ACKNOWLEDGMENTS

CSU TDMP Technical Advisory Committee Members

Parking and Transportation Services
Aaron Fodge       Devan Durand
Adam Anderson     Erika Benti
Bradley Calahan   Jamie Gaskill
Brian Grube       Stephanie Zakis
Dave Bradford     Tiffany Glover

Facilities Management
Gargi Duttagupta
David Hansen

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Aaron Iverson, City of Fort Collins
Administrative Professional Council
Alternative Transportation Fee Advisory Board (ATFAB)
Anita Dunkelman, Facilities Management
Associated Students of Colorado State University (ASCSU)
Christina Bagley, Parking and Transportation Services
Christie Mathews, Housing and Dining Services
Chris Williams, Parking and Transportation Services
Classified Personnel Council
Claude Jaillet, Facilities Management
Community Language Coop
Cortney Geary, City of Fort Collins
DeShane Williams, Biomedical Sciences
Ethan Martinez, Parking and Transportation Services
Faculty Council
Heather Reimer, Central Receiving

Housing and Dining Services Catering
Jeff Dodge, University Marketing and Communications
Jenny Lynskey, Parking and Transportation Services
Joan Paulsen, Facilities Management
Josephine Martinez-Rivera, Housing and Dining Services
Joy Childress, CSU Police Department
Josh Reyling, CSU Centroid
Julia Innes, Facilities Management
Laura Carter, Housing and Dining Services
Madie Burton, Parking and Transportation Services
Matt Costigan, Parking and Transportation Services
McKenna Cortney, Parking and Transportation Services
Mike Ellis, Lory Student Center
Rodney Gillespie, Facilities Management
Sandy Sheahan, Facilities Management
Sydney Crowe, Housing and Dining Services
Tamene Abebe, Lory Student Center

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Jeremiah Simpson – Project Manager
Bennett Hall, AICP – Lead Analyst
Kristen Faltz, AICP – Analyst
Mike Griffith – Community Outreach Specialist
Eve Fillingham – Graphic Designer
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EXECUTIVE SUMMARY

Purpose

The CSU Master Plan Committee and Parking & Transportation Services department provisioned this 2023 Transportation Demand Management Plan to serve as the transportation component of the next 10-year, multi-campus master plan. University leadership acknowledges the close relationship between multi-modal transportation access and large-scale campus decisions for land use, academic building priorities, student enrollment, and other far-reaching university decisions.

Just as the 2014 Parking and Transportation Master Plan established short- and long-term strategies to support campus parking offerings and recommended a shift to more multi-modal transportation planning, this TDMP builds on this multi-modal approach to meeting CSU’s campus access needs. By putting people at the center of the transportation and commute equations, CSU aims to actively support equitable and sustainable access to the multi-campus system in Fort Collins for the diverse community of students, staff, faculty, and visitors.

Context

The Fort Collins campuses that comprise the TDMP scope include the Main Campus, South Campus, West Campus, and Foothills Campus. There is a push to better integrate these campuses with one another and with the surrounding communities.

Main Campus has an increasing resident student population. Off-campus, high living costs and a lack of housing compared to demand have pushed many students and employees further from campus. The Spring 2023 commute mode split for students and employees combined is as follows:

- Driving/SOV: 67%
- Cycling: 11%
- Bus: 8%
- Walking: 7%
- Other (telework/virtual class/longboard/scooter/etc.): 3%
- Carpool/Vanpool: 2%
- Rideshare/Dropoff: 2%

As CSU has retrofitted its campuses for better bike and pedestrian access over the years, gaps in safety remain. Many people want better and clearer separation between modes on campus streets, multi-use pathways, and pedestrian areas.

Transit use declined during the COVID-19 pandemic and has not recovered as the bus driver shortage continues to limit bus frequencies.

Driving remains the most common commute mode for both students and employees. There are 0.47 campus Main and South Campus parking spaces (13,518 in total) per enrolled student—with a total of 27,939 students enrolled in Fall 2022. While many choose this mode, parking permit customers who participated in the stakeholder outreach frequently lamented the high cost of permits.

Newer commute mode options like rideshare (Uber, Lyft), e-scooters, and telecommuting have emerged as viable options for some people, there is a need to better organize their use across the campuses.

Goals

The TDMP sets ambitious but realistic goals for the next 10 years that are directly tied to existing campus conditions and feedback gathered from the robust stakeholder outreach process carried out by PTS and other CSU staff. These outreach efforts took place from December 2022 to July 2023 in phases, ranging from informational sessions to interactive tabling events around campus to focus groups to online surveys and open feedback forms.

Peer university profiles and existing institutional commitments were also referenced for goal-setting criteria.

What is “TDM”?

TDM, or Transportation Demand Management, is a set of strategies aimed at improving transportation network efficiency. TDM prioritizes the equitability and competitiveness of all transportation modes so that users have maximum travel options and face fewer barriers to daily mobility.

TDM strategies come in many forms and depend on local context. Approaches may include safety education programs, infrastructure improvements, incentives, or flexible work policies, to name a few.

This Plan will delve into strategies that align with CSU’s specific local and regional context.
Goals Checklist:

- **Balance the commute mode split by aiming for 50% overall driving/SOV rate by 2033**
- **Chart a course to net zero commuting and fleet emissions by 2040**
- **Increase equity by:**
  - Increasing households within 0.25 miles from frequent transit (10-15 minute headways throughout the day)
  - Increase households within 0.25 miles from a low-stress bikeway
  - Reduce household average transportation spending for students and employees
  - Increase transportation customer satisfaction
- **Achieve Vision Zero by eliminating serious and fatal transportation crashes**

Key Recommendations

**Infrastructure & Connectivity**
- Lower parking ratio to raise parking utilization from 65% to 80% campus-wide
- Add on-street pullouts in prime locations for access
- Install signage and infrastructure to separate bike/ped in problem areas
- Expand Foothills sidewalk and bike trail network to link areas together
- Expand Around the Horn to serve UCA and other key destinations
- Implement West Elizabeth BRT with complementary support from CSU where connecting to Foothills Campus, West Campus, and Main Campus
- Implement campus “mobility hubs”
- Explore student Transfort driver pipeline program

**Policies, Programs, & Initiatives**
- Promote bike registration and lock education to deter theft
- Increase bus frequency and expand third-party route planning options
- Establish a Commuter Management Platform for parking permits, carpool matching, and other commuter resources
- Launch a PTS-administered carpool/vanpool initiative for CSU employees
- Update motor pool rental process to digital and disperse the rental fleet around campus for convenience
- Implement centralized fleet management software
CHAPTER 1
INTRODUCTION
This document, the Colorado State University Transportation Demand Management Plan 2023 (“TDMP”), provides a roadmap of feasible goals and strategies for implementing continuous transportation improvements across the network of Colorado State University (“CSU”) campuses in Fort Collins, Colorado.

CSU and its leadership are currently finalizing the 2024 Master Plan, which outlines the campus’s overall strategy for growth and infrastructure planning over the next 10 years. The 2024 Master Plan follows the 2014 version, which included an accompanying “Parking and Transportation Master Plan 2014,” prepared by Kimley-Horn and Associates, Inc.

The 2023 TDMP will support the 2024 Master Plan and will build upon CSU’s prior parking and transportation master plan, with a specific emphasis on transportation demand management (TDM) strategies. TDM refers to infrastructure, programs, incentives, and other steps that improve the quality and accessibility of transportation options and ultimately increase mobility.

Effective TDM acknowledges that there are a variety of mode choices available to students, faculty, staff, and visitors as they travel to, through, and between the CSU campuses. Parking for private automobiles will remain an important part of CSU’s access strategy for the foreseeable future. However, this plan will also seek to leverage the campus’s investment in bicycle, pedestrian, transit, and micro transit programs and infrastructure to maximize the efficiency of these systems and provide alternatives to single-occupancy vehicle commuting.

**Context**

Over the past decade, the University has built significant parking infrastructure and a new football stadium and welcomed thousands more in student enrollment capacity. As the Fort Collins campuses continue to expand, according to the university’s strategic plans, the transportation choices available to all user groups must keep pace with these changes to move everyone efficiently.

The MAX bus in the Transfort network and the Around the Horn campus circulator bus have been operational since 2014, giving students, faculty, and visitors new options to get to and around the expanding campus.

Micromobility options like e-bikes and e-scooters have become an economical option for short trips and first- and last-mile connections in many countries and are well suited to university campus environments such as CSU. Certain areas of campus and downtown Fort Collins have ubiquitous coverage from Spin, a leading micromobility provider. These options, with their motorized assistance and ease of use, appeal to a wider potential user group than manual bikes.

At the same time, e-bikes and e-scooters allow riders to benefit from the same expanding bike lane infrastructure that has been a university and city priority for many years.

More recently, compounding dynamics brought on by factors such as the COVID-19 pandemic, monetary inflation, and a tight labor market have strained Transfort’s resources and led to cancelled and reduced service on less popular bus routes. The successful MAX route along Mason Street, launched in 2014 and lauded as a prime example of a strategically successful small city BRT project, was reduced from 10–15-minute headways to 20-minute headways in 2021.
Meanwhile the campus and surrounding community (like many other regions of the country) have struggled with the rapid increase in the cost of housing, which has outpaced the growth in incomes. This means that many faculty, staff, and employees, along with students not housed on campus, may have less options for housing that are within walking or biking distance.

While acknowledging the recent trends and challenges, CSU has doubled down on its greenhouse gas emission reduction goals with the 2022 Climate Action Plan (“CAP”). The University’s new goal is to reach carbon-neutral status by 2040 (compared to the previous target year of 2050 outlined in the 2010 CAP) based on various campus metrics—notably fleet and commuting emissions within the transportation sphere.

Transportation-related injuries continue to occur on CSU campuses each year. CSU is an active participant in the “Vision Zero” movement, which aims to increase transportation safety and awareness.

To meet these challenges and continue its mission to provide a high-quality, accessible education to a diverse student body, CSU seeks to optimize its transportation resources for the challenges that lay ahead.

Driving, walking/rolling, biking, transit, carpool/vanpool, and telecommuting all play a vital role in connecting students, faculty, staff, and visitors with varying travel preferences to campus on a daily basis.

Plan Goals

As previously stated, this document will build upon the prior parking and transportation master plan with a specific emphasis on applicable TDM elements. Specific goals for the 2023 TDMP are outlined in Figure 2.

**TDMP Document Goals**

- Evaluate the efficiency of existing CSU transportation systems and programs
- Establish transportation mode split targets, include parking supply ratios, to help inform land use priorities in the upcoming 2024 Master Plan
- Further the University’s sustainability and Vision Zero safety goals
- Outline performance monitoring tools to track progress
- Plan for transportation infrastructure, technologies, and resources needed to allow people to travel safely and efficiently
- Incorporate feedback from robust stakeholder engagement
- Ensure that all campus communities are represented in Plan recommendations

Figure 2: TDM Goals
Glossary of Terms

**CSU** – Colorado State University, encompassing the Main, South, West, and Foothills campuses in Fort Collins for the purposes of this Plan.

**PTS** – CSU’s Parking & Transportation Services department.

**HDS** – Housing & Dining Services department of CSU.

**FM** – Facilities Management department of CSU.

**BRT** – bus rapid transit; According to the Federal Transit Administration, “Bus Rapid Transit is a high-quality bus-based transit system that delivers fast and efficient service that may include dedicated lanes, busways, traffic signal priority, off-board fare collection, elevated platforms and enhanced stations.”

**GHG** – greenhouse gases, which come from a multitude of sources and are known to trap heat in the atmosphere.

**Carbon neutral** – the state of an organization, company, city, etc. having net-zero carbon emissions over time, often by balancing carbon emissions with carbon offsets such as sustainability programs or carbon storage techniques (planting trees, etc.).

**TDM** – Transportation Demand Management, which refers to programs and incentives that seek to maximize transportation options with the goal of increasing overall transportation network efficiency and removing barriers to personal mobility.

**SOV** – single-occupancy vehicle; SOVs are so-called for having underutilized capacity (empty seats) that strains shared land and street resources.

**PUDO** – pick-up and drop-off; generally, refers to designated areas where ridehailing (Uber/Lyft) occurs.

**TNC** – transportation network company; refers to Uber, Lyft, and other modern app-based, pre-arranged taxi services that may be shared or unshared with other groups of rider(s) and differ from traditional taxi services in that the rides cannot be hailed on the street or by phone call.

**ASCSU** – Associated Students of Colorado State University, the elected body that represents CSU student interests on campus and in local, state, and federal government matters.

**Vision Zero** – a non-binding global road traffic safety commitment pursued by individual states, municipalities, universities, and other entities who seek to minimize serious traffic-related injuries and deaths through roadway design and policy changes.

**ATFAB** – Alternative Transportation Fee Advisory Board

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Data Sources

Data (including tables and certain figures) shown in the current conditions and mode-specific analyses of this Plan were provided by the CSU Parking & Transportation Services Department, with supplemental data from the CSU Police Department and the CSU Geospatial Centroid. Peer university profile data was gathered from the respective universities’ publicly available parking and transportation services departments or transportation master plans and other planning and institutional sources. The most recently available data was used, and historic trends are derived from the 2017-2018 timeframe onward.
Community Outreach

The TDMP project team engaged in four phases of public outreach to assess and incorporate the quantitative and qualitative transportation concerns, preferences, and ideas on from the minds of students and employees who access the campuses on a regular basis. This feedback guided the project team’s investigation of problem areas on the campuses and informed the direction of the strategies and recommendations contained in this Plan.

Stakeholder groups participating in informational and active feedback sessions included:

- CSU Master Plan Committee
- Alternative Transportation Fee Advisory Board
- Off-Campus Life
- CSU Athletics
- Parking Services Committee
- CSU Bicycle Advisory Committee
- CSU Public Safety Team
- Transport Leadership
- Classified Personnel Council
- CSU Police Department & CSUPD Command Staff
- Physical Development Committee
- Parking & Transportation Services
- Collaboration for Student Achievement
- Student Affairs VP Council
- Residence Hall Association
- Vision Zero Task Force
- Inclusive Physical & Virtual Campus Committee
- Space Committee
- Graduate Student Council
- Associated Students of CSU Cabinet + Senate
- Administrative Professionals Council
- CSU President’s Sustainability Commission
- Faculty Council
- NorthFront Range MPO Technical Advisory Council
- CSU Transportation Board
- CSU Admissions
- College of Veterinary Medicine & Biomedical Sciences Executive Leadership Team
- Student Disability Center
- Housing & Dining Services Leadership Team + Staff
- CSU Professional Development Institute
- CSU Central Receiving

Hundreds of university-affiliated students, staff, and faculty were also engaged through pop-up events and transportation surveys. Parking & Transportation Services staff led the outreach efforts with these groups, assisted by the consultant team.

Engagement activities consisted of:

**Phase 1 – January 2023**

- What is TDM?
- Why is CSU pursuing the TDMP?
- Project Timeline
- Sign up for email updates
- How to volunteer for a focus group or find a pop-up session

**Phase 2 – Introductory sessions & workshops – January through April 2023**

- What is TDM?
- Why is CSU pursuing the TDMP?
- What challenges that reflect the group you represent (student, staff, etc.) should the TDMP consider?
- Activity – How and where would you spend $5,000 in campus transportation improvements?

  **Host on-campus “pop-up” tabling events – February through March**

- Activity – How and where would you spend $5,000 in campus transportation improvements?

  **Focus Groups – February through March**

- Contribute to the Unified Campus Mobility Charter
- Participate in “What is your journey?” exercise exploring how you travel to and around your campus(es)

**Phase 3 – Public Comment – July 2023**

- Invite stakeholders to submit comments on the draft TDMP content
- Advertise public comment period on social media, SOURCE, email list, and other outlets

**Phase 4 – University Acceptance of Plan – July/August 2023**

- Present final plan document to CSU leadership for adoption and integration into 2024 Campus Master Plan
### Stakeholder Outreach—Key Takeaways

**Broad Support For:**

- Street and pathway infrastructure that promotes safety
  - Better separation of bike/scooter and pedestrian infrastructure
  - Remedying conflict zones where bikes, motor vehicles, and pedestrians converge
- Greater transit frequency and expanded hours to meet rider needs
- More affordable (and flexible) parking permit options, especially for hourly workers and graduate students
- Transportation options that feel intuitive and convenient

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**3,535 Total stakeholders engaged**

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*Figure 3: Stakeholder Engagement Summary*
Unified Campus Mobility Charter

The Unified Campus Mobility Charter in Figure 4 is a synthesis of the values, vision, and goals expressed by the students, staff, and faculty who participated in 1 of 6 TDMP focus groups. The Charter also incorporates feedback from community members who provided public comment on the draft TDMP document.

The TDMP content, and its subsequent execution across the CSU campuses, aims to adhere to this Charter in accordance with the guidance of the CSU stakeholders who participated in its creation.

Participants expressed the common values of safety, convenience, equitability, and sustainability. They desire for these values to be imbedded into a multi-campus environment that is more intuitive to access using a variety of modes than what the present CSU and Fort Collins transportation networks provide. There is widespread acknowledgment that CSU must lean on key partnerships among its departments, leaders, the City of Fort Collins, Transfort, and other Northern Front Range institutions to enact needed transportation improvements in the coming years.

These engaged CSU community members want the TDMP outcomes to result in clear and measurable goals like reducing traffic injuries, improving customer satisfaction amongst the traveling public of students and employees, increasing the viability of multimodal lifestyles, and making transportation more affordable. Many participants expressed concern about being squeezed by limited housing options, family commitments, and other personal and economic pressures to the extent that their transportation choices are limited. These limited transportation options often lead to higher out-of-pocket costs for students’ and employees’ daily transportation.

Strategies to implement these values and visionary elements in pursuit of the aforementioned goals will be explored throughout this Plan.

VALUES

The CSU community values transportation options that are safe, convenient, equitable, and sustainable. These values are aligned with the spirit of the CSU Principles of Community—respect, integrity, service, social justice, and inclusion.

VISION

Students and employees envision a campus that is simple and straightforward to access and supports many travel modes to meet the unique needs of a diverse community, actualized by thoughtful and close collaboration between university departments, university leadership, and the City of Fort Collins.

GOALS

To that end, a successful Transportation Demand Management Plan will optimize transportation efficiency for travelers to and within the CSU campuses by aspiring to measurable goals such as reducing transportation-related injuries, improving student and employee transportation satisfaction, supporting the competitiveness of active and shared transportation options, and balancing transportation business needs with affordability for users who face persistent barriers to using alternative transportation modes.

Figure 4: Unified Campus Mobility Charter Statement
Campus Transportation Performance Measures

These metrics are based on the core goal of sustainability, a concept which is both the stated goal of the University and an integral part of the long-term success of any higher education institution.

In line with the University’s latest Climate Action Plan 2022, this plan will provide a roadmap for pursuing service quality and sustainability improvements in four key transportation/TDM areas:

- **Infrastructure & Connectivity**
- **Equity & Access**
- **Policies, Programs, & Initiatives**
- **Technology**

Commuting and fleet vehicle activities encompass the many ways students, employees, and visitors travel to, from, and around CSU’s four Fort Collins campuses. Emissions reductions from these two sources will support an overarching goal of fostering a healthy, sustainable multi-campus community.

This Plan aligns with the following Objectives, some of which have been previously laid out by CSU and partner organizations:

- 60% SOV mode share by 2025, aligned with the Colorado Employee Trip Reduction Program
- Balance the campus transportation mode share in pursuit of maximum mobility options
  - This Plan proposes a path to a 50% driving / SOV commute mode share goal for CSU by 2033, resulting from significant improvements to active transportation modes
- CSU-wide carbon neutral status by 2040
  - Comprised of compromising two tracked transportation emissions metrics:
    - Commuting
    - Fleet Vehicles
- Provide more reliable, equitable, and healthy transportation options and better campus access for diverse CSU students, employees, and visitors
- Aggressively pursue Vision Zero—to achieve and maintain minimal transportation-related serious injuries and fatalities

In addition, CSU seeks to improve curb management policies and build a plan for better use of curb space for activities such as deliveries, pick-up and drop-off, etc. that minimize street conflicts and maintain safety.

The Plan will include specific Vision Zero/transportation safety considerations related to the three primary modes of concern according to CSU Police Department and Fort Collins Police Department crash report statistics: driving, cycling, and walking.

Along with the importance of GHG emissions reductions to CSU’s continued community stewardship and academic vitality, the University also stresses equity and environmental justice principles in its definition of comprehensive sustainability. The strategies and performance measures detailed in this TDMP reflect that dual emphasis. There is a growing recognition that GHG emission reductions cannot be broadly achievable or equitable if sustainable transportation modes are not accessible to CSU students, employees, and visitors with diverse backgrounds, incomes, mobility needs, and other factors.

Performance Considerations

**MODE SPLIT**

The mode split performance indicators focus on rebalancing the campus and local transportation system around healthy and flexible range of travel options for students and employees. CSU’s annual Mode Split Survey has been a cornerstone of its metrics tracking efforts and the overall transportation network preferences of the CSU community since its launch in 2014. This survey has been and will remain a key tool for accurately measuring CSU student and employee commute constraints and preferences and the University’s progress in facilitating a more efficient transportation system.
Through coordinated efforts to increase the competitiveness of walking, biking, transit, and other non-SOV modes, CSU can lower the carbon intensity of student and employee commutes. This plan will focus heavily on strategies for encouraging the transition to more sustainable commuting behaviors. University fleet vehicle efficiencies will also be covered. Commuting and fleet vehicle emissions metrics are estimated and tracked annually by the University as it steers a course to carbon neutrality by 2040.

### EQUITY

The equity performance indicators in Figure 5 to the left are centered on affordability and geographic access. “Increase # households” should be understood primarily as a process of increasing frequency on more Transfort routes so that more households have access to frequent (convenient) transit, but consideration for proximity to transit at new housing developments should also be a priority.

“Commute transportation spending” and “transportation customer satisfaction” are factors that can be routinely tracked through a targeted survey administered by PTS or as an addition to the Mode Split Survey.

It is important to acknowledge that while it is difficult to move the needle of individual transportation spending, average expenses are an important transportation equity barometer. Accompanying demographic information will assist in interpreting the causal factors and potential future strategies for addressing commute transportation spending. Generally, transportation spending as a percentage of total income is the primary metric for understanding affordability for individual households.

### SAFETY

CSU tracks reported transportation-related incidents on and near its campuses as part of its participation in the international Vision Zero movement to minimize serious and fatal transportation system crashes. This Plan will use historic crash data and transportation planning best practices to support CSU’s Vision Zero efforts. The University can monitor crash location and severity data in subsequent years to determine the need for future infrastructure improvements.

### Mode Split Targets

The most recent commute mode split for students and employees at CSU campuses, based on the PTS annual Mode Split Survey, is shown in Figure 6 on the next page. These rates provide the most comprehensive representation of student and employee transportation behaviors available and should be considered highly reflective of the state of the CSU and Fort Collins transportation network. These reported commute habits have held relatively steady since PTS began distributing this springtime survey in 2014.
This Plan establishes a road map for facilitating a more balanced transportation mode split through the year 2033. There are myriad human health, equity, environmental sustainability, and campus growth benefits associated with a renewed focus on mobility and transportation options instead of the current trend of modal dependency. When students, employees, and visitors have less reliance on a singular mode (such as driving a personal vehicle), the entire campus and wider community benefit.

Figure 7 shows a target mode split for 2025 that is based on prior voluntary commitments CSU has made, as a constituent organization within the North Front Range Metropolitan Planning Organization (NFRMPO) area, to reduce single-occupancy vehicle commuting to at least 60%. Given the relatively stagnant mode split trends of the past few years, this is an ambitious target to reach in a short time span. This Plan will emphasize some of the most pressing non-driving transportation barriers expressed in the stakeholder engagement process as short-term goals to reach this target.

The 2033 target mode split goal, shown in Figure 8, is reflective of a sustained, highly strategic reimagining of transportation in and around the CSU campuses. Factors that were considered in the 2033 Mode Split Targets include:

- Proposed transit improvements such as the West Elizabeth Bus Rapid Transit route
- Propensity for higher Transfort bus ridership as a result of improved frequency of bus service on routes throughout the city
- New off-campus housing (and affordable housing, in particular)
- More on-campus housing for under- and upper-classmen
- The menu of infrastructure and programmatic transportation improvements recommended in Chapter 3 of this plan
- Peer universities’ current reported transportation mode splits and mode split goals

To achieve this target, CSU will need to consider street safety, wayfinding, transit quality, technology, incentives, and other core elements of campus infrastructure and programs along with related determinants of transportation access such as housing availability and affordability. Partnerships and dialogue with the City of Fort Collins and other public- and private-sector stakeholders will be vital for CSU’s pivot to expanded campus transportation options.

This Plan is a guide for elevating the quality and competitiveness of transportation alternatives to SOV driving, which CSU cannot accommodate at the 2023 baseline rate (67%) while growing its student enrollment (and associated faculty and staff employment) while simultaneously achieving its sustainability goals.
Table 1 above shows the yearly mode split targets proposed through 2033 that represent a rebalancing of the commute mode split amongst CSU students and employees. The 2023 Baseline mode split is informed by the results of the 2023 CSU Mode Split Survey issued in February 2023. The 2025 target is aligned with the Colorado Employee Trip Reduction Program to which CSU has voluntarily committed. Participating organizations and municipalities have pledged to implement multimodal transportation improvements so that no more than 60% (3 out of 5) of commute trips are made by SOV by 2025.

The 2024 mode split is adjusted proportional to the difference between 2023 baseline and 2025 target mode share for SOVs, with the increase in other mode shares coming primarily from:

1. Spot treatments to bike and pedestrian infrastructure like the CSU Complete Streets corridor redesigns
2. Increasing carpool/vanpool usage from the recommencing of a CSU-organized employee carpool matching program
3. Ongoing steady adoption of telework agreements for administrative staff

These 3 improvements are “low-hanging fruit” with relatively low upstart costs that can be implemented in the near term.

Key alternative modes like transit, biking, walking, carpooling/vanpooling, and telework are benchmarked to increase moderately (>0.15%) on an annual basis between 2025 and 2033. Large-scale systemic changes like bike facility improvements, increased bus frequency, more affordable housing proximate to campus, and sustained carpool program participation, which are some of the primary transportation recommendations detailed later in this Plan, will be necessary to achieve this target mode split.

Table 1: Yearly Mode Split Targets, 2023–2033

<table>
<thead>
<tr>
<th>Mode</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
<th>2027</th>
<th>2028</th>
<th>2029</th>
<th>2030</th>
<th>2031</th>
<th>2032</th>
<th>2033</th>
<th>Annual Rate of Growth 2025-2033</th>
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<tr>
<td>SOV</td>
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<td>64%</td>
<td>60%</td>
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<td>50%</td>
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</tr>
</tbody>
</table>

*“Other” category includes telework, virtual classes, university fleet vehicle, longboard, scooter, etc.

2 Based on 2023 Mode Split Survey results.

3 Target 60% single-occupancy vehicle commute rate by 2025 per voluntary Colorado Employee Trip Reduction Program.

4 Based on 50% SOV goal for 2033, which would require a minimum average 1.25% annual reduction in SOV commuting from 2025-2033. Non-SOV modeshare increases would need to be an annual average of 0.02%-0.31% to compensate.
The above chart outlines target metrics and projections to analyze underutilized parking areas on campus and increase the parking utilization rate so that PTS parking resources, which are a significant portion of CSU's land resources, can be used more efficiently. Note that the 13,518 spaces used for the base “Parking Supply” in this chart includes approximately 460 non-revenue generating spaces at the Veterinary Teaching Hospital, Medical Center, and elsewhere for document consistency, although these are not included in the parking utilization surveys.

The driving rate baseline is the “driving/SOV” primary commute mode split result from the 2022 CSU Mode Split Survey. The subsequent years progress at a 3.5% YoY rate toward the ambitious 60% driving mode share target CSU is pursuing for 2025 and then 1.25% YoY rate toward the 50% driving mode share target this Plan proposes for 2033.

The parking demand ratio is a function of student enrollment and the base parking demand ratio of 0.30 observed during the Spring 2023 parking demand survey. The driving rate targets leading to the 50% driving commute mode share goal for 2033 have been applied to this ratio.

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The parking demand ratio is a function of student enrollment and the base parking demand ratio of 0.30 observed during the Spring 2023 parking demand survey. The driving rate targets leading to the 50% driving commute mode share goal for 2033 have been applied to this ratio.
“Parking utilization % with baseline supply” represents the parking utilization that is projected for the campus in a scenario in which the current total of 13,518 stalls remains usable through 2033 and the driving rate falls at the target rate as a result of TDM and other improvements to other transportation modes. In this scenario, the parking utilization rate falls to 56% if the parking supply remains at 13,518, suggesting CSU’s existing parking resources will be even less land use-efficient in the coming years if the SOV commute rate declines.

Line 8 displays the projected parking surplus compared to peak demand in the baseline year (2023) through 2033. For example, there was a parking surplus of 5,050 spaces in Spring 2023, or peak demand for 8,468 stalls compared to a supply of 13,518 stalls. In 2033, there will be a projected surplus of 5,948 stalls, or demand for 7,570 stalls compared to a supply of 13,518 stalls (assuming that the campus parking supply does not change). Pending campus developments such as the expansion of the VTH facilities at the South Campus should consider any loss of parking spaces in comparison to the calculations shown in Table 2.

This Plan proposes a target parking utilization rate of 80% to make better use of CSU’s expansive parking resources. The current parking utilization rates (65% observed in Spring 2023, 67% observed in Fall 2022, etc.) suggests a significant portion of spaces are underutilized during peak weekday academic year conditions and that a significant supply buffer exists to accommodate all parking needs with less excess parking supply without negatively impacting users’ parking experience. There is an opportunity to repurpose the parking surplus resulting from these targets and recommendations for other uses that suit the University’s vision and priorities in the forthcoming 2024 Campus Master Plan. These strategies and capital improvements can further support the mode split targets detailed in this plan by providing vital campus land resources such as multi-modal hubs, student housing, and other complete campus elements.

This analysis found that, based on the projected enrollment, projected parking demand with factored driving rate targets, and a recurring yearly target parking utilization rate of 80%, 10,276 parking spaces is the recommended parking supply to accommodate 2024 projected total parking demand with a 20% supply buffer to ensure excess vehicle circulation and driver frustration is minimized. By 2033, in a scenario where CSU achieves the ambitious mode split rebalancing goals set forth in this Plan, 9,463 parking spaces would be recommended to meet parking demand with a 20% supply buffer.

The “parking stall surplus per Targets/Recommendations” are spaces that may be allocated to other university land uses without impacting the quality of the campus parking environment for students, employees, and visitors.

Strategies to ensure parking spaces remain conveniently available for the various user groups will be discussed in Chapter 3: Strategies by Mode.
Mode Hierarchies
The modal hierarchies in Figure 9 support the mode split goals discussed above. Emphasis is placed on active modes for students and employees living within 0.25 miles of the campuses or traveling within a single campus. When walking is not feasible, such as moving between campuses or coming onto a campus from more than 0.25 miles away (depending on the individual and their physical mobility and time constraints and the weather), shared modes like transit, carpooling, and biking are prioritized over driving and SOV driving in particular. These are the high-level transportation customer capture parameters CSU, Transfort, and other partners should use for street improvements, service planning, capital improvements, and TDM strategies.

2040 Targets
CSU committed in its 2022 Climate Action Plan to achieve a university-wide goal of carbon neutrality by 2040. The TDMP outlook is through 2033, but the strategies laid out herein seek to put CSU's transportation infrastructure and programs on a realistic path to eventual commuting and fleet vehicle carbon neutrality within the 2040 horizon.

Goals Roadmap
This plan proposes to meet the University’s mode split targets and overall mobility goals by identifying strategies to improve the following physical and programmatic elements of the transportation system across the CSU campuses. The following “Infrastructure & Connectivity” and “Policies, Programs, & Initiatives” will appear throughout this TDMP to call out corresponding strategies.

Infrastructure & Connectivity
Transportation infrastructure on campus is comprises of physical attributes such as streets, sidewalks, intersections, parking lots, curb space, paved pathways, and elements of these core assets such as bike lanes, other pavement paint, bike racks, bus stops, parking spaces, micromobility devices, and the like.

Infrastructure & Connectivity features can be summed up as the tangible, tactile components of the transportation network that facilitate travel from one place to another and form the foundation for Programs, Policies, and Initiatives to function.

Policies, Programs, & Initiatives
Policies, programs, and initiatives, including educational campaigns and communication efforts, allow CSU to promote CSU’s many transportation options to a wide population of students and employees effectively. Some of these programs may have physical infrastructure elements, such as the Spin e-bike and e-scooter service that is a partner agreement between Spin, CSU, and the City of Fort Collins, a mobile app, and a physical fleet of devices.

These Policies, Programs, & Initiatives aim to educate, increase travel mode competitiveness, and provide incentives for the range of transportation options available to students, employees, and visitors using the campuses’ existing Infrastructure & Connectivity features as a base. These elements are less tangible and may rely on technology or pop-up campaigns to spread awareness and engage users.
CHAPTER 2
MULTI-CAMPUS OVERVIEW
The central transportation vision for CSU’s four primary Fort Collins campuses is to unify the campuses through high-quality multimodal travel options to suit a wide range of academic and business needs. There is a desire to link the campuses through key transportation services to minimize physical barriers and maintain a strong, shared academic culture and campus life.

Speed limits of 20 mph on all campus streets and 10 mph in parking lots are enforced.

**Study Area**

In order to provide a master plan framework for this unified transportation vision, this TDMP will focus on the four primary Fort Collins campuses—Main, South, West, and Foothills—shown in Figure 10 below.

**Main Campus**

The CSU Main Campus has been designed over the years to emphasize permeability for pedestrians and cyclists. On the other hand, The University has taken steps to limit vehicular traffic within and through the Main Campus core so that the environment is safer and more inviting for students, employees, and visitors on foot and on smaller wheeled devices like bikes, skateboards, longboards, scooters, and wheelchairs.

The Center Avenue Mall, Academic Training Center, and Academic Village Commons dismount zones are active Monday-Friday from 7:30am-5:00pm to restrict bikes, scooters, longboards, and other non-ADA-designated wheeled mobility devices. Users of these conveyances must dismount and walk during these hours to mitigate conflicts between pedestrians and mobility devices.

Academic buildings are heavily weighted toward the east side of the Main Campus where the Center Avenue Mall dismount zone is located. The University's two parking garages, the South College and Lake Street garages, are located on this side of campus on Pitkin Street and Lake Street, respectively. Street access on this side of the campus primarily serves parking garage users, delivery vehicles, Facilities Management vehicles, cyclists, and pedestrians using the MAX bus route’s Laurel, University, and Prospect stations. The University Center for the Arts is located on the far east side of the Main Campus across College Avenue at the former Fort Collins High School. A pedestrian and bike underpass has been constructed under South College Avenue to link UCA to the rest of the Main Campus, although users of UCA facilities report frustration about low connectivity to the rest of the campus.
The west side of the Main Campus is more oriented toward student housing and recreational and collegiate-level sports facilities including Moby Arena and Canvas Stadium. Plum Street, Pitkin Street, Hughes Way, and Lake Street serve as primary accesses from the west. The new Elizabeth Street Underpass was built to serve pedestrian and bike access to and from the Main Campus that avoids the busy and potentially hazardous crossings on South Shields Street.

Interior travel between the east and west sides of the Main Campus is largely restricted to active modes (biking, walking, scooting, rolling) only, although the Around the Horn campus circulator bus routes through the engineering parking lot past the CSU Transit Center in order to access the North Oval and continue southward to the South Campus.

Aside from a large vehicle parking supply, extensive sidewalks and pedestrianized areas, on-street and off-street bike routes, and the Around the Horn circulator and other local bus routes, the Main Campus’ key transportation assets include a fleet of 450 Spin brand e-bikes and e-scooters rentable per minute via mobile app.

In the midst of the extensively managed campus parking system, there is a trend of students parking in free two-hour spaces in the neighborhood north of West Laurel Street, presumably to avoid parking fees.

West Campus

The West Campus is an upper-classman student residential area, owned by CSU and operated by Housing & Dining Services, that is made up of the University Village and International House apartment complexes. There is also an HDS storage and distribution building on West Plum. West Campus is roughly 0.3 miles west of the Main Campus and connected by sidewalks and bike lanes along West Plum Street and West Elizabeth Street.

The highest rate of cycling and pedestrian trips to and from the Main Campus come from the west due to the high student population in this area.

South Campus

The South Campus is dominated by a mix of student and federal government anchors such as Aggie Village Family, the CSU Veterinary Teaching Hospital, The Johnson Family Equine Hospital, and various U.S. Department of Agriculture National Resource Research Center offices. The University Tennis Complex has twolarge parking lots that can serve as remote Main Campus overflow parking.

Although it is contiguous with the Main Campus, which is just to the north of West Prospect Road, the spatial layout is more like that of a commuter campus environment, which is largely due to the significant land area needs of the animal-related facilities. The federal offices have a suburban business park-style layout.

South Campus is connected to the Main Campus by Center Avenue vehicular and bus transit (Around the Horn) access, the Mason Trail bike/pedestrian trail, and Spring Creek and Drake stations for MAX and FLEX service. Additional bus transit and vehicle access comes from West Drake Road to the south. Bay Road provides limited car access along the east side.

Foothills Campus

The Foothills Campus is two miles west of the Main Campus along West Elizabeth Street. It houses CSU hydrology, animal, and biotechnology labs as well as USDA and Centers for Disease Control and Prevention facilities over a sprawling area that utilizes the land resources for active biological, soil systems, and animal research.

Primary street accesses to the campus include West Elizabeth Street, West Mulberry Street, and Laporte Avenue. Dedicated cycling lanes are limited in this area of the city. The Foothills bus offers connections to the 2 and 32 buses that go to the Main Campus.

The permitted parking system was implemented at the Foothills Campus in August 2020. This permitting system provides uniformity across the CSU campuses and allows Parking & Transportation Services to responsibly fund transportation facilities maintenance specifically needed at the Foothills Campus. In general, permitholders can park anywhere necessary for research and teaching purposes and parking within striped vehicle spaces is not enforced.

The Foothills Campus’ remoteness contributes to high vehicle use, and the paid parking environment is not fully accepted by users. On-street parked vehicles on Laporte Avenue can be observed during the daytime when drivers come to the Atmospheric Chemistry Building and seek to avoid paying permit fees. Meanwhile, the nearby parking lot often has high vacancy.

Despite its specialized activities and relatively secluded location abutting Horsetooth Reservoir, almost half of Foothills Campus survey respondents reported in the 2019 Parking & Transportation Services survey that they travel between the Foothills and Main campuses at least weekly.

The Foothills bus route aims to meet this demand for intercampus travel by running every 15 minutes on weekdays and Saturdays and connecting to the 32 and 2 bus routes that can take riders to the CSU Transit Center. These routes present an
alternative to driving and parking between the two campuses, although the need to transfer in an area with a lack of transit facilities like bus shelters means the current transit connection between the Foothills and Main campuses has room for improvement and struggles to compete with more costly options such as driving. The consultant team identified a need for more GIS data for the Foothills Campus, which is lacking compared to the other campuses. Some maps in this document omit the Foothills campus in cases where no data was available.

Curb Space

Campus environments contain extensive street curb infrastructure that faces demand from a complex array of users. Curb space demand tends to concentrate in highly specific areas and at certain hours of the day, particularly on weekdays. CSU seeks to better manage its complex curb assets by embracing dynamic uses that balance student, employee, departmental, and visitor needs.

This Plan will address curb space as it relates to specific transportation services around the campuses in the individual Mode sections.

Recent Growth Trends & Commute Mode Share

Student Enrollment

CSU’s Fort Collins campuses had enrollment totaling 27,939 on-campus students (undergraduate and graduate) in Fall 2022. This total was less than the 28,852 undergraduate Fall 2021 enrollment. However, the University welcomed 5,517 new freshmen in Fall 2022 due to the delay in incoming freshmen electing to start their first terms, which is a 7% increase compared to Fall 2021 and is the largest freshman class ever. CSU and peer universities around the country have seen enrollment fall out of line with projections in the wake of the COVID-19 pandemic and other compounding factors. The 35,000-student enrollment projection for 2024 that was provided in the CSU 2014 Master Plan did not account for these and other unforeseen challenges to CSU’s traditional growth mechanisms.

Figure 12: Total Student Enrollment - Fall 2018 to Fall 2022

However, these shifting dynamics present an opportunity to reorient planning efforts around priorities such as multi-modal transportation options, greenhouse gas emissions reductions, accessibility, and equitable infrastructure to prepare to sustainably accommodate more students in the future.

1 Compared to 28,446 total enrolled students in Fall 2017.
Faculty & Staff Employment

CSU employed almost 9,500 faculty and staff in Fall 2022, including over 2,100 graduate assistants. About 82% of faculty and staff live within Fort Collins, with the remainder living in the nearby cities of Laporte, Loveland, Timnath, Wellington, and Windsor.

Table 3 shows the spread of faculty and staff home cities of residence for Larimer County residents.

Ongoing cost-of-living increases, especially in terms of housing costs in Fort Collins proper, were common concerns amongst employees participating in the TDMP stakeholder focus groups. Many participants said it is becoming increasingly difficult to afford living close to CSU campuses, which limits their transportation options. Campus land resources are committed to student housing.

Table 3: Larimer County Faculty & Staff Home Cities of Residence

<table>
<thead>
<tr>
<th>City</th>
<th>Faculty</th>
<th>Graduate Assistant</th>
<th>State Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Collins</td>
<td>2,000</td>
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<td>1,000</td>
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<td>Loveland</td>
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<tr>
<td>Laporte</td>
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<td>Total</td>
<td>9,436</td>
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</table>

Table 4 shows the spread of faculty and staff home cities of residence for Larimer County residents.

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<td>9,436</td>
<td>7,974</td>
<td>5,988</td>
</tr>
</tbody>
</table>

1 Compared to 9,329 total faculty and staff headcount in Fall 2017.
2 Does not include worker groups such as: student employees, hourly employees, etc.

Figure 13: Academic Year Faculty & Staff Headcounts

Figure 13: Academic Year Faculty & Staff Headcounts

Does not include worker groups such as: graduate students, student employees, hourly workers, etc.
Chapter 2: Multi-Campus Overview

The Mode Split Survey, which is performed in February each year, was not distributed in 2021 due to COVID-19 campus disruptions.

** Scooter, skateboard, University vehicle (excluding 2020), etc.

The primary respondent pool in 2014-2017 was students. Since students are more likely to live close to campus and use non-SOV modes due to convenience, cost, and other factors, this high proportion of student responses in 2014-2017 confounded the mode split data for those years. For this reason, 2014-2017 results have been omitted from Figure 14.

In general, driving alone for commuting purposes amongst all groups has increased slightly, while telecommuting has emerged as a primary commute mode for at least 1% of University staff for the first time. 2% of 2022 Mode Split Survey respondents (presumably all administrative staff) said they telecommute the majority of the time. Active modes such as walking and biking, as well as transit, have stalled or dropped slightly in popularity for primary commuting.
CHAPTER 3
STRATEGIES BY MODE
**Mode: Driving/SOV**

Students, faculty, and staff at CSU enjoy driving to and from the campuses for flexibility and comfort. Cold and snowy winters on the Northern Front Range make driving one’s personal vehicle from door to door a particularly attractive option. These drivers desire thoughtful parking permit types to suit their variable on-campus needs, especially as work and academic environments become more hybrid.

![Figure 1: Mode Split Graph](image)

<table>
<thead>
<tr>
<th>2023 Mode Split</th>
<th>2025 Goal</th>
<th>2033 Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk 7%</td>
<td>Walk 9%</td>
<td>Walk 11%</td>
</tr>
<tr>
<td>Bike 11%</td>
<td>Bike 12%</td>
<td>Bike 14%</td>
</tr>
<tr>
<td>Bus 8%</td>
<td>Bus 9%</td>
<td>Bus 12%</td>
</tr>
<tr>
<td>Carpool/Vanpool 4%</td>
<td>Carpool/Vanpool 4%</td>
<td>Carpool/Vanpool 6%</td>
</tr>
<tr>
<td>Rideshare/Dropoff 2%</td>
<td>Rideshare/Dropoff 2%</td>
<td>Rideshare/Dropoff 2%</td>
</tr>
<tr>
<td>Other 3%</td>
<td>Other 3%</td>
<td>Other 6%</td>
</tr>
<tr>
<td>SOV 67%</td>
<td>SOV 60%</td>
<td>SOV 50%</td>
</tr>
</tbody>
</table>

**Strategies**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
<th>Objective</th>
<th>Campus Context</th>
<th>Implementation Horizon</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve and expand intersection + mid-block crosswalks</td>
<td>🚗🚶‍♂️🚶‍♀️</td>
<td>✔️ ✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$</td>
</tr>
<tr>
<td>Add on-street pullouts</td>
<td>🚗</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$$$</td>
</tr>
<tr>
<td>Install dynamic loading signage system</td>
<td>🛏️</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$</td>
</tr>
<tr>
<td>Add strategic EV charging locations</td>
<td>🚗🔌</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$$$</td>
</tr>
<tr>
<td>Decentralize motor rental pool</td>
<td>🚗_rental</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$$$</td>
</tr>
<tr>
<td>Create more parking permit types/stalls for carpoolers and early/late workers</td>
<td>🚗сидя</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$</td>
</tr>
<tr>
<td>Lower parking ratios to raise parking utilization</td>
<td>🚗</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$$$</td>
</tr>
<tr>
<td>Transition vehicle parking supply to garages</td>
<td>🚗</td>
<td>✔️ ✔️</td>
<td>Main, South, Foothills</td>
<td>☀️</td>
<td>$$$</td>
</tr>
</tbody>
</table>
Figure 15: Main + South + West Campus Buildings & Street Accesses
Since its earlier days as a commuter campus, both CSU students and employees have tended to travel by personal vehicle more than other modes. The campus resident population has become a fixture of campus life and culture, and so too have bike lanes, bus routes, micromobility options, and the like, but driving remains a popular commute option for students, faculty, and staff.

Participants in the campuswide stakeholder outreach efforts for this TDMP cited the following as some of the primary benefits of commuting by car:

1. **Family / Errands**
   Parents often rely on the ability to chain their trips to perform childcare, dropping off and picking up their kids before and after work. Similarly, many drivers highly value being able to efficiently complete daily errands (work or personal) on the way to/from campus, which becomes more cumbersome and time-consuming with other travel modes.

2. **Weather**
   Northern Front Range weather variability (summer heat, winter cold and snow/ice) is a challenge, and climate-controlled vehicles mitigate these extremes. Personal vehicles feel comfortable and familiar.

3. **Reliability**
   Driving a personal vehicle typically involves fewer unknown factors, such as a late bus, a carpool partner who doesn’t arrive, extreme weather, etc., which has immense habit-forming value for commuters.

4. **Distance**
   Whether by choice or by necessity (due to cost-of-living factors), some drivers said they live too far from the campuses to commute by any other mode than car. Long and dangerous cycling routes, lack of bus service, and other factors were mentioned.

CSU intends to maintain driving and parking on campus as a high-quality and reliable option for students, staff, and employees. The paid parking system stabilizes demand for the limited capacity and allows Parking & Transportation Services (PTS) to fund parking capital projects such as parking garages, which are more space-efficient (i.e., can increase parking space capacity within a smaller land area) than surface lots.

PTS is an auxiliary unit of the University and as such its service offerings must be self-funded, including staffing as well as physical (parking lots and garages) and digital infrastructure. As PTS and the University have shifted their focus to multimodal campus transportation options, PTS revenue has also begun funding many of the active transportation initiatives and outreach programs that make walking, rolling, cycling, and scooting to and around campus safer and more inviting for students and employees.

There are approximately 13,518 vehicle parking spaces across the Main, South, and West campuses.

In addition, the Foothills Campus has roughly 1,500 parking spaces spread across about 650,000 sq. ft. of paved parking area. However, as a research-focused campus with unique onsite activities that depend on facilities access, permitted vehicles are allowed to park anywhere within the facilities to suit their academic and business needs, so the exact number of usable parking spaces at this campus is not tracked.

<table>
<thead>
<tr>
<th>Spaces per student (27,939 undergraduate and graduate students as of Fall 2023)</th>
<th>Employee-Designated Spaces</th>
<th>Student-Designated Spaces</th>
<th>Other Spaces (includes Remote + Daily/Hourly for students, employees, visitors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.37</td>
<td>2,618</td>
<td>6,507</td>
<td>4,393</td>
</tr>
</tbody>
</table>

Table 4: Spring 2023 Main + South + West Campus Parking Spaces/Total Pop. Ratio
Parking Utilization

Approximately 65% of the total Main and South Campus parking capacity was utilized in peak weekday conditions during a February 2023 parking inventory count. PTS performs these inventories every fall and spring semester to track parking demand.

Utilization rates varied widely from lot to lot depending on convenience to nearby activity zones, as shown in the parking utilization heat map in Figure 16. Significant excess supply exists at the Moby Lot, South Campus remote lots, and lot 240 west of Canvas Stadium.

Spring 2023 peak parking lot utilization rates are shown in the heat map in Figure 17.

Figure 16: Campus-Wide Standard Stall Utilization Rate 2017-2023
Figure 17: Main + South + West Campus Peak Weekday Parking Lot Utilization – Spring 2023
Permits

PTS structures the permit system to offer maximum flexibility to meet the wide-ranging needs of students and employees. Table 7 below shows PTS’ vehicle parking permits sales since 2018.

The limited campus activity during the COVID-19 response in Fall 2020 is evident in permit sales. Annual employee permits have declined slightly as more employees who have the option to telework for a portion of the week opt for partial week permits (see “Other” type). Student annual and monthly permits have declined moderately since Academic Year permits launched in Fall 2022. Overall permit sales have been climbing as drivers find more permit options that fit their schedules and allow them to save more money on total personal transportation costs. Data for “Daily” and “Hourly” parking permits was not available and is not included in Table 5.

<table>
<thead>
<tr>
<th>Permit Type</th>
<th>Fall 2018</th>
<th>Fall 2019</th>
<th>Fall 2020</th>
<th>Fall 2021</th>
<th>Fall 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>4,755</td>
<td>4,374</td>
<td>4,730</td>
<td>4,455</td>
<td>2,684</td>
</tr>
<tr>
<td>Other³</td>
<td>19</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Monthly</td>
<td>137</td>
<td>46</td>
<td>164</td>
<td>58</td>
<td>249</td>
</tr>
<tr>
<td>Semester</td>
<td>1,281</td>
<td>161</td>
<td>1,685</td>
<td>173</td>
<td>1,648</td>
</tr>
<tr>
<td>Totals</td>
<td>10,779</td>
<td>11,265</td>
<td>6,511</td>
<td>12,116</td>
<td>12,543</td>
</tr>
</tbody>
</table>

¹ “Other” category includes academic year permits launched in Fall 2022

Table 5: Parking Permit Sales 2018-2022

Driving / Parking Challenges

- Desirable and convenient parking spaces are expensive and inefficient to provide for all students, employees, and visitors who want them
- CSU exists in a city, region, and country that will likely continue to prioritize the conveniences of vehicular travel for the foreseeable future, even as other modes gain funding and momentum and CSU’s transportation priorities shift
- Driving (and SOV travel) is often the only viable travel mode option for people due to a variety of factors, which raises equity, land use, and environmental/GHG emissions concerns
- Special events such as Move-in Day present uniquely high parking demand in resident hall areas as students bring larger vehicles with furniture onto campus and vie for limited on-street space that is not currently designed for their use
VISION ZERO & SAFETY

Motor vehicles are the second most prevalent transportation mode involved in crashes on campus (50%, which is unsurprising given their prevalence as the most common transportation mode for both students and employees as evidenced by the annual CSU cordon studies (see Appendix C). Opportunities to improve street conflict zones should be targeted toward crash “problem areas” and areas with known design issues. Toole Design Group provided CSU with spot improvement concepts in 2022 to address six problem areas around Main Campus, which can be found in Appendix F.

Figure 18 to the right shows major and fatal transportation-related crashes on campus since 2017, which are actively tracked as part of CSU’s participation in the national Vision Zero initiative to aim for zero major or fatal transportation injuries. Crash and injury problem areas will be explored more in the Mode: Bikes section.

Figure 18: Reported Major + Fatal Main/South Campus Crashes 2018-2023
Figure 19: Main + South + West Campus Parking Lot Designations
Driving / Parking Strategies

Infrastructure & Connectivity

Parking Space Ratios for Long-term Master Planning
This Plan establishes a new parking ratio target for 2023-2033 based on the following factors:

- 80% average peak parking space utilization target, up from 65% observed in Spring 2023
- 50% driving commute mode share target, down from 67% reported in the Spring 2022 Mode Split Survey
- 0.6% YoY student enrollment growth

The current ratio of total parking spaces per total student enrollment is 0.47, which is based on an inventory of 13,518 parking spaces and 28,837 students enrolled at CSU Fort Collins campuses in 2022-23. A consistent 80% parking space utilization goal and a gradual YoY reduction to a 50% driving commute rate would result in a parking spaces-to-students ratio of 0.44 by 2033, assuming a static parking inventory. This ratio would be sufficient to meet expected student and employee demand, and a supply buffer of 20% that could accommodate some additional parking demand resulting from expansion of academic facilities on campus is also projected. Any changes to the parking supply should consider this baseline ratio.

Strategic parking garage placement decisions should consider the additional transportation (parking) demands created by new academic and housing structures so that the garages can help meet new demand generated after new buildings are built out.

On-street Pullouts
Move-in Day, as well as daily activities such as carpooling pickup/dropoff and quick Facilities deliveries, challenge the existing infrastructure on streets such as Plum Street, Lake Street, and Hughes Way. PTS has identified key locations where vehicle pullouts could be located along these streets to accommodate these vehicles uses. Priority zones that do not require the removal of mature trees are shown in Figure 20.

Hughes Way was identified frequently in the stakeholder outreach activities as a problem area due to the right of way being too narrow for one-lane bidirectional vehicle traffic next to the recently added angled parking stalls. Not only is this a difficult driving environment, it is also a safety issue for pedestrians since drivers’ line-of-sight to adjacent pedestrians can be obscured. PTS and partner departments may consider alternative parking configurations, such as parallel stalls. Parallel loading spaces along Hughes Way are already set up temporarily during Move-In Day activities.

EV Charging
There are 19 total public charging stations with 38 charging ports in the locations shown in Table 6 below.

Anyone with a CSU permit (regardless of type and including hourly parking) can use an EV charger in any lot since the chargers are funded by state and federal grant money. Charger placement should always consider this intended dual purpose to best meet the public’s EV charging needs.

There is a need for more chargers in central parking areas of the Main Campus such as in Lot 310 and lot 425. Opportunities exist for dispersed EV vehicles in the rental pool to utilize the public charging network overnight instead of returning the vehicle to a centralized fleet area.

<table>
<thead>
<tr>
<th>Campus</th>
<th># Charging Ports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main</td>
<td>26</td>
</tr>
<tr>
<td>Foothills</td>
<td>4</td>
</tr>
<tr>
<td>West</td>
<td>2</td>
</tr>
<tr>
<td>South</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 6: Existing CSU Campus EV Chargers
Significant growth in student/employee/visitor demand for EVs is highly likely in the coming decade as technology further develops and new EV subsidies continue—so all lots should be considered for charging installations as funding becomes available.

Lots 310, 145, 115, and 195, which are more accessible from the periphery of Main Campus, are examples of recommended locations to propose for the newly announced fast charger funding through the DC Fast-Charging Plazas grant program. This program allocates funding for fast chargers (150kW+ output) in areas near U.S. 287, for which CSU qualifies. Commuter students, resident students, and employees would all benefit from the availability of these fast chargers, in addition to serving demand from general travelers along U.S. 287. The West and South campuses are in areas eligible for enhanced incentives as disproportionately impacted communities.

**Parking Garages**

PTS seeks to position parking garages in strategic areas around the Main Campus perimeter. Two of the eight proposed parking garages are built and operational: the Lake Street Garage and the South College Parking Garage indicated in Figure 21.

The remaining slated garages are delayed in the funding phase and have yet to be planned or constructed.

PTS and CSU leadership should prioritize planning and funding for these garages, which can lower the land area footprint of parking resources on the campuses by adding vertical capacity. Structured parking is also more amenable to customer-centric parking technologies that students, employees, and visitors appreciate, such as real-time parking space vacancy widgets.

**Curb Space/Curb Management**

Loading areas for departmental deliveries are distributed across the Main Campus and are primarily off-street. Curbside loading spaces are typically adjacent to buildings for convenient access.

**Loading/Delivery Best Practices**

- Negotiate with vendors and departments to establish delivery windows outside peak campus commute and transition times to reduce conflicts with other travelers
- Install signage to allow dynamic usage of select curbside loading spaces during peak commute and transition times for activities such as:
  - Food delivery
  - Rideshare and carpooling pickup/dropoff
- Align building loading space capacity with demand over time
  - Some buildings have very high loading demand, but not all loading spaces are clearly allocated to individual buildings and users may compete for limited use
Some universities and other large institutions have experimented with dynamic parking rules that allow short-term loading in spaces designated as hourly and daily parking spaces. Although the vast majority of hourly and daily parking spaces on the Main Campus are not located conveniently close to campus buildings to adequately meet loading needs, there are specific opportunities to allow loading at the following hourly lots:

- Pitkins St on-street aisle north of Canvas Stadium
- Lot 425 (Library Lot)
- Lot 310 (Lory Student Union/Engineering)

PTS can review appropriate dynamic loading and hourly parking areas in the event that the inventory of hourly parking areas is revised. Management can independently determine the preferred maximum loading time limit for these dynamic spaces, but maintaining a maximum loading time campus-wide, such as 20 minutes, provides more predictability for staff and vendors.

It is important to note that the most convenient hourly/daily/visitor parking spaces are more likely to be occupied by students, employees, and visitors, so they may not be reliable parking options for delivery drivers, especially during peak daytime hours. Therefore, these additional loading spaces should be considered a supplement to the campuses’ loading space supply, the majority of which will continue to be dedicated stalls or dynamic pickup/dropoff and loading spaces.

---

### Policies, Programs, & Initiatives

The TDMP public engagement efforts revealed a demand for more flexible parking permit types to allow drivers to affordably drive to campus according to their unique lifestyles. PTS will need to continually listen to customer feedback and design its permit offerings to meet the needs of its business model in balance with its diverse customer base.

Informal carpooling amongst students and employees is relatively common, accounting for 2% of reported primary commute modes in the 2023 Mode Split Survey. These habits should continue to be encouraged through flexible permit options such as the existing multi-vehicle shared permit option offered by PTS.

Peers like Oregon State University use a zone-based permitting system that emphasizes fewer permit types and prices lots based on historic demand and/or proximity to key campus areas. PTS should explore alternative pricing structures such as this. Diverse stakeholder focus groups can be a useful and equitable tool for brainstorming and testing these types of new systems.
PTS has a webpage dashboard that shows parking garage inventory in real time. Features like this are valuable in today’s mobile app-oriented world. PTS should explore more of these convenient tools to add value to drivers’ investment in parking permits and distribute parking demand around campus efficiently. Automated parking guidance systems (see Figure 21) are an additional capital expense that should be considered for all existing and new parking garages.

In addition, a Commuter Management Platform could enable employee permit buyers to manage their permit on the same platform as their other transportation options. It is highly recommended that PTS offer a Commuter Management Platform to allow employees to manage all their commute options from one place. Many of these platforms have communication features that will allow automated reminders about permit renewals. These reminders provide convenience to users while encouraging them to consider alternatives. Employees could receive an email that their annual permit renews soon so they can log in to take action to renew or switch to another permit type or travel mode accordingly.

The market for commuter management platforms is relatively new. Vendor offerings are generally limited to employee-facing systems managed by Human Resources departments, particularly because options like carpool matching services and Commuter Benefit Accounts are more suited to employees. However, PTS should stay up-to-date on innovative platforms that allow access and specific features for student users, too.

**Equity & Access**

Progressive parking permit pricing that is more affordable for students and especially student employees, Facilities Management staff, and HDS staff, many of whom work early and late hours outside transit service hours and daylight hours, is an ongoing request among many of the stakeholders who participated in this Plan’s outreach. Behind much of this concern about permit costs is a frustration with the viability of other transportation modes and the challenges presented by inclement weather events such as heavy snow and extreme cold. PTS should consider opportunities to alleviate parking and permit frustrations as complementary to one another. Permit cost structures, flexible permit types, and high-quality alternatives to driving are all interconnected factors that affect individual travel choices.

**ADA-ACCESSIBLE SPACES**

The 294 ADA parking spaces across Main, South, and West Campus exceed the ADA minimum of 146 parking spaces, which is based on the overall parking supply of 13,500+ spaces. These spaces can be located on the interactive campus map online to provide convenience to people with disabilities. However, van-accessible spaces should also be tracked and made available in the interactive campus map for those with mobility devices that require van stall access.

**Driving/SOV Key Takeaways**

- Pursue a path to 50% driving mode share to balance the CSU transportation system
- Better utilize the vehicle parking supply – target 80% at peak weekday times
- Identify and build more on-street pullouts to facilitate deliveries, carpooling pickup/dropoff, rideshare pickup-dropoff, and Move-in Day activities
- Continue pursuing long-term parking garage strategy, which has land use density benefits and allows for parking technologies that users seek
- Monitor demand and phase in more EV chargers in central areas of campus such as Lot 310 and Lot 425
  - Mix of Level 3 (480-volt) chargers and Level 2 (240-volt) chargers
- Place FM and similar spaces closer to building entrances when possible
- Integrate parking permit buying into a Commuter Management Platform
- Engage with parking permit customers to design more flexible and shared parking permit types that save customers money
Mode: Walking

Everyone becomes a pedestrian at some point during their time on campus, so a safe and inviting walking environment is paramount. Walkability on the Fort Collins campuses is variable, from the dense and highly walkable Main Campus to the less developed Foothills Campus. Pedestrians want high-quality sidewalks, close-by destinations, and a safe environment that separates them from other modes like motor vehicles, bikes, and scooters whenever possible.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Improve and expand intersection + mid-block crosswalks</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Pursue proposed complete streets redesigns</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Install signage and infrastructure to separate pedestrian/bike in problem areas</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Implement West Elizabeth BRT</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Expand Foothills sidewalk and bike trail network</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Encourage affordable housing in walking distance</td>
<td>![Mode Split]</td>
</tr>
<tr>
<td>Add accessible classroom layer to Interactive Campus Map</td>
<td>![Mode Split]</td>
</tr>
</tbody>
</table>

2023 Mode Split

- Walk: 7%
- Bike: 11%
- Bus: 8%
- SOV: 67%

2025 Goal

- Walk: 9%
- Bike: 12%
- Bus: 9%
- SOV: 60%

2033 Goal

- Walk: 11%
- Bike: 14%
- Bus: 12%
- SOV: 50%

---

**LEGEND**

- **MODES**
  - DRIVING
  - RIDESHARE
  - FLEET
  - BIKING
  - WALKING
  - TRANSIT
  - MICROMOBILITY
  - CARPOOL
  - CARSHARE

- **STRATEGIES**
  - INFRASTRUCTURE & CONNECTIVITY STRATEGIES
  - POLICIES, PROGRAMS & INITIATIVES STRATEGY

---

**Objective**

- Balance Mode Split
- Promote Access & Affordability
- Pursue Vision Zero Safety
- Reduce Transportation Carbon Emissions
- Main
- South
- West
- Foothills
- Implementation Horizon
- Estimated Cost

---

- **Implementation Horizon**
  - 2023
  - 2025
  - 2033

- **Estimated Cost**
  - $$
  - $$
  - $$
Figure 24: Main + South + West Campus Sidewalks & Multi-Use Trails
CSU has made great strides in transforming the Main Campus into a pedestrian-oriented environment with a high resident population and near-ubiquitous sidewalk and paved walkway infrastructure, as shown in Fig 24 on the previous page.

25% of Fort Collins CSU student + employee households are within 0.25 miles of Main Campus

25% of CSU students and employees live within 1/4 mile from campus, as shown in Figure 25. Nonetheless, there is a widely voiced housing availability and affordability crisis in Fort Collins, largely predicated on proximity to the campuses, that presents access and commuting challenges for upperclassmen students, graduate students, and employees. These circumstances disproportionately affect lower income students and employees.

Furthermore, a harsh winter climate makes walking uncomfortable and potentially dangerous for part of the year. Icy sidewalk conditions may persist in certain areas for many days at a time.

Walking Challenges
Despite measures such as dismount zones and dedicated modal infrastructure, conflict areas between pedestrians and other modes (particularly bikes and cars) persist. Adherence to the dismount zones, particularly along the Center Avenue Mall, a central campus artery, can be low at both peak and off-peak times.

Walkability at the South and Foothills Campus is lacking due to insufficient infrastructure (incomplete sidewalks, missing mid-block crossings, no north-south connector trail, and high motor vehicle travel speeds) and dispersed buildings.

Pedestrians and people who use mobility devices such as wheelchairs are at an increased risk of transportation-related serious injury, which is a core concern in the Vision Zero movement.

Walking Strategies
All people on CSU campuses become pedestrians at some point. Methods for improving the pedestrian environment on CSU campuses must acknowledge this transportation maxim. As the most vulnerable transportation mode, walking should be a central focus of Vision Zero efforts to make streets and multi-use paths safer and more inviting.
Infrastructure & Connectivity

All Campuses
- Install additional signage and separated infrastructure for other modes where feasible to mitigate conflicts and accidents with pedestrians
  - Focus on six identified Complete Streets corridors (Appendix F) and multi-use paths where crashes have been reported
- Make lighting improvements in underserved areas and in areas where FM and HDS staff frequently work, which has historically received less priority
  - Consider promoting a “safe walking routes” map highlighting walking routes with contiguously-lit sidewalks and doorways.
- Maintain crosswalk paint for visibility and expand to new areas such as mid-blocks on long roadway thoroughfares like Plum St.

Some street crosswalks can be observed with degraded paint that reduces driver awareness of pedestrians within the right of way. These street elements are important safety features that should not be neglected.

Streets such as Plum St have a lack of crosswalks along significant stretches, which creates access barriers for pedestrians. Signalized crosswalks with traffic-calming features in these areas would improve campus navigability for pedestrians. Speed bumps may also be considered to regulate vehicle speeds and make drivers more aware of potential pedestrians in the area.

Main Campus
The Center Avenue Mall provides direct access to many key buildings on campus and thus gets significant cross-traffic from cyclists and skateboarders trying to reach their final destinations. Many users can be observed disregarding the dismount zone, which the stakeholder outreach efforts for this Plan also revealed. CSU can consider the following best practices applied to pedestrian malls in similar contexts:
- Continue active enforcement of dismount zones
  - Focus on education-based enforcement and incentives
- Use Vision Zero crash data to continuously identify areas where improved signage or spot treatments are needed
- Emphasize alternative, high-quality bike routes for cyclists that minimize the urge to travel along the mall without dismounting to get to/from destinations quickly

Foothills Campus
The Foothills Campus area is newer and has historically been less oriented around pedestrian connections between buildings than a traditional university campus environment. Sidewalk infrastructure linking buildings and other facilities to one another is lacking, which many students and employees noted in the stakeholder engagement. Some participants voiced safety concerns created by this lack of dedicated walking infrastructure.

Foothills has what many users refer to as a northern and southern section, divided by Rampart Road. A desire for improved bike and pedestrian links between the two areas were frequently mentioned during TDMP public engagement events.

Considerations
- Identify new opportunities for upperclassman housing on and off campus and advocate for more rental and for-sale housing options in Fort Collins for employees

Fort Collins’ housing crisis is not unique by U.S. standards. However, this does not preclude CSU and other city leaders and organizations from approaching this complex issue uniquely. The rental housing developments CSU is pursuing on Timberline Road and Ziegler Road to provide more in-town options for employees are exemplary, creative housing solutions.
Longboards & Skateboards

Manual (unmotorized) longboards and skateboards must ride on sidewalks and other pedestrian areas only (excluding CSU dismount zones), according to Fort Collins rules. Electric longboards and skateboards, meanwhile, must use bike lanes and streets. CSU must consider safe and intuitive paths of travel of these mobility devices in the midst of other modes, especially within the Main Campus where they are particularly popular for students who want fast internal campus transportation in highly pedestrianized areas.

Safe boarding education programs are also important methods spreading awareness among current and incoming students of local on-street and off-street riding laws.

Equity & Access

The accessibility features included in the interactive campus map are excellent resources for people walking and rolling on the Main, South, and West campuses. CSU can expand this resource by incorporating an accessible classroom layer. This layer would be invaluable for students trying to determine whether individual academic facilities will be accessible to them so they can make course arrangements accordingly. Sidewalk surface quality and continuity and curb ramps are another campus accessibility feature that must be continually considered as the CSU campuses age and expand.

Walking Key Takeaways

- Install additional signage and separated infrastructure for other modes where feasible to mitigate conflicts and accidents with vulnerable pedestrians
  - Focus on 6 Toole Design Group complete streets corridors and multi-use paths where multiple modes interact.
- Make lighting improvements in less obvious areas and in areas where FM and HDS staff frequently work, which has historically received less priority
- Maintain crosswalk paint for visibility and expand to new areas such as mid-blocks on long roadway thoroughfares like Plum St
- Expand sidewalk infrastructure at Foothills Campus
- Prioritize on-campus housing so that more students have the option to commute to campus by foot
- Develop an ADA-accessible classroom layer for the Interactive Campus Map
Mode: Bikes

CSU and the City of Fort Collins have focused significant investment in their dedicated cycling infrastructure over the years. There is a large community of both serious and casual cyclists who can park at one of over 18,000 bike rack spaces spread across the Main and South campuses. Efforts to build and retrofit more bike lanes and safety features into the existing campus environment are ongoing.

Strategies

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Main</td>
<td>2025</td>
<td>$300M</td>
</tr>
<tr>
<td>Improve and expand intersection + mid-block crosswalks</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>South</td>
<td>2025</td>
<td>$20M</td>
</tr>
<tr>
<td>Pursue proposed complete streets redesigns</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>West</td>
<td>2025</td>
<td>$100M</td>
</tr>
<tr>
<td>Install signage and infrastructure to separate ped/bike in problem areas</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Foothills</td>
<td>2025</td>
<td>$50M</td>
</tr>
<tr>
<td>Implement West Elizabeth BRT</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Main</td>
<td>2025</td>
<td>$150M</td>
</tr>
<tr>
<td>Increase connected + protected bike network</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>South</td>
<td>2025</td>
<td>$5M</td>
</tr>
<tr>
<td>Improve bike lane snow removal</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>West</td>
<td>2025</td>
<td>$5M</td>
</tr>
<tr>
<td>Expand Foothills sidewalk and bike trail network</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Main</td>
<td>2033</td>
<td>$100M</td>
</tr>
<tr>
<td>Encourage affordable housing in walking distance</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>South</td>
<td>2025</td>
<td>$50M</td>
</tr>
<tr>
<td>Add physical/digital drop zones for Spin devices</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>West</td>
<td>2025</td>
<td>$10M</td>
</tr>
<tr>
<td>Create employee commuter management platform</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Foothills</td>
<td>2025</td>
<td>$50M</td>
</tr>
<tr>
<td>Expand bike route planning options and outreach</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>Main</td>
<td>2025</td>
<td>$50M</td>
</tr>
<tr>
<td>Promote bike registration and lock education to deter bike theft</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td></td>
<td>South</td>
<td>2025</td>
<td>$10M</td>
</tr>
</tbody>
</table>
Figure 26: Main + South + West Campus Biking Infrastructure
Fort Collins and CSU have a well-established cycling culture and a sustained dedication to expanding bike infrastructure for all skill levels. Separated bike lanes and multi-use paths cover most areas of the Main Campus.

As of the 2022-2023 academic year, there are 1,812 bike racks providing a total of 18,696 bike parking spaces across the Main and South Campuses. These racks are maintained by Parking & Transportation Services and Housing & Dining Services, which split ownership of these bike parking assets.

Fort Collins continues to expand the 2020 Low Stress Bike Network laid out in the 2014 Fort Collins Bicycle Master Plan. As of Spring 2023, approximately 34% of the city-wide low-stress network laid out in the plan is built, along with 33% of bike spot improvements and 38% of the full-buildout bike network. This network provides high-quality and safer bike routes for all cyclists and in particular appeals to riders referred to as “interested but concerned,” or those individuals who are open to cycling and may commute by bike some of the time on certain routes but who are wary of the safety and/or logistical implications of cycling regularly on-street and especially in mixed traffic. Once completed, this cycling infrastructure will improve safety and help more cyclists to feel comfortable riding regularly.

Cycling Challenges

Stakeholders expressed concerns about the following characteristics of the CSU multi-campus biking environment:

- Biking infrastructure and roadway conditions, especially outside the Main Campus, can be perceived as dangerous and/or intimidating for potential cyclists, especially those who fall into the “interested but concerned” rider category

- Conflict zones such as the Center Avenue Mall and key intersections and multi-use paths cause modal confrontations between cyclists and other travelers

- The prevalence of bike theft on campus is a deterrent to investing in cycling equipment

- Inclement winter weather events make cycling facilities treacherous on certain days

- Areas such as the Foothills Campus have underdeveloped cycling infrastructure

VISION ZERO & SAFETY

Since 2018, 75% of reported serious transportation crashes on the CSU campuses involve one or more bicycles, and crashes involving serious injury or death disproportionately affect cyclists because of the amount of physical exposure they have on roadways. Bike infrastructure design choices and educational outreach are two areas where CSU and partners should focus their efforts to improve the safety and comfort of cycling at all ability levels in and around the campuses.

Figure 27 shows minor, severe, and fatal crashes between 2018-2022 on Main Campus, indicating problem areas and intersections.

Many of the spot treatments and Complete Street improvements recommended in the corridor redesign concepts provided by Toole Design Group (see Appendix F) directly address the problems that arise in some of these high crash rate areas.

Cycling Strategies

**Infrastructure & Connectivity**

- Focus on building out more protected and well-connected facilities, safe crossings on streets and paths, and wayfinding features/signage

- Consider Toole Design Group’s 2022 corridor redesigns for campus and adjacent areas to improve safety and separation of cycling facilities to reduce conflict with other modes like pedestrians

- Connect Foothills Campus with multi-use trails for better internal bike access

**Route Connectivity & Conflict Zones**

CSU manages its own streets, sidewalks, and mixed-use paths, but its interior infrastructure should still be thoughtfully integrated into the local area. The on-street and off-street facilities need to be consistent with Fort Collins’ 2014 Bicycle Master Plan and 2022 Active Modes Plan priorities. CSU is positioned to be an advocate for community-wide desires for high-quality, continuous bike lanes and paths.
Figure 27: Main + South + West Campus Crashes Reported 2018-2022
Protected intersections, protected roundabouts, mid-block crossings, and other junctions should employ Complete Street design measures and other best practices to ensure cyclist path of travel is just one of the many modal considerations embedded into the overall design of corridors.

**Snow Removal**

Fort Collins experiences regular snow events throughout the winter season that create a challenging environment on local streets, especially for cyclists who are more exposed to the elements than motorists, transit riders, etc. Stakeholders identified a need to ensure bike lanes and multi-use paths are better prioritized in the campus and City snow removal efforts on a consistent basis so that safe cycling facilities remain usable in the event that snow accumulation lingers on streets for an extended period of time.

Components of effective bike facility snow removal programs include:

- Prioritization levels
- Frequency
- Equipment
- Urban design
- Communication

The City of Fort Collins and CSU both have publicly available snow removal route maps (See Appendix D, Mode: Bikes). Fort Collins also establishes four priority tiers to organize its limited plowing resources, with main streets and arterials at the top and residential streets at the bottom.

Like sidewalk infrastructure, the City and CSU should ensure bike lane snow removal priorities are strategically synchronized between connecting on-campus and off-campus routes so that cyclists have a reliable commute from start to finish.

Residents should be able to look up, understand, and anticipate the minimum snow accumulation necessary to trigger snow removal within a specified timeframe and according to reasonable City and campus policies (e.g., protected bike lanes will be plowed four hours after 1 inch of snow accumulation).

Snow removal tools and motorized vehicles appropriate for effective bike lane clearance differ significantly from that of vehicle lanes. Specific equipment that suits the unique environment of all bike facility types under the jurisdiction of the University and the City, such as protected bike lanes and shared-use paths, should be considered during the equipment acquisition and replacement process.

The designing and dimensions of bike lanes, especially those adjacent to vehicle lanes, should consider the need to displace snow safely into a reservoir area out of the bicycle right of way or that of other transportation modes, consistent with Complete Street practices.

Policies should be communicated to the public with mechanisms for the public to provide feedback about areas within the existing snow removal network that are not being cleared according to the defined standards. These steps, when well-executed, will support CSU’s bike community and cyclist satisfaction.
Policies, Programs, & Initiatives

- Acknowledge a multi-pronged approach to bike theft prevention
- Promote a range of bike route planning options
  - Integrate route planning into outreach and educational events

CSU and PTS offer an extensive program of cycling safety, education, and outreach events and communication throughout the year to attract new riders and ensure the CSU cycling community follows the rules of the road.

Along with these efforts, CSU should promote a wide range of bike route-planning tools such as Google Maps, Transit App, Komoot, RidewithGPS, etc. in order to introduce cyclists to the quickest and most efficient and safe route option for where they live and to encourage habit building. It should be very readily apparent to interested cyclists, including key groups such as incoming freshmen, new employees, and anyone relocating to a new home address that there are many modern, easy options for route planning that do not require the individual to manually plan their route on a map.

Registration & Theft Prevention

Campus bike theft emerged as a common campus cycling concern during the TDMP stakeholder engagement process. Bike thefts have increased globally in the past several years as the value of bikes and bike parts have increased as a result of supply chain issues. CSU can take steps to deter bike thefts so that more people are willing to invest in cycling gear.

CSU students and employees are encouraged to register their bikes through the CSU Police Department in order to facilitate the return and management of lost, abandoned, and stolen bikes. Registration costs $10 and is available year round, but CSUPD hosts pop-up events to reach new students particularly during fall intake. CSUPD uses grant money to distribute free U-locks, which are a more secure type of bike lock. New registrants can pick up their registration stickers at the CSUPD office on Plum St or The Spoke bike shop. It is recommended to expand the number of locations where registrants can show photo ID and pick up these stickers so that the process is more convenient for cyclists. New locations should consider student population centers and may include:

- Lake Street Garage (PTS office)
- Lory Student Center
- West Campus

ASCSU may also consider covering bike registration fees with student fees.

CSUPD uses Central Square, a registration database that is shared between many university and municipal police departments around the U.S. and is not accessible to the general public, individual bike owners, or other university departments. Universities and other organizations are moving toward more open and universal databases to maximize the pool of organizations who can participate in bike registration, identification, and recovery. Options like 529 Garage emphasize easy, app-based registration that is amenable to pop-up events. These modern databases allow shared administrator access for partners of CSUPD, such as CSU PTS, to see bike registration information that is relevant to their departmental work. Some, such as Bike Index, also use social media platforms like Twitter for outreach.

Table 7 below shows highlights of CSU and peer universities’ bike registration processes for comparison.

<table>
<thead>
<tr>
<th>University</th>
<th>Registration Platform</th>
<th>Open to User Account Management</th>
<th>Open Database</th>
<th>Administrative Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSU</td>
<td>Central Square</td>
<td>No</td>
<td>No</td>
<td>CSU Police Dept.</td>
</tr>
<tr>
<td>Oregon State</td>
<td>529 Garage</td>
<td>Yes</td>
<td>Yes</td>
<td>Public Safety</td>
</tr>
<tr>
<td>Boise State</td>
<td>Bike Index</td>
<td>Yes</td>
<td>Yes</td>
<td>Transportation &amp; Parking</td>
</tr>
<tr>
<td>UC Davis</td>
<td>Bike Index</td>
<td>Yes</td>
<td>Yes</td>
<td>Transportation Services</td>
</tr>
<tr>
<td>U Michigan</td>
<td>Internal system</td>
<td>No</td>
<td>No</td>
<td>Division of Public Safety &amp; Security</td>
</tr>
</tbody>
</table>

Table 7: CSU + Peer University Approaches To Bike Registration & Administration
Secure bike racks, another type of bike theft prevention measure, are located at the University MAX station and the Lake Street parking garage for cyclists to access with a valid permit. Permits range from $38 (summer) to $80 (annual). Despite a drop in secure bike storage utilization rates (shown in Table 9 below) at the University MAX station related to COVID-19 and reduced MAX bus service in 2020, utilization was previously high and is expected to return to these levels when bus frequency returns. CSU and PTS may consider installing more secure bike parking at the University MAX station and other central areas of campus, especially the following high-theft areas (according to CSUPD data):

- Corbett Hall
- Summit Hall
- Newsom Hall
- Cottonwood Hall
- Parmelee Hall

Table 22 in Appendix D shows campus bike theft rates in recent years. An average of over 200 bikes have been reported stolen annually at CSU since 2018, some of which involving bikes stored within the secure bike structures.

Table 8 below shows secure bike storage utilization rates across Main Campus.

<table>
<thead>
<tr>
<th>Permit Year</th>
<th>Location</th>
<th>Capacity</th>
<th>Permits Sold</th>
<th>Utilization</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>University Max Station</td>
<td>35</td>
<td>23</td>
<td>66%</td>
</tr>
<tr>
<td>2018</td>
<td>University Max Station</td>
<td>35</td>
<td>28</td>
<td>80%</td>
</tr>
<tr>
<td>2019</td>
<td>University Max Station</td>
<td>35</td>
<td>38</td>
<td>109%</td>
</tr>
<tr>
<td>2020</td>
<td>University Max Station</td>
<td>35</td>
<td>11</td>
<td>31%</td>
</tr>
<tr>
<td>2020</td>
<td>Lake Street Garage</td>
<td>60</td>
<td>3</td>
<td>5%</td>
</tr>
<tr>
<td>2021</td>
<td>University Max Station</td>
<td>35</td>
<td>18</td>
<td>51%</td>
</tr>
<tr>
<td>2021</td>
<td>Lake Street Garage</td>
<td>60</td>
<td>23</td>
<td>38%</td>
</tr>
<tr>
<td>2022</td>
<td>University Max Station</td>
<td>35</td>
<td>7</td>
<td>20%</td>
</tr>
<tr>
<td>2022</td>
<td>Lake Street Garage</td>
<td>60</td>
<td>15</td>
<td>25%</td>
</tr>
</tbody>
</table>

Table 8: Secure Bike Storage Utilization 2017-2022

In summary, two factors remain the most cost-effective bike theft prevention techniques for the majority of cyclists:

1. Education and encouragement for using bike lock best practices
2. Maintaining a robust bike registration database with the ability for owners to update their own personal information.
3. Secure bike structures are a costly secondary theft prevention measure capable of reaching a small number of cyclists who can afford them.

### Technology

- Evaluate bike registration software compatibility with large, open national bike registration databases to maximize opportunities to return stolen bikes to owners and to deter thieves over time
  - User-facing account access to update personal information and continue access beyond CSU is also a highly recommended feature
- Registration software should allow access by other departments (such as Parking & Transportation Services) and integrate with other platforms such as Commuter Management Platform where possible

### Biking Key Takeaways

- Focus on building out more protected and well-connected facilities, safe crossings on streets and paths, and wayfinding features/signage
  - Prioritize problem areas based on Vision Zero data
- Consider Toole Design Group’s 2022 corridor redesigns for campus and adjacent areas to improve safety and separation of cycling facilities to reduce conflict with other modes like pedestrians
- Connect Foothills Campus with multi-use trails for better internal bike access
- Ensure the bike lane snow removal program follows best practices and is consistently executed after inclement weather events
- Deter bike theft through bike registration best practices:
  - Open, national database
  - Customer-side profile and bike management capabilities
Mode: Transit

Local Transfort buses, including the MAX bus with its dedicated lanes and other bus rapid transit features, provide daytime service to and from the campuses. Around the Horn serves as the Main Campus circulator. Main Campus areas like the CSU Transit Center have high transit coverage. Students and employees ride Transfort free with their RamCard, although fare collection has been suspended since the onset of the COVID-19 pandemic. Regional routes like Flex, Bustang, SkiSU, the Poudre Express, and private Denver International Airport shuttles also exist. Transfort, CSU, and partners face challenges in restoring bus frequency to pre-pandemic levels.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Create employee commuter management platform</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Implement West Elizabeth BRT</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Expand Around the Horn (Frequency, # of routes, ETC)</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Expand first- and third-party transit app functionality</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Run &quot;Tap Your RamCard&quot; challenge on buses during Fall semester</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Explore student Transfort driver pipeline program</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Increase bus frequency</td>
<td>![Mode Icons]</td>
</tr>
<tr>
<td>Add Around the Horn service to UCA</td>
<td>![Mode Icons]</td>
</tr>
</tbody>
</table>
Transfort, the Fort Collins and CSU transit agency, operates 23 routes within the city. Two of these routes are suspended due to ongoing staffing shortages that have led Transfort to consolidate its resources.

Roughly 60% of Transfort’s ridership is students and employees of CSU, and certain routes like the Foothills Shuttle, Around the Horn, and 31 bus have routes and schedules that specifically serve campus needs. As of 2023, 75% of student and employee households within Fort Collins city limits were within 0.25 miles of a bus stop. However, despite this relatively broad transit coverage, low route frequencies on most bus routes limit the usefulness of proximate transit stations for the average traveler.

There were approximately 192,000 boardings in October 2022, the busiest ridership month for Transfort. More detailed ridership information for CSU students and employees is no longer available because Transfort stopped enforcing rider transit card taps for boarding purposes as an early COVID-19 mitigation measure in 2020. This policy is still in effect, and there are plans for the system to go fare-free, so this granular information may be lost indefinitely unless Transfort determines an alternative method for analyzing boardings.

Buses are wheelchair-accessible and can accommodate bikes. Most of the bus fleet can store two bikes on a rack on the front exterior of the bus, but the MAX buses can store up to four bikes inside the bus for greater rider convenience and speed. Service has been free to all users since the onset of the COVID-19 pandemic. Previously, students and employees could ride Transfort and Dial-a-Ride free with their ID cards through ASCSU subsidies.

The CSU Transit Center on the north side of Main Campus provides an origin and destination point for multiple local and regional transit lines.

Transfort maps and headways are included in the Appendix D, Mode: Transit.

Regional Transit

Regional transit options allow students and employees to travel affordably around Northern Colorado. Some of these services are free to RamCard holders.

**Flex**

The Flex bus is operated by Transfort and runs between the CSU Transit Center and the University of Colorado in Boulder with stops in Fort Collins, Loveland, and Longmont. Flex is free for RamCard holders.

**Bustang**

Offered through the Colorado Department of Transportation, the Bustang service runs between Fort Collins and downtown Denver Monday-Friday with 8 daily departures and weekdays/holidays with two daily departures from the Fort Collins Downtown Transit Center. Single rides are $10, and volume discounts are available for 10-, 20-, and 40-ride ticket books.
SkiSU

CSU offers a shuttle from the CSU Transit Center to various Colorado ski resorts on 12 weekend days throughout the winter ski season. Round-trip tickets are $23 for students and $30 for employees and must be purchased in advance based on availability.

DIA Shuttles

Groome Transportation and Landline provide service between the CSU Transit Center and Denver International Airport for $35-$40 each way. Riders must book their tickets ahead of time.

Poudre Express

The Poudre Express bus runs Monday-Friday between the CSU Transit Center and the Greeley Regional Transportation Center with stops at the University of Northern Colorado, West Greeley, Windsor, and East Fort Collins. This service is free for RamCard holders.

According to the 2021 Transfort Onboard Survey, the most prevalent service concern amongst respondents (10%) was getting bus/route information from the Transfort website or Ride Transfort mobile app.

The most common concerns amongst the student respondent subgroup were 1. bus frequency and 2. bus nighttime availability, both of which relate to Transfort’s driver resources and route scheduling constraints. These concerns are mirrored in the transit service satisfaction question included in the 2023 CSU Mode Split Survey.

Student and non-student survey participants reported an average one-way trip distance of 2.5 miles.

Figure 28: Transfort and Regional Transit Routes
Figure 29: Transport Frequency Map
Transit Challenges

One of the most common stakeholder concerns throughout the outreach effort was the frequency and hours of operation of local Transfort buses.

Primary Transfort challenges expressed include:

- Frequency, shown in Figure 27 in the previous page.
  - Most routes run infrequently, including the MAX bus, which was purpose-built as a BRT (bus rapid transit) route with high-quality service every 10-15 minutes.
  - Service is especially limited in the evenings and on weekends; these hours have been cut further in recent months to shore up the Transfort staffing shortage.
- Route planning and location tracking
  - Real-time location tracking is limited to the Transfort app.
  - Transfort app is not user-friendly.
- Availability of stops near home, especially further from campuses.
- No direct connections to University Center for the Arts, ARDEC, Wellington, or Denver International Airport.

Transit Strategies

Infrastructure & Connectivity

- Long-term: Consider alternative/expanded Around the Horn route(s).
  - Provide service between UCA, Main Campus, and remote lots.
- Continue working with Transfort to plan West Elizabeth BRT route and W Elizabeth St/S Overland Tr and Drake Rd/College Ave Mobility Hubs and identify more amenable locations.

The City of Fort Collins began planning a framework for multimodal transportation hubs in key areas around the city in its 2019 Transit Master Plan. The existing CSU Transit Center and the slated Drake Rd/College Ave and Elizabeth/Overland Mobility Hubs are highlighted as some of these newly imagined mobility centers. CSU should continue partnering with the City to plan and build these hubs so that transit riders, cyclists, carshare users, and other travelers can more easily switch modes and get the transportation resources they need to commute more conveniently, affordably, and sustainably. This revamped mobility hub concept constitutes a significant upgrade for the current CSU Transit Center, which primarily accommodates connections between buses, shuttles, and private vehicles and does not provide access to micromobility, carshare, multimodal trip planning resources, or other important elements found at high-quality mobility hubs.

The TDMP consultant’s recommendations for siting these CSU-centric mobility hubs are shown in Figure 28.

Around the Horn launched in 2014 after persistent demand for an internal circulator bus to serve Main Campus. CSU and Transfort should revisit the current route over the next decade to ensure it is still serving Main and South Campus circulation needs, including for access between parking lots, parking garages, and campus academic and employment centers. Stakeholders who have classes and business at the UCA on the east campus expressed concerns that the Around the Horn does not serve this area of Main Campus.

Policies, Programs, & Initiatives

- Collaborate with Transfort to find ways to restore bus route frequency across the system.
  - Consider shifting Around the Horn, Gold, and/or 32 routes to CSU management and operation to enable new routing and frequency possibilities.
- Consider employing students as bus drivers with CDL attainment assistance to further support rider demand for greater frequency and mitigate Transfort driver shortage.
  - Launch a “Tap Your RamCard!” challenge for a specific period each Fall to continue collecting valuable student/employee ridership data that was lost when Transfort ceased fare collection in 2020.
  - Identify and advertise a prize as an incentive.

Some of CSU's peers have found great success by thinking creatively about transit operations and staffing. The University of Michigan has a multi-route campus bus system with a driver team made up of current students. Davis, California's entire fixed-route bus system, including multiple campus-centric routes, are staffed by students from the University of California, Davis. These systems maintain high-frequency routes to meet rider needs and have exemplary driver safety statistics.

CSU already has a history of engaging with student drivers through its long-running RamRide program as well as Safe Ride and Courtesy Shuttle programs. See Figure 48 in Appendix D, Mode: Transit for an alternative routes analysis for the Around the Horn circulator shuttle at Main Campus.

Technology

Transfort should utilize the open GTFS (general transit feed specification) Realtime standard to make real-time bus locations, arrival times, and disruptions available for use in third-party transit apps so that users, especially technology-oriented students, can have more choices for bus route planning and location tracking. A full list of these third-party apps should be provided on both the Transfort and PTS websites so users can make informed transit planning decisions accordingly. Currently, only the Transfort web app provides GTFS services, but it does not also offer modern trip planning functionality.
Figure 30: Recommended Mobility Hub Sites
As a federally-funded municipal transit agency, Transfort and its services are compliant with all Americans with Disabilities Act (ADA) statutes. The Transfort website has broad language translation and text-to-speech functionality and buses have standard wheelchair accessibility.

CSU, Transfort, and the City of Fort Collins should continually assess bus stops to ensure they have adequate paved surfaces for boarding and deboarding buses safely without assistance. More bus shelters at strategic locations on campus should be included in funding considerations.

PTS recently launched its own paratransit service, the Courtesy Shuttle, which is available for students and employees with documented permanent disabilities in accordance with the ADA. A supplement to Transfort’s Dial-A-Ride service, the Courtesy Shuttle is an excellent addition to CSU’s transportation options that leverages university funding to provide timely rides to and from campus (including Main, South, West, Foothills). Looking ahead to further program improvement, PTS should consider accepting temporary disabilities as a qualification for Courtesy Shuttle access to better align with public paratransit services that accept riders with ADA-defined temporary disabilities as a general best practice.

Transit Key Takeaways

⊙ Consider alternative/expanded Around the Horn route to better serve UCA, Main Campus connections, and remote parking lots
⊙ Collaborate with Transfort to find ways to restore bus frequency, which was a key concern raised in stakeholder feedback
  ⊙ Consider shifting Around the Horn, Gold, and/or 32 routes to CSU management and operation to enable new routing and frequency possibilities
  ⊙ Consider employing students as bus drivers with CDL attainment assistance, which is a successful model used at some peer universities
⊙ Advocate for real-time Transfort bus location info availability for third-party transit apps so that riders have more choices for trip planning
⊙ Prioritize multimodal mobility hubs and bus shelters as funding becomes available
Mode: Micromobility

Manual and electric scooters and bikes have emerged in the past decade as a popular and efficient transportation mode and first-/last-mile connector. Spin, a national micromobility service, manages 450 dockless e-bikes and e-scooters spread across the Main Campus. These devices are new to City and university authorities who must balance embracing their utility with organizing them safely and conveniently within complex campus streetscapes.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Improve and expand intersection + mid-block crosswalks</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Pursue proposed complete streets redesigns</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Install signage and infrastructure to separate ped/bike in problem areas</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Increase connected + protected bike network</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Improve bike lane snow removal</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Add physical/digital drop zones for Spin devices</td>
<td>![Icons for various transportation modes]</td>
</tr>
<tr>
<td>Offer e-device safety and on-campus storage education</td>
<td>![Icons for various transportation modes]</td>
</tr>
</tbody>
</table>
CSU has partnered with several micromobility providers since 2020 as the technological viability and public interest in these programs has grown. The Pace bikeshare pilot program went out of business in 2020 in response to COVID-19 lockdown measures. Then, Bird ended a yearlong e-scooter pilot in April 2021. Bird provided public data from this pilot program that shows valuable insights about rider habits. Many providers have been open and active in sharing ridership data with local governments and the public, an encouraging trend for this often-competitive industry.

The current Spin micromobility pilot program was launched in July 2021 to provide a managed e-bike and e-scooter system throughout CSU and the City of Fort Collins.

Usage peaked in Fall 2021 when promotion of the new program was at its highest. Riders tend to favor scooters over bikes, partially due to the greater prevalence of the scooters. E-scooters are cheaper to maintain than e-bikes, so they are preferred by most micromobility companies.

Additional Spin program data can be found in Appendix D, Mode: Micromobility.

In accordance with the pilot program contract, Spin maintains and distributes the following inventory of dockless e-scooters and e-bikes:

<table>
<thead>
<tr>
<th>Spin Device</th>
<th>CSU Campus Inventory</th>
<th>Fort Collins Inventory</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-scooter</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>E-bike</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>Subtotal</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td>Total</td>
<td>900</td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Spin Device Inventory

Since its inception, the Spin program has facilitated more than 185,000 e-scooter and e-bike trips starting or ending on the CSU campus.

There is also a growing market for personal electric-assisted scooters and bikes appealing to various campus commuters, especially those living close to campus like students.
Micromobility Challenges

- Campus resident students do not have clear options to charge and store their e-devices; charging infrastructure does not exist in outdoor bike rack areas, and meanwhile e-devices are not permitted inside academic buildings or residence halls
- Common lithium-ion batteries function best at room temperature and can be hazardous at extreme temperatures, but appropriate and safe indoor building space for these devices does not currently exist on campus and would be expensive to construct
- The distribution of Spin devices can be inconsistent throughout the day, so users may not be able to count on them when they want/need them
- Safe use of e-devices in accordance with local street laws is an ongoing educational effort that causes confusion
- Spin devices are supposed to be parked at bike racks on CSU campus but may be parked anywhere on sidewalks out of the pedestrian right of way throughout the rest of Fort Collins
- There is a lack of appropriate mobility hub-style locations to transfer between e-devices and other modes

Micromobility Strategies

### Infrastructure & Connectivity

**Spin**

- Drop zones highlighted in-app and with pavement paint to encourage distribution of e-devices in specific areas and to provide organization that better distinguishes between rentable Spin e-devices and personal bikes and scooters

**Personal E-devices**

Personal battery-assisted bikes, scooters, skateboards, and the like are growing in popularity, especially amongst the student-aged population. However, on-campus residents face challenges storing and charging their devices because e-devices, which are potential fire hazards and can damage building facilities during transport, are not allowed in CSU residence halls. There are no clearly appropriate storage locations in residence hall areas for these devices.

CSU must consider the pros and cons of offering dedicated e-device storage and charging facilities. These factors should be evaluated on an ongoing basis as battery technology and e-device ownership trends change.

Housing & Dining Services and university leadership should follow e-device storage/charging facility norms and best practices as they become established, although the associated costs would be high.

### Policies, Programs, & Initiatives

**Vision Zero & Safety**

PTS, CSU PD, and partners must maintain a sustained marketing and education campaign to ensure new and returning students understand and adhere to campus and city street ordinances and safety best practices when riding personal and shared e-devices.

**Personal E-devices**

Rentable e-devices like the Spin devices around Fort Collins are valuable components for enabling multimodal transportation habits amongst students, employees, and visitors to CSU, but their novelty in the market necessitates thoughtful policies and programs to make them successful and to create organization within the network.

The University can provide guidance to incoming and current students about e-device buying guides that highlight brands with known reliability ratings and/or otherwise encourage buyers to “shop smart.”

There is also an opportunity to engage the Fort Collins Fire Department in e-device education and outreach efforts specific to building charging issues. News sources like SOURCE should also be partners in e-device safety communications.

### Technology

As commuter management platforms expand to include students, CSU can explore incorporating a Spin device map and rental flow to the mobile app.

### Micromobility Key Takeaways

- Work with Spin to establish defined Spin device parking zones on campus for improved organization and to keep sidewalks clear
- Consider Spin credits or incentives for incoming students and/or campus residents with ATFAB funds
- Expand education and awareness of personal e-device building/charging policies for safety
- Follow e-device storage/charging facility norms and best practices as they become established, although costs will be high
Mode: Carpool & Vanpool

Organized carpool/vanpool services and participation are very low at CSU. However, with adequate support and promotion, carpool and vanpool programs present a promising, cost-effective option for employees with regular schedules.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create employee commuter management platform</td>
<td></td>
</tr>
<tr>
<td>Establish and promote carpool/vanpool matching program</td>
<td></td>
</tr>
</tbody>
</table>
According to current rider and driver data from VanGo, the official vanpooling program operating in the NFRMPO area, there are no regularly scheduled trips originating or ending at the CSU campus. Additionally, there has been no significant use of VanGo (<5 users) in the CSU user group since at least 2014, showing it is not just a COVID-19-era drop in shared ride interest. CSU previously hosted an internal carpool/vanpool matching program for students and employees in the VanGo area and sold specialized vanpool permits, but it is no longer active.

Similarly, current data from the Denver Regional Council of Governments’ Way To Go vanpool program shows there are no users within the CSU network.

There is a clear opportunity to expand the reach of vanpooling as a viable, affordable, and attractive option amongst the CSU community, particularly for staff with predictable weekly schedules. Easy-to-use rider matching and payment tools can remove barriers to trying out carpooling as a primary commute mode. Financial incentives can further nudge employees to try this option.

Some stakeholder outreach participants expressed skepticism that they would be able to rely on a formal carpooling arrangement on a regular basis because of last-minute plans, family care, and other daily activities that require flexibility.

Informal carpooling arrangements between acquainted students and/or employees are a relatively prevalent mode choice (2% of total commuters, according to the 2023 Mode Split Survey). Although these arrangements should be highly encouraged for their transportation network efficiency and cost savings benefits, they are fundamentally different from formal, organized carpool/vanpool programs, which are often arranged amongst strangers with similar home addresses and schedules.

### Carpool & Vanpool Challenges
- Awareness of programs and structures to match carpoolers and vanpoolers with one another is low
- No in-house CSU option exists for potentially interested carpool/vanpool users who trust the CSU brand
- Employees are unsure of how to navigate unforeseen events that could disrupt their planned carpooling arrangements, which causes trepidation

### Carpool & Vanpool Strategies

#### Infrastructure & Connectivity
- Consider restricting strategically located, convenient parking spaces for “Vanpool/Carpool Only” use

#### Policies, Programs, & Initiatives
- Offer internal carpool- and vanpool-matching events and/or a user-friendly digital platform to assist interested users in finding fellow riders who share common routes, work schedules, and other common interests
- Digital platform ideally should integrate with the Commuter Management Platform
- Carpool/vanpool matching platform should be prominently marketed to new and existing employees
- CSU/PTS should spread awareness of its guaranteed ride home option for vanpool/carpool users whose group ride is interrupted by driver emergencies and similar circumstances

---

Example of UCLA Transportation Vanpool | Flicker, LIC CC By 2.0
CSU and PTS should review software platforms that can manage commuter vanpool services and allow registered users to self-manage account details such as: manage their own profiles and conduct account activities like:

- Payment
- Route matching and scheduling
- Personal information updates

Many modern Commuter Management Platforms have options to manage this carpool/vanpool service as both a program administrator and a user.

**Equity & Access**

Carpool/vanpool arrangements are already cost-competitive by virtue of the shared nature of this mode. Participants typically share the cost of gas, maintenance, and insurance. Nevertheless, municipal and Metropolitan Planning Organization (MPO) subsidies and other grant programs exist to help bring down the cost of carpool and vanpool services for individual participants even further. CSU should seek out these opportunities as they become available.

To ensure the CSU vanpool program is inclusive and accessible, CSU should actively seek out vanpool vehicles that are equipped with lifts for riders with mobility challenges.

**Carpool/Vanpool Key Takeaways**

- Consider restricting strategically located, convenient parking spaces for “Vanpool/Carpool Only” use
- Offer internal carpool- and vanpool-matching events and/or a user-friendly digital platform to assist interested users in finding fellow riders who share common routes, work schedules, and other common interests
  - Digital platform ideally should integrate with the Commuter Management Platform
- Carpool/vanpool matching platform should be prominently marketed to new and existing employees
- CSU/PTS should work with taxi services, Uber, and Lyft to offer a guaranteed ride home option for vanpool/carpool users whose group ride is interrupted by driver emergencies or similar circumstances
Mode: Rideshare

Uber, Lyft, RamRide, RamRide Secure, and RamRide X Lyft operate on campus to provide on-demand rides, expanding multimodal transportation opportunities for students and employees. Dedicated pickup/dropoff areas have been established in key areas, with the opportunity to establish even more rideshare and/or dual rideshare/delivery spaces where needed.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>![icons]</td>
</tr>
<tr>
<td>Add on-street pullouts</td>
<td>![icons]</td>
</tr>
<tr>
<td>Install dynamic loading signage system</td>
<td>![icons]</td>
</tr>
<tr>
<td>Prioritize rideshare curbside spaces over pull in/out spaces</td>
<td>![icons]</td>
</tr>
</tbody>
</table>

Objective | Campus Context | Implementation Horizon | Estimated Cost
---|---|---|---
Balance Mode Split | | | $$
Promote Access & Affordability | | | $$
Pursue Vision Zero Safety | | | $
Reduce Transportation Carbon Emissions | | | $
Main | South | West | Footpaths | | | $

Legend: ![icons] INFRASTRUCTURE & CONNECTIVITY STRATEGIES | ![icons] POLICIES, PROGRAMS & INITIATIVES STRATEGY
Rideshare services such as Uber, Lyft (known in the industry as TNCs, or transportation network companies) and CSU’s in-house RamRide program are a popular secondary transportation option at CSU and around Fort Collins, especially amongst students and visitors/tourists for leisure purposes.

While TNCs share limited ridership data, the most frequently used pickup and dropoff locations are provided to CSU officials to strategically place dedicated pickup signage. These locations across campus are shown in the map in Appendix D, Mode: Rideshare.

Personal dropoff (“kiss and ride”) activity, which shares infrastructure needs with rideshare, is included in this section.

**RamRide x Lyft & RamRide Secure**

RamRide began in 2003 as a fleet of volunteer student drivers offering safe, free rides home on weekend nights. Today, the volunteer model continues, with service available on Fridays and Saturdays 10pm-3am. Drivers use fleet vehicles maintained by the Fleet Services team.

On Thursdays, rides are provided through RamRide x Lyft. These rides are booked through the Lyft app and are eligible for more prominent physical signage generated by the RamRide app.

RamRide Secure is another partnership between RamRide and Lyft. Students with financial need can receive ten (10) $12 Lyft credits. Subsidies are funded through ASCSU fees.

**Rideshare Challenges**
- Stakeholders expressed interest in the standard RamRide service resuming on Thursdays
- Existing curb space for safe rideshare and kiss and ride activity is limited

**Rideshare Strategies**

**Infrastructure & Connectivity**

Curb uses for ridesharing, drop-offs, loading/unloading, and other time-limited uses like deliveries can expand through clear, dynamic signage and targeted technology. These tools will improve curb space productivity while ensuring safe interaction between vehicles and other modes.

- Improve rideshare zone identification and wayfinding through coordination with TNCs
- More—and more prominent—physical signage

Expand rideshare curbside spaces, which encourage circulation and turnover compared to designated ‘back in, back out’ parking spaces and are safer and easier for riders and drivers to locate with the appropriate signage.

Identify areas for dynamic TNC/taxi and kiss and ride activity.

The PTS curb assessment completed in Fall 2022 identified key areas with potential for vehicle pullouts and other infrastructure to facilitate on-street vehicle activity to assist deliveries, pickup/dropoff, and other curb uses. In particular, more on-street access is needed along streets such as Plum, Pitkin, and Hughes.

**Priority Pickup/Dropoff Areas =**

\[
\text{Low street complexity} \quad + \quad \text{High public demand}
\]

Some key recommended Kiss and Ride/TNC locations are shown in Figure 32 on the next page. Many of these locations would require reconfigurations of existing curbs, sidewalks, bike lanes, and other infrastructure to accommodate new pullouts.
Rideshare Key Takeaways

- Improve rideshare zone identification and wayfinding through coordination with TNCs
  - More—and more prominent—physical signage

- Expand rideshare curbside spaces, which encourage circulation and turnover compared to designated ‘back in, back out’ parking spaces and are safer and easier for riders and drivers to locate with the appropriate signage

- Identify new areas for dynamic TNC/taxi and kiss and ride activity
  - CSU Transit Center
  - Lake Street/Center Ave. Mall
  - Other areas as identified
Mode: Carshare

Zipcar’s 5 locations on the Main and West Campus provide another tool in multi-modal travelers’ belts. Good Zipcar service is defined by clean and useful vehicles, a vehicle fleet that is right-sized for proximate demand, and robust local marketing to ensure the new user funnel remains steady.

Strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>![icons]</td>
</tr>
<tr>
<td>Explore Zipcar market potential at CTC, Foothills/South Campus, and new residences</td>
<td>![icons]</td>
</tr>
<tr>
<td>Increase Zipcar marketing and sign-up efforts/events</td>
<td>![icons]</td>
</tr>
</tbody>
</table>

### 2023 Mode Split
- Bus: 8%
- Carpool/Vanpool: 2%
- Bicycle: 11%
- Walk: 7%
- Other: 3%
- SOV: 67%

### 2025 Goal
- Bus: 9%
- Carpool/Vanpool: 4%
- Bicycle: 12%
- Walk: 9%
- Other: 3%
- SOV: 60%

### 2033 Goal
- Bus: 12%
- Carpool/Vanpool: 6%
- Bicycle: 14%
- Walk: 11%
- Other: 6%
- SOV: 56%

### Objective
- Balance Mode Split
- Promote Access & Affordability
- Pursue Vision Zero Safety
- Reduce Transportation Emissions

### Implementation Horizon
- Main
- South
- West
- Foothills

### Estimated Cost
- $$$
- $
The public carshare service on campus run by Zipcar has grown since its launch from 4 to 11 vehicles.

This service is not intended as primary commute mode to bring users to/from campus regularly. Rather, it facilitates a car-lite lifestyle amongst students, campus housing residents, and employees, lowering the demand for parking on campus compared to a scenario where each individual Zipcar user instead uses a resident or commuter parking permit instead. Users with occasional vehicle needs, such as for a grocery store run, can rent a Zipcar for one hour, unlock the vehicle with their phone, and then leave it for the next person to use when their trip is completed.

The current Zipcar vehicle inventory consists of 11 sedans and SUVs, some of which have all-wheel drive capabilities. The vehicles are spread across 5 locations on the west side of the Main Campus and within the West Campus student resident area. This program requires that all vehicles be returned to the same Zipcar-designated parking space/area at the end of each trip.

![Figure 33: Existing Zipcar Campus Locations at Main/West Campus](image)

<table>
<thead>
<tr>
<th>User</th>
<th>Membership (Annual)</th>
<th>Hourly</th>
<th>Daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student/Faculty/Staff</td>
<td>$35(^1)</td>
<td>$11.50</td>
<td>$82.50</td>
</tr>
<tr>
<td>Alumni</td>
<td>$45(^2)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) Compared to $90 for standard Zipcar members.  
\(^2\) $90 after first year.

*Table 10: Zipcar Student/Employee/Alumni Rates*
Carshare Challenges
- Incoming students and new employees may be unaware of Zipcar availability, leading them to plan for other transportation arrangements and form other habits.
- Those unfamiliar with carshare services may not know how carshare can factor into a multimodal lifestyle or contribute to monthly transportation budget savings.
- Stakeholders have expressed concerns that vehicles are unclean when they receive them.
- Vehicle availability and rental rates can fluctuate unpredictably; these dynamics are not directly within CSU’s control.

Carshare Strategies

Infrastructure & Connectivity
- Monitor utilization rates and advocate for carshare space expansion in existing areas accordingly.
- Create a plan to include carshare spaces at new residential buildings at ratios aligned with the utilization per bedroom observed at existing carshare sites to ensure supply is right-sized and the process is streamlined.
- Explore potential for Zipcar spaces at South Campus and Foothills Campus, which would allow for errands and connections between campuses.

Policies, Programs, & Initiatives
- Increase marketing of Zipcar availability in new and prospective student materials.
- Engage with Zipcar to resume Zipcar marketing and sign-up kiosks at key events; CSU students/Rambassadors or PTS staff could co-host these events.

Carshare Key Takeaways
- Monitor utilization rates and consider carshare space expansion in existing areas accordingly.
- Create a plan to include carshare spaces at new residential buildings at ratios aligned with the utilization per bedroom observed at existing carshare sites to ensure supply is right-sized and process is streamlined.
- Explore potential for Zipcar spaces at South Campus and Foothills Campus, which would allow for errands and connections between campuses.
- Increase marketing of Zipcar availability in new and prospective student materials.
- Engage with Zipcar to resume Zipcar marketing and sign-up kiosks at key events; CSU students/Rambassadors or PTS staff could co-host these events.
**Mode: Fleet**

CSU's fleet of employee rental pool vehicles give staff access to appropriate vehicles for work purposes, freeing them to make commute decisions more independently. The location and check-in/check-out experience for this rental program heavily influences utilization.

---

**Legends**

- **MODES**: Driving, Rideshare, Fleet, Biking, Walking, Transit, Micromobility, Carpool, Carshare
- **INFRASTRUCTURE & CONNECTIVITY STRATEGIES**: Policies, Programs & Initiatives Strategy

**Strategies**

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
<th>Objective</th>
<th>Campus Context</th>
<th>Implementation Horizon</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decentralize motor rental pool</td>
<td>![Car, Vanpool]</td>
<td>Balance Mode Split</td>
<td>Main, South, West, Foothills</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Add strategic EV charging locations</td>
<td>![Car]</td>
<td>Promote Access &amp; Affordability</td>
<td>Main, South, West, Foothills</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>Update motor pool rental process to digital</td>
<td>![Carpool]</td>
<td>Pursue Vision Zero Safety</td>
<td>Main, South, West, Foothills</td>
<td></td>
<td>$$$</td>
</tr>
<tr>
<td>Right-size fleet vehicle supply and types</td>
<td>![Car]</td>
<td>Reduce Transportation Emissions</td>
<td>Main, South, West, Foothills</td>
<td></td>
<td>$</td>
</tr>
<tr>
<td>Implement fleet management software</td>
<td>![Car]</td>
<td>Carbon Emissions</td>
<td>Main, South, West, Foothills</td>
<td></td>
<td>$$</td>
</tr>
<tr>
<td>Transition fleet to EVs as applicable</td>
<td>![Car]</td>
<td></td>
<td></td>
<td></td>
<td>$$$</td>
</tr>
</tbody>
</table>
Rental Motor Pool

CSU maintains a fleet of 74 light- and heavy-duty vehicles that can be rented by the day by any department upon approval. This rental option is an alternative to personal vehicle use for University business purposes and allows staff and faculty to use specialized vehicles for certain tasks, such as trucks and vans. Like Zipcar, the CSU rental pool offers users access to a shared, specialized vehicle as needed, which opens the door for employees who travel often on University business to consider alternative transportation modes for their commute to campus.

The University's rental pool vehicles are stored and maintained at the motor pool lot at 201 W. Pitkin, a prime location at the Main Campus. Renters must submit a manual form to PTS with departmental and other booking information in advance. The minimum age to check out the vehicles is 18, allowing students and younger employees to take advantage of this transportation resource.

Charter Buses

In addition, 8 charter buses that are available for departmental use are stored at the bus barn at 424 Cross Dr. at the South Campus. Renters follow the same form submission process with PTS to check out the buses.

These buses enable many transportation services such as SkiSU.

Critical & Departmental Fleets

PTS’ Fleet Services team also maintains a current count of 326 critical fleet vehicles used by FM, HDS, CSUPD, and PTS, and hundreds more state, federal, and departmental vehicles of various types. These vehicles are stored all over campus and even in other states as needed. Local vehicles are maintained at the centralized fleet service facility at 201 W. Pitkin.

Fleet Challenges

- Rental vehicles are in a centralized lot that is cumbersome to travel to for many employees who may otherwise be interested in using the service
- The rental process is low-tech and manual; the checkout process is less seamless and convenient than Zipcars, for example

Fleet Strategies

**Infrastructure & Connectivity**

- Transition to a decentralized rental pool dispersed throughout key Main Campus lots, see Figure 33
- Consider suitable location for one additional maintenance facility in peripheral Main, South, or Foothills campus area to meet needs of rental vehicles as well as the 700+ critical and departmental fleet vehicles
- Continue to right-size the vehicle fleets according to the 2019 Fleet Management Report provided by Mercury Associates, Inc.
- Adjust for increased utilization rate resulting from improved motor pool rental process
- Consider more EV vehicle adoption for appropriate vehicles as EV technologies mature
- Prioritize Level 2 EV chargers, which offer a balance between infrastructure cost and charging speed (can charge a typical vehicle overnight)
- Motor pool fleet should primarily rely on public charging infrastructure in the parking lots where the dispersed fleet is located
- Consider lighter-duty vehicles for certain needs. See Fig 34 below for examples of alternative vehicle options Some recommended locations for dispersed vehicles are shown in Figure 35 on page 67.

---

**Table 11: Rental Fleet Fuel Types**

<table>
<thead>
<tr>
<th></th>
<th>Unleaded</th>
<th>Hybrid</th>
<th>Electric</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>65</td>
<td>5</td>
<td>4</td>
<td>74</td>
</tr>
</tbody>
</table>

**Table 12: Rental Fleet EPA Weight Class**

<table>
<thead>
<tr>
<th></th>
<th>Light Duty (up to 8,500 lb. GVWR)</th>
<th>Heavy Duty (8,500+ lb. GVWR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>44</td>
<td>30</td>
</tr>
</tbody>
</table>

**Table 13: Charter Bus Full Type and EPA Weight Class**

<table>
<thead>
<tr>
<th></th>
<th>MiniVan</th>
<th>Motorcycle/UTV</th>
<th>Pickup Truck</th>
<th>Sedan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diesel</td>
<td>Grand Caravan</td>
<td>4WD UTV</td>
<td>F150</td>
<td>CruC</td>
</tr>
<tr>
<td>Hybrid</td>
<td>Polaris GEM e4</td>
<td>Coaster Venture</td>
<td>Polaris GEM e+ XD</td>
<td>RadRunner Plus</td>
</tr>
<tr>
<td>Electric</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 34: Light-Duty Vehicle EV Alternatives**
NEW MAINTENANCE FACILITY
PTS and FM expressed a growing need to look at new sites for a fleet vehicle maintenance facility. The location of this potential facility will be based on many complex factors and University priorities, but the process should include best practices such as:

- Referring to PTS and FM internal stakeholders to share expertise, institutional and local knowledge, and internal priorities for suitable locations
- Placing the site in a relatively centralized location within the multi-campus system but avoiding the highest-value CSU land so that prime land can be preserved for core academic and residential purposes

Maintenance centralization is critical for achieving the economies of scale necessary to run a large fleet like CSU’s. Departments should bring these considerations to the table during the ongoing Campus Master Plan process.

A new location on the periphery of campus, such as the border between Main and South Campus, could help the CSU fleet team optimize its operations while right-sizing its facility. Less fleet parking lot area would be needed as a result of relocating the motor pool rental vehicles to dispersed locations across the Main, South, and Foothills campuses, so the current fleet storage and maintenance facility at Facilities South on W Pitkin St and Libbie Coy Way may no longer but suitable for PTS’ fleet operations needs in the future. This area has been identified as a prime academic or utilities redevelopment opportunity.

Facilities South currently has a gas tank that is centrally located and supports multiple customer/vehicle types. This is an important vehicle refueling station that should be maintained for continued departmental use.

Infrastructure & Connectivity
- Launch mobile app for motor pool rentals, preferably one that can integrate with the proposed commuter management platform
- Adopt modern fleet management software on the same platform as motor pool rentals

More specific software selection criteria can be found below and in Chapter 5: Technology Summary.

Technology
Renter interest and customer satisfaction is increasingly driven by convenience features such as mobile access. The CSU motor pool rental fleet check-out process is currently manual and cumbersome, which reduces its accessibility and appeal. PTS should move its rental check-out and check-in process to a mobile app with features that meet its internal vehicle management standards as well as the desires of its customers.

- Mobile apps with in-vehicle hardware integrations will allow renters to easily locate vehicles in the dispersed parking lots
- Key pickup/dropoff kiosks for these purposes typically cost $10,000-$20,000 but allow for after-hours, convenient check-in and check-out.
- In-vehicle key systems like those in Zipcars allow for a more asset-light approach to these rentals, however.
- Vehicle condition reports can be completed easily and accurately by using a smartphone camera.

Likewise, the fleets are currently not managed with modern fleet management and maintenance software. PTS should adopt this software in order to track vehicle usage, maintenance, depreciation, and turnover. Technology best practices and crucial features will be addressed in the Technology Summary section.

Fleet Key Takeaways
- Transition to a decentralized rental pool dispersed throughout key Main Campus lots
- Consider suitable location for one additional maintenance facility in peripheral Main, South, or Foothills campus area to meet needs of rental vehicles as well as the 700+ critical and departmental fleet vehicles
- Continue to right-size the vehicle fleets according to the 2019 Fleet Management Report provided by Mercury Associates, Inc.
  - Adjust for increased utilization rate resulting from improved motor pool rental process
  - Consider more EV vehicle adoption for appropriate vehicles as EV technologies mature
- Launch mobile app for motor pool rentals
- Adopt modern fleet management software
Figure 35: Recommended Dispersed Rental Pool Locations
## Strategy Summary Matrices

### Strategy Summary Matrices

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
<th>Objective</th>
<th>Campus Context</th>
<th>Implementation</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement Mobility Hubs</td>
<td>🚗 🚙 🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Improve and expand intersection + mid-block crosswalks</td>
<td>🚗 🚙 🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Pursue proposed complete streets redesigns</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Install signage and infrastructure to separate ped/bike in problem areas</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Implement West Elizabeth BRT</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Increase connected + protected bike network</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Improve bike lane snow removal</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Expand Foothills sidewalk and bike trail network</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Decentralize motor rental pool</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Encourage affordable housing in walking distance</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Add on-street pullouts</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Install dynamic loading signage system</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Add physical/digital drop zones for Spin devices</td>
<td>🚴</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Add strategic EV charging locations</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Create more parking permit types/stalls for carpoolers and early/late workers</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Prioritize rideshare curbside spaces over pull in/out spaces</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Expand Around the Horn <em>(Frequency, # of routes, etc.)</em></td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Add &quot;carpool/vanpool&quot; parking spaces in preferred locations</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Add Around the Horn service to UCA</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
<tr>
<td>Transition vehicle parking supply to garages</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$$$</td>
</tr>
<tr>
<td>Lower parking ratios to raise parking utilization</td>
<td>🚗 🚙</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>✔ ✔ ✔ ✔</td>
<td>$</td>
</tr>
</tbody>
</table>

*Table 14: Infrastructure & Connectivity Strategies Summary*
### Table 15: Policies, Programs & Initiatives Strategy Summary

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Mode(s)</th>
<th>Objective</th>
<th>Campus Context</th>
<th>Implementation Horizon</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create employee commuter management platform</td>
<td>🚴‍♂️ 🎨</td>
<td>✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Expand bike route planning options and outreach</td>
<td>🚴‍♂️</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Expand first- and third-party transit app functionality</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Run &quot;Tap Your RamCard&quot; challenge on buses during Fall semester</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Explore student Transport driver pipeline program</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Increase bus frequency</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Establish and promote carpool/vanpool matching program</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Update motor pool rental process to digital</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Offer e-device safety and on-campus storage education</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$$$</td>
</tr>
<tr>
<td>Explore Zipcar market potential at CTC, Foothills/South Campus, and new residences</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Increase Zipcar marketing and sign-up efforts/events</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Promote bike registration and lock education to deter bike theft</td>
<td>🚴‍♂️</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Right-size fleet vehicle supply and types</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Implement fleet management software</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
<tr>
<td>Transition fleet to EVs as applicable</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$$$</td>
</tr>
<tr>
<td>Add accessible classroom layer to Interactive Campus Map</td>
<td>🛺</td>
<td>✓ ✓ ✓ ✓</td>
<td>✓</td>
<td>✓</td>
<td>$</td>
</tr>
</tbody>
</table>

**Legend:**
- **DRIVING:** Commute by personal vehicle
- **RIDESHARE:** Carpool or vanpool
- **FLEET:** Fleet vehicle
- **BIKING:** Bike to work
- **WALKING:** Walk to work
- **TRANSIT:** Public transit
- **MICROMOBILITY:** Electric scooter, electric bike, electric unicycle
- **CARPOOL:** Carpool/vanpool
- **CARSHARE:** Carsharing program
Physical Accessibility for People with Disabilities

CSU adopted a comprehensive “Inclusive Physical & Virtual Campus” policy in 2017 that formally establishes the removal of barriers to accessing campus as essential to the core educational mission of the University. Departments like PTS have incorporated these policies and standards into their service delivery.

CSU maintains an interactive accessibility map that displays ADA-accessible parking spaces, entrances with automated door openers, and preferred pathways but does not maintain a list of accessible classrooms. Students must determine the level of accessibility of an assigned classroom independently and then inquire to the Student Disability Center with concerns, at which point the course can be permanently relocated to an accessible classroom.

The Transfort website and RideTransfort mobile app provide accessibility features for students, employees, and visitors traveling by bus, like a full-text layout that allows the use of accessibility features for users with visual impairments. Additionally, the website itself, with its built-in trip planning tool, allows users to Google Translate text into dozens of languages. The website also directs users to try Google Maps transit mode (available as a web app or mobile app) for an alternate trip planning experience. Translation into many different languages is available within Google Maps. Many companies and services rely on the deep resources and reach of Google apps to bring physical accessibility and foreign language capabilities to their offerings.

There are 294 ADA stalls across the Main, South, and West campuses out of 13,523 total spaces. The 2010 Americans with Disabilities Act requires 20 ADA-accessible stalls plus 1 stall for each 100 spaces over 1,000 total parking spaces. This requirement amounts to 146 ADA-accessible stalls for the 13,523 total stalls at CSU. The ADA stall supply is therefore significantly greater than the federal guideline minimum of 146 spaces. Nevertheless, ADA stall availability serving new building additions added in the coming years should remain a priority, as should the even spread of van-accessible stalls.

Curb Access

CSU has extensive curb assets and is early in the process of reimagining the benefits these street elements can have for overall campus access. Much of the current curb network on the main campus is dedicated to vehicle parking, vehicle right of way, or bike right of way. The current designations do not always meet the access needs of other activities like deliveries and passenger pickup/dropoff.

Over the next decade, CSU, and its Main Campus in particular, has an opportunity to allocate more of this space to other pressing needs. The 2022 PTS/HDS curb assessment identified many opportunities to source these new elements, which align with CSU’s longstanding emphasis on encouraging multimodal access and porosity between the on-campus vs. off-campus environments. New curb cuts are recommended in strategic locations to add necessary curb access adjacent to infrastructure such as bike lanes.

In a scenario where Around the Horn service is expanded, additional bus stops would also be necessary. Any curb use allocations should consider this medium-to long-term possibility.

Incursions into bike lanes by motor vehicles parked for deliveries and drop-offs are frequent, especially on Main Campus.

Facilities Management Sites

In addition, many areas of the campuses, especially pedestrianized areas of Main Campus, have poor accessibility for Facilities Management and Central Receiving staff and their specialized work vehicles. Lighting coverage is often minimal in these non-public facing areas, which makes them less accessible to staff at night. A campus walk that identifies opportunities for small “FM/Central Receiving Only”-labeled stalls with special painting sized for light-duty vehicles in new areas to address these needs is highly recommended. If these identified locations are poorly lit, new lighting may be necessary.
EQUITY & ACCESS SUMMARY OF STRATEGIES

- Create inventory of wheelchair-accessible classrooms and add this layer to the Interactive Map.
- Consider blind wayfinding features in overall wayfinding improvements.
- Track the quantity and geographic spread of van-accessible vehicle parking stalls as a proportion of overall accessible parking stalls to ensure ADA compliance.
- Prioritize the Main + South Campus curb assessment completed in 2022 to monitor and prioritize the path of travel, safety, maintenance, repair, and ADA accessibility of the sidewalk network within CSU’s infrastructure jurisdiction.
- Coordinate and communicate this assessment and future construction pipeline with City of Fort Collins to ensure consistency and unity between on-campus and off-campus sidewalk quality.
- Continue curb assessments to monitor aging infrastructure at regular intervals, such as biannually.
- Add curb designations for deliveries and pickup/dropoff in select locations.
- Establish more dedicated Facilities Management work vehicle parking and remote area lighting across campuses.

Potential curb cut locations with amenable street accesses and nearby activities are shown in Figure 34 below. Well-placed curb cuts can alleviate short-term parking pressures while also avoiding the need to focus on punitive measures to deter illegally parked vehicles, although right of way violation citations for valid offenses should not be ignored. CSU PD and partners like PTS and HDS can look to right of way violation information as an indicator of problem areas where more short-term vehicle access is needed. After all, streets such as Plum St have not been designed over the years to accommodate increased curb use.

CSU’s 2022 curb assessment identified potential curb redesigns in the areas shown in Fig 37 below.
CHAPTER 5
TECHNOLOGY SUMMARY
PTS has steadily improved the usability of its parking payment offering in recent years, implementing mobile payment with Way To Park in 2016 and converting to ParkMobile in 2020 to stay ahead of the curve of customer expectations. Instead of using parking meters, which require ongoing service and maintenance, parkers can scan the nearest QR codes on simple branded signs in each lot to pay for parking through their mobile browser, without the need to download a separate mobile app. Additional functionality such as time limits, applicable lots, saved payment methods, etc. can be accessed by creating an account on the website or mobile app. ParkMobile is an excellent example of an asset-light transportation management solution since it relies primarily on the user’s mobile device with which they are already familiar and comfortable.

PTS now utilizes an ALPR (automated license plate recognition) system with equipment distributed across the campus for parking permit enforcement. Sensor-mounted vehicles analyze individual vehicle adherence to permit rules throughout the daily enforcement period in sync with PTS’ digital parking permit system. These increasingly popular digital systems greatly enhance the efficiency of parking adherence and enforcement on premises.

The Lake Street and South College parking garages have real-time occupancy counters that directly integrate with the public-facing parking garage occupancy dashboard on the PTS website, which help mitigate excess vehicle circulation and offers convenience to employees during their commutes. Future garages should also include this integration. PTS may also include instructions for adding mobile web bookmarks to the home screen of iOS and Android to assist users who are unfamiliar with this feature.

CSU’s partnerships with tech-focused platforms like Zipcar, Spin, Uber, and Lyft are also examples of the University’s successful push to actively incorporate modern technology solutions into its transportation network.

Building on these successful technology implementations, CSU organizations like PTS can adhere to key strategies in the coming years to glean the most benefits from new and emerging solutions.

**Technology Key Strategies**

- Continue pursuing a blend of asset-light and customer-centric technology investments
- Platforms and systems should provide convenience to customers and organizational efficiency to PTS and CSU

In addition, www.rent.colostate.edu has a price calculator feature that helps students estimate commute costs from multiple potential home addresses. This resource could be displayed on the student and employee landing pages of the PTS website and the suggested commuter management platform since transportation-related expenses are a crucial factor in living and commuting decision-making processes.

![Table 16: Technology Recommendations Priority Features](image)

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>Modes Supported</th>
<th>Priority Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter Management Platform</td>
<td>🚗педале</td>
<td>Carpool/vanpool matching, payment, management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parking permit payment/management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Incentives (carpool, biking, walking, micromobility)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Survey distribution</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Program statistics and real-time analysis</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Third-party app integrations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Communications (events, initiatives, challenges)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Real-time parking lot occupancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gamification options</td>
</tr>
<tr>
<td>Automated Parking Guidance System</td>
<td>🚗</td>
<td>Data analysis and forecasting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automated sensor maintenance notifications</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Integration with wayfinding/occupancy signage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multi-space sensors (for cost efficiency)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automated license plate recognition integration</td>
</tr>
<tr>
<td>Motor Pool Rental Platform</td>
<td>MULTIMODAL</td>
<td>Online/mobile app reservations</td>
</tr>
<tr>
<td></td>
<td></td>
<td>App-based vehicle tracking and unlock for customers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Automated mileage tracking and departmental billing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mobile condition reports (photos)</td>
</tr>
<tr>
<td>Fleet Vehicle Management Platform</td>
<td>🚗</td>
<td>Usage analytics and right-sizing insights</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Expenditure tracking (fuel, maintenance, life cycle, etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Asset tracking</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Safe driving telematics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EV conversion insights</td>
</tr>
<tr>
<td>Bike Registration System</td>
<td>🚴</td>
<td>Owner-facing profiles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Large, open database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Student/employee depreciation on back-end</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multi-departmental access/integration</td>
</tr>
</tbody>
</table>

1 The motor pool rental program is intended, among other benefits, to relieve employees of the need to use personal vehicles for work-related trips, and therefore enable employees to select from the full range of commute mode choices independent of workday inter-building obligations.
Appendix A: Peer Universities

The following are transportation profiles of other large, public U.S. universities that are peers of CSU. Focus topics include TDM strategies, parking, and shared and active transportation alternatives. These institutions have innovative campus transportation departments that support a wide range of transportation choices. A common theme amongst these universities is a coordinated departmental effort to provide many attractive and affordable alternatives to single-occupancy vehicle commuting as a means of efficiently managing limited land, road, and parking capacity on and around their growing campuses. CSU faces these same challenges in balancing needs and resources.

Oregon State University Profile

<table>
<thead>
<tr>
<th>Oregon State University - Corvallis, OR</th>
<th>2018 Mode Split</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Student Pop.</strong></td>
<td><strong>Overall</strong></td>
</tr>
<tr>
<td>23,111</td>
<td>32%</td>
</tr>
<tr>
<td><strong>City Pop.</strong></td>
<td>2018</td>
</tr>
<tr>
<td>59,864</td>
<td>Jan 2023</td>
</tr>
</tbody>
</table>

1 Sources: OSU transportation services website, transportation services staff data, OSU 2030 Sustainable Transportation Strategy plan, AASHE STARS mode split report

OSU saw a large jump in SOV usage as a result of the COVID-19 pandemic in 2020, reporting a 62% overall SOV rate in its December 2020 AASHE STARS sustainability report. However, the university foresees a return to pre-pandemic commute habits and has set its ambitious 20% overall SOV commute rate goal for year 2030 based on these pre-pandemic conditions.

The campus has the following resident parking inventory:

<table>
<thead>
<tr>
<th>Resident Spaces</th>
<th>Residents</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,317</td>
<td>5,000</td>
<td>0.26</td>
</tr>
</tbody>
</table>

The parking inventory is as follows:

<table>
<thead>
<tr>
<th>Total Spaces</th>
<th>Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>5,911</td>
<td>23,111</td>
<td>0.26</td>
</tr>
</tbody>
</table>

The Transportation Services department offers 3 annual commuter permit types with the following price scheme:

- Commuter programs and incentives
- Transit improvements
- Bike & pedestrian improvements

The following commute mode split data was reported by OSU in 2018:

<table>
<thead>
<tr>
<th>Mode Split</th>
<th>Mode</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>32%</td>
<td></td>
</tr>
<tr>
<td>Walk</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Bike</td>
<td>20%</td>
<td></td>
</tr>
<tr>
<td>Transit/shuttle</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Transit</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>Carpool/Vanpool</td>
<td>2%</td>
<td></td>
</tr>
<tr>
<td>Telecommute</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>
This zonal parking system prices lots based on the centrality of their locations and allows permitted vehicles to “park down” and use assigned zones as well as any lower-priced zones. There is no separation between employee and student spaces with the exception that student resident hall permits allow for exclusive use of resident hall lots to ensure availability.

University of California, Davis Profile

<table>
<thead>
<tr>
<th>University of California, Davis - Davis, CA</th>
<th>Student Pop.</th>
<th>City Pop.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>40,772</td>
<td>66,799</td>
</tr>
</tbody>
</table>

1 2022 undergraduate and graduate population as reported by Fall 2022 Budget and Institutional Analysis report.


Davis, California is compact and strongly oriented toward UC Davis-related activities—a college town in every sense of the term. The city maintains 55 miles of bike trails and 50 miles of on-street bike lanes. The university heavily promotes sustainable transportation options. A biannual “Bike Auction” allows students to bid on thousands of abandoned and donated bikes that often sell for below-market rates. Transportation Services includes a commute cost calculator on its Commute Options webpage to help students and employees factor commute mode costs into their travel decisions.

The on-campus student resident population is high—between 13,500 and 14,000.

UC Davis takes a unique approach to its transit offerings. The university transit service, Unitrans, is staffed by student bus drivers, mechanics, and dispatchers and is free to all undergraduates through student association fees. It is affiliated with the university and provides all local fixed-route bus service for the city while Davis Community Transit, affiliated with the City of Davis, provides on-demand paratransit services.

UCD reported commute mode split data to AASHE STARS just prior to the onset of the COVID-19 pandemic in 2020, which is shown below.

<table>
<thead>
<tr>
<th>2020 Mode Split</th>
<th>Students</th>
<th>Employees</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>18.2%</td>
<td>68.3%</td>
<td>43.3%</td>
</tr>
<tr>
<td>Walk/cycle/non-motor</td>
<td>55.5%</td>
<td>19.2%</td>
<td>37.4%</td>
</tr>
<tr>
<td>Vanpool/Carpool</td>
<td>4.0%</td>
<td>5.7%</td>
<td>4.9%</td>
</tr>
<tr>
<td>Transit</td>
<td>21.7%</td>
<td>4.5%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Motorcycle/Motorized scooter/Moped</td>
<td>Unreported</td>
<td>Unreported</td>
<td>Unreported</td>
</tr>
<tr>
<td>Telecommute</td>
<td>0.2%</td>
<td>0.7%</td>
<td>0.5%</td>
</tr>
</tbody>
</table>

1 50% or more of regular hours.
2 Remainder percentages are made up of zero-emission vehicle use (reported as 0.4% and 1.6% for students and employees, respectively), which is not indicated as part of or separate from SOV or carpool/vanpool use, so this mode has been omitted from this table.

Graduate students and employees can choose from the following affordable transit fare media:

<table>
<thead>
<tr>
<th>Permit Pass</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Ride</td>
<td>1.25</td>
</tr>
<tr>
<td>Ten-Ride</td>
<td>7.50</td>
</tr>
<tr>
<td>Monthly</td>
<td>30.00</td>
</tr>
<tr>
<td>Quarterly</td>
<td>77.00</td>
</tr>
<tr>
<td>Annual</td>
<td>216.00</td>
</tr>
</tbody>
</table>

Seniors, riders with certified disabilities, local K-12 students, City employees, and Medicare recipients ride free by presenting the relevant ID.

Sources: UCD transportation services website, transportation services staff-provided data.
Campus parking is limited. There are no student-specific lots except 3,063 spaces associated with non-freshman student housing.

<table>
<thead>
<tr>
<th>Resident Spaces</th>
<th>Residents</th>
<th>Ratio (Range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3,063</td>
<td>13,500-14,000</td>
<td>0.22-0.23</td>
</tr>
</tbody>
</table>

Freshmen in dorms and all other students must pay full-rate daily parking ($15) through ParkMobile to park on campus.

UC Davis has the following ratio of parking spaces per student

<table>
<thead>
<tr>
<th>Total Spaces</th>
<th>Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>12,380</td>
<td>40,772</td>
<td>0.30</td>
</tr>
</tbody>
</table>

Employees have several monthly permit options:

<table>
<thead>
<tr>
<th>Zone Type</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Zones</td>
<td>$ 75.00</td>
</tr>
<tr>
<td>C Zones</td>
<td>$ 65.00</td>
</tr>
<tr>
<td>L Zones</td>
<td>$ 45.00</td>
</tr>
<tr>
<td>CH Designated</td>
<td>$ 200.00</td>
</tr>
<tr>
<td>Electric Vehicle Charging</td>
<td>$15.00</td>
</tr>
</tbody>
</table>

Boise State University Profile

<table>
<thead>
<tr>
<th>Boise State University - Boise, ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Student Pop.**¹</td>
</tr>
<tr>
<td>26,162</td>
</tr>
</tbody>
</table>

¹ 2022 undergraduate and graduate population as reported by university enrollment profile.  

Boise State has a relatively compact campus just south of downtown Boise. Students and employees can ride the ValleyRide bus system for free, and there is a two-route campus circulator, the Bronco Bus, that also connects to downtown and provides frequent (8 minute) headways on weekdays. Biking resources such as parking, dedicated lanes and trails, and education are widely available and encouraged on campus and in the surrounding community.

The parking permit system consists of the following annual and daily options:

<table>
<thead>
<tr>
<th>Zones/Area</th>
<th>Student</th>
<th>Employee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessible</td>
<td>$ 124</td>
<td>$ 176</td>
</tr>
<tr>
<td>East Commuter</td>
<td>$ 124</td>
<td>$ 176</td>
</tr>
<tr>
<td>South Commuter</td>
<td>$ 148</td>
<td>$ 204</td>
</tr>
<tr>
<td>West Commuter</td>
<td>N/A</td>
<td>$ 472</td>
</tr>
<tr>
<td>Central Reserve</td>
<td></td>
<td>$ 368</td>
</tr>
<tr>
<td>East Reserve</td>
<td></td>
<td>$ 424</td>
</tr>
<tr>
<td>South Reserve</td>
<td></td>
<td>$ 380</td>
</tr>
<tr>
<td>West Reserve</td>
<td></td>
<td>$ 436</td>
</tr>
<tr>
<td>Brady Street Garage</td>
<td></td>
<td>$ 388</td>
</tr>
<tr>
<td>Lincoln Avenue Garage</td>
<td></td>
<td>$ 444</td>
</tr>
<tr>
<td>CH Designated</td>
<td></td>
<td>$ 408</td>
</tr>
<tr>
<td>Resident Central</td>
<td>$ 288</td>
<td>N/A</td>
</tr>
<tr>
<td>Carpool</td>
<td>$ 320</td>
<td>$ 320</td>
</tr>
<tr>
<td>DAILY - Garage, Reserve, or Commuter Lot</td>
<td>$ 15</td>
<td>$ 15</td>
</tr>
</tbody>
</table>

BSU has the following ratio of parking spaces per student:

<table>
<thead>
<tr>
<th>Total Spaces</th>
<th>Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>7,845</td>
<td>26,162</td>
<td>0.30</td>
</tr>
</tbody>
</table>

University of Michigan Profile

<table>
<thead>
<tr>
<th>University of Michigan - Ann Arbor, MI</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Student Pop.**¹</td>
</tr>
<tr>
<td>47,411</td>
</tr>
</tbody>
</table>

¹ 2023 undergraduate and graduate population per university Office of the Registrar enrollment reports.  

Sources: BSU transportation services website.  
Sources: Permit and parking ratio data is from UMich transportation services website and directly from UMich transportation services staff. Mode split data is pulled from the AASHE STARS reporting system.
UMich’s home of Ann Arbor is a quintessential college town with a unique urban form factor: there is a greenbelt around the city that encourages population density and supports the viability of alternative transportation options such as transit, biking, and walking.

Like other universities, UMich’s commute mode split reporting process has been interrupted by the COVID-19 pandemic. Complete mode split information for all students and employees at the Ann Arbor campus could not be found. Below are the most recent, pre-pandemic (2018) mode split reports UMich submitted to AASHE STARS.

<table>
<thead>
<tr>
<th>Mode</th>
<th>Students</th>
<th>Employees</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOV</td>
<td>12%</td>
<td>75%</td>
<td>44%</td>
</tr>
<tr>
<td>Walk/cycle/non-motor</td>
<td>55%</td>
<td>12%</td>
<td>34%</td>
</tr>
<tr>
<td>Vanpool/Carpool</td>
<td>2%</td>
<td>7%</td>
<td>5%</td>
</tr>
<tr>
<td>Transit</td>
<td>30%</td>
<td>6%</td>
<td>18%</td>
</tr>
<tr>
<td>Motorcycle/Motorized scooter/Moped</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Telecommute¹ Unreported Unreported Unreported

¹ 50% or more of regular hours.

The University of Michigan's transportation services, including fleet, are organized within the Logistics, Transportation & Parking department. No single travel mode is given preference, but sustainable multimodal transportation options to suit student and employee needs are highly emphasized. The LTP department facilitates dozens of active carpool and vanpool groups, with pickup/dropoff locations and seat vacancy information displayed online. Participants can share the cost of the parking permit and gas. Divided permit costs can be deducted from payroll.

UMich operates 13 free campus-centric bus routes that are staffed by student bus drivers, similar to UC Davis. The Ann Arbor Area Transportation Authority also operates local and intercity bus service on 32 routes that are free to students and employees with ID.

Daily vehicle parking permits are only available for employees with the following pricing:

<table>
<thead>
<tr>
<th>Daily Option Permits</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-paid park</td>
<td>$5.50</td>
</tr>
<tr>
<td>Scratch off packages of 10</td>
<td>$55.00</td>
</tr>
</tbody>
</table>

Annual permits are on a progressive pricing system that is costlier for employees. These prices are as follows:

<table>
<thead>
<tr>
<th>Permit Tier</th>
<th>Annual Total</th>
<th>University Contribution¹</th>
<th>Subsidized Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gold</td>
<td>$2,054</td>
<td>$172</td>
<td>$1,882</td>
</tr>
<tr>
<td>Blue</td>
<td>$938</td>
<td>$172</td>
<td>$766</td>
</tr>
<tr>
<td>Yellow</td>
<td>$339</td>
<td>$172</td>
<td>$167</td>
</tr>
<tr>
<td>Orange</td>
<td>$256</td>
<td>$172</td>
<td>$84</td>
</tr>
</tbody>
</table>

¹ The university provides subsidies for tenure-track faculty.

Automated Vehicle Identification (AVI) devices are required for access to all parking structures in the central and medical campus areas. These devices are color-coded according to the lots they provide access to and can be obtained with a refundable $20 security deposit.

With 47,659 undergraduate and graduate students and 23,118 parking spaces (excluding the School of Medicine spaces), the ratio of total parking spaces to undergraduate and graduate students (excluding School of Medicine students) is 0.49. Campus resident parking space information was unavailable.

<table>
<thead>
<tr>
<th>Total Spaces</th>
<th>Students</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>23,118</td>
<td>47,411</td>
<td>0.49</td>
</tr>
</tbody>
</table>
### Appendix B: Inventory of Existing TDM Strategies (As of Spring 2022)

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Target Commute Mode(s)</th>
<th>Target Audience(s)</th>
<th>Engagement Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Development Institute and Housing and Dining Employee Education Sessions</td>
<td>Educational programming offered to employees annually each January. Topics can include anything from safe bicycling to teleworking to mapping out transit routes for individuals.</td>
<td>Multimodal</td>
<td>Employees</td>
<td>January</td>
</tr>
<tr>
<td>Employee Commute Options Road Shows</td>
<td>Presentations that typically take place during department meetings that introduce employees to all their commute options and provides them with high-level information regarding resources. Attendees are invited to schedule time for commute consultations or for additional sessions to be scheduled.</td>
<td>Multimodal</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Orientation</td>
<td>Participate in orientation sessions for incoming students - specifically at resource fair to discuss transportation options on and to campus.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Summer</td>
</tr>
<tr>
<td>Transfort Welcome Center</td>
<td>CSU provides a Transfort Welcome Center on the north side of the Lory Student Center. The Welcome Center serves as a place for people to get transportation-related information.</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Bike to Work Day</td>
<td>CSU hosts one of the most successful breakfast stations in the city of Fort Collins to encourage bicycling as a form of transportation.</td>
<td>Bike</td>
<td>Students, Employees and Community Members</td>
<td>June</td>
</tr>
<tr>
<td>Winter Bike to Work Day</td>
<td>CSU hosts one of the most successful breakfast stations in the city of Fort Collins to encourage bicycling as a form of transportation year-round.</td>
<td>Bike</td>
<td>Students, Employees and Community Members</td>
<td>February</td>
</tr>
<tr>
<td>Bike to Breakfast</td>
<td>At the beginning of each academic year and also during Earth week, CSU hosts Bike to Breakfast events where several on-campus partners work together to hand out free food to people rolling to campus to encourage sustainable transportation. Bike to Breakfast events are also used to educate participants who visit the stations about transportation-related lessons (e.g., safety, bike locking, etc.)</td>
<td>Bike</td>
<td>Students and Employees</td>
<td>September and April</td>
</tr>
<tr>
<td>Choose CSU</td>
<td>Participate in Admissions events for prospective students with table at resource fair and breakout sessions to cover transportation options.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Winter/Spring</td>
</tr>
<tr>
<td>Community Rides</td>
<td>Optional bike tours offered by the Admissions Office to prospective students considering CSU. Additional tours are offered by Parking and Transportation Services to new admitted students through &quot;Ram Welcome&quot; programming during move-in week. Provide students with a transportation-focused tour of campus on their personal bike or a free Spin vehicle, incorporate safety info. Distribute free helmets. Special sessions for international students and certain academic groups, as well as open sessions.</td>
<td>Bike, Scooter</td>
<td>Employees</td>
<td>Summer</td>
</tr>
<tr>
<td>Admissions and Move-in Bike Tours</td>
<td>Special tours for incoming students considering CSU. Additional tours are offered by Parking and Transportation Services to new admitted students through &quot;Ram Welcome&quot; programming during move-in week. Provide students with a transportation-focused tour of campus on their personal bike or a free Spin vehicle, incorporate safety info. Distribute free helmets. Special sessions for international students and certain academic groups, as well as open sessions.</td>
<td>Bike, Scooter</td>
<td>Students</td>
<td>Summer/Fall</td>
</tr>
<tr>
<td>We Ride</td>
<td>Large festival-style event on the Saturday following move-in week (right before classes begin). Brings in community partners like Transfort, Bike Fort Collins, FC Moves, CSU Police, and The Spoke. Free helmets, bells, lights; teaches proper locking technique and other bike education and best practices.</td>
<td>Bike, Scooter</td>
<td>Students</td>
<td>Fall</td>
</tr>
<tr>
<td>Earth Week Events</td>
<td>Series of mode-specific events around Earth Week, including participation in campus Earth Day Fair, Bike to Breakfast, on-board transit survey, skateboard/longboard survey with incentives</td>
<td>Bike, Scooter, Board, Transit</td>
<td>Students and Employees</td>
<td>Spring</td>
</tr>
<tr>
<td>Strategy</td>
<td>Description</td>
<td>Target Commute Mode(s)</td>
<td>Target Audience(s)</td>
<td>Engagement Timeframe</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>------------------------</td>
<td>--------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Vanpool Formation Meetings</td>
<td>Service oriented by Parking and Transportation Services where employees who live within select zip codes are invited to vanpool formation meetings. Currently vanpools would be run through VanGo.</td>
<td>Vanpool</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Rams Ride Right</td>
<td>Pop-up bike, scooter and skateboard safety campaign to “catch” people riding safely and lawfully and reward them with $5 RamCash. Partner with CSUPD and funded by ATFAB.</td>
<td>Bike, Scooter, Board</td>
<td>Students and Employees</td>
<td>Fall/Spring</td>
</tr>
<tr>
<td>Get Back On the Bike</td>
<td>Program for employees aimed at helping them overcome barriers to using bicycling as a form of transportation. Includes incentives and in-depth education.</td>
<td>Bike</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>CSU Moves</td>
<td>Online transportation education training for students; offered prior to and at the beginning of the school year, especially to first-year students. Covers transportation options, reasons to choose certain options, and safety.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Summer/Fall</td>
</tr>
<tr>
<td>Rent.colostate.edu</td>
<td>Website resource that allows students to compare the time and monetary costs of various transportation options from different local addresses. Promoted around Housing Fair (early-Feb), when students are deciding on their housing for the next year.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Winter</td>
</tr>
<tr>
<td>City of Fort Collins Partnership for Transportation Education</td>
<td>CSU partners with the City of Fort Collins to offer transportation-related education to all community members.</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>New Employee Emails and Commute Consultations</td>
<td>Emails are sent to every new or rehired employee that provides them with commuting-related resources and invites them to have a 1:1 conversation with an employee in the Transportation Department to help them optimize their commute options.</td>
<td>Multimodal</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Incoming Student Mailer</td>
<td>Mailer to all incoming students prior to their arrival on campus to introduce transportation options and encourage them to take CSU Moves training.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Summer/Winter</td>
</tr>
<tr>
<td>Annual Transportation Mode Split Survey</td>
<td>CSU conducts a survey with a statistically valid sample of students and employees each February to measure transportation behavior.</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>February</td>
</tr>
<tr>
<td>Eco-counters, Bike and Pedestrian Counts, Bike Rack utilization Counts</td>
<td>PTS uses stationary measurement devices and manual surveyors to track bike and pedestrian activity around the campuses.</td>
<td>Bike, Walk</td>
<td>Students and Employees</td>
<td>Year-Round, seasonal</td>
</tr>
<tr>
<td>Campus Bicycle Advisory Committee</td>
<td>Interdisciplinary committee of CSU employees and students (along with a few local City and nonprofit partners) who weigh in on new infrastructure and programs related to biking at CSU. This group is responsible for submitting League of American Bicyclists application every four years. Meets monthly.</td>
<td>Bike</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Vision Zero Task Force</td>
<td>CSU established a Vision Zero Task Force in 2019. The Task Force has since established committees that have identified needed projects, done on-site crash and intersection analysis, data synthesis, and conducted project prioritization based on safety concerns.</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Monthly Utility Coordination Meeting</td>
<td>-</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Monthly</td>
</tr>
<tr>
<td>Transfort Monthly Coordination Meeting</td>
<td>-</td>
<td>Transit</td>
<td>Students, Employees and Community Members</td>
<td>Monthly</td>
</tr>
<tr>
<td>West Elizabeth Design Group</td>
<td>-</td>
<td>Transit, Bike, Micromobility</td>
<td>Students, Employees and Community Members</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Annual City Department Capital Construction Coordination Meetings</td>
<td>-</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Semi-Annually</td>
</tr>
<tr>
<td>Quarterly Transportation Planning Meeting</td>
<td>-</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Quarterly</td>
</tr>
<tr>
<td>Quarterly Planning Dept. Meeting</td>
<td>-</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Quarterly</td>
</tr>
<tr>
<td>DARTAC (Dial-a-Ride) Meeting</td>
<td>-</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Bi-monthly</td>
</tr>
</tbody>
</table>
### Appendix B: Inventory of Existing TDM Strategies (As of Spring 2022) Continued

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Target Commute Mode(s)</th>
<th>Target Audience(s)</th>
<th>Engagement Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLEX Meeting</td>
<td>-</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Bi-monthly</td>
</tr>
<tr>
<td>Climate Action Plan and EV Roadmap Meeting</td>
<td>-</td>
<td>Driving/SOV</td>
<td>Students and Employees</td>
<td>Currently suspended</td>
</tr>
<tr>
<td>City TDM Plan Technical Advisory Council</td>
<td>-</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Project end 2023</td>
</tr>
<tr>
<td>Northern Colorado Bicycle and Pedestrian Coalition / NFRMPO Technical Advisory Council</td>
<td>-</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Monthly</td>
</tr>
<tr>
<td>NoCo Bike Ped Collaborative</td>
<td>CSU participates in the NoCo Bike Ped Collaborative, a regional group that meets several times a year to address and discuss funding for regional bicycle and pedestrian infrastructure.</td>
<td>Bike, Scooter, Board, Walk</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Flexible Parking Permit Options</td>
<td>CSU Transportation offers a variety of flexible parking permit options to support people who only need to travel to campus fewer than five days a week.</td>
<td>Driving/SOV, Multimodal</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Free Transit Passes</td>
<td>CSU students and employees can ride unlimited local and regional transit at no additional cost using their RamCards.</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Around the Horn</td>
<td>Around the Horn, a Main and South Campus circulator bus with CSU branding, runs every 20-30 minutes 7:00am-6:30pm in partnership with Transfort. The route is free and funded by Parking and Transportation Services.</td>
<td>Transit</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>SkiSU</td>
<td>Bus to local ski resorts from CSU; 12 trips per season; $23/student ticket, $30/employee ticket (student tickets subsidized by ATFAB). Transit students and employees can ride unlimited local and regional transit at no additional cost using their RamCards.</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Spring</td>
</tr>
<tr>
<td>Telework Policy</td>
<td>Policy and training for employees and supervisors to establish and maintain teleworking setups that reduce the need to commute to campus daily.</td>
<td>Telecommute</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Development Review Checklist</td>
<td>Letter and checklist submitted to City development review team and developer with TDM recommendations specific to their property. First-year students are all trained to use bike, transit, etc. and will continue to use it in off-campus housing if those options are available.</td>
<td>Multimodal</td>
<td>Students</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Inclusive Design Standards and Geographic Maps</td>
<td>CSU has building standards that include inclusive amenities such as commuter showers, lactation rooms, reflection spaces, etc. in an effort to provide amenities so that people can avoid leaving campus (and thus taking another trip) for those needs.</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Bustang Rams Route</td>
<td>Special version of the Bustang North Line that picks up on campus on Friday afternoons and returns on Sunday afternoons - serves several stops in Denver.</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Zipcar Contract</td>
<td>Exclusive agreement with carshare provider, Zipcar, to station cars at designated locations on CSU campus. Monthly utilization reporting provided.</td>
<td>Carshare</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Spin Contract</td>
<td>Exclusive agreement with e-scooter and e-bike share provider Spin to station vehicles on campus. Have parallel contract with the City of Fort Collins. Have regular check-in meetings and monthly reporting.</td>
<td>Bike, Scooter</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Emergency Ride Home</td>
<td>Program for employees to utilize Zipcar or Ztrip for an emergency ride home on a day when they utilized non-SOV mode to get to work. Requires employees to submit receipt for reimbursement.</td>
<td>Multimodal</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Childcare Services</td>
<td>Both student and employee parents within the CSU community have access to on-campus childcare through the Early Childhood Center and the Sunshine House, which simplifies their commutes. Tuition-based financial assistance is available.</td>
<td>Multimodal</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Flexible Work Hours</td>
<td>Employees in some departments can work flexible hours to help them plan commute transportation around family and personal needs.</td>
<td>Multimodal</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
</tbody>
</table>
### Appendix B: Inventory of Existing TDM Strategies (As of Spring 2022) Continued

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
<th>Target Commute Mode(s)</th>
<th>Target Audience(s)</th>
<th>Engagement Timeframe</th>
</tr>
</thead>
<tbody>
<tr>
<td>VanGo</td>
<td>VanGo is a vanpool service provider run by the North Front Range MPO. VanGo provides $50 to any vanpooler that recruits another member of a vanpool. Additionally, CSU offers to pay the first month of a riders’ fees as an incentive to try vanpooling.</td>
<td>Vanpool</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Way To Go</td>
<td>CSU directs people to WayToGo for carpool/vanpool trip matching. WayToGo is DRCOG's trip matching tool. It is largely focused in the Denver region, however, people in Northern Colorado utilize it and it currently serves as the best place for trip matching in this area.</td>
<td>Carpool, Vanpool</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Boulder Vanpool Incentive</td>
<td>Vanpools that start in Boulder County are eligible for incentives.</td>
<td>Vanpool</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>RamRide</td>
<td>Free, safe ride home for students on Thurs, Fri, Sat nights. Currently provided via Lyft credits; mix of student and Lyft drivers depending on availability. Operated by Off-Campus Life office.</td>
<td>Driving/SOV</td>
<td>Students</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Private Airport Shuttle MOU</td>
<td>Agreement with Groome and Landline airport shuttle to access CSU transit center for a centralized connection to Denver International Airport.</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Private Resident Shuttle MOU</td>
<td>Agreement with off-campus, student-oriented apartment complexes that offer a private shuttle to campus to use the CSU Transit Center for pickup and dropoff.</td>
<td>Transit</td>
<td>Students</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Charter Buses</td>
<td>Charter buses are available for departments to rent for efficient group transportation to remote activities.</td>
<td>Transit</td>
<td>Students and Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Access to E-Bikes</td>
<td>CSU has partnered with the City of Fort Collins to get grant funding to provide free e-bikes or Spin memberships, and bicycling accessories to income-qualified CSU employees. Bicycling education is also provided to employees who receive the e-bikes or Spin memberships.</td>
<td>Micromobility, Bike</td>
<td>Employees</td>
<td>Year-Round, 1-year grant timelines</td>
</tr>
<tr>
<td>Fleet Vehicles for Workday Trips</td>
<td>CSU Fleet vehicles are available for employees to reserve and use for workday trips. CSU has a directive to transition this fleet to EVs over time.</td>
<td>Carshare</td>
<td>Employees</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Biking Infrastructure</td>
<td>CSU designs and invests in infrastructure to make active modes (biking, walking, rolling) safer and easier to access and utilize. For example, CSU builds split trails to allow for bicycles, scooters, and boards to move quicker while avoiding conflicts with pedestrians. Additionally, CSU has more than 18,000 bike parking spaces and 40 longboard racks and positions racks close to building entrances for convenience.</td>
<td>Bike, Scooter, Board</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Dismount Zones</td>
<td>Specific Main Campus pedestrian-oriented zones with high foot traffic have pavement paint instructing people biking, scooting, and boarding to dismount in order to avoid conflicts and collisions with pedestrians. Citations, including warnings or fines, may be issued to offenders. Current dismount zones include the Center Avenue Mall, Academic Village Commons, and Anderson Academic Center.</td>
<td>Bike, Scooter, Board, Walk</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>Transport Bus Bike Racks</td>
<td>All Transfort buses accommodate at least two bikes. Most buses can store two bikes on racks at the front of the bus. The MAX bus fleet, with its articulated design, allows 4 bikes onboard the bus-- two bikes in the standing area and 2 bikes on hanging racks at the rear of the bus-- for faster and more convenient boarding/deboarding and multimodal travel.</td>
<td>Multimodal</td>
<td>Students, Employees and Community Members</td>
<td>Year-Round</td>
</tr>
<tr>
<td>The Spoke &amp; Bike Repair Stations</td>
<td>There are self-service bike repair stations dispersed across the Main, South, and West Campuses to provide free tire air and minor repair equipment. Additionally, The Spoke is a student-run, full-service bike repair and retail shop offering affordable bike resources within the Laurel Village resident area. The team also offers bike education and safety programs.</td>
<td>Bike</td>
<td>Students, Employees and Community Members</td>
<td>Academic Year</td>
</tr>
</tbody>
</table>
Appendix C: CSU Cordon Study: Arrivals & Departures by Mode 2017 - 2022

Figure 38: CSU Cordon Study: Arrivals by Mode 2017

COLORADO STATE UNIVERSITY
2017 AM PEAK HOUR AUTOMOBILE ARRIVALS
MAIN CAMPUS
2017-2018 AM PEAK HOUR
AUTOMOBILE ARRIVALS COMPARISON

2017
676 VEHICLES (28%)
Of Total

2018
645 VEHICLES (26%)
Of Total

2017
573 VEHICLES (24%)
Of Total

2018
664 VEHICLES (27%)
Of Total

AUTOMOBILE SUMMARY
2013 - 2,794 TOTAL AUTOMOBILE ARRIVALS
2017 - 2,419 TOTAL AUTOMOBILE ARRIVALS
2018 - 2,484 TOTAL AUTOMOBILE ARRIVALS
* 2.7% AUTOMOBILE GROWTH (2017-2018)

Figure 39: CSU Cordon Study:
Arrivals by Mode 2018

FIGURE 18
AUTOMOBILE SUMMARY
FALL 2018 - 2,484 TOTAL AUTOMOBILE ARRIVALS
FALL 2019 - 2,521 TOTAL AUTOMOBILE ARRIVALS
* 1.5% AUTOMOBILE GROWTH (FALL 2018-FALL 2019)
AUTOMOBILE SUMMARY
FALL 2019 - 2,521 TOTAL AUTOMOBILE ARRIVALS
FALL 2020 - 1,071 TOTAL AUTOMOBILE ARRIVALS

* 57.5% AUTOMOBILE DECAY (FALL 2019-FALL 2020)
FIGURE 18

AUTOMOBILE SUMMARY
FALL 2020 - 1,071 TOTAL AUTOMOBILE ARRIVALS
FALL 2021 - 2,246 TOTAL AUTOMOBILE ARRIVALS
* 109.7% AUTOMOBILE GROWTH (FALL 2020-FALL 2021)

Figure 42: CSU Cordon Study: Arrivals by Mode 2021
### Fall 2021 vs Fall 2022 AM Arrivals Comparison

<table>
<thead>
<tr>
<th>Mode</th>
<th>Fall 2021 Volume</th>
<th>Fall 2022 Volume</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicles</td>
<td>466</td>
<td>528</td>
<td>21%</td>
</tr>
<tr>
<td>Bicycles</td>
<td>209</td>
<td>187</td>
<td>21%</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>439</td>
<td>444</td>
<td>49%</td>
</tr>
<tr>
<td>Skateboards</td>
<td>11</td>
<td>11</td>
<td>26%</td>
</tr>
</tbody>
</table>

**2021-2022 AM Arrivals Summary**

<table>
<thead>
<tr>
<th>Mode</th>
<th>Fall 2021</th>
<th>Fall 2022</th>
<th>% Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicles</td>
<td>2,245</td>
<td>2,465</td>
<td>9.8%</td>
</tr>
<tr>
<td>Bicycles</td>
<td>984</td>
<td>888</td>
<td>-9.8%</td>
</tr>
<tr>
<td>Pedestrians</td>
<td>934</td>
<td>899</td>
<td>-3.7%</td>
</tr>
<tr>
<td>Skateboards</td>
<td>58</td>
<td>42</td>
<td>-27.6%</td>
</tr>
</tbody>
</table>

**Figure 43: CSU Cordon Study: Arrivals by Mode 2022**
Appendix D: Supporting Modal Date

Mode: Driving / SOV

**Other* category includes academic year (August-May) permits launched in Fall 2022.

Figure 44: Parking Permit Sales 2018-2022

Table 17: Parking Permit Sales 2018-2022
<table>
<thead>
<tr>
<th>Permit Type (unit)</th>
<th>User</th>
<th>Fee (per unit)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily¹</td>
<td>Residence Hall Student or Employee</td>
<td>$13.00</td>
</tr>
<tr>
<td></td>
<td>Apartment Resident</td>
<td>$4.25 to $13.00</td>
</tr>
<tr>
<td></td>
<td>Employees - Other²</td>
<td>$13.00</td>
</tr>
<tr>
<td></td>
<td>Employees - Athletics &amp; Housing/Dining Services</td>
<td>$13.00</td>
</tr>
<tr>
<td>Hourly</td>
<td>All</td>
<td>$1.00 to $2.00</td>
</tr>
</tbody>
</table>

### Table 18: CSU Parking Permit Prices

<table>
<thead>
<tr>
<th>Permit Type (unit)¹</th>
<th>User</th>
<th>Fee Range (per unit)²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual</td>
<td>Employee Commuter</td>
<td>$266 to $2,606 ³</td>
</tr>
<tr>
<td></td>
<td>Employee Apartment Resident / Apartment Resident Student</td>
<td>$150 to $685</td>
</tr>
<tr>
<td></td>
<td>Off-Campus Commuter Student</td>
<td>$293 to $584</td>
</tr>
<tr>
<td>Academic Year</td>
<td>Employee Commuter</td>
<td>$350 to $574</td>
</tr>
<tr>
<td></td>
<td>Residence Hall Students</td>
<td>$198 to $685</td>
</tr>
<tr>
<td></td>
<td>Off-Campus Commuter Student</td>
<td>$350 to $557</td>
</tr>
<tr>
<td>Fall/Spring Semester</td>
<td>Employee Commuter</td>
<td>$62 to $343</td>
</tr>
<tr>
<td></td>
<td>Employee Apartment Resident / Apartment Resident Student</td>
<td>$117 to $407</td>
</tr>
<tr>
<td></td>
<td>Residence Hall Students</td>
<td>$153 to $394</td>
</tr>
<tr>
<td></td>
<td>Off-Campus Commuter Student</td>
<td>$153 to $322</td>
</tr>
<tr>
<td>Monthly</td>
<td>Employee Commuter</td>
<td>$45 to $120</td>
</tr>
<tr>
<td></td>
<td>Residence Hall Students</td>
<td>$42 to $120</td>
</tr>
<tr>
<td></td>
<td>Off-Campus Commuter Student</td>
<td>$42 to $96</td>
</tr>
</tbody>
</table>

¹ Daily scratch-off tags available to students, faculty, and staff at bulk rates: $13 ea. for 10-19 hangtag permits, $9 ea. for 20-29 hangtag permits, $8 ea. for 30-39 hangtag permits, and $7 ea. for 40+ hangtag permits. A, Z, ZR, and R spaces only.

² $6 and $8 remote-only permits also available for Lot 195, Lot 740, and Pickett Equine Center.

³ Reserved spaces, which are numbered and of very limited quantity on campus.
Mode: Bikes

Table 19: CSU Reported Bike Thefts 2018-2022

<table>
<thead>
<tr>
<th>Year</th>
<th># Reported</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>247</td>
</tr>
<tr>
<td>2019</td>
<td>195</td>
</tr>
<tr>
<td>2020</td>
<td>132</td>
</tr>
<tr>
<td>2021</td>
<td>187</td>
</tr>
<tr>
<td>2022</td>
<td>257</td>
</tr>
</tbody>
</table>

Figure 45: Current (2023) Fort Collins Bike Facility Snow Removal Routes

Figure 46: Current (2023) CSU Bike Facility Snow Removal Routes
Mode: Transit

Above: Blue dots represent CSU student or employee households within 0.25 mi. of a Transfort stop in Spring 2023. The analysis found 13,315 of 17,685 Fort Collins student/employee households (75%) were within this walkshed.

Figure 48: CSU Households Near Transit
## Appendix D: Supporting Modal Data

### Figure 41: Transfort Bus Network Service Hours Matrix

<table>
<thead>
<tr>
<th>Route</th>
<th>Service Hours³</th>
<th>Headway (mins) ¹ ² ³</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Weekdays &amp; Saturdays</td>
<td>Variable between 10-20 minutes throughout the day.</td>
</tr>
<tr>
<td>2</td>
<td>Weekdays &amp; Saturdays</td>
<td>Saturday headways are 30 minutes.</td>
</tr>
<tr>
<td>3</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Weekdays &amp; Saturdays</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Weekdays</td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>Weekdays</td>
<td></td>
</tr>
</tbody>
</table>

³ Variable headways between 10-20 minutes throughout the day.
² Saturday headways are 30 minutes.
³ As of 1/16/23

---

Additional Notes:

15. Additional Notes

20. Routes 11 and 12 are currently suspended and served by on-demand taxi service Mon-Fri from 5:30am to 8:00pm & Sat-Sun from 7:30am-5:00pm.

30. Route 92, not shown, is a special afternoon route serving the Poudre School District building to/from the Downtown Transit Center only during district sessions.

60. Routes with service beginning from any station at any time >5 minutes within the hour (e.g. 6:45 AM start time from Equine Station) are marked as having service during that hour.
Challenges
- Existing route is attempting to meet too many needs along a single circuitous route, leading to subpar service quality
- Street thru-access is a major routing challenge due to Center Ave Mall pedestrian area

Strategies
- More routes and directions to cater to desire for more direct trips
- More service from South Campus remote lot to encourage that lot’s utilization
- Connect University Center for the Arts to Main Campus (which is not currently served by The Horn)
- Introduce better coverage in key areas
  - CTC, East Campus, Lake Street Garage bus turnaround

Alternative Routes
- North
  - Option for direction change depending on time of day, e.g., clockwise in AM and counterclockwise in PM
- South-Meridian
  - Meets needs of Vet School students living in residence halls on west side of Main Campus
  - Faster connection from east side of Main Campus to connect to planned Elizabeth BRT to Foothills
- South-UCA
  - Connects UCA to CTC and the rest of east side of Main Campus to South Campus
Mode: Micromobility

Users tend to ride in the afternoon and evening rush-hour periods before and after classes, with additional significant ridership in the late evening nightlife hours. Figure 44 below shows rides by time of day on-campus between January 2022 and January 2023.

Users show a greater preference for e-scooters relative to overall e-scooter and e-bike inventory.

Figure 51: City-Wide Spin Trips September 2021 to January 2023

Figure 52: Spin Trips by Time of Day

Figure 53: Spin Vehicle Inventory

Figure 54: Device Ratio for total Spin Trips Starting/Ending on Campus

Source: Spin Data
Mode: Rideshare

Figure 55: Fort Collins/CSU TNC Pickups

Source: CSU Student Life
Figure 56: Fort Collins/CSU TNC Dropoffs

Source: CSU Student Life
Appendix E: Stakeholder Engagement

Feedback & Other Collected Data

Activity: If you had $5,000 to invest in campus transportation, what areas of improvement and travel modes would you select? Choose 5 options from most to least important.

<table>
<thead>
<tr>
<th>Area of Improvement</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
<th>4th</th>
<th>5th</th>
<th>Response Insights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>8%</td>
<td>13%</td>
<td>20%</td>
<td>17%</td>
<td>19%</td>
<td>Some participants combined safety and infrastructure concerns/suggestions</td>
</tr>
<tr>
<td>Infrastructure (Physical Improvements and Technology)</td>
<td>74%</td>
<td>56%</td>
<td>49%</td>
<td>49%</td>
<td>38%</td>
<td>Better separation between pedestrians, cyclists/boarders/scooters, and cars</td>
</tr>
<tr>
<td>Communication/Education/Engagement</td>
<td>13%</td>
<td>11%</td>
<td>7%</td>
<td>6%</td>
<td>23%</td>
<td></td>
</tr>
<tr>
<td>Program/Policy</td>
<td>6%</td>
<td>20%</td>
<td>24%</td>
<td>29%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Mode</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycling</td>
<td>20%</td>
<td>26%</td>
<td>23%</td>
<td>28%</td>
<td>18%</td>
<td>More separated bikeways</td>
</tr>
<tr>
<td>Driving a Motor Vehicle</td>
<td>35%</td>
<td>27%</td>
<td>25%</td>
<td>28%</td>
<td>27%</td>
<td>More affordable permits, some indicated affordability for specific groups (grad students, hourly workers)</td>
</tr>
<tr>
<td>Riding Transit</td>
<td>41%</td>
<td>39%</td>
<td>41%</td>
<td>30%</td>
<td>31%</td>
<td>More frequency, more routes</td>
</tr>
<tr>
<td>Scooters/Skateboarding</td>
<td>1%</td>
<td>1%</td>
<td>3%</td>
<td>1%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>2%</td>
<td>7%</td>
<td>8%</td>
<td>13%</td>
<td>18%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Student</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Faculty</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not specified</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

>20% Priority
Highest Priority

Figure 57: Multi-Campus Investment Activity Results
### Primary Mode and Percentage

<table>
<thead>
<tr>
<th>Primary Mode</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving a personal vehicle alone</td>
<td>63%</td>
</tr>
<tr>
<td>Carpooling or vanpooling with others going to campus</td>
<td>1%</td>
</tr>
<tr>
<td>Getting a ride</td>
<td>1%</td>
</tr>
<tr>
<td>Biking</td>
<td>13%</td>
</tr>
<tr>
<td>Walking</td>
<td>3%</td>
</tr>
<tr>
<td>Skateboarding/longboarding</td>
<td>0%</td>
</tr>
<tr>
<td>Taking the bus</td>
<td>4%</td>
</tr>
<tr>
<td>Ride share (Uber, Lyft)</td>
<td>0%</td>
</tr>
<tr>
<td>E-scooters</td>
<td>0%</td>
</tr>
<tr>
<td>Other mode</td>
<td>0%</td>
</tr>
<tr>
<td>Telework</td>
<td>13%</td>
</tr>
</tbody>
</table>

### Average distance from home to campus (8.84 miles)

### Status and Count

<table>
<thead>
<tr>
<th>Status</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin professional</td>
<td>52</td>
<td>47%</td>
</tr>
<tr>
<td>State classified employee</td>
<td>14</td>
<td>13%</td>
</tr>
<tr>
<td>Faculty</td>
<td>45</td>
<td>41%</td>
</tr>
</tbody>
</table>

Total: 111

Figure 58: 2023 College of Business Mode Transportation Survey
### Figure 52: On-Campus Pop-up Investment Activity Results

<table>
<thead>
<tr>
<th>Pop Up Location</th>
<th>Date</th>
<th>Number of Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication/Education/Engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>40</td>
<td>134</td>
</tr>
<tr>
<td>Bicycling</td>
<td>182</td>
<td>273</td>
</tr>
<tr>
<td>Riding Transit</td>
<td>223</td>
<td>310</td>
</tr>
<tr>
<td>Driving a Motor Vehicle</td>
<td>50</td>
<td>147</td>
</tr>
<tr>
<td>Other</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Program/Policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>21</td>
<td>134</td>
</tr>
<tr>
<td>Bicycling</td>
<td>125</td>
<td>273</td>
</tr>
<tr>
<td>Riding Transit</td>
<td>141</td>
<td>310</td>
</tr>
<tr>
<td>Driving a Motor Vehicle</td>
<td>80</td>
<td>147</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>34</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Bicycling</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Riding Transit</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Driving a Motor Vehicle</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

**Totals by Category**

- Communication/Education/Engagement: 512
- Infrastructure (Physical Improvement and Technology): 898
- Program/Policy: 371
- Safety: 898
- Other: 93

**Totals by Mode**

- Walking: 329
- Bicycling: 868
- Riding Transit: 1024
- Driving a Motor Vehicle: 455
- Other: 96

*Figure 59: On-Campus Pop-up Investment Activity Results*
Appendix F: Draft CSU Corridor Concepts (Toole Design Group 2022 Submittal)

See following pages for the deliverable report.
Complete Street Design Concepts
August 2022
Spot Treatments

A. Add flexible delineators to bike lane on west leg of W Plum St at S Shields St intersection, 50 ft in advance of bike box, to prevent right turning traffic from encroaching.

B. Add flexible delineators to bike lane on east leg of W Plum St at S Shields St intersection, on through-traffic side, to prevent late cut-over by right-turning traffic.

C. Remove Plum Street stop signs at parking lot entrances.

D. Add curb cut at Aggie Trail on the south side of W Plum St to match curb cut on north side.

E. Reconfigure diagonal trail north of Moby Pool to circumscribe area where pool building will be expanded.

F. Build a raised intersection at Meridian Ave and retain existing stop signs. Refer to Meridian Street for additional design details.

Cross Section

S Shields St to CSU Transit Center

Convert existing buffered bike lane to a sidewalk-level separated bike lane.

Retain current sidewalk, bike lane, and travel lane measurements.
W. Pitkin Street

Spot Treatments

A. At the S Shields Intersection east of the median, paint the existing left-turn lane directing bicyclists onto the off-street trail green to resemble a two-stage bicycle turn box.

B. Add a speed hump adjacent to Summit Hall to mitigate vehicle speeding. Throughout the corridor a crossing or traffic calming treatment should be placed roughly every 500 feet to attenuate opportunities to speed.

C. Install a transit boarding island at the Horn bus stop adjacent to Canvas Stadium parking entrance. Relocate the crosswalk from Aspen Hall to match the trail crossing and improve visibility by having pedestrians cross in front of the bus stop rather than behind.

D. Build high visibility decorative crosswalks at the entrance to Meridian Ave and install curb ramps north of the Stadium to provide accessible pedestrian crossing.

E. Build a roundabout at Meridian Village just east of the Stadium. Close east leg of intersection to vehicles, and move Braiden Hall parking entrance to new Meridian Street.

F. Remove marked crosswalks across portion closed to cars. This is funded to become a bicycle and pedestrian roundabout and crossing.

G. Improve signage for pick-up and drop-off.

H. Ramp the existing separated bike lane on the south side of W Pitkin onto a 4 ft wide sidewalk extension to facilitate bicyclists turning left onto Campus Loop Trail.

S Shields St to Closure East of Meridian Ave

Build a sidewalk-level separated bike lane, separated from vehicle traffic by a furnishing zone with planters and benches. Add intermittent concrete in the furnishing zone to allow for access to the curb and accommodate drop-offs.

Newton Memorial to S College Ave

Build a center-running median with one-way bikeways and pedestrian walkways on edges, all at street grade.

Cross Sections (Looking East)
Meridian Ave

Spot Treatments

A. Build a raised intersection at Meridian Ave and retain existing stop signs. Construct a refuge island between the bikeway and transit lanes on Meridian to create an aperture for buses and discourage cars from entering.

B. Construct traffic circle to direct traffic that accommodates bus and bike facilities, including two-way bikeway proposed on the east side of Meridian Ave.

C. Construct traffic circle to direct traffic that accommodates bus bike facilities, including two-way bikeway proposed on the east side of Meridian Ave.

D. Build pedestrian gateway at the entrance to Meridian Ave and install curb ramps north of the Stadium to provide accessible pedestrian crossing across Pitkin.

Cross Section
Hughes Way to W Plum St
(Looking North)

Add a two-way separated bike lane and a sidewalk to the east side of Meridian Ave.
Libbie Coy Way

Spot Treatments

A
Add mountable raised islands with flexible delineators at W Pitkin St to emphasize one-way restriction and mitigate wrong-way turns onto Libbie Coy Way.
Install vertical delineators at A Street to discourage wrong-way turns onto Libbie Coy Way and reinforce contraflow bicycle lane.

Cross Section
(Looking North)

W Pitkin St to University Blvd
Add raised islands to buffer at intersections

W Lake St to W Pitkin St
Move sharrows to the middle of the lane.
Add 6 ft sidewalk to the east side of Libbie Coy Way with future development.
Spot Treatments

A. At the Old Main Dr intersection, extend the southeast curb and straighten the northeast curb line to widen the curb ramp onto the crosswalk. Remove north- and southbound stop signs.

B. Remove the stairs that cross over the railroad tracks as well as the crosswalk leading to them.

C. Add green conflict markings across driveways from University Ave to W Laurel St.

D. At the west railroad crossing tunnel exit, eliminate the three easternmost parking spaces and stripe a walkway through the parking lot to the trail that connects to Oval Dr.

E. Reconfigure angled parking to back-in angled parking along east side of Mason St. At intersection with University Ave, extend curb (optionally with paint-and-post treatment) to narrow crossing distance to less than 15 feet; design curb radius to accommodate bus left turn. Move crosswalk and stop bar on Mason forward to mitigate sightline issue.

F. Add green conflict markings across on Pitkin St to guide bicycles through the rail and busway crossings.

Cross Section Alternatives
University Ave to W Pitkin St
(Looking North)

Various options presented for parking solutions:

1) Back-in angled parking on the east side of S Mason St with no designated bikeway. Because of the width of the roadway, parallel parking is recommended to be permitted on the west side of Mason St.

2) Parallel Parking is formalized on both sides of Mason St.
Rampart Road

Spot Treatments

A. Build bus bulb outs and landing pads at all Foothill Shuttle bus stops. See [location] for existing bus stop locations.

B. Add speed limit signs across corridor every 0.25 - 0.5 miles. See [location] for location suggestions.

C. Implement access control by closing redundant driveways to improve corridor safety. See [location] for driveway closure suggestions.

D. Build raised crosswalk to support future parking lot.

Cross Sections

(Scale is approximate; not suitable for construction.)