DRAFT Joint Sustainability Commission
Transportation, Land Use, and Electrification
Environmental Investment Plan Recommendations

Recommendation Description:

Expand All Ages and Abilities Bicycle Network, Urban Trails, Sidewalks, and Shared Mobility

The JSC recommends the City of Austin (COA) invest a total of $211.39 million to expand the number of Metro Bike stations and to build out the All Ages and Abilities (AAA) Bicycle Priority Network, the Tier One Urban Trails network, and sidewalks and shared streets as recommended in the Urban Transportation Commission's "Climate Equity Investment" Recommendation 20240305-006. We recommend the following specific investments:

1. $48,960,000 to build out an additional 148 miles of the AAA Bicycle Priority Network and meet the 2023 Bicycle Plan Goal of 380 miles built out by 2026. Projects should be selected using the project prioritization model in the 2023 Bicycle Plan, which scores projects based on equity, destinations & travel demand, connectivity & safety, and cost. Relevant plan sections: Austin Strategic Mobility (ASMP) Bicycle Policy 2, Austin Climate Equity Plan (ACEP) Transportation and Land Use (TLU) Goal 3, and 2023 Bicycle Plan Item 4.7.la.

2. $22,600,000 to build out an additional 200 Metro Bike Stations to reach the 2023 Bicycle Plan goal of 300 stations by 2025. The investment should prioritize new stations in low-income areas with high mobility needs and connections to CapMetro's existing high-frequency bus and Metro Rail network. Relevant plan sections: ASMP Shared Mobility Policy 1, ACEP TLU Goal 3, and 2023 Bicycle Plan Item 4.7.2.

3. $75,826,000 to build out 15.6 miles of Tier One Urban Trails by 2028 and put COA on track to reach the 2023 Urban Trails goal of building all 94 miles of Tier 1 trails by 2043. City Manager should also consider investments to ensure "the Urban Trails Plan is deliver[ing] projects on an accelerated timeline" as the Urban Trails Plan notes doing so is "dependent on increasing internal City of Austin capacity across supporting departments concerning staffing, systems, and the processes for permitting" Urban Trails Plan Section 3.5). Relevant plan sections: See ASMP Urban Trails Policy 2 & 3, ACEP TLU Goal 3, and 2023 Urban Trails Plan Section 3.5.

4. $64,000,000 to build out 136 miles of new sidewalks and 80 miles of shared streets per year through 2028, putting Austin on track to address all "Very High" and "High" priority sidewalks and shared streets within 10 years. Projects in the highest Equity Analysis Zones should be prioritized for funding, per the Sidewalks, Crossings, and Shared Streets Plan. Relevant plans: ASMP Pedestrian Network Policy 1 & 2, ACEP TLU Goal 3, and 2023 Sidewalks, Crossings, and Shared Streets Plan Section 2.3.4)

Benefits

Carbon dioxide (CO_2) emissions reduction from reducing Vehicle Miles Traveled (VMT) in single-occupancy vehicles (SOVs). More trips within Austin will use modes split between public transit, bicycles, walking/wheelchair, carpooling, or shared mobility, or will be avoided altogether. Public health benefits include improving air quality by reducing vehicle CO_2 emissions along with co-pollutants such as nitrous oxide (NOx) and fine particulate matter (PM2.5) as well as encourage more active transportation for overall wellbeing.

Equity benefits include increasing the variety and accessibility of modes of transportation besides SOVs which are significantly more expensive. Building out this infrastructure in underresourced zones will increase these benefits for low-income and communities of color.

Community benefits of greater cohesion from using public spaces and infrastructure and being better connected to the city.

Greater land availability for uses other than car and parking infrastructure, which can aid with heat mitigation if drought-tolerant tree plantings are prioritized along bikeways and sidewalks per Council Resolution 20240321-039.

Jobs creation.

Cost

1. $48,960,000. 2023 Bicycle Plan estimates the average protected bike lane costs $600k/mile. The total cost to reach the 2026 goal is $88,800,000. The 2016 and 2020 Mobility Bonds have a total of $39,840,000 in unspent bikeways funds (as of December 5th, 2023)
2. $22,600,000. MetroBike received $11.3 million from the Texas Department of Transportation's Transportation Alternative Set-Aside grant program. Those funds will build 100 new stations, including replacing 83 existing stations, and 800 new electric bicycles
3. The Urban Trails Plan uses the assumption of $10 million per mile. To build out all Tier 1 trails by 2043, Austin needs to average $52 million in Urban Trails spending per year. The 2016, 2018, and 2020 Mobility Bonds contain a total of $80,174,000 in unspent funds for Urban Trails (as of December 5th, 2023)
4. $64,000,000. The Sidewalks, Crossings, and Shared Streets Plan notes the city currently has "less than half the estimated funding required to meet plan goals through 2028". Those goals are spending $32 million for 34 miles of new sidewalks and 20 miles of shared streets annually. Over four years that amounts to $128,000,000.

Related Plan Goals & Sections

ACEP TLU Goal 3

ASMP Bicycle Policy 2, Shared Mobility Policy 1, Urban Trails Policies 2 & 3, Pedestrian Network Policies 1 & 2

2023 Urban Trails Plan Section 3.5

2023 Bicycle Plan Strategies 4.7.1a & 4.7.2

2023 Sidewalks, Crossings, and Shared Streets Plan Section 2.3.4

Recommendation Description:

Extend Pickup Service Zones

The JSC recommends CapMetro (CM) invest up to $5 million per year to extend the service area for the CM Pickup ridehailing and ridesharing service. Pickup launched in 2017 and serves 11 zones in Austin and the surrounding areas. Ridership is projected to increase 26.8% in FY2024 compared to FY2023; this follows a 200% increase over FY2022. On April 1, 2024, it passed the 1 millionth passenger mark. This milestone and the projected increase in riders attest that Pickup fulfills an unmet need in underresourced transit areas. It expanded to Dove Springs in January 2024 and plans to extend to Decker Lake. We recommend CM pursue the Decker Lake zone and also study user data and rider surveys through an equity lens to identify where it's needed most and expand into 1-2 additional zones by May 2025. Possible zones include the Del Valle and Montopolis. We also endorse CM's planned initiative to pilot an electric Pickup fleet by the end of 2024.

Benefits

Contributes to ACEP's overarching goal of "equitably reaching net-zero community-wide greenhouse gas emissions by 2040" and specifically Transportation and Land Use (TLU) Goal 3, "By 2030, 50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home." Pickup reduces VMTs by connecting riders to services and amenities in their zone, including school, work, shopping, recreation, and medical clinics and hospitals. It also solves the "first/last mile" problem in transit accessibility and utilization by connecting riders to transit stops that may be prohibitively far away and therefore especially improves transit access for the disabled, elderly, and riders with children who may not be able to use e-bikes, scooters, and other solutions for short trips and the "last mile." Given Austin's extreme temperatures and paucity of shade corridors, eliminating the first/last mile is essential to encouraging transit ridership.
Provides community cohesion by connecting people to the services and amenities they need.

Cost

Based on CapMetro's FY2024 Operating Budget, we estimate the annual cost of adding 1-2 new zones will be $3-5 million per year.

Related Plan Goals & Sections

CM's FY2024 budget lists extending Pickup service areas as one of its priorities (p. 91)
ACEP TLU Goal 3, Strategies 1, 3; if fleet is electrified, ACEP TE Goal 1, Strategy 5
ASMP Shared Mobility Policies 1-3, 5, 6; Public Transportation Policies 1 & 6; Air & Climate Policy 1

Recommendation Description:

Downtown High-Frequency Circulator

The JSC recommends that CoA and CapMetro (CM) invest up to $7 million per year to resurrect a high-frequency, free or low-fare downtown circulator along the routes proposed by the Downtown Austin Alliance in a June 2020 report. We also propose the addition of the Long Center and Barton Springs/Zilker Park to address 2023 Urban Trails Plan Policy 3, "Pursue opportunities to connect to and expand the Urban Trails System." This service should be free or <$1/ride, thereby addressing ACEP TLU Goal 3, Strategy 2 to "promote free transportation options," as well as Strategy 1 ("Expand and improve public transportation"). The circulator should also run frequently, i.e., with stops serviced every 15 minutes or less, which is one of the highest predictors of public transit usage according to a 2016 study. We also recommend the circulators be electric vehicles to reduce CO_2 emissions and co-pollutants in the downtown area, thereby addressing ACEP Transportation Electrification (TE) Goal 1, Strategy 5. Reviewing and updating the DAA analysis for present conditions and drawing best practices from the models examined there will facilitate design and implementation.

Benefits

Contributes to ACEP's overarching goal of "equitably reaching net-zero community-wide greenhouse gas emissions by 2040" and specifically Goal 3, "By 2030, 50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home." Circulators reduce VMTs and the associated environmental and public health damages of SOV travel. They also reduce reliance on expensive and dangerous ride-hailing services filling high-congestion downtown zones. Ride-hailing cars idle and block bike, bus, and car lanes, creating dangerous conditions for everyone on the roads. Reduce congestion and therefore emissions and co-pollutants.

Though the Circulator routes do not serve low-income or underresources neighborhoods, additional free transportation options can reduce the transportation cost burden for low-income residents traveling within the downtown core for work, services, and leisure.

Cost

$7 million per year

Related Plan Goals & Sections

ACEP TLU Goal 3, Strategies 1, 2; if fleet is electrified, ACEP TE Goal 1, Strategy 5
ASMP Shared Mobility Policies 1, 3, 5, 6; Public Transportation Policies 1 & 6; Air & Climate Policy 1
2023 Urban Trails Plan Policy 3

Recommendation Description

Heat Resilience Infrastructure

Building off JSC Recommendation 20240228-014, we further recommend that CoA invest $30 million in building shade and cooling interventions, green infrastructure, and other resilient infrastructure projects. These measures mitigate the effects of extreme heat, increase water conservation, increase carbon sequestration, encourage transit usage and active transportation,

and improve flood control through water retention. Council's approved resolution 20240228-014 directs the City Manager to improve and build out green infrastructure - including drought-tolerant trees, plantings, rain gardens, and bioswales - along new roadways, transit lines, in the right-of-way, and around utilities. We endorse these directives and further request the following allocations for green infrastructure development:

1. $25 million to design, build, and maintain curb extensions and neighborhood roundabouts along new bikeways as a traffic calming measure and a space for green infrastructure. The projects should use the equitable prioritization methods of the ASMP and related plans to equitably distribute these projects in neighborhoods throughout the city.
2. $5 million in recurring annual funding for shading and cool corridors to address urban heat island effects and the needs of key neighborhood sites. Identify priority mobility corridors to serve as “cool corridors” with natural and engineered shade and cooling solutions to provide safe, climate-resilient connectivity on core pedestrian and transit routes. These corridors should (1) prioritize benefits in low-income neighborhoods facing high heat vulnerability, (2) address gaps based on the City’s existing heat vulnerability analyses, and (3) be developed in consultation with community-based organizations. Initial locations to prioritize for cool corridors should include the Rundberg area and the St. Johns, Montopolis, Franklin Park, and Dove Springs neighborhoods, due to high heat vulnerability as measured by various socioeconomic and heat exposure indicators. Priority project include research, design, installation, and maintenance of heat resilient infrastructure at new and existing transit stops, including shade structures (with solar panels, where feasible) and fan misters at high-traffic stops; research, design, installation, and maintenance of shade structures and shaded drinking fountains in parks, recreation centers, trails, and other community spaces/facilities adjacent to cool corridors.

Benefits

Summer 2023 was Austin's and the planet's hottest summer on record, and future summers are expected to bring more extreme heat. Mitigating heat through increased shade provision and urban cooling strategies reduces the negative health effects of heat, especially for children, the elderly, low-income populations, communities of color, and outdoor workers. As ACEP emphasizes, "Low-income communities and communities of color are the most impacted by extreme weather and pollution despite having contributed least to the drivers of climate change and pollution."

Reduce VMTs in SOVs by making public transit, trails, sidewalks, and bikeways more comfortable and safer in the face of extreme heat.

Jobs creation.

Traffic calming promotes safer streets for all forms of mobility, serving ASMP Bike System Policy 1 (Make streets safe for bicycling).

In addition to local cooling and carbon reduction benefits, green spaces have aesthetic benefits that can increase neighborhood satisfaction and make the public transit and active transportation experience more comfortable for all users, serving ASMP priorities.

Providing shade and cooling in public spaces serves several other ASMP Policies (e.g., Public Transportation System Policy 5, Improve the public transportation experience) and ACEP TLU Goal 3, Strategies 1 (Expand and improve public transportation), 3 (Enhance transit stations and stops), 4 (Prioritize bicycle networks), and 6 (Improve sidewalks, urban trails, and crossings) and Natural Systems Goal 3, Strategy 3 (Increase community tree planting) and Goal 4, Strategy 2 (Reclaim public space and prioritize green infrastructure).

Cost

$30 million for all projects.

Relevant Plan Goals & Sections

ACEP TLU Goal 3, Strategies 1, 3, 4, 6
ACEP Natural Systems Goal 4, Strategy 3
ASMP Pedestrian Network Policy 2; Public Transportation System Policy 5; Bicycle System Policy 1; Land Use Policy 5; Land and Ecology Policy 2
2023 Urban Trails Plan Goals 4-7
2023 Bicycle Plan Chapter 2, Shade & Green Infrastructure
2023 Sidewalks, Crossings, and Shared Streets Plan Strategies 1-3

Recommendation Description

CityLeap ATX Plan: Convert Travel Lanes on Arterial Roads to Protected Bike or Bus Lanes

JSC recommends the Smart Streets Austin CityLeap ATX Plan. On all City-owned arterial roads of 4 or more lanes (approx. 100 miles), one or more travel lanes should be converted to either dedicated bus lanes or two-way protected bicycle lanes and protected intersections as appropriate. This should occur within 5 years of EIP approval using "quickbuild" materials. Examples of arterial roads include Burnet, William Cannon, W. 45th, Menchaca, and Oltorf, among others. This proposal serves ACEP TLU Goal 3 (50% of trips in Austin are made using public transit, biking, walking, carpooling, or avoided altogether by working from home) and ASMP's overall goal of achieving a 50/50 mode share (50% drive-alone, 50% taking transit, riding a bicycle, walking, carpooling, or teleworking) by 2039.

Benefits

Equity benefits of expanding the public transit system to be affordable, reliable, accessible, safe, and comfortable and expanding the bicycle network on major arteries throughout the city, making bikeways accessible to public transit and other services and amenities.
Climate benefits of carbon dioxide (CO_2) emissions reduction from reducing VMT in SOVs as more trips within Austin will use modes split between public transit and bicycles. Public health benefits include improving air quality by reducing vehicle CO_2 emissions along with co-pollutants such as nitrous oxide (NOx) and fine particulate matter (PM2.5) as well as encourage more active transportation for overall wellbeing.
Significant transportation modeshift in the shortest time by converting Austin’s most direct routes to bike and bus lanes.

Dedicating more lanes to space-efficient transportation will also move more people faster and reduce commuter delay, which reduces emissions and co-pollutants and improves public health and urban liveability.
Safer streets for all forms of mobility.
Jobs creation.

Cost
$38.5 million. Assumes half (55 miles) of lane conversions will be bus lanes ($100K/mile) and half will be protected bike lanes ($600K/mile). Estimate does not include protected intersections or other measures.

Relevant Plan Goals & Sections
ACEP TLU Goal 3, Strategies 1 & 4
ASMP Overall Goal; Air & Climate Policy 1; Bike System Policy 1 & 2; Shared Mobility Policy 1; Public Transportation Policy 1
2023 Bicycle System Plan Strategy 2

Recommendation Description:
Establish a city-owned all-electric carshare service.
The Joint Sustainability Committee recommends a City of Austin-owned all-electric carshare service established with at least 200 vehicles within the City of Austin by December 2025. This program has already been proven to be successful in St. Paul, Minnesota, where the city launched the largest publicly owned, renewably powered, electric car-sharing program in the nation called Evie Carshare. Therefore, the Evie Carshare should be used as an example for best management practice to establish a successful program. Service areas should be prioritized in low-income and marginalized communities and lower fees to use the vehicles should be considered to COA's Customer Assistance Programs (CAP) customers.

Benefits

Based on Evie Carshare program, each carshare vehicle put into service reduces 71,540 Vehicle Miles Traveled (VMT) in Single Occupancy Vehicles (SOVs) annually, or 196 VMT per day. For 200 cars that would be 14,308,000 VMT. If we assume the average passenger vehicle emits about 400 grams of CO2 per mile, that would be equivalent to displacing **5,723 metric tons of CO2e annually** from internal combustion engines

In addition, by reducing VMT in Single Occupancy Vehicles (SOV) and replacing Internal Combustion Engine (ICE) vehicle trips with Electric Vehicle (EV), the project will significantly reduce harmful criteria pollutants, including Carbon Monoxide (CO), Nitrous Oxides (NOx), and Volatile Organic Compounds (VOC). Benefits also include residents being able to drive an electric vehicle without the cost of having to purchase one.

Benefits also include residents being able to drive an electric vehicle without the cost of having to purchase one.

Cost

Assuming each car costs approximately $30,000, total cost for 200 all-electric vehicles would be $6 Million. In addition, $4 Million toward (but not limited to) application development and support, customer interface development, management of fleet and service. Therefore, total cost of $10 Million.

Related Plan Goals & Sections

Goal 1, Strategy 4 of the Austin Climate Equity Plan "Launch an e-bike and electric car-sharing program": Create an electric bike and car-sharing program centered on low-income communities and communities of color to support functional, low-cost zero-emissions mobility

Recommendation Description:

Funding for low-cost, accessible charging stations at the City's owned facilities.
City of Austin (COA) will be conducting an assessment to identify city facilities where charging stations can be installed. This assessment is focused on COA properties to support fleet, workplace, and public charging needs. The JSC recommends $10 million is provided for the installations of the charging stations once they are identified in COA's assessment. Service areas should be prioritized in low-income and marginalized communities. In addition, the funding should prioritize locations near local small businesses to increase their revenue potential to benefit Austin's small business local community economy. Installations of charging stations should be completed no later than July 2026.

Benefits

Assuming at $10k per installed port (level 2 - 7.2kW) that would be 1,000 ports so roughly 7.2MW of installed load for EV charging. That would be equivalent to approximately 3,154 MWh/year of potential load to EV vehicles. Assuming a 0.321 kWh/mile EV fuel economy and an Average Port Utilization Rate of 20%, that would be equivalent to displacing approximately 39,500,000 miles of internal combustion vehicles. Assuming, an average passenger vehicles emits approximately 400 grams/mile of CO_2, the CO_2 reduction would be as follows: CO_2e reduction = 39,500,000 miles/year x 400 grams CO_2/mile x 1,000,000 grams/metric ton = **15,800 metric tons of CO_2 per year**.

In addition, by reducing VMT in Single Occupancy Vehicles (SOV) and replacing Internal Combustion Engine (ICE) vehicle trips with Electric Vehicle (EV), the project will significantly reduce harmful criteria pollutants, including Carbon Monoxide (CO), Nitrous Oxides (NOx), and Volatile Organic Compounds (VOC), improving local air pollution.

Cost
$10 Million for the installation of the charging stations, prioritizing areas of low-income and marginalized communities and local small businesses.

Related Plan Goals & Sections
Goal 2, Strategy 1 of the Austin Climate Equity Plan "Create a network with more low-cost, accessible charging stations" Continue to incentivize the installation of EV charging infrastructure by the City, businesses, auto manufacturers, and third-party charging companies to create a compelling (convenient, reliable, and low-cost) network accessible to all.

Recommendation Description:
Funding to install charging stations at multi-family homes with priority in low income communities.
Charging BEVs at home is the most affordable way to charge your vehicle. However, a significant portion of the population in Austin lives in multi-family homes where in most cases charging stations are not available. Therefore, the JSC recommends $10 million be provided to multifamilies in low- and moderate-income communities for the installation of electric vehicle charging stations by December 2024.

Benefits
Assuming at $10k per installed port (level 2 - 7.2kW) that would be 1,000 ports so roughly 7.2MW of installed load for EV charging. That would be equivalent to approximately 3,154 MWh/year of potential load to EV vehicles. Assuming a 0.321 kWh/mile EV fuel economy and an Average Port Utilization Rate of 20%, that would be equivalent to displacing approximately 39,500,000 miles of internal combustion vehicles. Assuming, an average passenger vehicles emits approximately 400 grams/mile of CO2, the CO2 reduction would be as follows: CO2e reduction = 39,500,000 miles/year x 400 grams CO2/mile x 1,000,000 grams/metric ton = **15,800 metric tons of CO2 per year**.

In addition, by reducing VMT in Single Occupancy Vehicles (SOV) and replacing Internal Combustion Engine (ICE) vehicle trips with Electric Vehicle (EV), the project will significantly reduce harmful criteria pollutants, including Carbon Monoxide (CO), Nitrous Oxides (NOx), and Volatile Organic Compounds (VOC), improving local air pollution.

Cost
$10 Million for the installations of the charging stations, prioritizing areas of low-income and marginalized communities.

Related Plan Goals & Sections
Goal 2, Strategy 1 of the Austin Climate Equity Plan "Create a network with more low-cost, accessible charging stations" Continue to incentivize the installation of EV

charging infrastructure by the City, businesses, auto manufacturers, and third-party charging companies to create a compelling (convenient, reliable, and low-cost) network accessible to all.