Feasibility Study of a Bicycle-Based Active Transportation Program For Recently Released Offenders

Lauren Dietz
Iowa State University, lkdietz@iastate.edu

Follow this and additional works at: https://lib.dr.iastate.edu/creativecomponents

Part of the Urban Studies and Planning Commons

Recommended Citation
Dietz, Lauren, "Feasibility Study of a Bicycle-Based Active Transportation Program For Recently Released Offenders" (2019). Creative Components. 160.
https://lib.dr.iastate.edu/creativecomponents/160
Feasibility Study of a Bicycle-Based Active Transportation Program
For Recently Released Offenders

by

Lauren Dietz

A professional report submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF COMMUNITY AND REGIONAL PLANNING

Major: Community & Regional Planning

Program of Study Committee:
Carlton Basmajian, Major Professor
Julie Stevens
Benjamin Shirtcliff

The student author, whose presentation of the scholarship herein was approved by the program of study committee, is solely responsible for the content of this professional report. The Graduate College will ensure this professional report is globally accessible and will not permit alterations after a degree is conferred.

Iowa State University
Ames, Iowa
2019

Copyright © Lauren Dietz, 2019. All rights reserved.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>LIST OF FIGURES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>iv</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NOMENCLATURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>vi</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ACKNOWLEDGMENTS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>vii</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ABSTRACT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>viii</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER 1. INTRODUCTION</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits of Active Transportation</td>
<td>9</td>
</tr>
<tr>
<td>Project Scope</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER 2. THE TRANSPORTATION CONTEXT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Infrastructure</td>
<td>16</td>
</tr>
<tr>
<td>Bicycle Infrastructure</td>
<td>19</td>
</tr>
<tr>
<td>Sidewalks, Walkability, and Level of Service</td>
<td>19</td>
</tr>
<tr>
<td>Sidewalks</td>
<td>22</td>
</tr>
<tr>
<td>Level of Service and Walkability</td>
<td>22</td>
</tr>
<tr>
<td>Infrastructure and Right of Way Needs</td>
<td>28</td>
</tr>
<tr>
<td>Transit</td>
<td>29</td>
</tr>
<tr>
<td>Transit</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER 3. THE PLANNING CONTEXT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>MoveDSM</td>
<td>37</td>
</tr>
<tr>
<td>PlanDSM</td>
<td>37</td>
</tr>
<tr>
<td>Connect: Central Iowa Bicycle &amp; Pedestrian Transportation Plan 2020</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CHAPTER 4. IMPLEMENTATION</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutional Bicycle Programs</td>
<td>42</td>
</tr>
<tr>
<td>Valley State Prison – California</td>
<td>42</td>
</tr>
<tr>
<td>Scott County Jail – Iowa</td>
<td>43</td>
</tr>
<tr>
<td>Iowa State Penitentiary</td>
<td>44</td>
</tr>
<tr>
<td>Community-Based Bicycle Programs</td>
<td>44</td>
</tr>
<tr>
<td>Phoenix Bikes Donations to Offender Aid and Restoration Program</td>
<td>44</td>
</tr>
<tr>
<td>San Diego Reentry Roundtable – PEDAL Project</td>
<td>45</td>
</tr>
<tr>
<td>Father O’Neill Charities Bicycle Program – Maryland</td>
<td>46</td>
</tr>
<tr>
<td>Barriers and Challenges</td>
<td>47</td>
</tr>
<tr>
<td>Infrastructure and Amenities</td>
<td>47</td>
</tr>
<tr>
<td>Willingness</td>
<td>48</td>
</tr>
<tr>
<td>Winter</td>
<td>49</td>
</tr>
<tr>
<td>Implementation Objectives</td>
<td>52</td>
</tr>
<tr>
<td>Short Term</td>
<td>54</td>
</tr>
<tr>
<td>Mid-Term</td>
<td>55</td>
</tr>
<tr>
<td>Long-Term</td>
<td>58</td>
</tr>
</tbody>
</table>
CHAPTER 5. CONCLUSIONS ................................................................. 61
REFERENCES ..................................................................................... 63
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-1</td>
<td>Federal Functional Classifications road map in Polk County</td>
<td>17</td>
</tr>
<tr>
<td>2-3</td>
<td>Bicycle Accessibility Map from MoveDSM</td>
<td>20</td>
</tr>
<tr>
<td>2-4</td>
<td>Existing trails map from the Des Moines Area Metropolitan Planning Organization’s online mapping service (blue lines are existing on-street bicycle facilities)</td>
<td>21</td>
</tr>
<tr>
<td>2-5</td>
<td>Sidewalk network map from MoveDSM Transportation Master Plan</td>
<td>23</td>
</tr>
<tr>
<td>2-6</td>
<td>Map of DART routes in the immediate vicinity of the Fresh Start Community-Based Correctional Facility</td>
<td>24</td>
</tr>
<tr>
<td>2-7</td>
<td>Screenshot of Google Maps showing Hickman Road at the driveway to the Fresh Start Community-Based Correctional Facility (bottom right corner), showing a minimally inviting pedestrian environment</td>
<td>26</td>
</tr>
<tr>
<td>2-8</td>
<td>Screenshot of Google Maps showing northbound Martin Luther King Jr. Parkway at Hickman Road</td>
<td>27</td>
</tr>
<tr>
<td>2-9</td>
<td>DART route 16 map (ridedart.com)</td>
<td>31</td>
</tr>
<tr>
<td>2-10</td>
<td>Routes available within one mile of the Fresh Start Community-Based Correctional Facility (ridedart.com)</td>
<td>34</td>
</tr>
<tr>
<td>2-11</td>
<td>Motor vehicle miles traveled between the Fresh Start Community-Based Correctional Facility and selected destinations. *The Ankeny Industrial Park is a potential source of job opportunities, but is not directly or indirectly serviced by DART (it lacks any transit route, or pedestrian or bicycle infrastructure to cross I-35 from the nearest stop at Delaware Road).</td>
<td>35</td>
</tr>
<tr>
<td>2-12</td>
<td>Fresh Start CBC and destinations on DART routes map</td>
<td>36</td>
</tr>
<tr>
<td>3-1</td>
<td>2011 Bicycle and Trail Master Plan future network map</td>
<td>38</td>
</tr>
<tr>
<td>3-2</td>
<td>MoveDSM plan for the future bike network</td>
<td>39</td>
</tr>
<tr>
<td>4-1</td>
<td>Bicycles donated by Father O’Neill Charities, Inc. (Maryland Department of Parole and Probation Facebook)</td>
<td>46</td>
</tr>
</tbody>
</table>
Figure 4-2 – 2015 BRR Ride in Perry, Iowa (Photo courtesy of the City of Perry, perryia.org)
NOMENCLATURE

AADT  Annual Average Daily Traffic
AASHTO  American Association of State Highway and Transportation Officials
CBC  Community-Based Correctional Facility
CIP  Capital Improvements Plan
DART  Des Moines Area Regional Transit Authority
DMAMPO  Des Moines Area MPO
ICIW  Iowa Correctional Institution for Women
NACTO  National Association of City Transportation Officials
SUDAS  Statewide Urban Design and Specifications Manual
ACKNOWLEDGMENTS

I would like to thank Julie Stevens for introducing me to the practical complexities of incarceration, and the women and staff at the Iowa Correctional Institution for Women for welcoming our studio class, challenging our preconceptions, and showing us the true meaning of compassion.

Additional thanks to my committee members for their flexibility, understanding, and assistance throughout the process of developing this report, and to my parents for continually enabling my obsession with bike riding since preschool.
ABSTRACT

Barriers to successful reentry continue to plague formerly incarcerated individuals, and continue to be a problem that grows with the increasing rate of incarceration in the United States. Transportation continues to be a common issue faced by ex-offenders, especially for those who are prohibited from driving as a condition of their sentence. Compounding the problem is the spatial mismatch between important destinations like job centers and residential areas. This is true for the women who reside at the Fresh Start Community-Based Corrections residential facility in Des Moines. The Des Moines Metro area is designed around a traditional transportation network of interstates, arterials, collectors, and local streets—meaning that most destinations are only reachable by motor vehicle, whether recreational trail network in Iowa, it is a mostly regional network that is divorced from local pedestrian and bicycle infrastructure and public transit. This paper analyzes the existing and planned transportation networks, public transportation routes and schedules, and planning documents to determine whether a bicycle-based active transportation program is a feasible option for women who reside at Fresh Start, and the steps would need to be taken to design and implement such a program.
“Mass Incarceration” has become a common phrase to describe the modern American approach to criminal justice since the 1970s, when the U.S. shifted toward policies of punitive justice—most recognizable by mandatory minimum laws. A 2008 study by the Pew Public Safety Performance Project found that more than one percent of American adults are confined in a jail or prison (Chen and McFadden, 2010).

Studies have focused on the implications public policy, and the social and behavioral sciences—especially when considering restorative justice, rehabilitative incarceration, and reentry programs. Federal grant funding for such programming became available in 2008 when the U.S. Congress passed the Second Chance Act, which established the National Reentry Resource Center (NRRC). The NRRC was tasked with developing and promoting best practices for rehabilitation-focused reentry at the state and local levels (CSG, 2017).

“To be most effective at reducing recidivism, programming and treatment should focus on changing criminal thinking, increasing prosocial relationships and activities, treating substance abuse disorders, and ensuring a stable living environment” (CSG, 2017).

Unfortunately, many on probation are released to residential facilities and neighborhoods where these types of social services and stability are difficult to find.

The stigma surrounding incarceration and the individuals who have experienced criminal institutionalization is often reflected onto the community. Areas with higher concentrations of these residents develop negative reputations, and “positive social organization” becomes an uphill battle. The community becomes marginalized and often experiences economic decline, which is exacerbated when offenders are released from incarceration (Chen and McFadden, 2010). The stigma is especially present for offenders on
probation or parole, as they are still under correctional supervision. One setting where these individuals tend to be concentrated are in Community-Based Correctional Facilities.

Morenoff & Harding (2014) found that half of paroled offenders were concentrated into 12% of Michigan’s census tracts and contained within 3 counties, while one-quarter of the paroled population lived within 2% of the identified tracts. As the population of Iowa continues to urbanize, this type of parolee concentration becomes more likely—and is reflected in the current incarceration rates by county. The three counties with the highest level of incarcerated individuals are Polk (Des Moines Metro), Black Hawk (Waterloo-Cedar Falls), and Scott (Quad Cities Area) (Iowa DOC, 2018).

The common refrains about the struggles of prisoner reentry was adequately summed up by Koschmann and Peterson (2017):

“In the United States, we have a large prison population, virtually all these prisoners will be released, most are unprepared to integrate back into society, former inmates face increased difficulties at every turn, most will commit additional crimes and be sent back to prison or jail, and the whole process is a huge burden on budgets and society. Therefore, we must improve our reentry efforts so former inmates can integrate back into their communities successfully.”

Spatial mismatch hypothesis emerged in the 1960s as one explanation for low earnings among low income workers, which correlates to increasing residential isolation from emerging employment centers—an issue not typically affecting middle-income workers (Kain, 1968). Reviews of the literature imply a correlative link but lack the statistical outcomes to confirm a causal link. A review of the literature in the 1990s showed that spatial
mismatch does not exist alone in the economic environment for low wage earners—it is often paired with other factors such as depressed wages overall for the target population, general economic fluctuations, (Holzer, 1991; Arnott, 1998) and in the case of recently paroled offenders, the stigma of criminal conviction(s) and subsequent correctional institutionalization.

However, such correlative effects are shown in Polk County for the women at the Fresh Start Community-Based Correctional Facility (CBC). Economic opportunity in commercial and industrial centers throughout the Des Moines Metro area are geographically disparate from the Fresh Start CBC. A report by the Iowa Department of Corrections indicates that every resident of CBCs across the state has a need for transportation for job seeking, employment, and other locations for “evaluations, treatment, or participation in various educational programs” (2002). The report acknowledges that residents of the State’s CBCs rely heavily on walking and public transportation—as only certain residents in “more advanced stages” of rehabilitation are allowed to use personal vehicles within certain restrictions. Residents who are reliant on public transportation to travel to distant employment centers outside of a reasonable walkshed may experience further employment barriers based on bus routes and schedules—which may affect the days and hours during which they can work.

What much of the literature has neglected, though, is the role of the built environment on the success of offender reentry. Planning-based literature has recently studied obesogenic urban planning (or the field of research studying the effects of the built environment on physical health, specifically obesity)—some of these same ideas may apply to the success of parolees during reentry. Issues such as the location of residential facilities in relation to the
major job nodes where parolees are placed and the active and passive transportation networks between the facility and work may have an effect on successful reentry. A significant period of time spent on public transit may affect an individual’s ability to access facility counselors and treatment programs. Some offenders may be unable to obtain or use their driver’s license as a condition of their parole—but do not have alternative methods of reliable transportation and may violate parole by driving on a suspended license in order to get to work or tend to family obligations.

Additionally, utilization of public infrastructure for transportation is largely a matter of access—which extends beyond ADA compliance. Users must have access to the correct devices (e.g. car, bicycle, transit routes, etc.), have the physical and mental capability to use those devices, and be in proximity of the infrastructure they need. The infrastructure must also be maintained to such an extent that use is both possible to use and comfortable for the user.

Underserved populations that lack access to the proper infrastructure and devices for use are more likely to experience economic hardships related to transportation. Motor vehicle-based land use planning further exacerbates these issues, as public transportation and active transportation are often viewed by engineers and planners as something to manipulate into the existing fabric of motor vehicle infrastructure, rather than ideas to enhance and/or supplant traditional modes of transportation planning. External funding mechanisms for transportation infrastructure (e.g. grants and public loans) often rely on cost-benefit analyses, which inherently favor positive impacts to already enfranchised populations, as the economic benefit calculations often show higher returns on investment in middle and upper-class areas. The availability of alternative forms of transportation in already disadvantaged
communities—specifically the inclusion of ADA compliant sidewalks, bicycle facilities, and roadway crossings—are often treated as regulatory checklists rather than best practices for human-scale design (Epting, 2016).

The City of Des Moines has adopted a number of plans that incorporate active transportation infrastructure across the community to improve public health and livability, portions of which target disadvantaged populations to alleviate environmental justice concerns. However, the time horizons for these plans stretch decades into the future, and the short-term goals and objectives focus on public schools and the downtown core. Neighborhoods like the one near Fresh Start are considered longer-term goals, and are contingent upon future public budgets and the availability of outside funding.

**Benefits of Active Transportation**

According to the United States Center for Disease Control and Prevention (CDC), active transportation is:

“any self-propelled, human-powered mode of transportation, such as walking or bicycling. Physical inactivity is a major contributor to the steady rise in rates of obesity, diabetes, heart disease, stroke, and other chronic health conditions in the United States. Many Americans view walking and bicycling within their communities as unsafe due to heavy traffic and a scarcity of sidewalks, crosswalks, and bicycle facilities. Improving these elements could encourage active transportation such as children biking to school or employees walking to work. Safe and convenient opportunities for physically active travel also expand access to transportation networks for people without cars, while also
spurring investment in infrastructure to increase the comfort of the on-road experience to improve the appeal of active modes to all people.”

(https://www.cdc.gov/healthyplaces/transportation/promote_strategy.htm)

Numerous quantitative and qualitative studies have shown a causal relationship between active transportation and improved physical health and mental wellbeing. It has been shown to satisfy the recommended daily activity minutes for adults, decrease the negative effects of mental illnesses, decrease the incidence of obesity and cardiovascular disease, and decrease the overall mortality rate of active commuters (Dill, 2009; Oja, et al. 2011).

The key to promoting active transportation is improving the infrastructure for bicycle riders and pedestrians. A 2010 study showed a positive correlation between improved infrastructure and the number of multimodal miles traveled (Pucher, et al., 2010). A study of Portland, Oregon found that most bicycle commuting miles occurred on well-maintained, bicycle-specific facilities (Dill, 2009).

The U.S. Department of Transportation guidance on active transportation indicates that though public transit is not strictly considered an active form of personal transportation, “studies have shown a higher level of physical activity among public transportation riders. This is because every public transportation trip is a multi-modal trip. Most people who use public transportation walk to or from stops and stations or make other trips by foot during the course of their day.” Thus, this project will also include an examination of public transportation serving the Fresh Start CBC.
Project Scope

This project seeks to identify transportation constraints and programs that may help to increase employment opportunities and reliability for offenders released from prison. The study area is limited to the greater Des Moines area due to its vast transportation and transit network, the location of the Fresh Start Women’s Center, the ready availability of maps and information, and the current political and grassroots push to incorporate more options for multimodal and active transportation throughout the Metro.

This paper will include a cursory analysis of transit times from the Fresh Start Community-Based Correctional Facility to major employment centers, analysis of the current and planned active infrastructure (e.g. bicycle trails, sidewalk extensions and enhancements, etc.) and the feasibility of implementing a bicycle-based transportation program for the women residing at the Fresh Start CBC. Ready access to active infrastructure and public transportation will be vital to the implementation and success of any bicycle-based transportation program, as studies have shown that most bicycle miles ridden for commuting or recreation are completed on bicycle-specific facilities like multi-use trails, bicycle lanes, bicycle boulevards, and streets that have traffic calming treatments.

The general idea is to determine whether such a program is feasible, over what timeline, and whether the program could jumpstart active transportation among parolees and ex-offenders through the provision of bicycles that each participant would be able to keep after leaving the CBC to use for recreation and transportation.
CHAPTER 2. THE TRANSPORTATION CONTEXT

Federal Functional Classifications

The Des Moines Metro area has a complex transportation and transit network that make it a fitting study area, due to the wide array of constraints and potential interventions. The area is bisected by interstates, major and minor arterials and collectors, and a substantial number of local streets, as defined by the federal functional classification system.\(^1\)

As evidenced in Figure 2-1, Des Moines has an extensive network of high- and moderate-volume roads that creates difficulties in non-vehicular travel.

The Fresh Start Women’s Center is located near the intersection of Hickman Road and Martin Luther King Jr. Parkway in Des Moines. Hickman Road is classified as a Minor Arterial, which sees an Annual Average Daily Traffic (AADT) of 7200 in front of Broadlawns Medical Center. Martin Luther King Jr. Parkway is classified as an Other Principal Arterial with an AADT of 18,800 north of Hickman Road, and an AADT of 21,700 south of Hickman Road. (Figure 2-2). According to the MoveDSM Transportation Plan, traffic on Hickman Road is expected to stay roughly the same through 2040, while traffic along that stretch of Martin Luther King Jr. Parkway is expected to increase to 20,000-30,000 AADT by 2020, and to more than 30,000 AADT by 2040.

\(^1\) *Interstates* are the highest federal functional classification for public roads. They are limited-access arterials that have been officially designated as interstates by the U.S. Secretary of Transportation.

*Other Principal Arterials* are high-volume roadways that serve urban centers and often connect rural areas. However, the number of access points are more numerous than interstates, and include at-grade crossings that may provide direct access to a parcel or property.

*Minor Arterials* are moderate-volume roads that provide access to arterials from smaller geographic areas. They are generally spaced between 1/8-mile and 3 miles apart in urban and suburban districts, and often practically function as principal arterials in rural areas.

*Major and Minor Collectors* are also moderate-volume roads that provide access to arterials from smaller geographic areas, but have smaller volumes and provide higher mobility for dwellings and businesses. Major collectors often have higher speeds, fewer access points, and higher traffic volumes than minor collectors. Major collectors are also more likely to have longer mileage and span jurisdictions.

*Local Roads* comprise the largest percentage (by number and mileage) of all road classifications. These are the low-speed, low-volume residential roads that provide frequent access to individual properties. Public transit routes often do not traverse local roads, but this classification is often considered a “low stress” walking and biking route.
Figure 2-1 – Federal Functional Classifications road map in Polk County
Figure 2-2 – 2016 Annual Average Daily Traffic counts from the Iowa DOT (https://iowadot.gov/maps/msp/traffic/2016/cities/DesMoin.pdf)
Existing Infrastructure

Bicycle Infrastructure

The Des Moines Metro area has the most extensive network of bicycle facilities in Iowa. However, according to the MoveDSM Transportation Plan, the Fresh Start Community-Based Correctional Facility is in an area of poor bicycle accessibility—using the CBC as a starting point, very few places in Des Moines are accessible by bicycle.

The existing facilities map shows that the CBC is not directly served by any bicycle facilities (Figures 2-3 and 2-4). Users must travel north to access the Inter-Urban Trail, which provides a connection to other trails and bicycle facilities such as the Neal Smith Trail, and provides the only reliable bicycle crossing to access the east side of the Des Moines River. This connection requires at least some travel on sidewalks—the issues surrounding sidewalk transportation near the CBC is discussed in the following section of this chapter.
Figure 2-3 - Bicycle Accessibility Map from MoveDSM
Figure 2-4 – Existing trails map from the Des Moines Area Metropolitan Planning Organization’s online mapping service (blue lines are existing on-street bicycle facilities)
Sidewalks, Walkability, and Level of Service

Sidewalks

According to MoveDSM, Des Moines currently has 667 miles of existing sidewalk gaps. Fresh Start is serviced by complete sidewalks along Hickman Road and Martin Luther King, Jr. Parkway—which includes access to a nearby bus stop. (Figures 2-5 and 2-6).
Figure 2-5 Sidewalk network map from MoveDSM Transportation Master Plan
Figure 2-6 – Map of DART routes in the immediate vicinity of the Fresh Start Community-Based Correctional Facility
However, the plan does not take into account the condition of the sidewalk infrastructure or pedestrian comfort. Google Street View screenshots containing imagery from August 2018 show a common sight in this area of the city (Figure 2-7). A 3-foot wide sidewalk is only separated from the travel lanes of Hickman Road by a 4-foot, unlandscaped parkway with a low curb offering little vertical separation from a high-volume road. Overhead utilities and utility poles are immediately adjacent to the sidewalk, and the sidewalk is not within current ADA (Americans with Disabilities Act) compliance standards. Similar conditions are found on Martin Luther King, Jr. Parkway, where a 3-foot parkway buffers a 3-foot wide sidewalk from the travel lanes of an even busier road than Hickman (Figure 2-8).

Chapter 12 of the Iowa Statewide Urban Design and Specifications manual (SUDAS), which details design standards and ADA compliance for new sidewalk and recreational trail construction, states that the standard sidewalk width should be a minimum of 4 feet. Paved passing zones that have dimensions of a minimum of 5-feet by 5-feet are required to be spaced at intervals of 200 feet. The ideal sidewalk has a 5-foot width, which eliminates the need for periodic passing zones. Former ADA compliant sidewalks needed to be a minimum of 3-feet wide, so maintenance of the current sidewalks along Hickman Road and Martin Luther King, Jr. Parkway is grandfathered in. Only under a full reconstruction of the sidewalks would the new ADA guidelines need to be met. Commercial driveways that are controlled by a yield, stop, or traffic signals need to have curb ramps (aka truncated domes) for the sidewalk approaches on either side of the driveway—which would include the driveway at Broadlawns Medical Center.
Figure 2-7 – Screenshot of Google Maps showing Hickman Road at the driveway to the Fresh Start Community-Based Correctional Facility (bottom right corner), showing a minimally inviting pedestrian environment
Figure 2-8 – Screenshot of Google Maps showing northbound Martin Luther King Jr. Parkway at Hickman Road.
Level of Service and Walkability

Level of Service (LOS) refers to the quality of pedestrian facilities, and their ability to promote or hinder walking. “A pedestrian expects to move freely without too many disturbances due to interactions with other pedestrians and static obstacles in the environment” (Cepolina, et al., 2018). The 3-foot width of the existing sidewalk is not conducive to pedestrian comfort and lacks the facility width to pass someone else on the sidewalk, which puts bicyclists (who need more space for comfort and control) at an extreme disadvantage.

Creating Walkable Communities: A guide for local governments is a 1998 document produced by the Bicycle Federation of America’s Campaign to Make America Walkable (made available through the National Center for Biking and Walking) provides design criteria beyond ADA-based sidewalk design and safety, and includes criteria for personal comfort and walkability that includes: character and scenic opportunities, pedestrian furnishings (e.g benches and wayfinding signage), and street trees and landscaping—that make a sidewalk inviting on top of safety standards. (http://www.bikewalk.org/pdfs/ncbwpubwalkablecomm.pdf). Decades of landscape design standards back up these ideas. This is partially evidenced by the relative personal comfort of walkability in small, tree-lined neighborhoods with low-volume roads as opposed to large urban areas lacking character, biodiversity, and/or pedestrian amenities.

The non-residential areas within a one-mile walkshed of the Fresh Start CBC follows the same pattern as the pictures of Hickman Road and Martin King Luther, Jr. Parkway—which do not meet the personal comfort criteria in the Creating Walkable Communities guide.
Infrastructure and Right of Way Needs

The National Association of City Transportation Officials (NACTO) guidance on bicycle facility design for all ages and abilities states that roads with higher than 6,000 AADT, and/or a speed limit greater than 25 miles per hour should have protected bicycle lanes, bicycle paths with separated pedestrian paths (for high pedestrian volume corridors), or shared use paths (for low pedestrian volume corridors).

SUDAS standards, which follow the AASHTO (American Association of State Highway and Transportation Officials) guidelines from the 4th Edition (2012) of the Bike Guide or “Green Book”, detail the ideal dimensions and ADA requirements for shared-use paths and protected bicycle lanes.

Bicyclists require a minimum width of 4 feet, but a preferred width of 5 feet or more, of essential operating space when facing oncoming bicycle or pedestrian traffic in highly trafficked corridors. As such, the ideal width for high volume shared use paths is 11 to 14 feet. Low-volume bicycle corridors can be reduced to 8 feet in width, or where constraints exist, such as pinch-points caused by utility infrastructure, protected trees, and fences or other vertical obstructions (SUDAS Chapter 12B-3, 2019).

One-way protected bicycle lanes (where lanes for each direction are located on either side of the road in the same direction as vehicular traffic) require a minimum width of 5 feet and at least 1-foot of horizontal separation from vehicular traffic. If the space will be used for passing or riding side-by-side, a minimum width of 7 feet is required. Vertical separation is also necessary—consisting of bollards, curbs, planters, concrete barriers, or other protection from moving vehicles.

Therefore, while the immediate area around the CBC is considered to have an existing sidewalk and network connections, it has a low level of service and walkability.
(Section Note: Adoption of SUDAS (pronounced SOO-dahs) standards is voluntary and performed through a legislative resolution in each jurisdictional government that adopts the manual. It is the standard guidebook for civil engineering design information in the state of Iowa, and has been adopted for use by cities across the Metro, including Des Moines).

**Transit**

In addition to pedestrian and bicycle infrastructure local to Fresh Start and job-related destinations, public transit is integral to transportation needs for women who lack access to a personal vehicle. Without some form of public transportation, job opportunities and access to other destinations such as grocery stores and the library.

Transit service is provided by the Des Moines Area Regional Transit Authority, or DART. It is the largest transit service in Iowa, with regular routes serving most of the incorporated areas of Polk County and the Metro areas of Dallas County. The nearest stop to the CBC is the DART route 16 stop at Broadlawns Medical Center (Figure 2-9). It connects to the Merle Hay Mall area, Downtown Des Moines, and the DART Central Station. In the MoveDSM plan, this is considered a central route—which provides regular service throughout the week including weekends.
Google Maps trip planner and the DART trip planner apps were used to determine how long residents of Fresh Start might be expected to spend on bus routes to and from employment centers across the Des Moines Metro, and how that might change between weekdays and the weekend. Specific businesses within large, heavy commercial districts were used as proxy employment centers to have a concrete stopping place for determining routes (Table 2-1).

Weekend service is extremely limited, and seems to favor large retail areas like Jordan Creek Mall and Valley West Mall. These places are potential job centers, though
Jordan Creek Mall is wholly located in Dallas County—which may violate some travel area restrictions for parolees. On-call service (which picks riders up at home and delivers them to their destination) is available from 8:00am to 4:00pm on weekends, but the five on-call routes do not include the area around Broadlawns; women at the Fresh Start Community-Based Correctional Facility would still have to rely on weekend routes, or find a connection to an area served by the on-call routes. In these cases, having a bicycle could be beneficial for a last-mile transportation option where transit does not provide regular weekend service. However, this would still be dependent on the area around the destination having bicycle facilities or bicycle friendly streets between the stop and the destination.

Transit times have the potential to be reduced through increased access by walking or riding bicycles to other routes’ stops. A roughly 1-mile walkshed and bikeshed provides direct access to four more routes: the 3, 15, 50, and 60 (Figure 2-10)—which could reduce the need for bus transfers, and allow for people riding bicycles to leave the CBC a little later and still be able to make the bus by decreasing the active commuting time.

Figure 2-11 shows the road miles traveled between the Fresh Start CBC and select job centers in Polk County. Transit miles traveled may be higher due to decrease in personal efficiency due to the fixed routes designed to maximize population efficiency—additionally, average travel times will also increased due to the higher number of stops required on transit routes. If Des Moines’ vision for a truly multimodal city are realized, it may be more efficient for someone to ride their bicycle the entirety of the route between Fresh Start and destinations, as an average bicycle rider travels at an average speed of 10-14 miles per hour. Including stops, a rider moving at 10 miles per hour on the 6.5-mile route to the Animal Rescue League of Iowa would spend about 38 minutes traveling, compared to approximately
50-65 minutes on public transportation. An increase to 14 miles an hour would decrease the time by another 10 minutes. The time it takes to walk to and from the bus stop on either end of the trip would be eliminated, the rider has more flexibility with their schedule, and they would not be restricted by a lack of weekend bus service.

Table 2-1 – Transit times and hours to select job centers in Polk County

<table>
<thead>
<tr>
<th>DART Transit to/from Fresh Start Women’s Center</th>
<th># of transfers</th>
<th>Weekday hours</th>
<th>Weekend hours</th>
<th>Min. time on transit</th>
<th>Max. time on transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Start CBC to _____ (round trip)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PDI - Ankeny</td>
<td>2</td>
<td>Hourly between 6:00am and 10pm</td>
<td>None</td>
<td>37m</td>
<td>1h 29m</td>
</tr>
<tr>
<td>Animal Rescue League of Iowa – Des Moines</td>
<td>1</td>
<td>Late morning or early afternoon</td>
<td>None</td>
<td>49m</td>
<td>1h 2m</td>
</tr>
<tr>
<td>Quality Manufacturing – Urbandale</td>
<td>1-2</td>
<td>Early am or early pm</td>
<td>None</td>
<td>1h 22m</td>
<td>1h 40 m</td>
</tr>
<tr>
<td>Valley West Mall – West Des Moines</td>
<td>0-1</td>
<td>Hourly between 6:00am and 10pm</td>
<td>Hourly between 6:00am and 10pm</td>
<td>34m</td>
<td>1h 6m</td>
</tr>
<tr>
<td>Lowe’s Home Improvement – Altoona</td>
<td>1</td>
<td>Hourly between 6:00am and 10pm</td>
<td>Hourly between 6:00am and 10pm</td>
<td>1h 7m</td>
<td>1h 10m</td>
</tr>
<tr>
<td>Walmart – Grimes</td>
<td>1 + On Call</td>
<td>Periodic between 6am and 4pm</td>
<td>None</td>
<td>1h 17m</td>
<td>1h 40m</td>
</tr>
<tr>
<td>Target – West Glen West Des Moines</td>
<td>0-1</td>
<td>Hourly between 6:00am and 10pm</td>
<td>Hourly between 6:00am and 10pm</td>
<td>50m</td>
<td>1h 7m</td>
</tr>
</tbody>
</table>
Figure 2-10 – Routes available within one mile of the Fresh Start Community-Based Correctional Facility (ridedart.com)
Figure 2-11 – Motor vehicle miles traveled between the Fresh Start Community-Based Correctional Facility and selected destinations. *The Ankeny Industrial Park is a potential source of job opportunities, but is not directly or indirectly serviced by DART (it lacks any transit route, or pedestrian or bicycle infrastructure to cross I-35 from the nearest stop at Delaware Road).
Figure 2-12 – Fresh Start CBC and destinations on DART routes map
CHAPTER 3. THE PLANNING CONTEXT

MoveDSM

MoveDSM is the first all-inclusive transportation plan created by and for the City of Des Moines (with assistance from Sam Schwartz Consulting and consultants at Kirkham Michael). The plan promotes the incorporation of complete streets and active transportation into all such planning and engineering projects. It supplements the 2011 Bicycle & Trail Master Plan created by the City of Des Moines and Alta Planning & Design, and complements the PlanDSM Comprehensive Plan.

The 2011 plan calls for on-street bicycle lanes along Martin Luther King, Jr. Parkway, ostensibly in tandem with traffic calming measures such as lane reductions, decreased speed limits, and traffic diversion. The MoveDSM plan does not specify the facility type, but it does indicate that it would be part of the future core network of facilities.

The plan would better connect the CBC to core and secondary facilities that would improve non-motor vehicle transportation options and connections to transit. However, these plans have time horizons as far in the future as 2040. The improvements may not find their way into the City’s Capital Improvements Plan for years, making the wait time for adequate facilities prohibitive to a bicycle-based transportation program for women at the CBC.
Figure 3-1 – 2011 Bicycle and Trail Master Plan future network map
Figure 3-2 – MoveDSM plan for the future bike network
PlanDSM

PlanDSM is the City’s Comprehensive Plan, adopted in 2016, which has a time horizon of 2040—coinciding with the MoveDSM plan.

The Transportation chapter of the plan includes 5 goals related to active and multimodal transportation. The walkability portions of the goals focus on residential neighborhoods, new residential development, and Downtown Des Moines—all of which largely leave out commercial areas and the immediate location of Fresh Start. There is also no mention in the objectives about updating existing sidewalks to current ADA and SUDAS design standards.

The fourth goal involves improving transit as a viable form of commuter transportation, but is largely dependent on the City’s relationship with DART and increased ridership. This would greatly benefit recently released offenders, but requires broad public buy-in and increased public funding to expand the number of routes and the frequency of buses across routes.

The fifth and final goal involve enhancing and expanding the bicycle network with facilities that are “safe, comfortable, and easily accessible.” The plan implies a long-term capital improvement schedule for this, though, so it will most likely not be a viable option for women at the CBC for the foreseeable future.

Like MoveDSM, PlanDSM is city-specific, so it is possible that if this plan were fully implemented by 2040, it would only improve active transportation options within the corporate boundaries of Des Moines—leaving commutes to other cities in Polk County reliant on their respective comprehensive and transportation plans, and development patterns. In both plans, it is unclear whether these would be standalone projects, or ones that are
integrated with pavement management plans, or what the schedule for those management plans may be.

**Connect: Central Iowa Bicycle & Pedestrian Transportation Plan 2020**

The Connect plan was developed in 2009 by the Des Moines Area MPO. Its purpose was to guide bicycle and pedestrian planning throughout Central Iowa over the next 10 years. The original intent was to regularly update the plan over the years to adapt to implementation successes and challenges—though it has sat largely untouched since the final copy was issued in 2009. The plan focuses largely on regional connections, which might be beneficial to people who are willing to commute long distances by bicycle, but is in many cases unhelpful to residents of the CBC, unless those trails connect directly into the Inter-Urban Trail or the Neal Smith Trail (see Figure 2-4).

The DMAMPO’s Long-Range Transportation Plan from 2014 largely draws on the Connect plan for its bicycle and pedestrian plans, and as is fitting for a regional organization—focuses on regional trails and connections rather than local facilities.
CHAPTER 4. IMPLEMENTATION

Several considerations need to be made in order to implement a bicycle-based transportation program. This includes the acquisition of bicycles (likely through institutional or community relationships), developing an administrative protocol, facilitating interest and willingness for participation, and working with the City of Des Moines and other governments in the Des Moines Metro area to determine important transportation routes that would need to be moved up the CIP schedule for construction or maintenance.

Acquiring Bicycles

Aside from the need for safe, accessible sidewalks and bicycle facilities, perhaps the most difficult part of this program will be acquiring bicycles at a pace consistent with both interest and the length of time women will be residing at the Fresh Start Community-Based Correctional Facility (which averages about four to six months). Due to the cost of new bicycles (which range from a few hundred to many thousands of dollars), it is often more cost-effective to repair a bicycle or refurbish one from spare parts. Likely places where these bicycles could come from are correctional institutions or relationships with community groups who would donate bicycles.

Institutional Bicycle Programs

Some correctional institutions across the United States have job and skills programs for incarcerated offenders that involve the repair and refurbishing of bicycles for target populations or the broader community around the institution. Two such programs exist in Iowa—at the Iowa State Penitentiary and the Scott County Jail.
The following are a selection of institutional programs in the United States that could serve as a model for additional programs in the Iowa State Department of Corrections that could provide refurbished and/or repaired bicycles to programs like the proposed bicycle transportation program at the Fresh Start Women’s Center. A selection of community programs is also detailed.

**Valley State Prison – California**

In August 2017, Valley State Prison in Chowchilla, California officially opened the Bicycle Refurbishing Program, which had actually started months earlier as a community service project. The opening event included the donation of 30 refurbished bikes to local services agency and a local elementary school. Indeed, the goal of the program is to “collaborate with community partners to provide refurbished bicycles to local charitable and community-based agencies for distribution to those in need” (Inside CDCR, 2017). Incarcerated individuals are selected for the program, where they learn valuable hands-on skills that transfer beyond bicycle repair. The program partners with organizations throughout the larger community and region to obtain donations of bicycles, parts, equipment, and tools—some local stakeholders have “adopted” the program as their local service mission, and teaching assistance and some supplies have been donated by local bicycle shops (Inside CDCR, 2017).

Similar programs exist at Donovan State Prison—near the California/Mexico border—which donates bikes and toys refurbished by inmates to impoverished children in Tijuana, Mexico (Inside CDCR, 2015), and at Folsom State Prison, where a program was developed in the 1980s through the local Rotary Club and Moose Lodge as a way to keep incarcerated individuals busy and to provide holiday gifts to children in need (Yoon-Hendricks, 2017).
Scott County Jail – Iowa

In Iowa, the Scott County Sheriff’s Department provides vocational training in bicycle repair and maintenance to inmates who refurbish donated and discarded bicycles that are then returned to the community (Scott County, 2018).

Iowa State Penitentiary

After a 2-year hiatus in the program, the Iowa State Penitentiary’s John Bennet Bike Program restarted in January 2011 with a local donation of used bicycles and parts. Recently refurbished bicycles were donated to the Fort Madison Green Bike Program—which takes its name from the green paint used on the bicycles. Bicycles can be checked out by the community and visitors for use throughout Fort Madison.

It may be possible to work with the Iowa State Penitentiary to furnish some bicycles to a released-offender bicycle program. Another option might involve creating a similar bicycle rebuilding program at the Iowa Correctional Institution for Women in Mitchellville so women who come out of ICIW have already built a bicycle and know how to maintain it.

Community-Based Bicycle Programs

Phoenix Bikes Donations to Offender Aid and Restoration Program

Phoenix Bikes is a community program akin to the Des Moines Streets Collective (formerly the Des Moines Bicycle Collective) that houses a community bike shop where people can earn a bicycle by building it themselves. On Friday nights, young men from the Washington DC area of Virginia meet to work on their bikes and build others from parts at the organization. These additional bikes are donated to the Offender Aid and Restoration Program of Falls Church, Arlington, and Alexandria.
“Having a bike from Phoenix Bikes allows them to keep their job…we often hear stories from our participants particularly about how that bike has changed their lives,” said OAR Executive Director Elizabeth Jones Valderrama.


**San Diego Reentry Roundtable – PEDAL Project**

A retired corrections counselor and teacher came up with the idea to provide bicycles to individuals released from incarceration as a way to reduce recidivism by empowering ex-offenders. A group of former inmates who worked in a local temporary employment center were surveyed in 2012 and were receptive to the idea. Similar to the Valley State Prison bicycle program, local organizations such as churches have provided donations of bicycles, parts, and tools. Some of those surveyed worried about public perception and their perceived social standing if they were to ride bikes around the neighborhood, but the director of the Center for Employment Opportunities, where the surveyed individuals found temporary work, liked the idea of employees having more control over their schedules and an increased ability to take care of daily personal needs like grocery shopping—while saving on transportation-related expenses such as monthly bus passes. Local programs exist that provide a bus pass for free for the first month after incarceration as long as released offenders complete a four-week course, but the “graduation” rate is only about 50% (SD City Beat, 2013).

The PEDAL (Providing Ex-offenders Driving Alternatives for Life) Project has been in place since 2013 thanks to grant funding and local donations. PEDAL Project leaders have been considering how this program might pair with the Donovan State Prison program.
Father O’Neill Charities Bicycle Program – Maryland

Father O’Neill Charities Bicycle Program is a non-profit that repairs used bicycles and donates them to people in need. A donation in the summer of 2018 was made to the Maryland Department of Public Safety and Correctional Services’ Parole and Probation teams in Waldorf, Leonardtown, and Prince Frederick, Maryland. The cities are southeast of the Greater Washington D.C. metro area, and lack adequate options for public transit. However, according to the Maryland DPSC, a field supervisor got the idea for a program providing released offenders with bicycles after considering how to best tackle the issue of transportation to jobs and appointments for her supervisees.

Figure 4-1 – Bicycles donated by Father O’Neill Charities, Inc. (Maryland Department of Parole and Probation Facebook)

These programs indicate that it is possible to build a community support network necessary to furnish and administer a similar program in Des Moines. A likely organization
to start this program, at least initially, is the Street Collective of Greater Des Moines (https://www.dsmstreetcollective.org/). The Collective offers maintenance classes, women-focused classes and events, and offers an “Earn a Bike” program to “assist adults… in need of reliable transportation who are interested in wellness and learning new skills.” People who participate in the program are eligible for a bicycle by “paying” for it with 20 volunteer hours, during which time they learn how to build and maintain bicycles. The Collective is also a community partner in the Bike Back to School event in Des Moines, which provides a bicycle, helmet, and bicycle lock to children who qualify for the free/reduced lunch program. The organization’s commitment to social justice and active transportation, and its location in the East Village (roughly 3.5 miles from the CBC) make it a logical community partner.

Additional considerations beyond acquiring bicycles include access to (by purchase or provision) safety and storage accessories such as helmets, lights, and bike locks.

**Barriers and Challenges**

**Infrastructure and Amenities**

In the immediate term, assuming enough bicycles could become available relatively quickly, the biggest barrier to implementation of this type of program is the infrastructure element. The area surrounding the Fresh Start Community-Based Correctional Facility is one of the least friendly places for bicycles in Des Moines. There are no direct connections to bicycle facilities, and the sidewalks are unwelcoming and too narrow for even most pedestrian movement (as discussed in Chapter 2)—let alone a pedestrian walking a bicycle to a trail roughly a mile away.
Once the infrastructure is in place, which is planned to occur by 2040 but may take longer due to emerging circumstances in public budgets and land use, bicycle-specific amenities will also need to be installed to accommodate active commuting. These types of amenities include fix-it stations for small repairs or filling tires, benches to for rest on long commutes or for those who are new and not yet conditioned to bicycle commuting, and permanent bicycle racks for secure storage of bicycles when not in use. Without somewhere to safely and securely park a bicycle within the confines of local city codes, bicycle commuting is not feasible. These amenities need to be provided at regular intervals throughout the city, and are especially important at starting and ending points such as employers and transit stops.

**Willingness**

After infrastructure, the greatest potential barrier is likely to be willingness to participate—for users, administrators, and all other potential partners in the program. Bicycle riding is not for everyone, and both bicycle and pedestrian transportation require a level of physicality or access to physical assistance devices that not everyone has the opportunity to enjoy. Before starting a bicycle-based transportation program, it would be beneficial to survey previous, current, and soon-to-be residents of the CBC to gauge interest and willingness to participate. Garnering input from past, current, and future residents of the CBC is key to determining long-term viability for users as the average length of stay in a CBC is only four to six months.

Administrators would also need to be involved—which may be difficult as most public administrators in any capacity have a significant amount of responsibilities in the face of shrinking budgets and fewer staff resources. It could be helpful to have a community partner such as the Streets Collective of Greater Des Moines or a volunteer coordinator to
help promote and administer the program in terms of providing access to bicycles and accessories. The role of the facility administrator and staff could be to simply inform residents of the program and provide the initial contact to the community partner or volunteer coordinator should residents choose to participate.

If enough interest is shown, it would then be time to line up program partners such as community groups and/or institutional programs to provide bicycles, accessories, and possibly skill building lessons.

Winter

Winter in Des Moines brings an average of 35 inches of snowfall per year and an average annual low of 14 degrees (actual temperature). While the area also experiences an average of 36 inches of snow and average annual highs of 86 degrees (actual temperature) (*According to usclimatedata.com, and the National Oceanic and Atmospheric Administration), riding bicycles in winter conditions is significantly more dangerous due to reduced tire traction, reduced joint mobility with additional clothing layers, and reduced facility widths due to inadequate snow and ice removal.

However, with the right education, training, and clothing, year-round bicycle riding for commuting and/or recreation is neither impossible nor unheard-of in Iowa. It is becoming more common in urbanized areas as more bicycle facilities are built and maintained. A recent bicycle, pedestrian, and trails master plan shared by the City of Fort Dodge and Webster County includes suggestions for bicycle “snow routes”, similar to roadway snow routes—identifying specific trail and bicycle facility routes that would be maintained during winter weather events to make year-round commuting more practical and predictable (2018 Hike & Bike WC: Pedestrian, Bicycle, and Trail Master Plan). There are even winter-specific bicycle events like the BRR Ride (Bike Ride to Ripey)—which takes place on the Raccoon River
Figure 4-2 – 2015 BRR Ride in Perry, Iowa (Photo courtesy of the City of Perry, perryia.org)

While multi-mile round trip biking in winter can be a great option for some people, others may not feel comfortable riding long distances in cold temperatures. Bicycle commuting can still be an answer, but as a first-mile/last-mile strategy that complements public transit. Doing so limits the amount of time spent in cold weather, limits the number of bicycle miles ridden, and provides an opportunity to limit the number of transfers and time spent on transit by opening up the number of available bus stops and routes in addition to decreasing the transportation time to the bus stop.

A complicating factor is described in the Des Moines Comprehensive Plan regarding Valley Trail each year on the first Friday in February.
bicycle facilities maintenance in the winter:

“Snow and ice represent seasonal challenges to bicycling in Des Moines. When snowplows remove snow and ice from roadways, it is usually deposited on roadway edges. This creates a very difficult bicycling environment by narrowing the curb lane or blocking the bike lane. While trails are plowed in the winter, they are low priority and it may take several days before they are cleared. Ice on the roadway and on trails presents a more serious challenge to cyclists than motorists. Proper drainage for snowmelt, and more aggressive treatment of roadway surfaces in freezing temperatures may help increase the cycling season for some hardy riders. Timely removal of traction sands and winter debris will also improve cycling conditions and stormwater quality.”

Of additional note is that other cities will have their own policies and regulations regarding bicycle facility maintenance during the winter months, which may not match up completely with Des Moines’ maintenance. This may complicate factors for paroled offenders who may gain employment in other Metro cities in Polk County, especially for those who might choose to do more extensive winter riding.

All is not lost, though, as winter bicycle commuting becomes increasingly popular in Iowa. A 2017 article in the Des Moines Register highlighted winter commuters and their tips for pedaling in cold weather. One piece of advice in the article is to “Take road conditions into account. If you’re a novice winter rider, stick to trails or wait for a day when streets are clear,” (https://www.desmoinesregister.com/story/life/living-well/adventure-iowa/2017/01/17/iowa-bike-commuters-offer-winter-cycling-tips/96673372/). Released offenders who opt into this program and are not yet comfortable with riding in potentially
adverse weather conditions should take this into account when deciding whether accept a job where a bicycle is an integral part of their commute and crucial to scheduling reliability. While everyone is new to winter commuting when they are starting out, people who are less comfortable in general with their bicycle riding skills should reconsider this as an option as it puts them at a greater risk than other winter bicycle commuters, considering the widely varying pavement and traffic conditions they could encounter. Such conditions could be considered a different level of danger to less- versus more-experienced riders.

Additionally, while cold weather technical gear is not necessarily required, significant attention must be paid to the layers of clothing chosen to minimize exposed skin and keep the body warm. Prices for technical clothing such as thermal leggings from major brands such as Specialized™ can run well over $100 (www.specialized.com), which is a high price to pay for most people, let alone someone who is reentering the workforce and establishing the habits of someone living on a fixed budget with household expenses.

While not impossible or uncommon for residents of cold weather states to ride their bicycles in the winter, it could provide a serious hurdle for wintertime bicycle-based travel during reentry. However, this may only affect a moderate percentage of CBC residents whose length of stay includes the winter months.

**Implementation Objectives**

Even in light of the potential barriers to implementing a bicycle-based active transportation program at the Fresh Start Community-Based Correctional Facility, it is still a feasible project in the 5- to 10-year timeframe. To get to actual implementation of women commuting by bicycle to work and other destinations, other steps can be completed in the 1- to 5-year timeframe. Some of the objectives may be able to move up the implementation of
the program, such as working with the City to move bicycle facility programming up in the CIP, provided there is adequate funding and reasoning for doing so. The following objectives are divided into three action periods: short-term (1-3 years), mid-term (3-5 years) and long term (5+ years). The 1- to 5-year timeframe sets the groundwork for the implementation after 5 years. However, these timeframes should be considered estimates, and will likely not fit neatly into the identified action periods.
Short Term

Meet with women at ICIW to determine interest in future participation. Before taking any steps to design and implement the program, it is necessary to understand whether there is enough interest from women who are likely to spend time at Fresh Start once their period of incarceration is complete. If interest is low in the beginning, it does not mean that the program is not viable—it provides an avenue for early education on the benefits of bicycle commuting and multimodal active transportation. In addition to currently incarcerated women, it would be helpful to discuss the possibility of a program with women who currently reside at Fresh Start—though they would not be able to participate, they would be a valuable voice in the feasibility of such a program for women who are sent to the CBC in the future (especially when including those who were not incarcerated at the Iowa Correctional Institution for Women, but are reentering from county facilities or are taking part in other programs like pretrial supervision).

Build community partnerships. When working toward an aspirational bicycle commuting program, it helps to have community partners—whether for simple support in lobbying City officials, or for donations of some sort. The Street Collective of Greater Des Moines would be a great organization to start with, as they have a variety of existing programs in addition to strong ties to other organizations and government officials throughout the Des Moines Metro. It could be a partnership to help gather support for bicycle and pedestrian facility projects on priority routes, assisting with soliciting donations of bicycles and accessories, or actually providing bicycles, accessories, and/or educational programming for women enrolled in a future bicycle commuting program.

Develop a list of priority destinations and routes. Before building support for specific bicycle and pedestrian facility projects, it helps to know what projects would best benefit the
women at Fresh Start. By developing a list of priority destinations, based on how many women go to that destination/area and the frequency with which they do so. This list should then be compared against the existing network of trails, sidewalks, and DART routes/stops to determine where there are deficiencies. A partnership with the Street Collective could help with this, as the staff and volunteers there keep tabs on active transportation plans, capital improvement plans, and potential policy actions at the city and state level. The organization could be helpful in determining priority routes and marketing the need for those facilities to the public and City officials.

*Begin discussions with the Iowa State Penitentiary bicycle program.* These discussions should be twofold. The first line of discussion should focus on the logistics of the program at ISP, whether it could be expanded to provide some or all of the bicycles to the program at Fresh Start, and how the bikes would be transported to Fresh Start (and on what schedule). The second line of discussion should include staff from ICIW to determine whether a program for building and maintaining bicycles would be possible at ICIW—as it is closer to the CBC and provides women the chance to learn maintenance skills prior to their residence in a CBC.

**Mid-Term**

*Begin talking to the City and DART about priority projects.* The current active transportation planning documents identify the Downtown and East Village neighborhoods as priorities for bicycle facility implementation. However, that does not mean that it would not be worthwhile to begin discussions among Fresh Start administrators, the City, and community partners regarding the priority routes list. With enough public support, it could be possible to get these projects moved up in the capital improvements plan schedule. These types of projects are often programmed in terms of overall community benefit and support—
which are more likely to be on the City’s radar if it is brought to their attention. Another positive outcome would be to know when certain streets are programmed for repair or reconstruction, and how those projects relate to the priority routes. The City would be able to save on construction and mobilization costs if a project adjacent to scheduled roadwork is completed at the same time, and it provides Fresh Start staff and their community network with a more concrete timeline regarding the future availability of bicycle and pedestrian routes. Additionally, if the City plans to apply for grant funding to pay for the bicycle and pedestrian facility costs, it gives Fresh Start administrators time to provide information regarding the benefits to its residents and to write letters of support to strengthen the grant applications.

*Develop bicycle and accessory acquisition program.* Based on previous conversations with community partners and ISP staff, Fresh Start staff will need to develop a plan for acquiring bicycles and accessories—this includes any intergovernmental or partnership agreements that spell out the responsibilities of each organization involved (e.g. provision of repair/refurbished bicycles, provision of accessories, storage of surplus items, delivery/pick-up schedules, etc.) and the period for which the agreement will be in place (e.g. a 2-year renewable agreement). Having a signed agreement among organizations helps to reduce ambiguity and confusion during the long-term implementation phase.

*Develop an administrative protocol and evaluation framework.* Once some of the initial steps are finished or in motion, but prior to the implementation of a program, Fresh Start administrators should begin developing and administrative protocol and framework for program evaluation. The administrative plan should include a timeline for determining interest prior to a woman moving into the CBC, that would also allow enough time to acquire
an appropriately sized bicycle and safety accessories. Additional considerations include: storage of excess bicycles and accessories or those for incoming women, an evaluation framework that includes criteria and reevaluation periods, liability waivers, agreements between the women and the CBC, whether to require a demonstration of skills prior to allowing a woman to commute by bicycle, any successes or concerns regarding agreements with partner organizations, self-reported successes and challenges from participating women, and any determinations that need to be made about what criteria might disqualify a woman from participating (e.g. certain high risk health concerns).

Liability will be a key concern for administrators at Fresh Start and in the Iowa Department of Corrections—so this should be given significant attention during the planning phases of this program. Key concerns include the aspects of providing repaired or refurbished bicycles to women as opposed to new bicycles, previously known health concerns, and if any off-site actions by the women (while using the bicycles) will have an adverse effect on facility administrators or the Department of Corrections. A licensed attorney would need to make the final decision as to whether the women would need to sign a liability waiver prior to taking part in the program.

The following table is an example of evaluation criteria and possible time periods for evaluation. Due to the limited number of beds at Fresh Start, the evaluation of interest would hopefully increase initially, but over time the metric would be whether interest remains consistent over time (taking into account seasonal variance).

<table>
<thead>
<tr>
<th></th>
<th>First 4 months</th>
<th>First 6 months</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest (consistency over time)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Availability of bikes &amp; accessories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Routes/trail miles</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
 added to CIP
Routes/trail miles under construction
Routes/trail miles Completed
Women who continue bike commuting after leaving Fresh Start
# of installed amenities along routes
Self-reported challenges from women
Self-reported successes from women

Long-Term

*Begin acquiring bicycles for first round of participating women.* When the administrators are comfortable with the development of the short-term and mid-term supporting framework, it is time to begin acquiring bicycles for the first round of participating women. While the overall program may be considered a pilot for a broader application to CBCs across Iowa, this would be somewhat of a sub-pilot program to begin implementation and work out any issues that arise during the early stages.

*Work with community partners to develop pre-program education.* It would be helpful for women to receive some kind of education about active commuting, bicycle safety, and bicycle maintenance before sending them off. Community partners would be a great resource for this. While it would be convenient to have these courses at ICIW for women who are scheduled for release to the CBC, it would leave out women at the CBC who are in a reentry program or pretrial release and were not previously incarcerated at ICIW. Therefore,
it would be best completed on a regular schedule during or close to a woman’s orientation period. Offering the education once each month might mean some women are not able to start immediately, but it is possible that the education could be offered more frequently if the program becomes more popular. There may also be seasonal variation in the program, as it is likely that it will be more popular during the warmer months than during the winter.

*Update priority routes list as projects are completed.* As bicycle and pedestrian facility projects are completed, the list of priority destinations and routes should be updated. This could be done as part of the evaluation program to streamline workflows for administrators. Keeping tabs on priority projects and communicating those to community partners and government officials ensures that the program could continue to be successful for participating women by ensuring that women can reach their destinations efficiently and effectively.

*Continue conversations with community partners and City officials.* Continuing to strengthen existing partnerships and building new relationships with community organizations and government officials is important to continuing the success of any program that is implemented. Gathering input from all parties helps to identify strengths and concerns, and allows for a variety of viewpoints on how to strengthen the program and help women during their reentry.

*Evaluate and amend program as necessary.* No program is perfect, so it is important to regularly evaluate and amend it. This should be done more frequently at first to quickly identify and address concerns (e.g. every quarter), but after a comfortable procedure is established it could be extended to a bi-annual or annual evaluation. Ideally, the program would become more successful over time, with more women participating. It may also be
helpful to track participants who are willing to self-report whether they continued to commute by bicycle after leaving the CBC and returning to a permanent residence for the remainder of their parole or post-parole. A truly successful program is one that would provide women with a lifelong skill that promotes personal wellbeing, that they continue to implement in their lives after leaving the CBC.
CHAPTER 5. CONCLUSIONS

While in the long-term this type of program is feasible, the existing infrastructure in Des Moines—specifically that around the Fresh Start CBC—is prohibitive to the implementation of a bicycle-based transportation program for CBC residents.

The City of Des Moines has undertaken a number of planning efforts in the past decade that intend to increase and encourage active transportation, and the Des Moines Area Metropolitan Planning Organization has placed an emphasis on increased bicycle use with a focus on regional trail connections; however, the plans have time horizons up to 21 years in the future and include extensive infrastructure construction and some road lane realignments to accomplish each plans’ goals and objectives. Additional reconstruction of the sidewalk infrastructure in the immediate vicinity of Fresh Start would be needed to create an accessible, inviting, walkable space.

The benefit of having to a number of years for the infrastructure to be in place is that it provides more time to handle the start-up arrangements necessary to implement such a program—such as acquiring a partner for the provision of bicycles and safety accessories, as well as educating staff and creating an internal plan for marketing the program to future residents. The length of years could end up being a barrier in and of itself if the wait time is too long—which may make it seem like working to implement a bicycle transportation program for women at Fresh Start is futile. However, if staff and volunteers are willing to work with the City to determine more-informed timelines for improvements, it may move some infrastructure improvements up the schedule due to interest and environmental justice concerns. Even once the infrastructure is in place bicycle and pedestrian amenities would also need to be installed at starting and ending points for safe parking, storage, and simple
maintenance. Additionally, regular maintenance of the infrastructure will be key to not only implementing an active transportation program, but to continuing it into the future.

Starting the program at the Fresh Start Community-Based Correctional Facility creates a sort of pilot program to determine the feasibility of a wider rollout of bicycle transportation to other CBCs throughout the Department of Corrections, and eventually as an option to recently released offenders across Iowa DOC Institutions. This type of program goes beyond the environmental justice issues faced by ex-offenders reentering society, and has the opportunity to impact other disadvantaged communities and all residents of Polk County by expanding access to transit, and extending the availability of and access to bicycle and pedestrian infrastructure.
REFERENCES


Des Moines 2011 Bicycle & Trail Master Plan.
https://www.dmgov.org/Departments/Parks/PDF/Bicycleandtrailsmasterplan.pdf

Des Moines Area Metropolitan Planning Organization interactive online map. http://dmampo.maps.arcgis.com/apps/webappviewer/index.html?id=c48776f60395490eb3029f5b29fc7b88


Des Moines Area Regional Transportation Authority. https://www.ridedart.com


Gahagan, S., Foster, L., Hash, J. “Teens build bikes to help former convicts get to work.”
WUSA9, updated May 14, 2018.

Google Maps. https://www.maps.google.com


Hike & Bike WC: Bicycle, Pedestrian, and Trails Master Plan


Iowa Department of Corrections FY2016 Annual Report.


Maryland Department of Public Safety and Correctional Services (Facebook page)
https://www.facebook.com/MDPublicSafety

Mineta Transportation Institute. Low Stress Bicycling and Network Connectivity.


MoveDSM Transportation Master Plan.
https://sse.sharefile.com/share/view/sbeb2c04a1e64afcb


https://csgjusticecenter.org/wp-content/uploads/2017/12/12.15.17_Making-Peoples-


Pedestrian and Bicycle Information Center. “Low Stress Networks.” http://www.pedbikeinfo.org/topics/lowstress.cfm


U.S. Department of Transportation. “Active Transportation” https://www.transportation.gov/mission/health/active-transportation
