

Strategies for Addressing Unsheltered Homelessness

Columbus, Ohio

Knowlton

A PRODUCT OF

CRP 4900 SPRING STUDIO

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FOREWORD



The purpose of this Ohio State City and Regional Planning studio was to provide planners, policymakers, and stakeholders with new tools, evidence, and insights regarding planning considerations for people experiencing unsheltered homelessness in Columbus, Ohio. Students proposed planning, policy, and design specifications around access to food (community refrigerators), transportation, tiny home development, and programs for services. Students extensively reviewed pertinent literature, assessed case studies and best practices, and worked together on forward-thinking ideas for improving lives. While providing homes for people without homes is the optimal solution, the students' ideas offer essential ways to improve lives by providing immediate needs. Beyond resulting tools and specifications, this evidence will inform stakeholders and policymakers to advocate for our valued neighbors.

- Kyle Ezell, EdD, FAICP CUD

Professor's Note: This is a student document submitted for partial fulfillment of requirements for a junior-level city and regional planning capstone course. Student authors of this publication are in training to become professional planners. We are proud of the work presented here, but please consider the limitations of a project produced within the scope of a term when considering recommendations.

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COMMUNITY FRIDGES

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INTRODUCTION



Our strategy, Columbus Community Fridges, seeks to address the prevalent food insecurity that the unsheltered homeless and extremely impoverished populations face. It aims to increase access to food and provide essential non-food items for those who need them through the implementation of community fridges and shelves in the Columbus area. These community fridges can also raise awareness around the issues of homelessness and food scarcity and build bonds between the members of a community and its more vulnerable population.

This topic is important because unsheltered homeless people face a great amount of food insecurity, which has negative repercussions on their health (Petrik, 2019). Food scarcity and homelessness also leads to poorer educational outcomes and a lack of employment opportunities. People who are homeless often must make the impossible choice between food and shelter, sometimes they cannot afford either (Cody-Carrese, 2019). A study done at two homeless shelters in Minnesota found that participants obtained extra food (not provided by the shelter) by stealing, scavenging (dumpster diving), eating items in grocery stores, or prostituting for extra money (Richards & Smith, 2006). These are people who get served multiple meals a day, so the outlook for unsheltered people is even more dire.

A more creative solution is needed to combat the intersection of homelessness and food insecurity. In the wake of the COVID-19 pandemic, free, public fridges have become a leading trend. These fridges immediately put food in people's hands and there is no barrier to obtaining food from one, such as the need for identification or paperwork. These fridges are low cost and relatively simple to implement, which is why we have pursued this strategy. We will assess case studies in three major cities to understand and improve on the current model for community fridges, report on the conditions of unsheltered homelessness in Columbus in relation to food scarcity, recommended targeted locations for Columbus Community Fridges, and provide a prototype design and guidelines for implementation.

[illegible]

(1.1) Map of food deserts in Columbus

(1.1) USDA Economic Research Service, ESRI. <https://www.columbusnavigator.com/inner-city-food-deserts/>



Health in Relation to Food Insecurity Among Homeless and Unsheltered Homeless

Food insecurity can deeply affect a variety of things including mental and physical health, such as anxiety, depression, eating disorders, etc. Being homeless can also shape one's entry into, duration, or severity of food insecurity. Unfortunately, many who are experiencing homelessness and unsheltered homelessness, often worry about where their next meal will come from, however, in some cases, their primary focus is finding shelter first. When individuals are consumed with locating a safe and secure place to sleep every night, food or healthy food may take a backseat to the immediate importance of securing shelter. It's also important to realize that having food insecurity doesn't necessarily mean insufficient food quantity but also the incapacity to have a healthy diet.

Access to medical services also plays a critical role in the relationship between food insecurity and health. According to Michelle Kaiser, an assistant professor of social work at Ohio State University, "Someone with diabetes, high blood pressure or high cholesterol is not able to meet their dietary needs in a way that is not just convenient, but it adds to the challenges they're already experiencing," (Kaiser, 2020). Not having access to medical services is often seen within homeless people. When they don't have access to medical services, this usually means they are not getting their health regularly monitored. According to an article, *Is Food Insecurity Related to Health-Care Use, Access and Absenteeism?* published by Cambridge University Press, food insecurity was positively related to the suspension of medicines and to having fewer consultations (Public Health Initiatives Programme, 2019). Overall, food insecurity among the homeless and unsheltered homeless, still face the same overall health effects. Having a shelter in place puts the want of food first, compared to worrying about shelter, which unsheltered

homeless people usually prioritize first over food. However, both unsheltered and sheltered homeless people can still face the same negative health outcomes in relation to food insecurity, such as anxiety symptoms, depression, poor immunity, anorexia, etc.

Benefits to Implementing Fridges

With homelessness and food insecurity increasing, a solution must be put into place if we ever want to see this issue resolved. Therefore, we believe the implementation of free, public fridges should be considered to help combat the problem. Andy Fisher, the co-founder and former executive director of the Community Food Security Coalition said, "community fridges are wonderful, they're not institutionalized, they're not big business. They're a friendly way for neighbors to take care of one another" (Fisher, 2021). Implementing these fridges would certainly help reduce hunger among those who are considered homeless. It would also be a way to redistribute perfectly good food from grocery stores, restaurants, and farmers markets that would otherwise go to waste. A lot of families and individuals also faced the problem of unemployment due to COVID-19. Therefore, implementing these fridges in the Columbus area, would allow those who are experiencing homelessness access to free food in order to help these families feed their children and themselves. The implementation of these fridges also would help those who are unsheltered not have to make the decision between shelter or food. Overall, allowing these fridges to be administered will not only help combat the growing problem of hunger in underserved communities but also provide awareness around the issues of homelessness and food scarcity.

CASE STUDY

BOSTON, MA

Boston, Massachusetts has an extensive network of community fridges that has recently emerged as a response to the COVID-19 pandemic. These fridges are often accompanied by some shelves, stocked by donations, and monitored by volunteers (Blumenthal & Doyle, 2020). Many community fridges in Boston provide non-food household items too. The Eater Boston website has an accessible and interactive map of these fridges and write ups for each one containing information about what is in stock and when they are open. A lot of the fridges also have their own websites and social media accounts to raise awareness and reach as many people as possible. These specific sites also provide guidelines for use and what can be donated. Each community fridge has a unique identity and mission. Some

focus their efforts on BIPOC issues, some on LGBTQ+ issues. This model can be adapted to serve the homeless population specifically.

These fridges often use creative and strategic partnerships to make them more effective. For example, the Dorchester Community Fridge and organizer Jamison Cloud partnered with Brookwood Community Farm to stock the fridge once or twice a week (Kuschner, 2020). Another example of collaboration is local business D'Friends Barbershop covering the cost of electricity for the Jamaica Plain Community Fridge. This fridge is stocked by Allendale Farm and gets bread from local bakeries (Kuschner, 2020). It is a real community effort in Boston. The residents of the city have come together for a good cause in the absence of a city sponsored program.



(1.2) Allston Community Fridge Boston, MA

The community fridges in Boston are not a city project. However, the leniency that the city is currently granting allows them to stay open. There are other cities where there have been legal crackdowns after fridges were open for a while. In 2018 in Berlin, the city that is credited with pioneering this free food model as early as 2012, food and safety regulators required a huge number of fridges to be closed or moved to private spaces which seriously stems the mission of the public fridge model (Evans, 2020).

(1.2) (n.d.). allstonbrihtonfridges. (2020). Allston Community Fridge, Boston, Ma.
<https://www.instagram.com/p/Ci6Eiw7ALQc/>.

CASE STUDY

LOS ANGELES, CA

Los Angeles, California is home to another large network of community fridges. In July of 2020, Los Angeles Community Fridges, a “a non-hierarchical group of people involved in mutual aid and food justice,” began establishing fridges around LA with 14 currently in operation (Kalish, 2020). The organization has decided to slow down the rate at which they establish fridges in order to maintain and improve the sense of community around the current fridges (Kalish, 2020). The fridges have become very popular. They are frequently stocked by kind strangers who also discard the expired items they replace. Extra supplies such as face masks, hand sanitizer, and diapers are also available at many fridges.

California is also home to Ernst Oehninger, who co-founded a community fridge



(1.3) South Hill and West 28th Fridge, Los Angeles, CA

network called Freedge at UC Davis. Freedge maps community fridges all around the world. Oehninger says that, “part of the struggle with community-regulated food spaces is managing the concerns of authorities and residents... None of the food codes were made for food-sharing. They’re made for businesses and restaurants” (Kalish, 2020). This is always going to be an issue if a community fridge program is not developed through governmental channels. Los Angeles fridges have begun to face serious legal trouble just like fridges in Berlin. Fridges in Los Angeles are continually being shut down for violating health codes, building codes, fire codes, electrical codes, or being declared abandoned equipment (Kalish 2020).

The only fridge in the Compton area of Greater Los Angeles lasted just a few days. The fridge violated property maintenance and electrical codes. Where it was located, the extension cord that powered the fridge could be subject to physical damage. The Compton Fire Department then told the operators that the fridge could remain if it had a safety latch. A safety latch was installed. However, the fridge was once again targeted, this time with California Penal Code 402b, which declares that it is a misdemeanor to abandon a fridge without removing its doors or latching mechanisms (Kalish, 2020).

(1.3) Sures, E. (2020). One of the Los Angeles community fridges located at South Hill and West 28th St. <https://www.uscannenbergmedia.com/2020/09/18/south-la-community-fridges-feed-and-support-local-residents/>.

Lillian Kalish, a reporter from LA says that, “These incidents highlight the simmering tensions between food-based mutual aid efforts and city officials” (2020). This issue is at the forefront of our plan. The City of Columbus needs to be fully on board and supportive of this effort and we plan on adhering to all codes and regulations to make that possible.



(1.4) Lincoln Heights Fridge, Los Angeles, CA

(1.4) thelincolheightsfridge. (2020). Lincoln Heights Community Fridge, Los Angeles, Ca. <https://www.instagram.com/thelincolheightsfridge/?hl=en>

CHICAGO, IL

THE LOVE FRIDGE

The Love Fridge based in Chicago, Illinois is another community initiative that seeks to ensure 24/7 food access to anyone who needs it (The Love Fridge Chicago). It follows a very similar model to Boston with a great interactive map to locate fridges and gather information and each fridge has a unique identity. Many of the fridges that are part of The Love Fridge network are sponsored by small businesses such as liquor stores and restaurants. Additional fridges are sponsored by churches. The Love Fridge provides universal donation guidelines for all the fridges around Chicago so that there is a standardized system. The Love Fridge website also has a place to volunteer to be a fridge manager. This centralized system is very successful. We identified The Love Fridge as a best practice in community fridges.

The centralized system, including universal donation standards, a map of all fridges, and one direct sign up for volunteer monitoring, would work best for a city sponsored program. This website would be the hub for all community fridges in Columbus and can be built out sometime in the near future.

(1.5) Members of The Love Fridge network, Chicago, IL



(1.5) The Love Fridge Chicago. <https://www.thelovefridge.com>

COLUMBUS, OH

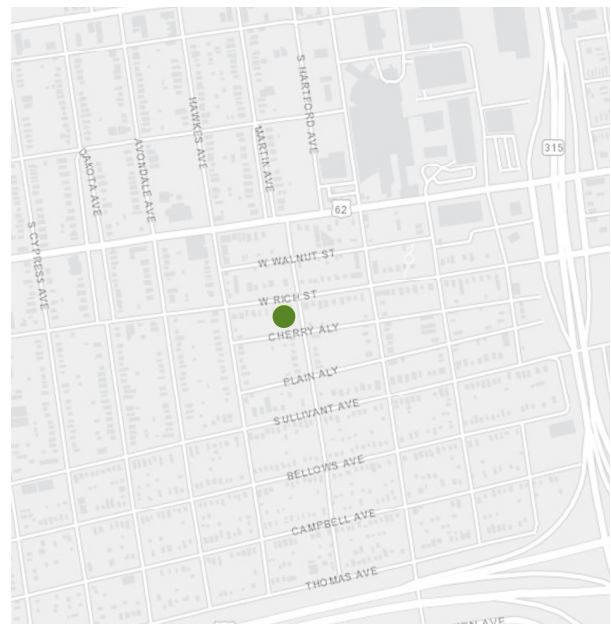
FRANKLINTON FARMS

Columbus was formerly home to one community fridge located at 907 Rich Street monitored and stocked by Franklinton Farms. This location is one of the lots owned by the farm itself. Franklinton Farms is a “nonprofit urban farm in Columbus, Ohio that utilizes sustainable agriculture to address our community’s most pressing challenges” (Franklinton Farms). They were motivated to start a community fridge after reading about fridges in New York City and thinking it lined up well with the values of the farm. The goals of the community fridge project were to reduce food waste on the farm, provide a greater percentage of the farm’s produce to Franklinton residents, particularly those that cannot afford to purchase food or are unable to navigate traditional food assistance programs, and increase awareness in the neighborhood of what they grow and their other programs.

Franklinton Farms received a donated fridge, built a fridge shelter with 100% volunteer labor, and were up and running. Volunteers would spend about two hours a week cleaning and stocking the fridge with fresh produce. They knew the fridge would fall into a legal grey area and were just hoping for the best. The fridge was shut down after just two months because you are not allowed to operate an appliance in an unenclosed space in Columbus. A neighbor filed a complaint and city zoning officials issued a citation. Since then, it was deemed acceptable for Franklinton Farms to make produce freely available to residents in need in a manner that is safe and compliant with all applicable codes. Franklinton Farms has been working to implement a legal unit and the guidance that has been given to them has translated to our broader plan and been immensely helpful.



Franklinton Farms. <https://franklintonfarms.org/about-us>.



(1.6) Location of Franklinton Farms Fridge, Columbus, OH

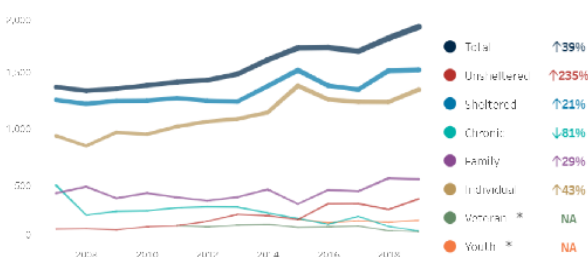
DATA AND RESOURCES

Statistics

Among vulnerable populations, the unsheltered homeless encounter detrimental obstacles aside from seeking shelter. As recorded between 2007 and 2019, Franklin County's unsheltered population has increased by 235% and can be inferred to increase over the years (National Alliance to End Homelessness, 2020). In addressing the food insecurity that the unsheltered face, food pantries/banks have been implemented across Columbus in attempt to establish resilience to food insecurity among impoverished areas. Food banks and pantries located in Franklin County reveal the food desert and swamps from food insecurity between the concentrated areas of the homeless population and the resources available to them in Columbus.

CoC Homelessness by Population (select a CoC above)

Between 2007 and 2019, Columbus/Franklin County CoC's Total homeless population changed by ↑39%, the Sheltered population changed by ↑21%, and the Unsheltered population changed by ↑235%. See list for statistics on other populations.



(1.7) Homeless population by category 2019


(1.7) National Alliance to End Homelessness. (2020, May 13). SOH: State and CoC Dashboards [Graph]. National Alliance to End Homelessness. <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness-dashboards/?State=Ohio>

From 2007-2019, the statistics show that the Columbus/Franklin County's population of the sheltered homeless totals 1,525 and the unsheltered homeless population totals 382 (National Alliance to End Homelessness, 2020). The drastic increase within the vulnerable homeless demonstrates the likelihood to continue in the future as the individual rate of homelessness increased by 43% (National Alliance to End Homelessness, 2020). Diving further into researching what kind of individuals are experiencing homelessness, the record of unsheltered homelessness needs to be accounted for in planning the recommendable locations for the community fridges. Introducing state-wide data on homelessness provides a better insight on where high concentrations are in the area.

Total Homeless Population

Total Family Households Experiencing Homelessness:	999
Veterans Experiencing Homelessness:	676
Persons Experiencing Chronic Homelessness:	874
Unaccompanied Young Adults (Aged 18-24) Experiencing Homelessness:	643
Total Number of Homeless Students:	34,180
Total Number of Unaccompanied Homeless Students:	1,981
Nighttime Residence: Unsheltered:	374
Nighttime Residence: Shelters:	5,209
Nighttime Residence: Hotels/motels:	1,958
Nighttime Residence: Doubled up:	26,639

(1.8) The 2019 Ohio homeless statistics according to the United States Interagency Council on Homelessness



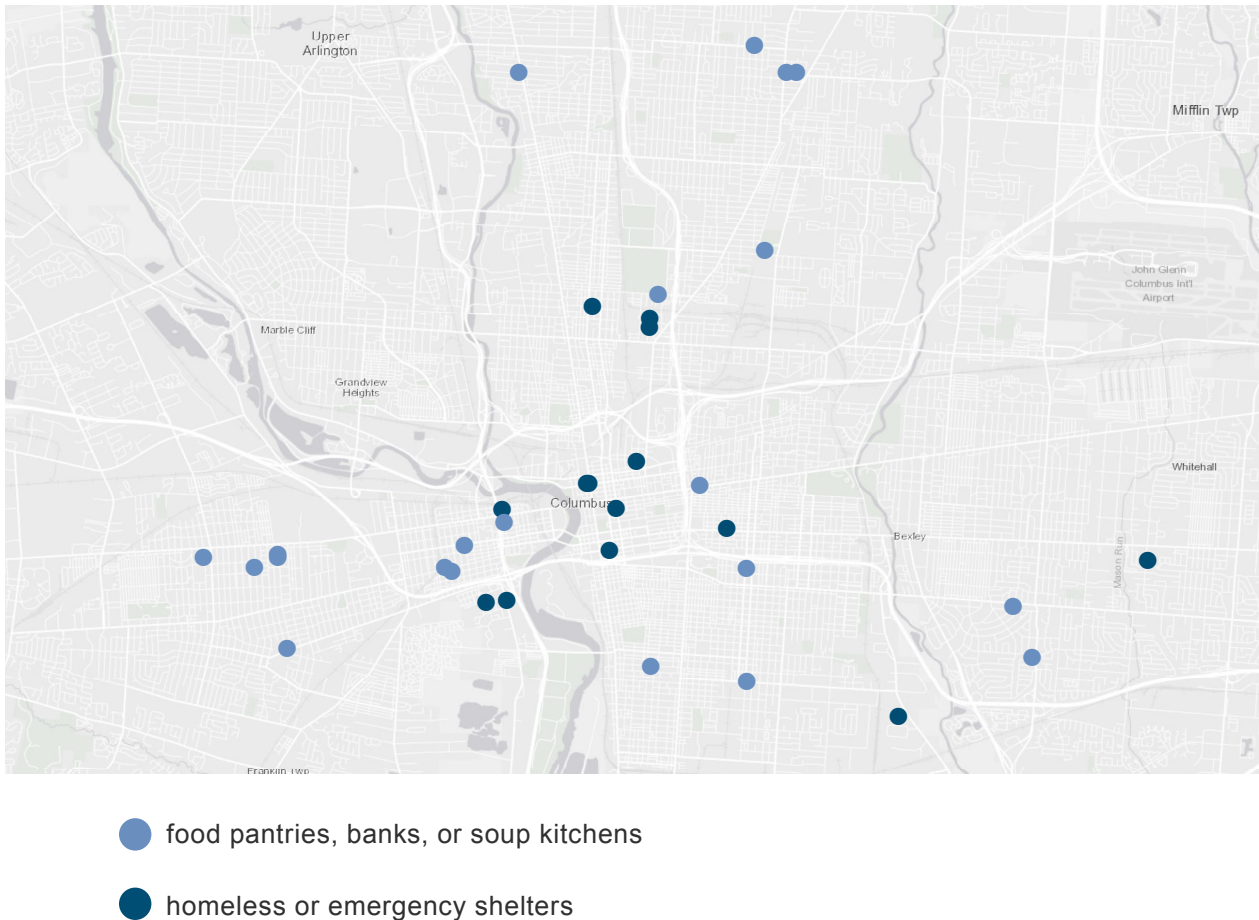
Moreover, the homeless statistics offers a look into who we are planning for and how to implement successful changes. The Ohio Housing Finance Agency found in their recent report *Confronting Homelessness*, that about one in every 15 Ohioans accessed homelessness services in 2018 (Coalition on Homelessness and Housing in Ohio, 2020). The number of Ohioans experiencing homelessness increased each year 30.8% from 2012 to 2018 (Coalition on Homelessness and Housing in Ohio, 2020). From 2012, the number of children experiencing homelessness has increased by 35%, increasing to 21,827 minors in 2018, including 2,258 infants under age 1 (Coalition on Homelessness and Housing in Ohio, 2020). Additionally in 2018, 76,478 unique individuals were served by the homelessness system. Within that population, Black Ohioans represented 49% of those accessing homeless services, but only 12.4% of the state's population (Coalition on Homelessness and Housing in Ohio, 2020). Researching the specific demographics of the population we are planning for is key to suggesting possible locations to recommend for the implementation of the community fridges. It allows for different perspectives that are not always seen through data.

Given these points, high levels of poverty and homelessness in Columbus are concentrated Far east, Sub South Side, and on the West side. Among the food pantries/banks and homeless shelters, the vacuity of essential resources and services is evident among the areas in which they are needed. Alongside Cleveland Avenue, there is a large concentration of

unsheltered homeless that suffer insufficient resources. Implementing community fridges between the gaps of the shelters to food pantries/banks is one step closer to building resilience to food insecurity and homelessness.

On most occasions, individuals must live in a certain zip code to receive food at some of these food banks and pantries. Yet, a majority of the homeless do not have a home to identify a zip code with, restricting them from access to food. With the community fridges, there is no requirement of identification or proof of address to receive food. This allows people to take what they need and leave what they can, to increase access to food for the unsheltered that do not have access or transportation to a food pantry/bank. Many food pantries and banks are not open 24/7 and individuals are not able to receive the food that they need and desire. Time also restricts individuals to have access to the food banks as the hours are not convenient to everyone and are open certain days a week. Limitations as such, on average only open three out of the seven days of the week from 8:30am-4pm. Since the homeless are often only able to travel by foot, this makes it more difficult to attain food and shelter.

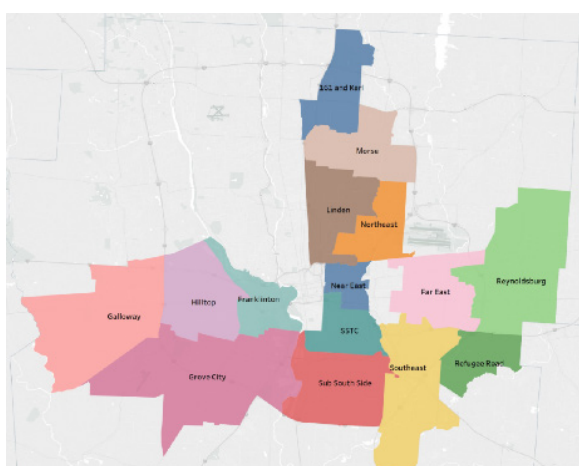
(1.9) Locations of current food pantries/banks and homeless shelters in Columbus/Franklin County.



The map lists a total of 31 food pantries, banks, and soup kitchens and a total of 14 homeless and emergency shelters in Columbus, OH. After mapping out the locations of the homeless shelters and food pantries and banks, we see a trend of food pantries and banks established near the West side and downtown area. There are a few located up North, and only a couple located out East. In comparison to the location of where current homeless and emergency shelters are located, the distance between the supply and demand of resources is ill-matched throughout Columbus. The distance between the shelters and food pantries and banks showcases the great food insecurity that the homeless battle with. There are only a few shelters that are less than 2 miles away from food pantries or banks. The ratio of shelters to food pantries and banks is poor, as the number of food pantries and banks is far greater than the number of shelters that the homeless have access to. This creates physical gaps that the community fridges can address to build resilience and increase access to food for everyone.

RECOMMENDED LOCATIONS

Our first priority is placing Columbus Community Fridges in locations that work towards closing the gaps between the existing shelters and food pantries/banks. It is best if the community fridges are located on a highly visible site. Addressing food insecurity alleviates the gaps between the homeless shelters and services that aim to make its usage accessible to the vulnerable population of the unsheltered homelessness. The Mid-Ohio Foodbank has administered 84% of their services to the follow 15 zones throughout Columbus:



(1.10) Mid-Ohio Food Collective most serviced areas

With this in mind, our choice locations are within the Linden, Hilltop, Downtown, and far East zones. Among these neighborhoods remains large distances between shelters and food pantries. For a population that does not have much access to transportation, specifically in Columbus, the COTA system does not work in favor of where the food pantries/banks and shelters are located. For

example, the COTA system in the East and West of Columbus poses the “mile-away” issue of bus stops being a mile away from your destination. The community fridges aim to be in visible high traffic areas to promote the location of the community fridge as it is visible to someone walking or driving by. The desired location of the fridges would be placed on open city-owned premises.

These recommendations were based on in-depth research not only on the statistical homeless data in Columbus, but the demographic data that is not always accounted for in planning. It is essential to capture who you are planning for, and in this case going out into these recommended areas of the city provided a first-hand experience to see what the recorded data did not capture. Recommendations were influenced by the zones throughout Columbus where the majority of the Mid-Ohio Food bank services are administered (Mid-Ohio Food Collective). Areas such as Hilltop, Linden, and Whitehall have a majority of low-income residents that struggle with the long roads full of food deserts and food swamps. The locations of homeless services are ill-matched and in hopes of alleviating the food insecurity gap, the recommended locations aim to be in high traffic areas and visible to the public.

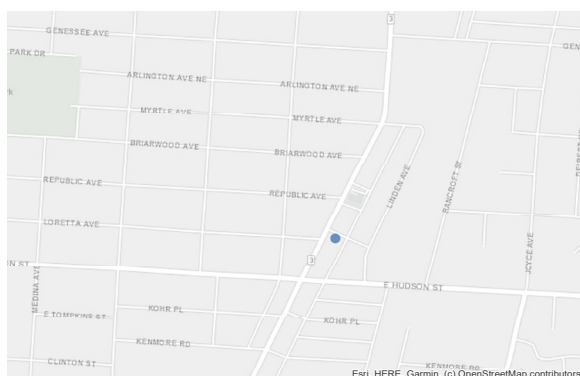
(1.10) Mid-Ohio Food Collective. (2021). MOFC Service Zones in Franklin County.

LINDEN

2332 CLEVELAND AVE

This vacant lot selected in the Linden area is near the intersection of Cleveland Avenue and E Hudson St. This location was recommended based on the income level and poverty rate of the area. It is recommended that the community fridge is to be established near the high traffic area of the Hudson St. intersection. Through in person observation, it was found that we saw that Cleveland Ave has a pattern of unsheltered homelessness that is not displayed in the recorded data. The proximity to St. Stephens Community House in South Linden, Bread of Life Food Pantry, and the New Salem Baptist Church that also serves hot meals, makes this a very centralized location for homeless individuals. This location alleviates the gaps in food security that the unsheltered homeless population

and a large portion of Linden residents regularly face. Further down Cleveland Ave is the Columbus Metropolitan Library: Linden Branch that attracts high traffic. The centrality of this area promotes visibility for homeless and food scarcity issues. The corner property would also makes usage of this fridge unit quick and simple.



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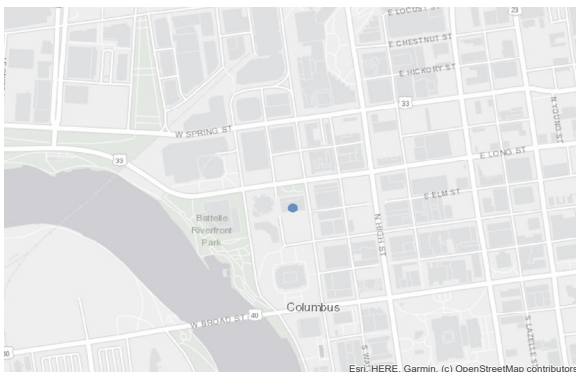
REFERENCES

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DOWNTOWN

111 N FRONT ST

City Commons Park is a high traffic area downtown across from Columbus City Hall and the Columbus Mayors Office. The fridge unit would be placed in City Commons park, which is owned by the City of Columbus. This site is located near many downtown shelters including YMCA Downtown Columbus, Southeast Coast Friends of the Homeless Columbus, LSS Faith Mission, and the Open Shelter Inc. This location will help alleviate the food insecurity that the unsheltered homeless population in the downtown area face. The concentration of unsheltered homeless folks in near downtown is demonstrated by the individuals camping out near the Scioto River train tracks and bridges. The nearest food pantry is the Broad Street Food Pantry that is located on the very outskirts of the downtown area.



This site has the potential to get a contentious recommendation, but it could be a profound way to make a statement about Columbus's intention to address unsheltered homelessness and food insecurity.

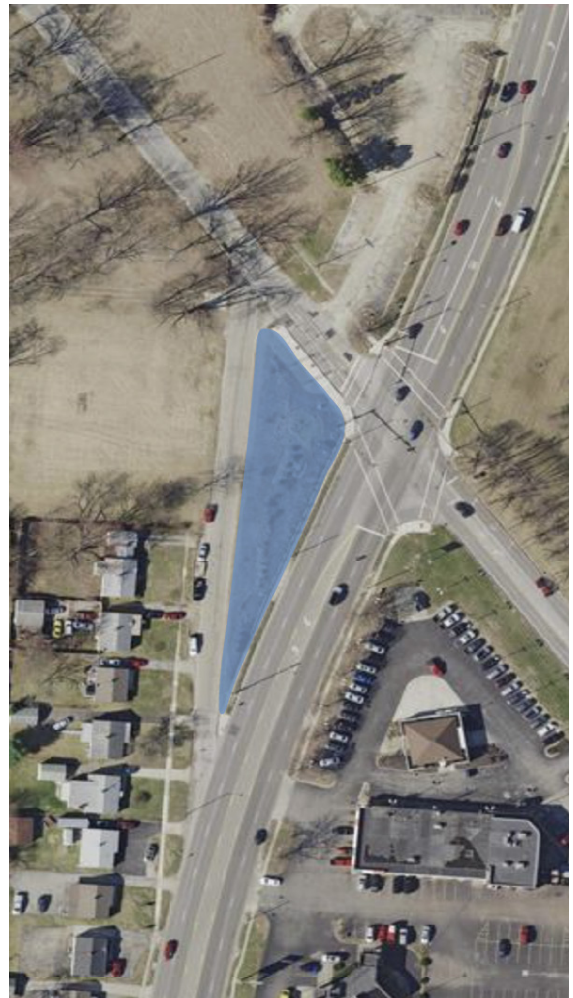
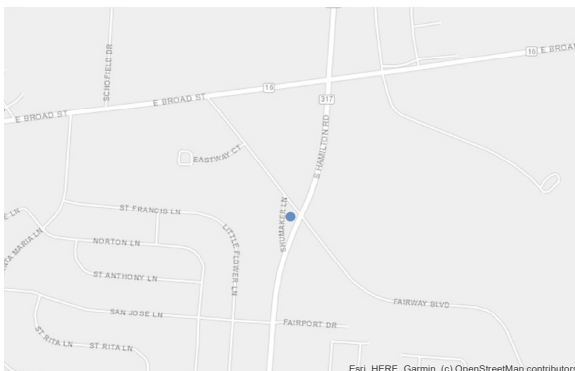


WHITEHALL

115 S HAMILTON RD

This location is a vacant lot that is at the intersection of Hamilton Rd and Fairway Blvd. It was selected for the high traffic area from Hamilton Rd leading up the the John Glenn Columbus International Airport and the Whitehall Community Park that attracts local homeless populations in the Whitehall area. Although Whitehall is not in the City of Columbus, this recommended location is based upon the negligence of resources that are provided in these low-income areas. Food insecurity is at a higher rate in the Far East, resulting in food swamps and food deserts that only offer unhealthy fast-food that is the only thing residents can afford. The proximity to Whitehall Community Park allows the fridge to be easily accessible for the unsheltered homeless that tend to stay around local parks. The demographics out

east in Columbus, OH include a higher poverty rate that results in individuals experiencing homelessness at an alarming rate that is not always documented properly. In comparison to the other areas of Columbus, the east side has a shortage of food pantries and food banks for the rising unsheltered homeless population. Therefore, it is important to fix the ill-matched resources that the homeless are offered.

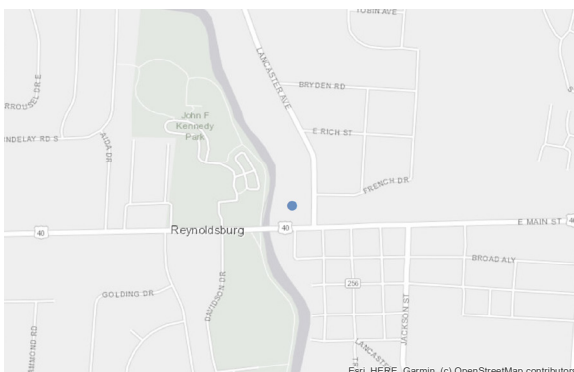


REYNOLDSBURG

7312 E MAIN ST

This lot is owned by the City of Reynoldsburg and is located in a visible, high traffic area at the intersection of E Main St. and Lancaster Ave. Although Reynoldsburg is not Columbus, the city-owned property poses an opportunity to offer a solution to getting one step closer to closing the food insecurity gap. Only a section of the parcel will be used to implement the community fridge near the intersection. This location is centralized between Whitehall and Blacklick which are seriously in need of more homeless services in their low-income areas. Down E Main St is the Heart Food Pantry that now requires a face mask and picture ID to shop in-person. For newcomers, proof of address is also required, and this has created a barrier for many unsheltered homeless individuals that do not have an

address to identify with or contemporary essentials such as a face mask. This speaks to the urgency of also providing essential items such as face masks and hand sanitizer at the community fridge locations to further alleviate the limitations that the vulnerable population faces.



LAND BANK OPTION



Coupled with our recommended sites based on extensive research, the Land Bank of Columbus and Franklin County presents opportunities for quick implementation in our targeted areas. Areas such as Hilltop and Linden have a higher concentration of Land Bank properties than the others. While the addresses we recommended are not Land Bank properties, using Land Bank properties in the same areas may make implementation swifter.

Many of the properties in the Columbus Land Bank are zoned for residential, which is something we originally wanted to avoid. However, a lot of Land Bank properties in Linden, including 1522 E Blake Ave, have essentially the same conditions as 2332 Cleveland Ave.

There are various Land Bank properties in Hilltop right around Hilltop Community Park. These are all vacant residential lots, but could be converted for a fridge placement. Many of these vacancies are in between two occupied structures. This may cause pushback from residents, but could be worth exploring if the State of Ohio owned parcel is hard to work with.

Overall, our site recommendations are just recommendations. The serviced area is more important than the individual site. It may even be advantageous to partner with private land owners such as non-profits to host Columbus Community Fridges.

DESIGN GUIDELINES

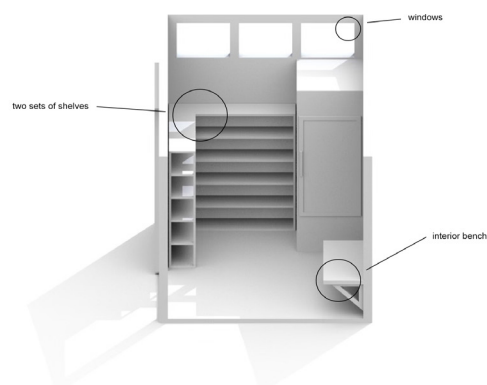
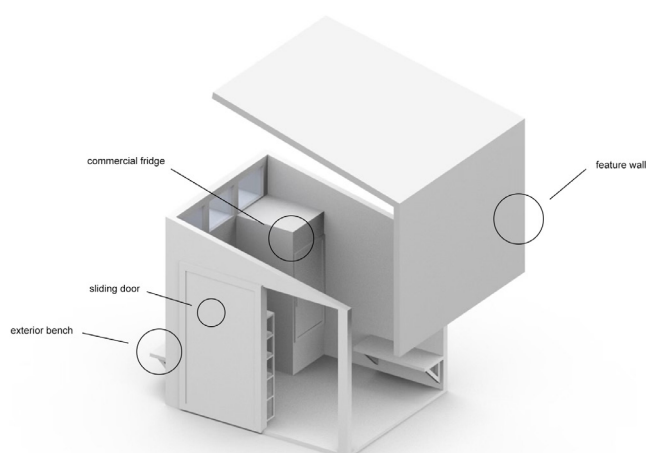
Each Columbus Community Fridge unit should have a cohesive design and branding. These units should be slightly bigger than a sheltered bus stop and fit a commercial fridge and two small shelving units. We have considered building and safety codes in order to design a prototype fridge unit. The design guidelines are as follows:

- Must have 4 walls and a door
- Must be able to fit a single door commercial fridge (2.5 ft wide, 3 ft deep, 7 ft tall) and 2 sets of shelves (one for food and one for non-food items)
- Must have space for at least 2 people inside comfortably (monitor and user)
- Must be LESS than 120 square feet
- Must have adequate light

Our prototype is 8 ft by 10 ft by 10 ft (highest point), so only 80 square feet, features a sliding door, a set of high windows for natural light, an exterior and interior bench, space for a one door commercial fridge and two sets of shelves, and is architecturally interesting enough that people will want this in their neighborhood. The feature wall that comes down like a continuous part of the roof can be decorated by local artists to make each fridge place-based. They can feature different murals that welcome those in need and reflect the best qualities of their respective locations. This design is straightforward enough to allow for relatively quick and inexpensive planning and construction.

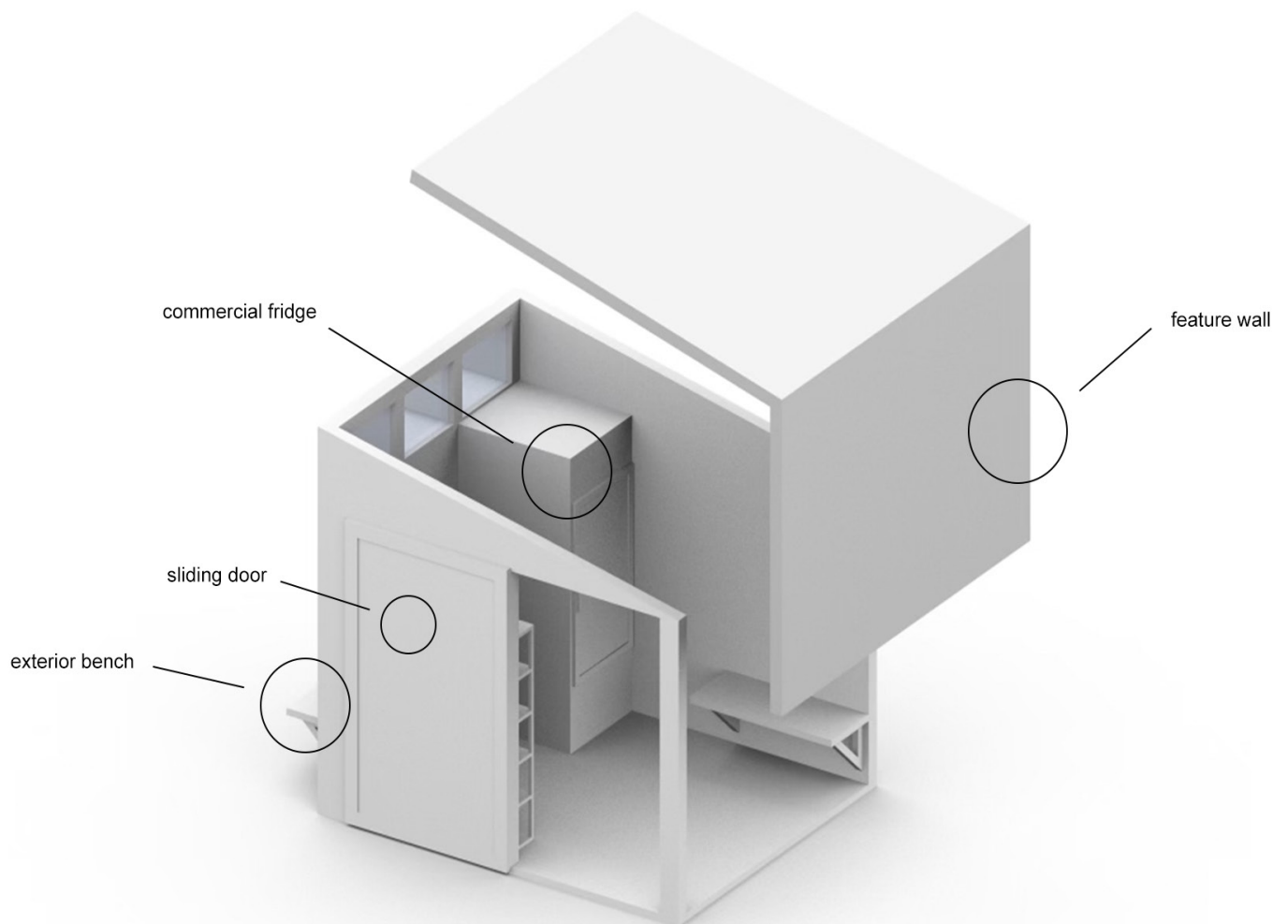


(1.11) Exterior view



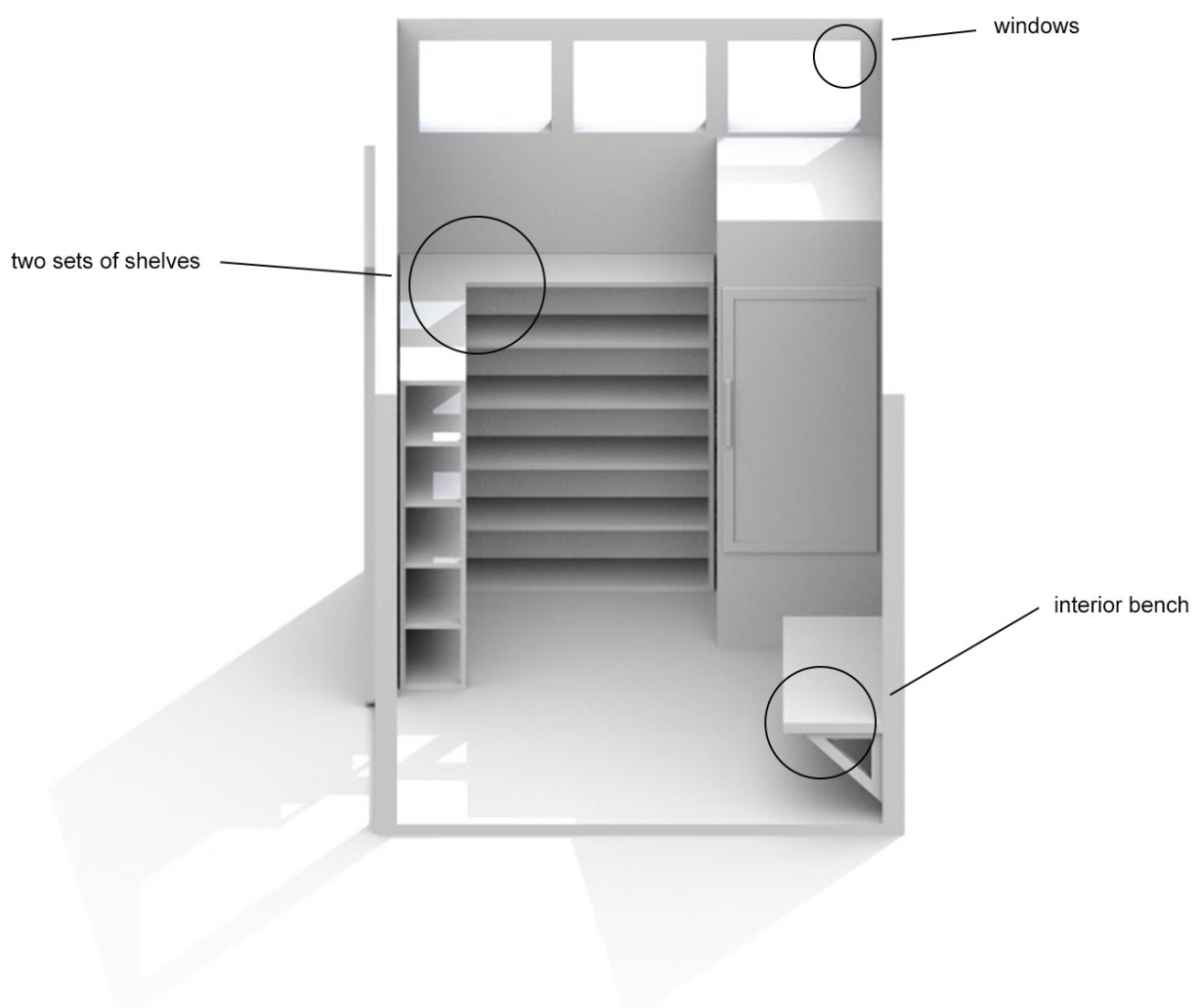
(1.12) Interior diagrams

All renderings by Sam Goecke



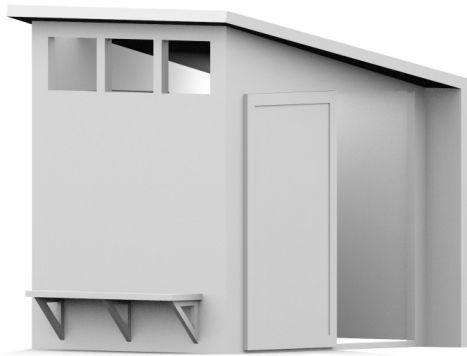
(1.13) Interior diagram

All renderings by Sam Goecke

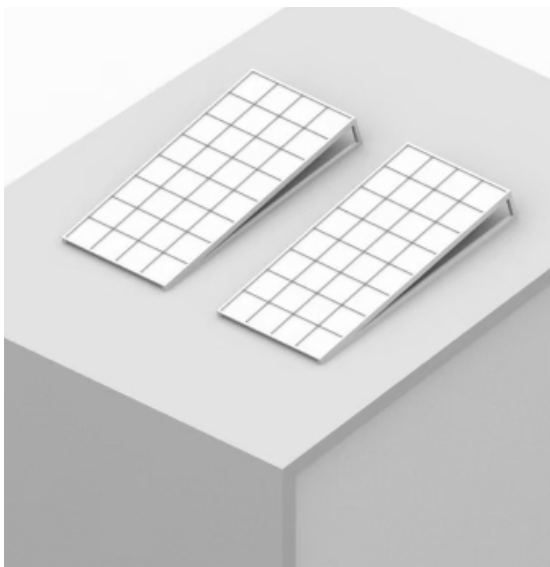


(1.14) Interior diagram

All renderings by Sam Goecke



(1.15) Exterior views from eye level



(1.16) Example of solar roof option

Site Placement

Columbus Community Fridge units must be placed on site in compliance with all applicable codes. Units must be placed 10 ft or more from the property line of the site it is placed on. Since our prototype is less than 120 square feet, only 80, it will not require zoning review or building permits. The city can move on a unit like this very quickly. However, electrical connection still has to be accounted for. Extension cords cannot be run through windows or doors and cannot pose a tripping hazard for pedestrians. Exact placement on the suggested sites is subject to further review.

Solar Possibilities

One option for powering Columbus Community Fridge units is small scale solar. A stand alone power system (SAP) can be utilized to eliminate the need for hooking up to the existing grid. SAPs that utilize solar are shown below powering a small sewage plant in Spain and a common parking meter. Installing solar would increase up front building cost, but make units more eco-friendly and resilient.



(1.17 and 1.18) Examples of small scale solar

(1.17) Chixoy. (2007). Lluç sewage treatment plant. https://commons.wikimedia.org/wiki/File:Depuradora_de_Lluc.JPG.

(1.18) Pilatus. (2005). Picture of a ticket parking meter in Edinburgh. <https://commons.wikimedia.org/wiki/File:TicketParkingMeter.jpg>.



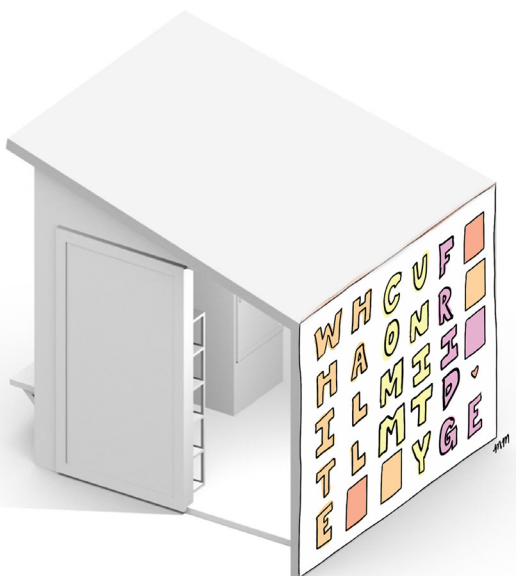
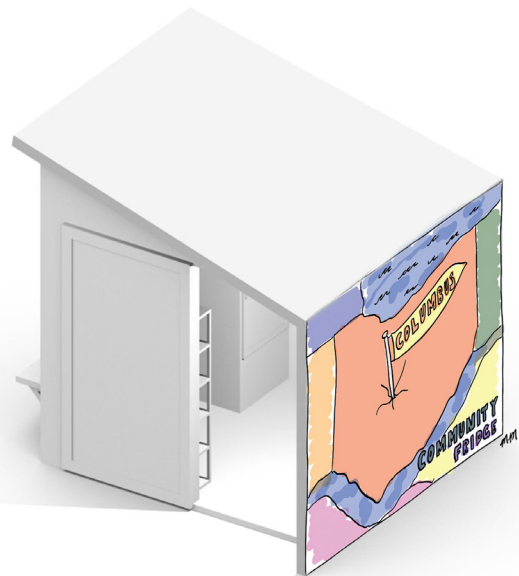
(1.19) Example of place-based fridge art by Morgan Mackey



<https://news.osu.edu/gap-between-rich-poor-neighborhoods-growing-in-some-cities/>

The inspiration for the Linden Community Fridge artwork came from a picture of a brick gateway located in the neighborhood. The fridge is not only for homeless individuals, but must also be accepted by the surrounding community, which is what the artwork helps to accomplish. By making the fridge artwork specific to each location, the fridges are better able to fit in with each community and could make locals feel more comfortable using them.

Examples of place-based fridge graphics for Linden, Hilltop, Downtown, Whitehall, and Reynoldsburg. This page exists for diagrammatical purposes only. Art could be commissioned by the Columbus Arts Commission or the Greater Columbus Arts Council.



COST ANALYSIS

CATEGORY	COST PER UNIT
Installation ^(*)	\$3,000 - \$3,400
Stocking	\$0 (donation based)
Maintenance and Monitoring ^(**)	\$30,000 - \$40,000 / year
First Year Total	\$33,000 - \$43,400

(*) Installation includes the cost of all construction materials and a single door commercial refrigerator

(**) Maintenance and monitoring includes pay for daily monitoring of locations, manual cleaning, building upkeep, and adjustments to refrigeration systems as necessary

This cost estimate was primarily done using simple material per square foot calculations based on leading hardware store prices. It is extremely limited. Materials in use include 2 x 4's, plywood sheets, drywall, paint, concrete, and aluminum panels. The maintenance and monitoring cost estimate was done with a full time fridge monitor in mind. The cost includes salary for a supervisor (there are additional notes on this system in the last section) as well as miscellaneous repair materials and labor. However, the employees necessary for fridge supervising and cleaning may be available through existing channels. There may not need to be any new hires, this would take the overall cost down to just construction costs. This cost estimate is for one Columbus Community Fridge and does not factor in the price of solar panel installation if that is a route that the city is interested in taking. This estimate does not factor in any type of electric hookup, but since these units will be located in developed areas, electrical hookup should not be a major cost or time setback.

DONATIONS



A universal donation guide that applies to every fridge location will make it much easier to understand what you can and cannot donate. These donation guidelines are just a suggestion, but they are based off what kinds of guidelines showed up most frequently while conducting case studies:

Yes

Fresh fruit
Fresh vegetables
Pastries
Bread
Cheeses
Sealed packaged foods
Unopened sauces
Unopened pasteurized milk and yogurt
Unopened fruit juices
Fresh eggs (with a use-by date)
New non-food essential items
 Toilet paper
 Deodorant
 Hand sanitizer
 Masks
 Feminine products

No

Raw meat
Raw fish
Alcohol
Unpasteurized dairy products
Partially eaten leftovers

OTHER

Maintenance and Monitoring

A fridge unit should be cleaned and thoroughly stock checked at least every seven days. Fridge units should have established hours (hopefully as many as possible) and at least one monitor present for all of those hours. We recommend creating an online space where people can volunteer to monitor fridges on an hourly basis. Volunteers should have some sort of food safety training before picking up shifts. Monitors should not present any barriers to visitors for obtaining items. There should also be a general supervisor who visits every fridge location and makes sure it is running properly every day. This supervisor should have extensive food safety training and understand both the USDA guide to food safety and the Columbus Public Health food guidelines. They will double check fridge temperatures and verify that all donations currently on hand are in line with the donation guidelines and food safety codes.

Fridge Etiquette

We recommend having a universal fridge etiquette sign on every unit to ensure proper use and remind people that this is a community space for the benefit of all people. Our recommended fridge etiquette is as follows:


- Please wear a mask and ensure that your hands are clean if you intend on accessing the fridge.
- Avoid unnecessary contact with food items to prevent contamination.
- Please do not donate anything that you would not personally consume.
- If you noticed or cause a spill, please clean up after yourself whenever possible.

Partnerships

Franklinton Farms has been identified as a possible stocker for a fridge because of their interest in the topic and their previous experience with the subject. They have owned and managed their own fridge at their facility which is due to reopen again, but may have more produce to give. With our legal framework and prototype and the continuous management and stocking of the fridges by Franklinton Farms, we could greatly help the unsheltered homeless community in and around the Franklinton area.

Woodland Farms could be another potential stocker in the form of an urban farm because of their passion for contributing to a more economically resilient community. The farm sells seasonally available foods and handcrafts as well as other farm and wildcrafted goods that they produce on site. Having farms as stockers would create a sustainable system and allow for better access to fresher, healthy foods for the users. These fresh foods would begin to help improve the overall health of the unsheltered homeless.

The Mid-Ohio Food Collective could be a crucial sponsor for Columbus Community Fridges. They are the largest food bank in Columbus and control the flow of most of the food that is given to people in need.



They have to move a ton of food to and from their multiple locations and allocating some food for the fridges would not be too much of a stretch for their supplies. With this additional service, they would be able to help people that cannot make it to their main banks and would extend their impact on the community. This would also make it so less people would have to come inside the banks, making the process of getting help less hectic due to less foot traffic in the main buildings.

2

RELIABLE TRANSPORTATION

CHRISTIAN HARRIS

BRIAN BRIGHTBILL

DELONDA GRIFFIN

DEVON TUCKER

INTRODUCTION



According to the U.S. Department of Transportation, housing and transportation costs strongly reflect aspects of the built environment, such as the number of homeless and lack of affordable housing. Transportation in areas where the average income is higher also tend to be places that are more walkable and have more access to public transit. These places also have higher housing costs which drive out people of low-income. The low-income population tend to reside where there is the least amount of access to public transit as well as being the least walkable. This leads us to the homeless population. The homeless population is not restricted to income and housing cost boundaries and sometimes reside in places where there is access to public transit. The problem lies with what homeless people need, and they need housing and a source of income. Where they can get work and where affordable housing is located does not always correspond to places with good public transit and walkable streets.

This is where transportation for the homeless becomes important (McCarty Carino, 2020). Homeless people tend to work low-income jobs and tend to be in temporary housing or in no housing. So how do we connect the homeless with the transportation that they need? This project aims to provide a guide and recommendation to the City of Columbus, Ohio for a program that will provide a reliable and affordable car sharing/on-demand ride service for the homeless. The project goes over the current and potential barriers that the homeless face regarding transportation, routes and locations of hubs in order to connect an individual with a ride, as well as providing a system for the homeless to register with the city as homeless and in need of transportation.

CASE STUDY

SEATTLE, WA

One of the few concrete examples of a city implementing a transit solution for their homeless population is the City of Seattle. Seattle's premise for their program is a simple one. Provide cheap bus passes for the homeless. This program does not help the homeless find a job or gain access to services in Seattle. Instead it helps the homeless purchase bus tickets in order to bus them to places where they might have a better chance of finding stability. This might be a place with family or friends who can help them, or somewhere where jobs are easier to obtain. This program is similar to San Francisco's "Homeward Bound" program which transported hundreds of homeless people to different cities across the United States (Baker, 2019).

However, these programs tend to provide more issues than solutions to the homeless that they intend on helping. San Francisco found out that 1 out of 8 people that they bused out of the city had returned to San Francisco and sought services from the city again (Baker, 2019). This is the root of the problem with many transportation services for the homeless in many cities. There are more programs just like Seattle and San Francisco, but they do not provide any additional insight on the issue. The issue lies in the fact that homeless need help finding jobs and stable housing where they are, and do not respond well to forced relocation from cities that seem like they would rather not provide services to them. Rather than redistributing the homeless population around the country cities, like Columbus, should focus on how to help them where they are instead of moving them.



(2.1) Homeless camp near Seattle highway

(2.1) (2.1) Rufo, C. F. (2020, March 26). The new favelas. Retrieved April 15, 2021, from <https://www.city-journal.org/covid-19-west-coast-homeless-encampments>

CASE STUDY

UBER MICRO-TRANSIT

The transit company Uber which specializes in car hailing services for one way transit has also begun transit services in multiple cities: MARTA and IndyGo in Atlanta and Indianapolis respectively (IndyGo). Atlanta partnered with Uber to provide transit to polling places in order to increase access to voting places for everyone. These rides were subsidized by Uber and were of little to no cost to the customer. MARTA has also started offering \$10 Uber vouchers to customers who use the Uber app to travel to and from rail stations (MARTA). This provides incentive for people to use the transit services and decrease the amount of people on Atlanta's roads. Indianapolis partnered with Uber to provide transit to their population at a subsidized cost. The program was started to provide transit to essential workers under the COVID-19 pandemic. Participants paid \$60 per month

and received one round-trip per day. Both programs can serve as guiding principles City of Columbus could implement. Columbus could use to implement its own program.

The idea behind Uber subsidizing a transit program for the homeless population of Columbus is that the city could utilize the system already put in place by Uber and could partner with them to provide specialized on-demand transit for the homeless. The homeless could register for the program and if they qualify for the service, they could have access to the specialized Uber rides to and from work. The service would provide one round-trip per day for as long as the person is enrolled in the program. This service would be a form of micro-transit (Walker, 2018) and would offer the homeless the opportunity to get to and from work with a relatively low cost per month. This eliminates the need for the homeless to use the bus service that has noted issues and conflicts when serving the homeless population, as well as issues with first and last mile transit, transit to get to and from bus stops or train stations and cost. An evolution of this program could involve having drop-off and pick-up points for the vehicle to provide more service to more people per ride. This would be like the LAnow service in Los Angeles which is an on-demand ride share service that allows people to book rides and be dropped off and picked up at designated locations (LADOT).



[https://www.cnet.com/news/uber-will-reportedly-let-riders-drivers-record-audio-of-trips-](https://www.cnet.com/news/uber-will-reportedly-let-riders-drivers-record-audio-of-trips-for-safety/)

for-safety/

CASE STUDIES CONCLUSION

AFFORDABLE AND RELIABLE

Due to the issue this project is trying to solve, we must set some parameters around what we deem to qualify as affordable and reliable transportation. We will be using benchmarks that are based off time and price data from other transit services in the City of Columbus. For our car share (Lyft and Uber) data, we will be using data from Uphail, the car share data aggregation service and for public transit data, we will be using COTA's data and data recorded by Ohio State University.

For car share, there are two main competitors in the Columbus Metropolitan area, Lyft and Uber. The average price of the cheapest options that they provide is 6 dollars for Lyft and 6 dollars and 60 cents for Uber. These have 5-minute, and 2-minute average waits respectively (Uphail).

For public transit, the only available mode of transit is the COTA (Central Ohio Transit Authority) bus service. According to the website from COTA, their cheapest fares are currently offered to the registered disabled, veterans, people over the age of 65, and Medicare card holders. The price for a day-pass (to include an entire commute) is 2 dollars and 25 cents (COTA). The average wait time for a bus has a lowest average wait time for a COTA rider as 4 minutes and 12 seconds (Liu & Miller, 2020). This wait time was if a rider was to time their departure by looking directly at the bus schedule

and not timing their arrival based on the real time data in the COTA app (Liu & Miller, 2020). They also gave this rider a six percent chance of missing the bus. This research also stated that checking real time data on the app on average resulted in a longer wait time (Liu & Miller, 2020).

So, to set our parameters, we want to take a reasonable approach in assessing our targets for reliability and affordability. To determine our reliability standard, we will simply use the six percent missed-bus statistic gathered by Liu and Harvey, as well as a four-to-six-minute wait time based off the car share (top-end) and transit (low end) wait times. This meaning, if our program can provide service to the individual within a 4-to-6-minute window of wait time and be successful 94 percent of the time, then we would be satisfied with the reliability of our service. For pricing, we would like our target to be no cost of service to a registered homeless individual and the highest price being 2 dollars and 25 cents, this being taken from the transit statistics. We would like to aim for free cost of service because taking monetary value out of the equation, helps us eliminate potential barriers for attracting homeless individuals to use the service. In conclusion, we recommend our service to be free of charge and have the wait time be between 4 and 6 minutes with a 94% success rate, measured over the period of a year.



STAKEHOLDERS

Introduction

The City of Columbus states that car share operators can apply for a permit in order to provide car share services to Columbus citizens. They are required to provide access 24/7, 365 days a year and provide drop off and pick up locations that do not require attendants. ZipCar is currently the only car sharing service with a permit to operate within the Columbus Metropolitan area. Creating a separate car sharing service specifically tailored to helping the homeless could provide the needed support.

Our team has found scooters are not a feasible option for giving the homeless population reliable transportation, due to the infrastructure surrounding the scooters (Griswold, 2018). They require mobile phone access, bank account, and debit or credit card access. The loose infrastructure surrounding how they are dispersed throughout the city creates issues regarding reliability in areas where the homeless population would need them. Scooters can also be dangerous. The current lack of bike lanes in the City of Columbus rules out the use of Lyft bike share service or leveraging that infrastructure for our needs. We need transportation to be able to cross the entire city and reach all places of employment, food, health, and support services. The need for reliable and consistent transportation and the limitations of the current infrastructure in Columbus, leads our team to focus on the use of car sharing or ride sharing services and the use of the COTA bus system.

The current car sharing and ride sharing companies operating in the Columbus Metropolitan area include, ZipCar, Lyft, Uber, and the Columbus Yellow Cab Taxi Company. Another service is the MORPC Gohio program which offers emergency ride services from work to home, and they also provide carpool and vanpool organization tools to customers.





Service Models

Our project group took part in the 4th annual Hazel Morrow-Jones Charrette that was focused on how new planning strategies could be designed and implemented to help solve the issue of unsheltered homelessness in the Columbus Metropolitan Area. Our project team was able to speak to three transportation professionals regarding how we can improve transportation access for the homeless population in Columbus. These professionals represented a regional planning agency and the transportation agency responsible for the bus transit system in the City of Columbus. We have decided to omit their names in part due to privacy of their opinions and to enable a more free and informative conversation about homelessness and how transportation can be changed to help them and how transportation is currently failing the homeless population. The topics we covered in the charrette have been separated by themes, including potential service models, mobility management, funding, registration, and information distribution. The potential service models that were discussed included the circulator service model, the On-demand service model, and modified bus transit and multi-modal transportation. The circulator service model exemplifies vehicles that follow constant pre-determined routes. The circulator service model has the advantage of not having to tailor routes or create an on-demand service that requires more resources to operate, for example, the on-demand model would require a platform for people to schedule rides. The major disadvantage of the circulator model is that the pre-determined routes make it hard to reach the majority of the unsheltered homeless due to the homeless being mobile or transitory. There would also be an issue where the workplaces of the homeless would not be able to be serviced due to the variety of locations where the homeless are employed. The on-demand service model can come in more than one evolution. There can be on-demand pre-scheduled rides or rapid on-demand which would be more equivalent

to Uber or Lyft in their service model. The on-demand model more suited to our needs is the pre-scheduled model due to the inability of a public agency to have a fleet of cars constantly available within a short distance of the individual requesting a ride. The rapid model would also demand a more robust service backbone with either an application on a smartphone or another technological aspect. The pre-scheduled rides provide more flexibility to the agencies involved because they can more efficiently use the vehicles and not have the vehicles constantly roaming around the city. The rides would be handled by a call center, that would field the calls and schedule the rides with the assigned driver. The driver platform could be handled by a company such as Userve, who can handle background checks and driver services. The modified bus and multi-modal are models based upon the basic bus transit models. The model would be edited to better accommodate the homeless population. The bus system (COTA) already serves the homeless population, but currently has issues due to fares and social barriers making it hard for the homeless to consistently use the bus system. The bus system also does not reach everywhere the homeless people need access to and without additional modes of transportation, like cars, the homeless require transit to take them directly to their destination. The multi-modal approach is one that would help with the issue of first and last mile transit. The issues arise that the applicable modes of transportation do not exist in the Columbus area and would require too much of an infrastructure change to implement. Scooters, train, and bus systems are not capable or do not exist for us to use the multi-modal model effectively.

Mobility Management

The participants in the charrette were able to provide information on how we would be able to manage and run the program. The issue of drivers would be solved by using a service like Userve which provides driver services and performs background checks and training for its drivers. Userve would be contracted out to handle driving the vehicles and handling face to face interaction. It also allows the customer to request the same driver, and this would allow for a more personalized approach to transit. This would allow the program to also understand the issues of the homeless better using feedback from the drivers.

There are some issues with management of this program, as there are some ethical hurdles to overcome. Some of these hurdles would have to do with customer-driver interaction and behavior. The City of Columbus ran into ethical issues when implementing a program to transport low-income mothers to the hospital when they are undergoing childbirth. The program was unable to continue given some ethics issues; as such, the program was terminated.

Another aspect of the management would have to do with funding. Funding for a lot of public transit comes from the agency's (COTA, MORPC, etc.) 5310 funding, which is funding passed from the federal government to state and local agencies. This funding is already stretched between agencies that provide transportation services and usually only used for the essential modes of transportation. Due to the lack of federal funding, the funding would have to come from secondary sources, including the private sector, non-profits, and other grants that are geared towards homelessness and homelessness equity.



Mobility Managers in Ohio



Updated: 10/27/2020

(2.2) Ohio regional mobility manager's map. Lexi Petrella serving as the mobility-manager for the Mid-Ohio region.

(2.2) MORPC. (2019, July 9). Emergency Ride Home. Gohio Mobility Hub. <https://morpc.gohio.com/regional-programs/emergency-ride-home/>.

Information Distribution System

A determining factor of success when working with individuals without homes is the effective dispersal of information. This would require some labor-intensive work on the part of the staff, but the most efficient and effective way to do so would be to physically put information in the hands of the homeless. Hand them information to the homeless population not having direct access to the internet and other modes of communication daily. This ensures that our target demographic is reached. We also want to conduct surveys of the people we want the service in order to gauge interest and usage of the service. We would also want there to be a survey gauging interest in additional resources offered on the vehicles such as Wi-Fi, health services, job resources, etc.



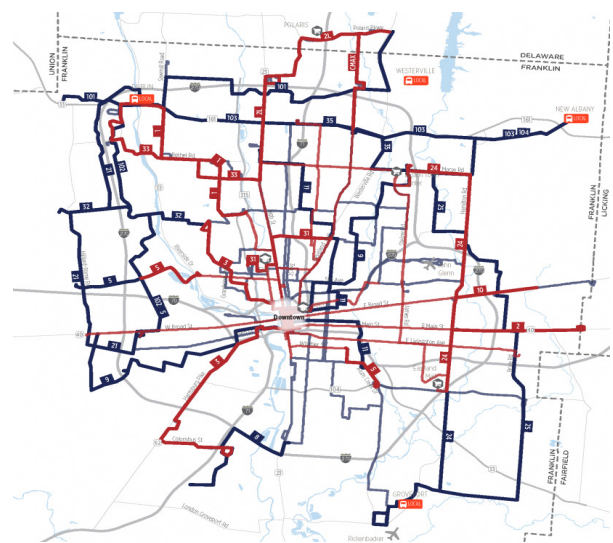
(2.3) CREATED BY BRIAN BRIGHTBILL

ROUTES, HOTSPOTS, AND BARRIERS

This section will discuss the high traffic location or hotspots for unsheltered homeless people and their transportation routes. This will also cover how the cities and jurisdictions influence these people's transportation, whether it be helping or hindering them. Homeless people, sheltered and unsheltered, encounter many obstacles in their day to day lives. But many times, when we are looking at the problems, we tend to limit the scope of their hardships to just being homeless. While unsheltered homelessness is the main issue here, while other obstacles preventing are individuals from finding long-term housing, such as transportation.

More specifically the issue that will be covered is the public transportation network limiting the transit access to homeless people. This problem is much more pertinent to the homeless community because they already are in an extremely disadvantaged position. The current state of the public transportation network is broken. Meaning that the city is not fully accessible through its public transit system in a reasonable amount of time. A good reliable source of transportation is so important for many people. This importance is only amplified by the homeless community. A reliable and safe mode of transportation can be the key to helping many of them escape the homelessness cycle. The next section will

examine case studies on homelessness and public transportation.



(2.4) COTA proposed nextgen bus lines. Expanding their service to a larger area

(2.4) COTA. COTA. <https://www.cota.com/>.

CASE STUDY


OPERATIONAL BARRIERS

The first case study is titled "Assessment of Operational Barriers and Impediments to Transit Use: Transit Information and Scheduling for Major Activity Centers" written by the National Center for Transit Research. This investigates the many barriers that impede someone from wanting to use public transit and some of the things that would make someone who wants to use public transit unable to do so. Later, in part two of the study the researchers went out into the community to survey people on their complaints on public transit. A study like this is great to find problems that the people themselves think are relevant so they can be fixed to make the public transit experience more accessible. The researchers ranked the barriers to entry from highest in priority to lowest in priority (Harden, et al., 2001). One of the focal points that the case study addresses is the availability and convenience of the transit services. Availability and convenience refer to many things in transportation such as:

- System-coverage
- Frequency of services
- Days and hours of service
- Wait times
- Cost of service

Cost of service is the most important factor for most patrons of public transit. However, in 1975 a study was conducted by Friman in Gothenburg, Sweden. In this study a group of 200 people were surveyed and asked, besides cost, what are some critical negative points that would deter you from wanting to partake in public transportation. Some of the reasons that were given are traffic planning (scheduling, routes, and fare structure), punctuality, information (arrival and departure times [including delays], destination, tickets and their validity), and treatment and action (how they are treated by employees, driver possibly missing stops, and behavior of other passengers).

Another reason as to why the public is deterred from using public transportation is due to the lack of clear and concise information provided to them. The study classified this as Transit Information and Marketing, which defined them as information on what route to take, information as to what station to disembark, information about headways, location of stops, time of arrival at destination, and information on crowding in transit vehicles. This could be a problem for homeless people, especially because they are less likely to have access to the internet where this information is available.



The third reason that many people are deterred from using public transportation, homeless or otherwise, is that they might not feel safe on public transportation networks. Transit crime is a real issue. But it is not limited to just crimes that happen on a form of a public transportation, it also includes crimes that happen as one is making their way from one bus stop to another. In 1999 Reed, et al examined the behaviors of transit patrons of the state of Michigan (Pg. 7-8). In the study they found that people mostly felt safe on public transportation. Some instances in which they felt unsafe include traveling at night on buses and waiting for the bus at night. Something else that was found in the study by Reed is that bus misconduct is also considered to be under the “transit crime” umbrella. Things such as obscene language/ verbal abuse, public drunkenness, vandalism, and disorderly conduct fall under the umbrella. Poor metrics provided by law enforcement and transit authorities make it difficult to really get a grasp on the statistics associated with these kinds of issues.

The information above is important when looking at why some homeless people are not using public transportation or are not able to use public transportation. The most pertinent factor being money, but many times there are other factors as detailed above. There are several other factors, of course, only a few of which were outlined above. This kind of study could be applied to the city of Columbus as similar results would most likely be found. When asked why they have not been to certain government buildings to seek government assistance many homeless people said because they were not able to make it due to public transportation.

CASE STUDY

DISABILITY TRANSPORTATION

This second case study looks into the way that individuals with disabilities travel on public transportation and the barrier that someone with a disability would have when using the public transportation network. This case study comes from a book by author Sandra Rosenbloom named *The Future of Disability in America*, in which the name of the case study is “Transportation Patterns and Problems of People with Disabilities”. According to Rosenbloom, over the last two decades the National Organization on Disability (NOD) has sponsored three successive Harris polls with people with disabilities, and respondents in each survey have reported that transportation issues are a crucial concern. This is applicable to the Columbus transit system because there is a homeless population with both mental and physical disabilities is present. 1 out of every 4 people have some sort of physical disability, and 1 out of every 20 adults have

a diagnosable mental illness. Just as with the previous case study, the barriers that non-homeless people encounter would only be more difficult for homeless people to overcome (Rosenbloom, 2007). In the studies Rosenbloom details an examination of the people with physical disabilities and what some their barriers to public transportation are. The primary audience of individuals who use public transportation are adults. According to her study over 19% of people under the age of 65 had difficulties getting around outside due to a health problem or physical impairment. That group of people were asked about their problems accessing public transit and over 75% of them expressed problems physically getting to their bus stop (Rosenbloom, 2007). This a problem applicable to the Columbus transit system because many of the bus stops have long distances between them. Long distances are a challenge for these people with physical disabilities. This a major deterrent for people with physical disabilities that impede them from walking, but only a small percentage of these people complained about not being able to get on the bus because of their disability.



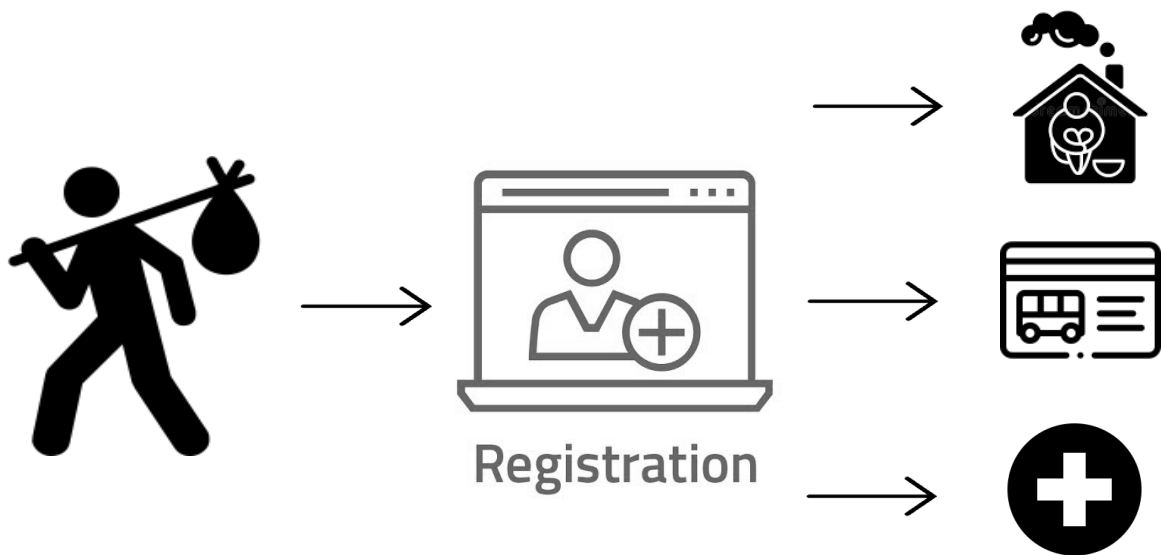
(2.5) COTA paratransit vehicle

(2.5) COTA. COTA. <https://www.cota.com/>.

REGISTRATION

The topic of this section is the registration process for homeless individuals in Columbus, Ohio and what can be done to make it more accessible and beneficial for them. As of right now, the homeless in Columbus must call a hotline to register for a place to stay and/or a hot meal. This registers them to a location that is nearest to them but if there is no availability, they may not be able to reach the location. This ties into the need for an effective and free option for homeless individuals. A part of the plan for transportation will be a registration process to get employed unsheltered homeless individuals' access to this and resources that are available to them and outlined in this project. Simply providing transportation to these individuals is pointless if they do not have a means of accessing them. Thus, the need for a registration process that does not require a cellphone but utilizes the tools they have access to in order to get the services they need is essential. The following case

studies show the benefits of a non-profit option and a federal option. Both of which, have positives and negatives. The registration solution for supplying these homeless individuals with access to services provided in this proposal comes down to funding and logistics. From the standpoint of a non-profit organization, it would be beneficial to have people that care about what they are doing for the community and thus will be more willing to help. From the standpoint of a federal program, the resources they have at their disposal are far greater but could be bogged down by red tape. The preferred method is a caring organization that is focused on the services they provide to these individuals and would find ways to fundraise to keep themselves afloat. There are many options for non-profit businesses including, government grants, bonds, and other financing options. The idea of a one number service for homeless individuals to call to have access to services is a step in the right direction.



(2.6) CREATED BY BRIAN BRIGHTBILL

CASE STUDY

BREAKING GROUND

The non-profit organization Breaking Ground has become revolutionary in their approach to homelessness. They established a 311 number that allows homeless to call for help and within one hour a representative will pick them up from wherever they are and get them the help they need. This organization has turned a registration process into a one call system that gets people exactly where they need to be. They collect information from the individual and log them into a system. They have turned a simple idea into something monumental, and an idea we could use in order to get the homeless individuals in Columbus what they need, and more (Breaking Ground, 2020). Breaking Ground's primary goal is to provide shelter to homeless individuals.

This is not the focus of this section so the focus will be on the other innovations they have implemented. The 3-1-1 call number is a one stop shop for any homeless in the area. They call and within one hour, provided the individual was able to give them proper direction, a car will pick them up and take them to their destination. The funds in order to have this service are provided by grants and donations. The issue with this would be creating, essentially, an entirely new department for registering and providing these services. The startup costs would be high and sustaining the program would be like running a new business, but a one stop shop for homeless individuals could do a lot of good for the community.



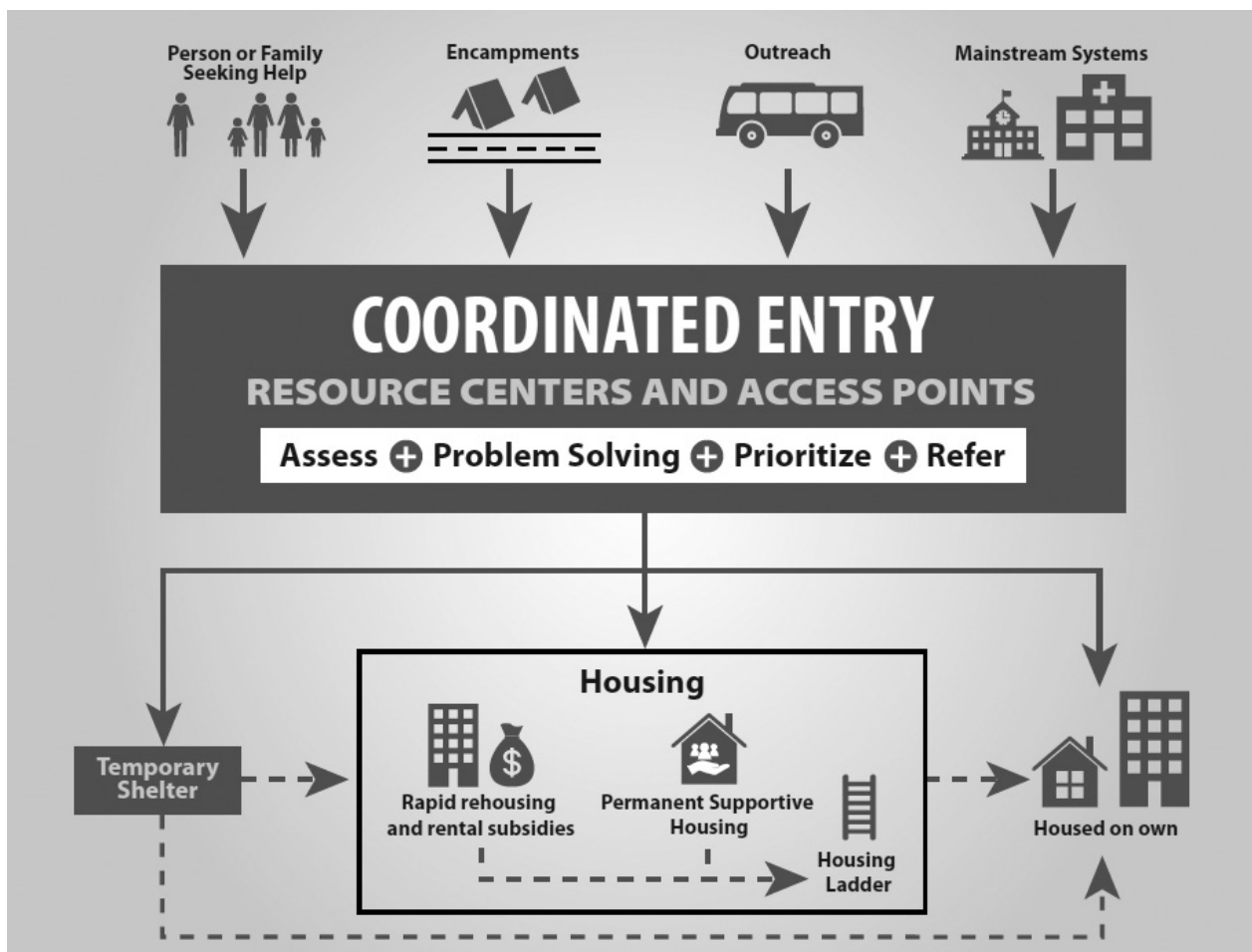
(2.7) CREATED BY BRIAN BRIGHTBILL

CASE STUDY

HMIS

The Homeless Management Information System (HMIS) is a Federal database that oversees three major programs, Housing and Urban Development (HUD), Health and Human Services (HHS), and Veteran's Affairs (VA). These programs are crucial for the development of low-income individuals and veterans who may be looking for housing, stimulus, food stamps, or medical care (HUD, 2020). The problem with this program is its lack of inclusion for unsheltered homeless individuals. These programs are tailored more towards people that have a home base and are looking for

additional services. They do not consider a homeless individual's needs. Most of the services require a home address and won't even consider you for benefits if you do not have that base level of supporting yourself. A proposal for HMIS is to create another system that is tailored specifically to unsheltered homeless. This is a significant portion of the low to no-income population that is being neglected. Getting a program going at the federal level would allow for more funding and other resources but could eventually be bogged down by bureaucratic roadblocks.



(2.8) Diagram displaying the pathways to housing for a homeless individual

(2.8) Coordinated Entry. (n.d.). Retrieved from <https://hsh.sfgov.org/services/the-homelessness-response-system/coordinated-entry/>

RECOMMENDATIONS

Service Model and Administration

Our recommendation begins with a proposal on the service model. We recommend that the City of Columbus organize an On-Demand pre-scheduled ride service model in order to provide the unsheltered homeless with transit services and mobility. This service model is based off the COTA Para-transit service model which provides people with transit services on a pre-scheduled basis, each ride costing \$3.50. This service could potentially be an extension of the para-transit services already offered by COTA but could also serve as a stand-alone program. COTA maintains a call center to field calls and scheduling and uses the company Userve to field drivers along with driver training and background checks. This service model is the best practice in order to provide stable and affordable transportation. We believe that this is the most user friendly and resource efficient in terms of adding a new transit service. This service is reliant upon the individual pre-scheduling their rides via phone call into a call center where the representative will schedule the ride. We also recommend that the city utilizes the services of Userve, as they can provide a platform to request and schedule rides with drivers. They also provide background check services for the drivers, so we can ensure that the people interacting with the homeless are trained and capable of fulfilling that duty.

This service model ensures that the city is not overreaching when it comes to deploying resources. The pre-scheduled, on-demand service dictates that there are only drivers out on the roads while they are completing rides, and do not have to roam the streets and wait for an individual to schedule a ride. This also limits the number of calls throughout a day as individuals who want to schedule rides can do so ahead of time and make reoccurring times. This is opposed to the rapid on-demand service model that is often demonstrated by

companies such as Uber or Lyft and require a large network of vehicles and drivers that are potentially not suitable to deal with the unsheltered homeless population. Issues that could arise between the driver and the individual could be mental health or health related trauma.

The pre-scheduled on-demand service model also allows the city to be flexible with the vehicles in the fleet, and they can adapt to cases ahead of time instead of having to adapt rapidly when someone requests a ride. For example, if an individual requires handicap access, the city can have the correct vehicle available at the time of the ride instead of the individual having to wait for the correct vehicle and driver to become available. This flexibility on a case-by-case basis can allow the city to serve more people and provide services to all abilities.

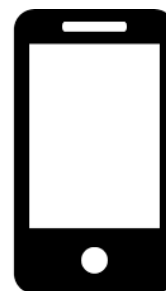
Some drawbacks identified with this service model, is that the rapid on-demand service model does have the potential to be quicker as the driver could be within a close proximity to the individual requesting a ride. Rapid on-demand can also provide the individual with more normal and inconspicuous transit experience. Given that the cars used by Uber and Lyft are pedestrian vehicles, they blend into normal traffic and allow the passenger to feel as if they are a part of normal day-to-day activities in the city. Therefore, we recommend that the city use discreet, if not non-existent branding on the vehicles in order to decrease the potential for negative feedback from public citizens towards the individuals utilizing the transit service.

Ideas From Charrette

The first recommendation that was developed from the Hazel Morrow-Jones Charrette discussions would address homeless population having limited access to transportation due to living out in rural areas. Offer a program that is similar to TDM, (Transportation Demand Management) that offers the homeless population transportation services that live beyond the boundaries for public transportation. This TDM is a single occupancy transportation program that offers transportation services to low income, elderly, and disabled individuals. This would also address the individuals needs when encountering the discrimination that has been experienced when using public transportation as well. Receive funding from FTA 5310, 5311 to include the homeless populations within these plans.

Many individuals that are experiencing homelessness may not have access to a bank account, which makes it difficult to pay for transportation services. The search tool that is in development with the Ohio transportation department could help with the monetary exchange for transportation services. A transportation search tool that is state-wide focuses on lower-income, elderly, and disabled individuals. Able to search based on accommodations types, this includes if the individual can only pay in or cash and didn't have access to a bank card.

Many individuals that are experiencing homelessness also don't have access to cell phone and internet service. Individuals that are experiencing homelessness should be offered cell phones through the Lifeline Assistance program, which provides phone service to low-income individuals, this program is under the Telecommunications Act of 1996, which was asserted by the FCC.



Registration, Distribution, and Due Diligence

Our recommendations for the City of Columbus are to incorporate homeless registration into its current 3-1-1 list of services and also supply them with handouts, postings, and other information in the places they frequent. Columbus already has a successful services call center for non-emergency city programs. Incorporating a homeless registration service would be a minimal change to the existing program. It would provide several new jobs to the call center while also providing a much needed service to an underserved population in the city. The idea would be that homeless individuals who have access to a phone line would call 3-1-1 and be connected to someone that would list the services available to them and connect them with someone that could help them. Eventually the 3-1-1 would be able to send drivers to pick up registered individuals to get them to where they need to be, whether it is a camp, shelter, job, or appointment. Another way of connecting these individuals to the services provided throughout this document would be to supply them with the information directly. This would be a collaboration with the Service to Sites Team in section four of this document. The on site teams could distribute the services list that the city provides at homeless camps, shelters, and the other areas they visit. They would also be able to give out bus access passes. The first step towards getting these services to them to gauge the potential effectiveness of this program would be in person surveys of what these individuals need and want. The survey would consist of questions asking what services they need most, what a bus pass would give them access to, and what best ways to administer this aid.

Next, there would be a concentrated focus on programming for 8-12 months that would allow the city to see what is affective and what is not. This pilot program would also allow them to step up coverage over time, rather than have high overhead right from the start.

Finally, as time progresses and research is done that show trends and successes the city would be able to increase drivers, call center associates, and services in order to target this underserved population of The City of Columbus and even beyond.



THE CITY OF
COLUMBUS
ANDREW J. GINTHER, MAYOR

DEPARTMENT OF
NEIGHBORHOODS
311 CUSTOMER
SERVICE CENTER

3

TINY HOMES

ALYSSA GRAZIANO

KAYLA ROBINSON

LUKE CIMINILLO DELAMOTTE

INTRODUCTION



On an average night, there are over half a million people experiencing homelessness in America (National Alliance, 2019). Cities across the U.S., large and small, are struggling to address the national epidemic that is homelessness. It does not help that in recent years cities have experienced an affordable housing shortage as home prices have skyrocketed. Traditional approaches to combating homelessness have not been enough and as such, many cities are seeking alternatives. Several cities have found tiny home villages to be an effective way of aiding those without homes. Tiny home villages vary from city to city and project to project, but they all include providing shelter for people in the form of tiny houses. As of April 2020, there are 34 such villages across the U.S. and an additional 57 underway (Evans, 2020). There are many benefits of utilizing tiny home villages as a method of addressing homelessness. One is that they are relatively inexpensive, the average cost of one tiny house is just under \$20,000 (Evans, 2020). Another is that they are flexible; these villages can be adapted to fit any particular site, address any particular need, and can be easily changed over time. And one more is that they directly address the issue of homelessness by providing homes.

Columbus is not immune to the issue of homelessness. One estimate found that roughly 1,800 people were without a home in the capital of Ohio, making up over 17% of the state's homeless population (Evans, Jan 2020). This was before COVID-19 caused many Americans to lose their jobs. In addition, Columbus has seen its housing prices rising at a high rate over these past few years, putting added pressure on low-income families, which will undoubtedly lead to more people without homes. Columbus would benefit greatly from creating tiny home villages as a way to address the homelessness crisis. The city could use the land it already owns and partner with existing organizations to provide services and find volunteers.

The case studies showcased in this chapter examine tiny house villages designed, built, and facilitated in effort to aid people without homes within the United States. These villages are in Seattle, Washington; Austin, Texas; and Detroit, Michigan. These cases were highlighted because they represent the many different types of tiny home villages built around the U.S., for combating homelessness. Some are privately funded, some are publicly funded, and some utilize both private and public funding. Some offer more amenities while others offer less. Examining a variety of tiny house villages allows one to see the benefits and challenges of different villages. Additionally, one can see that different villages face different problems, be it more severe weather, stricter zoning laws, less available funding, or more NIMBYism (Not In My Back Yard, or the attitude people can take on where they want social services, just not by them). While these villages offer slightly different solutions and have different results, one common theme in these case studies is that having a place to call one's own is essential for helping people get back on their feet.

CASE STUDY

SEATTLE, WA

The first case study focuses on the tiny house villages in Seattle, Washington. As of April 2020, there are 12 tiny home villages located throughout the city. Additionally, the city has approved for the expansion of 40 villages (Moreno, Feb 2020). Back in 2018 when the current mayor, Jenny Durkan, was elected she campaigned for 1,000 tiny homes to be built for the homeless to help combat the ongoing issues of homelessness in the city (Lee, March 2019). Seattle has the 3rd largest homeless population behind New York City and Los Angeles. In 2020, there were 11,751 people experiencing homelessness and 47% of this population was unsheltered (n/a, July 2020).


The tiny home villages are located on government, private, non-profit, and church owned properties. They are also sponsored by the Low Income Housing Institute (LIHI),

who are known for developing low-income, multi-family rental housing. Mayor Jenny Durkan directed her staff in the Department of Finance and Administrative Services (FAS) to compile an inventory of vacant, city owned sites that could be prepared quickly for the villages (Lee, March 2019). The staff at FAS partnered with LIHI to work with other city departments to bring water, electrical, and sewage access to the sites. LIHI led the efforts to raise funds to help construct the villages and to reach out to hundreds of volunteers and donors (Lee, March 2019). LIHI has also worked in partnership with SHARE and Nickelsville to establish five of the tiny house villages (Lee, June 2017). The council budget for 2021 allocated enough funding for the construction of 3 new villages. Councilmember Andrew Lewis hopes to



(3.1) Othello Village tiny house encampment in Seattle, WA

(3.1) from <https://www.bizjournals.com/seattle/news/2018/05/22/vulcan-lihi-tiny-homes-seattle-homelessness.html>



secure \$7 million from private donations and more than \$8 million in taxpayer money to continue to fund these tiny house villages. He also plans to put \$10 million into next year's budget to keep the villages up and running. The city has also identified \$13 million in new resources for the village. They have received donations of materials and funds from individuals, businesses, and foundations (Greenstone, Jan 2021). The city ordinance mandates that there be a Community Advisory Committee (CAC). The CAC is made up of neighbors, businesses, community council, and church groups who monitor progress, give feedback, and lend support however it is needed to all the villages. The neighborhoods in the areas surrounding the villages generously support them by donating materials, clothing, blankets, food, books, toys, hygiene supplies, and other necessities that may be needed (Lee, June 2017).

There are currently 12 tiny house villages for the homeless up and running in Seattle. Each village only needs 4-6 months' time to be constructed. There are anywhere from 15-34 tiny houses in a village. Creating a tiny house village can cost from \$60,000 to \$500,000 and can serve 20-70 people on this budget depending on staff and services (Lee, March 2019). The villages offer a shared community kitchen, community meeting space, counseling offices, storage, donation huts, security huts, bathrooms and showers with indoor plumbing, and laundry facilities (Lee, March 2019). Each tiny house costs roughly \$2,500 for materials and is 8ft by 12ft in area (Lee, June 2017). The tiny homes also have electricity, heat, ventilation, insulation, windows, and a lockable door. Local high schools, community colleges, carpentry apprenticeship programs, tribes, businesses,

church groups, and community members all volunteer to help with the construction (Lee, June 2017). This particular aspect could easily be adapted for a program in Columbus. Tiny houses could be constructed by volunteers from local high schools and trade schools. Students at Fort Hayes High School, local here in Columbus, OH, built a tiny house as a part of the school system's Career and Technical Education curriculum (n/a, Sept 2016). Perhaps a curriculum like this could be adapted so that tiny homes are built for people without homes.

The tiny home villages have proven to be an effective response to homelessness and provide better outcomes than traditional shelters. In 2018, the villages served 879 homeless men, women, and children and 34% were successful in obtaining permanent housing (Lee, March 2019). Only 4% of people from city funded shelters obtained permanent housing (Lee, March 2019). Tiny houses provide a bridge to helping people who are homeless get to permanent housing.

Summary of Features:

- Communal kitchen
- Laundry facilities
- Communal bathroom and showers
- Medical clinic
- Addiction treatment center
- Auto repair shop
- Dog park
- Ceramics art studio
- Blacksmithery
- Wood shop
- Salon and barbershop
- Outdoor movie theater

CASE STUDY

AUSTIN, TX

The second case study focuses on Community First Village in Austin, Texas. The village is located on 27 acres of land (Canales, Oct 2019). Alan Graham founded the Community First Village and is the CEO of Mobile Loaves and Fishes, a food truck that is used to distribute meals to the homeless in the Austin area (Canales, Oct 2019). Community First Village provides affordable and permanent housing in RV's and tiny houses to those facing chronic homelessness. The village, a non-profit, cost \$18 million and was funded independently of any local, state or federal government (Canales, Oct 2019). This frees Community First Village of certain governmental requirements that are usually tied up in housing projects for the homeless. The village is funded by donations from corporations, churches, organizations, families, and individuals. The annual operating

cost of the community is around \$6 million (Canales, Oct 2019). Alan Graham faced a lot of backlash for his vision of having a self-sustaining neighborhood for those facing chronic homelessness. Back in 2008, at a neighborhood meeting, many nearby residents were uncomfortable with having a homeless village in close proximity (Leffler, Jan 2021). By 2010 Graham finally found 27 acres of land and 5 years later the village had 130 tiny homes and 100 RV units (Leffler, Jan 2021). Aside from the communal kitchens, laundromat, restroom, and shower facilities typical of many tiny home villages, Community First Village also includes a medical clinic, addiction treatment center, a mechanic car shop, dog park, ceramics art studio, blacksmith shop, wood shop, salon and barbershop, and an outdoor movie



(3.2) Community First Village, Austin, TX

(3.2) from [http://austinwide.com/community-first-village-receives-\\$1-million-from-austin-board-of-realtors-p336-172.htm](http://austinwide.com/community-first-village-receives-$1-million-from-austin-board-of-realtors-p336-172.htm)



theatre (Canales, Oct 2019). Stylists in the vicinity visit the salon and barbershop onsite to give haircuts to the residents. John Paul DeJoria, co-founder of Paul Mitchell, donates his products to the salon at Community First Village. He also donated \$1.6 million towards the Phase II expansion of the village (Canales, Oct 2019). Residents can work at the various businesses in the community such as the auto-shop. They can also sell their art, handmade jewelry, or woodworking they make on site using the facilities. There is a metro stop that runs from the village to downtown Austin. Community First Village also has missionals, people who are not homeless but choose to live there and help around the community.

Each tiny home costs around \$25,000-\$40,000 to build. All residents must pay rent to live there, which costs anywhere from \$230 to \$440. Phase II of the expansion will feature 3D printed homes that would be completed within 27 hours (Canales, Oct 2019). This will be done by Austin startup company Icon. Residents must meet a strict criterion to live in Community First Village. They must have no children, unless they're a missional, have to have a disabling condition, and have lived on the streets of Austin for at least a year (Canales, Oct 2019). Community First Village strives to build a strong sense of community between residents. Everyone in the neighborhood knows what others are going through because they've been through it themselves. They encourage others to reach out if they need help, and they know that someone will be there for them.

Summary of Features

- Communal kitchen
- Laundry facilities
- Communal bathroom and showers
- Medical clinic
- Addiction treatment center
- Auto repair shop
- Dog park
- Ceramics art studio
- Blacksmithery
- Wood shop
- Salon and barbershop
- Outdoor movie theater

CASE STUDY

DETROIT, MI

The third and final case study focuses on Cass Community in Detroit, Michigan. Cass Community Social Services is an anti-poverty nonprofit that builds tiny homes for those experiencing chronic homelessness. Reverend Faith Fowler is the executive director of Cass Community Social Services and creator of the Tiny Homes program (Goldman, July 2019). She recently exceeded her fundraising goal of \$1.5 million. Cass Community first started back in 2016. As of 2019, they have built 13 tiny homes. The financial model for the tiny homes and its inhabitants is rent-to-own. The residents are charged \$1 per square foot until the property is paid off (Galligan, Aug 2019). Each home is 250-400 square feet, and on its own 30 by 100 foot lot (Galligan, Aug 2019). The rent payment is affordable on a minimum income of \$7,000 annually (Goldman, July 2019).


Each resident must pay their own utility bills, meet once a month with a financial coach, and take part in a community watch program. The tiny homes are designed to be a permanent living situation instead of just transitional housing. The estimated cost of construction is around \$45,000-\$55,000 (Goldman, July 2019). A lot of this money comes from donations from corporations, foundations, and a variety of religious organizations (Goldman, July 2019).

Cass Community tiny homes are open to a wide variety of people, such as formerly homeless individuals, senior citizens, college students, formerly incarcerated people, young adults who have aged out of foster care, and a few staff members that qualify as low-income (Galligan, 2019)



(3.3) Cass Community tiny homes, Detroit, MI

(3.3) from <https://www.ahealthiermichigan.org/2017/07/02/detroit-tiny-homes-provide-big-home-ownership-opportunities/>



In order to own the home, the resident must rent and live there for seven years. The houses are designed to look like miniature versions of middle-class homes with Cape Cod and Victorian styles. Each tiny home comes fully furnished and has their own bathroom. Eight out of the 13 homes are occupied by people who have formerly been homeless. The size of the tiny home village is much smaller than that of the ones found in Seattle or Austin. The goal of Cass Community is more focused on economic mobility rather than just financial stability. For many, a large part of the American dream is owning a home, and Cass Community seeks to provide that for individuals who are living paycheck to paycheck (Goldman, July 2019). Cass Community offers other types of housing for people who experience homelessness. They have a warming center which is open to women and children nightly from November 15th through March 31st. They also offer an emergency shelter that is open year round for families with children for up to 90 days. They offer rotating shelters which are open for adults from November through April. Churches usually host Cass clients for a week. They provide them with breakfast and dinner, a clean place to sleep, and a bagged lunch. Lastly, there are permanent supportive houses where individuals can stay in an apartment indefinitely.

Summary of Features

- Fully furnished
- Individual bathrooms and showers
- Access to a (required) financial coach
- Designed to look like middle class housing

TRAUMA-INFORMED DESIGN



Before looking at any additional resources needed for people who do not have homes to thrive, it would be beneficial to be aware of the effect that homelessness has on the psyche. Understanding and addressing the psychological trauma of homelessness in any project will have greater outcomes than any housing project on its own, as it will take on any internal issues that may hinder an individual's journey from unsheltered homelessness to living in a house.

Trauma is brought on by deeply distressing or disturbing experiences. It causes stress, depression, anxiety, and forces the body into survival mode. While being in a state of survival is natural, it is only meant to be temporary, homeless people however, tend to stay in the state of survival for months on end. This can cause changes in an individual's ability to function. They may suffer from a lack of focus, changes and loss of memory, fatigue of the mind and body, impulsivity, and lack of basic needs. The stigma surrounding people without homes is that they are lazy and just do not want to work, when, the trauma they experience each day is making it much harder to achieve what they could if they had a home (Bjorkgren, December 2020). This is one of the reasons why shelters can be so ineffective as the constraints, rules, and regulations that come with residence promotes a feeling of being overwhelmed, rather than aid. Additionally, individuals suffering from daily trauma and its side effects can find it hard to achieve and maintain the standards associated with a stay at a shelter.

One approach to addressing this trauma is through trauma informed design. Trauma informed design attempts to make one feel good when they walk into a space, the space

inspires a sense of dignity, restored power, and reduces the feeling of constraint. Trauma informed designs are achieved through the manipulation of light and colors, that promote brain function; utilizing round and curved walls that uplift positivity; invoking a strong sense of nature that conjures a feeling of freedom; and adding a flexibility to the spaces so that they can balance privacy and community. These elements of trauma inform design and architecture can diminish many of the debilitating side effects of trauma that individuals without homes experience. Studies have shown that with these design elements, there are shorter stays at shelter homes, and more people move towards a more stable lifestyle including, not returning to homelessness, having jobs, and their own home. In the Dolores project they found many are more receptive to their apartment living due to the design elements of trauma informed design and architecture (Hernandez, November 2020).

Utilizing trauma informed design on a larger scale can add feelings of comfort and safety to the built environment. These are places that feel safe, homelike, promote healing, and provide spaces people can be free and expressive. Studies have even found that by incorporating art and imagery to streetscapes and facilities cultural richness was extended and people who were once without a home felt a renewed sense of autonomy and control (DU, August 2019).

Incorporating trauma informed design into resources, such as tiny homes, would be a powerful and effective step in addressing the many challenges individuals who have been without a home face.

ZONING AND CITY LAND

When finding locations for tiny homes, it is important to be aware of the existing zoning codes of the area. The Zoning Code regulates the type of activity that may occur within specific geographic areas of the city. By extension, zoning laws determine the placement of structures on a given site. While there are subcategories, land uses can be grouped under three general categories: residential, commercial and industrial. If developing tiny homes does not match the zoning of a specific site, the project will face additional hurdles, as the project will either have to be granted variances or the site will have to be rezoned completely. Zoning is not an impossible challenge but it is one that will affect how easily a project can be developed. Any tiny home, and any development, will require a certificate of zoning clearance before ground can be broke. Zoning Clearance is responsible for ensuring that all development and redevelopment is following the zoning code. A certificate of zoning clearance is required prior to the construction or alteration of any building or structure, the establishment, change or modification in the use of any building, structure or land.

City Owned Land

The City of Columbus owns a significant number of pieces of land. City owned land could be used to house a tiny home village. Benefits of using City owned land are that it would be free, as the City already owns it, the process of building on the land would be smoother as there would be less hoops to jump through, and a tiny home village may be welcomed as it would be an improvement to

an empty lot or an abandoned building. There are currently 437 properties listed on the Land Bank's website. Most of the properties are concentrated in specific areas of Columbus. The areas include North and South Linden, the South Hilltop, the area around the Defense Supply Center of Columbus, Near Southside and the area surrounding the highway, OH-104. Most of the properties are classified as residential vacant lots. A neighborhood that has several potential sites for a tiny home village is in the 43207-zip code area of Columbus. This neighborhood has several large sites which would be ideal for a tiny home village. Due to the size limitations, smaller residential locations should be avoided, as the typical size of a residential parcel would be too small for more than one or two tiny homes. The surrounding areas are zoned residential. Only one larger location is commercial. The neighborhood has easy access to two COTA buslines, lines 1 and 2.

Example and Potential Sites

- **2131 Watkins Rd, Columbus Ohio 43207.** Currently zoned as residential. Asking price is \$68,6000 for vacant land. The lot square footage is 39,200 or .91 of an acre.
- **475 Basswood Rd, Columbus Ohio 43207.** Currently zoned as residential. Asking price is \$30,786 for vacant land. Lot square footage is 17,592 or .44 of an acre.
- **784 Stambaugh Ave, Columbus Ohio 43207.** Currently zoned as residential. Asking price is \$20,875 vacant land. Lot square footage is 11,929 or .27 of an acre.



Regulation Compliance of Tiny Homes

Tiny homes can be built on residential areas without the need of variances as long as they met several factors (see chapter 4541 of the Columbus City Codes). First, they must include a bathroom. It would appear, based on the city's codes that the bathroom must be in the dwelling. Second, a bedroom must be a minimum of 70 square feet. Third, a kitchen, which has to be included, must be a minimum of 50 feet. Fourth, the ceiling for at least half of a room must be at least seven feet high, and for a floor area to count towards the square footage of a room or dwelling, the ceiling above it must be at least five feet high (City, 2021). These requirements mean that if a tiny home were to be constructed without the need for variances, they must be larger than 120 feet, not counting the space required for a bathroom.

RECOMMENDATIONS

What design is used and what amenities, facilities, and services are provided is largely determined by the plot size of where the tiny villages are located. For instance, if there is a large enough plot, then it would be more cost effective to start to have communal facilities, such as a communal kitchen, bathroom, and laundry room. However, if the plot size is only large enough for two or three tiny homes, then the tiny homes should be able to function independently of each other. As such, recommendations will vary. However, there are several factors about the tiny homes that should be included regardless of plot size.

Electricity. Electricity should be provided to the tiny homes. In a study done by Krista Evans on tiny home villages across the U.S., 91 percent of all tiny home villages were electrified (2020). This makes sense in a city like Columbus which loses daylight at 5 pm in the winter.


Air Conditioning and Heating. In the same study, Evans found that 73 percent of tiny homes provided its inhabitants with both air conditioning and heating. While a lack of A/C or heating may not be very noticeable in some parts of the country, this is not the case in Columbus, as temperatures can rise above 90 degrees in the summer and below freezing in the winter. Including Air conditioning and heating can raise the cost of a tiny home, which is why some may be hesitant to include them. However, in a well-insulated tiny home which is designed to maximize the environment, heating and cooling costs will be relatively low.

Internet. We recommend providing internet access in the villages.

Design. The designs of tiny homes vary greatly, and this is just as evident when looking at tiny home villages made for the chronically unsheltered or similar populations. Some tiny

home villages, like those in Seattle, have tiny homes that look more shed-like, whereas others, such as those in Detroit, appear more house-like and typically vary in design from one another. The benefits of having a simple, one-size-fits-all, design is that the tiny homes are typically less expensive and are quicker to build. Since the design is already predetermined, time is saved that would normally be used in designing a new tiny home. The benefits of having tiny homes that look like houses are notable as well. For one, it can help reduce stigma surrounding the inhabitants as they are clearly living in houses. Secondly, nearby residents may be less opposed to the project as the design matches that of the residential area and is more visually pleasing than some of the more shed-like tiny homes. Varying the design of tiny homes also has benefits. For one, they can be more easily adapted to fit into the overall aesthetic of a neighborhood. This would increase the likelihood of both tiny home village inhabitants and nearby neighbors seeing the tiny home village inhabitants as legitimate residents of the neighborhood. Additionally, having a house that does not look exactly like the one next door fosters a greater sense of ownership and autonomy among inhabitants, which is very important for individuals who have long felt powerless. Furthermore, by spending more time and money on design, the tiny homes could contribute to inhabitant's overall wellbeing through better design (such as trauma informed design and architecture).

It is for these reasons that we recommend Columbus to build tiny homes that look more like homes than sheds. The tiny homes should vary in design amongst themselves, so that the homes have some uniqueness. Tiny homes should be designed to reflect, complement, or match the aesthetic and design of the overall neighborhood, so that they fit into the mesh of that area. Attention should be paid to designing the tiny homes (and the overall site)



to promote wellbeing and be trauma informed. Finally, tiny homes should be designed to be energy efficient, as many are. While this may take some additional effort, it will pay off in heating/cooling savings.

When designing the tiny homes, we recommend the city to involve both possible future inhabitants and nearby residents. Involving future inhabitants simply makes sense, as they may have needs designers would not be aware of unless they worked with them in the design-process. Involving nearby residents may help to reduce NIMBYism and increase neighborhood support of future inhabitants. By engaging nearby residents in the design process, nearby residents would feel listened to, and eventually that they have a stake in the project, so rather than wishing the tiny village was built elsewhere, they would become proponents of the project. And by involving both future inhabitants and nearby residents at the same time, connections between those two parties would be fostered. Those connections between existing residents and new inhabitants are incredibly important to the success of the project, as existing residents can act as a resource for the the new inhabitants.

Kitchen. At this point, the size of the plot the village is on, and how many tiny homes are in the village affects what should be recommended. For smaller villages, it may not be possible to build a separate space for a communal kitchen. In these instances, we recommend that the individual tiny homes have some sort of kitchen facility built in. Many tiny homes, not just those used for projects like this one, have a kitchen which is solely made up of a sink, a microwave, a mini-fridge, and a cabinet.

For larger villages, we recommend communal kitchen facilities. Not only would this be more cost effective, but it would provide residents with more appliances. For instance, a communal kitchen could include an oven, a

dishwasher, a larger area to prepare food, an eating space, a communal meeting space, a place to host cooking lessons or other activities.

However, not including a kitchen into the dwelling requires a variance. It may be easier and quicker to build small kitchens into each tiny home, regardless of the size of the village.


Bathroom. Similar to our recommendation for the kitchen, our recommendations for bathrooms in tiny homes varies by the size of the village. If the plot of land the tiny home village is on is rather small, and can only hold 2-3 homes, we recommend building the tiny homes to include a toilet, a shower, and a sink.

As the villages get larger, it becomes possible to have communal bathroom facilities, which can be more cost-effective.

Like, the kitchen before it, a bathroom must be included in the individual dwelling or a variance is required.

Laundry. We do not recommend including a washer or dryer in each individual tiny home. For smaller tiny home villages, we recommend doing laundry off-site. For larger villages, it is possible to have communal laundry facilities, however, it is also possible to continue to do laundry off-site, through a third party.

Size. The actual size of the tiny home, how much square footage it has, will be determined by the actual design of the tiny home, which we recommend be designed with future inhabitants and nearby residents. However, we can estimate the size range of these tiny homes. It is possible to have a toilet and shower, a kitchen, and a bed in a space that is no bigger than 100 square feet. While this may be somewhat cramped, it is not an uncommon dimension for tiny homes. Additionally, it may be an appropriate size for the tiny homes that have more communal facilities, and as such, do not need space for a shower, toilet, or kitchen. However, if the project wants to



avoid needing variances, a tiny home must be at least 120 square feet (see earlier in this chapter). As such, we would recommend no less than 120 square feet for the tiny homes. While the tiny homes could be bigger, we would not recommend exceeding 300 square feet, as any additional benefits from the extra space would not offset the additional costs at that point. This range is on par with the average size of tiny homes, 205 square feet, in projects like these found by Evans. Recommending a range of sizes rather than just one or two options allows the tiny homes to vary in size slightly which would have the benefit of making the tiny homes feel more unique and personal.

Social Services: The transition from unsheltered homelessness to housing can be jarring. For many individuals who transition back into a form of housing, the process can take time and oftentimes can require assistance. Besides creating a form of shelter, the most important thing these tiny villages must provide is assistance. One of the most prominent findings of the Hazel Morrow Jones Charrette was that the social services that are provided are critical for the success of any program addressing homelessness. If the village is large enough, we recommend creating a space, an office of sorts, for a full time staff member to be on hand to assist with the inhabitants' transition from unsheltered to sheltered life.

Costs. The cost of a tiny home can vary depending on the amenities and facilities included, what types of materials are used, and the cost of construction. However, in the same paper cited earlier, Evans found the average cost to be around \$20,000 per tiny home in tiny home villages across the U.S. designed for individuals without homes, which we feel is an appropriate estimate at this time.

SUMMARY



Homelessness is a complex problem, and as such one solution will not solve it completely. However, creating tiny homes can help. Tiny homes are a cost-effective solution to providing individuals who are without homes shelter directly. More and more cities are building tiny home villages to address their homelessness crisis across the U.S., and are achieving positive outcomes.

We recommend that the city of Columbus start to build tiny homes for individuals without homes. We recommend they use city owned land, land that is in the landbank, as most of those plots are already zoned for residential. In addition to directly addressing the problem of homelessness, using tiny homes as an approach to combating homelessness has several other benefits. Firstly, it is flexible. Tiny homes can be easily designed to fit the environment they are in. Additionally, the city does not need a large amount of money to start; they can simply start with one tiny home, and create more as resources become available. Secondly, building tiny homes is not a long process. This would allow the city to see results fairly quickly, and should the need arise, make appropriate changes sooner rather than later.

Housing is only one part of the homelessness crisis, which is why we have paired this recommendation with the two previous, neighborhood fridges and creating a transit system for individuals without homes, and the next recommendation, mobile services for individuals without homes.

4

MOBILE OUTREACH SERVICES

*MORGAN MACKEY
MADISON RICHARD
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INTRODUCTION



From the perspective of an individual who does not have a home to return to or even a piece of paper proving their identity, something as small as a lingering cold may seem impossible to seek and retrieve treatment for. Many homeless individuals are left to suffer through things that others would have no trouble obtaining access to, simply because they do not have the proper paperwork to show a hospital secretary, enough money to pay for the visit, or they might not know that there are resources available to help.

In one study, it was estimated that one quarter of the homeless population suffers from mental illness (Torrey) and at the same time about half of homeless respondents admitted to being turned away from shelters and medical services when they could not show an ID (NLCHP, 2004 p. 5). Considering the feeling that might come from someone living on the streets combined with an outright refusal to provide help, homeless individuals may rightly feel as if the world does not care about them. This report proves that there are groups who care deeply about lending a helping hand and lays out a plan for how similar programs could help the homeless population in Columbus.

Like other cities in the country, Columbus is fighting its own homelessness crisis, with thousands of people sleeping unsheltered each night. Some of them have a mental illness, some were turned away from shelters, and some even have a job but still do not make enough money to secure consistent shelter. Many groups are already trying to help the homeless in Columbus, such as Mount Carmel's Street Medicine, the Open Shelter, Goodwill, and the Alcohol, Drug, and Mental Health Board of Franklin County (ADAMH) to name a few. All these organizations have proven that with a little extra help, homelessness is not a cycle but rather something that can be overcome. The Street Medicine program has seen huge success in improving the quality of life for homeless living on the streets by sending a mobile service unit stocked with medical supplies and professionals into the city. According to Mount Carmel's website, in one year "the benefit... provided to central Ohioans through free health services, outreach programs, and other initiatives exceeded \$55 million" (Mount Carmel, 2021). The investment that goes into programs like this eventually makes its way back into the community when individuals feel confident and healthy enough to find a new sense of purpose in life.



Programs that help the homeless by bringing services to them cost money upfront, but they also offer significant savings for the organization. When medical programs are available that continue to follow up on a patient, otherwise known as respite care, hospitals benefit from having a decrease in patients that must be readmitted. In a study completed by the National Health Care for the Homeless Council and published by the Nashville Metropolitan Homeless Commission, three hospitals in Cincinnati saved \$6.2 million annually after medical respite programs were put into place (2011, p.1). If these people were treated but then left on the streets to suffer again, the care would have been a waste in money and human life. By providing attention with follow-ups, the hospitals ensure their in-house facilities operate efficiently and the homeless get the care that they need.

In order to help facilitate the implementation of the mobile service unit program, there is a collection of goals related to each element of the unit. The overarching goal is to provide help to the homeless population by bringing necessary services directly to them so that they do not need to organize transportation to get there or feel uncomfortable in an unfamiliar place. Mobile service units eliminate the need for transportation to a shelter or office and all the services take place within the homeless camps. An added benefit of bringing the services to the camps is that homeless individuals may be more likely to trust providers, especially if the service arrives consistently and on time each week. With each of the three main services that will be provided by the unit, we hope that the program will increase connections between the homeless community and providers. The three main goals of each service that will be provided are listed on the following page.

GOALS



1. In a study completed by the National Law Center on Homelessness and Poverty, when a homeless individual could not show proof of identification, 51% were denied social security benefits, 54% were denied access to shelters, and 53% were denied food stamps (NLCHP, 2004 p. 5). **We hope to decrease the number of homeless individuals turned away from the help they desperately need by increasing their access to IDs and other forms of paperwork.**

2. In a survey conducted by NPR, about 27% of homeless adults with children claimed to have a part or full-time job in Los Angeles County (Wagner, 2018). In Columbus, **we hope to help the remaining 3/4 of homeless adults find steady employment and aid those who are already employed find a job that provides a healthy standard of living.**

3. In a 2015 survey from the Mental Illness Policy Organization, about 25% of the homeless population was estimated to be “seriously mentally ill at any given point in time” (Torrey) and many of them do not have access to resources that could help, being out on the streets. **We hope to increase the availability of mental health resources that can be easily accessed by the homeless population.**

These goals are meant to provide a strong baseline for implementing the mobile service unit program and serve as a reminder of its true purpose, to help those among the homeless population in Columbus who need it most. Existing organizations might take advantage of the increased scope of people who can be reached by bringing services out into the community. The overall aim of this project is to increase the number of homeless individuals in Columbus with access to the services that they most desperately need, eventually reducing the total number of unsheltered homeless individuals. Through case studies, research, and input from professionals currently working with the homeless population, we hope to create a strong mobile service unit program that improves relations between the homeless population and larger institutions while also helping in the three main areas that could make the most difference between an individual going unsheltered and finding a home.

CASE STUDY

STREET MEDICINE, MOUNT CARMEL

It is important to look at different case studies around the city of Columbus and across the country before implementing a new program because they could offer critical information about how to structure the program and make it the most successful that it can be. Mount Carmel's Street Medicine program and the Open Shelter are two organizations that have succeeded in supplying the homeless population with health resources and paperwork, respectively. King County's mobile medical van is an example of a program that is outside of Ohio, located in Washington. The mobile service units might eventually be expanded to help additional organizations by providing units that go directly to the homeless camps and reach a larger amount of people. Additional input and research are needed to show how other services might be beneficial to getting homeless individuals' lives back on track, but case studies are critical to understanding what the homelessness crisis currently looks like in Columbus and what services would be most helpful to this segment of the unsheltered homeless population.

The inspiration for mobile medical units stemmed from the Mount Carmel Street Medicine Program. This program has been

around for close to 30 years specifically focusing on providing free urgent care services who are uninsured or underinsured. There are a lot of people out there who benefit from these services not just the unsheltered homeless. This shows the urgency and need for programs like this to exist; many people lack the ability to access healthcare, whatever their reason may be.

Currently the team visits 9 regular central Ohio locations on a rotating basis. As of right now the services they provide are:

- urgent medical care
- common medications
- limited vaccinations
- employment screenings
- case management
- referrals to primary care
- and other community resources

The Mount Carmel team provides a great look at what should be in place for a street medicine team. The goal is to implement what is already in place and expand upon it to umbrella over even more of the population and provide even more help to these people. Currently on staff is a family practice physician, nurse practitioner, registered nurses, medical technicians, bilingual case workers, and administrators. The team has provided help to around 6,000 people annually (Mount Carmel, 2021). This number can easily be expanded by generating a larger team and covering a larger radius around central Columbus.



(4.1) Mount Carmel Street Medicine van

(4.1) from <https://www.mountcarmelhealth.com/about-us/community-benefit/outreach-programs/mobile-medical-coach-and-street-medicine>

CASE STUDY

THE OPEN SHELTER


The Open Shelter is an organization located in Columbus, Ohio that provides a variety of services to unsheltered homeless individuals, such as food, clothing, and assistance obtaining official paperwork. According to their website, the Open Shelter began as Ohio's "first 24-hour emergency walk-in shelter" in 1983 and has helped over 40000 people since (Who We Are). It is mainly funded through donations and operated by selfless volunteers (Who We Are). St. John's Evangelical Protestant Church has also been helpful in standing as a permanent address for the organization and a physical location for operations to be ran out of (Who We Are). The organization's efforts serve as a prime example to the planning profession by showing proof that the built environment, a church, can help people living in the unbuilt environment, on the streets. The Open Shelter is already providing unsheltered homeless individuals in Columbus with help obtaining legal paperwork and could explain what methods are best to connect individuals with the Social



(4.2) The Open Shelter

Security Administration. Even though the unsheltered homeless population might not have a place to call home, they are always welcome at The Open Shelter.

One of the reasons why The Open Shelter has been successful in providing help to so many people over the decades is because their services have been so consistent. Even when they did not have a physical location to work out of, their volunteers were forming connections with the homeless community and filling in gaps where the government failed. Some issues occurred when the organization did not have a physical address to receive mail and other correspondence such as donations. When St. John's stepped in, they provided a safe space where The Open Shelter could receive correspondence and individuals knew they could go to receive help. The location of such an organization might create some pushback within a neighborhood if people do not want to live by a place that attracts homeless. There is some credibility in the claims because property values tend to fluctuate based on a property's surroundings. If a group helping the homeless wants to have access to a facility, it might be helpful to explain why the operations are so important to community members so they might understand more about the project. Additionally, it might make the transition a little easier if the organization first tried using the facility for mail only, and then move more operations there if the need arises. Throughout any changes in operation, it is paramount that the people being served still have consistent access to the services that they rely on.



The Open Shelter is important to setting up a mobile service unit program because they already have the trust of members of the homeless community and could provide further insight into what homeless individuals want in terms of services. They could also provide essential information on where the unsheltered population tends to congregate in the city. The mobile service units could benefit from having the support of The Open Shelter so that homeless individuals trust them with their health, paperwork, and employment search. The Open Shelter itself might benefit from adding a mobile service unit to its own operations to reach more people at one time. They are already providing access to paperwork, which is one of the main services that would be offered by the mobile service units. The volunteers could provide useful insight into how a relationship with the Social Security Administration works and the success rates for new paperwork. Lessons from organizations like The Open Shelter are critical in ensuring the success of a new mobile service unit program.

CASE STUDY

MOBILE MEDICAL VANS


In Washington, Public Health Seattle and King County and Downtown Emergency Services have partnered to form a unit of medical professionals that bring emergency care directly to the homeless populations (King County). According to the King County website, the program was put in place because the “people who are unsheltered in King County [should] have access to the health care they deserve, on their terms”. The dates, times, and locations of the vans are listed on the website, separated into downtown Seattle locations and locations in South King County. The vans visit the sites regularly every handful of days, which helps to build a connection with the people they are serving. In addition to medical services, the vans also offer “referrals to shelter, food banks, legal assistance, and domestic violence programs” (King County). One of the reasons why the program has been so successful is because it is able to meet a variety of needs within the homeless community.



(4.3) Photo of a mobile medical clinic in Seattle

Some of the details that have worked in King County’s mobile unit program is the clear communication between those who are being served and those in charge of the operations. The website clearly details when to expect the van and what services will be provided. It even informs people to arrive early, especially for the van that offers dental services. The more knowledge that individuals have before taking part in the program, the more efficiently the program operates to ensure that the greatest number of people are served at a given time. Some things that have not worked with the program revolve around the type of services that are provided. The medical services are mainly focused on emergency care instead of preventative screenings (King County), which could potentially increase their cost. If more preventative appointments could be set up, then less services might be needed in the long term because less emergencies would arise. A simple check-up might also be easier and cheaper to offer than an emergency procedure. By combining the organized plan of King County’s program with more preventative health care, new programs will be able to best help the unsheltered homeless.

One of the largest obstacles that the program has overcome is the large budget required to operate the vans. In a news article, it was revealed that a new van will cost the city around \$700,000 a year (Ruiz-Grossman, 2016). Recently, the COVID-19 pandemic might have put additional strain



on the budget with an increased requirement for masks, sanitizer, and testing. The funding for King County's mobile units comes primarily from King County Veterans, a human services levy, and the Seattle Human Services Department (King County). If not for these sources of income, the program would not be able to operate as many vans as it does and it might not have been to withstand the global health crisis. Despite these obstacles, the program has been very successful in treating the homeless populations of Seattle and King County. One van can serve almost 850 people a year (Ruiz-Grossman, 2016), and with each additional van the program continues to grow. The King County mobile medical units offer proof that one mobile unit can successfully offer a myriad of services to the unsheltered homeless populations that need them most.

MOBILE SERVICE UNITS

A mobile service unit (MSU) is a vehicle that can travel and provide functional services for people where they are. MSUs bring services to where the homeless are, driving directly up to well-known homeless camps. The idea here is that the unsheltered homeless who have been affected by homelessness for a long period of time are often distrusting of systems and organizations (Song, 2014) due to neglect and general feelings of ostracization from society. There are also often mobility issues for the homeless making it difficult for them to get to all the needed services they need to get to. MSUs provide an opportunity for the homeless to get the services they need in the location they are in without having to go great distances to find them. They also provide a different kind of service and consistency to the affected populations making it easier for the homeless to establish trusting relationships with the workers, and thus getting the help they need.

Mobile Service Units Currently Operating in Columbus

Mobile service units have been in use for several decades (Catholichealthassoc, 2019) mainly in the medical field. There are hospitals like Mt. Carmel with their street medicine program that brings medical services to homeless camps and has a big van with examination rooms to see patients on site (Catholichealthassoc, 2019). There is also the Breathing Association with their Mobile Medical Unit that provided several medical services (mostly centered around breathing) on the go as well (The Breathing Association, 2020). Another industry that has

used mobile services over the years is the food truck. The food truck or street vendor has been around since the 1600's (Myrick, 2019) as a means of moving food companies around and bringing them to the people. Food trucks are a little different because they are mainly motivated by profit, but they still show a way in which people have been able to provide mobile services and meet a need.



(4.4) Van operating as a mobile health clinic with The Breathing Association



Economic Benefits

There are several economic benefits of the mobile service unit from the example we have of them currently. Mt. Carmel has seen \$55 million in emergency room costs savings just in the last year with their mobile outreach programs. According to the National Health Care for the Homeless Council (NHCHC), they saved around \$6.2 million in hospital revisitation costs between 3 hospitals by having homeless people being involved in a medical respite program (Metropolitan Homelessness Commission, 2011).

One of the most effective ways to relinquish the cost burdens of homelessness would be to simply reduce the amount of homelessness in the city which is ultimately the goal of this program. According to the Coalition of Homelessness and Housing in Ohio (COHHIO) around 70,000 people are affected by homelessness each year in Ohio (COHHIO, 2020). The cost per person per day is around \$2171.40 (COHHIO, 2020). If you multiply this number by 365 days and 70,000 people you get an annual cost of around \$55.5 billion in total and around \$800,000 per person (this cost is spread out amongst several different groups and varies slightly throughout the state). As you can see getting people off the streets can save the city and the state immense amounts of money each year.

Economic Costs

When it comes to costs of mobile service units the two main things we want to look at are the upfront cost associated with acquiring the unit and the maintenance costs associated with it. The upfront cost

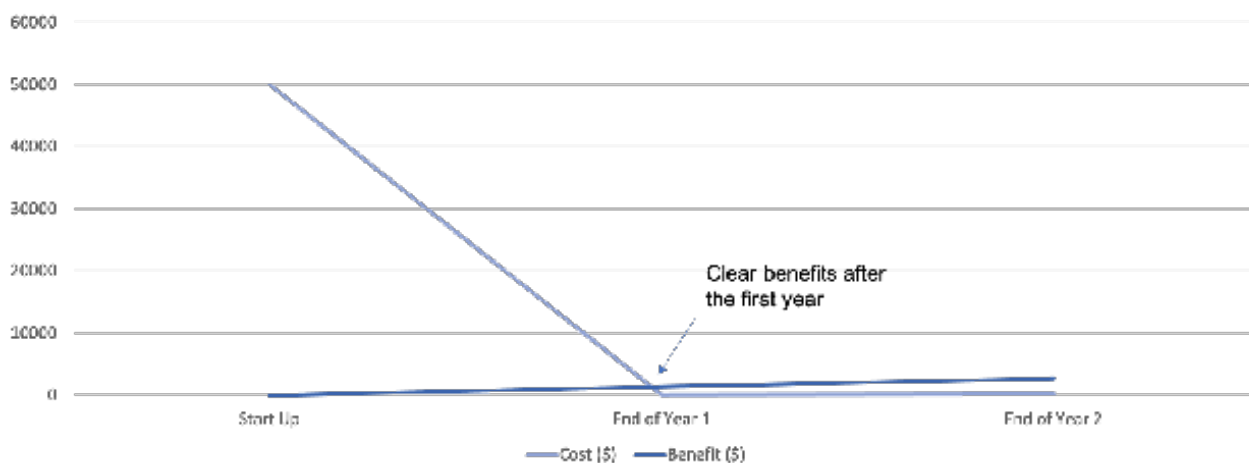
of operating a unit is the price of the van and initial marketing that is required to let people know about its routes and services. This is projected to be around \$50000. The maintenance cost includes regular costs that occur while operating the van, such as supplies, gasoline, and the salary of a licensed driver. This could range between \$75000 and \$100000. The salaries of the unit's employees would come from their respective companies, minimizing the cost to one party of operating the unit itself. In Seattle, Washington, a new van for their mobile medical unit cost the city around \$700,000 a year (Ruiz-Grossman, 2016), but a smaller sized unit could decrease that cost. It is clear that costs, especially at the beginning stages, will be extreme, but at the end the overall economic benefit is worth it, particularly over the year that the unit is in service. The cost will also be made up in indirect ways when the people receiving help are able to get back into the workforce and become actively involved in their community again.

COST VS BENEFITS ANALYSIS

CATEGORY	COST
Van	\$50,000
Maintenance*, Driver Salary, and Supplies	\$75,000/yr
Total for 1st year	\$125,000

*Maintenance includes gas, oil changes, car washes, and other normal upkeep

(4.5) Financial Costs of Implementation and Operation Table of total costs for a mobile service unit



Benefits based on \$55 million each year, serving 40000 = \$1375 / person

Costs based on initial \$50000 van, \$50000 salary for driver, \$20000 for supplies, \$5000 for gas, serving 850 people

Data on benefits from Mount Carmel (2021), costs from King County medical vans (Ruiz-Grossman, 2016)

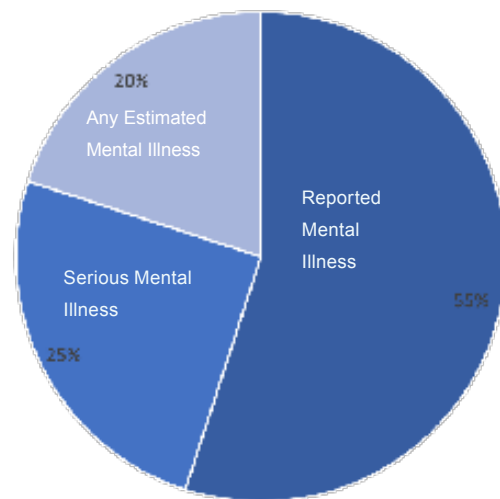
(4.6) Financial Benefits vs Costs per Person Graph of costs vs benefits of a mobile service unit

MENTAL HEALTH RESOURCES

In broad terms, if all the mentally ill received treatment, overall employment would increase, which would then translate into gross earnings seen in the United States. A substantial number of people not specific to homeless suffer from mental illness. This ratio increases when just looking specifically at the homeless population. To help lower these general statistics services and medical treatment need to be available. Although there is an abundance of help there for middle to high income earning individuals, the services are lacking for lower income individuals and the unsheltered homeless communities. The goal is to increase these services.

Overall, effective evidence-based treatments are not expensive, and they generate massive savings in the long run. In fact, they can more than pay for themselves in savings in terms of both the labor market and health care. Often, in homeless communities the mental illness present will also impact the individual's physical health. Mental health problems often make physical health problems worse—typically increasing mortality for people with the same initial health conditions. So, not surprisingly, mental health problems also add greatly to the cost of physical health care. There are also high associations of crime with mental illness which in the long run crime is associated with costs of damage and loss. In summary, by increasing the services available to the homeless population and hopefully guide them to treatment, there will be savings seen in the long run from health care departments and lower crime rates.


Many countries, such as the U.S., do not spend very much overall on mental health care. Therefore, great improvements can obviously be made in this industry. By increasing our attention to providing mental health services to our homeless population we are not only cutting down on overall costs seen in health care via emergency room occupancies or mortality but also in crime as seen above. By providing these resources for the homeless, half of those with mental illness recover post treatment and treatment will also decrease the likelihood of relapse.



(4.7) Number of Homeless who are Mentally Ill

Chart showing percentage of mentally ill homeless. The dark blue shows the the percentage of homeless who have reported a mental illness, the light blue shows the percentage of homeless who have any mental illness, and the medium blue is the percentage of homeless who have a serious mental illness.

Data from the Mental Illness Policy Org



Mental Health Resources Currently Offered in Columbus

We do not want to create new services; we want to increase the availability of the services that are out there for the unsheltered homeless. Netcare Access is a 24-hour mental health and substance abuse crisis center for adults and those with developmental disabilities. It serves as people's connection to the ADAMH system by providing referrals for treatment. The focus would be on providing licensed health care professionals to provide the unsheltered homeless with the ability to get mental health diagnostic evaluations, access to potential hospitalization if conditions require and prescriptions to treat these individuals. These medication prescriptions would be access to prescription drugs to treat life influencing mental illness. Medication would be provided for one week maximum since there is a potential to be dealing with addiction with some homeless. On the mobile units we would also provide an "encyclopedia" of sources and hotlines in the area. During evaluations, the need for other services or hotlines could reveal itself. North Central Mental Health services had a similar encyclopedia of resources in the Franklin County area. (Institute of Medicine, 1988)

How to Increase the Success of Mental Health Services

The homeless population is often hesitant to take advantage of medical services because of their distrust of medical providers, lack of support, their need for many different services and their lack of daily activities. By tackling communication and coordination in the approach, the availability of internal

and external resources becomes more widespread. Focusing on communication would mean that the services and our organization would need to interact regularly to ensure everything was on the right track in every way. Second, by coordinating individuals, potentially other previously homeless volunteers, to assist them in finding their services we can increase success in finding the right services for everyone. Third, our program needs to be assertive and directed in finding homeless communities to provide our services. The likelihood of all the homeless that need assistance in finding us is extremely unlikely so by seeking them it increases the chance of success. Lastly, our organization wants to ensure that proper funding is in place for our organization as well as the workers that will be fulfilling this job. These workers will hopefully include licensed doctors and psychiatrists as well as previously homeless volunteers to make our clients more trusting of our services.

JOB RESOURCES

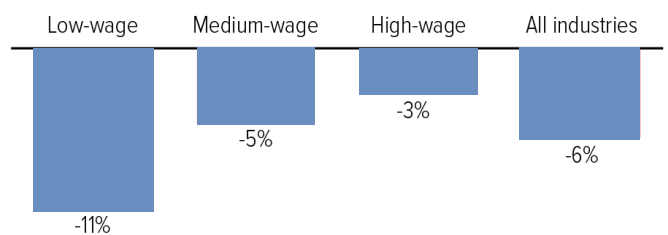
One of the services to be offered by the mobile service unit is providing resources for individuals experiencing homelessness to meet with potential employers and eventually get a steady job. The hope is that once individuals can rely on a consistent source of income, they can escape the cycle of homelessness and put down money on a house or use it toward food. While it is easy to claim that getting a job is the cure-all for homelessness, studies have shown that this is not always the case. In San Diego, about 10% of the homeless population claimed that they were employed (NPR, 2018). However, there are other benefits that can come from having a job, including social connections and economic advantages for the country at large. The mobile service unit program seeks to provide a trusted resource to homeless individuals seeking employment.

Before trying to tell homeless individuals that they should look into getting a job, it is important to understand what forces caused their current situation. Most of them probably lost a job in the past and could suffer from low confidence levels and a lack of motivation in the job search process. According to the Center on Budget and Policy Priorities (2021), in 2020 most job losses occurred in low-wage industries, which dropped by 11% compared to high-wage industries at 3%. Many individuals, including homeless, are routinely affected by job cuts and may not feel as if they are valued by the industry. Additionally, homeless individuals may already harbor a deep sense of mistrust with authorities after being left in their precarious situation, which could further hinder the process of connecting the homeless population with jobs.

The first thing to determine when putting together a job resource program is what type of service would be most helpful for the unique individuals it is trying to help. In a program offered by Volunteers of America, some services include resume writing, job matching, help filling out applications, skills coaching, providing professional clothes, and identifying references (VOA, 2021). Without these resources, homeless individuals might feel overwhelmed at even starting the job search process. If they do find a job, they might not have access to the technology to fill out an application or form a resume. The mobile service unit would provide these services and offer additional help like access to technology and training on computer programs.

Job Losses Largest in Low-Wage Industries

Percent change in number of jobs, February 2020 to February 2021



Note: Industries were ranked by average wages in February 2020 and divided into three groups containing roughly the same number of jobs.

Source: CBPP calculations of Bureau of Labor Statistics data

CENTER ON BUDGET AND POLICY PRIORITIES | CBPP.ORG

(4.8) Job Losses in Low-Wage Industries (Center on Budget and Policy Priorities)



Organizations that Currently Provide Job Resources in Columbus


Some organizations already providing job resources in Columbus are the YMCA, Salvation Army and Goodwill. It is important to include these organizations because the programs already have connections within the homeless community and know what type of services would work best for the people of Columbus. The YMCA's program seeks to provide individuals with a "sense of belonging, improve self-esteem, and establish themselves as contributing members of their community" (YMCA, 2021). The program is funded through various government bodies, United Way, and Community Shelter Board (YMCA, 2021). The Salvation Army's program matches skills with jobs, helps complete requirements, builds social skills, and even aids with financial planning and insurance coverage (Salvation Army, 2021). The Goodwill's program focuses on directly employing people who are homeless or have disabilities (Goodwill). All three of these programs are already successfully operating within the community, only in different ways and at different levels. They can offer important lessons for the implementation of mobile service units and might benefit by incorporating the units into their existing structure.

Goodwill's employment program can offer some critical information to think about in bringing job resources directly to homeless communities. On their website, Goodwill Columbus offers a handful of stories about people who have received help from the program and found a place for themselves in society. The success stories provide an idea

of what groups of people can most benefit from job resources: individuals with mental, developmental, and learning disabilities who may not be able to find a job that fits their unique situation. In one case, a man benefitted from practicing with interviews and now earns a steady paycheck and really enjoys his job. When talking about his current job, he says, "I like being productive. It makes me feels more independent" (Goodwill). Although this man was not homeless, anyone who is turned away from a job just because they do not look or act a certain way can appreciate the extra help that job resource programs offer. The mobile service units would not only connect homeless individuals to job opportunities but also include people who they can practice essential social skills with.

Economic Benefits

As more individuals are matched up with jobs, the economy of the city will begin to see the effects of having a lower unemployment rate. With so many homeless not participating in the workforce, society is missing out on talented individuals who could be contributing to the city's economy and giving back to the community. By placing more people into jobs, the mobile service units fill essential roles within the city that otherwise would have gone empty. Homeless individuals also benefit from having a consistent place to go everyday instead of walking around the streets of the city. As more people who have experienced homelessness get jobs, they may be able to help and relate to others experiencing similar



problems, hopefully continuing the cycle of networking and employment.

Currently, the United States spends a large amount of money every year in programs that help homeless groups improve their quality of life. While some of these programs are having a significant positive impact on the homeless community, others are simply perpetuating the crisis of homelessness. Some of the government's money may be better spent elsewhere, such as on programs that seek to eradicate the problem of living without a steady shelter. For example, by providing job resources on mobile service units, the program treats homelessness at the root of the problem and places people back on the right track to having a home. According to the Salvation Army, childhood poverty "costs the United States \$500 billion a year" or 4% of the country's GDP (Salvation Army, 2021). If more parents had access to the technology and connections that it takes to find a well-paying job, more children may escape from poverty and homelessness. The money that the country would save by not having to pay for federal poverty programs would go more directly into the pocket of hard-working individuals.

Social Benefits

In addition to the economic benefits that increased access to job resources provides, there are also many social benefits that individuals experience when they are employed. Having more connections with a boss or coworkers can serve to increase confidence levels, provide a sense of purpose in life, and act as references on a resume. Additionally, many homeless individuals suffer from a lack of trust in governmental systems

after they feel abandoned on the streets, so success from the mobile service unit program may boost the level of trust between homeless populations and larger institutions. In an article from the *Journal of Adolescent Health*, the author explains how some members of the homeless LGBTQ community have formed such a connection with other homeless individuals "that they may have little desire to leave street life" (Kruks, 1991 p. 518). Instead of trying to get homeless individuals out of their situation, it is also important for them to feel comfortable in any new environment they are placed in, which is where connections with non-homeless individuals like a boss or colleagues might help.

Once someone has a steady job to fall back on, he or she has the freedom to explore other options and discover new skills and hobbies in life. A manager might be able to serve as a gateway to other professions or positions and might also have recommendations for what type of skills could be improved on. A coworker might share similar interests and encourage a new employee to meet new people. With the help of job resources, a previously homeless individual can build a network of support and not only meet the standards for a minimum quality of living but live life to the maximum. The transition from street life to being housed can be difficult, so it is important to realize that these people might need more than just an offer of employment. However, with the proper long-term help, anyone can overcome a situation and rise to their full potential.

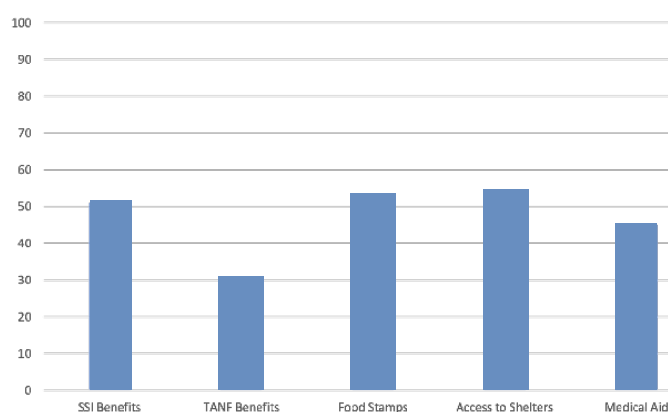
ACCESS TO PAPERWORK

An additional service to be offered by the mobile service unit is providing residents who are unsheltered and homeless better access to paperwork resources, specifically state-issued IDs, birth certificates, and social security cards. The goal of implementing this service, combined with the job resources, is to connect these individuals with the ability to apply for jobs, locate a place to live, receive disability benefits, open a bank account, and more. According to one individual, who was previously unsheltered and homeless, “not having ID can make it virtually impossible to escape homelessness. It means being shut out of federal, state and county buildings, where social services agencies that help the homeless are often located” (Wiltz, 2017). Due to regulations implemented in 2001 after the 9/11 attacks, it is even more difficult to obtain an ID. These regulations included bills centered around standardized IDs for the whole country, requirements of physical home addresses to obtain IDs, and more. Legislation is not the only issue associated with obtaining paperwork for those experiencing unsheltered homelessness, other issues include economic and social costs.


The mobile service unit would be able to combat these costs associated with obtaining paperwork and bring access to paperwork directly to those experiencing unsheltered homelessness.

Economic Costs

To fully understand the issue of lack of access to paperwork, we first need to understand the economic costs and benefits associated. For an unsheltered homeless individual to gain access to paperwork, there are direct costs associated, as well as indirect costs that come from not having access. One direct cost associated with retrieving an individual's paperwork is the cost of obtain a physical state ID, which is \$26.00 for Drivers License or \$9.00 for a State Identification Card, not including the addition fees associated (Ohio BMV, 2020). Another direct cost associated with retrieving paperwork is the cost of obtaining Certified Birth Record. This cost is \$21.50 and the “simplest way to get a certified copy of a birth or death record is to order online using a credit card” (ODH), which presents problems for those who do not have access to virtually fill out documents or use a credit card, like most unsheltered homeless individuals.



(4.10) Percentage of Respondents Denied Access to Services After Not Being Able to Show an ID. National Law Center on Homelessness & Poverty (2004) van operating as a mobile health clinic with The Breathing Association



Indirect costs associated with retrieving an ID include access to necessary services, such as medical, housing, and more. In fact, “54 percent of homeless people without photo ID were denied access to shelters or housing services, 53 percent were denied food stamps, and 45 percent were denied access to Medicaid or other medical services” (NLCHP, 2004). Additional indirect costs include the fees to obtain a social security card. While there is no fee for a replacement social security card, there are the costs of mailing in paperwork or transportation to go to the office, as well as the costs of a state-issued ID which is required to obtain a social security card.

Currently, there are nine states that have legislation implemented that waive the fees associated with getting a state-issued ID for people that are homeless; however, Ohio is not included as one of the nine. Additionally, there is little to no legislation removing fees associated with obtaining a birth certificate. Both indicate there is more work to do in eliminating the economic barriers.

Social Benefits

In addition to the economic benefits that increased access to paperwork provides, there are also many social benefits that individuals experience when they can obtain this paperwork. Having access to paperwork and increase an individual’s social capital within a community, allowing them to be involved within the community and decision-making within that community. Voting in Ohio as a person experiencing homelessness can present many challenges, which can lead to further lack of representation. In order to legally register to vote in Ohio, “one must provide their driver’s license number, an Ohio identification card number, or the last four digits of their social security number” (Gleydura, 2020). Every single form of identification listed would be extremely difficult to be obtained by someone experiencing unsheltered homelessness and without access to funding sources. This means those who are not currently in possession of one identification form are not able to vote on policies that may heavily impact those experiencing unsheltered homelessness. The mobile service unit would be able to combat these issues faced by those in Columbus facing these issues due to their lack of a state-issued ID. Additional issues associated with difficulty voting include access to educational information about candidates and not having a permanent address to register under, preventing an individual from voting in person on election day or using a mail in ballot.

CHARRETTE FINDINGS

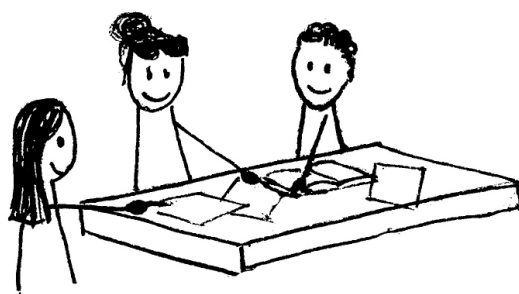
After meeting with professionals who are currently working with Columbus's homeless population, we realized that there are other services that we should look into providing on our mobile unit. We also learned about some of the obstacles we might face during the implementation of our plan and recommendations for how to get around them. The insights provided by the two professionals prove crucial in ensuring the success of mobile service units in helping the unsheltered homeless population with whatever they need.

Build a Trusting Relationship

The two speakers were glad to explain any obstacles they have faced in their own programs so that we could understand potential problems that we might have to address. Some of the problems had to do with a limited or unreliable budget and the fact that the homeless camps tend to move around so much. However, there were also more complex issues around actually connecting with the people the units are trying to help. Most homeless individuals hold a deep sense of mistrust with the systems in place due to poor experiences, which could make it difficult for them to accept help. One thing that tends to get overlooked is that these people are their own person; they are not going to do something just because they are told to. Instead, programs should ask

what they want and respect their decisions. A program is bound to fail if it forces solutions on people who do not want them.

Both professionals began by discussing the importance of relationships between the services and the people who are being treated. They explained how connected they become, developing a sense of trust with each other. In one story, the speaker brought the paperwork of a homeless individual from the lockbox to the office where she was hoping to get housed. It takes a long time to develop this type of relationship, but the key is to be consistent and always show up. One of the factors that could help is to employ previously homeless individuals who can relate to the patients at a personal level. The one speaker described a program where homeless individuals are offered day labor, so they can make some money and spend it however they want. The concept of trust is key to making the mobile service units successful because the patients must feel comfortable with staff if they will use the services.





Where to Focus the Services of a Mobile Unit

It is important to understand where and what the current services are in Columbus so that any new unit can fill in the lapses in the system and reach the most amount of people. One of the recommendations that the speakers had for us was to build on existing services that are already operating in the community. Homeless individuals tend to cluster around areas that provide an essential need for them, such as a church. The mobile unit can bring an additional connection to services that might not otherwise be offered. Additionally, patients might already be comfortable with the other units nearby, increasing the sense of trust with a new unit that is accepted by the other programs.

Additional Services to Provide

Lastly, the speakers provided ideas for what kinds of services should be included in a mobile service unit. They stressed the idea of providing help to people suffering from addiction and brought up the importance of having peer support. One speaker told the story of a homeless individual who worked to get clean and now wants to help others with their own addictions. They also spoke of legal aid that can help someone with, say, panhandling charges, and a more direct link to housing assistance programs. The Mount Carmel Street Medicine unit provides individuals with transportation to housing and help with their paperwork, but they do not have access to information such as how many units are available or other more specific data. In addition to these services, they supported our ideas of providing mental health resources, job resources, and help

with paperwork because they said that there are currently not enough services to help the large homeless population in Columbus.

By understanding how other programs operate in Columbus and help the homeless population, our program will be able to build on some of the things that have worked and anticipate some of the things that have not. The speakers' information is sure to greatly influence where our project is headed and increase the chances of its success. Taking one of the speaker's advice, we will certainly emphasize the fact that millions of dollars are saved by the hospitals when people do not have to go to the emergency room. Facts like this help us in deciding how to design a mobile unit and equip it with services that will help the homeless population most.

RECOMMENDATIONS

After gathering research about the most pressing problems facing the homeless population of Columbus and speaking to multiple professionals about their own work in the field, we have been able to create a realistic plan for the implementation of a mobile service unit in downtown Columbus. Throughout our research, we have found many services already exist in Columbus to help the homeless, through medical programs, housing assistance, and other resources. Mount Carmel's Street Medicine team is one of the better-known programs that has been providing medical attention to homeless individuals for over 30 years, and they are expanding into other areas such as addiction resources and food distribution. After speaking to one of the nurses who works on the Mount Carmel unit, we discovered that there is a large discrepancy between the number of people trying to help the homeless and the homeless population in the city. By increasing the number of mobile units operating in the city, we hope to be able to begin to bridge this gap and be there for those who want help.



(4.11) Photo of a mobile service van (Stevens Creek Toyota)



(4.12) Photo of the interior of a van filled with supplies (Morgan Corp)

SIX SERVICES OFFERED BY THE MOBILE SERVICE UNIT



MENTAL HEALTH RESOURCES

Resources to help with mental already exist in Columbus, but the challenge lies in homeless people accessing them.

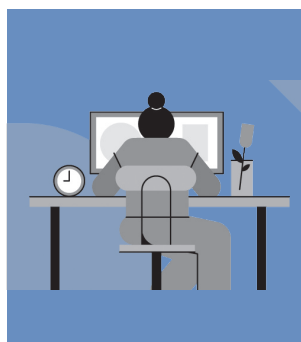
(Bronx Net)



LEGAL AID

From the charette, we learned that one legal mobile van is starting in Columbus, but one may not be enough to help everyone.

(Legal Aid Society of Cleveland)



JOB RESOURCES

Many organizations already provide job resources like the Goodwill and YMCA, but the reach of these could be enhanced with a mobile unit.

(Indeed)



ADDICTION HELP

According to professionals, one pressing challenge experienced by homeless individuals is addiction, and peer support can be one way to help.

(Addiction Technology Transfer Center)



ACCESS TO PAPERWORK

Even if homeless people overcome mental and physical obstacles, they still need an ID to access housing.

(DataNumen)



HOUSING

The obvious obstacle is obtaining housing, but many things go into this process that an individual might not be familiar with.

(New Hampshire Business Review)

LEGAL AID

We hope to include six main services on the mobile unit, with the flexibility to expand as needs arise within the community:

- **mental health resources,**
- **addiction help,**
- **job resources,**
- **access to paperwork,**
- **legal aid,**
- **and housing assistance.**

Instead of creating an entirely new team of professionals to work solely on the unit, the staff should be made up of six positions held by the type of service. For example, one position will be reserved for a peer supporter who can help individuals with their addiction. This provides the flexibility for different people and organizations to be involved with the unit every week. It is up to the organization if they have the budget to create a position dedicated solely to the unit or if it would be more helpful for them to have staff members take turns volunteering their time each week.

The following goes into more depth about the three services that will be included, in addition to the three that we have already looked at.

The concept of providing legal aid to homeless individuals was brought to our attention from the charette, but it seemed like such an obvious resource after the speaker explained the charges that some homeless individuals face. One of the largest volunteer organizations that provides free legal advice to homeless is H.E.L.P, or Homeless Experience Legal Protection. The volunteers meet at shelters and other service locations, usually for a single consultation (Project H.E.L.P., 2021). In Central Ohio, a handful of services exist with similar goals, such as the Legal Aid Society of Columbus, Access to Justice Foundation, and Lawyers for Justice. None of these organizations have a method set up to bring their services directly to the homeless. Coming from the streets, an individual might feel uncomfortable visiting a law firm and asking for advice. In Hartford Connecticut, a mobile legal van was put into place to help local homeless youth with “self-advocacy” and provide information about their options (Torre, 2015). By providing legal assistance on the mobile unit, homeless individuals might feel more comfortable accessing the services and learn useful information about solving their own affairs.



<https://www.volunteerunitedcbus.org/content/www.volunteerunitedcbus.org/agency/93884.jpg?1572961240?area=agency>

ADDICTION HELP

Substance abuse is both a cause and effect of homelessness. The National Coalition for the Homeless has found that 38% of homeless people are alcohol dependent, and 26% are dependent on other harmful chemicals (Murray, 2020). Mental illness that the homeless population encounters lead to substance abuse as well. The homeless can use alcohol and drugs to cope with their situations. There are also some times in which the substance abuse has led to them being homeless. Over a third of the homeless population suffers from mental illness, which is a large contributor to people over consuming drugs and alcohol (Murray, 2020). This does not even take into consideration young adults, minorities, LGBTQ communities or women that homeless. Often, these populations see more mental illness and more substance abuse than other groups. This data shows a significant need for addiction services to have a heavier role in the services that are provided to the homeless through these mobile services.

A 2014 survey by the United States Conference of Mayors asked 25 cities for their top three causes of homelessness; substance abuse and the lack of needed services were cited by 43% of cities, making it tied for the third leading cause (National Coalition for the Homeless, 2017). A lot of the issues with implementing more addiction help to the homeless are tackled in the entirety of our project. Housing for the homeless is one of the largest needs for the homeless population to see success. By combining mental health services, housing assistance, and addiction help hopefully the results will be evident in cycling the homeless through and out of being homeless.

Addiction services would incorporate a proper “AA type advisor” for their addiction or substance abused. These advisors would help establish some sort of connection back into society since many ties with loved ones are severed among homeless populations. Housing is also a main component of tackling addiction that these individuals would receive priority housing assistance to get them into stable housing so that they can start treatment. Mental health services would also be available to these individuals with priority because many mentally ill homeless self-medicate to cope with the illness. After housing, mental health and initial treatment are underway other services that the mobile unit offers can be utilized such as education, employment opportunities and daily life skills help. By treating substance abusing individuals with priority, full use of all the services we provide will be utilized. These individuals will have a lot better opportunity with proper services available to them whereas now there are few at all.

HOUSING ASSISTANCE



The last service provided on the mobile unit will have to do with providing housing services for the homeless population. Housing assistance would start with an assessment of the root causes of homelessness since everyone these service units would majorly be homeless. In general, housing is very minimal, especially free or low-income housing. The service would help to connect individuals to emergency shelters, transitional housing, and permanent supportive housing. The goal with these services would be rapid rehousing, quickly moving people from emergency shelters or the streets into permanent housing as quickly as possible. The longer a person is homeless, the more expensive and difficult it becomes to rehouse this person (SAMHSA, 2020). After rehousing, additional services in the unit would be provided connecting these families and individuals to food support, insurance, and other assistance.

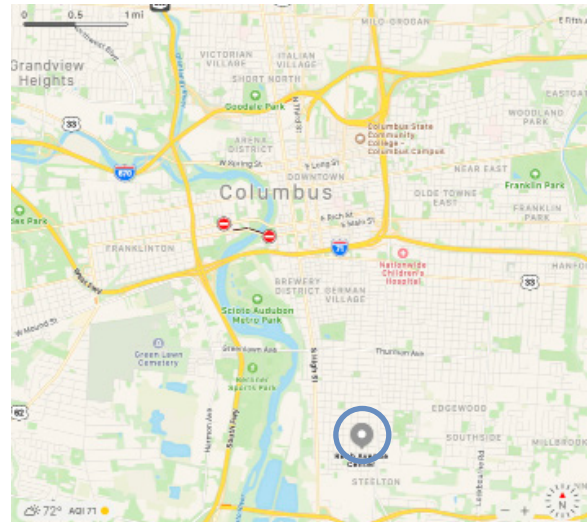
Many organizations around large cities, not just Columbus, aim to aid the homeless by opening their doors for housing or providing food. Housing assistance can also direct people to these emergency type shelters if they are on the streets. Housing is one of the key factors in getting people to cycle through homelessness. Individuals with mental illness or tackling substance abuse relapse more regularly without housing. Individuals also are more likely to develop mental illness or abuse substances when they are on the streets. In conclusion, providing these services is essential in cycling individuals and families through homelessness.

The van will serve as a safe place where different professionals can meet and talk about what issues they are currently working on and which patients might benefit from more attention. One lawyer might be helping a person with panhandling charges but find that he or she is actively looking for a job and could benefit from talking to a job aide to practice interviewing. By placing all these professionals in one space, even for a short drive, they can trade knowledge and expertise that can help provide the best care to the homeless.

LOCATION

After speaking with two professionals currently working in the field, we have decided that the best location for the mobile service unit to be positioned is where existing services already cluster. One of the main obstacles in starting a new service is how to get information out to the homeless, who may not be able to access or read an announcement. However, homeless individuals already know that services are available in certain locations around the city, such as near a church or shelter. One of the big hubs of services in Columbus is the REEB Avenue Center on the south side of the city. By being located close to other services, homeless individuals might feel more inclined to trust a new unit as well because the other organizations appear to trust it. Additionally, the unit could travel to known homeless camps, although the random pattern in which homeless move around could make finding enough demand difficult.

The mobile service unit should visit the same location at least once a week in order to build a sense of consistency and trust with individuals. The groundwork for the program already exists within programs operating in the city, which makes it more expedient to bring existing programs together and make the new program operational. With greater pressure placed on low-income communities during the COVID-19 pandemic, it is especially important to put the program in place as quickly as possible. Many individuals and families might be experiencing homelessness for the first time and not know where they can turn for help. The mobile service unit serves as a highly visible unit that operates on the streets, where people are likely to notice or hear about it. With its multitude of services, the program fills a variety of needs in the community, and its services are desperately needed right away.



(4.13) Location of REEB Avenue Center

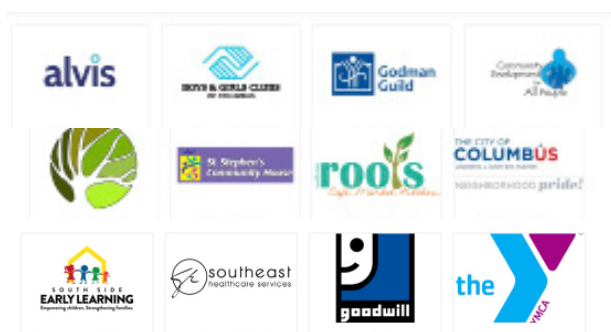
REEB AVENUE CENTER

The Reeb Avenue Center is located on the South Side of Columbus serving its community members. It seeks to build self-sufficiency by providing education, job training and local job growth so that these people can see opportunities and transform themselves and their lives. Some of the services they provide is GED classes, job training, certification programs, childcare, foodbank connections and family services. The center partners with other organizations around Columbus to help these individuals get off the brink of homelessness and to homeless individuals themselves. The Reeb Avenue Center acts as a guide to implement a variety of sources to combat homelessness in our own mobile service unit. Providing a multitude of sources is the best way to combat homelessness.

The Reeb Avenue Center can also act as a potential resource, connecting individuals that come to the mobile service units in the area to the center. The center currently acts as such in Columbus where mobile medical units connect individuals to the center for additional services and assistance. The Reeb Avenue Center has done a great deal to help the Mount Caramel Unit in particular. Centers such as the Reeb Avenue Center exist all over the country and can be great resources to connect with these mobile service units to help assist the most people as possible and tackle the issue of homelessness at an even larger scale than the units could accomplish alone. (REEB, 2019)



(4.14) Photo of the front facade of the REEB Avenue Center.
(REEB, 2021)



(4.15) List of partners working out of the REEB Avenue Center.
(REEB, 2021)

SUMMARY

After looking at how other cities across the country have fought similar problems related to homelessness and speaking to professionals about the current situation in Columbus, mobile service units are one of the best solutions to fight homelessness in Columbus. The unit offers a variety of services that can be tailored specifically to an individual's needs, while also providing a high quality of care from experts in the field. Professionals from the fields of mental health, employment, legal, addiction and housing services should be provided based on the most pressing problems among the homeless population of Columbus right now. Mount Carmel's program serves as an important example of how units can build a sense of trust with those they serve, but even a representative from the program admits they do not have enough resources to meet the increasing demands of the city's homeless. Other programs like the Open Shelter are operating within the city to supply services without using a mobile component. By bringing the flexibility of Mount Carmel's mobile unit together with a wide variety of services, a new mobile service unit can help Columbus' unsheltered homeless population find the resources they want, and possibly help them escape homelessness altogether.

All four of the proposals listed in this book work in different sectors of the city to help the unsheltered homeless population of Columbus. With community fridges, individuals living on the streets can find food and other supplies they might not easily obtain otherwise. With a more efficient system of affordable transportation, individuals can get around the city and expand the scope of their network. With mobile service units, individuals can get the help they need without having to go to an unfamiliar place. By building tiny homes on land that is going unused in the city, homeless individuals might even be able to overcome that ultimate obstacle of stable housing. The implementation of just one of these programs could have a strong impact on decreasing the number of homeless in the city. If all four of these programs were implemented, homeless individuals around Columbus would start to see real change and might even feel hope for a brighter future.

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