

Little Village, Chicago IL

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HAZARDOUS

Dust cloud descending through the Little Village neighborhood, after the Crawford Generating Station smoke stack was imploded in Chicago

Introduction

Little Village is a historic industrial and predominantly Latinx neighborhood on Chicago's Southwest Side. As a result, the neighborhood is a front line environmental justice community where inhabitants face a variety of challenges.

Continuing harmful emissions from manufacturing, transportation, and other sources, as well as pollution from a century ago are still creating a great impact on the health of the residents and students.

Minority communities on the West and South Sides of Chicago are the most vulnerable to toxic air pollution and other environmental health dangers in the city.² The findings of the Chicago study demonstrate that neighborhoods with high numbers of African American and Latino populations are most affected by air, water, and land pollution, extending from the deep South Side to Little Village, Pilsen, and McKinley Park on the West and Southwest Sides.¹



Increased diesel emissions from trucks, as well as new projects in line utilization plans by municipal officials and private business owners, pose significant dangers to Little Village's economy, ecology, health, and housing costs. As a result, community leaders and residents are increasingly asking that these efforts be driven by the community and serve the neighborhood rather than promoting gentrification and displacement.

The extension of existing facilities and the implementation of additional will result in an increase in pollution, particularly from diesel trucks, which are particularly detrimental because they are located near to Zapata Elementary School. Diesel fine particle emissions have been related to an increase in cancer, heart illness, and respiratory disease. According to a study conducted by Little Village North Lawndale High School, this neighborhood is already subject to considerable truck traffic. In five hours, students tallied 552 trucks.

Elevated lead levels were also discovered in the soil on the property, with amounts exceeding 1000 ppm in three spots. The EPA's lead limit is 400 parts per million in play areas and 1250 parts per million in other locations. As you can see, the valuated regions are exceedingly unsafe and toxic, and they are not good for the community. According to studies, even small amounts of lead consumed or inhaled can harm young children's brains, resulting in learning difficulties, aggression, and criminal behavior later in life. According to most scientists, there is no such thing as a safe level of exposure.



Smoke stack behind school sport event

¹"Zapata Academy Annex" PBC Chicago, 6 Apr. 2021, <https://pbcchicago.com/projects/zapata-elementary-school-annex/>

²Camarillo, Emmanuel. "Little Village Residents Rally, March against Pollution Year after Botched Implosion." Times, Chicago Sun-Times, 11 Apr. 2021, <https://chicago.suntimes.com/2021/4/11/22378791/little-village-residents-rally-march-against-pollution-year-after-botched-implosion>.

³EPA, Environmental Protection Agency, <https://www.epa.gov/il/environmental-issues-chicagos-little-village-pilsen-neighborhoods>.

⁴Yeo, Sophie. "Chicago's Mexican Immigrants Are Fighting Toxic Air Pollution-Again." Pacific Standard, Pacific Standard, 4 Apr. 2018, <https://psmag.com/environment/chicagos-mexican-immigrants-are-fighting-toxic-air-pollution-again>.

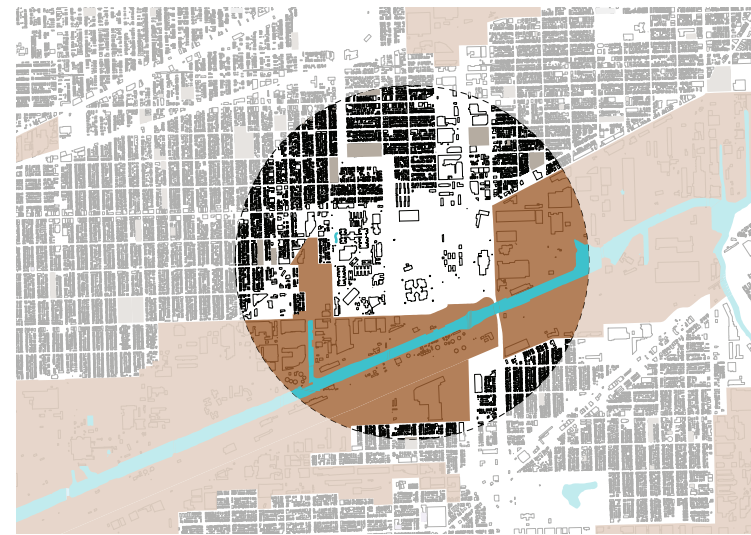
Little Village, Chicago IL



The green space near Little Village high school is very limited, and the site that are present use to be contaminated sites. The La Villita is a Park that connects to a food source. Collective planning and community engagement lead to the creation of a new recreational space. The site was previously occupied by Celotex, which made asphalt roofing materials and polluted soil with cold tar and other toxins, occupied the site earlier, and it was designated as a superfund site.



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Looking at this map, we can also see the industrial corridor highlighted with little village. Along with this are the open green spaces and schools lot areas. This map helps us see the close proximity that the schools and the parks have to the industrial corridor. The history that this industrial corridor has on the community is very crucial.

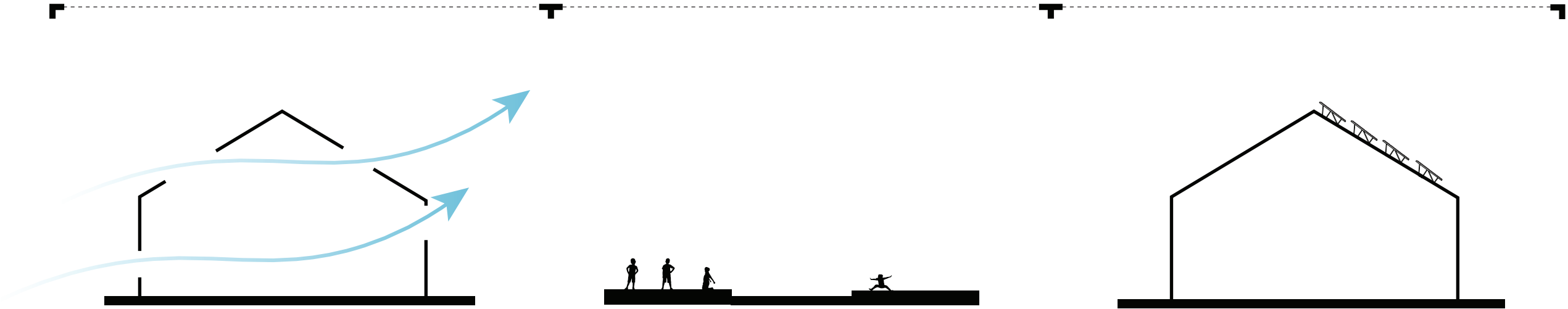
1."Zapata Academy Annex." PBC Chicago, 6 Apr. 2021, <https://pbcchicago.com/projects/zapata-elementary-school-annex/>

2.Camarillo, Emmanuel. "Little Village Residents Rally, March against Pollution Year after Botched Implosion." Times, Chicago Sun-Times, 11 Apr. 2021, <https://chicago.suntimes.com/2021/4/11/22378791/little-village-residents-rally-march-against-pollution-year-after-botched-implosion>.

3.EPA, Environmental Protection Agency, <https://www.epa.gov/il/environmental-issues-chicagos-little-village-pilsen-neighborhoods>.

4.Yeo, Sophie. "Chicago's Mexican Immigrants Are Fighting Toxic Air Pollution-Again." Pacific Standard, Pacific Standard, 4 Apr. 2018, <https://psmag.com/environment/chicagos-mexican-immigrants-are-fighting-toxic-air-pollution-again>.

Sustainable Education



Natural Ventilation

Out Door Education

Sustainable Building



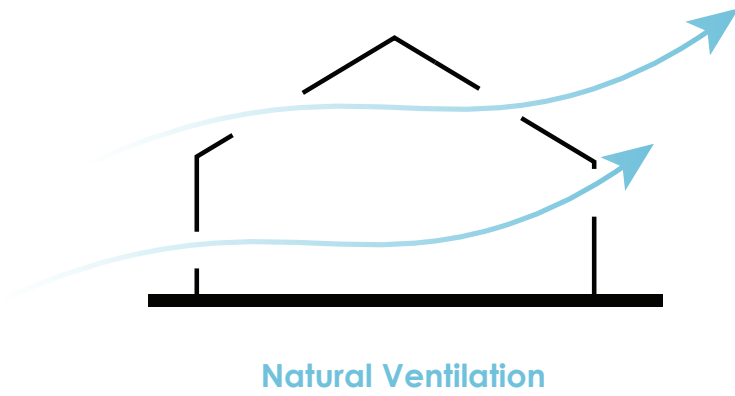
Green Houses

Canopy Coverage

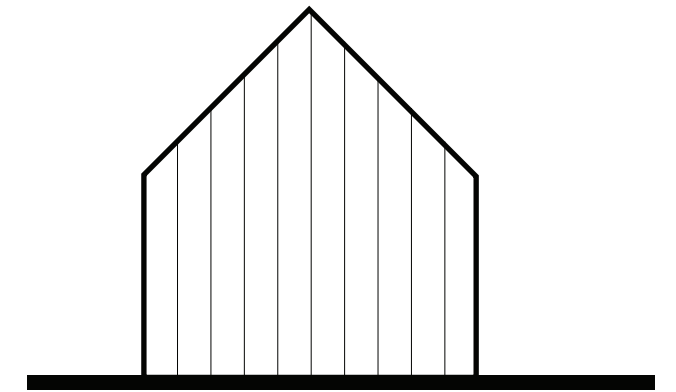
Solar energy

In order to start tackling the environmental issue in little village high school, these design tactics will help create healthier place for learning, but also for the neighborhood.

Currently, there is a factory in close proximity to little village high school. This is creating major health issues to the community, but it also impacts the educational experience that students in Little Village have.



Natural Ventilation



Green Houses



Canopy Coverage



Out Door Education

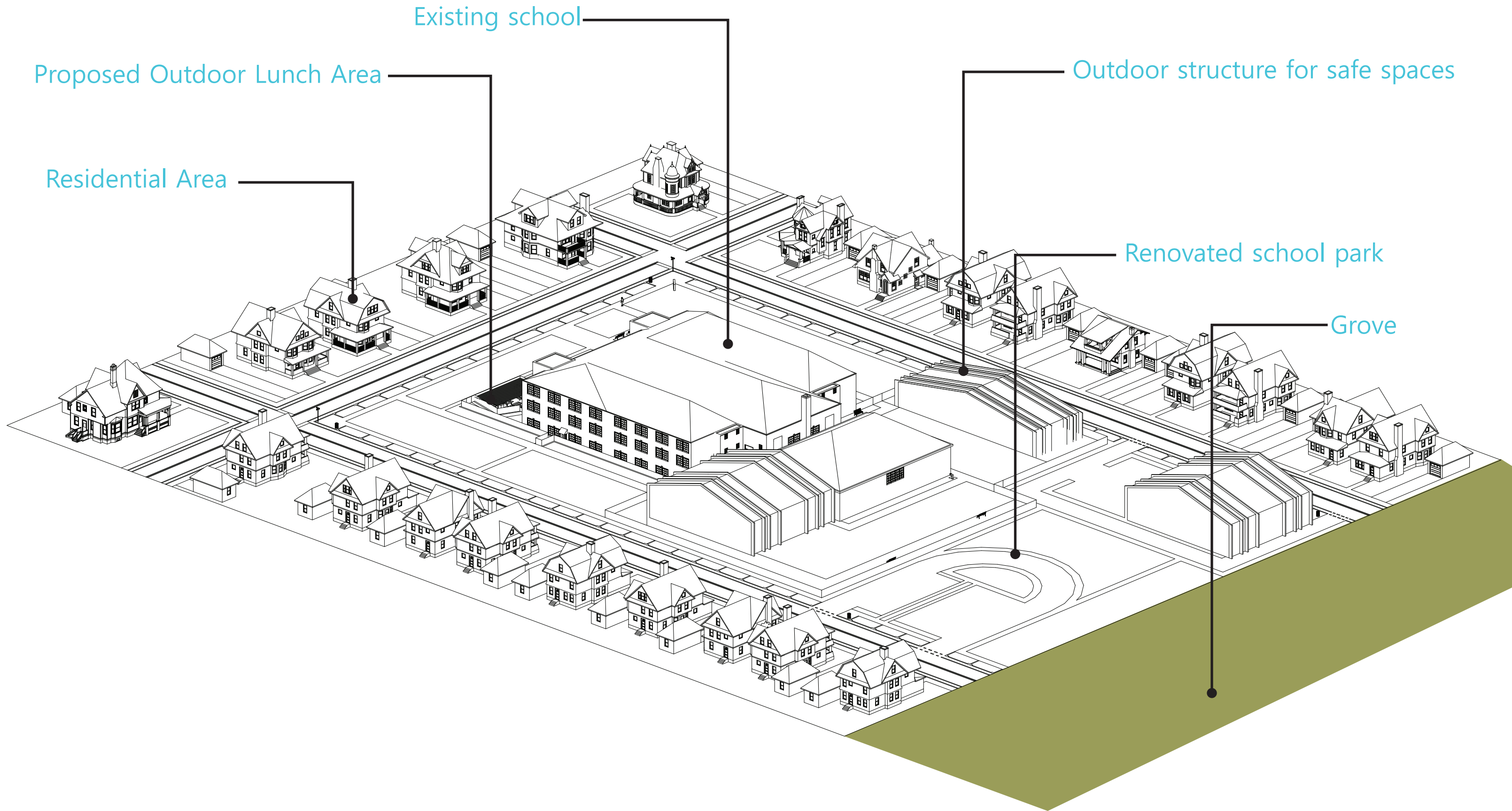
In 2006, testing by the Illinois EPA found the former Loewenthal Metals site contaminated with up to 5,900 parts per million of lead more than 14 times the federal safety limit for areas where children play. State investigators also found arsenic in the soil at levels more than 23 times higher than the federal cleanup goal for residential areas.

It is important to address these issues and especially in areas where kids are learning. Changing the structure and the environment where kids go to school, can have a huge impact on their educational goals. Increasing canopy coverage and natural ventilation that will in turn, pull clean fresh air in and helps force the warm, dirty air inside of the building out

The industrial corridor has made a harsh impacted the education of little village students. Students have to face these kind of events while being at school or while being out side and playing sports. Events like the image on the top left are consistent and limit the outdoor experience and also hurt student's education.

introducing a green house structure that will sever as an outdoor area for when toxic air levels are high, will give students more safe outdoor time. These spaces can then be transformed into outdoor educational spaces too.

Little Village



Existing school

Proposed Outdoor Lunch Area

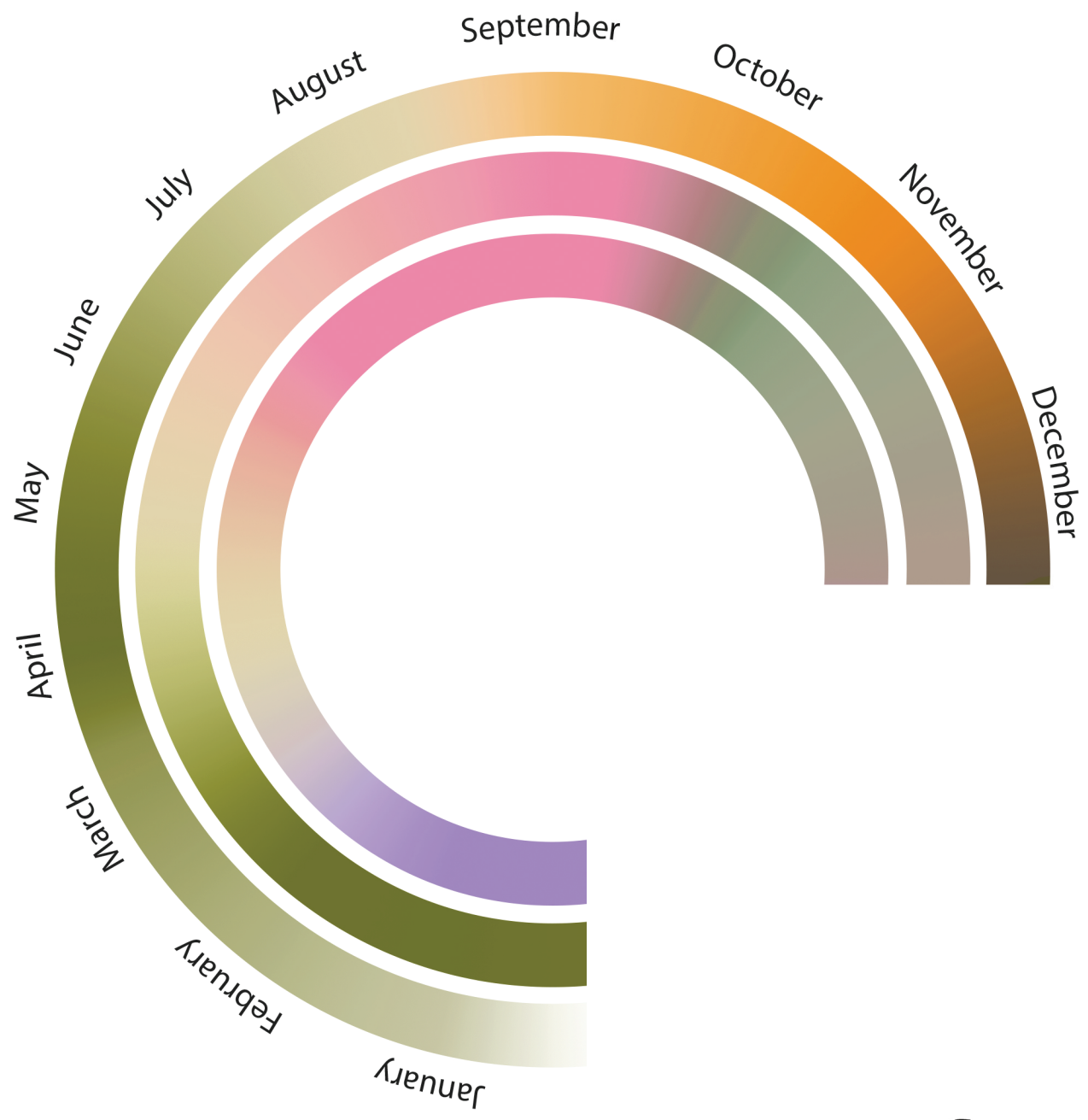
Residential Area

Outdoor structure for safe spaces

Renovated school park

Grove

Little Village



Year round planting

Green Buffer



Planting Bed

Student Path

Little Village

The new grove will create a green buffer between the industrial corridor and the neighborhood. This will also serve as an outdoor space for the community, educational spaces, but more importantly, it will reduce the levels of air pollution in the air.



In order to adapt to Chicago's weather, the outdoor structures are designed to still hold educational sessions throughout the year, while maintaining a transparent view to the school and the grove.

With this, students will be able to have a new educational experience by using the outdoor for learning and also for recreational activities throughout the year.





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