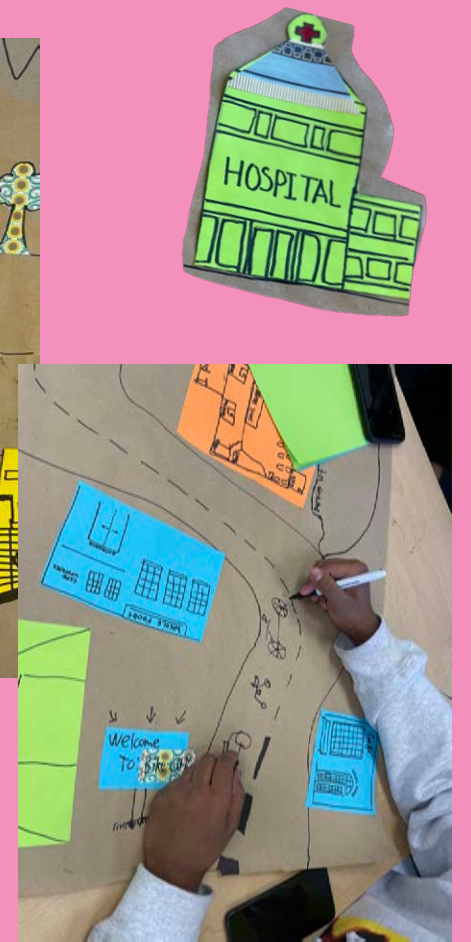
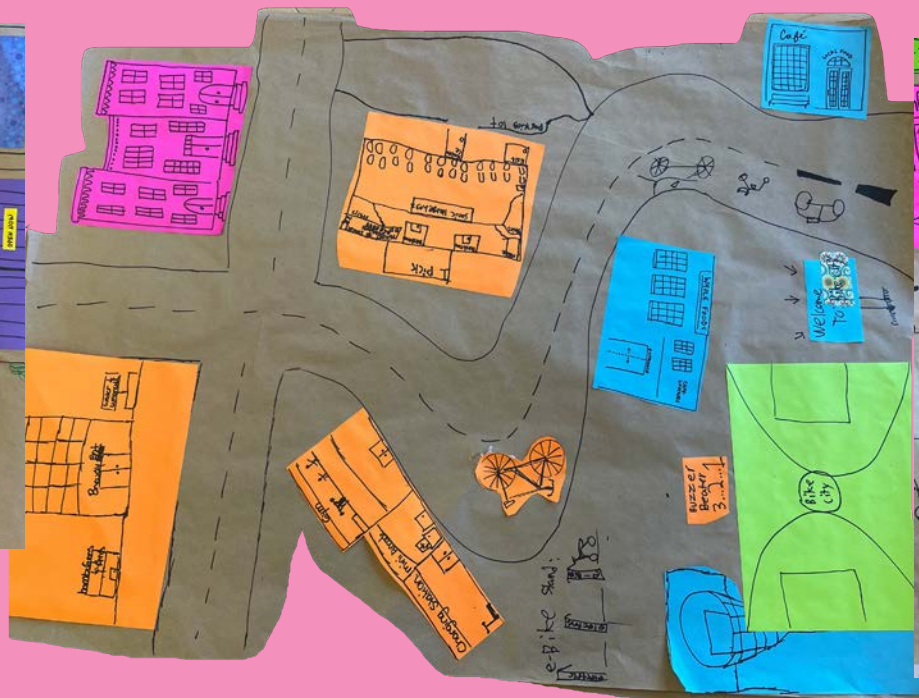
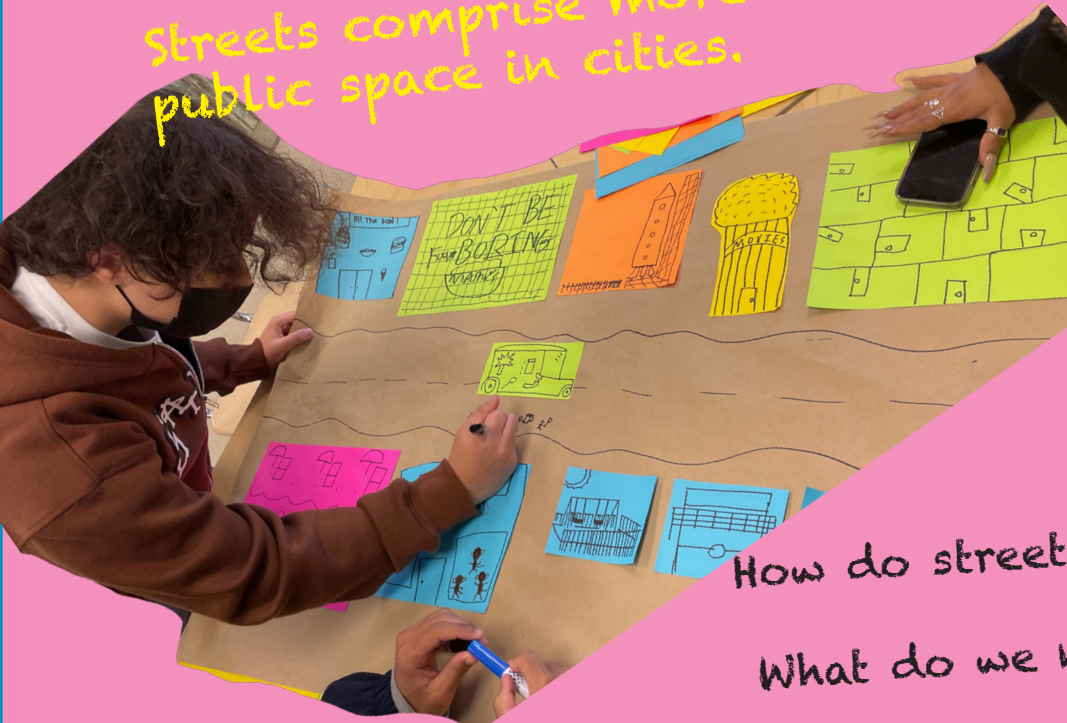


DESIGNING FOR CLIMATE CHANGE



How does street design impact our environment?

Streets comprise more than 80% of public space in cities.



How do streets impact our daily life in a city?
What do we need from our streets?
How does street design connect to the climate crisis?

What is a street?

In the spring of 2022, CUP collaborated with 9th and 10th grade students at Harvest Collegiate High School to take a closer look at the relationship between street design and the environment. To investigate the issue, students talked to community members in Manhattan and interviewed stakeholders working on the issue.

The team gathered what they learned and created this booklet to teach others about how the design of our streets impacts our environment, how this connects to the climate crisis, and what changes we need from our streets and city to help us navigate climate change.



A street is the basic unit of urban space through which people experience a city. Streets are multidimensional spaces made up of many surfaces and structures. They create space for movement and access and can be used in many ways for different activities.



Did you know?
The Commissioners' Plan of 1811 was the original design for the streets of Manhattan above Houston Street and below 155th Street, which put in place the rectangular grid plan of streets and lots that has defined Manhattan until today.

What is street design?

Street Design is made up of the different elements that make up city streets, from sidewalks to travel lanes to stop signs. Street Design is connected to Urban Design which shapes what makes up a city, like the streets, buildings, parks, plazas, and all the spaces in between.

Who designs streets?

“There is no one particular stakeholder or body that designs streets. It’s an amalgamation of different types of government agencies, stakeholders from the community and sort of just members of the public at large...and [each agency] they all have their own set of rules, guidelines, opportunities, outcomes, goals, things like that.”

- Kyle Gorman, Senior Program Manager, Public Space Unit at New York City Department of Transportation



“The Department of Transportation [handles] all construction of streets and roads. And we’re a really big city so there isn’t necessarily a master plan...[then] depending on how big the [construction] project is they’ll either do it with the engineers who work for the DOT, or if it’s a really big project it’s something that will be contracted out to a larger firm...And there’s a design phase...these processes can take I’d say sometimes multiple years, like three to five years, depending on this.”

- Karyn Williams, Director of Programs at Design Trust for Public Space

“Unfortunately, there is no connection between [these agencies] and the communities that they serve, meaning that they’re not going to prioritize communities that are in need versus those that are not. And as with anything, the one that screams the loudest is gonna get [heard]...”

- Jeanne DuPont, Founder and Executive Director at Rockaway Initiative for Sustainability and Equity (RISE)

Do NYC streets work well?

Car Related Deaths

“Over the last few years, it’s been the city’s goal to redesign our streets with the goal of having zero fatalities or injuries on our streets, because unfortunately lots of folks are killed by cars in our city while driving while walking or biking or taking the bus/train. There’s definitely a lot of room to make our streets safer overall.”

- Kyle Gorman

Little Space for Pedestrians

“Last night, I was in Times Square and there were like 1000s [of people]...squished, barely able to walk. And we were all waiting for like just a few cars to pass. And like I counted, it was like five cars...so there were five people holding up 1000s of people from being able to cross the street. That doesn’t make sense. If the majority of New Yorkers get around by bus, subway, walking and biking, then we should get the majority of space.”

- Jim Burke, Community Leader at 34th Ave Open Streets Coalition

Flooding

“The city of New York has what they call ‘combined sewer overflow system’. And combined sewer overflow is where all of the water goes into one point.... When we have rainwater and we have flooding, it just overflows...[and] some of that overflows into drinking water. And it’s a big problem....[In the Rock-aways] we get a lot of flooding. And so the city still has not really addressed the problem of trying to separate those storm drains in other parts of the city. And we still have huge problems right now in terms of just flooding in general.”

- Jeanne DuPont

Rising Water

“So New York is a water city and an island. And that’s something that we have to contend with...So I think that one of the best ways we can do that and the most affordable way is through making changes in our landscape. And for us in New York City, sort of focusing on the water’s edge.”

- Karyn Williams



Transportation Pollution

"I think just zooming out, even from street design, transportation and the climate crisis are definitely closely related. Transportation, in addition to sort of brick and mortar buildings, is one of the biggest emitters of all the CO2 and all the bad gasses... So there's definitely a huge opportunity for us to make our transportation a lot more sustainable to aid in the climate crisis."

- Kyle Gorman

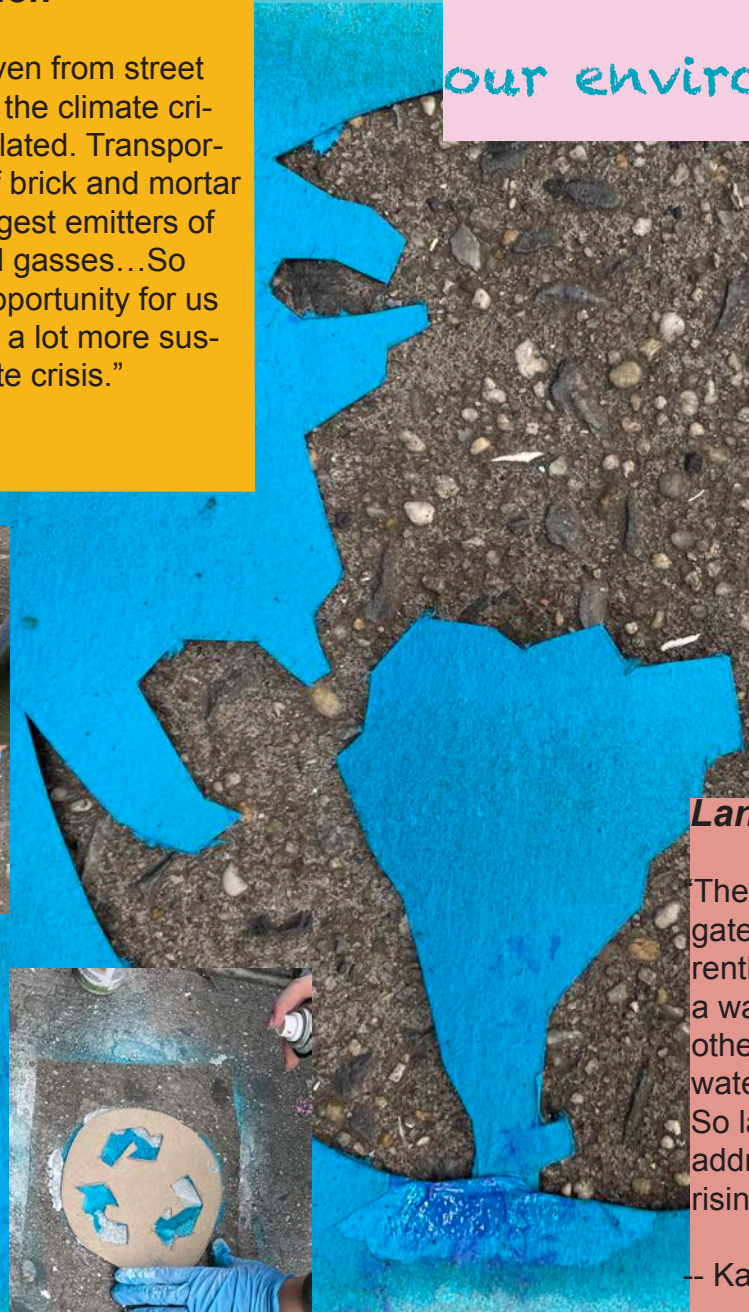
How does street design impact our environment?



Landscape

The design of [street] landscape can help to mitigate some of the effects of climate change... [Currently the] city's redesigning the East River Park in a way so that the park can help protect some of the other land and accommodate some of the storm-water in the event of another storm that takes place. So landscape can definitely be used as a tool to address and sort of solve for climate change and rising sea level."

- Karyn Williams



Park Space

"To me the parks in New York City are part of our own backyards, right? Most of you live in an apartment building. You know, 90% of your time you're spending indoors, but when you want to go outdoors those parks are our backyards... I would make all of those vacant lots [in different neighborhoods] parkland, and I would expand on the park space because I think there can be no shortage of park space or parkland." - Jeanne DuPont

Hotter Cities

"A lot of pavement creates, you know, hotter cities. But if we think about adding trees, or if we think about sewage, there are ways that we can incorporate that climate change and mitigate some of the negative effects like the [urban] heat island effect..." - Karyn Williams





What do people want to see **MORE** of on the streets?



What does the community think?

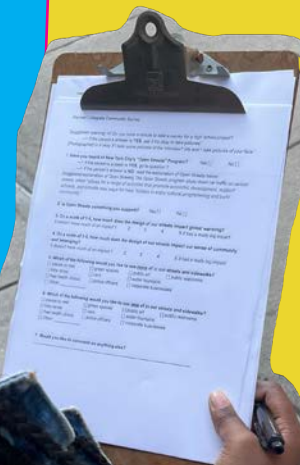
In the spring of 2022, Harvest Collegiate students went out into the community and surveyed their neighbors about street design and the environment.

38% of people agree that the design of our streets has a really big impact on global warming.

33 people said they would like to see less cars in our streets.

21 people said they would like to see less corporate businesses in our streets.

40% of people think street design can have a big impact on our sense of community and belonging.



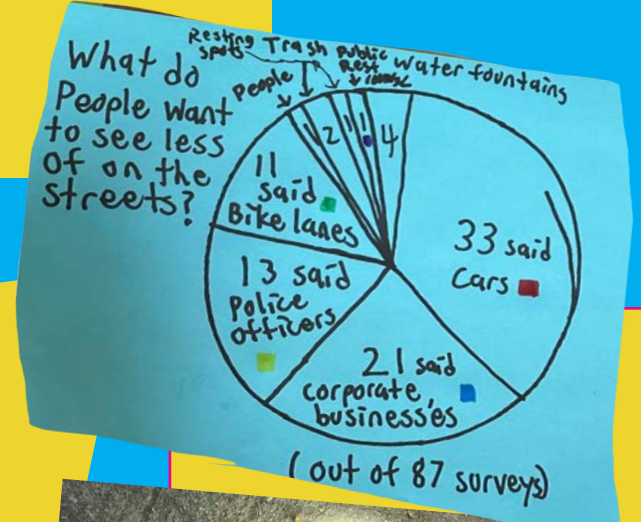
What do students think?

"Yes definitely, street design impacts the environment because certain materials that are used can impact [us] in either a good or bad way..."
-Kelvin Jimenez, 11th grade

"I think street design does impact our environment in both social and global warming aspects, [for example] if there are more trash cans people will be less inclined to litter..."
- Yoav Brosh, 11th grade

"Yes, [because] increased traffic increases the emission of fossil fuels."
- Eliza Occhiogrosso, 11th grade

"[Street design] helps create a better community."
- Lauren Viciedo, 11th grade



How could things be different?

Quality Public Space

"I think we have pretty good access to public space but the quality of those public spaces vary from neighborhood to neighborhood... There are certain spaces where depending on who you are you're made to feel unwelcome. And so that is one thing that I would love to change about public spaces in New York City, is that we value and treat public spaces the same.."

-Karyn Williams

Bioswales and Permeable Pavement

"Incorporating more greenery into our streetscape like bioswales, permeable pavement. So like runoff from like on a day like today when it's raining, and you notice how there's so much ponding and just puddles...but if we had permeable pavement it would help with runoff issues." - Kyle Gorman

Equitable Infrastructure

"We need a sort of wider systemic universal adaptation of this infrastructure across the city. Because, you know, we're thinking about places like Manhattan, like lower Manhattan, especially, which is especially prone to flooding, but we're not necessarily always thinking of other parts of the city that aren't well known or well resourced..."

- Kyle Gorman

Investing in Underserved Communities

"[In the Rockaways] we have regular flooding on a regular everyday basis, not just when there are storms like Storm Sandy, but every single day. And so people who live there have faced drownings from living in basements that have flooded, flooding of their cars on a regular everyday basis....So it's not just climate change. It's just on a day to day basis, the landscape and the coastal area of the Rockaways affects the people who live there in a huge way. And the people that it affects the most are those from the low income and BIPOC community." - Jeanne DuPont

Designing for Climate Change

"If we were to start to walk away from primarily only designing our streets for cars, I think that's definitely step one. And then in terms of the different types of materials like permeable pavements, different types of materials to also not create so much heat because of all the asphalt and concrete...So different types of materials to mitigate heat vulnerability, incorporating more greenery to sort of just add to the wider ecological system that is inherent to solving the climate crisis." - Kyle Gorman

There are 300 Open Streets in NYC!

What is Open Streets?

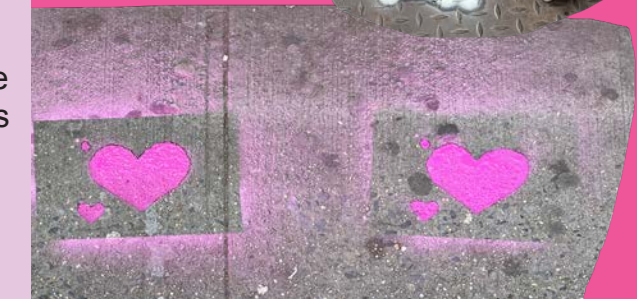
"So, Open Streets when it first launched was definitely a pandemic response tool to sort of facilitate more space for social distancing when lots of other recreational spaces were closed.

And as the pandemic has gone on its' added different layers, with supporting restaurants and bars, having them the ability to expand into the street when it's closed...

So it definitely first launched as a recovery tool...But the Open Streets program now is definitely sort of in line with the goals that we already sort of had about adding more infrastructure for bikes, pedestrians, transit users, while promoting accessibility for folks who rely on wheelchairs and things like that...

So Open Streets is sort of just a part of the wider sort of picture that DOT is trying to paint for our streets, and is now a permanent program, because the legislation that was passed in 2021. So it's now sort of taking all the success of the pandemic and evolving towards permanently changing our streets forever."

- Kyle Gorman



How can we change things?

Join Community Organizations

"I would encourage you as young people to find one of those [community] organizations and get involved in one of those groups and start to learn about what the issues are in your own community. And see, you know, how you can make a difference."

- Jeanne DuPont

Intersectional Policy

"But realistically, we need stronger political support and understanding of these issues to really integrate it into all of the policy decisions that we make. Climate change to me is so intersectional, so it sort of touches all the different levels of governance in society."

- Kyle Gorman

Stay Engaged

"Learning to advocate for your community and call it out, get engaged... that will hold you the rest of your life, it will make a difference, no matter where you live..." - Jeanne DuPont

"You only really get engaged with things if you have problems like my parking is gone or like my trash isn't getting picked up. Oftentimes people aren't engaged and be like, 'Oh, I actually really love Open Streets' or 'I love plazas' or things like that, because like you don't maybe necessarily feel like you need to because you feel like it's sort of expected. So just staying [engaged], keeping your voice loud and heard is definitely I think the best way to start."

- Kyle Gorman

Participating In Your Community Board

"Community boards are basically appointed individuals...[who] represent a specific neighborhood... but they wield a lot of influence over street design, over liquor licenses, over housing decisions, over really anything that's happening at the local level. And oftentimes, these boards don't necessarily reflect the diverse makeup of all the different types of neighborhoods that we have here in New York City, especially in terms of age..." - Kyle Gorman

Improved Bureaucratic Systems

"To me, what needs to happen is the bureaucracy needs to sort of be tinkered with to make it work a little bit better. In order to build out all of this green infrastructure you have to use funding from the city's capital budget...[So] I could talk about design too but I think really what needs to happen is our capital infrastructure developments and how these projects are implemented and constructed and this sort of process behind the scenes that happens needs to be completely overturned."

- Kyle Gorman



Harvest Collegiate Students:

Mujeebah Ajanaku
Karen Armas Moina
Ginayah Baptiz
Nyzell Boone
Jeray Boynton Barreto
James Braden
Brandon Bratini
Diego Bravo Torres
Yoav Brosh
Jada Browne
Ethan Cameron
Jackeline Campos
Araceli Cando
Steven Chiles
Kerly Cifuentes
Anathais Cisneros
Roger Coleman
Starlin Corporan
Elizabeth Corre
Tyler Delaney
Tigist Demssie
Shaikym Dillard
Elijah Faulkner
Liana Fitzgerald
Brittany Flores
Amanda Garcia
Darcy Garde
Noah Gharib
Indigo Glover
Alexis Gonzalez
Sarai Gonzalez
Ki Gordon
Brandon Graham
Andrea Green
Kimberly Guallpa Mendez
Havana Hadley
Alice Harrison
Erin Hernandez
Sabrina Herrera
Brianna Holmes
Ulises Isidoro
Shayleen Jaramillo
Elaine Jiang
Eric Jiang
Kelvin Jimenez Santos
Elena Kimberling
Christian Lebron

Kevin Leon
Justin Liao
Donald Mac Pherson li
Dairo Maza
Samantha Medina
Fiona Neco
Bridgette Ng
Allen Nieves
Elixandra Ocasio
Eliza Occhiogrosso
Judeliz Ovalles
Jocelyn Peral Robles
Nayack Perez
Breudy Polanco
Shelsey Ramirez
Charilin Ravelo Perez
Jayden Roberts
Marian Rodriguez
Angie Rodriguez
Akylys Rodriguez
Cristal Rodriguez
Brittney Rosado
Xavier Rosado
Marianyeli Rubio
Arieta Salovic
Jacqueline Santos
Winslow Shone
Brandon Silva
Ruth Struening
Hector Taveras
Gelson Trinidad
Christian Unthank
Darlenny Valet
Jolie Vallon
Bianka Vazquez
Lauren Viciedo
John Paul Villacis
Mylon Villavizar
Apolonio Villegas
Tandin Wangckuk
Dylan Wesley
Jasere Wright
Peter Wu

CUP

Teaching Artist: N.M.
Project Lead: Fielding Hong and Ro Garrido

Harvest Collegiate High School:

Classroom Teacher: Samantha Adams
Classroom Co-Teacher: Heather Lochridge
Paraprofessional: Massiel Perez
Principal: Catherine Burch & Dr. Mike Dunson
Assistant Principal: Audrey Federman

Thank you to our interviewees:
Jeanne DuPont, Kyle Gorman, Karyn Williams



The Center for Urban Pedagogy (CUP) is a nonprofit organization that uses the power of design and art to increase meaningful civic engagement, in partnership with members from historically marginalized communities.

This project is part of a City Studies, CUP's project-based, in-class and afterschool programs that use design and art as tools to research the city. To learn more, visit welcometoCUP.org.

Harvest Collegiate High School is a small, progressive public school, with a community of learners grounded in habits of mind and heart. To learn more, visit <https://harvestcollegiate.org/>.

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