



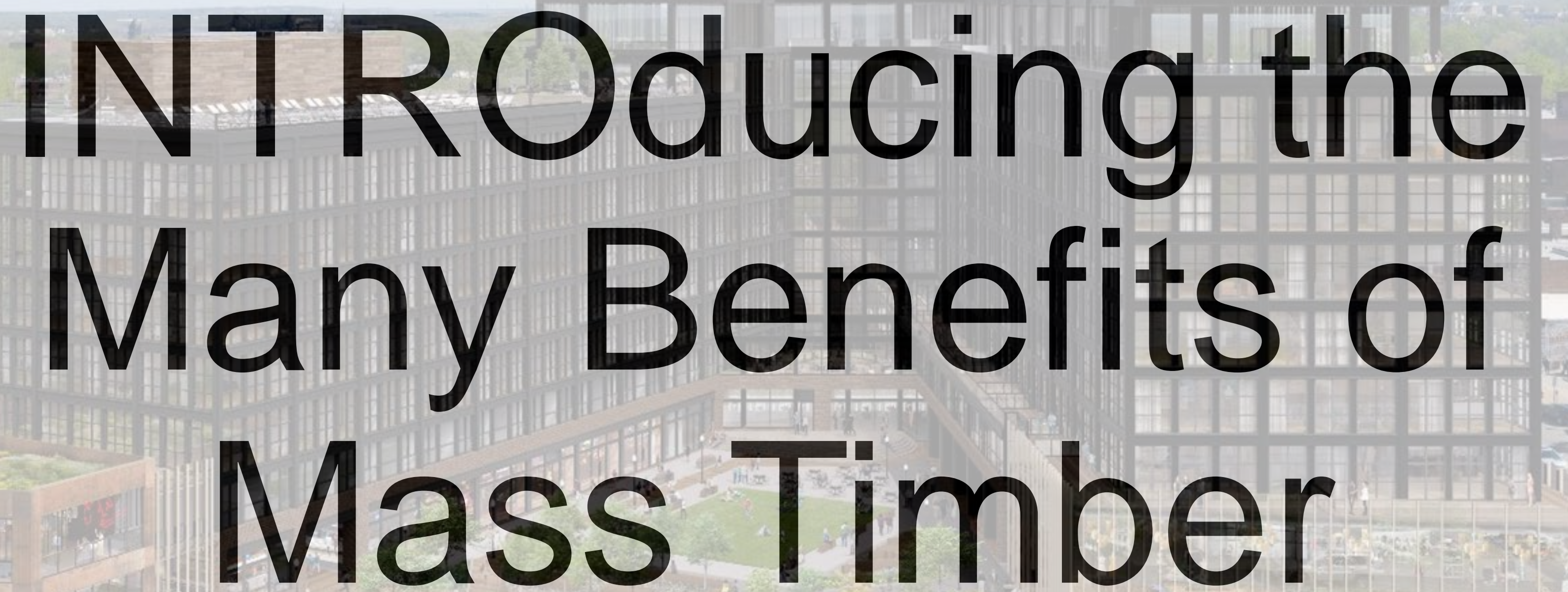
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An architectural rendering of a modern, multi-story building with a courtyard. The building features large windows and a mix of materials, including wood and brick. The courtyard is filled with greenery, including trees and plants, and has a paved area with people walking. The overall scene is bright and sunny, suggesting a pleasant urban environment.

Introducing the Many Benefits of Mass Timber



Description

INTRO Cleveland, an internationally-award winning project, is American's largest mass timber building. It brings wide ranging benefits from faster construction, biophilic benefits for occupants, training and market transformation for contractors, and impressive reductions in carbon emissions and other environmental impact as compared to a traditional concrete and steel building.

Learning Objectives

- Understand how developers connect with community climate action plans
- Explore design features supporting sustainable performance
 - Mass timber
 - Stormwater management
 - Energy Efficiency
 - Biophilia
- Review framework for local economic development & job creation
- Consider how building life-cycle analysis coupled with energy modeling aids in storytelling



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Cleveland (INTRO CLE)



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Emerald Built Environments – Sustainability

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INTRO Cleveland Video

Showcased at the 2021 International Mass Timber Conference

- <https://www.dropbox.com/s/fgyfzltt3ymtl51/INTROCLE-Final.mp4?dl=0>

Design Features – Mass Timber



INTRO CLE – Before (2019)



Mass Timber: Good for Developer and Occupants

- Reduces construction time
- Improves envelope performance
- Creates a foundation of biophilic design
- Differentiates developer

INTRO CLE – During Construction

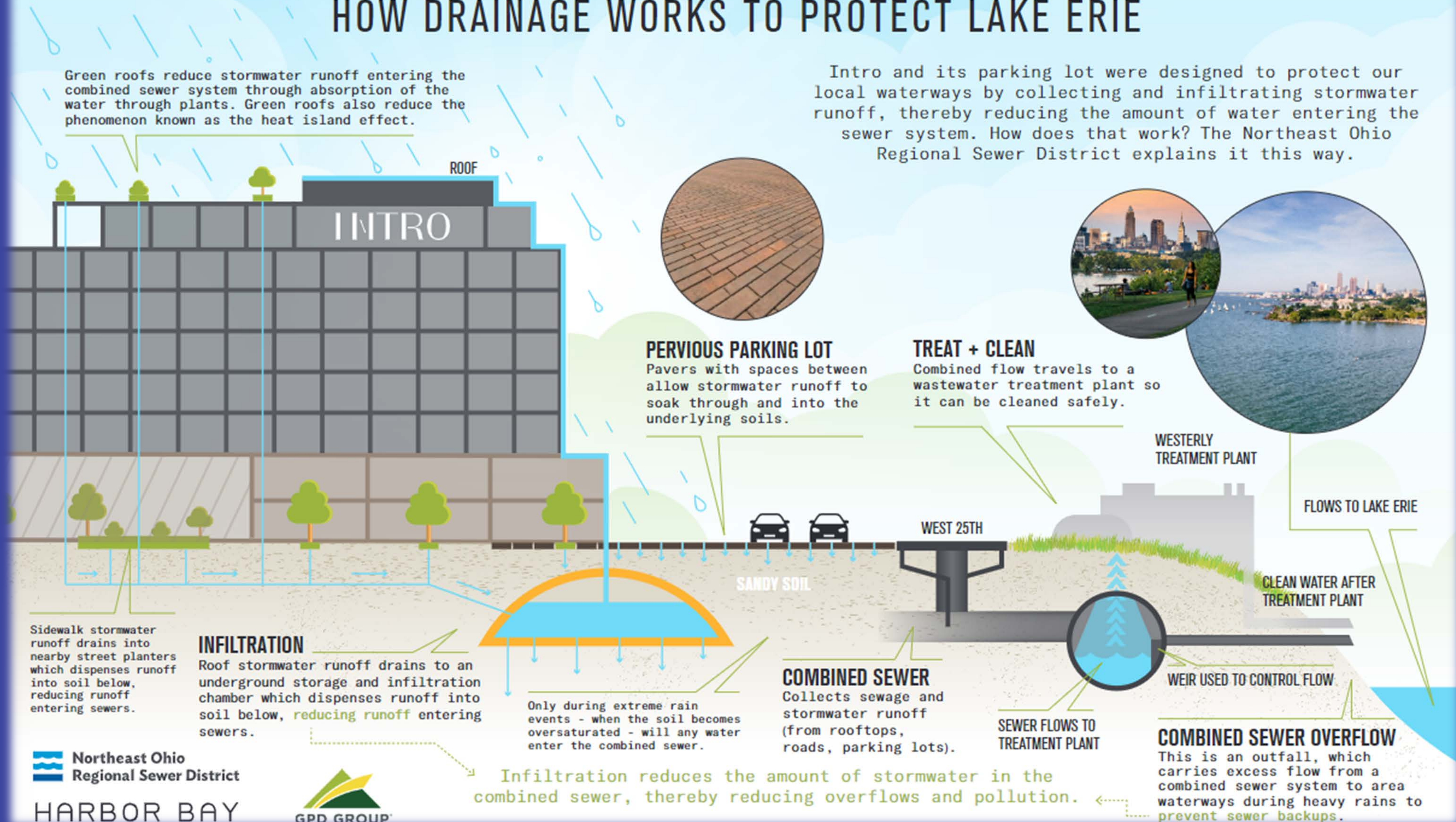


INTRO CLE – After (2022)



KEEPING OUR GREAT LAKE GREAT.

HOW DRAINAGE WORKS TO PROTECT LAKE ERIE



Northeast Ohio
Regional Sewer District

HARBOR BAY



Storm Water Mitigation

- Multiple BMPs at work on tight sight
- Leverage integrative design to identify opportunities to implement BMPs
- Invites occupants to interact at rooftop and parking levels
- Protects Lake Erie and reduces impact on infrastructure

Design Features – Energy



- Mass timber contributes to efficient envelope design
- Efficient HVAC design offsets large windows
- Design standards for retail – event space include efficiencies
- Wifi thermostats engage occupants in load management

Design Features – Biophilia



- Increases and inspires creativity
- Relieves stress & improves mental well-being
- Improves feelings of happiness

Non-Stop To The Top (NSTTT) Video

Developed by James Litwin, Harbor Bay's Vice President of Construction

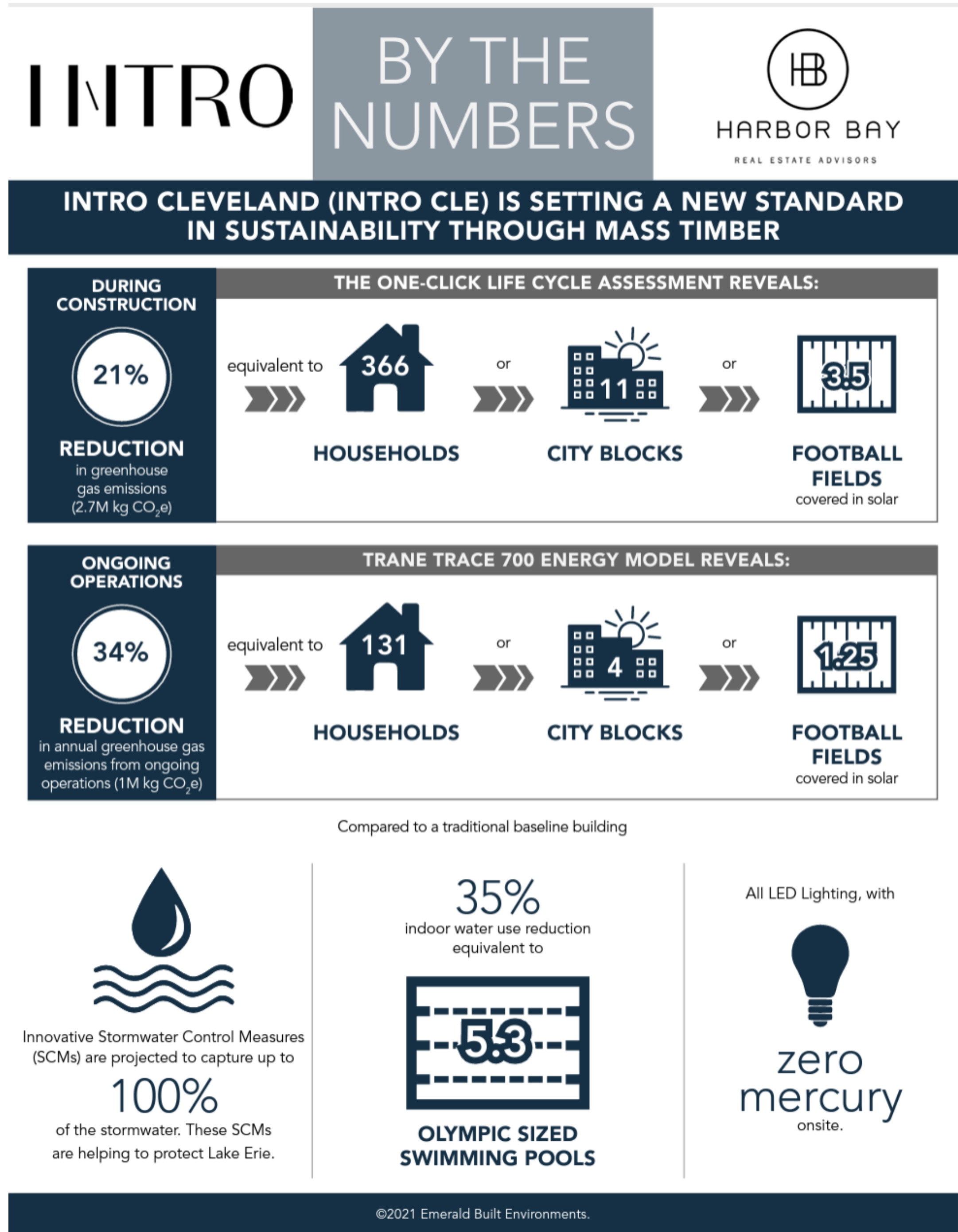
- <https://www.dropbox.com/s/thzy45lwt6ddalf/Harbor%20Bay%20-%20Non%20Stop%20to%20the%20Top.mp4?dl=0>

Local Economic Development & Job Creation

- Partnerships with workforce development agency and local labor organizations
- Economic Development support through the City of Cleveland, Ohio Department of Development, Port of Cleveland, and Ohio City Inc.
 - 2021 Gold Winner of the International Economic Development Council's (IEDC) Public-Private Partnership Excellence Award for communities with a population of greater than 500,000
- Collaboration with contractors + suppliers
- Precedence for regional experience – encourages next project

Telling the Story with Software

Energy model outputs combined with Building Life-Cycle Analysis generate pictures and stories that resonate. This summary piece aids in Harbor Bay's efforts to connect with other communities that are actively working on a Climate Action Plan.



Questions?

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Thank You.