

The Push for Healthier, Longer-Lived Trees in the Urban Core



PRESENTED BY:

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NeighborWoods

- Volunteer-based tree planting
 - ~60% of total trees planted
- 4,500 trees annually
- **Plantlanta**: 600 trees in 2 days
- **Front Yard Tree Program**
- 8 city partners

Urban Trees

- Large trees for municipal contracts
- **Atlanta BeltLine Arboretum**
 - 11+ miles complete





Conserving.

Forest Restoration

- Remove invasive species
- Re-introduce native trees & plants
- **Conserve the 4-0-Forest (April)**

BeltLine Arboretum

- Restore and maintain native plants
- Plan and design with Atlanta BeltLine
- Longest linear arboretum, upon completion



Tree Care

- Year-round Plant health care team
- Guarantee on plants/trees for 2 years



Youth Programs

- In-school programs & Homeschool
- Summer Camp & School Break Camps
- Family Fun events
- Youth Tree Team: Summer job Training

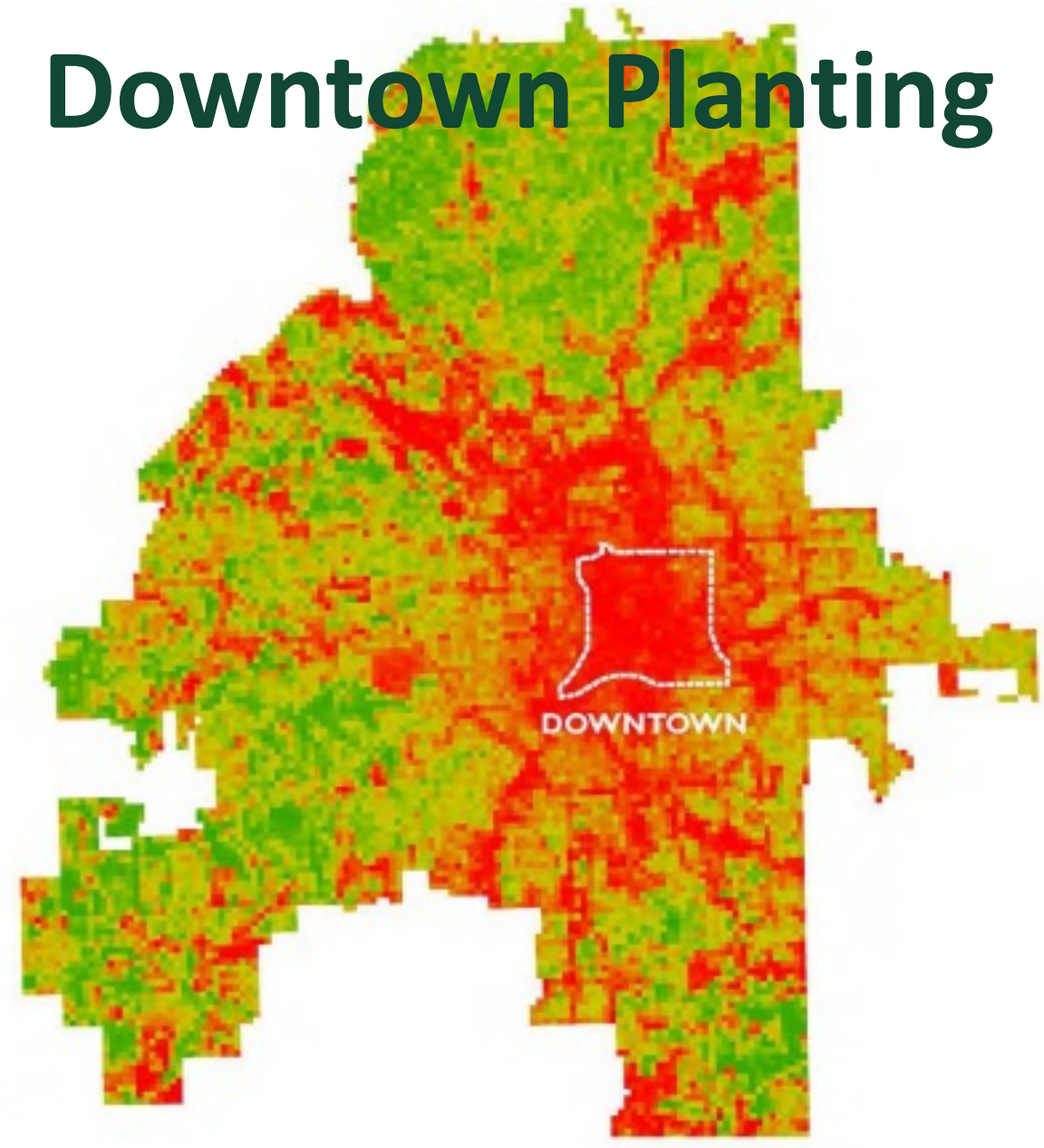
Adult Programs

- Certified Volunteer Training Programs (4)
- I.S.A. CEU Opportunities
- Tree and BeltLine Arboretum Tours
- Workshops, Speaker Series, Ask The Arborist Webinars



Downtown Planting

- Trees Atlanta formed in 1985 in response to a net loss of 2,000 trees annually
- From '85-90: Focus on Urban Core Downtown, where it's hottest, highest impervious surface
- 1st year: 46 trees Downtown
- 2008 Data: UTC @ 47%



The Greening of Downtown Has Begun



Bob Wagner, President of Trees Atlanta, Chester J. Funnyc, Commissioner of Public Works, Betsy C. Baker, Commissioner of Parks, Recreation, and Cultural Affairs, and Dan Sweat, President of Central Atlanta Progress, Inc., demonstrate the effectiveness of the public/private partnership at Trees Atlanta's planting of the first of 46 trees for downtown Atlanta. The greening of downtown has begun!



- **A Shared Goal:** Office of the Mayor, Atlanta Downtown Improvement District, and Trees Atlanta strive to transform Downtown Atlanta from 3% canopy cover to 18%
- **Downtown Master Plan:** HGOR identified approximately 8,000 (unverified) tree planting locations Downtown
- **Inflation Reduction Act (IRA) Grant:** Award focuses on Climate & Economic Justice Screening Tool (CEJST) to increase canopy in the hottest, most historically disadvantaged communities



Securing Funding

Inflation Reduction Act

- Site preparation for **1,000 trees** fully funded through the IRA Grant
- Staffing for 3.5 staff members
- Misc. PPE, signage, permitting and bonding funds, post-planting amenities (e.g. pavers, new sidewalk, fencing)

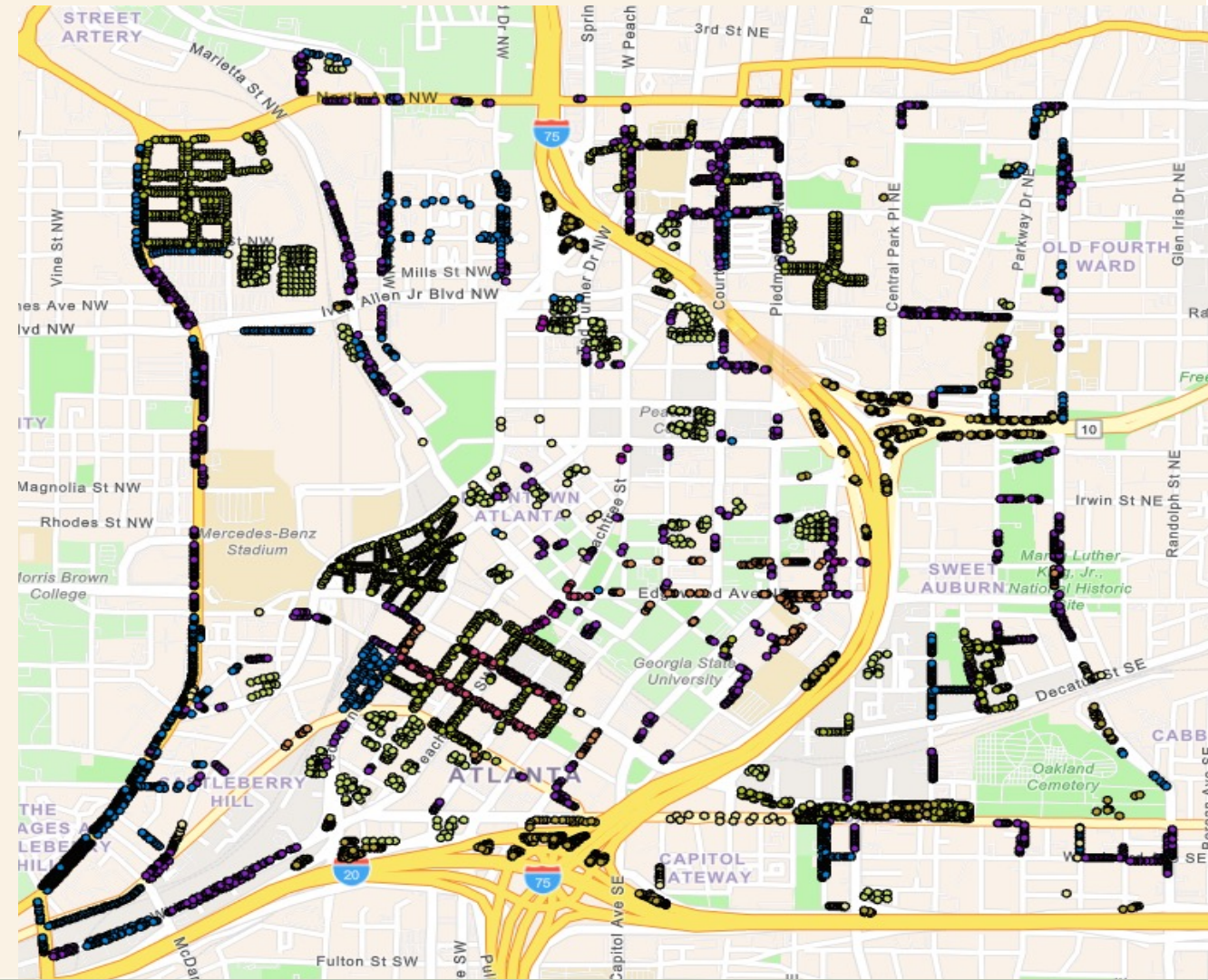
Tree Recompense Contracts

- Through various agreements (e.g. developers, city entities, utility companies), we have secured funding for tree plantings through 2029
- 3,517" in recompense to date



The Process p.1

- Ground truthing locations
- Design: Typology identification & tree selection
- Permitting process (all sites are public)
- Inform various stakeholders (DOT, utilities, developers, residents, NPU's)
- Onsite meeting with city arborists
- Property-owner notification
- Site preparation (April - November)
- Planting (November- March)
- Ongoing maintenance for 2 years, pruning for 5-10 years



The Process p.2

Site Conditions Guidelines

Utilities, Existing Canopy, Interstitial Zone, ADA, Future Development

Tree Protection Ordinance (TPO)

Required soil volumes:

- **Overstory:** 800 Cu Ft (very challenging to meet/Soil Cells)
 - **Midstory:** 500 Cu Ft
 - **Understory:** 200 Cu Ft
- *Up to 2.5' depth
*Shared soil is a consideration

STREETSCAPE TYPOLOGY MATRIX		INTERSTITIAL ZONE							
		8		10			15		
TYPOLOGY	ROOT ZONE	US/EG (15' OC)	MS (25' OC)	US/EG (15' OC)	MS (25' OC)	OS (35' OC)	US/EG (15' OC)	MS (25' OC)	OS (35' OC)
1A LANDSCAPE STRIP	M	15X3X2.5 112.5cf	25X4X2.5 250cf	15X4X2.5 150cf	25X4X2.5 250cf	35X5X3 525cf	15X5X2.5 187.5cf	25X5X2.5 312.5cf	35X5X3 525cf
	P	15X4x3 180cf	25X4X3 300cf	15X5X3 225cf	25X5X3 375cf	35X5X3 525cf	15X6X3 270cf	25X7X3 525cf	35X7X3 735cf
1B LANDSCAPE STRIP & PERMEABLE PAVERS	M	15X3X2.5 112.5cf	25X4X2.5 250cf	15X4X2.5 150cf	25X4X2.5 250cf	35X5X3 525cf	15X5X2.5 187.5cf	25X5X2.5 312.5cf	35X5X3 525cf
	P	15X4x3 180cf	25X4X3 300cf	15X5X3 225cf	25X5X3 375cf	35X5X3 525cf	15X6X3 270cf	25X7X3 525cf	35X7X3 735cf
2A TREE PIT IN CONCRETE	M	6X3X2.5 45cf	8X4X2.5 80cf	6X4X2.5 60cf	8X4X2.5 80cf	8X5X2.5 100cf	6X5X2.5 75cf	8X5X2.5 100cf	8X5X2.5 100cf
	P	12X4x3 144cf	15X4X3 180cf	12X5X3 180cf	15X5X3 225cf	15X5X3 225cf	12X6X3 216cf	15X7X3 315cf	15X7X3 315cf
2B TREE PIT & LANDSCAPE FENCE IN CONCRETE	M	6X3X2.5 45cf	8X4X2.5 80cf	6X4X2.5 60cf	8X4X2.5 80cf	8X5X2.5 100cf	6X5X2.5 75cf	8X5X2.5 100cf	8X5X2.5 100cf
	P	12X4x3 144cf	15X4X3 180cf	12X5X3 180cf	15X5X3 225cf	15X5X3 225cf	12X6X3 216cf	15X7X3 315cf	15X7X3 315cf
3 URBAN TREE ROOT CELL SYSTEM	M	15X3X2.5 112.5cf	25X4X2.5 250cf	15X4X2.5 150cf	25X4X2.5 250cf	35X5X2.5 437.5cf	15X5X2.5 187.5cf	25X5X2.5 312.5cf	35X5X3 525cf
	P	15X6X3 270cf	25X6X3 450cf	15X8X3 360cf	25X8X3 600cf	35X8X3 840cf	15X10X3 450cf	25X10X3 750cf	35X10X3 1050cf
4 CONCRETE PLANTERS	M	10X3X2 60cf		15X4X2 120cf			15X5X2 150cf		
	P	10X3X2 60cf		15X4X2 120cf			15X5X2 150cf		
5 ROAD DIETS	M			12X8X3 288cf	12X8X3 288cf	20x8x3 480cf			
	P			15X10X5 750cf	25X10X5 1250cf	35X10X5 1750cf			
6 OPEN SPACES	M								
	P	>300cf	>600cf	>300cf	>600cf	>1000cf	>300cf	>600cf	>1000cf



Concrete Cuts (Tree Well)

- *Create* new space for trees and represent the most common and simplest way to plant a tree downtown
- The dimensions vary depending on site conditions. Must adhere to newly adopted soil requirements outlined in the Tree Protection Ordinance (TPO) and maintain ADA
- When appropriate, groundcover is added to reduce runoff and fencing is added to protect trees from pedestrians, automobiles, dogs

Typology 1: Concrete Cuts





Typology 2: Landscape Strips

Landscape Strips

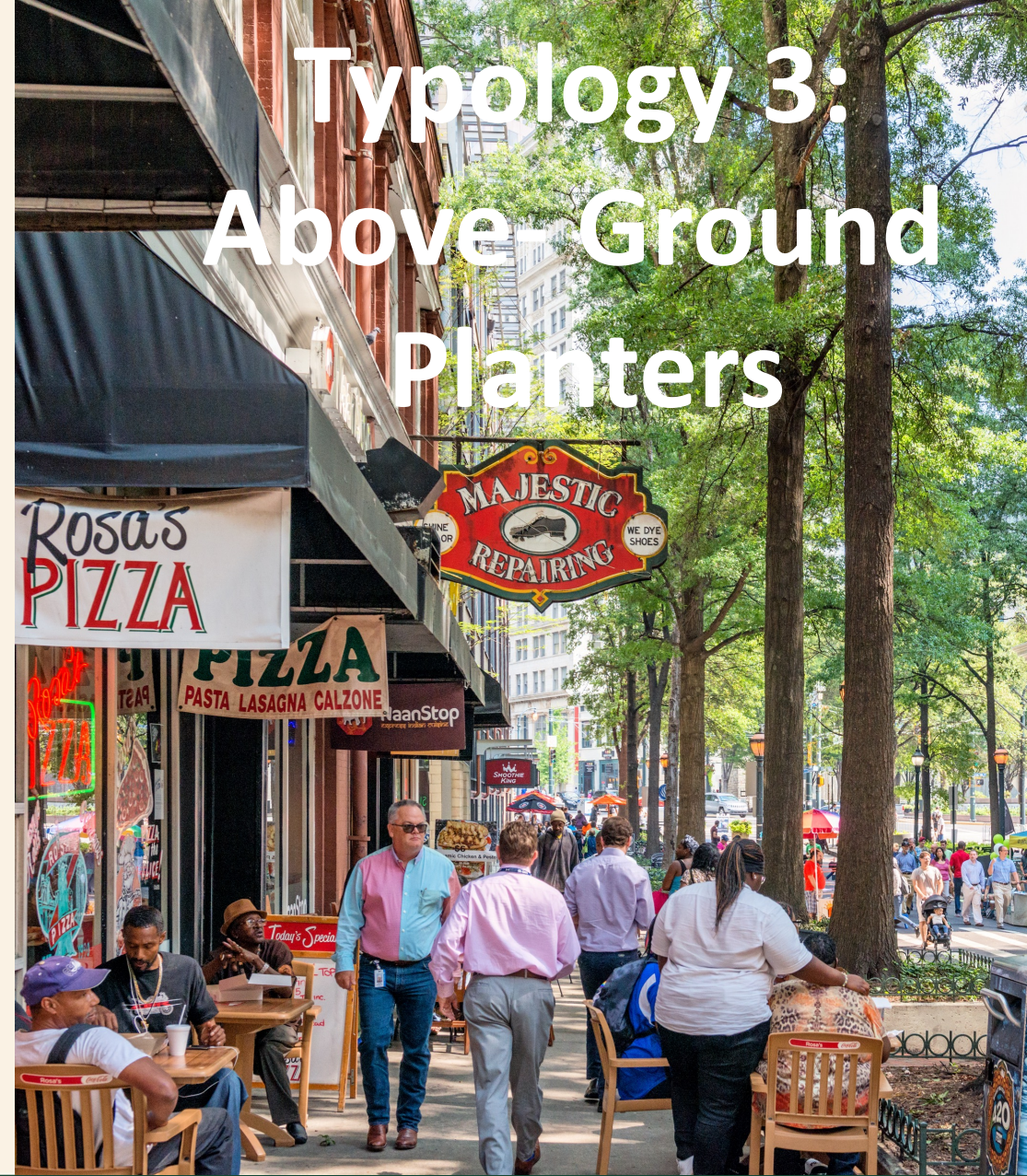
- This typology facilitates multiple trees planted in a single well
- Especially useful in narrow interstitial zones
- Length allows for vast shared soil to meet TPO
- In the case of *existing* landscape strips with inadequate soil volume, back-notch expansion is used
- In high pedestrian areas, permeable pavers are used between trees to provide ADA access and reduce lateral root compaction



Above-Ground Planters

- Variable heights depending upon site conditions
- Unlike traditional above-ground planters requiring indefinite watering, this typology connects to subsoil
- Increases amount of available soil to meet TPO
- Replaces compact urban clay with with more permeable, native, structured soil
- Provides added protection to trees and/or surroundings (e.g. barrier from motorists, protect critical/ sensitive infrastructure, eliminates/reduces pedestrian compaction)

Typology 3: Above-Ground Planters



Typology 4: Soil Cell Root Structure



Soil Cell Root Structures

- Creates additional navigable root space beneath infrastructure while maintaining above-ground stability
- Often the only way to achieve TPO-required soil volume for midstory and overstory species
- Additional root growth = additional shoot growth
- Highly effective stormwater solution
- High-density, 100% recycled polymer*
- Most labor intensive, cost prohibitive: averaging \$6,000 per installation, which does not include tree cost, install, and maintenance

*Stratavault by Citygreen



Species Selection

- Go native when possible
- Selecting urban hardy species and cultivars to maximize investment
- Use Southern genotypes that can better tolerate higher heat and drought

Experimentation

- Creating and tracking controlled experiments through use of varied caliper sizes, technologies, additives (mycorrhizae, soil moist), nursery stock

Ongoing Maintenance

- Each tree is guaranteed for 2 year period
- Mulching, pesticide applications (if/as necessary)
- Visibility pruning



Lessons learned



Always be ready: Develop shovel-ready projects.

*Shout out to Alice Ewen @ US Forest Service

Think (and deliver) big: Innovative urban forestry *CAN* save us. We have a unique ~~opportunity~~ responsibility to prove it.

Leverage partnerships: With the right partners, the inevitable bumps are smoother.

Not all who wander are lost: Be ready to educate stakeholders who do not understand or agree.

Plan ahead: This funding is finite. Document successes, failures, and inefficiencies to create a replicable, affordable program worthy of future investment!





THANK YOU



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ALLIANCE FOR COMMUNITY TREES DAY