Color makes us Happy...

Umbrella Sky Project
Agueda, Portugal
https://www.reddit.com/r/pics/comments/3j5b3z/umbrella_sky_street_in_agueda_portugal/
I just wanted to say thank you for your beautiful flowers by Due West. I pass them almost daily and they always brighten my day! I know how hard planting and weeding can be, so I just wanted you to know we appreciate it!

Allison Freedman
What is the opposite of GREEN space?
Titan: Thanos’ Destroyed Planet
Brown, Dry, Hard
I don’t want to live here...

https://thomasmouraille.com/avengers-infinity-war
... and neither does he
Asgard: Thor’s Home Planet
Green, lush, lots of water, beautiful

https://scifi.stackexchange.com/questions/75572/whats-under-the-crystal-bridge-in-asgard
Overcoming:
Finding Solutions to Common Container Garden Concerns
Green Streets, Not Mean Streets
In an inner city neighborhood, the greener the residence, the lower the crime rate.

Amounts of vegetation and total crimes

- **Highly green, lowest crime rate**

- **Somewhat green, moderate crime rate**

- **Barren of green, highest crime rate**

University of Illinois at Urbana-Champaign
http://lhhl.illinois.edu/crime.htm

Green Space Matters!
Green Space Matters!

Positive benefits:

- Reduces ADHD symptoms in children
- Embodies a greater sense of community
- Increases property values
- Improves job satisfaction
- Helps consumers locate businesses
- Reduces sports injuries
- Expedites home sales
- Reduces street crime rates
- Lowers levels of aggression between domestic partners
- Reduces stress of living in poverty
- Helps people better cope with life challenges

University of Illinois at Urbana-Champaign
http://lhhl.illinois.edu/index.htm

https://projectevergreen.org/research-shows-visiting-urban-parks-makes-you-happier/
Objectives:

1. Solving water & drainage concerns
2. Solving access challenges
   - For landscape teams
   - For public
3. Solving environmental restraints
Overcoming...
Water & Drainage

- Open vs. Closed Systems
- Planning Ahead
- Preventing Leaks and Stains
- Slip and Fall Risk Reduction
- Planter Options
Open System: Mississippi River System

Water in... Water out

- Salts flow to the sea
- Water along the way remains fresh
- Particulates exit system
- Life exists throughout the rivers and streams

https://courseware.e-education.psu.edu/courses/earth105new/content/lesson04/09.html
Closed System: Great Salt Lake

Water in... Water stays in

- Salts settle at the terminal point
- Salinity increases further from the fresh-water source
- Particulates remain in the system
- Limited life exists in the lake, primarily at fresh water-entry points
Open System for Containers
Water in... Water out... The IDEAL

- Salts flow out of the drainage holes
- Particulates exit system
- Plants are healthier with flow of fresh, clean water
- Water exits the system to prevent oversaturation
Open System for Containers
And what can go wrong...

- Leachates stain decking
- Water puddles and causes a hazard
- Particulates clog filters and impede drainage
- Containers become saturated, risk system failure
- Filters fail and soil escapes
When filters fail...
And the mess escapes into the world
When Failure is NOT an option...

Proper setup is key!!!
Planning Ahead

An ideal setup

- Watering Gap
- Potting Soil (no clay or fine particles)
- Filter Fabric
- Fill Material (gravel, packing peanuts, etc)
- Filter Fabric
- Drain Hole(s)
- Drainage Channel (connect to runoff system)
Natural Drainage Channels

Water escapes into the planting bed

Or through gaps in brickwork
Natural Drainage Channels

Water escapes into the planting bed
Saucers
Protection or Eye-Sore?

Interior
• GREAT solution
• Protects surfaces
• Allows open system
• Easy to clean

Exterior
• Mosquito habitat
• Eye-sore (with age)
• Trash receptacle
• Difficult to clean
  (pots are big and heavy!)
Elevated Pots
Clean-up is a breeze!

BENEFITS:
• Easy to pressure wash
• Keeps weep holes open
• Rain washes away soil
• Better air flow
• Less staining

DRAW-BACKS:
• Feet can crack
• Pots may be unstable
• Feet can get lost
• Metal rusts
Subsurface Drainage Channel
Water escapes with other rooftop runoff

Post Tuscana, Manhatten, NYC
32nd floor rooftop
Photo by Todd Tibbets
Subsurface Drainage System
Excess water drains with storm-water runoff system

- What happens when it leaks?
- And it’s over a parking deck?
- Where are the Maserati’s parked?

(Insert bad words here...)

- INSPECT!
- MAINTAIN!
- AVOID DISASTER!
Closed System for Containers

When it makes sense...

- Safety concerns
- Interior areas
- Protecting surface areas
- Areas with no natural rainfall
- Protecting bodies of water and wildlife
- Balcony plantings
Closed System for Containers

What is concerning

- Calcium, lime, fertilizer and other salts build
- Salinity increases, which may cause toxicity over time
- Overwatering creates a swamp
- **Must plan for emergency water removal**
- Monitor for failures
Planning for the Flood
Emergency Water Removal

Components: Top To Bottom
- Loose-fitting cap
- PVC Pipe
- Screen encased in filter material
- Pipe ends in gravel section

Problems:
- Curious public/Vandalism
- Ugly
- Hiding place?!?
Closed System for Containers

What is concerning

- Roots eventually penetrate planter
- Plants outgrow space
- Requires regular monitoring
- Will require periodic changes of soil & plants
- May require re-waterproofing
- Container failures: Leaching, rusting, buckling, rotting
Planning for Failures
When water-proofing breaks down

Best Practice:
Purchase without drain holes

Option 2:
Fill holes
Water-proof container
Monitor for seepage

Water-proof again as needed
or
Replace with sealed system
Closed System for Containers
Artificial Options

• Viable and beautiful option
• Many realistic choices available
• Expensive, but little upkeep
• Plan for replacements as artificial plants fade
Where synthetic turf makes sense

- Dog parks
- Upper level amenities
- Putting greens
- Low light areas
- Low load limits
- Pool decks
Drainage & Self-Watering Solutions
Planters to achieve goals

• Website + blog is sooo detailed
• Good background info
• Nice solutions
• Check it out!


https://planterblog.com/planter-selection/
https://planterblog.com/planter-drainage-modern-solutions/

NOTE: These selections are based on research and recommendations from industry professionals. They have not been field tested by this speaker and are intended for illustration purposes only.
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Overcoming...

Access Challenges for Installation & Service

The key is PLANNING....

- For failure points
- For avoiding a mess
- For cooperation with onsite personnel
- For safety
- Urban settings & quiet hours
- Special equipment
Planning for Failure...
Overcoming...

Access Challenges

Involving the Public

Protecting people & plants:

• Can the public harm the landscape?

• Can the landscape harm the public?

• Design with pots that are not easily tipped/moved

• Consider barriers as needed
Overcoming...

Environmental Constraints

- How big will it get?
- How long will it last?
- How will it be maintained?
- How will it be removed?
- How will it be replaced?
- How to think outside of the box
Post Luminaria, Manhattan, NYC
23rd floor rooftop
Photo by Todd Tibbets
Solved!

1. Water & drainage concerns
2. Access challenges
   - For landscape teams
   - For public
3. Environmental restraints
Color makes us Happy...
As Guardians of Green Space

We really DO have the power to save the world!