



Mt Washington Landslide Mitigation

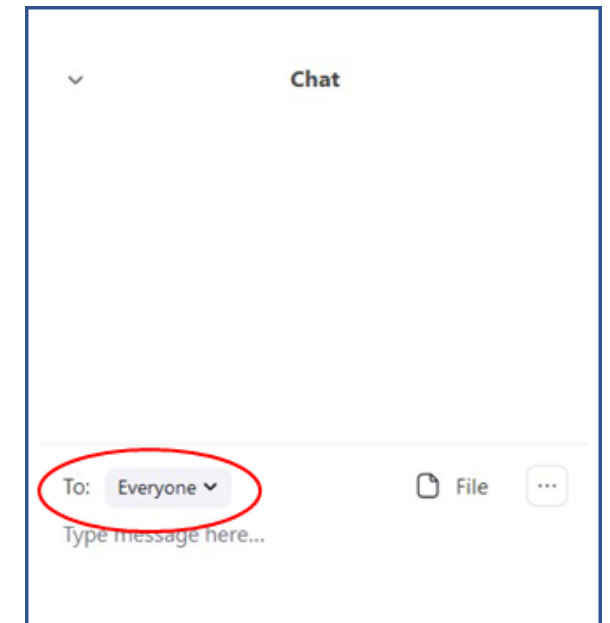
Greenleaf Street and Reese Street
Tuesday April 11, 2023



Housekeeping



- Session is being recorded and will be posted to EngagePGH website
 - Using the Chat Feature to ask questions
 - Dedicated Q&A Segments after presentation
 - Special Accommodations
-
- Technical Difficulties? – Chat Paige Nealer
 - Joining by phone ? – *6 - Toggle mute/unmute
*9 - Raise hand



Agenda



1. Introduction
2. Project Background
3. Final Design Overview
4. Project and Construction Timeline
5. Next Steps
6. Questions



Project Team



City of Pittsburgh, Department
of Mobility and Infrastructure
(DOMI)



Pennsylvania Emergency
Management Agency
(PEMA)



FEMA

Federal Emergency
Management Agency
(FEMA)



Project Background — Goals



- Stabilize selected slopes to protect
 - Roadways
 - Properties
 - Trails
- Stabilize selected roadways
- Consider Emerald Park Master Plan (EPMP)



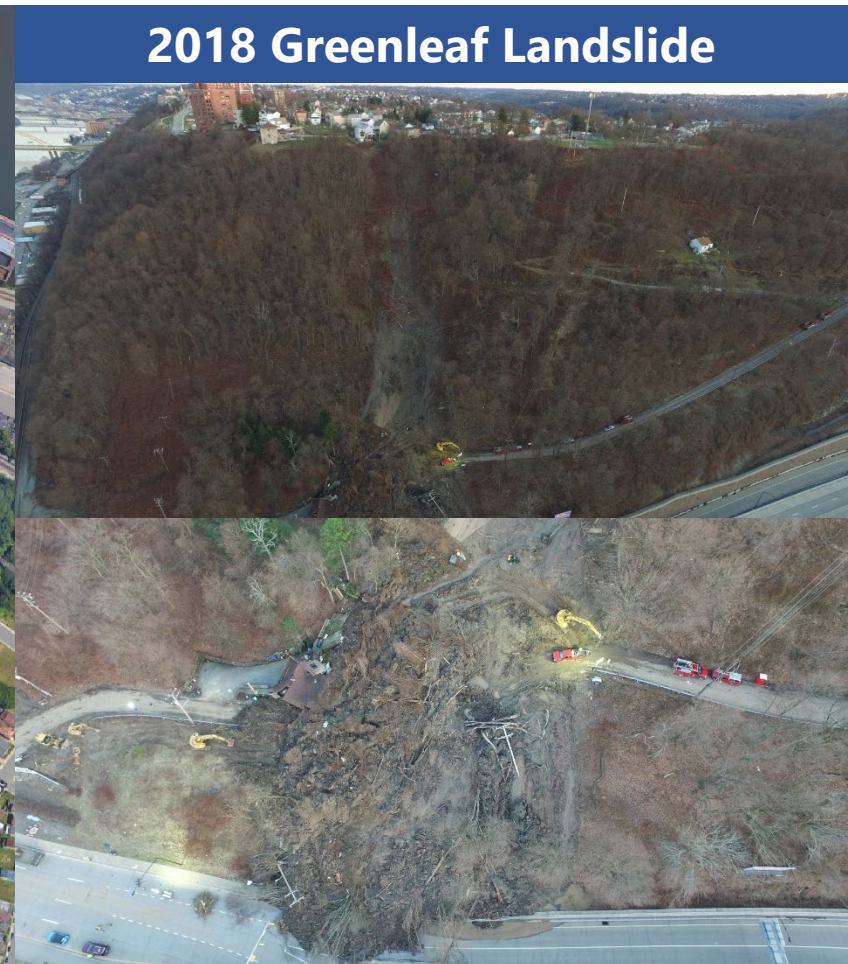
Greenleaf/Reese Streets — Overview



Greenleaf Street — Rationale



- 2018 - Catastrophic failure
 - Destroys home
 - Blocks Roadway
 - Severs Trail



2018 Greenleaf Landslide

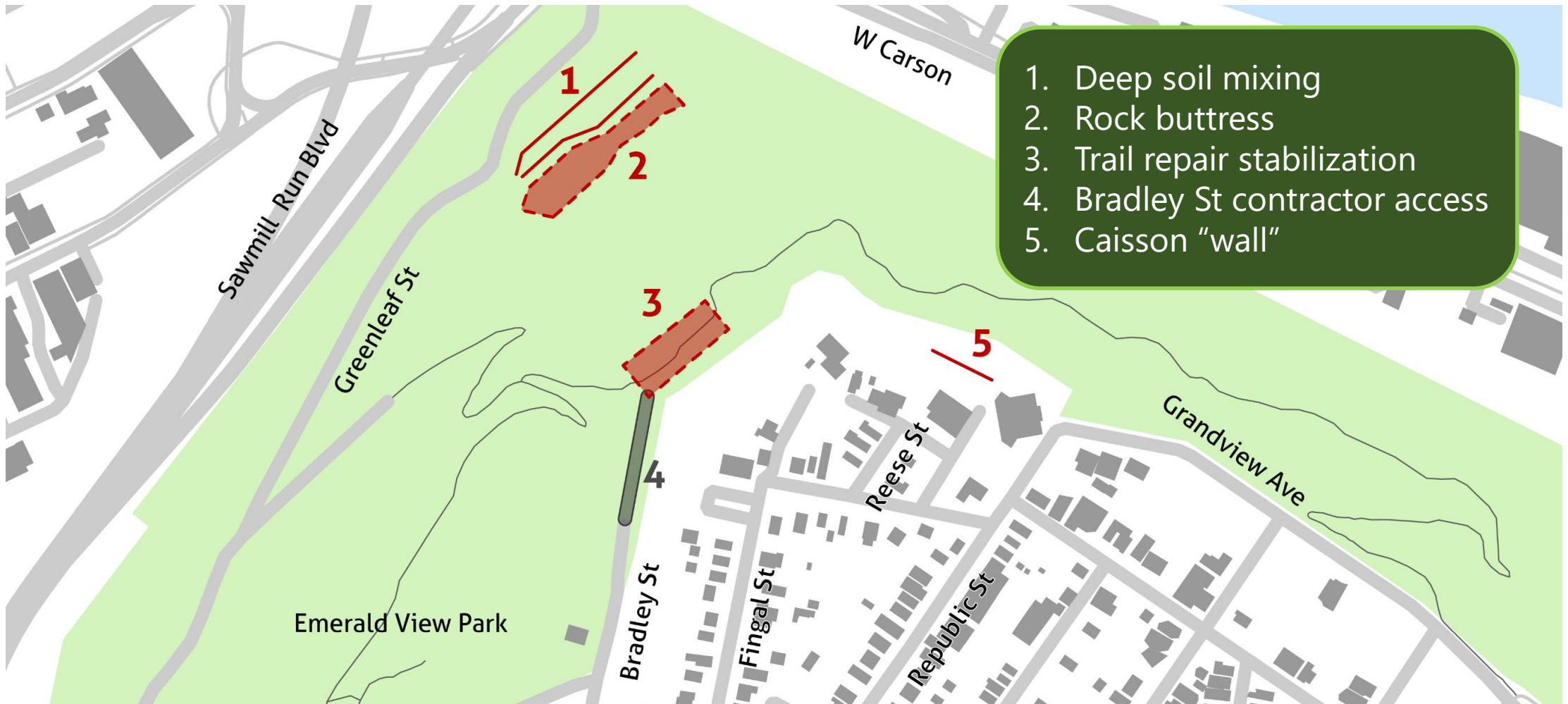
Reese Street — Rationale



- 2011 – Failure
 - Wall Constructed-supports tower
 - Slide below continues to move
 - Encroaching on Emerald View Park trail
 - Potential for Rockfall/slide debris to impact Trail and infrastructure



Greenleaf/Reese — Design Overview

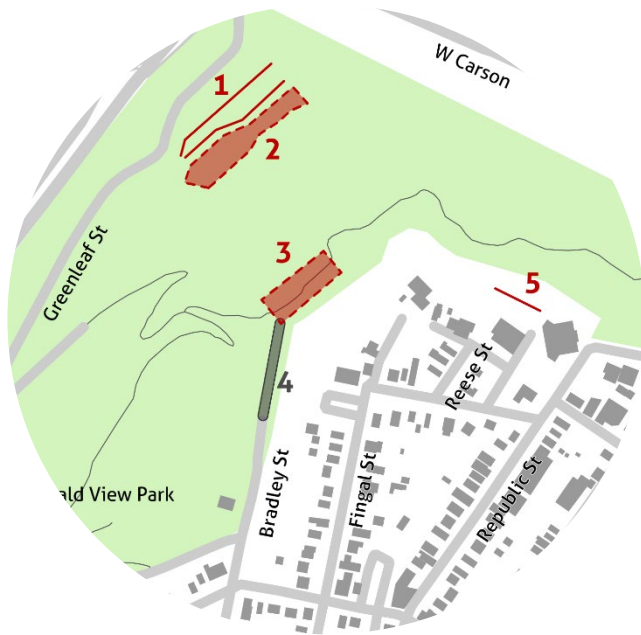


Greenleaf/Reese Sts — Mitigation measures



Deep soil mixing

Improves soil strength in place

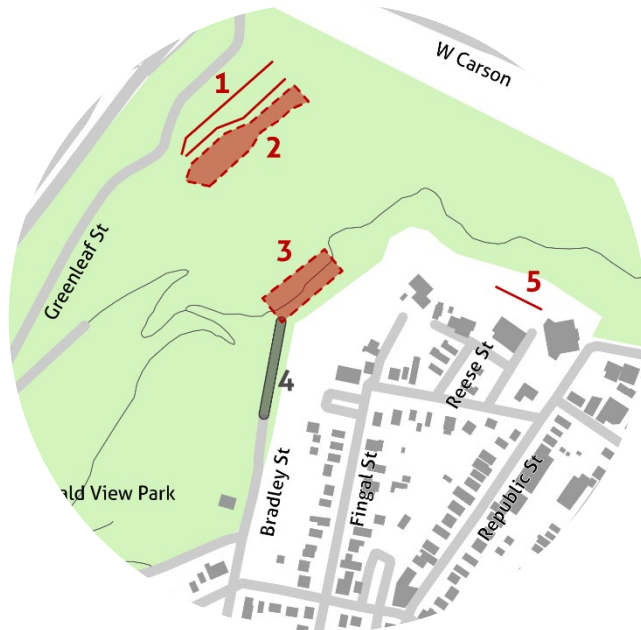


Greenleaf/Reese Sts — Mitigation measures



Rock buttress

Stabilizes landslides at the base

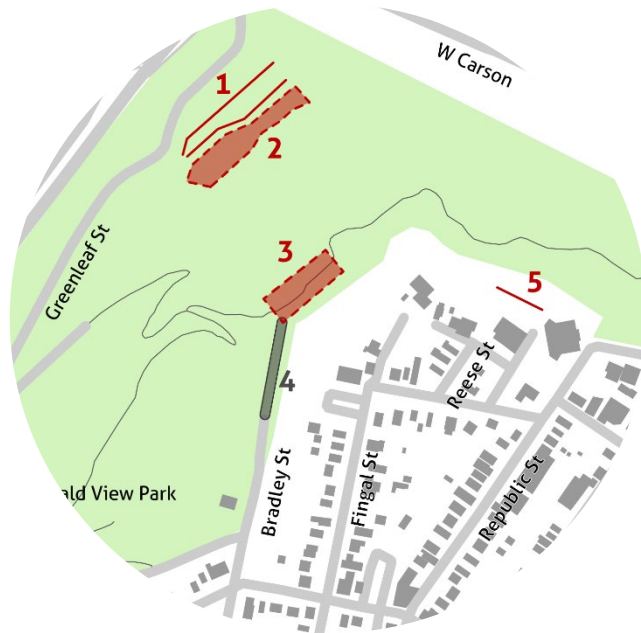




Greenleaf/Reese Sts — Mitigation measures

Caissons

Adds structure components through landslide prone soils on steep slopes to retain soils above

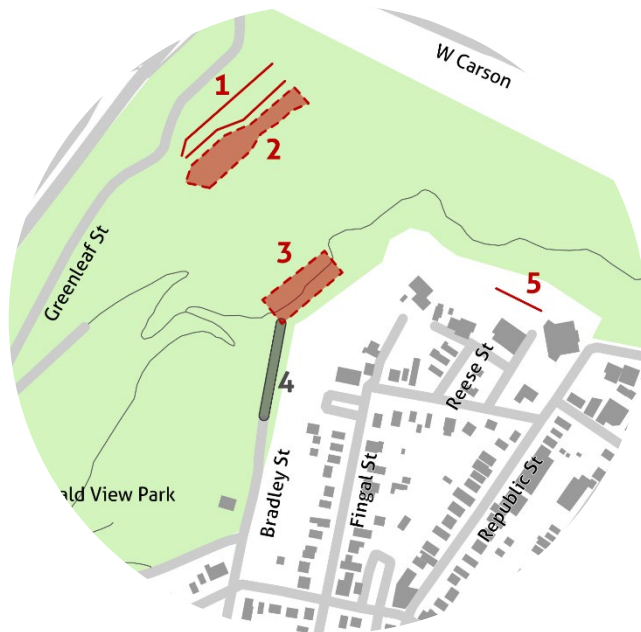


Greenleaf/Reese Sts — Mitigation measures



Micropiles

Supports surface by distributing loads through landslide material

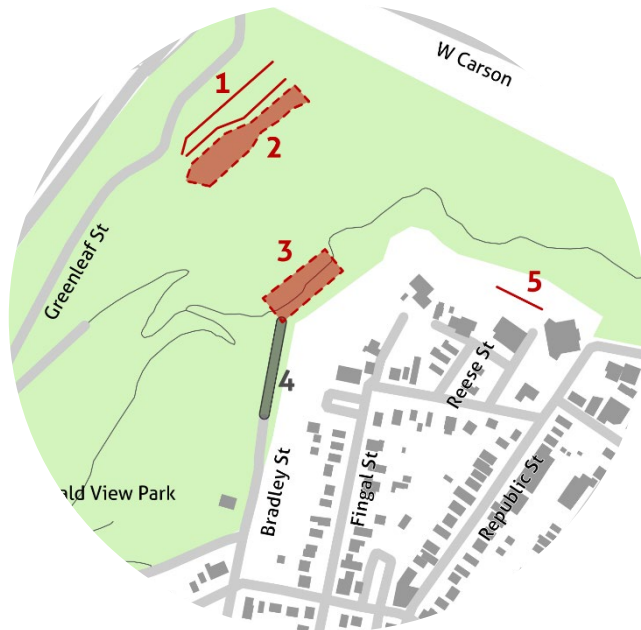


Greenleaf/Reese Sts — Mitigation measures



Soil nails

Reinforces steep
soil slopes





Greenleaf Street — Limit of Disturbance

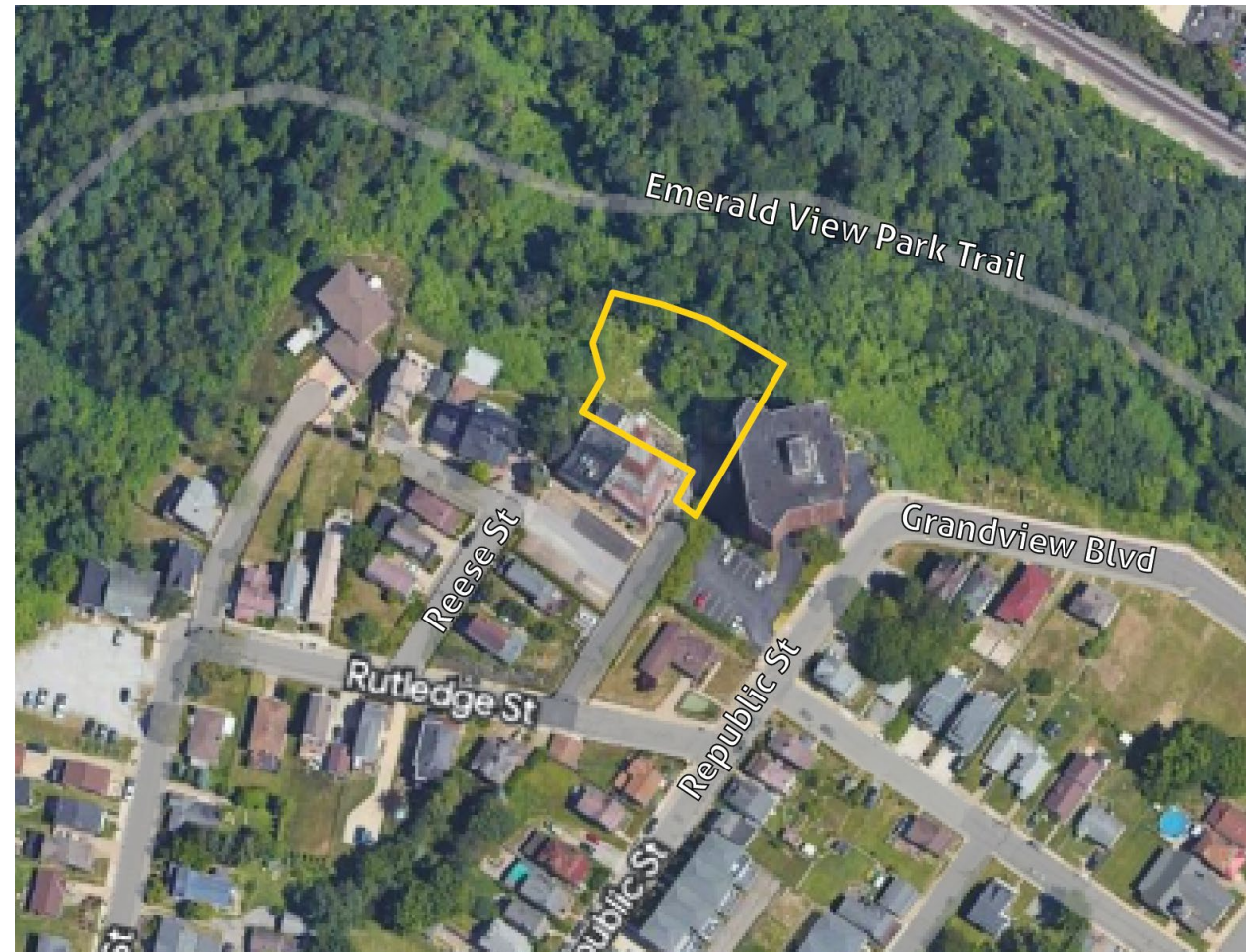
- The limit of disturbance is the area in which all construction, material storage, and other related activities may occur





Reese Street — Limit of Disturbance

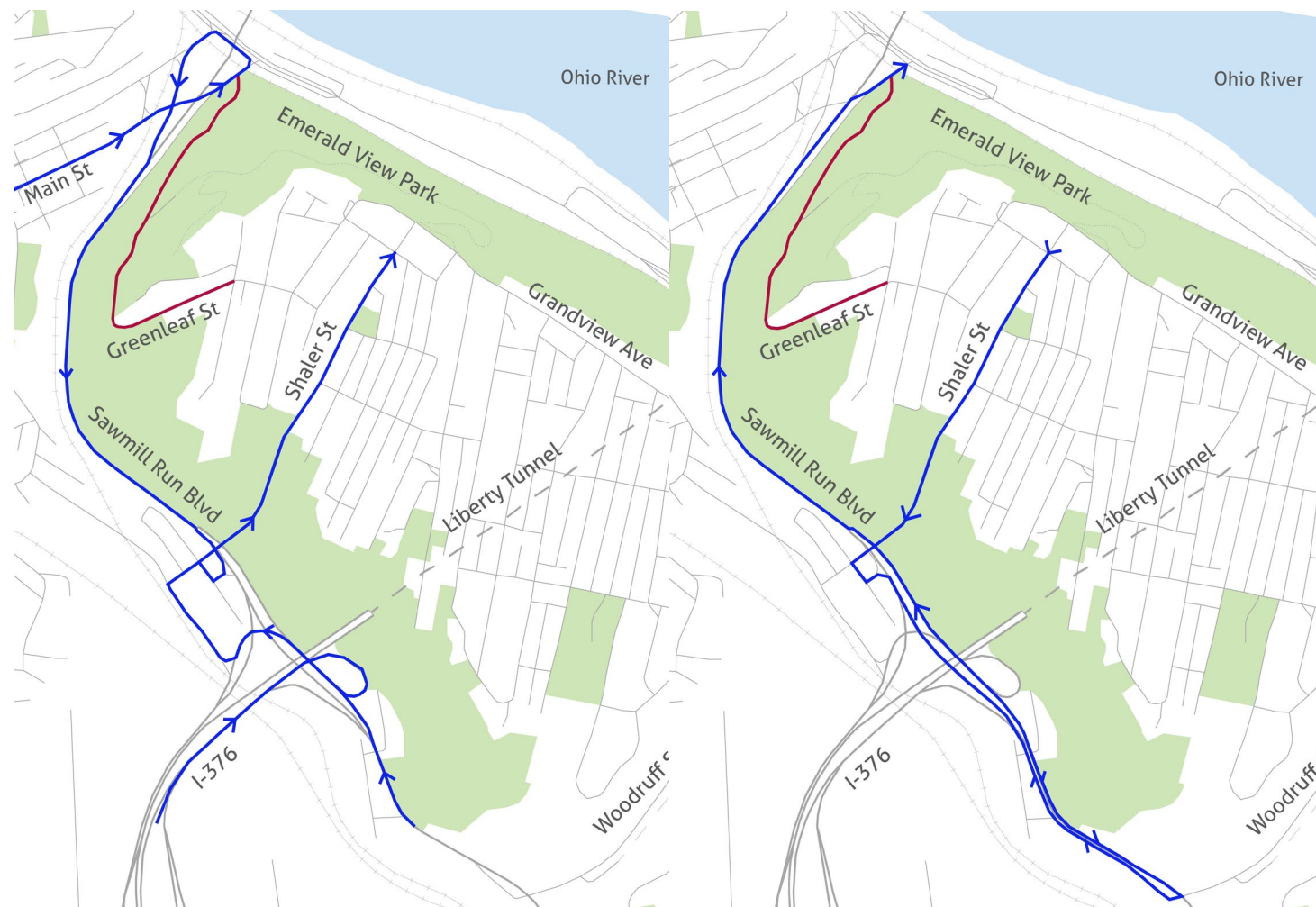
- The limit of disturbance is the area in which all construction, material storage, and other related activities may occur





Greenleaf Street — Construction Detour

- Access via Sawmill Run Boulevard, Woodville Avenue (off of I-376), and Shaler Street
- Grout Plant, which supplies cement for the DSM panels, may be placed on Greenleaf St. roadway during construction.

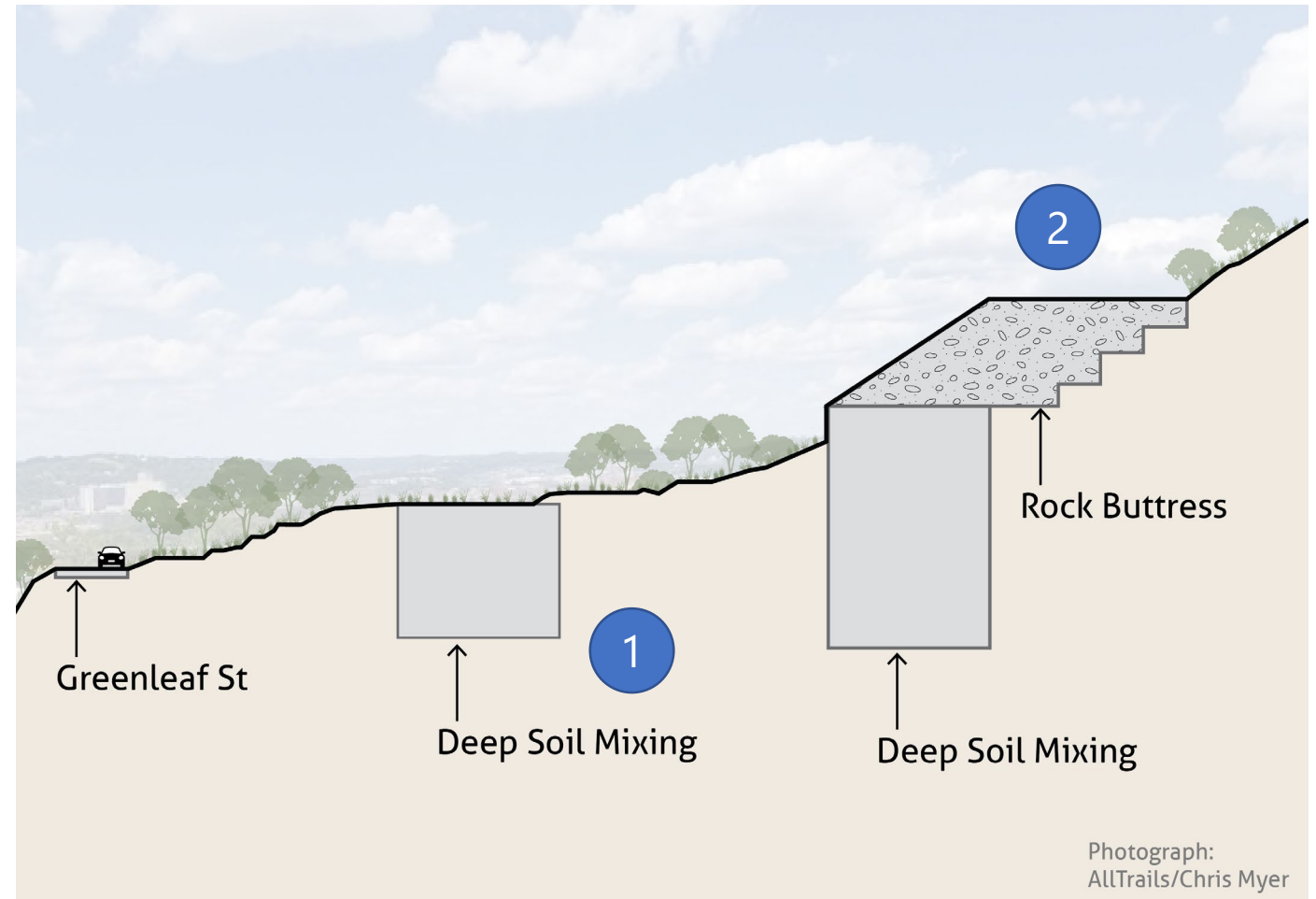
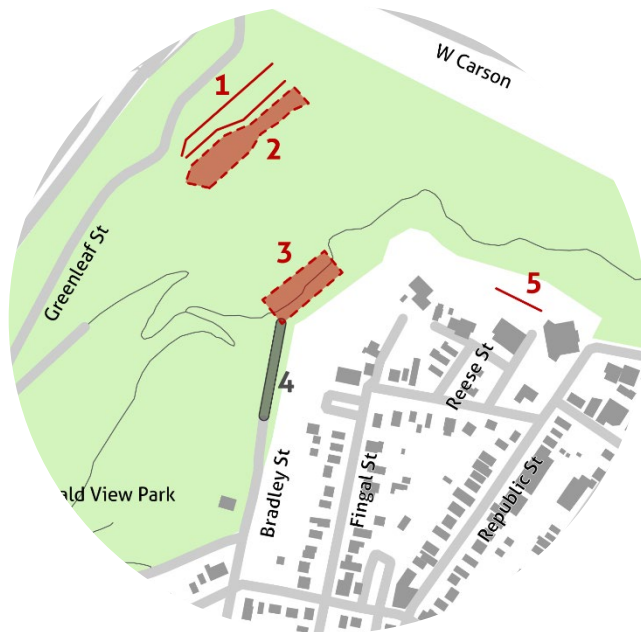


Greenleaf Street — Landslide Treatment



Slide Mass Strengthening, Typical Section

- Deep Soil Mixing: Improves soil strength in place
- Rock buttress: Stabilizes landslides at the base

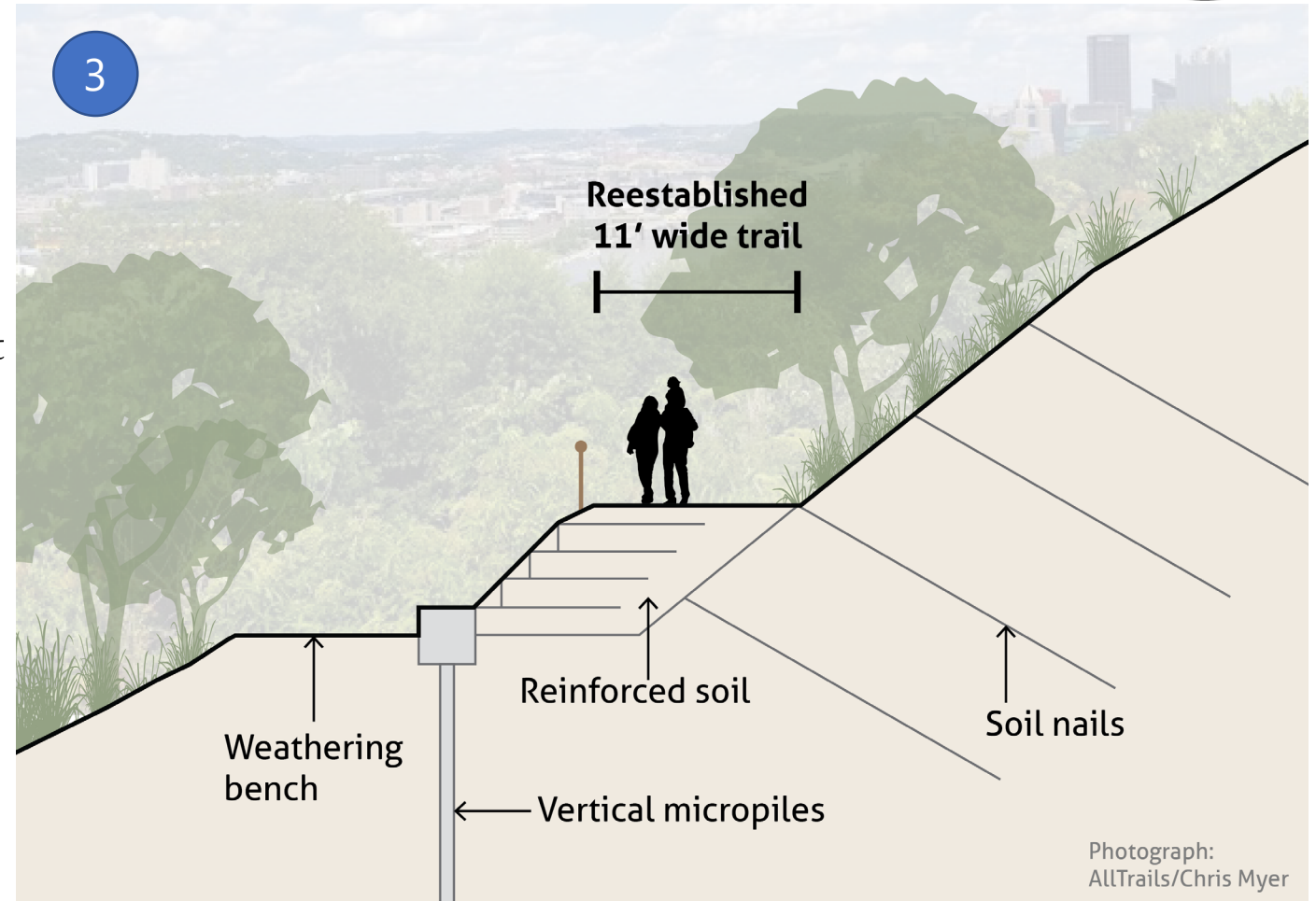
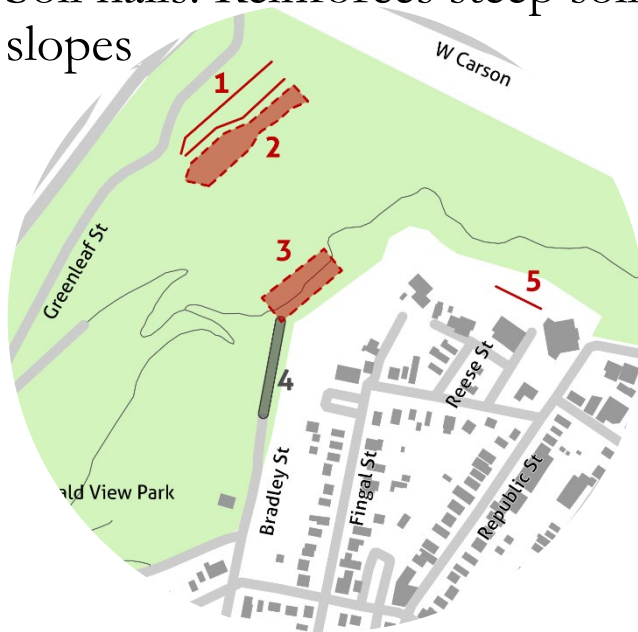


Greenleaf Street — Trail Rehab



Emerald View Park Trail Rehabilitation, Typical Section

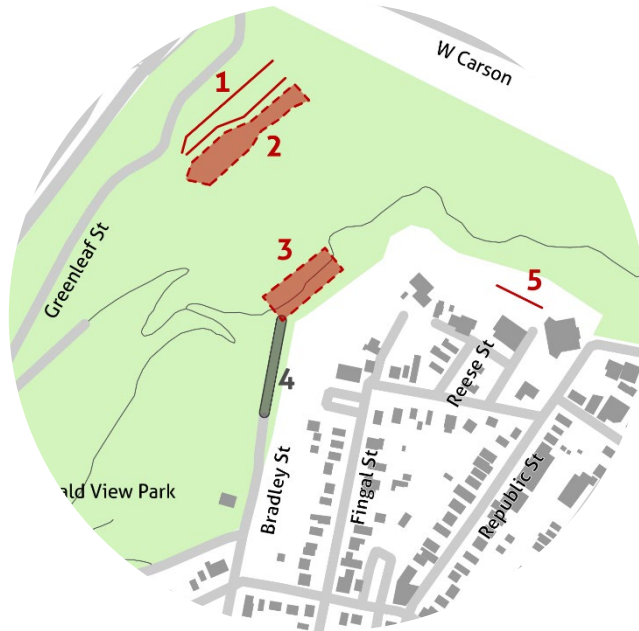
- Vertical micropiles: Supports surface by distributing loads through landslide material
- Reinforced soil placed to reconstruct the trail
- Soil nails: Reinforces steep soil slopes



Greenleaf Street — Contractor Access



Bradley Street Construction Access

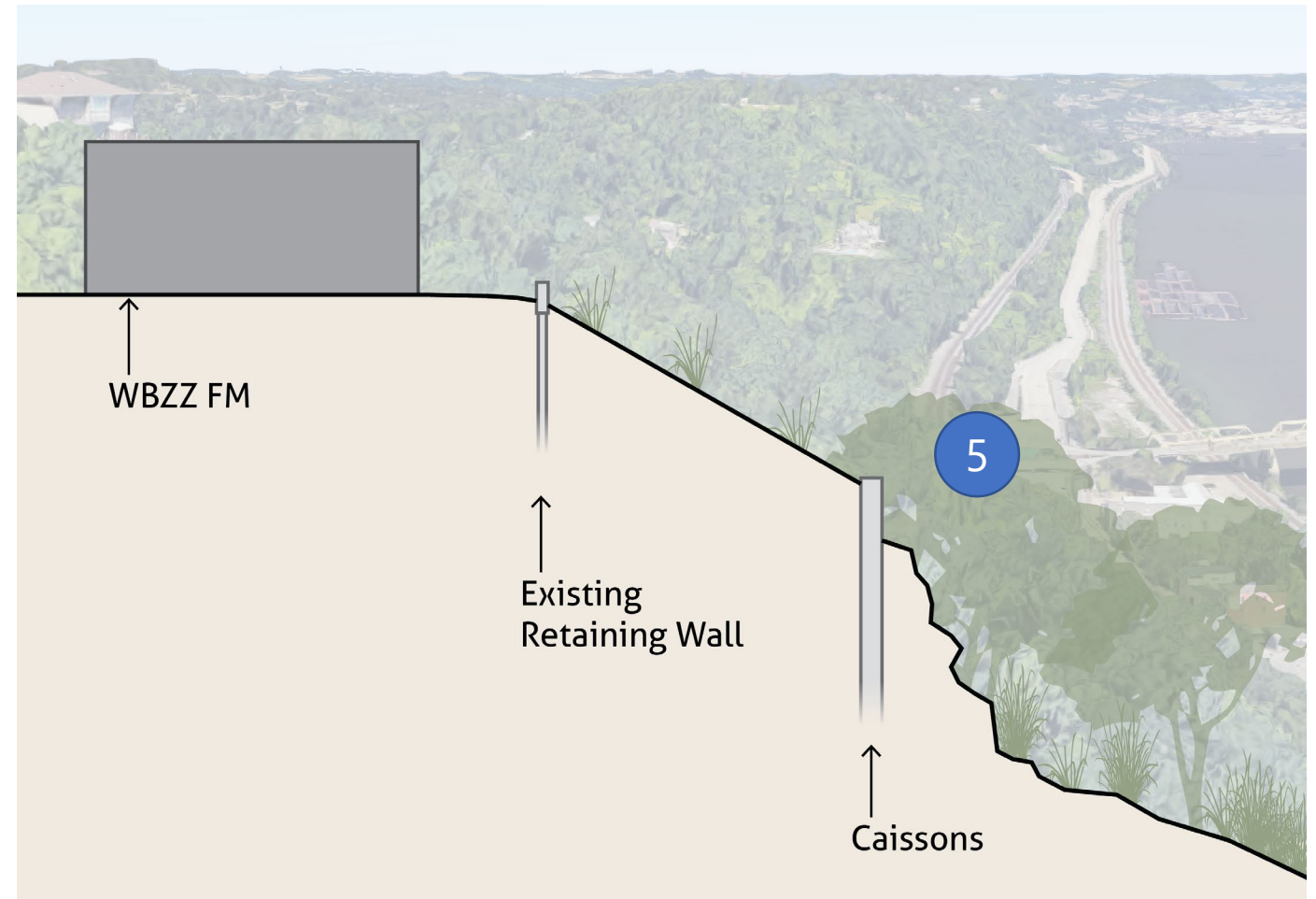
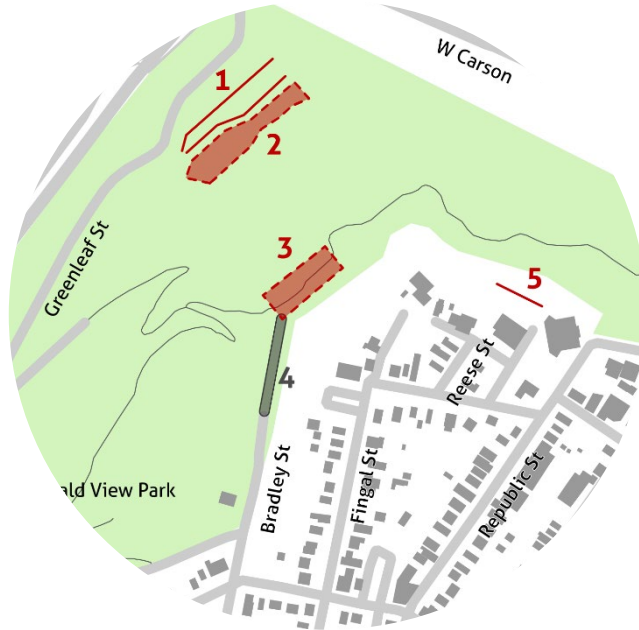




Reese Street — Landslide Treatment

Reese Street Treatment, Typical Section

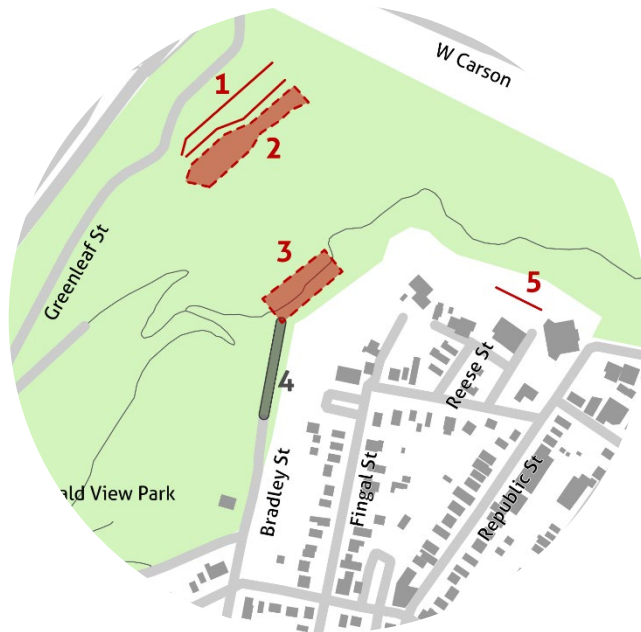
- Caissons: Structural barrier to restrain upslope movement of landslide prone soils





Greenleaf/Reese Sts — Landscape Concepts

- Trees and plantings coordinated with City of Pittsburgh
- Seeding of rock buttresses to encourage growth
- Taller trees planted at base of remediation efforts to screen rock buttress and/or walls





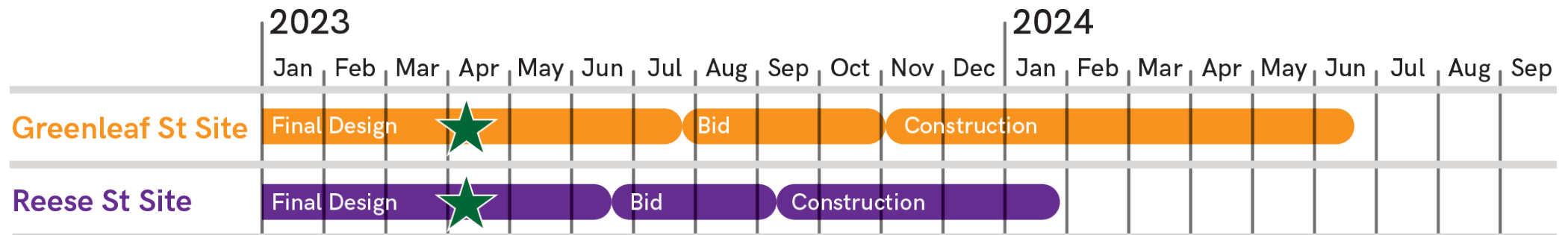
Past Engagement Efforts

- Engage PGH website
 - This website hosts project information and updates, and allows the public to ask project specific questions
 - Access Past public meeting information
 - Virtual public meetings were hosted on March 21, 2022 and March 23, 2022
 - Notifications were sent to property owners and community stakeholders
- Communication with key community groups and stakeholders



Next Steps

Tentative Schedule



- Bid and Contractor selection
 - *Summer 2023:* Greenleaf and Reese Streets
- Construction
 - *Fall/Winter 2023:* Greenleaf and Reese Streets
 - Reese St. will extend to spring to allow for permanent plantings



Thank you! Questions?

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