

Three Rivers Heritage Trail, Poor to Fair, High Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 1,085

Poor to Fair Condition, High Risk

Trail segments categorized as Poor to Fair, High Risk tend to have worn or uneven surfaces that may show cracks, potholes, or drainage issues. Despite already suboptimal pavement or gravel conditions, the overarching concern here is geographic or structural risk factors—steep slopes, unstable soils, eroded embankments, failing retaining walls, or other hazards that jeopardize both the trail and user safety. Even though the surface condition by itself warrants repairs or resurfacing, the greater priority is mitigating the high-risk environment, which may include the potential for landslides or collapses. Because these risks could have costly or dangerous consequences, dedicated geotechnical or structural engineering inspections are strongly recommended. Those evaluations should identify immediate stabilization measures—such as reinforcing embankments, improving drainage, or repairing retaining walls—before any routine surface or aesthetic upgrades occur.

Anticipated Cost: \$171,724.50
Cost per Linear Foot: \$158.33



Three Rivers Heritage Trail, Poor to Fair, High Risk

SEGMENT: Monongahela North - Section 4, Segment 4

Trail Opposite Sand Castle to Trail Opposite Costco

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor to moderate edge cracking along river-side edge (possible slippage).
- Numerous transverse cracks and some depressed ponding areas, mostly minor.
- Significant bridge crossing beneath the trail with historic ironworks. Surface is in good condition, but no structural assessment of the bridge itself was performed.

Wall, Fence, and Streambank

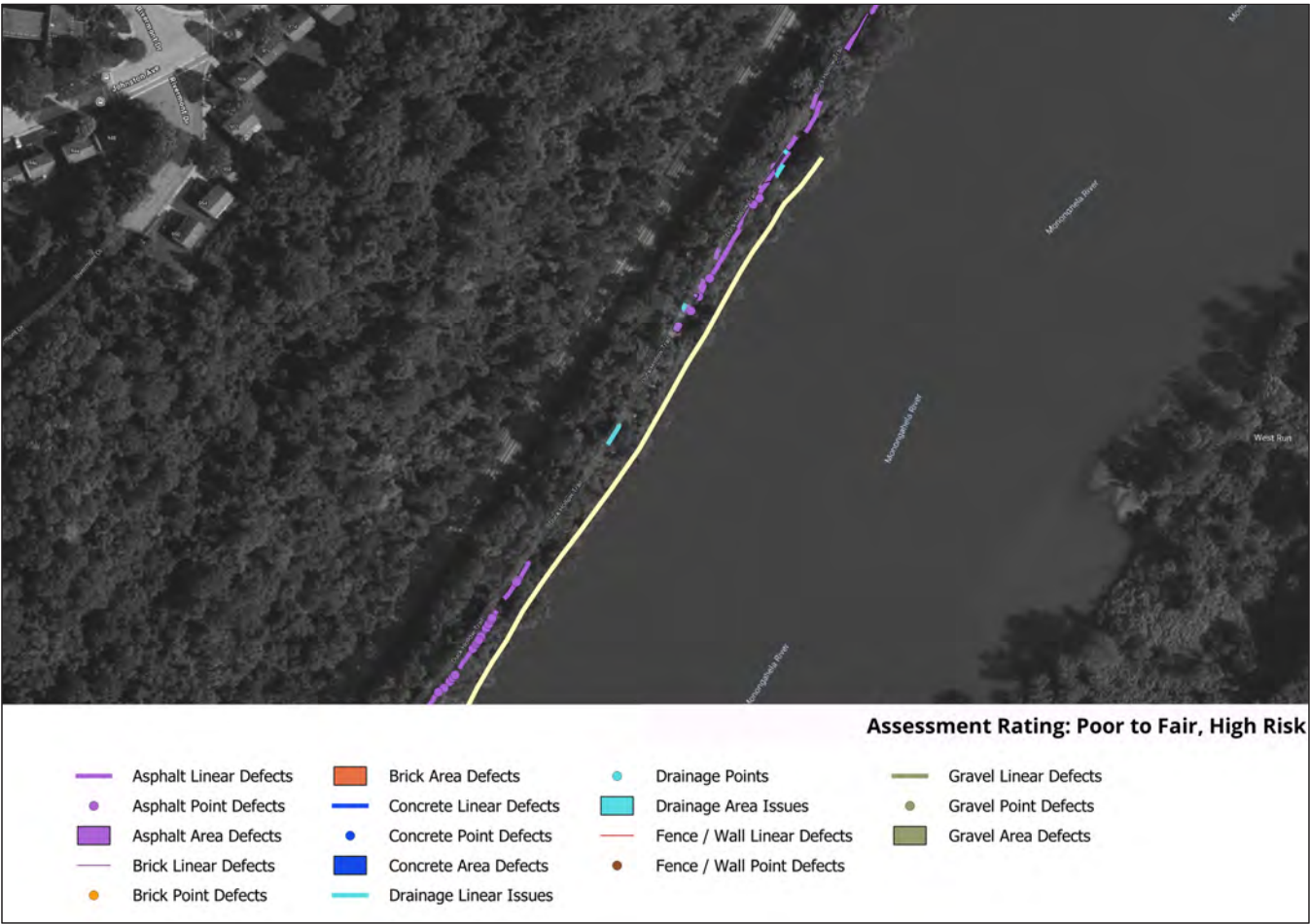
- About 15 ft of fence knocked down. Minor risk to pedestrians/bikers.
- Army Corp study indicates 'Fair' riprap stabilization adjacent to the trail. May relate to minor/moderate edge and longitudinal cracking. Recommend monitoring over time.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,144.83	SY	\$ 120.00	\$ 137,379.60
Base Course Preparation	1,144.83	SY	\$ 30.00	\$ 34,344.90

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 171,724.50	\$ 158.33



Three Rivers Heritage Trail, Fair to Good, High Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 2,228

Fair to Good Condition, High Risk

For Fair to Good, High Risk sections, the trail's actual riding or walking surface is relatively serviceable—users may notice only mild cracks or infrequent rough patches. However, 'high risk' still signals significant underlying geotechnical or structural vulnerabilities that outweigh the decent surface condition. Slopes, bedrock conditions, and retaining walls in these areas may be susceptible to failure, or there may be a documented history of landslides, streambank erosion, or flood risk. Because such factors can rapidly degrade even a good trail surface, proactive measures are a must. Engineering inspections should focus on identifying critical concerns that could undermine the trail's foundation or endanger users. Repair priorities might include stabilizing embankments, reinforcing culverts or drainage ditches, and scheduling frequent monitoring to detect early warning signs of slope movement or erosion.

Anticipated Cost: \$0.00
Cost per Linear Foot: \$0.00



Three Rivers Heritage Trail, Fair to Good, High Risk

SEGMENT: Monongahela South - Section 2, Segment 9

South Side Marina to South Shore Riverfront Park Plaza

Length (ft): 1,056

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Patched area in a low spot near steep slope. Additional transverse cracks forming at patch edges (repeated problem zone).
- Settlement along edge with cracking, likely from slope erosion. Repair & slope remediation recommended.
- Low point drainage from new development lacks cross pipe, causing potential settling/slippage.
- Transverse cracks along one pavement edge.
- Plaza slab settled ~1/2 inch, minor trip hazard.
- Adjacent plaza slab also settled ~1 inch max. Minor, but could become a trip hazard.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Fair to Good, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, High Risk

SEGMENT: Monongahela South - Section 2, Segment 4

Trail Past 13th Street to Trail Near 17th Street

Length (ft): 864

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Very steep slope erosion right next to trail. Trail edge sagging/failing in steepest area.
- Edge failure from steep slope downgrade. Potential hazard for bikers/walkers. Barrier and slope stabilization recommended.
- Fence failure in some areas from material loss on steep slope. Corresponds with significant bank erosion/undercutting from boat assessment.
- Several transverse/longitudinal cracks and edge cracking near 'Poor' walls (cause-effect unclear).
- Extensive spray painting on surface, beyond Color Park limits.

Wall, Fence, and Streambank

- Significant bank erosion/undercutting rated 'Poor' by ACOE. Moderate-high risk due to proximity, slope height. Stabilization recommended.
- Adjacent segment in 'Fair' condition per ACOE; related issues but less severe than above.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Fair to Good, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, High Risk

SEGMENT: Allegheny South - Section 2, Segment 5

24th Street to 25th Street

Length (ft): 307

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Transverse cracks noted near the failing timber wall. Not certain if related to wall failure. Trail otherwise in good condition, but the timber wall presents a significant risk. Recommend reviewing DPW maintenance/repair records.

Wall, Fence, and Streambank

- Timber crib wall in 'Poor' condition per ACOE. Very aged timbers, failed horizontals, significant post deflection. Moderate to high risk given proximity and bank height.
- Another section of timber crib wall in 'Poor' condition per ACOE with similar issues—failed horizontals, deflected posts, moderate to high risk.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, High Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 11,691

Good to Excellent Condition, High Risk

Even on a Good to Excellent, High Risk segment—where the pavement or trail bed is smooth, well-maintained, and offers a comfortable user experience—the surroundings may contain significant geotechnical threats. These might include steep or unstable hillsides looming over the trail, aging or undersized retaining structures, or areas with known landslide histories. Although users will appreciate the superior riding and walking conditions, those conditions can deteriorate quickly if a slope fails or if heavy rains cause unexpected erosion. Accordingly, these stretches require prompt geotechnical assessment and possibly preventive measures, such as installing rockfall barriers, strengthening retaining walls, or improving drainage to mitigate flood or runoff risks. The key message is that excellent surface quality does not negate an elevated hazard posed by the environment itself.

Anticipated Cost: \$22,579.00

Cost per Linear Foot: \$1.93



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Ohio North - Section 1, Segment 2

Doerr Street to Wood Run Corporation Parking Lot

Length (ft): 753

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Edge cracking on the river side with flanking transverse cracks. Location corresponds to stream banks rated in 'Poor' condition from boat assessment.

Wall, Fence, and Streambank

- Undercut wharf wall, in 'Poor' condition per ACOE. Trail base consists of large precast block with asphalt poured on top. Undercutting is prevalent along base. Solutions may include armoring at base, or grouted backfill. Low to moderate risk.
- Naturalized, steep river banks in 'Fair' condition per ACOE. Some stones missing from vertical block wall, with undercutting at river edge. Low to moderate risk to trail.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00
Edge Cracking - Minor	107.00	LF	\$ 8.00	\$ 856.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,144.00	\$ 1.52



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny South - Section 2, Segment 1

Past Fort Wayne Railroad Bridge to Veterans Bridge

Length (ft): 827

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor edge cracking and several transverse cracks observed.
- Long stretch of streambank erosion. Distance from trail varies 1–10 feet with very steep slopes down to the river's edge. Under-bridge area fenced with orange construction fence for safety. Remnants of a timber crib wall visible, rated 'Poor' in boat assessment.
- Relatively deep depression (~3 inches) with ponding.

Wall, Fence, and Streambank

- Timber crib wall under Veterans Bridge in 'Poor' condition per ACOE. Very aged timbers, failed horizontals with >50% loss of upper courses. Moderate to high risk given proximity and bank height.
- Naturalized bank west of the timber crib wall under Veterans Bridge rated 'Fair' per ACOE. Substantial undercutting at the river's edge but unlikely to impact trail unless it worsens.
- Naturalized bank east of the timber crib wall under Veterans Bridge rated 'Fair' per ACOE.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00
Edge Cracking - Minor	21.00	LF	\$ 8.00	\$ 168.00
Traverse Crack - Minor	4	EA	\$ 144.00	\$ 576.00

Summary by Category



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny North - Section 1, Segment 6

Veterans Bridge to 16th Street Bridge

Length (ft): 1,412

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Past depression and erosion point. DPW has attempted remediation with poured asphalt at the edge. Minor pedestrian hazard. Correlates with 'Poor' streambank conditions noted by ACOE/riverboat assessment.
- Extreme cross slope under the bridge, likely to mitigate erosion on the opposite side; minor pedestrian hazard.
- Minor edge cracking in areas.

Wall, Fence, and Streambank

- Banks under Veterans Bridge rated 'Poor' by ACOE. Severe, steep, bare earth erosion with undercut. Moderate risk to trail; recommend stabilization.
- Riprap banks rated 'Poor' by ACOE. Severely eroded with stone wall remnants. Moderate to high risk given proximity and height. Recommend bank stabilization or walls.
- Riprap banks in 'Fair' condition by ACOE. Large boulders and brush provide stable bank. Unsightly but stable. No recommendations.
- Portion of streambank east of the 'Poor' area is 'Fair' by ACOE; large boulders and brush. Unsightly but stable. No recommendations.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	21.00	LF	\$ 8.00	\$ 168.00
Depression - Moderate	832.00	SF	\$ 18.00	\$ 14,976.00

Summary by Category



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny North - Section 1, Segment 8

Heinz Stack to Champion Container Corp

Length (ft): 1,015

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor edge cracking in places.

Wall, Fence, and Streambank

- Undercutting of bank over >300 feet near Heinz Stacks (per ACOE). No observed trail impacts at this time.
- Rip-rap slopes rated 'Fair' by ACOE; very steep, unprotected slopes close to the trail. Moderate risk. Minor edge cracking observed. Additional assessment/stabilization recommended.
- Concrete wall near Champion Container Corp rated 'Poor' by ACOE. Severe undercutting along river edge, but low risk to trail given distance. Minor edge cracking noted.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	26.00	LF	\$ 8.00	\$ 208.00
Longitudinal Crack - Minor	7.00	LF	\$ 9.00	\$ 63.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 271.00	\$ 0.27



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Monongahela South - Section 2, Segment 15

Pitt Orthopaedic Research Labs to Trail Along E Carson St

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Large patched area (~90 sf).
- Minor watercourse crosses trail, causing muddy ponding and potential slip.
- High density of transverse/longitudinal cracks suggests accelerated service-life endpoint.

Wall, Fence, and Streambank

- Naturalized slopes in 'Fair' condition, but severe erosion undercutting trail support. High risk.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Monongahela South - Section 2, Segment 14

End of Athletic Fields to Pitt Orthopaedic Research Labs

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- High density of transverse/longitudinal cracks suggests nearing service life.
- Large patched area (~75 sf).

Wall, Fence, and Streambank

- Walls of unknown composition in 'Poor' condition per ACOE (vertical/near-vertical). Severe undercut/failure. High risk due to proximity/height. ~1000 ft requires thorough evaluation.
- Steep, naturalized slopes rated 'Fair' but severe erosion undercutting trail support. High risk.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Monongahela South - Section 2, Segment 1

4th Street Boat Launch to Color Park Near 8th Street

Length (ft): 1,084

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse / longitudinal cracks and edge cracking, especially near walls rated 'Poor' (cause-effect unclear).

Wall, Fence, and Streambank

- Masonry & miscellaneous material walls in 'Poor' condition per ACOE/Design Team. Severe undercutting/deflection/missing sections. High risk to trail due to proximity/height.
- Solid-face wharf wall in 'Favorable' condition per ACOE. Some debris/boat crash corrosion noted, seemingly non-structural.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	8	EA	\$ 144.00	\$ 1,152.00
Edge Cracking - Minor	72.00	LF	\$ 8.00	\$ 576.00
Edge Cracking - Moderate	9.00	LF	\$ 12.00	\$ 108.00
Longitudinal Crack - Minor	49.00	LF	\$ 9.00	\$ 441.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,277.00	\$ 2.10



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Monongahela South - Section 2, Segment 2

Color Park Near 8th Street to Trail Near 11th Street

Length (ft): 900

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse/longitudinal cracks and edge cracking, especially near walls rated 'Poor' (cause-effect unclear).
- Extensive spray painting on surface, beyond Color Park limits.

Wall, Fence, and Streambank

- Concrete wall west of 10th Street Bridge in 'Poor' condition (ACOE/Design Team). Failed sheet piling, undercut base. Moderate-high risk.
- Naturalized shorelines on either end in 'Fair' condition per ACOE. Issues relate to the adjacent 'Poor' wall.
- Failed/deteriorating steel piling walls, concrete block walls, undercut rock/slab embankments (40–60 ft from trail). Need more detailed assessment to confirm risk.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 288.00	\$ 0.32



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Ohio North - Section 1, Segment 1

Westhall Street to Doerr Street

Length (ft): 1,241

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Cut Bank stream erosion along edge of trail, nearly close enough to be a hazard should the banks fail. Distance to vertical slopes varies from 4 feet to 10 feet; height of slope appears to be 8 to 10 feet tall. Location corresponds to stream banks rated in 'Poor' condition from boat assessment.
- Cross-pipe lacks an endwall, and minor erosion can be seen around the edges of the pipe.
- The presence of chain-link fence along trail edge indicates perceived safety risk to pedestrians due to steep cutback of bank immediately adjacent to Trail. Edge cracking on the river side is also visible along this stretch of trail. Location corresponds to stream banks rated in 'Poor' condition from boat assessment.
- The above-mentioned fence is in good condition except for growth through the fence which could be removed and one area where a tree appears to have fallen on the fence at some point. Damage to fence is minimal.

Wall, Fence, and Streambank

- Naturalize stream banks in 'Fair' condition per ACOE. Low risk to trail, but some minor stabilization measures could be helpful.
- Steep sloped slag / rock along former prison site, rated as 'Poor' condition by Army Corp. Significant undercutting observed at base of slope. Risk to trail is low to moderate, but could increase if undercut sections break loose.
- Steep sloped slag / rock outcrop shoreline along former prison site, rated as 'Poor' condition by Army Corp. Undercutting at base. Transitions to concrete block trail base, with more undercutting. Risk low to moderate.
- Undercut wharf wall, in 'Poor' condition per ACOE. Trail base consists of large precast block with asphalt poured on top. Undercutting is prevalent along base. Solutions may include armoring at base, or grouted backfill. Low to moderate risk.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	22.00	LF	\$ 8.00	\$ 176.00



Assessment Rating: Good to Excellent, High Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny South - Section 2, Segment 5

Lock Wall Marina to 23rd Street

Length (ft): 607

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Transverse cracks noted near the failing timber wall. Not certain if related to wall failure. Trail otherwise in good condition, but the timber wall presents a significant risk. Recommend reviewing DPW maintenance/repair records.

Wall, Fence, and Streambank

- Timber crib wall in 'Poor' condition per ACOE. Very aged timbers, failed horizontals, significant post deflection. Moderate to high risk given proximity and bank height.
- Another section of timber crib wall in 'Poor' condition per ACOE with similar issues—failed horizontals, deflected posts, moderate to high risk.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	3	EA	\$ 144.00	\$ 432.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 432.00	\$ 0.71



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny South - Section 2, Segment 3

16th Street Bridge to 18th Street

Length (ft): 957

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Edge cracking in numerous locations near an adjacent 'Poor' concrete wall, possibly indicating edge movement. Transverse cracking at either end suggests a broader pattern.
- Areas of patched asphalt near these cracks. Recommend reviewing DPW records for original cause and potential link to adjacent wall conditions.

Wall, Fence, and Streambank

- Wall in 'Poor' condition per ACOE—loose concrete slabs/blocks missing or deflected. Failing wooden crib walls adjacent. Moderate to high risk given proximity. Only a small portion is within 30 feet of the trail edge, but overall potential impact is significant.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00
Edge Cracking - Minor	28.00	LF	\$ 8.00	\$ 224.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 368.00	\$ 0.38



Three Rivers Heritage Trail, Good to Excellent, High Risk

SEGMENT: Allegheny South - Section 2, Segment 4

18th Street to Lock Wall Marina

Length (ft): 680

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Several transverse and longitudinal cracks clustered above a 'Poor' concrete wall (see below).
- Berm grading on river side prevents complete drainage off the path. Sediment, leaf debris, and wet spots remain after rainfall.

Wall, Fence, and Streambank

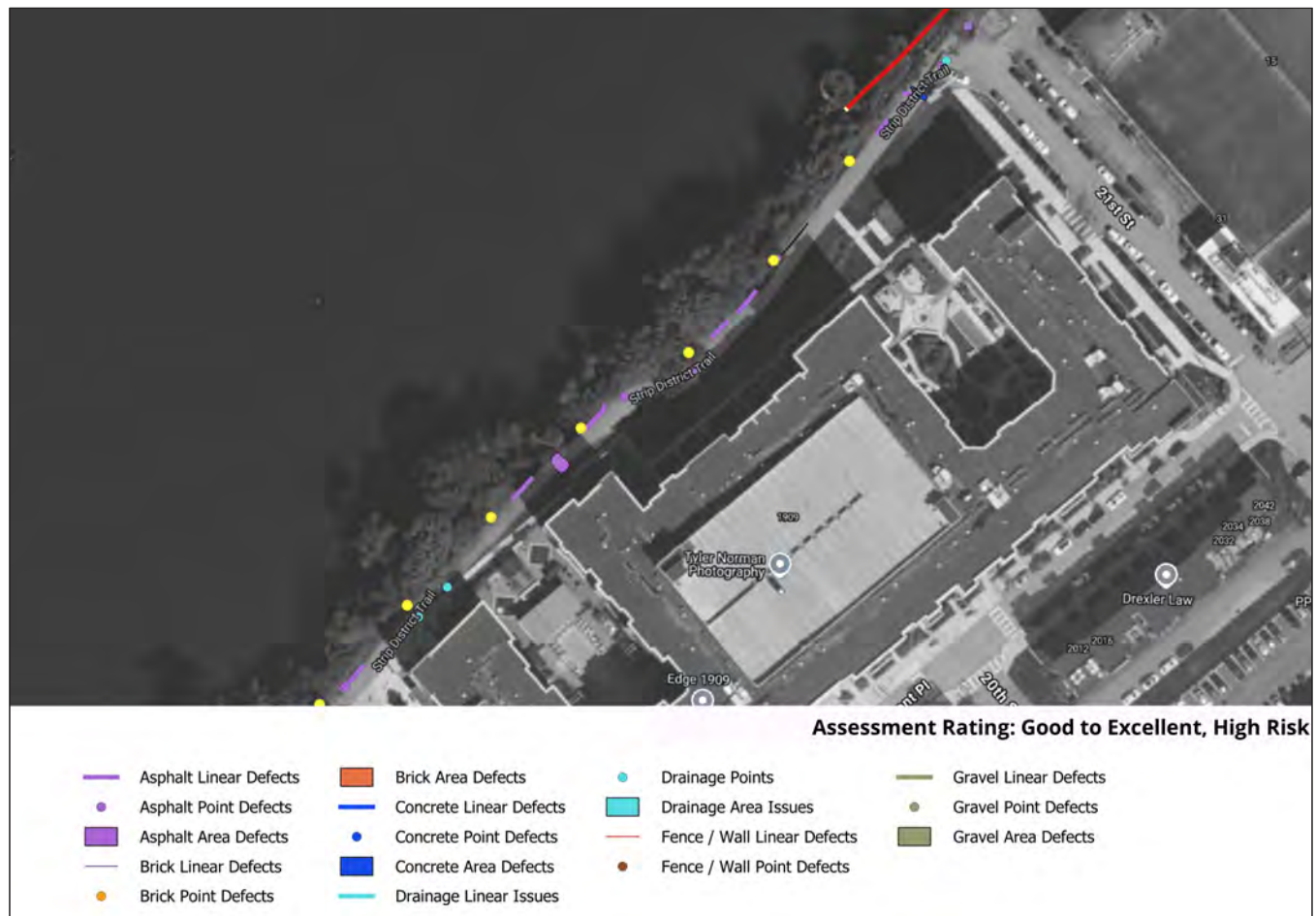
- Concrete wall in 'Poor' condition per ACOE. Adjacent wooden/concrete crib walls are badly deteriorated. High risk given trail proximity and wall height.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00
Edge Cracking - Minor	101.00	LF	\$ 8.00	\$ 808.00
Longitudinal Crack - Minor	11.00	LF	\$ 9.00	\$ 99.00
Depression - Minor	21.00	SF	\$ 12.00	\$ 252.00
Patching - Minor	280.00	SF	\$ 0.00	\$ 0.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,447.00	\$ 2.13



Three Rivers Heritage Trail, Poor to Fair, Moderate Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 1,738

Poor to Fair Condition, Moderate Risk

Segments rated Poor to Fair, Moderate Risk have noticeable surface defects—small cracks, unevenness, or suboptimal pavement—but the overall threat from geology or structures is less severe than in high-risk areas. Still, 'moderate risk' suggests the potential for slope instability, minor retaining wall movement, or moderate erosion that could worsen over time. Periodic inspections are advisable, although they may not be as urgent or frequent as in high-risk segments. In many cases, the recommendation involves scheduling geotechnical and structural checks on a routine basis—perhaps annually—while also addressing surface deterioration. By combining targeted repairs (e.g., patching holes, grading gravel) with preventive slope management (e.g., clearing vegetation, improving ditching), these areas can often be stabilized in a cost-effective manner.

Anticipated Cost: \$231,768.00

Cost per Linear Foot: \$133.33



Three Rivers Heritage Trail, Poor to Fair, Moderate Risk

SEGMENT: Monongahela South - Section 2, Segment 6

Trail Near 19th Street to South Side Dog Park

Length (ft): 869

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Entire section aged/deteriorated, with cracks/patches/failing curb. Full replacement recommended.

Wall, Fence, and Streambank

- Wharf wall & naturalized slopes in 'Favorable' condition per ACOE. No recommendations at this time.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	772.56	SY	\$ 120.00	\$ 92,707.20
Base Course Preparation	772.56	SY	\$ 30.00	\$ 23,176.80

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 115,884.00	\$ 133.33



Three Rivers Heritage Trail, Poor to Fair, Moderate Risk

SEGMENT: Monongahela South - Section 2, Segment 5

Trail Near 17th Street to Trail Near 19th Street

Length (ft): 869

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor alligator cracking along ~12 ft of trail edge (poor drainage).
- Minor alligator cracking over ~30 ft edge stretch.
- Localized minor alligator cracking along ~18 ft edge stretch.
- East of 18th Street: aged/deteriorated asphalt with frequent cracks/patches/failing curb. Full segment replacement recommended.

Wall, Fence, and Streambank

- Steel/concrete walls & naturalized slopes nearby, rated 'Favorable' by ACOE. Aged but appear structurally sound from visual inspection.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	772.56	SY	\$ 120.00	\$ 92,707.20
Base Course Preparation	772.56	SY	\$ 30.00	\$ 23,176.80

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 115,884.00	\$ 133.33



Three Rivers Heritage Trail, Fair to Good, Moderate Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 4,340

Fair to Good Condition, Moderate Risk

In the Fair to Good, Moderate Risk category, the trail surface requires only modest attention—perhaps sealing small cracks, ensuring proper drainage, or refreshing signage. Although the risk from steep slopes or structural failures is not deemed high, there are still enough geographical or environmental factors (e.g., mild slope, partial erosion) to warrant occasional monitoring. Ideally, staff or consultants would conduct scheduled geotechnical reviews to confirm that retaining walls, slopes, or river embankments remain stable. If early indicators of trouble—like hairline cracks in concrete or small landslides—are identified, the trail can be proactively reinforced. By addressing moderate hazards before they escalate, you maintain user safety and avoid more expensive emergency interventions later.

Anticipated Cost: \$57,977.00

Cost per Linear Foot: \$13.36



Three Rivers Heritage Trail, Fair to Good, Moderate Risk

SEGMENT: Monongahela South - Section 1, Segment 2
Lincoln Highway to Past Duquesne Incline
Length (ft): 868

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Corner-cracked slabs, transverse cracks, broken curbs, popouts in multiple locations.

Wall, Fence, and Streambank

- Failed wrought iron fence with gap blocked by orange barrier (likely vehicle strike). Not GPS'd in GIS due to poor signal.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	4	EA	\$ 10.00	\$ 40.00
Popout - Minor	2	EA	\$ 8.00	\$ 16.00
Longitudinal Cracking - Minor	21.00	LF	\$ 12.00	\$ 252.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 308.00	\$ 0.35



Three Rivers Heritage Trail, Fair to Good, Moderate Risk

SEGMENT: Monongahela North - Section 4, Segment 1
2nd Avenue to Beyond Rail Bridge
Length (ft): 998

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor to moderate edge cracking along river-side edge (possible slippage).
- Numerous transverse cracks and some depressed ponding areas, mostly minor.

Wall, Fence, and Streambank

- Army Corp study shows no major streambank/wall issues. However, pavement edge is close to the steep slope on the river side, possibly causing the edge cracking. Recommend monitoring over time.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	4	EA	\$ 50.00	\$ 200.00
Traverse Crack - Minor	14	EA	\$ 144.00	\$ 2,016.00
Traverse Crack - Moderate	4	EA	\$ 18.00	\$ 72.00
Edge Cracking - Minor	62.00	LF	\$ 8.00	\$ 496.00
Edge Cracking - Moderate	344.00	LF	\$ 12.00	\$ 4,128.00
Alligator Cracking - Minor	258.00	SF	\$ 30.00	\$ 7,740.00
Patching - Minor	187.00	SF	\$ 0.00	\$ 0.00

Summary by Category



Three Rivers Heritage Trail, Fair to Good, Moderate Risk

SEGMENT: Monongahela North - Section 4, Segment 5

Trail Opposite Costco to Trail Opposite Courtyard

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

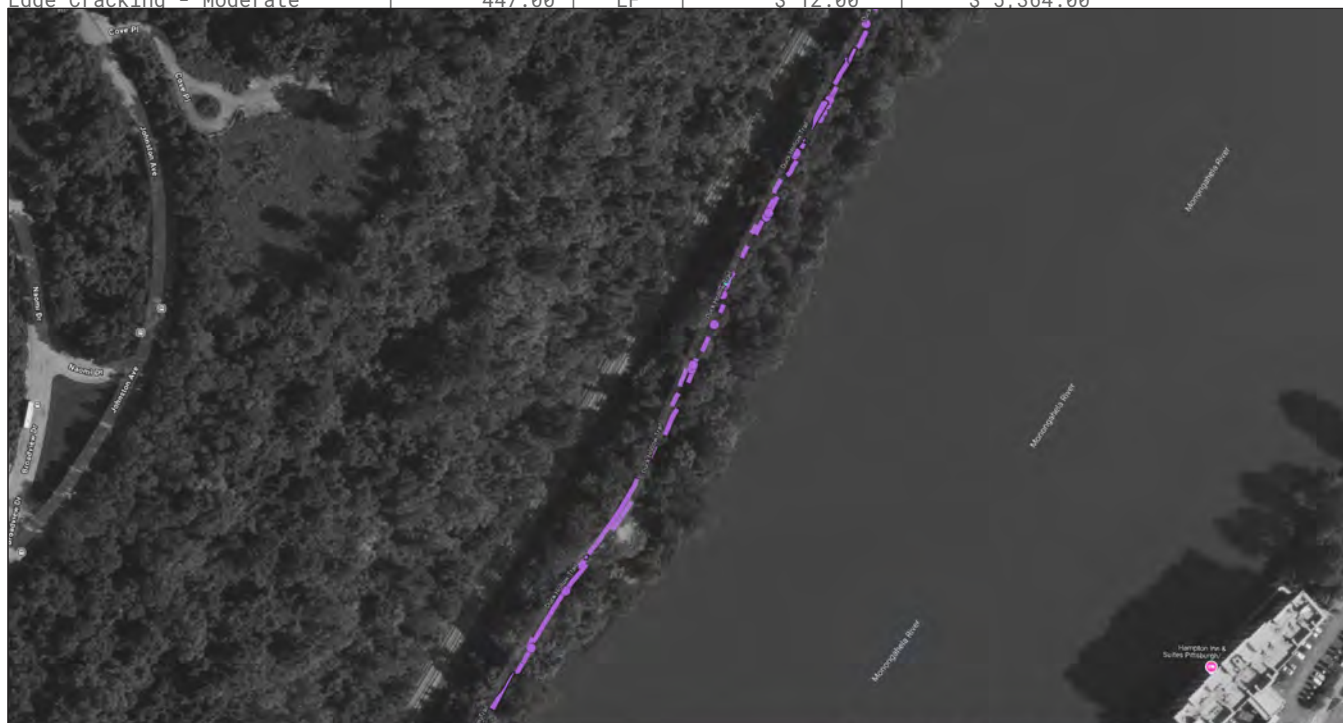
- Low spot with frequent ponding (~20 ft long x 10 ft wide). Fine sediment deposits visible.
- 15-inch concrete pipe extends from hillside, dropping 5–6 ft before crossing under trail. Inlet partially clogged. Cracking/heaving/settling around pipe on trail.
- Poor seam between adjacent pours causing a 1–2 inch tripping hazard.
- Uncontrolled flow from upstream 24-inch pipe causing severe erosion on steep adjacent slope. Possibly undermining a large diameter pipe exposed above ground.
- Large diameter pipe draining across the trail with erosion/washout. Water may be bypassing the pipe ~20 ft away. Recommend a more formal crossing.
- Significant depressed asphalt area slipping downslope (~4–5 in drop, ~20–25 ft in length, half the trail width). Wide longitudinal cracks.
- Several large longitudinal cracks near drainage pipe (likely accelerated by erosion).
- Minor to moderate edge cracking along river side (possible slippage).
- Numerous transverse cracks, plus some depressed ponding areas, mostly minor.

Wall, Fence, and Streambank

- Army Corp study indicates 'Fair' riprap bank stabilization adjacent to the trail. Likely related to cracking. Recommend monitoring.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	3	EA	\$ 144.00	\$ 432.00
Traverse Crack - Moderate	13	EA	\$ 18.00	\$ 234.00
Edge Cracking - Minor	94.00	LF	\$ 8.00	\$ 752.00
Edge Cracking - Moderate	447.00	LF	\$ 12.00	\$ 5,364.00



Assessment Rating: Fair to Good, Moderate Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Moderate Risk

SEGMENT: Monongahela North - Section 4, Segment 2

Beyond Rail Bridge to Trail Opposite Sand Castle

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor to moderate edge cracking along river-side edge (possible slippage).
- Numerous transverse cracks and some depressed ponding areas, mostly minor.

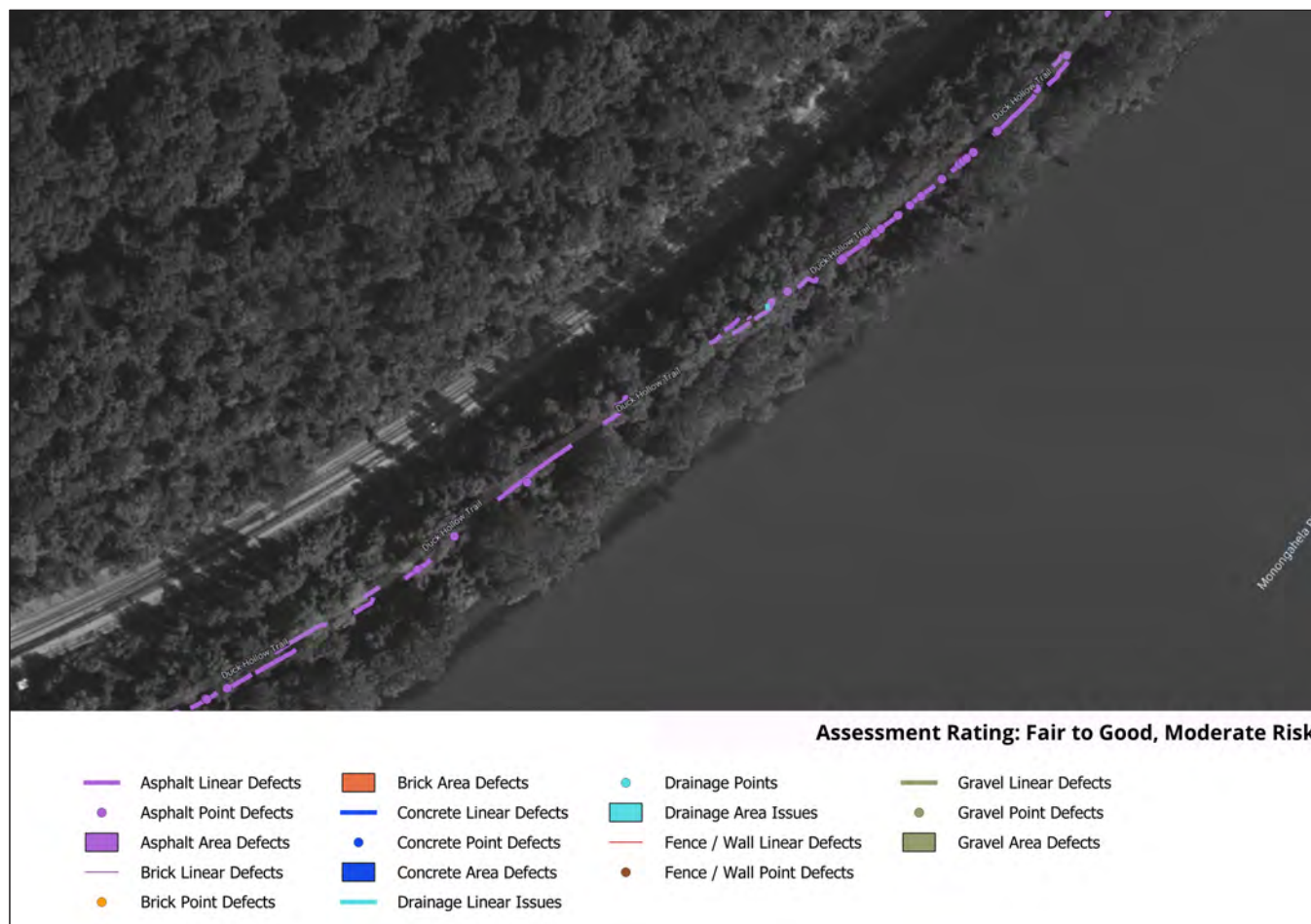
Wall, Fence, and Streambank

- 24-inch drainage cross pipe adequately conveying water but outlet extends 4–5 ft over a steep drop (~8–10 ft). Future risk of erosion or pipe failure.
- Army Corp study shows no major streambank/wall issues. However, pavement edge is close to steep slope, possibly causing edge cracking. Recommend monitoring over time.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	1	EA	\$ 50.00	\$ 50.00
Traverse Crack - Minor	13	EA	\$ 144.00	\$ 1,872.00
Traverse Crack - Moderate	10	EA	\$ 18.00	\$ 180.00
Edge Cracking - Minor	260.00	LF	\$ 8.00	\$ 2,080.00
Edge Cracking - Moderate	310.00	LF	\$ 12.00	\$ 3,720.00
Longitudinal Crack - Minor	8.00	LF	\$ 9.00	\$ 72.00
Longitudinal Crack - Moderate	10.00	LF	\$ 14.00	\$ 140.00
Patching - Minor	50.00	SF	\$ 0.00	\$ 0.00

Summary by Category



Three Rivers Heritage Trail, Fair to Good, Moderate Risk

SEGMENT: Allegheny South - Section 2, Segment 5

23rd Street to 24th Street

Length (ft): 304

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Transverse cracks noted near the failing timber wall. Not certain if related to wall failure. Trail otherwise in good condition, but the timber wall presents a significant risk. Recommend reviewing DPW maintenance/repair records.

Wall, Fence, and Streambank

- Timber crib wall in 'Poor' condition per ACOE. Very aged timbers, failed horizontals, significant post deflection. Moderate to high risk given proximity and bank height.
- Another section of timber crib wall in 'Poor' condition per ACOE with similar issues—failed horizontals, deflected posts, moderate to high risk.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, Moderate Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Summary Report - Trails Surfaces

Total Trail Length (ft): 3,747

Good to Excellent Condition, Moderate Risk

A Good to Excellent, Moderate Risk trail is inviting for users: its surface is typically smooth, with good drainage and few visible flaws. Nevertheless, certain environmental or structural conditions—perhaps moderate slopes or creek embankments—pose some risk of damage over time. While the area does not demand immediate large-scale stabilization, the prudent course is to keep up routine inspections and remain vigilant for telltale signs of slope shifts or erosion. Occasional surveying and minor preventive work (e.g., shoring up small washouts, clearing debris from culverts) can help maintain both the high-quality trail surface and the underlying stability. Compared to high-risk zones, the urgency is lower, but the commitment to periodic checks remains vital to sustain excellent conditions into the future.

Anticipated Cost: \$10,380.00

Cost per Linear Foot: \$2.77



Three Rivers Heritage Trail

Three Rivers Heritage Trail, Good to

SEGMENT: Allegheny South - Section 3, Segment 8

National Robotics Engr. Center (41th Street) to 43rd Street

Length (ft): 537

Trail Surface, Crushed Limestone Assessment and Observations

Wall, Fence, and Streambank

- Large block gravity wall immediately adjacent to the path edge. Appears in ‘fair’ condition with no discernible movement or imminent risk. Some material loss on block faces. The rough placement of blocks may reflect original construction, as minimal portions of the wall were visible during inspection.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Moderate Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail

SEGMENT: Allegheny North - Section 1, Segment 5

River Ave Connection to Veterans Bridge

Length (ft): 1,069

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor edge cracking along the river's edge in various stretches. Banks are steep and close to the trail, rated 'Fair' by ACOE and the Design Team. Some undercutting observed.

Wall, Fence, and Streambank

- Naturalized slope in 'Fair' condition per ACOE. Some undercut but generally stable; low to moderate trail risk.
- River banks on either side of the railroad bridge rated 'Fair' by ACOE/Design Team. No immediate recommendations. Edge cracking above correlates to potential movement.
- River banks just west of the Veterans Bridge in 'Fair' condition per ACOE. Some undercut observed, but generally stable. Low to moderate trail risk, correlates to previously observed edge cracking.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	87.00	LF	\$ 8.00	\$ 696.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 696.00	\$ 0.65



Three Rivers Heritage Trail, Good to

SEGMENT: Monongahela North - Section 4, Segment 3

Trail Opposite Sand Castle to Trail Opposite Costco

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor to moderate edge cracking along river-side edge (possible slippage).
- Numerous transverse cracks and some depressed ponding areas, mostly minor.
- Significant bridge crossing beneath the trail with historic ironworks. Surface is in good condition, but no structural assessment of the bridge itself was performed.

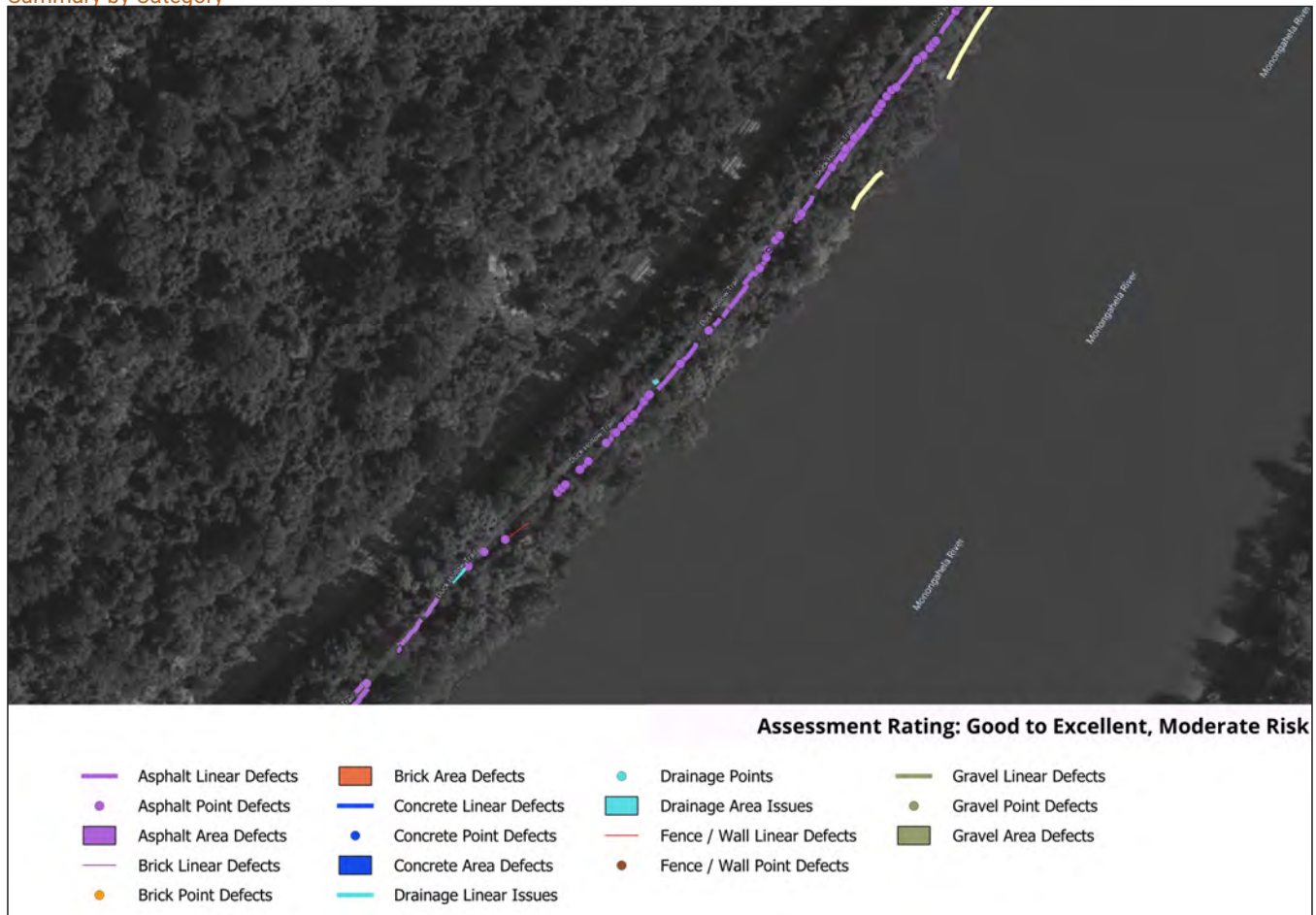
Wall, Fence, and Streambank

- About 15 ft of fence knocked down. Minor risk to pedestrians/bikers.
- Army Corp study indicates 'Fair' riprap stabilization adjacent to the trail. May relate to minor/moderate edge and longitudinal cracking. Recommend monitoring over time.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	15	EA	\$ 144.00	\$ 2,160.00
Traverse Crack - Moderate	24	EA	\$ 18.00	\$ 432.00
Traverse Crack - Severe	1	EA	\$ 25.00	\$ 25.00
Edge Cracking - Minor	65.00	LF	\$ 8.00	\$ 520.00
Edge Cracking - Moderate	345.00	LF	\$ 12.00	\$ 4,140.00
Longitudinal Crack - Minor	31.00	LF	\$ 9.00	\$ 279.00
Longitudinal Crack - Moderate	152.00	LF	\$ 14.00	\$ 2,128.00
Patching - Minor	92.00	SF	\$ 0.00	\$ 0.00

Summary by Category



Three Rivers Heritage Trail

SEGMENT: Monongahela South - Section 2, Segment 10

South Shore Riverfront Park Plaza to Hot Metal Bridge

Length (ft): 1,056

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Slab edge settled ~3/4 inch, minor trip hazard.
- One slab corner lifted, minor trip hazard.
- Expansion joint material lifted out; needs replacement.
- Rail post installed too close to edge, minor edge failure near post anchors.
- Erosion protection partially failed above slope, minor drainage issues.
- Missing/broken glass at accent light fixtures near monument. Moisture inside another fixture.

Wall, Fence, and Streambank

- Very high river walls near Hyatt House: steel piling, concrete block, masonry, slag. Appear structurally sound but show various deterioration. Recommend thorough assessment/monitoring.
- Naturalized slope under Hot Metal Bridge in 'Fair' condition per ACOE. Steep slope possibly undercutting trail. Moderate risk; more assessment recommended.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 0.00	\$ 0.00



Three Rivers Heritage Trail, Poor to Fair, Low Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 10,880

Poor to Fair Condition, Low Risk

Where a segment is labeled Poor to Fair, Low Risk, the most pressing issues tend to be surface-level. Potholes, cracking asphalt, worn gravel, and inconsistent grading are common, but the broader environmental and structural setting is relatively stable—there are no major steep slopes or failing retaining walls. Consequently, there is not a significant safety or infrastructure hazard looming, but these poor conditions can still hamper users' experience. The recommended approach is to prioritize surface repairs or resurfacing—improving the ride quality, drainage, and aesthetic. Geotechnical monitoring may be minimal here; however, standard best practices (like ensuring drainage ditches are clear or that small banks remain stable) still apply. A proactive maintenance schedule can effectively raise the trail to a fair or better condition without high-cost engineering interventions.

Anticipated Cost: \$2,273,473.50

Cost per Linear Foot: \$208.95



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Allegheny South - Section 1, Segment 2

Point State Park Plaza to Wharf

Length (ft): 1,131

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Large deposit area of sediment from river flooding. No viable prevention method.
- Generally cracked and patched slab.
- Large area (~140 sf) of cracking concrete with spalled surfaces and missing sections. Recommend replacement.
- Minor surface spalling (~190 sf).
- Numerous instances of corner cracking, transverse cracking, longitudinal cracking, and minor slippage of concrete toward the river.

Wall, Fence, and Streambank

- Spalling at the top of the concrete river wall with loss of material.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Concrete Paving	3,142.58	SY	\$ 150.00	\$ 471,387.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 471,387.00	\$ 416.67



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 1

West Station Square Drive to Lincoln Highway

Length (ft): 1,028

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

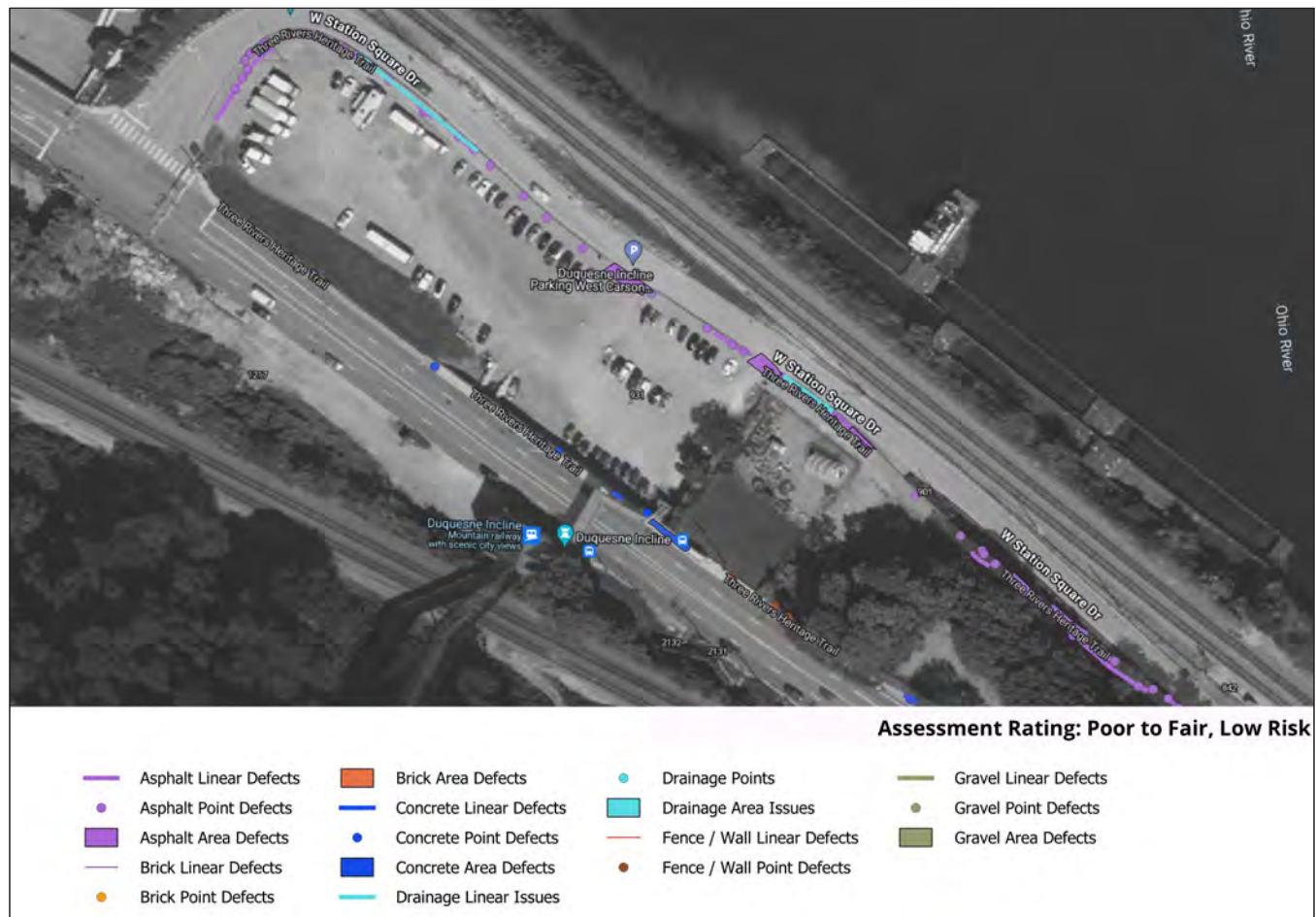
- High point in trail with rougher pavement (~60 sf). Adjacent steep slopes may be contributing.
- Trapped ponding area with silt deposition (~20 sf). Asphalt wedge curb blocks drainage.
- No formal driveway apron leads to erosion from parking lot. Depressed/broken area (~50 sf). Possibly private ownership issue.
- Lack of pavement maintenance at driveway entrance: alligator cracking, ponding (~70 sf).
- Sediment deposited along trail edge, wedge curb prevents drainage (~25 sf).
- Drainage from adjacent gravel lot ponds where an asphalt curb is damaged (~55 sf).
- Numerous transverse/longitudinal cracks and moderate edge cracking correlated with drainage issues.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	913.50	SY	\$ 120.00	\$ 109,620.00
Base Course Preparation	913.50	SY	\$ 30.00	\$ 27,405.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 137,025.00	\$ 133.33



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 7

Sheraton Pittsburgh Hotel, Station Sq. to Liberty Bridge

Length (ft): 1,689

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Frequent ponding indicated by mulch/debris. Undersized inlet in low spot is plugged.
- Catch basin under the bridge undersized for drainage area. Recommend larger structure.
- Ponding area with sunken pavement (not cracked).
- Multiple issues near Liberty Bridge: large contributing drainage area from the parking lot above, edge slippage toward railroad, debris, erosion. Recommend full replacement, fence-line wall stabilization, improved drainage (~400 sf).
- Patching (~15 sf).
- Washout of stone/asphalt debris from slope above. Frequent maintenance needed.
- Numerous transverse/longitudinal cracks, edge cracking.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	3,002.60	SY	\$ 120.00	\$ 360,312.00
Base Course Preparation	3,002.60	SY	\$ 30.00	\$ 90,078.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 450,390.00	\$ 266.67



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 3

Allegheny County Jail Parking Lot to 10th Street Bridge

Length (ft): 711

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Round inlet grate partially covered by debris; needs more frequent maintenance.
- Large area (~700 sf) of severe alligator cracking, multiple longitudinal and transverse cracks. Likely linked to ponding at low point.
- Heaving (~36 sf) from tree roots breaking up asphalt near drainage structure.
- Another heaved/broken area (~100 sf) from tree roots near drainage structure.
- Numerous transverse/longitudinal/edge cracks, potholes, depressions. High frequency suggests near end of service life.

Wall, Fence, and Streambank

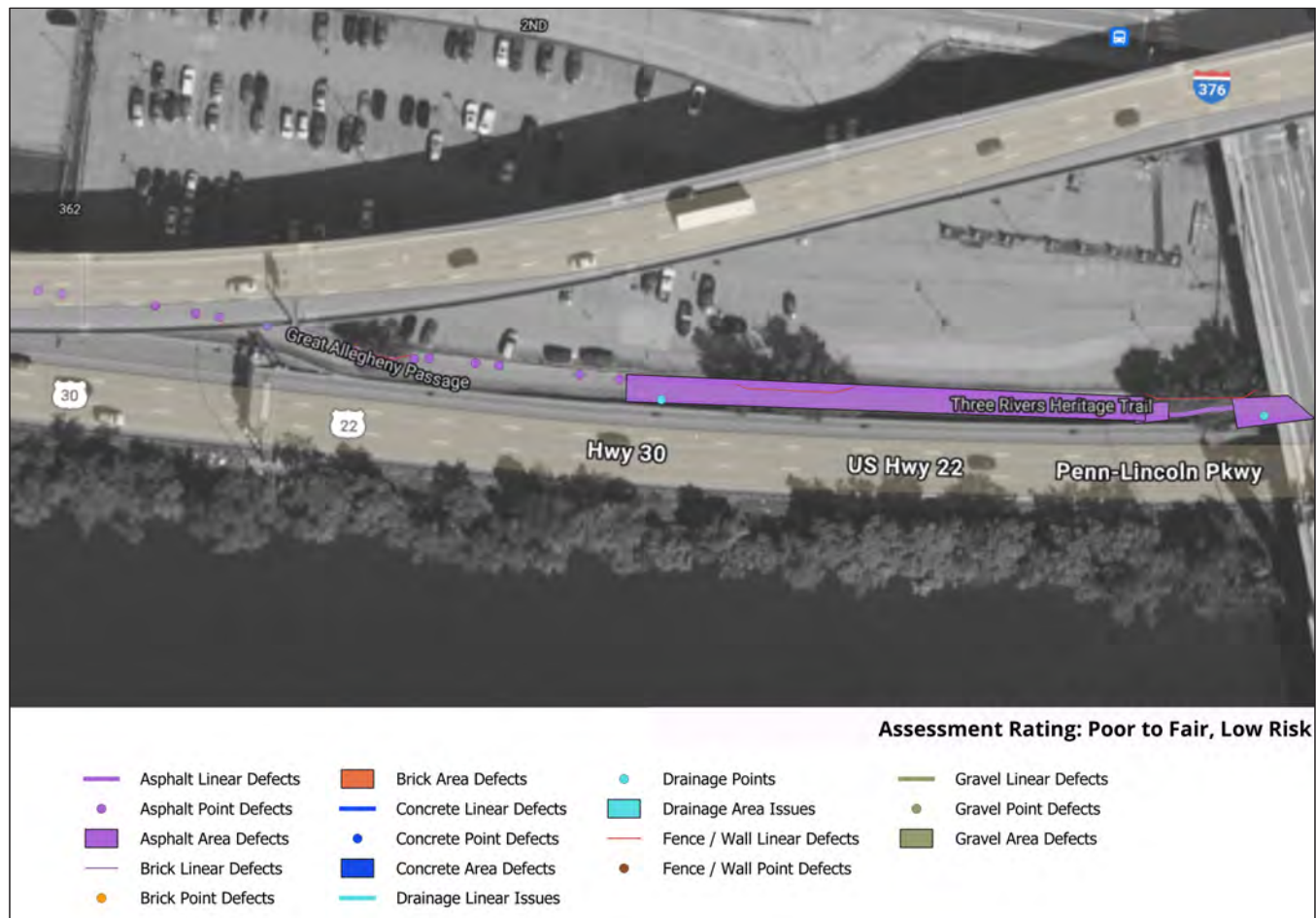
- Timber planter wall is completely rotted. Low height means low immediate risk to the trail, but recommend replacement within a year to prevent falling into travel path.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,027.27	SY	\$ 120.00	\$ 123,272.40
Base Course Preparation	1,027.27	SY	\$ 30.00	\$ 30,818.10

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 154,090.50	\$ 216.67



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 8

Birmingham Bridge to SDI Building

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Alligator cracking (~40 sf) at trail edge where heavy machinery often operates.
- Extensive edge cracking, possibly from heavy machinery/truck traffic.
- Numerous transverse/longitudinal/edge cracks. Mostly minor/moderate, but frequent enough to indicate end of service life.
- PennDOT Type M Inlet in working condition but receives excessive sediment from trail and slopes.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,345.67	SY	\$ 120.00	\$ 161,480.40
Base Course Preparation	1,345.67	SY	\$ 30.00	\$ 40,370.10

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 201,850.50	\$ 200.00



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 7

Heidelberg Materials & Concrete to Birmingham Bridge

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

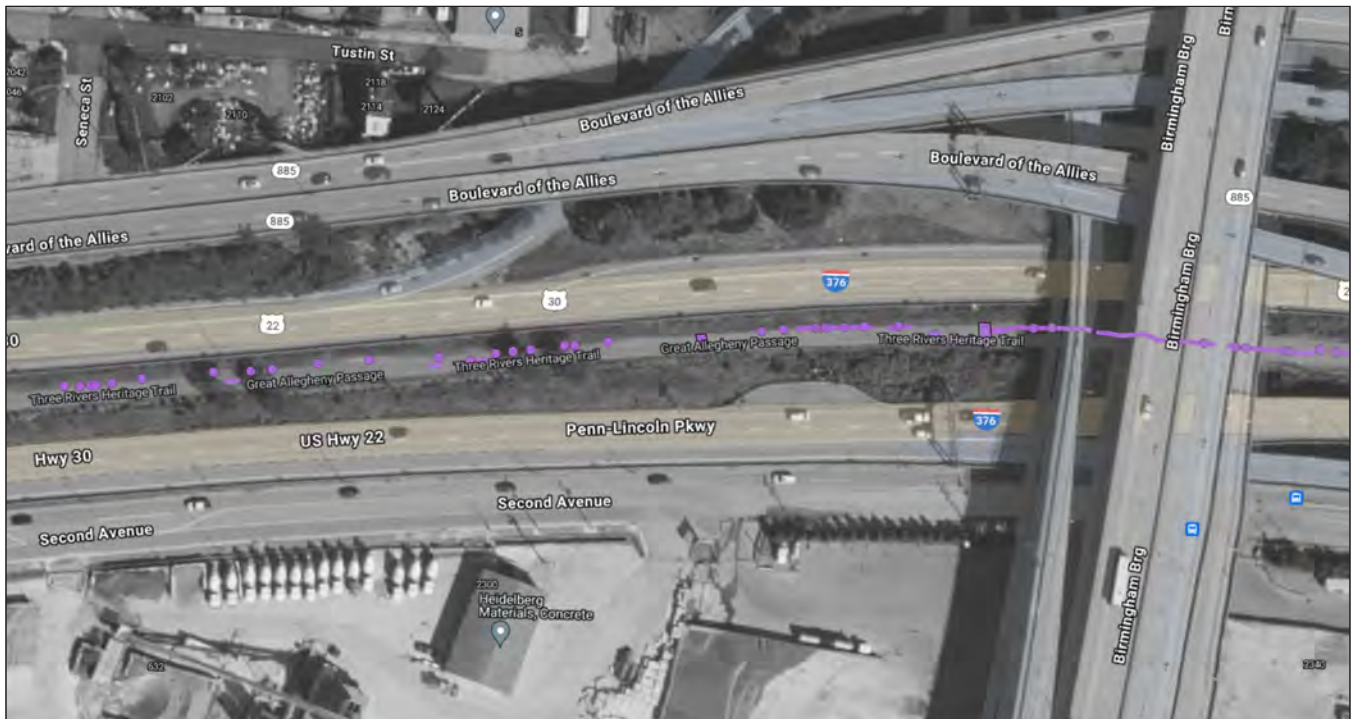
- Patched area (~20 sf).
- Cracked/heaved area with 1–2 inch vertical deflection (~30 sf).
- Significant longitudinal/edge cracking, possibly from heavy machinery/truck traffic at Heidelberg Materials & Concrete.
- Numerous transverse/longitudinal/edge cracks. Mostly minor/moderate, but frequent enough to indicate end of service life.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,457.81	SY	\$ 120.00	\$ 174,937.20
Base Course Preparation	1,457.81	SY	\$ 30.00	\$ 43,734.30

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 218,671.50	\$ 216.67



Assessment Rating: Poor to Fair, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Allegheny South - Section 1, Segment 3

Wharf to Roberto Clemente Bridge

Length (ft): 1,098

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Oversized double inlet is generally functional, but the grate is deformed/corroded with missing sections. Not critical.
- Crumbling and broken pavement (~6 sf).
- Crumbling, broken seawall/pavement near the bridge abutment (~18 sf missing). Recommend individual slab replacements.
- Crumbling and broken pavement (~40 sf).
- Crumbling and broken pavement (~20 sf).
- Crumbling and broken pavement (~40 sf).
- Generally cracked and patched area.
- Grass strip along path prevents runoff, leading to sediment buildup. Hand-cut channels in the embankment reduce ponding.
- Numerous instances of corner cracking, transverse cracking, and longitudinal cracking.
- Entire slab is sunken by 2–3 inches, creating a tripping hazard.

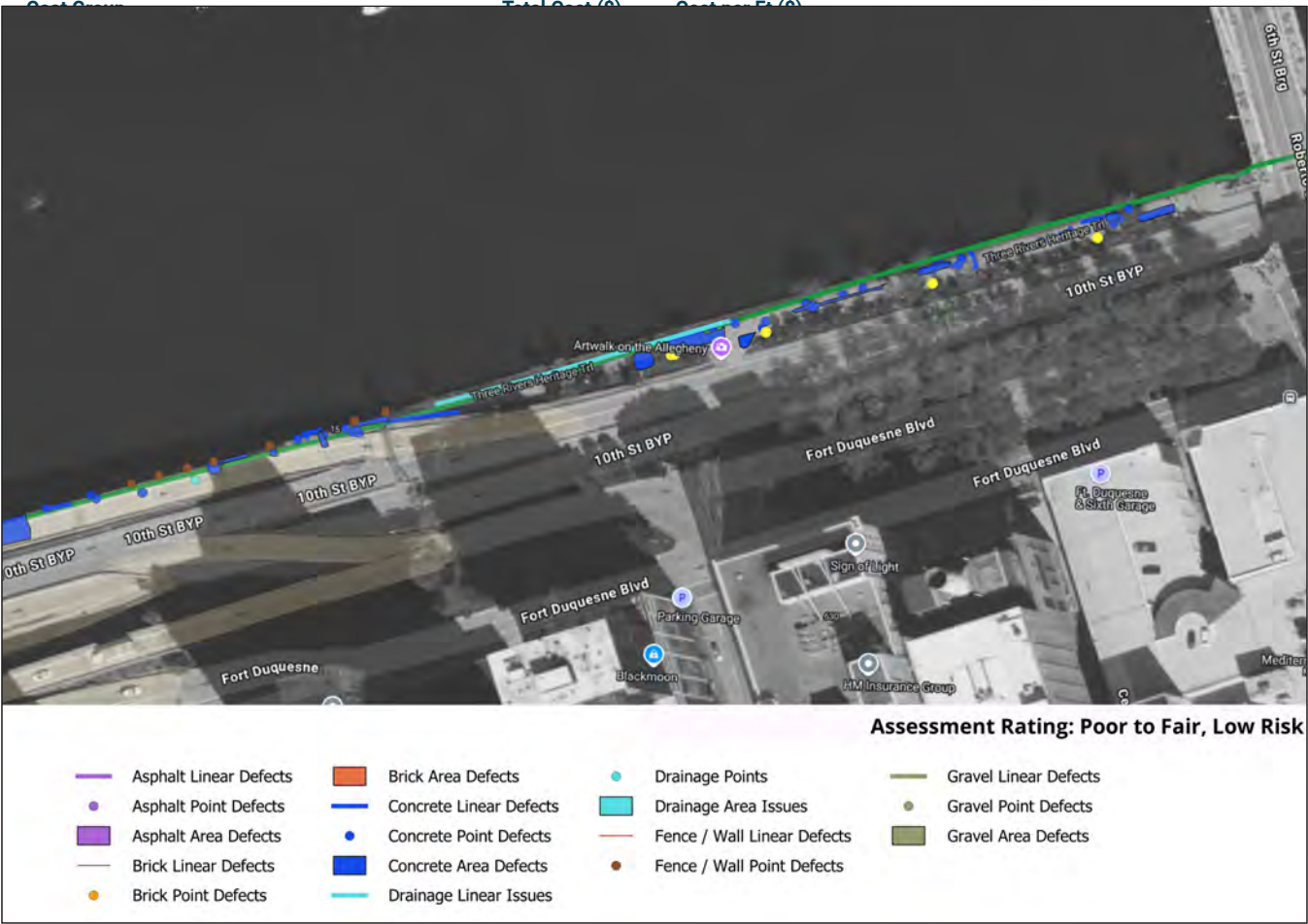
Wall, Fence, and Streambank

- Chunks of the concrete river wall are broken off at the top, exposing reinforcement. Steel rails must span several feet.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Concrete Paving	1,098.28	SY	\$ 150.00	\$ 164,742.00

Summary by Category



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 3

Roberto Clemente Bridge to Rachel Carson Bridge

Length (ft): 1,080

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Considerable region of very aged asphalt with significant alligator cracking, east of the Sugarman sculpture to the Andy Warhol Bridge.
- Trapped ponded area under bridge abutments (efflorescence on concrete). Some bank erosion on downstream side.
- Minor corner cracking of the concrete slab at one location in Allegheny Landing.
- Sparse minor longitudinal cracks, plus some transverse/corner cracking between Andy Warhol Bridge and Rachel Carson Bridge.

Wall, Fence, and Streambank

- Naturalized steep slopes in 'Fair' condition per ACOE. No immediate recommendations. Some future slope armoring may be beneficial.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,439.53	SY	\$ 120.00	\$ 172,743.60
Base Course Preparation	1,439.53	SY	\$ 30.00	\$ 43,185.90

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 215,929.50	\$ 200.00



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Ohio North - Section 1, Segment 10

Pittsburgh Boats to Trucking Storage Yard

Length (ft): 1,084

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Area of heaving pavement, previously patched. Adjacent alligator and longitudinal cracking indicates a localized problem. Leaning slightly toward the trail; could worsen in the next several years.
- Extensive alligator cracking in this region. Pavement appears aged beyond its service life. Recommend full depth replacement.
- Heaving and alligator cracking, previously repaired with asphalt overlay. Surface is rough with ~2 inch deflection in places.
- Widespread minor alligator cracking over considerable length. Some rutting along the edge. Recommend full depth replacement.
- Large block gravity wall (likely private) is leaning towards the trail rather than away. Not critical in the short term but could become so within a few years. Recommend monitoring and talking with the private owner.
- Gravel from adjacent parking area washing onto the trail. Not a major hazard, but a possible risk for cyclists.
- Extensive cracking along the trail edge. Possibly a drainage low point with no outlet. Recommend minor drainage solution.
- Deep, relatively severe rutting with extensive alligator cracking in a low spot. Suggest addressing drainage via cross slope or a small yard drain if path is repaired.
- Extensive alligator cracking across the entire trail surface. Recommend full depth replacement. Not yet a major cycling hazard.
- Severe alligator cracking over large areas.
- Heavy density of transverse cracks, plus numerous longitudinal cracks throughout entire segment.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	1,324.41	SY	\$ 120.00	\$ 158,929.20
Base Course Preparation	1,324.41	SY	\$ 30.00	\$ 39,732.30

Summary by Category



Three Rivers Heritage Trail, Poor to Fair, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 15

Second Avenue to UPMC Parking Lot

Length (ft): 1,041

Trail Surface, Asphalt Paving Assessment and Observations

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Asphalt Paving	404.84	SY	\$ 120.00	\$ 48,580.80
Base Course Preparation	404.84	SY	\$ 30.00	\$ 12,145.20

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 60,726.00	\$ 58.33



Three Rivers Heritage Trail, Fair to Good, Low Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 32,464

Fair to Good Condition, Low Risk

In Fair to Good, Low Risk sections, the trail is generally comfortable for most users, with only minor roughness or small cracks to address. Low risk means there are no major red flags—such as steep embankments or chronic flood zones—that require urgent geotechnical attention. Maintenance focuses on preserving the decent surface condition and preventing minor issues from compounding over time. Strategies may include crack sealing, patching isolated damage, and ensuring adequate drainage. Although this category is not prone to large-scale structural failures, standard inspections—particularly after extreme weather—help confirm that there are no emerging hazards. Maintaining these segments in fair-to-good condition is typically straightforward, requiring less capital investment than higher-risk or more heavily degraded areas.

Anticipated Cost: \$195,732.00

Cost per Linear Foot: \$6.03



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 9

Champion Container Corp to Ontrac

Length (ft): 1,015

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse and longitudinal cracks in the off-trail utility area, possibly from heavier vehicular usage.
- Large off-trail paved area with cracks, weeds, and bushes. Low priority utility area.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	20	EA	\$ 144.00	\$ 2,880.00
Edge Cracking - Minor	28.00	LF	\$ 8.00	\$ 224.00
Longitudinal Crack - Minor	25.00	LF	\$ 9.00	\$ 225.00
Patching - Minor	3,304.00	SF	\$ 0.00	\$ 0.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 3,329.00	\$ 3.28



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 6

Nearby Gist Street to Heidelberg Materials & Concrete

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse, longitudinal, and edge cracks. Mostly minor/moderate, but frequent enough to indicate end of service life.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	34	EA	\$ 144.00	\$ 4,896.00
Edge Cracking - Minor	110.00	LF	\$ 8.00	\$ 880.00
Edge Cracking - Moderate	124.00	LF	\$ 12.00	\$ 1,488.00
Longitudinal Crack - Minor	61.00	LF	\$ 9.00	\$ 549.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 7,813.00	\$ 7.74



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny South - Section 1, Segment 4

Roberto Clemente Bridge to Rachel Carson Bridge

Length (ft): 1,098

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Crumbling and broken pavement (~6 sf).
- Crumbling and broken pavement (~12 sf).
- Spalling (~10 sf).
- Numerous instances of corner cracking, transverse cracking, and longitudinal cracking.
- Broken or missing concrete edge in multiple locations (popouts).
- 6" x 3 ft length of concrete edge missing.
- Crumbling, broken section (~400 sf) under the Rachel Carson Bridge and just to the west.

Wall, Fence, and Streambank

- Steel guide rail appears knocked out of place. Recommend re-fastening.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	10	EA	\$ 10.00	\$ 100.00
Popout - Minor	12	EA	\$ 8.00	\$ 96.00
Edge Cracking - Minor	19.00	LF	\$ 10.00	\$ 190.00
Longitudinal Cracking - Minor	90.00	LF	\$ 12.00	\$ 1,080.00
Crumbling / Broken - Minor	114.00	SF	\$ 25.00	\$ 2,850.00
Spalling - Minor	60.00	SF	\$ 22.00	\$ 1,320.00

Summary by Category



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 3

West Station Square Drive to Under Fort Pitt Bridge

Length (ft): 969

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

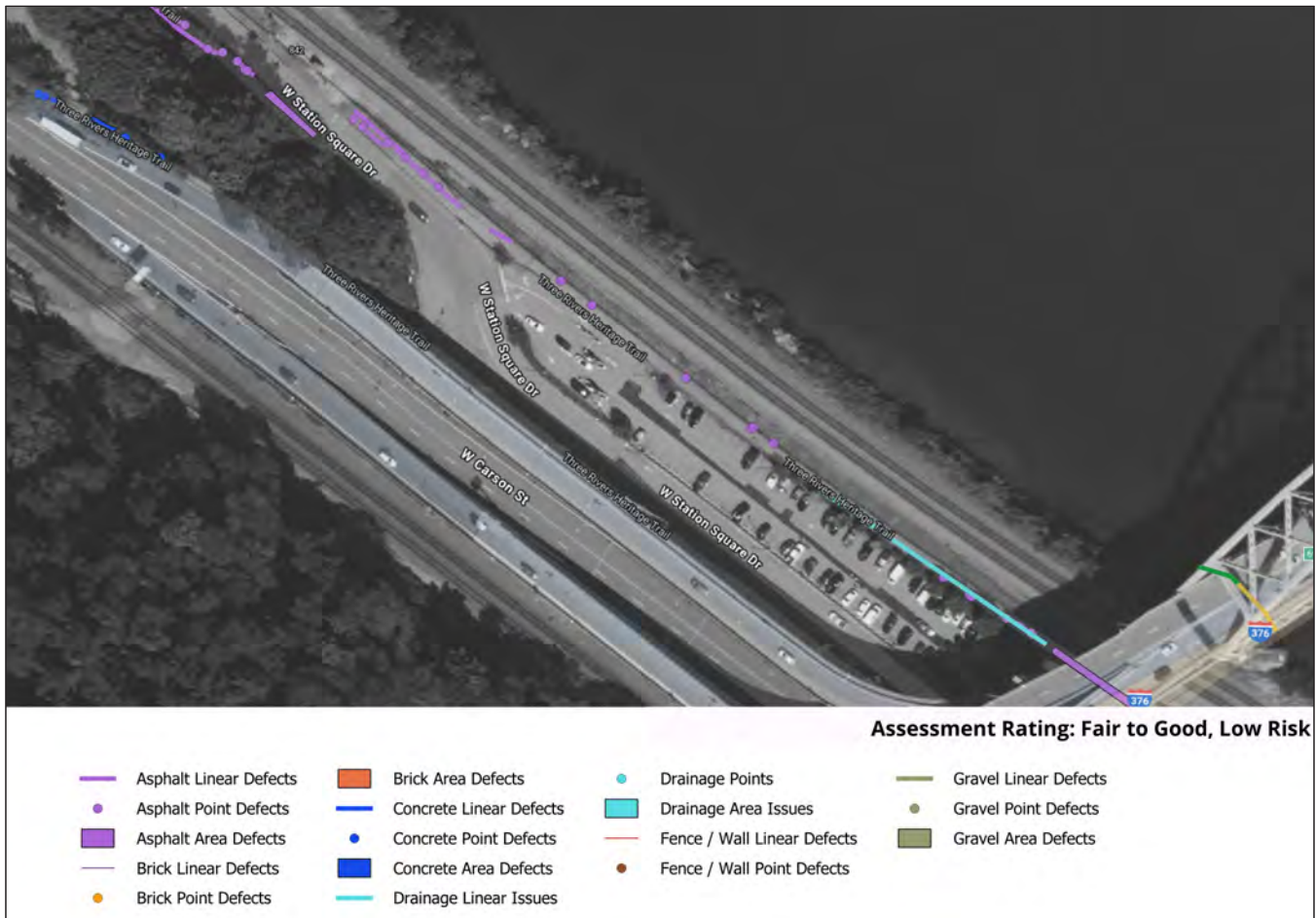
- Badly broken/cracked concrete slabs near existing street inlet (~20 ft). Recommend replacement.
- Corner-cracked slabs, transverse cracks, broken curbs, popouts in various spots.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	2	EA	\$ 50.00	\$ 100.00
Pothole - Severe	1	EA	\$ 150.00	\$ 150.00
Traverse Crack - Minor	14	EA	\$ 144.00	\$ 2,016.00
Traverse Crack - Moderate	3	EA	\$ 18.00	\$ 54.00
Edge Cracking - Minor	18.00	LF	\$ 8.00	\$ 144.00
Edge Cracking - Moderate	74.00	LF	\$ 12.00	\$ 888.00
Edge Cracking - Severe	71.00	LF	\$ 18.00	\$ 1,278.00
Longitudinal Crack - Minor	31.00	LF	\$ 9.00	\$ 279.00
Longitudinal Crack - Moderate	23.00	LF	\$ 14.00	\$ 322.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 5,231.00	\$ 5.40



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 5

Under Fort Pitt Bridge to Highmark Stadium

Length (ft): 883

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Mulch washup from adjacent planter bed across large stretches of trail.
- Patching (~10 sf).
- Patching (~25 sf).
- Numerous transverse/longitudinal cracks, edge cracking, and depressions, especially where pavement overhangs railroad drainage on the opposite fence side.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	23	EA	\$ 144.00	\$ 3,312.00
Traverse Crack - Moderate	3	EA	\$ 18.00	\$ 54.00
Edge Cracking - Minor	46.00	LF	\$ 8.00	\$ 368.00
Edge Cracking - Moderate	114.00	LF	\$ 12.00	\$ 1,368.00
Longitudinal Crack - Minor	54.00	LF	\$ 9.00	\$ 486.00
Patching - Minor	155.00	SF	\$ 0.00	\$ 0.00
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 5,732.00	\$ 6.49



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 6

Highmark Stadium to Sheraton Pittsburgh Hotel, Station Sq.

Length (ft): 1,557

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Patching (~30 sf).
- Patching (~100 sf).
- Cracked/missing bricks, sunken areas, edge loss. Widespread but more severe in certain spots. Some bricks fully missing.
- Large area (~60 sf) of alligator cracking, potholes, low point with ponding.
- Numerous transverse/longitudinal cracks, edge cracking.
- Fence damage: hole in fence.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	22	EA	\$ 144.00	\$ 3,168.00
Traverse Crack - Moderate	8	EA	\$ 18.00	\$ 144.00
Edge Cracking - Minor	51.00	LF	\$ 8.00	\$ 408.00
Edge Cracking - Moderate	70.00	LF	\$ 12.00	\$ 840.00
Longitudinal Crack - Minor	48.00	LF	\$ 9.00	\$ 432.00
Longitudinal Crack - Moderate	58.00	LF	\$ 14.00	\$ 812.00
Patching - Minor	756.00	SF	\$ 0.00	\$ 0.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 5,804.00	\$ 3.73

Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 1, Segment 4

Past Duquesne Incline to Fort Pitt Bridge

Length (ft): 1,047

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

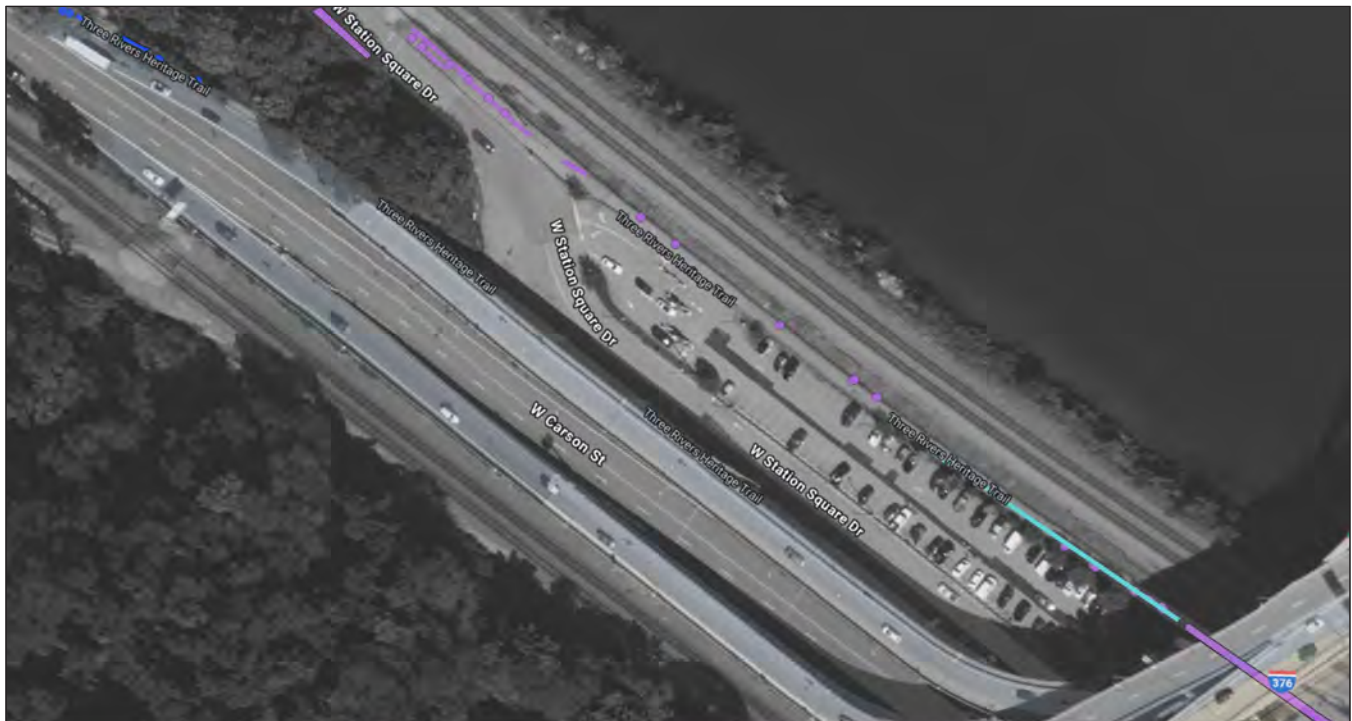
- Alligator cracking coded, but really extensive longitudinal/transverse cracks. Not an immediate hazard but suggests earlier replacement needed.
- Washout of mulch from adjacent planter bed, debris across large trail area.
- Edge cracking near railroad tracks. Paved edge drops off quickly with concentrated flow.
- Patching (~165 sf), possibly utility-related.
- Numerous transverse/longitudinal cracks and edge cracking, often linked to drainage issues.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	1	EA	\$ 10.00	\$ 10.00
Crumbling / Broken - Minor	113.00	SF	\$ 25.00	\$ 2,825.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 2,835.00	\$ 2.71



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 1, Segment 5

Grant Street to Crosstown Blvd

Length (ft): 1,025

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

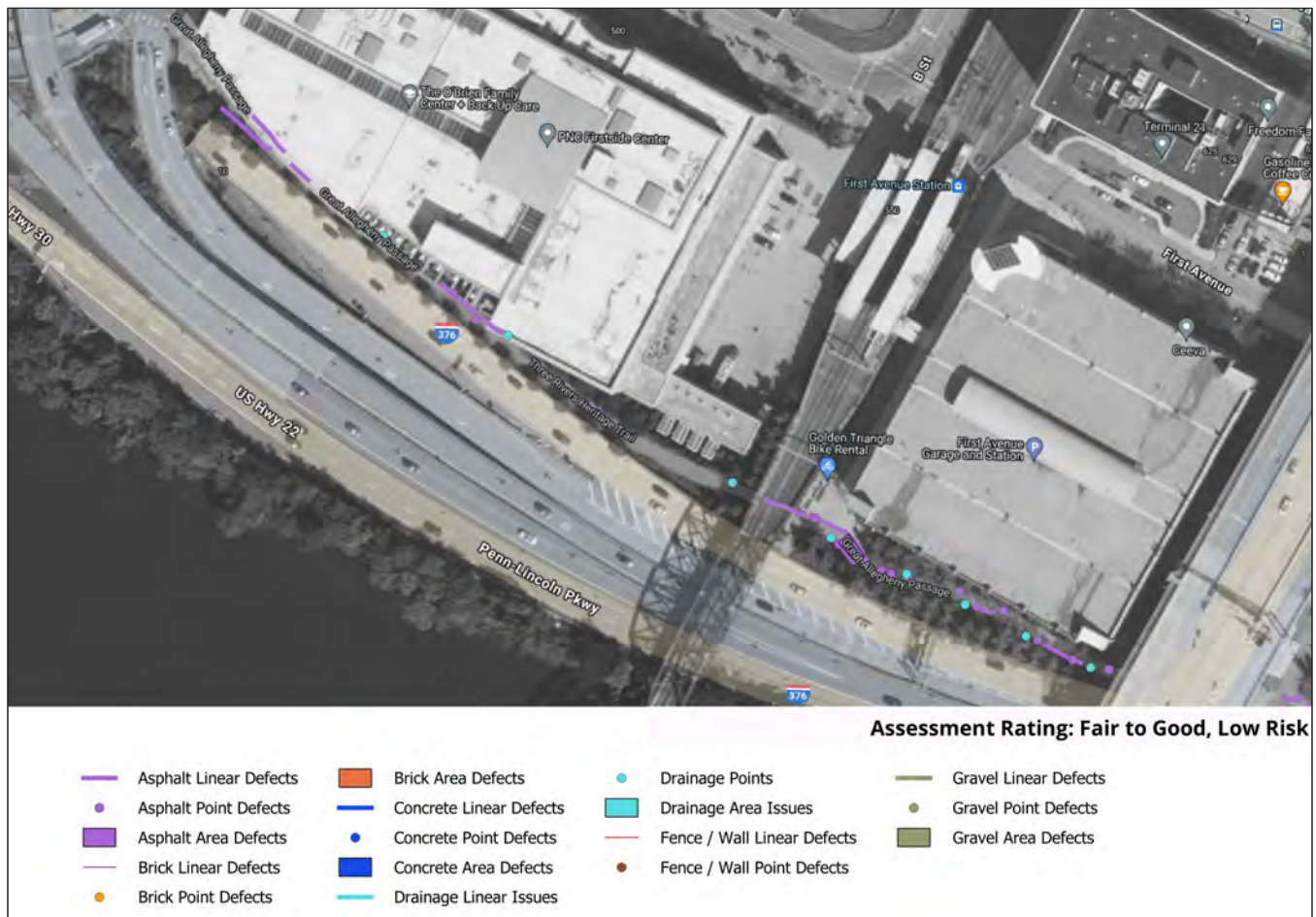
- Alligator cracking across ~40 sf area.
- Numerous transverse/longitudinal cracks, potholes, depressions (mostly minor/moderate). High frequency suggests nearing service life end.
- Type M Inlet in good condition, but a tree is growing out of it. Adjacent low point in pavement causing minor ponding.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	1	EA	\$ 50.00	\$ 50.00
Traverse Crack - Minor	13	EA	\$ 144.00	\$ 1,872.00
Edge Cracking - Minor	253.00	LF	\$ 8.00	\$ 2,024.00
Longitudinal Crack - Minor	164.00	LF	\$ 9.00	\$ 1,476.00
Alligator Cracking - Moderate	233.00	SF	\$ 40.00	\$ 9,320.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 14,742.00	\$ 14.38



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 1

Crosstown Blvd to Allegheny County Jail

Length (ft): 351

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Alligator cracking and sunken transition (~32 sf) between older pavement and newer adjacent pavement.
- Numerous transverse/longitudinal cracks, potholes, and depressions. Mostly minor to moderate, but frequency is high, indicating end of service life.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	8	EA	\$ 144.00	\$ 1,152.00
Edge Cracking - Minor	11.00	LF	\$ 8.00	\$ 88.00
Longitudinal Crack - Minor	76.00	LF	\$ 9.00	\$ 684.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,924.00	\$ 5.48



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 2

Allegheny County Jail to Allegheny County Jail Parking Lot

Length (ft): 673

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse/longitudinal cracks, potholes, and depressions. Mostly minor to moderate, but frequency is high, indicating end of service life.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	14	EA	\$ 144.00	\$ 2,016.00
Edge Cracking - Minor	8.00	LF	\$ 8.00	\$ 64.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,080.00	\$ 3.09



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 4

10th Street Bridge to Second Avenue

Length (ft): 1,865

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Heaving by tree roots (marked in red paint).
- Shallow but extensive alligator cracking (~60 sf).
- Numerous transverse/longitudinal cracks, potholes, and depressions. Mostly minor/moderate but frequent, indicating nearing end of service life.

Wall, Fence, and Streambank

- Aged 2.5 ft timber planter wall. Timbers at risk of falling into travel lane—recommend replacement within a year.
- Another planter wall in better shape, but recommend replacement in 1–3 years.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	71	EA	\$ 144.00	\$ 10,224.00
Edge Cracking - Minor	87.00	LF	\$ 8.00	\$ 696.00
Longitudinal Crack - Minor	171.00	LF	\$ 9.00	\$ 1,539.00
Alligator Cracking - Minor	358.00	SF	\$ 30.00	\$ 10,740.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 23,199.00	\$ 12.44



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 9

SDI Building to Technology Drive

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Significant erosion near parkway concrete barrier, exposing utility pipes and creating channelized erosion. Minimal risk to path currently.
- PennDOT Type M Inlet covered with plywood/silt socks; under-bridge area is muddy with gravel plant vehicles.
- Inlet in a depression at trail edge, partially covered. May be missing a grate or clogged. Recommend replacement/repair as needed.
- Numerous transverse/longitudinal/edge cracks. Mostly minor, but frequent enough to warrant repairs.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	24	EA	\$ 144.00	\$ 3,456.00
Edge Cracking - Minor	18.00	LF	\$ 8.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 3,600.00	\$ 3.57



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 5

Second Avenue to Nearby Gist Street

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse, longitudinal, and edge cracks. Mostly minor/moderate, but frequent enough to indicate end of service life.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	33	EA	\$ 144.00	\$ 4,752.00
Edge Cracking - Minor	24.00	LF	\$ 8.00	\$ 192.00
Longitudinal Crack - Minor	12.00	LF	\$ 9.00	\$ 108.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 5,052.00	\$ 5.01



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 9

GAMMA Sports Around Loop to GAMMA Sports Parking

Length (ft): 1,849

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

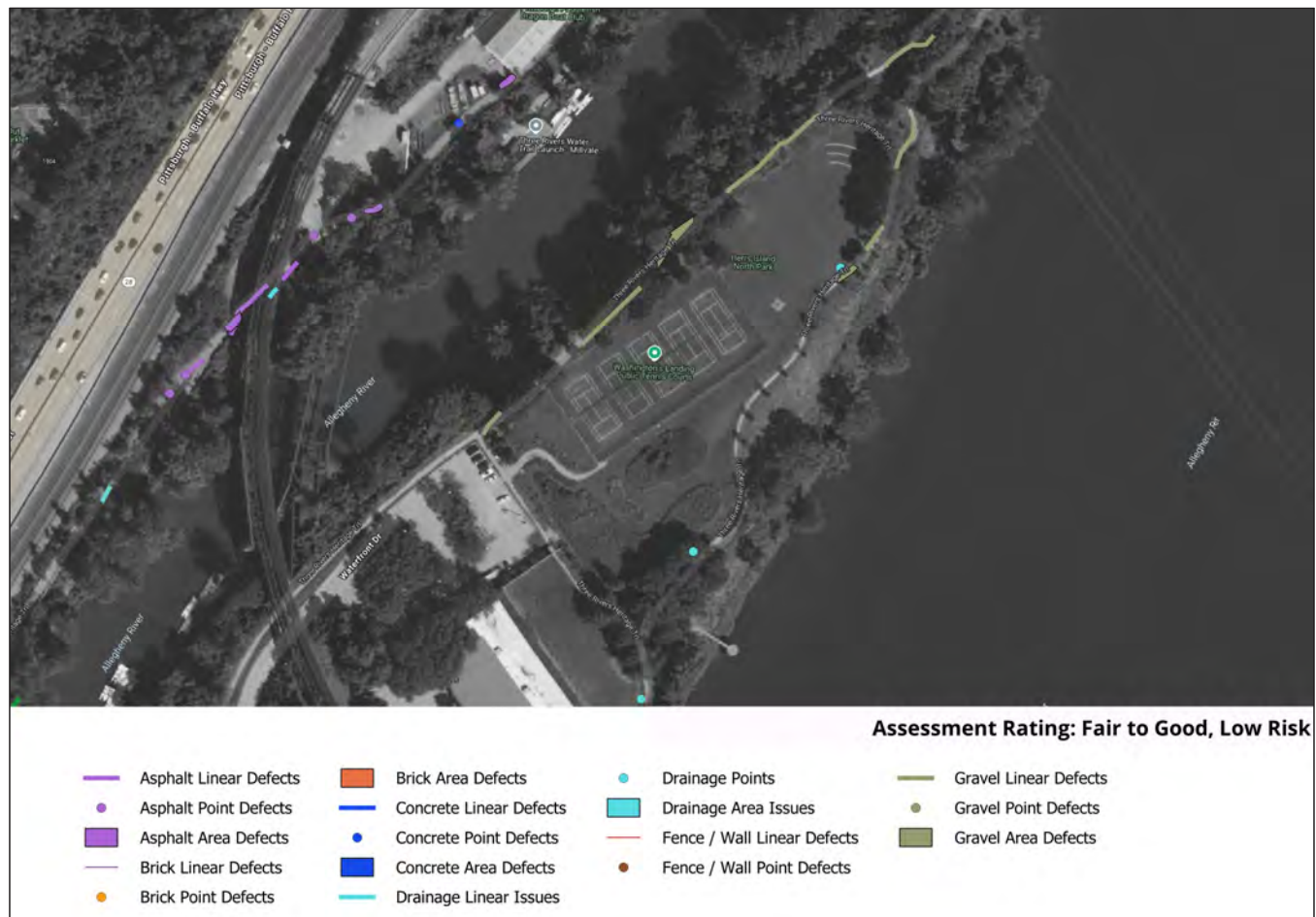
- Erosion of trail aggregate in many areas due to small-surface materials on steep grades.
- Minor loss of surface material down to coarser aggregate base.
- Washout down to coarse aggregate where flow runs down the middle/edge of path.
- Deeper erosion along northern edge of island, with material loss up to 1–2 inches.
- Washout/deposition of fines near tennis courts suggests a ponding location.
- Surface material loss over a large area. Flow from a grassy area above is creating an eroded channel along a steep slope.
- North of tennis courts, path material erodes at the edge; washout of mulch/leaf debris from hillside.
- Very minor surface erosion from concentrated flow west of tennis courts.

Cost Estimate for Trail Surface, Crushed Limestone

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Erosion - Minor	223.00	LF	\$ 6.00	\$ 1,338.00
Erosion - Moderate	221.00	LF	\$ 10.00	\$ 2,210.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 3,548.00	\$ 1.92



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 10

GAMMA Sports Parking to Three Rivers Rowing Association

Length (ft): 530

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Several long longitudinal cracks in the pavement surface.

Wall, Fence, and Streambank

- Tall masonry wall next to steps along trail. Appears privately owned and in good shape aside from possibly loose upper-course blocks.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 4

Opp. Three Rivers Rowing Assoc. to Three Rivers Water Trail

Length (ft): 999

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Edge of slope close to path edge. Slopes vegetated and stabilized, but a safety concrete barrier is sliding downslope near the bridge, trapping water.
- Considerable erosion where path flow concentrates into river. Unvegetated swale cut into grade. Some asphalt loss at top of the swale. The surface for ~20 feet upgrade shows advanced deterioration (falling, rutting, alligator).
- Numerous potholes, heaving, dimpling, alligator cracking, plus transverse and edge cracking throughout the segment.
- Moderate raveling of surface; shallow potholes and cracks. This appears to be the end of the Three Rivers Heritage Trail.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Moderate	1	EA	\$ 100.00	\$ 100.00
Traverse Crack - Minor	3	EA	\$ 144.00	\$ 432.00
Edge Cracking - Minor	63.00	LF	\$ 8.00	\$ 504.00
Patching - Minor	261.00	SF	\$ 0.00	\$ 0.00
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,180.00	\$ 1.18



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 4, Segment 7

Trail Opposite Waterfront Drive to Homestead Grays Bridge

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

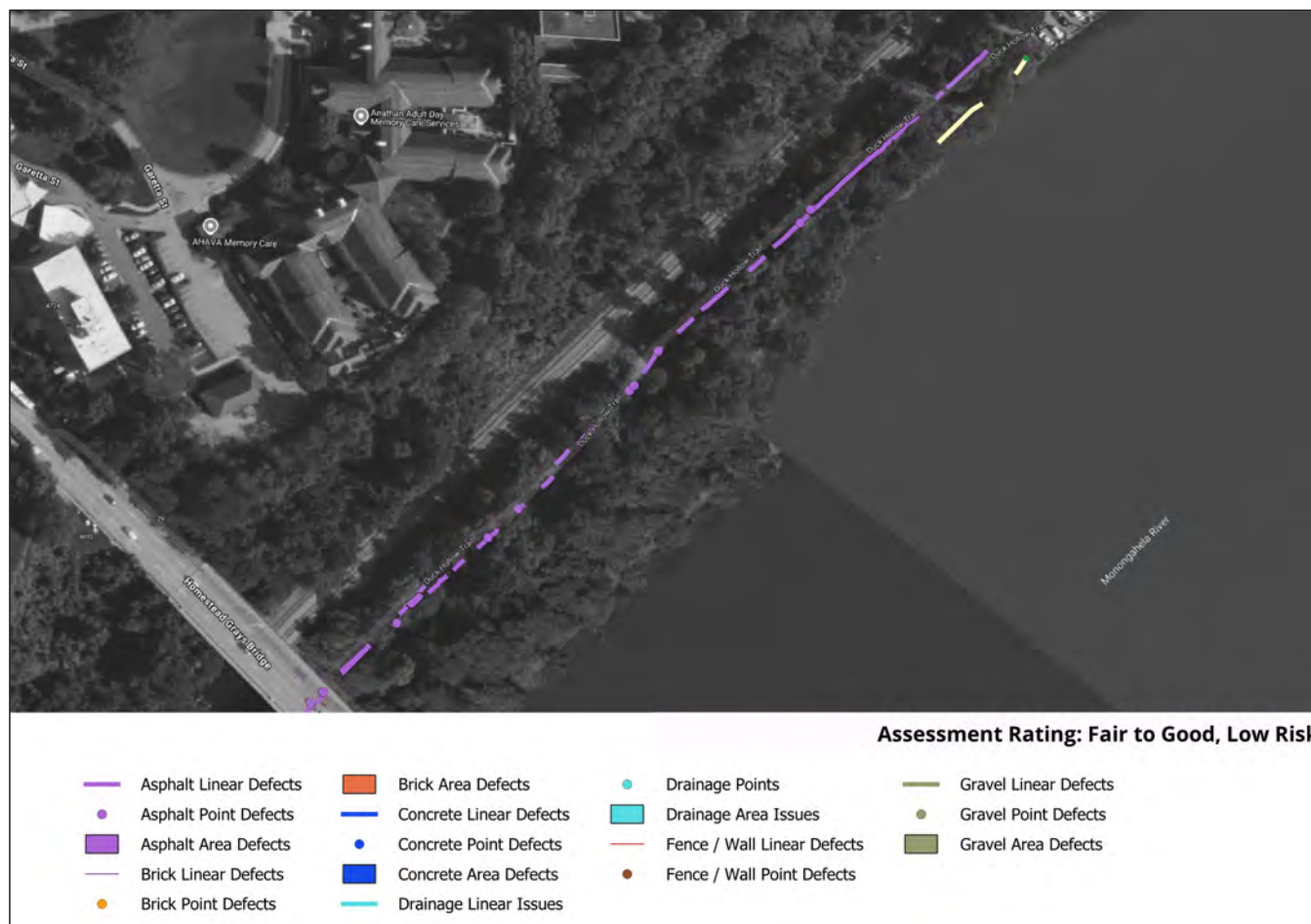
- Cross pipe is very shallow. Upstream joint offset by ~3 in. Possibly intentional but could be a future storm event risk.
- Natural drainage way with no path crossing. Eroding pavement edge ~6 in deep. Recommend inlet or runnel if possible.
- Minor to moderate edge cracking.
- Numerous transverse/longitudinal cracks and some heaved areas, mostly minor.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	1	EA	\$ 50.00	\$ 50.00
Traverse Crack - Minor	6	EA	\$ 144.00	\$ 864.00
Edge Cracking - Minor	139.00	LF	\$ 8.00	\$ 1,112.00
Edge Cracking - Moderate	347.00	LF	\$ 12.00	\$ 4,164.00
Longitudinal Crack - Minor	83.00	LF	\$ 9.00	\$ 747.00
Alligator Cracking - Minor	616.00	SF	\$ 30.00	\$ 18,480.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 25,417.00	\$ 23.43



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 4, Segment 6

Trail Opposite Courtyard Pittsburgh to Opposite Waterfront

Length (ft): 1,085

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Small diameter (6–8 in) corrugated metal cross pipe, upstream side clogged with debris but still passing base flow. Recommend clearing and possibly adding a catch basin.
- Minor to moderate edge cracking along river side (possible slippage).
- Numerous transverse/longitudinal cracks and some depressed ponding areas, mostly minor.

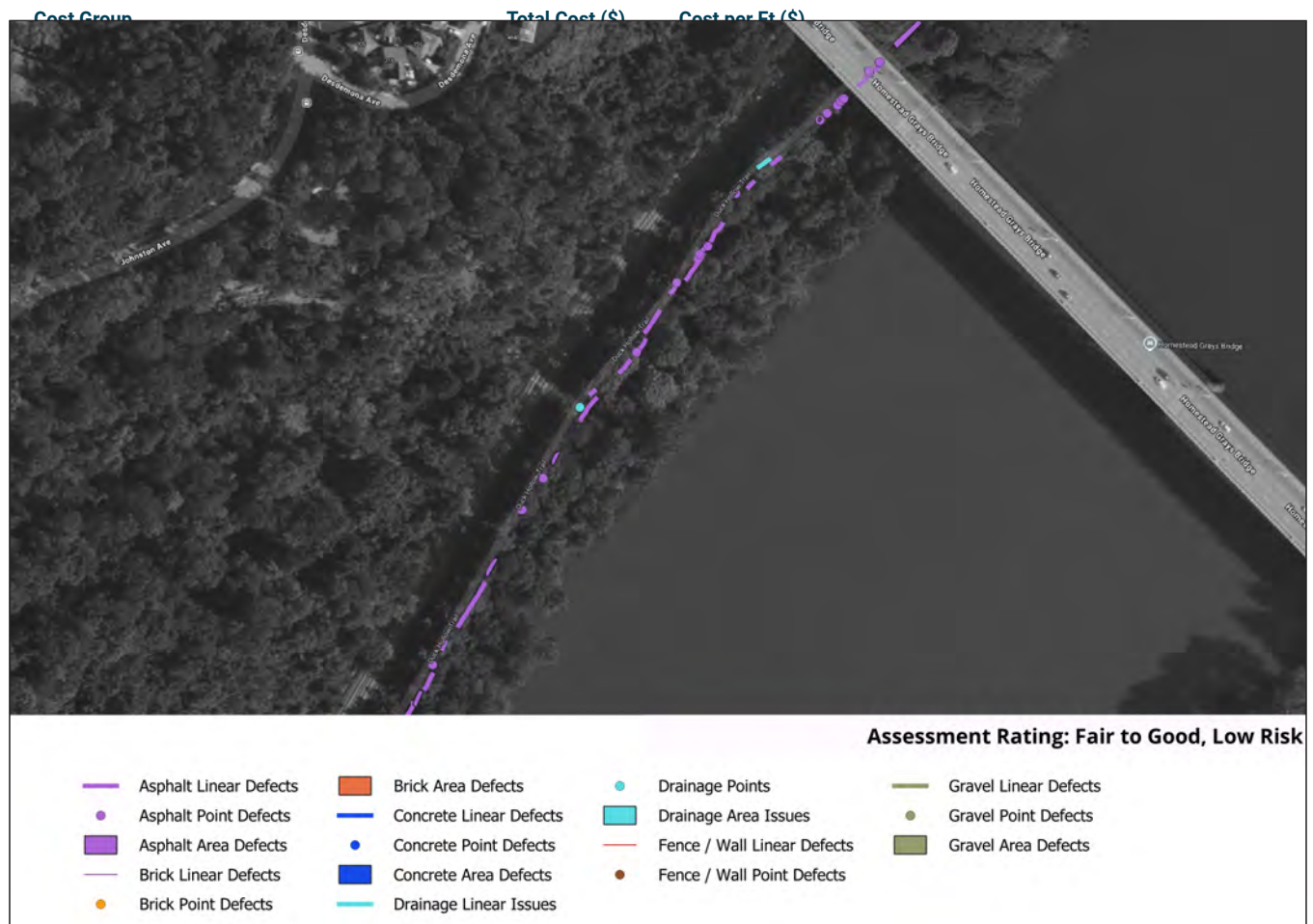
Wall, Fence, and Streambank

- Army Corp study indicates 'Fair' riprap adjacent. Minor to moderate cracking may be linked to slope. Recommend monitoring.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	3	EA	\$ 50.00	\$ 150.00
Pothole - Moderate	1	EA	\$ 100.00	\$ 100.00
Traverse Crack - Minor	11	EA	\$ 144.00	\$ 1,584.00
Traverse Crack - Moderate	1	EA	\$ 18.00	\$ 18.00
Edge Cracking - Minor	219.00	LF	\$ 8.00	\$ 1,752.00
Edge Cracking - Moderate	99.00	LF	\$ 12.00	\$ 1,188.00
Longitudinal Crack - Minor	64.00	LF	\$ 9.00	\$ 576.00
Alligator Cracking - Minor	333.00	SF	\$ 30.00	\$ 9,990.00

Summary by Category



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 7

South Side Dog Park to Past Birmingham Bridge

Length (ft): 895

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Localized edge failure (poor transition to grade).
- Very wide transverse crack (3–5 in).
- Another wide transverse crack (2–4 in).
- Deep transverse crack with edge settlement.
- Faint longitudinal crack + some alligator cracking.
- High density of cracks suggests nearing end of service life.
- Minor asphalt settlement in small patched areas (~3 ft wide).

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 16

Trail Along E Carson St to Past Becks Run Road

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Substantial asphalt patching (~500 sf).
- High density of transverse/longitudinal cracks suggests nearing end of service life.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 8

Past Birmingham Bridge to South Side Marina

Length (ft): 1,156

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Heaving/dimpling (dendritic) from likely tree roots.
- Minor edge cracking where asphalt meets aggregate trail (thin overlay edges).
- Edge failure over ~20+ ft segment at a low spot, possible global sliding.
- Minor edge/alligator cracking from mismatched edge conditions.
- Longitudinal crack at interface of two asphalt pours. Previously sealed, now pulling apart. Local edge failures.
- High density of cracks; near end of service life. Some wide enough for weeds/grass.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela South - Section 3, Segment 1
Past Becks Run Road to Trail Along E Carson St
Length (ft): 1,141

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Patching (~150 sf).

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Fair to Good, Low Risk

- Asphalt Linear Defects - Asphalt Point Defects - Asphalt Area Defects - Brick Linear Defects - Brick Point Defects	- Brick Area Defects - Concrete Linear Defects - Concrete Point Defects - Concrete Area Defects - Drainage Linear Issues	- Drainage Points - Drainage Area Issues - Fence / Wall Linear Defects - Fence / Wall Point Defects	- Gravel Linear Defects - Gravel Point Defects - Gravel Area Defects
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Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Ohio North - Section 1, Segment 14

Sproat Way to Heinz Quay Boat Launch

Length (ft): 1,233

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Loss of granular slope material over time, with visible erosion patterns on the slope (minor).
- Rill erosion on the hillside adjacent to Science Center sidewalk, depositing sediment on the trail edge. Recommend slope stabilization or a minor drainage structure.
- Extensive transverse and longitudinal cracking from Casino parking lot to past the Science Center.
- Area of patched asphalt.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	126.00	LF	\$ 10.00	\$ 1,260.00
Spalling - Minor	169.00	SF	\$ 22.00	\$ 3,718.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 4,978.00	\$ 4.04



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Ohio North - Section 1, Segment 9

N. Franklin Street to Pittsburgh Boats

Length (ft): 1,023

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Areas of alligator cracking requiring full depth replacement.
- Mix of broken and spalling pavement, missing edge, patching, and utility cuts. Appears to be privately owned with the trail right-of-way running through the middle.
- Dense distribution of transverse cracking and numerous longitudinal cracks.
- Large area of raveling, alligator cracking, and longitudinal cracking. Surface material loss ~1/4 to 1/2 inch. Recommend full depth replacement.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	2	EA	\$ 50.00	\$ 100.00
Traverse Crack - Minor	25	EA	\$ 144.00	\$ 3,600.00
Traverse Crack - Moderate	1	EA	\$ 18.00	\$ 18.00
Longitudinal Crack - Minor	172.00	LF	\$ 9.00	\$ 1,548.00
Alligator Cracking - Minor	95.00	SF	\$ 30.00	\$ 2,850.00
Traverse Crack - Minor	5	EA	\$ 144.00	\$ 720.00

Summary by Category

Cost Group

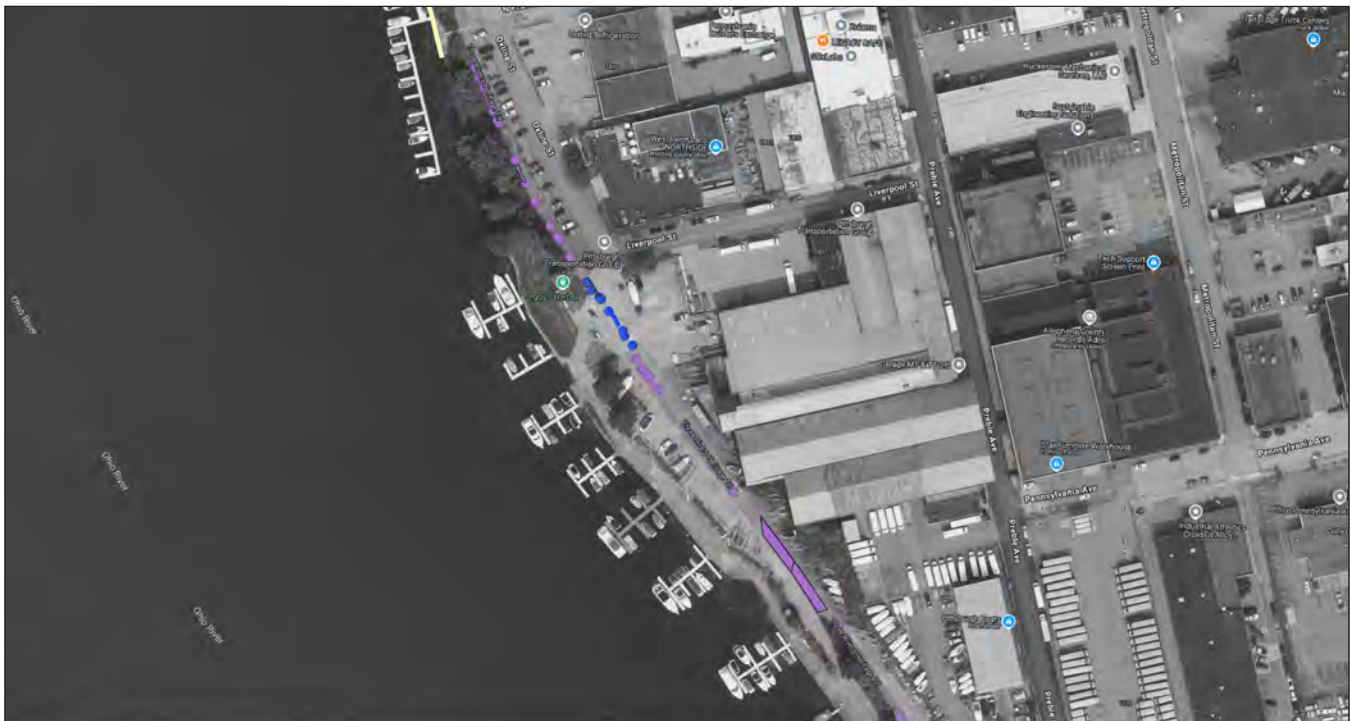
Trail Surface, Asphalt Paving

Total Cost (\$)

\$ 8,836.00

Cost per Ft (\$)

\$ 8.64



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Ohio North - Section 1, Segment 12

West End Bridge to Rivers Casino Edge

Length (ft): 1,084

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Concrete masonry unit block ~7 to 8 feet tall immediately along the path edge. Wall leans towards the path with ~8 to 10 inches of horizontal deflection top-to-bottom. Cracked in several locations. Coded as minor due to no imminent failure, but this could change within years.
- Heavy density of transverse cracks, widespread edge cracking, and numerous longitudinal cracks throughout entire segment.

Wall, Fence, and Streambank

- Naturalized steep slope in 'Fair' condition per ACOE. Generally stable, but failed timber / steel crib wall suggests slope movement in the past. Low to moderate risk.
- Bank erosion is severe upstream of the icebreaker. Rated 'Poor' by ACOE. Loose shelf stone suggests a former wall. Moderate to high risk given proximity and height.
- Icebreaker structure is in poor condition. Close to the trail, but not part of trail maintenance.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	49	EA	\$ 144.00	\$ 7,056.00
Edge Cracking - Minor	69.00	LF	\$ 8.00	\$ 552.00
Longitudinal Crack - Minor	193.00	LF	\$ 9.00	\$ 1,737.00

Summary by Category



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Ohio North - Section 1, Segment 11

Trucking Storage Yard to West End Bridge

Length (ft): 1,084

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- A failed crib wall is immediately adjacent to the path, 5 feet or less from the edge. In some spots it's as close as 2 feet. The drop-off is steep. Steel I-beam supports are visible but horizontal members are not. Edge cracking along the trail indicates downslope movement. Boat trip photos confirm failed crib wall here.
- Heavy density of transverse cracks, widespread minor edge cracking, and numerous longitudinal cracks throughout entire segment.

Wall, Fence, and Streambank

- Naturalized steep slope in 'Fair' condition per ACOE. Generally stable, but failed timber / steel crib wall suggests past slope movement. Low to moderate risk.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	4	EA	\$ 50.00	\$ 200.00
Traverse Crack - Minor	57	EA	\$ 144.00	\$ 8,208.00
Edge Cracking - Minor	602.00	LF	\$ 8.00	\$ 4,816.00
Longitudinal Crack - Minor	743.00	LF	\$ 9.00	\$ 6,687.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 19,911.00	\$ 18.37



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Ohio North - Section 1, Segment 16

Art Rooney Avenue to Fort Duquesne Bridge

Length (ft): 997

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Very long, moderately wide crack spanning multiple adjacent concrete slabs, suggesting global horizontal movement toward the river. Slabs seem monolithic. DPW has tried to repair by cleaning and widening the crack, then filling, but filler is missing or ineffective in places.
- Numerous longitudinal cracks in the river's edge concrete plaza area and along the main path, plus a high density of transverse cracking.

Wall, Fence, and Streambank

- Concrete river walls along this stretch deemed 'Favorable' to 'Fair' condition by ACOE. No recommendations at this time.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	2	EA	\$ 10.00	\$ 20.00
Longitudinal Cracking - Minor	248.00	LF	\$ 12.00	\$ 2,976.00
Longitudinal Cracking - Moderate	259.00	LF	\$ 18.00	\$ 4,662.00
Crumbling / Broken - Minor	470.00	SF	\$ 25.00	\$ 11,750.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 19,408.00	\$ 19.47



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 10

Ontrac to Herr's Island Bridge

Length (ft): 668

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- 25-foot stretch of alligator cracking.
- Minor edge cracking in numerous places west of the pedestrian ramp, plus some longitudinal cracks.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00
Alligator Cracking - Minor	21.00	SF	\$ 30.00	\$ 630.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 774.00	\$ 1.16



Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 16

Saline Street to Second Avenue

Length (ft): 1,120

Trail Surface, Asphalt Paving Assessment and Observations

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 17

Naylor Street to Saline Street

Length (ft): 841

Trail Surface, Asphalt Paving Assessment and Observations

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Fair to Good, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Fair to Good, Low Risk

SEGMENT: Allegheny South - Section 2, Segment 6

25th Street to 27th Street

Length (ft): 1,056

Trail Surface, Crushed Limestone Assessment and Observations
Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00

		Assessment Rating: Fair to Good, Low Risk	
Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

Summary Report - Trails Surfaces

Total Trail Length (ft): 52,281

Good to Excellent Condition, Low Risk

Good to Excellent, Low Risk trail segments exemplify the most favorable combination of quality and safety. The tread is smooth and stable, while the surrounding environment has no noteworthy slope or structural threats. Riders and pedestrians can fully enjoy the trail with minimal disruptions or hazards. The main management goal is routine upkeep—sweeping, checking for surface cracks, trimming vegetation—and occasionally verifying that drainage systems work as intended. Though these segments need the least intense oversight, basic monitoring ensures they remain in excellent condition for the long term. Inspectors should still watch for early signs of wear or unexpected erosion, but this category rarely requires major interventions, allowing resources to focus on more vulnerable sections elsewhere.

Anticipated Cost: \$40,151.00

Cost per Linear Foot: \$0.77



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 2

Second Ave UPMC Parking to Past Blair Street

Length (ft): 1,011

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Minor to moderate rill erosion along the railroad tracks in numerous places.

Cost Estimate for Trail Surface, Crushed Limestone

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Erosion - Minor	9.00	LF	\$ 6.00	\$ 54.00
Erosion - Moderate	4.00	LF	\$ 10.00	\$ 40.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 94.00	\$ 0.09



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny South - Section 3, Segment 6

Terminal End at Railroad to 39th Street

Length (ft): 914

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Minor surface erosion at the end of eroded rills where an outlet point drops off over the hillside. Recommend further investigation to determine if erosion below is problematic.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 1, Segment 1

The Point to Commonwealth Place

Length (ft): 1,474

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Longitudinal crack running across multiple pavers, suggesting monolithic action.
- Chipped or broken paver/concrete corner.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 1, Segment 2

Commonwealth Place to Mon Wharf Landing (Market St)

Length (ft): 1,123

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Broken and missing bluestone pavers in numerous locations.
- Numerous areas of broken or deteriorated concrete (coded as popouts in GIS). Mostly minor to moderate failures.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Moderate	1	EA	\$ 100.00	\$ 100.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 100.00	\$ 0.09



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 1, Segment 3

Mon Wharf Landing (Market St) to Smithfield Street Ramp

Length (ft): 1,123

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor transverse crack in one location.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 144.00	\$ 0.13



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 1, Segment 4

Smithfield Street Ramp to Grant Street

Length (ft): 1,060

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Minor corner crack in one location.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	1	EA	\$ 10.00	\$ 10.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 10.00	\$ 0.01



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 13

Hot Metal Bridge Ramp to Trail Above Blair Street

Length (ft): 1,309

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Longitudinal cracking along bridge centerline.
- Minor transverse/longitudinal cracks in some areas.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 144.00	\$ 0.11



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 10

Technology Drive to Middle Access Drive

Length (ft): 1,009

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Dendritic cracking possibly from tree roots. Minimal vertical deflection.
- Numerous transverse/longitudinal/edge cracks. Mostly minor, but frequent enough to warrant repairs.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	23	EA	\$ 144.00	\$ 3,312.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 3,312.00	\$ 3.28



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 11

Middle Access Drive to Bates Street

Length (ft): 1,026

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

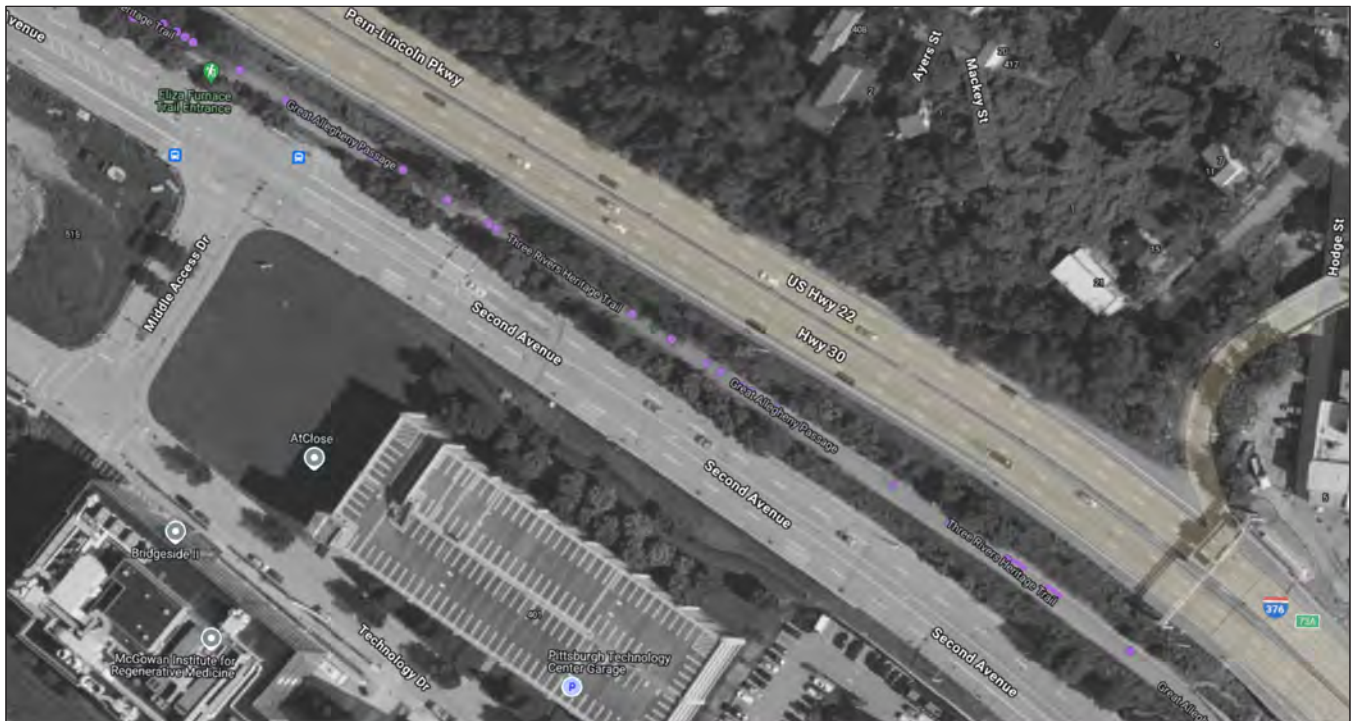
- Numerous transverse/longitudinal/edge cracks. Mostly minor, but frequent enough to warrant repairs.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	28	EA	\$ 144.00	\$ 4,032.00
Edge Cracking - Minor	24.00	LF	\$ 8.00	\$ 192.00
Longitudinal Crack - Minor	91.00	LF	\$ 9.00	\$ 819.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 5,043.00	\$ 4.91



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 12

Bates Street to Hot Metal Bridge Ramp

Length (ft): 887

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous transverse/longitudinal/edge cracks. Mostly minor, but frequent enough to warrant repairs.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	7	EA	\$ 144.00	\$ 1,008.00
Edge Cracking - Minor	42.00	LF	\$ 8.00	\$ 336.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,344.00	\$ 1.52



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 14

Trail Above Blair Street to UPMC Parking Lot

Length (ft): 942

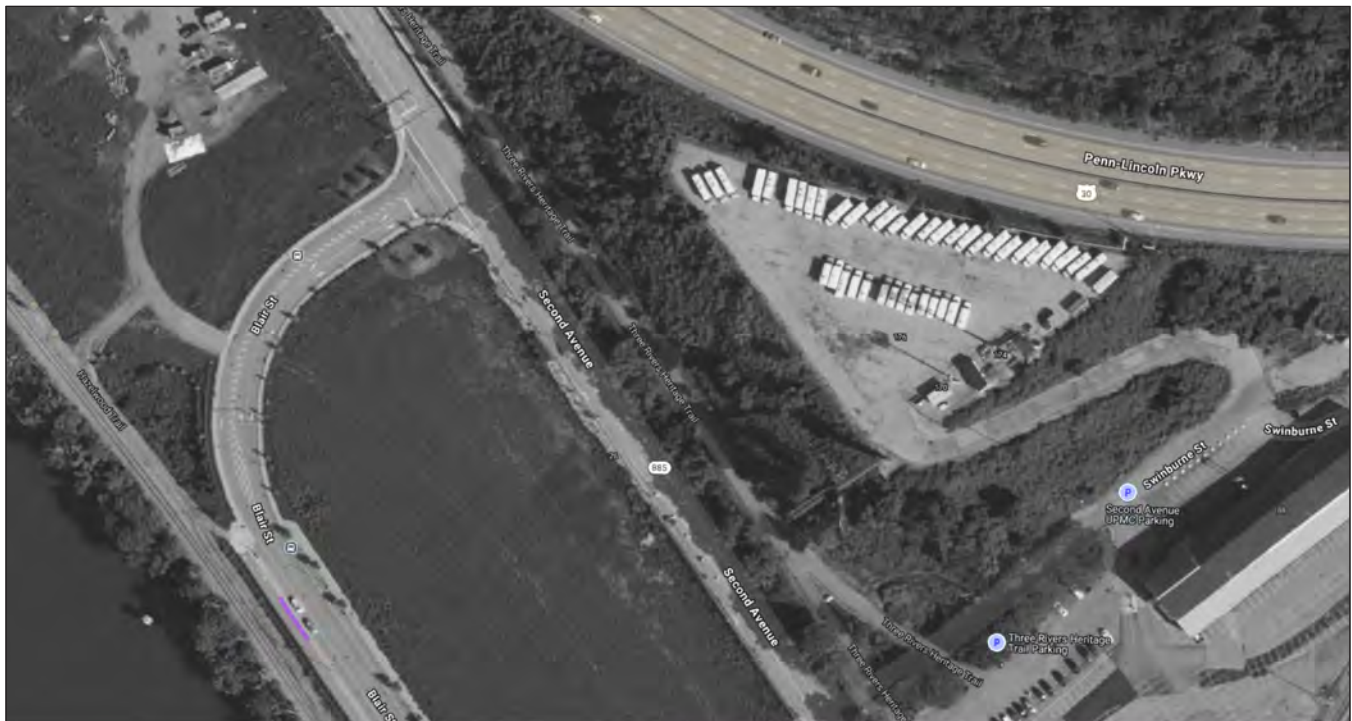
Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Trapped drainage swale at base of concrete retaining wall along path edge.
- Minor transverse/longitudinal cracks in some areas.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny South - Section 1, Segment 1

The Point to Point State Park Plaza

Length (ft): 1,131

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

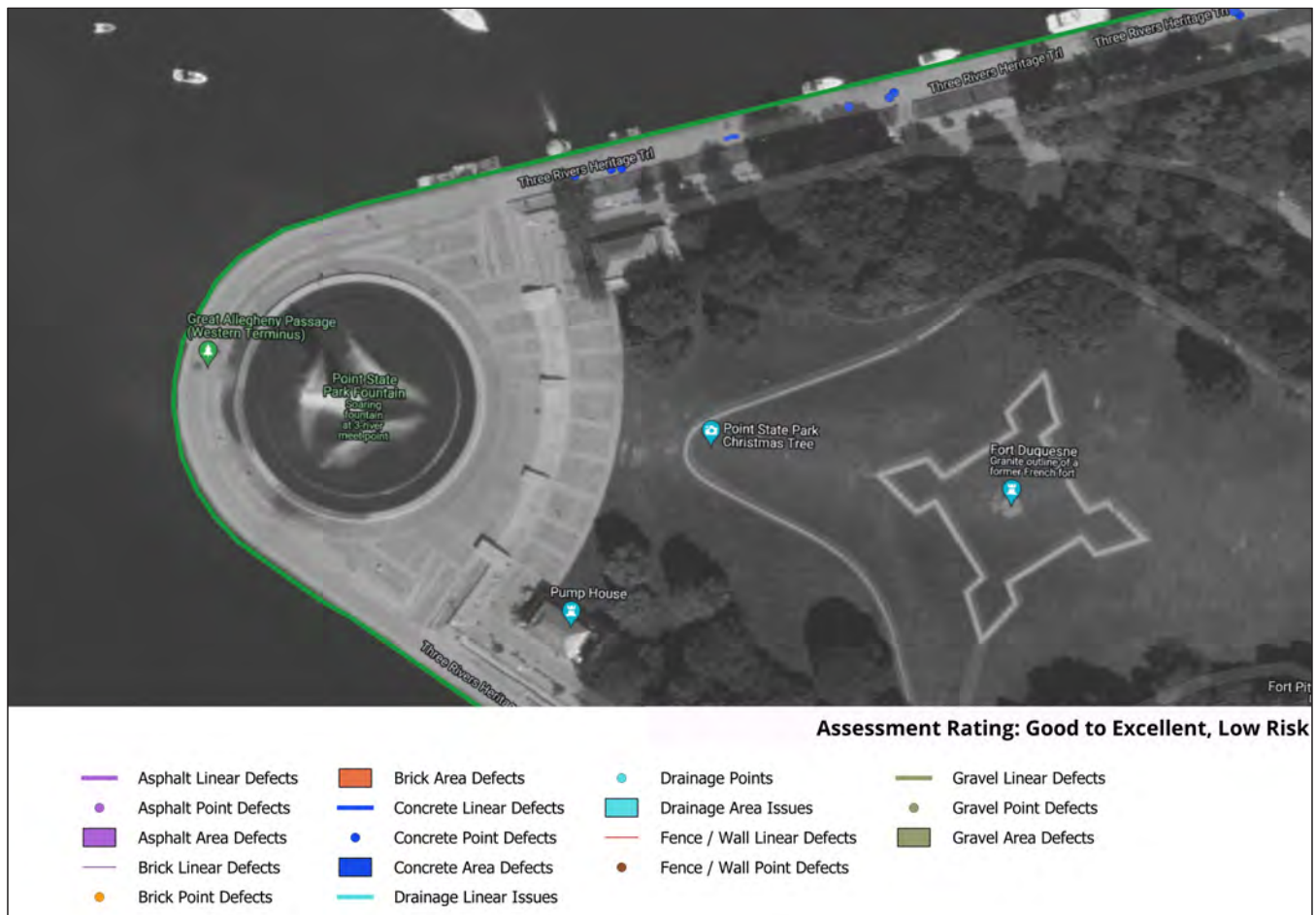
- Minor corner cracking of slabs, transverse and longitudinal cracking, and aggregate popouts in several places. Aesthetic rather than structural.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	4	EA	\$ 10.00	\$ 40.00
Popout - Minor	2	EA	\$ 8.00	\$ 16.00
Longitudinal Cracking - Minor	8.00	LF	\$ 12.00	\$ 96.00
Spalling - Minor	18.00	SF	\$ 22.00	\$ 396.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 548.00	\$ 0.48



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny South - Section 1, Segment 5

Rachel Carson Bridge to Past Fort Wayne Railroad Bridge

Length (ft): 1,431

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

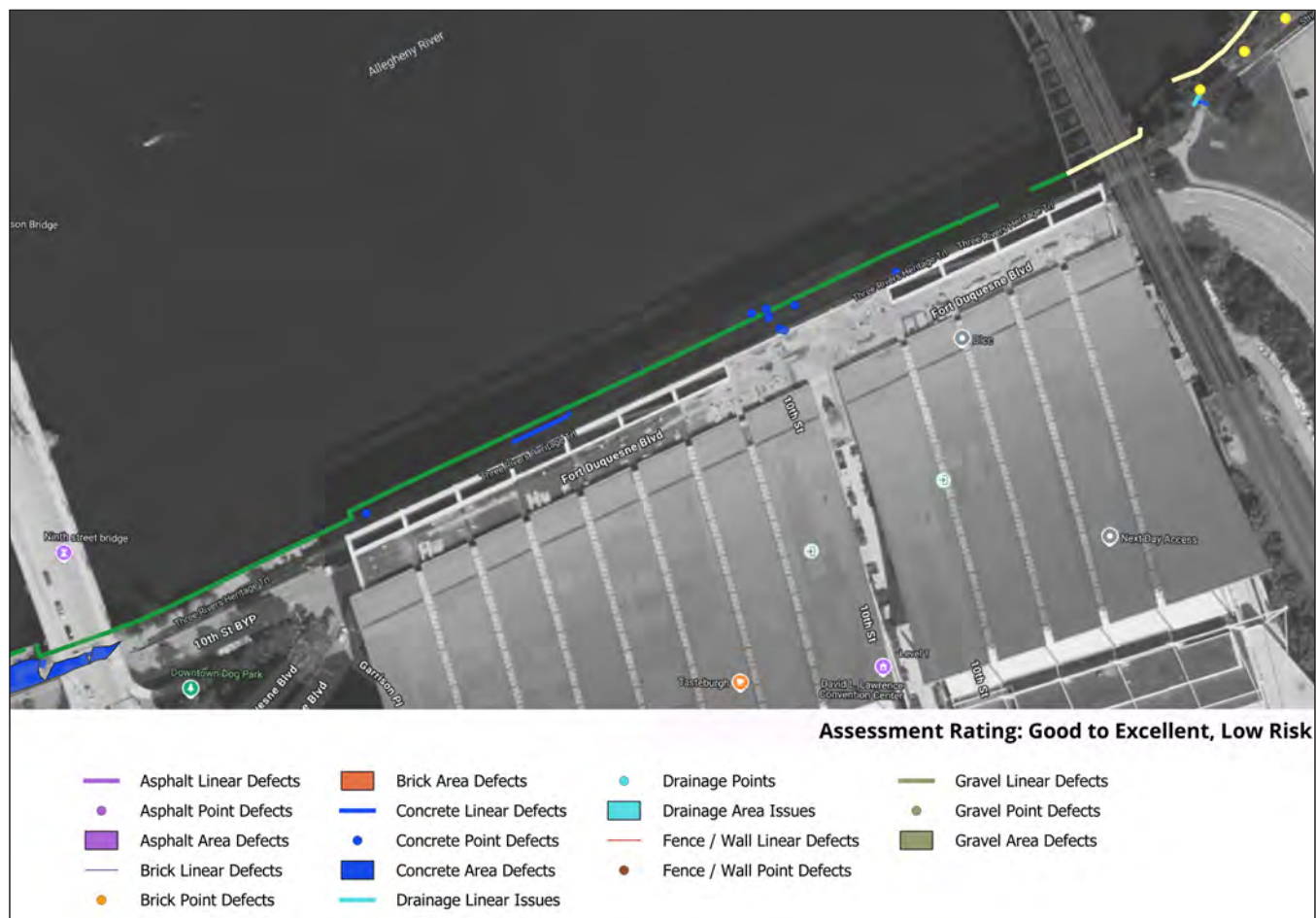
- Several instances of corner cracking, popouts, and longitudinal slippage cracks. Generally minor.
- Streambank erosion close to pavement edge. A new safety fence installed at the most critical location (few feet from slope). Erosion extends beyond fencing. Debris at trail edge indicates minor drainage issues.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	6	EA	\$ 10.00	\$ 60.00
Popout - Minor	1	EA	\$ 8.00	\$ 8.00
Longitudinal Cracking - Minor	21.00	LF	\$ 12.00	\$ 252.00
Slippage - Minor	72.00	LF	\$ 12.00	\$ 864.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 1,184.00	\$ 0.83



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny South - Section 2, Segment 2

Veterans Bridge to 16th Street Bridge

Length (ft): 1,042

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Sediment accumulation along the path edge due to inadequate drainage at a low point.
- Sediment accumulation under the 16th Street Bridge over ~8 ft area. No stabilization for channel downgrade. Recommend a yard drain with pipe or a more intentional swale.
- Continuation of sediment issue—excess flow runs along the path edge to this location.
- Several minor depressions.
- A sunken slab edge (~1 inch), possible trip hazard.

Wall, Fence, and Streambank

- In 'Favorable' condition per ACOE. Minor scour/erosion along the river edge, low risk to the trail.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	4	EA	\$ 10.00	\$ 40.00
Popout - Minor	1	EA	\$ 8.00	\$ 8.00
Slippage - Minor	38.00	LF	\$ 12.00	\$ 456.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 504.00	\$ 0.48



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny South - Section 3, Segment 7

39th Street to National Robotics Engr. Center (41th Street)

Length (ft): 914

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Very minor migration of surface material where runoff flows down the center of the trail rather than the edges.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 7

Under 31st Street Bridge to PaDEP Building

Length (ft): 1,118

Trail Surface, Crushed Limestone Assessment and Observations

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 11

Three Rivers Rowing Association to 31st St Bridge Parking

Length (ft): 1,276

Trail Surface, Crushed Limestone Assessment and Observations
Summary by Category



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 6

Waterfront Drive to Under 31st Street Bridge

Length (ft): 1,140

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Inlet clogged with gravel and mulch; needs maintenance.
- Large boulders along edge of trail appear to be sliding slowly downslope (~4–5 feet). Minor risk to pedestrians/bikers but indicative of a longer-term issue.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 8

PaDEP Building to GAMMA Sports

Length (ft): 1,069

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Deposition of fines suggests possible ponding area adjacent to GAMMA Sports Building.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 0.00	\$ 0.00



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 3

Past 31st Street Bridge to Opp. Three Rivers Rowing Assoc.

Length (ft): 999

Trail Surface, Asphalt Paving Assessment and Observations

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 2

River Avenue Parallel to Past 31st Street Bridge

Length (ft): 999

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Concrete barrier prevents water from leaving the trail, causing ponding and siltation (potential long-term issue).
- Minor edge cracking in numerous places.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00
Edge Cracking - Minor	24.00	LF	\$ 8.00	\$ 192.00
Longitudinal Crack - Minor	12.00	LF	\$ 9.00	\$ 108.00
Longitudinal Crack - Moderate	13.00	LF	\$ 14.00	\$ 182.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 770.00	\$ 0.77



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 2

Mazaroski Way to Roberto Clemente Bridge

Length (ft): 1,021

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Sparse minor longitudinal cracks, plus some transverse/corner cracking.

Wall, Fence, and Streambank

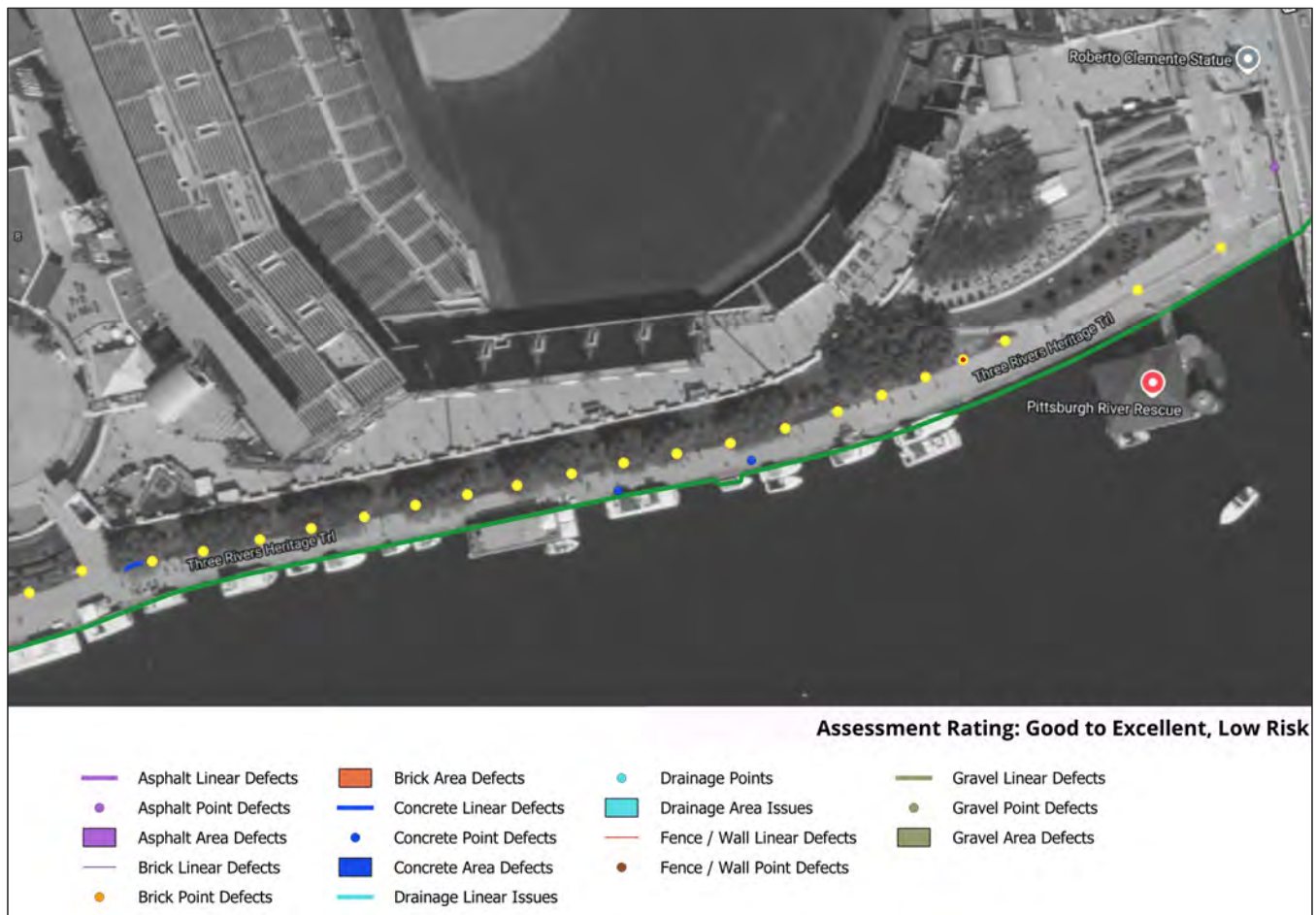
- Concrete river walls along this stretch deemed 'Favorable' to 'Fair' by ACOE. No recommendations at this time.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	2	EA	\$ 10.00	\$ 20.00
Longitudinal Cracking - Minor	11.00	LF	\$ 12.00	\$ 132.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 152.00	\$ 0.15



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 4

Rachel Carson Bridge to River Ave Connection

Length (ft): 914

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Low point in the patio with no yard drain.
- Stream bank erosion and some washout under the Rachel Carson Bridge abutment. Slab side is exposed but appears thick.
- Sparse minor longitudinal cracks, plus some transverse/corner cracking.

Wall, Fence, and Streambank

- Entire stone seat area of the wall apparently knocked loose and replaced without mortar. Recommend full replacement of the top. Wall base is intact and in good shape.

Lighting

- Light pole is leaning significantly. The seating wall across from it is also damaged.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	32.00	LF	\$ 10.00	\$ 320.00
Corner Crack - Moderate	11	EA	\$ 15.00	\$ 165.00
Longitudinal Cracking - Minor	35.00	LF	\$ 12.00	\$ 420.00
Slippage - Minor	76.00	LF	\$ 12.00	\$ 912.00

Summary by Category



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 1

Fort Duquesne Bridge to Mazaroski Way

Length (ft): 780

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Numerous minor longitudinal cracks, plus some transverse/corner cracking.

Wall, Fence, and Streambank

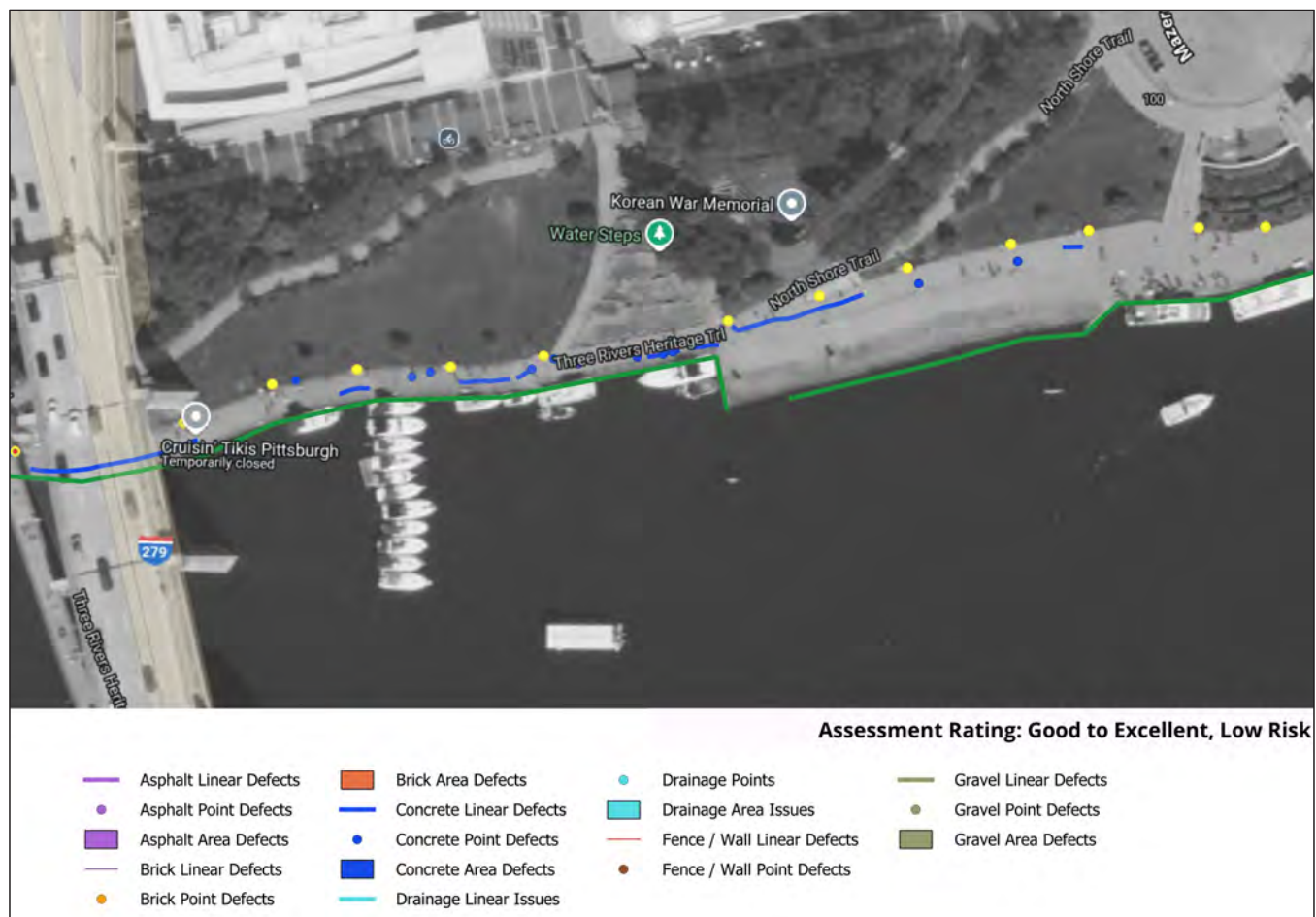
- Concrete river walls along this stretch deemed 'Favorable' to 'Fair' by ACOE. No recommendations at this time.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	3	EA	\$ 10.00	\$ 30.00
Edge Cracking - Minor	7.00	LF	\$ 10.00	\$ 70.00
Longitudinal Cracking - Minor	171.00	LF	\$ 12.00	\$ 2,052.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 2,152.00	\$ 2.76



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 1, Segment 7

16th Street Bridge to Heinz Stack

Length (ft): 1,015

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Patching in good condition (no defects). Suggests former sliding or erosion area. Recommend general monitoring.
- Some minor potholes and transverse cracking.

Wall, Fence, and Streambank

- Naturalized streambanks/steep slopes within 30 feet of the trail, rated 'Fair' by ACOE/Design Team. One segment of the trail was patched in the vicinity. Recommend reviewing DPW records for details.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Minor	1	EA	\$ 50.00	\$ 50.00
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00
Edge Cracking - Minor	14.00	LF	\$ 8.00	\$ 112.00
Patching - Minor	342.00	SF	\$ 0.00	\$ 0.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 306.00	\$ 0.30



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 1
Hot Metal Bridge Ramp to Second Ave UPMC Parking
Length (ft): 934

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Flow runs down the path rather than the edge, causing some material loss and minor erosion.
- Minor rill erosion along the railroad tracks.

Cost Estimate for Trail Surface, Crushed Limestone

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Erosion - Minor	2.00	LF	\$ 6.00	\$ 12.00
Erosion - Minor	73.00	LF	\$ 6.00	\$ 438.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 450.00	\$ 0.48



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 3

Past Blair Street to Mid Blair Street

Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

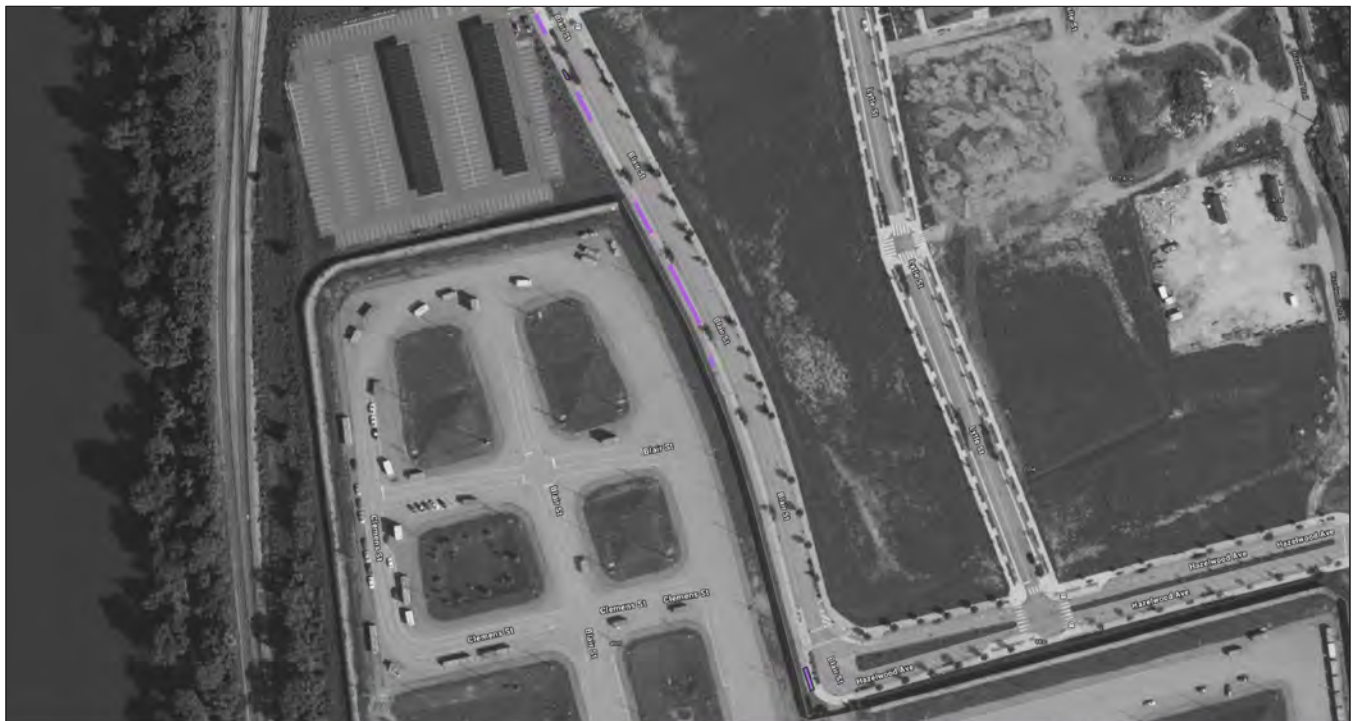
- Fairly large patched section with no apparent cause.
- Gap at interface between asphalt and adjacent pavement (coded as edge cracking). Size roughly that of aggregate. Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	171.00	LF	\$ 8.00	\$ 1,368.00
Longitudinal Crack - Minor	12.00	LF	\$ 9.00	\$ 108.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,476.00	\$ 1.46



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 4

Mid Blair Street to Roundhouse

Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

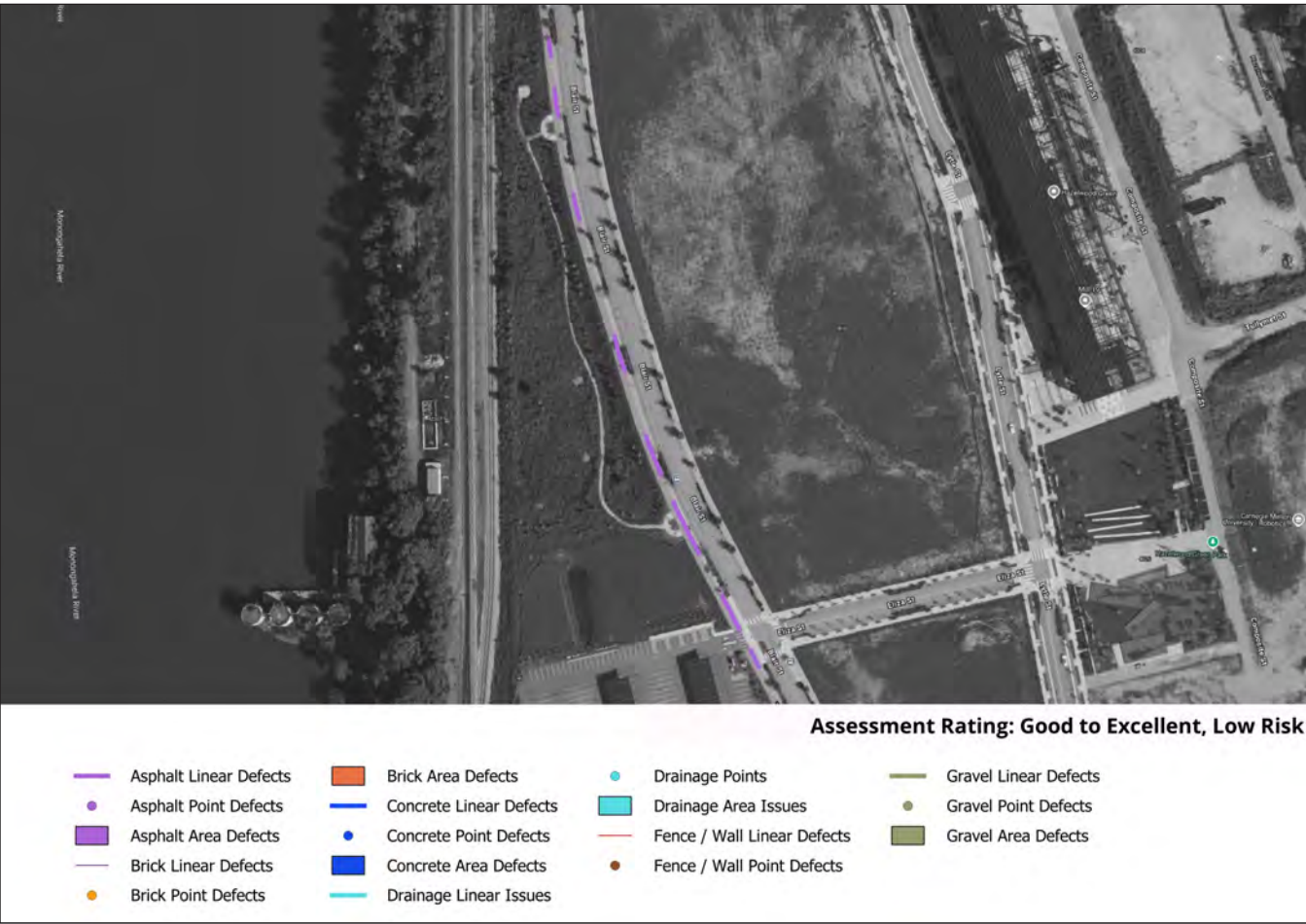
- Gas valve ~1.5 inches below grade, creating small pothole-like depression.
- Gap at asphalt/pavement interface (coded as edge cracking). Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	382.00	LF	\$ 8.00	\$ 3,056.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 3,056.00	\$ 3.02



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 5

Roundhouse to Beehive Street

Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

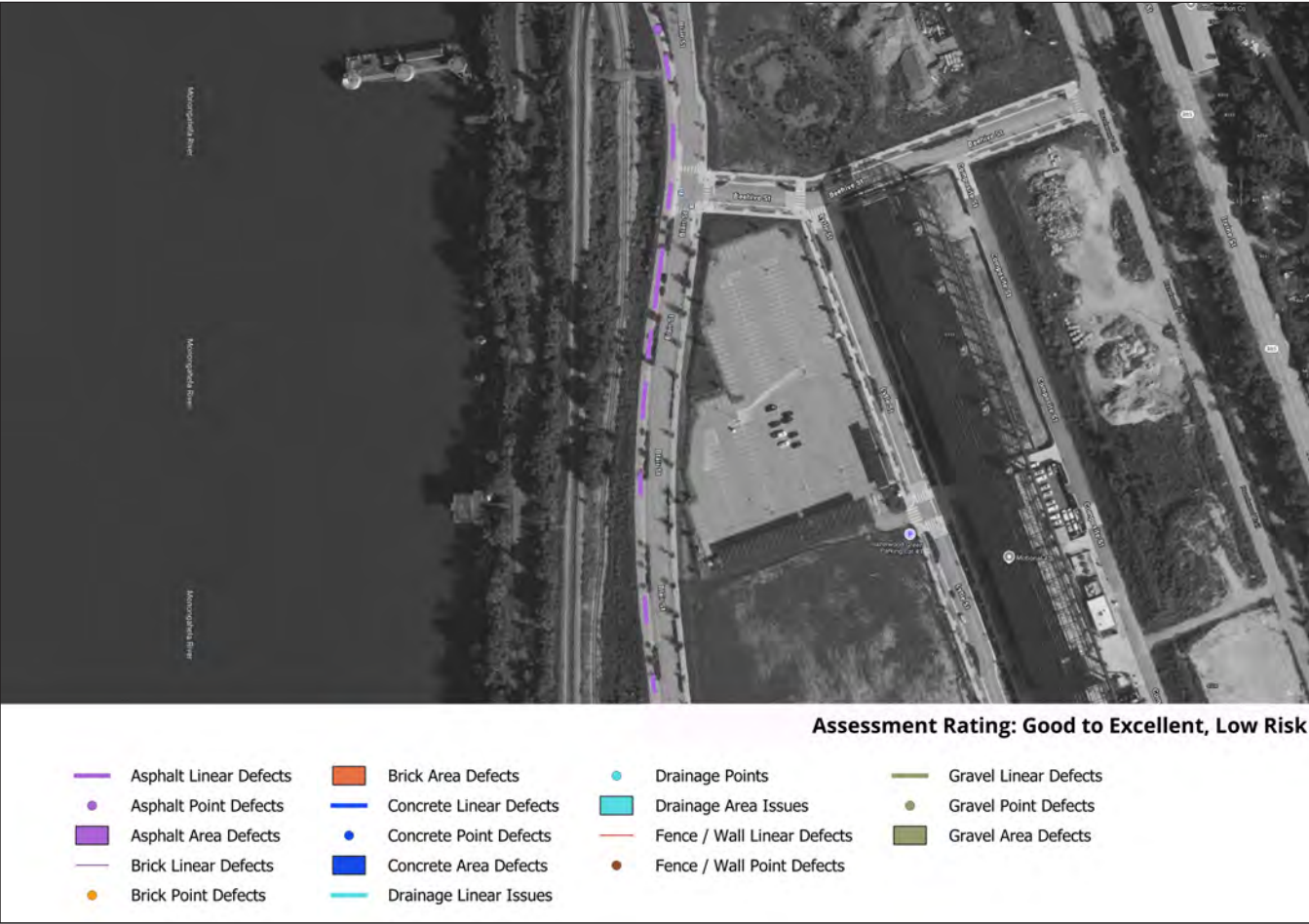
- Raveling of asphalt surface (~10 sf).
- Gap at asphalt/pavement interface (coded as edge cracking). Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	370.00	LF	\$ 8.00	\$ 2,960.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,960.00	\$ 2.93



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 6

Beehive Street to Hazelwood Green Parking Lot #1

Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

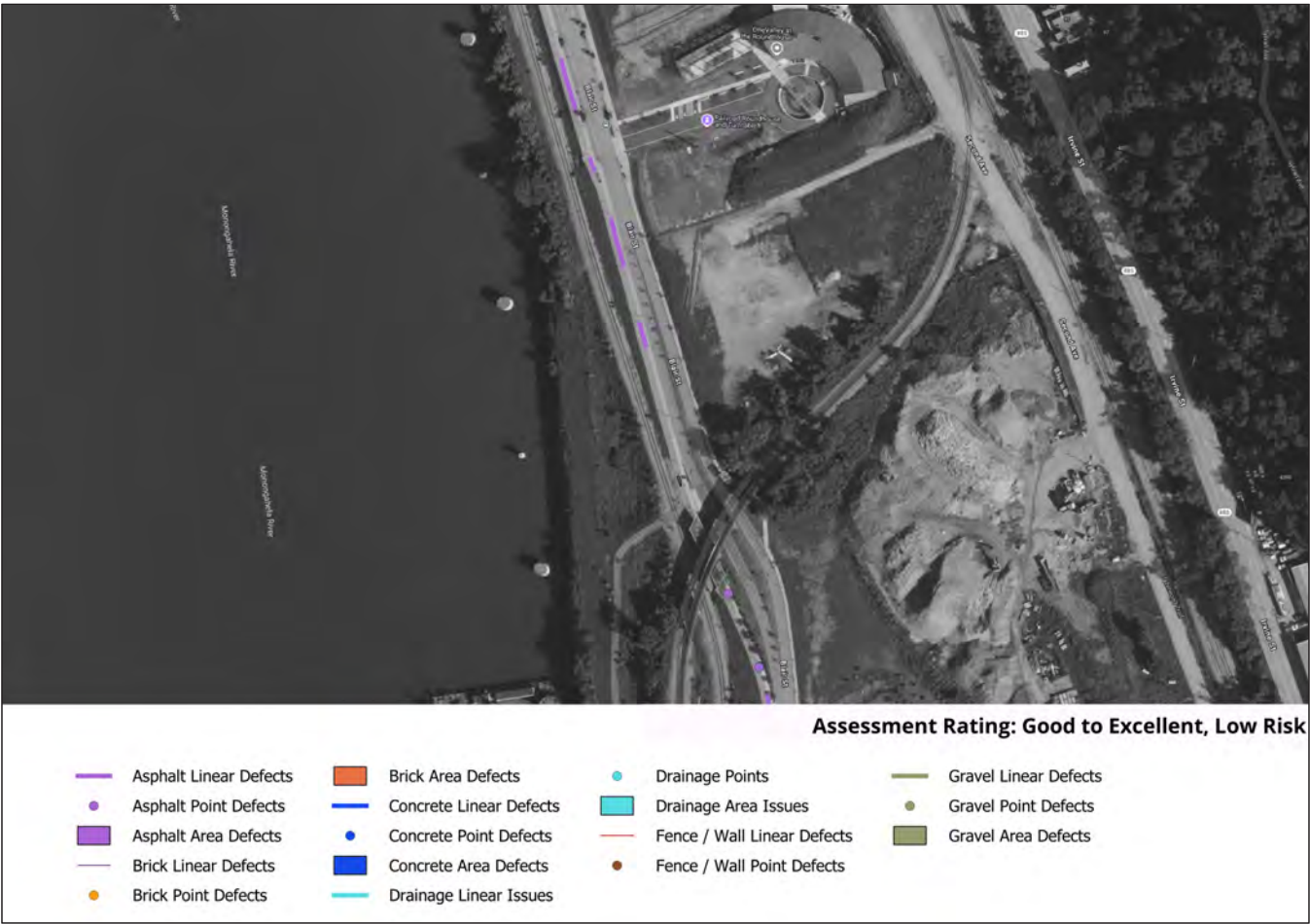
- Gap at asphalt/pavement interface (coded as edge cracking). Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	2	EA	\$ 144.00	\$ 288.00
Edge Cracking - Minor	194.00	LF	\$ 8.00	\$ 1,552.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,840.00	\$ 1.82



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 7

Hazelwood Green Parking Lot #1 to Eliza Street

Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

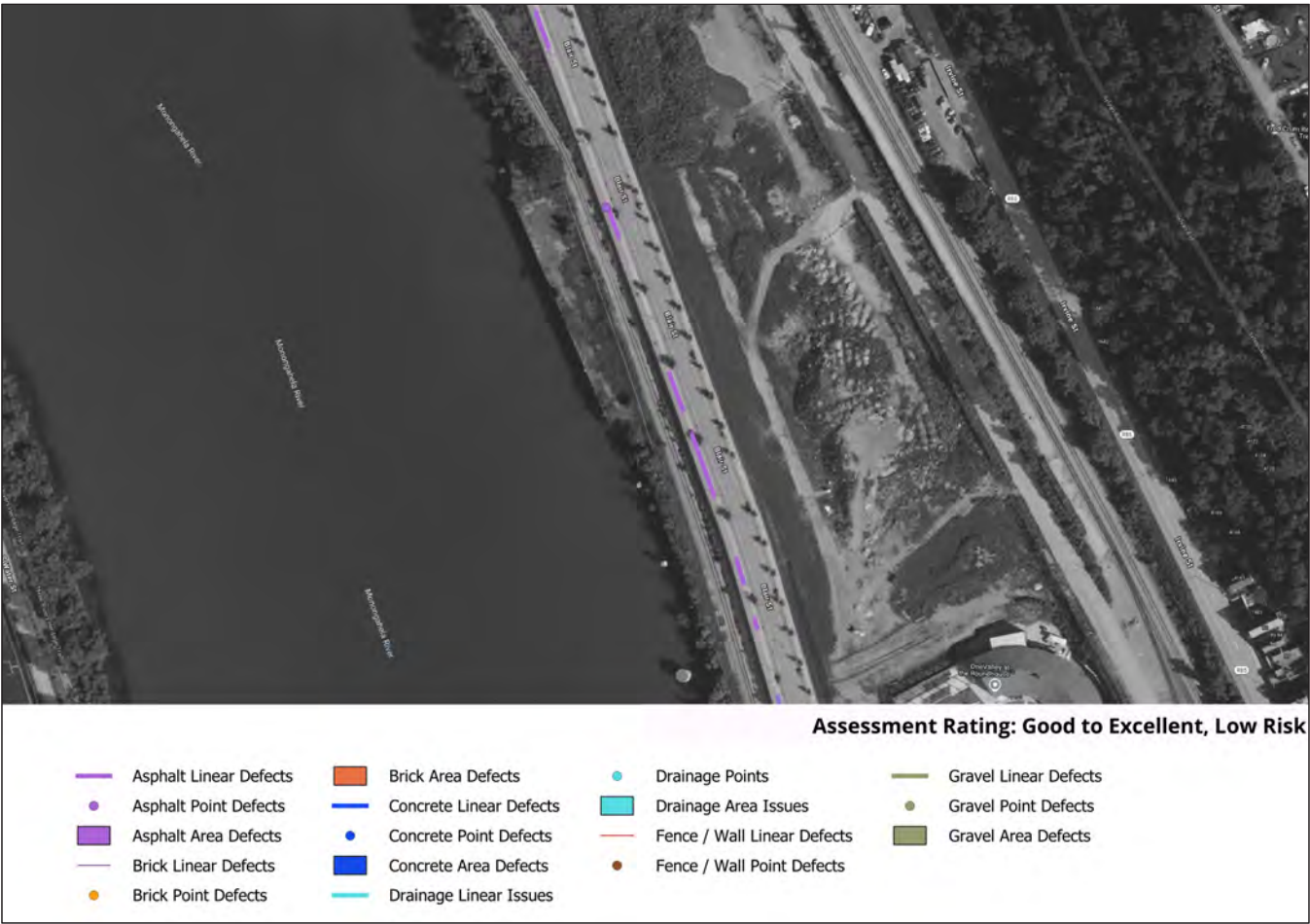
- Gap at asphalt/pavement interface (coded as edge cracking). Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Moderate	1	EA	\$ 100.00	\$ 100.00
Edge Cracking - Minor	244.00	LF	\$ 8.00	\$ 1,952.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,052.00	\$ 2.03



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 3, Segment 8
Eliza Street to Hazelwood Avenue
Length (ft): 1,011

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

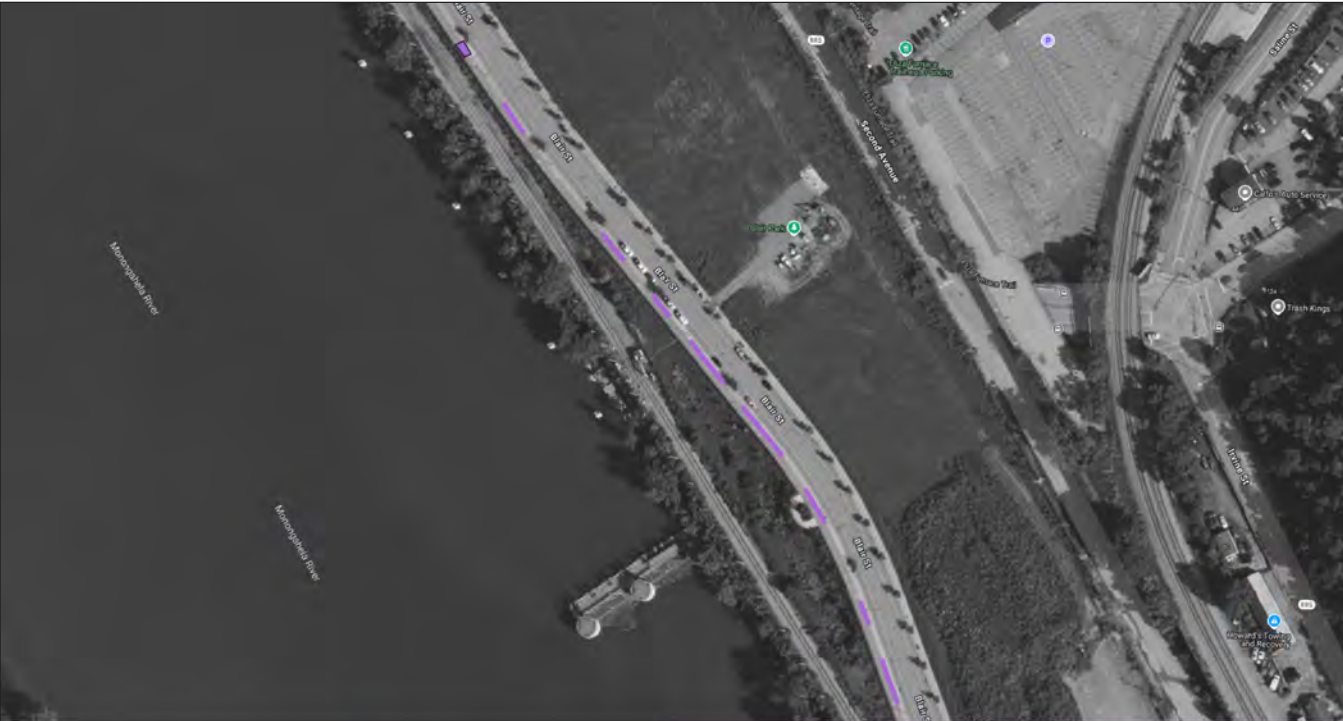
- Raveling (~10 sf).
- Minor raveling over ~20 ft stretch (~35 sf).
- Gap at asphalt/pavement interface (edge cracking). Could allow water intrusion/freeze-thaw damage.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	325.00	LF	\$ 8.00	\$ 2,600.00
Patching - Minor	190.00	SF	\$ 0.00	\$ 0.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,600.00	\$ 2.57



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 11

Hot Metal Bridge to UPMC Rooney Sports Complex

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- High density of transverse/longitudinal cracks suggests accelerated approach to end of service life.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

- Asphalt Linear Defects - Asphalt Point Defects - Asphalt Area Defects - Brick Linear Defects - Brick Point Defects	- Brick Area Defects - Concrete Linear Defects - Concrete Point Defects - Concrete Area Defects - Drainage Linear Issues	- Drainage Points - Drainage Area Issues - Fence / Wall Linear Defects - Fence / Wall Point Defects	- Gravel Linear Defects - Gravel Point Defects - Gravel Area Defects
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Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 12

UPMC Rooney Sports Complex to Steelers Training Ground

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- High density of transverse/longitudinal cracks suggests accelerated approach to end of service life.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

- Asphalt Linear Defects - Asphalt Point Defects - Asphalt Area Defects - Brick Linear Defects - Brick Point Defects	- Brick Area Defects - Concrete Linear Defects - Concrete Point Defects - Concrete Area Defects - Drainage Linear Issues	- Drainage Points - Drainage Area Issues - Fence / Wall Linear Defects - Fence / Wall Point Defects	- Gravel Linear Defects - Gravel Point Defects - Gravel Area Defects
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Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 13

Steelers Training Ground to End of Athletic Fields

Length (ft): 1,108

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- High density of transverse/longitudinal cracks suggests accelerated approach to end of service life.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

 Asphalt Linear Defects	 Brick Area Defects	 Drainage Points	 Gravel Linear Defects
 Asphalt Point Defects	 Concrete Linear Defects	 Drainage Area Issues	 Gravel Point Defects
 Asphalt Area Defects	 Concrete Point Defects	 Fence / Wall Linear Defects	 Gravel Area Defects
 Brick Linear Defects	 Concrete Area Defects	 Fence / Wall Point Defects	
 Brick Point Defects	 Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 2, Segment 3

Trail Near 11th Street to Trail Past 13th Street

Length (ft): 900

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Heaving/dendritic cracks, likely tree roots.
- Cross-pipe with spalled head wall, some debris clogging. Trail surface remains good.
- Minor edge failure from asphalt poured with insufficient transition on both sides of trail.
- Complete loss of asphalt in places (0–20 inches wide) possibly from excavator activity (trip hazard).
- Moderate edge failure from an overpoured/unreinforced asphalt layer.
- Extensive spray painting on surface, beyond Color Park limits.

Wall, Fence, and Streambank

- Chain-link fence breaches (top rails missing, bottom rail/mesh damaged), possibly intentional or from fallen trees.
- Another large hole intentionally cut in newly installed fence.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 3, Segment 8

Trail Along E Carson St to Glenshaw Bridgeshow Bridge

Length (ft): 1,118

Trail Surface, Asphalt Paving Assessment and Observations
Summary by Category



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela South - Section 3, Segment 9

Glenshaw Bridgeshow Bridge to Sandcastle Parking Lot

Length (ft): 728

Trail Surface, Asphalt Paving Assessment and Observations
Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects

Asphalt Point Defects

Asphalt Area Defects

Brick Linear Defects

Brick Point Defects

Brick Area Defects

Concrete Linear Defects

Concrete Point Defects

Concrete Area Defects

Drainage Linear Issues

Drainage Points

Drainage Area Issues

Fence / Wall Linear Defects

Fence / Wall Point Defects

Gravel Linear Defects

Gravel Point Defects

Gravel Area Defects

TRAIL-Good to Excellent, Low Risk-39

Three Rivers Heritage Trail

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 15

Carnegie Science Center to Art Rooney Avenue

Length (ft): 997

Trail Surface, Concrete Paving Assessment and Observations

Pavement Surface and Drainage

- Area near the river's edge appears to flood periodically (dried silt observed). Recently cleaned with construction vehicles. Likely an ongoing future cleanup cost.
- Frequent debris cleanup needed due to proximity to the shoreline. DPW crews were cleaning debris during assessment.
- Minor longitudinal cracking along the river's edge.
- Minor corner crack.

Wall, Fence, and Streambank

- Riprap steep slopes along this stretch deemed in 'Favorable' to 'Fair' condition by ACOE. No recommendations at this time.

Cost Estimate for Trail Surface, Concrete Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Corner Crack - Minor	1	EA	\$ 10.00	\$ 10.00
Longitudinal Cracking - Minor	118.00	LF	\$ 12.00	\$ 1,416.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Concrete Paving	\$ 1,426.00	\$ 1.43



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 13

Rivers Casino Edge to Sproat Way

Length (ft): 1,008

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Various hairline corner cracks, minor aggregate popouts, and edge damage of concrete slabs.
- Consistent spiderweb pattern of transverse cracks in the concrete patio at the top of the amphitheater, suggesting some settling or sliding along this edge.
- Miscellaneous longitudinal cracking near intersection of main trail with lower trail spur, typical of concrete transition areas.

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00

Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 7

Past Seymour Street to Armin Iron Works @ Columbus Ave

Length (ft): 874

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Insufficient killing back of knotweed in this area seems to have caused knotweed to grow up through the pavement in numerous locations. Recommend more intensive treatment and potential replacement of asphalt in places. Risk to pedestrians seems low now, but this could change without additional maintenance.
- Minor edge cracking.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	15.00	LF	\$ 8.00	\$ 120.00
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 264.00	\$ 0.30



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 4

Railroad Bridge to Duquesne Light Building

Length (ft): 855

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Steepbank cut back erosion comes relatively close to the edge of pavement. Distance varies from 4 to 8 feet. Does not appear to be an immediate risk. Boat trip observations indicate that stream bank condition is 'fair', but in close proximity to the trail.
- Minor edge cracking along sections of trail along steep slope.

Wall, Fence, and Streambank

- Steep, partially undercut segments of stream bank, but not within the 40 foot buffer from trail centerline. Additional assessment may be needed to assess risk to trail.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	158.00	LF	\$ 8.00	\$ 1,264.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 1,264.00	\$ 1.48



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 3

Wood Run Corporate Parking Lot to Railroad Bridge

Length (ft): 753

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Short stretch of edge cracking under railroad bridge.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	25.00	LF	\$ 8.00	\$ 200.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 200.00	\$ 0.27



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 5

Duquesne Light Building to Island Boat Club

Length (ft): 855

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Cut back Bank erosion close to trail edge, contributing to minor-to-moderate edge cracking. The slope height is ~15 feet, with slopes steeper than 1/2:1. Boat observations did not reveal visible issues from the river.
- Steep cut Bank erosion, 3 to 5 feet from Trail. Bank height ~10 to 15 feet with slopes steeper than 1/2:1. Evidence of a former crib wall in one location; steel posts remain but horizontal members are missing. Boat observations did not reveal visible issues from the river.

Wall, Fence, and Streambank

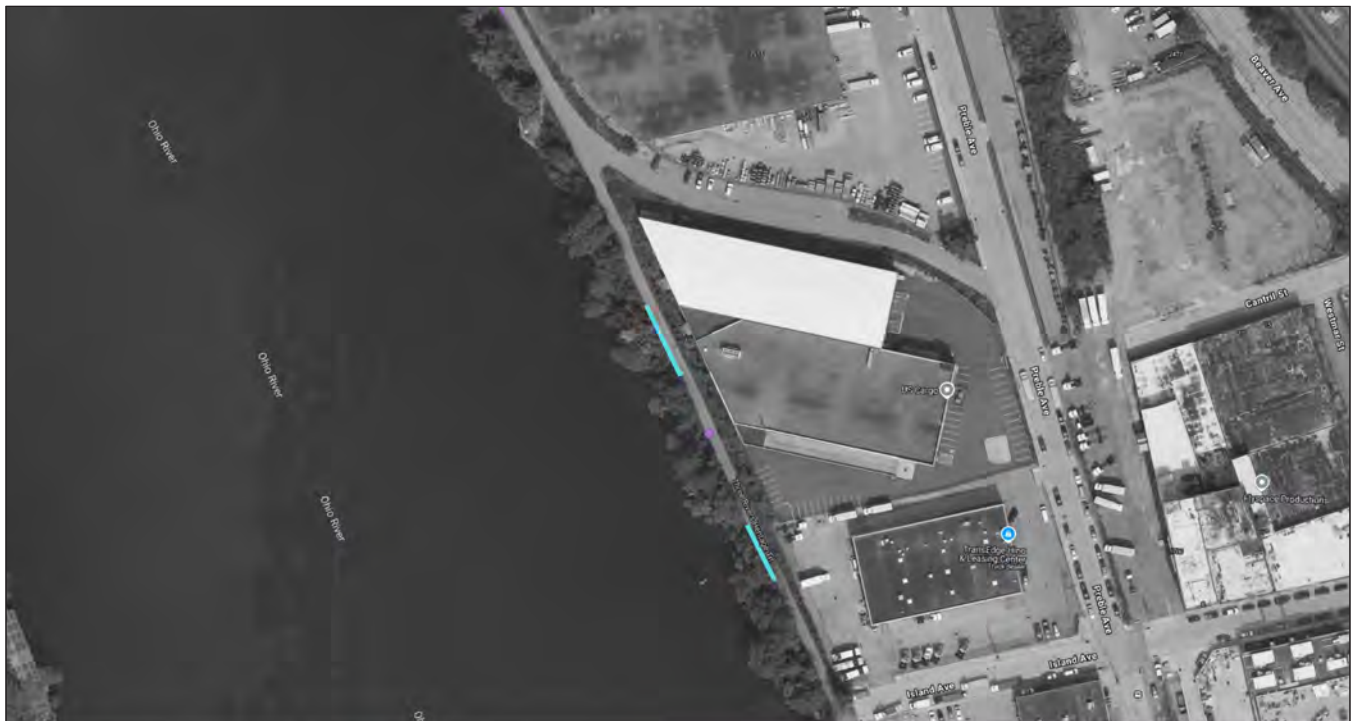
- Steep, partially undercut segments of stream bank, but not within the 40 foot buffer from trail centerline. Additional assessment may be needed to assess risk to trail.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00
Edge Cracking - Minor	27.00	LF	\$ 8.00	\$ 216.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 360.00	\$ 0.42



Assessment Rating: Good to Excellent, Low Risk

Asphalt Linear Defects	Brick Area Defects	Drainage Points	Gravel Linear Defects
Asphalt Point Defects	Concrete Linear Defects	Drainage Area Issues	Gravel Point Defects
Asphalt Area Defects	Concrete Point Defects	Fence / Wall Linear Defects	Gravel Area Defects
Brick Linear Defects	Concrete Area Defects	Fence / Wall Point Defects	
Brick Point Defects	Drainage Linear Issues		

Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 8

Armin Iron Works @ Columbus Ave to N. Franklin Street

Length (ft): 874

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Very severe cut back erosion immediately at the asphalt edge, potentially undermining it. Safety chain-link fence is falling in at the most extreme point of cut back (drop-off ~15+ feet). Trail slippage evidenced by longitudinal and edge cracking on the river side. Sections of failed masonry wall visible just over the edge, correlating with a partially failed timber crib wall observed from the river.
- Insufficient killing back of knotweed causing knotweed growth through pavement. Recommend intensive treatment and possible asphalt replacement. Risk is low now, but could change without additional maintenance.
- Presence of steel chain-link safety fence indicates steep drop-off. Trail and fence in good condition, but an I-beam steel post and aluminum sheet metal crib wall are mostly overgrown with knotweed, making it hard to assess overall risk. This area is coded moderate severity due to difficulty assessing and close proximity to the trail. Recommend long-term monitoring.

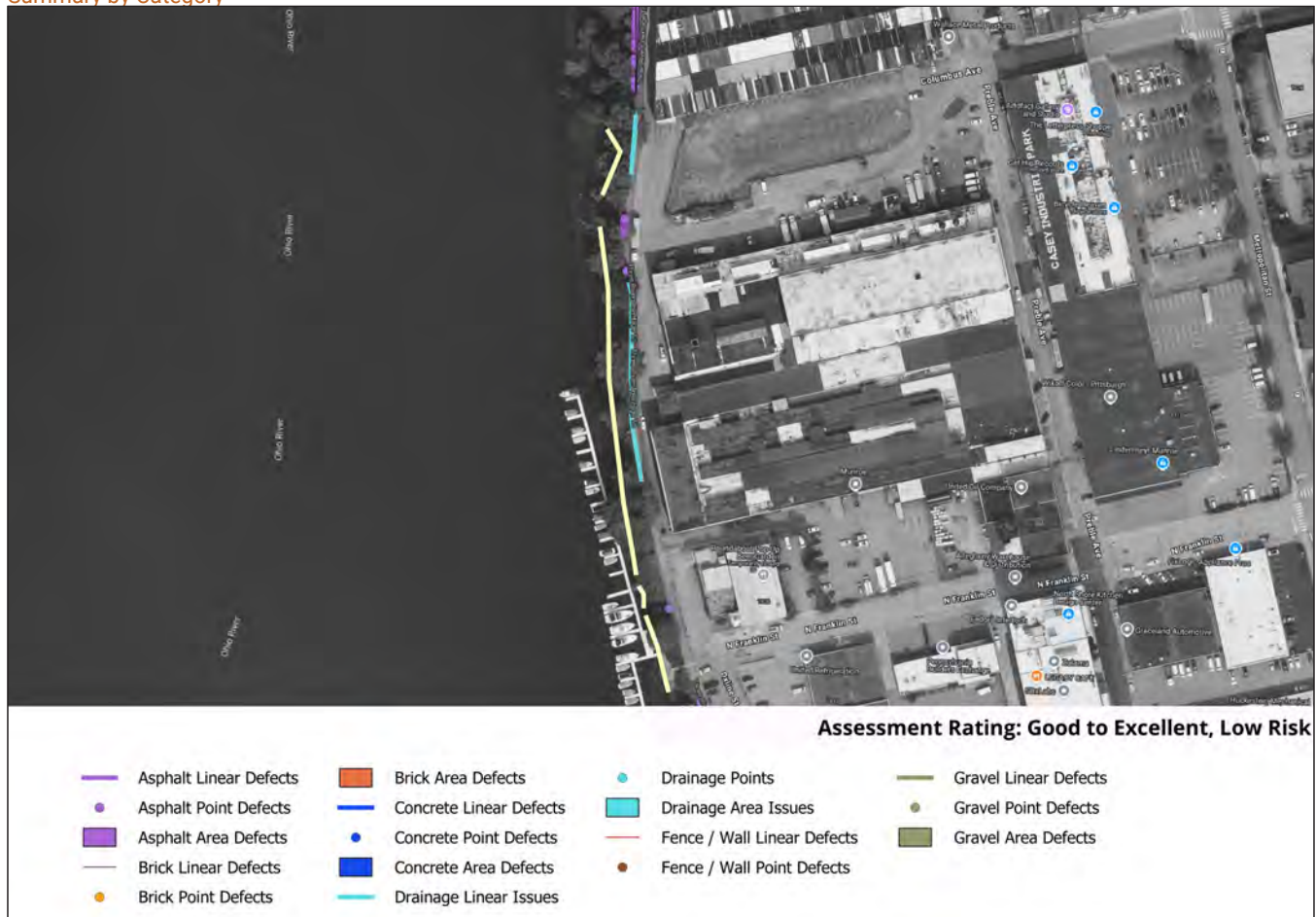
Wall, Fence, and Streambank

- Naturalized, steep slope in 'Fair' condition per ACOE. Excessively steep and poorly vegetated. Movement of guiderail along trail edge is visible. Moderate risk to trail.
- In 'Fair' condition per ACOE. Roadway along boat marina is in poor condition, with erosion and undercutting along its length. Low risk to trail.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Traverse Crack - Minor	1	EA	\$ 144.00	\$ 144.00
Longitudinal Crack - Minor	19.00	LF	\$ 9.00	\$ 171.00

Summary by Category



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Ohio North - Section 1, Segment 6

Island Boat Club to Past Seymour Street

Length (ft): 874

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Loss of asphalt at the edge (~18 inches wide by 3 feet long), possibly due to a construction accident rather than material failure.
- Minor accelerated erosion with previous rough concrete stabilization. Creates a sunken location along the trail edge that could accelerate deterioration.
- Minor edge cracking in places.

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Pothole - Moderate	1	EA	\$ 100.00	\$ 100.00
Edge Cracking - Minor	8.00	LF	\$ 8.00	\$ 64.00
Edge Cracking - Minor	80.00	LF	\$ 8.00	\$ 640.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 804.00	\$ 0.92



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 5

Herr's Island Bridge to Waterfront Drive

Length (ft): 1,043

Trail Surface, Crushed Limestone Assessment and Observations

Pavement Surface and Drainage

- Numerous minor (hairline) transverse cracks on pedestrian bridge concrete.
- Faint crazing of pedestrian bridge concrete surface.
- Aggregate surface washout in two places on steeper stretches, where runoff travels down center/shoulders.
- Inlet clogged with gravel and mulch; needs maintenance.

Cost Estimate for Trail Surface, Crushed Limestone

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Erosion - Minor	202.00	LF	\$ 6.00	\$ 1,212.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Crushed Limestone	\$ 1,212.00	\$ 1.16



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Allegheny North - Section 2, Segment 1

Herr's Island Bridge to River Avenue Parallel

Length (ft): 1,185

Trail Surface, Asphalt Paving Assessment and Observations

Pavement Surface and Drainage

- Minor edge cracking in numerous places along the stretch

Cost Estimate for Trail Surface, Asphalt Paving

Item	Quantity	Unit	Unit Cost (\$)	Total Cost (\$)
Edge Cracking - Minor	185.00	LF	\$ 8.00	\$ 1,480.00
Traverse Crack - Minor	5	EA	\$ 144.00	\$ 720.00
Edge Cracking - Minor	6.00	LF	\$ 8.00	\$ 48.00

Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 2,248.00	\$ 1.90



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 20

Boundary Street to Under Blvd of the Allies

Length (ft): 845

Trail Surface, Asphalt Paving Assessment and Observations Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 19

Under Blvd of the Allies to Schenley Soccer Field

Length (ft): 1,186

Trail Surface, Asphalt Paving Assessment and Observations
Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

- Asphalt Linear Defects - Asphalt Point Defects - Asphalt Area Defects - Brick Linear Defects - Brick Point Defects	- Brick Area Defects - Concrete Linear Defects - Concrete Point Defects - Concrete Area Defects - Drainage Linear Issues	- Drainage Points - Drainage Area Issues - Fence / Wall Linear Defects - Fence / Wall Point Defects	- Gravel Linear Defects - Gravel Point Defects - Gravel Area Defects
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Three Rivers Heritage Trail, Good to Excellent, Low Risk

SEGMENT: Monongahela North - Section 2, Segment 18

Schenley Soccer Field to Naylor Street

Length (ft): 1,138

Trail Surface, Asphalt Paving Assessment and Observations
Summary by Category

Cost Group	Total Cost (\$)	Cost per Ft (\$)
Trail Surface, Asphalt Paving	\$ 0.00	\$ 0.00



Assessment Rating: Good to Excellent, Low Risk

- Asphalt Linear Defects - Asphalt Point Defects - Asphalt Area Defects - Brick Linear Defects - Brick Point Defects	- Brick Area Defects - Concrete Linear Defects - Concrete Point Defects - Concrete Area Defects - Drainage Linear Issues	- Drainage Points - Drainage Area Issues - Fence / Wall Linear Defects - Fence / Wall Point Defects	- Gravel Linear Defects - Gravel Point Defects - Gravel Area Defects
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