

## ***DEVELOPMENT REVIEW REPORT***

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### **University of Pittsburgh Institutional Master Plan DCP-MPZC-2019-00675**

**PROPERTY:** See attached map  
**PROPERTY OWNER:** University of Pittsburgh  
**ACTION REQUIRED:** Public Hearing and Recommendation to City Council  
**COUNCIL DISTRICTS:** 8; Councilperson Erika Strassburger  
3; Councilperson Bruce Kraus  
6; Councilperson R. Daniel Lavelle  
**DATE:** April 20, 2021  
**SUBMITTED TO:** The Planning Commission of the City of Pittsburgh

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### **FINDINGS OF FACT**

1. An application for a new Institutional Master Plan was submitted by the University of Pittsburgh.
2. There is no accompanying Zone Change Petition, all of the sites in the 10 year development envelope are already within the Educational Medical Institution (EMI) district.
3. Notice of this Planning Commission hearing was mailed to abutting property owners 21 days in advance and posted on the City Planning website. Due to COVID-19 restrictions, notices cannot be printed, distributed in person, or posted at sites. This alternative process is authorized by Pennsylvania Act 15 of 2020 (SB 841).
4. The University had a Development Activities Meeting with Oakland Planning and Development Corporation the Hill CDC on November 18, 2020. Under the Pennsylvania Act 15 of 2020, related to the COVID-19 emergency, time limits may be waived, so the City has agreed to extend the one year maximum from the Development Activities Meeting to the public hearing. Please see attached memo.
5. The University of Pittsburgh voluntarily participated in the Department of City Planning's Performance Targets Program. For this program, City Planning coordinates a series of meetings where the project team collaborates with staff from the Department of Mobility and Infrastructure, Pittsburgh Sewer and Water Authority, Green Building Alliance, Port Authority, and multiple divisions at the Department of City Planning. The goal is to collectively identify opportunities to achieve excellence in energy and water use, open space and tree canopy provision, stormwater management, public art, and other public amenities. The University of Pittsburgh was an active participant in this process and their proposed IMP shows many benefits from their work with us including their commitment to carbon neutrality, commitment to pursuing a new generation of energy systems with partners in Oakland, a district-scale stormwater management strategy, tree canopy maintenance and planting efforts that will lead to investments beyond their campus and replace lawns with native plants, and commitments to significant public realm and open space improvements. This process was designed to go hand-in-hand with the IMP Best Practices Guide adopted by the Planning Commission in 2018.
6. This Institutional Master Plan includes 21 new developments in the 10 Year Development Envelope.
7. The development site for Frick Fine Arts Expansion (Site 10 A) is within the Parks Zoning District and is advisory only, not regulated by the IMP.
8. New projects (and demolitions where proposed) within the City Historic Districts are subject to Historic Review approval.

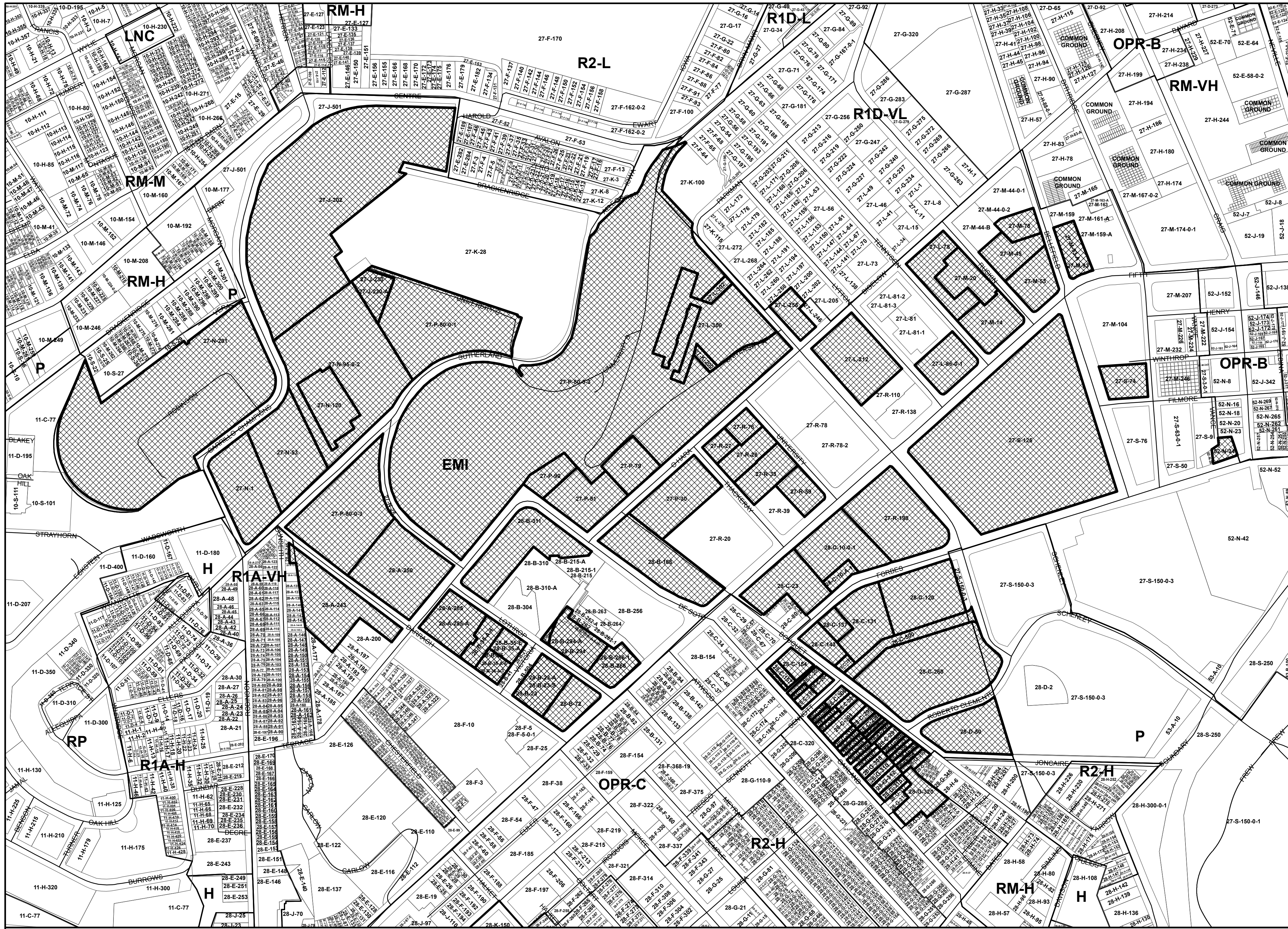
9. The TIS was reviewed and approved by the Department of Mobility and Infrastructure.
10. An Institutional Master Plan is intended to permit flexibility for a large institution that is not possible on a lot-by-lot basis while providing a level of understanding to the public about potential growth of the institution. Provisions of the Master Plan are intended to:
  - (a) Protect the integrity of adjacent residential neighborhoods by addressing the impacts of institutional development on adjacent areas;
  - (b) Provide a growing and continuing source of employment which is easily accessible;
  - (c) Create attractive and efficient urban areas which incorporate a high degree of amenity;
  - (d) Protect sensitive portions of the natural and man-made environment which are potentially affected by institutional development.

#### **RECOMMENDED MOTION**

That the Planning Commission of the City of Pittsburgh **Recommends Approval** to City Council of the University of Pittsburgh Institutional Master Plan dated April 2012.

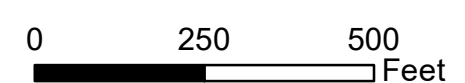
#### **SUBMITTED BY:**

Kate Rakus, Land Use Policy and Code Implementation Coordinator



University of Pittsburgh Institutional Master Plan DCP-MPZC-2019-00675

- Streets
- ▨ Project Area
- Zoning



CITY OF PITTSBURGH  
SEPTEMBER 2020

## Development Activities Meeting Report (Version: 10/16/2019)

This report created by the Neighborhood Planner and included with staff reports to City Boards and/or Commissions.

Logistics	Stakeholders
<b>Project Name/Address:</b> University of Pittsburgh Institutional Master Plan (2019/2020)	<b>Groups Represented (e.g., specific organizations, residents, employees, etc. where this is evident):</b> Hill CDC Neighborhood Allies Pitt Student Environmental Group Schenley Farms Civic Association Residents Students Office of Senator Jay Costa CMU staff University of Pittsburgh staff
<b>Meeting Location:</b> 32 Oak Hill Drive	
<b>Date:</b> 11/18/2019	
<b>Meeting Start Time:</b> 6:10 p.m.	
<b>Applicant:</b> University of Pittsburgh	<b>Approx. Number of Attendees:</b> 40-50

### How did the meeting inform the community about the development project?

*Ex: Community engagement to-date, location and history of the site, demolition needs, building footprint and overall square footage, uses and activities (particularly on the ground floor), transportation needs and parking proposed, building materials, design, and other aesthetic elements of the project, community uses, amenities and programs.*

The University of Pittsburgh presented a detailed overview of their entire Institutional Master Plan which includes projects and programs for the next 10 years. Specifically identified changes made based on past public comments, projects near to the location of the meeting, neighborhood enhancement strategy, sustainability efforts, public process to-date, web materials, and what to expect in the legislative process ahead. Approvals sought: IMPs are reviewed by Planning Commission before being approved by City Council. No Planning Commission hearing date yet, but will send out through the RCOs when they have it.

### Input and Responses

Questions and Comments from Attendees	Responses from Applicants
Does the playing field site allow entertainment uses?	Yes
If the entertainment uses were removed from the playing field site in the IMP, what would be the process to add them back later? Through the project review itself?	It would require an amendment the IMP first, before the project could be reviewed.
There have been partnerships between universities and CDCs to share the wealth for building structures. Is Pitt open to this?	Yes
From a Pitt student's perspective, how do we advocate for something in the IMP?	There are many processes at Pitt that could be used to prioritize projects. There is also the opportunity to highlight things you want during public testimony in the approval of the IMP both at Planning Commission and at City Council.
Have you thought about how your future entertainment uses in terms of avoiding competition with other plans?	The intent is not to compete with other venues.

Questions and Comments from Attendees	Responses from Applicants
If residents have concerns about the impacts to them, they should present those.	No response recorded.
For the Recreation and Wellness Center, are there plans to include a rock climbing wall?	Yes
Will there be new parking reserved for students?	We will use the tenant type option. No parking will be reserved for students.
How will people access the Lower Hillside project?	We are flipping the road that exists today to create the development site and improve traffic flow. The exit and entry access points to the road will be the same.
Will that lead to more traffic on Centre Ave?	No. The new road will have the same entrance and exit points (shows on map).
Are you adding more escalators?	No. They use too much energy and break down too much.
It appears you're losing parking spaces overall, but adding beds. Is that right?	Parking spaces stay the same, but we are adding beds to try to draw students into University housing and out of the neighborhood homes. We will be doing many programs to get students to campus other than by car and we're also optimizing our parking garage use.
Parking isn't required for campus housing?	No.
Who will live in the Lower Hillside housing?	We expect it to be predominantly sophomore students.
Is there a policy that says freshmen and sophomore students can't bring a car to campus?	City asked us not to add any new parking. The parking plan section covers parking for the whole university.
For the RA lot site next to the Music Building, what uses are proposed?	Housing, office, a variety.
Is the Music Building a historic landmark?	It's a contributing structure to a historic district, the Oakland Civic District.
What does that designation mean?	If public funds are used, then Section 106 requirements apply. Will have to look at the impact.
What is your confidence interval for whether the things you're proposing will happen? You're planning things now, but how do you revise your plans as you move along?	Many of our approaches are best practices. We have metrics that we're establishing in various plans including the IMP and we'll report back on some of these to the City.
Have you looked back at your existing IMP and assessed your success in meeting those goals? Are there gaps between proposed buildings, demolition, student population growth and what happened? Do you have metrics for this?	This IMP provides the goals and variables we're committing to tracking and reporting against. We're trying to commit to regular reporting. We want to be transparent.
Consider metrics.	Great feedback. Thank you.
Do you have an MWBE commitment for construction? Are there minority work force hiring commitments for other job opportunities including construction?	We will cover this when we talk about the Neighborhood Enhancement Strategy section (later in the presentation at the meeting).
Is UMPC factored into your transportation study?	Not sure. Will check. Great question.
Does Pitt's hydroelectric plant service just the campus or parts of the neighborhood as well?	Pitt is committed to using the hydroelectric to offset 25% of its own electricity load.

Questions and Comments from Attendees	Responses from Applicants
There needs to be a discussion about the expansion of Pitt's campus police into adjacent areas. This can have a negative impact depending on how they're trained and what direction they receive.	Community and Government Relations does work with the police on training. We still need to do more and be accountable.
There's not a lot of details about the Community Leisure Learn program. This is important given that they're moving out of West Oakland area. How many hours will this program be available? Student access will likely increase and this may have an impact on resident access.	We will work with Nadine and West Oakland on this. We will be growing the facilities and benefits but we understand the move is concerning.
The names "Victory Heights" and "West Hilltop" are different from what the community calls these places and can have unintended impacts, particularly in predominantly black communities.	Starting to look at this more thoughtfully with our new Associate Vice Chancellor of Planning, Mary Beth McGrew.
What was the process for involvement?	Lots of back and forth.
How can we see that you captured the community comments accurately?	We will send them out.
Can you boost the Community Leisure Learn Program?	Yes, we need to recalibrate.
Parking is a problem despite the best plans.	We are including parking with our projects.
UPMC is an unintended consequence in this plan.	No response recorded.
City has a new policy of no new parking and they won't finance or fund any projects that include parking.	No response recorded.
Pitt traffic doesn't end at your IMP boundary and heavily impacts Robinson Street. Traffic flow into Pitt affects neighborhoods. Economic resources are needed to help neighboring communities.	No response recorded.
Hill CDC wants to discuss the RCO process.	No response recorded.

**Other Notes**

None
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**Planner completing report:** Derek Dauphin and Stephanie Joy Everett

# UNIVERSITY OF PITTSBURGH ZONING HEARING BOARD

## Zoning Narrative

Prepared by Reed Smith LLP

Submitted April 16, 2021

### I. Applicant Standing

The Applicant, University of Pittsburgh – Of the Commonwealth of Pennsylvania of Higher Education (the “*University*”) is a state-related, urban research university with 16 schools and colleges on its campus, all of which are located in Pittsburgh, Pennsylvania. The University controls and/or is the record owner of the development sites identified in the Institutional Master Plan (the “*Property*”). The Institutional Master Plan (“*IMP*”) provides the framework for the development and redevelopment of the Property.

### II. Purpose Statement

The University submitted the IMP for approval pursuant to Section 905.03.D and 922.12 of the Pittsburgh Zoning Code (“*Code*”), which such IMP addresses the University’s plans for growth in Oakland over the next twenty-five (25) years. Most of Property subject to the IMP is located in the Educational/Medical Institutional District (“*EMI*”). The University participated in a robust community process as it developed a plan that provides an attractive, high-quality development in an urban setting that is also respectful of adjacent residential areas and limits negative impacts of its use and proposed developments.

As one of the nation’s most distinguished comprehensive universities, the resources of the University constitute an invaluable asset for the intellectual, economic, and social enrichment of Pennsylvania, while the international prestige of the University enhances the image of Pennsylvania throughout the world. The University is a major contributor to economic growth in the region; providing jobs, creating start-ups, significant local and state tax revenue, and charitable and volunteer services.

### III. Background

The University of Pittsburgh was founded in 1787. The University’s prior IMP was adopted in 2003 with subsequent updates in 2008 and 2010. The new IMP replaces the prior 2003 IMP as amended. As part of the new IMP, the University provides the framework for potential new development and the potential redevelopment of existing buildings throughout the EMI Zoning District. The IMP is not intended to represent actual development of the Property, but rather establishes the rules for actual development. As actual development projects are advanced, each will be subject to the City’s applicable approval procedures. The University submitted the initial draft of the new IMP on December 20, 2019 with updated submissions in August of 2020 and February and April of 2021.

### IV. Zoning Requests and Compliance

The University is requesting approval of its IMP dated April 2021 in accordance with Section 905.03.D and 922.12 of the Code.

Pursuant to Sections 905.03.D and 922.12 of the Code, an institutional master plan shall “provide a framework for development of large institutions such as universities, which control large areas within the City of Pittsburgh, contain a much greater density of development than surrounding areas, are a source of substantial employment, and are usually located immediately adjacent to residential neighborhoods.”

The IMP complies with all enumerated requirements of Sections 905.03.D and 922.12 of the Code, as evidenced in **Exhibit A** attached hereto. In addition, **Exhibit B** references the *Pittsburgh Department of City Planning IMP Best Practices Guide for Medium and Large Academic Institutions* dated November 2018 and notes where each applicable item can be found in the University's IMP. As demonstrated in Exhibit A and Exhibit B, the University's IMP is complete and fully complies with the Code requirements for an IMP.

## **V. Expert Testimony**

The following persons are representatives of or advisors to the University and will provide expert testimony in support of the IMP:

- Mary Beth McGrew, AIA, University Representative for IMP
- Owen Cooks, University Representative for IMP
- Elizabeth Long, AIA, Architectural and Planning Consultant on IMP
- Nathaniel Grier, PE, Transportation Consultant for Mobility Plan
- Dennis Dunmire, RLA, Advisor on Stormwater and Sustainability Issues
- Tim Nuttle, PhD, CSE, CWB, Advisor on Sustainability and Tree Canopy Issues

For the purposes of this Zoning Narrative, Nathaniel Grier, Dennis Dunmire, Tim Nuttle, and Elizabeth Long shall herein collectively be referred to as, the “***Subject Matter Experts.***” Each Subject Matter Expert's respective experience is further described in **Exhibit C**.



**EXHIBIT A – ZONING CODE COMPLIANCE TABLE**

Code Requirements	University of Pittsburgh Institutional Master Plan
<p><b>905.03.D.3</b> – An IMP shall illustrate and identify the current land use of all area within the EMI, contiguous properties, and properties within 1,000 feet of the EMI District under control of the institution.</p>	<p>Section 2.1, IMP Boundary Area, pages 24-27</p> <p>Section 4, Long-Term Vision and Growth, pages 70-95</p> <p>Section 4.1, Twenty-Five Year Development Sites, pages 72-95</p>
<p><b>905.03.D.4(a)</b> – IMP shall cover a period of at least 25 years.</p>	<p>Section 4, Long-Term Vision and Growth, pages 70-95</p>
<p><b>905.03.D.4(b)</b> – IMP shall include a statement defining organizational mission and objectives of the institution and describe how the development contemplated in the IMP advances these goals.</p>	<p>Section 1.1, Mission and Objectives, page 3</p> <p>Section 1.1.2, Mission, page 4</p> <p>Section 1.1.3, IMP Goals, page 4</p> <p>Section 1.3.1, History, page 7</p> <p>Section 1.3.2, Previous Institutional Master Plans, page 8</p> <p>Section 1.3.3, Other Planning Efforts, pages 9-15</p> <p>Section 1.4, Process, page 16</p> <p>Section 1.4.1, Project Team and Committees, pages 17-18</p> <p>Section 1.4.2, Public Engagement Summary, pages 19-21</p> <p>Section 2.2.2E, Previous IMP Development Sites, pages 44-45</p> <p>Section 3.1, Expectations for Growth or Change, page 63</p> <p>Section 3.3, Current and Future Needs for Housing, pages 66-69</p> <p>Section 8.0, Neighborhood Enhancement Strategy, pages 430-445</p>
<p><b>905.03.D.4(c)</b> – IMP shall include description of existing properties and uses.</p>	<p>Section 2.2, Existing Properties &amp; Uses, pages 28-59</p> <p>Section 3.0, Needs of the Institution, page 62</p>
<p><b>905.03.D.4(c)(1)</b> – IMP shall include Illustrative plans with building footprints, roads, sidewalks, parking, landscaping, and other significant improvements.</p>	<p>Referenced throughout IMP</p>

Code Requirements	University of Pittsburgh Institutional Master Plan
<b>905.03.D.4(c)(2)</b> – Description of existing land and building uses	Section 2.2.2, Existing Buildings Site Plan, pages 30-31  Section 2.2.2B, Existing Property Ownership, page 34  Section 2.2.2C, Changes Since 2010 IMP, page 35  Table 1: Existing Buildings, pages 36-41
<b>905.03.D.4(c)(3)</b> – Existing gross floor area in SF	Section 2.2, Table 1: Existing Buildings, pages 36-41
<b>905.03.D.4(c)(4)</b> – Existing building height in stories and feet	Section 2.2, Table 1: Existing Buildings, pages 36-41
<b>905.03.D.4(c)(5)</b> – IMP shall include details of existing off-street parking and loading	Section 2.2.5, Existing Parking Facilities, pages 50-59  Section 5.1.5, IMP Parking Facilities, pages 118-119
<b>905.03.D.4(d)</b> – IMP shall include a summary and projection of the institution's current and future needs for specified facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-69
<b>905.03.D.4(d)(1)</b> – IMP shall include a summary and projection of the institution's current and future needs for academic facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(d)(2)</b> – IMP shall include a summary and projection of the institution's current and future needs for service facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(d)(3)</b> – IMP shall include a summary and projection of the institution's current and future needs for research facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(d)(4)</b> – IMP shall include a summary and projection of the institution's current and future needs for office facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(d)(7)</b> – IMP shall include a summary and projection of the institution's current and future needs for public assembly facilities.	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(d)(8)</b> – IMP shall include a summary and projection	Section 2.2.5, Existing Parking Facilities, pages 50-59

Code Requirements	University of Pittsburgh Institutional Master Plan
of the institution's current and future needs for parking facilities.	<p>Section 2.2.5, Table: Existing Parking Facilities, pages 58-59</p> <p>Section 5.1.5, IMP Parking Facilities, pages 118-119</p> <p>Section 6.1.3, Existing Transportation Network, pages 298-299</p>
<b>905.03.D.4(d)(9)</b> – IMP shall include a summary and projection of the institution's current and future needs for other facilities related to use	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>905.03.D.4(e)</b> – IMP shall include a description of the ten-year development envelope, the maximum amount of development.	<p>Section 5.1, Proposed Development, pages 98-119</p> <p>Section 6.3, Proposal – Mobility Plan, pages 310-325</p> <p>Section 7.3, Campus Energy Planning, pages 376-379</p> <p>Section 7.4, Stormwater Management, pages 380-413</p> <p>Section 7.5, Green Buildings, pages 414-415</p> <p>Section 7.6, Waste Management &amp; Water Conservation, pages 416-419</p>
<b>905.03.D.4(e)(1)</b> – Detail location of each development site within 10 year envelope.	<p>Section 5.1.2, Ten-Year Development Sites, pages 100-109</p> <p>Section 5.3.5, District Guidelines, pages 150-275</p>
<b>905.03.D.4(e)(2)</b> – IMP shall include max. floor area of structures for each potential development site	<p>Section 5.1.1, Ten-Year Development Sites, Table 4: Ten-Year Development Sites, pages 102-109</p> <p>Section 5.3.5, District Guidelines, pages 150-275</p>
<b>905.03.D.4(e)(3)</b> – IMP must include the total maximum floor area for IMP structures.	<p>Section 5.1.1, Ten-Year Development Sites, Table 4: Ten-Year Development Sites, pages 102-109</p> <p>Section 5.3.5, District Guidelines, pages 150-275</p>
<b>905.03.D.4(e)(4)</b> – IMP shall include height of possible structures	<p>Section 5.1.1, Ten-Year Development Sites, Table 4: Ten-Year Development Sites, pages 102-109</p> <p>Section 5.3.5, District Guidelines, pages 150-275</p>
<b>905.03.D.4(e)(5)</b> – IMP shall include required setbacks on each parcel	Section 5.3.5, District Guidelines, pages 150-275

Code Requirements	University of Pittsburgh Institutional Master Plan
<b>905.03.D.4(e)(6)</b> – IMP shall address other factors which may affect the size and form of buildings	Referenced throughout Section 5
<b>905.03.D.4(e)(7)</b> – IMP shall include total number and location of parking spaces which will occur within a 10-year period	Section 5.1.5, IMP Parking Facilities, pages 118-119 Section 5.3.5, District Guidelines, pages 150-275
<b>905.03.D.4(f)</b> – IMP shall detail potential development envelope within period of 10-25 years in the future (at a minimum)	Section 4.1, Twenty-Five Year Development Sites, pages 72-95
<b>905.03.D.4(g)</b> – IMP shall include a transportation and parking management plan and identify traffic mitigation measures	Section 6.0, Mobility Plan, pages 276-325 Section 6.2, Mobility Goals, pages 308-309
<b>905.03.D.4(h)</b> – IMP to include Environmental Protection Plan	Section 7.1, Environmental & Sustainability Goals, pages 328-333 Section 7.2, Environmental Protection, pages 334-375 Section 7.3, Campus Energy Planning, pages 376-379 Section 7.4, Stormwater Management, pages 380-413 Section 7.5, Green Buildings, pages 414-415 Section 7.6, Waste Management & Water Conservation, pages 416-419
<b>905.03.D.4(i)</b> – Open Space and Pedestrian Circulation guidelines and objectives.	Section 5.3.4, Landscape and Open Spaces, pages 144-149 Section 7.2.6, Public Area Enhancements, pages 370-375 Section, 7.7, Open Spaces & Pedestrian Circulation, pages 420-429
<b>905.03.D.4(j)</b> – Urban Design Guidelines shall include objective for new and renovated structures to assure compatibility with the surrounding area and minimize adverse impacts. They should address appropriate materials, height, bulk, massing, and colors that will be used.	Section 5.3, Urban Design Guidelines, pages 122-149

Code Requirements	University of Pittsburgh Institutional Master Plan
<p><b>905.03.D.4(k)</b> – IMP to include Neighborhood Protection Strategy to identify standards and programs to be implemented to ensure the quality of surrounding neighborhoods is maintained or enhanced.</p>	<p>Section 8.0, Neighborhood Enhancement Strategy, pages 430-445</p>

**EXHIBIT B – IMP GUIDELINES COMPLIANCE TABLE**

<b>Guideline</b>	<b>University of Pittsburgh Institutional Master Plan</b>
<b>Introduction</b> 1	Section 1.0, Introduction, pages 1-21
<b>Missions and Objectives</b> 1.1	Section 1.1, Mission and Objections, pages 3-5
<b>Requirements</b> 1.2	Section 1.1.2, Requirements, page 6
<b>Planning Context</b> 1.3	Section 1.3, Planning Context, pages 7-15
<b>Process</b> 1.4	Section 1.4, Process, pages 16-21
<b>Existing Conditions</b> 2	Section 2.0, Existing Conditions, page 22-59
<b>IMP Boundary</b> 2.1	Section 2.1, IMP Boundary, pages 24-27
<b>Existing Property and Uses</b> 2.2	Section 2.2, Existing Properties & Uses, pages 28-59
<b>Needs of the Institution</b> 3	Section 3.0, Needs of the Institution, pages 60-69
<b>Expectations for Growth or Change</b> 3.1	Section 3.1, Expectations for Growth or Change, page 63
<b>Current and Future Needs for Facilities</b> 3.2	Section 3.2, Current and Future Needs for Facilities, pages 64-65
<b>Current and Future Needs for Housing</b> 3.3	Section 3.3, Current and Future Needs for Housing, pages 66-69
<b>Long-Term Vision and Growth</b> 4	Section 4.0, Long-Term Vision and Growth, pages 70-95
<b>Twenty-Five Year Development Site</b> 4.1	Section 4.1, Twenty-Five Year Development Sites, pages 72-95
<b>Ten-Year Development Envelope</b> 5	Section 5.0, Ten-Year Development Envelope, pages 96-275
<b>Proposed Development</b> 5.1	Section 5.1, Proposed Development, pages 98-119
<b>Implementation Plan</b> 5.2	Section 5.2, Implementation Plan, pages 120-121
<b>Urban Design Guidelines</b> 5.3	Section 5.3, Urban Design Guidelines, pages 122-275
<b>Mobility Plan</b> 6	Section 6.0, Mobility Plan, pages 275-325
<b>Existing Conditions</b> 6.1	Section 6.1, Existing Conditions, pages 278-307
<b>Mobility Goals</b> 6.2	Section 6.2, Mobility Goals, pages 308-309

<b>Guideline</b>	<b>University of Pittsburgh Institutional Master Plan</b>
<b>Proposal</b> 6.3	Section 6.3, Proposal, pages 310-325
<b>Infrastructure Plan</b> 7	Section 7.0, Infrastructure Plan, pages 326-429
<b>Environmental and Sustainability Goals</b> 7.1	Section 7.1, Environmental & Sustainability Goals, pages 328-333
<b>Environmental Protection</b> 7.2	Section 7.2, Environmental Protection, pages 334-375
<b>Campus Energy Planning</b> 7.3	Section 7.3, Campus Energy Planning, pages 376-379
<b>Stormwater Management</b> 7.4	Section 7.4, Stormwater Management, pages 380-413
<b>Green Buildings</b> 7.5	Section 7.5, Green Buildings, pages 414-415
<b>Waste Management and Water Conservation</b> 7.6	Section 7.6, Waste Management & Water Conservation, pages 416-419
<b>Open Spaces and Pedestrian Circulation</b> 7.7	Section 7.7, Open Spaces & Pedestrian Circulation, pages 420-429
<b>Neighborhood Enhancement Strategy</b> 8	Section 8.0, Neighborhood Enhancement Strategy, pages 430-445
<b>Appendices</b> 9	Section 9.0, Appendices, pages A3-A325

**EXHIBIT C – SUBJECT MATTER EXPERTS**

*Please see attached.*



# Dennis S. Dunmire, R.L.A.

## Project Manager I



### 14 YEARS OF EXPERIENCE

#### EDUCATION

B.S., Landscape Architecture, West Virginia University, 2006

#### EXPERTISE

Site Design  
Project Permitting  
Site Visualization

#### REGISTRATIONS

Registered Landscape Architect  
• PA 003350

Mr. Dunmire has over fourteen years of experience in the design of commercial real estate land development projects, including mixed-use, office, residential, and higher education. He has served as a project manager for multi-disciplinary land development projects from design and permitting through construction. His areas of technical expertise include site development feasibility studies, conceptual planning, preparation of land development and permitting packages, stormwater management facilities, cost estimating, and construction documents.

#### PROJECT EXPERIENCE

##### Public Sector | State

##### **Ohiopyle Falls Area Visitor Center, Ohiopyle State Park, Department of Conservation and Natural Resources, Fayette County, PA**

At the direction of the PA DCNR, CEC was contracted to provide site design and development services for the design of a new visitors center at the falls area of Ohiopyle State Park. Mr. Dunmire was a project consultant that worked on site layout and pedestrian circulation. He also assisted with selecting and designing sustainable features including: site furnishings with recycled components, FSC certified wood products, use of native plants, pervious pavement, bio-retention facilities, multiple green roofs, using captured rainwater and flow from the living machine for irrigation, and promoting alternate forms of transportation.

##### **Cross Creek Park – Thompson Hill Boat Launch, Washington County Department of Parks and Recreation, West Middletown, Washington County, PA**

At the direction of the PA DCNR, CEC was contracted to provide site design and development services for the design of a new visitors center at the falls area of Ohiopyle State Park. Mr. Dunmire was a project consultant that worked on site layout and pedestrian circulation. He also assisted with selecting and designing sustainable features including: site furnishings with recycled components, FSC certified wood products, use of native plants, pervious pavement, bio-retention facilities, multiple green roofs, using captured rainwater and flow from the living machine for irrigation, and promoting alternate forms of transportation.

##### Real Estate | Education/Institutional

##### **North Catholic High School, Pittsburgh Catholic Diocese, Cranberry Township, Butler County, PA**

Mr. Dunmire's role in this project included conceptual and final site design, landscape architectural design, as well as the design and evaluation of site rendering and visual graphics for the proposed development. The campus is located on a 71 acre site in Cranberry Township, just north of Route 228. The new school includes an approximately 180,000 sf building designed to educate up to 1,000 students, grades 9



## **Dennis S. Dunmire, R.L.A.**

### **Project Manager I**

through 12. The school also includes an auditorium to seat 1,000; a competition gymnasium that seats 1,250; a two story classroom wing; a library; music department; kitchen/cafeteria and administration offices. LEED Silver Certification is being pursued from the United States Green Building Alliance (USGBA) to enhance efficiency and sustainability. The project architect was Astorino and CEC's services include surveying, preliminary conceptual design, landscape architectural design, civil engineering, geotechnical engineering, ecological permitting, land development approval services, construction administration, construction QA/QC and IBC special inspections.

#### **The Bible Chapel, South Hills Bible Chapel, Inc., Collier Township, Allegheny County, PA**

Mr. Dunmire provided conceptual design and final engineering guidance for the development of a 4-acre branch campus for the Bible Chapel. The project will consist of a 13,000 square-foot, one-story building with associated parking areas, site amenities, stormwater management facilities, a recreational soccer field and a trail system.

#### **Tennis Court Rehabilitation, Indiana University of Pennsylvania, Indiana, PA**

CEC was retained by IUP to provide design and construction documentation for the rehabilitation of the three existing tennis courts on campus. These courts were redeveloped in three phases and included complete reconstruction of the pavement and subgrade, fencing, and court furnishings. Mr. Dunmire was the lead design consultant for the final phase of the design and construction of the project.

#### **Real Estate | Hospitality**

##### **Drury Hotel Development, Drury Southwest Development, Robinson Township, Allegheny County, PA**

Mr. Dunmire was the primary design consultant for the development of a 22-acre, mixed use commercial development which will consist of a 170,000 gross-square-foot, 9-story hotel, with two restaurants outparcels. The project site is constrained by numerous technical challenges, including subsurface mine conditions, topographic challenges necessitating significant retaining wall design, and wetland impacts.

#### **Real Estate | Mixed-Use**

##### **Mon-View Development Phase III, Mon-View Development, LLC., Granville, WV**

CEC was contracted by CONSOL Energy to assist in preparing a master plan and graphics package for a presentation to WV Legislation for grant money. Mr. Dunmire worked closely with CONSOL preparing masterplans and renderings for their presentation. The grant money allowed for a new interchange along Interstate 79 and provided funding for the Phase III development. Once the grant money was secured, CEC prepared construction documents for the Phase III development. Mr. Dunmire was involved in the overall site design and was one of the points of contact for the client.

#### **Robinson Square Development, Robinson Square, LLC., Robinson Township, Allegheny County, PA**

Mr. Dunmire has been the assistant project manager and lead design consultant on a 45 acre development located along Steubenville Pike in Robinson Township. CEC has provided conceptual design, final engineering, and permitting services for the mixed-use development of over 100,000 square-feet of retail, office and residential uses.

#### **Real Estate | Office**

##### **Cable Property Flex Office Park, Sampson Morris Group, Robinson Township, Allegheny County, PA**

Mr. Dunmire assisted in the design of this 180,000 S.F. flex office park, housing five separate buildings. The existing property is topographically challenged and required creative layout alternatives and grading to maximize the site. Mr. Dunmire provided assistance with conceptual planning, and final engineering services through permitting.

#### **District 15 Office Building, RDC Design-Duild, Inc., Pittsburgh, Allegheny County, PA**

A 105,000 square-foot, four-story speculative R&D office building located on a 2-acre parcel at the northeast corner of 15th and Smallman Streets in the Strip District, at the entrance to Robotics Row. The site includes a 150-space surface parking lot. Site challenges included development within a FEMA floodplain, grading to meet ADA accessibility, bicycle & pedestrian access; and extensive coordination with the City of Pittsburgh, regulatory review agencies, and the RiverLife Task Force. CEC also provided public plaza/amenity design for two prominent corners within the development which provide interactive space and amenities for the public, along with access to the public trail system.

#### **Boardwalk @ Park Lane, Burns & Scalo Development, LLC, North Fayette Township**

Is a two building, 212,000 square foot office complex located in the RIDC West Business Park. The buildings sit on a combined 13.5 acres of pad ready area.

## **Dennis S. Dunmire, R.L.A.**

### **Project Manager I**

#### **Westinghouse Headquarters, Trammell Crow Services, Inc., Cranberry, Butler County, PA**

CEC was tasked with the civil engineering and landscape architectural design for the construction of a new 1 million square foot multi-level LEED certified corporate headquarters for Westinghouse located within the Cranberry Woods Business Park in Butler County. Construction required working around numerous environmentally sensitive areas while still providing an extremely large development footprint. Mr. Dunmire was part of the design team in charge of site layout, grading and landscaping. Mr. Dunmire was also tasked with evaluating a variety of different pedestrian paths around the perimeter of the site.

#### **Corporate Office Building, Chartiers Enterprises, Inc., Scott Township Allegheny, PA**

CEC provided survey, landscape and civil engineering services for the site design and permitting for a new 7,800 square foot office building. Mr. Dunmire was the primary design consultant for the site layout, grading and landscaping design. The site provide unique grading and stormwater challenges due to the size and location of the site.

#### **Abele Business Park Beacon 1, Burns & Scalo Real Estate Services, Inc, South Fayette Township, Allegheny County, PA**

CEC provided surveying, geotechnical, and civil engineering services for the design and permitting of an 80,000 square foot office building for the Beacon 1 Project located within the Abele Business Park. CEC's scope included the preparation of site layout plans, grading plans and earthwork computations, design of extensive stormwater management facilities and water quality best-management-practices, utility service design and coordination, preparation of land development plans and an NPDES permit, and municipal site plan approvals. Mr. Dunmire responsibilities ranged from conceptual design of layout and grading through the final design and permitting phase.

#### **The Riviera, Burns & Scalo Real Estate Services, Inc, Pittsburgh, Allegheny County, PA**

CEC provided surveying, landscaping and civil engineering services for the design and permitting of a 156,000 square foot office building located within the Pittsburgh Technology Center developed by the Urban Redevelopment Authority. Mr. Dunmire was the assistant manager on all of CEC's scope that included the evaluation of several vacant parcels with in the Center, the preparation of site layout plans, grading plans, design of stormwater best-management-practices, utility service design and coordination, preparation of land development plans and municipal site plan approvals.

#### **Real Estate | Residential**

#### **Providence Point Phase II, Baptist Homes Society, Scott Township, Allegheny County, PA**

Mr. Dunmire was a primary design consultant for the development of an 80 unit apartment building with ground floor parking garage and a multi-purpose building on the existing Providence Point Campus. The design included preparation of site layout and grading plans, stormwater management facilities and water quality best management practices, land development plans and an NPDES permit, and municipal site plan approvals. The stormwater design included underground detention facilities, a bio-retention facility, and rerouting of the existing stormwater conveyance system.

#### **Hillcrest Senior Residences, RDL Architects, Inc., Pittsburgh, Allegheny County, PA**

Mr. Dunmire was a primary design consultant for a 2-acre, 66,000 gross-square-foot, 4-story senior residence building, including surface parking, site circulation roads and sidewalks, retaining walls, and landscaped areas. CEC's services include site layout, roadway design, site grading, utility design and coordination, stormwater management design, erosion and sedimentation control plan development and permitting, water quality BMP design, and demolition plan development.

#### **The Bridge on Forbes, Campus Advantage Development Associates, L.P., City of Pittsburgh, PA**

A 489-bed, 10-story student housing development near the University of Pittsburgh and Carnegie Mellon University. The site is located between Forbes Avenue and Euler Way, which presented site-grading challenges due to the significant elevation changes between the two streets, as well as the steep slope along the adjacent building to the east. Other land development challenges included extensive utility coordination and relocation design, and extensive permitting through the City of Pittsburgh Public Works, the Pittsburgh Water and Sewer Authority, and the PADEP.

#### **One on Centre Site Development, EdR and Park 7 Group, City of Pittsburgh, PA**

A new 17-story student housing building located near the University of Pittsburgh. The building is on a 1.2-acre urban redevelopment site with topography challenges and significant utility relocations. CEC provided grading, layout, stormwater, utility design, and permitting services, survey, environmental, and landscape architecture services including a detailed design for the street-level hardscape adjacent to the public right-of-way, a 7th story pool deck and amenity space for the building.

# **Dennis S. Dunmire, R.L.A.**

## **Project Manager I**

### **Real Estate | Retail**

#### **Dollar General Site Evaluation Studies**

Mr. Dunmire was the lead consultant on a variety of site evaluation for new Dollar General Stores in the Pennsylvania, Ohio and West Virginia markets. He was tasked with reviewing ordinances and preparing site information reports and test fits for each location.

#### **Warrendale Village Shopping Center, UDSD, LP, Marshall Township, Allegheny Township, PA**

CEC was retained to perform landscape architecture, civil engineering, surveying services for the design and construction of an upscale 45,000 SF shopping center located on 13-acres in Allegheny County. This project site is bound by three highways and is designed to be a pedestrian-friendly development with extensive pedestrian plazas and sidewalks. Mr. Dunmire was tasked to assist with preparing the site design and land development plans.

#### **South Hills Village Renovations, Simon Property Group, Bethel Park, Allegheny County, PA**

CEC provided comprehensive civil engineering and site development services for the redevelopment of the western anchor stores at South Hills Village mall. The addition consisted of a 145,000 s.f. Target store, 85,000 s.f. Dick's Sporting Goods store, and small tenant spaces. Mr. Dunmire assisted with the site design, landscape architecture and prepared various exhibits for municipal approval.

#### **Donaldsons Crossroads , Collaborative Ventures, LLC, Peters Township, Washington County, PA**

CEC was tasked with the site layout, planting plan, and land development approval for a 10,000 s.f. retail development. This development included a new building footprint, an expanded parking lot with new site entrances, and a drive through lane. Mr. Dunmire was the lead consultant for this project.

### **PROFESSIONAL AFFILIATIONS**

Urban Land Institute

NAIOP Commercial Real Estate Development Association

International Council of Shopping Centers

American Society of Landscape Architects

# Tim Nuttle, PhD, CSE, CWB

Principal



## 27 YEARS OF EXPERIENCE

### EDUCATION

B.S., Wildlife Ecology & Management, Michigan State University, 1993

M.S., Wildlife Ecology, Mississippi State University, 1997

Ph.D., Ecology, Utah State University, 2003

### CERTIFICATIONS

Certified Wildlife Biologist, The Wildlife Society

Certified Senior Ecologist, Ecological Society of America

Chair, Board of Professional Certification, Ecological Society of America

Dr. Nuttle has over 27 years of experience in ecological restoration, green infrastructure design, ecological studies throughout the United States and Europe. Dr. Nuttle specializes in understanding and managing the function of complex, species rich, ecological systems and how these respond to anthropogenic environmental changes. He is also experienced in coordinating large, multi-partner projects.

### PROJECT EXPERIENCE

#### **Emerald View Park Master Plan, City of Pittsburgh, PA, City of Pittsburgh, Pittsburgh, Pennsylvania**

**Role:** Principal in Charge

CEC led the ecological inventory and analysis, as well as the landslide risk assessment tasks for the Emerald View Park Master Plan. CEC participated in public meetings to present findings and listen to community input. CEC developed an online GIS database to share results of field inventories with the project team and with the city. Finally, CEC developed recommendations for vegetation restoration, wildlife habitat, trail rehabilitation, and landslide remediation.

#### **Larimer Park Water Circulation Master Plan, Pittsburgh Parks Conservancy, Pittsburgh, PA, Pittsburgh Parks Conservancy, Pittsburgh, Pennsylvania**

**Role:** Principal in Charge

CEC worked with an interdisciplinary team of landscape architects, engineers, and ecologists to prepare a plan to help develop community consensus and provide a roadmap for implementation and funding. CEC ecologists performed an ecological assessment to identify vegetation management needs, including invasive species management and forest stewardship, and recommended appropriate stream daylighting approaches that use an ecosystem-based approach to manage stormwater runoff in the context of a restored stream system. CEC also performed a desktop landslide risk assessment of the area. Tim was the Principal in Charge and primary client contact for the project.

#### **Firden Run Mitigation Bank, Water & Land Solutions LLC, Elizabeth, Pennsylvania**

**Role:** Principal in Charge

CEC performed ecological assessments; stream, floodplain, wetland, and riparian buffer design, permitting, and landowner coordination for this private commercial mitigation bank in southwestern Pennsylvania.

#### **Forest Stewardship Plan, Confidential Client, Elizabeth Allegheny, PA**

Completed a Forest Stewardship Plan to support the landowners' successful application for enrollment in NRCS's Environmental Quality Incentives Program. Completed habitat assessments and forest inventories to support development of management strategies



Civil & Environmental Consultants, Inc.

## **Tim Nuttle, PhD, CSE, CWB**

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to support the landowners' objectives for the property. Strategies include invasive species management, timber stand improvement, tree planting, and early-successional management.

#### **Four Mile Run Green Infrastructure Project, Pittsburgh Water and Sewer Authority, Pittsburgh Allegheny County, PA**

**Role:** Associate Project Director, Ecosystem Restoration Lead

This watershed-scale green infrastructure project consists of restoring approximately one mile of existing streams and daylighting approximately one mile of historically buried stream with the aim of reducing combined sewage overflows and flooding risk. The project involves stream restoration, landscape architecture, urban planning, civil engineering, and community engagement. 2018-2022

#### **Schenley Park Geohazard Evaluation, Native and Invasive Plant Assessment, and Soil Characterization, Pittsburgh Parks Conservancy, Pittsburgh, PA**

CEC evaluated plant communities and landslides and geohazards throughout Schenley Park, and evaluated soils for development of a native tree nursery.

#### **Green Hills Wind Project - Endangered Species Habitat Conservation Plan, Capital Power, Sullivan County, MO**

Capital Power engaged CEC to conduct ecological, environmental, and cultural resources assessments and environmental permitting for a wind power project in northern Missouri. Integral to the project is a Habitat Conservation Plan (HCP) necessary to receive an Incidental Take Permit for federally listed bat species. I led the HCP component of this project, which involves detailed risk assessments to quantify potential take and development of avoidance, minimization, and mitigation strategies to offset take.

#### **Transforming Sampsonia Way into a Model of Green Infrastructure and Artful Stormwater Management, Allegheny City Central Association / Sprout Fund, Pittsburgh Allegheny, PA**

The project will create an inviting, pedestrian friendly environment filled with vegetation and art, while reducing combined stormwater outfalls and the local urban heat island by planting trees, green roofs, and rain gardens. Throughout the project, neighbors are involved in creative placemaking, choosing green infrastructure options and artful solutions that meet our needs and wants for our neighborhood, and visitors for years to come will experience demonstrations of these solutions in action. The project aims to transform purely utilitarian function into creative and engaging experience of sustainable infrastructure.

#### **Wingfield Pines Conservation Stewardship and Master Plan, Allegheny Land Trust, PA**

CEC developed an ecological master plan for Allegheny Land Trust's flagship property. The project involves cataloging and analyzing ecological assessment data, invasive species assessments and habitat restoration plans, stakeholder engagement, and planning for educational infrastructure.

#### **Woods Run Green Infrastructure Project, Pittsburgh Water & Sewer Authority, Pittsburgh Allegheny, PA**

**Role:** Principal in Charge

Woods Run currently discharges into the 50-inch-diameter combined sewer pipe as it leaves Riverview Park in Pittsburgh. Baseflows and stormwater entering at this location contribute to combined sewage overflows into the Ohio River. CEC was tasked by PWSA to develop interventions to redirect, capture, and detain the existing rainwater runoff using a combination of nature-based, surface, and subsurface storage techniques. CEC is working with PWSA to design systems that control and delay stormwater, and remove sediment and debris before entering the pipe by restoring healthy stream and riparian forest ecosystems.

*\* Work performed prior to joining CEC*

#### **Natural Variability of Streams and Wetlands in Southwestern Pennsylvania, CONSOL Energy**

This research projects seeks to understand the degree to which streams and wetlands change through time. The project assesses stream and wetland boundaries and biological status both within the course of a year and across years. By understanding natural variability in these resources, we can better distinguish between changes caused by human activities from the background variability.

#### **Riparian Connections: Food Web Linkages between Streams and Forests, National Science Foundation**

Research grant. In this study, CEC is investigating how changes in stream quality cascade through food chains that rely on macroinvertebrates in the stream. This is a partnership with Carnegie Museum of Natural History, Duquesne University, and the Ecological Society of America. Nuttle is the principal investigator and scientific lead.

## **Tim Nuttle, PhD, CSE, CWB**

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#### **Rustic Ridge Mine Permit Expert Reports, LCT Energy, Donegal, PA**

CEC conducted various ecological studies in association with LCT Energy's Rustic Ridge Mine to document existing conditions prior to mine development and evaluate the likely effects, if any, treated water discharges from the mine would have on receiving streams. I oversaw several of these studies as well as prepared an expert report where I reviewed these findings in light of the scientific literature to refute claims that the mine would adversely affect aquatic resources. Ultimately, the parties arrived at a settlement that resulted in LCT receiving its permit and commencing mining operations.

#### **Stream Restoration Approaches for Longwall Mining Impacts: Effectiveness for Restoring Fish and Macroinvertebrate Communities, CONSOL Energy**

Making use of our long-term monitoring data on streams over CONSOL's coal mines in Pennsylvania, we evaluated success of stream restoration techniques in restoring biological status of streams following mining impacts.

#### **Ecological Support of Gas Development at the Pittsburgh International Airport, CNX Gas**

CEC delineated wetlands and streams and surveyed plant and animal species of special concern on proposed natural gas well pads, impoundments, and pipeline rights of way both on and off airport property. We prepared wildlife, soils, and wetlands sections of the Environmental Assessment, as well as provided GIS support. We prepared permit applications and mitigation plans for proposed crossings of aquatic features.

#### **Expert Witness Testimony, Confidential Client, Pittsburgh Allegheny County, PA**

Qualified and an expert in the field of Ecology, providing testimony on systems ecology, ecological restoration, and stream ecology before the Pennsylvania Environmental Hearing Board.

#### **Expert Witness Testimony - Environmental Hearing Board, CONSOL Energy, Pittsburgh Allegheny County, PA**

Qualified as Expert Witness in the field of Ecology. Prepared exhibits and testified regarding effects of longwall mining and restoration following mining on streams.

#### **Habitat and Water Quality Effects on Stream Macroinvertebrate Communities Near Mine Discharge Points, CONSOL Energy**

Making use of data from 163 monitoring stations, we evaluated the relative importance of stream habitat versus water quality in determining macroinvertebrate-based stream metrics.

#### **Climate change impacts assessment and phenological monitoring for Lepidoptera in Pennsylvania, Pennsylvania Wild Resources Conservation Fund\***

Research grant. \$18,325. 18 months. PIs: T. Nuttle and E. Yerger.

#### **Climate change impacts on birds against the backdrop of gas development and historical deer browsing, Pennsylvania Wild Resources Conservation Fund**

Research grant. \$31,867. 30 months. PIs: T. Nuttle and S. Stoleson.

#### **Investigating mechanisms of trophic ricochet in canopy food chains resulting from long-term legacies of historic deer browsing, National Science Foundation\***

Research grant. \$197,000. This multi-year project studied the long-term effects of human-induced changes in white-tailed deer density on the structure and function of forest vegetation, caterpillar communities, and the bird communities that rely on them. In partnership with USDA Forest Service, the project contributed to the education and training of several masters and undergraduate research students, three publications in international journals, and multiple conference presentations.

#### **Long-term ecosystem function and invasibility of green roofs under different establishment scenarios, Eisler Landscapes**

Research grant. \$10,000. 24 months. PI: Tim Nuttle.

#### **Long-term effects of experimentally controlled deer density on forest canopy food chains, USDA Forest Service Northern Research Station**

Cooperative Joint Venture research project, 2008 through 2013.

# Tim Nuttle, PhD, CSE, CWB

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**Effects of white-tailed deer, fire and canopy gaps on forest dynamics, USDA Forest Service, Northeast Research Station\***  
Research grant. \$12,000. PI: Walter P. Carson, Co-PIs: Mary Beth Adams and Tim Nuttle.

**Long-term impacts of white-tailed deer over-abundance on birds of deciduous forests of Western Pennsylvania, Pennsylvania State System of Higher Education\***

Faculty Professional Development Council, research grant. \$6,338. 17 months. PI: Tim Nuttle.

**NATURNET-REDIME: New Education and Decision Support Model for Active Behaviour in Sustainable Development based on Innovative Web Services and Qualitative Reasoning, European Commission, Sixth Framework Programme\***

Specific Target Research Project. 1,900,000 € (ca. US\$ 2,660,000). PIs: Karel Charvat and Tim Nuttle.

**Factors affecting the distribution of trees in real and simulated hardwood bottomland restoration sites in the Mississippi Alluvial Valley, US Fish & Wildlife Service, Yazoo National Wildlife Refuge\***

Research grant. \$4,784. PI: James Haefner (PhD advisor), Co-PI: Tim Nuttle (grant fully authored and negotiated by Nuttle).

**Factors affecting tree colonization of natural and afforested hardwood bottomlands, USDA Forest Service Southern Hardwoods Laboratory\***

Research grant. \$4,800. PI: James Haefner (PhD advisor), Co-PI: Nuttle (grant fully authored and negotiated by Nuttle).

**Monitoring avian communities of National Forests in Mississippi, USDA Forest Service, National Forests of Mississippi**

Research and monitoring grant. \$50,000. PI: Francisco Vilella (grant fully authored and co-negotiated by Nuttle).

**Monitoring avian communities of Delta National Forest, USDA Forest Service, Delta National Forest\***

Challenge cost share grant. PI: Wes Burger (MS advisor), Co-PI: Tim Nuttle (also author of proposal).

## AWARDS

2009 Special Recognition for Outstanding Research, Indiana University of Pennsylvania (University-wide—selected as top among the six college Outstanding Researchers).

2009 Outstanding Researcher for the College of Natural Sciences and Mathematics. Indiana University of Pennsylvania Research Institute.

2009 Academic Excellence and Innovation Award, Indiana University of Pennsylvania, \$8,000.

2002 German Research Council (Deutsche Forschungsgemeinschaft, DFG) Postdoctoral Fellowship. 45,000 € (ca. US\$56,000).

2001 Fellowship, Utah State University Ecology Center. \$12,000.

1998 Willard F. Eccles Foundation Fellowship, Utah State University College of Science, \$48,000.

## PROFESSIONAL AFFILIATIONS

Ecological Society of America

The Wildlife Society

Society for Ecological Restoration

## PUBLICATIONS

### Books:

Temperton, V. M., R. J. Hobbs, **T. Nuttle**, and S. Halle. 2004. *Assembly Rules and Restoration Ecology: Bridging the Gap Between Theory and Practice*. Island Press, Washington, DC, USA.



# Tim Nuttle, PhD, CSE, CWB

## Principal

### Peer-reviewed papers (journal articles, chapters, and proceedings):

- Hoenig, B. D., Trevelline, B. K., **Nuttle, T.**, & Porter, B. A. (2021). Dietary DNA metabarcoding reveals seasonal trophic changes among three syntopic freshwater trout species. *Freshwater Biology*, 66(3), 509-523.
- Nuttle, T.**, & Klemow, K. (2018). Ecological consultants: serving on the front lines of species and ecosystem conservation. *Frontiers in Ecology and the Environment*, 16(7), 421-422.
- Trevelline, B. K., **Nuttle, T.**, Porter, B. A., Brouwer, N. L., Hoenig, B. D., Steffensmeier, Z. D., & Latta, S. C. (2018). Stream acidification and reduced aquatic prey availability are associated with dietary shifts in an obligate riparian Neotropical migratory songbird. *PeerJ*, 6, e5141.
- Godfrey, R. K., E. Yerger, and **T. Nuttle**. 2018. Opposing deer and caterpillar foraging preferences may prevent reductions in songbird prey biomass in historically overbrowsed forests. *Ecology & Evolution* 8:560–571.
- Trevelline, B. K., **Nuttle, T.**, Hoenig, B. D., Brouwer, N. L., Porter, B. A., & Latta, S. C. (2018). DNA metabarcoding of nestling feces reveals provisioning of aquatic prey and resource partitioning among Neotropical migratory songbirds in a riparian habitat. *Oecologia*, 187(1), 85-98.
- Nuttle, T.**, Logan, M. N., Parise, D. J., Foltz, D. A., Silvis, J. M., & Haibach, M. R. 2017. Restoration of macroinvertebrates, fish, and habitats in streams following mining subsidence: replicated analysis across 18 mitigation sites. *Restoration Ecology* 25: 820–831
- Trevelline, B. K., S. Latta, L. Marshall, **T. Nuttle**, and B. Porter. 2016. Molecular analysis of nestling diet in a long-distance neotropical migrant, the Louisiana waterthrush (*Parkesia motacilla*). *The Auk* 133: 415-428.
- Frantz, M. W., K. R. Aldinger, P. B. Wood, J. Duchamp, **T. Nuttle**, A. Vitz, J. L. Larkin. 2015. Space and habitat use of breeding Golden-winged Warblers in the central Appalachian Mountains. *Studies in Avian Biology*.
- Chips, M. J., E. H. Yerger, A. Hervanek, **T. Nuttle**, A. A. Royo, J. N. Pruitt, T. P. McGlynn, C. L. Riggall, W. P. Carson. 2015. The indirect impact of long-term overbrowsing on insects in the Allegheny National Forest region of Pennsylvania. *Northeastern Naturalist* 22: 782-797.
- Nuttle, T.**, T. E. Ristau, and A. A. Royo. 2014. Long-term biological legacies of herbivore density in a landscape-scale experiment: forest understoreys reflect past deer density treatments for at least 20 years. *Journal of Ecology* 102:221-228.
- Wheatall, L., **T. Nuttle**, and E. H. Yerger. 2013. Indirect effects of pandemic deer overabundance inferred from caterpillar-host relationships. *Conservation Biology*. 27:1107–1116.
- Nuttle, T.**, A. A. Royo, M. B. Adams, and W. P. Carson. 2013. Historic disturbance regimes promote tree diversity only under low browsing regimes in eastern deciduous forest. *Ecological Monographs* 83:3-17.
- Kansou, K. **T. Nuttle**, K. Farnsworth, and B. Bredeweg. 2013. A qualitative reasoning model of plant macroevolution and the long-term carbon cycle. *Ecological Informatics* ISSN 1574-9541, 10.1016/j.ecoinf.2013.02.004.
- Anderson, J. T. , **T. Nuttle**, J. S. Saldas Rojas, T. H. Pendergast, and A. S. Flecker. 2011. Extremely long-distance seed dispersal by an overfished Amazonian frugivore. *Proceedings of the Royal Society of London B*. doi:10.1098/rspb.2011.0155.  
*This paper was highlighted in Nature (volume 471, p. 551, doi:10.1038/471551c) , Nature News (23 March 2011, doi:10.1038/news.2011.177), and in popular outlets such as Mother Jones, Discover, Science News, and the CBC radio show Quirks and Quarks (26 March 2011).*
- Nuttle, T.**, E. H. Yerger, S. H. Stoleson, and T. E. Ristau. 2011. Legacy of top-down herbivore pressure ricochets back up multiple trophic levels in forest canopies over 30 years. *Ecosphere* 2(1):art4. doi:10.1890/ES10-00108.1
- Kansou, K., **T. Nuttle**, K. Farnsworth, and B. Bredeweg. 2011. Qualitative model of the long-term carbon cycle: the rise of the vascular plant during the Paleozoic period and its dramatic effect on our atmosphere. N. Agell and L. Rosello, eds. *25th International Workshop on Qualitative Reasoning*, Barcelona, Spain, 16-18 July 2011.
- Nuttle, T.**, and A. Bouwer. 2009. Supporting education about environmental sustainability: evaluation of a progressive learning route for qualitative models. *Ecological Informatics* 4:396-404.
- Nuttle, T.**, B. Bredeweg, P. Salles, and M. Neumann. 2009. Representing and managing uncertainty in qualitative ecological models. *Ecological Informatics* 4:358-366.
- Bredeweg, B.; P. Salles, A. Bouwer, J. Liem, **T. Nuttle**, E. Cioaca, E. Nakova, R. Noble, A.L.R. Caldas, Y. Uzunov, E. Varadinova, and A. Zitek. 2008. Towards a structured approach to building qualitative reasoning models and simulations. *Ecological Informatics* 3:1-12.

## Tim Nuttle, PhD, CSE, CWB

### Principal

- Nuttle, T.** and A. Bouwer. 2008. A Qualitative Reasoning–based curriculum for learning about sustainable development. Pages 1992-1994 in M. Sánchez-Marrè, J. Béjar, J. Comas, A.E. Rizzoli, and G. Guariso, eds. *Proceedings of the International Congress on Environmental Modelling and Software*. Universitat Politècnica de Catalunya, Barcelona, Catalonia. 7-10 July 2008.
- Nuttle, T.**, B. Bredeweg, P. Salles, and M. Neumann. 2008. Simulating an uncertain world: using qualitative reasoning to model a plant-resource system. Pages 2001-2002 in M. Sánchez-Marrè, J. Béjar, J. Comas, A.E. Rizzoli, and G. Guariso, eds. *Proceedings of the International Congress on Environmental Modelling and Software*. Universitat Politècnica de Catalunya, Barcelona, Catalonia. 7-10 July 2008.
- Nuttle, T.**, and J. W. Haefner. 2007. Design and validation of a spatially explicit simulation model for bottomland hardwood forests. *Ecological Modelling* 200:20-32.
- Bredeweg, B., P. Salles, and **T. Nuttle**. 2007. Using exogenous quantities in qualitative models about environmental sustainability. *AI [Artificial Intelligence] Communications* 20(1):49-58.
- Nuttle, T.** 2007. Evaluation of restoration practice based on environmental filters. *Restoration Ecology* 15:330-333.
- Leidolf, A., **T. Nuttle**, and M. L. Wolfe. 2007. Spatially scaled response of a lazuli bunting population to fire. *Western North American Naturalist* 67(1):1-7.
- Cioaca, E., B. Bredeweg, P. Salles, **T. Nuttle**. 2007. A Garp3 Model of Environmental Sustainability in the Danube Delta Biosphere Reserve based on Qualitative Reasoning Concept. Pages 7-16 in C. Price, ed. *21st International Workshop on Qualitative Reasoning (QR'07)*. Aberystwyth, Wales, U.K., 26-28 June 2007.
- Nakova, E., B. Bredeweg, P. Salles, **T. Nuttle**. 2007. A Garp3 model of environmental sustainability in the River Mesta (Bulgaria). Pages 87-95 in C. Price, ed. *21st International Workshop on Qualitative Reasoning (QR'07)*. Aberystwyth, Wales, U.K., 26-28 June, 2007.
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## Tim Nuttle, PhD, CSE, CWB

### Principal

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## Nathaniel Grier, PE, ENV SP

National Practice Leader – Campus Mobility



Nat leads VHB's Campus Mobility practice, having extensive experience in a broad set of disciplines within the field of transportation. He has worked on campuses across the country. Most these projects have involved extensive public outreach and stakeholder involvement. In addition to transit, bike, and pedestrian planning, his multimodal work includes TOD, scenario analysis, and small area planning. Nat has a strong background in the development of TDM plans as well as parking analysis and financial planning. He supports the sports design practice through his understanding of event and venue transportation planning. In addition to campus planning, Nat has experience with a wide array of public sector transportation planning projects including environmental impact statements (EIS), transit studies, CTP, L RTP development and traffic forecasting, as well as air quality modeling and emissions estimates.

### Education

MS, Transportation,  
Massachusetts Institute of  
Technology, 2002

BS, Civil Engineering,  
Massachusetts Institute of  
Technology, 2000

*19 years of professional experience*

### Registrations/Certifications

Professional Engineer, PA

Professional Engineer, DC

Professional Engineer, VA

Professional Engineer, NC

Professional Engineer, MD

Professional Engineer, DE

Professional Engineer, IL

Professional Engineer, OH

Professional Engineer, MO

Professional Engineer, IN

Professional Engineer, WV

Envision™ Sustainability  
Professional

### Selected projects include:

- University of Pittsburgh, Transportation Master Plan & Institutional Master Plan
- Catholic University of America, TDM & Transportation Compliance Plan
- Cornell University, Transportation-GEIS, Traffic Studies, & Climate Action Plan
- District DOT, Long Bridge Environmental Impact Statement
- Emory University, Transit Alternatives Analysis
- Georgia State University, Parking and Transportation Master Plan
- Georgia Institute of Technology, Impact and Value Analysis
- Maine Medical Center, TDM Compliance Plan
- Princeton University, Campus Plan, Transit Plan, & Washington Rd Corridor Study
- Rutgers University, Physical Master Plan and College Ave Quad Precinct Plan
- University of Chicago, Master Plan & Parking and Traffic Demand Management Plans
- University of Chicago, Obama Presidential Center 3<sup>rd</sup> Party Impact Analysis
- University of Florida, Strategic Parking and Transportation Plan
- University of Georgia, Campus Transportation and Parking Study
- University of Kansas, Master Plan and Parking & Finance Analysis
- University of North Carolina – Chapel Hill South Development Plan TIS
- University of North Carolina – Chapel Hill South Campus Infrastructure Plan and Campus Master Plans
- Virginia Tech, Parking and Transportation Master Plan & Physical Master Plan
- Washington Union Station 2<sup>nd</sup> Century Master Plan and EIS
- Washington University in St Louis, Parking and Transportation Strategic Plan
- Yale University, Sustainable Transportation Plan

**Elizabeth Long, AIA**

**Recent Projects**

**The Ohio State University Regional Framework 2.0, Newark, Lima, Marion, Mansfield, OH**

Project Manager for a framework plan to align each of the four campuses with its unique programs by assessing enrollment, program evolution, and institutional relationships.

**Northern Kentucky University Campus Master Plan, Highland Heights, KY**

Project Manager for a campus master plan to address space needs to support academic excellence, diversity, and accessibility by leveraging existing campus assets.

**University of North Carolina at Chapel Hill, Campus Master Plan, Chapel Hill, NC**

Campus Planner for an updated plan to revisit the initial master plan in order to develop guiding principles for ongoing land use and a new development framework.

**Campus Master Plan Update, University of Illinois at Chicago, Chicago, IL**

Campus Planner for the plan to create the overarching vision for the future of the campus that aligns with the university's strategic goals and priorities. The master plan continues the evolution of UIC from a historically commuter-oriented school to a vibrant, mixed-use, urban campus in the heart of a global city.

**ONE VCU Master Plan, Virginia Commonwealth University, Richmond, VA**

Campus Planner for this plan that aligns VCU's new strategic plan, existing studies, and stakeholder's input to present a comprehensive vision.

# Firm Profile

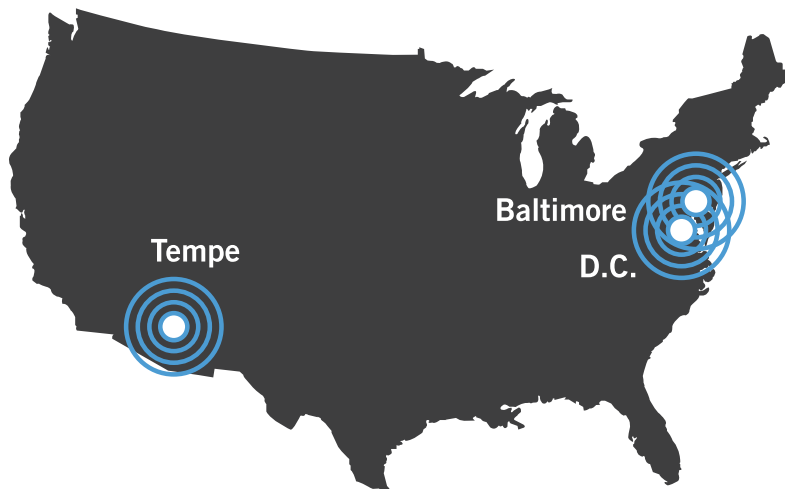
Ayers Saint Gross is a 180-person, internationally-recognized architecture and planning firm focused on higher education. Founded in 1912, we have a cross-disciplinary staff of design professionals organized around specialized areas of expertise including building design for a wide range of academic and student life facilities, campus master planning, landscape architecture, interior design, space analytics, and wayfinding and environmental signage. Our design is driven by a critical and analytical discourse, a respect for past wisdom, a mind to future potential, and a belief that we have an obligation to leave places better than we found them.

We believe that in designing a project for a campus, nothing can be considered in isolation. Whether it is the efficiencies that can be gained around the data and metrics of space, or how the building interacts with its surrounding landscape, one needs a multidisciplinary approach to designing on a campus. To service this need, we have organized our company through an interweaving of our design disciplines. Through this approach we have developed elegant and effective designs, focusing on the dissemination of knowledge and research.

## HIGHER EDUCATION

Ayers Saint Gross has worked with more than 215 higher education clients around the world. Our focused experience designing for higher education clients is marked by a commitment to align the physical form of our designs with the mission, structure, and spirit of each campus. We listen, observe, analyze, and collaborate, and we design in a way that grows from the spirit of our clients and the specifics of our sites.

## OFFICE LOCATIONS



### BALTIMORE

1040 Hull Street  
Suite 100  
Baltimore, MD 21230

### WASHINGTON

1100 First Street NE  
Suite 800  
Washington, DC 20002

### TEMPE

60 E. Rio Salado Pkwy.  
Suite 701  
Tempe, AZ 85281

## DISCIPLINES

Architecture  
Landscape Architecture  
Campus Planning  
Space Analytics  
Graphic Design  
Interior Design

## STAFF

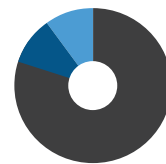
# 180

Professional Staff Members

## PHILOSOPHY

*“ We engage people  
and places to create  
designs that enrich  
the world.”*

## CLIENTELE



# 100%

of our work is for  
mission-driven clients

**80%**  
higher  
education

**10%**  
cultural  
institutions

**10%**  
K-12 and  
private  
sector

# Ayers Saint Gross Core Services Provided In-House

## WORKING ACROSS DISCIPLINES

Ayers Saint Gross' practice is built on an interweaving of design disciplines. We work in an integrated fashion that allows each discipline to benefit from the others instead of working in silos. The result is planning scenarios that are holistic and evaluate multiple, cross-disciplinary factors, such as ecological impacts and benefits, connectivity, energy use, transportation impacts, broader community goals, university goals, cost, and implementation.

## ARCHITECTURE

Ayers Saint Gross has built a reputation for buildings and environments of enduring value. Knowing that architecture has the power to sustain, transform, educate, and delight, we know the built environment must reflect and support an institution's ongoing evolution. Architecture can and should be dynamic and versatile, allowing and encouraging improvement and innovation.

## CAMPUS PLANNING

Our planning group works to develop long-range strategies for the growth and transformation of physical settings. Common to all our projects is a belief that no single issue can be considered in isolation. We strive to inter-relate buildings, infrastructure, open spaces, transit, site ecology and storm water management. Our process is driven by consensus-building, collaboration and a respect for local culture, climate and setting. Our plans act as road maps for clients, allowing their physical settings to grow more useful and beautiful over time.

## LANDSCAPE ARCHITECTURE

Landscapes have the power to advance an academic goals. Traditionally, campus landscapes were used as places for formal and informal convocation. Ayers Saint Gross works with colleges universities to plan for landscapes that are high performing and actively serve the learning communities that occupy them. A mix of pastoral and formal, these landscapes provide social hubs for interactive learning outside of the classroom and serve as outdoor laboratories with a wealth of data for academic research.



## INTERIOR DESIGN

We develop interiors in harmony with architecture for learning environments. Every space is considered from the inside out and the outside in, ensuring a holistic approach during all phases of a project. This methodology -- that also takes into account comfort, noise levels, technology, and cool factor -- leads designers to efficient solutions more quickly, helping them to make attractive and enduring environments.

## SPACE ANALYTICS

Our space analytics studio develops short-term and long-range strategies for the growth and transformation of physical settings by utilizing existing conditions and providing real-time information and data on how an institution utilizes their space efficiently. Our process is driven by consensus-building, collaboration and a respect for the inter-departmental nature of an institution while keeping the larger mission in mind. Our analysis serves as a road map for clients, allowing their physical settings to grow more useful over time which enables them to maximize investments.

## GRAPHIC DESIGN

The graphic designers at Ayers Saint Gross excel at both creating signage and wayfinding that connect people with places, as well as creating master plan reports that embody the university. We understand that visual communication is powerful tool that informs, educates, motivates, and inspires.

## SUSTAINABILITY

Ayers Saint Gross believes that sustainability requires carefully balancing the unique needs of people and ecological systems with the economic realities inherent in each project. Using innovation simulation and analytical technologies in the earliest design stages, we track the long-term performance potentials of our projects. The result is design that celebrates and protects the spirit and culture of the environment in which it exists.

