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### Acronyms and Abbreviations

AADT	Annual Average Daily Traffic
ACS	American Community Survey
ADA	Americans with Disabilities Act
AMI	Area Median Income
BRT	Bus Rapid Transit
CBD	Central Business District
CBRE	Coldwell Banker Richard Ellis
СМИ	Carnegie Mellon University
CSO	Combined Sewer Overflow
DCP	Department of City Planning
DOMI	Department of Mobility and Infrastructure
FTE	Full-Time Equivalent
GAP	Great Allegheny Passage
HH	Household
HUD	Department of Housing and Urban Development
IMP	Institutional Master Plan
LED	Light-emmiting diode
LEHD	Longitudinal Employer-Household Dynamics
LERTA	Local Economic Revitalization Tax Assistance
MARTA	Metropolitan Atlanta Rapid Transit Authority
MBTA	Massachusetts Bay Transportation Authority
MIT	Massachusetts Institute of Technology
MUH	Montefiore University Hospital
NCAA	National Collegiate Athletic Association
NICU	Neonatal Intensive Care Unit
NIH	National Institutes of Health
OBID	Oakland Business Improvement District
OPDC	Oakland Planning and Development Corporation
PADEP	Pennsylvania Department of Environmental Protection
Pitt	University of Pittsburgh
PNC	PNC Financial Group Services
PTC	Pittsburgh Technology Center
PUH	Presbyterian University Hospital
PWSA	Pittsburgh Water & Sewer Authority
R&D	Research & Development
TBD	To be determined
TDM	Transportation Demand Management
UC	Under-Construction
URA	Urban Redevelopment Authority of Pittsburgh
UPMC	University of Pittsburgh Medical Center
VA	Veteran Affairs

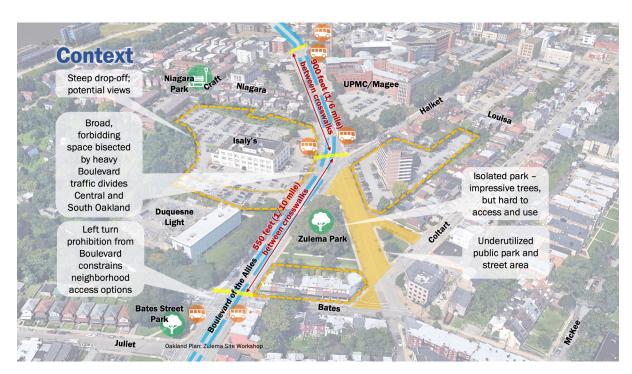
## **ZULEMA SITES**

The Zulema sites and Boulevard of the Allies are areas of significant interest and public comment during the planning process thus far.

These sites include property owned by the City of Pittsburgh (Zulema Park) the University of Pittsburgh, and UPMC. All three organizations are considering redevelopment and were engaged in hearing from community members about their goals for redevelopment.

#### Parcels studied:

- Former Quality Inn parcel, occupied by Panera Bread, at Boulevard of the Allies/Halket St/ Coltart Ave (Pitt)
- Vacant rowhouses (later demolished) between Bates Street and Zulema Park
- Isaly's Building site (UPMC, with city ownership of a portion of the site adjoining the Duquesne Light substation)
- Zulema Park and adjoining public street right of way



### **Strengths**

- City-owned land and green space
- Large, visible, prominent sites
- Views to the west

### Weaknesses

- Significant congestion
- Current condition of properties along Zulema Park
- Noise from substation and road

### **Opportunities**

- Important location for Central and South Oakland
- Opportunity for significant redevelopment

### Threats

- Reduced mobility and economic opportunity for residents
- Hazardous pedestrian conditions



## Zulema Sites: Previous Planning Issues

The Bates/Boulevard/Zulema Park area was identified as a key gateway and development hotspot in the Oakland 2025 Plan.

The 2012 effort established a vision for sustainable living and mobility across the neighborhood. The plan also established the Boulevard of the Allies as an urban design focus area—to be remade as a mixed-use corridor.

The plan identified the need for an integrated land use and redevelopment plan to address challenges of the intersection, high volumes of traffic, and poor condition of surrounding property at the Zulema sites gateway.

Bold alternatives for street realignment were proposed that could help spur redevelopment and connect pedestrian-oriented neighborhoods.

Ideas included potential grade separation of the Bates and Boulevard intersections, a new roundabout at Semple/Zulema, and medians along Boulevard of the Allies. Over the last decade, these major interventions have not advanced. The need for coordinated action and redevelopment—identified in the Oakland 2025 plan—has continued to grow.

Oakland 2025 established a vision to transform Boulevard of the Allies with mixed-use development, new streetscape, and a reconfigured park.

The plan sets out a vision of greening the Boulevard of the Allies, increasing pedestrian safety, and improving the quality of residential life. It identifies desired program, including mixeduse adaptive reuse of the historic Isaly's building and potential grocery store that are still prevalent in community conversations.

# The sites offer opportunities to implement citywide plans for affordable housing and open space.

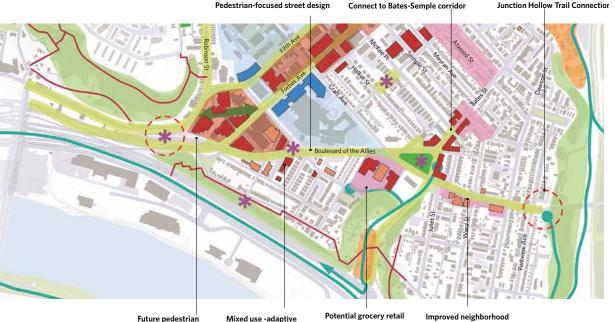
The site contains an underutilized park that is prized for its greenspace and tree canopy, even while having few amenities and being difficult to access. There is a nearby HACP community, and HACP has expressed an interest in working with developers at the site to create more affordable housing options. Creating more affordable housing is a citywide and neighborhood priority.

### **Near-Term Action**

Some immediate near-term pilot projects or actions could help advance core concepts in the site workshops and build community support and momentum for broader transformation at the Zulema sites. These include:

- Temporary closures of Zulema Street could help community members and transportation stakeholders get a feel for the size and feel of expanded space for Zulema Park, try out possible circulation and access patterns, and make use of current road as a play street or space for community events.
- Installing temporary facilities and amenities in the park such as movable furniture, art, dog station, or others to get a sense for what is most successful and embraced by the community over time.
- Host community events and programs to help identify long-term priorities and opportunities.





reuse opportunity

connection

and infill opportunity

serving retail

"The Bates Street intersection has been studied for decades. The Oakland 2025 Plan envisions a bold transformation, recognizing that small changes to Bates Street will never fully solve the challenges of this important arrival point in Oakland. Zulema Park and intersection improvements should become an anchor for new development—part of a long-term commitment to developing the entire area."

Top: Image from the Oakland 2025 Plan of Option 2 for a Bates Portal Bridge and Roundabout at the Zulema sites.

Bottom: Image from the Oakland 2025 Plan of desired redevelopment along Boulevard of the Allies.

# Summary of Stakeholder Interview Input around Zulema Sites

In preparation for the Zulema site workshops, key stakeholders were interviewed about the future of the area, development constraints and opportunities, and overall vision.

Stakeholders included representatives of the Housing Authority of the City of Pittsburgh, UPMC, University of Pittsburgh, DOMI, and Walnut Capital. Further conversations included long-term Oakland residents Walter and Kathleen Boykowycz.

These conversations helped ensure the site workshops were testing the most significant variables for the future development of the site—including the strongest opportunities for public-private or institutional partnerships. Findings from the interviews are summarized below.

# Key large parcels are owned by the major institutions who are considering redevelopment to serve their broader mission and community.

Pitt owns the Quality Inn site to the north of Zulema Park and is considering redevelopment of the site. Walnut Capital purchased the rowhomes, demolished them, and then sold the property to the University of Pittsburgh who has not released any plans for redevelopment on their location at this time. Pitt has signed an agreement with Walnut Capital for the redevelopment of the Quality Inn/Panera site.

Pitt's goal is to pursue a coordinated redevelopment that helps meet core community needs including a grocery store and provides non-student housing.

Across the Boulevard, UPMC owns the Isaly's site. The building itself, while historic, is only lightly-used; the larger parcel is used as surface parking for employees. This parking would likely need to be replaced as part of redevelopment.

# The location is important as a gateway to and strategic center of the Oakland neighborhood.

The intersection of Bates and the Boulevard is the second gateway to Oakland for vehicle traffic, after the Fifth and Forbes Corridor. Among all interviewees, there was a sense that change here would be highly-visible and high-impact, changing the perception of the area.

The area already offers key services as a neighborhood center. Peoples Oakland, an important community organization runs services from their building. The Monroe daycare is on the north side of the site, and UPMC daycare is just southwest.

There is a strong desire to understand how this effort can be different than previous studies of the area. The need for near-term action and implementation is a top priority for all stakeholders.

In interviews, there was a sense that the current ownership in the area and possibility for partnership offers a real opportunity for transformation.

# City staff led a site tour for approximately 30 attendees prior to the virtual workshop.

City planning staff held a site tour in advance of the workshop on May 10, 2021, allowing for socially-distant in-person engagement.

Approximately 30 residents and stakeholders attended. Overall, commenters expressed their concerns about congestion and the auto-oriented Boulevard of the Allies. They offered suggestions for park improvements, especially the addition of benches, picnic tables, flowers, and the preservation of the existing trees. Major detractors for potential park users and pedestrians are noise and the perception that road crossings are not safe. Participants also noted their appreciation for the history and beauty of the Isaly's building and their desire that it be preserved.





Top: Image from Oakland resident and architect Walter Boykowycz exploring ideas for how redevelopment along the Zulema sites could function, illustrating an expanded park, new street trees along Boulevard of the Allies, and new development that faces the park space with terraces and rooftop uses.

Bottom: Planning staff and tour attendees discuss the Zulema sites on the tour, including preservation of the Isaly's building.

# Feasibility of Redevelopment and Funding Community Benefits

This analysis tested the economic feasibility of several site redevelopment scenarios from the perspective of an investor, property owner, and developer. These groups may pursue redevelopment motivated by:

- **Economics:** There is a higher and better economic use for the property
- Long Term Economic Development: Redevelopment will unlock significant additional opportunities
- Institutional Mission: Redevelopment serves critical mission, or supports overall institutional direction
- Civic or Social Motivation: Removing a negative influence or providing significant community benefit

A general rule of thumb for when redevelopment makes economic sense is that the yield of a project, or its Net Operating Income divided by the Development Cost, must exceed a minimum investment threshold for the developer to complete it. When a redevelopment project's yield is above the minimum investment threshold there may also be an opportunity for developer contributions toward community benefits. When the redevelopment project's yield is below

the minimum investment threshold, there is a gap that must be filled by subsidy in order for redevelopment to occur. The most important factor to Net Operating Income is the rental rate to tenants. Major development costs include the cost of land, building construction, and parking.

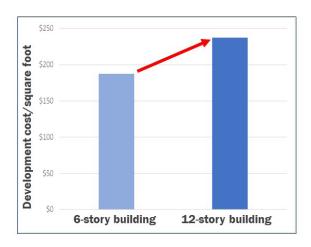
Investment thresholds change over time, and depend on many factors including the cost of money, the land use, the market, and perceived risk. Different developers also have different investment thresholds that largely depend on their appetite for risk. In Oakland, the fact that the institutions, including Pitt and UPMC, have a longer-term perspective may make some projects feasible that otherwise would not move forward.

In Oakland, Pitt and UPMC own land. The price a redevelopment project pays for this land is at the institutions' discretion. Therefore, the institutions' have a major influence on redevelopment project's feasibility. A potential additional source of subsidy is when a landowner like Pitt or UPMC forgo profit from land sale for projects that they feel fit their needs, including responding to community goals. This is similar to how the City and URA provide land to developers at reduced cost based on the subsequent development meeting community goals. For some projects, the opportunity for companion improvements to adjacent Cityowned streets and public spaces could enhance feasibility.

In Oakland, the building height and construction cost, cost of land acquisition, parking format and quantity, and product-type and/or target markets all have a large impact on the feasibility of development.

### **Height and Construction Cost**

**Structural material drives building cost.** For buildings under 6-7 stories, less expensive wood or light metal frame construction is possible. Taller buildings generally require more expensive construction materials and formats, such as steel or concrete.



Under current market and construction cost conditions used for this analysis, taller buildings were found to be economically challenging because they are more expensive to build and thus do not necessarily produce more Net Operating Income, particularly because current market rents for residential spaces to not rise considerably with increased height. A developer or property owner may still want to pursue a taller building because of long-term goals for the property.

### **Land Acquisition Cost**

The cost to acquire and assemble land is a significant project cost. Land acquisition price is at the discretion of the owner – this means an owner who is willing to reduce the land acquisition price can help advance redevelopment or subsidize community benefits.

### **Parking Format and Quantity**

The amount and type of parking required impacts development feasibility. Underground and structured parking are expensive, and new parking user fees do not cover the cost of building new structured or underground parking. This means parking is a "drag" on project economics. Simultaneously, some tenants desire parking and will not lease space in a development without it. Avoiding over-building of parking in development is helpful to development feasibility.

Generally, underground structured parking is cost prohibitive for residential development in Pittsburgh.

As a result, our scenarios show a district parking strategy that maximizes shared-use parking by utilizing two central garages to serve redevelopment.

### **Product-Type and/or Target Markets**

Student housing projects charge higher rents than non-student housing projects, in part because they rent by the bedroom. Student housing projects can thus afford the cost premiums associated with height and prime locations. The planning process has established that private-market student housing is not the community vision for this area; it was included in analysis to highlight where subsidy may be required to achieve desired redevelopment.

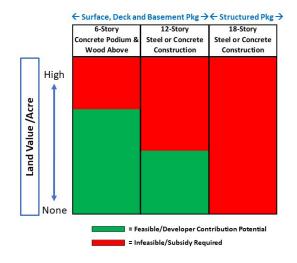
Providing affordable housing is a community priority, so its impact on project feasibility was analyzed to understand when subsidy may be required to achieve affordable units.

The feasibility of allocating 20% of redeveloped units at rents affordable to households earning 80% of the areawide median income largely depends on the building's height and land costs. Incorporating affordable housing in a new highrise, non-student housing project is not financially feasible from a private investor's perspective without significant subsidy from sources outside the project, such as Low Income Housing Tax Credit Funding, HACP vouchers, or other sources. Including affordable housing in a 5- to 6-story, primarily wood building, is feasible assuming reasonable land costs. Achieving more units of

affordable housing, units serving households at a lower areawide median income, and/or ownership units would require additional subsidy or development partnership models.

## Final takeaways from economic analysis:

- Assuming non-student housing, buildings constructed primarily of wood are the most feasible (5- to 6-story buildings).
- Cost effective parking is important to feasibility.
- Because of the added costs associated with steel and concrete, height does not necessarily enhance project feasibility nor developer contribution potential.



### Site Workshop Questions

Based on the planning history and current context of the area, the analysis completed for the Zulema site workshop explores how to:

- Provide new housing options that meet neighborhood needs: for accessible housing, for affordable housing, and to serve everyone who would like to call Oakland home
- Creatively reuse community landmarks and create a great urban place
- Transform the Boulevard of the Allies into an asset and the center of Oakland-not a barrier
- Grow our tree canopy and make Zulema Park a more significant, thriving public space

 Think strategically about the area as a whole so it functions as a neighborhood node

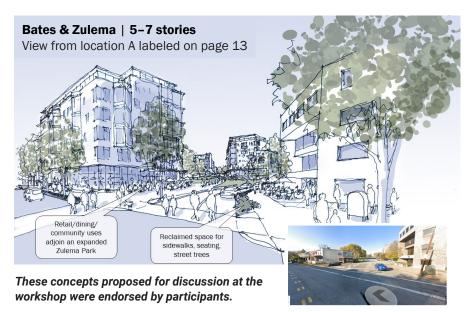
The scenario exercise studied alternative combinations of new building development, expanded and improved public park space, and improved pedestrian connections.

Urban design strategies aimed to overcome the significant pedestrian barrier currently posed by Boulevard of the Allies, and the Boulevard's negative impact on usability of Zulema Park. New development includes a neighborhood-oriented land use mix with 300-450 community housing units, a 30,000sf grocery store, and about

20,000sf additional neighborhood retail/services space. The scenarios also include continued occupancy of UPMC's Isaly's building, potentially with a change from the current medical uses.

Public realm improvements explored transforming existing portions of Zulema Street into an extension of Zulema Park, and adding park space and/or a pedestrian walk on the south side of the Boulevard to connect the site to the future Lawn Street Greenway that Oakcliff residents have championed and Niagara Park.

Scenarios include improved bus stop facilities on Boulevard of the Allies at Zulema/Halket Streets to leverage the area's transit and walkability assets and reduce the space and cost required for parking.







## Key analysis questions for the different scenarios included:

- Can improved public spaces framed by new buildings with neighborhood retail destinations turn this place into the heart of Oakland?
- Where would new crosswalks across
   Boulevard of the Allies most improve neighborhood walking connections? Are these compatible with conventional intersection spacing?
- Could adequate neighborhood street circulation be preserved if portions of Zulema Street and/or Coltart Avenue are removed? Could left turn limitations at Boulevard of the Allies and Bates Street be modified to expand neighborhood access choices?
- Would high-rise buildings on selected sites fit acceptably with neighborhood context? Would they significantly help provide the mixedincome housing Oakland needs?



• Does it make a difference whether the **grocery store** is north or south of the Boulevard?

### **Assumptions**

- Multifamily residential building floorplates of 10,000-15,000sf with 1,000sf units and 1 parking space per unit
- 30,000sf **neighborhood grocery store** with access to 2 parking spaces per 1,000sf
- Possibility of district parking approach with some sharing of parking among uses with different demand peaks
- Existing parking spaces on Isaly's site (approx. 400, many serving Magee Hospital) must be replaced on site
- Active ground floor uses facing Boulevard of the Allies, Zulema Park, corner of Zulema and Bates
- New buildings typically set back from sidewalks 5-10' to enable introduction of street trees and more generous sidewalk spaces
- **6 story typical building height.** 15 or more stories for high-rise tower options
- Potential for a public pedestrian walk along the south edge of Isaly's site linking Boulevard of the Allies to Craft Ave. and Niagara Park

SCENARIO	PARCELS	DISTINCTIONS		
A	<ul><li>Quality Inn</li><li>Zulema-Bates rowhomes</li><li>Zulema Park</li><li>Isaly's</li></ul>	<ul> <li>Grocery store on Quality Inn site</li> <li>About 15% more housing area than Scenario B</li> <li>Coltart Ave spur reconfigured as shared pedestrian-vehicle street</li> <li>Housing adjacent to Duquesne Light substation</li> </ul>		
В	<ul><li>Quality Inn</li><li>Zulema-Bates rowhomes</li><li>Zulema Park</li><li>Isaly's</li></ul>	<ul> <li>Grocery store on Isaly's site.</li> <li>Coltart Ave spur changed to additional park space</li> <li>Public recreational path adjacent to Duquesne Light substation</li> </ul>		





\* Parking height limited to one deck level above existing surface parking to minimize scale and shadow impacts on properties at lower elevation along Coltart Avenue.

The image at left differs from the one above by including 10-18 story buildings on the Quality Inn site along Halket Street, and on the Isaly's site near Craft Street.





\* Parking height limited to one deck level above existing surface parking to minimize scale and shadow impacts on properties at lower elevation along Coltart Avenue.

The image at left differs from the one above by including 10-18 story buildings on the Quality Inn site along Halket Street, and on the Isaly's site near Craft Street.

## Concluding Findings and Recommendations

The site workshops included extensive breakout discussions about the site scenarios and the issues they explore. Further information on the site workshops, including attendance and a record of all comments, can be found on the EngagePGH page and as part of the Site Workshops Summary Report. These findings and recommendations, arising out of the site workshops and analysis of scenarios, indicate where further analysis, consideration, and potential incorporation into the Oakland Plan could help achieve planning goals and community vision.

## **Site Workshop Discussion of Transportation** and Infrastructure

- Consensus that it is important to transform the Boulevard of the Allies so that it is not a barrier—top priority for attendees is making it safe to walk across the street, and having it function as a multi-modal boulevard
- Need for more green space and trees
- Importance of piloting some changes—some trepidation about changes to the circulation pattern, and what its effect could be—such as the existing limitations on vehicular access to Central Oakland (due to no left turns at Boulevard/Bates) and concern these could become even more limited. Important to achieve transformation as part of a comprehensive project that addresses long-term infrastructure and transportation concerns.

 Desire for a more beautiful neighborhood gateway and more green as part of the transformation

### What does that mean for strategy?

- It is essential that institutions, City departments, and other transportation stakeholders like Port Authority and PennDOT, all play role in transformation of this area to realize the land use-types the community desires and public right-of-way to achieve. Mobility recommendations need to advance this goal.
- Integrate transportation more deeply into development by promoting strong Transportation Demand Management (TDM) policies and ensuring all multimodal facilities, including transit stop improvements, are a part of project review.

## **Site Workshop Discussion of Land Use and Development**

- Not strong opinions about the differences between the two scenario—presence and price point of the grocery store is a priority (versus location)
- Concern about residential near substation—will require strong buffering of sound
- Support for accessible housing—want to ensure residents with limited mobility can cross the

- street, some enthusiasm for elevator buildings as offering accessible housing options
- Support for affordable housing, including ownership models, workforce housing, and well-managed affordable options for students
- Importance of long-term transportation changes to achieve redevelopment.

### What does that mean for strategy?

- If Forbes corridor is a focus for employment growth, the Boulevard of the Allies is an important location for higher-density housing to be developed to serve the neighborhood.
- Simultaneously, height in residential development does not currently create corresponding potential for developer contributions because of construction costs. In these cases, the building's height and density should be considered a community benefit given its contribution to neighborhood vitality, customer base, and placemaking.
- A coordinated strategy that can leverage multiple funding sources or create crosssubsidy through different project elements, such as a master development plan, can help provide the desired community uses as part of more substantial redevelopment.
- It will be critical to work with the institutions to leverage their land holdings to realize the land uses and target markets the community desires, including affordable housing.

# FORBES/SEMPLE SITES

These sites include property owned by the Pittsburgh Parking Authority, the University of Pittsburgh, and UPMC. Neighboring property at 3500 Forbes is currently approved for future student housing development, and the Fifth Forbes BRT project will soon provide improved transit service along the corridor. The site workshops addressed questions such as:

- How do we ensure that Forbes Ave is one
   of Pittsburgh and Oakland's great streets?
   Specifically, work focused on how new
   development and infrastructure investments
   on major streets can work in concert to create
   a public realm that is safer and more enjoyable
   for people due to better design of buildings,
   wider sidewalks with green features and open
   spaces such as plazas and parklets.
- How can we achieve planning goals for jobs, sustainability, and community benefits as part of increased density and redevelopment along the Fifth and Forbes corridors?

#### Parcels studied include:

- Pittsburgh Parking Authority Forbes-Semple Garage. While this is a valuable asset to the parking authority, with high occurpancy, these scenarios assume there could be future changes to the garage, such as reconstruction that may include replacement parking distributed at other sites throughout Oakland
- The Pitt-owned and historic Parkvale Building is adjacent to the Forbes-Semple Garage; it is assumed to have an internal connection to new development in Scenario A, although all scenarios maintain the facade of this historic structure
- Group of parcels across Fresco Way from Forbes-Semple garage: 220-230 Meyran Ave, 239 Semple St. (selected scenarios)
- UPMC Sennott St parking lot (existing parking below grade)
- Pitt Forbes Hall on Forbes Ave.
- Series of small properties behind Forbes Hall and Euler Way facing Fifth Street (Including some institutional ownership)



## Forbes/Semple Sites: Previous Planning Issues

The Fifth and Forbes BRT project will soon bring improved transit service and multi-modal facilities to these busy corridors.

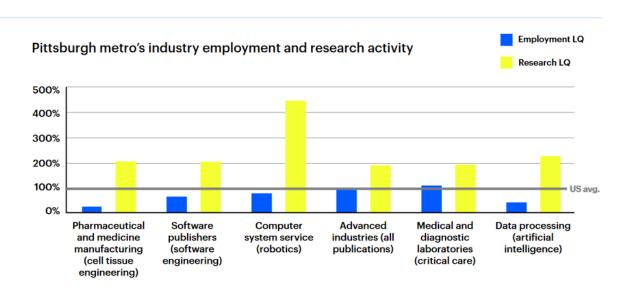
This achieves a key recommendation in the Oakland 2025 Plan.

The 2017 "Capturing the Next Economy" identified the need to define, grow, and connect the Oakland innovation district to reach its full potential as essential for the City and regional economy.

The recommendations include a district-wide strategy that leverages ongoing investments by CMU, Pitt, and UPMC to grow and attract firms in advanced industries and better integrates Oakland with nearby employment centers, including to downtown.

Recent development projects have pursued variances and zoning relief. Community members and stakeholders are frustrated by recent development outcomes and the contentious process.

Recent projects and development proposals in the corridor have included large private student housing developments and lab and innovation space. There have been several recent projects that have pursued variances for larger-scale development in the Fifth and Forbes corridor. Not all of these projects have moved forward, but many participants would like to see clearer expectations for the form, quality, and community benefits of development, as well as greater predictability and certainty in the process.



The report showed our region is not producing as many jobs as would be expected for the Research and Development (R&D) activity happening here. Identifying ways to create more jobs for Pittsburghers is a primary concern for efforts across the city and a common theme in comments from the Oakland community through this planning process.

Source: Brookings and TEConomy analysis of National Science Foundation, Higher Education Research and Development Survey; BLS, QCEW enhanced file from IMPLAN; and U.S. Census Bureau. Note: LQ = regional location quotient.



Image from the Oakland 2025 Plan of desired redevelopment and multimodal improvements along Forbes Ave.

# Summary of Stakeholder Interview Input around Forbes/Semple Sites

In preparation for the Forbes/Semple site workshops, key stakeholders were interviewed about the future of the area, development constraints and opportunities, and overall vision.

Stakeholders included representatives of the Housing Authority of the City of Pittsburgh, UPMC, University of Pittsburgh, DOMI, and OBID.

These conversations helped ensure the site workshops were testing the most significant variables for the future development of the site—including the strongest opportunities for public-private or institutional partnerships. Findings from the interviews are summarized below.

# Key large parcels are owned by the major institutions who are considering redevelopment to serve their broader mission and community.

Pitt owns or is a tenant in most of the buildings that are part of the site workshops. The Parking Authority is exploring a potential new future for the garage, and is willing to consider other locations and approaches for providing public parking throughout Oakland.

Stakeholders share aspirations for Forbes Ave to be a great street—and share concerns that recent development along the corridor is not achieving that vision.

There was a strong focus on the tenanting and vitality of ground floor uses and the need to improve the quality of the streetscape. Residents want to be able to walk to more neighborhood services on the corridor, and also want the Forbes Corridor to include destinations that would attract city residents from other neighborhoods.

Development on this corridor is significant citywide—particularly when it includes jobs in transit-accessible locations.

Stakeholders emphasized that the Forbes Corridor is bigger than a few development sitesand they are concerned about making sure future development advances economic development and a grand vision. Many stakeholders expressed concern about the design and land use of recent development, finding student housing counterproductive to the goals of transforming the corridor. There were also concerns about the high rents of new student housing development, which can be unaffordable to many students.

City staff led a site tour for approximately 20 attendees prior to the virtual workshop.

City planning staff held a site tour in advance of the workshop, allowing for socially-distant inperson engagement. Approximately 20 residents and stakeholders attended. Tour attendees also included students



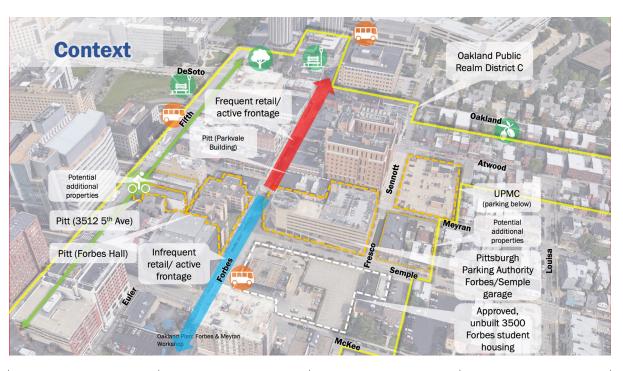
Planning staff and tour attendees discuss the Forbes and Semple sites on a walking tour.

### Site Workshop Questions

# Based on the planning history and current context of the area, the analysis completed for the site workshops explore how to:

- Support the growth of Oakland as one of the economic engines of the City, including providing more jobs for Pittsburgh residents
- Creatively reuse historic buildings that provide architectural detail and variety throughout the corridor
- Continue to invest in walking, biking, transit, and curbside management to have a transitoriented and great street as BRT arrives
- Integrate sustainability into every project

   within buildings and as part of a greener corridor overall



### **Strengths**

- City-owned land Corridor has some of the best transit service in the City and BRT will make it even better
- Major employers and destinations within walking distance of each other

### Weaknesses

- Active retail frontage becomes intermittent west of Meyran, does not support destination use by larger region
- Limited number of large parcels for transformational development

### **Opportunities**

- Improved bicycle facilities with BRT project to achieve multi-modal avenues
- North/South pedestrian and cyclist travel between Fifth and Forbes will become only more important with BRT project
- Opportunity for economic development that creates a broad range of jobs

### **Threats**

- Loss of some of Pittsburgh's most promising job growth potential to other cities.
- Pedestrian-hostile streets that turn people away from Oakland.

## Feasibility of Redevelopment and Funding Community Benefits

As identified in the Oakland Plan Existing Conditions Report, Oakland is not providing as many jobs for employees with lower educational attainment as other national innovation districts. Improving this is important to the long-term economic development of Oakland, the city, and region. Oakland is a strategic location for life sciences, particularly, because of the existing research and clinical facilities at the universities and hospitals in the district.

The Forbes Ave corridor is particularly significant because development in the life sciences are location sensitive and talent driven. Significant investments are occurring in life sciences at the institutions taking an already strong research enterprise and adding substantial new capabilities. This investment leads to a higher probability of more start up companies or existing companies wanting to locate research teams in Pittsburgh. Biotech in particular wants to be near academic research and patients during the development phase making Oakland a critical location.

As companies move from start ups to clinical applications in the life sciences, a range of jobs are created requiring different levels of education. A recent study of posted life sciences and biotech jobs found that 33% of those jobs require only a high school degree, and 10% an associates degree. Increasing the number of jobs in Oakland, and increased space for life science companies to grow, will help ensure life science development, particularly labs, achieves these economic development goals.

## Feasibility of Life Sciences and Lab Development

This analysis tested the economic feasibility of several site redevelopment scenarios from the perspective of an investor, property owner, and developer. These groups may pursue redevelopment motivated by:

- Economics: There is a higher and better economic use for the property
- Long Term Economic Development: Redevelopment will unlock significant additional opportunities
- Institutional Mission: Redevelopment serves critical mission, or supports overall institutional direction
- Civic or Social Motivation: Removing a negative influence or providing significant community benefit

Like at the Zulema sites, the yield of development must meet a minimum investment threshold for a project to be feasible. When the yield exceeds the investment threshold, there is excess value available to fund community benefits as part of redevelopment.

Along Forbes Ave, the building height of labs and construction cost, the floorplate of lab buildings, cost of land acquisition, and parking format and quantity all have a large impact on the feasibility of development.

### **Height and Construction Cost**

Lab floor-to-floor heights are taller, generally 14–15 feet versus 12–13 feet for traditional office and 10 feet for residential (or parking levels).

Assuming an active ground floor use (with a 15-20 foot floor height), a 120' height limit roughly allows:

- 10-11 Stories of Residential, or
- 8-9 Stories of Office, or
- 7-8 Stories of Lab,

Any above-grade parking reduces the number of stories possible. As a result of the higher floor-to-floor heights, there is less leasable space in a lab building of the same height as a residential building.

### **Construction Type and Building Cost**

A lab building is constructed of steel or concrete regardless of height. As a result, and because it also requires more significant ventilation and mechanical systems, lab development is more expensive to build than residential development.

Unlike in residential development in Oakland, there are cost efficiencies as height increases.

### **Floorplate**

Lab development requires larger floorplates than residential development for efficient and safe layouts, typically a minimum of 20,000 square feet, with 25,000 square feet or larger preferred. Because many parcels for redevelopment in Oakland are relatively small, supporting life science redevelopment may mean using strategies like skybridges and linked building footprints to enable the larger floorplates that make for feasible redevelopment.

It also means remaining large parcels may be particularly important to target or preserve for life science development.

### **Land Acquisition Cost**

The cost to acquire and assemble land is a significant project cost, even more so than for the Zulema sites, because sites need to be large to enable lab development. Land acquisition price is at the discretion of the owner. Institutions and the parking authority own land in the Forbes Avenue corridor, and at these sites. If these stakeholders are willing to reduce the land acquisition price as part of a partnership

for redevelopment, they can help advance redevelopment or subsidize community benefits.

### **Parking Format and Quantity**

The amount and type of parking required impacts development feasibility. Surface parking is the least expensive format, at a cost of approximately \$2,500 a space. Deck or basement parking that tucks under a building is \$15,000 a space. Structured parking in a garage is an order of magnitude more expensive at \$33,000 a space and underground parking is even more expensive to construct at \$60,000 a space.

Parking user fees do not cover the cost of building new structured or underground parking. This means parking is a "drag" on project economics. In most cases, underground structured parking is cost prohibitive for most development in Pittsburgh. Some institutional development, including in Oakland, have included underground parking because it is a land owner priority.

Some of the scenarios for the Forbes sites envision that not all of the existing Parking Authority spaces are rebuilt as underground or parking structure spaces on site - and that there are opportunities to distribute public parking more broadly across the district.

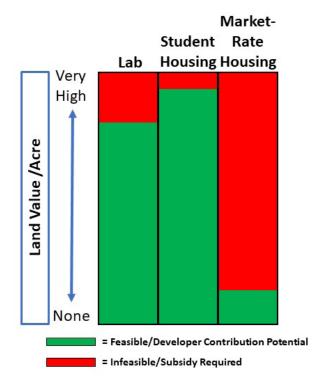
### **Product-Type and/or Target Markets**

Student housing projects charge higher rents than non-student housing projects, in part because they rent by the bedroom. Student housing projects can thus afford the cost premiums associated with height and prime locations. Because of the less expensive construction and

the high rents, student housing can compete with lab development in Forbes Ave.

### **Final Takeaways from Feasibility Analysis:**

- Assuming reasonable land acquisition prices, lab development has a sufficient yield and can pay community benefits. However, student housing currently has a higher yield than lab development due to cheaper construction types and higher rents. It may be necessary to prevent future private student housing development on the corridor in order to ensure the economic development potential of lab development.
- The amount of community benefit possible depends on reducing development costs with lower land prices and right-sizing parking costs and optimizing height.
- Small parcels can create challenges to to lab floorplate, both for design and for parcel assembly.
- Increased building height enhances feasibility and community benefit potential.



Left: This graph shows the comparative feasibility of lab, student housing, and market-rate housing development in the corridor at different land values. Student housing has the greatest range of feasibility, with lab having a slightly smaller range, and market-rate housing with a signficantly-smaller range of feasibility. Affordable housing will require intervention and subsidy.

Right: Recent lab development in Kendall Square of Cambridge, MA showing the large floorplates required for efficient and safe life science uses.





## Development Scenarios at Forbes/Semple Sites

The scenario exercise studied several alternative placements of new building development and public outdoor space in the area of Forbes and Semple Streets.

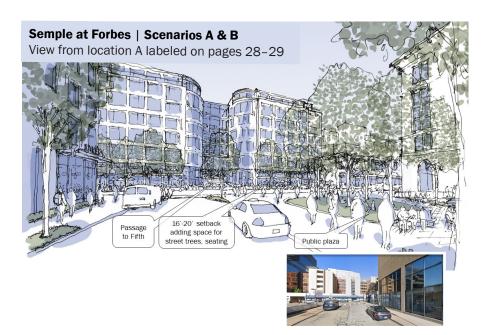
The primary land use considered was laboratory and related office/academic space, as the study area sites are uniquely well suited to this purpose owing to their walkable proximity to the cluster of research, medical, and academic facilities along Forbes and Fifth in Oakland anchored by Pitt, UPMC, and Carlow University. This land use choice was also driven by the challenging economics of developing market-rate community housing in the Forbes-Fifth corridor, and by the undesirability of additional privately-developed student housing in the corridor.

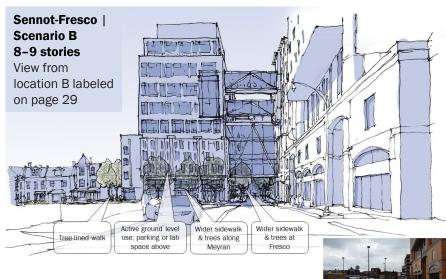
Accessory retail and/or other active uses were also included at ground floor level, particularly along Forbes and Fifth, where active uses and services are notably lacking. In addition, the exercise sought to locate a prominent and memorable public outdoor space in the area, and improve sidewalks with additional street trees, active building frontage, width, or other qualities where lacking.

### Key analysis questions included:

 How well could lab buildings fit here, given the relatively large preferred floorplates for research space, and the relatively small available parcels?

- What impacts would on-site parking have on development scale, character, and economics?
   Can we minimize parking to avoid these negative impacts?
- What would be considered a reasonable scale transition from taller, wider Forbes-Fifth corridor development to the smaller building scale typical in Central Oakland?





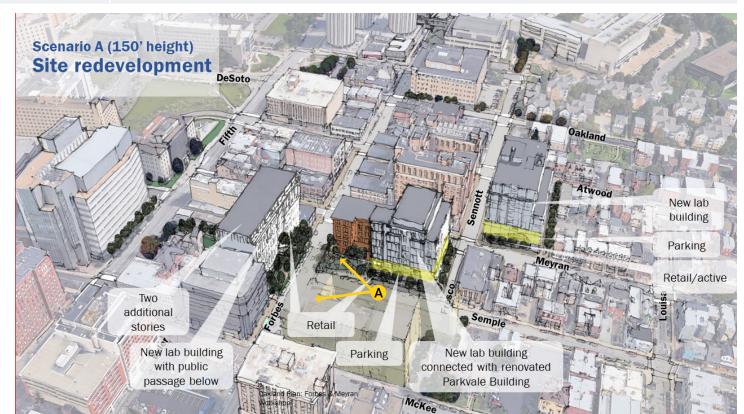


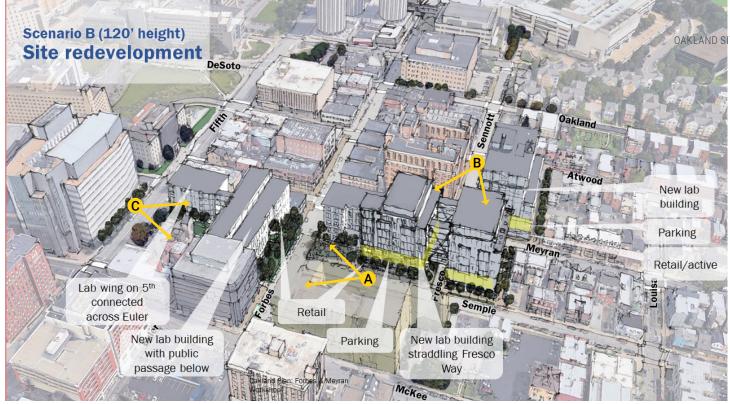
### **Assumptions**

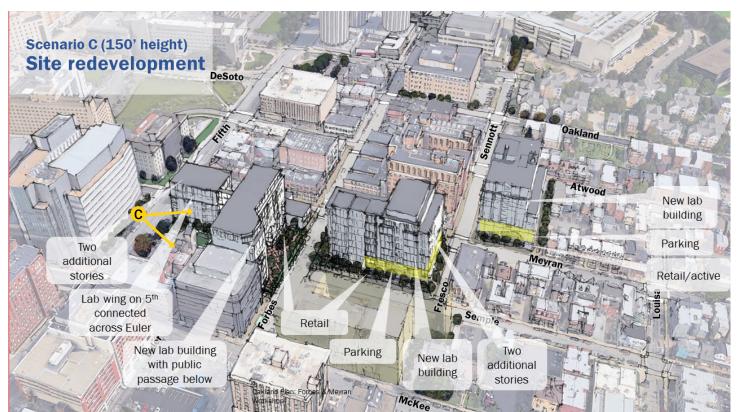
- **Research floorplates** of at least 20,000sf in size, preferably 25,000sf or larger
- Active ground floor uses facing Forbes, Fifth, and perpendicular streets
- New buildings typically set back from sidewalks 5-10' to enable introduction of street trees and more generous sidewalk spaces
- Preferred parking ratio of at least 1 space per 1,000sf building area
- 120-150' height possible along Forbes and Fifth through participating in bonus height and incentive zoning. Scenarios show options at both heights.
- Enclosed pedestrian bridges over alleys may be considered when they enable feasible research floorplates that would otherwise be

impossible given site constraints, and when their design maintains or improves pedestrian conditions below through means such as transparent building envelope, solar access, and new street trees. These are not considered, and are not appropriate, across major corridors like Fifth and Forbes.

SCENARIO	PARCELS	DISTINCTIONS		
A	<ul><li>Forbes-Semple Garage</li><li>Sennott Street lot</li><li>Forbes Hall</li></ul>	<ul> <li>Public plaza on Forbes-Semple Garage site. Broadened sidewalk seating area along Forbes hall site.</li> <li>10-20% less research area than scenarios B ad C</li> <li>New research building at Forbes-Semple garage depends on floor connections to existing Parkvale Building to reach typical minimum floorplates.</li> </ul>		
В	<ul> <li>Forbes-Semple Garage</li> <li>220-230 Meyran, 239 Semple</li> <li>Sennott Street lot</li> <li>Forbes Hall</li> <li>Fifth Ave. parcels</li> </ul>	<ul> <li>Public plaza on Forbes-Semple Garage site. Broadened sidewalk seating area along Forbes hall site.</li> <li>Building on Forbes-Semple Garage site extends onto 220-230 Meyran and 239 Semple via bridges over Fresco Way to expand floorplate of building. Scenario variations demonstrate appearance of this extension at different height levels, compared to lower existing context.</li> <li>Building on Forbes Hall site extends onto Fifth Ave. parcels via bridge over Euler Way.</li> </ul>		
С	<ul><li>Forbes-Semple Garage</li><li>Sennott Street lot</li><li>Forbes Hall</li><li>Fifth Ave. parcels</li></ul>	<ul> <li>Public plaza on Forbes Hall site.</li> <li>Building on Forbes Hall site extends onto Fifth Ave. parcels via bridge over Euler Way.</li> </ul>		







Scenario Comparison	Plaza on parking garage site Parkvale Building connection		Plaza on parking garage site Building across Fresco Way		Plaza on Forbes Hall site Building across Euler	
	Scenario A Up to 120' height	Scenario A Up to 150' height	Scenario B Up to 85'/120' height	Scenario B Up to 120' height	Scenario C Up to 120' height	Scenario C Up to 150' height
Limited Public Realm Shadow Impacts	••••	••••	••••	••••	••••	••••
Community Benefit Funding Potential	••••	••••	••••	••••	••••	••••
Increased Innovation Space and Number of Jobs (1.5/1,000sf)	360,000SF 540 jobs	400,000SF 600 jobs	440,000SF 660 jobs	440,000SF 660 jobs	380,000SF 570 jobs	475,000SF 710 jobs
Public Parking Provided (449 existing spaces)	76% existing	74% existing	67% existing	96% existing	84% existing	73% existing
Need for careful design of height transitions and/or bridges	••••	••••	••••	••••	••••	••••

### **Near-Term Action**

Redevelopment at Forbes may take years to occur, but near-term use of the site can help establish priorities for redevelopment. During the workshop, a poll established that resuming community events like the farmer's market on the UPMC parking lot was prioritized. Other ideas included:

- New seating and amenities on Forbes, particularly by shuttle stops
- Hosting events in the service alley within the parking garage, or garage rooftop
- Art and lighting installation in the service alley within the parking garage

## Concluding Findings and Recommendations

## **Site Workshop Discussion of Land Use and Development**

- Recognition of the importance of jobs in this corridor – and need to diversify the employment base
- Desire to support walk to work lifestyles, acknowledgment that office/lab workers would be an important new customer base for dining, retail, and services on the corridor
- General comfort with incentivizing lab over student housing, but don't want to preclude opportunities for greater mix of uses, including residential development in the corridor
- Need to have affordable housing in place either as part of development on corridor or as part of community benefits
- Concern about whether lab development could feel like "takeover" by UPMC or would not promote the same level of activity as more mixed uses on the corridor

### What does that mean for strategy?

 It is a priority to grow and diversify the employment base and jobs, and that should be the focus for future development along the corridor. This priority is consistent with community goals, established during the Oakland Plan, for more jobs that residents can take advantage of and employment that helps reduce displacement from the neighborhood.

- There is a strong desire to continue to see
   a mix of uses and vibrancy on the corridor.
   Ground floor use and site design that includes green, publicly-accessible spaces at street level are a priority. There should be strong standards for ground-floor uses and design, including dining, services, retail, and art.
- Housing affordability and diversity is a goal for all development. When a development does not include housing, there should be community benefits that can help advance community housing needs.
- The current market demand is for student housing, and under current conditions in the corridor, development is unlikely to produce market rate housing for professionals or affordable housing without intervention and/ or subsidy. Intervention and/or subsidy to meet housing goals may be more successful in other areas of Oakland, including Central Oakland and the Zulema sites, than along the Forbes corridor.
  - Potential regulatory strategy: Allow affordable housing to be developed on Forbes Ave, but otherwise disincentivize student housing development by allowing less residential density and height for residential development than for employment uses along the corridor.

## Site Workshop Discussion of Height on Forbes Ave and In Transition to Central Oakland

- General acknowledgment that height is appropriate in this corridor, particularly as way to generate significant community benefits / investments
- Excitement about greater height and what that could offer in terms of jobs, activity, and overall quality of redevelopment
- Some saw height as a core issue of the transition to Central Oakland; many much more concerned with open space, pedestrian passageways and particularly landscape buffers as a transition issue
- Small group of attendees were primarily concerned with avoiding "canyonization" of corridor, think significant new development and height should be limited
- Generally positive response to transition ideas – but want to see them included in development as a priority and part of regulation
- Some additional concerns about not promoting more development on Forbes
- Alternatively, a sense that Central Oakland will need to continue to evolve and change to address planning goals

### What Does this Mean for Strategy?

- Revise development regulations for adjacency to promote landscaped buffers – whether as usable green space, pedestrian pathways through long blocks, tree canopy, or green infrastructure in addition to other transitions.
- Future of Central Oakland: avoid only one block of the Forbes corridor, and address planning issues in Central Oakland so that redevelopment can:
- Develop strategies to address affordability and improve housing conditions throughout the neighborhood, not just through development projects.
- Encourage development that addresses the lack of housing types for non-student residents throughout the neighborhood, including strategies for existing buildings.
- Protect important historic buildings.
- Address transportation and parking concerns, including promoting more walk-to-work travel behavior as a community goal of development.

### **Regulatory Process**

- Frustration with variance process
- Want core community benefits to be established upfront – particularly affordable housing, improved streetscapes, and green/ public spaces.

 Need to address transportation and parking regulations to avoid spillover parking in the neighborhood (either as off-street rentals or taking up on-street spaces)

### What Does this Mean for Strategy?

- Establish known community benefit framework for affordability and potentially other types of community investments that applies to all sites in the Fifth and Forbes Corridors to avoid project-by-project negotiation and uneven outcomes.
- Establish requirements for the provision of greenspace on each site, or when not possible on site, a contribution to create or improve district-wide greenspace such as at the Zulema sites.

### Strategies for Livable Lab-Neighborhood Transitions

- Landscaping buffers: planted setbacks at residential uses; path opportunities
- Massing transitions
- Lower volume in scale with context
- Upper volume stepped-back, more flexible in height
- Emphasis on design & proportion of neighborhood-facing facades
- Importance of screening mechanicals and locating exhaust away from residential areas