Pamela S. Ulmer

From: HarrisonburgVA.gov via HarrisonburgVA.gov <noreply@harrisonburgva.gov>
Sent: Tuesday, February 14, 2023 3:31 PM
To: Pamela S. Ulmer
Subject: Form submission from: Agenda Comment Form

Submitted on: Tuesday, February 14, 2023 - 3:30pm

Name: Kim Sandum for Alliance for the Shenandoah Valley
Type of Meeting: Harrisonburg City Council
Date of Meeting: Tue, 02/14/2023
Agenda Item Number: 5c
Comment:
Alliance for the Shenandoah Valley, a long-standing nonprofit organization working to ensure the Valley's rural character, scenic beauty, clean water and vibrant communities are protected by providing accurate and timely information to community members and decision makers, submits the following comments for your consideration as you deliberate on the Bluestone Town Center development.

City staff has spent considerable time analyzing the Bluestone project noting the following considerations which the Alliance would like to highlight:
While this location is well suited for housing development, Bluestone Town Center does not conform to the city's comprehensive plan. Affordable housing was very much a topic of discussion during the development of the comp plan, and yet this area of the city was designated as Low Density Mixed Residential, in part to provide a transition between different land uses. "Low Density Mixed Residential areas are planned for residential development containing a mix of large and small-lot single-family detached dwellings, where commercial and service uses might be finely mixed within residential uses or located nearby along collector and arterial streets."

This project does not include a mix of housing types and price points, which is generally considered best practice in planning.

Comprehensive plan objective 6.2 seeks to increase homeownership and owner-occupied units in the city. It is unclear the percentage of the proposed development that will accomplish this goal.

Similarly, the Housing Coordinator notes that this project does not meet the goal of a mix of both income restricted and market

The master plan does not show/describe 1) proposed recreation areas and facilities, and 2) general landscaping plan as required by R7 district regulations. In addition, the master plan does not address design principles of R7 such recreation areas, landscaping, parks, or village greens. These are not just simple "window dressing" details. All these are aspects of a dense development project that make it liveable.
rate housing options – widely recognized as best practice for healthy developments.

As with any development, we would hope that the costs of services necessitated by the project, such as schools and

roads, would not be borne by current taxpayers but would rather be covered by the developer who is benefiting from the project.
This is a consequential project for the future of the City, and we urge you to take a deliberate and careful approach.

Contact: No
Contact Info:

Pamela S. Ulmer

From: HarrisonburgVA.gov via HarrisonburgVA.gov <noreply@harrisonburgva.gov>
Sent: Tuesday, February 14, 2023 11:36 AM
To: Pamela S. Ulmer
Subject: Form submission from: Agenda Comment Form

Submitted on: Tuesday, February 14, 2023 - 11:35am

Name: Andrew Vinson
Type of Meeting: Harrisonburg City Council
Date of Meeting: Tue, 02/14/2023
Agenda Item Number: 5.d.
Comment:
The best way to deal with the homelessness crisis is more homes--specifically, affordable homes. Single-family dwellings are a misuse of space and do not adequately address the housing crisis. I hope the City Council moves forward with the Bluestone Town Center and that this is only the beginning of creating more housing in Harrisonburg. Thank you for your time.

Contact: No
Contact Info:

Mayor Deanna Reed

409 S. Main St.

Harrisonburg, VA. 22801

Mayor Reed:

For your service and dedication to serving on the Harrisonburg City Council, I am grateful. I am contacting you to request that you, as the mayor of the City of Harrisonburg, vote to support the Planning Commission decision to approve the low income Housing Project for the City of Harrisonburg/Rockingham County.

I realize that you have pressure from both sides: to approve, to not approve. So why do I request the city council to approve the housing development project. I am Caucasian. I am middle class. I have very **adequate** housing for my husband and I. I assume most of the "do not approve" voices with all their reasons, come from this category. Those of us who fit the above criteria should be supporting approval. Simply put homelessness, inadequate housing is "living hell" for those experiencing it. No home for myself or my family, cold and hungry, poor school performance, difficulty preforming on a job (if I have one). My opinion is: if I have adequate housing for myself and family, I have NO valid reason to request the city council to reject federal funding for more available and financially accessible housing. Why reject this possibility for federal funding to help our community meet this pressing need.

Having warmth, protection, security, and a sense of worth is a right of every citizen, especially children considering how homelessness impacts them for life. Please vote affirmatively to approve the Low-Income Housing Project when you meet on February 14, 2023. I trust those of us who have adequate housing also have hearts of compassion for those struggling and need a "place of warmth, protection, security, a sense of worth". Simply put they need a "HOME".

Thank you for considering my plea.

Joan and Duane Kauffman

1637 Bald Eagle Circle

Harrisonburg, VA. 22801

Joan Kauffman

Pamela S. Ulmer

From: HarrisonburgVA.gov via HarrisonburgVA.gov <noreply@harrisonburgva.gov>
Sent: Friday, February 10, 2023 9:25 AM
To: Pamela S. Ulmer
Subject: Form submission from: Agenda Comment Form

Submitted on: Friday, February 10, 2023 - 9:24am

Name: Austin Sachs
Type of Meeting: Harrisonburg City Council
Date of Meeting: Tue, 02/14/2023
Agenda Item Number: 5.d
Comment:
Dear City Council Members,

I am Austin Sachs of 1309 Greystone Street. A 2019 graduate of Eastern Mennonite University with a bachelors in economics and accounting and a 2022 graduate of George Washington University with a masters in applied economics and I am happy to have called Harrisonburg home for the last 7.5 years.

I had typed a large public comment addressing the concerns brought forth by the Friendly City for Smart Growth group, but after seeing the public comments submitted by nearly every type of non-profit in our city, from environmental to social services to business, all I want to share is a personal anecdote about the how bad the housing crisis is in Harrisonburg.

After 7.5 years of living here, I am finally looking to buy a house this year. I am not low income and am very privileged to end up in a career with strong earning potential. But even given those characteristics it will be a struggle to find a house in the city. For the last year I have been frequenting websites like Zillow to better understand our housing market and find what is available for someone like me. The houses that meet my needs leave the market in normally less than a week. If a higher income individual can't find a house, how can we expect others in our community to even have a chance. We need more housing at all income levels now and BTC is part of that solution.

Is the project perfect? No, but is it an improvement? Absolutely. We can not afford to let perfect be the enemy of good.

Thanks!
Austin Sachs

Contact: No
Contact Info:

Pamela S. Ulmer

From: HarrisonburgVA.gov via HarrisonburgVA.gov <noreply@harrisonburgva.gov>
Sent: Friday, February 10, 2023 4:16 PM
To: Pamela S. Ulmer
Subject: Form submission from: Agenda Comment Form

Submitted on: Friday, February 10, 2023 - 4:15pm

Name: Eric J Pyle
Type of Meeting: Harrisonburg City Council
Date of Meeting: Tue, 02/14/2023
Agenda Item Number: 5.c. and 5.d.
Comment:
10 February 2023

To the members of the Harrisonburg City Council,

I write to you as a citizen of Harrisonburg of over 18 years, as a homeowner, and as a scientist who studies and teaches about the Earth, both in terms of Earth materials but also in terms of humanity's relationship with the Earth. In fact, this semester I am teaching a course that touches not just on environmental science, but also on environmental ethics and justice. In this course, and in others that I teach, I constantly ask my students to examine their convictions, with a healthy dose of skepticism to claims that they, or others might make. They are constantly reminded to be clear in their ideas, but also ask of themselves, "what would it take to change your mind?" This means they must decide what evidence or data would remove doubts or convince themselves that their thinking needed redirection or adjustment. It also requires of them that they use both their hearts and their heads in decision-making. This a useful skill when confronted with conflicting or mutually exclusive options.

Such is the case of the Bluestone Town Center proposal, which seeks to provide a simple solution to a very complex social justice issue. Humans needs air, water, food, and shelter, with that priority, in order to merely survive. Air surrounds us, and the community is blessed with abundant water of generally high quality and quantity. Food insecurity remains an issue, but it is not a supply issue – it is a distribution issue, getting food to those in the most need. But shelter is perhaps the most difficult to provide – it is expensive, takes time, and is not portable if it is to build long term value. It is a fundamental issue of social justice, and the BTC proposal seeks to provide a simple solution to this complex problem. The logical inconsistency is that simple solutions rarely provide stable and persistent solutions to complex problems. There are many moving parts to this project, which seem, in isolation, to be solvable on paper. But in a real world, complex situation, nothing exists in isolation. Small effects from a small development on the surrounding area are not additive at the scale of BTC but grow exponentially when one seeks to add 10% of the Harrisonburg population into 1% of the area.

Another line of argument for the BTC proposal concerns the environmental benefits that can come as a result of such a high-density environment, particularly as a function of urban in-fill and in opposition to suburban sprawl into rural areas. I myself have witnessed such sprawl, having lived in both the Charlotte, NC, and Atlanta, GA regions. The fringing areas of these cities are virtually unrecognizable from the early 1980s to today and building on the periphery of the city margins only serves to amplify traffic and air quality issues. Many infill areas have seen developments such as proposed for BTC, but these developments are hardly optimized for low-income or affordable housing. BTC is unique in that it seeks to reconcile the problem of urban sprawl with the social justice goal of providing affordable housing. The overall concept of BTC is logically inconsistent with the goal of curbing sprawl – it is not infill if it is placed on the very edge of

the city boundaries, and at the extreme edge of city infrastructure. The HRHA- commissioned Traffic Impact Analysis underscores this factor by the very scale of the number of additional car trips per day – up to 6000 additional trips – just to gain access to the broader services that Harrisonburg provides. Adding lanes does not relieve traffic pressure in the long run – a simple rule of transportation geography states that traffic will fill all of the available space. More lanes mean more, not less, traffic.

In the context of BTC, various environmentally minded groups in the area have put forth the argument that concentrated, high density development will have a net positive impact on greenhouse gas emissions by reducing the number of car trips to access vital services. Sacrificing 40-odd acres of secondary growth urban forest is a necessary cost in order to ensure a greater social and environmental goal. This argument holds a historical echo of arguments for colonialism. What has been completely lacking in the environmental argument in favor of BTC has been any actual data supporting the net positive benefit. The burning of 1 gallon of gasoline releases to the atmosphere the same amount of carbon as is found in one 2x4x8-foot stud. Just burning one tank of gasoline adds up to a not insignificant tree. Multiplied across 40 acres of forest, a considerable carbon sink is lost forever, and a lumber-yard work of carbon worth of carbon would be released every month. No carbon cost-benefit analysis specific to this project has been offered by any group and should be required if support for the environment is to be advanced. Convince me with data and dialogue that the model works for this particular setting. An abstract model derived from in-fill in much larger urban areas does not constitute evidence – it is merely an ideal, and evidence remains an open issue.

The environment of BTC presents challenges that can be characterized, much more fully and openly than have previously been provided. As a geologist, I have been prepared, and prepare my students, to read the landscape from multiple lines of evidence, and at different scales of time and space. I spoke to the Harrisonburg Planning Commission on this topic last month, outlining my observations from publicly available data sources highlighting areas where solid rock is close to the surface, as well as those areas where sinkholes were likely. These same areas had substantial prescriptions laid on them by Commonwealth and Federal scientific agencies, underscoring the engineering difficulties that would be likely by the construction of residential infrastructure in this area. The findings of the Phase I Environmental Survey, conducted nearly a year ago was in parallel with my own observations, enhanced by actually walking the landscape – ground-truth. This report shows no fewer than 12 sinkhole or collapse features across the area. The report also suggests, indirectly, that subsurface imaging should be conducted in order best understand where the specific hazards exist and should be mitigated or avoided. While not a definitive warning, the final statement is cautionary enough to leave unanswered questions and expect a more detailed subsurface analysis before any reasoned estimate of cost and risk can be determined.

With a consideration of risk in mind, several issues of environmental justice particular to this site can defined. Historically, those people that have been the most marginalized socially and economically have been consigned to live in areas with the highest exposure to environmental hazards. I have yet to see any evidence that would convince me that this is not the case for BTC. The lack of set-back from an active poultry operation is troubling enough, and the dismissal of this issue as an odor-nuisance issue alone by the Planning Commission is appalling – the same logic could be applied to building next to an existing chemical plant or landfill - with potential health impacts that should be ruled out before any approval is granted. Hidden beneath the surface in many parts of the area are as yet undefined sinkholes, shrink-swell clay pits, and underground flow zones. Matching these suspected hazards to the proposed development plans show that at least one set of high-density apartment buildings and two blocks of town houses are planned to be placed directly over areas of observable surface evidence for collapse features, which strongly suggests the need for a more detailed examination of adjacent areas that have not collapsed. Hazards should be ruled out in the front-end, rather than assuming they can be worked around once they are discovered.

Some public comments suggest that raising concerns about karst features in the area amount to scare-tactics and Nimbyism, and state that sinkholes, rock layers beneath thing soils, radon gas, etc. are simply a feature of the Shenandoah Valley in general. That statement would be valid if the nature of the bedrock was of a consistent nature everywhere. As a geologist, I can argue from science that the statement is incorrect and based a broad assumption that is not supported by even a cursory examination of the state and federal geologic maps of the area. Along the same trend-line of limestone on the west side of Harrisonburg, the depth of solid rock can be seen in Google Earth photos of

the Waterman Drive Quarry. Just to the west of the ridge overlooking Eastern Mennonite University, there is an area that is of similar size to the BTC site, and with greater forest cover. This area has had only minimal development, as these same maps show extensive karst features. The BTC site has both of these elements – solid rock to depth in some areas, and extensive current and future karst features. The difference is that Fraser Quarries know the depth of the rock, and those east of EMU know of their sinkholes, but these elements have not been fully defined in the BTC site and are only likely to be identified after construction begins, when it will be more costly to engineering designs after the fact.

Many of the responses to these geological issues have been heard by HRHA and by other respondents, but they have been largely dismissed or downplayed. Only recently, the BTC website FAQs have mentioned it in the context of a recognized need for conducting subsurface studies, but no timetable or scope of these studies has been shared. The idea seems to be to get approval first, and then the studies will be conducted. This is the equivalent of "ready-fire-aim," and seems very short-sighted. Others have suggested that any hazards offered by karst features could simply be engineered around. That may well be true, but at what cost? As hazards are uncovered, the cost to mitigate them through engineering grows exponentially, and any initial estimates on the cost of rock removal or engineered fill are rendered useless. This includes the costs to install even basic infrastructure, such as water, sewer, and electricity. Since the City will eventually bear part of the cost of this infrastructure, the City should insist upon cost estimates based on the most comprehensive information possible. These factors are outlined in the 2022 Comprehensive Plan, Chapter 10.

One element that has scarcely been discussed is the effect of removing 40 acres of forest and covering a large fraction of the total development with impervious hardscape. There is already a surface drainage system on portion of the BTC area, and highly likely that there is subsurface flow in the central portion of the area, which is clear from the Phase 1 survey. The plan as presented has shown various stormwater impoundments that have only slight consideration to the local topography and rock exposures. In some cases, these impoundments would require extensive stone removal just to start, and in other cases would require water to flow across a hill than downhill. Even as proposed, a great deal of this water will end up in the one stream bed, which already regularly floods backyards along South Dogwood Drive. The acceleration of run-off downslope will cause floodwaters to rise more quickly, and subsequently back up well into Hillandale Park. Engineering is again raised as a solution to this concern, but no quantitative studies or plans have been made available. Once again, the engineering is planned as part of the design process, but as a development this large will affect existing properties in a negative fashion, this analysis should be completed before, rather than after approval. The costs are simply undetermined at this phase, and the City will undoubtedly incur expense to mitigate what will become a growing problem for current residents.

The interaction of stormwater run-off and the subsurface geology has not been mentioned at all in these discussions. A question that is asked in general is what triggers collapse features in karst hazard areas – is it high water? Low water? It is actually a change in the water level in subsurface voids that triggers a collapse. The great concern for BTC is, with known and suspected karst features in the property, the installation of hardscape (roofs, sidewalks, and roads) and the redirection of stormwater away from its normal infiltration routes will lower the water levels in any voids in the rock and thus increase the risk of a collapse. Providing a more detailed look at what lies below the surface, a need admitted by HRHA, should take place before permission is granted in order to develop data-driven estimates of risk and cost of mitigation, with is easier and less costly than disaster recovery in the event of a collapse.

Ultimately, each of these scientific and engineering concerns should be weighed against all of the other concerns, especially those of social and environmental justice. It is manifestly an issue of social justice that the City ensures that each citizen has access to the fundamental needs that I mentioned at the beginning of this essay. This includes affordable housing, especially when the market has failed to deliver this need. I have no opposition in principle to fulfilling this function, including placing such housing in the area under consideration. The principles of smart growth, with increased density leading to decreased carbon emissions, speak to aspects of environmental justice, such that we make decisions for the welfare of everyone through a stable physical environment.

But in the case of BTC, the social and environmental justice issues collide with each other in ways that make the proposed development a "wicked problem." There is a long and sordid history of social and environmental injustice by placing people of lower economic means in areas of increased hazard or lower environmental quality. The hazards and

quality issues for BTC have yet to be addressed in any meaningful manner, and there is a rare opportunity to clarify these in advance of any significant investment or commitment. And just as smart cities offer environmental quality and seek to combat sprawl, this model works as infill within a city, not as a dense settlement on the fringes of the city. The traffic impact analysis alone should raise enough questions of whether or not the benefit of dense settlement is offset by the vastly increased traffic and the loss of significant urban forest. The increased flooding in adjoining issues becomes another issue of environmental justice, as asking one segment of the community to disproportionately bear the added risk and insurance expense resulting this flooding amounts to an unlegislated tax burden on that segment that provides no benefit to the city through revenues that would otherwise be needed to mitigate flooding issues. By disregarding the concerns of the surrounding community in favor of solving a social justice issue, the environmental injustice that results reflects an imbalance by magnifying an already existing effect.

HRHA has done all that has been legally required of them, but no more. They have taken the effort that would required for a single building or smaller parcel development and scaled it up without considering any of the amplification of environmental risk or the surrounding community. They have claimed that they sought public input, but two meetings held on the same day on the opposite corner of the city, and advertised only on their Facebook page, does not represent a good-faith effort towards education and public outreach. Extraordinary claims require extraordinary proof, and the scale of BTC is simply extraordinary. Since HRHA and EquityPlus have only met the bare minimum of community engagement, it is clear that they have yet to meet the burden of proof needed to adequately support their claims of great social and environmental benefit through BTC. Too many questions still stand, ones that could be answered with further work and careful, data-driven decision making. I am not asking that the City Council decline to support the requested zoning changes at this time, but I do ask that City Council postpone any decision until the questions and conflicts that I have outlined above can be resolved and more members of the community local to BTC be engaged in meaningful dialogue.

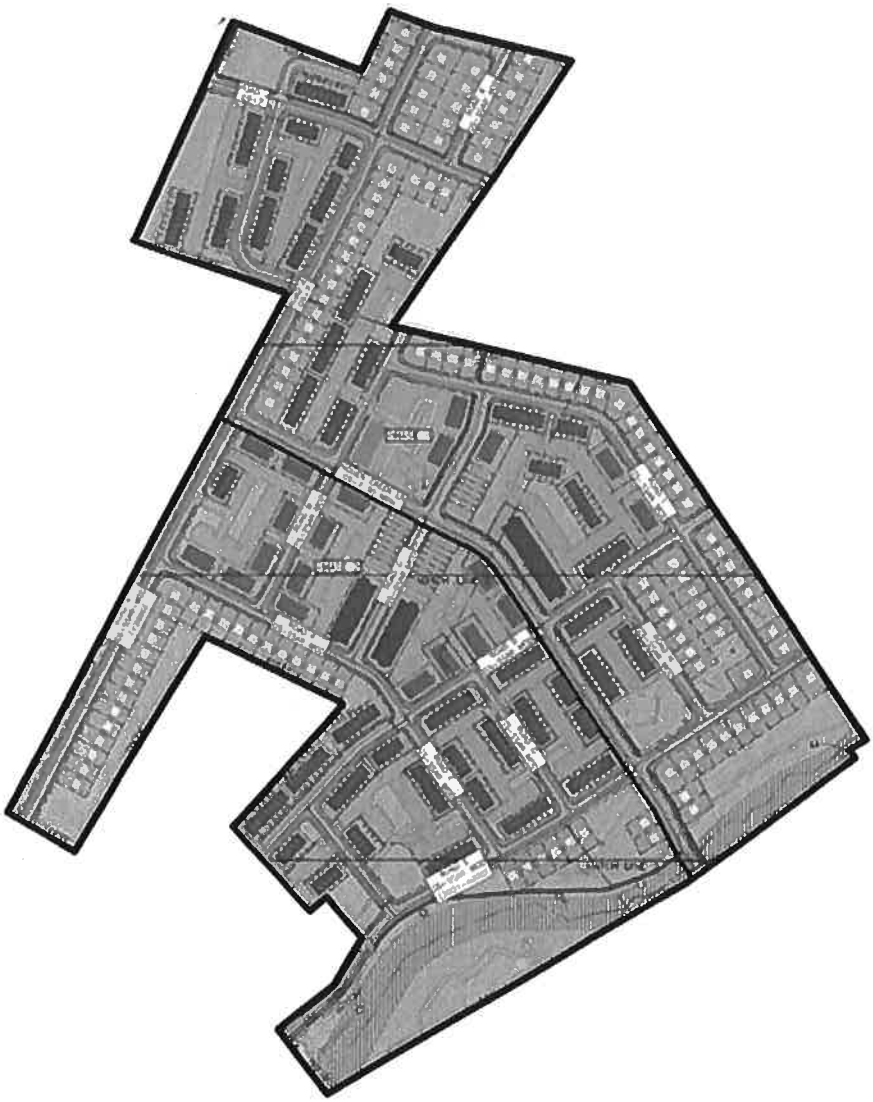
Sincerely,
Eric J Pyle, PhD

Contact: Yes
Contact Info: ejpyle.mgb@gmail.com, 540.383.5933

Request

to reject or delay

Bluestone Town Center



Submitted by Friendly City for Smart Growth

Bluestone Town Center as proposed has the potential to increase the non-college population of Harrisonburg by 10 percent in six years, exclusive of other growth. This will put added stress on city schools, public safety, and other departments at a time when the city is, like the rest of the world, recovering from a pandemic.

This document addresses concerns and objections by city residents who believe BTC is the wrong project at the wrong time for the city. This document was prepared by members of Friendly City for Smart Growth. We are a citizen group begun by Garber's Church Road and Dogwood Avenue residents, but also including residents from other parts of Harrisonburg and Rockingham County who are concerned about the future of the community.

We have no funding, no engineers on staff, and no attorneys on retainer. We will attempt to explain the concerns in layman's terms, using the information we have gathered as bits and pieces of the project have gradually been revealed. We were prepared and willing to present our objections as early as last summer, had the applicants not delayed their application by at least five months.

We are requesting that the City Council deny both the amendment to the zoning ordinance and the rezoning of the relevant property. If the City Council does not have enough information to deny the requests from the applicants, we ask that council members table the request while more information is gathered. After all, the HRHA and EquityPlus had originally said they'd present to Planning Commission and City Council in July and August. Their delay suggests a lack of urgency.

We hope to get a more friendly hearing before the City Council than before the Planning Commission. Planning commissioners and the applicants did not answer the concerns raised at the Jan. 17 hearing. In addition, planning commissioners questioned the motivations and qualifications of the residents challenging the application.

We would hope that being citizens of Harrisonburg would be qualification enough to petition our government for consideration, and we would hope City Council agrees with us enough to fully consider our objections to the project, and to at least delay moving BTC forward too quickly for all questions to be answered.

We will address several issues. They include:

- the advisability of allowing manufactured homes in R7 and the cost to the city;
- health and environmental justice issues raised by a nearby poultry operation;
- the difficult geology of the area;
- the numbers the project is based on;
- the likelihood of the project's success.

We do not have answers to all of the questions we raise. But we hope the City Council will consider the questions and concerns seriously enough to avoid a rush to judgment. The members of the group are available both before and during the public hearing for questions or input. This is the most divisive issue in Harrisonburg since the golf course controversy twenty years ago. We need to get through it as a united city.

Manufactured Housing

Stick-built homes are built on-site in Harrisonburg by local carpenters, electricians, plumbers, roofers and other trades. Estimates are that it takes 1,500 to 2,400 labor hours to build a single home. Taking the low estimate, and an average wage of $20 an hour, it takes $30,000 of labor to build a home. This is a very low estimate both of hours and of wages.

Manufactured homes are built elsewhere and brought to town on a flatbed. If the BTC website promise of 109 homes is accurate, those homes represent $3.3 million in wages going somewhere outside Harrisonburg. Again, this is a very low estimate. The actual amount of lost local wages may be twice that high.

One thing making building in the city expensive is the city's set of building standards, adopted 30 years ago. The standards apply to new streets, curbs and gutters, drainage and other factors. The standards significantly increase lot preparation costs for single-family home construction over, for example, building in Rockingham County.

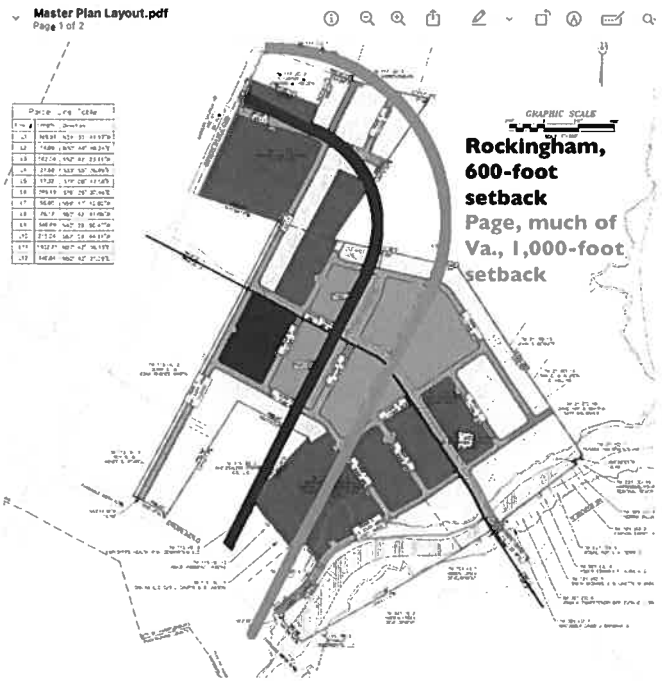
Allowing manufactured homes in the city will lower our standards for housing construction. We should ask if we are willing to sacrifice those standards to create the BTC community? If so, would it not be better to relax the standards city-wide to encourage private builders? We oppose changing the city's zoning ordinance to allow manufactured housing. Should the City Council go that route, we hope for an accompanying acknowledgement that we are lowering standards to encourage housing, and may do so elsewhere in the city.

There are other drawbacks to manufactured housing that members of our group will address at the public hearing. Concrete slabs and long flat roofs are not environmentally effective. Manufactured homes may depreciate over time instead of being the beginning of generational wealth. They may be harder to insure. Members of our group are available to provide further information both before and during the public hearing; however, detailing all of the objections to manufactured housing in this document would make it prohibitively long.

It's not just the odor

Harrisonburg annexed a poultry operation in 1983 without annexing the regulations to go with it. If the turkey farm at Erickson and Garber's Church were still in Rockingham County, a development such as Bluestone Town Center could not be built within 600 feet. In Page County and much of the rest of Virginia, the minimum distance would be 1,000 feet.

The health risks to renters and buyers seeking affordable housing in BTC present what may be the biggest obstacle to allowing the development. Still, council members are asked to remember that even if the applicants are able to buy or close the poultry operation, it is still only one of many serious objections to BTC.



Harrisonburg has no setback ordinance for poultry operations. We've never needed one, because there is only one poultry farm in the city, and developers have considered the nearby property too rocky to build on.

Concentrated Animal Feeding Operations, or CAFOs, emit ammonia, hydrogen sulfide, volatile organic compounds, methane gas, and particulate matter into adjacent environments. The strong odors cannot be minimized but they are not all or even most of the reason to keep children and pregnant women a healthy distance away from these sites.

Poultry dust consists primarily of manure, feed, feathers, dander, litter, and a lot of biological contamination. Hundreds of studies reveal that the closer housing is to a CAFO, the higher the risk for multiple respiratory diseases, including asthma and bronchitis.

A 2022 study conducted on Virginia's Eastern Shore suggests an association between expectant mothers living near poultry operations and reduced birth weight.

Hundreds of studies have also documented disparities in the location of CAFOs relative to race and class. The clustering of low-income, minority communities around CAFOs has raised concerns about environmental injustice and environmental racism.

Between a rock and a hardscape

Before EquityPlus and HRHA break ground for this project, they need to make sure the ground will break. A report from ECS Mid-Atlantic, a geotechnical firm, contains this information about the geology of the area chosen for Bluestone Town Center.

"Karst features, such as sinkholes . . . are problematic in this geologic terrain. . . . At least 12 distinct sinkhole features were mapped during our recent site reconnaissance. . . . If the decision is taken to continue exploring subsurface conditions at the site, we recommend limited geophysical imaging ... coupled with widespread pneumatic hammer drill rock probes, be conducted. . . . Additional geotechnical work would be warranted . . . We understand that the planning of this site is in its infancy."

The excerpt above is edited, but we hope not cherry-picked, from a report delivered to EquityPlus's Mississippi offices almost a year ago. We do not know if any more sinkholes or depressions have opened up since that time. The report notes that local builders are accustomed to dealing with karst geology, but that does not commit EquityPlus to using local firms. The report also does not say what concerns those local builders might have about building in a rocky area. We do not know of any further geological testing of the site since this report.

Sinkholes identified by ECS for EquityPlus

Rock under the BTC plot is folded and fractured. Water infiltrates along those fractures, which also allow radon gas to escape. Pinnacles of rock dot the pasture, with ECS mapping at least ten potentially problematic areas. Clay between the pinnacles is subject to shrinking and swelling, which can damage foundations. These pinnacles would have to be removed by blasting or hammering just to get water lines below the frost lines. The jackhammering or blasting is not for a single building, but for several hundred buildings. In addition, the geological report from ECS notes that jackhammering for testing will have to be done as part of the site engineering, so hammering will begin well in advance of actual building.

The geology creates sinkholes, depressions and a lack of surface streams. The area where water flow creates the highest possibility of sinkholes or depressions is the area where BTC proposes the highest density housing. Roads, slabs, parking, sidewalks, and roofs will create new hardscape where water cannot sink into the ground. Moderate to heavy rain already backs up into Hillandale Park and backyards along Dogwood Avenue. The area of the proposed entry along Hidden Creek Lane floods without any added hardscape.

Hidden creek will not remain hidden past the first strong rain.

Predictions?

While the applicants have obviously reached out to local environmental groups for support, there is no comment so far from any representatives of police, teachers, or other groups targeted by the development.

A walkable community is an environmentally sound principle in concept. But we have not yet been shown that's what BTC is. Its walkability depends on its ability to draw retail to the area. To date, retail and housing partnerships in Harrisonburg have not been successful.

As to teachers and police, some in both groups have said privately they don't necessarily want to live where they work. We know of no outreach to date to others needing affordable housing. We do not know how many of HRHA's current clients are teachers or public safety officers, so we cannot gauge their expertise in deciding what sort of housing these groups seek. Neither the applicant nor the project's opponents can claim anything more than anecdotal evidence about who wants to live there.

Other evidence is also lacking. Questions have been raised in public and private discussions about the Mullin & Lonergan housing study conducted for the city. Some with expertise in Low Income Housing Tax Credits have said the study will not be sufficient for state housing officials to judge the HRHA/EquityPlus proposal. One major flaw in the study is using the citywide average of 2.8 residents per apartment to judge how many apartments college students occupy. We all know that students house in groups of three and four. There may be more students in fewer apartments, and therefore more available housing than the study believes, and we should be cautious about making major decisions without further investigation.

It is unfortunate that so much private knowledge cannot be easily presented in public hearings. This problem became worse on Jan. 17. Some who might speak at a public meeting were discouraged by the Planning Commission's actions at their public hearing on that date. Many found the commissioners' reactions dismissive and even insulting. They forwarded a unanimous recommendation without answering any of the concerns.

Can they do it?

While it is legitimate to question the profit motive of a tax-credit broker like EquityPlus, it makes less sense to question the motivations of the Harrisonburg Redevelopment Housing Authority. The agency was created to carry out the destructive R4 Project and focused for decades on downtown development, but its focus for most of this century has been housing.

The questions about HRHA are not its intentions, but rather its ability to double its responsibilities while still taking proper care of the properties it runs now. HRHA has 379 units right now, according to its website. The proposed Bluestone Town Center would add 415 rental units to its portfolio.

The number and nature of complaints from tenants to HRHA are not public record, but current council members are on record expressing concerns about the topic. Those members would be in the best position to judge if HRHA is up to the task of handling twice the properties it now manages.

As to EquityPlus, we need developers. Some of the developers who've built Harrisonburg are either members of our group or providing information based on their knowledge of the city's history and growth. EquityPlus however is not a developer. They are a financial organization expert in leveraging tax credits. That expertise does not take away from what they've built in Mississippi and other states, but it does not give them the kind of understanding that a unique community such as Harrisonburg deserves.

If EquityPlus had held the public input sessions it promised last June, the group might have a better understanding of the city and its people. The casual but unkept promise of community involvement makes it fair to wonder what else they say may evaporate if they are not held to it by the force of law. They have promised us community meetings and 20 million dollars. One hasn't happened, and the other is illegal.

EquityPlus has done everything legally required in preparing its application. But it has done nothing more. Extraordinary claims require extraordinary proof, and so far EquityPlus has given no proof that it can provide what it has promised.

Conclusion

The biggest question about Bluestone Town Center remains whether it will begin to solve Harrisonburg's housing issues. The other questions are subordinate to that one. Will the residents said to be targeted by the development want to live there? Is there an environmental benefit if the project can't draw relevant retail? Can the health risk be minimized, especially for children and expectant mothers? Will the required blasting disrupt or even damage nearby homes and the two nearby city schools? Is the HRHA prepared for the task of managing the development?

We hope these issues can be discussed openly and without characterizing or demeaning some of the residents who have raised the questions. Accusations of NIMBY (not in my back yard) raise a critical question. What is wrong with being concerned about the future of one's neighborhood? Neighborhood associations have been a benefit to the city for at least thirty years. Living near a project should not disqualify a tax-paying citizen from participation in the discussion.

The goal is simple for members of Friendly City for Smart Growth. We would ask to have the amendment to the zoning ordinance rejected, and we would ask to have the rezoning of this rocky cow pasture rejected. If outright rejection is considered unwise, we would ask that City Council table both issues until more questions can be answered.

We do not have millions of dollars in public and corporate funds to support our efforts. We have only our personal efforts and our voice in the public process. Two decades ago, a City Council ignored opponents' voices in their haste to build a golf course. Harrisonburg still bears the scars from that decision. We hope the City Council will not rush into this decision. The applicants' deadline is their issue, not ours.

Housing & Schools

LITERATURE REVIEW, NEEDS, AND INSIGHTS

VCHR

Topics

- Housing and student outcomes
- Housing needs among children in Harrisonburg/Rockingham
- Housing and schools, services
- Student Yields
- Neighborhood/residential choice

Student Outcomes

Affordable housing creates positive academic outcomes for students inasmuch as it *reduces*

- forced mobility,
- overcrowded conditions,
- health consequences of
  - substandard housing,
  - insufficient income and
  - parental/family stress

Relevant Evidence

- "affordable housing can reduce the likelihood that a family will be forced to move as a result of an eviction, foreclosure, rent increase, or other financial challenges" (Brennan 2014, Bartlett 1997, Mills et al 2006, Shaff 2002)

- Access to affordable housing may reduce overcrowding. Mills et al. (2006) "found that households that received a housing voucher had less than half the incidence of overcrowding compared with similar households without voucher assistance" (Brennan et al. 2014)

- Fenelon and Newman (2021) find that "rental assistance leads to a reduction in the number of health problems among children and thus to fewer days of school missed due to illness."

Student Outcomes

Affordable housing creates positive academic outcomes for students inasmuch as it *increases*

- Family & household stability,
- access to better schools, and
- income that can be devoted to child educational enrichment

Relevant Evidence

- A number of studies suggest that tenant-based and housing choice vouchers allow households to access better-performing schools, assuming all other factors are equal (Fenelon et al. 2022; Mast 2018)

- Project-based housing has positive effects on children's health, social networks, and residential stability (Boudreaux et al. 2020; Fenelon et al. 2018; Kennedy-Hendricks et al. 2015; Lundberg et al. 2020)

- Newman and Holupka (2014, 95) find that families who are not cost burdened are more likely to spend a portion of their income on child enrichment, which impacts children's cognitive achievement.

Student Outcomes and Schools

- Brennan et al (2014) suggest "A supportive and stable home environment can complement the efforts of educators, leading to improved student achievement."
- Dillman (2017) and Di and Murdoch (2013) suggest that increased stability offered by affordable housing may have positive implications for schools.
  - Decreased student turnover
  - Increased test scores
- Anthony et al (2009) assert that afterschool programing at housing developments such as public housing can provide protection against some risks associated with concentrated poverty.

Need in Harrisonburg

- 15,691 low-income (80% of AMI or less) households (2021 ACS PUMS 5-year estimates)
  - 12,394 low-income, cost-burdened households
    - 4,423 low-income, cost-burdened household that include children
- 85 students identified as experiencing homelessness in the 20-21 school year (William and Mary Project Hope Data)
  - 35 students in Rockingham
  - 45 students in Harrisonburg

VIRGINIA TECH

Need in Harrisonburg

- Regional McKinney Vento representatives and school social workers cite complexity of challenges leading to housing instability
  - Affordable housing needs to be balanced with adequate support
  - Former student housing not ideal for families
  - Many families experiencing homelessness shelter in hotels
  - Families need emergency shelter and services to respond to crisis and appropriate, affordable housing and services to remain stable

Housing & Schools Collaboration Examples

- 2014-2015 Richmond, local school leaders convene superintendents, board members, staff from housing authority, city housing department, and state education departments to develop strategies to reduce segregation. Good model for cross-sector collaboration (National Education Association 2019)
- Housing authority learning centers
  - Tutoring, homework help, skill building
  - Emphasis on parental involvement and empowerment

Housing & Schools Collaboration Examples

- Brookline Housing Authority Steps to Success Program
  - Afterschool & summer programming
  - Tutoring
  - Job training
  - Academic advising
- Norwalk Housing Authority Bridge to College and Career
  - Dedicated after school program from middle school students
  - Skills training for transition from high school to college
  - Scholarships
- Seattle Housing Authority, Seattle Youth Tutoring Program
  - Administered by Catholic Community Services of King County
  - Tutoring and mentorship

Housing & Schools Collaboration Examples

- Denver Housing Authority Bridge Project
  - Administered by University of Denver's Graduate School of Social Work
  - Kindergarten to college sophomore
  - Case management
  - Higher rates of school attendance, substantially fewer disciplinary referrals, better end-of-year achievement ratings in math and science, and greater gains in literacy skills (HUD PD&R 2017)

Student Yields

- Number of bedrooms is the best predictor of average school-age children per housing unit (Wong et al 2017, Voicu & Listokin, 2018)
- Lower-cost units have a larger average household size, including school-age children (Voicu & Listokin, 2018). There are exceptions, however:
  - Grip's (2020) study of owned housing in a suburban-NJ local jurisdiction
  - Voicu & Listokin's (2018) observations of older units in 2-4 unit structures
- Renter households have higher student yields than owners households (Voicu & Listokin, 2018; ESI, 2017)
  - This is likely related to Grip's (2020) observation that student yields fall dramatically as length of ownership increases
- Structure age: results vary, likely due to local/regional variations in relative affordability (City of Alexandria, 2021; Voicu & Listokin, 2018)

Student Yield Example

- Estimated Student Generation Multipliers for Bluestone Town Center (using multipliers from ESI, 2017)

Unit Type	*Proposed Unit Count*	*Multiplier*	*Student Yield*	*Student Yield per year*
Townhouses	349	0.52	181.48	20.164
Single Family Detached	133	0.675	89.775	9.975
Apartments	355	0.257	91.235	10.137
Senior Apts.	60	0	0	0
Total	897		362.49	40.577

Neighborhood/Destination Choice and Mobility

- Households choose their best "housing bundle" given their budget constraint
  - Reasons to move
    - Better schools
    - Better employment opportunity
    - Closer to social/support networks
    - Effective eviction/foreclosure
    - Family event (marriage, children, divorce)
  - Reasons to stay
    - Maintain social/support networks
    - Maintain employment
    - Moving costs
    - Cost/discrimination barriers to neighborhoods of opportunity

Neighborhood/Destination Choice and Mobility

- Key consideration and relevant evidence
  - Low income households are likely more sensitive to housing costs than high-income households (Davis et al 2017)
  - Family rootedness impacts willingness to move (Kosar et al 2021)
  - "Relationships, rather than neighborhoods, appear to be the driving factor in residential mobility and decision making [among low-income households]" (Skobba and Goetz 2013)
    - Social networks help households meet basic needs
    - True for local moves between neighborhoods (Spring 2017)
  - Distance to kin roots socioeconomically disadvantaged households in place, but the ability to move toward kin members is facilitated by advantaged racial position (Spring 2017)

Questions?

- Housing and student outcomes
- Housing needs among children in Harrisonburg/Rockingham
- Housing and schools, services
- Student Yields
- Neighborhood/residential choice

Additional References

- Most references are included in literature reviews, additional references are
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  - Skobba, K. Goetz, E. (2013), Mobility Decisions of Very Low-Income Households. *Cityscape: A Journal of Policy Development and Research. 15 (2): 155-171*
  - Spring A, Ackert E, Crowder K, South SJ. Influence of Proximity to Kin on Residential Mobility and Destination Choice: Examining Local Movers in Metropolitan Areas. Demography. 2017 Aug;54(4):1277-1304. doi: 10.1007/s13524-017-0587-x. PMID: 28681169; PMCID: PMC5734642

Housing and Student Outcomes

Recent academic research and literature review address housing's impact on student outcomes. Affordable housing creates positive academic outcomes for students inasmuch as it *reduces* forced mobility, overcrowded conditions, health consequences of substandard housing, parental and family stress, and *increases* access to better schools and income that can be devoted to child educational enrichment. A number of researchers suggest that affordable housing contributes to "a supportive and stable home environment [that] can complement the efforts of educators, leading to improved student achievement (Brennan et al. 2014)" Based on a number of studies (Bartlett 1997, Mills et al 2006, Shaff 2002), Brennan et al (2014) assert that "affordable housing can reduce the likelihood that a family will be forced to move as a result of an eviction, foreclosure, rent increase, or other financial challenges." Dillman (2017) and Di and Murdoch (2013) suggest that increased stability offered by affordable housing may have positive implications for schools.

A lack of affordable housing often results in an increase in residential mobility for low income families when they find themselves priced out of markets where they live (McKoy & Vincent, 2008). Coulton et al (2009) find that many low-income households are "churning movers," suggesting that their moves are "a response to financial stress or problems in their rental housing arrangements." Residential instability causes frequent school changes, higher absentee rates, and lower educational achievement. Many studies have examined the effects that frequent moves have on children's scholastic achievement. Disrupting the physical location of a young child or an adolescent "has a strong negative and significant effect on achievement" (Haveman et al. 1991, 144; Beatty, 2010). Children who change schools often are exposed to curricula that vary greatly across schools and districts, forcing them to catch up and shift their focus to different material in the middle of the school year (Mueller & Tighe, 2007). Students who changed schools frequently lag behind non-mobile students by a year or more in reading and math (Garriss-Hardy & Vrooman, 2005). Studies have found that homeless and highly mobile students have higher rates of absenteeism (Buckner et al, 2001), and score lower than stably housed children on standardized tests in reading, spelling, and math (Obradovic et al. 2009; Rafferty, Shinn, and Weitzman 2004). Further, mobility in early childhood also has lasting, negative social and psychological effects. Repeated school moves increased the risk of violent behavior in high school, and caused students to fall behind socially (Rumberger 2003; Buerkle 1998). The effects extend to graduation potential, with one study finding that three or more moves in early childhood is associated with a 13.7 percentage point decrease from the base probability of graduating from high school (Haveman, Wolfe, & Spaulding, 1991).

Increased student mobility has a significant effect on classrooms and schools as a whole. Brennan et al. 2014 cite student achievement at schools with high turnover is significantly lower than at schools with little or no turnover (Raudenbush et al. 2011). By having to catch up or change curricula, mobile students take time and resources away from other students in the classroom, increasing the strain on teachers and school systems (Mueller & Tighe, 2007). The curricular pace at schools with highly mobile populations is one grade below grade level on average (Kerbow et al. 2003), often causing students to underperform on standardized tests (Kaase, 2005).
Parents that must work multiple stressful jobs to afford their housing costs may not be able to be as involved or supportive of their children as parents with better access to affordable homes (Duncan et al 2012; Guryan et al 2008). Yeung, Linver, and Brooks-Gunn (2002) reviewed an array of empirical studies and concluded that "economic hardship diminishes parental abilities to provide warm, responsive parenting" (p.1862). Parents constrained by residential instability may not be able to prioritize helping children with their homework, or get involved in school activities (Cunningham, Harwood, and Hall 2010).

Further, studies find that the health and stress levels of parents and caregivers—especially those of pregnant mothers—affect children's development, ability to learn, and educational attainment. (Aizer et all 2012; Curie & Almond & 2011; Heckman 1999; Kalil & Zoil-Guest 2005) Family and child stress can directly impact a student's education and future career success. Stress during the early childhood years, such as that brought on by parental unemployment or demanding jobs, can diminish children's subsequent academic and labor market accomplishments (National Scientific Council on the Developing Child [NSCDC], 2014; Kalil & Zoil-Guest 2005).

A family's housing cost burden relates directly to children's development and educational achievement as well. Several studies find that increases in a family's disposable income significantly improve children's test scores. (Duncan et al, 2011; Dahl & Lochner 2012; Boca, Flinn, & Wiswall 2014). Newman and Holupka (2014, 95) find that families who are not cost burdened are more likely to spend a portion of their income on child enrichment, which impacts children's cognitive achievement. Further, the greater the cost burden, the less money households are likely to spend on child enrichment. Although limited, research found that unaffordable housing contributes directly to children's poor attendance and performance in school (Anderson et al. 2003, 48). For example, Gagne and Ferrer (2006, 285) find that major home repair requirements and short length of residence have negative effects on children's math scores. Low income children who live in more affordable areas tend to have better health and educational outcomes, with stronger effects for adolescents compared to school-aged children. In particular, grade retention increases as housing affordability decreases for children of all ages (Harkness & Newman, 2005).

Poor quality housing exerts a negative impact on educational performance through its association with poor health and poor home environment as well. Unaffordable housing can lead to difficult choices in household budgets, such as choosing between paying the rent or paying for food and other necessities like adequate health care. Families with affordability issues may choose lower quality housing to make up for the gap in income (Cunningham & MacDonald, 2012). Evidence shows that families living in low-quality housing may suffer severe health consequences, particularly children. Strong evidence supports the contention that housing is the principal source of exposure to lead paint, and that poor housing conditions contribute to asthma (Kinney et al., 2002; Rothstein, 2004). The evidence is also strong that these health factors increase school absence and affect academic performance (Moonie et al, 2008). Fenelon and Newman (2021) find that "rental assistance leads to a reduction in the number of health problems among children and thus to fewer days of school missed due to illness."

Access to affordable housing may reduce overcrowding. Mills et al. (2006) "found that households that received a housing voucher had less than half the incidence of overcrowding compared with similar households without voucher assistance" (Brennan et al. 2014). Studies have found that children growing up in overcrowded housing have lower math and reading scores, complete fewer years of education, and are less likely to graduate from high school than their peers (Braconi, 2001). Increases in noise and chaos interfere with children's studies and cognitive development. Research has also linked household chaos with reductions in children's IQ scores and increases in behavior problems. (Deater-Deckard et al., 2009).

Recent research has also examined the ability for students who receive housing assistance to access high-quality schools. A number of studies suggest that tenant-based and housing choice vouchers allow households to access better-performing schools, assuming all other factors are equal (Fenelon et al. 2022; Mast 2018). However, in the context of tight housing markets and fewer supportive landlords, housing choices for voucher-holders are limited and project-based

supports are increasingly necessary. Therefore it is important that Fenelon et al. note "this finding does not necessarily imply that project-based housing is harmful or should not be preferred in many cases (Fenelon et al 2022)." Indeed, "project-based housing has positive effects on children's health, social networks, and residential stability (Boudreaux et al. 2020; Fenelon et al. 2018; Kennedy-Hendricks et al. 2015; Lundberg et al. 2020), and may offer greater access to walkability than vouchers (Talen and Koschinsky 2014)" (Fenelon et al 2020).

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Housing and Student Outcomes

Recent academic research and literature review address housing's impact on student outcomes. Affordable housing creates positive academic outcomes for students inasmuch as it *reduces* forced mobility, overcrowded conditions, health consequences of substandard housing, parental and family stress, and *increases* access to better schools and income that can be devoted to child educational enrichment. A number of researchers suggest that affordable housing contributes to "a supportive and stable home environment [that] can complement the efforts of educators, leading to improved student achievement (Brennan et al. 2014)" Based on a number of studies (Bartlett 1997, Mills et al 2006, Shaff 2002), Brennan et al (2014) assert that "affordable housing can reduce the likelihood that a family will be forced to move as a result of an eviction, foreclosure, rent increase, or other financial challenges." Dillman (2017) and Di and Murdoch (2013) suggest that increased stability offered by affordable housing may have positive implications for schools.

A lack of affordable housing often results in an increase in residential mobility for low income families when they find themselves priced out of markets where they live (McKoy & Vincent, 2008). Coulton et al (2009) find that many low-income households are "churning movers," suggesting that their moves are "a response to financial stress or problems in their rental housing arrangements." Residential instability causes frequent school changes, higher absentee rates, and lower educational achievement. Many studies have examined the effects that frequent moves have on children's scholastic achievement. Disrupting the physical location of a young child or an adolescent "has a strong negative and significant effect on achievement" (Haveman et al. 1991, 144; Beatty, 2010). Children who change schools often are exposed to curricula that vary greatly across schools and districts, forcing them to catch up and shift their focus to different material in the middle of the school year (Mueller & Tighe, 2007). Students who changed schools frequently lag behind non-mobile students by a year or more in reading and math (Garriss-Hardy & Vrooman, 2005). Studies have found that homeless and highly mobile students have higher rates of absenteeism (Buckner et al, 2001), and score lower than stably housed children on standardized tests in reading, spelling, and math (Obradovic et al. 2009; Rafferty, Shinn, and Weitzman 2004). Further, mobility in early childhood also has lasting, negative social and psychological effects. Repeated school moves increased the risk of violent behavior in high school, and caused students to fall behind socially (Rumberger 2003; Buerkle 1998). The effects extend to graduation potential, with one study finding that three or more moves in early childhood is associated with a 13.7 percentage point decrease from the base probability of graduating from high school (Haveman, Wolfe, & Spaulding, 1991).

Increased student mobility has a significant effect on classrooms and schools as a whole. Brennan et al. 2014 cite student achievement at schools with high turnover is significantly lower than at schools with little or no turnover (Raudenbush et al. 2011). By having to catch up or change curricula, mobile students take time and resources away from other students in the classroom, increasing the strain on teachers and school systems (Mueller & Tighe, 2007). The curricular pace at schools with highly mobile populations is one grade below grade level on average (Kerbow et al. 2003), often causing students to underperform on standardized tests (Kaase, 2005).
Parents that must work multiple stressful jobs to afford their housing costs may not be able to be as involved or supportive of their children as parents with better access to affordable homes (Duncan et al 2012; Guryan et al 2008). Yeung, Linver, and Brooks-Gunn (2002) reviewed an array of empirical studies and concluded that "economic hardship diminishes parental abilities to provide warm, responsive parenting" (p.1862). Parents constrained by residential instability may not be able to prioritize helping children with their homework, or get involved in school activities (Cunningham, Harwood, and Hall 2010).

Further, studies find that the health and stress levels of parents and caregivers—especially those of pregnant mothers—affect children's development, ability to learn, and educational attainment. (Aizer et all 2012; Curie & Almond & 2011; Heckman 1999; Kalil & Zoil-Guest 2005) Family and child stress can directly impact a student's education and future career success. Stress during the early childhood years, such as that brought on by parental unemployment or demanding jobs, can diminish children's subsequent academic and labor market accomplishments (National Scientific Council on the Developing Child [NSCDC], 2014; Kalil & Zoil-Guest 2005).

A family's housing cost burden relates directly to children's development and educational achievement as well. Several studies find that increases in a family's disposable income significantly improve children's test scores. (Duncan et al, 2011; Dahl & Lochner 2012; Boca, Flinn, & Wiswall 2014). Newman and Holupka (2014, 95) find that families who are not cost burdened are more likely to spend a portion of their income on child enrichment, which impacts children's cognitive achievement. Further, the greater the cost burden, the less money households are likely to spend on child enrichment. Although limited, research found that unaffordable housing contributes directly to children's poor attendance and performance in school (Anderson et al. 2003, 48). For example, Gagne and Ferrer (2006, 285) find that major home repair requirements and short length of residence have negative effects on children's math scores. Low income children who live in more affordable areas tend to have better health and educational outcomes, with stronger effects for adolescents compared to school-aged children. In particular, grade retention increases as housing affordability decreases for children of all ages (Harkness & Newman, 2005).

Poor quality housing exerts a negative impact on educational performance through its association with poor health and poor home environment as well. Unaffordable housing can lead to difficult choices in household budgets, such as choosing between paying the rent or paying for food and other necessities like adequate health care. Families with affordability issues may choose lower quality housing to make up for the gap in income (Cunningham & MacDonald, 2012). Evidence shows that families living in low-quality housing may suffer severe health consequences, particularly children. Strong evidence supports the contention that housing is the principal source of exposure to lead paint, and that poor housing conditions contribute to asthma (Kinney et al., 2002; Rothstein, 2004). The evidence is also strong that these health factors increase school absence and affect academic performance (Moonie et al, 2008). Fenelon and Newman (2021) find that "rental assistance leads to a reduction in the number of health problems among children and thus to fewer days of school missed due to illness."

Access to affordable housing may reduce overcrowding. Mills et al. (2006) "found that households that received a housing voucher had less than half the incidence of overcrowding compared with similar households without voucher assistance" (Brennan et al. 2014). Studies have found that children growing up in overcrowded housing have lower math and reading scores, complete fewer years of education, and are less likely to graduate from high school than their peers (Braconi, 2001). Increases in noise and chaos interfere with children's studies and cognitive development. Research has also linked household chaos with reductions in children's IQ scores and increases in behavior problems. (Deater-Deckard et al., 2009).

Recent research has also examined the ability for students who receive housing assistance to access high-quality schools. A number of studies suggest that tenant-based and housing choice vouchers allow households to access better-performing schools, assuming all other factors are equal (Fenelon et al. 2022; Mast 2018). However, in the context of tight housing markets and fewer supportive landlords, housing choices for voucher-holders are limited and project-based

supports are increasingly necessary. Therefore it is important that Fenelon et al. note "this finding does not necessarily imply that project-based housing is harmful or should not be preferred in many cases (Fenelon et al 2022)." Indeed, "project-based housing has positive effects on children's health, social networks, and residential stability (Boudreaux et al. 2020; Fenelon et al. 2018; Kennedy-Hendricks et al. 2015; Lundberg et al. 2020), and may offer greater access to walkability than vouchers (Talen and Koschinsky 2014)" (Fenelon et al 2020).

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Featured Article

Investing in Education: Part I

To help resident students succeed academically, public housing agencies across the country are partnering with schools, parents, and local stakeholders to implement educational initiatives.

Using housing as a platform to boost education, health, and other outcomes that contribute to quality of life is central to HUD's mission. HUD Secretary Ben Carson considers improving education outcomes to be integral to fostering self-sufficiency and upward mobility. With more than 750,000 children living in public housing in the United States, public housing agencies (PHAs) have a unique opportunity to improve the educational circumstances of a population that has traditionally faced challenges to academic success. The disparate educational outcomes between students from low-income households and those from middle- and high-income households, often called the achievement gap, begin early in a child's education and persist even after graduating from high school. In 2014, 11.6 percent of students in the lowest income quartile dropped out of high school compared with 4.7 percent of students in the middle-high quartile. Of those students who successfully graduate from high school or complete a general educational development program, 64 percent of middle-income students and 84 percent of high-income students go on to college or trade school within two years compared with 58 percent of low-income students. Furthermore, low-income, first-generation students who do enter college are four times more likely than other students to leave after their first year.

Across the country, PHAs are implementing programs to help resident students overcome barriers to academic performance, graduate from high school, and go on to higher education. This two-part feature will describe how four PHAs are engaging parents and partnering with schools and other local stakeholders to prioritize education and improve outcomes for resident high school and college students.

Data-Driven Programming in the Denver Housing Authority's Bridge Project

The Bridge Project, an afterschool and summer program based out of four learning centers on Denver Housing Authority (DHA) properties, offers tutoring, workshops and classes, individual education and career counseling, and other enrichment activities to resident students. The project, administered by the University of Denver's Graduate School of Social Work with support from DHA, was established in 1991 and is one of the few programs of its kind to operate out of a major university. Approximately 600 students from kindergarten to the sophomore year of college are enrolled each year. The program employs an evidence-based curriculum built around positive youth development, early literacy, and case management that

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serves as a comprehensive model addressing the multiple needs of each participant. Staff, many of whom are licensed educators or hold advanced degrees in social work, also attend to the students' social and emotional development and refer families to support services when necessary.

Bridge Project students participate in tutoring, workshops and classes, individual education and career counseling, and enrichment activities such as the experimental robotics program depicted here. Credit: University of Denver

High school students can access a special program, Steps to Success, to prepare them for college, other postsecondary education, or a career. Each student in Steps creates a portfolio to use as a planning tool; meets regularly with a staff member; and attends weekly sessions consisting of career exploration, college tours, networking sessions, and other activities related to postsecondary readiness. All graduates from the Bridge Project are eligible for a supplemental scholarship to help them afford college or trade school.

Because the University of Denver has a data-sharing agreement with Denver Public Schools, the project's evaluation team has been able to compare Bridge students with similar youth living in nearby public housing developments who do not receive afterschool support. The results of this evaluation show that, compared with their peers, Bridge Project students have substantially higher rates of school attendance, substantially fewer disciplinary referrals, better end-of-year achievement ratings in math and science, and greater gains in literacy skills. Graduation and college enrollment rates for Bridge Project students participating in the College and Career Readiness program far outstrip the average for their school district: in 2016, 100 percent of Bridge Project seniors graduated from high school compared with a district average of 46 percent, and every student in the program enrolled in college.

Seattle's Youth Tutoring Program

Seattle's Youth Tutoring Program (YTP), established in 1991, is based out of 6 low-income housing communities including 5 Seattle Housing Authority (SHA) properties and provides one-on-one summer and afterschool tutoring for students in grades 1 to 12. The nonprofit Catholic Community Services of King County conducts the program with financial and operational support from SHA, grants, and private donors. Roughly 500 volunteer tutors assist approximately 450 students from 50 schools as they navigate the educational system. The average student tenure is 30 months, and tutors frequently stay

Family Unification Program-Family Self Sufficiency Demonstration Evaluation

***Cityscape*: Volume 24, Number 3**

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with their student for multiple years, serving as mentors. Parents, many of whom do not speak English as a first language, also receive support navigating the school system and advocating for their child. YTP enjoys a close partnership with Seattle Public Schools, sharing data, professional development training sessions, and relationships with individual teachers and staff to create tailored plans for specific students.

The YTP curriculum for high school students is highly individualized, centering on the bond between mentor and mentee. Tutors discuss their mentees' needs, opportunities, and goals; use their access to the Seattle Public Schools' online portal, the Source, to detect problems and intervene; and help students access opportunities related to their personal path. In addition to this individualized support, YTP provides SAT test preparation, college application support, assistance in applying for financial aid, and internship placements. YTP also participates in an annual scholarship program offered through SHA called Dream Big that offers $1,000 scholarships to public housing youth to help offset expenses related to higher education.

A quarter of those aged 6 to 17 living in SHA communities targeted by YTP participate in YTP each year, and in 2015, 92 percent of high school seniors enrolled in the program graduated. In 2016, 100 percent of YTP seniors graduated with clear plans for college and career training. Cicily Nordness, a supportive services coordinator at SHA, believes that one reason for the program's success is its ability to work with families to provide youth with "wraparound support." SHA considers YTP one of its primary youth services partners, and the curriculum for high school students is currently being expanded.

The discussion of PHAs' efforts to improve high school graduation and college attendance rates will continue in the next issue of *PD&R Edge* with a look at two effective initiatives in Brookline, Massachusetts, and Norwalk, Connecticut.

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Featured Article

Investing in Education: Part II

The Steps to Success program in Brookline, Massachusetts, has served more than 3,800 public housing students since its inception in 2001. Credit: Brookline Housing Authority

Throughout the country, public housing agencies (PHAs), often partnering with a range of public, private, and nonprofit entities, are offering their residents innovative, housing-based educational initiatives to address various areas of concern. The May 15 issue of *The Edge* featured programs supported by two large PHAs in Denver and Seattle. This issue looks at two long-running projects based out of smaller PHAs: the Steps to Success program run by a nonprofit in partnership with the Brookline Housing Authority in Massachusetts and the Learning Centers initiative at the Norwalk Housing Authority in Connecticut. Both programs report significant results, although they employ different methodologies; whereas Norwalk's educational learning centers constitute an organizational subset of the housing agency, Brookline's Steps to Success is a nonprofit entity characterized by a three-pronged partnership that includes the housing agency. Both programs rely on partnerships with stakeholders such as the public schools and on the engagement of parents.

Learning Centers Provide Basis for Academic Programming in Norwalk, Connecticut

The Norwalk Housing Authority (NHA) began offering educational programming in 1997 in response to the poor academic achievement of its resident students. NHA bases its educational activities out of five learning centers located on its residential properties. The activities offered at the learning centers are divided into two basic categories: academics, such as homework help, tutoring, and skill building in literacy and math, and enrichment. All programs undertaken through the learning centers emphasize parental involvement, including programming to empower and encourage parents to take a more active role in their students' academic careers. One of the many initiatives that these learning centers support is the Bridge to College and Career (BTCC) program, which assists students in grades 6 to 12.

The BTCC program prepares youth for college or entry into a living-wage career. BTCC participants in middle school attend a dedicated afterschool program five times a week, and high school students are invited to drop in as needed for support and attend monthly workshops. In addition to academic support, participants in this program receive skills training for the transition to high school, college, or career, access to speaking events, financial literacy instruction, college preparatory activities, and more. All graduates of the program are eligible for scholarships ranging from $1,000 to

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$17,000 from the Norwalk Housing Foundation, a nonprofit established in 1998 by NHA, which has distributed more than $1.5 million to 202 students.

Bridge to College and Career graduate Tina Spencer, now a second year medical student at the University of Connecticut Medical School, received both undergraduate and medical school scholarships from the Norwalk Housing Foundation. Credit: Norwalk Housing Authority

Because NHA considers promoting educational success and self-sufficiency a core part of its mission, its educational initiatives derive most of their oversight and execution from the housing agency itself, with funding from its operating budget and capital improvements fund. However, Norwalk Public Schools and the Norwalk Housing Foundation are primary partners in NHA's ongoing effort to advance the educational achievement of resident youth.

The Brookline Housing Authority's Steps to Success Program

The Steps to Success (STS) program began as a partnership between the Brookline Housing Authority (BHA) and the Public Schools of Brookline with seed money provided by the Brookline Community Foundation and a federal Gaining Early Awareness and Readiness for Undergraduate Programs (GEAR UP) grant. Established in 2001, the program is open to Brookline public housing residents from fourth grade through college and provides a range of educational enrichment activities in and out of school. In addition to afterschool and summer programming, STS provides tutoring, job training, summer internships, academic advising, and exposure to higher education. In 2009, the College Success Initiative was added to the STS roster of services to advise and assist STS graduates who had moved on to college. In 2010, a group of volunteers formalized its commitment to the program and established Steps to Success, Inc., as a nonprofit that provides funding for the afterschool and summer programming and underwrites the College Success Initiative.

Steps to Success has seen significant positive results for the 3,800 Brookline students it has served since its inception. In 2015, there were 283 students enrolled in the Steps to Success program, and of those participants who were high school seniors, 100 percent were accepted into college. Among students still in grade school, 87 percent moved to the next grade level on time. Most 2014 enrollees returned for a second year, resulting in a retention rate of 82 percent. Judy Katz, commissioner of BHA and chair of the Steps to Success board of directors, attributes the program's efficacy to its success in recruiting parents and its close partnership with the public schools and BHA. Katz reports that Steps to Success administrators are interested in expanding the program, first to students whose families receive housing subsidies through the Housing Choice Voucher program and eventually to all low-income students in Brookline.

Improving Life Outcomes

Public housing agencies are well positioned to help resident students achieve academic success and have a vested interest in doing so — educational attainment is a primary means of improving lifetime

earnings prospects. The four PHAs discussed in this two-part feature provide a snapshot of the work taking place nationwide, demonstrating the potential of educational programs based in public housing developments to boost high school graduation and college attendance rates. Although the initiatives within PHAs take various forms based on several factors, including the nature of available resources, the needs of resident children and parents, and the PHAs' relationships with schools and nonprofits, all are striving to improve life outcomes for low-income students.

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Housing and Student Yields

Calculating Demographic Multipliers

Demographic multiplier estimation techniques were originally developed by researchers at the Rutgers Bloustein School, and updated Rutgers studies (Listokin et al, 2006; Voicu & Listokin, 2018) provide the most comprehensive analysis of demographic multipliers by housing type available. The Rutgers studies utilize the Public Use Microdata Sample (PUMS) of the US Census Bureau's American Community Survey (ACS).

The PUMS' respondent-level observations are used to cross-tabulate household characteristics (such as household size and school age children) with housing unit characteristics (such as number of bedrooms, unit cost, tenure, and number of units in structure), generating an average number of students per household for a range of unit types. Unweighted observations are then weighted to reflect the broader socio-demographic characteristics of the geographic unit being analyzed.

Demographic multipliers assume stable household characteristics; they do not account for changes to trends (Mix & Jiang, 2009). For example, in New Jersey, the number of students per housing unit has generally decreased over the first two decades of the twenty-first century (Voicu & Listokin, 2018). Demographic multiplier estimation can only extrapolate current trends.

Common Methodology Limitations

Demographic multipliers calculated using an insufficient sample size are likely to be inaccurate. This presents a trade-off between highly localized geographic scale and highly differentiated housing unit characteristics. Analysis at a larger geographic scale (such as state the level) yields more robust estimates of demographic multipliers associated with a wider range of housing unit types, costs, and tenures. Analysis at a smaller geographic scale better reflects housing market dynamics at the local or regional level.

For analysis of smaller geographic areas, less common housing unit types (such as five-bedroom apartments or one-bedroom single-family detached houses), unit types with a generally insignificant impact on student yield (such as studio or one-bedroom apartments), or uncommon tenures (such as five-bedroom rented housing), can be combined into larger categories of housing unit characteristics. Dividing the limited number of PUMS observations for a small geography among fewer categories addresses analytic distortions caused by insufficient sample size.

Sample-size limitations are evident in the Rutgers studies' examinations of newer-built housing units. Voicu & Listokin (2018), for example, derive two sets of demographic multipliers: one from housing units constructed within the past 10 years, and the other from all housing units. Isolating newer built units is meant to give practitioners a more accurate tool to estimate the impact of new housing development. Table X demonstrates variations in student yield for newer-built and older housing units with the same size and tenure characteristics.

Table X. Student Yield Variation by Structure Age (From Voicu & Listokin, 2018)

All Housing Types & Values, by BR Count	*Newer Built*	*All Housing*
3 BR Owned	0.426	0.419
4-5 BR Owned	1.033	0.716
2 BR Rented	0.347	0.473
3 BR Rented	0.902	0.926

Wong et al (2017) identify several shortcomings in applying the newer-built methodology to more localized geographic units: primarily, wide variations in local housing production year to year, and the potential for insufficient sample size. An alternative methodology, the mover sample (Econsult Solutions Incorporated [ESI], 2017; Wong et al, 2017), disregards structure age and calculates multipliers based on households which have moved within the past 8 years. This technique recognizes similar characteristics in households moving into newly-built and older housing units, and accounts for filtering in regional housing markets adding inventory: wealthier households moving from older to newer market-rate housing, and less affluent households moving from older market-rate housing to newer subsidized housing. This technique enables more robust estimates to be generated for smaller geographies.

Table Y uses state-level demographic multiplier estimates for the state of Virginia, generated by ESI's Community Data Analytics team (ESI, 2017). Multiplier estimates from Voicu & Listokin's (2018) sample of newer-built New Jersey housing units are presented for comparison.

Table Y. Multipliers Derived from Mover Sample & Newer Built Sample

All Housing Types & Values, by BR Count	*ESI*	*Voicu & Listokin*
0-1 BR Owned	0.057	0.033
2 BR Owned	0.127	0.095
3 BR Owned	0.380	0.426
0-1 BR Rented	0.059	0.086
2 BR Rented	0.298	0.347
3 BR Rented	0.793	0.902

Housing and Student Yields

General Findings

Voicu & Listokin (2018) present several major findings from their analysis of demographic multipliers in New Jersey. These general findings, as well as relevant findings from other, more limited studies, are summarized in this section.

Housing Unit Size

Voicu & Listokin (2018) found a statistically significant relationship between the number of bedrooms in a housing unit and household size, including school-age children. This correlation affects multiplier estimates associated with building type as well: to the extent that single-family detached houses have a higher average number of bedrooms than multifamily units, they tend to generate a higher student yield.

Housing Unit Cost

Voicu & Listokin (2018) found a statistically significant relationship between lower housing costs and larger household sizes for housing units of any given size and type. One exception in their findings is small multifamily buildings (2-4) units in their sample of all housing units. In these buildings, housing units in the middle cost tercile had slightly higher student generation rates than units in the upper or lower cost terciles. Likewise, Grip's (2020) study of one suburban New Jersey school district found that owned housing units above the median assessed value generated a higher student yield than housing units below the median.

Tenure

Voicu & Listokin (2018) found that, in general, rental housing generates a slightly higher student yield than owned housing of the same unit size and type. Virginia statewide multipliers calculated by ESI (2017) confirm this finding: the student generation rate for three-bedroom units was 0.380 for owned units and 0.793 for rented units. The ESI study, however, did not differentiate four-bedroom units by tenure, likely due to the low number of renter households in four-bedroom units. Four-bedroom units generated an average of 0.863 students per unit, higher than three-bedroom units of either tenure. Thus, unit size likely mediates student generation rates to a greater extent than differences in tenure.

Length of Ownership

Grip (2020) examined student yields in owned housing by length of ownership, finding that student yield is highest in recently purchased housing and generally declines over time. For example, in single-family detached houses, student yield peaks at six years of ownership (1.227 students per unit) and drops below average yield (0.591 students per unit) after 17 years of ownership. Grip did not analyze student generation rates in rented housing. Thus, his findings do not address how length of occupancy may affect student generation rates as an isolated variable, nor does it address how length of occupancy may be affected by tenure. Grip's observation that student yields per owned housing units fall dramatically over time likely explains some observed differences between student yields in owned and rented housing.

Age of Structure

The City of Alexandria (2021) found housing stock over 30 years old generated a disproportionate share of student yield, likely due to the lower relative cost of older housing stock in the city. Voicu & Listokin (2018)'s student yield calculations by unit size (bedroom count) and tenure shows variation between samples of recently built housing and all housing. Students per household was higher for some combinations of unit size and tenure, and lower for others. Relationships between structure age and relative cost are likely to vary based on regional housing market dynamics. Methodologies utilizing the mover sample (ESI, 2017; Wong et al, 2017) can likely address this variation in the relative affordability of newer and older housing units.

Subsidized Housing & Demographic Multipliers

ACS-derived estimates cannot differentiate households in subsidized housing to determine variations in household size or student yield (Voicu & Listokin, 2018). Student generation multipliers calculated by the City of Alexandria (2021), however, show above-average student generation associated with publicly-assisted and income-restricted housing (excluding senior housing). For example, in 2021, market-rate single-family detached houses generated an average of 0.3 students per unit in older (>30 years old) properties and 0.21 per unit in newer properties. Income-restricted units generated 0.7 student per unit in older buildings and 0.83 students per unit in newer buildings.

This represents an increase from older multipliers (City of Alexandria, 2015). In 2015, income-restricted housing units in Alexandria generated an average 0.6 students per unit. In contrast, market-rate housing of various types generated more students per unit in 2015 than in 2021. These figures may reflect less affluent families moving to lower-cost jurisdictions if unable to secure income-restricted housing in Alexandria. The relationship between subsidized housing and student generation rates likely varies by local/regional housing markets and levels of affordable housing provision.

Illustrative Example: Student Generation Multipliers for Bluestone Town Center (using multipliers from ESI, 2017)

Unit Type	*Proposed Unit Count*	*Multiplier*	*Student Yield*	*Student Yield per year*
Townhouses	349	0.52	181.48	20.164
Single Family Detached	133	0.675	89.775	9.975
Apartments	355	0.257	91.235	10.137
Senior Apts.	60	0	0	0
Total	897		362.49	40.577

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Making housing more affordable
for people with physical disabilities

CHRT

Individuals with disabilities are **twice as likely** to experience poverty

1 in every 7 U.S. adults has a mobility disability.

4 million renters with disabilities spend over half their monthly income on rent, mortgage, and utilities.

The average rent is **127 percent more** than a person with a disability's SSI income.

People of color and poor people with disabilities are even more acutely impacted by the nation's housing crisis.

Those living in unaffordable housing are more likely to

- Rate their health as fair or poor
- Miss prescriptions or treatments
- Experience evictions and homelessness

Rental assistance helps over **2 million people** with disabilities

Total people assisted by program

Housing choice vouchers	Public housing	Project based rental assistance
1,259,000	444,000	377,000

Supportive housing sections:
- Section 811 for people with disabilities: 32,000
- Section 202 for elderly people: 10,000

But more than **7 million homes** are still needed

Federal housing assistance designed specifically for people with disabilities has seen a **43 percent** reduction over the last decade.

57 percent of low income, disabled renters do not receive the federal assistance they qualify for.

CHRT

DEC 12, 2022

Evaluating housing concerns for people with physical disabilities:

Barriers, best practices, and policy implications

Abigail Lindsay, Jaque King

With 64.3 million U.S. adults living with disabilities (25 percent), most of us either know someone with a disability or experience one ourselves.[1]

- One in every seven U.S. adults has a mobility disability[i] the most common disability type in the U.S.[2]
- Individuals with disabilities are more likely to be women, minorities, impoverished, and reside in the South.[2]
- Disability rates increase with age, affecting two in every five adults aged 65 and older.[2]
- By 2035, some predict that 17 million older adult households (an increase of 7.4 million compared to 2014) will have a least one individual with a mobility disability.[3]

The home environment is critical to improving the quality of life and independence for individuals with mobility challenges, regardless of disability age of onset.[3] However, despite a long history of advocacy efforts to ensure that individuals with disabilities have a right to fair housing, those with physical disabilities remain disproportionately impacted by the lack of accessible and affordable homes compared to individuals without disabilities.[4,5]

To protect populations with disabilities from further inequities it is imperative for policymakers to address both the affordable housing crisis and the insufficient stock of accessible housing.

Toward that end, this issue brief outlines:

1) The factors that are exacerbating housing challenges around affordability and accessibility for individuals with physical disabilities.
2) The role housing has on improving health outcomes and minimizing health costs.
3) Best practices and policy levers that local, state, and federal governments may utilize to address the accessible and affordable housing shortage for people with disabilities.

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[i] Mobility disability is defined by the Behavioral Risk Factor Surveillance System (BRFSS) as someone with serious difficulty walking or climbing stairs[2]

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Figure 1

7 million Americans with disabilities pay more than 30% of their income on rent...

... of which **4 million** Americans with disabilities pay more than 50% of their income on rent

Source: CBPP analysis of 2018 ACS PUMS 5-year data; 2018 Department of Housing and Urban Development income

The fallout from the COVID-19 epidemic, combined with the U.S. housing market's "unprecedented levels of unaffordability," has only intensified this long-running crisis.[6,9]

The U.S. Department of Housing and Urban Development (HUD) rental assistance programs serve over 2.4 million people with disabilities and an additional 1.9 million older adults, most of whom also live with a disability.[10] In fact, due to this growing demand, individuals with disabilities and older adults have become the main demographic of beneficiaries served by HUD programs.[11]

HUD provides three main types of deep housing subsidies, which are the federal government's most generous and reliable support:

1) Public housing assistance (PHA): rental housing assistance tied to a specific unit and managed by public housing agencies.
2) Section 8 project-based rental assistance (PBRA): private housing owners contract with HUD to allow units to be rented to individuals receiving rental housing assistance.
3) Housing choice vouchers (HCV): rental housing assistance provided through the use of vouchers to help pay for privately-owned housing.[11]

However, the Center on Budget and Policy Priorities (CBPP) calculates that out of the 1.9 million low-income disabled renter households without children, 57 percent do not receive the federal assistance they need.[12]

- Since housing assistance is not an entitlement, households may be placed on long waiting lists, sometimes waiting years before receiving assistance.[11]
- While some housing assistance programs have seen increased funding over the past few years, funds specifically for people with disabilities have been reduced by 43 percent over the last decade.[13]

The underproduction of housing that occurred after the Great Recession, coupled with discriminatory and restrictive regulations, has led to demand outpacing supply.[38] Presently, "no state has an adequate supply of affordable rental housing for ELI households," and nationally only 36 affordable and available homes exist for every 100 ELI renter households.[7] There is a national affordable housing shortage of more than 7 million units.[6,7] The greatest challenge exists in Nevada where only 18 out of 100 affordable and available rental homes exist, followed by California at 23 out of 100.[7]

Accessibility

What does physically accessible housing mean?

Housing that people with disabilities can easily enter and use. Minimum accessibility features include:

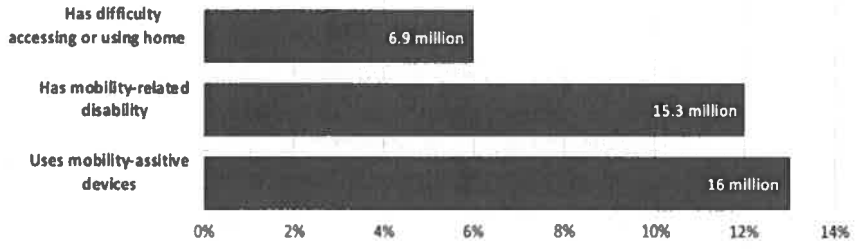
- Ground-level entrances or graded ramps
- First floor bedrooms and bathrooms
- Levered handles
- Widened doorways and hallways for wheelchairs
- Accessible light switches, electrical outlets, thermostats, and other environmental controls
- Reinforced walls for installation of grab bars or handrails

The American Housing Survey (AHS), led by the U.S. Census Bureau, surveyed housing accessibility nationwide in 2011 and 2019. Findings from the most recent survey indicate that:

- Less than **five percent** of housing is accessible for people with moderate mobility difficulties.[20]
- Less than **one percent** of housing is accessible for wheelchair users.[20]
- 19 percent of U.S. households, or 23.1 million households, contain an individual who has difficulty accessing their home or using spaces in their home, has a mobility-related disability, or uses a mobility-assistive device (Figure 2).[vi,21]
- 40 percent of U.S. households include someone with accessibility needs that does not currently have the accessibility features they need, such as a ramp, lift, or bedroom and full bathroom on the entry level.[21]

Figure 2

Households that Include Persons with Accessibility Needs



These findings reinforce the need for adequately funded home modification programs that can improve housing accessibility. Many local or state-funded programs for home modifications exist, but only a small share of older adults with disabilities can receive home modification support through Medicaid home and community-based care (HCBS) waivers. These programs are often limited to individuals with certain types of disabilities and may require residents to still pay for part of the cost, which may not be practical for those operating with low incomes.[20] Especially considering that challenges with housing accessibility are most common among those

[vi] Individuals who experienced more than one of the accessibility measurements were only counted once. The combination of the three accessibility measurements in the figure does not add to 23.1 million due to overlap within the categories.[21]

Figure 3

Americans with Disabilities Act (ADA): passed in 1990, the act required public, commercial spaces, (hotels, businesses, restaurants), and local and state government facilities to be made physically accessible to individuals with disabilities.[22]

Fair Housing Amendments Act (FHAA): makes it illegal to discriminate against individuals with disabilities in the sale or rental of private and public housing. It ensures the right of the tenant to make any reasonable accommodations or home modification necessary for full use of a unit, at their own expense. In addition, it requires that all newly constructed (after 1991) privately owned and publicly assisted multifamily housing buildings with four or more units meet FHA design and construction requirements.[22]

Section 504 of the Rehabilitation Act: ensures accessibility standards in any federally financed multi-family housing project. All newly-constructed multifamily housing and non-housing facilities, or existing facilities where substantial alternations are made, require a minimum of 5 percent of the total dwelling units (or at least one unit, whichever is greater) to be made accessible for persons with mobility impairments.[22]

Factors exacerbating the crisis

COVID-19 magnified housing issues and widened disparities among populations with disabilities

People with disabilities and older adults were hit hardest by the COVID-19 pandemic, experiencing higher rates of severe cases and deaths.[26]

Older adults and people with disabilities not only faced an increased physical threat from the COVID-19 virus, but also experienced layoffs resulting in income losses and subsequent difficulties paying mortgages, rent, or utilities, and receiving tenancy support services.[26] During the first month of the pandemic (March-April 2020) the number of people with a disability who were working decreased by 20 percent, and past recessions show evidence that those with disabilities who lose their jobs are less likely or slower to return to work.[27]

Moreover, evictions and financial stress related to affording rent disproportionately affected Black and Hispanic populations, further widening health and housing disparities.[26] Low-income individuals with disabilities already experience higher rates of homelessness than the general population and the COVID-19 pandemic has only worsened this gap.[6,26]

The pandemic reshaped community life for everyone, but especially for people with disabilities. Many experienced social isolation, reduced independence, difficulty receiving necessary health care services, and difficulty receiving home modifications to support independent living, which was especially common for those who opted to return home after a hospitalization instead of being transferred to a nursing facility.[26] Additionally, for individuals with disabilities who relied heavily on external home care workers, those who continued in-home services risked infection while others who chose to reduce risk were forced to go without necessary care.

Housing discrimination remains widespread

In 2019, 61.7 percent of housing discrimination complaints were based on disability status and failure to make reasonable accommodations. Complaints based on disability status have accounted for the largest share of complaints since the Fair Housing Act went into effect in 1989 and listed populations with a disability as a protected group.[28,29]

While individuals with disabilities already begin their housing search at a disadvantage due to the limited number of accessible housing units, an analysis conducted by the federal department of Housing and Urban Development found that only a small number of units advertised as accessible truly were.[29]

across the country.[36] In 1992, Atlanta was the first city to pass an ordinance requiring all publicly subsidized single-family homes to have these visitability features (JCHS Accessibility Needs, 2014). It's estimated that over 30,000 new units have been built with visitability features due to these ordinances.[36] Alternatively, some states (GA, VA, PA, OH) are encouraging visitability initiatives through tax credits, which are available to builders and homeowners who install accessibility features. For example, Ohio's Livable Homes Tax credit offers a personal income tax credit of up to $5,000 to new or existing homes.[24] Over 10 years ago, Vancouver, British Columbia implemented a building bylaw requiring all new housing, single or multifamily, to include several universal design features.[24]

Regulatory reform

Addressing exclusionary zoning policies would provide low-income individuals with disabilities and older adults with more opportunities to live in housing that suits their needs.[36] Exclusionary zoning, defined as zoning restrictions in neighborhoods that only allow single-family homes, makes it difficult for those who need alternative housing arrangements to live in preferred or safe locations. Changing these ordinances would allow for different types of residences, such as small group residences, shared housing, intergenerational housing, co-housing, and most importantly, accessory dwelling units (ADUs),[viii] which would increase aging and disabled adults' access to affordable housing.[36] Best practice legislation, preventing local prohibition of ADUs, has been enacted or revised in recent years in California, Vermont, Oregon, New Hampshire, and Rhode Island.[37] Due to these changes in policy, Los Angeles, has seen a substantial increase in issued ADU permits; LA issued 6,747 ADU permits in 2019, up from 15 ADU permits in 2013.[37]

States can empower local jurisdictions to revise their land use regulations[ix] to expand the construction of affordable housing and reduce price pressures.[9] Local best practices for specific housing policies are hard to identify because effectiveness depends on local context, however, expedited permit reviews and repurposing of unused government lands are relatively easy, cheap, and effective policies to implement. [35,38]

Another promising practice is the creation of density bonuses that allow developers to build more units, only if a certain percentage of them are affordable.[36] Communities can utilize the Regulatory Barriers Clearinghouse, which documents state and local regulations and policies affecting the creation or maintenance of affordable housing; this resource provides local communities to browse affordable housing solutions that may work best for their jurisdictions.[39]

Home modification initiatives

In the meantime, home modification efforts can improve the accessibility of current housing stock. Due to the lack of a nationally streamlined approach to home modifications, communities and states have built a vast yet confusing network of programs and funding resources available to disabled and older adults.[33]

One best practice to alleviate the burden of searching for resources is online "one-stop-shop" resources. The National Directory of Home Modification and Repair Resources created by USC Leonard Davis, School of Gerontology, Fall Prevention Center of Excellence provides a catalog of resources including available loans, grants, and for-profit businesses offering modification or repair services.[35] The center also provides a credentialing program to certify businesses in home modification techniques.[40]

Other home modification programs include the Centers for Independent Living and Area Agencies on Aging. The Centers for Independent Living (CILs) are local non-profits that are funded by the Administration for

[viii] ADUs are independent housing units, that are typically created on single-family lots through remodeling or expanding the existing home or through the construction of a detached dwelling[37]

[ix] Land use regulations refer to a range of ordinances and procedures local governments use to govern housing developments[9]

CAPABLE has been cited by multiple sources as reducing disabilities related to physical function, reducing depressive symptoms, and being cost-effective by decreasing health care costs through reduced hospitalization and nursing home admissions.[47] For every $1 spent on CAPABLE, Medicare and Medicaid reap $10 worth of savings.[47] Efforts to convince Medicare to reimburse the CAPABLE program are underway, but presently some Medicare Advantage plans, ACOs, and other local aging agencies such as Meals on Wheels, Habitat for Humanity, and AAAs are acting as partners and payers.[47]

Federal policy options

Increase funds for affordable housing assistance

Federal and state housing programs have been chronically underfunded, leading to long waiting lists. These waiting lists are predicted to worsen given the increase in demand for affordable and accessible housing as the U.S. population ages.[45]

Housing Choice Vouchers (HCVs) are the largest source of federal rental assistance, providing benefits to 1.2 million people with disabilities nationwide.[8] HCVs provide low-income individuals with access to private housing and can be project-based or tenant-based, with the majority in the latter category, allowing individuals to move without losing their voucher.

HCVs are applauded as efficient and effective housing assistance and they typically cost less than new housing production.[9] HUD just recently announced that it is awarding $36 million to Mainstream Vouchers, which are dedicated to individuals with disabilities, to promote transition into the community and to avoid homelessness and institutionalization.[48]

Housing Choice Vouchers would effectively lift 1 million people with disabilities out of poverty, reducing poverty among people with disabilities by 25 percent — and by even more among Black and Latinx people with disabilities — according to researchers at Columbia University.

While this is strong progress, HUD could go one step further by ensuring that everyone who qualifies for HCVs receives assistance.[8] This solution would effectively lift one million people with disabilities out of poverty, reducing poverty among people with disabilities by 25 percent for the general population and more for Black and Latinx people with disabilities, according to researchers at Columbia University.[8]

Figure 4

Rental assistance helps over 2 million people with disabilities

Total people assisted by program

Source: CBPP analysis of HUD 2018 administrative data

National Home Modification Program

Despite the known benefits of home modifications, only about one-quarter of adults make modifications, likely due to the fragmented delivery system that leads to inadequate support in identifying and obtaining these needed modifications.[33] To improve access to home modifications, we need to create more coordinated systems.[33] One widespread suggestion is to streamline resources to pay for home modifications by creating a National Home Modification program. In a 2016 report to Congress, the Bipartisan Policy Center proposed using current federal funds to create a Modification Assistance Initiative that would be administered by ACL and a federal income tax credit that could be used to help pay for modifications.[36,51]

Improve SSI benefits

Another approach to increasing access to housing is to modify and increase the supplemental security income (SSI) benefit for people with disabilities.[15,25] In 2016, this program aided over 4.6 million people with disabilities, however, the income is not sufficient to cover basic needs such as housing and leaves people living below the poverty line.[15] Congress could raise the SSI benefit so that it would lift all beneficiaries' incomes above the annual poverty line, and could continue to adjust max benefits indexed with inflation.[52]

Equally important to raising SSI benefits, is increasing the asset limit.[15] The asset limits have not been updated for more than 30 years and individuals are currently limited to $2,000 in assets, including retirement accounts, restricting recipients' wealth and economic mobility.[16] Policymakers could increase the asset limit to at least $10,000 and exempt retirement savings from these limits.[16] Supporters could advocate for the SSI Restoration Act introduced in 2021.

Combined, these measures would increase income and accrue wealth for older adults and individuals with disabilities, enhancing protections against housing insecurity and safeguarding against poverty.

Conclusion

The lack of sufficient accessible housing, resources for home modifications, and funding for housing assistance programs have contributed to a dual housing crisis for individuals with disabilities.

- Individuals with physical disabilities are particularly vulnerable to inequities in employment and income, which disproportionality impacts minorities and perpetuates the cycle of poverty, resulting in housing insecurity, poor health outcomes, and increased health care costs.[6,23]
- The COVID-19 pandemic has further increased income disparity and reduced independence, resulting in increased housing insecurity for individuals with disabilities.

While best practices to improve accessibility are most frequently focused on older adults with disabilities rather than the younger population– policymakers could consider advocating for universal design principles, locally or federally, eliminate exclusionary zoning, and support generous Medicaid waivers to improve accessibility for all adults with physical disabilities.

Improving the social-safety net through increased SSI benefits and funds for federal housing assistance will allow households with disabilities to enjoy better health and economic mobility, lifting millions out of poverty, for which society will reap the benefit.[9]

Leaders should look to this brief to address barriers to housing, ensuring all individuals regardless of ability, have equal rights to accessible and affordable housing.

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The Virginia State and Local Government Conflict of Interests Act requires that I make disclosure, to be recorded in the City records, in any matter in which I am prohibited by law from participating. Therefore I make the following disclosure.

1. The transaction involved is the item taken up on the July 12, 2022 City Council Agenda as Item 6(a), a request for a special use permit to allow short term rental.

2. My personal interest in this transaction relates to the ethical requirements to which I must adhere as a licensed member of the Virginia Bar.

3. I affirmatively state that I will not vote or in any manner act on behalf of City Council in this matter.

7/12/22

Moving and Neighborhood Choice

Households making residential mobility decisions negotiate numerous tradeoffs in terms of economic opportunity, neighborhood qualities and amenities, and proximity to social and familial networks (Spring et al, 2017). The past three decades have seen a considerable secular decline in migration, with migration rates at their lowest point since the Census began tracking mobility in 1948 (Kosar et al, 2022). The non-monetary costs of moving are considerable (Kosar et al, 2022), with a major deterrence factor being loss of proximity to familial and social networks (Spring et al, 2017). This risk of disembeddedness from support networks is especially acute for very low-income households (Skobba & Goetz, 2013).

Neighborhood Quality

Using data from Los Angeles County, Clark & Ledwith (2007) examined household residential mobility decisions based on racial and socioeconomic characteristics of mover households and destination neighborhoods. The authors found that both lower-income white and Hispanic households were more likely to move to majority-Hispanic neighborhoods, while higher-income white and Hispanic households were more likely to move to majority white neighborhoods. Rather than interpreting these findings as expressions of racial preference, the authors suggest that higher-income households of any race choose higher-status neighborhoods, and that higher-status neighborhoods correlate with a higher percentage of white neighborhoods due to a history of differential access mediated by racial discrimination.

Davis et al (2017) found a relationship between neighborhood qualities and student educational achievement. Their study found a relationship between improvement in math test scores and neighborhood quality, controlling for individual-level factors including lagging test scores. They describe these neighborhood factors as "value added" for student academic performance.

Family and Social Network

Proximity to family and social networks has been found to play an important role in residential location choice, especially for lower-income households.

Kosar et al's (2022) choice experiment asked respondents to value residential location characteristics as a percentage of the respondent's income. Respondents reported a willingness to sacrifice an average of 43% income in exchange for increased proximity to family, but only 6.16% of income for an increase in school quality. Respondents were more likely to state neighborhood desirability, housing cost reduction, proximity to family and friends, neighborhood safety, and access to amenities than increased school quality as reasons to move.

Spring et al (2017) found that proximity to family most strongly influences residential mobility decisions for parents of young children, older adults, and households with lower educational attainment and lower incomes. Households most dependent on the support and resources of social networks, whether due to life cycle stage or income level, are most likely to make residential location decisions based on proximity to kin.

Skobba & Goetz (2013) found that very low-income households are the most dependent upon private mutual aid networks based on familial or neighborhood social ties. This dependency on proximity to support networks severely limits residential location choices for very low-income households. Indeed, Spring et al (2017) note that low-income housing voucher recipients who relocate to wealthier neighborhoods may lose these private support networks, resulting in "increased social isolation" (p. 1301).

Davis et al's (2017) study of the residential location decisions of housing voucher recipients confirms these observations. While certain neighborhood qualities consistent with higher socioeconomic status constitute "value-added" neighborhood effects for student academic achievement, families receiving housing vouchers generally did not relocate to such neighborhoods. Indeed, the authors concluded that highly targeted housing subsidies would be necessary to move voucher-holders to value-added neighborhoods at a scale affecting student outcomes.

Livability

Finally, Zhang (2022) compares migration data with livability indicators from the AARP's Livability Index. The author identifies various drivers of migration at different stages of the life cycle: young working-age adult migration is driven by the availability and affordability of rental housing; middle-aged adults are pulled by economic opportunity; and older adults migration is driven by quality of community engagement and quality of neighborhood built environment (including walkability and mixed land uses). For younger households, high housing costs and lack of rental housing availability have a strong negative effect on migration, outweighing the pull factor of economic opportunity.

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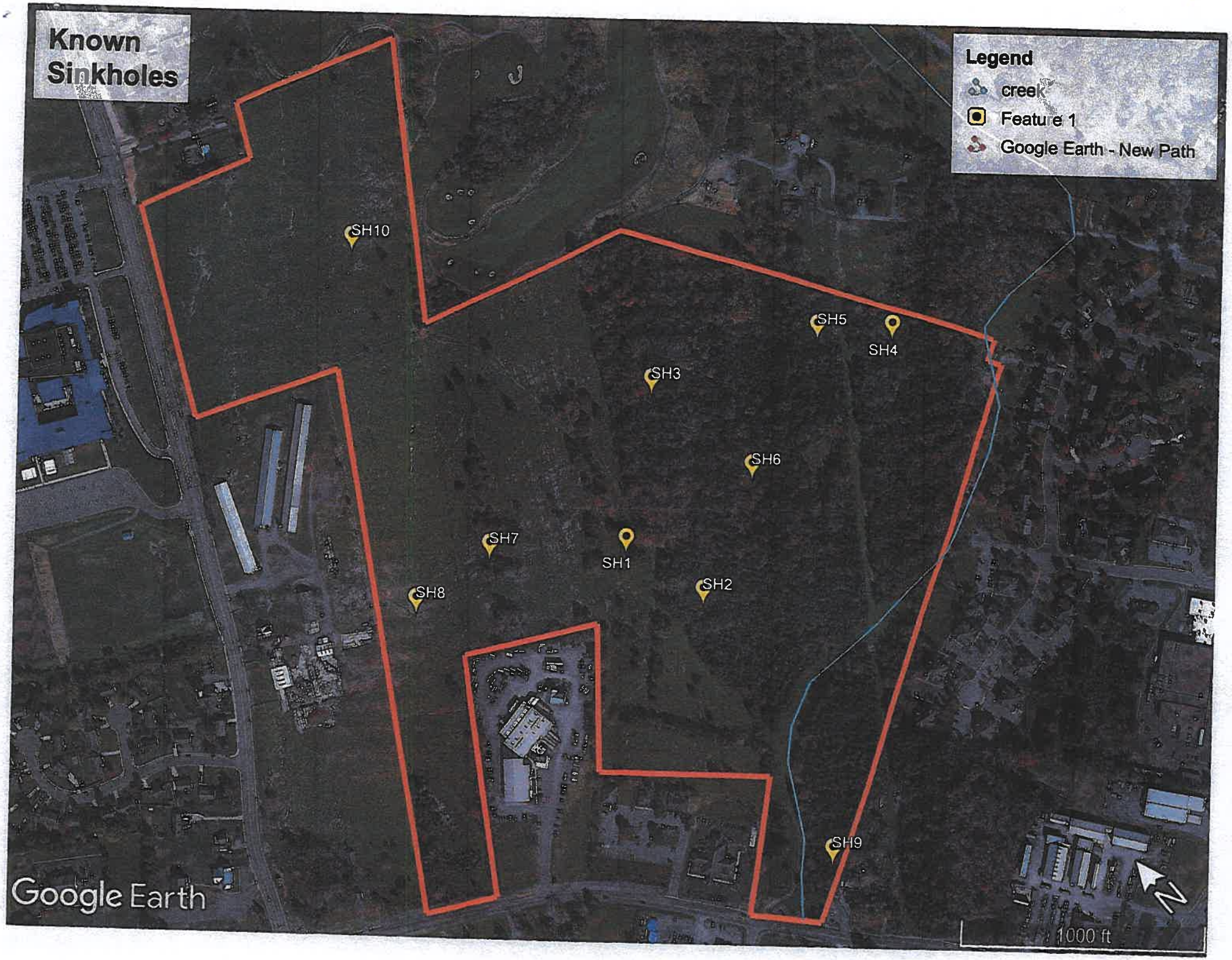
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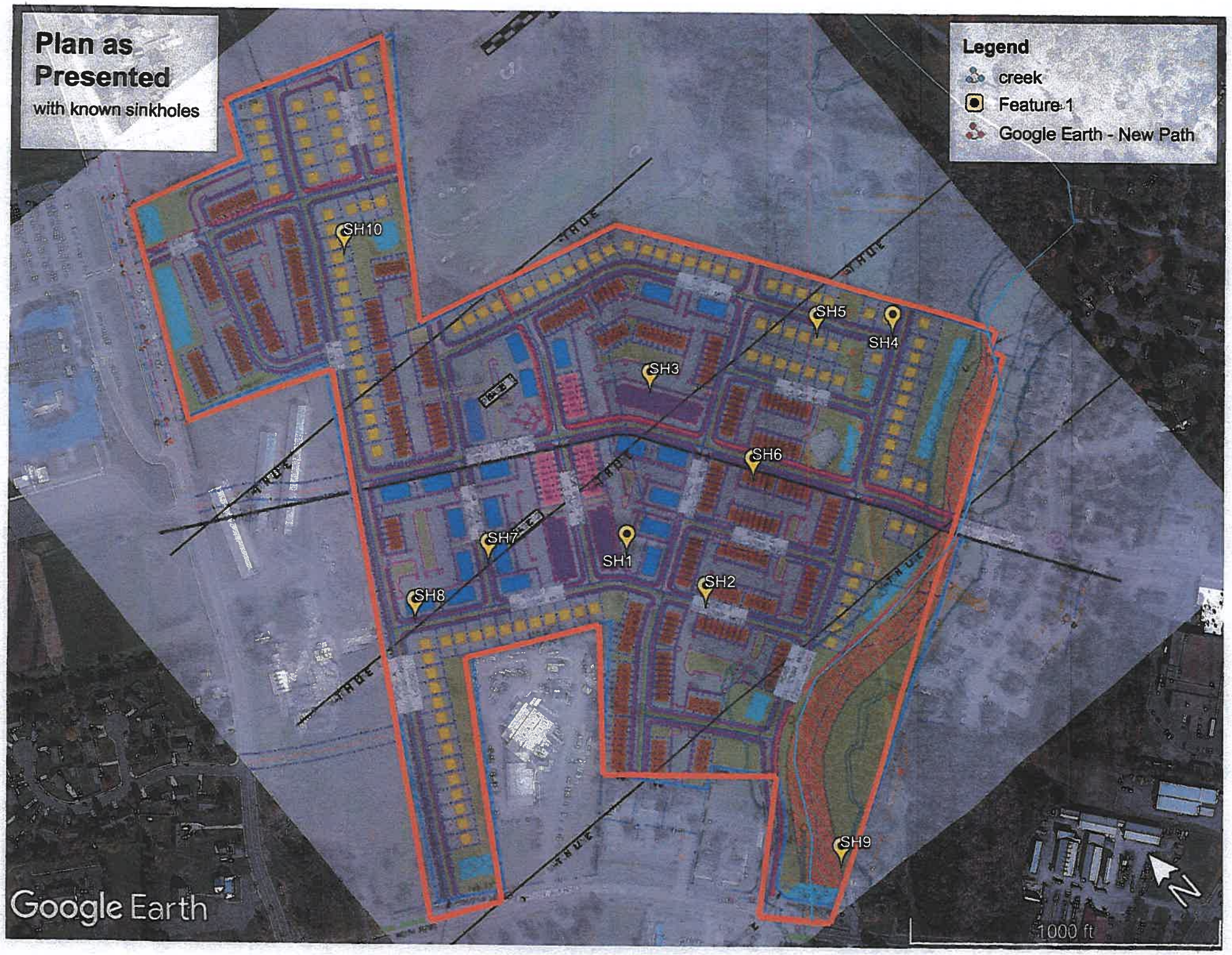
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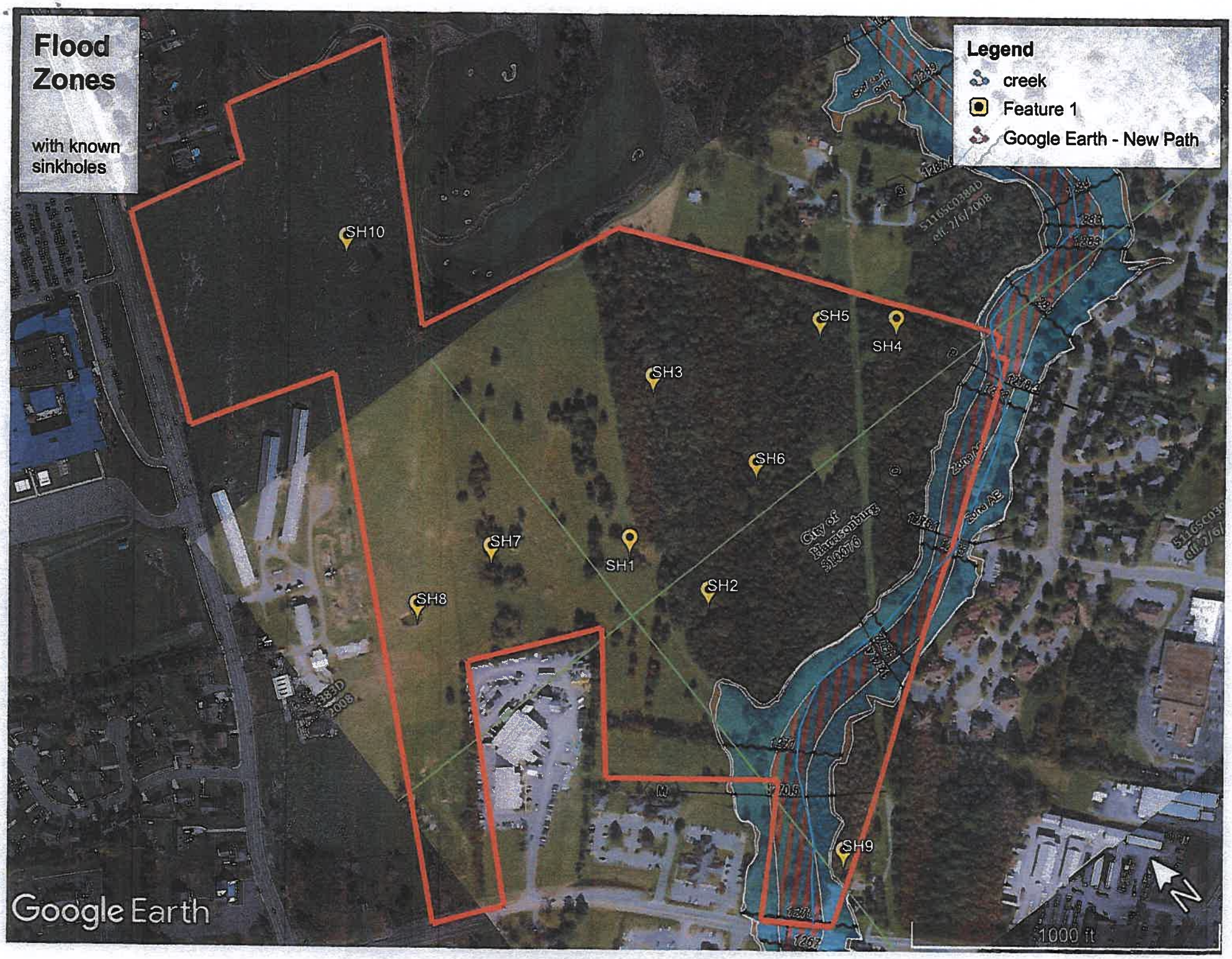
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