BOARD OF ZONING ADJUSTMENT
PREHEARING STATEMENT OF THE APPLICANT

BZA APPLICATION No. 18790
JEFFERSON-11TH STREET LLC (the "Applicant")
2724 11th Street, NW (the "Subject Property")

I. Background.

The Subject Property is located at 2724 11th Street, NW (Square 2859, Lot 89), in the R-4 Zone District. It is improved with a two-story plus cellar apartment house built in 1923 (the "Building"). The Building consists of twenty-five (25) one-bedroom apartment units, including twelve (12) units on the first floor and thirteen (13) units on the second floor. These existing units are subject to the District's rent control restrictions. The cellar level is empty space and has never been used for any purpose other than for mechanical equipment, and at one point previously for a small caretaker's unit. The Building is located on the west side of 11th Street and is bordered by Girard Street to the north and Fairmont Street to the south. The Building was legally constructed as an apartment house in or around 1923, and, upon the adoption of the Zoning Regulations in 1958, became a legally nonconforming structure.

Until the adoption of Section 401.11 in 2006 (Zoning Commission Order No. 06-47), the proposal put forth in this Application – adding units to a pre-1958 apartment building – was permitted as a matter-of-right. The adoption of Section 401.11 in 2006 effectively made the 900-foot rule of Section 401.3 applicable to the Subject Property in the event of any increase in the number of units. The 900-foot rule had previously applied only to the *conversion* of a structure into an apartment house, but did not apply to buildings which were originally constructed as apartment houses prior to 1958.

The Property has a lot area of 12,209 square feet. The Building currently has twenty-five (25) apartment units, which represents 488 square feet of land area for each unit. While the Building is currently a legally nonconforming structure, Section 401.11 of the Zoning Regulations does not permit an increase in the number of units except to the extent there is 900 square feet of land area for the total number of units.

II. The Proposed Project.

The Applicant is proposing to development the un-used cellar space by adding nine (9) units in that space. Two of the existing units will be combined into one unit, leading to a net proposed increase of eight (8) units. The addition of eight (8) units would take the land area per unit amount from 488 square feet down to 370 square feet.[1] The Applicant originally requested eleven (11) additional units, all in the cellar, but has since scaled back plans in response to a request from ANC Design Review Committee for a reduction in units and the provision of some 2-bedroom units. The current plan provides three 2-bedroom units in the cellar and will combine two existing 2nd-floor units into a 2-bedroom unit. A floor plan and other drawings are attached hereto as Exhibit D.

As part of the proposed project (the "Project"), the Applicant intends to completely overhaul the Building. The Building, built in 1923, suffers from significant decay - structurally, mechanically, and aesthetically. The Applicant has attempted to sustain and maintain the Building, but after 90 years, routine maintenance is not enough. In addition, the individual units

[1] The initial proposal requested relief from the 900-foot rule under Section 401.3 for a conversion to an apartment house, but since this is a proposed expansion of an existing pre-1958 apartment house, the applicable section is Section 401.11, which provides that the 900-foot rule in Section 401.3 applies to existing apartment buildings in the same manner as conversions.

must also be renovated, and their fixtures and appliances should be replaced. The Applicant intends to renovate the individual units on a rolling basis, one at a time as tenants opt to move into the renovated units.

The proposed work includes work which is necessary or recommended for the structural maintenance of the Building, to update and improve the appearance of the Building, to replace and/or add mechanical systems, and to completely renovate the residential units. A copy of the Development Budget for the Project is attached hereto as Exhibit A.

Some of the other changes to be made as part of the Project are:

(i) creating inviting patio/garden spaces in front of the entrances to cellar units on Girard Street and on Eleventh Streets;

(ii) providing direct access for five (5) of the new cellar units to Girard and Eleventh Streets, which may tend to make the Building more open to the surrounding neighborhood and more in character with the surrounding row house neighborhood. The Building was built as a solitary, stand-alone Building with no real relationship to the row house district around it, and it has operated in this manner as well, with the primary entrance recessed from the front exterior and shut off from the surrounding buildings. This will have the added benefit of providing handicapped-accessible units;

(iii) relocating trash dumpsters from the back yard to the inside of the Building, into a sealed room at the southwest corner of the cellar level;

(iv) no tenants will be involuntarily relocated or evicted as part of the renovations. They will be offered the renovated units in turn and moving assistance will be provided;

(v) updating the exterior appearance of the Building with a lighter color more in character with the surrounding neighborhood and the current time period;

(vi) completing structural updates and upgrades as recommended in the structural engineer's report attached hereto as Exhibit C;

(vii) providing "through-wall" individual air conditioner units for all units;

(viii) adding tenant laundry facilities in the finished cellar.

The Project involves no increase in the Building's footprint, height, or allowable envelope. No mezzanines will be added or other additional gross floor area. It is worth noting that the Applicant could develop the cellar level as a matter-of-right provided it did not increase the overall number of units. While this is an attractive option, it would involve the difficulty of evicting all tenants and reconfiguring the existing units to convert two stories of 12 and 13 units to three stories of 8, 8 and 9. Such a strategy, with larger units, would also require a full gut renovation, the removal of the tenants, and the eventual conversion and sale of condominiums. The Applicant is in the business of holding and renting apartment units. It does not wish to evict any existing tenants as part of this renovation and it does not intend to convert to condominiums should the Application be granted.

The Building is subject to the District's rent control laws, which, even after a recent hardship petition increase, keeps the rental rates for the existing units below market value. The

combination of the relatively low rental rates and the cost of the renovation create an economic practical difficulty for the Applicant in maintaining the Building as it was originally approved; as an apartment house. The addition of nine (9) apartment units in the cellar (net of one unit eliminated on the second floor), can provide the revenue necessary to fund this renovation. Without the requested relief, the Applicant could not adequately maintain the Building as a legally nonconforming apartment house.

III. Variance Relief and the Burden of Proof.

The burden of proof for an area variance is well established. The Applicant must demonstrate three elements: (1) unique physical aspect or other extraordinary or exceptional situation or condition of the property; (2) practical difficulty from strict application of the Zoning Regulations; and (3) no substantial detriment to the public good or the zone plan. *Gilmartin v. D.C. Board of Zoning Adjustment*, 579 A.2d 1164, 1167 (D.C. 1990). As the D.C. Court of Appeals has noted, the variance procedure "is designed to provide relief from the strict letter of the regulations, protect zoning legislation from constitutional attack, alleviate an otherwise unjust invasion of property rights and prevent usable land from remaining idle." *Palmer v. D.C. Board of Zoning Adjustment,* 287 A.2d 535, 541, (D.C. 1972).

As set forth below, the Applicant meets the three-part test for the requested area variance relief from Section 401.11 for minimum lot area, and from Section 2101.1 for three (3) required parking spaces.

A. <u>The Property is Uniquely Affected by an Exceptional Situation/Condition</u>.

In order to prove an extraordinary or exceptional condition, or uniqueness, the Applicant must show that the property has a peculiar physical aspect or other extraordinary situation or condition. *Monaco v. D.C. Board of Zoning Adjustment*, 407 A.25 1091, 1096 (D.C. 1979). A property's uniqueness is not limited to physical aspects of the land and may be determined by "some difficulty not shared by the entire neighborhood." *Id.* at 1098.

The exceptional situation or condition can apply not only to the land, but also to the existence and configuration of a building on the land. See *Clerics of St. Viator, Inc. v. D.C. Board of Zoning Adjustment*, 320 A.2nd 291, 294 (D.C. 1974). Furthermore, the Court of Appeals held in *Gilmartin v. D.C. Board of Zoning Adjustment*, 579 A.2d 1164, 1167 (D.C. 1990), that it is not necessary that the exceptional situation or condition arise from a single situation or condition of the property. Rather, it may arise from a "confluence of factors."

First and foremost, the Property and the Building are unique because the Building was legally constructed as an apartment house in 1923 and then later saddled with legally nonconforming status upon the adoption of the 1958 Zoning Regulations. The adoption of the 1958 regulations, along with the 2006 text amendment creating Section 401.1, has effectively limited the Applicant's options for further investment in and redevelopment of the Property, such that the means necessary to effect a necessary comprehensive renovation is not economically possible without relief from the strict compliance of the Zoning Regulations. This situation is in direct contrast to the typical 900-foot rule variance, which seeks to convert a one or two-family

row dwelling. The Subject Property was a large apartment building well before changes in the Zoning Regulations made it a nonconforming structure.

In addition to that situation, the Property is extraordinarily large in comparison to surrounding properties. It has a land area of 12,209 square feet while almost every other lot in this square, and the entire surrounding area, is around 2,300 square feet or less. The lot square footage existed prior to 1958, and was not created by any consolidation or acquisition by the Applicant or previous property owners.

Despite the large size, total demolition and redevelopment is limited by the lot's location. It could possibly be subdivided into four lots fronting on Girard Street, providing only eight (8) units, on lot widths that would be wider than most other lots in this area. It could be redeveloped by providing row houses fronting on 11th Street, but this would also be limited by the need to provide parking spaces on all of those lots.

The Building is also unique in that it is in a physical condition that requires a full-scale renovation due to ninety (90) years of wear and tear as well as significant structural concerns. The Applicant would prefer to complete the renovation using a strategy that would avoid tenant relocations, a conversion to condominium, or creating much larger units on three (3) floors that would effectively displace all current tenants and most likely require a conversion and sale.

Regarding the parking relief, the Property is unique because the Building was not initially developed with parking spaces. The Property does not have a rear alley for access. On the south alley, the Building abuts the property line and provides no access to the lot. The Girard Street side of the Property is the only possible location for parking spaces, but there is not enough room

there to provide an adequately sized parking lot. Also, the only abutting neighbor and the ANC Single Member District representative, and others, have asked the Applicant not to attempt to create a curb cut and a parking lot in this location. Furthermore, any curb cut would be close to the Girard/11th Street intersection, and would likely remove as many spaces as it would provide.

B. Strict Application of the Zoning Regulations Would Result in a Practical Difficulty to the Owner.

The second prong of the variance test is whether a strict application of the Zoning Regulations would result in a practical difficulty. In reviewing the standard for practical difficulty, the Court of Appeals stated in *Palmer v. Board of Zoning Adjustment*, 287 A.2d 535, 542 (D.C. App. 1972), that "[g]enerally it must be shown that compliance with the area restriction would be unnecessarily burdensome. The nature and extent of the burden which will warrant an area variance is best left to the facts and circumstances of each particular case." In area variances, applicants are not required to show "undue hardship" but must satisfy only "the lower 'practical difficulty' standards." *Tyler v. D.C. Bd. of Zoning Adjustment*, 606 A.2w 1362, 1365 (D.C. 1992) (citing *Gilmartin v. Bd. of Zoning Adjustment*, 579 A.2d 1164, 1167 (D.C. 1990).

This situation is in line with what the area variance and BZA process was designed to address. As the D.C. Court of Appeals has noted, the variance procedure "is designed to provide relief from the strict letter of regulations, protect zoning legislation from constitutional attack, alleviate an unjust invasion of property rights and prevent usable land from remaining idle." *Palmer v. D.C. Board of Zoning Adjustment,* 287 A.2d 535, 541, (D.C. 1972). The requested

relief in this case will help achieve this objective. Without the market-based revenue stream from the eight (8) additional units, any comprehensive renovation is simply not economically feasible. Any other possible alternatives are fraught with their own practical difficulties, including reconfiguring the Building to consist of twenty-five (25) units occupying all three floors, which would require removal of all of the tenants and most likely completing a condominium conversion and sale, which the Applicant, owner of the Property for over fifty (50) years, does not wish to do. The Applicant asserts that a renovation that forces a sale of a long-held asset and relocation of tenants represents an unnecessary burden to the Applicant in and of itself, regardless of financial considerations.

The Development Budget (Exhibit A) was prepared by the Applicant. It is presented under two scenarios: one that includes a full renovation of the cellar space and one that includes a full renovation of all but the cellar space. Attached hereto as Exhibit B are pro formas under two scenarios, including one that considers the operation of the Building with eight (8) additional units and one that considers the operation of the Building without the additional eight (8) units, each using the respective redevelopment budget amounts under each scenario.

The D.C. Court of Appeals (the "Court") has consistently held that the economically viable use of property may be considered in deciding whether the strict application of the zoning requirements would result in a practical difficulty to an applicant. For example, in *Wolf v. D.C. Board of Zoning Adjustment,* 397 A.2d 936, 943 (D.C. 1979), the Court upheld the grant of variance relief from the 900-foot rule based on economic considerations.[2]

[2] Wolf is also the case which established the long-followed precedent that relief from the 900-foot rule is an area variance, not a use variance.

Similarly, in *Tyler v. D.C. Board of Zoning Adjustment,* 606 A.2d 1362 (D.C. 1982), the Court reversed and remanded a decision back to the BZA, in part, because the BZA failed to consider the applicant's evidence of economic difficulties in a variance case.

The Board has on many occasions ruled that the physical condition of a property can be a unique condition that can result in an economic practical difficulty sufficient to provide relief from the strict requirements of the "900-foot rule" of Section 401.3.[3] A common aspect of these cases is the Board's recognition that the unique condition causes additional costs in maintenance or redevelopment, which are then considered as a practical difficulty when considering the ongoing profitability of a property. In line with those decisions, this Application is a straightforward and strong example of a unique situation – the legally nonconforming status – combined with a unique condition – the physical condition of the Building, which contribute directly to the practical difficulty to the Applicant in strictly complying with the Zoning Regulations.

In this Application, as shown in the pro formas, it is not economically feasible to complete the necessary renovation without utilizing the vacant cellar space.

The Applicant needs to upgrade the Building to provide a safe and habitable home for its tenants. In addition, the units themselves are in need of a complete renovation and updating. In a building such as this, long subjected to rent control, the Applicant will not realize market value, even after the recent hardship petition. The use of the vacant cellar space provides the opportunity to raise the revenue stream necessary to complete necessary renovation.

[3] Some examples include BZA Cases No. 18197, 18055, 17991, 17873, 17871, 17779, 17500, and 17694.

Regarding the request for parking relief, an approval from DDOT is highly unlikely because of the loss in on-street parking spaces and the proximity to the intersection. In addition, the ANC SMD and the abutting neighbor both expressed serious concerns about providing parking spaces on the Property. Parking cannot actually be legally provided, at any rate, because of the lack of width of the available parking lot area.

C. No Substantial Detriment to the Public Good Nor Substantial Impairment to the Intent, Purpose and Integrity of the Zone Plan.

The requested relief can be granted without substantial detriment to the public good or substantial impairment of the zone plan. The Applicant is proposing no changes to the density, footprint, or height of the Building, even though it is well below the maximum permitted height. The Building has operated as a twenty-five (25)-unit building since its construction in 1923. Granting relief will add only eight (8) market-rate units. Granting relief also allows the maintenance and continuation of the existing rental units which have been here for 90 years. The addition of only eight (8) units is not likely to have a noticeable impact on the surrounding area, especially when compared to the benefits of restoring and upgrading the 90-year old building.

There will be numerous benefits to the public good in the granting of the relief requested herein. Granting relief will allow a high-quality comprehensive renovation, while allowing the existing tenants to remain in the Building and enjoy completely renovated living spaces. The exterior of the Building will be repaired, updated, and beautified. The trash collection facilities will be brought inside the Building, which, along with developing and inhabiting the cellar level, will go a long way toward resolving the Property's rodent problems. The design of the Girard

and 11th Street cellar units, with direct access to front patios, will change the character of this Building from an alien structure in this community to one that is more cohesive with the character of the surrounding row houses.

The Applicant has met with the only abutting neighbor, Ms. Catrina Rorke. Ms. Rorke is a strong supporter of the requested relief, and is very much looking forward to the rehabilitation of the Building. In particular, Ms. Rorke is very much in favor of the cellar level being inhabited, the trash facilities moving indoors, and the patios being developed on the Girard Street side near the front of her property.

Regarding the integrity of the Zoning Regulations, the Applicant is merely asking for the ability to use all of its existing space for an expansion of a long-existing use. The Building's cellar could be developed as a matter-of-right by making larger units and spreading the permitted twenty-five (25) units throughout the three floors. This matter-of-right situation would have the same amount of density being considered in this Application, although that matter-of-right scenario would be absent the RPP restrictions that the Applicant will be subject to in the event of an approval of this Application.

The lot is very large, and the Building has existed and been used as an apartment house for many years prior to 1958. The situation and conditions on the Subject Property and with this Building are safely unique, which serves to protect the integrity of the Zoning Regulations.

IV. Conclusion.

For the reasons stated above, this Application meets the requirements for area variance relief. Therefore, the Applicant respectfully requests that the Board grant the requested relief.

Respectfully Submitted

Martin P. Sullivan, Esq.

SCF Management, LLC

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2724 11th St., NW
Construction Budget

Item	Cost	With Basement Units	Without Basement Units
Windows	$	83,000.00	$ 70,000.00
New Roof, Gutters & Facial Board	$	82,000.00	$ 82,000.00
New Electrical	$	200,000.00	$ 100,000.00
New Plumbing	$	275,000.00	$ 150,000.00
New HVAC	$	175,000.00	$ 140,000.00
Resanding Floors and New Floors	$	90,000.00	$ 75,000.00
New Walkways & Retaining	$	100,000.00	$ 50,000.00
Point up building and painting	$	100,000.00	$ 100,000.00
Sprinkler System	$	82,000.00	$ 65,000.00
Doors	$	35,000.00	$ 24,500.00
Countertops	$	84,000.00	$ 58,800.00
Appliances	$	125,000.00	$ 87,500.00
Cabinets	$	100,000.00	$ 70,000.00
PEPCO (Utility Tie-In)	$	40,000.00	$ -
Bathroom & Common Area Tile	$	125,000.00	$ 87,500.00
Drywall & Carpentry	$	250,000.00	$ 175,000.00
Painting	$	125,000.00	$ 87,500.00
Trash Removal	$	50,000.00	$ 35,000.00
Demolition	$	60,000.00	$ 42,000.00
Structural Repairs-Silman Report	$	250,000.00	$ 250,000.00
Architect and Engineering	$	110,000.00	$ 80,000.00
Permits & Licenses	$	25,000.00	$ 25,000.00
Excavation	$	220,000.00	$ -
Environmental & Lead Abatement	$	200,000.00	$ 200,000.00
Total	**$**	**2,986,000.00**	**$ 2,054,800.00**
General Contractor Fee (6%)	$	179,160.00	$ 123,288.00
Subtotal	$	3,165,160.00	$ 2,178,088.00
Interest Carry (7% for 18 months)	$	332,341.80	$ 228,699.24
Total Development Costs	**$**	**3,497,501.80**	**$ 2,406,787.24**

Exhibit A

Pro Forma with Basement Units - 2724 11th Street, NW Exhibit B

	2015	2016	2017	2018	2019	2020
RENTAL INCOME	$200,000	$335,000	$540,000	$545,000	$550,000	$590,000
EXPENSES						
Management & Marketing	$30,000	$50,000	$40,500	$37,000	$37,000	$38,000
Maintenance & Repairs	$25,000	$15,000	$10,000	$10,000	$10,000	$10,000
Utilities	$35,000	$30,000	$31,000	$32,000	$33,000	$35,000
Professional Expenses	$150,000	$50,000	$10,000	$10,000	$10,000	$10,000
Taxes	$21,000	$35,000	$35,000	$36,000	$37,000	$37,500
Insurance	$17,000	$18,000	$18,000	$18,000	$18,000	$18,500
Renovation Fees	$7,000	n/a	n/a	n/a	n/a	n/a
Misc. Expenses	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
TOTAL EXPENSES	$295,000	$190,000	$154,500	$154,500	$155,000	$159,000
Operating Income	($95,000)	$145,000	$385,500	$390,500	$395,000	431,000
LESS Vacancy/Collections Prediction	N/A	$10,200	$64,800	$65,400	$66,000	$70,800
LESS Debt Service on note of $3,500,000 @ 5% over 15 years	$200,000	$320,000	$320,000	$320,000	$320,000	$320,000
Net Cash Flow	($295,000)	($165,200)	$20,700	$25,100	$29,000	$60,200

Pro Forma without Basement Units - 2724 11th Street, NW Exhibit B

	2015	2016	2017	2018	2019	2020
RENTAL INCOME	$200,000	$348,000	$360,000	$372,000	$384,000	$402,000
EXPENSES						
Management & Marketing	$20,000	$24,500	$25,500	$26,000	$27,000	$29,000
Maintenance & Repairs	$25,000	$15,000	$10,000	$10,000	$10,000	$10,000
Utilities	$20,000	$22,000	$23,000	$25,000	$25,500	$26,000
Professional Expenses	$100,000	$30,000	$10,000	$10,000	$10,000	$10,000
Taxes	$21,000	$22,000	$25,000	$26,000	$27,000	$27,500
Insurance	$17,000	$18,000	$18,000	$18,000	$18,000	$18,500
Renovation Fees	$7,000	n/a	n/a	n/a	n/a	n/a
Misc. Expenses	$10,000	$10,000	$10,000	$10,000	$10,000	$10,000
TOTAL EXPENSES	$220,000	$141,500	$121,500	$125,000	$127,500	$131,000
Operating Income	($20,000)	$206,500	$238,500	$247,000	$256,500	$271,000
LESS Vacancy/Collections Prediction	N/A	$41,760	$43,200	$44,640	$46,080	$48,240
LESS Debt Service on note of $2,400,000 @5% over 15 years	$140,000	$228,000	$228,000	$228,000	$228,000	$228,000
Net Cash Flow	($160,000)	($63,260)	($32,700)	($25,640)	($17,580)	($5,240)

ROBERT SILMAN ASSOCIATES
STRUCTURAL ENGINEERS

2724 11th Street, NW
Condition Assessment Report
FINAL

RSA PROJECT NO. W3179
October 28, 2014

PREPARED FOR:

Jefferson – 11th Street LLC
Sullivan & Barros, LLP
1990 M Street, NW Suite 200
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Attn: Martin P. Sullivan

By:
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1053 31st Street NW
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Introduction

2724 11th Street NW is a two-story masonry apartment complex believed to be originally constructed in the 1920s. Limited structural modifications or repairs have been conducted on the building since the original construction. Robert Silman Associates (RSA) was retained by the owner to perform a condition assessment of the building which included the main structural elements and a cursory review of non-structural elements of the building. This report is intended to present our findings and recommendations regarding repair, replacement, and/or reinforcement.

RSA visited the site on October 10, 2014 to meet with the owner's representative and maintenance staff, and to observe existing building conditions. At the time of the visit, RSA was unable to access any occupied apartments or the roof of the building. Observations and findings included in this report are only based on the visual condition of exposed elements. In many locations, interior finishes concealed the structure of the building. RSA reviewed existing architectural drawing prepared by Global Housing Alliance, Inc. (dated 03/19/2014); however, no structural drawings were available for review.

Photo 1: View of building from 11th Street and Girard Street.

Photo 2: View of northern half of basement level showing piles of debris from slab on grade removal. Note the steel beam and column lines.

Photo 3: Ponding water visible at the slab on grade in the northwest corner of the basement.

Superstructure (Roof and Above Grade Levels)

The apartment complex at 2724 11th Street NW (Photo 1) is a two-story occupied structure with an uninhabited basement. The wood floor and roof joists are supported by load bearing walls which consist of multi-wythe brick at the exterior and wood bearing walls at the interior. At the first floor level, the floor joists are supported between the exterior masonry bearing walls and interior lines of steel beams supported by steel columns between the first floor and basement levels.

Floor and wall framing above the first floor was primarily hidden behind interior finishes. In limited locations where the floor framing was exposed, wood joists appeared to frame between the exterior masonry wall and interior wood bearing walls. It appears that the interior bearing walls at the first and second floors align with the steel beams seen in the basement.

The exterior masonry walls appear to be 3-wythe brick construction with header courses visible every sixth course on the south and west facades. Window openings on the north and east facades are largely supported by

steel lintels. Window openings on the south and west facades are supported with brick arches.

Substructure (Basement and Foundations)

The exterior masonry foundation walls sit on shallow continuous concrete wall foundations. The foundations under the steel columns in the basement were not visible but are likely to be shallow concrete spread foundations. The basement level was originally a slab on grade, though most of it has been removed in a recent renovation. .

Observations

I. Interior Survey

A. Basement Level

1. At the basement level, a large expanse of the existing concrete slab on grade in the northern half of the building had been removed in a recent renovation, exposing the soil beneath. Remnants of the demolished slab had been piled in the northwest corner of the basement (Photo 2). Ponding water is present at some locations where the slab on grade is still present (Photo 3). The water appears to be primarily attributed to leaking water lines within the building; however, signs of water intrusion are also visible on the face of the foundation walls as well as at their base.

2. The brick masonry foundation walls show signs of water staining, efflorescence, and mortar loss due to the presence of moisture within and behind the wall (Photo 4).

3. Localized settlement is apparent in the foundation wall at the south facing windows at the north side of the entrance walkway (Photo 5). The amount of settlement seen in the foundation walls is expected for a building of this era of construction.

4. A number of the steel support columns exhibit corrosion at their base due to the presence of standing water around the column bases and elevated moisture levels in the basement level. One particular column, located in the southwest quadrant of the building exhibited severe corrosion with nearly full section loss at its base (Photo 6). Due to life safety concerns, RSA notified the owner's representative of this condition and recommended immediate installation of shoring posts to support the framing above.

5. Surface corrosion is visible along various steel beams

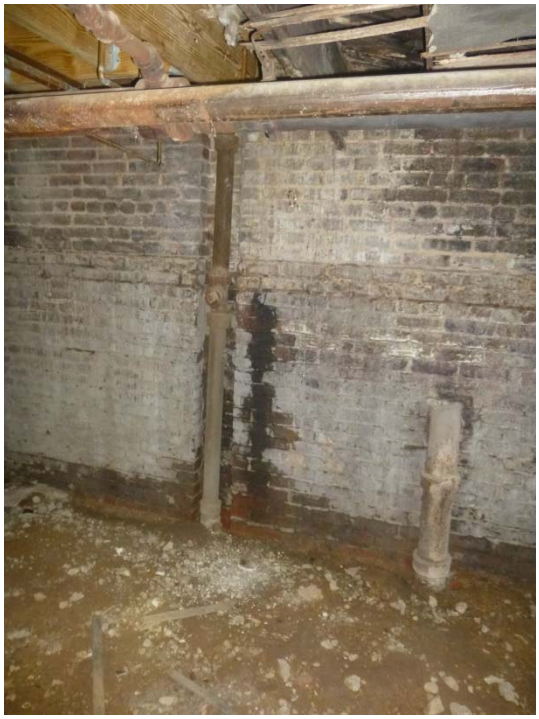

Photo 4: Interior view of the west foundation wall. Note the efflorescence and presence of moisture at the base of the wall.

Photo 5: Settlement of the foundation wall at either side of the basement window which faces the entrance walkway. Note the temporary wood shoring at the right edge.

(Photo 7). These beams are pocketed into the exterior masonry walls along the perimeter of the building. A single shoring post was positioned beneath the beam end in the northeast quadrant of the basement (Photo 8). Deterioration of steel embedded within exterior masonry wall is a common issue of structures of this period. Therefore this shoring post was presumably installed to provide support for a compromised bearing condition at the exterior masonry wall.

6. The first floor wood joists appear to be in fair condition with some joists exhibiting localized areas of water-staining, rot, and deterioration. This is primarily due to their vicinity to leaking water lines and drain lines. Various repairs and temporary shoring is in place and appears to have been installed to support areas with deteriorated joists (Photo 9). At joist bearing pockets in the masonry wall, there were signs of water staining and slight deterioration. At a few locations, floor joists have lost full bearing and have significantly displaced from the masonry wall pocket (Photo 10). Mold growth was present at the underside of the floor sheathing in the proximity of water lines and drain lines.

7. Several floor joists have been notched to allow the passage of pipes. Notches range in depth from approximately three to six inches, and are located at both the top and bottom edges of the joists (Photo 11).

Photo 9: Temporary shoring structure for support of wood framing above.

Photo 6: Steel support column in the southwest quadrant of the basement with nearly full section loss at its base.

Photo 7: Corrosion of steel beam in north east quadrant of building.

Photo 8: Steel post shore positioned beneath a steel beam presumably to provide support for a compromised bearing condition at the exterior masonry wall

Photo 10: Wood joist with full bearing loss at west exterior masonry wall.

Photo 11: Floor joist notched for passage of drain line.

8. A few joists north of the main stairwell show signs of charring which appears to be a result of fire damage. These joists have been repaired by sistering a new joist on either side of the existing damaged joists (Photo 12). A thicker concrete mud slab appears to have been added at the locations of the fire damaged joists mentioned earlier. The tops of the sistered joist were notched for approximately five feet along the length of their span to accommodate the mud slab (Photo 12).

   A reoccurring framing detail was observed beneath the bathroom areas above. Wood nailers were fastened to the faces of the floor joists with floor sheathing spanning between the wood nailers for support of a tile setting bed. At various locations, it appears that this detail was modified to allow for additional concrete similar to the mud slab mentioned above.

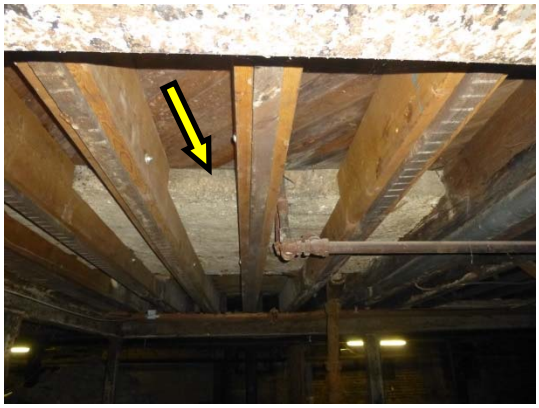

Photo 12: Original fire damaged joists with wood sister at either face. Note that the sisters have been notch to incorporate the additional cementitious material.

9. In the typical basement framing condition, steel beams that support the first floor joists frame continuous overtop of the steel column; however, in the boiler room located to the south of the main stairwell, it appears that the beam has been cut out over top of the column to allow for the passage of piping. This loss in continuity results in a reduced capacity of the steel beam at this location. It is unclear whether this detail is original construction or if the beam was modified at a later date (Photo 13).

10. Above each basement window, a header spans approximately four joist bays to pick up the ends of the floor joists spanning perpendicular to the window. This ledger joist is connected to adjacent floor joists through a mortise and tenon connection. This connection appears to be deteriorating, allowing

Photo 13: Atypical beam framing at top of steel column; the steel beam is not continuous over top of the column.

the floor joists perpendicular to the window to sag at their ends.

11. Brick and mortar have been displaced or are missing at most of the basement window sills and jambs.

12. The southeast quadrant of the basement appears to have been previously occupied as an apartment. The floor framing appears to be wood sleepers that sit atop the slab on grade and are heavily deteriorated. The interior wall finishes are also heavily deteriorated showing signs of distortion and racking. There is an extensive amount of mold growth within this portion of the building.

B. First Floor Level

As mentioned previously the second floor and roof framing were almost entirely concealed behind the interior finishes. In addition to the building lobby, two units were investigated on the first floor level, Unit A in the northeast corner of the building and Unit D, directly south of the main stairwell.

1. The lobby of the building appears to have cracks in the walls that were previously repaired and re-plastered (Photo 14). There is also a sag in the floor at the location of entry to the stairway that leads to the basement.

2. Unit A (Northeast)

In Unit A on the First Floor, there was a noticeable slope in the floor in the Living Room towards the northeast corner of the room (Photo 15). A slight bowing and separation of the floor boards was also visible adjacent to the settlement of the floor framing in the northeast corner of the unit. Floor settlement was also noticeable in the Bedroom of Unit A. The floor framing sloped downwards toward the north side of the building. This correlates to cracks observed in the plaster and racking of the doorframe on the east wall of the bedroom. This settlement is likely related to a combination the settlement of the exterior masonry bearing walls as seen in the basement and deterioration of the first floor joists.

3. Unit D (South)

In Unit D on the First Floor, the ceiling was partially removed exposing the floor framing of the second floor above. The framing consists of wood joists that are pocketed into the exterior masonry wall and span to the interior bearing walls along the corridor. The framing looks to be in good condition with little

Photo 14: Plaster repair of crack on north wall of lobby.

Photo 15: Floor slopes toward northeast corner of living room in Unit A at the northeast corner of the first floor.

Photo 16: Full depth notch in outer ply of built-up wood beam above the north wall of living room in Unit D to the south of the main stair on the first floor.

to no deterioration visible at the joist pockets. One ply of the built-up beam above the north wall of the Living Room was completely cut through to allow for the passage of a plumbing line (Photo 16).

The bath tub in the bathroom was filled with water and did not appear to be draining (Photo 17). The floor in the bathroom had a slight downward slope towards the full tub of water. Also, when entering the apartment unit, there was noticeable slope in the floor towards the west, also in the direction of the full tub of water. Based on the typical moisture damage and deterioration to the first floor joists near existing plumbing lines, it is likely that the deflection is partially caused by the deterioration of the floor joists, and the weight of the full tub of water is exacerbating the adjacent floor to slope downward towards the tub. The doorframe on the south wall of the living room is racked correlating with the slope seen in the floor.

Photo 17: Bath tub in Unit D. Note that the tub does not appear to be draining.

C. Second Floor Level

At the Second Floor level, two units were investigated, Unit F and Unit A at the southeast corner of the building.

1. Unit F

Unit F has a noticeable floor settlement with all the floor slopes converging to the bathroom. It is suspected that the settlement observed in the floor is due to a similar deteriorated framing condition seen beneath the first floor bathrooms. Cracks in the plaster wall and racking of the doorway on the south wall of the Living Room correspond to the settlement observed in the floor (Photo 18).

Photo 18: Racking of bathroom doorframe in Unit F on the second floor.

2. Unit A (Southeast)

The ceiling of the living room in Unit A appears to have some minor water staining. There is a noticeable sag in the ceiling near the main window; however, it is unclear what is causing this deformation. Water damage and infiltration is evident at the ceiling in the southeast corner of the bedroom. This damage likely stems from a roof leak above (Photo 19).

Photo 19: Water damage at ceiling of bedroom in Unit A at the southeast corner of the second floor

II. Exterior Survey

A. Façade - General

1. Mortar loss is apparent along all exterior façades of the structure, especially at the base of the wall. Some localized areas of the wall appear to have been

previously repointed using mortar; however, in some instances it appears that caulking was used in an attempt to repair/seal the deteriorating mortar joints (Photo 20). Caulking is not an appropriate repair for deterioration or loss of mortar, because it does not bond properly to the brick material or allow moisture to escape from the wall assembly. This traps moisture within the wall assembly and can result in further damage through expansion and contraction of water during freeze-thaw cycles.

Photo 20: Brick arch at the south façade with displaced brick. Note the white caulking used in an attempt to repair the deteriorated mortar.

2. Mortar washout is apparent at all window sills. This is likely attributed to prolonged environmental exposure along with the prolonged presence of moisture due to air conditioner condensation accumulation.

B. South & West Facades

1. The west façade faces an alley space that separates it from the adjacent building. The vegetation growth visible along the base of the wall suggests the prolonged presence of moisture (Photo 21). It is suspected that the alley space does not provide proper drainage, allowing water to locally pond and facilitate the growth of vegetation and deterioration of the masonry.

2. As mentioned previously, the window openings along the west and south facades are supported by brick arches. Several brick arches have displaced bricks, mortar loss, and/or cracks through the full depth of the arch (Photo 20).

3. The west exterior stairwell retaining wall at the south end of the building exhibits a noticeable horizontal bowing (Photo 22). There are vertical through-wall

Photo 21: Vegetation growth along the base of the exterior masonry at the west façade.

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Photo 22: Exterior stairwell at west façade with horizontal bow noticeable in brick retaining wall and exterior slab on grade.

Photo 23: Brick damage at southwest corner of building

cracks near the mid span of the retaining wall. This bowing and wall cracking is a sign of the wall beginning to fail. Further investigation is required to determine the cause of the failure.

4. Brick deterioration and displaced bricks are apparent at the southwest corner of the building. This may be due to vehicular impact or a previously removed structure (Photo 23).

Photo 24: Toothed wall construction at southeast corner of the building, tying the south and east facades together.

5. The south façade of the structure has similar deterioration to that of the west façade. Some brick arches exhibit signs of settlement and brick displacement. In particular the brick arch above the easternmost first floor window on the south façade is exhibiting significant brick displacement. It appears that caulking was used in an attempt to repair this brick arch; however, as stated previously this is not an appropriate repair for this condition (Photo 20).

C. North & East Facades

1. Based on the difference in color, the north and east façades of the building appear to be constructed of three-wythe masonry with the outer wythe being a facing brick. Unlike the south and west facades of the building, no header courses are visible at the north and east facades. The two types of wall construction are toothed together at the northwest and southeast corners of the building (Photo 24). Star anchors are visible at several locations on the east façade. Star anchors are most commonly used to tie exterior masonry walls to the interior floor framing to prevent bowing of the wall; however, based on their placement, it appears that these anchors are potentially tying the outermost wythe of masonry (facing brick) to the inner two wythes in the absence

Photo 25: East façade of building showing locations of star anchors.

Photo 26: Displaced brick arch with previous repair at the east façade.

Photo 27: Disconnected drain scupper at northeast corner of the building.

of brick header courses (Photo 25).

2. Mortar loss is visible at various locations along the north and west facades. Once again caulking appears to be used as a repair for the deteriorated mortar joints; however, this is not acceptable. The window openings on the north and east façades are primarily supported by steel lintels; however, single wythe brick arches are used to support the openings above the triple windows at the first floor. Nearly all of these brick arches have brick displacement and arch settlement, and show signs of previous repair work (Photo 26).

3. The north and east facades contain a number of ornamental stone panels towards the top of the wall. A few of these panels appear to be displaced with large gaps at either side and stepped cracks in the mortar joints surrounding the panels. One panel is missing at the north façade.

4. A drain scupper appears disconnected at the northeast corner of the building (Photo 27). Since RSA could not access the roof, it is unclear what the current drainage system is on the roof. There is visible vegetation growing in the mortar joints along the north façade, indicating the presence of water and inadequate drainage/water infiltration in the vicinity of these locations.

5. On the north façade, an opening at the base of the wall had been covered with plywood. Per conversations with the owner's representative, the opening had been made as part of a recent renovation project in the basement as a temporary access point (Photo 28). The project was halted prior to any substantial modifications being made.

6. The stair concrete stairs leading up to the entry of the building are cracked and spalling. This condition may create a trip hazard for residents and guests entering and leaving the building (Photo 29)

D. Chimney

1. A single brick masonry chimney is located midway along the west façade of the building. Mortar loss and loose bricks are visible near the top of the chimney. Parging at the top of the chimney appears to be deteriorated, and cracks are visible through the chimney cap (Photo 30).

Photo 28: Opening at base of exterior foundation wall along the north façade has been covered with plywood.

Photo 29: Cracked and spalled concrete on the exterior stairs at the entry to the building.

Photo 30: Deterioration of parging and cracks through the chimney cap.

Conclusions and Recommendations

Overall, much of the deterioration and conditions observed at the basement and first floor framing levels can be attributed to water damage. Continual maintenance and repair of plumbing lines within the building as well as proper waterproofing, moisture mitigation, and drainage are required to maintain the integrity of the structure. The moisture concerns mentioned above should be addressed in parallel with the following recommendations. These recommendations are based on limited field observations of unoccupied areas and additional probes are recommended to assess the existing conditions.

RSA recommends further investigation and/or repair at several areas:

- Repoint the interior of the existing brick masonry foundation walls where the mortar is loose, deteriorated, or washed out. Locally replace bricks that are missing or damaged with new bricks to match the original wall construction. Special attention should be paid to wall sections beneath beam bearing locations.

- The steel beams and columns in the basement should be cleaned of corrosion and painted with a corrosion inhibiting paint. Evaluate the base of all steel columns for section loss and repair as required. Drainage and slab on grade modifications should be provided to prevent standing water at the basement columns.

  Install post shores immediately to support the beam above at either side of the deteriorated column in the southwest quadrant of the basement level. This column has near complete section loss at its base. Any shoring installed is temporary and a permanent repair of this column should be designed and implemented. **Note:** RSA notified the owner's representative of this condition and immediate shoring recommendations on 10/10/2014.

- Wood joist exhibiting deterioration along their length and/or at their bearing end should be sistered or replaced to match existing in kind. Provide temporary shoring where existing joists have failed at their bearing ends until a permanent repair is implemented. (See Photo 10)

- Temporary wood shoring seen in the basement is not intended to be permanent. The wood shoring is showing signs of moisture at their base. Permanent repairs should be designed and implemented to facilitate the removal of temporary shoring.

- Wood joists notched beyond the limits specified in the National Design Specification (NDS) for Wood Construction shall be sistered to provide the equivalent joist capacity.

- An analysis should be conducted to determine the capacity of existing notched joists beneath the 3" concrete mud slabs and whether reinforcement of these members is required. Conduct an analysis of unmodified floor joists where excess mud slabs are added.

- Existing deteriorated wood and steel framing at the first floor shall be repaired such that the existing temporary shoring can be removed. The shoring in place is not intended as a long term solution.

- The steel beam with adjacent shoring post should be investigated further to determine the intention of the shoring post.

- Deteriorated wood headers above the basement windows shall be replaced with new pressure-treated wood ledgers. Existing floor joist perpendicular to the ledger shall be fastened to the new ledger

using joist hangers.

- Further investigation and analysis of the first floor framing is required to determine the cause of the types of floor settlement and sloping seen in Unit A and Unit D, and whether this condition can be attributed to typical foundation settlement.

- Further investigation and analysis of the second floor framing is required to determine the cause of the floor settlement seen in Unit F.

- Further investigation and analysis of the roof framing is required to determine the cause of the deflection seen in the ceiling of Unit A.

- Repoint all exterior masonry walls, full height. Provide deep repointing where the mortar is loose, significantly deteriorated, or washed out. Locally replace bricks that are missing or damaged with new bricks to match the original wall construction

- Existing brick masonry arches that exhibit significant deterioration and/or masonry displacement shall be reconstructed by an experienced mason. Displacement of bricks within an arch can lead to destabilization of the arch. (See Photo 20 & 26) Arches with displaced bricks should be evaluated for their current stability and shored as necessary.

- Further investigation and probes at the installed star anchors on the east façade of the building to determine the intent and requirements for these anchors.

- Repair and seal leaks in the building envelope and piping that are related to water intrusion.

- Provide surface repair at spalled/cracked concrete steps at entry to prevent trip hazards.

All structural repairs should be designed by a professional structural engineer licensed in the District of Columbia. The control of water in and around the building will require input from other design professionals such as architects and civil engineers.

APPENDIX A:
REFERENCES AND REPAIR DETAILS

- **Existing Architectural Drawings (EX.01 through EX.03)**
  Drawings produced by Global Housing Alliance, Inc., dated 03/19/2014.

- **Temporary Shoring Detail for Deteriorated Steel Column in Basement**
  Detail produced by Robert Silman Associates (RSA), dated 10/10/2014.

EXISTING BUILDING CONDITIONS

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PROPOSED RENOVATION

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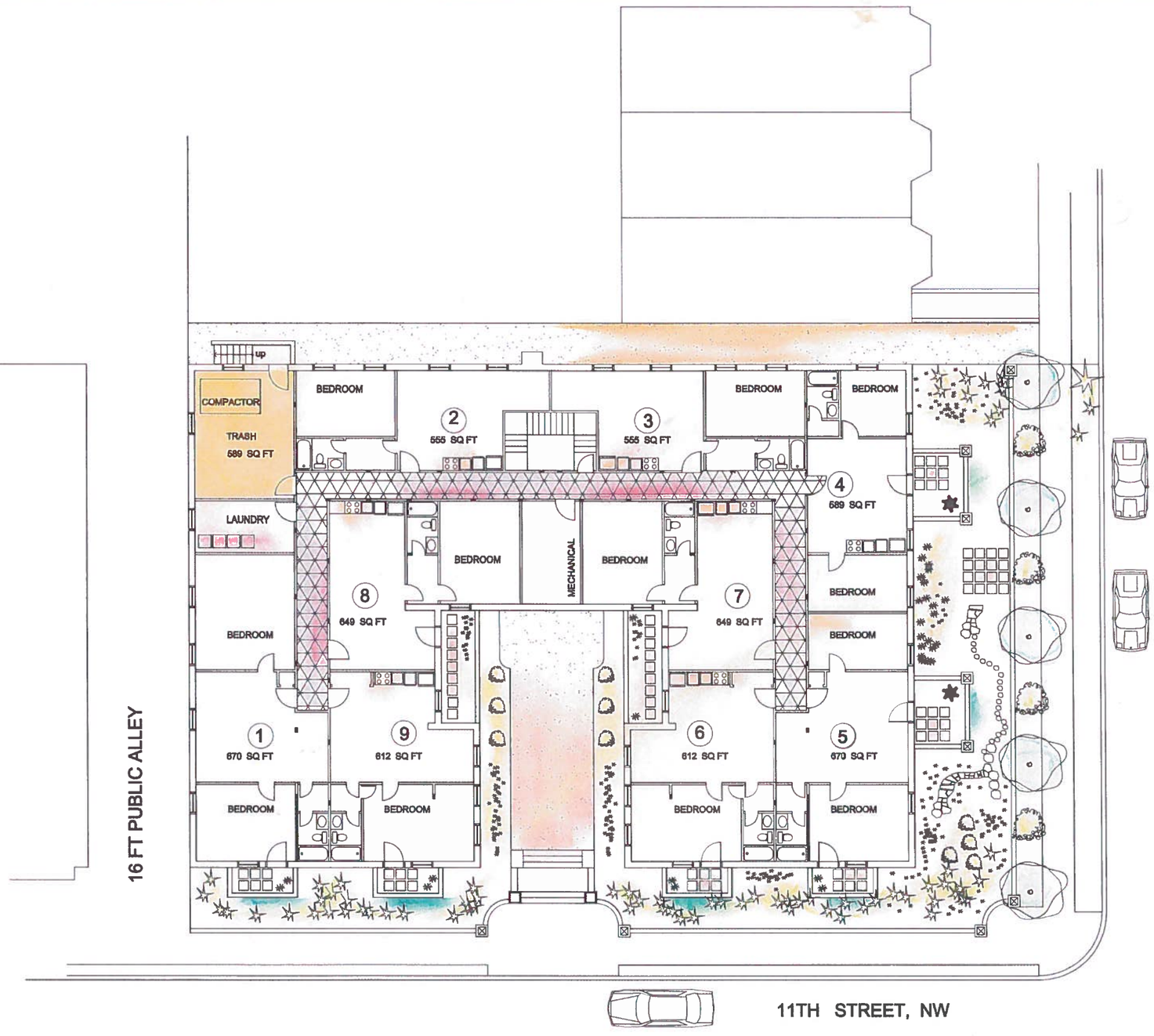

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2724 11th STREET, N.W. WASHINGTON, DC

NEW BASEMENT FLOOR PLAN scale: 1/8" = one ft 16 OCTOBER 2014

SHEET 1 OF 2

VIEW OF NEW PRIVATE GARDEN AT GIRARD STREET

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NEW TERRACE SIDE ELEVATION FROM GIRARD STREET scale: 1/8" = one ft 1 OCTOBER 2014

SHEET 2 OF 2