

December 23, 2022

Ms. Jennifer Dorman  
Remediation and Redevelopment Program  
Wisconsin Department of Natural Resources  
1027 W St. Paul Avenue  
Milwaukee WI, 53212

**Project # 40441**

Subject: **Proposed Vapor Mitigation System Commissioning Plan for  
Community Within the Corridor – East Block  
2748 N. 32<sup>nd</sup> Street, Milwaukee, WI 53210  
BRRTS #: 02-41-263675, FID #: 241025400**

Dear Ms. Dorman:

On behalf of the Community Within the Corridor Limited Partnership, K. Singh & Associates, Inc. (KSingh) proposes a Vapor Mitigation System Commissioning plan for the Community Within the Corridor - East Block property.

Project Background

The Community Within the Corridor Limited Partnership is proposing to redevelop the property into a mix of affordable housing, commercial spaces, and other amenities. The proposed development includes the following: The Corridor Lofts (64 Units), Creme City Lofts (36 Units) & 30 Square Townhomes (6 Units) and the Briggs Apartment Homes (91 Units) and a Community Service Facility which will include early childhood education, Science, Technology, Engineering, Art & Math after school programming, a health club (Basketball, Volleyball & Futsal, Skatepark), laundromat and a petite grocery store. The property has been rezoned Industrial Mix to facilitate development of the project. The subject property is owned by Community within the Corridor Limited Partnership (BRRTS #02-41-263675), and is located at 2748 N. 32<sup>nd</sup> Street, City of Milwaukee, Milwaukee County, Wisconsin. The parcel totals approximately 4.16 acres and are all zoned as IM – Industrial Mixed (1 and 2). The subject property is covered by one- to three-story buildings. Historically, the East Block of the facility served various industrial purposes for over 100 years (since 1906). The East Block building complex was recently vacant and is currently under construction for redevelopment which started in February 2021, which entails affordable housing, commercial space, and other amenities within the former industrial complex.

Between November and December of 2021, sub-slab vapor samples were collected throughout the East Block facility. Concentrations from sampling activities identified impacts beneath the sub-surface for future mitigation efforts.

Forty-nine (49) sub-slab vapor (SSV) points were installed at the East Block and were tested for VOCs. Vapor results indicated the following:

- Contamination related to chlorinated solvents consisting of Trichloroethene (TCE), Vinyl Chloride, 1,1,2-Trichloroethane, 1,1-Dichloroethane, 1,4-Dichlorobenzene, and/or Benzyl Chloride exceeds Residential VRSLs in vapor points SS-1, SS-2, SS-3, SS-5, SS-6, SS-7, SS-10, SS-14, SS-18, SS-20, SS-23, SS-25, SS-26, SS-27, SS-28, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-42, SS-43, SS-45, SS-49, and SS-51.
- TCE, 1,1-Dichloroethane, and/or Benzyl Chloride exceeds the Large Industrial / Commercial Building VRSLs in vapor points SS-2, SS-5, SS-18, SS-20, SS-25, SS-26, SS-27, SS-35, SS-36, and SS-41.
- Cyclohexane and/or Hexane were detected exceeding Residential VRSLs in vapor points SS-2, SS-5, SS-18, SS-39, and SS-41 and Large Industrial / Commercial Building VRSLs in vapor points SS-5 and SS-39.
- TCE is the most widespread contaminant of concern under the building and is associated with past industrial uses of the facility.
- Benzene, Ethylbenzene, Toluene, 1,2,4-Trimethylbenzene, 1,2,5-Trimethylbenzene, and/or Xylenes were detected exceeding Residential VRSLs in vapor points SS-2, SS-3, SS-5, SS-39, SS-41, SS-43.
- Benzene, 1,2,4-Trimethylbenzene, and/or m&p-Xylenes were detected exceeding Large Industrial / Commercial Building VRSLs in vapor points SS-2, SS-5, and/or SS-39.
- Petroleum VRSL exceedances are located in the northeastern portion of the building and are associated with the previously closed Leaking Underground Storage Tank case.

Based on the results of SSV sampling, limited areas of Residential VRSL exceedances for chlorinated solvents and other VOCs were detected and delineated. Based on the levels of vapors and soil contamination, vapor mitigation of the known areas of vapor contamination was recommended.

Pressure field extension testing was performed in CWC East Block and a report for Feasibility Study and Design of a Vapor Mitigation System was submitted to the WDNR on June 8, 2022. Installation of the Vapor Mitigation System (VMS) in CWC East Block is nearing completion. Hot spots have been removed and vapor barriers have been installed. The plans for the VMS system for the East Block complex are shown on Figure 1. This plan has been prepared to properly commission the VMS for the East Block buildings in accordance with guidance provided in WDNR publication RR-800 "Addressing Vapor Intrusion at Remediation & Redevelopment Sites in Wisconsin" dated January 2018.

#### Commissioning Plan for CWC East Block

The performance goals for CWC East Block are the following.

1. Demonstrate a sub-slab depressurization of at least 0.004 inches water under the entire ground floor slab where vapors exceeding VRSLs were determined to be present.
2. Demonstrate that there are no indoor air exceedances of VALs.
3. Demonstrate that the ground floor slab acts as a barrier.

To do so, the following commissioning actions will be performed for the first round in accordance with Appendix D of WDNR publication RR-800.

1. The SSDS fans will be turned on and allowed to operate for at least 48 hours prior to measurements.
2. The building will be sealed for at least 24 hours prior to air testing.
3. An inspection of cracks and joints will be performed using smoke methods to determine if air is being drawn into the sub-slab. Identified infiltration points will be sealed to prevent further infiltration.
4. Sub-slab vapor pins will be installed at 43 points (VP-1 to VP-43) as shown on Figure 1.
5. Following installation of vapor pins, vacuum measurements will be performed using a digital manometer. Readings will be recorded and compared to the standard of 1 Pa or 0.004 inch-H<sub>2</sub>O. If all points do not meet the vacuum goal, modifications will be made to the system including 1) installing larger fans, 2) adjusting valves to pull less air from legs of the system, 3) adding extraction points, 4) improving the barrier seal, or, with WDNR's permission, 5) adding supplemental air exchange or treatment.
6. In addition to the PFE measurements, indoor air samples will be collected and tested for PCE and TCE to document compliance with residential VALs using passive air samplers. The proposed locations are shown in Attachment A. Two samples will be collected from Building 3A, thirteen samples will be collected from Building 2A, seven samples will be collected from Building 2B, five samples from Building 1B-NE, five samples from Building 1B-NW, three samples from Building 1B-W, seven samples from Building 1B-SW, six samples from Building 1B-S, ten samples from Building 1B-SE, one sample from Building 1B, and four samples from Building 1C. One outdoor background sample (OA-EB-BK) will be collected. Sixty-four (64) air samples will be tested in total for each commissioning round.
7. Baseline conditions will be documented including 1) vacuum measurements for each fan system, 2) barrier condition inspection, repair, and photographic and written documentation, and 3) parts inspection, repair, and photographic and written documentation. Air flow inspection may be performed if vacuum isn't sufficient as part of troubleshooting.

Following completion of each round of commissioning, a report documenting findings will be submitted to WDNR. The first round of commissioning is scheduled for January 2023.

If VALs are complied with and adequate sub-slab depressurization is demonstrated, it is expected that the building will be open for residents in January/February 2023.

The second round of commissioning is scheduled for March/April 2023. The third and final round of commissioning is scheduled for June/July 2023.

An operations and maintenance plan will be submitted with the first-round commissioning report and modified as necessary.

### Schedule

The following schedule is proposed:

January/February 2023 First round of commissioning, Buildings 1A, 1B-SE, 1B-S, 1B-SW, 1B-W, 1B-NW, 1B-NE, 2A, 2B, and 3A.

January/February 2023 Residential Occupancy of Buildings 1A, 1B-SE, 1B-S, 1B-SW, 1B-W, 1B-NW, 1B-NE, 2A, 2B, and 3A.

February 2023 Submission of First Round Commissioning Report for Buildings 1A, B-SE, 1B-S, 1B-SW, 1B-W, 1B-NW, 1B-NE, 2A, 2B, and 3A. 1

April 2023 Second round of commissioning, Buildings 1A, 1B-SE, 1B-S, 1B-SW, 1B-W, 1B-NW, 1B-NE, 2A, 2B, and 3A.

May 2023 Submission of Second Round Commissioning Report

July 2023 Final round of commissioning, Buildings 1A, 1B-SE, 1B-S, 1B-SW, 1B-W, 1B-NW, 1B-NE, 2A, 2B, and 3A.

August 2023 Final Commissioning Report

Please contact us if you have any questions or seek clarification regarding this submittal.

Sincerely,  
K. SINGH & ASSOCIATES, INC.



Robert T. Reineke, P.E.  
Project Manager



Singh, Ph.D., P.E.  
Principal Engineer

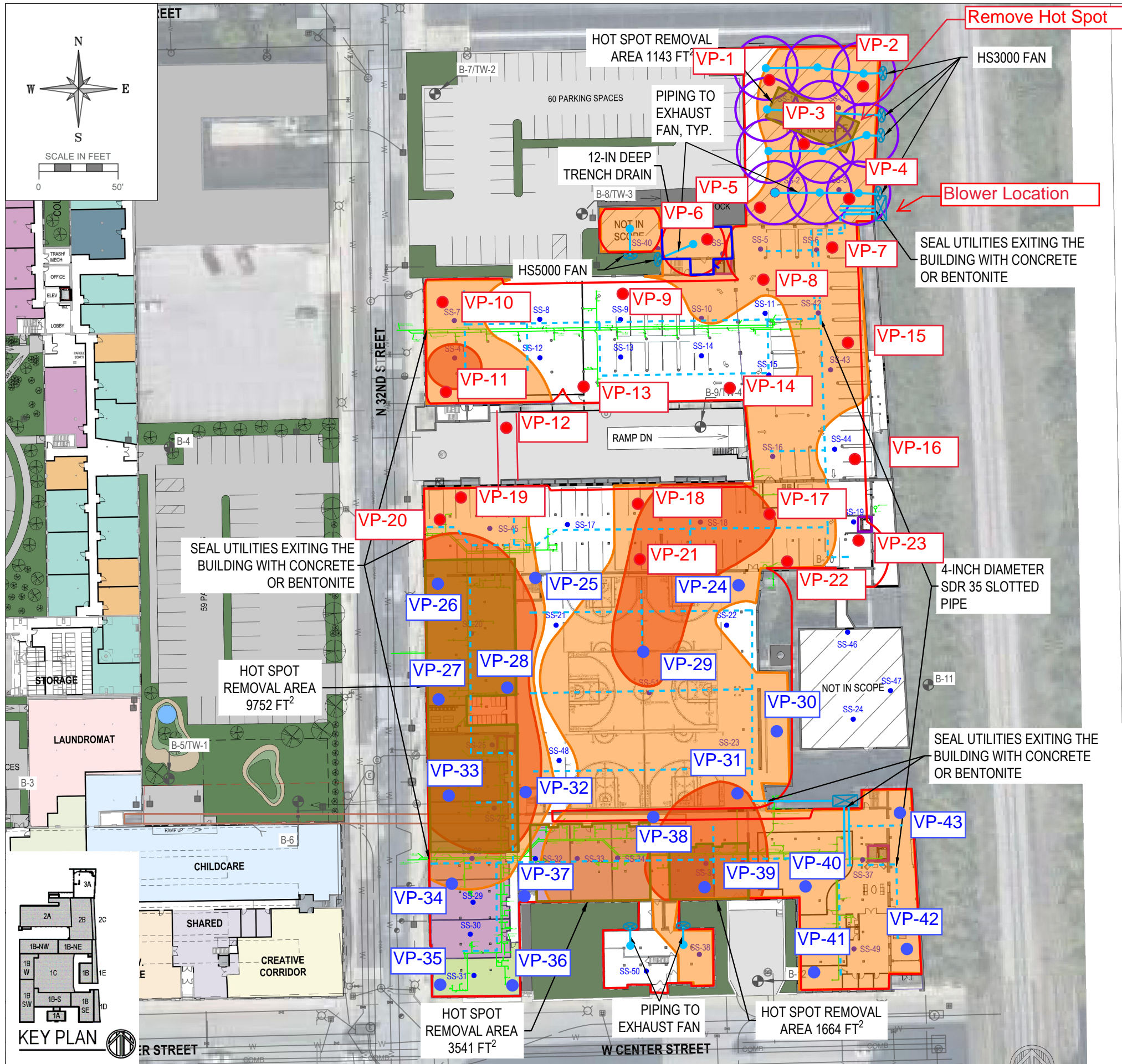
cc: Que El-Amin / Scott Crawford, Inc.  
Shane LaFave / Roers Companies

Attachments:

Figure 1 Vacuum Measurements Plan for East Block

Attachment A Buildings Air Sampling Locations

## FIGURES



**LEGEND**

- Sub-Slab Sampling Locations (51)
- ⊕ Previous Boring and Temporary Well Locations
- Known Elevator Shaft
- 1 - Bedroom Apartment
- 2 - Bedroom Apartment
- 3 - Bedroom Apartment
- 4 - Bedroom Apartment
- Studio Apartment
- WI Residential VRSL Exceedance Extents
- WI Large Commercial / Industrial VRSL Exceedance Extents
- Hot Spot Removal Area
- Slotted Horizontal Extraction Piping
- Solid Horizontal Extraction Piping
- Extraction Points
- Extraction Point Zone of Influence
- ⊗ Potential Blower Locations
- ⊗ Vapor Mitigation Fan
- Zone of Influence
- 12-Inch Trench Drain
- Underground Plumbing
- Northern System Vacuum Measurement Point
- Southern System Vacuum Measurement Point

NOTES:  
1. SAMPLING LOCATIONS AND VAPOR EXTRACTION POINTS ARE APPROXIMATE

CONSULTANT  
CONSULTANT  
CONSULTANT

PROJECT TITLE: COMMUNITY WITHIN THE CORRIDOR  
2748 N 32ND STREET  
MILWAUKEE, WI 53210  
PROJECT NUMBER: 40441  
CLIENT: COMMUNITY WITHIN THE CORRIDOR LIMITED PARTNERSHIP

REVISIONS	DATE	DESCRIPTION

DRAWN BY: AMZ DATE: 09/07/2021  
CHECKED BY: RTR DATE: 09/08/2021  
SHEET TITLE: VACUUM MEASUREMENT PLAN FOR EAST BLOCK BUILDINGS

**FIGURE 1**

ATTACHMENT A

Air Sampling Locations

CONSULTANTS:

COMMUNITY WITHIN THE CORRIDOR - EAST BLOCK  
2748 N. 32nd Street  
Milwaukee, WI 53210  
SHEET TITLE: FLOOR FINISH PLAN - LEVEL 01 & 02

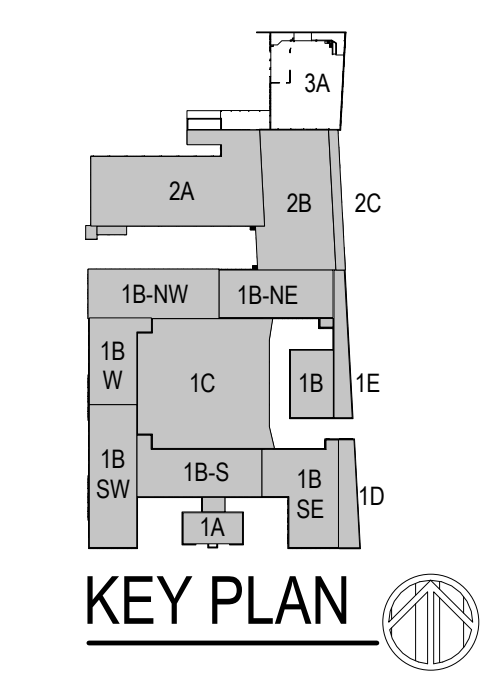
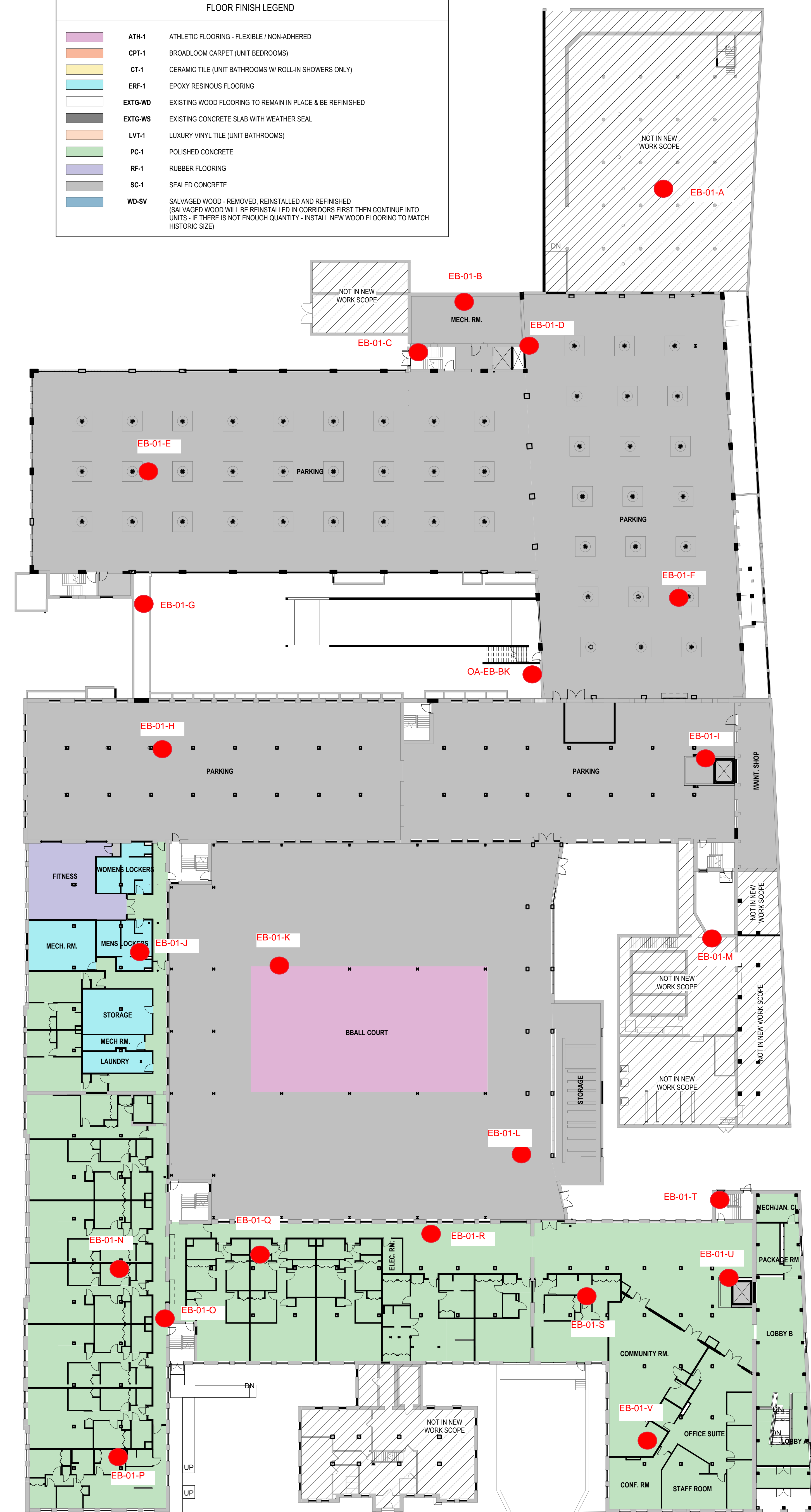
REVISIONS:

ATTACHMENT A:  
AIR SAMPLING LOCATIONS  
(Sheet 1 of 2)

SCALE	VARIES
PROJECT NUMBER	200102
SET TYPE	CONSTRUCTION DOCUMENTS
DATE ISSUED	09/25/20
SHEET NUMBER	<b>A901E</b>

FLOOR FINISH LEGEND

ATH-1	ATHLETIC FLOORING - FLEXIBLE / NON-ADHERED
CPT-1	BROADLOOM CARPET (UNIT BEDROOMS)
CT-1	CERAMIC TILE (UNIT BATHROOMS W/ ROLL-IN SHOWERS ONLY)
ERF-1	EPOXY RESINOUS FLOORING
EXTG-WD	EXISTING WOOD FLOORING TO REMAIN IN PLACE & BE REFINISHED
EXTG-WS	EXISTING CONCRETE SLAB WITH WEATHER SEAL
LVT-1	LUXURY VINYL TILE (UNIT BATHROOMS)
PC-1	POLISHED CONCRETE
RF-1	RUBBER FLOORING
SC-1	SEALED CONCRETE
WD-SV	SALVAGED WOOD - REMOVED, REINSTALLED AND REFINISHED (SALVAGED WOOD WILL BE REINSTALLED IN CORRIDORS FIRST THEN CONTINUE INTO UNITS - IF THERE IS NOT ENOUGH QUANTITY - INSTALL NEW WOOD FLOORING TO MATCH HISTORIC SIZE)



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CONSULTANTS:

COMMUNITY WITHIN THE CORRIDOR - EAST BLOCK

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Milwaukee, WI 53210

SHEET TITLE  
FLOOR FINISH PLAN - LEVEL 03

REVISIONS:

ATTACHMENT A:  
AIR SAMPLING LOCATIONS  
(Sheet 2 of 2)

SCALE VARIES

PROJECT NUMBER 200102

SET TYPE CONSTRUCTION DOCUMENTS

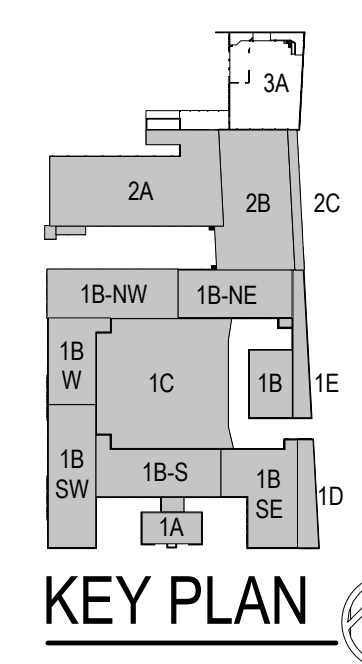
DATE ISSUED 09/25/20

SHEET NUMBER **A902E**

FLOOR FINISH LEGEND	
	ATH-1 ATHLETIC FLOORING - FLEXIBLE / NON-ADHERED
	CPT-1 BROADLOOM CARPET (UNIT BEDROOMS)
	CT-1 CERAMIC TILE (UNIT BATHROOMS W/ ROLL-IN SHOWERS ONLY)
	ERF-1 EPOXY RESINOUS FLOORING
	EXTG-WD EXISTING WOOD FLOORING TO REMAIN IN PLACE & BE REFINISHED
	EXTG-WS EXISTING CONCRETE SLAB WITH WEATHER SEAL
	LVT-1 LUXURY VINYL TILE (UNIT BATHROOMS)
	PC-1 POLISHED CONCRETE
	RF-1 RUBBER FLOORING
	SC-1 SEALED CONCRETE
	WD-SV SALVAGED WOOD - REMOVED, REINSTALLED AND REFINISHED (SALVAGED WOOD WILL BE REINSTALLED IN CORRIDORS FIRST THEN CONTINUE INTO UNITS - IF THERE IS NOT ENOUGH QUANTITY - INSTALL NEW WOOD FLOORING TO MATCH HISTORIC SIZE)



**1 FINISH PLAN - LEVEL 03** 17 Samples Level 3  
Scale: 3/64" = 1'-0"  
0' 2.65' 5.3' 8'



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