August 13, 2024

Alex Grant
Development Project Manager
Housing Visions
1201 East Fayette Street
Syracuse, New York 13210
agrant@housingvisions.org

RE: Coventry Commons
130-132 Harrison Street, Newark, New York
Post-Mitigation Soil Vapor Intrusion Work Plan

Dear Alex,

The following letter is in response to the Homes and Community Renewal (HCR) Environmental Review Follow-up Letter (FUL), dated July 22, 2024. Item 12e of that letter requires Housing Visions to prepare and implement a Soil Vapor Intrusion (SVI) Work Plan per the most recent New York State Department of Health (NYSDOH) protocol which, includes their Guidance for Evaluating Soil Vapor Intrusion in New York State, as updated.

The following paragraphs describe the elements of the post-mitigation testing and sampling that will be performed by C&S Engineers prior to building occupancy.

Sub-Slab Depressurization System (SSDS)

C&S Engineers designed a sub-slab depressurization system (SSDS) for the main building and the annex. The construction of the system is planned for 2025. The design includes the installation of "vapor pins" at 13 strategic locations across the ground floor and basement levels of the buildings. This includes 11 locations in the main building and two in the annex. The locations of the vapor pins are signified with a number "13" keyed note and highlighted in yellow on Sheets V-100 and V-101 of the attached **SSDS Design Drawings**.

The vapor pins will be connected to an appropriate length of tubing that will be accessible within access doors in common areas of the finished building. The locations of the doors are identified with a number "8" keyed note and highlighted in yellow on Sheets V-100 and V-101. A detail is provided as C-1 on Sheet V-200. Sheet V-200 also shows other important details such as the vapor pins, manometer gauge, alarm panel, etc. The doors provide access to the tubing connected to the vapor pins as well as the monometer. The tubing will be utilized to verify negative pressure below the slab and could also be utilized to collect sub-slab air samples, although that is not proposed.

Pressure Field Extension Testing

As part of the design, pressure field extension testing (PFET) was performed across the footprint of the buildings. That data was utilized to determine the number of vapor pits, trenching, pipe size, and fan sizes. The locations of the vapor pits are shown on the design drawings as keyed note number "1" on Sheet V-100 and keyed note number "3" on Sheet V-101. Trenching is shown as hatched lines. The locations of the roof-mounted fans are shown on Sheet V-100 and Sheet V-104.

Post-Mitigation Testing and Sampling

To confirm the adequate performance of the system, two sets of data will be collected:

1. Pressure readings will be recorded for each vapor pin to ensure that the negative pressure below the slabs is at least -0.004 water column inches (wci).

2. Indoor air samples will be collected from 10 locations, including eight in the main building and two in the annex. The proposed locations are shown on Sheets V-100 and V-101 and noted as IA-01 through IA-10.

Pressure readings will be recorded with a TSI VelociCalc Model 9630-966 DP anemometer.

Indoor air samples will be collected consistent with NYSDOH guidance, as follows:

- The indoor air samples will be collected using Summa™ canisters (6-Liter capacity) equipped with a critical orifice flow regulation device sized to allow an air sample to be collected over a 24-hour sampling period. Care will be taken to deploy the canisters away from the direct influence of any forced air emanating from air conditioning units, central air conditioning vents, furnaces or heaters. The sampling procedure is generally as follows:

    - The samples will be collected during the heating season, which is generally defined by NYSDOH as November 15, to March 31. However, in Upstate New York, it is common to heat buildings between October and April.

    - The SSDS will operate for at least 15 days prior to sampling. Sampling may be conducted sooner if at least -0.004 wci is confirmed across the entire slabs.

    - Building spaces will be examined to determine locations for deploying sample canisters. Canisters will be deployed in areas not subject to disturbance and which will not interfere with building activities. If construction is ongoing, workers will be requested to keep out of the sampling area during the sampling event.

    - An inventory of chemicals stored and building products recently installed in or near the sampling areas will be prepared.

- Sample canisters will be labeled with a unique sample designation number. The sample number and location will be recorded in the field log book.

- The canister vacuum will be measured using an integrated vacuum gauge immediately prior to canister deployment and recorded in the field log book. The critical orifice flow controller will be installed, as supplied by the laboratory, on the canister; the canister will be opened fully at the beginning of sample collection period; and the start time will be recorded.

- The canister valve will be closed fully at the end of the sample period by disconnecting the regulator from the canister and the end time will be recorded. Any evidence of canister disturbance during the sample collection will be recorded.

- The canister vacuum will be measured and recorded immediately after canister retrieval at the end of the sample period. Once the vacuum is measured, the canisters will be returned to their sampling boxes for safe storage and shipping. Field data will be verified and correctly entered into field books prior to shipment. Canisters will be shipped to the laboratory under a chain-of-custody.

- Samples will be submitted to a NYS ELAP certified laboratory and analyzed for volatile organic compounds (VOCs) via United States Environmental Protection Agency (USEPA) Method TO-15. Detection limits will be 1 µg/M^3.

The laboratory data will be presented in tabular form, compared to NYSDOH air guideline values, and submitted for review.

Please let us know if you have any questions or comments.

Sincerely,

C&S ENGINEERS

Matthew L. Walker
Senior Project Environmental Scientist II

f:\project\w96 - housing visions adhv redevelopment\w96.007.003 - coventry commons hcr ful support\planning-study\reports\svi work plan\coventry commons svi work plan august 2024 mlw.docx

HOUSINGVISIONS
Real Plans. Real People. Real Progress.

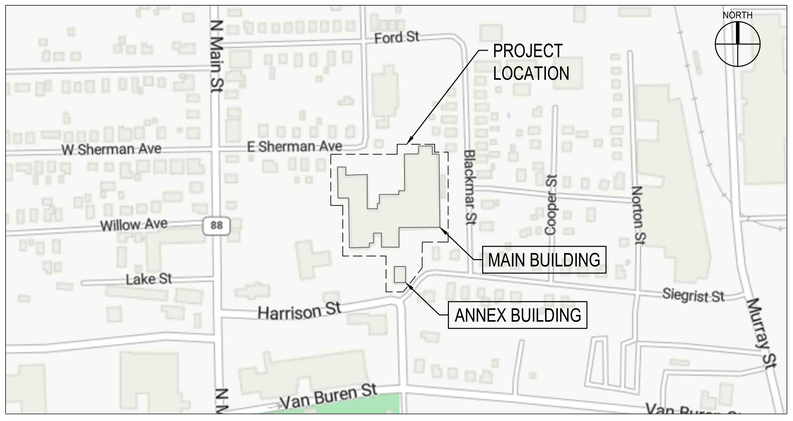
C&S COMPANIES®

CONTRACT DRAWINGS
FOR THE CONSTRUCTION OF

SUB-SLAB DEPRESSURIZATION SYSTEM

COVENTRY COMMONS

130-132 HARRISON STREET
NEWARK, NEW YORK 14513



LOCATION MAP

DRAWING LIST	
SHEET NO.	**SHEET NAME**
G-001	TITLE SHEET
G-101	GENERAL NOTES
V-100	ANNEX BUILDING - BASEMENT, 1ST FLOOR, 2ND FLOOR, ROOF
V-101	MAIN BUILDING - BASEMENT & FIRST FLOOR
V-102	MAIN BUILDING - SECOND FLOOR
V-103	MAIN BUILDING - THIRD FLOOR
V-104	MAIN BUILDING - ROOF
V-200	DETAILS

C&S PROJECT: W96007002

MAY 31, 2024

DESIGN DEVELOPMENT SET

STAMP

TO THE BEST OF OUR KNOWLEDGE, INFORMATION AND BELIEF THE PLANS AND SPECIFICATIONS FOR THIS PROJECT ARE IN COMPLIANCE WITH THE NEW YORK STATE ENERGY CONSERVATION CONSTRUCTION CODE AND THE BUILDING CODE OF NEW YORK STATE

NO ALTERATION PERMITTED HEREON EXCEPT AS PROVIDED UNDER SECTION 7209 SUBDIVISION 2 OF THE NEW YORK STATE EDUCATION LAW

G-001

GENERAL NOTES:

1. THE CONTRACTOR SHALL SUPPLY ALL LABOR, EQUIPMENT AND MATERIALS TO COMPLETE THE SUB-SLAB EXTRACTION PITS / TRENCHES, PIPING, MANIFOLDS, EQUIPMENT STAGING, REMEDIAL EQUIPMENT CONNECTIONS AND CONCRETE SLAB REPAIR AND RESTORATION ACCORDING TO THE PLANS AND SPECIFICATIONS HEREIN. SEE DIVISION OF WORK FOR CONTRACTOR RESPONSIBILITIES.
2. ALL WORK WILL BE IN COMPLIANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL STANDARDS AND REGULATIONS. IF THERE SHOULD ARISE ANY CONFLICT BETWEEN ANY NOTES AND/OR DETAILS ON THE APPROVED DRAWINGS OR SPECIFICATIONS FOR THE PROJECT, THIS NOTE WILL SUPERSEDE AND GOVERN UNLESS THERE IS A WRITTEN SIGNED DOCUMENT FROM THE ENGINEER STATING OTHERWISE.
3. EACH CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. EACH CONTRACTOR SHALL EXERCISE PRECAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF EACH CONTRACTOR TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.
4. THESE DRAWINGS WERE PRODUCED FROM MAPS, DRAWINGS AND RECORDS COLLECTED FROM THE OWNER.
5. EACH CONTRACTOR WILL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES OR TECHNIQUES.
6. EACH CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS AND GOVERNMENT FEES, LICENSES AND INSPECTIONS ASSOCIATED WITH THE IMPROVEMENTS UNDER THEIR RESPONSIBILITY AS OUTLINED IN THE DIVISION OF WORK.
7. ANY MODIFICATION TO THE SPECIFICATIONS OR CHANGES TO THE WORK AS SHOWN ON THE DRAWINGS MUST HAVE PRIOR WRITTEN APPROVAL BY THE OWNER AND ENGINEER.
8. SHOULD WATER BE ENCOUNTERED, THE CONTRACTOR SHALL FURNISH AND OPERATE SUITABLE PUMPING EQUIPMENT OF SUCH CAPACITY ADEQUATE TO DEWATER ACCUMULATED WATER WITHIN EXCAVATION AREAS. AREAS SHALL BE SUFFICIENTLY DEWATERED SO THAT THE PLACEMENT OF BACKFILL IS MADE IN AN AREA FREE OF STANDING WATER. THE CONTRACTOR SHALL PROPERLY CONTAINERIZE, CHARACTERIZE AND DISPOSE OF WATER IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL RULES AND REGULATIONS. THE CONTRACTOR SHALL CONSULT THE OWNER AND ENGINEER TO DETERMINE SUITABLE WATER AND SOIL CHARACTERIZATION AND DISPOSAL METHODS.
9. THESE PLANS HAVE BEEN PREPARED USING THE MOST ACCURATE INFORMATION AND DATA AVAILABLE AT THE TIME OF PREPARATION. FIELD CONDITIONS MAY BE ENCOUNTERED WHICH VARY FROM THOSE DEPICTED HEREIN. AS SUCH, THESE PLANS SHOULD BE USED AS A CONSTRUCTION CONTROL REFERENCE, NOT A PRECISE CONSTRUCTION DOCUMENT. MODIFICATIONS TO THE DESIGN AS SHOWN MAY BE REQUIRED BASED ON FIELD CONDITIONS AT THE TIME OF CONSTRUCTION. IN ANY EVENT, THE ENGINEERING OBJECTIVES OF THE DESIGN SHALL BE MET.
10. EACH CONTRACTOR SHALL CONFINE HIS ACTIVITIES TO THE PROJECT SITE AND SHALL NOT TRESPASS UPON OTHER PROPERTIES OR DISRUPT THE OPERATIONS OF ADJACENT PROPERTY OWNERS WITHOUT THE WRITTEN PERMISSION OF THOSE OWNERS.
11. HORIZONTAL AND VERTICAL CONTROL WILL BE ESTABLISHED BY EACH CONTRACTOR FOR THE PROJECT. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED SURVEYS TO COMPLETE THE PROJECT INCLUDING REESTABLISHMENT OF CONTROL POINTS AND PROJECT LAYOUT.
12. FLOW IN EXISTING STORM AND SANITARY SEWERS SHALL BE MAINTAINED AT ALL TIMES DURING EXECUTION OF THE WORK FOR THIS PROJECT. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING SEWERS RESULTING FROM THEIR OPERATIONS OR NEGLIGENCE.
13. SUITABLE BACKFILL MATERIALS MAY BE STOCKPILED ON-SITE, BUT MUST BE POSITIONED SO AS NOT TO COMINGLE WITH EXCAVATED SOILS.
14. THE TRACKING OR SPILLAGE OF MUD, DIRT, CONCRETE, OR DEBRIS UPON STATE, COUNTY, TOWNSHIP, PRIVATE, OR CITY STREETS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.
15. DUST CONTROL SHALL BE MAINTAINED THROUGHOUT THE ENTIRE SITE. SAW-CUTTING SHALL BE PERFORMED USING A WET SAW TO MINIMIZE DUST.
16. EACH CONTRACTOR SHALL MAINTAIN WORK AREA FREE OF WASTE MATERIALS, DEBRIS, AND RUBBISH. MAINTAIN SITE IN A CLEAN AND ORDERLY CONDITION. CONTRACTOR IS RESPONSIBLE FOR COLLECTING AND REMOVING WASTE MATERIALS, DEBRIS AND RUBBISH FROM THE SITE AND DISPOSING OF OFF SITE.
17. FACILITY INTERIOR WORK AREAS MUST BE LEFT FREE OF DEBRIS AND MATERIALS AT THE COMPLETION OF EACH WORK PERIOD. ANY FLOOR SPACE AND/OR EQUIPMENT WITHIN THE WORK AREA AND IMMEDIATE VICINITY MUST BE MOPPED AND WIPED CLEAN OF DIRT, MUD, DEBRIS AND DUST PRIOR TO COMPLETION OF WORK.
18. MAINTAIN DRIVEWAYS AND PEDESTRIAN ACCESS IN A SAFE AND CLEAN CONDITION. COOPERATE WITH THE OWNER IN EVERY WAY PRACTICAL IN ORDER TO MINIMIZE DISRUPTION TO THEIR OPERATIONS.
19. EACH CONTRACTOR SHALL REPAIR AND REPLACE ANY AND ALL EXISTING EQUIPMENT, SITE FEATURES OR WORK DAMAGED DURING OR DUE TO THE EXECUTION OF THIS PROJECT AT HIS OWN EXPENSE. ALL SAID WORK SHALL BE TO THE SATISFACTION OF THE OWNER.

DIVISION OF WORK:

1. OWNER'S'S GENERAL CONTRACTOR TO INSTALL ALL EXTRACTION PITS, VAPOR PINS, TRENCHING AND PIPING INSTALLATION TO ADJACENT COLUMN, AND PIPING STUB-UPS TO 2 FT. ABOVE THE FLOOR SLAB IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS PROVIDED HEREIN.
2. OWNER'S PLUMBING CONTRACTOR TO COMPLETE ALL PIPING INSTALLATION WORK FROM 2 FT. STUB-UPS PROVIDED AT SLAB TO SSDS EQUIPMENT AT ROOF IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS HEREIN.

TRENCH AGGREGATE FILL:

1. TRENCH FILL MATERIAL SHALL BE STONE AS DEFINED HEREIN OR AS OTHERWISE APPROVED BY THE ENGINEER.BEDDING MATERIAL AND EXTRACTION PIT BACKFILL MATERIAL SHALL BE WASHED, CLEAN COARSE STONE (LISTED IN THE TABLE BELOW).
2. COMPACTION OF SOIL SHALL BE PERFORMED IN 6 INCH LIFTS USING EQUIPMENT ACCEPTABLE TO THE OWNER AND ENGINEER.

ASTM Aggregate Size	Sieve Size	Percent Passing
5	1 ½" (37.5 mm)	100
	1" (25 mm)	90-100
	¾" (19 mm)	20-55
	½" (12.5 mm)	1-10
	3/8" (9.5 mm)	0-5
56	1 ½" (37.5 mm)	100
	1" (25 mm)	90-100
	¾" (19 mm)	40-85
	½" (12.5 mm)	10-40
	3/8" (9.5 mm)	0-15
	#4 (4.75 mm)	0-5
57	1 ½" (37.5 mm)	100
	1" (25 mm)	95-100
	½" (12.5 mm)	25-60
	#4 (4.75 mm)	0-10
	#8 (2,36 mm)	0-5
6	1" (25 mm)	100
	¾" (19 mm)	90-100
	½" (12.5 mm)	20-55
	3/8" (9.5 mm)	0-15
	#4 (4.75 mm)	0-5
DOT Table 703-4 Size	**Sieve Size**	**Percent Passing**
2	1 ½" (37.5 mm)	100
	1" (25 mm)	90-100
	½" (12.5 mm)	0-15

TRENCHING & PIPING:

1. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR DESIGNING AND CONSTRUCTING STABLE TRENCHES AND SHOULD SHORE, SLOPE OR BENCH THE SIDES OF TRENCHES AS REQUIRED TO MAINTAIN STABILITY OF BOTH EXCAVATION SIDES AND BOTTOM. ALL EXCAVATIONS SHOULD COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS INCLUDING THE CURRENT OSHA EXCAVATION AND TRENCH SAFETY STANDARDS (29 CFR PART 1926).
   a. SUB-SLAB DEPRESSURIZATION SYSTEM (SSDS) PIPING AND FITTINGS SHALL CONFORM TO THE FOLLOWING, EXCEPT WHERE OTHERWISE NOTED:
   b. PIPING SHALL BE THE SIZE INIDCATED ON THE PLANS AND BE SCHEDULE 40 POLYVINYL CHLORIDE (PVC) PRESSURE PIPE MADE FROM CLASS 12454 MATERIALS IN ACCORDANCE WITH ASTM D1784, UNLESS NOTED OTHERWISE. PIPE DIMENSIONS SHALL CONFORM TO ASTM D1785.
   c. ALL FITTINGS SHALL BE SOLVENT CEMENTED SCHEDULE 40 PVC FITTINGS. FITTINGS SHALL BE PERMANENTLY SEALED USING PRIMER MEETING THE REQUIREMENTS OF ASTM F 565 AND SOLVENT CEMENT MEETING THE REQUIREMENTS OF ASTM D 2564. JOINTS SHALL BE MADE WHILE SOLVENT CEMENT IS WET IN ACCORDANCE WITH ASTM D 2855 AND ASTM F 402.
   d. SLOTTED PIPE SHALL BE SCHEDULE 40 PVC, 0.020 INCH SLOT, WITH ASTM D2466 FLUSH THREAD FITTINGS.
   e. PVC FITTINGS SHALL BE SCHEDULE 40 PVC SOCKET STYLE IN ACCORDANCE WITH ASTM D1784.
   f. FANS SHALL BE INSTALLED WITH FLEXIBLE CONNECTORS. ALL PVC PIPE SHALL BE SOLVENT WELDED USING LOW VOC PRIMER AND LOW VOC PVC CEMENT IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.
3. SOLID-WALLED SSDS PIPING FROM THE SLAB TO ROOF SHALL BE SUCCESSFULLY PRESSURE TESTED PRIOR TO EQUIPMENT CONNECTIONS. LINES SHALL BE PRESSURE TESTED BY APPLYING THIRTY (30) INCHES WATER COLUMN VACUUM TO THE SSDS LINES. THE LINES WILL PASS THE TEST IF THE PRESSURE IS MAINTAINED FOR 30 MINUTES WITHOUT DEVIATING. THE BALL VALVE LOCATED ON EACH RISER PIPE AT FIRST FLOOR LEVEL MAY BE PLACED IN THE CLOSED POSITION TO ACHIEVE TEST VACUUM IF NECESSARY.
4. EXACT LOCATION OF EXTRACTION PITS SHALL BE COORDINATED IN FIELD. INTENDED LOCATIONS ARE SHOWN ON THE MITIGATION SYSTEM FLOOR PLANS.
5. WHERE RISER PIPES PENETRATE BUILDING SLAB, VAPOR BARRIER SHALL BE SEALED TO OUTSIDE PERIMETER OF PIPE AND INTERFACE BETWEEN FLOOR SLAB AND PIPE SHALL BE SEALED WITH URETHANE CAULK AT FLOOR LEVEL.
6. COORDINATE ALL MITIGATION SYSTEM PIPING ROUTES WITH ALL GENERAL, MECHANICAL, ELECTRICAL & PLUMBING WORK. NO ELBOWS SHALL BE ADDED WITHOUT THE APPROVAL OF THE OWNER AND ENGINEER.
7. VERTICAL PIPES SHALL BE SUPPORTED AND SECURED AT LEAST EVERY 8 FEET AND AT POINTS ABOVE AND BELOW POINTS OF PENETRATIONS THROUGH FLOORS, CEILINGS, AND ROOFS.
8. HORIZONTAL PIPES SHALL BE SLOPED TO PROMOTE DRAINAGE OF CONDENSATION / WATER DOWNWARD TO EXTRACTION PIT.
9. HORIZONTAL PIPES SHALL BE ADEQUATELY SUPPORTED AT 6-FT INTERVALS.
10. ALL EXPOSED / VISIBLE / ACCESSIBLE INTERIOR PIPING HAVING TO DO WITH THE MITIGATION SYSTEM SHALL BE LABELED WITH A LABEL THAT READS: VAPOR / RADON REDUCTION SYSTEM.
11. MITIGATION SYSTEM PIPING ABOVE CEILING IN PLENUM RETURN SPACES SHALL BE WRAPPED WITH APPROVED PIPING FIRE WRAP. THE WRAPPED PVC SHALL STILL BEAR THE REQUIRED LABELING.
12. ALL TRENCHES AND EXTRACTION PITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. EACH VERTICAL RISER SHALL BE EQUIPPED WITH A U-TUBE MANOMOETER IN A LOCATION THAT ALLOWS VISUAL VERIFICATION OF PRESSURE DIFFERENTIAL BETWEEN THE SYSTEM PIPING AND THE AMBIENT INDOOR AIR OF THE FACILITY. MANOMETER SHALL BE CAPABLE OF MEASURING DIFFERENTIAL PRESSURE IN THE RANGE OF 0 TO 4.5 INCHES OF WATER. MANOMETER SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
13. MANOMETERS SHALL BE INSTALLED AT APPROX. 6' ABOVE FLOOR HEIGHT ON EACH VERTICAL RISER. WHERE RISERS ARE ENCASED IN SHEETROCK, ACCESS TO THE MANOMETERS SHALL BE PROVIDED BY A 12"X12" LOCKABLE INSULATED FIRE-RATED ACCESS DOOR (BABCOCK-DAVIS BIT OR BIW, OR EQUIVALENT) AT LOCATIONS INDICATED ON THE V-SERIES DRAWINGS. ALL ACCESS DOORS SHALL BE KEYED THE SAME. MANOMETER AND DOOR INSTALL TO BE COORDINATED WITH SHEETROCK TRADE. THE MANOMETER AND PANEL SHALL BE ACCESSIBLE FROM A COMMON SPACE (EG HALLWAY) WHERE POSSIBLE.
14. EACH VERTICAL RISER SHALL BE EQUIPPED WITH A MANOMETER IN A CONSPICUOUS LOCATION TO ALLOW VISUAL CONFIRMATION OF SYSTEM OPERATION AND ADEQUATE NEGATIVE PRESSURE. THE TUBING CONNECTION INTO THE RISER SHALL BE AIR-TIGHT.
15. VENT STACK PIPES SHALL EXTEND VERTICALLY A MINIMUM OF 48 INCHES ABOVE SURFACE OF ROOF. DISCHARGE / EXHAUST POINTS SHALL BE A MINIMUM OF 10 FEET AWAY FROM ANY WINDOW, DOOR, AIR INTAKES, OR OTHER OPENING INTO CONDITIONED / OCCUPIED BUILDING SPACE, AND 10 FEET OR MORE AWAY FROM SIMILAR OPENINGS OF ADJACENT BUILDINGS.
16. THE TOP OF EACH RISER / EXHAUST PIPE SHALL BE EQUIPPED WITH A RODENT SCREEN TO PREVENT DEBRIS AND RODENTS FROM ENTERING. SCREEN SHALL BE NO LESS THAN ½ INCH IN SPACING.

INLINE FANS:

1. MITIGATION FANS SHALL BE RADONAWAY MODEL RP265 OR ENGINEER-APPROVED EQUIVALENT.
2. MITIGATION FANS AND ALL ELECTRICAL CONNECTIONS SHALL BE RATED FOR OUTDOOR / EXTERIOR APPLICATION AND COMPLY WILL ALL APPLICABLE ELECTRICAL CODES.
3. MITIGATION FANS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURE.
4. MITIGATION FANS SHALL BE CONNECTED TO RISER AND EXHAUST PIPING USING FLEXIBLE ANTI-VIBRATION CONNECTIONS CONFORMING TO ASTM D5926.

SPECIAL INSPECTIONS AND TESTS

1. THE PLACEMENT OF SUB-SLAB AGGREGATE, SUB-SLAB EXTRACTION PITS, AND SUB-SLAB PIPING SHALL BE INSPECTED BY ENGINEER PRIOR TO INSTALLATION OF THE MEMBRANE. THE CONTRACTOR SHALL PROVIDE ENGINEER AT LEAST ONE WEEK NOTICE BEFORE REQUESTED INSPECTIONS AND PRIOR TO THE PLACEMENT OF THE MEMBRANE.
2. THE PLACEMENT OF THE MEMBRANE, RISER PIPE STUBS, AND UTILITY PENETRATION BOOTS SHALL BE INSPECTED BY ENGINEER PRIOR TO POURING OF FLOOR SLAB CONCRETE. THE CONTRACTOR SHALL PROVIDE ENGINEER AT LEAST ONE WEEK NOTICE BEFORE REQUESTED INSPECTIONS.
3. THE CONTRACTOR SHALL ARRANGE FOR ENGINEER TO CHECK THE OPERATION OF SYSTEMS AFTER THE FANS HAVE BEEN MADE OPERATIONAL AND BEFORE THE BUILDING IS OCCUPIED.

SUBMITTALS

1. SHOP DRAWINGS, MATERIAL SPECIFICATIONS, INSTALLATION INSTRUCTIONS, OPERATION AND MAINTENANCE INFORMATION, AND WARRANTIES SHALL BE SUBMITTED TO ENGINEER PRIOR TO FABRICATION, CONSTRUCTION, AND/OR INSTALLATION, AS APPLICABLE, FOR THE FOLLOWING:
   a. AGGREGATE
   b. SUB-SLAB PIPING MATERIAL AND RELATED PRODUCTS
   c. MEMBRANE AND RELATED PRODUCTS (SEAM-TAPE, DOUBLE-SIDED TAPE, TACK BAR)
   d. RISER PIPE MATERIAL AND LOCATIONS (INCLUDING FAN LOCATIONS)
   e. URETHANE CAULK AND OTHER SEALANTS
   f. MANOMETER MATERIALS AND LOCATIONS
   g. IN-LINE FAN UNITS
2. SHOP DRAWINGS AND OTHER SUBMITTALS ARE REVIEWED BY ENGINEER ONLY FOR GENERAL COMPLIANCE WITH THESE SUB-SLAB DEPRESSURIZATION SYSTEM DRAWINGS. RESPONSIBILITY FOR CORRECTNESS SHALL REST WITH THE CONTRACTOR. NOTE THAT THE DRAWINGS AND SPECIFICATIONS HEREIN TAKE PRECEDENCE OVER SHOP DRAWINGS OR OTHER SUBMITTALS PROVIDED BY THE CONTRACTOR. REQUESTS TO PERFORM MODIFICATIONS SHALL BE SUBMITTED SEPARATELY FOR ENGINEER'S REVIEW.

UTILITIES:

1. THE CONTRACTOR IS RESPONSIBLE FOR THE INVESTIGATION, LOCATION, SUPPORT, PROTECTION, AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES WHETHER SHOWN ON THESE PLANS OR NOT. THE CONTRACTOR SHALL EXPOSE ALL UTILITIES OR STRUCTURES PRIOR TO CONSTRUCTION TO VERIFY THE VERTICAL AND HORIZONTAL EFFECTS ON THE PROPOSED CONSTRUCTION.
2. THE CONTRACTOR SHALL NOTIFY THE U DIG NY AT LEAST 7 DAYS PRIOR TO THE START OF CONSTRUCTION.
3. WHERE POTENTIAL GRADE CONFLICTS MIGHT OCCUR WITH EXISTING UTILITIES, THE CONTRACTOR SHALL UNCOVER THE EXISTING UTILITY IN ADVANCE OF LAYING PIPE IN ORDER THAT THE ENGINEER MAY DETERMINE THE EXACT ELEVATION AND MAKE ANY NECESSARY ADJUSTMENTS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR EXERCISING REASONABLE CARE IN OPERATING EQUIPMENT IN THE VICINITY OF UTILITIES, WHETHER OVERHEAD, AT GROUND LEVEL, OR BURIED, AND SHALL SAVE AND HOLD HARMLESS C&S EINGINEERS, INC., THE OWNER AND ANY OF THEIR DESIGNATED AGENTS FROM AND AGAINST ANY AND ALL CLAIMS AND DAMAGES OF ANY KIND OF INJURY TO, OR DEATH TO, ANY PERSON OR PERSONS AND FROM DAMAGE TO OR LOSS OF PROPERTY, ARISING OUT OF, OR ATTRIBUTED TO THE NEGLIGENCE OF CONTRACTOR'S OPERATIONS.

ELECTRICAL:

1. ALL ELECTRICAL WORK TO BE COMPLETED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL ELECTRICAL CODES, REGULATIONS AND REQUIREMENTS.
2. INSTALL AN OPERATIONAL MITIGATION FAN ALARM SYSTEM. EACH MITIGATION FAN SHALL BE EQUIPPED WITH AN ALARM TO PROVIDE AUDIBLE AND VISUAL INDICATION TO ALERT THE BUILDING MANAGER ON DUTY WHEN SYSTEM IS OFF. THE ALARM PANEL SHALL BE CENTRALLY LOCATED IN THE OFFICE SECTION ON THE FIRST FLOOR.THE ASSOCIATED PANEL AND BREAKER NUMBER SHALL BE INDICATED ON THE AS-BUILTS.
3. COMPLETE ALL ELECTRICAL WORK NECESSARY TO SUPPLY POWER TO THE SSDS PRE-PACKAGED AND PRE-WIRED SYSTEMS STAGED AT ROOF, INCLUDING ALL ELECTRICAL CONNECTIONS TO THE PANEL-MOUNT DISCONNECT SWITCHES PROVIDED WITH EACH SYSTEM.
4. INSTALL AND SECURE ALL SSDS PRE-PACKAGED EQUIPMENT AT THE ROOF LOCATIONS SHOWN HEREIN. EQUIPMENT SHALL BE ANCHORED/SECURED TO ROOF AS DIRECTED BY OWNER.

EQUIPMENT:

1. MITIGATION FANS SHALL BE RADONAWAY MODEL RP265 PRO SERIES OR ENGINEER-APPROVED EQUIVALENT.
2. MITIGATION SYSTEM FAN ALARM
3. MANOMETERS SHALL BE RADONAWAY® U-TUBE EASY-READ MANOMETERS OR EQUIVALENT.
4. INSULATED FIRE-RATED ACCESS DOORS SHALL BE BABCOCK-DAVIS BIT OR BIW, OR EQUIVALENT
5. PRESSURE TUBING SHALL BE ¼" O.D. TYPE LM T.BLACK NYLAFLOW TUBING, OR EQUIVALENT
6. PRESSURE TUBING CAP SHALL BE SWAGELOK CARBON STEEL CAP FOR ¼" O.D. TUBING (OR EQUIVALENT)
7. VAPOR SAMPLING DEVICE SHALL BE VAPOR PIN ® (FLX-VPSS), OR EQUIVALENT.

WARRANTY:

1. ALL WORK PERFORMED BY THE CONTRACTOR (OR CONTRACTOR'S SUBCONTRACTORS) TO BE WARRANTED FOR ONE YEAR FROM THE DATE OF COMPLETION.
2. DURING THE WARRANTY PERIOD, THE CONTRACTOR SHALL COMPLETE ANY ITEM OF WORK NEEDING TO BE REPLACED AND/OR REPAIRED AT NO COST TO THE OWNER, WITHIN TWO WEEKS AFTER NOTIFICATION BY THE OWNER.

CONCRETE:

1. CONCRETE SHALL BE 4,000 PSI (28-DAY) MINIMUM COMPRESSIVE STRENGTH.
2. ALL INTERIOR CONCRETE WORK SHALL BE COMPLETED IN ACCORDANCE WITH ACI 301, ACI 315, AND ACI 318.
3. ALL CRACKS, PERFORATION, HOLES, AND OTHER PENETRATIONS THROUGH CONCRETE FOUNDATION SHALL BE THOROUGHLY SEALED WITH ELASTOMERIC / URETHANE SEALANT.
4. ALL DISCONTINUITIES WITHIN THE FLOOR SLAB, INCLUDING BUT NOT LIMITED TO EXPANSION JOINTS, PIPE AND UTILITY PENETRATIONS, CONTROL JOINTS, CONSTRUCTION JOINTS, CRACKS IN THE FLOOR SLAB SHALL BE SEALED AT THE FINISHED FLOOR SURFACE USING URETHANE SEALANT.
5. ALL OPENINGS IN THE FLOOR SLAB GREATER THAN 0.5 INCHES IN WIDTH SHALL BE FILLED WITH SUITABLE EXPANDING FOAM SEALANT AND SEALED AT THE FINISHED FLOOR SURFACE WITH URETHANE SEALANT.

SITE RESTORATION:

1. REPAIR AND/OR REPLACE ANY FLOORING, STAIRWAYS, DRIVEWAYS, CONCRETE SIDEWALKS, CONCRETE APRONS, LANDSCAPING, ETC. DAMAGED OR REMOVED DURING CONSTRUCTION ACTIVITIES.

HEALTH AND SAFETY:

1. CONTRACTOR SHALL COMPLY WITH 40 CFR 1910.120 (OSHA HAZWOPER).
2. COMPLY WITH BASIC PROVISIONS OF OSHA HEALTH AND SAFETY STANDARDS 29 CFR 1910 AND GENERAL CONSTRUCTION STANDARDS 29 CFR 1926, AS APPROPRIATE TO THIS CONSTRUCTION AND SITE ACTIVITY.
3. ADHERE TO OSHA EXCAVATION REGULATIONS 29 CFR SECTIONS 1926.650, 1926.651, AND 1926.652.
4. ENSURE THAT ALL PERSONNEL ON SITE AND ALL ACTIVITIES CONTAINED THEREIN COMPLY WITH APPLICABLE LAWS AND REGULATIONS OF THE PUBLIC BODY HAVING JURISDICTION FOR SAFETY OF PERSONS OR PROPERTY.
5. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION AND ENFORCEMENT OF THEIR HEALTH AND SAFETY PLAN, AND TAKE THE NECESSARY PRECAUTIONS AND PROVIDE PROTECTION FOR:
   a. PERSONNEL WORKING ON OR VISITING THE PROJECT SITE (IRRESPECTIVE OF EMPLOYED BY THE CONTRACTOR);
   b. WORK MATERIAL(S) TO BE INCORPORATED INTO THE WORK AREA ON OR OFF SITE;
   c. OTHER PROPERTY AT OR ADJACENT TO THE PROJECT SITE; AND
   d. MEMBERS OF THE PUBLIC POTENTIALLY EXPOSED TO JOB RELATED ACTIVITY.

CONTAMINATED SOIL AND GROUNDWATER ENCOUNTERED DURING CONSTRUCTION:

1. THE SITE MAY CONTAIN SOILS AND GROUNDWATER IMPACTED WITH VOLATILE ORGANIC COMPOUNDS (VOC)s. IF ENCOUNTERED, CONTAMINATED SOILS AND GROUNDWATER MUST BE MANAGED IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS.
2. ALL ACTIVITIES RELATED TO THE DISTURBANCE OF SOILS, TRENCH AND EXCAVATION WATER AND/OR GROUNDWATER AT THE SITE SHOULD BE CONDUCTED IN ACCORDANCE WITH AN ADEQUATE HEALTH AND SAFETY PLAN IN ACCORDANCE WITH OSHA REQUIREMENTS. THE CONTRACTOR MUST HAVE ITS OWN HEALTH AND SAFETY PLAN.
3. SOILS SHALL NOT BE TRANSPORTED OFF SITE UNTIL THEY ARE SCREENED AND DETERMINED TO BE 'CLEAN' OR SOILS ARE CHARACTERIZED TO DETERMINE PROPER DISPOSAL REQUIREMENTS AND APPLICABLE PERMITS OR REGULATORY APPROVAL IS OBTAINED.
4. SHOULD WATER BE ENCOUNTERED, THE CONTRACTOR SHALL FURNISH AND OPERATE SUITABLE PUMPING EQUIPMENT OF SUCH CAPACITY ADEQUATE TO DEWATER THE TRENCH OR EXCAVATION. TRENCHES SHALL BE SUFFICIENTLY DEWATERED SO THAT THE PLACEMENT OF BEDDING AND LAYING AND JOINING OF THE PIPE IS MADE IN A TRENCH FREE OF STANDING WATER. THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO PROPERLY PLAN AND MANAGE SURFACE WATER AND GROUNDWATER IN TRENCHES AND EXCAVATIONS.
5. SURFACE WATER OR GROUNDWATER COLLECTED IN A TRENCH OR EXCAVATION SHALL NOT BE DISCHARGED TO A STORM OR SANITARY SEWER.
6. INFORMATION REGARDING THE CONTAMINANTS IDENTIFIED AT THIS SITE CAN BE OBTAINED FROM THE ENGINEER, IF NECESSARY.

VAPOR PIN INSTALLATION:

INSTALL VAPOR PINS FOR FUTURE TESTING POINTS. VAPOR PINS SHALL BE INSTALLED ACCORDING TO FOLLOWING MANUFACTURER INSTRUCTIONS.

VaporPin®

Standard Operating Procedure Installation and Extraction of the Vapor Pin®
Updated March 16, 2018

Scope:

This standard operating procedure describes the installation and extraction of the VAPOR PIN® for use in sub-slab soil-gas sampling.

Purpose:

The purpose of this procedure is to assure good quality control in field operations and uniformity between field personnel in the use of the VAPOR PIN® for the collection of sub-slab soil-gas samples or pressure readings.

Equipment Needed:

- Assembled VAPOR PIN® [VAPOR PIN® and silicone sleeve](Figure 1)[; Because of sharp edges, gloves are recommended for sleeve installation;
- Hammer drill;
- 5/8-inch (16mm) diameter hammer bit (hole must be 5/8-inch (16mm) diameter to ensure seal. It is recommended that you use the drill guide), [Hilti™ TE-YX 5/8" x 22" (400 mm) #00206514 or equivalent];
- 1⅛-inch (38mm) diameter hammer bit (Hilti™ TE-YX 1⅛" x 23" #00293032 or equivalent) for flush mount applications;
- ¾-inch (19mm) diameter bottle brush;
- Wet/Dry vacuum with HEPA filter (optional);
- VAPOR PIN® installation/extraction tool;
- Dead blow hammer;
- VAPOR PIN® flush mount cover, if desired;
- VAPOR PIN® drilling guide, if desired;
- VAPOR PIN® protective cap; and
- VOC-free hole patching material (hydraulic cement) and putty knife or trowel for repairing the hole following the extraction of the VAPOR PIN®.

Figure 1. Assembled VAPOR PIN®

Installation Procedure:

1) Check for buried obstacles (pipes, electrical lines, etc.) prior to proceeding.
2) Set up wet/dry vacuum to collect drill cuttings.
3) If a flush mount installation is required, drill a 1⅛-inch (38mm) diameter hole at least 1⅝-inches (45mm) into the slab. Use of a VAPOR PIN® drilling guide is recommended.
4) Drill a 5/8-inch (16mm) diameter hole through the slab and approximately 1-inch (25mm) into the underlying soil to form a void. Hole must be 5/8-inch (16mm) in diameter to ensure seal. It is recommended that you use the drill guide.

5) Remove the drill bit, brush the hole with the bottle brush, and remove the loose cuttings with the vacuum.
6) Place the lower end of VAPOR PIN® assembly into the drilled hole. Place the small hole located in the handle of the installation/extraction tool over the vapor pin to protect the barb fitting, and tap the vapor pin into place using a dead blow hammer (Figure 2). Make sure the installation/extraction tool is aligned parallel to the vapor pin to avoid damaging the barb fitting.

Figure 2. Installing the VAPOR PIN®

During installation, the silicone sleeve will form a slight bulge between the slab and the VAPOR PIN® shoulder. Place the protective cap on VAPOR PIN® to prevent vapor loss prior to sampling (Figure 3).

Figure 3. Installed VAPOR PIN®

7) For flush mount installations, cover the vapor pin with a flush mount cover, using either the plastic cover or the optional stainless-steel Secure Cover (Figure 4).

Figure 4. Secure Cover Installed

8) Allow 20 minutes or more (consult applicable guidance for your situation) for the sub-slab soil-gas conditions to re-equilibrate prior to sampling.
9) Remove protective cap and connect sample tubing to the barb fitting of the VAPOR PIN®. This connection can be made using a short piece of Tygon™ tubing to join the VAPOR PIN® with the

Nylaflow tubing (Figure 5). Put the Nylaflow tubing as close to the VAPOR PIN® as possible to minimize contact between soil gas and Tygon™ tubing.

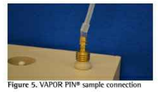


Figure 5. VAPOR PIN® sample connection

10) Conduct leak tests in accordance with applicable guidance. If the method of leak testing is not specified, an alternative can be the use of a water dam and vacuum pump, as described in SOP Leak Testing the VAPOR PIN® via Mechanical Means (Figure 6). For flush-mount installations, distilled water can be poured directly into the 1 1/2 inch (38mm) hole.

Figure 6. Water dam used for leak detection

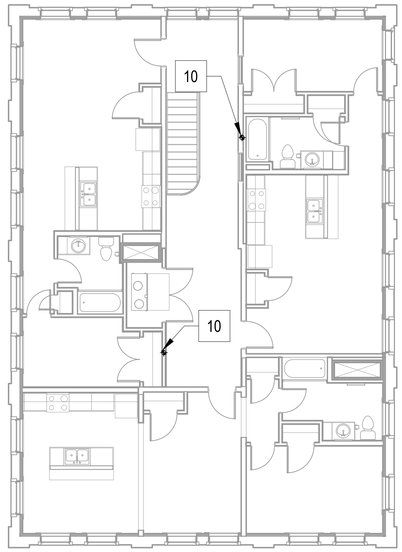
11) Collect sub-slab soil gas sample or pressure reading. When finished, replace the protective cap and flush mount cover until the next event. If the sampling is complete, extract the VAPOR PIN®.

Extraction Procedure:

1) Remove the protective cap, and thread the installation/extraction tool onto the barrel of the VAPOR PIN® (Figure 7). Turn the tool clockwise continuously, don't stop turning, the VAPOR PIN® will feed into the bottom of the installation/extraction tool and will extract from the hole like a wine cork, DO NOT PULL.
2) Fill the void with hydraulic cement and smooth with a trowel or putty knife.

Figure 7. Removing the VAPOR PIN®

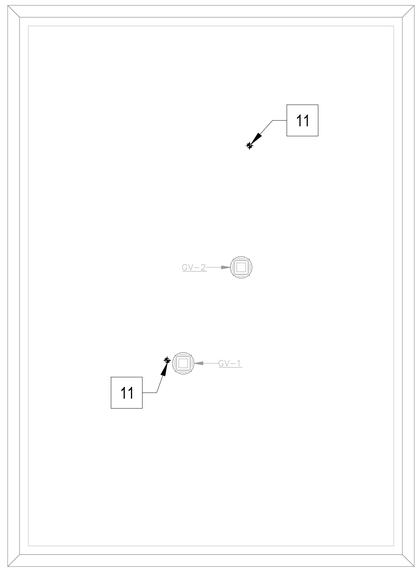
- Prior to reuse, remove the silicone sleeve and protective cap and discard. Decontaminate the VAPOR PIN® in a hot water and Alconox® wash, then heat in an oven to a temperature of 265° F (130° C) for 15 to 30 minutes. For both steps, STAINLESS = ½ hour, BRASS 8 minutes



PLAN NORTH

A1 SECOND FLOOR - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

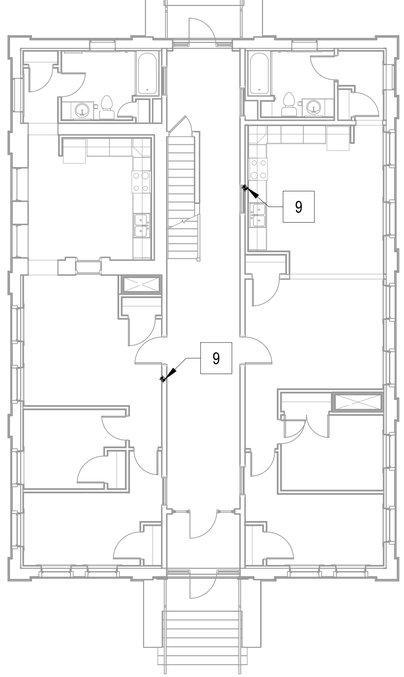
0 4' 8' 16'



PLAN NORTH

C3 ROOF - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

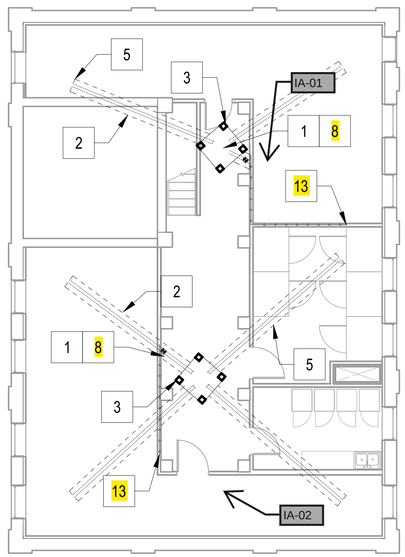
0 4' 8' 16'



PLAN NORTH

A1 FIRST FLOOR - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'



PLAN NORTH

A3 BASEMENT - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

0 4' 8' 16'

KEYED NOTES:

1. 6" SCHED. 40 PVC VERTICAL VAPOR & RADON MITIGATION PIPE (NO TURNS) UP THROUGH FLOORS ABOVE TO ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A3) ON DETAIL SHEET (V-200)
2. 4" SCHED. 40 PVC PERFORATED PIPING-TYPE DB - UNDER SLAB. SEE DETAIL (B3) ON DETAIL SHEET (V-200)
3. VAPOR & RADON MITIGATION PIT. SEE DETAIL (A1) ON DETAIL SHEET (V-200),
4. PROPOSED UTILITY TRENCH TO BE UTILIZED TO SUPPORT 4" SCHED. 40 PVC PERFORATED PIPING. TRENCH TO BE BACKFILLED WITH CLEANED, WASHED, COARSE STONE. SEE NOTE SHEET (G-101) FOR FURTHER INFORMATION.
5. PROPOSED TRENCH EXTENSION TO SUPPORT MITIGATION COVERAGE. TRENCH EXTENSION SHOULD TERMINATE 5' FROM EXTERIOR WALL.
6. PROPOSED TRENCH CONNECTION TO SUPPORT MITIGATION COVERAGE.
7. VAPOR / RADON ALARM SYSTEM SHALL BE LOCATED IN THE OFFICE (COORDINATE LOCATION WITH OWNER).
8. A MINIMUM OF A 12"x12" INSULATED FIRE-RATED ACCESS DOOR SHALL BE INSTALLED (DETAIL C1) TO ALLOW INSPECTIONS / READINGS OF MANOMETER (DETAIL C3) AND SUB-SLAB PRESSURE READINGS FROM TUBING CONNECTED TO NEARBY VAPOR POINT (DETAIL D3). ALL DETAILS CAN BE FOUND ON SHEET (V-200) AND ADDITIONAL INFORMATION CAN BE FOUND ON NOTE SHEET (G-101).
9. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE (NO TURNS) - UP THROUGH ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION.
10. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE. PIPE TO PENETRATE EPDM ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A4) ON DETAIL SHEET (V-200),
11. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW. PIPING AT EPDM ROOF. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
12. MAINTAIN MINIMUM SEPERATION OF 10'-0" BETWEEN ERV INTAKE AND VENTS/EF'S AND MITIGATION EXHAUSTS. (TYP. ALL ERV'S)
13. INSTALL VAPOR PIN® ACCORDING TO INSTALLATION INSTRUCTIONS PROVIDED ON NOTE SHEET (G-101) AND SEE DETAIL (C4) ON DETAIL SHEET (V-200) FOR FURTHER INFORMATION.

LEGEND:

- VAPOR/RADON MITIGATION RISER
- PROPOSED UTILITY TRENCH
- PROPOSED TRENCH EXTENSION / CONNECTION
- 4" SCHED. 40 PVC PERORATED PIPING
- PRESSURE FIELD TESTING LINE

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION #: 00 5122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION DESIGN SYSTEM

MARK	DATE	DESCRIPTION

REVISIONS

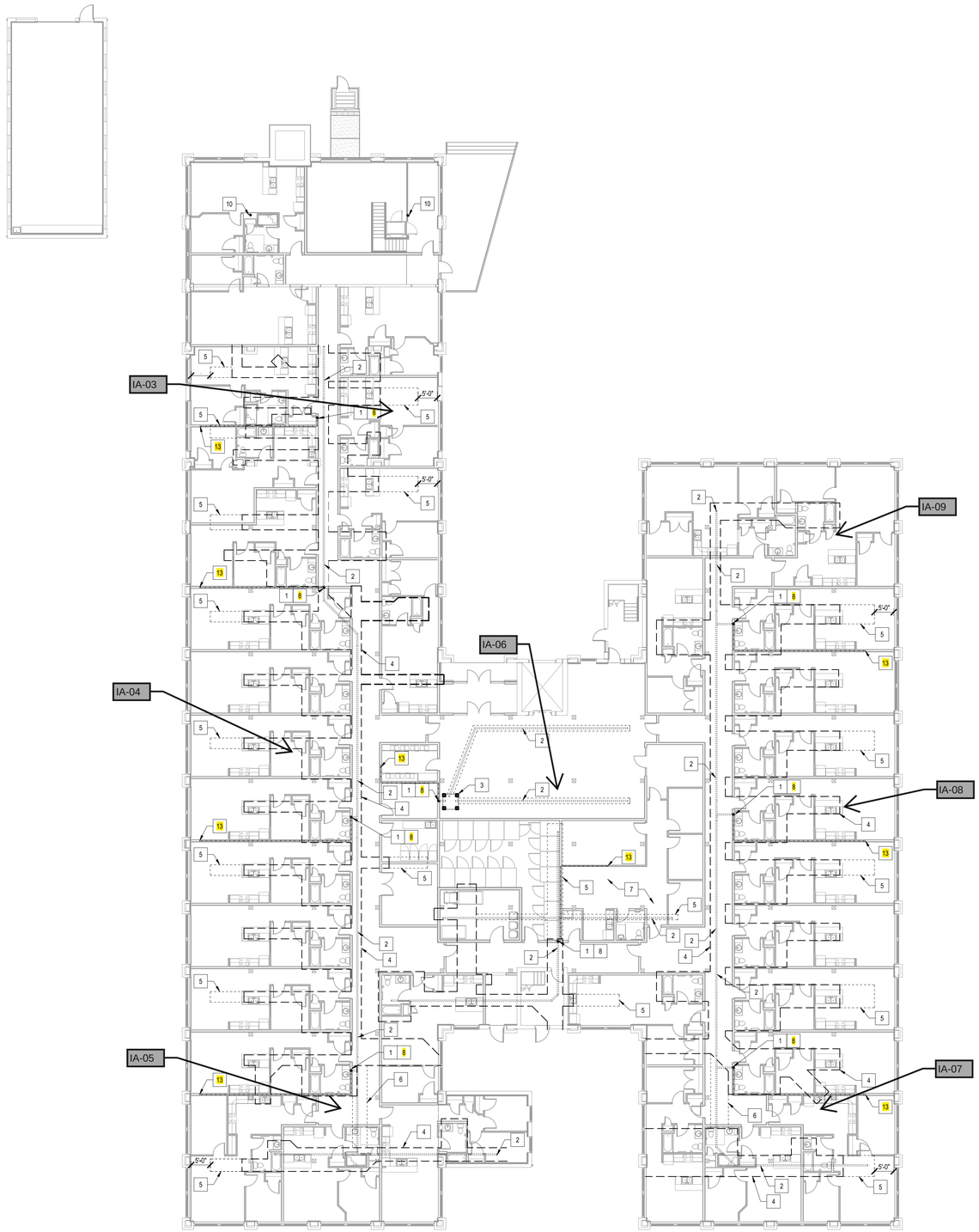
PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

SOIL VAPOR / RADON MITIGATION SYSTEM

ANNEX BUILDING

V-100

May 29, 2024 - 4:55pm
C:\temp\acadtemp\AcPublish_48584\V-100_Coventry Commons_SSDS Design_Annex_B-2_Plan_reconvet.dwg



PLAN NORTH

A1 FIRST FLOOR - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

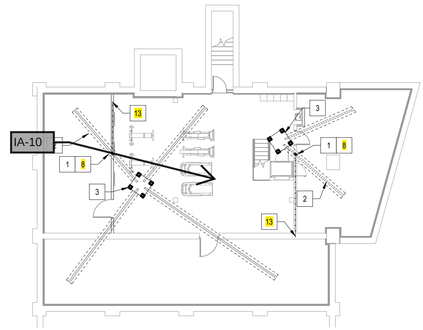
0 8' 16' 32'

KEYED NOTES:

1. 6" SCHED. 40 PVC VERTICAL VAPOR & RADON MITIGATION PIPE (NO TURNS) UP THROUGH FLOORS ABOVE TO ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A3) ON DETAIL SHEET (V-200)
2. 4" SCHED. 40 PVC PERFORATED PIPING-TYPE DB - UNDER SLAB. SEE DETAIL (B3) ON DETAIL SHEET (V-200)
3. VAPOR & RADON MITIGATION PIT, SEE DETAIL (A1) ON DETAIL SHEET (V-200).
4. PROPOSED UTILITY TRENCH TO BE UTILIZED TO SUPPORT 4" SCHED. 40 PVC PERFORATED PIPING. TRENCH TO BE BACKFILLED WITH CLEANED, WASHED, COARSE STONE. SEE NOTE SHEET (G-101) FOR FURTHER INFORMATION.
5. PROPOSED TRENCH EXTENSION TO SUPPORT MITIGATION COVERAGE. TRENCH EXTENSION SHOULD TERMINATE 5' FROM EXTERIOR WALL.
6. PROPOSED TRENCH CONNECTION TO SUPPORT MITIGATION COVERAGE.
7. VAPOR / RADON ALARM SYSTEM SHALL BE LOCATED IN THE OFFICE (COORDINATE LOCATION WITH OWNER), SEE DETAIL (D4) ON DETAIL SHEET (V-200)
8. A MINIMUM OF A 12"x12" INSULATED FIRE-RATED ACCESS DOOR SHALL BE INSTALLED (DETAIL C1) TO ALLOW INSPECTIONS / READINGS OF MANOMETER (DETAIL C3) AND SUB-SLAB PRESSURE READINGS FROM TUBING CONNECTED TO NEARBY VAPOR POINT (DETAIL D3). ALL DETAILS CAN BE FOUND ON SHEET (V-200) AND ADDITIONAL INFORMATION CAN BE FOUND ON NOTE SHEET (G-101).
9. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE (NO TURNS) - UP THROUGH ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION.
10. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE. PIPE TO PENETRATE EPDM ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
11. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW. PIPING AT EPDM ROOF. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
12. MAINTAIN MINIMUM SEPERATION OF 10'-0" BETWEEN ERV INTAKE AND VENTS/EF'S AND MITIGATION EXHAUSTS, (TYP, ALL ERV'S)
13. INSTALL VAPOR PIN® ACCORDING TO INSTALLATION INSTRUCTIONS PROVIDED ON NOTE SHEET (G-101) AND SEE DETAIL (C4) ON DETAIL SHEET (V-200) FOR FURTHER INFORMATION.

LEGEND:

- VAPOR/RADON MITIGATION RISER
- EXISTING UTILITY TRENCH
- NEW TRENCH AND/OR TRENCH EXTENSION
- 4" SCHED. 40 PVC PERORATED PIPING
- PRESSURE FIELD TESTING LINE



PLAN NORTH

A3 BASEMENT - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com
CERTIFICATE OF AUTHORIZATION #: 00 5122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION
DESIGN SYSTEM

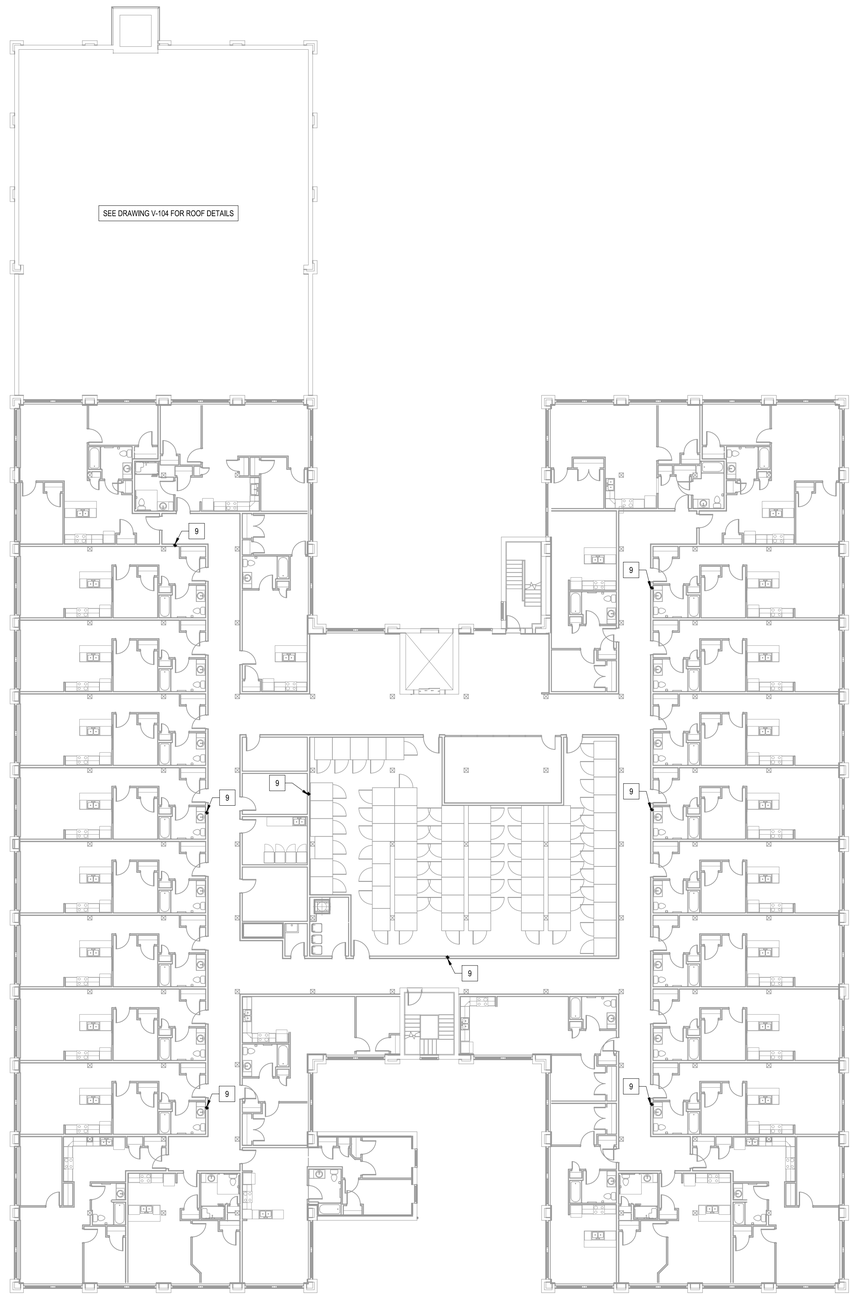
MARK	DATE	DESCRIPTION
		REVISIONS

PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

SOIL VAPOR / RADON MITIGATION SYSTEM

MAIN BUILDING BASEMENT & FIRST FLOOR

V-101



KEYED NOTES:

1. 6" SCHED. 40 PVC VERTICAL VAPOR & RADON MITIGATION PIPE (NO TURNS) UP THROUGH FLOORS ABOVE TO ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A3) ON DETAIL SHEET (V-200)
2. 4" SCHED. 40 PVC PERFORATED PIPING-TYPE DB - UNDER SLAB. SEE DETAIL (B3) ON DETAIL SHEET (V-200)
3. VAPOR & RADON MITIGATION PIT, SEE DETAIL (A1) ON DETAIL SHEET (V-200).
4. PROPOSED UTILITY TRENCH TO BE UTILIZED TO SUPPORT 4" SCHED. 40 PVC PERFORATED PIPING. TRENCH TO BE BACKFILLED WITH CLEANED, WASHED, COARSE STONE. SEE NOTE SHEET (G-101) FOR FURTHER INFORMATION.
5. PROPOSED TRENCH EXTENSION TO SUPPORT MITIGATION COVERAGE. TRENCH EXTENSION SHOULD TERMINATE 5' FROM EXTERIOR WALL.
6. PROPOSED TRENCH CONNECTION TO SUPPORT MITIGATION COVERAGE.
7. VAPOR / RADON ALARM SYSTEM SHALL BE LOCATED IN THE OFFICE (COORDINATE LOCATION WITH OWNER), SEE DETAIL (D4) ON DETAIL SHEET (V-200)
8. A MINIMUM OF A 12"x12" INSULATED FIRE-RATED ACCESS DOOR SHALL BE INSTALLED (DETAIL C1) TO ALLOW INSPECTIONS / READINGS OF MANOMETER (DETAIL C3) AND SUB-SLAB PRESSURE READINGS FROM TUBING CONNECTED TO NEARBY VAPOR POINT (DETAIL D3). ALL DETAILS CAN BE FOUND ON SHEET (V-200) AND ADDITIONAL INFORMATION CAN BE FOUND ON NOTE SHEET (G-101).
9. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE (NO TURNS) - UP THROUGH ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION.
10. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE. PIPE TO PENETRATE EPDM ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
11. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW. PIPING AT EPDM ROOF. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
12. MAINTAIN MINIMUM SEPERATION OF 10'-0" BETWEEN ERV INTAKE AND VENTS/EF'S AND MITIGATION EXHAUSTS, (TYP. ALL ERV'S)
13. INSTALL VAPOR PIN® ACCORDING TO INSTALLATION INSTRUCTIONS PROVIDED ON NOTE SHEET (G-101) AND SEE DETAIL (C4) ON DETAIL SHEET (V-200) FOR FURTHER INFORMATION.

LEGEND:

- VAPOR/RADON MITIGATION RISER
- EXISTING UTILITY TRENCH
- NEW TRENCH AND/OR TRENCH EXTENSION
- 4" SCHED. 40 PVC PERORATED PIPING
- PRESSURE FIELD TESTING LINE

PLAN NORTH

A1 **SECOND FLOOR - SOIL / RADON VAPOR MITIGATION**
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com
CERTIFICATE OF AUTHORIZATION #: 00 5122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION
DESIGN SYSTEM

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

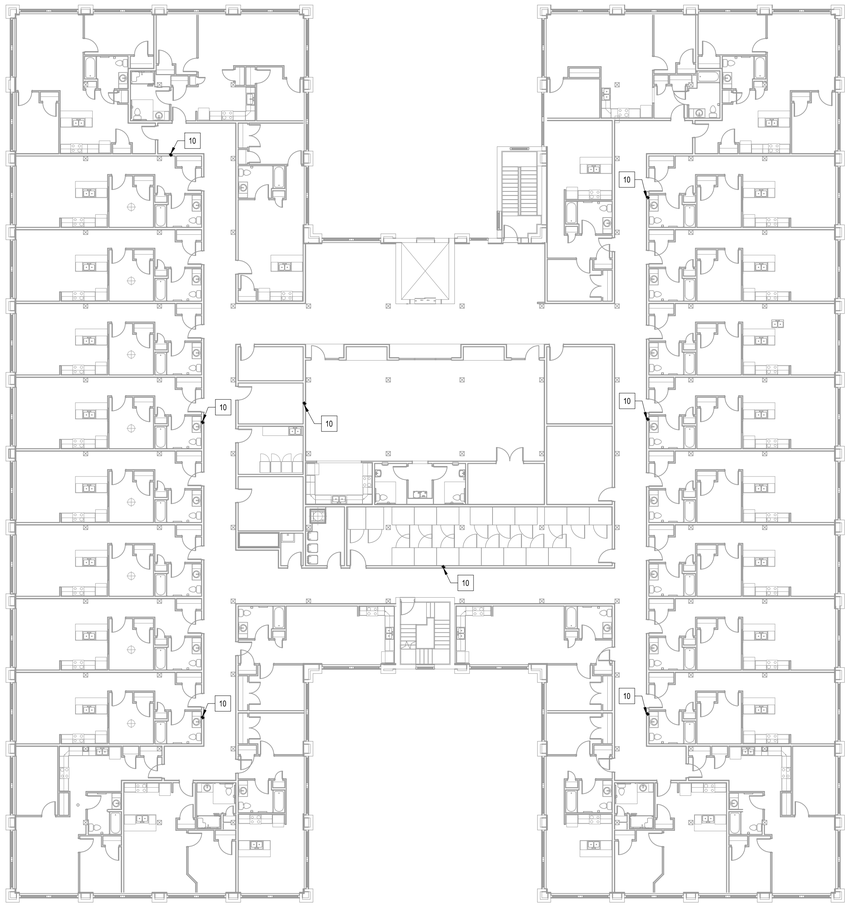
SOIL VAPOR / RADON MITIGATION SYSTEM

MAIN BUILDING

SECOND FLOOR

V-102

May 29, 2024 - 4:56pm
C:\temp\acadtemp\AcPublish_4856\4V-101-V1-104_Coventry Commons_SSDS Design_Main Bldg_B-3_Plan_recover.dwg



KEYED NOTES:

1. 6" SCHED. 40 PVC VERTICAL VAPOR & RADON MITIGATION PIPE (NO TURNS) UP THROUGH FLOORS ABOVE TO ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A3) ON DETAIL SHEET (V-200)
2. 4" SCHED. 40 PVC PERFORATED PIPING-TYPE DB - UNDER SLAB. SEE DETAIL (B3) ON DETAIL SHEET (V-200)
3. VAPOR & RADON MITIGATION PIT, SEE DETAIL (A1) ON DETAIL SHEET (V-200).
4. PROPOSED UTILITY TRENCH TO BE UTILIZED TO SUPPORT 4" SCHED. 40 PVC PERFORATED PIPING. TRENCH TO BE BACKFILLED WITH CLEANED, WASHED, COARSE STONE. SEE NOTE SHEET (G-101) FOR FURTHER INFORMATION.
5. PROPOSED TRENCH EXTENSION TO SUPPORT MITIGATION COVERAGE. TRENCH EXTENSION SHOULD TERMINATE 5' FROM EXTERIOR WALL.
6. PROPOSED TRENCH CONNECTION TO SUPPORT MITIGATION COVERAGE.
7. VAPOR / RADON ALARM SYSTEM SHALL BE LOCATED IN THE OFFICE (COORDINATE LOCATION WITH OWNER), SEE DETAIL (D4) ON DETAIL SHEET (V-200)
8. A MINIMUM OF A 12"x12" INSULATED FIRE-RATED ACCESS DOOR SHALL BE INSTALLED (DETAIL C1) TO ALLOW INSPECTIONS / READINGS OF MANOMETER (DETAIL C3) AND SUB-SLAB PRESSURE READINGS FROM TUBING CONNECTED TO NEARBY VAPOR POINT (DETAIL D3). ALL DETAILS CAN BE FOUND ON SHEET (V-200) AND ADDITIONAL INFORMATION CAN BE FOUND ON NOTE SHEET (G-101).
9. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE (NO TURNS) - UP THROUGH ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION.
10. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE. PIPE TO PENETRATE EPDM ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
11. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW. PIPING AT EPDM ROOF. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
12. MAINTAIN MINIMUM SEPERATION OF 10'-0" BETWEEN ERV INTAKE AND VENTS/EF'S AND MITIGATION EXHAUSTS, (TYP. ALL ERV'S)
13. INSTALL VAPOR PIN® ACCORDING TO INSTALLATION INSTRUCTIONS PROVIDED ON NOTE SHEET (G-101) AND SEE DETAIL (C4) ON DETAIL SHEET (V-200) FOR FURTHER INFORMATION.

LEGEND:

- VAPOR/RADON MITIGATION RISER
- EXISTING UTILITY TRENCH
- NEW TRENCH AND/OR TRENCH EXTENSION
- 4" SCHED. 40 PVC PERORATED PIPING
- PRESSURE FIELD TESTING LINE

PLAN NORTH

A1 THIRD FLOOR - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION #: 001122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION
DESIGN SYSTEM

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

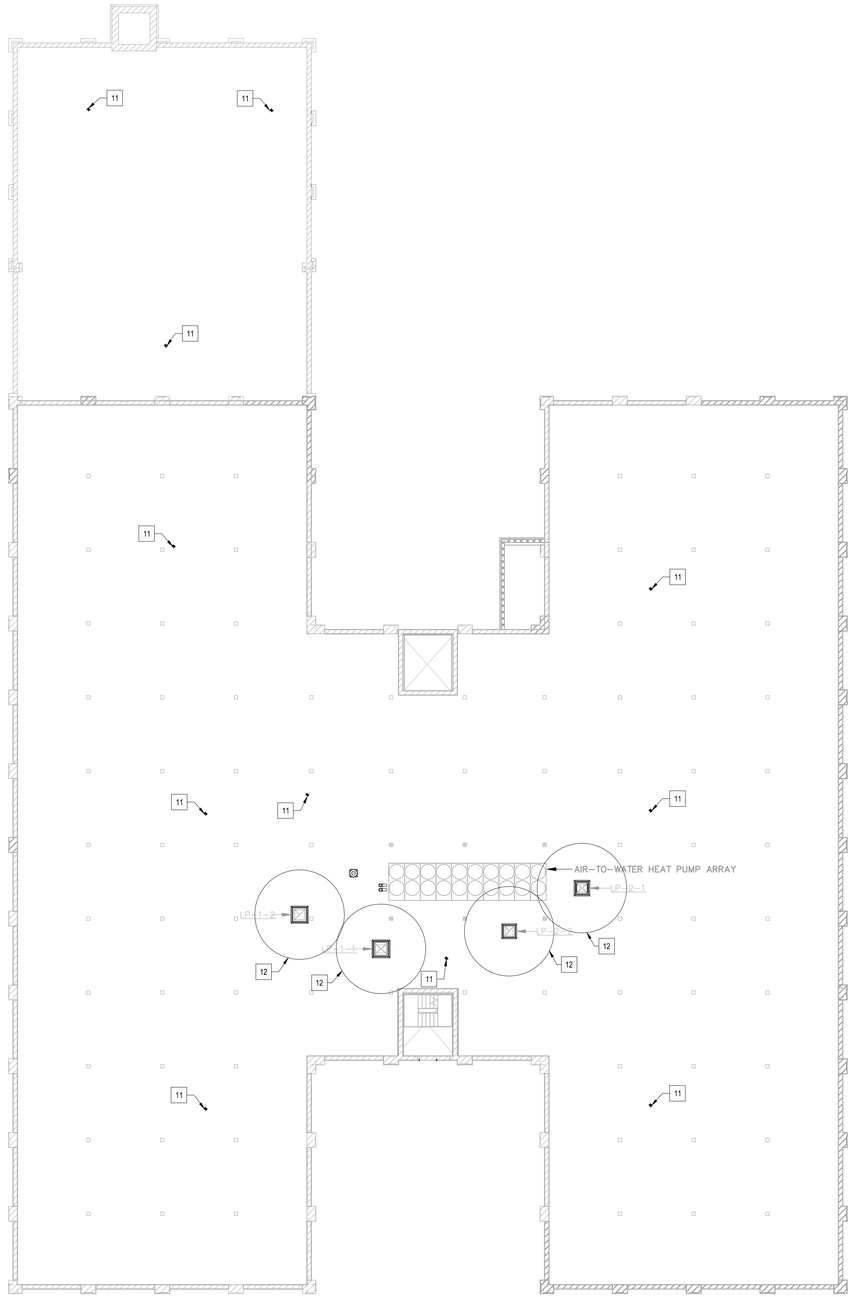
SOIL VAPOR / RADON MITIGATION SYSTEM

MAIN BUILDING

THIRD FLOOR

V-103

May 29, 2024 - 4:56pm
C:\temp\acadtemp\AcPublish_48864\V-101-V-104_Coventry Commons_SSDS Design_Main Bldg_B-3_Plan_reconer.dwg



KEYED NOTES:

1. 6" SCHED. 40 PVC VERTICAL VAPOR & RADON MITIGATION PIPE (NO TURNS) UP THROUGH FLOORS ABOVE TO ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A3) ON DETAIL SHEET (V-200)
2. 4" SCHED. 40 PVC PERFORATED PIPING-TYPE DB - UNDER SLAB. SEE DETAIL (B3) ON DETAIL SHEET (V-200)
3. VAPOR & RADON MITIGATION PIT, SEE DETAIL (A1) ON DETAIL SHEET (V-200).
4. PROPOSED UTILITY TRENCH TO BE UTILIZED TO SUPPORT 4" SCHED. 40 PVC PERFORATED PIPING. TRENCH TO BE BACKFILLED WITH CLEANED, WASHED, COARSE STONE. SEE NOTE SHEET (G-101) FOR FURTHER INFORMATION.
5. PROPOSED TRENCH EXTENSION TO SUPPORT MITIGATION COVERAGE. TRENCH EXTENSION SHOULD TERMINATE 5' FROM EXTERIOR WALL.
6. PROPOSED TRENCH CONNECTION TO SUPPORT MITIGATION COVERAGE.
7. VAPOR / RADON ALARM SYSTEM SHALL BE LOCATED IN THE OFFICE (COORDINATE LOCATION WITH OWNER), SEE DETAIL (D4) ON DETAIL SHEET (V-200)
8. A MINIMUM OF A 12"x12" INSULATED FIRE-RATED ACCESS DOOR SHALL BE INSTALLED (DETAIL C1) TO ALLOW INSPECTIONS / READINGS OF MANOMETER (DETAIL C3) AND SUB-SLAB PRESSURE READINGS FROM TUBING CONNECTED TO NEARBY VAPOR POINT (DETAIL D3). ALL DETAILS CAN BE FOUND ON SHEET (V-200) AND ADDITIONAL INFORMATION CAN BE FOUND ON NOTE SHEET (G-101).
9. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE (NO TURNS) - UP THROUGH ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION.
10. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW & UP TO ABOVE. PIPE TO PENETRATE EPDM ROOF. RISER TO BE ENCASED WITH SHEETROCK FOR PROTECTION. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
11. 6" SCHED. 40 PVC VAPOR & RADON MITIGATION PIPE FROM BELOW. PIPING AT EPDM ROOF. SEE DETAIL (A4) ON DETAIL SHEET (V-200).
12. MAINTAIN MINIMUM SEPERATION OF 10'-0" BETWEEN ERV INTAKE AND VENTS/EF'S AND MITIGATION EXHAUSTS, (TYP. ALL ERV'S)
13. INSTALL VAPOR PIN® ACCORDING TO INSTALLATION INSTRUCTIONS PROVIDED ON NOTE SHEET (G-101) AND SEE DETAIL (C4) ON DETAIL SHEET (V-200) FOR FURTHER INFORMATION.

LEGEND:

- VAPOR/RADON MITIGATION RISER
- EXISTING UTILITY TRENCH
- NEW TRENCH AND/OR TRENCH EXTENSION
- 4" SCHED. 40 PVC PERORATED PIPING
- PRESSURE FIELD TESTING LINE

PLAN NORTH

A1 ROOF - SOIL / RADON VAPOR MITIGATION
SCALE: 1/8" = 1'-0"

0 8' 16' 32'

C&S COMPANIES®
C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION #: 001122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION DESIGN SYSTEM

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

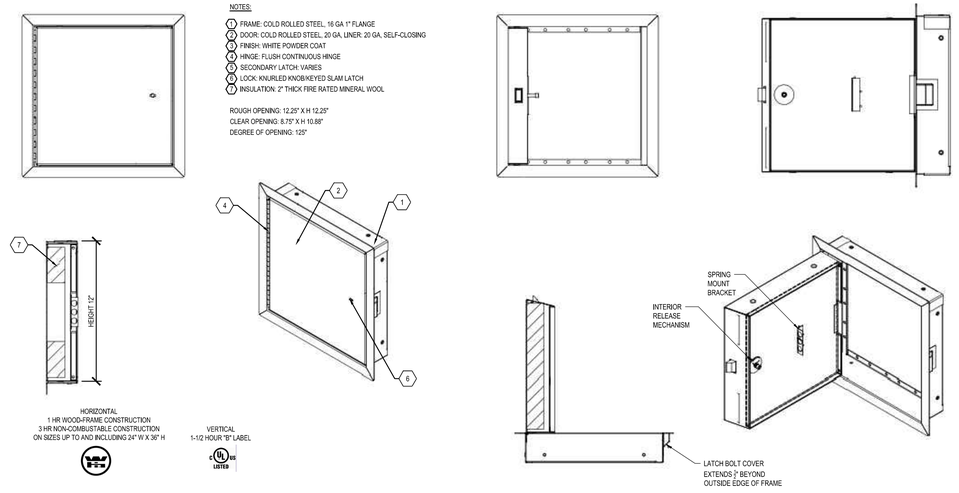
SOIL VAPOR / RADON MITIGATION SYSTEM

MAIN BUILDING

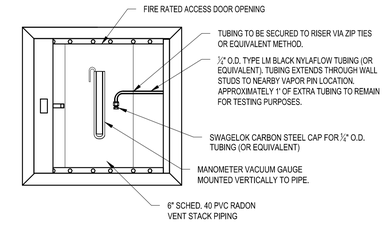
ROOF

V-104

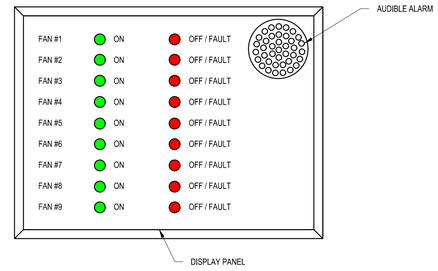
May 29, 2024 - 4:56pm
C:\temp\acadtemp\AcPublish_48584\V-101-V-104_Coventry Commons_3S835 Design_Main Bldg_B-3_Plan_recover.dwg



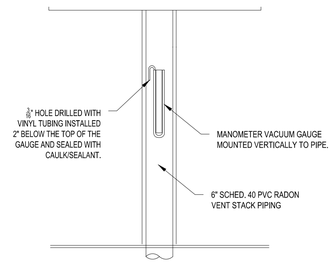
C1 INSULATED FIRE-RATED ACCESS DOOR
NOT TO SCALE



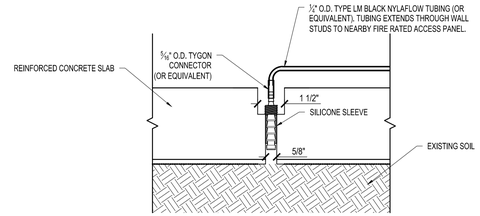
D3 PRESSURE TUBE @ MANOMETER INSTALLATION DETAIL
NOT TO SCALE



D4 FAN ALARM PANEL DETAIL
NOT TO SCALE



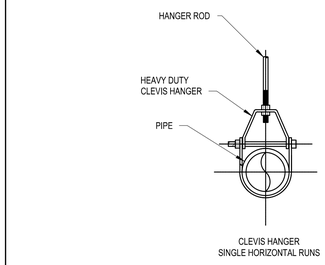
C3 MANOMETER GAUGE INSTALLATION DETAIL
NOT TO SCALE



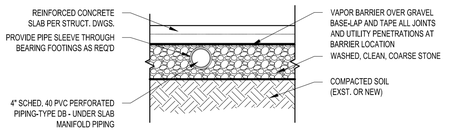
NOTE: REFER TO NOTES SHEET (G-101) FOR MANUFACTURER INSTALLATION INSTRUCTIONS.

C4 VAPOR PIN DETAIL
NOT TO SCALE

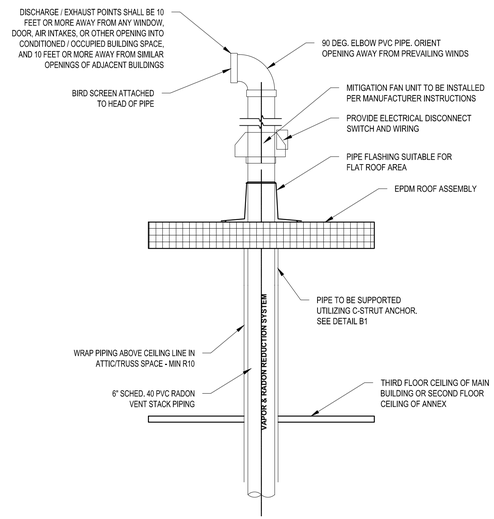
B1 PIPE SUPPORT DETAIL
NOT TO SCALE



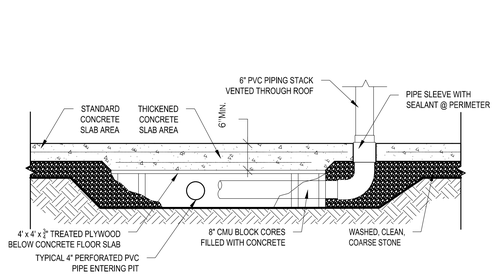
B2 HORIZONTAL PIPE SUPPORT DETAIL
NOT TO SCALE



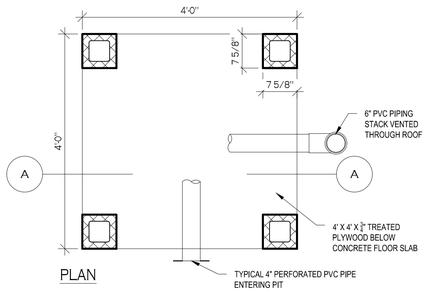
B3 SUB-SLAB PIPING DETAIL
NOT TO SCALE



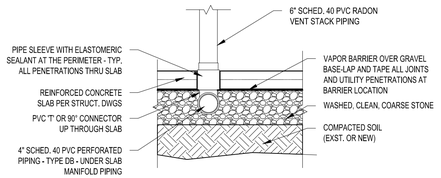
B4 VENT STACK ROOF PENETRATION DETAIL
NOT TO SCALE



A1 SUB-FLOOR EXTRACTION PIT DETAIL
NOT TO SCALE



A3 TYP. PIPE PENETRATION DETAIL
NOT TO SCALE



A4 VENT STACK ROOF PENETRATION DETAIL
NOT TO SCALE

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: 315-455-2000
Fax: 315-455-9667
www.cscos.com

CERTIFICATE OF AUTHORIZATION #: 0075122

PRELIMINARY NOT FOR CONSTRUCTION

INSERT CLIENT LOGO, SUBCONSULTANT LOGO, OR REMOVE THIS AREA AND RESIZE/CENTER THE PROJECT IDENTIFICATION BLOCK

COVENTRY COMMONS
200 BLACKMAR STREET
NEWARK, NEW YORK 14513
SUB-SLAB DEPRESSURIZATION SYSTEM
DESIGN

MARK	DATE	DESCRIPTION

REVISIONS

PROJECT NO:	W96.007.002
DATE:	MAY 2024
DRAWN BY:	N. COULOMBE
DESIGNED BY:	N. COULOMBE
CHECKED BY:	M. WALKER

SOIL VAPOR / RADON MITIGATION SYSTEM

DETAIL SHEET

V-200

May 30, 2024 - 2:48pm
P:\Projects\W96 - Housing Visions ADHV Redevelopment\W96.007.002 - Coventry Commons SSDS Design\Design\CAADD\Shaet Files\V-200_Coventry Commons_SSDS Design_Detail Sheet(_recover).dwg