

**NOTES**

- HORIZONTAL PIPING SHALL BE SLOPED MINIMUM 1/64-INCH PER LINEAR FOOT TOWARDS THE SUB-SLAB VAPOR EXTRACTION (VE) POINTS TO FACILITATE DRAINAGE OF CONDENSATION OR PRECIPITATION WHICH MAY COLLECT WITHIN THE SYSTEM.
- FLOOR SLAB PENETRATION LOCATION IS APPROXIMATE AND SHALL BE DETERMINED BY THE MECHANICAL ENGINEER AND/OR ARCHITECT.
- 4" SCHEDULE 40 PVC VE POINT PIPE TO BE MACHINE SLOTTED 0.020". 4" ELBOWS WILL BE USED WITH PVC CEMENT AT TURNS.
- PIPING SHALL BE AS SHOWN, UNLESS OTHERWISE REQUIRED BY BUILDING CODE. PIPE SHALL BE SOUND AND CLEAN BEFORE LAYING.
- PIPING SHALL BE RELOCATED, AS NECESSARY, TO AVOID FOUNDATIONS AND MINIMIZE INTERFERENCE WITH OTHER UTILITIES, INCLUDING FLOOR DRAINS.
- VAPOR RETARDER SHALL CONSIST OF AN 15-MIL STEGO® WRAP VAPOR BARRIER. VAPOR RETARDER SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ADJOINING SHEETS SHALL OVERLAP MINIMUM OF 6" AT ALL EDGES. SEAMS BETWEEN ADJOINING SHEETS TO BE SEALED WITH STEGO® TAPE OR CRETE CLAW® TAPE. VAPOR RETARDER SHALL EXTEND UP EXTERIOR FOUNDATION WALLS A MINIMUM OF 3" AND BE SEALED TO WALL, SLAB PENETRATIONS, AND COLUMNS WITH STEGO® TAPE OR CRETE CLAW® TAPE.
- ALL HOLES OR OPENINGS THROUGH THE VAPOR RETARDER MUST BE EFFECTIVELY SEALED. SEAL AROUND SEWER PIPES, SUPPORT COLUMNS OR ANY OTHER PENETRATIONS WITH STEGO® TAPE OR CRETE CLAW® TAPE TO CREATE A MONOLITHIC MEMBRANE BETWEEN THE SURFACE OF THE SLAB AND MOISTURE AND/OR SOIL VAPORS.
- ONCE INSTALLED, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE VAPOR RETARDER FROM HOLES, TEARS, AND OTHER DAMAGE PRIOR TO INSTALLATION OF THE CONCRETE FLOOR SLAB. ANY HOLES, TEARS OR OTHER DAMAGE SHALL BE PROPERLY PATCHED AND/OR REPAIRED PRIOR TO SLAB INSTALLATION.
- ALL SLAB JOINTS, INCLUDING BUT NOT LIMITED TO: FLOOR/WALL JOINTS, POUR AND CONTROL SAW JOINTS, CRACKS AND SLAB PENETRATIONS SHALL BE SEALED WITH AN ELASTOMERIC JOINT SEALANT.
- VENT STACKS SHALL EXTEND FROM THE ROOF AND TERMINATE NO LESS THAN 18" ABOVE THE SURFACE OF THE ROOF. VENT STACKS SHALL BE LOCATED IN COMPLIANCE WITH ANY APPLICABLE LOCAL ORDINANCES DICTATING MINIMUM DISTANCE FROM WINDOWS OR AIR INTAKES AND NO LESS THAN OF 10' FROM WINDOWS OR INTAKES ASSOCIATED WITH THE HEATING, VENTILATION AND AIR CONDITIONING SYSTEM. A VENTILATOR SHALL BE INCLUDED ON THE ROOF VENTS TO INSURE THAT RAIN WATER DOES NOT COLLECT WITHIN THE SYSTEM.
- PIPING WITHIN THE OCCUPIED BUILDING SPACE SHALL BE LABELED AT A MAXIMUM SPACING OF 10'; THE LABEL SHALL READ "SUBSLAB VENT SYSTEM".
- AT ROOF EXIT, A PERMANENT LABEL SHALL BE ATTACHED TO VENT STACK READING "SUBSLAB VENT SYSTEM, DO NOT PLACE AIR INTAKE WITHIN 10 FEET". DISTANCE MAY BE INCREASED TO COMPLY WITH LOCAL CODE.
- FLOOR DRAINS AND AIR CONDITIONING OR REFRIGERATION DRAINS THAT DISCHARGE DIRECTLY INTO THE SOIL BELOW THE FOUNDATION SHOULD BE AVOIDED.
- THE SUB-SLAB VENTILATION SYSTEM SHALL BE A "PASSIVE" SYSTEM. HOWEVER, IF IN THE FUTURE, THE OWNER WISHES TO UTILIZE A SUCTION FAN, SUCTION FANS SHALL BE 4" FANTECH HP190 OR APPROVED EQUAL. UPON INSTALLATION OF A SUCTION FAN, DETERMINATION OF RADIUS OF INFLUENCE MAY BE NECESSARY TO CONFIRM VACUUM PRESSURES AND VAPOR CONTAMINANT CONCENTRATIONS BENEATH THE SLAB. VACUUM PRESSURES WILL BE DETERMINED USING VAPOR MONITORING POINTS. IF NECESSARY, A LARGER FAN MAY BE INSTALLED. THE CONTRACTOR SHALL COORDINATE FAN INSTALLATION WITH THE ELECTRICAL CONTRACTOR, (IF NEEDED).
- VERTICAL RUNS OF PIPE SHALL BE SUPPORTED INDEPENDENTLY OF THE CONNECTED HORIZONTAL PIPE RUNS. VERTICAL RUNS SHALL BE SUPPORTED AT EACH FLOOR AND AT INTERVALS NOT GREATER THAN 10' BY APPROVED PIPE COLLARS, CLAMPS, BRACKETS OR WALL RESTS.
- PIPE SUPPORTS SHALL BE LOCATED WITHIN 4" OF EACH SIDE OF ALL FITTINGS.
- PROVIDE PIPE SUPPORTS CONSTRUCTED OF TYPE 304 STAINLESS STEEL WITH TYPE 316 STAINLESS STEEL FASTENERS, NUTS, WASHERS AND BOLTS WITH APPROVED ANCHORING SYSTEM FOR WALL AND CLAMP FOR PIPE.
- BUILDING SLAB SHALL BE UNDERLAIN BY A VENTING LAYER CONSISTING OF 6" MINIMUM OF 3/4" WASHED, CRUSHED STONE.
- CHIMNEY CAP SHALL BE 4" STAINLESS STEEL DRAFTMASTER WITH 1/2" STAINLESS STEEL MESH SCREEN OR APPROVED EQUAL.
- TWO SPARE ELECTRICAL CONDUITS SHALL BE INSTALLED WITH THE 4" RISER/VENT PIPES TO FACILITATE POTENTIAL FUTURE RETROFIT OF VAPOR MITIGATION SYSTEM TO AN "ACTIVE" SYSTEM. ONE CONDUIT SHALL BE 1" DIA. CONDUIT FOR FUTURE POWER LINES; AND THE SECOND SHALL BE 1" DIA. CONDUIT FOR FUTURE LOW-VOLTAGE CONTROLS OR SAMPLE TUBING. ALL CONDUIT, WIRING AND ELECTRICAL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICIAN AND IN ACCORDANCE WITH STATE AND LOCAL APPLICABLE CODES AND STANDARDS.

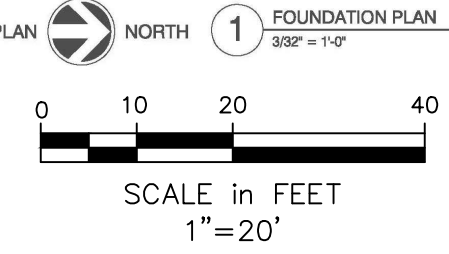
SPREAD FOOTING SCHEDULE			
TYPE	SIZE	RESPONSE	TOP
F-1	8" DIA. RISE	8" DIA. RISE	8" DIA. RISE
F-2	10" DIA. RISE	10" DIA. RISE	10" DIA. RISE
F-3	12" DIA. RISE	12" DIA. RISE	12" DIA. RISE
F-4	14" DIA. RISE	14" DIA. RISE	14" DIA. RISE
F-5	16" DIA. RISE	16" DIA. RISE	16" DIA. RISE
F-6	18" DIA. RISE	18" DIA. RISE	18" DIA. RISE
F-7	20" DIA. RISE	20" DIA. RISE	20" DIA. RISE
F-8	22" DIA. RISE	22" DIA. RISE	22" DIA. RISE
F-9	24" DIA. RISE	24" DIA. RISE	24" DIA. RISE
F-10	26" DIA. RISE	26" DIA. RISE	26" DIA. RISE
F-11	28" DIA. RISE	28" DIA. RISE	28" DIA. RISE

**LEGEND**

— APPROXIMATE LOCATION OF SUB-SLAB UTILITY PIPING

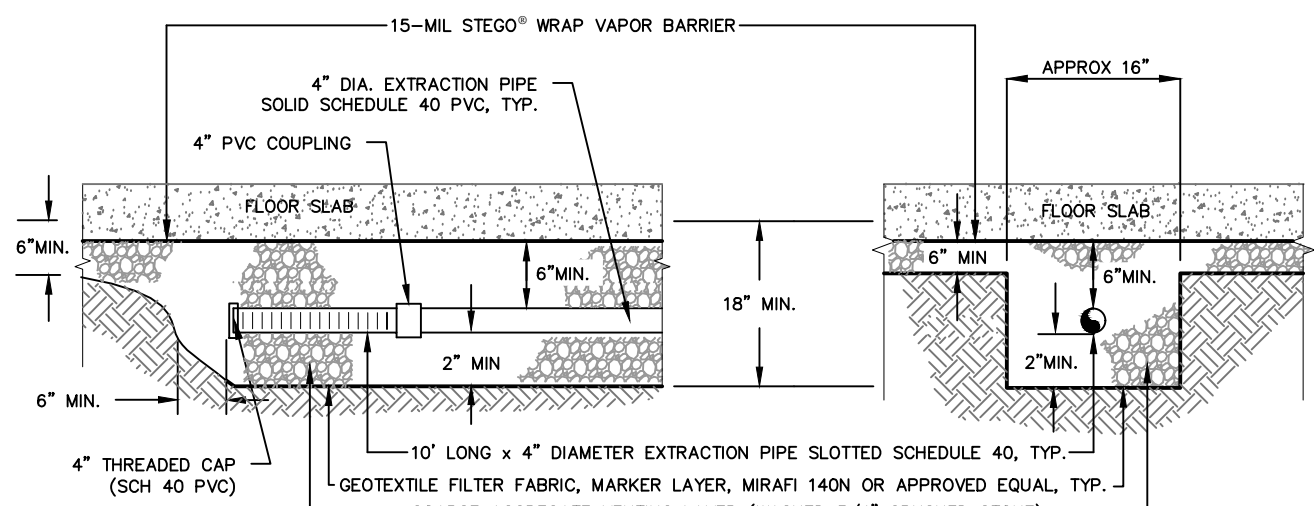
**NOTES**

- 4" DIA. VERTICAL RISER/VENT PIPES SHOULD BE LOCATED WHERE THEY MAY BE ACCESSED FOR MAINTENANCE. THE PIPES MAY ALSO BE RELOCATED TO RUN PARALLEL WITH OTHER VERTICAL PIPING AND ROOF PENETRATIONS (I.E. SEWER VENTS).
- SUB-SLAB VAPOR EXTRACTION POINTS MAY BE RELOCATED WITHIN 10' OF NECESSARY TO AVOID SUB-SLAB UTILITIES, FLOOR DRAINS OR OTHER SUB-SLAB FEATURES.
- SOME FEATURES ARE APPROXIMATE IN LOCATION AND SCALE.
- PLAN BASED ON "S1.01 - FOUNDATION PLAN" PREPARED BY OPECHEE CONSTRUCTION CORPORATION DATED JANUARY 13, 2016 (REVISED MARCH 28, 2016)

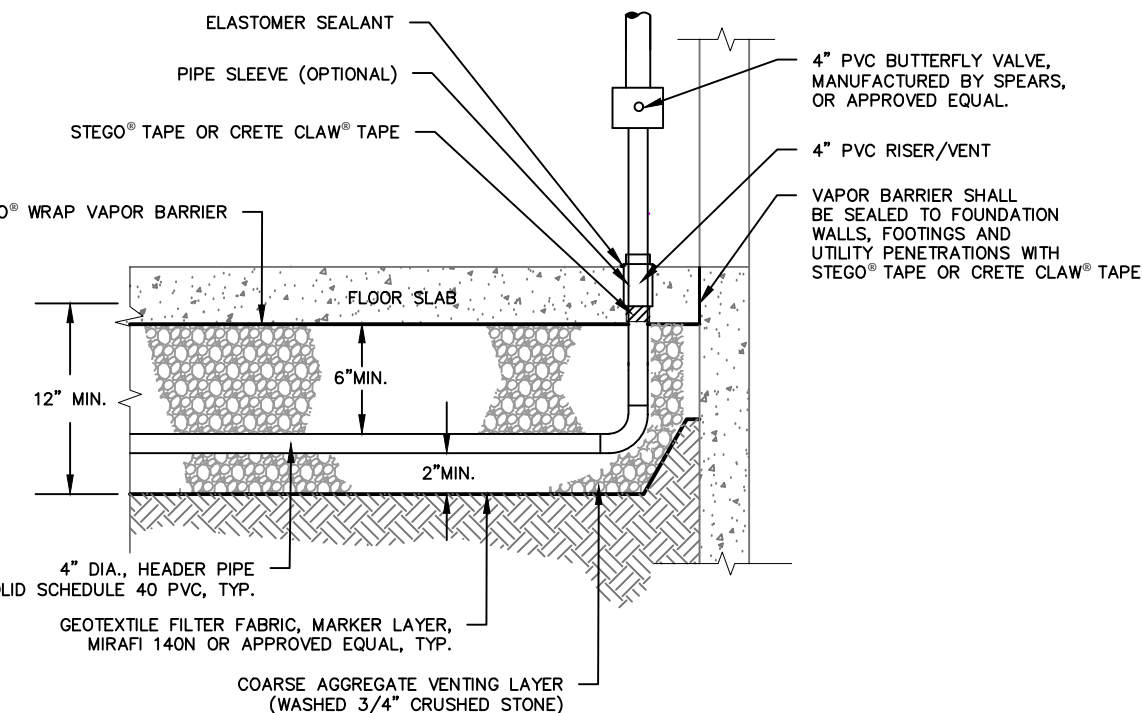


PLAN NORTH 1 FOUNDATION PLAN 3/28/16

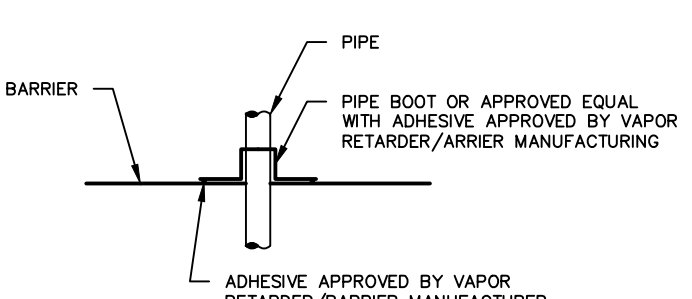
**ELEVATION** SUB-SLAB VAPOR EXTRACTION (VE) POINT NOT TO SCALE



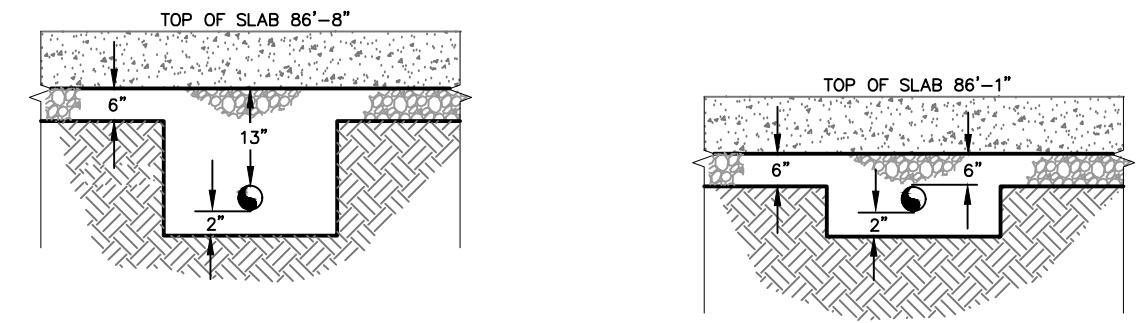
**SECTION** SUB-SLAB VENTING SYSTEM VERTICAL DISCHARGE STACK NOT TO SCALE



**VAPOR RETARDER PENETRATIONS** NOT TO SCALE



**CROSS-SECTION A-A'** NOT TO SCALE



NOTE: VAPOR MITIGATION SYSTEM PIPING SHALL BE INSTALLED AT THE SAME ELEVATIONS, AS SHOWN

<b>RANSOM Consulting, Inc.</b>		<b>SUB-SLAB VAPOR MITIGATION SYSTEM LAYOUT AND DETAILS</b>	
PREPARED FOR:	OPECHEE CONSTRUCTION CORPORATION 11 CORPORATE DRIVE BELMONT, NEW HAMPSHIRE	SITE:	101 YORK STREET PORTLAND, MAINE
DATE:	MARCH 2016	PROJECT:	161.06038
FIGURE:	1		



