CONTRACT EXHIBIT

CONTROL OF MOISTURE AND MOLD PREVENTION PROTOCOL

Controlling water infiltration and keeping materials dry during construction is an important step in reducing the risk for moisture damage and mold growth. The Contractor, as part of the Work, shall at least comply with the requirements set forth in this Control of Moisture and Mold Prevention (COMMP) Protocol ("Protocol") to control water infiltration, moisture damage, and mold growth.

A. DEFINITIONS

1. "Porous materials" are materials that are the most susceptible to moisture damage and mold growth. Examples include, but are not limited to drywall, ceiling tiles, carpeting, and insulation.

2. "Semi-porous materials" are materials that are less prone to moisture damage than porous materials, but which could be damaged if sufficient moisture is present over time. An example of a semi-porous material is lumber.

3. "Non-porous materials" are materials that can be readily reused if promptly and properly cleaned after exposure to moisture. Examples include, but are not limited to, metal ductwork (non-insulated), metal studs, vinyl flooring, and glass.

4. "Certified Industrial Hygienist" (or "CIH") is an independent third party professional industrial hygienist that is certified by successful qualification and examination by the American Board of Industrial Hygiene ("ABIH"). The CIH shall be reasonably acceptable to the Owner and retained by the Contractor. The CIH must possess either a baccalaureate degree in engineering, chemistry, or physics or a closely related biological or physical science degree from an accredited college or university, and have a minimum three (3) years of experience in industrial hygiene practice.

5. "OSHA" is the Occupational Safety and Health Administration, federal and/or state approved program.

6. "EPA" is the Environmental Protection Agency.

B. STEPS TO BE TAKEN PRIOR TO COMMENCING THE WORK

1. FORMAL WRITTEN MOISTURE MANAGEMENT PROGRAM

At least forty-five (45) days prior to commencing Work involving porous or semi-porous materials, the Contractor shall submit to the Owner for review, a formal, written moisture prevention and remediation program (the "Control of Moisture and Mold Prevention (COMMP)"). The program shall be prepared by and/or reviewed by the Project CIH and signed and sealed by the CIH prior to submission to the Owner. The Owner's review of the COMMP shall not relieve the Contractor or its responsibilities under this Protocol or other provisions of the Contract. The COMMP, at a minimum, must contain the following elements:

a. **Keeping Materials Dry** – The particular steps that the Contractor and its Subcontractors shall take to control and or minimize water infiltration and water

damage to materials during the performance of the Work. This section of the COMMP shall include, but not be limited to:

i. Procedures and plans for temporary weatherization of the structure, including roof, window and door openings and storm water surface runoff.
ii. Procedures and plans for construction control of mechanical, plumbing and sprinkler subcontractors.
iii. Procedures and plans for on-site storage of porous and semi-porous materials.

b. **Responding to Water Events** – The particular steps that the Contractor and its Subcontractors shall take to respond to water infiltration and wet materials. These steps shall be reflected in a comprehensive, written response procedure so that all Contractor and Subcontractor personnel are aware of the steps to be taken. This section of the COMMP shall include, but not be limited to:

i. The name and contact information for the selected water damage restoration contractor to be employed in the event of water infiltration.
ii. The type and amount of equipment available to respond to water infiltration events.
iii. The procedures and plans to be followed in the first 8 hours after a water infiltration event.
iv. The procedures and plans to be followed in hours 8-48 after a water infiltration event.
v. The procedures and plans to be followed in hours 48-72 after a water infiltration event.
vi. The procedures and plans to be followed beyond 72 hours after a water infiltration event.
vii. Records that the Contractor and its Subcontractors shall keep to track and document instances of water infiltration, including utilizing the Moisture Control Log, format is attached herein.
viii. All procedures and plans shall be consistent with guidance provided by EPA for responding to water infiltration events. Additional guidance can be found in the ANSI/IICRC S500 "Standard and Reference Guide for Professional Water Damage Restoration."

c. **Responding to Mold Contamination –** The particular steps that the Contractor and its Subcontractors shall take to effectively and safely remediate mold contamination. These steps shall be reflected in a comprehensive, written procedure so that all Contractor and Subcontractor personnel are aware of the steps to be taken. This section of the COMMP shall include, but not be limited to:

i. The procedures and plans to be followed for various amounts of mold contamination (i.e. <10 square feet, between 10 – 100 square feet, and > 100 square feet.)
ii. All procedures and plans shall be consistent with guidance provided by EPA for responding to mold contamination. Additional guidance can be found in the ANSI/IICRC S520 "Standard and Reference Guide for Professional Mold Remediation."

2. TRAINING

At least thirty (30) days prior to commencing Work involving porous or semi-porous materials, the Contractor shall provide training regarding the COMMP and the requirements of this Protocol. Training shall be provided by the Project CIH. The persons to attend training shall include, but not be limited to the Contractor's Project Manager, Superintendent and other supervisory personnel who conduct inspections of the work. Attendees shall also include all trades that have anything to do with water, moisture, mold or building envelope concerns. The training shall last at least ninety (90) minutes and shall include, at a minimum, the following topics:

a. Health and constructability issues, and liabilities, associated with mold growth.

b. The importance of regular inspections for water, moisture and mold.

c. The importance of keeping written results of such inspections.

d. The use of a moisture meter and how to interpret results.

e. How to properly respond to water infiltration and mold issues during construction.

f. The equipment available to control humidity in areas where porous and semi-porous materials are being installed and which equipment should be on hand to respond to water infiltration and possible mold growth.

g. The provisions of the COMMP specific to the Project and the requirements of this Protocol.

3. The Contractor shall ensure that all applicable Subcontractors have competent trained personnel able to comply with the terms of this Protocol, and shall ensure that such Subcontractors do so comply.

C. STEPS TO BE TAKING DURING THE EXECUTION OF THE WORK

1. PARTICULAR MOISTURE PREVENTION REQUIREMENTS

a. The Contractor shall ensure that all reasonable and prudent recommendations of the CIH and Observers/Consultants retained by the Owner are implemented in a prompt and effective manner prior to subsequent work being performed in the areas affected by water infiltration or mold growth.

b. The Contractor shall ensure that all manufacturer recommendations for installing finished materials including but not limited to all drywall, flooring, cabinets, and other porous or wood products are followed.

c. The Contractor shall ensure that all water infiltration, water damaged materials, and mold incidents are handled in accordance with the COMMP, current OSHA and EPA procedures and guidelines, and this Protocol in a prompt and effective manner prior to subsequent work being performed in the areas affected by water infiltration, water damage, or mold growth.

d. All corrective or remediation actions shall be inspected and approved by the Contractor and the CIH. Appropriate entries shall be made in the Moisture Control Log that is a part of this Protocol and the COMMP and appropriate approvals shall accompany each noted event once remedial actions are complete. All remedial actions following a water infiltration event or mold remediation require a sign-off and closure by the Project CIH.

e. The Contractor shall operate the building's HVAC system during construction in accordance with Best Management Practices during construction in areas containing finished, porous materials. The Contractor shall ensure that the all condensate discharges and humidity levels are controlled so as not to promote mold growth and/or impact finished materials including all dry wall, wood work, flooring, and cabinetry. At the completion of construction work, all filters and cooling coils will be cleaned to the same level of cleanliness as unused equipment. All insulation materials should be protected from water damage, moisture, and accumulated dirt/dust that could support mold growth.

f. The Contractor shall not accept any porous and semi-porous materials for the Work unless they arrive at the Project site dry. The Contractor shall not accept or use any unprotected gypsum board, insulation, or other porous material delivered during, or impacted by, precipitation/storm events. The Contractor shall take care in handling/removing protective shipping covers designed to protect porous or semi-porous materials so that the porous or semi-porous materials do not become wet. Porous and semi-porous materials must be stored in dry, protected locations elevated above the floor (e.g., pallets, dunnage).

g. The Contractor shall schedule material deliveries to the Project site as near as reasonably practicable to the time that the material will be used or installed.

h. The Contractor shall inspect materials after a rain or snow event for water damage or excessive moisture, including measurements with a moisture meter, as necessary to meet or maintain manufacturer's recommendations.

i. The Contractor shall inspect all porous and semi-porous building materials prior to installation. The Contractor shall monitor the condition of materials arriving at the Project site by taking a moisture content reading of a reasonable sample of the material to ensure proper moisture content range consistent with manufacturer's recommendations. Materials that exceed the manufactures recommendations for moisture content should not be installed/used. The Contractor shall utilize moisture meters that are specifically designed to measure moisture in wood, gypsum, EIFS, concrete, and other tested materials. The moisture meter must be capable of allowing calibration checks, and the Contractor must document such

calibration prior to each use.

j. Prior to installation of a floor leveling product, the Contractor shall prime all gypsum board or not hang drywall until the floor leveling product is in place. The Contractor shall also employ the use of isolation strips at the base of the drywall PRIOR to pouring of the floor leveling product to protect the drywall from absorbing moisture as a result of the installation of the floor leveling product.

k. Prior to installing gypsum board, the Contractor shall test wood studs or concrete block that will be in contact with the drywall to ensure that they are dry (i.e., meeting manufactures' recommendations). All drywall shall be installed per manufactures' recommendations and building/fire codes requirements (including meeting requirements for bottom gaps above flooring, where applicable).

l. Prior to installing finished flooring, the Contractor shall test the moisture content of the slab floor to ensure that the moisture content, temperature, and relative humidity are in accordance with manufacturer's instructions/recommendations.

m. Prior to closing in walls, the Contractor shall require all mechanical and plumbing Subcontractors to test and certify in writing that their work is free from leaks.

n. The Contractor shall protect porous and semi-porous materials from water and condensation while in storage whether on or off the Project site and shall ensure that adequate clearance is kept between the materials and the storage site floor or ground.

o. The building envelope shall be sufficiently enclosed and water tight prior to the installation of porous building materials. By way of example (and not by way of limitation), temporary roofing should be installed immediately after roof sheathing or decking is completed; weather barriers such as building wrap or fluid applied membranes should be installed immediately upon walls; all window, door and other penetrations must be closed up by installation of the windows or doors or by temporary polyethylene barriers; risers and other penetrations to floors above must be sealed prior to installing porous or semi-porous materials below. **All stormwater flow must be controlled and diverted away from all finished spaces/materials.**

p. The Contractor shall, to the extent feasible, utilize mold-resistant building products in areas susceptible to moisture. Examples of alternative drywall products include Humitek™ and DensGlass®, which are less susceptible to mold in moist and humid conditions than the common white/grey gypsum drywall.

q. Finished products including furniture, carpet, and millwork shall not be installed unless humidity meets manufacturers recommendation (humidity readings shall be documented on inspection Logs). During spring, summer

or other rainy months, HVAC cooling or spot coolers must be used to control humidity to <60% after finished products are installed.

2. INSPECTIONS AND REPORTING

a. The Contractor shall update and discuss the COMMP, and all steps that the Contractor has taken pursuant to the COMMP and this Protocol, at each weekly progress meeting, at each subcontractor meeting, and as part of the Monthly Status Report. Such steps shall be documented in the Monthly Status Report by photographs and a narrative describing the steps undertaken.

b. **At least weekly, and after every rain, snow, or water infiltration event** the Contractor's Superintendent, Project Manager, or other qualified employee shall inspect the Work for occurrences of water infiltration, wet materials (installed or stored), and for the presence of visible or suspect mold. Such inspection shall be documented and include, but not be limited to, the interior sides of windows, doors and exterior cavity walls, all chases and cavity interior components including wiring and piping, and all interior walls prior to installing final wallboard or cladding. The inspection will also verify that dissimilar materials (such as steel and copper) are not in contact with each other. The extent and results of each such inspection shall be documented and reported in writing and shall include sign-offs by representatives of all Subcontractors performing the Work inspected. **Such report shall identify the particular materials that are wet and are to be removed, replaced, or cleaned, and include documentation of water infiltration in the Moisture Control Log**. Areas of the Work with water infiltration or mold shall be photographed or videotaped. The Contractor shall report in writing to the Owner and Architect the corrective action to be undertaken, the date the corrective action is implemented, and the results of the corrective action. The affected areas shall again be photographed or videotaped at the completion of such corrective action.

c. At least monthly, and after every significant water infiltration event ("significant" to be defined in the COMMP), the CIH shall inspect the Work (including but not limited to flashings, waterproofing systems, curtain wall components, condition of porous and semi-porous materials installed and stored on the site) and shall issue a written report monthly to the Owner and Contractor detailing the inspection made, the observations, the presence and quantity of water visible mold, and any recommended corrective actions. Such report shall identify the particular materials that are to be removed, replaced, dried and/or cleaned on the Moisture Control Log. **The Moisture Control Log shall be cumulative, noting all incidences of water re-occurrences in repeat (or same) areas.**

d. The Owner, its insurers, its lenders, its partners or joint ventures, and their respective designees/consultants shall have access to all information regarding the COMMP and the steps that the Contractor has taken pursuant to the COMMP and this Protocol.

e. Prior to submitting each Application for Payment, the Contractor shall inspect the Work for water infiltration, water damage, and mold issues and submit a written certification to the Owner, as part of the Application for Payment, stating the inspection performed, the results of that inspection, and the corrective actions, if any, that the Contractor will undertake. Such report shall include a **Moisture Control Log** and identify the particular materials that were or are to be removed, replaced, dried and/or cleaned.

g. The Contractor shall photograph or videotape all finished areas that are impacted by moisture or mold and include a referenced photo in the **Moisture Control Log**. Wet areas behind walls/cabinets must be dried (with photo documentation) and inspected and cleared by the CIH **prior to closing in walls or replacing cabinets or surfaces** with documentation of CIH inspection/clearance included in **Moisture Control Logs** and CIH report.

h. The Contractor shall maintain and keep current a cumulative **Moisture Control Log** that is used to record and track all water infiltration/intrusion events, by date, description, duration, corrective action, the particular materials removed, replaced, or cleaned, and completion of corrective action. The format and contents of the Moisture Control Log shall be reviewed and actions approved or recommended by the CIH. The cumulative **Moisture Control Log** shall be a running document (listing final resolution and close out inspection date for all items) and submitted to Owner monthly.

3. RESPONSE TO WATER INFILTRATION AND MOLD GROWTH

a. The Contractor shall ensure that construction drying equipment is expeditiously available to keep finished spaces dry during construction (60% Relative Humidity or less). As needed, the Contractor shall use plastic or temporary doors in place to control finished areas at 60% RH or less.

b. The Contractor shall have portable dehumidifiers, air movers and wet vacuums available within twenty-four (24) hours after a water infiltration or mold incident occurs that impacts finished materials/spaces.

4. FINISHED AREAS THAT ARE IMPACTED BY WATER INFILTRATION

Water leaks or floods that impact finished areas should be treated or remediated according to the protocols and methods outlined in the COMMP or as determined by the CIH if such protocols and methods differ from the COMMP. Water infiltration response efforts and mold remediation procedures in all finished units/areas must be reviewed, approved, and overseen by the CIH and immediately reported to the Owner. The Contractor is responsible for all compliance with worker safety during mold and/or sewage remediation, including OSHA standards and regulations. At a minimum, mold remediation must follow current procedures and guidelines established by OSHA and the EPA.

5. All mold issues and/or sanitary sewage leaks/releases/backups must be <u>reported immediately</u> to Owner and clean up overseen and documented by CIH.

Project: **MOISTURE CONTROL LOG**

Date	*Item #*	*Originator*	*Initial Inspection Date*	*Room #*	*Location/Description*	*Grid Line/Location*	*Comments*	*Wet Materials or Mold Noted (include SF of Mold, if present)**	*Materials Removed*	*Water Type (Potable, Storm, GW, Sanitary)*	*Pictures #'s (Attach)*	*Moisture Intrusion Cause*	*Remedy*	*Follow-up Inspection Dates by CIH to Confirm Remedy Worked*	*Issue Status (Open/Clsoed)*