Subcontract

HENSEL PHELPS CONSTRUCTION CO. Contractor

Issuing Office	•	WESTERN DISTRICT OFFICE: 4129 E. Van Buren, Suite 100, Phoenix, AZ 85008
	•	Contractor License Number in State of Project ROC089520
Subcontractor	•	Spiral HVAC 3922 N. Kentucky St. Gilbert, AZ 85225
Subcontract	•	HVAC
Project	•	Luhrs Marriott Courtyard/Residence Inn
Project Number	•	5915088 - 1500200

This Subcontract consists of 19 pages numbered 1 of 19 through 19 of 19 and attachments numbered: 2A – 2D, 19A – 19B and Job Information Policy (JIP) Brochure

Please initial each page where indicated, affix authorized signature(s) and return THREE copies at once to the issuing office shown above.

- $\ \square$ A copy executed on behalf of Hensel Phelps Construction Co. will be returned for your files.
- ☑ An additional copy is included to be forwarded to your bonding company.
- ☑ Please retain the copy identified as yours.

SUBCONTRACT

THIS SUBCONTRACT is made and entered into this 1st day of March, 2018, by and between

 Spiral HVAC
 Attention:
 Steve Lewis

 3922 N. Kentucky St.
 Phone:
 (480) 657-1235

 Gilbert, AZ 85225
 Fax:
 (480) 657-1131

hereinafter referred to as the Subcontractor and Hensel Phelps Construction Co., a Delaware corporation, hereinafter referred to as the Contractor. **WITNESSETH:** That for and in consideration of the mutual promises and covenants herein contained, the Subcontractor and the Contractor agree as follows:

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SECTION A. The Subcontractor covenants, promises and agrees to furnish all material and personal property and to diligently and fully perform all work hereinafter described for the construction of Luhrs Marriott Courtyard/Residence Inn, hereinafter referred to as the Project, to be

located at <u>132 S. Central Ave., Phoenix, AZ 85004,</u> for the use and benefit of <u>LUHRS CM, LLC</u>, hereinafter referred to as the Owner, in strict

accordance with the Contract between the Contractor and the Owner entered into March 01, 2018 and hereby made a part of this Subcontract by reference; all to the satisfaction of the Contractor, the Owner, and the representative authorized by the Owner to interpret and judge the performance of the aforesaid Contract and named therein as architect, engineer, contracting officer, or otherwise, when such representative shall have been designated as the Owner's Authorized Agent; and all of which shall be done in timely, faithful and strict compliance with this Subcontract and all the Subcontract Documents described and defined in Section D, Article 1, hereof and elsewhere herein.

SECTION B. The Subcontractor agrees to furnish all necessary management, supervision, labor, materials, tools, supplies, equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the portions of the work described as follows:

Complete all <u>HVAC</u> described in the issue for construction Plans and Specifications as prepared by Awbrey Cook Rogers McGill Architects dated May 18, 2015, Instruction Bulletin #3 dated June 16, 2015, and Job Information & Policy Brochure dated July 7, 2015.

B.1 All work and materials described in Division 1, and Divisions:

1.	07 7100	Roof Specialties (as applies)
2.	07 7200	Roof Accessories (as applies)
3.	07 8446	Fire-Resistive Joint Systems (as applies)
4.	07 9200	Joint Sealants (as applies)
5.	08 3113	Access Doors and Panels (as applies)
6.	08 3119	Horizontal Access Doors (as applies)
7.	23 0500	Common Work Results for HVAC complete
8.	23 0500.01	General Provisions complete
9.	23 0501	Demonstration & Training for HVAC Systems complete
10.	23 0513	Common Motor Requirements for HVAC Equipment complete
11.	23 0514	Variable Frequency Motor Drives complete

(Continued on Page 2A of 19)

SECTION C. The Contractor agrees to pay the Subcontractor for the full, faithful and complete performance of this

Subcontract the sum of **Five Million Eight Hundred Fifty Four Thousand Dollars and 00/100** (\$5,854,000.00), subject to additions and deductions for changes agreed upon in writing as hereinafter set forth or as otherwise authorized hereinafter; and Contractor further agrees to make all partial and final payments on account thereof in accordance with the terms and provisions of the Subcontract Documents including, but without restriction thereto, the provisions of Section D, Article 5 of this Subcontract.

Contractor Subcontractor

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1 2	Continued from	n Page 2 of 19	
3	12.	23 0515	Enclosed Motor Controllers complete
4	13.	23 0517	Sleeves & Sleeve Seals for HVAC Piping complete
5	14.	23 0518	Escutcheons for HVAC Piping complete
6	15.	23 0519	Meters and Gauges for HVAČ Piping complete
7	16.	23 0520	Electrical & Control Wiring for Mechanical Systems complete
8	17.	23 0523	General Dry Valves for HVAC Piping complete
9	18.	23 0529	Hanger and Supports for HVAC Piping and Equipment complete
10	19.	23 0548	Vibration & Seismic Control for HVAC Piping and Equipment complete
11	20.	23 0553	Identification for HVAC Piping and Equipment complete
12	21.	23 0593	Testing, Adjusting and Balancing for HVAC complete
13	22.	23 0713	Duct Insulation complete
14	23.	23 0716	HVAC Equipment Insulation complete
15	24.	23 0719	HVAC Piping Insulation complete
16	25.	23 0800	Commissioning of HVAC Systems complete
17	26.	23 0800.01	HVAC Testing Requirements complete
18	27.	23 0800.02	HVAC Prefunctional Checklists complete
19	28.	23 0800.03	HVAC Sample Functional Test Procedures complete
20	29.	23 2113	Hydronic Piping complete
21	30.	23 2115	HVAC Drain Piping complete
22	31.	23 2123	Hydronic Pumps complete
23	32.	23 2300	Refrigerant Piping complete
24	33.	23 2500	HVAC Water Treatment complete
25	34.	23 3113	Metal Ducts complete
26	35.	23 3115	Type I Kitchen Hood Exhaust Duct complete
27	36.	23 3300	Air Ducts Accessories complete
28	37.	23 3416	Centrifugal HVAC Fans complete
29	38.	23 3423	HVAC Power Ventilators complete
30	39.	23 3600	Air Terminal Units complete
31	40.	23 3700	Air Outlets and Inlets complete
32	41.	23 3723	HVAC Gravity Ventilators complete
33	42.	23 4100	Particulate Air Filtration complete
34	43.	23 5100	Breechings Chimneys & Stacks complete
35	44.	23 5233.13	Copper Fin Tube Boilers complete
36	45.	23 5700	Heat Exchangers complete
37	46.	23 6410	Refrigerant Detection & Alarm complete
38	47.	23 6426	Rotary-Screw Water Chillers complete
39	48.	23 6501	Cooling Towers complete
40	49.	23 7313	Indoor Air Handling Units complete
41	50.	23 7413	Packaged, Outdoor Electric-Electric ACUs complete
42	51.	23 8129	Variable Refrigerant Flow HVAC Systems complete
43	52.	23 8219	Fan Coil Units complete
44	53.	25 5110	Integrated Automation Control of Guestroom Equipment complete
45	54.	25 5500	Integrated Automation Control of HVAC & Plumbing Equip.complete
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are included within the scope of this Subcontract with the following being the only exceptions:

B.2 Exclusions:

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- 1. Hoisting roof top equipment (by Hensel Phelps, subject to Tower crane availability and capacity)
- 2. Laundry Chute (by Equipment Subcontractor)
 - 3. Formed concrete (by Hardrock Concrete)
 - 4. Generator fuel oil piping (by Sparky Electric)
 - 5. Louvered Mechanical Screen Walls (by Louver Subcontractor)
- 6. Furnishing Duct Smoke Detectors (by Sparky Electric). Installation of duct detectors is included.

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- 7. Supplemental structural steel for mechanical equipment support (by Owner)
- 8. Power wiring and conduit to equipment (by Sparky Electric)
- 9. Disconnects and starters not integrally part of the mechanical equipment (by Sparky Electric)
- 10. Kitchen, laundry, and pool equipment (by Others)
- 11. Arizona Transaction Privilege Tax (by Hensel Phelps)

B.3 Inclusions

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Your attention is specifically called to the following items, which are included in this Subcontract, but without limiting the Scope of work as provided above. This Subcontractor acknowledges that it would be impossible to identify and specifically list every inclusion for this Scope of Work, therefore the below list is meant to provide clarity, but not limit the Scope. Items omitted from this list, but necessary for the proper performance of this Subcontractor's Scope of Work are included. Only the specific listed exclusions in Section B are excluded from this Scope of Work.

15 16 Payment and performance bond is required. 1.

- In conformance with the Contract Documents, provide all labor, materials, and equipment necessary to furnish and install, including testing, commissioning, and placing into operation all mechanical work specified and shown and/or as reasonably inferred for a complete and fully functional mechanical system installation which includes, but is not limited to chilled water systems, condenser water systems, heating hot water systems, air conditioning and heating systems, general exhaust systems, smoke control/evacuation systems, kitchen hood exhaust duct systems, generator exhaust duct systems.
- 22 Furnish all variable frequency drives as specified for all equipment supplied under this Subcontract. Loose VFD's shall be stored 23 and delivered when requested to the Electrical Subcontractor for mounting and equipment connection. Coordinate power requirements of all equipment with the Electrical Subcontractor. 24
- Integrated Automation Control Systems includes all control wiring (regardless of voltage), fiber optics cabling, sensors, 25 26 controllers, control valves, devices, equipment, automatic dampers, actuators, and operators for control and monitoring of the 27 mechanical and plumbing equipment. All programming to be performed by this subcontractor. Conduit for controls to be installed 28 by Electrical Subcontractor.
- 5. Provide relief vents at the elevator shafts. 29
- All required fire/smoke dampers are included. Fire/smoke dampers shall be coordinated and compatible with the Fire Alarm 30 31 System and shall be provided with a one point of connection for Fire Alarm interface.
- Install duct smoke detectors shall furnished by Electrical Subcontractor. 32
- Condensate piping and insulation for all mechanical systems is included. Condensate pumps for mechanical systems is excluded 33 (to be supplied by Plumbing Subcontractor). 34
- 9. Provide all diffusers, louvers and grilles which include the guestroom outside air louver and associated duct (excluding 35 architectural) 36 37
 - 10. Generator exhaust system as specified in section 23 5100 Breechings, Chimneys & Stacks is included.
- 11. Manufactured roof bases and curbs for all your equipment which includes sloping or shims as required to provide a level surface. 38
- 39 12. Provide all flashing, counter-flashing, sealants, link seals, dry-packing and all other similar items for all exterior penetrations associated with this scope of work. 40
- 13. Subcontractor shall witness concrete work and other work associated with the encasement of piping, sleeves boxes, etc. and 41 shall be responsible for their alignment and condition. Field measure and confirm all floor and wall opening dimensions, sleeve 42 43 locations, embeds, etc. prior to concrete placement.
- 14. Furnish coordination drawings to the drywall subcontractor for locations of backing or other special framing needs (recesses, 44 45 openings, etc.). Subcontractor shall layout ductwork and piping in a manner that minimizes the impact on framing members 46 which includes, but may not be limited to, proper spacing of pipes, avoiding holes in header and jamb studs, and proper clearances from stud edges. Prior to hanging drywall, field verify openings have been installed correctly by the drywall 47 48 contractor.
- 15. Equipment/Housekeeping Pads- All pads to be completed by Hardrock Concrete. Layout for pads to be performed by this subcontractor. 49
- 16. All required vibration and expansion control requirements such as integral equipment systems, spring hangers/bases, neoprene 50 51 pads, rollers, and inertia bases.
- 17. Provide all related signage, nameplates, tags, labels and similar identification materials. Include temporary identification at 52 53 valves, equipment, main lines, control panels, and all other similar items during construction.
- 54 18. Coordinate with the acoustic ceiling tile Subcontractor specific tiles that are to be left out to facilitate access for inspection and testing. Coordinate with the HPCC Superintendent the specific flagging method as necessary. 55
- 56 19. Route all piping away from electrical rooms and equipment. If necessary to be over electrical or low voltage rooms, provide pans, drains, sensors, leak detection, or other barriers as necessary or required by code. 57
- 58 20. Flush and treat all systems as necessary. Maintain and service water treatments from start-up through turn over to the Owner. Provide additional personnel to monitor all pipe connections during initial flushing activities to identify any potential leaks. 59
- 60 21. Subcontractor shall clean, test and operationally demonstrate all mechanical systems using factory certified representatives as 61 required.

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- 22. Subcontractor is responsible for the instruction and training of Owner Maintenance personnel as well as initiating and conducting 2 a formal equipment and system start-up and turn-over program.
- 23. It is the responsibility of this Subcontractor to coordinate work with other Subcontractors whose work it interfaces with to provide 3 4 a fully functioning and integrated system.
- 5 24. Subcontractor includes all mock-ups as identified in the contract documents. Guest Room Model mock-up in accordance with drawings A-1.2, A-5.1, and A-6.1 will be constructed in the Luhrs office building near the project. Additional in place mockup 6 rooms and building envelope mockup, as further defined by the Quality Control Plan, will be constructed. All expedited product 7 submittals, shop drawings and early deliveries associated with these mockups are hereby included. Mockup quality will be 8 representative of final installations.
- 10 25. Mobilizations as necessary to complete work is included.
- 26. All applicable sales tax on consumables items is included in the sum of this contract. 11
- 27. Foreman/Superintendent to participate in pull planning sessions for work that will affect their scope (sessions are 2-4 hours 12 13 depending on scope).
- 28. Foreman to attend/participate in Weekly Work Plans, including providing their plan for the next week before the meeting (meeting 14 is held to 1 hour once a week) when onsite. 15
- 29. Foreman to attend daily huddle (huddle is held in work area for 15-20 minutes daily) when onsite. 16
- 30. Foreman to attend training for Last Planner System (Nuts and Bolts training is 2 hours, Boot Camp is 5 hours). 17
 - 31. Subcontractor understands and accepts the proactive coordination effort required with other MEP, structural, architectural and finish trades which includes developing formal MEP coordination drawings and all design conflicts resolution required for a proper and complete installation including re-routing if necessary. It is explicitly understood that the MEP trades shall produce a detailed and dimensioned set of plans, in which all MEP trades are overlaid onto one set of plans. Work in conjunction with the Mechanical, Plumbing, Electrical and Fire Sprinkler Subcontractors to compile, draft, and submit a complete set of 3D AutoCAD drawings which clearly identifies all electrical, plumbing, piping and ductwork heights above the finished floor along with their assigned routing in the ceiling space. One hundred percent (100%) attendance for all coordination meetings will be required. Coordinate work through the use of these meetings with the following trades: drywall, concrete, structural steel, metal deck, plumbing, fire protection, electrical, and HVAC. In the event that the completed work of any trades has to be removed, replaced. or modified due to lack of coordination, the cost of removing, replacing or modifying such work will be paid for by the responsible BIM coordination Subcontractor.

B.4 Clarifications

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- 1. Upon issuance...
 - 1. Work shall proceed in accordance with the overall project schedule.
 - 2. For accounting purposes only, calculated contract price as follows:

36	Base Bid HVAC Scope	\$ 5,990,000.00
37	VE Item: Centrifugal chillers in lieu of Rotary Screw chillers*	\$ (-60,000.00)
38	VE Item: Alternate mechanical piping for 4" and less*	\$ (-90,000.00)
39	VE Item: Provide stainless steel basin only for cooling towers*	\$ (-20,000.00)
40	VE Item: Alternate Boiler*	\$ (-40,000.00)
41 42	VE Item: Standard 7-day programmable thermostat in lieu of INNCOM room controls system*	\$ (-90,000.00)
43	Guestroom Outside Air Louver	\$ 25,000.00
44	Payment & Performance Bonds (2.0%)	\$ 114,000.00
45	Subtotal	\$ 5,829,000.00
46	Generator Exhaust Allowance	\$ 25,000.00
47	Total Contract Amount	\$ 5,854,000.00

48 * Contingent upon formal acceptance of scope revision and pricing by the Owner.

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> Contractor Subcontractor

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B.5 Alternates - work to be added / deleted by Change Order at the option of the Owner or Contractor:

Alternate prices below include all materials, fabrication, labor/installation, delivery, subsistence, taxes, insurance, bond costs, shipping, overhead, profit and all other costs incurred by the Subcontractor and his suppliers for the change. Work covered by these alternate prices shall be in strict accordance with the applicable provisions of this agreement.

Alternate No. 1:

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Contract value includes \$25,000 allowance for installation of the diesel generator exhaust system. Final value for this work will be adjusted by Change Order.

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SECTION E. SPECIAL PROVISIONS.

TEMPORARY FACILITIES:

- SITE FENCE Subcontractor accepts Contractor's perimeter fence / barricade as is. Any relocation or adjustments required
 by this Subcontractor to perform its work is this Subcontractor's responsibility. Modifications shall be pre-approved by the
 Contractor, secured nightly and restored upon completion of work.
- 2. WATER Subcontractor is responsible for their own water for testing, mixing, etc made available from sources reasonably near the point of use. The Subcontractor is responsible for all drinking water and ice required for its work force.
- 3. TEMP TOILETS Hensel Phelps shall provide and maintain adequate temporary toilets and hand wash facilities for the use of all employees.
- 4. POWER Temporary Electrical Service: Hensel Phelps will furnish temporary 120V electrical power for use by all Subcontractors to several central locations within the building as selected by Hensel Phelps. Distribution of power from these central locations is the responsibility of each subcontractor. Temporary power will not support equipment, electric welders or heaters. Any required specialty power is the responsibility of each subcontractor and shall be coordinated with the electrical subcontractor. It is understood that temporary electrical power may not be available for construction use during the initial stages of the project and that Subcontractor shall provide electric generators as needed to perform the work until temporary power is available.
- 5. LIGHTING Natural or temporary lighting will be provided to meet OSHA minimum standards. Individual task light stands for remote locations or individual rooms to achieve specified quality will be the responsibility of each Subcontractor for the satisfactory performance of its work.
- 6. CLIMATE CONTROL This Subcontractor shall provide any special heat, dehumidification, ventilation and weather protection as required to complete the scope of work in accordance with the specifications, manufacturer's requirements and/or industry standards. Temporary electrical services required for temporary climate control to be by Electrical Subcontractor.
- 7. STORAGE Onsite storage and laydown is limited; all storage and delivery needs are to be coordinated in advance with the HPCC Project Superintendent. Coordinate with other trades to accommodate access to stored materials. Cost of any offsite storage required to support the work is included in this Subcontract.
- 8. CLEAN-UP Every subcontractor shall provide the contractor with labor effort once a week in order to broom clean the project as necessary; this is in addition to your required cleanup. The exact amount shall be determined using the table below and applies only during the time the subcontractor is actually on the project performing work.

Subcontract Amount Weekly Labor Effort \$0 - \$1.5M 8 mh / week \$1.5M - \$5M 16 mh / week \$5M - above 24 mh / week

- 9. TRASH REMOVAL Hensel Phelps will furnish dumpsters for all subcontractors general waste disposal. All crates, cartons, boxes, ductwork, and steel scraps must be knocked down small enough to fit into the dumpster. Each subcontractor will be responsible for the proper disposal of all hazardous waste generated by their work. Submit documentation of all hazardous waste disposals to Hensel Phelps.
- 10. ENVIRONMENTAL PROTECTION Subcontractor shall comply with Environment Protection during construction as specified. Subcontractor will limit noise, vibration and fumes effecting adjacent areas. Provide dust control for its own work. Subcontractor shall install and later remove any erosion control measures required for the proper performance of their work. Protect and/or repair any erosion control barriers installed by others if damaged by your work. Subcontractor shall make provisions to remove excess soil from truck and other vehicle tires as necessary to prevent tracking of mud or other substances onto paved streets and highways. Subcontractor is responsible for removal of mud and debris from sidewalks and streets due to traffic in and out of jobsite caused by subcontractor. Cleaning of streets as required or necessitated by this Subcontractor's work is also included.
- 11. MOLD ACTION PLAN Subcontractor recognizes that water leakage and infiltration are major factors in growth of mold. Subcontractor shall actively participate in implementation of a project specific mold action plan. This plan will address procedures to limit or eliminate water leakage and infiltration, as well as address detailing of building components to be less susceptible to water damage and mold growth.

FIELD INSTALLATION REQUIREMENTS:

- 12. EMBEDS / SLEEVES Provide any embeds or sleeves required for casting into poured in place or precast concrete. Subcontractor shall be responsible for the timely delivery, layout and installation of all nailers, inserts, blockouts, penetrations, sleeves, etc., as may be specified and/or required for their scope of work.
- 13. SEALANTS All caulking, sealants, fire stop/caulking/safing, STC rated sealants, and similar items required by the contract documents or code are included for this subcontractor's scope. This includes all wall, roof, floor and ceiling penetrations. Caulking of this subcontractor's scope of work to adjacent work surfaces is included as required. Escutcheons are required at exposed conditions and are included as required.

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- 14. BLOCKING / BACKING Provide backing as detailed in the drawings for all items that require backing per the manufacturer's installation instructions and all those items that, based on the conditions of the underlying support, cannot be installed without backing. Where backing is indicated in the documents to be installed by others, this Subcontractor shall notify others in advance, provide layout for and verify the installation of special framing, blocking or backing required for its work. Failure to procure and coordinate the locations of all required backing at the time when the substrate is being constructed will result in this subcontractor being responsible for all repairs as required. Do not rely on the Contractor or the installing subcontractor to verify installed blocking or backing on your behalf. Any costs associated with additional backing not identified and coordinated as stated above will be the responsibility of this Subcontractor.
- 15. SEISMIC BRACING Provide all seismic bracing, isolation and anchorages as required for the scope of this work. Include all necessary engineering and design work, if required by the contract documents.
- 16. ACOUSTICAL Provide all acoustic sealants, pads, isolation devices, materials and details as specified or otherwise appropriate to achieve sound ratings required or suitable for the conditions related to this Subcontractor's scope of work.
- 17. ACCESS DOORS Access doors are to be provided as required for your work. All access panel locations must be provided to the trade framing the opening prior to constructing the element to receive the access door. Failure to locate panels will result in your account being charged the cost of reframing and repairing finishes if necessary. Location of access panels are to be clearly identified on shop drawings.
- 18. ACCESS & HOISTING The Subcontractor shall be responsible for material handling and hoisting its materials, supplies and equipment that does not include the use of the material hoist. Subcontractor shall provide all supports, shores, scaffold, ladders and lifts required to support its installation of the work.

ADMINISTRATIVE PROVISIONS:

- 19. ADMINITRATIVE COSTS Subcontractor shall be responsible for paying all taxes, permits (other than building permits), fees (including than utility tap fees), licenses, insurance costs, etc., applicable to the work. The subcontractor may take a Code 550 deduction to become exempt from Transaction Privilege Tax, but it is the subcontractor's responsibility to request the form 5005 from Hensel Phelps Construction Co. and to file the appropriate paperwork.
- 20. SUPPLYING OF DOCUMENTS Subcontractor must purchase all contract documents.
- 21. CLOSE OUT DOCUMENTS This Subcontract includes spare parts, training, O & M manuals, warranties, certifications, test reports and all other close out requirements as specified. Training shall be videotaped, if required by the contract specifications for this scope of work. Subcontractor's schedule of values shall include no less than 2% of the Subcontract value each, for both punch list and testing / closeout requirements.
- 22. QUALITY CONTROL The Contractor will develop a quality control plan for all aspects of the project. This plan will require this Subcontractor to prepare for and attend meetings to review and plan each component of work. The plan will also require that in place mock-ups of each component of work be constructed and reviewed prior to proceeding with the work. These mock-ups may be in addition to the prescribed mock-ups required by the Owner. All costs associated with the Quality Control Plan are included.
- 23. COMMISSIONING All subcontractors having any installations effected by individual system testing and/or integrated system testing shall be present and available to adjust, re-set or inspect their appropriate work. Such testing may necessarily be required after normal working hours.
- 24. MATERIALS Provide materials only by specified manufacturers. All products other than the "specified manufacturer" are considered substitutions. This subcontractor is responsible for all costs relating to substitution review and shall provide the documentation required for substitution approval.
- 25. COORDINATION Foreman/Superintendent to participate in pull planning sessions for work that will affect their scope (sessions are 2-4 hours depending on scope).
- 26. Foreman to attend/participate in Weekly Work Plans, including providing their plan for the next week before the meeting (meeting is held to 1 hour once a week) when onsite.
- 27. Foreman to attend daily huddle (huddle is held in work area for 15-20 minutes daily) when onsite.
- 28. Foreman to attend training for Last Planner System (Nuts and Bolts training is 2 hours, Boot Camp is 5 hours).
- 29. ADDITIONAL INSURANCE In addition to the insurance requirements of Article 39 Insurance, Subcontractor agrees to provide the additional insurance coverage as required by Exhibit I Project Insurance Requirements of the Prime Contract.

Subcontract

HENSEL PHELPS CONSTRUCTION CO. Contractor

Issuing Office •	WESTERN DISTRICT OFFICE: 4129 E. Van Buren, Suite 100, Phoenix, AZ 85008
•	Contractor License Number in State of Project ROC089520
Subcontractor •	Sparky Electric 9034 N 47th Ave. Tempe, AZ 85021
Subcontract	Electrical, Telecommunications, Electronic Safety and Security
Project	Luhrs Marriott Courtyard/Residence Inn
Project Number •	5915088 - 1600100

This Subcontract consists of 19 pages numbered 1 of 19 through 19 of 19 and attachments numbered: 2A – 2D, 19A – 19B and Job Information Policy (JIP) Brochure

Please initial each page where indicated, affix authorized signature(s) and return THREE copies at once to the issuing office shown above.

- $\ \square$ A copy executed on behalf of Hensel Phelps Construction Co. will be returned for your files.
- ☑ An additional copy is included to be forwarded to your bonding company.
- ☑ Please retain the copy identified as yours.

SUBCONTRACT

1

Contractor

Subcontractor

2 THIS SUBCONTRACT is made and entered into this 1st day of March, 2018, by and between 3 Sparky Electric Attention: **Brad Harvey** 9034 N 47th Ave. Phone: (602)-222-2600 Tempe, AZ 85021 Fax: (602)-222-2605 hereinafter referred to as the Subcontractor and Hensel Phelps Construction Co., a Delaware corporation, hereinafter referred to as 5 the Contractor. WITNESSETH: That for and in consideration of the mutual promises and covenants herein contained, the Subcontractor and the Contractor agree as follows: 8 9 SECTION A. The Subcontractor covenants, promises and agrees to furnish all material and personal property and to diligently and 10 fully perform all work hereinafter described for the construction of Luhrs Marriott Courtyard/Residence Inn, hereinafter referred to as 11 the Project, to be 12 13 located at 132 S. Central Ave., Phoenix, AZ 85004, for the use and benefit of LUHRS CM, LLC, hereinafter referred to as the 14 15 Owner, in strict accordance with the Contract between the Contractor and the Owner entered into March 01, 2018 and hereby made a part of this Subcontract by reference; all to the satisfaction of the Contractor, the Owner, and the representative authorized by the 16 Owner to interpret and judge the performance of the aforesaid Contract and named therein as architect, engineer, contracting 17 officer, or otherwise, when such representative shall have been designated as the Owner's Authorized Agent; and all of which shall 18 be done in timely, faithful and strict compliance with this Subcontract and all the Subcontract Documents described and defined in 19 20 Section D. Article 1. hereof and elsewhere herein. 21 22 SECTION B. The Subcontractor agrees to furnish all necessary management, supervision, labor, materials, tools, supplies, 23 equipment, plant, services, engineering, testing and/or any other act or thing required to diligently and fully perform and complete the portions of the work described as follows: 24 25 Complete all Electrical, Telecommunications, Electronic Safety and Security described in the issue for 26 construction Plans and Specifications as prepared by Awbrey Cook Rogers McGill Architects dated May 18, 2015. Instruction 27 Bulletin #3 dated June 16, 2015, and Job Information & Policy Brochure dated July 7, 2015. 28 29 30 B.1 All work and materials described in Division 1, and Divisions: 31 32 1. 07 8413 - Penetration Firestopping (as applies) 2. 07 9200 – Joint Sealants (as applies) 33 3. 31 0200 – General Provisions for Earthwork (as applies) 34 4. 26 0500 - General Provisions complete 35 5. 26 0501 - Scope of Work complete 36 6. 26 0519 - Temporary and Remodeling Work complete 37 7. 26 0520 - Low Voltage Electrical Power Conductors and Cables complete 38 8. 26 0526 – Low Voltage Open Wiring Systems complete 39 9. 26 0533 - Grounding and Bonding for Electrical Systems complete 40 10. 26 0543 - Raceways and Boxes for Electrical Systems complete 41 11, 26 0544 – Underground Ducts and Raceways for Electrical Systems complete 42 43 12. 26 0548 - Underground Pull Boxes and Handholes complete 44 45 46 (Continued on Page 2A of 19) 47 48 49 50 SECTION C. The Contractor agrees to pay the Subcontractor for the full, faithful and complete performance of this 51 52 Subcontract the sum of Six Million Sixteen Thousand Dollars and 00/100 (\$6,016,000.00), subject to additions and deductions for changes agreed upon in writing as hereinafter set forth or as otherwise authorized hereinafter; and Contractor further 53 agrees to make all partial and final payments on account thereof in accordance with the terms and provisions of the Subcontract Documents including, but without restriction thereto, the provisions of Section D, Article 5 of this Subcontract.

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Sparky Electric 9034 N 47th Ave. Tempe, AZ 85021 5915088 - 1600100

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- 1. 26 0553 Vibration and Siesmic Controls for Electrical Systems complete
- 2. 26 0800 Identification for Electrical Systems complete
 - 3. 26 0801 Electrical Systems Testing Requirements complete
 - 4. 26 0802 Electrical Systems Prefunctional Checklists complete
 - 5. 26 0803 Electrical Systems Sample Functional Procedures complete
- 8 6. 26 0913 – Power Systems Metering - Feeders complete
 - 7. 26 0923 Lighting Control Devices Relay Panel Basic Systems complete
- 8. 26 0925 Lighting Control Devices Digital Occupancy & Daylight Management System complete 10
 - 9. 26 2213 Low Voltage Distribution Transformers complete
- 10. 26 2300 Low Voltage Switchgear complete 12
 - 11. 26 2412 Service Entrance Switchboards complete
 - 12. 26 2416 Panelboards complete
 - 13. 26 2500 Enclosed Bus Assemblies complete
 - 14. 26 2660 Lighting Accessories complete
- 15. 26 2726 Wiring Devices complete 17
- 18 16. 26 2813 – Fuses complete
- 19 17. 26 2816 - Enclosed Switches and Circuit Breakers complete
- 20 18. 26 2913 - Enclosed Controllers complete
- 19. 26 3213 Diesel-Engine-Driven Generator Set complete 21
 - 20. 26 4113 Lightning Protection for Structures complete
- 21. 26 4313 Surge Protection for Low Voltage (SPD's) for Low Voltage Surge Protection for Electrical 23 Distribution Systems complete 24
 - 22. 26 5100 Interior Lighting complete
- 23. 26 5600 Exterior Lighting complete 26
 - 24. 27 0500 Common Work Results for Communications complete
- 25. 27 1000 Structured Cabling complete 28
 - 26. 27 4116 New Building Television Equipment (as applies)
- 30 27. 27 5100 – Distributed Audio-Video Communications System complete
 - 28. 28 0000 Electronic Safety and Security complete
 - 29. 28 3000 Fire-Alarm and Detection Systems complete

are included within the scope of this Subcontract with the following being the only exceptions:

B.2 Exclusions:

- 1. Duct Smoke Detectors (by Keeping Cool Mechanical)
- 2. Light Pole Bases (by Hardrock Concrete)
- 3. Formed Concrete (by Hardrock Concrete)
- 4. Traffic Signal work (by Traffic Signal Subcontractor)
- 5. Asphalt patching (by Asphalt Subcontractor)
- 6. Arizona Transaction Privilege Tax (by Hensel Phelps)
- 7. Integrated Automation System- All Components (By Keeping Cool Mechanical)

B.3 Inclusions

48 Your attention is specifically called to the following items, which are **included** in this Subcontract, but without limiting the Scope of work as provided above. This Subcontractor acknowledges that it would be impossible to identify and specifically list every inclusion 49 for this Scope of Work, therefore the below list is meant to provide clarity, but not limit the Scope. Items omitted from this list, but necessary for the proper performance of this Subcontractor's Scope of Work are included. Only the specific listed exclusions in Section B are excluded from this Scope of Work.

- 1. Payment and performance bond is required.
- 56 In conformance with the Contract Documents, provide all labor, materials, and equipment necessary to furnish and install, including testing, commissioning, and placing into operation all electrical work specified and shown, and/or as reasonably 57

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- inferred, for a complete and fully functional electrical system installation which includes, but is not limited to, Electrical, Fire Alarm/Life Safety, Telecommunications, CCTV, Fiber Optics, Data, Audio Video, and Security systems.
- 3 3. Motor starters, relays, control centers, disconnect switches, etc. shown on the electrical or mechanical drawings. Size starters based on horsepower and/or manufacturer's requirements. Equipment requiring Variable Frequency Drives (VFD's) will be procured by the Mechanical subcontractor and turned over to this Subcontractor for mounting. Interconnection conduit and wiring from the VFD to its applicable motor is included in this scope; line-in and line-out conductors are not to be combined in the same raceway.
- 8 4. All required electrical rough-in, interconnections, transformers, and final electrical connections to equipment furnished by others including but not limited to, automatic doors, motorized dampers, elevator equipment/panels, coiling doors, dock levelers, laundry chutes, and mechanical & plumbing equipment. Coordinate voltages of actual equipment supplied with your scope of work. Low voltage connections for flush valves to be provided by Plumbing Subcontractor.
- 12 5. Subcontractor to provide all necessary embeds, supports and other appurtenances for installation of Owner furnished FF&E lighting including, but not limited to wall sconces, guestroom entry light, track lighting, LED art lighting. Miscellaneous metal supports less than 50 lbs. for Chandeliers shall be provided under this subcontract.
- 15 6. Final connections to laundry and kitchen equipment including all necessary cords, pig tails, plugs, and like items required for final connection to the equipment.
- 7. Emergency generator system including generator, tanks, diesel fuel filling station (diesel piping to be furnished and install by others), spill containment berm, muffler, and transfer switch. Subcontractor shall supply the initial fill of the tank, testing load bank, and replace fuels expended while testing the generator and other special system components tied to the emergency system (e.g. fire alarm system). Subcontractor shall procure air quality permits for the emergency generator supplied for this Project.
- 22 8. Fully functional Fire Alarm System including but not limited to all fire alarm control/monitoring panels, programming, conduit, wiring, smoke detectors, heat detectors, pull stations, monitor modules, control modules, horns and strobes, door holders, etc. necessary for a complete system. Provide all shunt trip circuits, relays, control modules, circuit breakers etc. along with required control wiring to control shutdown of equipment provided by others including, but not limited to, smoke dampers, air handling equipment, fans, elevators, escalators and gas solenoid valves.
- 27 9. Provide electrical conduit, wiring and connections required for fire protection systems including tamper switches, alarm bells, and post indicator valves.
- Furnish and install the Communication, Data, Fiber-optics, CATV, and Cabling Systems backbone as specified. Work shall include but is not limited to conduit, cable trays, racks, wiring, cables, and other necessary appurtenances as specified and as shown on the drawings. Subcontractor shall coordinate Patch fields and Fiber-optic Patch Panel interfacing with the Owner through Contractor.
- 11. Provide Guestroom entry locking system power and communication cable. Subcontractor shall coordinate location of Transceiver
 Hub for entry system with entry door subcontractor.
- 12. Fire stopping, acoustic, and any other requirements for sealing your penetrations through non-rated/rated/sound rated walls and floors.
- 37 13. Sound pads are included behind all J-Boxes that occur between common walls and where necessary to meet sound required ratings.
- 39 14. Site and building underground electrical and ductbank work, including excavation, bedding, backfill, compaction, concrete 40 material, reinforcing, manholes, pull boxes, marking tape, etc. Provide shoring and bracing of trenches where necessary for 41 personnel and structure protection which meets OSHA guidelines. Excavation spoils to be stockpiled on site as directed by 42 HPCC Superintendent. Provide all cutting and removal of existing pavements as required to perform Subcontractor's work.
- 43 15. Site lighting and power including removal of existing street lights and associated overhead conductor, installation of new street lights, and landscape power receptacles. Subcontractor to furnish layout drawings, templates, and anchor bolts for concrete light pole bases provided by others.
- 46 16. Provide conduits and power wiring to irrigation controllers as required and indicated on the drawings.
- 47 17. Unistrut and pulling eyes in APS room is included.
- 48 18. Subcontractor to furnish, install, secure, maintain and remove all transformers, panels, disconnects, distribution boxes (monthly testing required), meters, fixtures, cable/wire, poles, and other appurtenances necessary for a complete and reliable temporary electrical power and lighting system which fulfills the requirements as follows:
 - a. Arrange for and coordinate with APS for temporary service to the buildings and construction offices.
 - b. Temporary power shall be available from start of foundation work through conversion to permanent system.
 - c. Provide the required number of temporary power drops with distribution panels being available no more than a 100 ft. away on each level throughout the building.
 - d. Furnish temporary feeders to permanent mechanical, plumbing, and elevator equipment as necessary until permanent power is available.
 - e. Provide temporary power and hookup of other construction equipment as coordinated with Contractor's Superintendent including but not limited to, fireproofing machines, man and material hoists, and tower crane.

Contractor Subcontractor

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- f. Provide and maintain temporary lighting system capable of being switched on/off per floor for work while under construction. Temporary lighting shall illuminate all building areas in accordance with OSHA requirements. In addition, provide no less than 5 foot-candle lighting in rooms larger than 2000 square feet. A stock of required lamps for temporary fixtures will be kept on site at all time for immediate maintenance as needed. Task lighting shall be provided by each trade.
- g. All temporary power will be G.F.C.I. protected.
- h. Relocation as needed of temporary electrical facilities to clear the path of permanent installation of all trade's work is included.
- i. Provide maintenance of all items including replacement of lamps and fuses.
- j. Provide switchover of temporary system onto permanent service when the latter is ready for same. Power switchover is to be performed on off-hours to minimize disruption to construction activities. Coordination of exact source requirements and raceway installation is included in this scope.
- 19. Prior to any digging notify Arizona Blue Stake.
- 20. Subcontractor includes all mock-ups as identified in the contract documents. Guest Room Model mock-up in accordance with drawings A-1.2, A-5.1, and A-6.1 will be constructed in the Luhrs office building near the project. Additional in place mockup rooms and building envelope mockup, as further defined by the Quality Control Plan, will be constructed. All expedited product submittals, shop drawings and early deliveries associated with these mockups are hereby included. Mockup quality will be representative of final installations.
- 19 21. All applicable sales tax on consumables items is included in the sum of this contract.
 - 22. Subcontractor understands and accepts the proactive coordination effort required with other MEP, structural, architectural and finish trades which includes developing formal MEP coordination drawings and all design conflicts resolution required for a proper and complete installation including re-routing if necessary. It is explicitly understood that the MEP trades shall produce a detailed and dimensioned set of plans, in which all MEP trades are overlaid onto one set of plans. Work in conjunction with the Mechanical, Plumbing, Electrical and Fire Sprinkler Subcontractors to compile, draft, and submit a complete set of 3D AutoCAD drawings which clearly identifies all electrical, plumbing, piping and ductwork heights above the finished floor along with their assigned routing in the ceiling space. One hundred percent (100%) attendance for all coordination meetings will be required. Coordinate work through the use of these meetings with the following trades: drywall, concrete, structural steel, metal deck, plumbing, fire protection, electrical, and HVAC. In the event that the completed work of any trades has to be removed, replaced, or modified due to lack of coordination, the cost of removing, replacing or modifying such work will be paid for by the responsible BIM coordination Subcontractor. No Change Order will be issued for field coordination problems. In the event any dispute should arise as to the interpretation of the plans, specifications, or drawings concerning the work or materials to be furnished by this Subcontractor, Contractor's Representative shall determine such dispute. Such determination shall be final and binding.

B.4 Clarifications

- 1. Upon issuance...
 - 1. Work shall proceed in accordance with the overall project schedule.
 - 2. For accounting purposes only, calculated contract price as follows:

40	Base Bid Scope	\$ 6,160,000.00
41	VE Credit: Aluminum feeders in lieu of copper*	\$ (100,000.00)
42	VE Credit: Alternate Fixture Package*	\$ (170,000.00)
43	Addenda A changes	\$ 8,000.00
44	Subtotal:	\$ 5,898,000.00
45	Payment & Performance Bonds (2.0%)	\$ 118,000.00
46		
47	Total Contract Amount	\$ 6,016,000.00

* Contingent upon formal acceptance of scope revision and pricing by the Owner.

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B.5 Alternates - work to be added / deleted by Change Order at the option of the Owner or Contractor:

Alternate prices below include all materials, fabrication, labor/installation, delivery, subsistence, taxes, insurance, bond costs, shipping, overhead, profit and all other costs incurred by the Subcontractor and his suppliers for the change. Work covered by these alternate prices shall be in strict accordance with the applicable provisions of this agreement.

Alternate 1.

Provide additional low voltage devices as indicated in ACRM Instruction Bulletin #2

Alternate No. 1 Value: \$8,000.00

Alternate 2.

Provide additional switches and back boxes for additional sconces indicated in ACRM Instruction Bulletin #2

Alternate No. 2 Value: \$31,000.00

Alternate 3.

Provide lighting changes to fixtures L9 and W1 as described in ACRM Instruction Bulletin #2

Alternate No. 3 Value: \$76,000.00

Light-It-Up Electrical, LLC. 9034 N 47th Ave. Tempe, AZ 85021 5915088 - 1600100

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SECTION E. SPECIAL PROVISIONS.

TEMPORARY FACILITIES:

- 23. SITE FENCE Subcontractor accepts Contractor's perimeter fence / barricade as is. Any relocation or adjustments required by this Subcontractor to perform its work is this Subcontractor's responsibility. Modifications shall be pre-approved by the Contractor, secured nightly and restored upon completion of work.
- 24. WATER Subcontractor is responsible for their own water for testing, mixing, etc. Water will be available from a single source near the building pad at ground level. All distribution and proper disposal is by the Subcontractor. The Subcontractor is responsible for all drinking water and ice required for its work force.
- 11 25. TEMP TOILETS Hensel Phelps shall provide and maintain adequate temporary toilets and hand wash facilities for the use of all employees.
 - 26. POWER Temporary Electrical Service: Hensel Phelps will furnish temporary 120V electrical power for use by all Subcontractors to several central locations within the building as selected by Hensel Phelps. Distribution of power from these central locations is the responsibility of each subcontractor. Temporary power will not support equipment, electric welders or heaters. Any required specialty power (including temporary power required for temporary mechanical units) is the responsibility of each subcontractor and is excluded. All temp power not covered by this subcontractor shall be coordinated with the electrical subcontractor. It is understood that temporary electrical power may not be available for construction use during the initial stages of the project and that Subcontractor shall provide electric generators as needed to perform the work until temporary power is available.
- 27. LIGHTING Natural or temporary lighting will be provided to meet OSHA minimum standards. Individual task light stands for remote locations or individual rooms to achieve specified quality will be the responsibility of each Subcontractor for the satisfactory performance of its work.
 - 28. CLIMATE CONTROL This Subcontractor shall provide any special heat, dehumidification, ventilation and weather protection as required to complete the scope of work in accordance with the specifications, manufacturer's requirements and/or industry standards.
 - 29. STORAGE Onsite storage and laydown is limited; all storage and delivery needs are to be coordinated in advance with the HPCC Project Superintendent. Coordinate with other trades to accommodate access to stored materials. Cost of any offsite storage required to support the work is included in this Subcontract.
 - 30. CLEAN-UP Every subcontractor shall provide the contractor with labor effort once a week in order to broom clean the project as necessary; this is in addition to your required cleanup. The exact amount shall be determined using the table below and applies only during the time the subcontractor is actually on the project performing work.

Subcontract Amount Weekly Labor Effort \$0 - \$1.5M 8 mh / week \$1.5M - \$5M 16 mh / week \$5M - above 24 mh / week

- 31. TRASH REMOVAL Hensel Phelps will furnish dumpsters for all subcontractors general waste disposal. All crates, cartons, boxes, ductwork, and steel scraps must be knocked down small enough to fit into the dumpster. Each subcontractor will be responsible for the proper disposal of all hazardous waste generated by their work. Submit documentation of all hazardous waste disposals to Hensel Phelps.
- 32. ENVIRONMENTAL PROTECTION Subcontractor shall comply with Environment Protection during construction as specified. Subcontractor will limit noise, vibration and fumes effecting adjacent areas. Provide dust control for its own work. Subcontractor shall install and later remove any erosion control measures required for the proper performance of their work. Protect and/or repair any erosion control barriers installed by others if damaged by your work. Subcontractor shall make provisions to remove excess soil from truck and other vehicle tires as necessary to prevent tracking of mud or other substances onto paved streets and highways. Subcontractor is responsible for removal of mud and debris from sidewalks and streets due to traffic in and out of jobsite caused by subcontractor. Cleaning of streets as required or necessitated by this Subcontractor's work is also included.
- 33. MOLD ACTION PLAN Subcontractor recognizes that water leakage and infiltration are major factors in growth of mold. Subcontractor shall actively participate in implementation of a project specific mold action plan. This plan will address procedures to limit or eliminate water leakage and infiltration, as well as address detailing of building components to be less susceptible to water damage and mold growth.

FIELD INSTALLATION REQUIREMENTS:

- 34. EMBEDS / SLEEVES Provide any embeds or sleeves required for casting into poured in place or precast concrete. Subcontractor shall be responsible for the timely delivery, layout and installation of all nailers, inserts, blockouts, penetrations, sleeves, etc., as may be specified and/or required for their scope of work.
- 35. Equipment/Housekeeping Pads- All pads to be completed by Hardrock Concrete. Layout for pads to be performed by this subcontractor.
- 36. SEALANTS All caulking, sealants, fire stop/caulking/safing, STC rated sealants, and similar items required by the contract documents or code are included for this subcontractor's scope. This includes all wall, roof, floor and ceiling penetrations. Caulking of this subcontractor's scope of work to adjacent work surfaces is included as required. Escutcheons are required at exposed conditions and are included as required.

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- BLOCKING / BACKING Provide backing as detailed in the drawings for all items that require backing per the manufacturer's installation instructions and all those items that, based on the conditions of the underlying support, cannot be installed without backing. Where backing is indicated in the documents to be installed by others, this Subcontractor shall notify others in advance, provide layout for and verify the installation of special framing, blocking or backing required for its work. Failure to procure and coordinate the locations of all required backing at the time when the substrate is being constructed will result in this subcontractor being responsible for all repairs as required. Do not rely on the Contractor or the installing subcontractor to verify installed blocking or backing on your behalf. Any costs associated with additional backing not identified and coordinated as stated above will be the responsibility of this Subcontractor.
- SEISMIC BRACING Provide all seismic bracing, isolation and anchorages as required for the scope of this work. Include all necessary engineering and design work.
- ACOUSTICAL Provide all acoustic sealants, pads, isolation devices, materials and details as specified or otherwise appropriate to achieve sound ratings required or suitable for the conditions related to this Subcontractor's scope of work.
- ACCESS DOORS Access doors are to be provided as required for your work. All access panel locations must be provided to the trade framing the opening prior to constructing the element to receive the access door. Failure to locate panels will result in your account being charged the cost of reframing and repairing finishes if necessary. Location of access panels are to be clearly identified on shop drawings.
- ACCESS & HOISTING The Subcontractor shall be responsible for material handling and hoisting its materials, supplies and equipment. Subcontractor shall provide all supports, shores, scaffold, ladders and lifts required to support its installation of the work.

ADMINISTRATIVE PROVISIONS:

- ADMINITRATIVE COSTS Subcontractor shall be responsible for paying all taxes, permits (other than building permits), fees (including than utility tap fees), licenses, insurance costs, etc., applicable to the work. The subcontractor may take a Code 550 deduction to become exempt from Transaction Privilege Tax, but it is the subcontractor's responsibility to request the form 5005 from Hensel Phelps Construction Co. and to file the appropriate paperwork.
- SUPPLYING OF DOCUMENTS Subcontractor must purchase all contract documents. 43.
- CLOSE OUT DOCUMENTS This Subcontract includes spare parts, training, O & M manuals, warranties, certifications, test reports and all other close out requirements as specified. All training shall be videotaped. Subcontractor's schedule of values shall include no less than 2% of the Subcontract value each, for both punch list and testing / closeout requirements.
- QUALITY CONTROL The Contractor will develop a quality control plan for all aspects of the project. This plan will require this Subcontractor to prepare for and attend meetings to review and plan each component of work. The plan will also require that in place mock-ups of each component of work be constructed and reviewed prior to proceeding with the work. These mock-ups may be in addition to the prescribed mock-ups required by the Owner. All costs associated with the Quality Control Plan are included.
- 35 COMMISSIONING - All subcontractors having any installations effected by individual system testing and/or integrated system 36 testing shall be present and available to adjust, re-set or inspect their appropriate work. Such testing may necessarily be required 37 after normal working hours.
- 38 MATERIALS - Provide materials only by specified manufacturers. All products other than the "specified manufacturer" are considered substitutions. This subcontractor is responsible for all costs relating to substitution review and shall provide the 39 40 documentation required for substitution approval.
 - COORDINATION Foreman/Superintendent to participate in pull planning sessions for work that will affect their scope (sessions 48. are 2-4 hours depending on scope).
- Foreman to attend/participate in Weekly Work Plans, including providing their plan for the next week before the meeting (meeting 43 49. is held to 1 hour once a week) when onsite. 44 45
 - Foreman to attend daily huddle (huddle is held in work area for 15-20 minutes daily) when onsite. 50.
- 46 51. Foreman to attend training for Last Planner System (Nuts and Bolts training is 2 hours, Boot Camp is 5 hours).
- 47 ADDITIONAL INSURANCE - In addition to the insurance requirements of Article 39 - Insurance, Subcontractor agrees to provide 48 the additional insurance coverage as required by Exhibit I – Project Insurance Requirements of the Prime Contract.

Subcontract

HENSEL PHELPS CONSTRUCTION CO. Contractor

Issuing Office	•	WESTERN DISTRICT OFFICE: 4129 E. Van Buren, Suite 100, Phoenix, AZ 85008
	•	Contractor License Number in State of Project ROC089520
Subcontractor	•	Pex Plumbing, Inc. 6033 W. Century Blvd. Phoenix, AZ 85310
Subcontract	•	Plumbing
Project	•	Luhrs Marriott Courtyard/Residence Inn
Project Number	•	5915088 - 1500500

This Subcontract consists of 19 pages numbered 1 of 19 through 19 of 19 and attachments numbered: 2A – 2C, 19A – 19B and Job Information Policy (JIP) Brochure

Please initial each page where indicated, affix authorized signature(s) and return THREE copies at once to the issuing office shown above.

- ☑ A copy executed on behalf of Hensel Phelps Construction Co. will be returned for your files.
- ☑ An additional copy is included to be forwarded to your bonding company.
- ☑ Please retain the copy identified as yours.

SUBCONTRACT

THIS SUBCONTRACT is made and entered into this 1st day of March, 2018, by and between

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	Pex Plumbir	ng, Inc.	Attention:	Chris Christianson
	6033 W. Ce	ntury Blvd.	Phone:	(602) 123-1866
	Phoenix, AZ	Z 85310	Fax:	(602) 123-1816
4 5 6 7 8 9	the Contracto	eferred to as the Subcontractor and Hensel Phelps Con or. WITNESSETH: That for and in consideration of the or and the Contractor agree as follows:		
10 11 12 13		The Subcontractor covenants, promises and agrees t all work hereinafter described for the construction of Lu be		
14 15	located at <u>132</u> Owner, in stri	2 S. Central Ave., Phoenix, AZ 85004, for the use and ct	d benefit of <u>LU</u>	HRS CM, LLC, hereinafter referred to as the
16 17 18 19 20 21 22 23	Subcontract to interpret and otherwise, what timely, faithful	with the Contract between the Contractor and the Owner of reference; all to the satisfaction of the Contractor, the judge the performance of the aforesaid Contract and not need such representative shall have been designated as I and strict compliance with this Subcontract and all the eof and elsewhere herein.	e Owner, and the amed therein as the Owner's A	the representative authorized by the Owner to as architect, engineer, contracting officer, or Authorized Agent; and all of which shall be done in
24 25 26 27	equipment, pl	The Subcontractor agrees to furnish all necessary malant, services, engineering, testing and/or any other act the work described as follows:		
28 29 30 31		Plumbing described in the issue for construction Platects dated May 18, 2015, Instruction Bulletin #3 date	•	
32 33	B.1 All work a	and materials described in Division 1, and Divisions:		
34 35 36 37	1. 2. 3. 4.	07 8413 – Penetration Firestopping (As Applies 07 9200 – Joint Sealants (As Applies) 08 3113 – Access Doors and Panels (As Applie 22 0500 – Common Work Results for Plumbing	s)	
3/	4.	22 0300 - Continion Work Results for Plumbing	complete	

- 22 0500.01 General Provisions complete
- 22 0501 Demonstration & Training for Plumbing Systems & Components complete
- 22 0513 Common Motor Requirements for Plumbing Equipment complete 7.
- 22 0519 Meters and Gauges for Plumbing Piping complete
- 22 0523 General Duty Valves for Plumbing Piping complete
- 10. 22 0529 Hangers and Supports for Plumbing Piping and Equipment complete
- 11. 22 0553 Identification for Plumbing Piping and Equipment complete

(Continued on Page 2A of 19)

SECTION C. The Contractor agrees to pay the Subcontractor for the full, faithful and complete performance of this

Subcontract the sum of Three Million Eight Hundred Twenty One Thousand Dollars and 00/100 (\$3,821,000.00), subject to additions and deductions for changes agreed upon in writing as hereinafter set forth or as otherwise authorized hereinafter; and Contractor further agrees to make all partial and final payments on account thereof in accordance with the terms and provisions of the Subcontract Documents including, but without restriction thereto, the provisions of Section D, Article 5 of this Subcontract.

Contractor Subcontractor

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- 12. 22 0700 Plumbing Insulation complete
 13. 22 0716 Plumbing Equipment Insulation complete
 14. 22 0800 Commissioning of Plumbing Systems complete
 - 14. 22 0800 Commissioning of Plumbing Systems complete15. 22 0800.01 Plumbing Testing Requirements complete
 - 15. 22 0800.01 Plumbing Testing Requirements complete
 - 16. 22 0800.02 Plumbing Pre-functional Checklists complete
 - 17. 22 0800.03 Plumbing Sample Functional Test Procedures complete
 - 18. 22 1116 Domestic Water Piping complete
- 19. 22 1119 Domestic Water Piping Specialties complete
 - 20. 22 1123 Domestic Water Pumps complete
- 12 21. 22 1123.13 Domestic Water packaged Booster Pumps complete
- 22. 22 1316 Sanitary Waste and Vent Piping complete
 - 23. 22 1319 Sanitary Waste Piping Specialties complete
 - 24. 22 1323 Sanitary Waste Interceptors complete
 - 25. 22 1329 Sanitary Sewer Pumps complete
 - 26. 22 1413 Storm Drainage Piping complete
 - 27. 22 1423 Storm Drainage Piping Specialties complete
- 19 28. 22 1429 Sump Pumps complete
- 20 29. 22 1623 Facility Natural Gas Piping complete
- 30. 22 3100 Domestic Water Softeners complete
 - 31. 22 3544 Domestic Hot Water Storage Tanks complete
- 23 32. 22 4000 Plumbing Fixtures complete
 - 33. 25 5110 Integrated Automation Control of Guestroom Equipment (As Applies)
- 25 34. 25 5500 Integrated Automation Control of HVAC & Plumbing Equipment (As Applies)
 - 35. 31 0200 Earthwork (As Applies)

are included within the scope of this Subcontract with the following being the only exceptions:

B.2 Exclusions:

- 1. Air Handler and Fan Coil Condensate Pumps (by Spiral HVAC)
- 2. Furnishing shower pans (by Hensel Phelps). Unloading, distribution, and installation is included.
- 3. Cultured marble shower/tub surrounds (by Hensel Phelps)
- 4. Glass shower enclosures (by Hensel Phelps)
- 5. Building gas and water meter (by Owner)
- 6. Arizona Transaction Privilege Tax (by Hensel Phelps)
- 7. Landscaping water supply to be by Landscaping Subcontractor

B.3 Inclusions

Your attention is specifically called to the following items, which are **included** in this Subcontract, but without limiting the Scope of work as provided above. This Subcontractor acknowledges that it would be impossible to identify and specifically list every inclusion for this Scope of Work, therefore the below list is meant to provide clarity, but not limit the Scope. Items omitted from this list, but necessary for the proper performance of this Subcontractor's Scope of Work are included. Only the specific listed exclusions in Section B are excluded from this Scope of Work.

- 1. Payment and performance bond is required.
- 48 2. In conformance with the Contract Documents, provide all labor, materials, and equipment necessary to furnish and install, including testing, commissioning, and placing into operation all plumbing work specified and shown and/or as reasonably inferred for a complete and fully functional plumbing system installation which includes, but is not limited to the following systems: hot and cold domestic water systems, water softener system, sanitary sewer system, grease waste and interceptor system, storm sewer drainage systems, and gas piping system.
- 53 3. Sanitary waste, storm sewer and domestic water systems are to stub out 5' from building. Connections to site utility piping for these systems are included.
- 55 4. Grease waste system includes piping, grease interceptor, cleanouts, excavation, bedding, and necessary appurtenances for a complete and fully functional system.
- 57 5. Gas system shall extend outside the building to the gas meter for connection by Utility Company.

Pex Plumbing, Inc. 6033 W. Century Blvd. Phoenix, AZ 85310 5915088 - 1500500

- 1 Subcontractor shall install all loose kitchen and laundry equipment plumbing fixtures, regulators, valves, etc. and make the final connections to the all equipment kitchen equipment and laundry equipment. Subcontractor shall provide all piping, fittings, and 2 appurtenances necessary for final connection to the equipment. Food Service and laundry subcontractor to furnish all pressure 3 4 regulators and backflow valves required for their equipment to be installed under this scope.
- 5 7. Connection to mechanical equipment installed by others.
- Provide all hangers, supports, fire stopping for subcontractor's scope of work necessary for a complete and working system. 6 Subcontractor should plan for supports to be installed before placement of concrete. 7
- Unload, inventory, distribute, and install curved and ADA shower pans provided by others. 8
- 10. Sewage ejector pumps and pit including all required excavation, bedding, and backfill.
- 10 11. Pool drain to Room 303 as shown.
- 12. Provide access doors and panels for this subcontractor scope of work (Installed by Others). Provide locations as part of shop 11 12
- 13 13. Excavate, provide bedding material, and backfill underground lines per contract documents. Subcontractor to locate spoils as directed by Hensel Phelps. 14
- 14. Flush and disinfect domestic water systems. 15
- 15. Provide two (2) toilets and sink fixtures per every three (3) floors to be used for construction use during operations. Final location 16 of facilities to be coordinated with Hensel Phelps' Project Superintendent. 17
- 16. All applicable sales tax on consumable items is included in the sum of this subcontract. 18
- 17. It is the responsibility of this Subcontractor to coordinate work with other Subcontractors whose work it interfaces with to provide 19 a fully functioning and integrated system. 20
- 21 18. Subcontractor includes all mock-ups as identified in the contract documents. Guest Room Model mock-up in accordance with 22 drawings A-1.2, A-5.1, and A-6.1 will be constructed in the Luhrs office building near the project. Additional in place mockup rooms and building envelope mockup, as further defined by the Quality Control Plan, will be constructed. All expedited product 23 24 submittals, shop drawings and early deliveries associated with these mockups are hereby included. Mockup quality will be 25 representative of final installations.
- 26 19. Foreman/Superintendent to participate in pull planning sessions for work that will affect their scope (sessions are 2 – 4 hours 27 depending on scope)
- 20. Condensate piping and insulation for all mechanical systems is included. Condensate pumps to be provided by HVAC contractor. 28
- 29 21. Foreman to attend/participate in Weekly Work Plans, including providing their plan for the next week before the meeting (meeting 30 is held to 1 hour once a week)
- 22. Foreman to attend daily huddle (huddle is held in work area for 15-20 minutes daily) 31
- 23. Foreman to attend training for Last Planner System (Nuts and Bolts training is 2 hours, Boot Camp is 5 hours) 32
- 24. Subcontractor understands and accepts the proactive coordination effort required with other MEP, structural, architectural and 33 34 finish trades which includes developing formal MEP coordination drawings and all design conflicts resolution required for a proper 35 and complete installation including re-routing if necessary. It is explicitly understood that the MEP trades shall produce a detailed and dimensioned set of plans, in which all MEP trades are overlaid onto one set of plans. Work in conjunction with the 36 Mechanical, Plumbing, Electrical and Fire Sprinkler Subcontractors to compile, draft, and submit a complete set of 3D AutoCAD 37 38 drawings which clearly identifies all electrical, plumbing, piping and ductwork heights above the finished floor along with their assigned routing in the ceiling space Spiral HVAC shall take the lead in gathering the information provided by other 39 40 Subcontractors and producing the final overlay 3D AutoCAD drawing which shall identify clash areas between trades to be solved in the coordination meetings. One hundred percent (100%) attendance for all coordination meetings will be required. Coordinate 41 42 work through the use of these meetings with the following trades: drywall, concrete, structural steel, metal deck, plumbing, fire protection, electrical, and HVAC. In the event that the completed work of any trades has to be removed, replaced, or modified 43 due to lack of coordination, the cost of removing, replacing or modifying such work will be paid for by the responsible BIM 44 45 coordination Subcontractor. No Change Order will be issued for field coordination problems. In the event any dispute should 46 arise as to the interpretation of the plans, specifications, or drawings concerning the work or materials to be furnished by this Subcontractor, Contractor's Representative shall determine such dispute. Such determination shall be final and binding. 47

25. Provide a temporary potable water system complete with backflow device for construction use through the Tower. Water meter and usage costs are excluded and are to be paid by Owner.

58 Contractor Subcontractor

48

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B.4 Clarifications

- Upon issuance...
 - 1. Work shall proceed in accordance with the overall project schedule.
 - 2. For accounting purposes only, calculated contract price as follows:

6	Base Bid Plumbing Scope	\$ 3,915,000.00
7 8	VE Item – Standard couplings in lieu of heavy duty waste, vent, and storm *	\$ (75,000.00)
9 10	VE Item – CPVC in lieu of copper for domestic water (160 degrees to remain copper 8 pex in units)*	\$ (100,000.00)
11 12	6" Domestic Water and Roof Drain Main increase quantity* (Roof flashings to be completed by roofer)	\$ 25,000.00
13	Subtotal:	\$ 3,765,000.00
14	Payment & Performance Bonds (1.5%)	\$ 56,000.00
15		
16	Total Contract Amount	\$ 3,821,000.00

^{*} Contingent upon formal acceptance of scope revision and pricing by the Owner.

B.5 Alternates - work to be added / deleted by Change Order at the option of the Owner or Contractor:

Alternate prices below include all materials, fabrication, labor/installation, delivery, subsistence, taxes, insurance, bond costs, shipping, overhead, profit and all other costs incurred by the Subcontractor and his suppliers for the change. Work covered by these alternate prices shall be in strict accordance with the applicable provisions of this agreement.

1. Low Voltage for Plumbing Fixtures

67,500

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SECTION E. SPECIAL PROVISIONS.

TEMPORARY FACILITIES:

1. SITE FENCE - Subcontractor accepts Contractor's perimeter fence / barricade as is. Any relocation or adjustments required by this Subcontractor to perform its work is this Subcontractor's responsibility. Modifications shall be pre-approved by the Contractor, secured nightly and restored upon completion of work.

- WATER Subcontractor is responsible for their own water for testing, mixing, etc. Water will be available from a single source
 near the building pad at ground level. All distribution and proper disposal is by the Subcontractor. The Subcontractor is
 responsible for all drinking water and ice required for its work force.
- TEMP TOILETS Hensel Phelps shall provide and maintain adequate temporary toilets and hand wash facilities for the use of all employees.
- 4. POWER Temporary Electrical Service: Hensel Phelps will furnish temporary 120V electrical power for use by all Subcontractors to several central locations within the building as selected by Hensel Phelps. Distribution of power from these central locations is the responsibility of each subcontractor. Temporary power will not support equipment, electric welders or heaters. Any required specialty power is the responsibility of each subcontractor and shall be coordinated with the electrical subcontractor. It is understood that temporary electrical power may not be available for construction use during the initial stages of the project and that Subcontractor shall provide electric generators as needed to perform the work until temporary power is available.
- 5. LIGHTING Natural or temporary lighting will be provided to meet OSHA minimum standards. Individual task light stands for remote locations or individual rooms to achieve specified quality will be the responsibility of each Subcontractor for the satisfactory performance of its work.
- 6. CLIMATE CONTROL This Subcontractor shall provide any special heat, dehumidification, ventilation and weather protection as required to complete the scope of work in accordance with the specifications, manufacturer's requirements and/or industry standards.
- 7. STORAGE Onsite storage and laydown is limited; all storage and delivery needs are to be coordinated in advance with the HPCC Project Superintendent. Coordinate with other trades to accommodate access to stored materials. Cost of any offsite storage required to support the work is included in this Subcontract.
- 8. CLEAN-UP Every subcontractor shall provide the contractor with labor effort once a week in order to broom clean the project as necessary; this is in addition to your required cleanup. The exact amount shall be determined using the table below and applies only during the time the subcontractor is actually on the project performing work.

Subcontract Amount Weekly Labor Effort \$0 - \$1.5M 8 mh / week \$1.5M - \$5M 16 mh / week \$5M - above 24 mh / week

- 9. TRASH REMOVAL Hensel Phelps will furnish dumpsters for all subcontractors general waste disposal. All crates, cartons, boxes, ductwork, and steel scraps must be knocked down small enough to fit into the dumpster. Each subcontractor will be responsible for the proper disposal of all hazardous waste generated by their work. Submit documentation of all hazardous waste disposals to Hensel Phelps.
- 10. ENVIRONMENTAL PROTECTION Subcontractor shall comply with Environment Protection during construction as specified. Subcontractor will limit noise, vibration and fumes effecting adjacent areas. Provide dust control for its own work. Subcontractor shall install and later remove any erosion control measures required for the proper performance of their work. Protect and/or repair any erosion control barriers installed by others if damaged by your work. Subcontractor shall make provisions to remove excess soil from truck and other vehicle tires as necessary to prevent tracking of mud or other substances onto paved streets and highways. Subcontractor is responsible for removal of mud and debris from sidewalks and streets due to traffic in and out of jobsite caused by subcontractor. Cleaning of streets as required or necessitated by this Subcontractor's work is also included.
- 11. MOLD ACTION PLAN Subcontractor recognizes that water leakage and infiltration are major factors in growth of mold. Subcontractor shall actively participate in implementation of a project specific mold action plan. This plan will address procedures to limit or eliminate water leakage and infiltration, as well as address detailing of building components to be less susceptible to water damage and mold growth.

FIELD INSTALLATION REQUIREMENTS:

- 12. EMBEDS / SLEEVES Provide any embeds or sleeves required for casting into poured in place or precast concrete. Subcontractor shall be responsible for the timely delivery, layout and installation of all nailers, inserts, blockouts, penetrations, sleeves, etc., as may be specified and/or required for their scope of work.
- 13. Equipment/Housekeeping Pads- All pads to be completed by Hardrock Concrete. Layout for pads to be performed by this subcontractor.
- 14. SEALANTS All caulking, sealants, fire stop/caulking/safing, STC rated sealants, and similar items required by the contract documents or code are included for this subcontractor's scope. This includes all wall, roof, floor and ceiling penetrations.

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- Caulking of this subcontractor's scope of work to adjacent work surfaces is included as required. Escutcheons are required at exposed conditions and are included as required.
- 15. BLOCKING / BACKING Provide backing as detailed in the drawings for all items that require backing per the manufacturer's installation instructions and all those items that, based on the conditions of the underlying support, cannot be installed without backing. Where backing is indicated in the documents to be installed by others, this Subcontractor shall notify others in advance, provide layout for and verify the installation of special framing, blocking or backing required for its work. Failure to procure and coordinate the locations of all required backing at the time when the substrate is being constructed will result in this subcontractor being responsible for all repairs as required. Do not rely on the Contractor or the installing subcontractor to verify installed blocking or backing on your behalf. Any costs associated with additional backing not identified and coordinated as stated above will be the responsibility of this Subcontractor.
- 16. SEISMIC BRACING Provide all seismic bracing, isolation and anchorages as required for the scope of this work. Include all necessary engineering and design work.
- 17. ACOUSTICAL Provide all acoustic sealants, pads, isolation devices, materials and details as specified or otherwise appropriate to achieve sound ratings required or suitable for the conditions related to this Subcontractor's scope of work.
- 18. ACCESS DOORS Access doors are to be provided as required for your work. All access panel locations must be provided to the trade framing the opening prior to constructing the element to receive the access door. Failure to locate panels will result in your account being charged the cost of reframing and repairing finishes if necessary. Location of access panels are to be clearly identified on shop drawings.
- 19. ACCESS & HOISTING The Subcontractor shall be responsible for material handling and hoisting its materials, supplies and equipment. Subcontractor shall provide all supports, shores, scaffold, ladders and lifts required to support its installation of the work.

ADMINISTRATIVE PROVISIONS:

- 20. ADMINITRATIVE COSTS Subcontractor shall be responsible for paying all taxes, permits (other than building permits), fees (including than utility tap fees), licenses, insurance costs, etc., applicable to the work. The subcontractor may take a Code 550 deduction to become exempt from Transaction Privilege Tax, but it is the subcontractor's responsibility to request the form 5005 from Hensel Phelps Construction Co. and to file the appropriate paperwork.
- 21. SUPPLYING OF DOCUMENTS Subcontractor must purchase all contract documents.
- 22. CLOSE OUT DOCUMENTS This Subcontract includes spare parts, training, O & M manuals, warranties, certifications, test reports and all other close out requirements as specified. All training shall be videotaped. Subcontractor's schedule of values shall include no less than 2% of the Subcontract value each, for both punch list and testing / closeout requirements.
- 23. QUALITY CONTROL The Contractor will develop a quality control plan for all aspects of the project. This plan will require this Subcontractor to prepare for and attend meetings to review and plan each component of work. The plan will also require that in place mock-ups of each component of work be constructed and reviewed prior to proceeding with the work. These mock-ups may be in addition to the prescribed mock-ups required by the Owner. All costs associated with the Quality Control Plan are included.
- 24. COMMISSIONING All subcontractors having any installations effected by individual system testing and/or integrated system testing shall be present and available to adjust, re-set or inspect their appropriate work. Such testing may necessarily be required after normal working hours.
- 25. MATERIALS Provide materials only by specified manufacturers. All products other than the "specified manufacturer" are considered substitutions. This subcontractor is responsible for all costs relating to substitution review and shall provide the documentation required for substitution approval.
- 26. ADDITIONAL INSURANCE In addition to the insurance requirements of Article 39 Insurance, Subcontractor agrees to provide the additional insurance coverage as required by Exhibit I Project Insurance Requirements of the Prime Contract.