

**EXHIBIT A SCOPE OF WORK**

A. General:

1. Provide all required labor, material, equipment, supervision, expertise and permits as required to provide a turnkey design and construction of the complete building HVAC system.
- B. Install systems in accordance with all drawings, specifications, ASHRAE requirements, all federal, state, and local code enforcement agencies, the fire marshal, the building departments and any other local application requirements.
  1. Subcontractor will be responsible for adequate coordination with other members of the design team, during design, throughout the construction phase, and through the punchlist to completion.
  2. ARCO will host an above ceiling coordination meeting with the job electrician, plumber, HVAC contractor, fire protection contractor prior to starting above ceiling work.
  3. Upon completion, provide start-up and commissioning of the entire HVAC system provided and include owner training as necessary on the controls.  
All open ducts to be sealed during construction of this project. Filter media to be installed over all supply and return grills. Once unit is ready for operation, filter media on supply grills will be removed, but will stay on return grill until completion of construction. This contractor to supply (1) set of construction filters and (1) set of final filters. One (1) additional filter change to be provided. Gas/electrical consumption bills to be paid for by ARCO.
  4. Include temporary thermostat controls for HVAC equipment to allow for heating/cooling of the building during finish trade installation (drywall finishing, painting etc.). This ensures the final product t-stat does not get damaged/dirty during construction.
  5. HVAC subcontractor shall provide condensate piping for all equipment supplied under this scope. Size traps appropriately.
  6. All packaged rooftop units shall have economizers.
  7. Furnish and install all pre-sloped, pre-insulated roof curbs required for this equipment. Properly secure roof curbs to the metal deck or angle frames. Install insulation inside the roof curbs on the metal deck to reduce noise. Rooftop units should extend over the curbs to allow for proper cover of the curb flashing.
  8. For equipment that does not sit on curbs, provide rails to support unit on roof.
  9. All penetrations shall be flashed by the roofing contractor. Include coordination to ensure that roof penetrations (gas pipe, refrigerant, curbs, equipment rails etc.) are made prior to the installation of the roofing membrane. This will prevent an additional mobilization by the roofing contractor.
  10. If possible, any wiring or natural gas for the units shall enter the units through the curb and not through a penetration in the roof.

C. Exhaust Systems:

1. Furnish and install all exhaust fan systems per the mechanical and kitchen drawings.
2. Kitchen Equipment Clarifications:
  - a. Grease and stainless duct for hoods/dishwasher included.
  - b. Furnish and install for all of the following (note that ARCO will provide Captive Aire equipment, this contractor is responsible for installation, see provided equipment schedule).
    - i. Hoods

- ii. Kitchen exhaust
- iii. Dishwasher exhaust
- iv. Ansul System
- c. Furnish and install all stainless-steel wall paneling in the kitchen
- d. Include shop drawings for kitchen – proper planning and coordination will be important in this area.

D. RTU's:

- 1. Furnish and install all required roof top equipment per the drawings.
- 2. Steel angle roof frames will be provided by the steel contractor, spotted by the HVAC contractor.
- 3. Include a marked up "roof frame plan" generated by the mechanical contractor within 1 wk of award. Dwg to be in AutoCAD, using the structural drawings as a background. Fully dimensioned locations of openings – use column lines to locate openings. Reinforcing of the roof deck shall be by the steel contractor. Cutting of the roof deck shall be the responsibility of the mechanical contractor.
- 4. Include equipment rigging/hoisting (crane etc.) as required to rig the roof top equipment onto the roof of the structure.

- E. Install all duct smoke detectors as required for this scope. Duct smoke detectors to be furnished by others. Provide all necessary wiring for unit shutoff via smoke detector. Connections from the smoke detectors to the fire alarm panel (if required) shall be by others. Include area heat detection in the laser tag space. Fog is used in this space.

F. Ductwork

- 1. Fiberglass ductwork should be supported by pencil rods or metal straps
- 2. Metal ductwork should be supported by pencil rods or ASHRAE approved metal straps.
- 3. Spiral ductwork may be supported by gripple hanging where required. Flanged connections on exposed spiral/oval duct is not acceptable.
- 4. Uni-strut should NOT be utilized as support underneath any exposed ductwork. Utilize a hangar strap that wraps the duct with attachments to all thread above the duct. Uni-strut may only be used where strap hangers cannot support weight of the duct.
- 5. Ductwork should be supported by the structure, not the metal deck. Locate hangars at each change of direction and as required to support the ductwork. A maximum spacing of 8' on center is recommended.
- 6. Ensure ductwork is hung to proper elevations so as to not impede upon the clear height or to allow installation of proper ceiling elevations. The bottom of all ductwork should be at a minimum 6" above all finished ceiling elevations to allow for the installation of light fixtures.
- 7. Organize and execute work so that finished appearance is neat, plumb when vertical and level when horizontal.
- 8. All flex ductwork should not be laid on the acoustical ceiling tile. It should be adequately supported to the underside of the deck above. Maximum flex duct lengths to be dictated by local codes. Flexible ductwork may only run above acoustical tile or drywall ceilings.
- 9. Sleeve ductwork through walls, floors and roofs to allow for a free movement of the ductwork. Include a trim ring for any penetrations through walls into finished spaces. Coordinate installation of ductwork through interior walls with drywall/framing/ceilings

- contractor(s).
10. Reinforce ductwork to ensure a rattle and vibration free installation.
  11. Install all exterior ductwork with duct covered in 2" of R-8 rigid board exterior insulation with weatherproof aluminum jacket. Support exterior duct as required on roof (minimum 5' spacing on support rails). Support for roof top ductwork should be installed prior to installation of roof insulation or membrane to allow for roofer to flash them in on primary mobilization.
  12. All ductwork in exposed spaces should be constructed of round ductwork with internal insulation.
  13. All ductwork in concealed spaces (above ceilings) may be rectangular ductwork with internal OR external insulation.
  14. Ductwork joints in exposed areas should be pre-manufactured and sleeved i.e., no mastic or tape required.
- F. Subcontractor is responsible for furnishing all required thermostats, controls, and motor starters. The electrician will furnish disconnects and motor starters for the exhaust fans only. Disconnects for other mechanical equipment (RTU's, MUA's, etc) shall be provided by HVAC contractor for all equipment offering factory mounted disconnects.
- G. All power wiring is to be by the electrician. All temperature control wiring is to be by the HVAC contractor – control conduits will be provided by job electrician. Cross check the electrical and mechanical drawings to ensure proper voltage is being provided to all equipment.
- H. Include test and balance with 3<sup>rd</sup> party commissioning report.
- I. Fire dampers are to be included at all penetrations through rated walls and floors.
- J. Items provided by general contractor
1. Captive Aire Equipment (see provided equipment schedule)
  2. Utility bills for temporary electrical service
  3. Temporary electrical and temporary lighting
  4. Dumpsters for debris
  5. Temporary toilets
- K. Items provided by others:
1. Power wiring to HVAC equipment (electrician)
  2. Disconnects for exhaust fans and split systems (electrician)
  3. Wiring of the duct smoke detectors to fire alarm panel (fire alarm contractor)
  4. Condensers for ice machines (kitchen equipment vendor)
  5. Walk in coolers and freezers in kitchen space and associated condensers/evaporators (kitchen equipment vendor)
  6. Flashing of curbs, natural gas penetrations or refrigerant piping penetrations (roofer)
- L. Items provided by mechanical contractor:
1. Factory mounted disconnects for RTU's
  2. Factory mounted 120V service outlets on RTU's
  3. Motor starters for all mechanical equipment unless otherwise noted herein.
  4. Installation of duct smoke detectors, for all units whose return flow is greater than 2000 cfm. Testing of duct smoke detectors by HVAC contractor. Furnish of duct smoke detectors, by others.
  5. Low voltage control wiring associated with temperature controls. Conduit, pull string and back box provided by others.
- M. Exclusions

1. Domestic plumbing work

## Safety and General Requirements

### A. Jobsite Cleanliness:

1. Each trade to provide **DAILY** clean-up of working debris. Each trade is responsible for providing labor, trash cans, and daily removal of trash produced from their scope of work. Dumpsters will be provided by ARCO. Subcontractor is responsible for providing the required amount of field labor to hoist debris to the provided dumpsters and maintain a safe & clean jobsite. If clean-up standards are not met, this subcontractor is to provide dedicated labor for cleanup activities on top of the required tradesmen to complete their scope of work.
2. A notice via email will be provided to this subcontractor when sufficient labor and clean-up is not being provided to meet the general contractor's standard of a clean and safe jobsite. If appropriate corrections are not made within 24 hours of this notice, ARCO will provide its own labor to collect and dispose of this subcontractor's debris. All associated costs incurred to dispose of debris will be charged to this subcontractor.
3. Eating is not allowed at any time within the building footprint. Designated locations on site will be available for eating and breaks.

### B. Field Changes

1. Field extras must be approved by ARCO in writing **prior to starting** any field extra work taking place.
2. Field tickets must be submitted to the ARCO superintendent on the same day which work occurs. All field tickets will be voided if the field ticket is not submitted to the on-site superintendent on the day in which the work is performed. The hours & materials for each field extra must be verified & approved in writing after **each** day of field extra work (even if the extra takes several days).
3. Pricing of the field tickets must be submitted via email or fax to the ARCO project manager within 5 calendar days from date of signed field ticket. All extras as a result of field tickets will be voided and not paid for if not submitted with this deadline. Signed field tickets do NOT constitute submitting field extras for formal approval. No extras can be approved after the 5-day window of approval. Extras will not be approved without signed field tickets verifying the time and material used.
4. If approved additional field work takes more than 1 week to complete, the hard to date costs of that work are to be provided weekly to the ARCO PM and noted as a still open field change order. Do not wait to provide a cost update on field change work that requires more than a week to complete. That field work will not be approved.
5. No exclusions or changes from the drawings, specifications or bid instructions will be permitted without written approval from ARCO project manager or superintendent.

### C. Requirements for Track Area:

1. Any materials stored on the track slab must have visqueen and Masonite underneath to protect the concrete floors. The visqueen and Masonite must extend 12" further than the size of the stored materials in all directions. If materials are stored that are not protected, they will be relocated or disposed of by ARCO at this subcontractor's cost.
2. Any sort of cutting work **can NOT** take place, unless specifically approved by ARCO ahead of

time: studs, wood, rebar, etc.

3. Any sort of work involving oils, specifically pipe fitting, can NOT take place.
4. Any material that can potentially stain concrete can NOT be stored at any point: paints, oils, materials that can oxidize (studs, rebar), etc.

D. In an effort to improve safe working habits and provide a safer working environment, we at ARCO have implemented a revised safety program. As in the past, we ask that all of our subcontractors and suppliers strictly adhere to the following policies of this program. Conform to all OSHA, hazardous communications, and other applicable safety requirements, including but not necessarily limited to the following:

1. All subcontractors (crew foremen only) will be responsible for attending weekly toolbox talks in the general contractor's trailer. Contractors have the option of conducting their own toolbox talks as long as attendance sheets for these toolbox talks are presented to the general contractor's superintendent on a weekly basis.
2. All on site personnel to wear safety glasses, safety vests (or high visibility t-shirts), hard hats, and proper work boots at all times while on site.
3. GFI and Assured Grounding of Electrical Outlets: All extension cords shall have either a GFI receptacle or be routinely checked as part of a written and recorded assured grounding program.
4. Each subcontractor must have a written Health and Safety Program, which includes all, required Federal, State and local safety policies, active health and safety inspections and weekly safety meetings.
5. Any fines or penalties imposed by OSHA for work relating to subcontractor's scope shall be deducted from the subcontractor's compensation.
6. Excavations that are four feet or more in depth shall be either slopped or shored according to the specifications set aside in subpart P of the occupational safety and health standards for construction.
7. Provide backup alarms on all equipment.
8. It is the subcontractor's responsibility to insure that all equipment utilized to complete its scope of work is inspected and properly maintained per the equipment manufacturer's and OSHA's standards. In addition, this subcontractor is responsible for properly training all employees who are operating said equipment including but not limited to lifts, excavation equipment, cranes, fork lifts, welders, etc.
9. If subcontractor's employee(s) arrives at the job site without a hard hat, the employee(s) will be issued a hard hat by ARCO. The hard hat will become property of the subcontractor and the subcontractor will be charged \$50.00 for each hard hat issued to their employee(s). At no time will a subcontractor's employee be allowed to work at the site without a hard hat.
10. Hazardous Communications Program:
  - a. Each subcontractor on ARCO/Murray's job sites must maintain a hazardous materials file for his own employees. Each file shall contain Material Safety Data Sheets (MSDS) on all material used in that specific project's construction.
  - b. It is the subcontractor's responsibility to notify other Contractor's on the job site of any hazardous materials to which their employees may be exposed.

E. Subcontractor is responsible for a complete installation and is to specifically ensure that all seismic considerations have been accounted for in their installation. ARCO/Murray will NOT be providing any design documents, submittal review comments, or field assistance to ensure the installation methods completed by this vendor meet seismic design requirements.

F. Required Meeting Attendance

1. All subcontractors will be required to attend a pre-construction meeting at the jobsite trailer. All relevant office and field staff (project manager and site foreman) are required to attend. Scope of the meeting will include a full review of the subcontractor's contracted scope and ARCO/Murray procedures, means, and methods. Some subcontractors will be required to attend multiple preconstruction meetings depending on the amount of coordination is required
  2. All subcontractors will be responsible for attending weekly coordination meetings to be held at the general contractor's construction trailer. Time and day of week for meetings is at the discretion of the superintendent. The subcontractor project manager and/or foreman must attend each meeting. Failure to do so may result in back charges for lack of coordination and/or schedule delays.
  3. All subcontractors will be responsible for attending a Safety Training Orientation. This may or may not be associated with the preconstruction meeting. It will be at the discretion of the job-site superintendent.
- G. Subcontractor is responsible for providing all required hoisting and/or temporary elevator, scaffolding, clean up, supervision, overhead, etc., to perform his work. ARCO will not be providing any sort of hoisting equipment, access to high elevations (specifically the mezzanine/Sky Bar/track), or elevator use through the entire duration of the project.
- H. Drawings: Each subcontractor performing work on site is required to have the most recent printed full size drawings at all times work is being performed. This also is to include all applicable shop drawings and submittals. Half size drawings are not permitted.
- I. Punchlist: At the completion of the project, ARCO will consolidate all punch-lists and deliver them to all subcontractors. Andretti invites several parties to create punchlists including but not limited to: Andretti construction and development staff, project architect, ARCO etc. It is important to note that ARCO will deliver punchlist responsibilities as soon as they are identified. As such, several lists may be provided to the subcontractor at different time. Punchlist items are to be corrected within 5 working days of Notification.
- J. Submittals
1. Provide any applicable shop drawing submittals to ARCO within 20 working days of award. Provide electronic copies for ARCO's review.
  2. The submittal schedule will dictate submittal due dates, provide estimated lead times, and required delivery of materials. All dates are to be met by this subcontractor in conformance with the project schedule.
  3. Advise of any lead times (if over 2 weeks) or any discrepancies in lead time shown on the Submittal Schedule for all materials required to complete your scope of work within 5 days of receipt of the submittal schedule.
  4. Provide required samples prior to material fabrication or placing orders.
  5. ARCO will provide a comprehensive list of all shop drawings and submittals required of each subcontractor. Provide samples/product data within 10 working days of the submittal request from ARCO.
- K. Miscellaneous:
1. Subcontractor is responsible for the design, furnishing, and installation of all required supports for their specific scope of work. Required supports include hangers, miscellaneous steel, hardware, fasteners, etc. Structural steel and concrete will be provided by the GC as shown on the contract documents.

2. Include all required mobilizations to complete this scope of work.
3. It is the Subcontractor's responsibility to visit the job site prior to bidding to familiarize himself with actual job site conditions.
4. All materials used shall be new and first quality, and shall be installed in accordance with manufacturer's recommendations.
5. The initial lead foreman will not be replaced for the duration of the project unless directed otherwise by ARCO.
6. All lifts to be used for this subcontractor's work that will be placed inside of the building must have grey (or another non-marking color) tires. No black tired lifts will be allowed on building floor slabs.
7. Layout and sleeving for drywall, concrete, masonry, metal decking, or other materials is the responsibility of this subcontractor. If layout and sleeve installation is not provided prior to the start of work, this subcontractor is responsible for any required coring or other resulting costs to make penetrations. Penetrations larger than 12" x 12" must be approved ARCO and structural engineer prior to sleeve layout or installation. The drywall contractor will be responsible for framing all penetrations through partitions over the size of 12" x 12". All other penetrations are to be coordinated with the drywall contractor and laid out by this subcontractor.
8. Include all required field verifications, measurements, material transportation/access, existing conditions investigation, due diligence, etc. to sufficiently prepare for your scope of work in an existing facility.

L. Coordination with Other Trades

1. The building slab on grade will be used for tilt casing beds. Do not penetrate the slabs prior to tilt work being completed. Once tilt work is completed, it is the responsibility of each trade to saw cut the slabs to access any underground work.
2. Routes to be installed in exposed ceiling areas (namely the gaming area and track areas), regardless of size or scope, must all be approved by general contractor prior to installation. Unapproved routes are to be removed and re-installed as required. Items requiring approval include conduit, heaters, hangers, gas piping, plumbing work, sprinklers, and cable tray regardless of whether or not they are already laid out on the contract documents.
3. Subcontractor shall correctly coordinate the installation of this subcontractor's system with all contract documents and other trades, including fire protection, plumbing, HVAC, site utility, structural, architectural, and/or any other trade involved, to establish routes, clearances, elevations, duct, piping, conduit, fitting, fixture, and equipment locations, etc.
4. Systems coordination meetings will be held once a week until the entire building is coordinated.
5. Two days prior to each scheduled meeting, each subcontractor will post their AutoCAD drawings for the floors to be coordinated on the box.net website. It is the responsibility of each subcontractor to review the posted drawings before the meeting and identify potential problem areas and develop possible solutions.
6. Subcontractors will then attend the weekly meeting with their most current version of their respective drawings, adjusting as necessary to resolve major conflicts.
7. Access panels to be furnished by the requiring subcontractor and installed by drywall subcontractor.

- Subcontractor must quantify and locate (during coordination) any and all access panels required for this scope of work. Any access panels required, but not identified prior to award of drywall subcontract, shall be furnished and installed by drywall contractor at the sole expense of subcontractor, including any costs associated with drywall patching/rework.
8. Provide the electrical subcontractor with all wiring diagrams and/or any other special information, which may be required for the proper hook-up of equipment.
  9. All disciplines shall be governed by the following priority and right-of-way rules. In general, priority shall be arranged in this order unless otherwise directed by ARCO/Murray:
    - a. TV locations
    - b. Lighting fixtures
    - c. Ceiling elements
    - d. Air inlets and outlets and sheet metal ductwork
    - e. Sprinkler piping
    - f. Water lines and gas lines
    - g. Electrical conduit
    - h. Control air lines in conduit
    - i. Right-of-way:
      - i. Lines with pitch have precedence over those that do not
      - ii. Lines whose elevations cannot be changed shall have the right-of-way over lines whose elevations can be changed.
      - iii. Duct has the right-of-way over small pipes that need not pitch.
  10. Masonry penetrations must be coordinated with the mason and other trades. Sleeves for pipe penetrations through masonry are to be furnished to the masonry subcontractor, along with dimensioned layout drawing for installation at time of wall construction. Duct, louver, and access panel penetration information to be provided to masonry subcontractor on a dimensioned layout drawing.
  11. All services shall be maintained as close to the underside of the slab construction as practical. The intent is to ensure that tenant ceilings can be installed to a maximum dimension above finished floor with sufficient clearance for installation of light fixtures.
  12. Temporary use of permanent equipment during the construction process does not commence the warranty or guarantee period of the equipment. All warranties and guarantees begin at substantial completion.
  13. Location and size of equipment and housekeeping pads and curbs will be marked in the field by this subcontractor and installed by others.
  14. All work is to be enclosed in existing drywall ceiling or walls unless specifically allowed thru formal approval by the contractor.
  15. No fly zones to be confirmed during coordination meetings. Zones include elevator shafts, egress stairwells, elevator/electrical rooms, ice machine locations, and HVAC shafts.