



ST. TAMMANY PARISH

PATRICIA P. BRISTER
PARISH PRESIDENT

July 13, 2017

Please find the following addendum to the below mentioned BID.

Addendum No.: 1

Bid#: 339-00-17-46-2

Project Name: STPC – Built-In Cooler for the Morgue

Bid Due Date: Thursday, July 27, 2017

GENERAL INFORMATION:

1. When acknowledging any addenda, bidders must enter each number the Owner assigned to each of the addenda. This applies to both hardcopy and electronic versions of the bid package. If each addenda is not properly acknowledged by the number(s) assigned by the Owner, the submission will be deemed non-responsive.
2. Please add Section 09 Map to the bid package. (Attached)
3. Please add Section 10 Scope of Work to the bid package. (Attached)
4. Please add Section 11 Specifications and Drawings to the bid package. (Attached)
5. Please add Section 12 Plans to the bid package. (Attached)
6. Mandatory Pre-Bid Meeting Sign-In Sheet. (Attached)

ATTACHMENTS:

1. "Section 09 Map.pdf"
2. "Section 10 Scope of Work.pdf"
3. "Section 11 Specifications and Drawings.pdf"
4. "Section 12 Plans.pdf"
5. "Mandatory Pre-Bid Meeting Sign-In Sheet.pdf"

<< End of Addendum # 1 >>

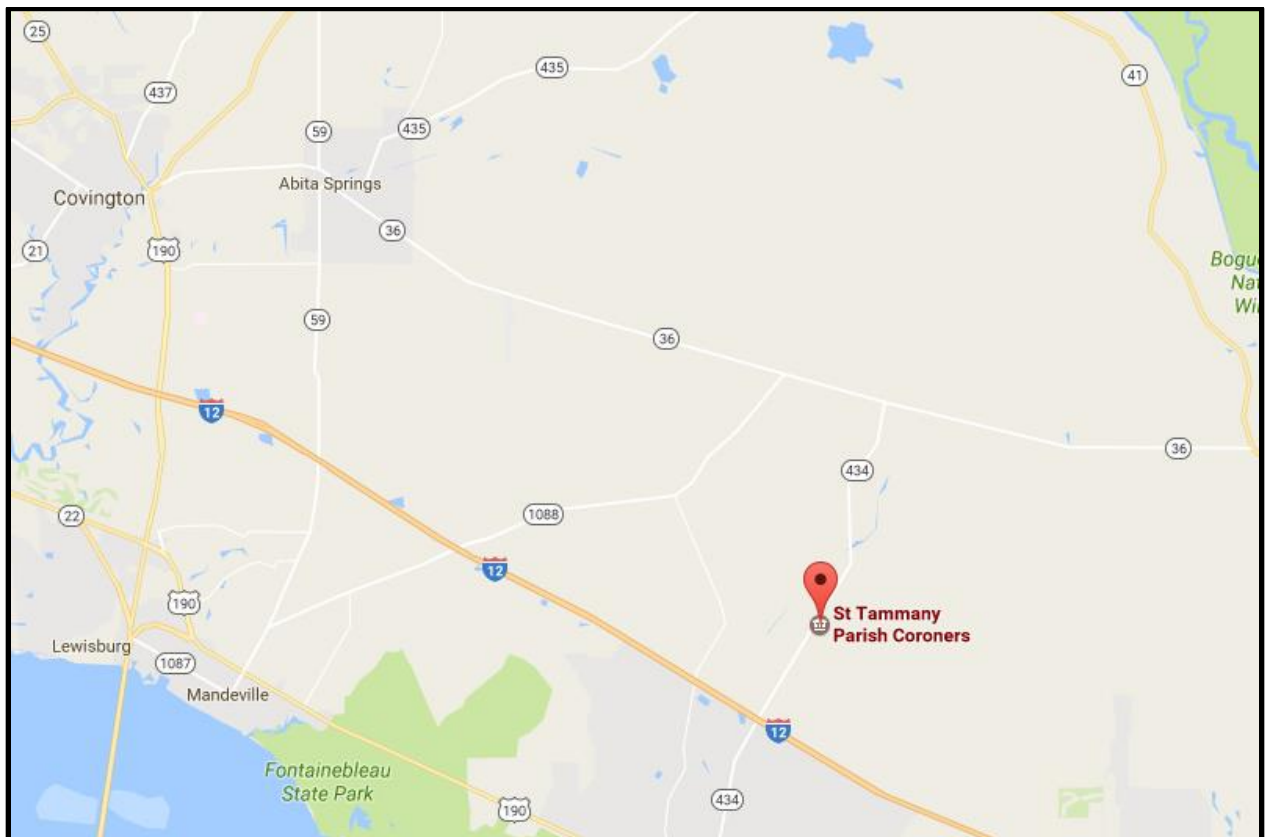
Section 9

**STPC-Built-In Cooler for the Morgue
St. Tammany Parish Coroner's Office**

65278 Highway 434

Lacombe, LA 70445

June 1, 2017



Section 10

The St. Tammany Parish Coroner's office, 65278 Highway 434, Lacombe, LA 70445, requires the:

- A. disassembly, removal and storage of an existing controlled environment room (existing cooler);
- B. provision and installation of a new controlled environment room (cooler), per the drawings and specifications; and
- C. completion of any required flooring, foundation, roofing, mechanical, electrical, and/or plumbing work required to install and commission the cooler.

The existing cooler is approximately 14'6" x 16'5"x8'5". It shall be carefully disassembled and stored as directed by the Coroner's Office.

The new cooler shall meet or exceed the specifications. The new cooler shall be approximately 20'0" x 18'8" x 9'6". Cooler shall be installed on top of the finished, epoxy-coated floor.

Interior and exterior cooler walls and electric sliding door finishes shall be 22 Ga. 304 #4 stainless steel. Ceiling interior finish shall be 22 Ga. 304 #4 stainless steel and exterior finish shall be embossed, galvanized 26 Ga. steel. Electric door, motor and slide assembly shall be installed to the left side of the face of the cooler.

Cooler equipment shall have at least:

- A. one (1) redundant system with PLC controller;
- B. two (2) air cooled condensing units;
- C. two (2) evaporators;
- D. one (1) 230-3 phase electrical for condensing;
- E. one (1) 115 volt electrical for evaporator;
- F. one (1) Controller PLC;
- G. one (1) Munters HC-150 Dehumidifier, or approved equal; and
- H. four (4) vapor-proof/vapor-tight, 4' LED Light Fixtures (MaxLite LSVECO-4NU-4050-P or approved equal).

New cooler shall be installed in accordance with the manufacturer's specifications.

Work shall include, but is not limited to, the installation of:

- A. the cooler with an electric sliding door on the existing floor;
- B. the humidity unit above the cooler;
- C. an air return and a supply plenum inside the cooler. Ductwork shall be extended, per the specifications, and a condensate drain line shall be run to the designated drain hub;
- D. two (2) evaporators;

- F. condensing units, as directed, on the roof and refrigeration line sets shall be extended to evaporators in cooler;
- G. drain lines from evaporators to designated drain hub;
- H. four (4) LED lights per the manufacture's specifications.

All work (mechanical, electrical, roof penetrations, flooring, foundation, and plumbing etc.) required to complete the scope of work and commission the cooler shall be performed. As applicable, licensed contractors and/or sub-contractors shall perform the work.

All penetrations to the building (roof, walls, floor, ceiling) incurred to complete the work shall be restored to like-new condition and be properly sealed to prevent water and/or moisture intrusion.

Any work, that may be reasonably inferred from the specifications or drawings as being required to produce the intended result shall be supplied whether or not specifically called for. Work, materials, or equipment described herein which so applied to this project are covered by a well-known technical meaning or specification shall be deemed to be governed by such recognized standards unless specifically excluded. A clean and safe construction environment shall be maintained at all times. Normal operations of the Coroner's Office shall be disturbed as minimally as possible. All work shall be scheduled through the Parish Department of Facilities Management and the Coroner's Office.

Cut sheets, product literature, and specifications for the alternate product to be evaluated as an "approved equal" must be submitted to Purchasing@stpgov.org or faxed to 985-898-5227 in accordance Section 08 General Conditions for St. Tammany Parish Government and Section 02 Instructions to Bidders.

Contract time shall be one hundred and twenty (120) calendar days from the issuance of the Notice to Proceed (NTP).

All mechanical, plumbing, roofing, flooring, and electrical service repair work, labor, sub-contracting, supervision, materials, supplies, equipment, permits, transportation, tools, sanitary facilities, machinery, services, and permits (local, state or federal) required to complete the work shall be included in the lump sum bid.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Pre-manufactured, pre-engineered environmental rooms.
- B. Pre-engineered, field assembled environmental rooms.
- C. Wall sleeves and louvers.
- D. Controls.

1.2 RELATED SECTIONS

- A. Basic Mechanical Requirements.
- B. Cable, Wire and Connectors.
- C. Equipment Wiring Systems: Electrical supply to units.

1.3 REFERENCES

- A. ARI¹ Unitary Air-Conditioning Equipment.
- B. ARI Air Source Unitary Heat Pump Equipment.
- C. ARI Sound Rating of Outdoor Unitary Equipment.

1.4 SCOPE OF WORK:

- A. Contractor will furnish and install all materials and equipment required in conjunction with the fabrication and delivery of environmental rooms as specified herein.
- B. Contractor will provide electrical service to the Environmental Rooms.
- C. Rooms will be constructed of various quantities of panels, depending on the size of the room. Construction will allow for future expansion and disassembly. Rooms will be self-contained with necessary temperature controls, heating, refrigeration, lighting systems and all necessary mechanical and electrical components to provide the environmental conditions herein described.

1.5 MANUFACTURER'S QUALIFICATIONS:

- A. The environmental walk-in rooms covered by this specification will be a product of a manufacturer of environmental room equipment, (hereafter; Contractor).
- B. Contractor will supply all trades complete rough-in Drawings .Rough-in Drawings are to indicate accurately all service outlets. Contractor will coordinate with other trades

¹ American Refrigeration Institute

during installation to insure adequate working area in and around service connections.

1.6 SUBMITTALS

- A. Submit shop drawings and product data.
- B. Indicate water, drain, and electrical rough-in connections on shop drawings and product data.
- C. Submit samples under provisions, if required by owner.

1.7 OPERATION AND MAINTENANCE DATA

- A. At the completion of the project, submit as built operation and maintenance data under Uniform General Conditions.
- B. Include three (3) copies of operators' manuals and submit to owner or representative at the end of project.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver assembled and unassembled products to site.
- B. Store and protect products from physical damage.

1.9 WARRANTY

- A. Provide one (1) year warranty on all parts and labor on the completed environmental rooms.
- B. Provide ten year (10) manufacturer's warranty on the insulated structure including the door.(Door hardware is warranted for one (1) year)
- C. Provide four (4) additional years of replacement coverage on refrigeration compressors.
- D. Provide a five (5) year warranty on all parts and labor on the control panel.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Hussmann Services Corporation Houston, TX 281-639-5842; or

B. **Approved equal**

2.2 EQUIPMENT SUBSTITUTION REQUIREMENTS:

Wherever a manufacturer's name, type or catalog number appears in equipment schedules, Drawings or Specifications, it indicates the manufacturer of this particular item of equipment upon which the design has been calculated and Design Drawings have been based. In all cases where a bidder intends to gain prior approval, it must submit a request for an approved equal per Section 02 Instructions to Bidders and/or Section 08 St. Tammany Parish General Conditions.

2.3 PERFORMANCE REQUIREMENTS:

- A. Structural Performance: Controlled environment rooms shall withstand the effects of gravity Loads and the following loads and stresses within limits and under conditions indicated according to SEI/ASCE 7 and the applicable Building Code requirements
 - i. Room Ceiling Panel: Design ceiling panels for spans indicated, to support the weight of the controlled environment room top mounted mechanical equipment, and the weight of two persons performing equipment installation and/or maintenance.
 - 1. Where ceiling panel spans exceed the manufacturer's limits for self-supporting ceiling panels, provide secondary support system to support the ceiling panels.
 - ii. Room Floor panels: Design floor panels to withstand uniformly distributed load of at least 600 PSF.
- B. Controlled Environment Room Design Criteria: Design controlled environment rooms for the following:
 - i. Temperature Performance
 - 1. Design Temperature Set-point/Range per manufacturer.
 - 2. Temperature Control Capability: Temperature Differential from design temperature shall not exceed $\pm 0.5^{\circ}$ C when measured at the temperature sensing element, and shall be the total variation in temperature control of the room.
 - 3. Temperature Uniformity: Measured on a horizontal plane, 40" above the floor and within 12" of the walls throughout the entire room. Uniformity shall be measured by a multipoint strip chart recorder or data logger utilizing a minimum of 10 thermocouples during a 24 hour test.

- a. Cold Rooms $4C \pm 1.0^{\circ} C$
- 4. Temperature Gradient: The maximum temperature differential between any two points in a room shall not be more than the following:
 - a. Cold Rooms $\pm 1^{\circ} C$
 - b. Freezer Rooms $\pm 2.0^{\circ} C$ Recovery Period: Following a defrost cycle, environmental rooms shall recover the design temperature within 20 minutes. Temperature rise shall not exceed $5^{\circ} C$ above the design temperature
- ii. System Capacity: The controlled environment room mechanical systems shall be design to maintain the environmental conditions specified for the follow parameters:
 - 1. Interior Building Ambient Conditions (Outside Controlled Environment Rooms): Controlled environment rooms shall be designed to maintain design temperature in ambient conditions ranging from 72 to $75^{\circ} F$ and at humidity levels ranging from 30 - $50\% Rh$.
 - 2. Door Openings: Personnel entering and leaving controlled environment rooms at a rate of six per hour.
- iii. Humidity Requirements
 - 1. Humidity must be maintained by a mechanical desiccant dehumidifier manufactured by Munters Corporation or approved equal.
 - 2. Humidity level in the chamber must be maintained at 60% or less
 - a. Humidity control setpoint – $50\%(+/-) 5\%$

2.4 CONSTRUCTION:

- A. All panel sections shall be precisely shaped with metal pans processed through roll forming equipment and steel dies. Urethane insulation will be injected (poured-in-place) to bond with the inner and outer metal pans when confined within temperature controlled fixtures or molds. Finished panels will be insulated with 100% urethane without internal wood, wood fiber, steel perimeter or substructure except for cam locking devices, entrance door frames, panels of unusual configuration and special "opening" perimeters
- B. All panels will be at least $4"$ thick. Corner panels will be Mfg. Standard", 90 degrees angled with interior and exterior radius. All wall and ceiling lengths will be provided with a DOUBLE 90 degrees formed edge ($17/32"$ initial flange, $11/32"$ return) for rigidity and strength. All panel edges will have a formed urethane tongue or groove configuration with factory foamed-in-place compression gaskets on interior and exterior of all male edges.

- C. Urethane insulation will be poured-in-place to a minimum density of 2.2 pounds per cubic foot (yielding compression strength of 30 PSI). *No CFC's will be used as an expanding agent in the manufacturing process.* Established thermal conductivity factor ("K") is 0.142 BTU/hr. /sq. ft. /degree (F)/inch. The overall coefficient of heat transfer ("U" Factor) is .0355 ("K" factor divided by 4" panel thickness). The resulting "R" value or assigned insulation efficiency rating is 29².
- D. Panels will be equipped with steel cam locking devices foamed-in-place at exact matching location within tongue and groove perimeters. All locks will have integral rear flanges to permanently anchor their position without use of temperature conductive strapping. Male and female locks will be precisely situated to secure all panels and uniformly compress perimeter gaskets. Access to lock assembly must be provided on interior of panels allowing erection of structure within confined areas. Lock access ports will have closure snap-in caps of colored PVC to match interior panel finish.

2.5 FINISH:

- A. Panel surface finish will be selected from the following list of standard material best suited to location and/or application of structure. A combination of materials (interior versus exterior) will be selected to satisfy aesthetic and economic design requirements.
- B. Walls - interior or exterior in the following: 22 gauge type 304 stainless steel with a number 4 finish.
- C. Ceilings - interior finish in any material listed for walls above. Exterior edge caps to match adjacent walls. Top surface will be 26 gauge embossed galvanized unless otherwise specified.
- D. Special application may dictate use of non-standard finish - consult manufacturer.

2.6 DOOR:

- A. Hinged entrance doors with swing and net opening size will be provided in 72" wide sections. Entrance door will be flush-mounted, in fitting type with full 4" thickness insulated by poured-in-place urethane as specified for panels. Interior and exterior finish will be as listed.
- B. Each door will be provided with two (2) heavy duty self-closing hinges (minimum 7" leaf), followed by pull handle. An inside key lock release is provided. Hydraulic door closer. All hardware must be attached with stainless steel machine screws. Screws will be fastened into minimum 14 gauge tap plates foamed into door panel. Standard hardware finish to be polished chrome.
- C. A bellows-type thermoplastic gasket with a magnetic core will be provided at top and strike side of interior door flange with cushion core on hinge side to prevent binding. The gasket retainer - an integral part of door assembly - will allow easy replacement of gasket in the event of damage or misuse. A flexible double blade

² It is normal to see (R) values of 32, however these are based on older industry specifications which do not take into account the elimination of fluorocarbons in manufacturing methods.

"sweep" wiper gasket will be provided at the bottom of door. All gasket material is resistant to sunlight, water, mild cleaning soap, oil, and fat.

- D. All bright chrome hardware, pull handles, cylinder lock handles and dead bolt locking hardware available as selected options.
- E. Door section will be constructed with an opening framed by a non-conductive heavy duty extrusion. Insulation of this section will be as described for all panels. Finish will be as listed (not necessarily same as selected for applicable door).
- F. The exterior "strike" side of each door section will be provided with a flush-mounted toggle switch and pilot light indicator. The cover plate will be chrome plated. An incandescent vapor-proof light fixture will be supplied and mounted on interior of section over opening. All pre-wiring will be accomplished at the factory by material and performance guidelines approved by UL.
- G. **Electric Sliding Door** - Single Horizontal Electric slide doors are used for personnel and truck traffic where side room is not a problem on one side of opening. Wood free design with the use of aircraft grade aluminum internal door panel frame and HDPE (high density polyethylene extrusion) for header, casings, jambs and mirror image back frames. Adjustable reinforced neoprene bulb seals at 3 sides of opening. 'Down and in' door track system. Dual speed operation. Two ceiling mount pull switches. Low temperature doors will have full perimeter heater cables 120V/60Hz. Certified NEMA 4. See drawing for dimensions and additional features.

2.6 CONTROL SYSTEM AND INSTRUMENTATION:

- A. Manufacturer – Frost Refrigeration – Houston, TX 281-799-6831 or **approved equal**
- B. The Frost Control System is a Programmable Logic Control (PLC) capable of modification all operating parameters. A color touch screen is required with two level password protection. First level for temperature, and alarm settings. The second level for operational system changes. In the event of a power failure, all settings and functions are maintained and restored automatically once power returns.
- C. All electrical components are located inside a control console. The control console is mounted in ADA compliance. The panel door is furnished with lock and two for added security. The key for the control panel matches the key to the environmental room door.
- D. Control Panel Specifications
 - 1. Heavy Duty Regulated DC Power Supply
 - 2. Full color touch screen controller
 - 3. High Voltage Separation from Low Voltage DC
 - 4. Includes Power Distribution to all of the Chamber Components excluding Condensing Units

5. Automatic Restart after Power Failure
6. Holds Correction Factors for temperature and humidity.
7. RTD Sensor located in the Evaporator Air Stream
8. One Panel can Control Multiple Chambers depending on Proximity
9. Integrated Back-up Controller incase of PLC Failure

E. DC Control Specifications

The controller operates approximately 24 VAC/DC and provides approximately 24 VAC control signals to the mechanical system controls. The control system provides "zero" switching outputs to mechanical system components to prevent unnecessary radio frequency interference.

F. Back-up Thermostat

Control panel is provided with a Back-up Electronic Thermostat, which turned on, allows for an emergency temperature control of the environmental room, as well as, during routine maintenance to allow technician to work without the worry of alarms.

G. Temperature Alarms and Mechanical Failure Alarms

The controller must include high/low temperature alarms and mechanical failure alarms.

H. Visible and Audible Alarm System

This feature is circuited with limit controls to indicate a condition that has exceeded the high or low temperature limit control setting. The controller allows for alarm settings to be programmed either as deviation from set point or absolute fixed values.

I. Single Point Power Distribution

Each circuit has individual breakers and relays.

J. Lockout/Safety

The control panel also features locking covers to secure the controls from damage and as a second level of security to prevent unauthorized adjustments.

K. Humidity

The controller will supply signals as required to control chamber humidity. Humidity control will be by means of an on-off controller with a dead-end of 1% RH. The humidity sensor must be manufactured by Vaisala or approved equal. Data Communications

The control system will have a set of dry contacts enabling communication with internal monitoring system.

System can be made fully accessible with a Cat 5 or 6 internet cable and windows based software on the parent computer.

2.7 LIGHTING:

- A. Environmental Rooms will feature 4' LED vapor-proof, wet location fixtures. These fixtures shall be at least 115 volt and powered out of the room PLC control panel.

2.8 ENVIRONMENTAL CONDITIONING SYSTEM:

- A. A ceiling mounted evaporator will be used. Evaporator is composed of fans, heat exchangers, drain pans and controls. A heavy gauge aluminum condensate pan to be built into the evaporator and to be provided with a drain fitting to allow connection of waste line, for removal of condensate. Evaporator will consist of a *Floating Coil System* design or approved equal to reduce the possibility of coil wear at copper bends.
- B. Evaporator fan motor noise level will not exceed 65 decibels at 3.5 foot distance from motor.
- C. A minimum of two (2) fan motors per evaporator.

2.9 REFRIGERATION SYSTEM:

- A. Complete integrated system consisting of a compressor, condenser unit, interconnecting piping, interconnecting wiring, and controls designed for continuous system operation. The refrigeration system will utilize standard "over the counter" non-proprietary controls and solenoids modified or manufactured for rapid cycle operation. Systems will use Sporlan or equivalent type expansion valves and solenoids. Refrigeration system will use a hot gas bypass regulator to idle the compressor when the temperature is satisfied, adjusted so that compressor is idled. The compressor will use an automatic de-superheating valve to maintain safe compressor discharge temperatures. The system will also include high/low pressure controls, receiver, and other components to complete the system.
- B. System capacity will be sufficient to simultaneously and continuously meet all loads, from 0 to 100 percent, including heat transmission from external sources, ventilation load and internal heat gain from equipment, lighting and people. Refrigerant used for all environmental rooms will be R-407C, R-407A or approved equal.
- C. Ventilation will be continuously provided to the cold room to meet minimum code requirements.
- D. Compressor/Condenser unit shall be air-cooled condensing units with Copeland Scroll or approved equal, Hermetic, or Semi-hermetic compressors designed for low noise operation. Condensing units installed subject to low ambient temperature conditions will be equipped with necessary controls to operate during low ambient periods.
- E. Unit will be designed for continuous operation for maximum compressor life and to eliminate on-and-off cycling.

F. Automatic Defrost System:

1. Rooms operating less than (<) 20 °C will be designed for air-defrost cycle.

G. Fabrication and Installation:

Installation of the refrigerant system will be performed by licensed refrigeration contractor. Refrigerant lines will be dehydrated refrigerant copper tubing assembled by silver soldering, using wrought copper fittings. Minimum of 15% of silver solder must be used. Grade all refrigerant lines to compressor or install approved suction line traps. Refrigerant lines will be adequately supported with approved pipe hanger assemblies consisting of rods and hangers outside of insulation. Each system will be evacuated to a pressure of at least 500 microns or as specified by manufacturer. The suction lines will be insulated with Armaflex Foamed Plastic Insulation, or equivalent, which will be slipped over tubing wherever possible. Use ¾" thick material on applications above (>) 0 °C. Use 1" thick Armaflex on applications below (≤) 0 °C.

- H. On chamber below (<) 10°C evaporators must be hung with 3/8" or ½" nylon all thread with nylon bolts and nuts
- I. Heaters: Low watt density, Ni-chrome, tubular heaters will be used. Open wire heaters will not be acceptable. Heaters will be fitted with adjustable safety series safety limit klixons to prevent overheating of the chamber in the event of a control malfunction.

2.10 DIMENSIONS:

Refer to Mechanical Drawings for estimated size.

2.11 CONTROL AND PERFORMANCE PARAMETERS:

For temperature ranges refer to Schedule of Equipment. Temperature control of ± 0.5 °C., is the maximum variation at the work or storage area. Temperature uniformity of 1.0 °C., is the variation in temperature between any points in the working area of the room as measured by a multipoint strip chart recorder.

2.12 ELECTRICAL:

- A. All electric components utilized within each room will be UL approved with interior wiring practices in accordance with UL and the National Electrical Code. All electrical runs should be out of sight from interior of the chamber, when ever possible, either on top of the box or foamed within the walls. Conductors to conform to Article 310 of the National Electrical Code and all motors, motor circuits and controllers to conform to Article 430 of the National Electrical Code.
- B. Contractor to provide power to all condensing units and to the control panel and provide all control and high voltage wiring from the control panel to all other components as required to make the environmental rooms function properly.
- C. Circuit Breakers: Complete breaker protection for lights, receptacles, controls, condensing units, etc., will be provided. All circuits at rooms will be protected by circuit breakers of proper amperage rating (common fuses will not be acceptable). An individual circuit breaker type disconnect will be provided at each condensing unit

in addition to other breakers. Each room and controls will operate from a separate 120/208 volt, 3-phase, 4-wire feeders and each condensing unit will operate from a separate 208 volt, 3-phase, 3-wire feeder.

PART 3 EXECUTION

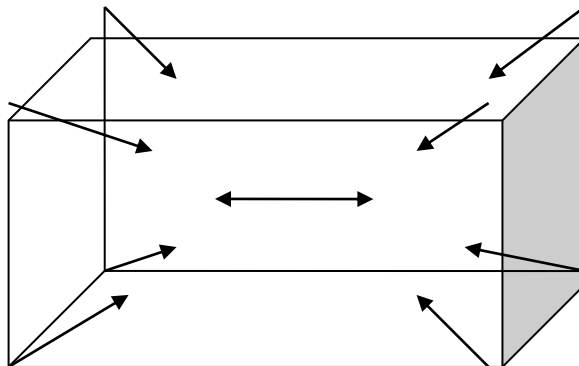
3.1 INSTALLATION

- A. Install in accordance with manufacturers' instructions.
- B. Installation is coordinated between Contractor, Parish and Coroner's Office.
- C. All refrigeration units are charged with refrigerant and checked for oil.
- D. Scheduled performance is based on ARI 210 or ARI 240 test conditions, if applicable.

3.2 CERTIFICATION AND TESTS

- A. Qualification process confirms that an environment operates within the specifications.
 - a. Environmental chambers are controlled temperature and controlled humidity environments.
- B. Qualification method; steps D through R. Step S refers to annualized PM-type service.
- C. Contractor will use a commissioning check off list.
 - a. This should be included in the final qualification report, unless otherwise specified.
- D. Qualification should be performed prior to installation of any casework.
 - a. Casework such as shelves and counters change airflow characteristics.
 - b. Probe location can not be consistent because each rooms has different casework.
 - c. If casework is installed, then discussion and agreement must take place whether temperature is measured,
 - 1. At the location of product/reagent storage or,
 - 2. At the location of work.
- E. Documentation is used to record each step of qualification, for example,
 - a. Facility and unit ID to ensure no mix up of data.
 - b. Set up and use of data logger(s).
 - c. Calibration of probes.
 - d. Probe locations.
 - e. Etc.
- F. Correct type of data acquisition device is used.
 - a. Agilent HP34970A
 - b. Extech 42270

- c. Approved Equal
- G. Correct type of probes are used.
 - a. RTD
 - b. Thermocouple
 - c. RH sensor
 - d. Approved equal
- H. Appropriate standards are used.
 - a. NIST certified thermometer.
- I. Place probes and a NIST standardized thermometer into a water bath in the environment room for a minimum of 30 minutes for equilibration.
 - a. Calibrate probes against a NIST standard adjusting the data logger's internal settings.
 - b. For Humidity, this is not applicable.
- J. Number of probes used.
 - a. Approximately 10 probes will be used. Each eight (8) corners, approximate 2 – 4 feet from corner towards the opposite corner, and two (2) in the middle of ECR as illustrated below. Care will be taken to ensure that the probes are not directly in front of evaporator coils. This will give a good 3-D picture of the temperature uniformity and range. (see picture)



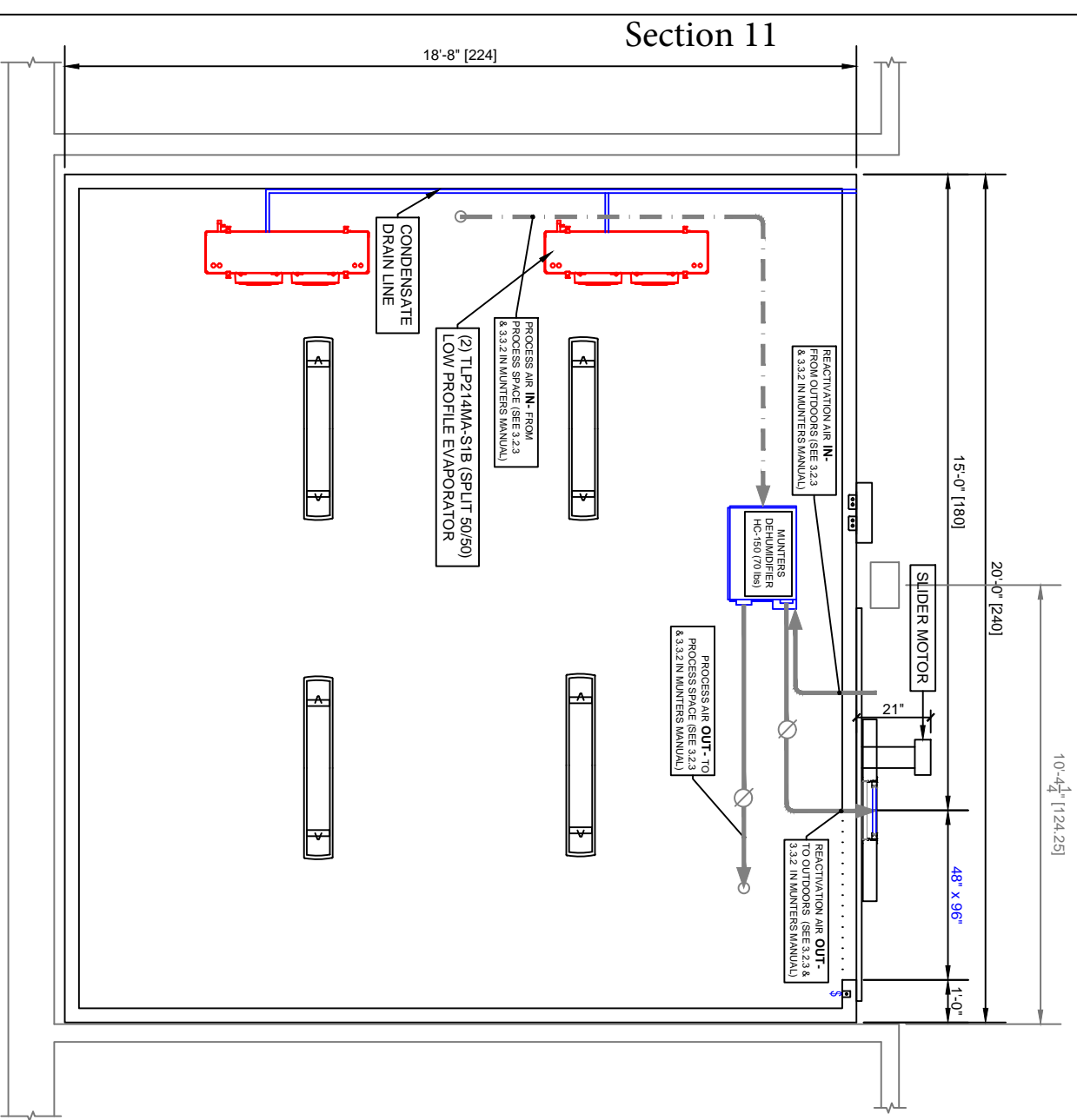
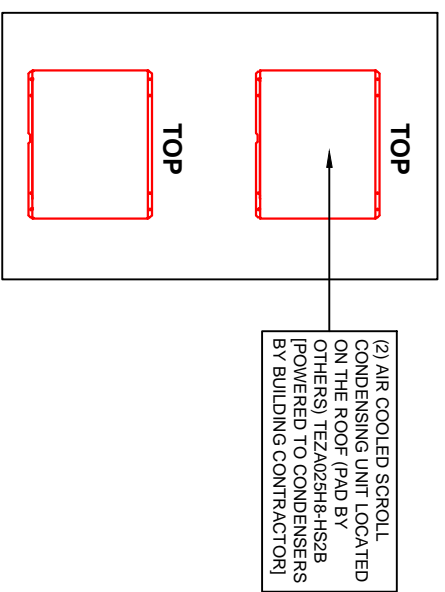
- b. For humidity, there is no need to have more than one (1) probe in the center of the room. Exceptions are based on size and shape.
- c. Different number of probes is possible based upon size characteristics of the room.
- d. 40" height and 8 probes is a simple mapping for rooms with casework and no owner or architect feedback.
- K. Perform an Open Door Challenge.
 - a. Set up Agilent.
 - b. Record data for minimum of 10 minutes for a baseline.
 - c. Open door 100%.

- d. Keep door open for one minute and look for recovery to set point within 5 minutes.

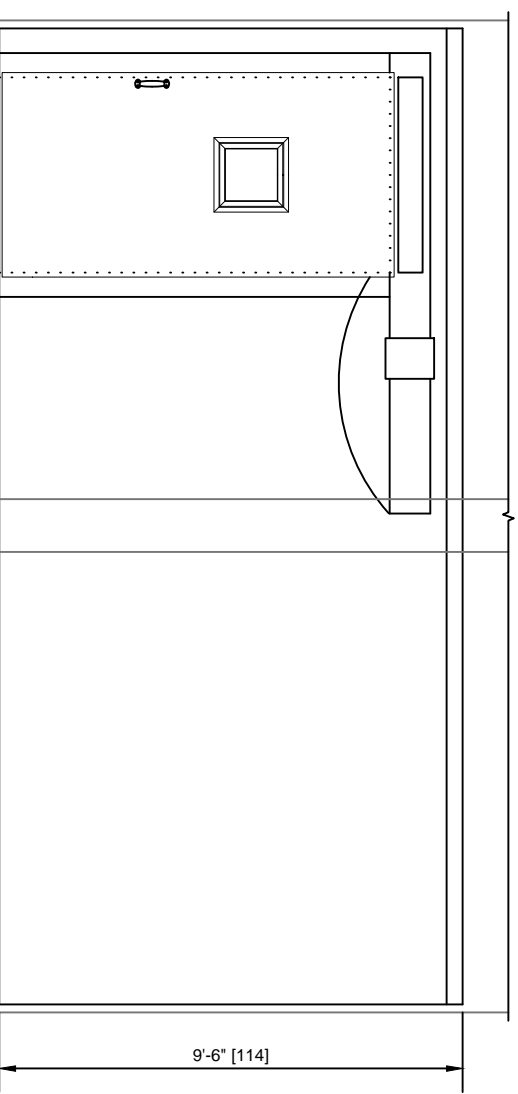
3.3 SCHEDULES ON DRAWINGS:

In general, all capacities of equipment, temperature performance, humidity requirements, and ventilation requirements, flooring requirements, ramps and other special features are shown on the Drawings. Reference will be made to the schedules for such information where installation instructions are not included in these Specifications or on the Drawings, the manufacturer's instructions will be followed.

END OF SECTION



1 COLD ROOM 213
Scale: 1/4" = 1'-0"



2 ELEVATION
Scale: 1/4" = 1'-0"

- Controlled Environmental Rooms
 - o Rooms:
 - Cold Room 4° C
 - o Thickness:
 - 4" Walls, 4" Ceilings
 - o Finishes:
 - Walls - Stainless Steel - 22 Ga. 304 #4 Interior & Stainless Steel - 22 Ga. 304 #4 Exterior
 - Ceilings - Stainless Steel - 22 Ga. 304 #4 Interior & Embossed Galv 26 Ga. Exterior
 - o Door/Opening(s)
 - 48x96 Electric Power Sliding Door
 - 14" x 14" Heated View Window
 - o Accessories
 - (1) Pilot Light Switch (Stub 3/4" Conduit thru Ceiling)
 - (2) 4x2 Recessed Receptacles (Stub (2) 3/4" Conduit Per box thru Ceiling)- Control Panel
 - o Refrigeration System:
 - Refrigeration equipment including all necessary valves and controls
 - (2) 2.5HP Air Cooled Scroll Condensing unit (208-230/3/60)
 - (2) Low Profile 2ton evaporator(s) (115/1/60)
 - Refrigerant: R407A
 - o Controller:
 - (1) Touch Screen PLC controller with high/low alarms, mechanical failure alarms, data logging and networking capability, and power distribution !
 - o Humidity/Dehumidification:
 - Munters HC-150 Dehumidifier or approved equal
 - o Lighting:
 - (4) 4' Vapor proof LED Lighting

NOTICE OF DISCLOSURE:
All plumbing, electrical, equipment and refrigeration drawings are furnished as a guide to assist the architect and our customer with store fixtures and its operating requirements only. Hussman assumes no further responsibility. all specifications involving refrigeration equipment and line sizing are subject to change without notice. The use of this drawing for structural or architectural purposes is not authorized. It is the responsibility of the Architect, Structural, Electrical, and Mechanical engineers to verify and coordinate accuracy of all dimensions and refrigeration line sizing with contractors at job site and insure that installations conform to specification and all applicable codes.

EQUIPMENT SUBSTITUTION REQUIREMENTS:
Whenever a manufacturer's name, type or catalog number appears in equipment schedules, Drawings or Specifications, it indicates the manufacturer of this particular item of equipment upon which the design has been calculated and Design Drawings have been based. In all cases where a bidder intends to gain prior approval, it must submit a request for an approved equal per Section 02 Instructions to Bidders and/or Section 08 St. Tammany Parish Supplementary General Conditions.

ST TAMMANY PARISH CORONOR
COVINGTON, LA

Sheet #	1 of 1
Create Dwg Date:	5.18.2017
Drawing Name	

17-HSCI-190

- FLOOR PLAN GENERAL NOTES**
1. ALL INTERIOR DIMENSIONS ARE SHOWN FROM FACE OF METAL STUDS OR CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED.
 2. ALL EXTERIOR DIMENSIONS ARE SHOWN FROM FACE OF EXTERIOR STED OR CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED.
 3. ALL PARTITION WALLS ARE SHOWN FROM FACE OF METAL STUDS OR CENTERLINE OF COLUMNS UNLESS OTHERWISE NOTED.
 4. CONTRACTOR SHALL PROVIDE BLOCKING IN PARTITIONS FOR ALL WALL MOUNTED EQUIPMENT, SHELVING AND FURNISHINGS. COORDINATE WITH EQUIPMENT SUPPLIERS FOR BLOCKING IN PARTITIONS AS REQUIRED FOR PROPER INSTALLATION.
 5. SEE SHEET A01 FOR PARTITION TYPES AND DETAILS.
 6. REFER TO SPECIFICATION SECTION 0910 FOR HARDWARE (HW).
 7. SEE SHEET G102 FOR ABBREVIATIONS AND SPECIAL DEFINITIONS.
 8. SEE OPENING SCHEDULE FOR HEAD HEIGHTS @ ALL WINDOWS.
 9. REFER TO U.F. SHEETS FOR ALL LABORATORY FURNISHINGS AND EQUIPMENT.

- LEGEND**
- SEMIRECESSED FIRE EXTINGUISHER CABINET
F.E.C.

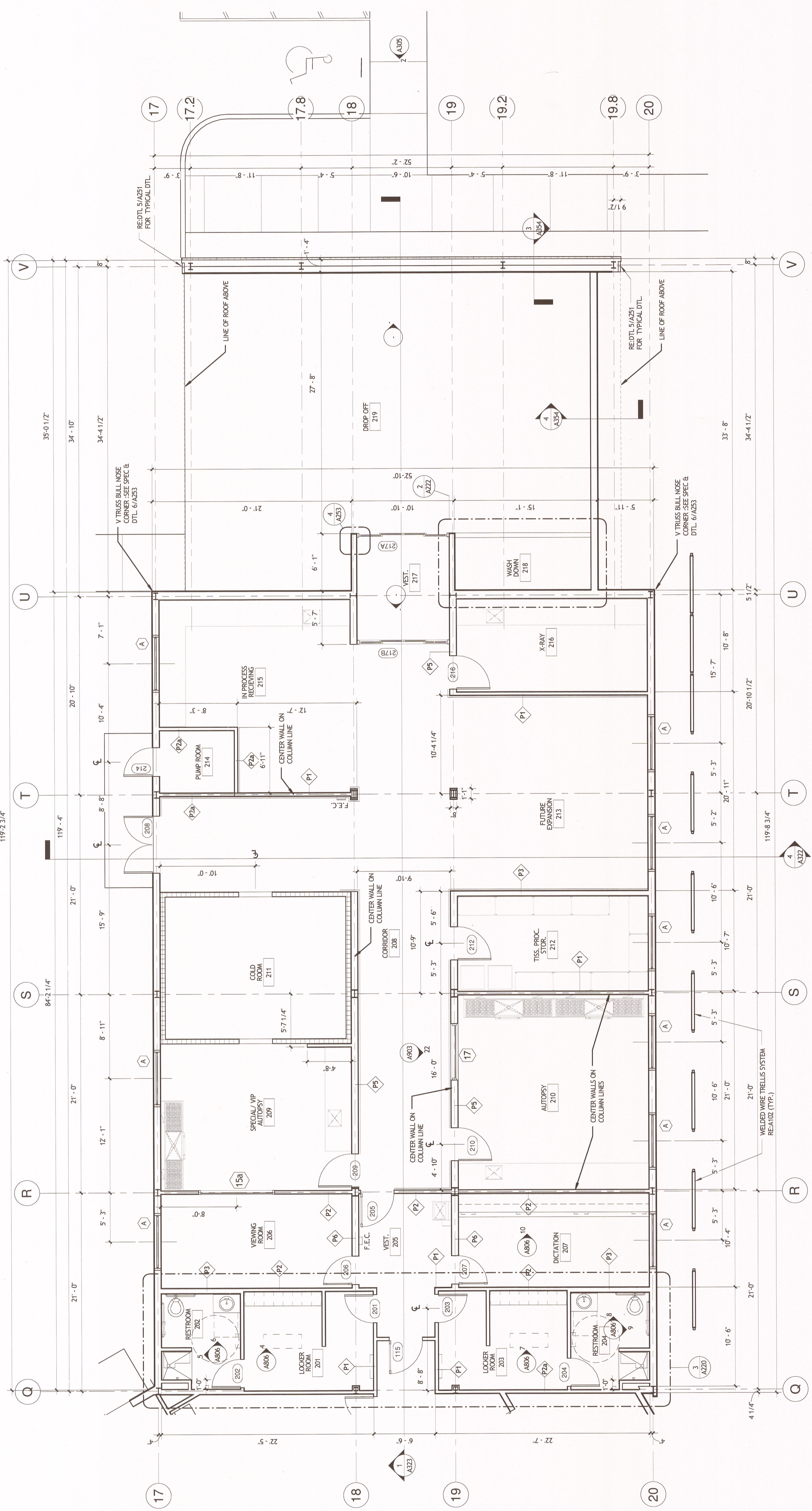
SIZELER THOMPSON BROWN ARCHITECTS
PROJECT DESIGN GROUP, LLC
 300 LAFAYETTE STREET, SUITE 200
 THOMPSON BROWN ARCHITECTS
 NEW ORLEANS, LOUISIANA 70130
 (504) 523-6472 FAX (504) 329-1181

No.	Revisions	Description	Date

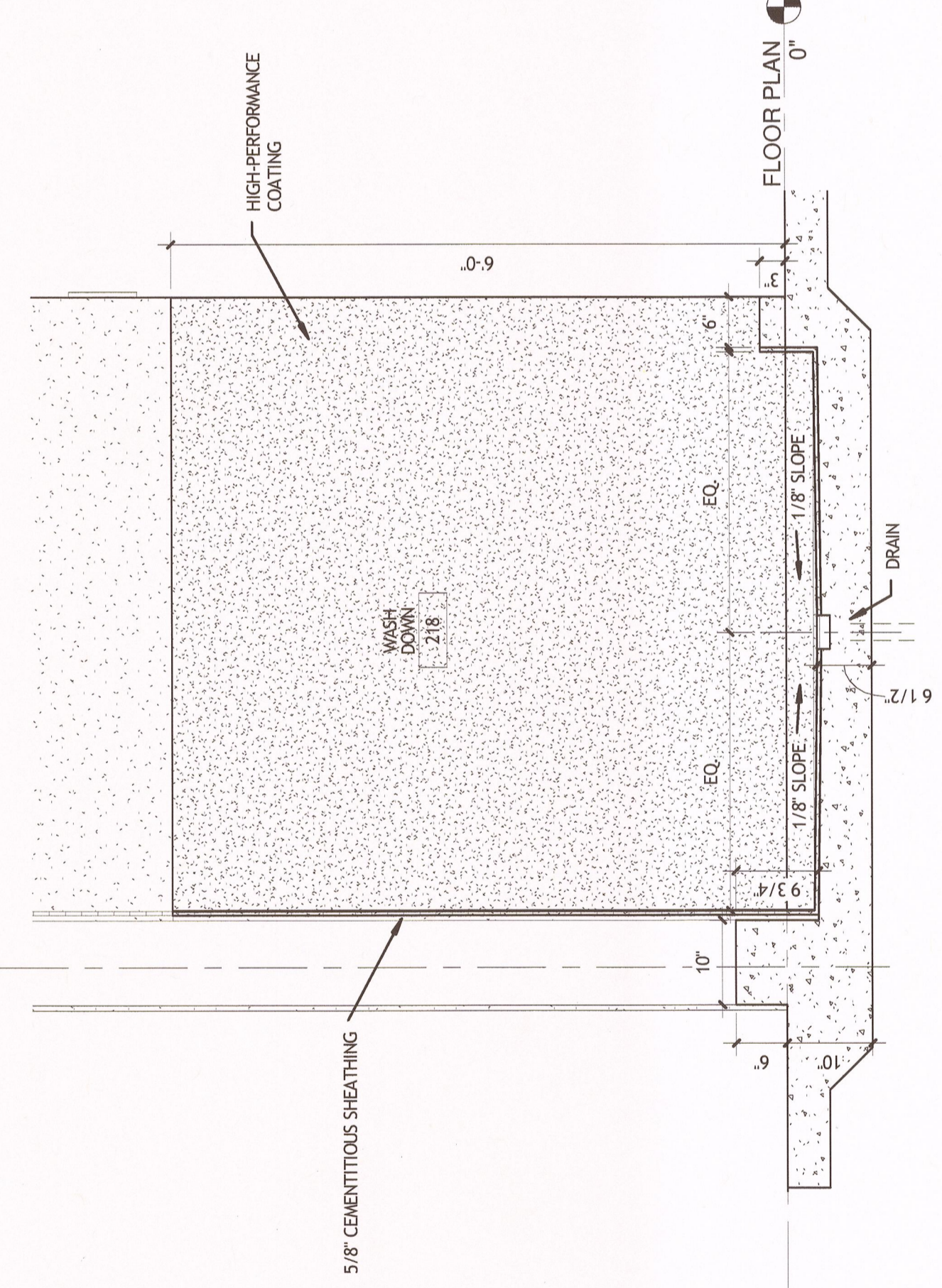
ST. TAMMANY PARISH CORONER'S FACILITY
 HIGHWAY 434
 LACOMBE, LA 70445

ENLARGED MORGUE PLAN

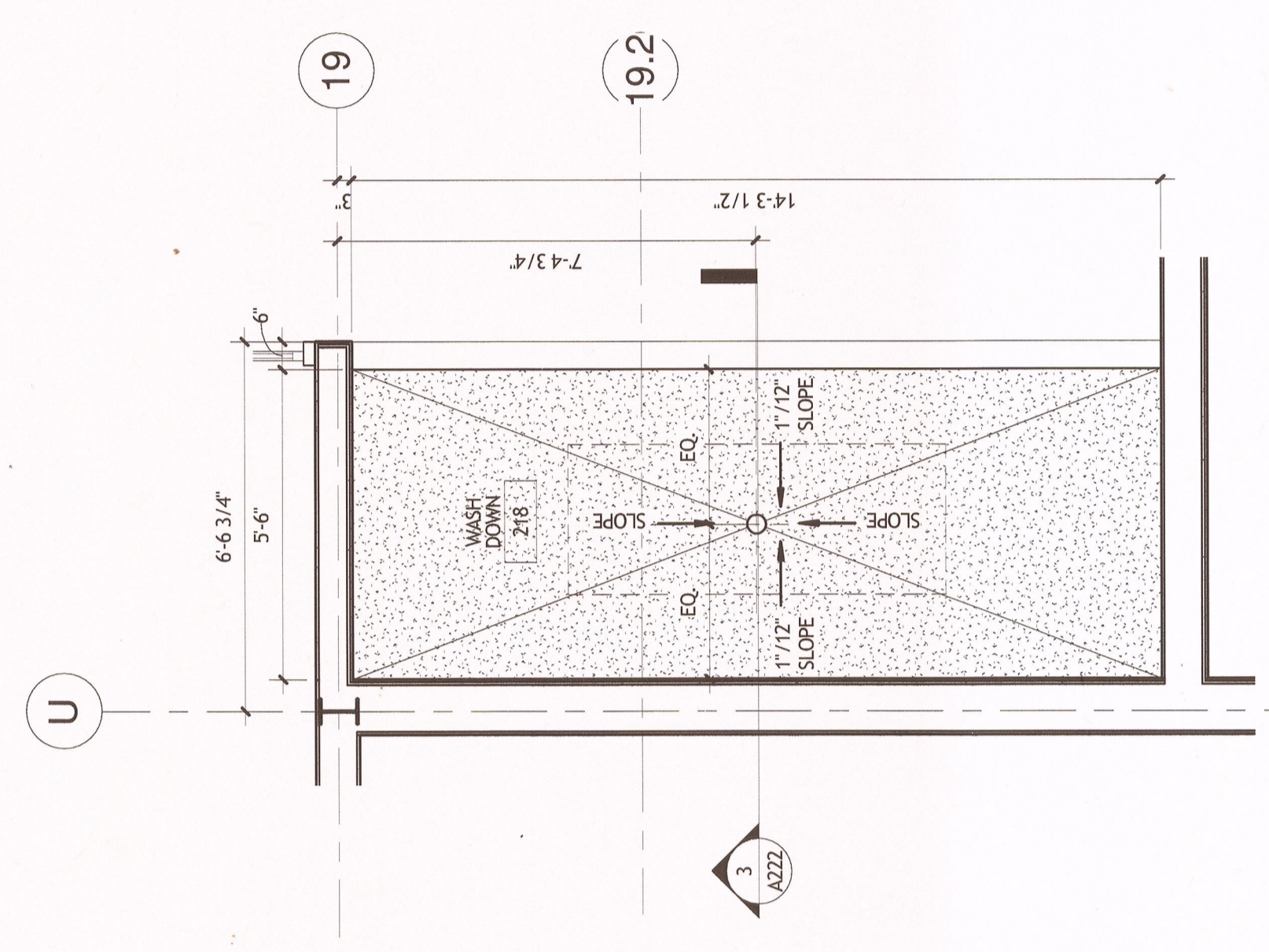
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Project number	51088.00		
Date	04-21-10		
Phase			



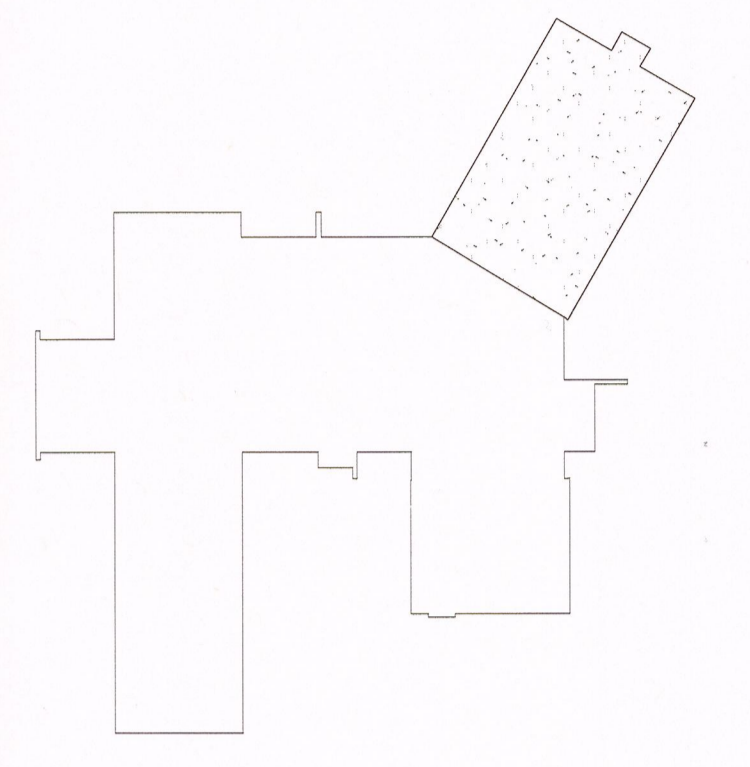
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3-ENLARGED MORGUE PLAN
 3/16" = 1'-0"



3
 A222
WALL SECTION
 3/4\"/>



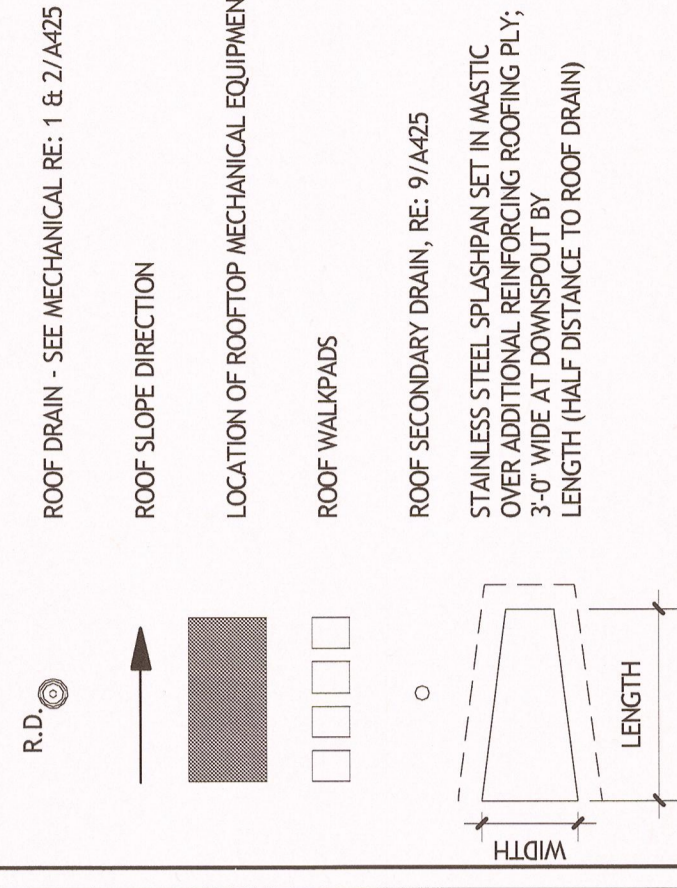
2
 A222
ENLARGED PLAN WASH DOWN
 3/16\"/>



ROOF PLAN GENERAL NOTES

- A. ALL ROOF SLOPES AS SHOWN ARE TO BE REVIEWED AND APPROVED BY THE ROOFING MANUFACTURER.
- B. SEE MECHANICAL PLANS FOR EXACT LOCATION OF ROOF DRAINS AND THEIR CONTINUATION THROUGH THE BUILDING.
- C. "R.D." INDICATES ROOF DRAIN
- D. PROVIDE WALKWAY PANS TO ROOFTOP EQUIPMENT AS SHOWN. AVOID ANY CONFLICTS WITH R.D. AND OTHER ROOFTOP EQUIPMENT.
- E. PROVIDE PROPER DRAINAGE AT WALKWAY PANS. COORDINATE WITH EXACT LOCATION OF ROOF DRAINS, EXHAUST FANS AND OTHER ROOF TOP PENETRATIONS.
- F. THE EXACT DIMENSIONS AND LOCATION OF MECHANICAL UNITS SHALL BE COORDINATED BY THE GENERAL CONTRACTOR IN SHOP DRAWINGS TO BE REVIEWED AND APPROVED BY THE ARCHITECT.
- G. EXHAUST FANS ARE TO BE LOCATED A MINIMUM 10'-0" FROM HVAC INTAKE UNITS.
- H. COORDINATE LOCATIONS OF ALL EQUIPMENT, ROOF OPENINGS AND DETAILS WITH MECHANICAL AND STRUCTURAL DRAWINGS.
- I. COORDINATE AND METALL ALL ROOF PENETRATIONS WITH ROOFING MANUFACTURER'S RECOMMENDATIONS.
- J. PROVIDE CASSETS AT ALL ROOF CURBS, PENETRATIONS, ETC. TO DIRECT WATER RUNOFF AROUND UNITS.

LEGEND



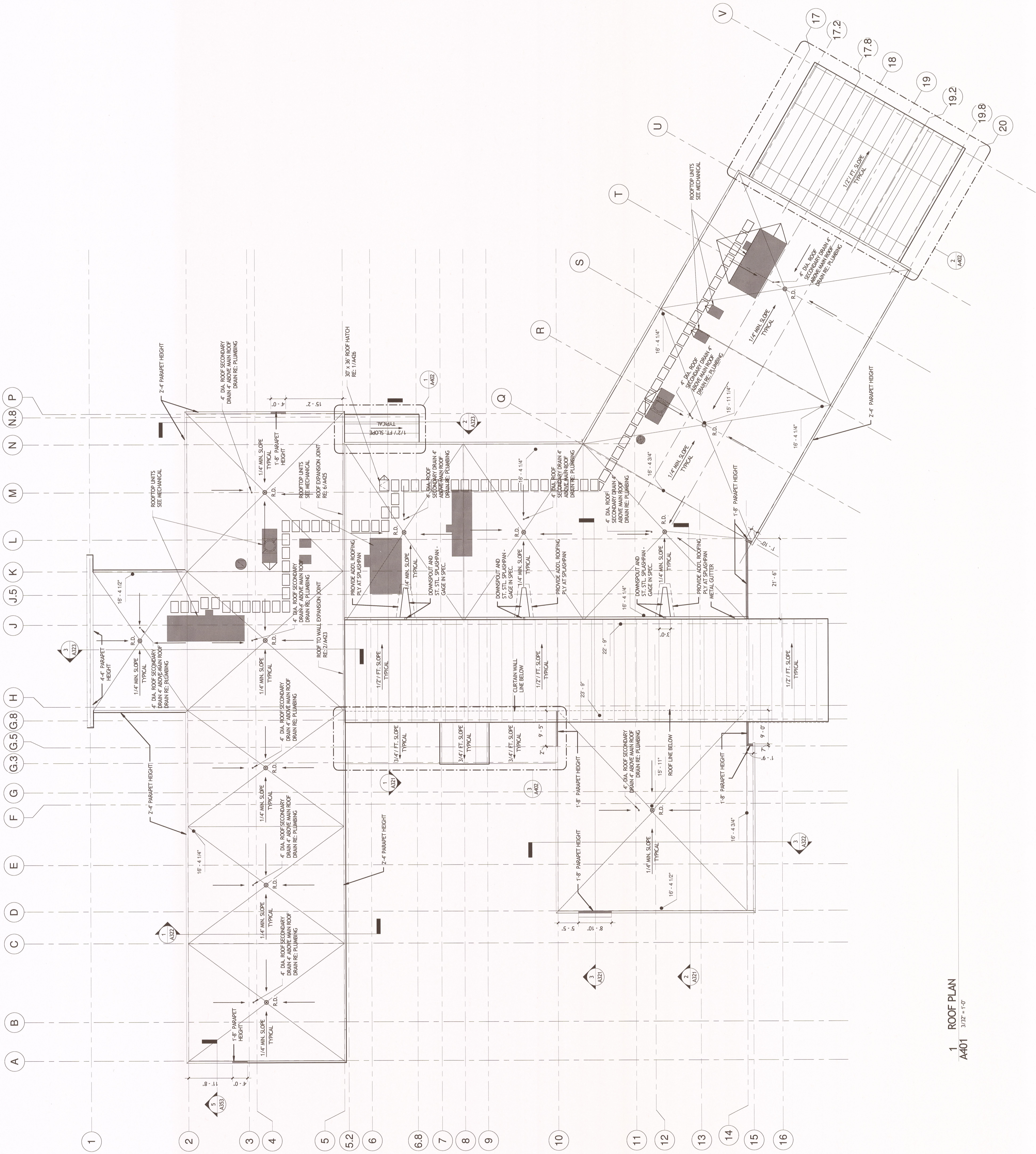
SIZELER THOMPSON BROWN ARCHITECTS
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 THOMPSON BROWN ARCHITECTS
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No.	Revisions	Description	Date

ST. TAMMANY PARISH CORONER'S FACILITY
 HIGHWAY 434
 LACOMBE, LA 70445

ROOF PLAN

File name	51088.00-STPCO.rvt	Drawing number	A401
Project number	51088.00	date	04.21.10
Phase	CD		



1 ROOF PLAN
 A401 3/32" = 1'-0"

- GENERAL NOTES: THIS SHEET.
- ALL RACEWAYS SHALL BE 1/2" CIRC. UNLESS NOTED OTHERWISE.
 - ALL RACEWAYS SHALL CONTAIN 1-#12 GND. UNLESS NOTED OTHERWISE. HATCH LINES DO NOT INDICATE GROUND WIRE.
 - COORDINATE EXACT LOCATION OF ALL MECHANICAL EQUIPMENT WITH MECHANICAL DRAWINGS PRIOR TO INSTALLATION.
 - PROVIDE UNBUILT FRAMING AS REQUIRED FOR MOUNTING OF DISCONNECT SWITCHES.

- SPECIFIC NOTES: THIS SHEET.
- JUNCTION BOX MAY BE REQUIRED FOR SYSTEM FURNITURE. PLEASE CONSULT WITH THE SYSTEM FURNITURE CONTRACTOR FOR CONNECTIVITY SOLUTION.
 - SEE LARGE SCALE DRAWING SHEET E203.
 - SEE LARGE SCALE DRAWING SHEET E204.
 - SEE LARGE SCALE DRAWING SHEET E202.
 - RECESSED MOUNTING HEIGHT IS 12" AFF. TELEVISION RECEPTACLE.
 - COORDINATE LOCATION WITH FURNITURE LAYOUT AS PROVIDED/APPROVED BY ARCHITECT.
 - TELEVISION RECEPTACLE MOUNTING HEIGHT IS AT APPROXIMATELY 6" ABOVE CEILING.
 - RECEPTACLES SHALL BE MOUNTED ON EXTERIOR WALL BEHIND SCREEN IN RECESSED BOX. COVER PLATE SHALL HAVE 2 RECEPTACLE DOORS.
 - RECEPTACLE SHALL BE RECESSED AND CONTAIN 2 RECEPTACLE DOORS.
 - JUNCTION BOX FOR POWERED DOORS.
 - CARD READER POWER JUNCTION BOX MOUNT IN NEAREST ACCESSIBLE CEILING. CONNECT TO NEAREST 200V CIRCUIT.
 - MOUNT AT 6" ABOVE COUNTER BACKSPLASH.
 - SEE EDH CONNECTION SCHEDULE THIS SHEET, FOR WIRING AND DISCONNECT.
 - SEE VAV CONNECTION SCHEDULE THIS SHEET, FOR WIRING AND DISCONNECT.
 - 200V CONTROL JUNCTION BOX. PROVIDE 20A TOGGLE SWITCH FOR DISCONNECT. THRU WIRE POWER TO ADDITIONAL BOXES AS REQUIRED.
 - CONNECT TO SWITCH LIGHT CONDUCTORS (2TV) THIS ROOM. FAN TO RUN WHEN LIGHTS ARE ON.
 - ELECTRIC WATER HEATER EMH-1, 63 KA, 480V, 3 PH. PROVIDE COCA, 600V, 3 PH. NEMA 1, FUSE (COA, RMI) 1/4" C; 3-15 ANS AND 1-1/4" C; 3-15 ANS AND 1-1/4" C.
 - NOT WANTED CIRCULATING FANS (RH-1, 120V). CONNECT TO RECEPTACLE CIRCUIT AS SHOWN.
 - SEE LARGE SCALE ELECTRICAL ROOM LAYOUT THIS SHEET.
 - 3/4" C; 2-#10 ANS AND 1-#10 GND.
 - MAIN FACP.
 - ACCESS CONTROL PANEL AND INTRUSION CONTROL PANEL.
 - FIRE ALARM REMOTE ANNUNCIATION PANEL.
 - SEE VAV CONNECTION SCHEDULE ON THIS SHEET FOR WIRING AND DISCONNECT.

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ST. TAMMANY PARISH
 CORONERS FACILITY
 ST. TAMMANY PARISH, LOUISIANA

PARTIAL ADMINISTRATION FLOOR PLAN - POWER

PROJECT NUMBER: 51088-00
 DATE: 04-21-10
 FILE NAME: E201.dwg
 DRAWING NUMBER: CD

LUCIEN T. VIVIEN JR.
 AND ASSOCIATES, INC.
 CONSULTING ENGINEERS
 3001 2ND STREET
 METairie, LOUISIANA 70002
 T (504) 218-5409 F (504) 218-5412
 www.vivienengineers.com

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REVISIONS
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 NO. 2
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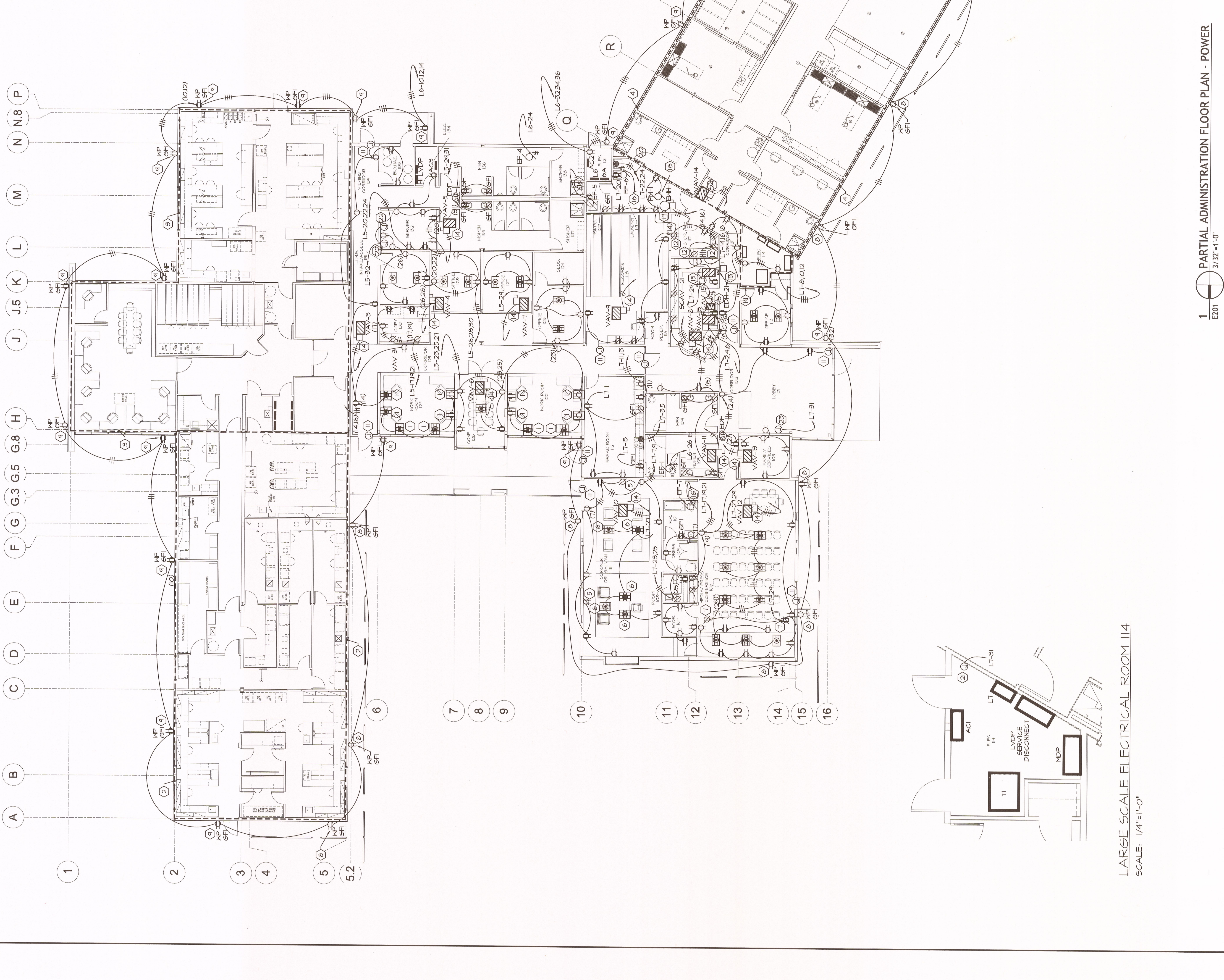
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DUCT HEATING COIL ELECTRICAL CONNECTION SCHEDULE

MARK	KW	VOLTS	PH	AMPS	FUSE	Panel Designation	Conduit/Wiring	Disconnect Size
EDH-1	18	480	3	21.7	30	AC3-4,6,8	3/4" C, 3-#10 AWG, 1-#10 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-2	2	480	3	21.7	30	AC3-4,6,8	3/4" C, 3-#10 AWG, 1-#10 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-3	2	480	3	21.7	30	AC3-4,6,8	3/4" C, 3-#10 AWG, 1-#10 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-4	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-5	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-6	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-7	13	480	3	15.7	20	AC3-15,17,19	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-8	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-9	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-10	18	480	3	21.7	30	AC3-4,6,8	3/4" C, 3-#10 AWG, 1-#10 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-11	18	480	3	21.7	30	AC3-4,6,8	3/4" C, 3-#10 AWG, 1-#10 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-12	3	277	1	10.8	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-13	3	277	1	10.8	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-14	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-15	4	277	1	14.4	20	AC3-9	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-16	6	277	1	21.7	30	AC3-15,17,19	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
EDH-17	11	480	3	13.2	30	AC3-22,24,26	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-18	11	480	3	13.2	30	AC3-22,24,26	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-19	11	480	3	13.2	30	AC3-22,24,26	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-20	11	480	3	13.2	30	AC3-22,24,26	3/4" C, 2-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
EDH-21	1	277	1	3.6	20	AC1-12	1/2" C, 2-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A

VAV ELECTRICAL CONNECTION SCHEDULE

MARK	KW	VOLTS	PH	AMPS	FUSE	Panel Designation	Conduit/Wiring	Disconnect Size
VAV-1	3	277	1	7.2	20	AC1-1,3,5	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-2	3	277	1	7.2	20	AC1-1,3,5	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-3	15	480	3	15.7	20	AC2-2,4,6	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-4	4	277	1	14.4	20	AC2-7	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-5	4	277	1	14.4	20	AC2-7	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-6	4	277	1	14.4	20	AC2-7	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-7	3	277	1	10.8	20	AC2-8	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-8	3	277	1	10.8	20	AC2-8	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-9	3	277	1	10.8	20	AC1-1,3,5	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-10	9	480	3	10.8	20	AC1-2,4,6	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-11	9	480	3	10.8	20	AC1-2,4,6	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-12	10	480	3	14.4	20	AC1-3	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-13	10	480	3	14.4	20	AC1-3	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 480V, 3P, NEMA 1 FDS, FUSE 30A
VAV-14	1	277	1	3.6	20	AC1-8	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-15	4	277	1	7.2	20	AC1-11	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A
VAV-16	4	277	1	14.4	20	AC1-10	1/2" C, 3-#12 AWG, 1-#12 GND	30A, 277V, 1P, NEMA 1 FDS, FUSE 30A



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1 PARTIAL ADMINISTRATION FLOOR PLAN - POWER
 3/32"=1'-0"
 NORTH

ST. TAMMANY PARISH
 CORONERS FACILITY
 ST. TAMMANY PARISH, LOUISIANA

Location

St. Tammany Coroners Office
65278 Louisiana 434, Lacombe, LA 70445

**Mandatory Pre-Bid Sign-In Sheet
STPC-Built-In Cooler for the Morgue**

	Name	Company	Email	Phone	Time In	Time Out
1	Chavez Cruthirds	CRESO FWC	cruck@crescoinc.com	228-864-3950	9:50	10:27
2	Ross Cruthirds	Cresco Inc	ross@crescoinc.com	228-864-3950	9:50	10:27
3	Brett Sherida	ARC Abatement	brettsheridan@arcabatement.com	251-621-0690	9:55	10:28
4	Thomas Miller	Hussmann Services	thomas.miller@hussmann.com	504-272-4063	9:51	10:34
5	Ken Fiedler	STPCO	kfiedler@stpcoroner.org	985-781-1150	9:50	10:30
6	DAVE MORIEL	STPCO	DMORIEL@STPCORONER.ORG	985-781-1150	9:55	10:30
7	CARL MORGAN	STPCO	CMORGAN@STPCORONER.ORG	985-290-6566	10:00	10:30
8	Richard Fields	STPG	rsfields@stpgov.org	985 818 2792	10:00	10:30
9	Valerie Talley	STPG	umtalley@stpgov.org	985-898-5245	10:00	10:29
10						
11						
12						
13						

Location

St. Tammany Coroners Office
65278 Louisiana 434, Lacombe, LA 70445

**Mandatory Pre-Bid Sign-In Sheet
STPC-Built-In Cooler for the Morgue**

	Name	Company	Email	Phone	Time In	Time Out
14						
15						
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