**Mod3\_1 Food Safety & Refrigeration Concepts**

**Included**

**Refrigeration &**

**Certifications**

-Food Safety

-Beer/Tobacco

-HACCP Plans

**Refrigeration**

**1st Thing**

* Find your Refrigeration contractor, Electrician, and Plumber
* Warehouse can provide refrigeration help but you really want to consult with the person who will be installing and maintaining your equipment PRIOR TO finalizing your purchasing decisions
* Partner with a “General Contractor” for general construction needs

**Opening Date**

* Opening date is driven by refrigeration completion
  + Refrigeration to temp (degrees) ~2 weeks prior to opening day
  + Refrigeration timeline influenced by Refrigeration contractor, receiving your physical equipment, electrical and plumbing updates made to your building

**Store Layout**

* Establishes refrigeration and shelving needs
* Inventory layout tells you how many doors of
  + Refrigerator
  + Frozen
  + Ice Cream
* **Template: Mod3\_2 Planning Layout**

**Refrigeration Connection to Plumbing / Electrical**

* Send them both your case specs for your refrigeration units
* They will need to come onsite to perform their analysis of what updates are needed based on your case specs
* Remember to get time and money included in their quote
  + Time can be hard to estimate, which is fine, have them walk you through the variables that will influence their timeline
  + Put this in writing, especially the finalized version right before they begin work

**Refrigeration Temperature Monitoring**

* VERY important to hopefully minimize inventory loss in the event you have refrigeration go down
* Manual Temp Checks
  + **Template: Mod3\_3 Temp Check Log**
  + Frequency of your checks depends on
    - Your required frequency for your Food Safety certification
    - More frequently if you prefer, depends on if you have Automatic monitoring or not
* Automatic 24/7 Monitoring
  + Example: Einstein
    - Einstein system holds temperature thresholds you program for where you want each case to maintain
    - Einstein monitors the Right Now temperature on all sensors
    - Einstein trips an alarm if any of the cases step outside their temperature threshold (colder or warmer)
      * Security System Required
        + Example: ADT

“Refrigeration” is a zone on your security system

* + - * Landline may be Required for the Security System
    - Einstein allows your refrigeration contractor to monitor your case performance remotely
      * This troubleshooting may give them enough information to walk you through a “fix” over the phone

**Refrigeration Units**

* Individual Units or Integrated System
  + Individual units each with their own power cord and compressor
    - Pros
      * Cheaper to buy / install
      * Minimal to no building updates needed
      * Short timeline to purchase and have in place
    - Cons
      * Overtime the compressors make more and more noise and become loud
      * Older models use more electricity
      * Will add to the heat load in the store and AC has to compensate for the increased heat
      * Size and space constraints determined by the unit
      * Limited or no automatic monitoring capability
  + Integrated Refrigeration System
    - Pros
      * Compressors can be outside or somewhere dedicated where the noise won’t be a nuisance
      * Redundancy is an option with more than one unit for walk-ins or using a compressor bank that serves the entire store
      * Size and space of refrigeration designed and built to suit the store
      * Extensive automatic monitoring and alarm capabilities
    - Cons
      * More expensive up front
      * Professional refrigeration technician required for maintenance and repair in most cases
      * Long timeline to design, purchase, and install equipment
* Used or New
  + Used Equipment
    - Pros
      * Cheaper
      * Short timeline
    - Cons
      * Potentially need more frequent maintenance
      * Energy needs higher in older equipment
      * May not be ideally suited for the store
  + New Equipment
    - Pros
      * More energy efficient
      * Can purchase exactly what is needed/desired for the store
    - Cons
      * More expensive up front
      * Long timeline

**Used Equipment - Where to Find**

* Facebook Groups
  + Kansas Grocery Equipment & Supply
  + The Rural Grocery Network
  + Free Grocery Resources
  + \*Search “Grocery” or “Restaurant Equipment” to find others
* Christopher Sales, and other similar companies in your area
* Restaurant Equipment resale
* Ask your Warehouse for existing stores who may be selling equipment

**Certifications**

**Licensing Guide**

* Kansas Dept of Ag [for Grocery + Retail Stores](https://agriculture.ks.gov/docs/default-source/licensing-guides/grocery-and-retail-stores83e0e5002e6262e1aa5bff0000620720.pdf?sfvrsn=528287c1_12)
  + Covers tobacco, beer, lottery, fuel, pharmacy, etc.
* Find one specific to your state and if not, the Kansas one can get you started

**Food Safety Certification**

* Define range of services
* Highly Recommend getting the highest level risk certification - preparing ready to eat food
  + Strict hygiene protocols between raw and ready to eat
    - Surfaces, handwashing, knives, etc.
* Planning Inspection
  + Schedule for ASAP once you have your services defined
  + Factor planning inspection report into the requirements for your contractors so they can include in their quotes
* FREE Food Safety Training by State Dept of Ag
* Meat Grinding
  + **Template: Mod3\_4 Grinding Log Template**

**Beer / Tobacco / Lottery / Fuel / etc. License**

* Selling regulations
  + **See Licensing Guide by** Kansas Dept of Ag [for Grocery + Retail Stores](https://agriculture.ks.gov/docs/default-source/licensing-guides/grocery-and-retail-stores83e0e5002e6262e1aa5bff0000620720.pdf?sfvrsn=528287c1_12)
    - Find one specific to your state and if not, the Kansas one can get you started

**Fire Code**

* Schedule walk through with City Fire Chief
  + Same as Food Safety Planning Inspection, schedule ASAP to review your services with them and make sure you’re building something that will work in the end
  + Have them make you aware of any rules / regulations your space is subject to
* Fire Extinguishers - buy / install prior to opening

**HACCP Plans**

* Vac Packing machine requires specific approval to use per food item
  + Seafood, chicken, beef, pork, deli meats, cheeses, marinated specialty items, etc.
* Vac Packing things you don’t have a HACCP plan for will cause the food safety inspector to throw away those items automatically
  + Vac Packing - can make people sick if it’s done wrong
* Temperature Checks - depends on Ops so check with your state licensing requirements
  + **Template: Mod3\_3 Temp Check Log**