# Mod3_1 Food Safety & Refrigeration Concepts

<u>**Included**</u>
**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
  - o 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

- o 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
  - o 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
  - o 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](#)
  - ○ 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
    - 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**