



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
Factory Assembled Structure
PO Box 44430 Olympia, Washington 98504-4430

Dear Concessionaire:

You have probably been directed to contact Labor and Industries for approval of your mobile food business. By law, a structure on a permanent chassis that is used for commercial purposes is a "Commercial Coach" or a "Conversion Vendor Unit." Such units are regulated by Labor & Industries for the structural elements when applicable, electrical wiring, the water supply and waste water systems, as well as any mechanical systems such as fuel gas piping, and fire suppression systems. You can think of us as the building department for the entire state for portable structures. Labor and Industries does not determine what elements you might need to satisfy the health department requirements, for example the health department may require a hand washing sink, but it is Labor & Industries responsibility to be sure it is installed correctly.

In order to obtain Labor & Industries approval of your concessions trailer or truck, you will need to submit two sets of plans to the Plan Review Section in Tumwater. There is a fee for approving your plans as published in [WAC 296-150V-3000](#). We will examine the plans for conformance to the proper building codes and notify you of the results. You will also need to purchase an insignia of approval.

Once your plans are approved, one copy of the plans will be returned to you by mail, at which time you should schedule your unit for inspection with the Factory Assembled Structures Inspector at our local office. Travel Time, Inspection Time and Mileage will be charged to you in accordance with the published fees schedule in [WAC 296-150V-3000](#). There will typically be two inspections; the first being a "cover inspection" before the walls and roof are concealed by the interior finish material and when all of the electrical wiring, plumbing and other elements are in place. There is also a "final" inspection when the unit is completely finished and ready to go down the road. Upon passing the Final Inspection, the inspector will affix the insignia to the outside of the unit to show approval by Labor & Industries. This insignia must be maintained as a permanent record of Labor & Industries approval.

The plans you submit for plan review need to contain enough information for us to determine conformance with the applicable codes. Please refer to our sample drawing set as an example of the type of information that is needed. The plan set could include, but is not limited to the following:

Floor Plan: Show the layout of the trailer or truck along with the locations and sizes of doors and windows and the overall dimensions of the unit. Also show the locations of counters, appliances, equipment, LP gas containers, generator compartment, battery compartment, and plumbing fixtures such as sinks.

Structural: If you have equipment or appliance loads of 500 lbs or more on an area of 16 square feet or less you will need to provide either a structural analysis or a structural load test from a registered engineer. Please contact us at FAS1@lni.wa.gov, or 1-800-705-1411 Option 3 for additional information.

Electrical: Show the locations of outlets, lights, switches, other electrical devices such as inverters, batteries and the main distribution panel box. The electrical information may be combined with the floor plan drawing or you can provide it as a separate drawing. Include a schedule showing what breakers are installed in the main panel box including breaker sizes and what devices (lights, receptacles etc...) they control.

Plumbing: Show the locations of sinks, holding tanks, water heaters, pumps and other plumbing fixtures. Include pipe sizes for water supply and sizes for the drain and vent pipes. List the operating pressure of the water supply system, along with the length of water piping from the inlet or pump to the furthest fixture. Show the location and size of the water supply inlet and the drainage system outlet.

Mechanical: If you have gas appliances in your concession trailer or truck, you need to show the fuel gas piping layout and size. Please list the BTU/H rating for all fuel gas appliances on the drawings. Show the location of the fuel gas supply inlet and tank. Provide the type of fuel (i.e.: natural gas or propane) and the length of the piping run from the tank or inlet to the farthest appliances. If any of your cooking equipment are "commercial" appliances you should show the required hoods and fire suppression systems.

NOTE: You should check with all local building departments where you plan to use your unit. Some building departments may not allow the use of conversion vendor units in their jurisdiction.

If you should have questions or need additional assistance you may contact us at FAS1@lni.wa.gov, or 1-800-705-1411 Option 3.

Sincerely,
Shane Daugherty, Program Chief
Factory Assembled Structures Program
Washington State Department of Labor & Industries



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
Field Services & Public Safety
Factory Assembled Structures
PO Box 44430 Olympia, Washington 98504-4430

Conversion Vendor/Medical Mobile Units

Regulations

Food trucks, concession trailers and mobile medical units used in Washington State are inspected by the Department of Labor & Industries, Field Services and Public Safety Division and are to be constructed to comply with the following codes. Factory Built Structures WAC Rules are linked below. Washington State Amendments and Washington State Building Codes are available from Washington Association of Building Officials.

1. Rules for Conversion Vendor Units & Medical Units

Chapter [296-150V WAC](#) (Dated 02/04/2020) [\(Website\)](#)

(Note: As new rules become effective they will be published on our [website](#))

What codes apply to conversion vendor units or medical units?

(2) A conversion vendor unit or medical unit must comply with the following codes where applicable:

(a) The International Mechanical Code (current edition), with the amendments made by the Washington State Building Code Council, chapter 51-52 WAC.

(b)(i) For conversion vending units Article 551, Parts I through VI of National Electrical Code/National Fire Protection Agency (NFPA) 70, (current edition), or Article 552, Parts I through V Article of National Electrical Code/National Fire Protection Agency (NFPA) 70, (current edition).

(ii) For medical units the current edition National Electrical Code as referenced in chapter 19.28 RCW and chapter 296-46B WAC, installing electric wires and equipment.

(c) Chapter 7 of National Fire Protection Association (NFPA) 1192, (current edition), or the Uniform Plumbing Code (current edition), as adopted and amended according to chapter 19.27 RCW.

(d) The Washington State Building Code Council, chapter 51-50 WAC, International Building Code (current edition), Chapter 11, Accessibility as applies to the exterior of the unit relating to customer service facilities in section 1109.11.3

3. Also enclosed for your use are:

- A. Concessionaires Letter
- B. Vendor/Medical Conversion Units Pre-Inspection Checklist
- C. Sample drawing set
- D. Plan Approval request form with instructions for completing
- E. Application for Insignia form with instructions for completing

Copies of the Codes are available from:

Washington Association of Building Officials
P. O. Box 7310
Olympia, WA 98507-7310
Phone: 360-628-8669
Web Site: wabo.org

You should also contact your local Health Department for their requirements.



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES
Field Services & Public Safety
Factory Assembled Structures
PO Box 44430 Olympia, Washington 98504-4430

MEMORANDUM
MANUFACTURER ONLY

TO: Food Truck and Concession Trailer Manufacturers

FROM: Shane Daugherty, FAS Program Chief

SUBJECT: Manufacturer's Contact Personnel

In order that we may serve you better we are requesting you complete the enclosed form and return it to us. By having contact persons on our mailing labels and faxes the information we are sending to you should be received by those who need it. We thank you in advance for your assistance.

If you have any questions, please feel free to contact us at FAS1@lni.wa.gov, 1-800-705-1411 Option 3 or FAX (360)902-5229.

Return to: Shane Daugherty
Dept. of Labor & Industries
PO Box 44430
Olympia, WA 98504-4430

MANUFACTURER ONLY

Factory 1

Company Name: _____

Mailing: Address _____

City: _____ State: _____ Zip: _____

Physical Address: _____

City: _____ State: _____ Zip: _____

Phone No: (____) _____ Ext: _____ Fax No: (____) _____

Web Address: _____

Contact for Plan Review: _____

Phone No: (____) _____ Ext: _____ Fax No: (____) _____

Email Address: _____

Contact for Plant Audit: _____

Phone No.: (____) _____ Ext: _____ Fax No: (____) _____

Email Address: _____

Factory # 2

(If applicable)

Company Name: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Physical Address: _____

City: _____ State: _____ Zip: _____

Phone No: (____) _____ Ext: _____ Fax No: (____) _____

Web Address: _____

Contact for Plan Review: _____

Phone No: (____) _____ Ext: _____ Fax No: (____) _____

Email Address: _____

Contact for Plant Audit: _____

Phone No.: (____) _____ Ext: _____ Fax No: (____) _____

Email Address: _____



STATE OF WASHINGTON
DEPARTMENT OF LABOR AND INDUSTRIES

Factory Assembled Structures
PO Box 44430 • Olympia, Washington 98504-4430

June 24, 2020

Important information about getting your food truck approved by L&I,

Labor & Industries inspects food trucks and concession trailers to be sure they are safe prior to being used. Except for the [simplest units](#), this also involves submitting plans before the truck or trailer is inspected. Plans show how the electrical, gas piping, cooking equipment, exhaust hood and fire suppression systems are built and whether they will meet the minimum requirements.

Many states have little or no regulations for food trucks and trailers. New or used units coming from these locations have a very difficult time passing inspection and they often need expensive repairs before they can be approved. Even if a food truck or trailer has been used for years in another state, it is no guarantee that it will pass inspection in Washington.

Before buying a food truck or trailer, you should see whether you will be able to get it approved and what you will need to fix before you have it inspected. Typically, the three most expensive problems to fix in food trucks and trailers are the exhaust hoods/ fire suppression systems, the location of LP gas tanks and the location of electrical panels. If you are unfamiliar with these systems, you should look for help from a licensed professional, a reputable food truck company or a food truck association. Other problems that frequently need fixing include improper cooking equipment, water lines, drain lines, gas piping and electrical wiring.

Exhaust hoods installed above the cooking equipment have the same requirements that you would see in a restaurant. They are designed to contain and extinguish cooking fires and can be expensive to install. They are heavy gauge metal, have grease filters, restaurant type exhaust fans on the roof and in most cases a fire suppression system. Hoods that are home built or that have regular wall, ceiling or attic fans, or lack fire suppression cannot be approved. There is no way to fix a substandard hood so that it will pass inspection. If you have to replace the hood, it will need to be either a "listed" (UL710) hood or it will need to be fabricated by a company that specializes in this work and understands all of the code requirements for building it. Fire suppression systems must be installed by certified companies that are approved to do this.

Liquid propane (LP) tanks must be located in one of three places. On trailers, they can be mounted on the front towing hitch, like an RV trailer. The tank must not extend past the side of the hitch where it might be damaged by the towing vehicle during a turn. On trucks or trailers they can also be mounted either under the floor like a motor home or they can be mounted inside a sealed compartment that is within the body of the truck or trailer and accessed from the outside. LP tanks mounted on the rear bumper or wall, on the roof, or exposed to the inside of the unit will not pass inspection and need to be moved.

Electrical panels must be installed so that you can stand in front of them without a counter, appliance or other obstruction below them. Panels that are located under counters or sinks or recessed back into cabinets also will not pass inspection and need to be moved.

Other issues can arise in food trucks and concession trailers that can cause problems for owners trying to get them approved. Complete information on L&I food truck requirements can be found on the [L&I website](#).

Finally, some local jurisdictions have restrictions on how food trucks can be used. You will need to check with the local health department, fire marshal, or others to see about local permit requirements.

L&I approval of your Food Truck or Concession Trailer

Labor & Industries must approve food Trucks and Concession trailers before they can be used in Washington State.

Follow this step-by-step process to obtain L&I approval.

Step 1:

Check To See If You Have a Food Truck

Does your food truck or trailer require an L&I inspection? If it does, you must get the inspection done before you start your food truck business. First, answer **Yes** or **No** to the following questions:

- Will you sell food or other items from the truck/trailer at temporary sites?
- Is the truck/trailer licensed as a vehicle?
- Do people work inside?
- Do customers stand on the outside (and not go inside)?
- Does it have at least one of the following:
 - Electrical system 120v or greater.
 - Water or drain system.
 - Propane gas piping system.
- Is the truck/trailer no more than 8.5 feet wide?

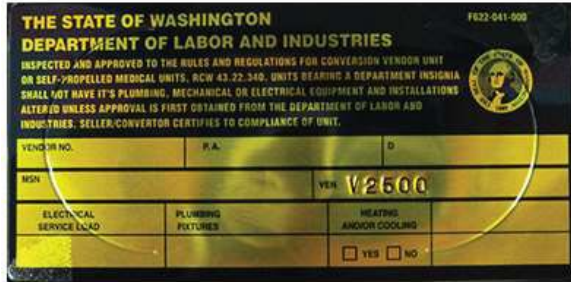
If you answered "Yes" to all the questions above, you have a food truck or trailer. Check to see if you must submit plans [Go to Step 2](#).

If you answered "No" to any of the questions, you may have another type of unit that may require L&I approval. For example:

- If customers can go inside, you may have a commercial coach or modular building. Please contact the plan review staff at FASI@Lni.wa.gov or **1-800-705-1411, Option 3**.
- If employees work outside, you may have a push cart or food delivery truck. These are not regulated by Labor & Industries. Contact the state [Department of Health and/or local health department](#).

- If you already have an L&I label on your food truck, you do not need to have it inspected unless you make changes to the truck.

Food Truck/Trailer Label



Note: Be sure to check with all local building departments where you plan to use your unit. Some building departments may not allow the use of food trucks / trailers in their jurisdiction. You may be required to have a commercial coach in that jurisdiction.

Step 2:

Do You Need To Submit Plans?

If food trucks have certain items included, then you must submit plans to L&I.

First, answer **Yes** or **No** to the following questions.

Do you have:

- Commercial cooking equipment, such as a deep fryer, stove, or oven, which will require a commercial-grade ventilation hood and -in many cases -a fire suppression system? (This does not include espresso machines and other small, plug-in electrical appliances.)
- Cooking equipment that uses solid fuels such as wood or charcoal?
- A propane (or other fuel gas) piping system?
- An electrical system more than 30 amps, more than 120 volts, or more than five (5) circuits?
- A source of alternate energy such as a photovoltaic system, or fuel cells?
- A bathroom or other plumbing for bodily waste?
- Does any equipment weigh more than 500 pounds?

If you answered "Yes" to any of the questions, you need to submit plans to L&I and have them approved, before an inspection can take place. [Go to Step 3.](#)

If you answered "No" to all of the questions, then you do not need to submit plans. You still need an inspection for your vehicle. [Skip to Step 4.](#)

Step 3:

Here's how to submit plans and get your food truck inspected.

First, [download a plan review packet](#) (PDF). It has examples of drawings and other information we will need to approve your plan. We will need 2 copies of your plans

Use the Plan Submittal Checklist along with the informational sheets and the sample plans to prepare the plans for your food truck.

Next, fill out the applications:

- [Plan Approval Request](#) (F622-035-000): Conversion Vendor Units Application.
- [Application for Insignia Conversion](#) (F623-021-000): Vendor Units.

Finally, include payment of \$148.30 for plan review and insignia. We will notify you to schedule an inspection (see below).

Mail the completed packet to:

Department of Labor & Industries

Factory Assembled Structures

7273 Linderson Way SW

PO Box 44430

Olympia WA 98504-4430

Or, go to your [local L&I office](#). You can pay the fee by cash, check, money order, Visa, or Mastercard.

NOTE: It will take several weeks for L&I to review plans. We will notify you if we need more information or if your plans have been approved.

We will notify you to schedule an inspection.

Be ready for the inspection. [Use this pre-inspection checklist](#) (F622-072-000) to prepare for the inspection.

Remember: You will still be charged for an inspection even if your truck isn't ready. Additional fees will be charged if extra inspections are necessary.

Once your truck passes inspection, you will have completed L&I requirements for your food truck.

Step 4:

Inspection Only

Don't need to submit plans? You still need an inspection.

Food trucks need to be inspected to receive an L&I insignia. You need an inspection before starting your food truck business. Here's how:

First, [fill out the application for food trucks and concession trailers not requiring plans](#) (F623-040-000). The form indicates you don't need a plan, but still need an inspection to obtain your food truck insignia.

Next, include a payment of \$43.40 for the insignia. We will notify you to schedule an inspection (see below).

Mail the completed packet to:

Department of Labor & Industries
Factory Assembled Structures
7273 Linderson Way SW
PO Box 44430
Olympia WA 98504-4430

Or, go to your [local L&I office](#). You can pay the fee by cash, check, money order, Visa, or Mastercard.

NOTE: It will take about 10 days for L&I to process your application. We will contact you to schedule an inspection.

Be ready for the inspection. [Use this pre-inspection checklist](#) (F622-072-000) to prepare for the inspection.

Remember: You will still be charged for an inspection even if your truck isn't ready. Additional fees will be charged if extra inspections are necessary.

Once your truck passes inspection, you will have completed L&I requirements for your food truck.

PLAN SUBMITTAL CHECKLIST

In order to provide a comprehensive review & inspection of the Vendor (Food Truck/ Trailer) application please review the following (9) pages of information as guidance to a complete application and preparedness for inspection. An incomplete application will be returned requesting the same information herein to be satisfied prior to a complete review.

Code Edition Standards:

See **WAC 296-150V-0800** for a list of code standards that are applicable to Vendor Units. Outlined below are code references that apply to Vendor Units (the codes listed in the WAC regulations reference other applicable codes). The following is not a comprehensive list as it is the applicant's responsibility to review the standards as they apply to the application:

- **WAC 296-150V**
- **2015 IBC** (International Building Code)
- **2015 IMC** (International Mechanical Code)
- **2015 IFC** (International Fire Code)
- **2015 IFGC** (International Fuel Gas Code)
- **2015 UPC** (Uniform Plumbing Code)
- **Washington State Building Code Amendments** (WAC) (i.e. IBC, IMC, IFC, IFGC & UPC)
- **2017 NFPA 70 NEC** (National Electrical Code)
- **2009 ICC/ANSI A117.1** (Accessibility Standards)
- **2014 NFPA 58** Fuel Code
- **2018 ANSI/NFPA 1192** Standard on Recreational Vehicles (RV), Chapter 7.
- **2018 ANSI/RVIA** Standard for Low Voltage Systems in Conversion & RV's.

Submittal Requirements:

- Drawings and document submittals shall be on a substantial size paper not less than 8-1/2 x 11 inches.
- Provide information as it applies to the individual application to meet the requirements.
- Vendor application material is available online at:
 - <https://lni.wa.gov/licensing-permits/manufactured-modular-mobile-structures/food-trucks-trailers/#submit-plans>
 - Or by request if internet access is not available.
- Address each system to ensure completeness.
- Review the "*Vendor/Medical Conversion Units Pre-Inspection Checklist*" available on-line at the provided link or by request for additional information in conjunction with the listed items.
- All information is to be submitted at one time to ensure a complete plan submittal package is received (pieced information through many emails or faxes will not be accepted).
- The required drawings shall be schematic, isometric, orthographic, or pictorial w/ narrative description, including 3D images. If indexes/ legends are used, ensure accuracy.
- Drawings can be individual or in combination with each other provided the information is clearly detailed and legible. (Individual plans by specific system is preferred).
- Photos can be included in addition to the plans if necessary, although the photos are not considered to be in lieu of plans (plans are required).
- Ensure that all communication responses reference all names (personal and/or business) that the application was submitted under.
- Submit the complete application by one of the following methods:
 - By mail (methods are listed on the application at the upper left hand corner)

- Submitting to a local L&I office.

Disclaimer:

- The information herein is supplied as a courtesy to assist with compliance with the applicable codes. It is the responsibility of the applicant to ensure all code compliance.
- Per **WAC 296-105V-0020** - 'Conversion Vendor Unit' must be 8 feet 6 inches in width or less in full set up and less than 40 feet in length. **Note:** A Vendor Unit may **NOT** include a dining area.
- The items herein (as they apply) will be required in order to be considered a complete application submittal in addition to all relevant code requirements.
- The provided list may not be all that is necessary for an individual application, it is to assist in completeness of an application. The items listed are minimum requirements needed to assess an application for compliance. Be advised that once an application is assigned to a Plans Examiner, additional items may be requested upon assessment.
- Upon providing a complete application submittal it will be placed in line for review in the order that it is received. If an application is received that is not complete it is not in line for review until it is complete. The applicant will be notified of incompleteness or if additional information is needed if the items are minor or the application will receive a letter of incompleteness with the returned application with a disapproval notice.
- Be advised that there are many options to meet the standards, one of which is obtaining professional assistance with the design and installation of the systems needed to ensure the application and Vendor Unit meets the regulations required. All systems are to be installed to journeyman quality of work per **WAC 296-150V-0800(2)**.

Plan Review Drawings and Documents:

The requirements provided below are to be reviewed in conjunction with the application. The applicant is to submit the information as outlined under the 'Submittal Requirements' section of this document. The submittal information shall include but not be limited to the following:

Floor Plan:

- Dimensions of the overall unit.
- Dimensions and location(s) of awning(s).
- Indicate the Front and Rear of the unit (indicate driver location if applicable).
- Indicate all locations of counters, appliances, equipment, LP gas containers, generator compartment, battery compartment, plumbing fixtures (sinks, water heaters etc.), and all other fixtures and devices.
- Provide the make & model of all **Major** cooking appliances (i.e. grill, fryer, griddle, range etc.) including dimensions. (to be Commercial Listed Appliances including BBQ's & Smokers)
- Indicate & label the main egress door & all other doors (including height & width). (minimum required egress door is 28 inches wide by 72 inches tall). See **WAC 296-150V-1180**.
- Indicate the window opening locations and sizes (height & width). See **IBC 2406.4 & IBC 2406.3**.
 - Indicate if the serving window is glass and if it is tempered safety glass or PLEXI.
- Indicate wall finish, floor finish and ceiling finish materials. See **WAC 296-150V-1040, 1070, 1100, 1110 & 1120**.
- Indicate that all appliances are installed per the manufacturer and secured against displacement per **WAC 296-150V & WAC 296-150V-1090**.
- Provide information for one or both of the following for an accessible counter:
 - Integral to the Vendor Unit per **IBC 1109.12.3** and **ICC/ANSI A117.1 - 308.2.1 & 904.3**.
 - Separate table meeting the **IBC 1109.12.3** and **ICC/ANSI A117.1 - 308.2.1 & 904.3**.

Structural Loading:

- If the equipment or an appliance proposed, has a load of 500 lbs. or more on an area of 16 square feet or less provide either a structural analysis or a structural load test from a registered engineer. See **WAC 296-150V-0340, 0350 & 0930.**

Electrical System (50 AMP Plan Schematic & Panel Schematic):

Note: 30 AMP system information is included in the following to assist.

- Indicate locations of all outlets, lights, switches and other electrical devices such as inverters, batteries, shore power inlet location and the main distribution panel box.
- Indicate that only (1) main power supply is installed per **NEC 551.44.**
- Provide a schedule showing what amperage of breakers are installed in the panel box.
 - Indicate the panel loads are distributed evenly for a 50 AMP service per **NEC 551.42[D].**
 - Indicate each electrical device that is connected to the circuit.
- Indicate the panel box location.
 - Indicate the clear area of 24 inches wide by 30 inches deep is provided in front of the panel (no tables, shelves, appliance or other obstructions) per **NEC 551.45[B].**
 - Indicate that the center of the operating handle of the main breaker at its highest position is not more than 6 feet 7 inches above the floor per **NEC 404.8.**
- Indicate all outlets to be GFCI protected per **NEC 210.8(B)(2).** (*The first outlet on a circuit shall be GFCI protected, additional outlets on the circuit can be standard and labeled 'GFCI Protected'.*)
- Indicate the shore power connection location per **NEC 551.46,** indicate the type and amperage as allowed per **NEC 551.42** for a 30 AMP or 50 AMP service. Note 15 AMP or 20 AMP power supply service is allowed see **NEC 551.42.**
- A 30 AMP plug is a 2-pole, 3-wire, grounding type for 125V up to 5 circuits per **NEC 551.46[C](3).**
- A 50 AMP plug is a 3-pole, 4-wire, grounding type for 125/250V for more than (5) circuits up to the calculated amperage allowance per **NEC 551.46[C](4).**
- Indicate the main breaker (1 for 30 AMP service) (2 for 50 AMP service). A main disconnecting means is required for all panel configurations per **NEC 551.45[C].**
- Indicate the AWG (GA) of the conductors (wiring) for the main shore power to the panel (10 AWG for 30 AMP and 6 AWG for 50 AMP) per **NEC Table 310.15[B](16) & 400.5[A](1) column B.**
- The power supply cord ampacity shall be chosen from **NEC table 400.5[A](1) column B.** Ampacity shall indicate a minimum of the AMPS. Example: 10 AWG /30 AMP for 30 AMP power assemblies and 6 AWG / 50 AMP for 50 AMP assemblies.
- The power supply cord shall be listed as identified in **NEC table 400.4** with the following criteria; TRADE NAME: Hard Service Cord, USE: Damp and Wet Locations, Thermoplastic, and Extra Hard Usage. The supply cord ends shall be listed, molded and for use in wet locations.
- Indicate that the shore power cord is a listed molded type per **NEC 551.46.**
- Indicate the AWG of the grounding conductor for the panel (Typically 8 AWG copper or 6 AWG supplied with 50 AMP service cable) per **NEC Table 250.102[C](1) & 551.56 [B][C]**
- Indicate the AWG for the neutral conductor for the panel per **NEC Table 250.122/310.15[B](16).**
- Indicate the amperage of the branch breakers (20 AMP, 15 AMP or 30 AMP).
- Indicate the AWG of the conductors (wiring) for the system 12 AWG or 14 AWG (12 AWG - 20 AMP, 14 AWG (or 12 AWG) - 15 AMP & 10 AWG - 30 AMP) per **NEC Table 310.15[B](16).**
- Indicate that all exposed non-current carrying metal parts that may become energized are effectively bonded per **NEC 551.56.**

- Indicate the wiring method and type (i.e. raceway, conduit, etc.)(i.e. MC Cable, EMT, ENT etc.) as allowed per **NEC 551.47**.

Electrical System (cont.):

- Ensure conduit supports for the wiring conduit method is installed per the respective criteria per **NEC Chapter 3**. (Example: See **NEC Article 330.30** Securing & Supporting for MC Type conduit)
- Indicate that the electrical panel is bonded to the chassis with an 8 AWG bonding wire per **NEC 551.56(A), (B) & (C)**.
- Indicate that exterior electrical panels that are accessed from the exterior are listed for outdoor use, 'Wet / Damp Locations' (NEMA 3 Rated) per **NEC 408.37** and installed per **NEC 312.2**.
- Indicate the hot water heater (LP or electric) and include the make & model number.
 - If LP (gas) is used indicate by specifications that it is a sealed combustion unit and that it is direct vented per **WAC 296-150V-1470**.
- Indicate any low voltage systems installed to conform to **ANSI/RVIA 12V -2018**.
- Indicate if there is a storage battery that it is installed per **WAC 296-150V-1303**.
- Indicate where the generator is located, that it is sealed in a vapor resistant enclosure from the interior, that it is not directly connected to the system unless listed for the connection (RV listed) or installed through a listed system. Indicate if the generator is connected by use of the shore power cord when the electrical system is not connected to shore power service. Provide the make and model of the generator. Indicate that the generator is secure against displacement per the manufacturer's recommendations. Indicate if it is permanently installed and that it is installed in a 26 MSG minimum galvanized steel or better compartment that it is vented properly per the manufacturer. **NFPA 1192 - 6.4.5 & NEC 551.30**.
- Contact L&I Factory Assembled Structures for additional requirements if a main distribution panel is a 100 AMP / 250V main panel. (Note: This is not a typical amperage for vendor units)

Plumbing Fresh Water System:

- A schematic is **NOT** required for plan review only advised for inspection. The fresh water system shall meet all regulations upon inspection for final approval.
- Fresh water system shall conform to **WAC 296-150V-1570 & 1580, UPC Chapter 6 & NFPA 1192 Chapter 7 & 7.3**. See also **UPC Table 1701.1** reference standards.
- Water conveyance shall be of an approved material (PEX, CPVC, Copper) per **UPC Table 604.1** and size of pipe as allowed per **UPC Table 610.3 & NFPA 1192 – Table 7.3.6.4** and installed per **UPC Table 313.3**.
- The hot water tank shall be secured & installed per the manufacturer per **WAC 296-150V-1470**.
- For the first 18 inches from the water heater (hot & cold) the water lines shall be a flexible metal type per **UPC 604.13** (i.e. copper & stainless steel).
- A 150 degree pressure relief valve shall be plumbed to the exterior with the proper pipe (not to be PEX or PVC) & sized not less than the PRV per **WAC 296-150V-1580, UPC 608.4 & 608.5**.
- Water tanks shall be listed for potable water (IAPMO, NSF, & UPC) per **WAC 296-150V-1570**. (Note: Food grade storage containers are not potable water tanks)
- The water tank capacity shall be **15% less than** the waste water tank holding capacity.
- The water service connection shall be a 3/4" swivel connection per **NFPA 1192 - 7.3.8.1**.
- Provide a backflow prevention device in the water supply piping adjacent to the water service connection per **NFPA 1192 – 7.3.10**.
- A drainage line shall be installed & a full-way shut of valve per **UPC 606.2** and be equipped with a watertight cap or plug permanently attached per **WAC 296-150V-1550**.
- Low point drainage for the hot & cold lines shall be provided per **NFPA 1192 – 7.3.6.2**.

- The water storage tank shall be secure against displacement per **NFPA 1192 - 7.3.7.**
- Hangers and supports shall be installed per **UPC table 313.3.**

Plumbing Waste Water System:

- A schematic is **NOT** required for plan review only advised for inspection. The waste water system shall meet all regulations upon inspection for final approval.
- The waste water systems shall conform to **WAC 296-150V-1530-1560 & 1590, UPC Chapter 7 & NFPA 1192 Chapter 7.** See also **UPC Table 1701.1** reference standards.
- The conveyance pipe shall be of an approved type per the **UPC Table 701.2** (i.e. ABS, PVC).
- The size of piping shall of an approved size (i.e. 1-1/4", 1-1/2", 2" etc.) per **WAC 296-150V-1590.**
 - 3-compartment sink & roof vent - minimum 1-1/2 inch per **NFPA 1192 - 7.5.2.5(2).**
 - Hand washing sink – minimum 1-1/4 inch per **NFPA 1192 - 7.4.2.2.**
 - If combined at a single drain to the tank the pipe shall be 2" to the tank per **UPC 908.1.1, UPC 910.4, 703.0, Table 702.2(1) & Table 702.1.** (Wet Vent Systems, i.e. fixture trap arms connected separately to the wet vent system)
- The 3-compartment sink & hand sink cannot share the same P-trap per **UPC 1001.2** and **NFPA 1192 - 7.4.4.1.**
- The 3-compartment sink shall have a P-trap located at the middle sink per **UPC 1001.2.**
- The hand washing sink can have an anti-siphon at the P-trap per **UPC 1002.1, NFPA 1192 - 7.6.6** and **WAC 296-150V-1530(2).**
- The vent & drain location shall be at the top of the tank per **IAPMO TS 2-2015 section 4.4.2.**
- The vent shall be through the roof per **NFPA 1192 – 7.6.7** or alternate sidewall vent as approved with a listed diverter T per **NFPA 1192 - 7.4.7.** (Note: This is an RV listed device that is difficult to locate and not an advisable solution).
- The tank shall be listed for waste water use per **WAC 296-150V-1590.**
- The capacity of the waste tank is to be **15% greater than** the fresh water tank.
- A full-way termination valve shall be installed per **WAC 296-150V-1590(f).**
- The size of the drain shall be 1-1/2 inch min. with the appropriate cap & chain. Location of the drain shall be per **WAC 296-150V-1540, 1550, 1560 & 1590** and **NFPA 1192 - 7.5.2.3 & 7.5.7.9.**
- The tank shall be secured against displacement per **WAC 296-150V-1590** and **NFPA 1192 - 7.5.1.**

Plumbing Black Water System:

- If a black water (toilet) system is installed, schematic plans of the system & location is required with the application submittal for review. See **NFPA 1192 – 7.5, 7.5.3, 7.5.7 & 7.6** for installation requirements.

LP/Gas (Propane/Natural Gas Plan Schematic):

- Provide a schematic per **WAC 296-150V-1350 through 1460** in addition to the following information.
- Indicate the type of pipe & size of pipe sized per **IFGC Table 402.4(28)**.
- Indicate the type of gas being proposed per **WAC 296-150V-1360**. (LP or Natural Gas)
- Indicate the total length of the pipe from the tank location to the furthest appliance served.
- Indicate & label on the plan all appliance locations that are being served.
- Indicate the maximum BTU rating of each appliance that is being served.
- Indicate the tank location as allowed per **WAC 296-150V-1350**. (Note: The rear of the Vendor unit, the sides of the Vendor unit and the roof of the Vendor unit are **not compliant** locations).
- Indicate the fire suppression auto shut-off location. (see 'Fire Suppression System' list)
- Indicate the full-way shut off locations for the main system as well as each appliance or bank of appliances as allowed per **WAC 296-150V-1440**. Shut of locations shall be readily accessible.
- Indicated where the drip leg is located per **IFGC 408.1 through 408.4**.
- Indicate the gas piping securing interval per **WAC 296-150V-1360 through 1400**.
- Indicate that the gas piping is bonded by a minimum 8 AWG copper or equal conductor to the chassis **WAC 296-150V-1410, NEC 551.56[C] & NEC 551.56[E]**.
- The gas line is not to be used for an electrical ground per **WAC 296-150V-1410(1)**.
- Indicate that the gas lines are not concealed per **WAC 296-150V-1380**.
- Indicate LP cylinder locations to be a minimum of 5 feet from any source of ignition (i.e. shore power connections, generators, electrical panels, outlets, appliances that are direct vent (sealed combustion) intake/vent (i.e. gas water heater), etc. from the discharge of the pressure relief device per **NFPA 58 - 6.8.1.6 & Table 6.3.4.3**.
- Ensure the LP cylinder locations are a min. of 3 feet horizontally from any opening that is below the level of the discharge of the pressure relief device per **NFPA 58 - 6.8.1.5 & Table 6.3.4.3**.

Fire Suppression System (Plan Schematic):

- Provide a design plan of the suppression system in relation to the hood and the appliances that are being served by the system per **IMC 509, IFC chapter 904 & IFC 904.12**.
- Indicate the type of system by the manufacturer name. (i.e. ANSUL R-102, AMEREX etc.)
- Indicate the type of chemical being proposed & installed (wet or dry) per **IFC 904.5** for a Wet system and **IFC 904.6** for a Dry system.
- Indicate the pull station location (near main exit door) **IFC 904.12.1**.
- Indicate the fusible link locations and temperature rating.
- Indicate the size of the system suppression tank and the location of the suppression tank.
- Indicate the locations (including duct, plenum & appliance coverage per the suppression manufactures installation by a certified installer) of the suppression heads (nozzles) and the type (model number or color band or identification number) per the manufacturer as rated for the appliance being served.
- Indicate the location of the fire suppression automatic shut-off system interconnection to the gas system per **IFC 904.12.2**.
- Systems shall be operated & maintained per **IFC 904.12.6**.

Hood & Fan System (Type I or Type II Plan Schematic):

- Provide detailed manufacturer drawings, shop fabrication drawings or detailed specifications of the hood & fan system to meet compliance with **IMC Chapter 5**.
- Indicate on the plan that for 18 inches beyond the hood & cooking appliances (including ceiling) in all directions that it is of non-combustible material per **IMC 506.3.6, 506.5.4, 507.2.6**.
- Indicate on the plan that for 6 inches beyond each extent of the cooking appliances and the complete rear wall behind the cooking appliances that it is non-combustible material with a flame spread no greater than **25** per **WAC 296-150V-1120 & IMC 507.4.1**
- Provide all dimensions and indicate the placement meets **IMC 507.4.1** for Canopy style hoods to extend a horizontal distance not less than 6 inches beyond the edge of the appliances (no overhang is required when closed to the appliance side by a non-combustible wall) and not greater than 48 inches above the cooking surface. (Note: For UL710 listed hood systems the distance above the appliance is exempt)
- Provide all dimensions and indicate the placement meets **IMC 507.4.2** for Non-Canopy style hoods to be no greater than 3 feet above the cooking surface and not more than 12 inches from the front edge of the cooking surface. (Note: For UL710 listed hood systems the distance above the appliance is exempt)
- Indicate the hood type (Type I or Type II) as required for the appliances being served per **IMC Chapter 507**. See definitions for appliance by type (Extra-Heavy Duty, Heavy Duty, Medium Duty or Light Duty) per **IMC Chapter 202**. Note the most restrictive appliance shall dictate the total hood design per the prescriptive path (not UL710 listed & labeled).
- Indicate the hood style (Wall-hung or Back-shelf/Low Proximity) per **IMC 507.5.1 – 507.5.4**.
- Indicate if the hood is a listed & labeled **UL710** hood system as allowed in per **IMC 507.1**. Documentation is required from the manufacturer with the listing information and proper labeling is to be in place upon inspection. If the hood is not a **UL710 listed** system the hood shall meet all requirements of **IMC Chapter 5** as indicated through a prescriptive path construction.
- Indicate the material gauge of system per **IMC 506.3.1.1** for the Grease Duct (18 GA stainless), **IMC 507.2.3** (20 GA stainless) for a Type I hood and **IMC 507.5** (24 GA stainless) for a Type II hood. (non-UL710 listed)
- Indicate the grease duct clearance is in accordance with **IMC 506.3.6** to be not less than 18 inch clear in all directions to combustible materials.
- Indicate the hood joints, seams and penetrations meet **IMC 506.3.2**. (i.e. welded) (non-UL710 listed)
- Indicate the duct for a Type I hood meets **IMC 506.3**.
 - Indicate the duct joint type per **IMC 506.3.2.1**.
 - Indicate the method used for the duct to hood joint per **IMC 506.3.2.2**.
 - Indicate the grease duct joints, seams and penetrations meet **IMC 506.3.2**.
 - Indicate that the proper flange and gasket material at the duct to exhaust fan connection to meet a minimum of 1500 degrees F (816 degrees C) continuous duty per **IMC 506.3.2.3**.
 - Indicate the hinge kit is installed for the hood exhaust housing per **IMC 506.5.3**.
- Indicate the duct for a Type II hood meets **IMC 507.3**.
 - Indicate the compliance with **IMC 507.3.1 through 507.3.3**.
- Indicate the hood exhaust outlet location meets **IMC 507.1.5** (1 outlet no more than 12 feet)

- Indicate the grease filters meet **IMC 507.2.8** (to be UL1046 listed) **through 507.2.9** including the clearances listed in **IMC Table 507.2.8**. (non-UL710)
- Indicate the grease gutters meet **IMC 507.2.9**. (non-UL710)

Hood & Fan System (cont.):

- Indicate the mounting angle of the grease filters per **IMC 507.8.8.2** (not less than 45 degrees).
- Indicate the CFM rate of the fan including the make, model and serial number (if available) for both a UL710 system and non-UL710 listed system.
 - The CFM required shall meet the appropriate capacity exhaust flow rate by appliance definition and style of hood per **IMC 507.5.1 through 507.5.4**. (non-UL710)
- Indicate the hood supports meet **IMC 507.2.4** (for Type I) or **IMC 507.3.2** (for Type II).

Testing & Inspection Requirements:

- **Overall Vendor Unit Inspection:** Per **WAC 296-150V-0500(2)(a)** A ‘cover’ inspection is required during construction of the unit before the electrical, plumbing, mechanical, and structural systems (if required) are covered. A ‘final’ inspection is required after vendor unit is completed. Wiring installed in surface mount conduit may have the cover inspection waived for a final inspection upon approval from L&I Factory Assembled Structures (FAS) Plan Review or assigned FAS L&I Inspector. Please review all sections of **WAC 296-150V-0500**. A ‘final’ may be conducted to verify all systems in the event the ‘cover’ inspection has not been conducted and it has been approved by Washington State Labor & Industries FAS Plan Review.
- **Electrical Testing:** Per **NEC 551.60** each Vendor Unit designed with a 120v or 120/240v electrical system shall be tested for the following: (1) Continuity test; (2) Operational test; (3) Polarity test; (4) GFCI test.
- **Plumbing Fresh Water Testing:** Per **UPC 609.4** upon completion of a section or of the entire hot and cold water supply system, it shall be tested and proved tight under a water pressure not less than the working pressure under which it is to be used.
- **Plumbing Waste Water Testing:** Per **UPC 712.1** the piping of the plumbing, drainage and venting system shall be tested with water or air except that plastic pipe shall not be tested with air.
- **Gas System Testing:** Per **WAC 296-150V-1450 & WAC 296-150V-1460** the gas piping shall be tested and documentation of these tests shall be provided to the inspector upon inspection. See the code sections indicated for specific testing standards.
 - Acceptable documentation: A completed ‘**Affidavit of Testing**’ supplied by *Washington State Labor & Industries FAS Plan Review* OR a test report with the testing agent’s official letterhead and contact information. The test is to be performed by a third party agent and the testing information is to be supplied to the inspector upon inspection.
- **Fire Suppression System Testing:** A **Wet-Chemical** extinguishing system shall be installed, maintained, periodically inspected and tested in accordance with NFPA 17A and their listing. Testing and maintenance shall meet all provisions of **IFC 904.5.1 & 904.5.2**.
- **Fire Suppression System Testing:** A **Dry-chemical** extinguishing systems shall be installed, maintained, periodically inspected and tested in accordance with NFPA 17 and their listing. Testing and maintenance shall meet all provisions of **IFC 904.6.1 & 904.6.2**.
 - Provide to the inspector documentation of either the Wet or Dry Chemical system testing and the system shall be tagged & dated for inspection. The tag shall remain on the system for maintenance & verification.
 - Installation, testing and tagging of the fire suppression system is to be by a certified installer for the specific fire suppression system per the manufacture of the system and per the **IFC**.

Labeling Required:

- Provide a label at the exterior gas connection listing the type of system (LP or NATL), indicate the BTU Input Rating. Example: *Propane Gas System, 250,000 BTU* (less or more per specific BTU demand) per **WAC 296-150V-1420**. The label shall be easily identifiable with contrasting lettering & background.
- Provide a label at the LP shut off valve near the tank for the gas system "LP SHUT OFF". The label shall be easily identifiable with contrasting lettering & background.
- Provide a label at the electrical service connection in accordance with **NEC 551.46[D]** for the amperage of the service. See the specific code section for the size of lettering & wording.
- Provide a label for a Type I hood designed prescriptively under the **IMC** indicating the CFM flow rate per linear foot of hood **IMC 507.2.1** as indicated by appliance definition & style of hood per **IMC 507.5.1 through 507.5.4**. (Note: UL710 systems are supplied with a label by the manufacturer).
- Provide a label at the potable water connection inlet per **NFPA 1192 section 7.3.7.7**. See the specific code section for the proper size of lettering & wording.

(END OF CHECKLIST)

What You Need to Know About Food Truck Safety

It is important for public safety and health that food trucks meet certain fire safety requirements. The L&I Factory Assembled Structures program inspects food trucks for code compliance. We cannot help you design or instruct you on how to build your mobile food unit. If you do not know how to do this type of work, you should hire an experienced professional.

Be sure to check with the county health department and fire marshal for their requirements for your food truck or trailer.

Use this list to help assure you meet the safety code requirements. By following these guidelines, you will have the best chance of passing your inspection. This is not a complete list of requirements; please see [WAC 296-150V](#) and the referenced codes in section [0800](#) for all applicable requirements.

- Vehicle size: food trucks and concession trailers must be a legal vehicle licensed by DOL for use on highways and streets. A legal vehicle is one that is no wider than 8'-6", no taller than 14' from the road to the highest point and no longer than 40'.
- Exit doors: food trucks/trailers must have at least one swinging or sliding exit door with an opening that is at least 28" wide and 72" high (net clear openings). Access to the door must be clear and unobstructed on both sides. Roll up doors cannot be used to meet the exit requirement.
- Windows: the glass in serving and pass through windows must be safety glass or plastic.
- Interior finishes: check with the health department, they have requirements for walls, floors and counters in food prep areas. To pass L&I inspections the walls and ceilings must be a material that will not easily catch fire such as metal or plastic laminate. Wall and ceiling panels will have a "flame spread" stamp on the back. The rating must be 200 or less.
- Walls behind cooking appliances must be constructed to protect them from the appliance (see the installation instructions that come with the appliance).
- The floor below heavy appliances, weighing more than 500 pounds must be reinforced if it cannot support the weight.
- Equipment and appliances must be secured in place to the truck/trailer walls and floor. There must be enough bolts, screws or welds for the weight of the equipment.
- If required by the health department, restroom facilities must be provided. In many cases they may be in an adjacent building. If a bathroom is built into the mobile food unit, plans must be submitted for review and approval by L&I
- Exterior walls and roof must be weatherproof and not leak
- The bottom of the floor must be sealed so that animals and insects cannot enter.
- An exterior shelf or table must be provided to serve handicap patrons. This top of the shelf or table must be no higher than 36" above the ground.
- Covered decks and patios on a food truck or trailer are considered interior space.
- See the "master applications" checklist for Food truck labels requirements.

What You Need to Know About Food Truck Plumbing Systems

It is important for public safety and health that plumbing systems in food trucks be correctly installed. The L&I Factory Assembled Structures program inspects these systems for code compliance. The requirements for plumbing systems are found in the Uniform Plumbing Code (UPC). We cannot help you design or instruct you on how to install plumbing systems. If you do not know how to install plumbing systems, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

You should consult the county health department for their requirements for your food truck or trailer. Health department rules will determine what types of sinks you must have in your unit. Most likely, you will need to have a hand wash sink and a separate three-compartment wash sink.

We have a series of fact sheets to aid you in making sure your plumbing systems are safe and meet code requirements. By following these brochures, you will have the best chance of passing your inspections. Not all requirements are listed on these fact sheets, it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Water piping
- Drain Piping
- Sinks and plumbing fixtures
- Water heaters
- Water holding tanks
- Waste water tanks

What You Should Know:**Installing water piping in your food truck**

In order to pass inspection your water piping system must be installed to code. If you do not know how to install water piping, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Use copper water pipe, CPVC plastic pipe or PEX water pipe. Pipe must have listing marks on it.
- Joints, elbows, tees and other fittings in the piping system are the type used with the piping and installed correctly.
- Water piping is at least ½" in diameter for a hand sink and three-compartment or ¾" for more.
- Support the water piping every 4 feet by hangers or strapping.
- There are no "cross-connections" between different piping systems that would introduce contamination.
- Water connections to ice machines, beverage machines, carbonators and other similar equipment provided with a backflow device.
- The water pressure pump is listed for potable water systems and provides at least 30 PSI of pressure.
- Install drains at all low points in the fresh water system (both hot and cold water piping).
- Testing
- What to avoid:
 - Braided hose or other unapproved tubing or piping in your water system.
 - Using the wrong type of fitting (tee, elbow etc) for the type of piping
 - Using hose clamps
 - Used or old materials
- Also see these checklists:
 - Water heaters
 - Sinks and plumbing fixtures
 - Water holding tanks and water fill piping.

What You Should Know:

Installing drain piping in your food truck

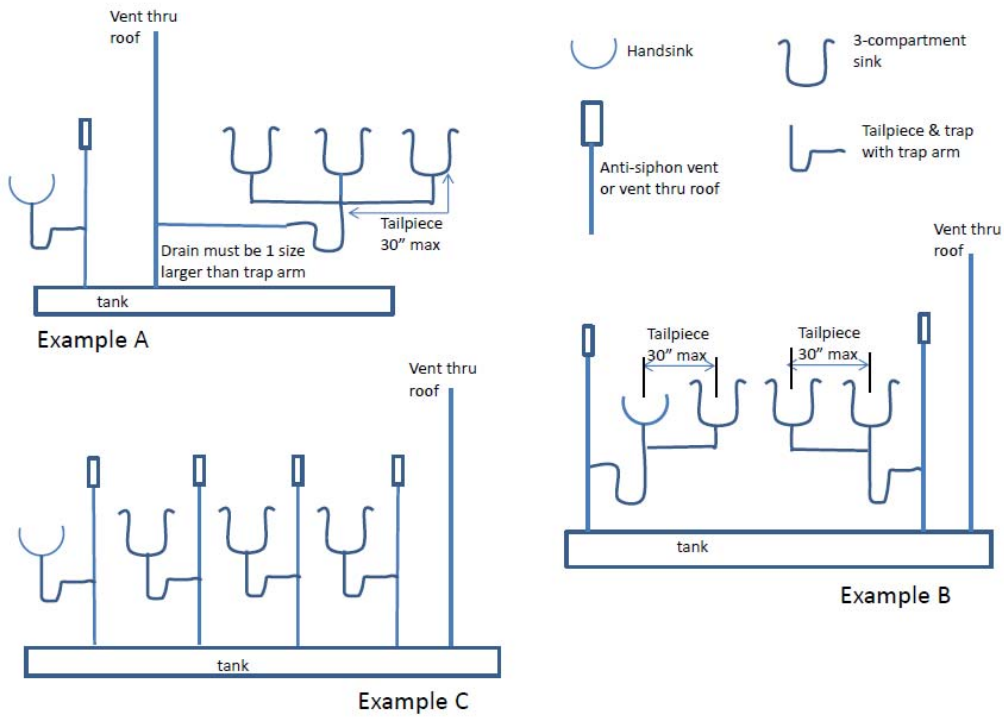
In order to pass inspection your drain piping system must be installed to code. If you do not know how to install drain piping, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

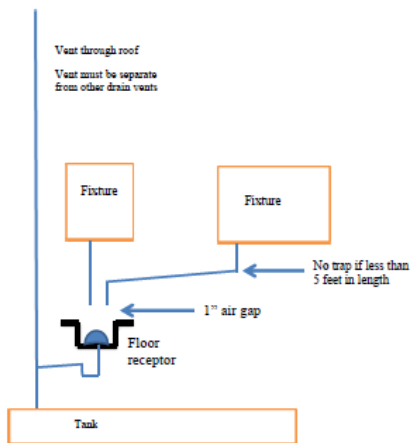
- Use ABS or PVC plastic pipe. Pipe must have listing marks on it.
- Joints, elbows, tees and other fittings in the piping system must be for ABS or PVC drain piping and installed correctly. Fittings are also required to have listing marks on them.
- Use proper pipe glue to connect the pipe and fittings, following the directions on the glue can. The glue type is specific to the type of plastic the pipe is made of.
- Fittings such as tees and elbows must be the correct type (such as long turn for drainage) and be oriented in the correct direction for proper drainage.
- Drain piping must be at least 1-½" in diameter for a hand sink and 2" for a three-compartment sink.
- Drain lines must be sloped downhill and supported every 4 feet by hangers or strapping.
- All fixtures, such as sinks, connected to the drain system must be protected by a trap and vent as shown in the attached diagrams
- Testing- drain lines must be tested per the plumbing code
- What to avoid:
 - Used or old materials
- Also see these checklists:
 - Sinks and plumbing fixtures
 - Waste water holding tanks and main drain piping.

Examples of basic installation options (you cannot mix and match options)

See WAC 296-150V and UPC for more specific installation requirements & sizes.



Examples of basic Indirect Waste installation for fixtures such as Ice bins, Coffee Urns, Espresso Machines, etc.
See UPC for more specific installation requirements & sizes.



The floor receptor shall be approved for the use and shall be of a shape and capacity as to prevent splashing or flooding and located where readily accessible for inspection and cleaning.

What You Should Know:

Installing sinks and other plumbing fixtures in your food truck

In order to pass inspection your water piping system must be installed to code. If you do not know how to install plumbing fixtures, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed in a neat and workman like manner with a journeyman level quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Use listed fixtures. Listed plumbing fixtures bear the stamp or label of a listing agency such as IAPMO
- The health department determines what sinks are required in food trucks. You will most likely need a hand wash sink and a three compartment dish sink.
- Each sink must have a p-trap and vent. See the diagrams on the backside of this page for the proper installation of sinks, traps and vents.
- Food prep sinks must be connected to the drain line system through an indirect waste which has an air gap in the drain system to prevent backup of drain water into the sink
- Indirect waste outlets must drain into a floor sink or other approved receptor. Floor sinks and receptors are also plumbing fixtures and must be trapped and vented (see the indirect waste diagram on the back of this page).
- The health department may require that a grease interceptor be installed on your waste water system.
- Drain connections from ice machines, beverage machines and other similar equipment provided with an airgap. Following the “indirect waste” diagram below will provide the airgap.
- Testing
- What to avoid:
 - Trap and vent arrangements different that shown on the diagrams
- Also see these checklists:
 - Water piping
 - Drain piping
 - Water holding tanks and water fill piping.

What You Should Know:

Installing water heaters in your food truck

In order to pass inspection your water piping system must be installed to code. If you do not know how to install water heaters, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Use a listed water heater with a stamp or label from a listing agency such as UL.
- Follow the instructions provided with the water heater.
- The manufacturer's instructions will tell you where the water heater can be located (inside, outside etc.)
- Provide strapping at top and bottom to hold the water heater in place.
- All hot water heaters must have a listed pressure relief valve (PRV).
- The outlet of the PRV must have an overflow line no smaller than the outlet, made of galvanized water pipe or copper water pipe extended thru the floor to the exterior of the unit. The PRV overflow line must be sloped so that water cannot collect in it and the outside end is below extended to below the floor. The outside opening of the PRV overflow pipe must be clear of obstructions, not screened and not be threaded on the end.
- LP water heaters must be listed and of the direct vent (sealed combustion) type.
- Connections from the water heater to the water piping must be with a minimum 18" long metal "flex connector".
- Testing – PRV operational test
- What to avoid:
 - Used water heaters
- Also see these checklists:
 - Water piping

What You Should Know:

Installing fresh water holding tanks in your food truck

In order to pass inspection your water piping system must be installed to code. If you do not know how to install water piping, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Fresh water holding tanks must be listed for potable water use. Listed tanks have an approval stamp on them. In most cases, you will want to use a listed RV fresh water tank.
- The size of the freshwater tank is determined by the health department.
- Fresh water tanks must be vented and have an overflow
- The freshwater tank must have a drain at the water piping low point so it can be fully drained
- The water inlet must have a cap on it
- The tank must be securely fastened to truck but easily removed
- Testing
- What to avoid:
 - Homemade and unlisted tanks
 - Using food storage containers as a fresh water tank
- Also see these checklists:
 - Water heaters
 - Sinks and plumbing fixtures
 - Water holding tanks and water fill piping

What You Should Know:

Installing waste water holding tanks in your food truck

In order to pass inspection your holding tanks must be installed to code. If you do not know how to install holding tanks, you should hire a licensed plumber to do this work. All plumbing systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet plumbing code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the plumbing system to be familiar with the requirements of the plumbing code.

- Wastewater holding tanks must be listed for grey water use. Listed tanks have an approval stamp on them. In most cases, you will want to use a listed RV grey water tank.
- The size of the wastewater tank is determined by the size of the freshwater tank and the requirements of the health department.
- Wastewater tanks must be vented from the tank top by a pipe through the roof
- The drainlines must connect into the top of the holding tank
- The drain to the exterior from holding tank must have a fullway valve with cap or plug at the exterior of the truck
- The exterior drain opening must have at least 3" of clearance around it and 12" in front of it
- The tank must be securely fastened to truck but easily removed
- Testing
- What to avoid:
 - Homemade and unlisted tanks
 - There are special requirements which not covered here if you have a toilet. Design plans must be submitted for review and approval.
- Also see these checklists:
 - Water heaters
 - Sinks and plumbing fixtures
 - Water holding tanks and water fill piping.

What You Need to Know About Food Truck Commercial Cooking: Including Propane Systems, Cooking Appliances, Ventilation and Fire Suppression Systems

It is important for public safety and health that LP gas piping systems, appliances, ventilation hoods and fire suppression systems in food trucks are installed correctly. The L&I Factory Assembled Structures program inspects these systems for code compliance. The requirements for these systems are found in the International Mechanical Code (IMC), Intl Fire Code (IFC) and Intl Fuel Gas Code (IFGC). We cannot help you design or instruct you on how to install these systems or appliances. If you do not know how to install these items you should hire a licensed professional to do this work.

You should consult the city/county health and fire departments for their requirements for your food truck or trailer.

We have a series of fact sheets to aid you in making sure your appliances and systems are safe and meet code requirements. By following these brochures, you will have the best chance of passing your inspections. Not all requirements are listed on these fact sheets, it is the responsibility of the person installing the these to be familiar with the requirements of the fuel gas code.

- LP storage tanks
- LP gas piping
- Cooking appliances
- Ventilation hoods and fire suppression.

What You Should Know:**Installing LP Storage Tanks in your food truck**

In order to pass inspection your LP gas storage tanks must be installed to code. If you do not know how to install appliances, you should hire a qualified person to do this work.

Use this list to help assure you meet fuel gas code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the LP tanks to be familiar with the requirements of the fuel gas code.

your inspection:

- LP tanks must be installed on one of three places:
 - On the hitch (A-frame) of a trailer (like an RV)
 - Under the floor of the truck or trailer (like a motor home)
 - In sealed compartment, within the body of the truck, which opens and is vented to the exterior only.
- Locate LP tanks so they are at least 3 feet horizontally from any opening into the food truck and at least 5 feet from any source of ignition such as power cords, generators, electrical panels and water heaters
- LP tanks must be secured to the unit.
- LP tanks must be provided with an approved gas regulator.
- LP tanks mounted below the floor must be ASME listed and protected from damage by the chassis and axles of the truck or trailer.
- All other LP tanks must be DOT listed and tested.
- What to avoid:
 - Mounting the LP tank on the back, bumper or roof or other unapproved location.
 - Hitch mounted tanks must be protected from damage, do not hang over the side of the hitch or tow bar.
 - Do not transport any type of LP tank or container inside the unit.
 - Used or old materials
- Also see these checklists:
 - LP Gas Piping
 - Cooking Appliances

What You Should Know:**Installing LP Gas Piping in your food truck**

In order to pass inspection your LP gas piping system must be installed to code. If you do not know how to install gas piping, you should hire a licensed plumber to do this work.

Use this list to help assure you meet fuel gas code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the LP system to be familiar with the requirements of the fuel gas code.

- Use black iron pipe. Pipe must have listing marks on it.
- Gas piping is at least ½", ¾" or 1" depending on the rating of the attached appliances.
- Support the gas piping every 4 feet by hangers or strapping.
- Joints, elbows, tees and other fittings in the piping system are the type used with the piping and installed correctly.
- Use pipe joint compound listed for LP systems.
- Bond the metal gas piping system to the chassis.
- Connection to the LP tank must be by a high-pressure gas hose and regulator with a rated capacity equal to or greater than the maximum BTU_h demand of the entire system.
- Connections to appliances should use a listed gas flex connector with a gas shut off valve at the solid pipe. The flex connector must be large enough to supply the appliance and no longer than 6 feet.
- Install an automatic gas shut off valve connected to the fire suppression system.
- The gas shut off valve for appliances must be installed in the same ...
- Gas piping systems must be tested by an approved ...
- What to avoid:
 - Only one flex connector per appliance. They cannot be connected together to make a longer flex line.
 - Using fittings (tees, elbows, couplings) made of different material than the piping
 - Used or old materials
 - Do not run gas piping on the wall above the cooking equipment
- Also see these checklists:
 - LP Tanks
 - Appliances

What You Should Know:

Installing cooking appliances in your food truck

In order to pass inspection your cooking appliances must be installed to code. If you do not know how to install appliances, you should hire a qualified person to do this work.

Use this list to help assure you meet fuel gas code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the appliances to be familiar with the requirements of the mechanical and fire codes.

- Cooking appliances, including smokers and BBQ's must be listed for your intended use (residential appliances for the most part are not suitable for commercial food preparation)
- Cooking appliances must be installed as required by the manufacturer's instructions and any listing requirements
- Appliances must be secured to the unit so they cannot move or shift
- For appliances over 500 pounds the floor may need to be reinforced to pass inspection (see plan review checklist)
- The wall behind the appliance must be protected per...
- All appliances must be protected by commercial ventilation hoods (see brochure)
- In most cases, including in all Type 1 hoods, fire suppression must be provided in the hood over the appliance
- The gas piping and connectors or the electrical supply circuit must be sized to meet the gas or electrical rating on the appliance ID label
- Testing
- What to avoid:
 - Home built or unlisted appliances
- Also see these checklists:
 - LP Gas Piping
 - Hoods and fire suppression

What You Should Know:

Installing ventilation hoods and fire suppression in your food truck

In order to pass inspection, your cooking appliances must be protected by ventilation hoods and fire suppression installed to code. This work is highly specialized and must be done by technicians from approved companies.

Use this list to help assure you meet code requirements. By following these guidelines you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the hood and fire suppression system to be familiar with the requirements of the fire and mechanical codes.

- Commercial ventilation hoods are required over all commercial cooking equipment regardless of the type of food being prepared. There are exceptions for small countertop appliances such as espresso makers and equipment with built in ventilation (for example some types of pizza ovens)
- Commercial hoods must be either type I with a fire suppression system or a type II hood depending on the cooking equipment underneath the hood
- Installation of a Type 1, UL 710 listed hood is the easiest way to meet the requirements for commercial cooking ventilation and fire protection
- Hood information must be submitted for plan review and approval prior to installation. See plan guidelines.
- Hoods and fire suppression must be installed by qualified technicians from approved companies
- Except for UL 710 hoods, the hood fabrication requirements are found in Chapter 5 of the International Mechanical Code.
- The ventilation fans in commercial hoods must be approved and listed for this use. The fans must be sized to provide the air flow required to properly ventilate the cooking equipment. Bath fans, attic fans, wall fans and other general purpose fans are not approved for use in commercial cooking ventilation systems
- Fire suppression systems must be sized for the appliances being protected
- There must be a fire suppression system pull station at the main door
- The fire suppression system must shut of LP gas or electrical power to the cooking equipment
- Fire suppression systems must be installed, tested and certified by an approved agency every six months and after anytime that it has been used or recharged. The inspection tag must be on the tank.
- What to avoid:
 - Home built hoods
 - Installing your own fire suppression system
- Also see these checklists:
 - LP Gas Piping
 - Appliances

What You Need to Know About Food Truck Electrical Systems

It is important for public safety and health that electrical systems in food trucks be correctly installed. The L&I Factory Assembled Structures program inspects these systems for code compliance. The requirements for electrical systems are found in the National Electrical Code (NEC). We cannot help you design or instruct you on how to install electrical systems. If you do not know how to install electrical systems, you should hire a licensed electrician to do this work. All electrical systems in the food truck must be installed with a journeyman quality of work.

We have a series of brochures to aid you in making sure your electrical systems are safe and meet code requirements. By following these brochures, you will have the best chance of passing your inspections.

- Electrical Wiring
- Electrical Panels and Power Supply Cords
- Generators and Transfer Switches
- Light Fixtures, switches and receptacles

What You Should Know:

Installing electrical wiring in your food truck

In order to pass inspection your electrical system must be installed to code. If you do not know how to install electrical wiring, you should hire a licensed electrician to do this work. All electrical systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet electrical code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the electrical system to be familiar with the requirements of the electrical code.

- For easiest approval, use type MC (Metal-Clad) electrical cable and fittings. MC Cable must have listing marks on it. See NEC section 330 for the full requirements for this wiring method.
- Use the type of MC Cable that contains a green ground wire. By using a built in ground wire you do not have to rely on the special connections of the metal cable jacket to provide the system ground
- Using approved straps or ties, support or attach MC cables to the wall or roof every 6 feet (max).
- Other wiring methods can be used, when installed as required by the correct article in chapter 3 of the NEC
- The electrical system must be bonded to the truck or trailer chassis and to the LP gas piping
- Electrical wiring must be tested to be sure it is not damaged or installed incorrectly. The normal test is a high-potential test (HiPot).
- What to avoid:
 - Used or old materials
 - Materials or devices that are not listed
 - Do not install electrical wiring on the wall above the cooking equipment
- Also see these checklists:
 - Electrical Panels and Power Supply Cords
 - Generators and Transfer Switches
 - Light Fixtures, switches and receptacles

What You Should Know:

Installing electrical panels and power supply cords in your food truck

In order to pass inspection your electrical system must be installed to code. If you do not know how to install electrical wiring, you should hire a licensed electrician to do this work. All electrical systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet electrical code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the electrical system to be familiar with the requirements of the electrical code.

- Panels and other electrical products must be listed and have approval labels on them (for example UL)
- Electrical panels must have a 24" wide x 30" deep clear space in front. You must be able to stand in front of the panel without leaning over an obstruction such as a counter or appliance.
- Electrical panels and other equipment installed on the outside or under the unit must be listed for outdoor use or wet locations
- The electrical system must be bonded to the truck or trailer chassis and to the LP gas piping
- The jumper between the ground and bonding termination bars must be installed in the panel. See the wiring diagram in the electrical panel.
- The panel must have a single disconnecting breaker or switch that turns off power to the whole system. Typically, this is the circuit breaker for food trucks with only one circuit or the main breaker installed in the panel for food trucks with two or more circuits.
- Only a single power cord to the truck is allowed.
- Unless only a generator or the truck engine supplies power, a correctly sized RV power supply cord must be used.
 - Food trucks/trailers with one 15 amp circuit may have a 15 amp / 120 volt (2 wire with ground) RV supply cord and a 15 amp circuit breaker in the panel.
 - Food trucks/trailers with one 20 amp circuit may have a 20 amp / 120 volt (2 wire with ground) RV supply cord and a 20 amp circuit breaker in the panel.
 - Food trucks/trailers with up to five 15 and 20 amp circuits may have a 30 amp / 120 volt (2 wire with ground) RV supply cord and a 30 amp main breaker in the panel.
 - Food trucks/trailers with more than five 15 and 20 amp circuit must have a 50 amp / 240 volt (3 wire with ground) RV supply cord and a 50 amp main breaker in the panel.
- Testing
- What to avoid:
 - Panels mounted over equipment or counters
 - Panels installed in cabinets
 - Panels installed upside down or laying flat
 - Used or old materials
 - Materials or devices that are not listed
- Also see these checklists:
 - Electrical Wiring
 - Generators and Transfer Switches
 - Light Fixtures, switches and receptacles

What You Should Know:

Installing generators and transfer switches in your food truck

In order to pass inspection your electrical system must be installed to code. If you do not know how to install electrical wiring, you should hire a licensed electrician to do this work. All electrical systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet electrical code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the electrical system to be familiar with the requirements of the electrical code.

- Generators that operate when mounted on the food truck must be RV listed and installed per manufacturer's instructions
- Generator compartments must be lined with 26 galvanized steel and made vapor resistant
- Generator compartments must be ventilated to the exterior per the manufacturer's instructions
- Generators must be bonded to the electrical system (see installation instructions)
- Generators must be connected to the electrical system with stranded conductors terminating in a panel, junction box or transfer switch. The stranded conductors need to be part of a cable or installed in a flexible raceway.
- A transfer switch needs to be used if the food truck has both a generator and a separate power supply cord
- Transfer switches must be listed and bear the listing mark or label of an approved testing lab
- Transfer switches must be sized for the electrical load connected to the switch
- Testing
- What to avoid:
 - Used or old materials
 - Materials or devices that are not listed
- Also see these checklists:
 - Electrical Wiring
 - Electrical Panels and Power Supply Cords
 - Light Fixtures, switches and receptacles

What You Should Know:

Installing devices such as light fixtures, switches and receptacles in your food truck

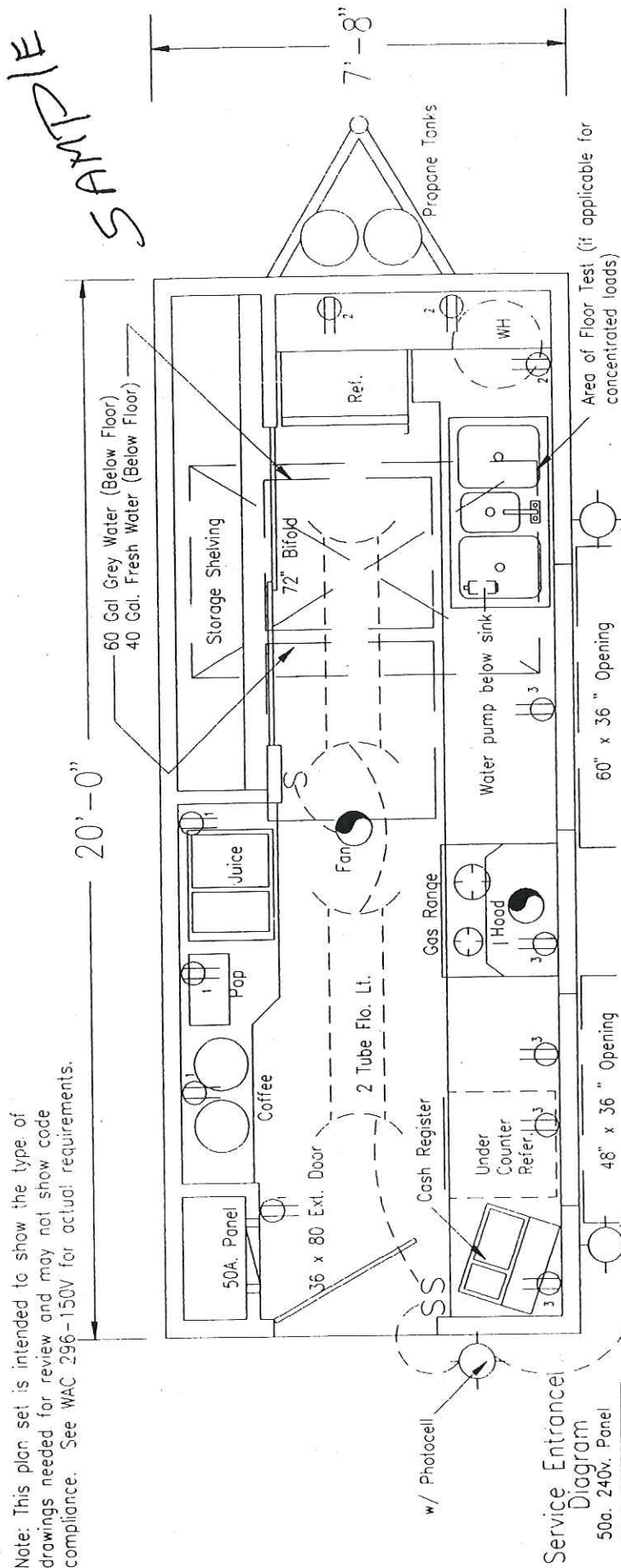
In order to pass inspection your electrical system must be installed to code. If you do not know how to install electrical wiring, you should hire a licensed electrician to do this work. All electrical systems in the food truck must be installed with a journeyman quality of work.

Use this list to help assure you meet electrical code requirements. By following these guidelines, you will have the best chance of passing your inspection. Not all requirements are listed on these fact sheets; it is the responsibility of the person installing the electrical system to be familiar with the requirements of the electrical code.

- Light fixtures, switches, receptacles (plug-ins) and other devices must be listed and bear a UL or other approval label or stamp.
- Wiring must terminate in an electrical box, which is secured to the structure of the food truck.
- Lights, switches, receptacles and other devices must be mounted in an electrical box, or in the case of a light fixture it is mounted onto the box.
- Receptacles within 6' of the edge of a sink must be GFCI protected, measured in a straight line. The easiest way to accomplish this is by installing a GFCI breaker for this circuit in the panel.
- Light fixtures installed in cooking hoods must be specifically listed and approved for this application. This may require a wiring method other than MC cable.
- Light fixtures over food prep areas must have a lens or guard to contain broken glass so it does not contaminate food.
- All devices must be tested to assure they are correctly connected to the electrical system and are functioning normally. The normal tests are polarity, GFCI and operational tests.
- What to avoid:
 - Used or old materials
 - Materials or devices that are not listed
 - Do not install electrical devices on the wall above the cooking equipment.
- Also see these checklists:
 - Electrical Wiring
 - Electrical Panels and Power Supply Cords
 - Generators and Transfer Switches

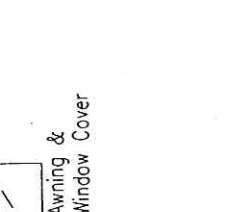
SAMPLE

Note: This plan set is intended to show the type of drawings needed for review and may not show code compliance. See WAC 296-150V for actual requirements.



Circuit Schedule

Description	Size	Spaces	Wire
Ckt #1 Receipts	20a.	120v.	12ga.
Ckt #2 Receipts	20a.	120v.	12ga.
Ckt #3 Receipts	20a.	120v.	12ga.
Ckt #4 Lights & Fan	15a.	120v.	14ga.
Ckt #5 Hood & Range	20a.	120v.	12ga.
Ckt #6 Pumps	15a.	120v.	14ga.
Ckt #7 Water Heater	20a.	120v.	10ga.
Ckt #8 Spare			



(Note: 0 3 wire service is acceptable for 120 volt systems)

Hubbell #RV3250 plug.

Service entrance cord in storage box below floor.

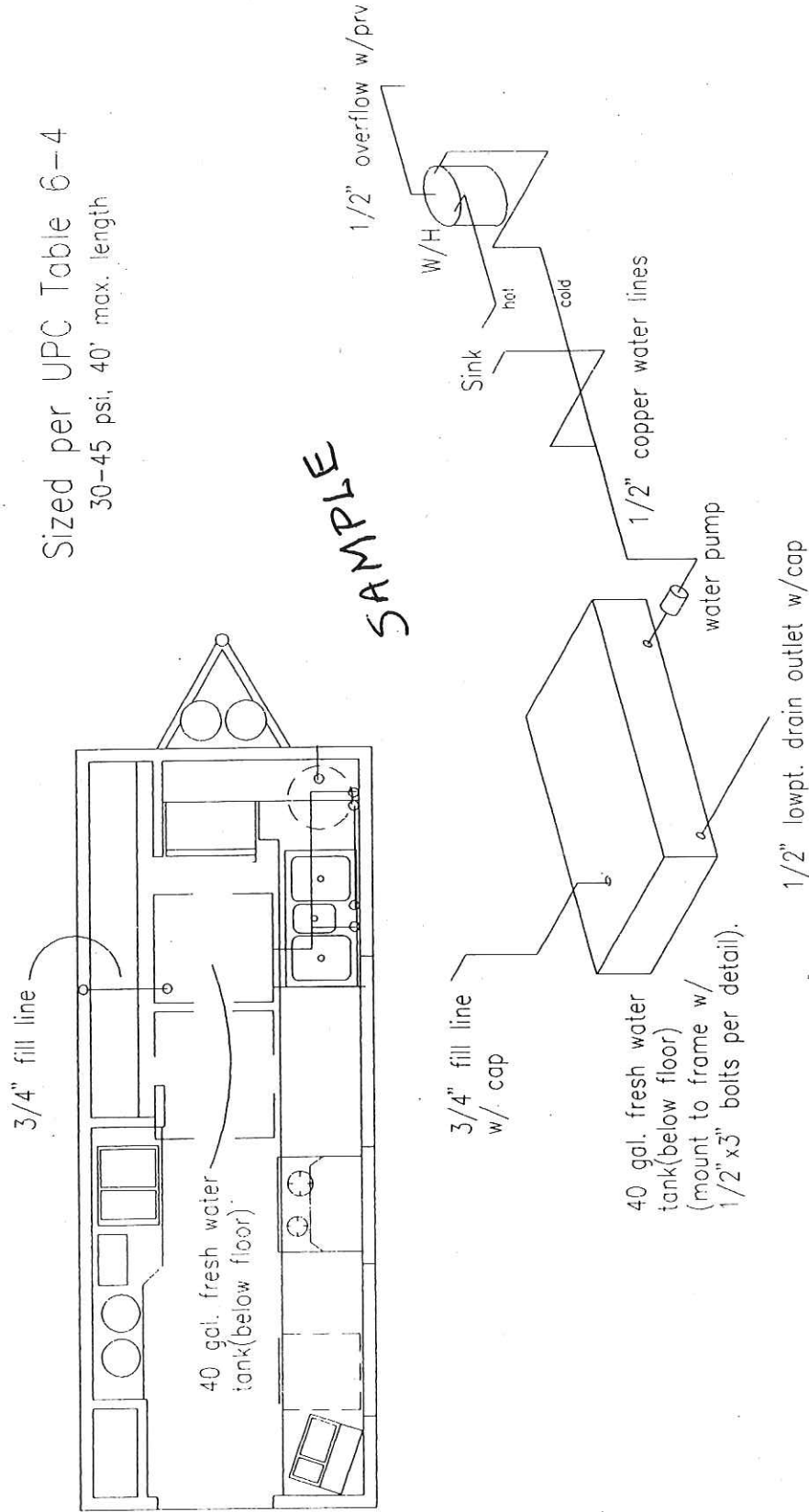
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Drawn By:	Revision: 7/1/99
Dwg#:	File#:

Typical Floor Plan

Sample Drawing Set for Conversion Vendor Units per WAC 296-150V. Wash. State Dept. of Labor and Industries.

SAMPLE

Sized per UPC Table 6-4
30-45 psi, 40' max. length



Water Lines

Sample Drawing Set for Conversion Vendor Units per
WAC 296-150V. Wash. State Dept. of Labor and Industries.

Date: 12/97

Scale: 1/2" = 1'-0

Drawn By:

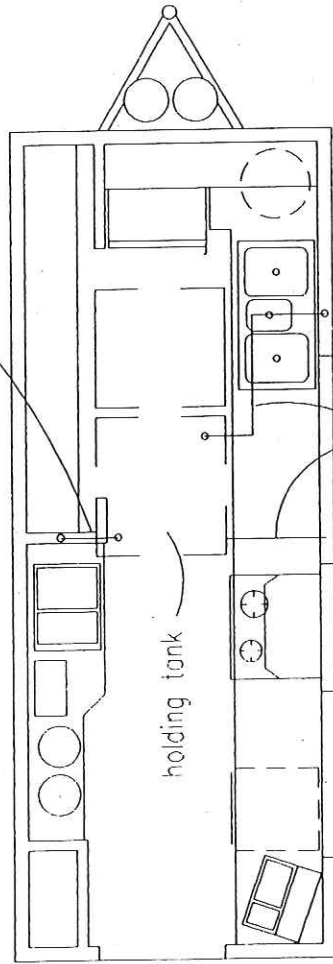
Revision: 7/1/99

Dwg#:

File#:

SAMPLE

1-1/2 vent
thru roof



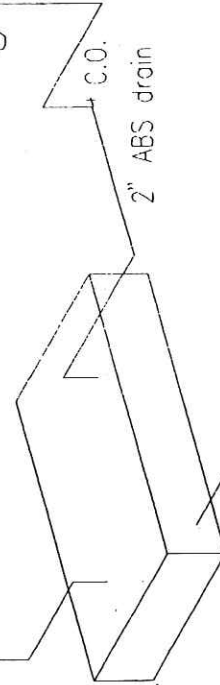
holding tank

2" drains

1-1/2 vent
thru roof

Sink w/
1-1/2" P-trap
and trap arm

60 gal. holding
tank (below floor)
listed for RV use.
Mount to frame
per detail.



2" drain outlet w/cap and gate valve

Sample Drawing Set for Conversion Vendor Units per
WAC 296-150V. Wash. State Dept. of Labor and Industries.

Drain Lines

Date: 12/97

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

Drawn By:

Revision: 7/1/99

Dwg#:

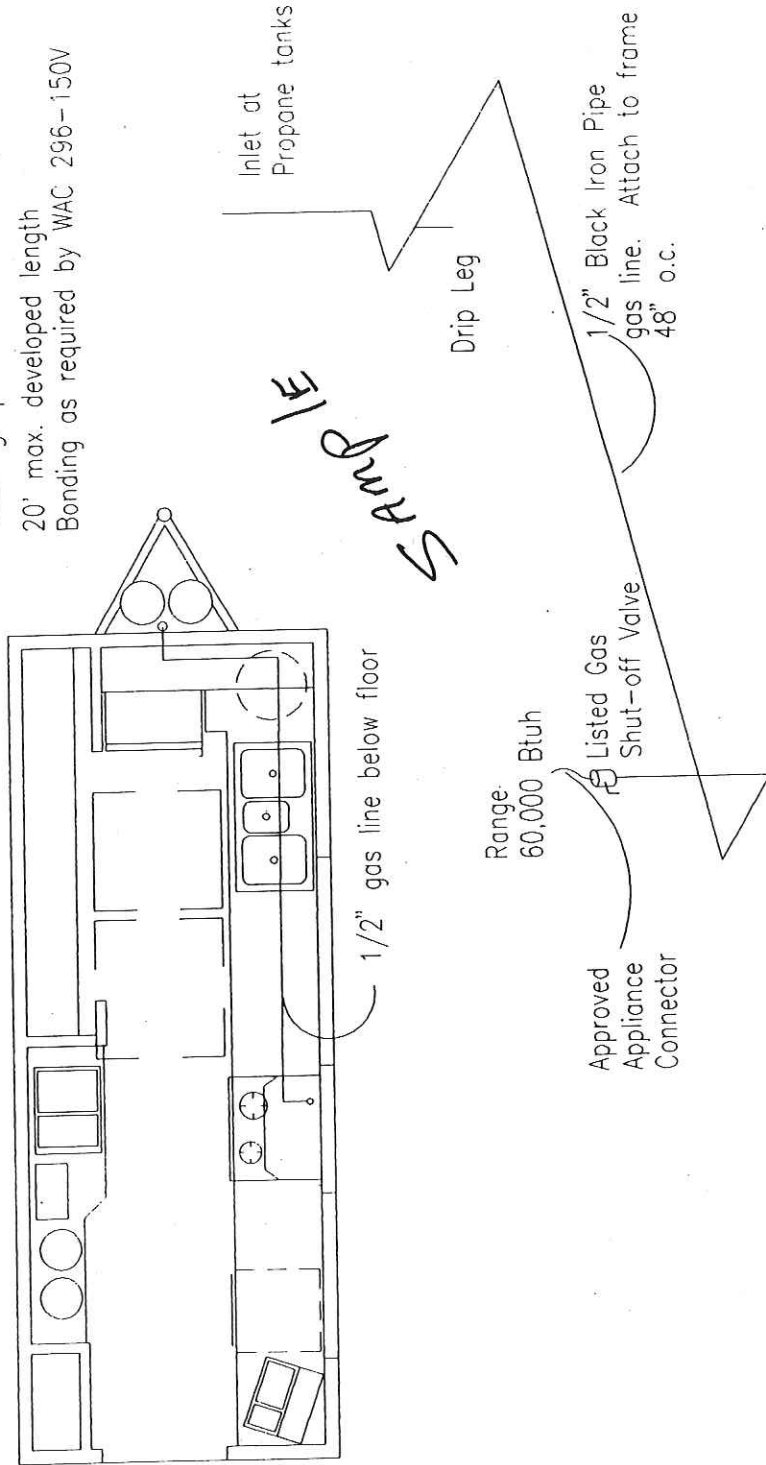
File#:

SAMPLE

Sizing per- UMC Chpt.13

20' max. developed length

Bonding as required by WAC 296-150V

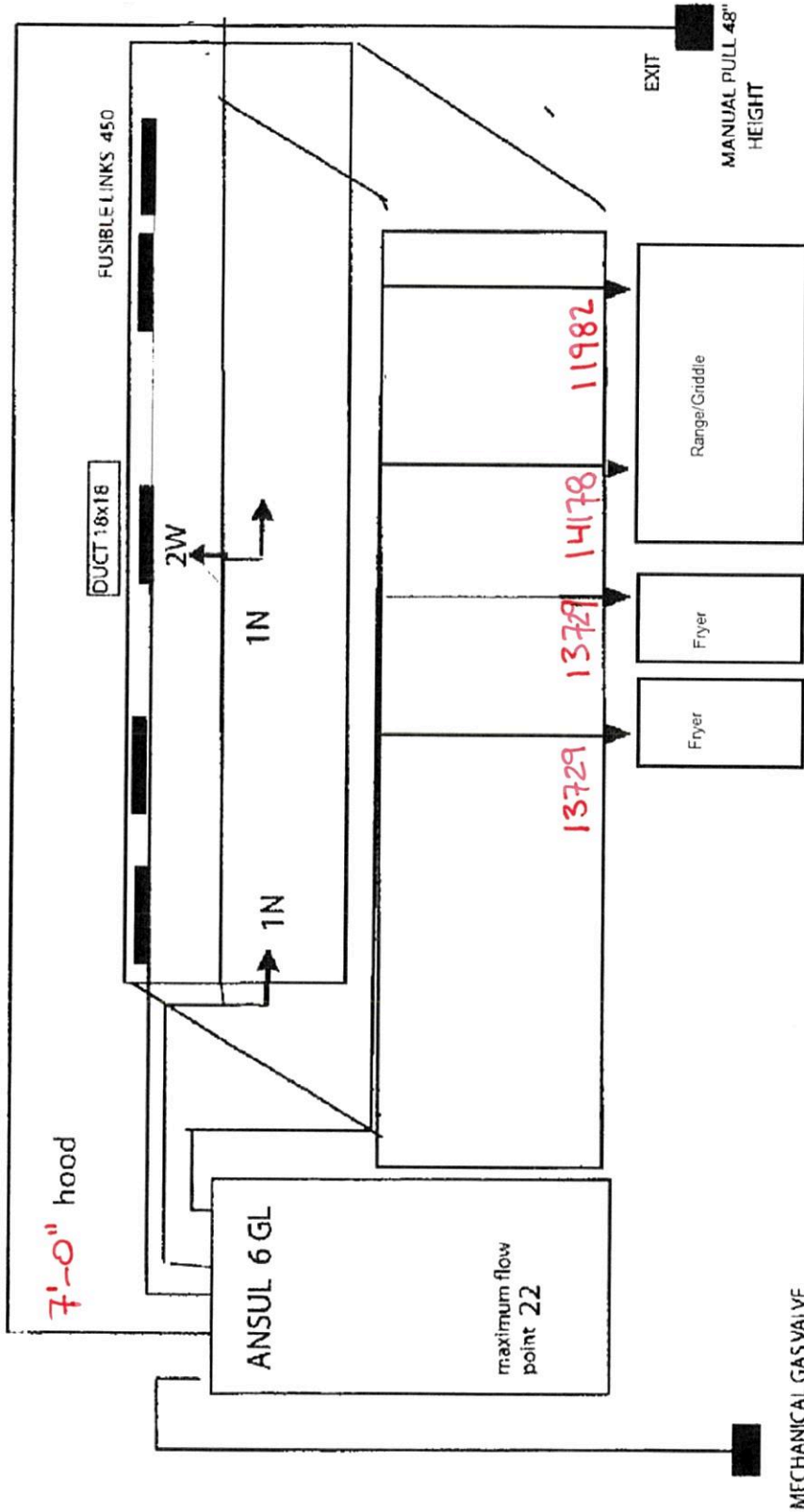


Gas Lines	Sample Drawing Set for Conversion Vendor Units per WAC 296-150V. Wash. State Dept. of Labor and Industries.		Date: 12/97	Scale: 1/2" = 1'-0
			Drawn By:	Revision: 7/1/99
			Dwg#:	File#:

SAMPLE

ANSUL R 102 6 GL fire suppression system ul

NOZZLE HEIGHT 42 IN
PIP SIZE 3/8
total flow point 14



FIRE SUPPRESSION SYSTEM PLAN

HOOD INFORMATION - Job#

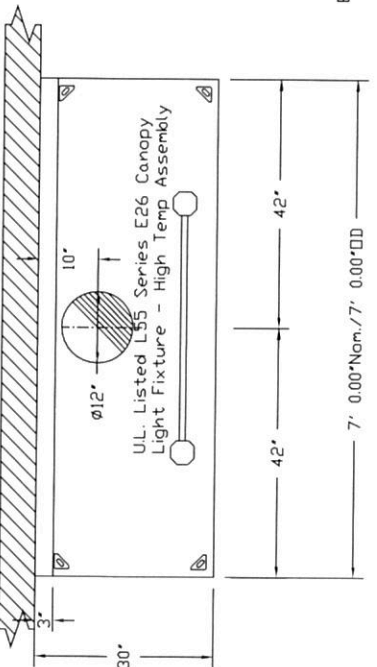
HOOD NO.	TAG	MODEL	LENGTH	MAX. COOKING TEMP.	EXHAUST FLOW		HOOD CONSTRUCTION	HOOD END	ROW
					EXH. CFM	SP.			
1		3044 VX-BD-2	7' 0.00"	600 Deg	1400	12"	430 SS Where Exposed	ALONE	ALONE

HOOD INFORMATION

HOOD NO.	TAG	TYPE	FILTERS		EFFICIENCY @ 9 MICRONS	QTY.	TYPE	LOCATION	WIRE GUARD	NO	LIGHTS	TYPE	QUANTITY	SWITCHES	FIRE SYSTEM	SIZE	ELECTRICAL MODEL #	FIRE SYSTEM PIPING	HOOD WEIGHT	
			QTY	HEIGHT																LENGTH
1		SS Baffle with Handles	5	16"	16"	2	L55 Series E26			NO									NO	205 LBS

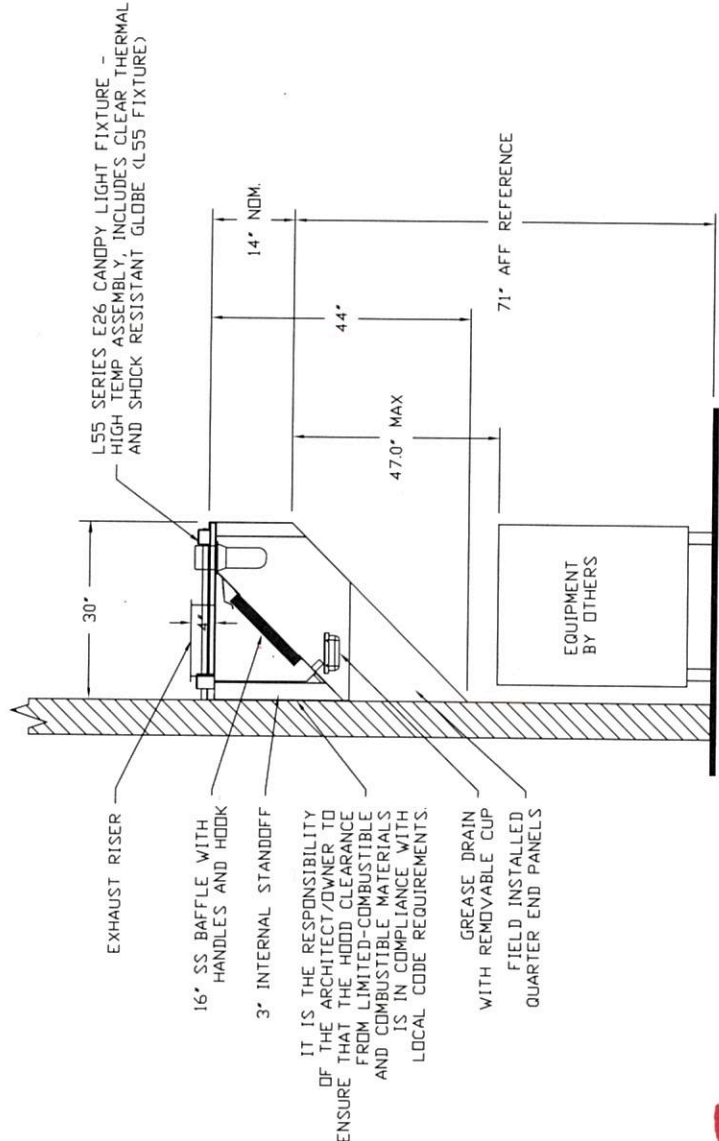
HOOD OPTIONS

HOOD NO.	TAG	OPTION	RIGHT QUARTER END PANEL	TOP Width	0"	Bottom Width	20"	High	430 SS	
1			LEFT QUARTER END PANEL	20"	Top Width	0"	Bottom Width	20"	High	430 SS



PLAN VIEW - Hood #1

7' 0.00" LONG 3044VX-BD-2



SECTION VIEW - MODEL 3044VX-BD-2
HOOD - #1

SAMPLE

JOB** Quote
LOCATION , 0
DATE 3/14/2016
JOB #
DRAWN BY WRB
REV.
SCALE 3/8" = 1'-0"

FAN #1 VXD50 - EXHAUST FAN

FAN UNIT NO.	FAN UNIT MODEL #	CFM	ESP.	RPM	HP.	B.H.P.	Ø	VOLT	FLA	WEIGHT (LBS.)	SONES
1	VXD50	1400	0.500	1394	0.500	0.3070	1	115	8.4	69	13.8

FAN OPTIONS

FAN UNIT NO.	OPTION (Qty. - Descr.)
1	1 - Grease Box
1	1 - Low Profile Option - 50

FAN ACCESSORIES

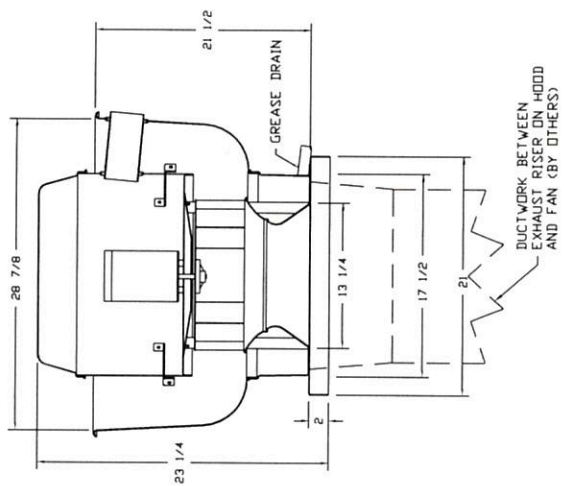
FAN UNIT NO.	EXHAUST	SUPPLY
1	GREASE GRAVITY DAMPER MOUNT YES	GRAVITY DAMPER MOUNT
	WALL MOUNT	MOTORIZED DAMPER
	SIDE DISCHARGE	WALL MOUNT

- FEATURES:**
- ROOF MOUNTED FANS
 - RESTAURANT MODEL
 - UL705 AND UL762
 - VARIABLE SPEED CONTROL
 - INTERNAL WIRING
 - WEATHERPROOF DISCONNECT
 - THERMAL OVERLOAD PROTECTION (SINGLE PHASE)
 - HIGH HEAT OPERATION 300°F (149°C)
 - GREASE CLASSIFICATION TESTING

NORMAL TEMPERATURE TEST
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST
 EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BEING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

- OPTIONS**
- GREASE BOX
 - LOW PROFILE OPTION - 50.



SAMPLE

JOB** Quote	
LOCATION , 0	
DATE 3/14/2016	JOB #
DWG # 2	DRAWN BY WRB
REV.	SCALE 3/8" = 1'-0"



Ventilation Direct

Exhaust Fan Wiring

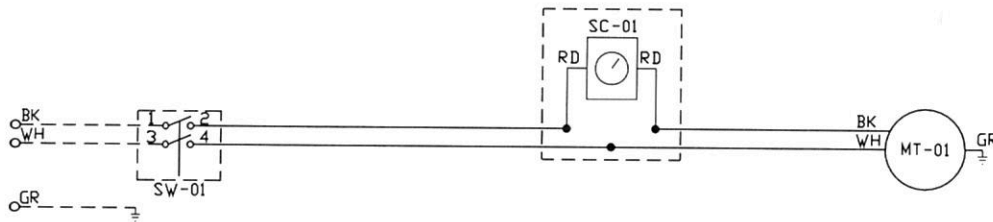
JOB - ** Quote

DRAWING NUMBER EXH2596184-1

SHIP DATE 3/14/2016

MODEL VXD60

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SAMPLE

Installed Options
Speed Control

<u>Component Identification</u>		
Label	Description	Location
MT-01	Fan Motor	[20]
QD-01	Quick Disconnect	[20]
SC-01	Speed Control	[10]
SW-01	Main disconnect switch	[20]

MOTOR INFO
EXHAUST 0.5HP-115V-1P-8.4FLA

ELECTRICAL INFORMATION
MOTOR/CTRL MCA: 10.5A
MOTOR/CTRL MOP: 15A

NOTES
- - - - DENOTES FIELD WIRING
———— DENOTES INTERNAL WIRING

WIRE COLOR
BK - BLACK YW - YELLOW
BL - BLUE GR - GREEN
BR - BROWN GY - GRAY
OR - ORANGE PR - PURPLE
RD - RED PK - PINK
WH - WHITE

[PLEASE PRINT ON YOUR COMPANY'S LETTERHEAD]

GAS PIPING TESTS AFFIDAVIT

Homeowner (PLEASE PRINT)
Address
City
Manufacturer of home (if known)
Serial number of home (if known)

I, _____, am authorized to certify on behalf
(Print Name)
of _____, that on
(Company Name)
_____, 20__ the gas piping system was tested as follows:

1. Before all appliances were connected, at three (3) PSI for a period of not less than ten (10) minutes without showing any drop in pressure; and
2. After the appliances were connected and the system was pressurized to not less than ten (10) inches nor more than fourteen (14) inches water column and the appliance connections were tested for leakage with soapy water or bubble solution, no leaks were observed.

Signature of tester

Other witness signature(s) [when available]:
Homeowner
Gas Company
L&I Inspector

The original of this affidavit must be available for the inspector when the inspection is made.
F622-048-000 (FPDF) gas piping tests affidavit 6-00

ENGINEERING CHECK LIST FOR CONVERSION VENDOR UNITS [WAC 296-150V](#)

Is an engineering analysis or structural load test required for my vendor conversion unit or a medical unit design plan? ([WAC 296-150V-0340](#))

- Check to be sure that specific loads by equipment or usage do not create concentrated loading that may require engineering analysis or a structural load test. These are required when loads of 500 pounds or more are concentrated in a sixteen square foot area.

Where do I find an engineer to do the calculations and analysis?

- Check in the yellow pages of the phone book, with the engineering associations or recommendations of friends or the construction trades etc. By law we are not permitted to recommend specific names.
- Check to be sure that the engineer is currently licensed with the State of Washington. You may call the Department of licensing at (360) 664-1575 or go to their [website](#) for more information.
- If you have determined to use the structural load test, check to be sure the following test procedures are followed for your design plan ([WAC 296-150V-0350](#))

1. The test must be witnessed by a professional engineer or architect licensed in the State of Washington or by a Department of Labor and Industries Factory Assembled Structure Inspector.
2. Test reports must contain the following items:
 - (a) A description of the methods or standards that applied;
 - (b) Drawings and a description of the item tested;
 - (c) A description of the test set up;
 - (d) The procedure used to verify the correct load;
 - (e) The procedure used to measure each condition;
 - (f) Test data, including applicable graphs and observations of the characteristics and behavior of the item tested; and
 - (g) Analysis, comments, and conclusion.

Department of Labor and Industries
 Factory Assembled Structures
 PO Box 44430
 Olympia WA 98504-4430



PLAN APPROVAL REQUEST CONVERSION VENDOR/ MEDICAL UNITS

FedEx/UPS Delivery:
 Department of Labor and Industries
 7273 Linderson Way SW
 Tumwater WA 98501-5414

Company/Owner Name		
Address		
City	State	Zip
Telephone number		Fax number

Contact person	Date	Fee enclosed \$
Email address		
Signature	Telephone number	Fax number

See WAC 296-150V-3000 for fees required

New plan design	Addendum	Resubmittal	One time filing fee
\$ _____	\$ _____	\$ _____	\$ _____

Size of Vendor/Medical Unit: Width _____ Length _____ Area (Sq Ft.) _____
Electrical Service: Amps _____

	Attached	N/A	
Concentrated load calculations or test proposals	_____	_____	_____
Panel box schedule/electric load calc's	_____	_____	_____
Floor plan drawing	_____	_____	_____
Gas piping drawing	_____	_____	_____
Water supply drawing	_____	_____	_____
Drain and vent drawing	_____	_____	_____
Operating pressure _____	No of fixtures _____	Total length _____	_____

For Department Use Only

Fee ledger sheet number	Application ID	Plan approval number
Date approved	Expiration date	

Department of Labor and Industries
 Factory Assembled Structures
 PO Box 44430
 Olympia WA 98504-4430



PLAN APPROVAL REQUEST CONVERSION VENDOR/ MEDICAL UNITS

FedEx/UPS Delivery:
 Department of Labor and Industries
 7273 Linderson Way SW
 Tumwater WA 98501-5414

Company/Owner Name 1		
Address		
City	State	Zip
Telephone number	Fax number	

Contact person 2	Date	Fee enclosed \$
Email address		
Signature	Telephone number	Fax number

See WAC 296-150V-3000 for fees required

New plan design	Addendum	Resubmittal	One time filing fee
\$ 3	\$ 4	\$ 5	\$ 6

Size of Vendor/Medical Unit: Width **7** Length _____ Area (Sq Ft.) _____

Electrical Services: Amps **8** _____

	Attached	N/A
Concentrated load calculations or test proposals	9	_____
Panel box schedule/electric load calc's	_____	_____
Floor plan drawing	_____	_____
Gas piping drawing	_____	_____
Water supply drawing	_____	_____
Drain and vent drawing	_____	_____
Operating pressure 10	No of fixtures	Total length
_____	_____	_____

For Department Use Only		
Fee ledger sheet number	Application ID	Plan approval number
Date approved	Expiration date	

Instructions for completing Plan Approval Request Conversion and Vendor/Medical Units

1. Provide owner name, address, and telephone number and your fax number if available.
2. Print and sign the name of the contact person responsible for this plan and for information. Include on this line the date the plan was sent to the Department and the total fee enclosed for this Vendor/Medical Unit. See [WAC 296-150V-3000](#) for the fee schedules. Provide an extension number or direct line and FAX number if available for the contact person. Provide the email address of the contact person.
3. Use this line if a new plan is submitted for the first time. Indicate the appropriate fee to be paid. See [WAC 296-150V-3000](#).
4. This line is to be used if this submittal is an ADDENDUM to a previously approved plan. Indicate the fee paid and the approved plan number that you wish to amend.
5. Fill in this line only if this is a resubmittal response to a previously reviewed and rejected plan. Indicate the fee required for resubmittal. See [WAC 296-150V-3000](#).
6. This is a ONE TIME fee for first-time applicants. This applies to MANUFACTURERS ONLY.
7. Show the width, length, and the square footage of the Vendor/Medical Unit.
8. Provide the size of the Electrical Service for the whole Vendor/Medical Unit. The size of the electrical service is usually the same as the main breaker.
9. This section is meant to act as a checklist for some of the information that may be necessary to approve the Vendor/Medical Unit. Not all elements may be applicable to your plan and as such may be 'N/A'.
10. Provide plumbing system operating pressure whenever plumbing fixtures are installed in the Vendor/Medical Unit. Provide the number of individual fixtures that are installed in the Vendor/Medical Unit. Provide the total length of the water supply system. For self contained Vendor/Medical Units, the length is from the pump to the most remote fixture.

Department of Labor and Industries
 Factory Assembled Structures
 PO Box 44430
 Olympia WA 98504-4430



**APPLICATION FOR INSIGNIA
 CONVERSION VENDOR/
 MEDICAL UNITS**

FedEx/UPS Delivery:
 Department of Labor and Industries
 7273 Linderson Way SW
 Tumwater WA 98501-5414

A separate form is required for each unit unless multiple units have the same plan approval, addendum, and design options.

Date	Fee Enclosed \$
------	--------------------

Vendor (original) Replacement

Manufacture/Owner Name		Mfg Number (issued by L&I)
Address		
City	State	Zip Code
Telephone Number	Fax Number	

Contact Name	Email Address	
Signature	Phone Number	Fax Number

A non-refundable fee is due with application. Please make your check payment to: Labor & Industries.

Important: Each insignia is assigned to a specific vehicle.

1.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
Electrical Service Size /			Plumbing Fixture	
2.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
3.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
4.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
5.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
6.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$

Select how you want your insignia(s) mailed.

Total number of tags: _____

USPS mail Overnight at customer expense

Other: _____ Carrier: _____

Acct. #: _____

For Department Use Only		
Fee Ledger No.	Check No.	Amount \$
Insignia Released By	Date	To

Instructions for Application for Insignia Conversion Vendor/Medical Units

1. Enter the application date and the total fee for all insignias requested on this form.
2. Check the appropriate box for the type of insignia you are requesting.
3. Complete as much of the Manufacture/Owner information as available.
4. L&I will assign Manufacture Number upon approval of the manufacture's first plan.
5. Provide the name of the contact person requesting the insignia(s) and their contact information in case the department has questions about your application.
6. Enter the unique manufacture serial number for which an insignia is being requested. You can use the last five numbers of the vehicle identification number (VIN).
7. This box is for department use only. Leave blank.
8. If applicable, enter the previously approved plan number for which this insignia is being requested. If the insignia request accompanies a new plan approval request, you should leave this blank and the department will enter the plan approval number when assigned.
9. See [WAC 296-150V-3000](#) for the current fee schedules.
10. Show the size of the electrical service to the unit.
11. Indicate the number of plumbing fixtures (not fixture units) within the building. Do not count icemakers. Count hot water heaters; hose bibs; etc.
12. Request additional insignias required for the building configuration or the other buildings.
13. Show the total number of insignias on this request. Indicate how you want insignias to be forwarded to the inspector. If requesting overnight delivery, you must give the carrier to be used and your account number to be billed.

Preparing for Inspections:

Visit www.Lni.wa.gov/TradesLicensing/FAS/Types/VendMed/ for instructions about required inspections and insignia.

Department of Labor and Industries
 Factory Assembled Structures
 PO Box 44430
 Olympia WA 98504-4430



**APPLICATION FOR INSIGNIA
 CONVERSION VENDOR/
 MEDICAL UNITS**

FedEx/UPS Delivery:
 Department of Labor and Industries
 7273 Linderson Way SW
 Tumwater WA 98501-5414

A separate form is required for each unit unless multiple units have the same plan approval, addendum, and design options.

Date 1		Fee Enclosed \$	
<input type="checkbox"/> Vendor (original) 2		<input type="checkbox"/> Replacement	
Manufacture/Owner Name 3		Mfg Number (issued by L&I) 4	
Address			
City		State	Zip Code
Telephone Number		Fax Number	
Contact Name 5		Email Address	
Signature		Phone Number	Fax Number

A non-refundable fee is due with application. Please make your check payment to: Labor & Industries.

Important: Each insignia is assigned to a specific vehicle.

1.	Serial No. or VIN No. 6	Dept. Insignia No. 7	Approved Plan No. 8	Fee \$ 9
Electrical Service Size / 10		Plumbing Fixture 11		
2.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
3.	Serial No. or VIN No.	Dept. Insignia No. 12	Approved Plan No.	Fee \$
4.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
5.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$
6.	Serial No. or VIN No.	Dept. Insignia No.	Approved Plan No.	Fee \$

13 Total number of tags: _____

Select how you want your insignia(s) mailed.

USPS mail Overnight at customer expense

Other: _____ Carrier: _____

Acct. #: _____

For Department Use Only		
Fee Ledger No.	Check No.	Amount \$
Insignia Released By	Date	To

Department of Labor and Industries
 Factory Assembled Structures
 PO Box 44430
 Olympia WA 98504-4430
 www.lni.wa.gov



VENDOR/MEDICAL CONVERSION UNITS PRE-INSPECTION CHECKLIST

From time to time Labor & Industries receive inquiries by vendor owners, manufacturers and others on what they need to know how to get their vendor unit or medical unit approved with an insignia by Labor and Industries (as listed below). Local County/City Jurisdictions, Insurance Companies, Health Departments, and others may generate inquiries and will not accept a vendor unit unless it has had a Plan Review and field inspection by L&I to meet the requirements for usage at their respective venues.

Conversion Vendor/Medical units built to be used in Washington State are inspected by the Department of Labor and Industries, Specialty Compliance Services Division, Factory Assembled Structures and are to be converted or built to comply with the following Laws and Codes. RCW 43.22, WAC 296-150V, RCW 19.28, WAC 296-46B current edition NEC Article 551 and 552 and other applicable sections, current edition IMC, current edition UPC, current edition NFPA 1192, current edition IFC.

This checklist is designed to be generic in content and may not include all requirements for your particular installation. The Vendor unit may require a Plan Review approval and checklist installation instruction must be adhered to and available to the inspector at the time of the inspection. You may contact the L&I Factory Assemble Structures Plan Review section for additional information. Be sure you can answer YES to all of the questions before calling for inspection. Failure of the inspection will require a reinspection fee to be paid.

Please call your local L&I Factory Assembled Structures Inspector with any questions.

Reference

Compliance

Reference	Yes	No
WAC 296-150V-0020	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-0210	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-0220	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-0300	<input type="checkbox"/>	<input type="checkbox"/>
Electrical	<input type="checkbox"/>	<input type="checkbox"/>
Mechanical	<input type="checkbox"/>	<input type="checkbox"/>

Reference

Compliance

Reference		Yes	No
Plumbing	Show the locations of all sinks, holding tanks, and other plumbing fixtures. Include pipe sizes for water supply and drainage, waste and vent pipes. Provide information on the operating pressure in the water supply system, length of water piping from the inlet or pump to the furthest fixture. Show the location and size of the drainage system outlet. Provide type of piping material being used for water and DWV.	<input type="checkbox"/>	<input type="checkbox"/>
Structural	Only concentrated loads of 500 lbs. or more in a 16 square foot area need to be engineered.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1420	Provide label at exterior gas connection listing type of system (LP or NATL), BTU Input Rating and if excess input is allowed.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1100	The flame-spread requirements for all walls and ceilings must be 200 flame-spread or less.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1110	The exposed wall adjacent to the cooking range must be 50 flame-spread or less, such as 5/16 inch gypsum board or material having equivalent fire protective properties. All openings for pipes and vents in furnace and water heater spaces shall be tight-fitted or fire-stopped.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1120	The bottom and sides of combustible cabinets over cooking appliances or tops including a space of 6 inches from the edge of the burners must be protected with at least 5/16 inch sheetrock with a 25 flame spread. This material must be behind deep fat fryers, grills, ranges, and other cooking appliances. It must extend 6 inches beyond the edge of the appliance and range hood. (1) Range hoods for commercial equipment must meet the requirements of the International Mechanical Code such as Type I or II hoods and Fire suppression. (2) Range hoods for noncommercial equipment may be of a residential type, the hood must be centered over and at least as wide as the top of the cooking appliance.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1180	Pass-through window areas shall be safety glazed based on the IBC 2406.1 Each pane of safety glazing installed in a hazardous location shall be identified	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1185	The exit door must have at least 28 inches wide opening by 72 inches high, units with doors less than 28 inches in width must have a second means of exit. The second means of exit shall be 24 inches by 17 inches. When there are employees, a minimum of 28 inch clear door opening must be provided	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1303	Storage batteries must be securely attached to the vendor unit. They must be installed in an area which is vapor tight to the interior and ventilated directly to the exterior. When batteries are installed in a compartment, the compartment must be ventilated with openings not less than 2 square inches at the top and 2 square inches at the bottom. Batteries shall not be installed in a compartment containing spark or flame producing equipment.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1350	LP-Gas containers must be mounted on either; (1) the A-frame and not lower than the bottom of the trailer frame. (2) installed in a compartment that is vapor-tight to the inside of the vendor/medical unit and accessible only from the outside; or be mounted on the chassis or to the floor and neither the container nor its supports may be lower than the top of the axle height.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1350 NFPA1192 5.2.6.1	LP-Gas container being housed in a compartment enclosure shall be ventilated at or near the top and at the extreme bottom to facilitate diffusion of vapors. The vents shall be equally distributed between the floor and ceiling of the compartment. Vents shall have an unrestricted discharge to the outside atmosphere. LP-Gas containers shall be secured in place so they will not become dislodged.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1360-1390	Vendor & Medical units using gas may be piped for LPG, NG or both. Fuel gas piping shall not be concealed inside walls or floors of the unit. It may pass perpendicular through a wall or floor only when protected by a weather resistant and snug fitting grommet. Only pipe joint compound approved for the type of Fuel gas & Fuel gas pipe shall be used and shall be supported every 4 feet by metal hangers or strapping or by a structural member. Fuel gas piping shall be rigidly anchored within 6 inches of the supply connections.	<input type="checkbox"/>	<input type="checkbox"/>

Reference		Compliance	
		Yes <input type="checkbox"/>	No <input type="checkbox"/>
WAC 296-150V-1410	Fuel gas piping shall not be used for an electrical ground. Fuel gas line must be bonded with a number 8 copper minimum or equal conductor to the ground buss or the electrical panel	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1440	A full-way fuel gas shut off valve shall be installed with-in 6 feet of the cooking appliance or within 3 foot of any other appliance inside the unit. A shut off valve may serve more than one appliance	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1450	The fuel gas piping system must stand a pressure of at least 10 psi gauge for a period of not less than 15 minutes without showing any drop in pressure. Pressure must be measured with a gauge calibrated to be read in increments of not greater than 1/10 pound. The source of pressure must be isolated before the pressure tests are made. Before a test is begun, the temperature of the ambient air and of the piping must be approximately the same, and constant air temperature must be maintained throughout the test.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1550	Drain outlets must be equipped with a watertight cap or plug that must be permanently attached to the unit.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1570	All piping for potable water shall be of approved material. When potable water holding tanks are used they shall be a listed product, (IAPMO, NSF, & UPC). All potable water supply connections shall be equipped with a water tight cap or plug that is permanently attached to the vehicle, chain or strap.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1580	Water heater relief valves must be provided with full-size drains. Drains must be directed to the exterior of the unit, exiting at least 6 inches above the ground, and must exhaust downward. Drain lines must be of a material approved for hot water distribution and must drain fully by gravity, must not be trapped, and must not have their outlets threaded.	<input type="checkbox"/>	<input type="checkbox"/>
WAC 296-150V-1590	<p>Waste water holding tanks must be listed for the intended use, securely installed, easily removable for service, Neither the inlet nor vent fitting may extend downward into the tank more than 1-1/2 inches. Drain opening must be located at the lowest point of the tank. Tanks must be vented at the highest point in the top of the tank by one of the following methods; (1) A 1-1/4 inch diameter vent pipe. (2) A continuous vent serving as a drain from one additional fixture provided the drain portion is increased one pipe size larger than the connected trap arm. (3) Two or more vented drains when at least one is wet vented and each drain is separately connected to the top of the tank. All waste lines from sinks shall be a minimum of 1-1/2 inches, ABS or equivalent. Drain lines from hand wash sink may be 1-1/4 inches.</p> <p>An auto-vent may be used to vent drain lines from 1-2 compartment sinks. Three compartment sinks shall be vented per Uniform Plumbing Code.</p> <p>The waste water tank shall have a minimum of 1-1/4 inch vent extending to the outside of the unit at least 6 foot above the ground. The tank must be approved for this purpose. IAPMO, UPC</p>	<input type="checkbox"/>	<input type="checkbox"/>
NFPA 1192 – 5.2.5	Propane containers located less than 18 inches from the exhaust system, the transmission, or a heat-producing component of the internal combustion engine shall be shielded by a vehicle frame member or by a noncombustible baffle with an air space on both sides of the frame member or baffle.	<input type="checkbox"/>	<input type="checkbox"/>
NFPA 1192–6.4.5	Internal combustion engine-driven generator units shall be listed and installed in accordance with manufacturer's instructions and shall be vapor resistant to the interior of the vehicle. The generator compartment shall be lined with galvanized steel not less than 26 MSG thick	<input type="checkbox"/>	<input type="checkbox"/>

Reference

Compliance

		Yes	No
IMC 507.2.1 IMC 509	Type I hood, classified as commercial equipment, shall be installed where cooking appliances produce grease or smoke, such as occurs with griddles, fryers, boilers, ovens, ranges and wok ranges. Commercial food heating-processing appliances required to have a Type I hood shall be provided with an automatic fire suppression/extinguishing system to protect the cooking equipment. Per IMC 509	<input type="checkbox"/>	<input type="checkbox"/>
IMC 507.2.2	Type II hood shall be installed where cooking or dishwashing appliances produce heat or steam and do not produce grease or smoke, such as steamers, kettles, pasta cookers and dishwashing machines.	<input type="checkbox"/>	<input type="checkbox"/>
NEC 404.8	The electrical service panel shall be located so that breakers may be operated from a readily accessible place. They shall be installed such that the center of the grip of the operating handle of the circuit breaker, when in its highest position, is not more than 6' ft 7" inches above the floor or working platform	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.41(C)	GFCI, Ground-Fault Circuit-Interrupter receptacles required when the receptacles are installed to serve the countertop surfaces and are within 6 feet of any lavatory or sink and when located on the exterior side of the vehicle.	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.42 (C)	A maximum of two to five 15- or 20-ampere circuits to supply lights, receptacles outlets, and fixed appliances shall be permitted. Such vendor/medical units shall be equipped with a distribution panel board rated at 120 volts maximum with a 30-ampere rated main power supply assembly	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.42 (D)	A 50-ampere, 120/240-volt power supply shall be used where six or more circuits are employed. It shall use a listed 50-ampere, 120/240-volt main power-supply assembly	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.44	Power Supply Assembly, (A) (B) (C) (D) Fifteen, Twenty, Thirty and Fifty-ampere service panels shall use a listed main power supply assembly for their respective ampere service.	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.45(B)	The distribution panel board shall be installed in a readily accessible location. Working clearance for the panel board shall not be less than 24 inches wide and 30 inches deep. Exception 1: Where the panel board cover is exposed to the inside aisle space, one of the working clearance dimensions shall be permitted to be reduced to a minimum of 22" inches. A panel board is considered exposed where the panel board cover is within 2" inches of the aisles finished surfaced	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.46	The power supply cord shall be installed with a strain relief connector listed for use in wet location. The strain relief is intended to keep the cord secured so that conductors will not be compromised in the electrical service panel. The cord assembly shall have permanent provisions for protection against corrosion and mechanical damage while the vehicle is in transit	<input type="checkbox"/>	<input type="checkbox"/>
NEC 551.56	All exposed non current carrying metal parts that may become energized shall be effectively bonded. A bonding conductor shall be connected between the distribution panel board and an accessible terminal on the chassis	<input type="checkbox"/>	<input type="checkbox"/>
NEC 517.13	All branch circuits serving patient care areas shall be installed in a metal raceway system, or a cable having a metallic armor or sheath assembly qualifying as an equipment grounding conductor. All receptacles and electrical equipment over 100 volts, and subject to personal contact, shall be connected to an insulated copper equipment grounding conductor. The equipment ground shall be installed in the same metal raceway, or listed cable having a metallic armor or sheath assembly, with the branch circuit conductors.	<input type="checkbox"/>	<input type="checkbox"/>