**Company Demographics and Philosophy:**

We are a small USDA inspected meat processor that slaughters and processes cattle, hogs, sheep, and goats for small ranchers and farmers in Oregon and Southern Washington that want to sell their own beef, pork, lamb, and goat products to local businesses, restaurants and directly to consumers. We also raise and slaughter our own animals and sell their carcasses and products directly through our establishment. In addition, our establishment also operates under USDA Custom Exemption to slaughter and process cattle, hogs, sheep, and goats for the “Not For Sale” personal use of the owners of the livestock. Our business model requires that we place our customer demands, our supplier ethics, the nutritional and gastronomic value of the meat products we produce, and of the absolute responsibility we bear to produce those products from our suppliers for our customers from livestock slaughtered and processed under strict humane standards, at the highest level. For these reasons, this establishment always has been and continues to be committed, to the humane handling and slaughter of livestock.

**Humane Handling Coordinator (HHC):**

Because we bear the responsibility or ensuring that all livestock that arrive at our establishment are handled and slaughtered under strict humane standards that conform to the Humane Methods of Slaughter Act (HMSA), the Federal Meat Inspection Act (FMIA), and our third-party independent humane certification provider, Animal Welfare Approved (AWA), we employ a member of our staff that is specifically trained to design, support, implement, and revise our Robust Systematic Approach to Humane handling program as a Humane Handling Coordinator (HHC). This HHC is also responsible for training and assessing any and all of our employees that ever handle or slaughter livestock at our establishment. Currently, our HHC is a veterinarian and humane handling consultant with extensive veterinary practice and USDA experience in the handling and slaughter of livestock. He is training both one of the establishment owner’s and the establishment’s slaughter floor manager to become the establishment’s permanent primary and alternate HHCs.

**Humane Handling and Humane Slaughter:**

1. Livestock Transport To Our Establishment
   1. Our livestock producing clients provide for the transportation of their own animals from their farms/ranches to our establishment using their own vehicles. We inform and work with all of our livestock producing clients to understand basic standards of livestock transportation to our establishment as described below. In addition, we provide all of our livestock producing clients some basic livestock transportation guidelines regarding climate protection and vehicle stocking density from Dr. Temple Grandin entitled “Recommended Trucking Practices” updated November 2013.
      1. Livestock producing clients are expected to only bring healthy, ambulatory livestock to our establishment for slaughter and processing. Healthy means livestock that are not exhibiting signs of generalized disease processes that may render their meat adulterated and unfit for human food such as significant ocular or nasal discharges, fevers, general malaise, poor body condition, visible tumors, etc. Ambulatory means livestock can rise, stand, and walk on their own.
      2. Livestock producing clients are encouraged to acclimate their livestock to the close proximity of people and if possible, to walking on flat concrete surfaces.
      3. Livestock producing clients must load their transport vehicles and provide the animals within those vehicles protection from extreme weather conditions as listed in the “Recommended Trucking Practices” updated November 2013 by Dr. Temple Grandin.
      4. Trained establishment livestock handling employees monitor and document the acceptability of the livestock transport vehicle for each delivery, prior to unlocking any of the unloading points, on a Receiving Pen Card. Acceptability means that the livestock producing client’s transport vehicle is loaded correctly, and the animals within have been provided protection from extreme weather conditions, both in accordance with the requirements in “Recommended Trucking Practices” updated November 2013 by Dr. Temple Grandin.
      5. If the monitoring results demonstrate that the livestock producing client’s transport vehicle is not acceptable, then the trained livestock handling employee does not unlock any of the unloading points and notifies the HHC and Owners of the unacceptable finding. The HHC and Owners will discuss the unacceptable finding(s) with the livestock producing client, and agent/driver of the transport vehicle if necessary, and secure written corrective actions and preventive measures to be maintained on file at the establishment, before unlocking the appropriate unloading point and proceeding with unloading. If the finding of unacceptability is the second finding for the livestock producing client, the establishment will not receive the animals and the livestock producing client will be excluded from consigning livestock for slaughter at the establishment forever.
2. Unloading Livestock From Vehicles
   1. We require that all livestock producing clients plan on arriving at our establishment to unload livestock between 3:30 and 5:00 PM on week days. If livestock producing clients are unable to meet this drop-off time requirement, they must contact Marks Meat and speak to one of the owners, Ben or James, to arrange for an alternate time.
   2. Because of the wide array of knowledge that our livestock producing clients may have regarding the unloading of livestock at a USDA establishment we have secured and locked our unloading facilities to prevent unloading without the presence of one of our trained livestock handling employees.
   3. Livestock producing clients are required to check-in at the establishment’s office and wait for a trained livestock handling employee to assist them in the unloading process. One of our trained livestock handling employees will determine which of the establishment’s three unloading points will be used in each unloading situation and will unlock that point if then livestock transport vehicle is determined to be acceptable in accordance with the section, Livestock Transport To Our Establishment, above. The establishment employee will ensure that the transport vehicle’s unloading height closely matches the unloading point and that there are not any gaps that could allow animal injury or animal escape before the livestock producing client is allowed to open the transport vehicle and begin unloading.
   4. That employee will also guide and supervise the livestock producing client while the client enters the vehicle and unloads the animals to ensure that no humane handling violations occur. Animals must be allowed to move at their own pace, and can never be aggressively forced, pushed, pulled or tethered. If they are halter-trained, then halters may be used, unless the animals are resisting or pulling back.
   5. Trained establishment livestock handling employees guiding and supervising livestock producing clients, monitor and document the acceptability of the unloading process for each delivery on a Receiving Pen Card. The trained livestock handling employees have the responsibility and authority to stop the unloading process, re-lock the unloading point, and report any humane handling transport and/or unloading issue to the establishment HHC and Owners if the livestock producing client does not follow the guidance or instruction provided above and by the trained livestock handling employee. The HHC and Owners will discuss the unacceptable finding(s) with the livestock producing client, and agent/driver of the transport vehicle if necessary, and secure written corrective actions and preventive measures to be maintained on file at the establishment, before unlocking the appropriate unloading point and proceeding with unloading. If the finding of unacceptability is the second finding for the livestock producing client, the establishment will not receive the balance of animals on the livestock producing client’s transport vehicle and the livestock producing client will be excluded from consigning livestock for slaughter at the establishment forever.
   6. In addition, these employees also monitor all livestock during unloading and driving to their pens for slips and falls and records the number of each on the Receiving Pen Card (See section VI below for further information regarding slips, falls, and action points).
   7. All pigs and cattle must be weighed individually for future stunning reference with the weights documented on the Receiving Pen Card, with ear tag number or other ID, if available. Pigs without individual ID will be grouped together in pens by similar weights. Then the establishment’s trained livestock handling employee will drive the animals through the establishment’s alleyways into an appropriate holding pen following all establishment requirements for humane handling during the driving of livestock as listed in the section, Handling During Ante-Mortem Inspection, Handling of Suspects and Disabled Livestock, and Use of Driving Aids, below.
   8. Once a week the HHC or trained Alternate HHC will monitor a trained livestock handling employee driving animals from the unloading point, through the weighing process if necessary, and ending with placement of the livestock in appropriate pens to verify that the establishment’s requirements for humane handling during the driving of livestock are being met and document the results on the Receiving Pen Card.
   9. Trained establishment livestock handling employees monitor and document the unloading area weekly to ensure that the area is in good repair and is free from any sharp or protruding objects that could injure animals on the Weekly Pen Checklist.
3. Escape Animals
   1. Do not get excited, do not try to herd the animal back in to a pen, close and secure all front gates first, then let animal calm down and use green hay or pellets to chum them back into the enclosed pen area.
4. Establishment Facilities To Provide Protection From Inclement Weather
   1. All of our livestock holding and antemortem pens are under a single metal covered roof with open sides to allow for adequate ventilation. In addition, all floors of the livestock vehicle unloading ramps, pens, alleyways, and stunning box are concrete to allow us to maintain sanitary conditions of the grounds about our establishment as required by USDA regulations. Pens, alleyways, and floors are maintained in good repair so as to prevent injury to livestock. We provide pens to hold each client's species separately. Stocking rates in pens are managed to ensure animals have sufficient room to lie down.
   2. We inspect pens prior to placing animals within them to verify that the pen(s) needed are clean and document the results on the Receiving Pen Card. If the intended pen is not fully cleaned and prepared, another pen must be selected that is clean and prepared to house the animal. A clean and prepared pen must provide access to clean, fresh water for the animals to be placed within it, show that the floor is free of manure or mud, and that the texture of the floor is visible to assure good footing for the animal(s). The condition of the boards must be clean and free of jagged edges, sharp points or any other dangerous conditions. See the section, Slips and Falls, below for the procedures to clean pens.
   3. Trained establishment livestock handling employees monitor and document the pens, alleyways, and floors weekly to ensure that they are in good repair and are free from any sharp or protruding objects that could injure animals on the Weekly Pen Checklist.
5. Water and Feed Availability
   1. There is fresh water available to all animals in each pen. If animals are held for over 24 hours, we provide feed as appropriate for their species. Trained establishment livestock handling employees monitor and document the access to water in each pen when animals are placed into them on the Receiving Pen Card. During ante-mortem inspection the trained livestock handling employee monitors and documents access to water in each pen containing livestock on our Fresh Water Log. When we feed animals held for longer than 24 hours we also document that feeding with a type of feed appropriate for the species and the particular requirements of the producers’ program, on the Fresh Water Log.
6. Handling During Ante-Mortem Inspection, Handling of Suspects and Disabled Livestock, and Use of Driving Aids
   1. Every day before slaughter begins, our kill floor manager and our USDA inspector conduct ante-mortem inspection. Suspect animals are identified by the USDA inspector and segregated by our trained livestock handling employee(s) into a separate pen identified as a US Suspect Pen, for evaluation by the USDA Public Health Veterinarian. If there is a non-ambulatory animal the USDA veterinarian is contacted. Non-ambulatory disabled cattle are condemned, humanely euthanized and disposed of in accordance with federal regulations. Non-ambulatory disabled sheep, goats and pigs will be segregated and referred to the USDA Public Health Veterinarian for disposition and determination of suitability for use in the food supply according to federal regulations.
      1. Euthanasia Procedure
         1. Restrain the animal’s head first.
         2. Use the same captive bolt device and ammunition as for stunning for the species and slaughter class.
         3. Use the same anatomical landmarks as for stunning.
         4. Always have at least one loaded back-up device readily available (arm’s reach).
         5. Stun the animal, determine consciousness status.
         6. Once the animal is determined to be unconscious, pith the animal to prevent return of brain function and hasten death.
         7. Record information from above (date, time, device, and ammunition) on the reverse side of the Receiving Pen Card for the animal. If there is any question about stunning, immediately re-stun, confirm unconsciousness, pith, and contact HHC and Alt. HHCs to conduct corrective action investigation.
   2. The central drive alley in the pens and the stunning box lead-up alleyway are arranged to minimize sharp corners and direction reversal of driven animals.
   3. Our establishment does not own and does not allow the usage of hot-shots. Our establishment trains our livestock handling personnel to use low stress methods to drive livestock so that the driving of animals is done with a minimum of excitement and discomfort to the animals.
      1. Personnel are taught not to yell, but instead talk to the animals in conversational volume and tone.
      2. Personnel are taught never to strike or hit animals with driving aids.
      3. Personnel are taught to use rattle paddles and plastic bags on handles as driving aids for cattle and sheep.
      4. Personnel are taught to use plastic pig boards, plastic paddles without rattles, plastic bags on handles, or plastic witches’ capes as driving aids for hogs.
      5. Personnel are taught to use small tied bundles of green alfalfa hay as an enticement to get animals to move forward, if necessary.
      6. Personnel are taught to never force animals to move faster than a normal walking speed.
      7. Personnel are taught to read each animal during initial interaction and movement to determine the relative area of their flight zone or handlers bubble and to use that information during driving. For cattle and sheep, the flight zone technique works well for driving, but for pigs the employee is taught how to drive them using the handlers bubble to effect movement in the desired direction.
      8. If an animal is acting unpredictably, it is safest to leave the animal in its safe, clean pen, rather than further agitate it by manipulation and risk a failure to handle the animal humanely. If the animal is not moving at a fast pace, it must be given time to move at its own pace. If it refuses to move forward, it should be returned to a safe, clean pen and allowed to relax before any further attempts to move it are made. If necessary, anxious and agitated animals may be housed for more than 24 hours to allow them time to acclimate to the new and different environment at the establishment.
   4. The establishment’s Humane Handling Coordinator or Alternate Humane Handling Coordinators monitor the handling of livestock during ante-mortem inspection and while driving animals from the pens to and into the stunning box at least once weekly and document the results on the Weekly Pen Checklist.
7. Slips and Falls
   1. All of our unloading ramps, alleyways, pens, and stunning box floors are concrete. To provide adequate footing for animals in pens the establishment implements multiple techniques. When animals are placed in pens, they are not placed in any pen previously used without cleaning the pen first. Regular cleaning includes dry removal of most solid waste and then to rinse off the floor with tap water to remove remaining solid waste and liquid waste. On an at least a monthly basis the establishment uses a pressure washer to remove any biofilm build-up from the concrete floors of all of the pens. The establishment has trained its employees that handle animals to move and speak calmly to prevent surprise and exacerbation of animals that may be flighty.
   2. During unloading, a trained livestock handling employee monitors all livestock as they are unloaded and driven to their pens for slips and falls and documents the number of each on the Pen Card. The establishment’s Humane Handling Coordinator or trained Alternate Humane Handling Coordinators monitor the slips and falls of all animals when livestock handling employees handle livestock during ante-mortem inspection and while they drive animals from the pens to the stunning box at least once weekly and documents the numbers of slips and falls on the Receiving Pen Card.
      1. Slips occur when a portion of the leg other than the foot touches the ground or floor, or a foot loses contact with the ground or floor in a non-walking manner. Slips in docile animals are an early warning indicator of poor footing on the floors. If slipping is observed the monitor also needs to document the context as comments. Repetitive slipping documented at a similar location is grounds for the establishment to place the area under a Marks Meat Red Retain-Reject Tag to prevent further use of the area until the problem is fixed.
      2. A fall occurs when an animal loses an upright position suddenly in which a part of the body other than the limbs touches the ground. All falls must be investigated to determine the root cause so that appropriate corrective actions and preventive measures can be implemented and documented to prevent further falls. According to the NAMI Recommended Animal-Handling-Guidelines & Audit-Guide -June 2017, rev. 1, “If there is a high incidence of slips or falls and the animals are noted as excitable, then a temperament problem is the likely reason for the slips and falls. If there is a high incidence of slips and falls and the animals are noted as being docile, it is more likely that poor footing is the problem.” When the trained livestock handling employee notes on the Receiving Pen Card that an animal during unloading and driving to its pen is easily excitable or high-strung, the establishment, may elect to house the easily excitable or high-strung animal for more than 24 hours to allow the animal time to acclimate to the new and different environment at the establishment.
8. Stunning Boxes and Restraint Devices
   1. The cattle and large hog stunning box and restraint and the market hog, sheep, and goat stunning box and restraint are both constructed of steel pipe, square tubing, sheet steel, and expanded metal. The floor of the cattle and large hog stunning box is grooved concrete that slopes downward toward the slaughter floor. The floor of the market hog, sheep, and goat stunning box is the concrete floor of the landing area in then slaughter floor.
   2. The establishment’s Humane Handling Coordinator or trained Alternate Humane Handling Coordinators monitor and document the stunning boxes and restraints daily to ensure that they are in good repair, functioning correctly, and are free from any sharp or protruding objects that could injure animals on the Pre-operational SSOP Checklist.
9. Stunning Restraint By Species
   1. Sheep and Goats
      1. Primary Stunning Box
         1. The primary stunning box for sheep and goats is the new, inside stunning box which restrains one animal at a time. However, if the primary stunning box is unavailable due to damage that cannot be repaired immediately, the establishment will use the large, outside stunning box as the back-up stunning box for sheep and goats.
         2. The primary stunning box has a head restraint device with chin lift that is used to secure the most accurate stunning blow location and angle. However, if additional restrain is needed, the stunning employee may employ gentle hand manipulation of the sheep/goat heads or firmly attached horns to achieve adequate placement and angle of stun, as long as it does not produce discomfort or stress to the animal. Stunning employees must keep their hands safely away from the line of fire from the captive bolt device.
            1. Alternatively, the stunning employee may use gree alfalfa hay as a distraction device.
         3. If needed, a plastic hog driving board, used only inside, may be used to assist in the body restraint of sheep and goats as long as it does not cause discomfort or increase stress to the animal.
         4. If the sheep or goat vocalizes during handling, the stunning employee must immediately halt handling of the head or horns.
      2. Back-up Stunning Box
         1. When this stunning box is used a maximum of four (4) sheep or goats may be placed in the box at a time.
         2. Because this stunning box does not have head restraint for sheep and goats, the stunning employee may employ gentle hand manipulation of the sheep/goat heads or firmly attached horns to achieve adequate placement and angle of stun, as long as it does not produce discomfort or stress to the animal. Stunning employees must keep their hands safely away from the line of fire from the captive bolt device.
         3. If the sheep or goat vocalizes during handling, the stunning employee must immediately halt handling of the head or horns.
         4. Immediately after stunning occurs on each animal in the group, the stunning employee must conduct an immediate inspection on each animal in the stunning group to determine the consciousness status as in XI below, before proceeding to let the animals roll out onto the landing area.
         5. When the stunning on all animals in the group is done, the order in which the lamb were knocked must be noted, and then immediately communicated to the personnel inside the slaughter floor, in order to ensure the animals are shackled, hung and bled in the order they were stunned.
   2. Hogs
      1. Primary Stunning Box
         1. The primary stunning box for hogs less than 350 pounds is the new, inside stunning box which restrains one animal at a time. However, if the primary stunning box is unavailable due to damage that cannot be repaired immediately, the establishment will use the large, outside stunning box as the back-up stunning box for hogs under 350 pounds.
         2. The stunning employee may employ gentle hand manipulation of the hog’s head or ears to achieve adequate placement and angle of stun, as long as it does not produce discomfort or stress to the animal. Stunning employees must keep their hands safely away from the line of fire from the captive bolt device.
         3. If needed, a plastic hog driving board, used only inside, may be used to assist in the body restraint of hogs as long as it does not cause discomfort or increase stress to the animal. It is important to be patient and wait until proper angle and placement can be achieved before a stun attempt can be made.
         4. If there is any high-pitched vocalization is made, then handling must stop, and the animal be allowed to calm down before any further attempts are made.
      2. Back-up Stunning Box for Hogs under 350 pounds and Primary Stunning Box for Hogs at or over 350 pounds.
         1. Only one hog at a time is placed into this stunning box.
         2. Stunning personnel may climb into the stunning box with the hog and may employ the use of our outside use only, hog driving board in order to provide additional body restraint of the animal in position inside the stunning box.
         3. The stunning employee may employ gentle hand manipulation of the hog’s head or ears to achieve adequate placement and angle of stun, as long as it does not produce discomfort or stress to the animal. Stunning employees must keep their hands safely away from the line of fire from the captive bolt device.
         4. If needed, the outside use only plastic hog driving board may be used to assist in the body restraint of hogs as long as it does not cause discomfort or increase stress to the animal.
         5. It is important to be patient and wait until proper angle and placement can be achieved before a stun attempt can be made. If there is any high-pitched vocalization is made, then handling must stop, and the animal be allowed to calm down before any further attempts are made.
         6. When the outside stunning box is used for hogs the stunning employee must check each animal for unconsciousness status as in XI below, before proceeding to let the animal roll out onto the landing area.
   3. Cattle
      1. The large, outside stunning box is the cattle stunning box and cattle are stunned one at a time.
      2. The box has a hydraulic head restraint device with a chin support that is used to restrain the heads of all cattle to allow the stunning employee to secure the most accurate stunning blow location and angle.
         1. If additional restraint is needed, try distraction with green hay first, followed by use of a nylon cow halter to secure the head.
      3. The stunning employee may either stun the animal from our catwalk above the box, or from the front of the box, depending on the demeanor, size and position of the animal.
      4. Stunning should be done as quickly as possible after the animal is secured in the head restraint. However, if the animal is overly anxious/fractious immediately after being caught in the head restraint, then it is very important to be patient, and allow the beef to relax, in order to achieve the proper shot placement and angle. It is IMPERATIVE that no attempt is made to take a shot until the animal is relaxed enough to allow for the correct, measured placement and angle.
      5. Trained personnel must wait until the animal is in a steady position allowing for the correct placement and angle.
10. Stunning Device Selection and Ammunition Selection
    1. Captive bolt devices, firearm, and ammunition combinations used on each species and slaughter class. The establishment has and maintains two (2) CASH Special .25 caliber captive bolt pistol style devices (XD and XL), one (1) CASH Magnum Freeflight .25 caliber cylinder style captive bolt device, and one (1) Mossberg 510 Youth .410 gauge 2 ½ inch shotgun. The establishment purchases and maintains the following .25 caliber ammunition for the captive bolt devices: 3.0 grain (Blue) charges, 3.5 grain (Orange) charges, 4.0 grain (Black) charges, and 4.5 grain (Green) charges. The establishment purchases and maintains 2 ½ inch .410 gauge shotgun shells with a minimum 87.5 grain (1/5 oz.) Hollow Point Slug. We will not knowingly accept nor attempt to stun hogs greater than 1000 pounds or cattle over 2250 pounds. The Mossberg 510 Youth .410 gauge shotgun loaded with a 2 ½ inch shotgun shell containing a minimum 87.5 grain hollow point (1/5 oz.) slug can be used as the primary device on cattle and hogs if the stunning employee determines that its use would be the most effective and it is also the emergency back-up device for all cattle and hogs. When using the firearm, the muzzle should be from 1-2 feet from the head so that exiting gases do not blow the gun back into the shooter and cause injury to the shooter. If there is any question of effectiveness with the listed options, then we **WILL NOT** attempt to stun the animal, and will discuss options for release of the animal with FSIS inspection staff, including the SPHV. The following information will be posted on a laminated poster either in front of the outside stunning box or on the wall above the inside stunning box, as appropriate and during the stunning of the species listed.
       1. Hogs
          1. All hogs less than 350 pounds.
             1. Primary: CASH Special XD .25 caliber loaded with 3.5 grain (Orange) charge.
             2. Back-up: CASH Special XL .25 caliber loaded with 4.0 grain (Black) charge.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with 4.0 grain (Black) charge.
          2. All hogs, with or without dished faces, at or above 350 pounds and less than 500 pounds.
             1. Primary: CASH Special XL .25 caliber loaded with 4.0 grain (Black) charge.
             2. Back-up: CASH Special Magnum Freeflight .25 caliber loaded with 4.5 grain (Green) charge.
             3. On-Rail: CASH Special Magnum Freeflight .25 caliber loaded with 4.5 grain (Green) charge.
          3. All hogs (older, sows, boars, and/or with dished faces) at or over 500 pounds and less than 1000 pounds
             1. Primary: CASH Magnum Freeflight .25 caliber loaded with 4.5 grain (Green) charge.
             2. Back-up: Mossberg 510 Youth .410 gauge shotgun loaded with a 2 ½ inch shotgun shell containing a minimum 87.5 grain hollow point (1/5 oz.) slug.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with 4.5 grain (Green) charge.
       2. Sheep and Goats
          1. All polled lambs, all horned lambs, lambs with head anomalies, ewes, and all goats, except adult billys/bucks
             1. Primary: CASH Special XD .25 caliber loaded with a 3.0 grain (Blue) charge.
             2. Back-up: CASH Special XL .25 caliber loaded with a 3.5 grain (Orange) charge.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with a 3.5 grain (Orange) charge.
          2. All adult rams and adult billys/bucks
             1. Primary: CASH Special XD .25 caliber loaded with a 3.5 grain (Orange) charge.
             2. Back-up: CASH Special XL .25 caliber loaded with a 4.0 grain (Black) charge.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with a 4.0 gain (Black) charge.
       3. Cattle
          1. All cattle less than 1800 pounds and horned cattle less than 1800 pounds
             1. Primary: CASH Special XL .25 caliber loaded with a 4.0 grain (Black) charge.
             2. Back-up: CASH Magnum Freeflight .25 caliber loaded with a 4.5 grain (Green) charge.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with a 4.5 grain (Green) charge.
          2. All cattle 1800 pounds and over and less than 2250 pounds, including heavily horned cattle
             1. Primary: CASH Magnum Freeflight .25 caliber loaded with a 4.5 grain (Green) charge.
             2. Back-up: Mossberg 510 Youth .410 gauge shotgun loaded with a 2 ½ inch shotgun shell containing a minimum 87.5 grain hollow point (1/5 oz.) slug.
             3. On-Rail: CASH Magnum Freeflight .25 caliber loaded with 4.5 grain (Green) charge.
11. Stunning Device Anatomic Location Placement and Orientation Angle During Device Discharge
    1. Based upon literature research and email conversation with a recognized stunning authority, our humane handling consultant has determined that Marks Meat stunning employees are trained to use the following descriptions of the correct anatomic locations and orientation angles of both captive bolt devices and firearms stunning blows. See 2016 AVMA Guidelines for the Humane Slaughter of Animals, March 2, 2019 email from Dr. Jan K. Shearer, and 2016 Pork Checkoff On-Farm Euthanasia of Swine. The following information will be posted in picture form on a laminated poster either in front of the outside stunning box or on the wall above the inside stunning box, as appropriate and during the stunning of the species listed.
       1. For long faced (dairy breed) cattle or young stock, a point on the midline of the face that is halfway between the top of the poll and an imaginary line connecting the outside corners of the eyes will be used as the correct anatomic location for placement of the stunning device at discharge.
       2. For horned beef cattle, on the intersection of two imaginary lines, each drawn from the outside corner of the eye (lateral canthus) to the center of the base of the opposite horn will be used as the correct anatomic location for placement of the stunning device at discharge.
       3. For polled beef cattle and dairy/beef crossbreds, on the intersection of two imaginary lines, each drawn from the outside corner of the eye (lateral canthus) to the center of the base of where the opposite horn would be located if the animal was horned.
       4. The orientation angle of all stunning blows on all cattle is perpendicular to the frontal bone (forehead).
       5. There are three possible anatomic sites for gunshot and penetrating captive bolt application in hogs: frontal, tempo­ral (firearm only), and from behind the ear (firearm only) toward the opposite eye. The frontal site is in the center of the forehead slightly above (one-half of an inch) a line drawn between the eyes. The bolt or bullet should be directed toward the spinal canal. The temporal site is slightly anterior and below the ear and should be directed through the head to the identical location on the opposite side of the head
       6. The orientation angle for all stunning blows on all hogs without concave (dished faces) is perpendicular to the frontal bone (forehead).
       7. The orientation angle for all stunning blows on all hogs with concave (dished faces) is slightly less than perpendicular (approximately 60° instead of 90°).
       8. The anatomic location for placement of a cap­tive bolt or entry of a free bullet for polled sheep is on the top of the head on the midline. For heavily horned sheep, the optimal site is behind the poll.
       9. The orientation angle for all stunning blows on all sheep is to aim toward the angle of the jaw.
       10. The anatomic location for placement of a cap­tive bolt or entry of a free bullet for goats is approximately 1 ½ inches (3.8 cm) behind (toward the back of the head) an imaginary line connecting the outside corners of the eyes. Alternatively, use the intersection of two imaginary lines, each drawn from the outside corner of the eye to the center of the base of the opposite ear.
       11. The orientation angle for all stunning blows on all goats is to aim toward the back of the throat.
    2. The establishment’s employees will apply a security stun to any animal that is rendered immediately unconscious and is either beginning to return to consciousness or that the stunning employee feels more secure with a security stun.
    3. The establishment’s Humane Handling Coordinator or Alternate Humane Handling Coordinators will monitor and document the correctness of the placement and orientation of the stunning blow at discharge and the result of the stunning blow for every animal stunned on the Stunning Effectiveness Log.
12. Determination of Consciousness Status - The following information regarding the sings of consciousness, unconsciousness, beginning to return to consciousness, and Nystagmus/Gasping will be posted on a laminated poster either in front of the outside stunning box or on the wall above the inside stunning box, as appropriate and during the stunning of the species listed.
    1. The trained stunning employee will monitor every animal immediately after the stunning blow to verify that the animal is unconscious. If the determination is that the animal is unconscious but is exhibiting signs of beginning to return to consciousness, has nystagmus, or is gasping then the employee will immediately communicate this determination to the HHC or Alternate HHC and then immediately administer a security stun with the back-up captive bolt device, for all cattle, hogs, goats, and sheep. If the determination is that the animal has not been rendered unconscious, then immediate re-stunning with the immediately available loaded back-up captive bolt device shall be implemented to cause immediate unconsciousness and then immediately stop stunning and take control of the stunning box with a Marks Meat Red Retain-Reject Tag. If back-up device is ineffective in sheep or goats, then use loaded captive bolt device for use on the rail because any firearm used in this situation is too dangerous for the shooter and any bystanders. If the back-up captive bolt device is ineffective in cattle or hogs outside, use the emergency firearm.
    2. The shackling and hoisting employee will verify every animal for signs of consciousness immediately before shackling and hoisting. If the determination is that the animal is unconscious, then proceed with slaughter. If the determination is that the animal is beginning to return to consciousness, then this employee is to immediately administer an effective security knock with the immediately available loaded captive bolt device for use on the rail and then immediately stop stunning and take control of the stunning box with a Marks Meat Red Retain-Reject Tag. If the determination is that the animal has regained consciousness, then this employee is to immediately administer an effective stunning blow with the immediately available loaded captive bolt device for use on the rail and then immediately stop stunning and take control of the stunning box with a Marks Meat Red Retain-Reject Tag.
    3. The sticking and bleeding employee will verify every animal for signs of consciousness immediately before sticking and then after bleeding before any other cutting. If the determination is that the animal is unconscious, then proceed with slaughter. If the determination is that the animal is beginning to return to consciousness, then this employee is to immediately administer an effective security knock with the immediately available loaded captive bolt device for use on the rail and then immediately stop stunning and take control of the stunning box with a Marks Meat Red Retain-Reject Tag. If the determination is that the animal has regained consciousness, then this employee is to immediately administer an effective stunning blow with the immediately available loaded captive bolt device for use on the rail and then immediately stop stunning and take control of the stunning box with a Marks Meat Red Retain-Reject Tag.
    4. Signs of Consciousness
       1. Remains standing or fails to collapse (stiffened legs).
       2. Voluntary vocalization
       3. Spontaneous blinking (do not confuse with nystagmus)
       4. Eye pursuit to moving object
       5. Response to threat (menace) test - No touching
       6. Head or body righting reflex on the rail
    5. Signs of Beginning to Return to Consciousness - Situations where a security stun from a captive bolt device prevents return to sensibility as long as all indicators of definite consciousness are absent
       1. Weak corneal reflex
       2. Eyelash reflex
       3. Rhythmic breathing
    6. Signs of Definitely Unconscious – All of the signs below must be absent.
       1. Absence of corneal reflex to touch
       2. Absence of eyelash reflex to touch
       3. Absence of rhythmic breathing (do not confuse with gasping)
       4. Absence of response to threat (menace) test – No touching
       5. Tongue is hanging out and does not exhibit any tone (NOT curled)
    7. If the establishment’s stunning employee, Humane Handling Coordinator, or Alternate Humane Handling Coordinator observe any animal that was found not to have any of the signs of Definitely Unconscious as listed above, but does show nystagmus or is gasping like a fish out of water then the stunning employee will immediately administer an effective security stun. Literature review of available research shows that nystagmus and gasping can be either a sign of a dying brain OR a weak stun; therefore, the establishment will error on the side of caution and humane stunning.
    8. The establishment’s Humane Handling Coordinator or Alternate Humane Handling Coordinators will verify and document the consciousness status of every animal immediately after the stunning blow on the Stunning Effectiveness Log.
    9. The establishment’s Humane Handling Coordinator or Alternate Humane Handling Coordinators will verify and document the consciousness status of every animal immediately before shackling and during hoisting on the Stunning Effectiveness Log.
    10. The establishment’s Humane Handling Coordinator or Alternate Humane Handling Coordinators will verify and document the consciousness status of every animal immediately before sticking and during bleeding on the Stunning Effectiveness Log.
    11. If during any HHC or Alternate HHC verification of consciousness the determination is made that the animal is beginning to return to consciousness, has nystagmus, or is gasping, then the stunning employee is instructed to immediately administer an effective security stun and then the HHC or Alt HHC stops stunning, takes control of the stunning box with a Marks Meat Red Retain-Reject Tag, and begins a root cause investigation to determine, implement, and document the corrective action(s) and preventive measures.
    12. If during any HHC or Alternate HHC verification of consciousness the determination is made that the animal has returned to consciousness, then the stunning employee is instructed to immediately administer an effective stunning blow and then the HHAC or Alt HHC stops stunning, takes control of the stunning box with a Marks Meat Red Retain-Reject Tag, and begins a root cause investigation to determine, implement, and document the corrective action(s) and preventive measures.

**Corrective Actions:**

1. Corrective action for all non-stunning related issues will follow these procedures.
   * 1. If an animal is severely injured or in distress, we will immediately and humanely euthanize it.
     2. We will immediately halt or modify our operations when necessary to ensure all animals are handled humanely and not subject to injury or distress.
     3. We will make any necessary repairs to facilities at the earliest possible opportunity. If the area where the repair is needed cannot be repaired immediately then a Marks Meat Red Retain-Reject Tag will be placed in the area, thereby preventing its use until the repair is made.
     4. All corrective action(s) and preventive measure(s) are documented on the Humane Handling Corrective Action Log.
   1. Corrective action for all stunning related issues will follow these procedures.
      1. Immediately and effectively re-stun or apply a security stun to the animal. When any animal is beginning to return to consciousness, or was determined to be unconscious but had nystagmus or was gasping and a security stun is administered this is not a mis-stun, but because it could be an indicator of an underlying problem with stunning we will conduct corrective actions for this event just like it was a mis-stun.
      2. Immediately place a Marks Meat Red “HOLD” tag on the stunning box to prevent any further stunning until corrective actions have been completed and resolve the issue.
      3. All stunning, shackling/hoisting, and sticking/bleeding employees, floor managers, Humane Handling Coordinator and Alternates, and owners will conduct a root cause analysis.
      4. Then all stunning, shackling/hoisting, and sticking/bleeding employees, floor managers, Humane Handling Coordinator and Alternates, and owners will use the root cause analysis to determine the actual corrective actions and preventive measures to be implemented, including all necessary monitoring/verification procedures and recordkeeping forms.
      5. All information gathered and determined in the steps above is documented on the Humane Handling Corrective Action Log - Mis-Stuns.
      6. Once the HHC, alternate HHC, and the owners determine that the documented corrective actions and preventive measures are acceptable, then the Marks Meat Red Retain-Reject Tag will be removed from the stunning/knocking box and stunning will continue.
      7. If at any time during this process there are animals in lead-up alleyway or driveways outside of the holding pens, those animals will be humanely returned to an appropriate holding pen with access to water.

**Captive Bolt Device Testing and Maintenance:**

1. See manufacturer’s device instruction manual(s) for cleaning and maintenance of CASH captive bolt devices.
2. See Karl Schermer instruction manual for daily pre-operational instructions for testing using wood/cardboard.
3. See firearm manufacturer’s instruction manual for safe usage and cleaning instructions.
4. All devices will be cleaned daily per the manufacturer’s instructions, whether they were used or not. All captive bolt devices will be cleaned weekly per the manufacturer’s instructions, whether they were used or not. Daily and weekly cleaning is documented on the Stunning Device Cleaning and Parts Replacement Log.
5. All captive bolt devices will be tested daily prior to slaughter operations and after repair/replacement of parts, using the instructions provided in the Karl Schermer manual. The penetration depth will be recorded on the Stunning Device Daily Pre-Operational Testing Log. The minimum penetration depth cut-off was determined by the following method.
   1. All three (3) devices are cleaned per the manufacturer’s daily and weekly cleaning instructions after having met or exceeded the minimum velocity requirement in VI below.
   2. Fire all three (3) devices loaded with the 3.0 grain (Blue) cartridge five (5) times each.
   3. Measure the depth of penetration of each group of five (5) shots and calculate the depth of penetration by device.
   4. Subtract 5% from the average for each device to determine the minimum penetration depth cut-off for each device.
6. All captive bolt devices will be tested once weekly, preferably at the end of each week of slaughter operations, via the bolt velocity tester that the establishment has access to at another Northern Oregon USDA establishment. The results will be recorded on the Weekly Bolt Velocity Test Results Log. All devices will be cleaned per the daily cleaning instructions after this testing and documented as in IV above in this section. The velocities of each captive bolt device will be tested using the 3.0 grain (Blue) cartridge, which is weakest cartridge we use in any of the three (3) devices. The manufacturer of all three captive bolt devices we use, Accles & Shelvoke, does not currently produce and market a device bolt velocity tester and does not provide recommended minimum velocity cut-offs by device and cartridge. The minimum velocity cut-off for an acceptable device was determined by the following method.
   1. All three (3) devices are cleaned per the manufacturer’s daily and weekly cleaning prior to testing.
   2. Fire all three (3) devices loaded with the 3.0 grain (Blue) cartridge five (5) times each using the bolt velocity tester at another Northern Oregon USDA establishment.
   3. Calculate the average velocity for each device and subtract 5% to get the minimum velocity cut-off for each device.
7. All devices and their parts will be inspected carefully by the employee or owner conducting daily and/or weekly cleaning using the instructions in the manufacturer’s manual to determine if any of the parts need replacement or if the device needs to be sent to a factory authorized service center for repair. All parts replaced or factory authorized repairs will be documented per occurrence on the Stunning Device Parts Replacement or Device Repair Log.

**Recordkeeping Documents:**

1. Receiving Pen Card
2. Weekly Pen Checklist
3. Fresh Water Log
4. Pre-operational SSOP Checklist
5. Stunning Effectiveness Log
6. Humane Handling Corrective Action Log
7. Humane Handling Corrective Action Log - Mis-Stuns
8. Marks Meat Red Retain-Reject Tag
9. Stunning Device Daily Pre-Operational Testing Log
10. Stunning Device Cleaning and Parts Replacement Log
11. Weekly Bolt Velocity Test Results Log

**Supporting Documentation:**

1. US Code Title 7 Chapter 48, 2015 – Humane Methods of Slaughter Act
2. Title 9 CFR Part 313, 2018 electronic version.
3. FSIS Directive 6100.1, rev. 1
4. FSIS Directive 6900.2, rev. 2
5. FSIS Livestock Slaughter Inspection Training, Humane Handling and GCP, 2017.
6. FSIS Compliance Guide Systematic Approach to Handling Livestock, October 2013.
7. FSIS Humane Handling Guidebook, 2015.
8. askFSIS Disposition of Cattle That Become Entrapped After Antemortem Inspection, January 30, 2019.
9. NAMI Recommended Animal Handling & Audit Guide, June 2017.
10. Small Plant Common Humane Handling Challenges and Solutions by Erika Voogd, 2014 NAMI Animal Handling Conference.
11. Recommended Trucking Practices by Dr. Temple Grandin, updated November 2013, available online from [www.grandin.com](http://www.grandin.com).
12. Understanding Flight Zone and Point of Balance for Low Stress Handling of Cattle, Sheep, and Pigs by Dr. Temple Grandin, updated December 2018, available online from [www.grandin.com](http://www.grandin.com).
13. Using Prods and Persuaders Properly to Handle Cattle, Pigs, and Sheep, by Dr. Temple Grandin, updated October 2018, available online from [www.grandin.com](http://www.grandin.com).
14. Assessment of Temperament in Cattle and Its Effect on Weight Gain and Meat Quality and Other Research, by Dr. Temple Grandin, updated May 2018, available online from [www.grandin.com](http://www.grandin.com).
15. Handling Cattle, Pigs, and Sheep at Meat Plants, 2nd Edition, by Dr. Temple Grandin, presented at 2017 NAMI Animal Care and Handling Conference, available online at <https://www.meatinstitute.org/index.php?ht=d/sp/i/218/pid/218>.
16. Video: Proper Use Of Livestock Driving Tools, by Dr. Temple Grandin, March 24, 2014, available online at <https://www.youtube.com/watch?v=d8mdhUqsi9s>.
17. Multiple Short Video Clips Illustrating Poor Pig Handling and Low Stress Pig Handling by Nancy Lidster in the Archives of her blogsite, [www.dnlfarmsltd.com](http://www.dnlfarmsltd.com), available as of March 12, 2019.
18. Instruction Manuals for CASH Special captive bolt devices and for CASH Magnum FreeFlight captive bolt device, available online at [www.accles-shelvoke.com](http://www.accles-shelvoke.com).
19. Testing Manual for Captive Bolt Devices, available online at [www.karl-schermer.de](http://www.karl-schermer.de).
20. Captive Bolt Guns & Electrical Stunners, Chuck Bildstein, Product Specialist at Bunzl, presented at 2017 NAMI Animal Care and Handling Conference, available online at <https://www.meatinstitute.org/index.php?ht=d/sp/i/218/pid/218>.
21. Ballistic Testing of Select 410 slugs, by Abram Villarreal, March 11, 2019, available online at <https://mcb-homis.com/ballistic-testing-of-select-410-slugs/>.
22. Bison - Annex A - Species-Specific Stunning Guidelines - Red Meat Species - Food - Canadian Food Inspection Agency, available online at <http://www.inspection.gc.ca/food/food-specific-requirements-and-guidance/meat-products-and-food-animals/guidelines-for-stunning-techniques-of-mammalian-fo/eng/1525119279994/1525119280696?chap=4>.
23. 2013 AVMA Animal Euthanasia Guidelines, available online at <https://www.avma.org/KB/Policies/Pages/Euthanasia-Guidelines.aspx>.
24. 2016 AVMA Guidelines for the Humane Slaughter of Animals, available online at <https://www.avma.org/KB/Policies/Pages/Guidelines-Humane-Slaughter-Animals.aspx>.
25. J K Shearer Email of Correct Anatomic Locations for Stunning Cattle, March 2, 2019, Animals 2018, 8, 57.
26. 2016 Pork Checkoff On Farm Euthanasia of Swine – Recommendations for the Producer, available online at <https://library.pork.org/media//>.
27. Euthanasia of Cattle- Practical Considerations and Application, Shearer, 2018,
28. Guidance for Euthanasia of Non-ambulatory Livestock at Meat Plants, by Erika Voogd, available online at <http://www.voogdconsulting.com/prodandstunninginfo.html>.
29. Recommended Captive Bolt Stunning Techniques for Cattle by Dr. Temple Grandin, updated October 2014, available online from [www.grandin.com](http://www.grandin.com).
30. Captive Bolt Stunning of Livestock, 2016 and Humane Killing Using Firearms, 2016, both by Humane Slaughter Association, available online at <https://www.hsa.org.uk/publications/online-guides>.
31. How to Determine Insensibility (Unconsciousness) in Cattle, Pigs, and Sheep in Slaughter Plants by Dr. Temple Grandin, updated June 2017, available online from [www.grandin.com](http://www.grandin.com).
32. Determining Insensibility and Unconsciousness in Cattle, Pigs, and Sheep by Dr. Temple Grandin, presented at 2017 NAMI Animal Care and Handling Conference, available online at <https://www.meatinstitute.org/index.php?ht=d/sp/i/218/pid/218>.
33. FSIS PHV Refresher Training: Consciousness and Stunning, 2017, available online at <https://www.fsis.usda.gov/wps/portal/fsis/topics/regulatory-compliance/humane-handling>.

**Training:**

1. All training for this program will be conducted as follows and will utilize all supporting documentation as appropriate. Where possible and when necessary, printed documents will be provided in Spanish as well as English. During training, the establishment’s slaughter floor manager, fluent in both Spanish and English, will provide translation as needed. All slaughter floor employees and owners will receive training in all aspects of the RSAHH program, livestock handling facilities, stunning restraint devices, stunning locations, stunning devices and ammunition combinations, and corrective actions prior to resumption of inspection. All slaughter floor employees and owners will receive refresher training on stunning restraint, stunning locations, stunning devices and ammunition combinations, and corrective actions every 90 days for the first (1st) year after resumption of slaughter, then annually thereafter. All new slaughter floor employees or slaughter management will receive the same pre-resumption training before working on the slaughter floor. Training will be provided when needed for changes to the RSAHH program, livestock handling facilities, stunning restraint, stunning devices and ammunition combinations, stunning locations, and corrective actions; and at least once annually.
   1. All training documents are maintained in printed form with this program and in electronic form on the establishment’s computer and are provided in training either as printed documents or as projected presentations of the electronic form.
   2. All training videos are available in electronic form on the establishment’s computer.
   3. All training from written documents, projected documents, and videos will be assessed by a written quiz containing 10-15 true/false, multiple choice, short answer/drawing location questions. Quizzes will be provided in Spanish when necessary. Separate quizzes will be given for humane handling of livestock and for humane slaughter of livestock. Dr. Henley will grade all quizzes from pre-resumption training and will provide the Alternate Humane Handling Coordinators the answers for all subsequent trainings during his tenure as Interim Humane Handling Coordinator. After grading, the HHC, Alternate HHCs, and employees will have a group discussion regarding the results and correct answers.
   4. All cadaver head training will include a written description of the heads used by species and slaughter class; the captive bolt devices, firearms, and ammunition combinations used on each species by slaughter class during the training, photographic evidence of the placement of each shot by employee/owner, and splitting of each skull to probe the pathway of the projectile for each shot with photographic evidence.
   5. Mock drills using scenarios that occurred historically at this establishment or that Dr. Henley has observed previously will also be conducted prior to resumption of inspection, then as needed for changes as included in I above in this section, and annually.

**Documents Maintained On File and Retention:**

1. This program and all supporting documentation are maintained on file until revision dictates that the revised program and revised supporting documentation are placed on file. Previous versions are maintained in an archival file until they are replaced in the archival file by newer versions.
2. All completed recordkeeping documents are maintained on file for a minimum of two years and up to a maximum that is defined by our humane handling certification body.