

ABSTRACT OF THE THESIS OF

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This study was undertaken to design a Farm Labor camp that would satisfy all federal, state and local regulations which apply to the siting, construction, and maintenance of camps. The regulations applicable to Farm Labor Camps are also identified. A design of a Labor Camp with a central building for washing, cooking and dining and temporary structures for sleeping purposes surrounding it is proposed. A cost estimate for construction of the camp is provided. The study concluded that a camp could be constructed at cost of \$15,284.19 that would benefit the employee by providing safe and hygienic living conditions and the employer by stabilizing his labor supply and reducing the possibility of fines.

FARM LABOR CAMP DESIGN  
IN RURAL MARION COUNTY

by

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FARM LABOR CAMP DESIGN  
IN RURAL MARION COUNTY

INTRODUCTION

The deficient housing of migrant farm workers is an issue that has been receiving media attention and public concern in Oregon in varying degrees for a number of years. (2)(4) Migrant farm workers are employed on a seasonal basis in Oregon agriculture, mainly for the harvesting of labor intensive crops. The pay is generally low. (3) A minimum wage of \$3.35 per hour is considered normal to high. At this wage rate, workers find it difficult to provide themselves with housing. Additional factors in housing of migrant farm workers are the distance from the living quarters to the work site, and limited housing available in rural areas.

Employer solutions to the problem of worker housing have taken a number of alternate forms. The employers have provided housing on the farm in the form of labor camps. The employers have contracted with other individuals to provide labor and the contractors have taken responsibility for housing for the workers. The employers have ignored the problem and simply let the workers find their own housing.

This study will focus on migrant farm worker housing in Marion county, Oregon. Marion county has the highest demand for migrant labor of any of the counties in Oregon. (4) Marion county also had, until March 1989, no zoning code provisions for labor camps to be built on rural property. The combination of a high population of farm workers and no provisions for on-farm migrant labor housing resulted in living conditions lacking basic necessities from a public health perspective for many of the workers.(5)

#### PHILOSOPHICAL PERSPECTIVES

Labor camp design and operation in this study will be approached as an Industrial Hygiene issue, concerned with worker health in temporary housing provided by an employer. The broader topics of worker social and economic integration with the community, educational opportunities, and off-season employment will not be included. The housing proposed will address only the topics of safety and health. While other concerns of recreation, aesthetics, and tenant satisfaction are significant to worker welfare, they will not be considered. The topic of Labor Camps is taken literally to mean temporary quarters to meet the housing needs of workers.

## PUBLIC HEALTH ASPECTS OF HOUSING

Housing conditions have a direct relationship to health. Crowded conditions with inadequate ventilation contribute to an increased rate of disease. The type of diseases that are at increased risk are Tuberculosis and other respiratory diseases.(6) Water quality in relationship to housing is also vital. It has been estimated that 80% of all disease world-wide is related to drinking water quality. (7) Adequate sanitation facilities for bathing, food preparation and waste disposal are necessary to avoid elevated risk of disease.

### OBJECTIVES OF THE STUDY

The objective of the study was to determine the minimal cost at which a labor camp can be constructed in Marion County, Oregon while meeting the following criteria:

- 1) To satisfy all applicable county, state and federal regulations.
- 2) To be suitable for occupancy from June through September.
- 3) To be used to house farm laborers.

- 4) To have a housing capacity of 44 occupants or less, which would be the labor force estimated to be sufficient for most Marion county farms.

#### RATIONALE FOR THE STUDY

Farm Labor Camps that consider the welfare of the workers and comply with regulations which apply to their construction and operation are necessary in Marion County due to the high population of migrant farm workers. As of June 1988, the housing available to farm workers was inadequate in both number of available beds and in construction. According to Bob Krohn, the executive director of the Marion County Housing Authority, there were 24,734 migrant farm laborers who needed housing in the county and there were 29 registered farm labor camps available with bed capacity for 999 workers. (8) The Accident Prevention Division conducted inspections of the farm labor camps in Marion County. The 36 inspections done covered registered and unregistered camps and resulted in \$22,150.00 in fines levied (9), and 3 camps were closed (10) due to imminent danger to the occupants. Imminent danger is defined as conditions which exist that could be reasonably expected to cause death or serious physical harm.

Growers and farmers who employ the migrant workers have expressed frustration and confusion when dealing with the numerous regulations and agencies that have jurisdiction over farm labor camps. The farmers have been quoted as saying that they could use the camp space but are not willing to try to deal with the bureaucratic aspects involved. (11)

This study will address the questions about regulatory authority and rules concerning labor camps and propose a solution to the problem of housing farm labor. It will propose a camp design that will be in compliance with all government regulations as of April 1989. The study will also provide a synopsis of the government agencies which have jurisdiction over farm labor camps.

#### REASONS FOR ADEQUATE CAMPS

Four reasons are able be given for the development of adequate farm labor camps:

- 1) Adequate camps reduce disease rates in farm worker populations. The typical migrant farm worker relies on clinics which are supported by federal grants and private donations to provide health care. Prevalent communicable diseases associated with housing found at these clinics are

tuberculosis, hepatitis and syphilis.(36) Adequate camps can influence the rates of two of these diseases directly and syphilis may be reduced through better worker education. Adequate camps might reduce the rates of these diseases thereby freeing up clinic resources for other health issues, and reducing costs to the community.

2) Adequate camps would reduce community upset which was prevalent during the summer of 1988. Community upset was evident in the many news articles in the Salem and Portland newspapers and television stations. Community members were upset with the living conditions found among migrant workers. Media attention requires time and resources of the public officials involved. Public officials have the responsibility of informing interested parties of their actions but the time required for informing the media takes away from their other duties.

3) Adequate camps would improve employee-employer relations. Employees would be more likely to return to the same employer if camp conditions were good. Farm labor is like other types of labor consisting of good and poor workers. Employers would be more likely to attract and retain the good workers if adequate living conditions were provided.

4) Adequate camps attract less attention from government agencies responsible for enforcing regulations pertaining to living conditions. The government attention can in some cases take the form of interrupted production due to the closure of the camp or expense in the form of civil penalties.

This study will propose a design for a camp which will be an adequate camp. The proposed camp will meet regulatory requirements and a cost estimate will be provided. Dollar value on some of the benefits from an adequate camp cannot be provided. The value from adequate camps in worker relations, community relations, and efficient operation to the farm would appeal to the responsible producers. The benefit of eliminating fines and litigation from poor camp operations would appeal to all producers.

## LITERATURE REVIEW

### HISTORY

In 1935 a program was designed by the Farm Security Administration (FSA) to provide adequate housing for migrant farm workers. The country was suffering the aftermath of the Depression. Many farm families had been uprooted due to loss of their property and had joined the forces of migrant farm

workers. The FSA was assigned the task of reaching a portion of the migrant population.

From 1935-1938 FSA camp program attempted to provide temporary housing for migrant agricultural workers. Ninety five camps were ultimately built in 16 states serving 121 cities with a capacity of nearly 20,000 families.

The first standard camps were wooden tent platforms around central sanitary facilities. These gave way to one room structures made of wood or metal. The farm labor camp program continued under federal and occupant support until 1946 when liquidation of the camps was ordered. It was not until 1956 that the last of the camps were turned over to local authorities.

Various permanent camps were proposed and constructed in Washington and California using labor housing grants and loans provided from Farmers Home Administration. These camps followed the pattern of low income housing with family and bachelor units being built by grower organizations. The tenants were charged monthly rent plus utilities. (12)

## CURRENT LEGISLATION

Legislation proposed on the federal level which impacted farm labor housing was the passage of the Occupational Safety and Health Act in 1970. 1910.142 of OSH Act covers temporary labor camps and defines requirements for construction, operation, maintenance and reporting of accidents. 1910.142 was included in the OSH Act because temporary labor camps were interpreted as part of the employers responsibility in providing a safe and healthful workplace under the tenants of the act. The effect of this law put the burden of providing adequate housing on the employer. Previous rules relied on the good will or social conscience of the employers and many of the provided camps fell short of the minimum requirements for safe and healthful living conditions. (17)

In 1973 Oregon passed the Oregon Safe Employment Act, ORS Chapter 654. This act is the state plan for enforcement of the federal Occupational Safety and Health Act. The state of Oregon assumed the responsibility for development and enforcement of occupational safety and health standards. The standards included Division 147-Labor Camps, which was approved September 15, 1982 in its present form. The Accident Prevention Division operates as the enforcement and

consultative organization for these standards in the Department of Insurance and Finance. (16)

Employment and Training Administration also promulgated rule 20 CFR 654 sub-part E-Housing for Agricultural Workers. This rule parallels the OSHA rule on temporary housing but is enforced by the Department of Labor, Wage and Hour Division.

#### REGULATORY AGENCIES

In the state of Oregon, there are three state agencies which inspect farm labor camps: Accident Prevention Division, Department of Human Resources-Employment Division, and Bureau of Labor and Industries-Wage and Hour Division. The Federal Department of Labor, Wage and Hour Division also may conduct Labor Camp inspections, generally in relation to wage claims in the state of Oregon. The three state agencies can inspect camps with the result of the inspection being advisory in nature. Inspections conducted by the Accident Prevention Division, however, are also enforcement inspections, enforcing compliance with the Oregon Safe Employment Act. Enforcement inspections may be accompanied by civil penalties and will be assigned mandatory correction times for any identified deficiencies found.(15) The U.S.

Department of Labor-Wage and Hour Division also can conduct enforcement inspections, enforcing the Migrant and Seasonal Agricultural Workers Protection Act. The code under which the inspection is done is Federal OSHA 1910.142 if the housing was built prior to April 1980 or 20 CFR 654 if built after April 1980. In practice, the compliance officer doing the investigation for the Federal Department of Labor gives the camp operator a choice of which standard will be used.

(18)

The Oregon Land Conservation and Development Commission also has indirect authority over the placement of labor camps. The LCDC requires each county to develop a plan for land use and development. The LCDC addresses development of labor camps and specifically allows them to be established for seasonal use in exclusive farm use zones. (13)

Labor Camps cannot be constructed if building codes and zoning regulations from county agencies prohibit them. Marion county zoning regulations prohibited the construction of new farm labor camps until March 15, 1989. Ordinance number 820, signed and finalized on March 15, 1989 by the Board of Commissioners, which permits construction of seasonal farm housing as Limited Permitted Use. (14)

## SEASONAL AGRICULTURE IN MARION COUNTY

Marion County has the greatest demand for seasonal agricultural workers of all counties in Oregon because of the extent and type of agriculture in the county. Marion county ranked first in total farm income of all the counties in Oregon from 1976 to 1982, the years for which data were readily available. Agriculture is a major source of income in the county. (19) The agriculture in the county relies heavily on hand labor for harvesting and other activities due to the types of crops grown. These crops include: tree fruits and nuts, small fruits and berries, vegetable crops, and ornamental horticulture. In 1986, Marion county had an estimated 51,378 acres planted with these crops, the largest of any county in Oregon. Figure 1 shows the labor requirements for some of the crops found in Marion county and the month needed. (20)

Figure 1 LABOR REQUIREMENTS BY MONTH FOR SELECTED CROPS

CROP	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
STRAWBERRIES			XXXX	X				
CHERRIES			XX	XXX				
CANEERRIES				XXXX	XXXX	XX		
PRUNES						XXX		
FILBERTS						XX	XX	
WALNUTS							XX	XXX
BUSH BEANS				XX	XXXX	X		
APPLES						XXXX		
PEARS					XXXX			
ONIONS					XX	X		
CUCUMBERS				XX	XXXX	XXX		
MINT					XXXX			
PEACHES					XXX	XXX		
HOPS	XXXX	X	XXXX		XX	XX		
BROCCLI/CAULI			XX	XX		XXXX	XX	
GRAPES						XX	XX	
ORN. HORT.	XXXX							

(20)

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## CASE STUDIES

The selected case studies demonstrate the diversity of labor camp conditions and locations found in Marion county. The case studies are inspection reports done by the author in August of 1988 while employed as an Occupational Health

Specialist by the Accident Prevention Division. Labor camps are not always located on farm property, and they exist in a variety of structures. The two main factors the residents of these camps had in common were that they were employed as farm workers and they had been told by their employers that they could reside in the camp.

#### CASE 1 A CAMP ON A FARM

The camp was in rural Marion county. The structure was a two story barracks-like building owned by a farmer but operated by a labor contractor. The compliance officer could not determine if rent was charged to the 67 workers. The workers slept on bunk beds with mattresses. The cooking was done by employees of the contractor in the kitchen adjacent to a dining room. The workers were charged \$50.00 a month for meals. Showers, washing facilities, and privies were provided and in a clean condition. Four violations were found, none of which was serious. The problems found in this camp related to overpopulation in the camp, not enough floor space per occupant and not enough washing or shower facilities. (23)

## CASE 2 A CAMP IN THE CITY

The camp was a two-story duplex house in Woodburn. The controlling party was a labor contractor providing housing for a fee to his workers. The bottom unit of the duplex was rented to a family not employed by the contractor and not included in the inspection. The upper unit of the duplex was rented to workers. There were fifteen people living in the two bedroom upper unit. There were three more workers sleeping in a truck in the backyard. One bathtub was provided as was one stove, one toilet, one refrigerator, three mattresses and one bed. Thirteen violations of Division 147-Labor Camps were found, five of which were of a serious nature (see Appendix B). (21)

## CASE 3 A CAMP IN THE COUNTRY

The site was in rural Marion county. The owner provided housing for employees picking cane berries on the property. He charged no money for rent and allowed other workers not employed by him, to stay there at no charge. The buildings consisted of two three-sided sheds and one house. The camp had no water, no cooking facilities, no washing or bathing facilities, and no collection of solid waste. One privy was

provided but it was so full and soiled that the people living there elected to use the bushes instead. The house was structurally unsound with rotten and weak flooring. The population of the camp was estimated at 50, with twelve people sleeping in the house and the rest sleeping in the sheds and outside. There were twenty-one violations of Division 147-Labor Camps found, thirteen of which were of a serious nature (see Appendix B). (22) After the inspection was completed, the camp was vacated and the house demolished by the owner.

#### CAMP DESIGN

##### CRITERIA FOR THE CAMP

The camp proposed will be designed to meet certain criteria:

- 1) The camp will be appropriate to be located in rural Marion county.
- 2) The camp will be designed to house seasonally employed agricultural workers.
- 3) The camp will be occupied for a period of four months or less, from June through September.

- 4) Occupancy of the camp will be limited to 44 people, which would be a labor force estimated to be sufficient for most Marion county farms.
- 5) Construction and management of the camp will comply with Marion county zoning regulations and Oregon Safe Employment Act regulations.
- 6) The owner of the camp will be providing employment to the occupants.

#### FACILITIES OF THE CAMP

The camp will be comprised of a central building which contains shower facilities, cooking and food storage facilities, and dining facilities. Sleeping quarters will be wood frame tents on platforms elevated one foot from the ground as required by Division 147. Toilet facilities will be chemical toilets provided by a contractor. Solid waste disposal will be provided by a contractor as will a drop box. Water will be supplied by an existing well and a drain field for grey water will be installed. A gravelled parking area for six private vehicles will be provided as required by Ordinance 820.

## CENTRAL BUILDING

The purpose of the central building is to provide a structure containing showering, washing, cooking, food storage, and dining facilities. The size of the central building will be 20 by 30 feet, and will be built on a concrete slab. The type of construction will be a wood frame covered with metal siding and roofing. The building will be provided with two exterior man doors and one eight-foot sliding door. The building will be supplied with electricity, plumbing, and a septic system. For descriptive purposes, the building will be oriented with the two twenty-foot ends being east and west and the thirty-foot sides will be north and south. (See Figure 2)

## CONSTRUCTION REQUIREMENTS

### DRAIN SYSTEM AND PLUMBING

Drain plumbing will be installed prior to the pouring of the concrete slab. Three floor drains will be installed, one fifteen feet from the west wall and seven and one half feet from the south wall. Two other floor drains for the showers are located two and one-half feet from the north

wall and four- and twenty-seven feet, respectively, from the west wall. The sink drains for the kitchen sink, located on the center of the south wall, and two hand washing sinks, located in the changing rooms five feet from the north wall, will tie into the drain plumbing servicing the floor drains. The drain system will connect to the septic tank and drain field located 20 feet from the center of the north wall of the building.

Water supply plumbing may be installed along the west wall, five feet from the north wall. When installing the supply plumbing pipe, the designer must keep in mind the possible need to leave space for a chlorinator. If the water supply is from a sealed domestic well, a chlorinator may not be needed. If the water supply is from a unsealed irrigation well, a chlorinator will be necessary to assure acceptable water quality.

#### CONCRETE SLAB

The concrete slab will be poured and leveled to accommodate proper floor drainage and footing. Floor areas five feet from the north wall should be rough broom finish for adequate footing when wet and sloped to the two shower drains. The central floor of the building should be smooth

finish for easier cleaning and sloped to the central floor drain. After appropriate curing time, the concrete will be sealed.

#### BUILDING EXTERIOR

The building will be a wood frame covered with metal siding. The roof will be metal with one and one half inches of insulation to prevent condensation as required by Marion county building code. Fiberglass panels will be installed along the top of the walls to emit light. A ventilation fan with louvered covering will be installed eight feet from the south east corner on the south wall to vent cooking odors and heat. Two man doors will be installed to provide fire exits, one in the center of the east wall and one on the west wall three feet from the south west corner. One eight foot wide sliding door will be installed on the west wall six feet from the south-west corner which opens to the north.

#### BUILDING INTERIOR

The central building will have facilities for showering, hand washing, cooking, food storage, and dining.

Partition walls will be constructed to provide separation for washing and showering and changing clothes. Food preparation will be done with gas hotplates on a counter. The food storage will be built-in shelves and refrigerators. The dining area in the center of the building will be provided with tables and benches.

Two showering and changing rooms will be built on the north side of the building. The dimensions of the rooms are five by nine feet for the women's and five by sixteen feet for the men's. The rooms differ in size because this paper assumes the majority of the camp occupants will be male. The rooms are separated by a three-foot corridor. Each room has a ceiling. A two foot unenclosed space on the west end of the building is provided for the placement of two 52 gallon water heaters.

Entrance to the rooms are by doors placed on the corridor wall. The doors open to a five by six foot changing room for women and a five by nine foot changing room for men. The changing rooms are supplied with benches along the north wall and a sink and mirror centered on the south wall. Hooks are mounted on the north wall for hanging clothes. The changing rooms are separated from the shower areas by a three-foot wall which extends to the ceiling originating on the north wall.

The shower areas have three shower heads, which satisfy the requirements of Division 147 for 45 workers, on the south wall in the men's side and two on the west wall of the women's which satisfy the requirements for 30 workers. The shower area walls will be covered with vinyl material to prevent water damage to the walls and provide easy cleaning as required by Division 147. The shower rooms will also have a ceiling vent and fan to remove steam. The lighting in both rooms will be done with recessed ceiling lights and fiberglass panels on the exterior wall. Shower and changing room walls and ceilings will be sheetrocked with green board, taped and painted with waterproof paint. The floor will be sealed concrete. Plumbing will be supplied with pipes running along the interior of the south wall and the previously installed drain system.

Cooking and food storage will be provided on the south wall of the building. Unless otherwise noted, all the stipulations for construction included are required under Division 147. Cooking facilities will be three three-burner gas hot plates placed on a metal covered counter. Gas for the hotplates will be supplied by two twenty-five gallon propane bottles stored on the exterior south side of the building. Gas cooking is not required but seems to be most popular and durable. The two-foot wide counter will extend

along the south wall starting on the east wall and terminating six feet from the west wall. Smooth finish, painted shelving will be built under the counter for food storage. The counter will be covered with smooth metal and have an eighteen-inch metal covered backsplash. A sink for food preparation and handwashing will be centered on the south wall. Plumbing for the sink will run along the interior of the west and south walls with enough elevation for clearance of the doors on the west wall. The sink will drain into the previously installed drain system. The counter space west of the sink will be left open for food preparation. The six feet on the south wall not occupied by counter space will have two refrigerators placed there as will six feet of the east wall on the south corner.

Dining facilities are tables and benches arranged in the 437 square feet of unoccupied floor space in the center of the building. The tables should be smooth finish and painted with a durable gloss finish or covered with formica. A six foot table with two benches and two chairs will provide seating for eight people. Four tables, eight benches and eight chairs will provide adequate seating for the camp occupants.

Electrical service is supplied to the central building and the other camp facilities by a service panel located in

the central building. Electrical receptacles need to be supplied to the refrigerators. Electrical receptacles will be supplied at two locations on the counter for use of electrical applicancies. Electrical receptacles will be supplied on the east and west wall for occupant use. Electrical receptacles in the changing rooms should be of the Ground Fault Receptacle type to prevent electrical hazards. Lighting of the central building will be done with three rows of three two-bulb fluorescent lights suspended from the rafters. Two exterior quartz lights will be hung, one above each man door outside.

#### SLEEPING QUARTERS

Sleeping quarters will be plywood structures roofed with canvas over a wood frame. The floor space of the structures is 160 feet. Temporary structures of less than 200 square feet are not subject to Marion county building codes but are subject to Division 147 and MSPA rules. The sleeping quarters will contain bunks, chairs, tables, and clothes storage. The sleeping quarters will be supplied with an electric light and receptacle on an outside service post.

## CONSTRUCTION REQUIREMENTS

### STRUCTURE

The sleeping quarters will be a plywood floor elevated from the ground on concrete piers. The dimensions of the structure will be 10 by 16 feet giving 160 square feet floor space which satisfies the space requirement for four unrelated occupants. The plywood floor will be painted with epoxy paint and have a smooth finish as required. Plywood walls will be constructed around the perimeter of the floor and painted with alkyd paint for weather durability. The wall height will be four feet on the sixteen-foot sides, and the ends will be totally covered with plywood. Framework for support of the canvas roof will be constructed of 2x4 lumber and allow a ceiling height of seven feet for at least half the floor space, as required. There will be a door at either end of the structure with a screen to provide adequate ventilation and the necessary fire exit. The roof will be canvas, ten-ounce single fill and secured to the plywood walls with grommets.

## FURNISHINGS

The sleeping quarters will be furnished with two bunk beds, four mattresses, a table and two chairs. Shelves will be built on one wall for storage of clothes and suitcases. Four foot lockers can be built along one of the walls, using the floor as a base and the wall as the back.

## ELECTRICAL SERVICE

Electrical service will be provided by an exterior electrical post. Electricity will be supplied from the central building with the wires running underground to the electrical posts. The post will be built into the plywood wall. There will be a duplex electrical receptacle with a weather proof cover attached to the post to service the tent as required by Division 147. There will also be an exterior light fixture provided with the required switch. The light will be attached to the central post supporting the canvas roof with enough clearance to avoid contact with the canvas roof.

## CONTRACTED SERVICES

Contracted services will include solid waste disposal and chemical privie rental and service. These services are available throughout Marion county. The cost of these service will be estimated.

### Garbage service :

Rental of a 1.5 yard drop box---	\$1.75 per week	
Emptying charge-----	<u>\$10.00</u> per week	
Total	\$11.75 per week	(27)

Chemical privies, one privie is required by Division 147 for every 15 camp occupants:

Rental of three chemical toilets-	\$160.00 per month
Rental includes one weekly service	(26)

## DRAIN FIELD CONSTRUCTION AND GRAVEL FOR PARKING

A drain field and septic tank must be constructed to service the showers, and gravel must be purchased to gravel the turn-around and vehicle parking, as required by county ordinance 820. The septic system will require a 1500 gallon septic tank and 900 feet of drain field, as suggested by the Marion county building department. (24) The cost for septic system construction will depend on the site characteristics.

Cost of the installation and septic tank was estimated at \$2000. (25) Gravel on the parking area and vehicle turn-around requirements will be five ten yard trucks at \$75.00 per truck for a total of \$375.00. (25)

#### SITE REQUIREMENTS

The site will contain the central building, vehicle turn-around, parking, sleeping quarters, and privies. To comply with Division 147 the site will have to be well drained and free of depressions which would collect water. Approximately 0.3 acres will be needed to contain the camp and its facilities (see Figure 3).

The central building will be surrounded by gravel for approximately 15 feet. The gravel serves as a vehicle turn-around and helps control weed growth in the camp area. Bollards must be placed to protect the propane tanks which are stored outside on the south side of the central building.

Sleeping quarters are placed in a horse shoe arrangement on three sides of the central building. The ten foot end will be most conveniently placed facing the central building. The sleeping quarters should be placed a few feet from the gravel and will take 20 feet of ground space.

Graveled parking for six cars needs to be provided to comply with Ordinance 820. The parking could be provided at the open end of the horseshoe and along the access road. The parking area will require an area 60 by 20 feet and could be parallel to the access road.

Siting of the privies is required by Division 147 to be at least 50 feet from the central building and the nearest sleeping structure. The most convenient place would be at the end of the graveled parking. Placement there would allow easy access for the service truck and be in compliance with Division 147. Siting of the 1.5 yard dumpster would be best placed adjacent to the privies. The privies are required to be illuminated. The privies could be illuminated by a yard light on a pole. Electrical service for the light will come from the central building with the wires being underground. A quartz or mercury vapor light will satisfy this requirement.

#### LAUNDRY FACILITIES

In accordance with Division 147, laundry facilities must be provided. Should the camp be more than five miles from a laundromat, then the camp will have to be provided with two laundry tubs supplied with hot and cold running

water, one for each 25 occupants, or one mechanical clothes washing machine. Regardless of the distance to a laundromat, clothes drying lines must be provided. Clothes drying lines can be on posts located behind the sleeping quarters or on brackets attached to the exterior of the sleeping quarters in a manner which will not present a hazard to the occupants.

#### SAFETY PROVISIONS

Division 147 requires that provisions be made for fire fighting, alarms, first aid and an emergency medical plan. One forty ounce sodium bicarbonate base dry chemical extinguisher hung in the central building will satisfy the requirement for fire fighting equipment. A mechanical alarm needs to be provided. Two pieces of metal hung from a bracket on the exterior of the central building will be sufficient if the noise it makes when struck is loud enough to be heard throughout the camp. A first aid kit needs to be provided the camp. The first aid kit can be placed on the wall inside the central building. Emergency medical plans (plans to get professional aid to injured workers) are required. The camp manager should be responsible for summoning help in case of emergency. The method of notifying

the manager in case of emergency should be posted in a conspicuous place in the central building in addition to being verbally communicated to all the camp occupants.

#### CLOSING FOR THE SEASON

Closing the camp presents the problem of how to preserve the camp equipment from weather damage. The central building will serve as off season storage for the sleeping quarters' furnishings. Placing the eight foot sliding door in the central building allows a pickup truck to be driven into the building for easy unloading. The canvas covers, mattresses, tables, chairs, and metal bed frames will be stored in the central building as will the propane bottles. Storing the mattresses in the central building provides an opportunity for the owner to fumigate them as required by Division 147. The central building should also be winterized by disconnecting and draining the water supply and disconnecting the electrical service.

#### MANAGEMENT APPROACHES

Responsible management of the camp is a vital aspect of providing adequate living conditions. Marion county

ordinance 820 requires a manager to be in the camp or live in an adjacent building. Division 147 requires that the camp operator be responsible for the daily operation and maintenance of the camp and its facilities. It is the author's experience that camps with poor management receive citations even if the original design is in compliance with Division 147 because the camp had not been properly maintained. If the owner is unable to provide daily supervision and maintenance, the owner should hire one of the occupants to perform the management duties with periodic owner follow-up.

#### COST ESTIMATES

In proposing a camp design, cost information will be beneficial to those interested in implementing the recommendations. Cost information is fluid and unstable, but some idea of general cost range is beneficial. The proposal is not accompanied by detailed architectural drawings so a detailed listing of components and materials is not available. Listing of components and materials, while accurate will not be comprehensive. Prices were obtained without shopping for the lowest price available, but represent a middle-of-the-line price. Labor cost is included

for pouring and finishing of the concrete floor, installation of the septic system, and erection of the central building because these tasks are the most time-consuming and require specialized tools. All other labor will be supplied by the owner and will be well within the range of general farm maintenance abilities.

The costs presented include costs of the camp only. The costs of supplying the central building with underground electrical service and water are not included. The cost of constructing an access road beyond the camp limits are not included. The reason for excluding the above costs is that there is no accurate way to determine the distance from supply sources or road distances that would apply to all camp areas.

The costs of materials and selected labor results in a total expenditure of \$15,248.19. Financing this amount with a 90% loan at 11.5% interest rate and a five year pay-out yields following payment schedule:

Down payment	\$1524.82
Payments per month	\$335.35

Monthly operating expenses must also be considered. The expenses include the previously listed costs of garbage and portable toilets in addition to propane gas and electricity.

Additional costs not addressed in the paper include the cost of furnishings. Furnishings include tables, chairs, mattresses, and bunks. The cost of furnishings could not be realistically estimated using prices available in commercial outlets because the operator will undoubtedly buy these items used. The cost of furnishings purchased from dealers in used furnishings depends greatly on the purchaser's negotiating ability and contacts.

#### JUSTIFICATION

Growers producing crops which rely on hand labor could justify spending money constructing and maintaining a labor camp. The grower would benefit by a more stable labor force, less time spent recruiting labor and reduced interruption from government agencies. Growers who rely on a sign in front of their farm advertising "pickers wanted" run the risk of not having their crops picked in times of labor shortages, as happened in the 1987 harvest season. (20) Growers who operate inadequate camps are at risk of having their camps closed by government agencies and losing their

labor force. Growers operating inadequate camps are also at risk of receiving monetary penalties from state and federal agencies. Employers have the responsibility for providing a safe and healthful workplace. Labor camps have been included in the definition of workplace so it is the employer's responsibility to assure that these camps are adequate.

#### SUMMARY

In the past labor camps and their operation in Marion county have been inadequate. It is now possible for interested employers to construct a labor camp in Marion county which will comply with county, state and federal regulations. One type of camp which would comply with the regulations is a central building containing washing, cooking and dining facilities surrounded by sleeping quarters. Adequate labor camps benefit the worker by providing hygienic living conditions and the employer by stabilizing the labor force availability.

#### ALTERNATE CAMP DESIGN

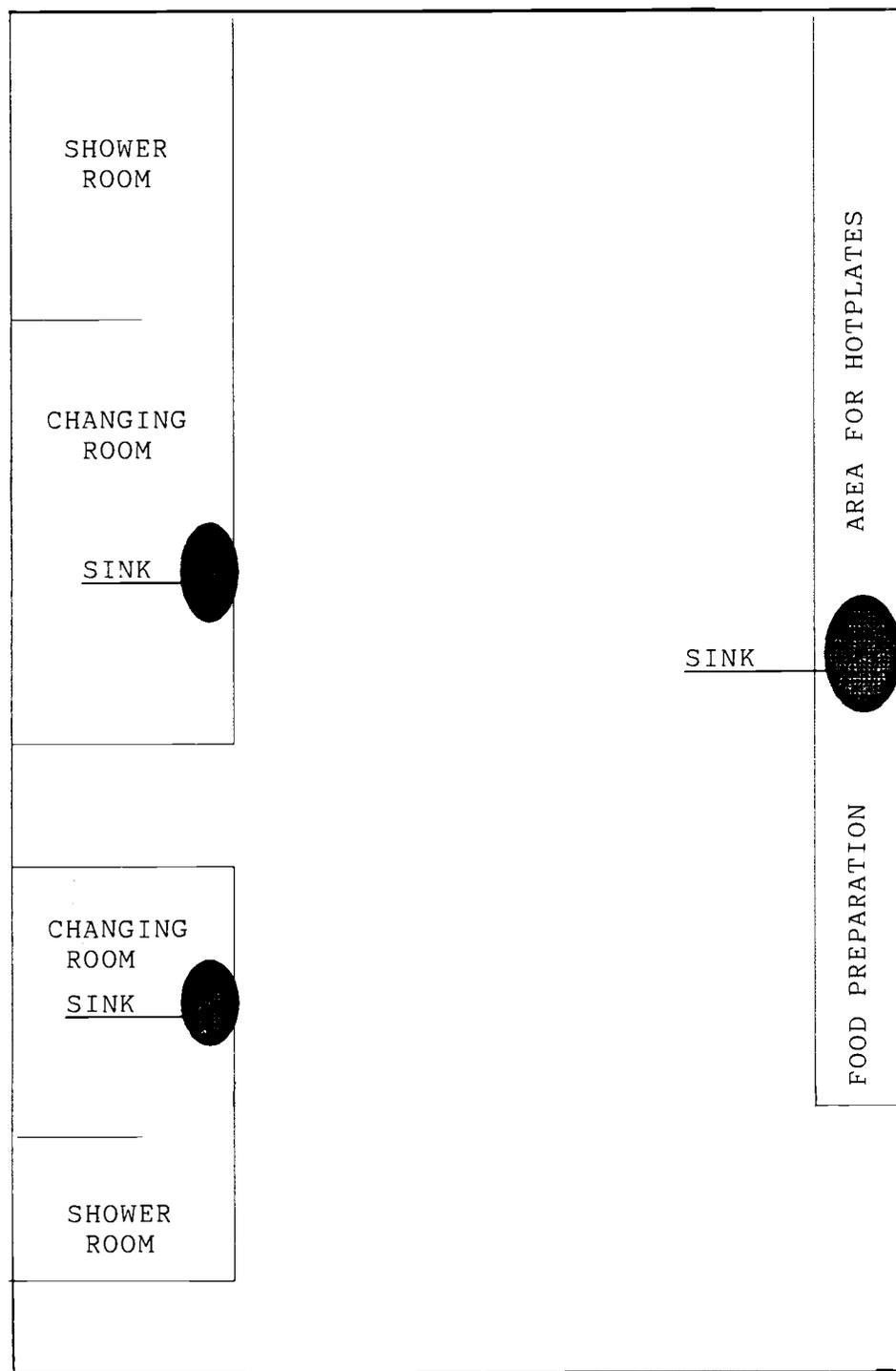
The design proposed in this study is not the only option available to those interested in building a labor camp. Alternate designs could be implemented. The goal of

this paper was to coordinate the existing regulations influencing labor camp construction and operation and to propose the least costly method of complying with those regulations to provide some measure of improvement in living conditions among the workers.

#### BIAS

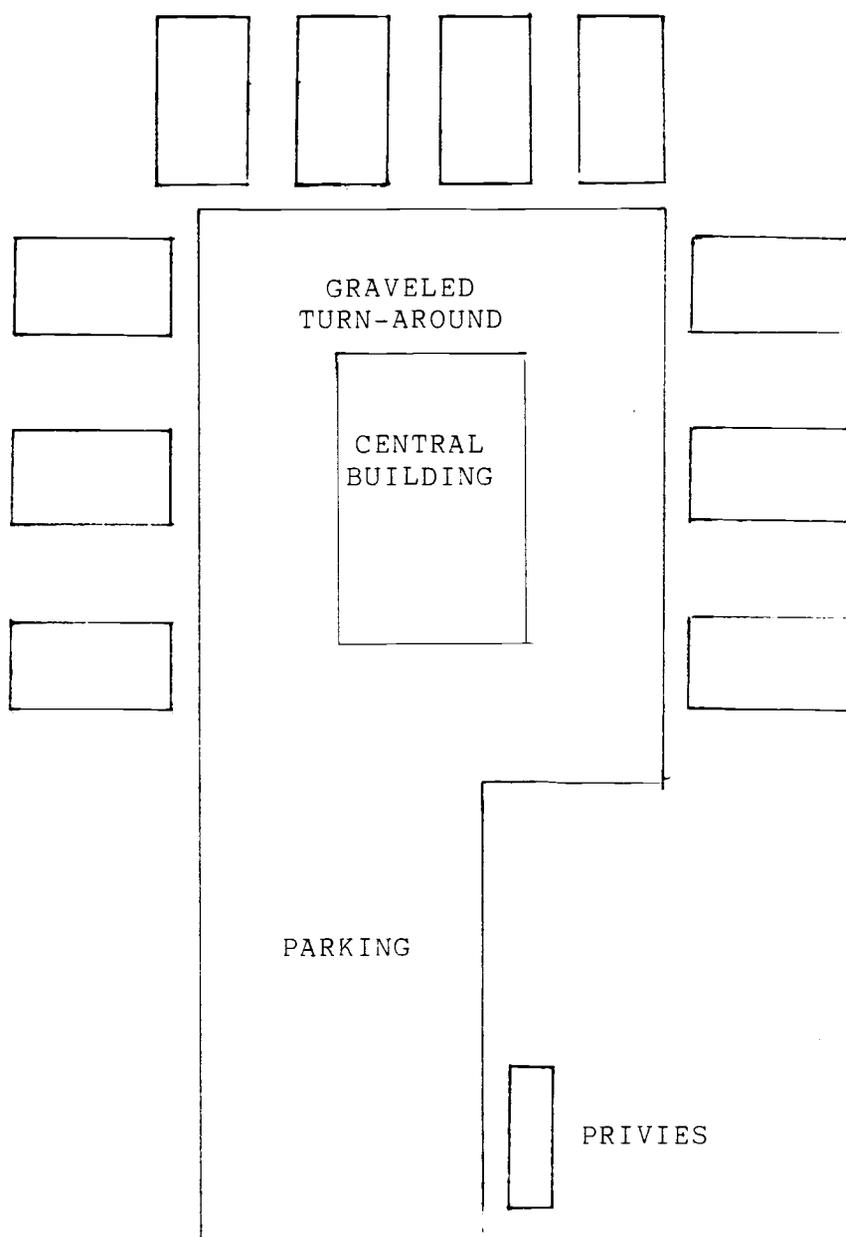
Potential sources of bias in this study exist in the collection of cost data. Cost data was collected from costs available in the month of April 1989. These costs will not be stable for even a month. Cost data instability does not effect the validity of the paper because it was not the intent of the paper to give an absolute value to the construction of the camp but rather to provide an idea of the relative cost. The paper has shown that it is less expensive to construct an adequate labor camp than to buy a new 3/4 ton four wheel drive pick-up truck, and is likely to remain so.

# FIGURE 2 CENTRAL BUILDING



scale:1/4in.=1 ft.

# FIGURE 3 SITE LAYOUT



scale: 1in.=20ft.

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## APPENDICES

APPENDIX A  
LISTING OF SERIOUS VIOLATIONS IN CASE STUDIES

## CASE 2

The violations below have been grouped because they involve similar or related hazards.

## 1-1A Standard Violated: OAR 437-147-040(1)

## Description of Violation:

All sleeping places were not maintained in a safe condition.

(a) The carpeting on the stairs was loose and allowed the foot to slip off stair edges.

## 1-1B Standard Violated: OAR 437-147-015(16)

## Description of Violation:

Stairwells and toilets rooms were not provided with ceiling or wall type electrical lighting.

(a) The stairwell had no electrical lighting functional.

(b) The bathroom had no electrical lighting functional.

The violations below have been grouped because they involve similar or related hazards.

## 1-2A Standard Violated: OAR 437-147-045(3)

## Description of Violation:

The bedrooms were not provided with a window that could be easily opened from the inside without breaking the glass.

## 1-2B Standard Violated: OAR 437-147-045(1)

## Description of Violation:

The camp was not equipped with a mechanical means of arousing the occupants in the event of a fire or other emergency.

(a) At the \_\_\_\_\_ farm labor camp.

## 1-2C Standard Violated: OAR 437-147-045(2)

## Description of Violation:

Fire extinguishing equipment was not provided within 100 feet from each housing unit.

(a) No fire extinguishing equipment or hoses were provided.

APPENDIX A CONTINUED  
CASE 3

The violations below have been grouped because they involve similar or related hazards.

- 1-1A Standard Violated: OAR 437-147-025(10)  
Description of Violation:  
At least one toilet for every 15 occupants or fractional part thereof for each sex was not provided.  
(a) There was one toilet provided for 50 camp occupants.

- 1-1B Standard Violated: OAR 437-147-025(11)  
Description of Violation:  
Toilet facilities were not maintained in a clean and sanitary condition.  
(a) The toilet provided was dirty with feces, soil and used toilet paper on the seat, floor and walls; and not supplied with toilet paper.

The violations below have been grouped because they involve similar or related hazards.

- 1-2A Standard Violated: OAR 437-147-045(1)  
Description of Violation:  
The camp was not equipped with a mechanical means of arousing the occupants in the event of a fire or other emergency.  
(a) At the \_\_\_\_\_ farm labor camp.

- 1-2B Standard Violated: OAR 437-147-045(2)  
Description of Violation:  
Fire extinguishing equipment was not provided within 100 feet from each housing unit.  
(a) No fire extinguishing equipment was provided.

The violations below have been grouped because they involve similar or related hazards.

- 1-3A Standard Violated: OAR 437-147-050(3)(1)  
Description of Violation:  
The following kitchen facilities were not provided with mechanical refrigerators:  
(a) There were no mechanical refrigerators in the camp.

## APPENDIX A CONTINUED

- 1-3B Standard Violated: OAR 437-147-050(3)(2)  
Description of Violation:  
The following kitchen facilities were not provided with a stove or hotplate:  
(a) No stoves or hotplates were provided.
- 1-3C Standard Violated: OAR 437-147-050(3)(3)  
Description of Violation:  
Food storage shelves and food preparation areas in the following kitchen facilities were not constructed of or finished with smooth, nonabsorbent, cleanable material:  
(a) The kitchen in the house.  
(B) The shed used for food preparation and cooking.
- 1-4 Standard Violated: OAR 437-147-015(2)  
Description of Violation:  
The grounds of the labor camp were not maintained in a clean and sanitary condition.  
(a) Litter and garbage was throughout the camp.  
(b) Piles of broken glass and unbroken bottles were north of the house.  
(c) Human feces was in the camp area.
- 1-5 Standard Violated: OAR 437-147-020(3)  
Description of Violation:  
An ample supply of safe and potable water was not provided to the labor camp.  
(a) No water was provided at the time of inspection for handwashing, bathing, drinking or domestic purposes.

The violations below have been grouped because they involve similar or related hazards.

- 1-6A Standard Violated: OAR 437-147-015(10)  
Description of Violation:  
All toxic materials were not stored in a safe place accessible to only authorized personnel.  
(a) An open bucket of used motor oil was stored in shed #3 floor.  
(b) A can of Mercury seed treatment was stored in the houses' unsecured china cabinet.  
(c) A can of Rawlins livestock insecticide was stored upstairs in the house on an open shelf.

## APPENDIX A CONTINUED

- 1-6B Standard Violated: OAR 437-147-015(11)  
Description of Violation:  
Empty containers which contained toxic materials were left in the camp area.  
(a) An empty Rawlins livestock insecticide container was left upstairs in the house on open shelves.

The violations below have been grouped because they involve similar or related hazards.

- 1-7A Standard Violated: OAR 437-147-040(1)  
Description of Violation:  
The sleeping places in the camp were not in good repair structurally.  
(a) The house upstairs had weak floors that sagged when people walked across them.  
(b) The front and back porches had holes in the floor due to rotten support and flooring boards.
- 1-7B Standard Violated: OAR 437-147-040(5)  
Description of Violation:  
Screens were not provided on doors and windows of the cabins when flies and mosquitos were present.  
(a) At the house in the \_\_\_\_\_ farm labor camp.

APPENDIX B  
LISTING OF COSTS

Electrical Components (28)

QU. ITEM	UNIT COST	COST
300ft#12-2 UF wire		\$65.00
250ft#14-2 wire	\$29.95	\$29.95
3 quartz light	\$26.00	\$78.00
9 fluorescent lights	\$11.45	\$103.05
14 switches	\$0.89	\$12.46
10 wp switch covers	\$1.85	\$18.50
10 wp receptacle covers	\$2.00	\$20.00
20 wp boxes	\$2.30	\$46.80
16 boxes	\$1.55	\$24.80
16 duplex receptacles	\$0.79	\$12.64
10 ext light fixtures	\$11.95	\$119.50
2 GFI receptacles	\$11.95	\$23.90
1 fan rheostat	\$22.50	\$22.50
1 vent fan 1050cfm	\$62.50	\$62.50
2 bath vent fans	\$13.95	\$27.90
1 panel box	\$17.00	\$17.00
6 circuit breakers	\$5.25	\$31.50
10ft1.25in conduit	\$6.50	\$6.50
50ft.5in conduit	\$2.80	\$14.00
7 recessed lights	\$12.25	\$85.75
100 staples	\$1.39	\$1.39
4 switch covers	\$0.59	\$2.36
6 receptacle covers	\$0.59	\$3.54
 TOTAL		 \$829.54

Kitchen Components (29)

Qu. ITEM	UNIT COST	COST
3 Hotplates,gas	\$76.00	\$228.00
10 ft gas hose	\$1.00	\$10.00
2 propane tanks,25 gal.	\$109.00	\$218.00
2 regulators	\$10.95	\$21.90
4 used refrigerators	\$100.00	\$400.00 (estimated)
 TOTAL		 \$877.90

## APPENDIX B CONTINUED

Hardware Components (30)

Qu	ITEM	UNIT COST	COST
1350	1ft 2x6 GDF	\$0.29	\$391.50
700	8ft. 2x4's	\$1.54	\$1,078.00
40	1ft. 4x4 GDF	\$0.61	\$24.40
2	.75 PBV	\$8.75	\$17.50
87	.5 shop T-1-11 VBC	\$9.25	\$804.75
50	CDX Ply.	\$15.00	\$750.00
9	.5 Green Bd. S.R.	\$7.95	\$71.55
24	.5 S.R. 4x8	\$3.39	\$81.36
60	Pier Block Plan	\$1.95	\$117.00
2	bx 16d sinkor	\$17.95	\$35.90
5	bx AP Mud	\$5.99	\$29.95
2	rolls tape	\$5.19	\$10.38
10	lb.sheetrock nails	\$0.37	\$3.70
5	4x8 vinyl sheet	\$14.55	\$72.75
1	gal vinyl adhesive	\$11.99	\$11.99
4	silicone sealant	\$4.89	\$19.56
75	ft. Rubber Base	\$0.49	\$36.75
1	gal R.Base Adhesive	\$7.99	\$7.99
2	36x30in Mirrors	\$19.99	\$39.98
140	ft 32in fgl.screen	\$0.45	\$63.00
44	hinges	\$2.51	\$110.44
44	hasps	\$1.35	\$59.40
20	door springs	\$2.49	\$49.80
18	fluorescent bulbs	\$1.89	\$34.02
1	fire extinguisher	\$17.79	\$17.79
1	bx.wire nuts	\$4.95	\$4.95
2	water heaters 52gal	\$179.00	\$358.00
16	leng..75in CPVC	\$4.69	\$75.04
6.5	2in.ABS	\$11.98	\$77.87
3	floor dr. and connec	\$17.19	\$51.57
40	elbows	\$0.59	\$23.60
1	qt PVC Cement	\$8.99	\$8.99
1	steel sink	\$21.99	\$21.99
2	fiber sinks	\$22.99	\$45.98
3	faucets	\$24.89	\$74.67
5	shower head & faucet	\$49.99	\$249.95
2	gal paint	\$13.79	\$27.58
TOTAL			\$4,959.65

## APPENDIX B CONTINUED

Canvas components (31)

Qu	ITEM	UNIT COST	COST
150 yards	10oz sing.fill	\$6.75	\$1,012.50

Metal fabrication (32)

Qu	ITEM	UNIT COST	COST
1	14ga counter top	\$184.00	\$184.00

Paint components (33)

Qu	ITEM	UNIT COST	COST
10 gal	Tile-Clad Epoxy	\$35.00	\$350.00
20 gal	wood primer	\$18.99	\$379.80
20	alkyd exterior	\$24.99	\$499.80
TOTAL			\$1,229.60

Pole Building (34)

Qu	ITEM	UNIT COST	COST
600 sq ft	Pole building	\$2.80	\$1,680.00
Labor cost estimate (by author)			\$1,500.00
TOTAL			\$3,180.00

Concrete Work (35)

Qu	ITEM	UNIT COST	COST
600	Concrete & finishing	\$1.00	\$600.00

Septic & Gravel (36)

Qu	ITEM	UNIT COST	COST
1	Septic system	\$2,000.00	\$2,000.00
5	10yd loads gravel	\$75.00	\$375.00
TOTAL			\$2,375.00

<u>GRAND TOTAL</u>			<u>\$15,248.19</u>
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APPENDIX C

OAR 437  
DIVISION 147  
LABOR CAMPS

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DIVISION 147

LABOR CAMPS

[Ed. Note: Rules on labor camps were first adopted as Chapter 22-120, Labor Camps, in Part 22 of the Oregon Occupational Safety and Health Code by WCD Admin. Order, Safety 3-1975, filed 10/6/75, effective 11/1/75. Prior to this time, occupational health rules were administered by the Occupational Health Section of the Health Division, Department of Human Resources. As a direct result of the passage of the Oregon Safe Employment Act (OSEAct) in 1973, these occupational health rules were adopted by the Workmen's Compensation Board (later the Workers' Compensation Department).

Amended by WCB Admin. Order, Safety 6-1976, filed 4/2/76, effective 4/15/76.

Chapter 22-120, Labor Camps, was redesignated as Division 147, Labor Camps, and renumbered by WCD Admin. Order, Safety 5-1984, filed 6/18/84. Its effective date remains 11/1/75.]

**Application**

437-147-003 (1) These rules apply to any labor camp as defined in Rule 437-147-005(5).

(2) These rules shall pertain to any type of labor camp together with the tract of land pertaining thereto, established, or to be established, operated or maintained for housing workers with or without families whether or not fees are paid or collected.

(3) These rules apply but are not limited to farm labor housing, railroad work trains, logging camps, construction camps, and similar housing.

(4) These rules pertain but are not limited to tents, frame construction housing, trailers, and mobile homes. Mobile homes, however, shall not be required to comply with specifications contained herein pertaining to construction of sleeping places, only if they are in compliance with Oregon Revised Statutes (ORS) 446.155 to 446.185, which contain the requirements and specifications for sanitation and safety design for mobile homes.

(5) These rules shall apply to housing which is given to, rented, leased to or otherwise provided to employes for use while employed and provided either by the employer, a representative of the employer or a camp operator.

(6) These rules, unless otherwise stipulated, are applicable to all occupants of the labor camp.

(7) These rules shall also apply to all labor camp housing sites owned, operated, or allowed to operate on property under the jurisdiction of any state or municipal authority.

#### Exemptions

(8) Housing including tents, vehicles, mobile homes, and trailers owned or provided by employes for their own use are not subject to these rules. However, when such housing is provided, the camp operator is responsible for the provision and maintenance of all other requirements as specified herein.

(9) These rules do not apply to accommodations subject to licensing as mobile home parks, organizational camps, traveler's accommodations or recreation parks.

(10) Mobile homes and trailers which, due to the nature of the work being done, are being moved regularly from place to place are exempt from these rules except when located at parks or camps intended for the parking of such mobile facilities.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### Scope

437-147-004 These rules apply to any labor camp or labor camp facility as defined in Rule 437-147-005(2) or (5).

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### Definitions

437-147-005 (1) "Clean" means the absence of soil or dirt or removal of soil or dirt by washing, sweeping, clearing away, or any method appropriate to the material at hand.

(2) "Facility" means a sleeping place, drinking water installation, toilet installation, sewage disposal installation, food handling installation, or other installation required for compliance with the labor camp rules.

(3) "Garbage" means food wastes, food packaging materials or any refuse that has been in contact with food stuffs.

(4) "Housing site" is a location upon which a sleeping place is situated.

(5) "Labor Camp" means any place, area or piece of land where sleeping places or housing sites are provided by an employer for his/her employes or by another person, including a camp operator, who is providing such accommodations for employes.

(6) "Local public health administrator" means the administrator as defined in ORS 431.418 for the county or district in which a labor camp, or the larger portion thereof, is located.

OREGON ADMINISTRATIVE RULES  
CHAPTER 437 - WORKERS' COMPENSATION DEPARTMENT

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(7) "Operator" means a person holding legal title to the land on which a labor camp is located. However, if the legal title and the right to possession are in different persons, "operator" means a person having the lawful control or supervision over the labor camp under a lease or otherwise.

(8) "Potable water" means water meeting the bacteriological and other requirements specified in Oregon Administrative Rules (OAR) Chapter 437, Division 112, Water and Sanitation, which sets specific limits on the presence of certain substances in water supplies.

(9) "Refuse" includes waste materials such as paper, metal, discarded items, as well as debris and litter and trash.

(10) "Sanitary" means free from agents which may be injurious to health.

(11) "Section" means the Occupational Health Section (Accident Prevention Division).

(12) "Sewage" means the water-carried human and animal wastes, including kitchen, bath, and laundry wastes from residences, buildings, industrial establishments, or other places, together with such ground-water infiltration, surface waters, or industrial wastes as may be present.

(13) "Sleeping place" means any room, structure, shelter, tent, trailer house, vehicle or other place where one or more persons are housed. Sleeping place is not limited to a place for sleeping only but includes the entire area where one or more persons are housed.

(14) "Toilet room" means a room maintained within or on the premises of any labor camp, containing toilet facilities for use by employes and occupants of that camp.

**Hist:** WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Purpose**

**437-147-007** The purpose of this division is to prescribe minimum safety and health requirements for establishing, operating and maintaining labor camps.

**Hist:** WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Camp Registration Requirements**

**437-147-010** (1) All labor camps shall be registered with the Occupational Health Section (APD) at least 30 days prior to the first opening of the camp for the year.

(2) The registration shall include the name and location of the camp, name of the camp operator, as defined herein, number of units, number of occupants, and anticipated periods of occupancy.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

**Site**

437-147-015 (1) All sites shall be adequate in size to prevent overcrowding of necessary structures.

(2) The grounds of a labor camp shall be maintained in a clean, sanitary condition, free from waste water, sewage, garbage, litter, refuse and noxious plants such as poison oak and poison ivy.

(3) During the period of camp occupancy, grass, weeds, and brush shall be kept cut.

(4) All housing site land shall be adequately drained and shall not be subject to periodic flooding during the period of camp occupancy.

(5) Camps shall not be located within 200 feet of swamps, pools, sink holes, unless such water surfaces are subjected to effective mosquito control measures.

(6) All labor camps shall be located on well-drained ground and the sites shall be graded, ditched, or rendered free from depressions in which water can stand.

(7) Measures shall be taken so as to adequately dispose of the waste water and spillage underneath outside water hydrants.

(8) Provisions shall be taken to prevent or control the breeding of mosquitos, flies, and rodents in the immediate camp area and in the barns, pens, feed yards, or similar livestock or poultry areas within 200 feet of any labor camp facility owned or under lawful control or supervision of the camp operator.

(9) The operator of a labor camp shall be responsible for the daily maintenance and operation of the camp and its facilities.

(10) All toxic materials such as pesticides, fertilizers, paints and solvents shall be stored in a safe place accessible only to authorized camp occupants.

(11) No empty containers such as drums, bags, cans, or bottles which contained toxic materials shall be left in the immediate camp area or disposed of in such a manner so as to endanger the camp occupants.

(12) No poultry or livestock shall be kept within approximately 200 feet of the immediate camp area during the period of camp occupancy unless appropriate measures have been taken to prevent a sanitation or health hazard and to effectively eliminate flies and mosquitos.

(13) All housing sites in a labor camp shall be provided with electrical service.

(14) All electrical wiring and lighting fixtures shall comply with the Oregon Electrical Code.

(15) Each room in a sleeping place shall contain a ceiling or wall-type electric light fixture in working order and at least one wall-type electrical convenience outlet.

(16) Toilet rooms, lavatories, shower or bathing rooms, laundry rooms, hallways, stairways, or other hazardous dark areas shall be provided with ceiling or wall-type electric lighting.

(17) Privies shall be lit either directly as are other toilet rooms or indirectly from an outside light source.

(18) Corridors and walkways shall be provided with sufficient lighting to allow safe travel at night.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Water Supply**

437-147-020 (1) All domestic water furnished at labor camps shall conform to the required standards for purity as required in OAR, Chapter 437, Division 112, Water and Sanitation, which sets specific limits on the presence of certain substances in water supplies.

(2) Except where water is obtained from a community water supply system, a water sample from each drinking water system shall be submitted for bacteriological analysis prior to the occupancy of the camp, and as often thereafter as required by the Section in order to assure a potable water supply.

(3) An ample supply of safe and potable water shall be provided in every labor camp for drinking, handwashing, bathing and domestic purposes. Water for drinking and domestic purposes shall be available within 100 feet of each sleeping place. An ample supply shall be construed as not less than 35 gallons of water per day per camp occupant.

(4) The water supply storage and distribution facilities shall be arranged, constructed, and if necessary, periodically disinfected to satisfactorily protect the water from contamination. (All plumbing in a labor camp shall be installed in compliance with ORS 447.140 and state regulations relating to plumbing and water supply and any applicable county or city plumbing code.)

(5) Cups, dippers or other utensils used in common for drinking purposes are prohibited.

(6) If drinking fountains are provided at a labor camp they shall be angle-jet type with adequate water pressure at all times.

(7) Where water, unsafe for drinking purposes is accessible, this water shall be posted as "Unsafe for Drinking."

(8) Portable water containers equipped with spigots and tightfitting lids may be used by the camp operator for providing and storing drinking water in the camp. These containers shall be constructed of impervious non-toxic materials which

protect the water from contamination and shall be washed with soap or detergent and sanitized with a suitable sanitizer at least every seven days.

(9) Containers such as barrels, pails or tanks from which the water must be dipped or poured are prohibited.

(10) There shall be no cross connection between a system furnishing water for drinking purposes and a nonpotable supply.

(11) In addition to requirements stated above, where applicable the provisions of OAR Chapter 437, Division 112, Water and Sanitation, which contain specifications for water system design, construction, and maintenance shall also apply.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Laundry, Handwashing, Toilet, and Bathing Facilities**

437-147-025 (1) An adequate supply of hot and cold water under pressure shall be available for all common use handwashing, bathing, and laundry facilities at all labor camps.

(2) In installations containing flush toilets, lavatory, bathing, or laundry facilities, the floor and walls shall be of readily cleanable finish and impervious to moisture.

(3) Floor drains shall be provided in all shower rooms to remove waste water and facilitate cleaning; and floors shall be sloped to drain and not made of slippery materials.

(4) The walls and partitions of shower rooms shall be smooth and impervious to moisture.

(5) All laundry, handwashing, bathing, and central facilities shall be maintained in a clean and sanitary condition.

(6) In every labor camp there shall be at least one handwashing basin provided with hot and cold water under pressure for every 15 occupants of the camp. These handwashing facilities shall be provided either adjacent to all toilet facilities or adjacent to the sleeping places in a labor camp. A twenty-four inch linear measurement of a "trough" type sink with an individual faucet shall be considered equal to one basin. The use of a single common towel is prohibited.

(7) If paper towels are provided, there shall be a container provided for their disposal.

(8) Handwashing facilities shall be maintained in a clean and sanitary condition.

(9) In every labor camp there shall be at least one shower head provided with hot and cold water under pressure for every 15 occupants of each sex. A plumbed-in bathtub may be substituted for a shower head. When a total of 9 or less persons of both sexes are housed, only one shower need be provided.

(10) In every labor camp there shall be at least one toilet for every 15 occupants or fractional part thereof for each sex housed in the labor camp. When a total of 9 or less persons of both sexes are housed, only one toilet need be provided.

(11) Toilet facilities shall be in good repair and maintained in a clean and sanitary condition.

(12) Laundry and drying facilities to serve the needs of the occupants shall be conveniently located and readily accessible within the camp area for use by all occupants of the labor camp when public laundry and drying facilities are not available within five miles of the camp site. When laundry facilities are required in a labor camp under this rule, laundry trays or tubs, plumbed with hot and cold water under pressure shall be provided in the ratio of 1 to 25 occupants. Mechanical washers may be provided in the ratio of 1 to 50 occupants in lieu of laundry trays, although a minimum of one laundry tray per 100 occupants shall be provided in addition to the mechanical washers.

(13) Clothes lines or drying facilities to serve the needs of the occupants shall be provided. Mechanical clothes dryers may be provided in the ratio of 1 per 50 occupants in lieu of clothes drying lines.

(14) In toilet rooms and privies where there are multiple toilets or toilet seats, there shall be partitions between each individual toilet or toilet seat, to provide privacy. These partitions may be less than the height of the room walls but the top of the partition shall not extend less than 6 feet from the floor and the bottom of the partition shall not extend more than 1 foot from the floor. The width of the partition shall not extend less than 1 1/2 feet beyond the front of the toilet seat. A door, curtain or arrangement of design shall be provided so the toilet compartment is private.

(15) All labor camp toilet rooms shall be ventilated in accordance with the State Plumbing Regulations (OAR Chapter 814, 21-280 - 21-290) relating to ventilation of toilet rooms and, in the case of privies, conform to the requirements of the Section contained in the regulations governing the Subsurface Disposal of Sewage (OAR, Chapter 437, Division 128, Subsurface Sewage and Nonwater Carried Toilet Facilities), which contains specifications for the design, construction and maintenance of privies and other toilet rooms.

(16) No water closet, chemical toilet, or urinal shall be located in a room used for other than toilet or washing purposes.

(17) All toilet facilities shall be provided with toilet paper and equipped with toilet paper holders or dispensers.

(18) Toilet and bathing facilities provided for each sex shall be distinctly marked for "women" and "men" in English and in the native language of employes expected to occupy the camp or marked with easily understood pictures or symbols.

(19) When common use bathing or toilet facilities for both sexes are in the same building, they shall be separated by a solid, non-absorbent wall extending from the floor to the ceiling.

(20) There shall be a usable path or walkway which is maintained and free of weeds, debris, holes or standing water from each sleeping place to the central toilet facilities, if any.

(21) Toilet facilities in labor camps shall be no more than 200 feet from the sleeping places that they serve and privies shall not be closer than 50 feet from any sleeping place or any facility where food is prepared or served.

(22) Privies shall conform to the regulations of the Section with regard to their construction and location and they shall be maintained in good repair and in a clean and sanitary condition. (See OAR Chapter 437, Division 128, Subsurface Sewage and Nonwater Carried Toilet Facilities, contains specifications for the design, construction and maintenance of toilet facilities).

(23) If urinals are used in the toilet facility and where three or more toilets are required for men, one urinal may be substituted for one toilet (24 inches of trough-type urinal shall be considered equivalent to one toilet), up to a maximum of one-third of the total toilets required.

(24) Urinals shall be constructed on non-absorbent, non-corrosive materials with a smooth and cleanable finish.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Sewage Disposal and Plumbing**

437-147-030 (1) Sewage disposal in a labor camp shall be effected by means of a connection to a community sewer system, a septic tank with subsurface disposal of the effluent, pit type privies or other sanitary means conforming to ORS 447.140 which relates to the Department of Environmental Quality requirements and to OAR, Chapter 437, Division 128 which also contains specifications for sewage disposal.

(2) All plumbing in a labor camp shall be installed in compliance with ORS 447.140 which relates to Department of Environmental Quality Requirements and with state regulations relating to plumbing and water supply and applicable county or city plumbing code.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Garbage and Refuse Disposal**

437-147-035 (1) All refuse in a labor camp including garbage and kitchen wastes, shall be stored in durable, watertight containers so constructed as to exclude flies and rodents.

(2) Refuse and garbage containers shall be maintained in a clean and sanitary condition and in good repair, and in a minimum ratio of one container of not less than 20-gallon capacity per 15 occupants. Containers must be accessible to all camp occupants and in no case located outside of the housing site.

(3) All garbage and refuse shall be removed from a labor camp at least once a week.

(4) All refuse and garbage containers shall be kept covered and the garbage storage area shall be kept clean and free of flies and rodents.

(5) Burning of any food garbage or wet refuse is prohibited whether or not a burning permit is granted by a local or state agency.

(6) The garbage and refuse shall be disposed of in accordance with the rules of the Section relating to solid waste disposal contained in OAR, Chapter 437, Division 136, General Occupational Health Regulations (Disposal of Waste Materials), which contains requirements for the safe disposal of hazardous materials and to DEQ rules and regulations (ORS, Chapter 459 and OAR, Chapter 340) which govern the disposal of garbage and refuse as well as other solid wastes.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### Sleeping Places

437-147-040 (1) All sleeping places in a camp shall be maintained in a safe and sanitary condition, in good repair structurally; and shall be so constructed as to provide shelter for the occupants against the elements and to exclude ground and surface water as well as exclude, structurally or otherwise, rodents and insects.

(2) The walls and roof of the permanently constructed sleeping places shall be tight and solid; the floors shall be constructed of rigid and durable material, and shall be of a smooth and cleanable finish and be maintained in good repair. If tents are provided as sleeping places, they shall have floors constructed of wood, asphalt or concrete. Such floors shall be smooth and of tight construction.

(3) The sleeping places that are occupied between the months of October through May shall be provided with heating equipment capable of maintaining a temperature of at least 68° F and installed and maintained in accordance with applicable state and local fire building and electrical regulations.

(4) All heating equipment in a labor camp must meet the following specifications:

(a) Any stoves or other sources of heat utilizing combustible fuel shall be installed and vented in such a manner as to prevent fire hazards and a dangerous concentration of gases. No portable heaters other than those operated by electricity shall be permitted. If a solid or liquid fuel stove is used in a room with wooden or other combustible flooring, there shall be a concrete slab, insulated metal sheet, or other fire resistant material on the floor under each stove, extending at least 18 inches beyond the perimeter of the base of the stove.

(b) Any wall or ceiling within 18 inches of a solid or liquid fuel stove or a stove pipe shall be of fire resistant material. A vented metal collar shall be installed around a stovepipe, or vent passing through a wall, ceiling, floor or roof or combustible material.

(c) When a heating system has automatic controls, the controls shall be of the type which cut off the fuel supply upon the failure or interruption of the flame or ignition, or whenever a predetermined safe temperature or pressure is exceeded.

(d) All gas appliances and gas piping shall be installed in accordance with NFPA standard 54-1969 with National Fire Protection Administration (NFPA) Standard 54-1969 which contains specifications for design and installation of gas appliances, valves, piping and related items (Copy of which is attached hereto as Appendix 1 and by this reference made a part hereof.)

(5) Screens of not less than 16 mesh shall be provided on the doors and windows of the sleeping places when flies or mosquitos are present. All doors with screens shall be tight fitting, in good repair, and self closing. No screens will be required if adequate control measures are employed to effectively eliminate flies and mosquitos.

(6) If tents are used for sleeping places, the tent body and screens shall be sound. Except with respect to Wasco and Hood River counties, the tents shall be treated with an effective water-proofing material as often as is necessary to assure the tent's being waterproof. The tents shall be adequately screened to effectively keep out flies and mosquitos. Tents shall not be used for housing between the months of October through May.

(7) Beds, bunks or cots shall be provided for each occupant and suitable storage facilities such as wall lockers shall be provided for each occupant or family unit.

(8) If mattresses are furnished they shall be clean, in good repair, and free from insects and animal parasites before being used by occupants. After each period of occupancy, all mattresses shall be treated with an effective insecticide or fumigated and stored in a clean, dry place.

(9) Such beds, etc. as are provided, shall be spaced so that there is sufficient room between them to allow for rapid and safe exiting in case of emergency. Beds shall be elevated approximately 12 inches off the floor.

(10) Nothing in this rule shall be construed to prohibit "banking" where floors are elevated with earth or other suitable material around the outside walls in areas subject to extreme low temperatures.

(11) Each room used for sleeping purposes where double bunk beds are not used shall contain at least 50 square feet of floor space for each employe (with at least one half of the floor area having a minimum ceiling height of 7 feet), with the following exceptions:

(a) If employes are members of the same nuclear family (in this instance being defined as a mother and father, their combined children and grandparents), then space shall be provided as follows:

(A) Full space for the first employe over twelve.

(B) 3/4 space for each additional occupant over twelve, whether or not they are employed.

(C) 1/2 space for children under twelve, whether or not they are employed.

(b) Any room where workers cook, live, and sleep (regardless of whether double bunk beds are used) shall contain at least 60 square feet of floor space per occupant except that the adjustments specified in subsection (a) above shall apply to members of the same nuclear family.

(c) In camps constructed after August 1, 1975, space used for combined cooking, eating, and sleeping purposes shall contain not less than 100 square feet per occupant except that the adjustments specified in subsection (a) above shall apply to members of the same nuclear family.

(12) In rooms used for sleeping purposes only, where double bunk beds are used, 40 square feet per occupant will be provided. Triple bunks are prohibited.

(13) Separate private areas for sleeping shall be provided for each sex if not related or for each family.

(14) Except where ventilation is provided by mechanical or some other method, each habitable room in a shelter shall have openable windows or skylight openings directly to the out-of-doors.

Nothing in this rule shall be construed to prohibit those windows that meet the fire exit requirements to be used as such.

(15) In every labor camp all sleeping places shall be swept, cleaned, and be free from rodents, insects, and animal parasites before occupancy.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.  
WCB Admin. Order, Safety 6-1976, f. 4/2/76, ef. 4/15/76

#### Fire Protection

437-147-045 (1) Fires are prohibited in the housing site except in equipment specifically designed for such purposes. No stove or combustion heater shall be located so as to block escape from a sleeping place. All labor camps shall be equipped with a mechanical means of arousing the occupants in the event of danger from fire or other emergency.

(2) Fire extinguishing equipment shall be provided in a readily accessible place, located not more than 100 feet from each housing unit. Such equipment shall provide protection equal to a 2 1/2 gallon stored pressure or a 5-gallon pump-type water extinguisher.

(3) All sleeping places constructed with one door, except tents, vehicles, and trailers houses that are owned by the occupants, shall have, in addition to a door, a window that can be used as an exit in case of fire. This window shall have an openable space of not less than 24 inches by 24 inches of which the lowest portion thereof is not more than 48 inches above the floor. This window shall open directly to the out-of-doors and shall be readily openable by the housing occupants from inside without breaking of glass. This window shall be located in a wall different than the outside door to the unit. If the living unit has more than one room, the

exit window shall be in a room other than the one having the outside door and shall be clearly marked as a fire exit.

(4) All sleeping places in labor camps shall be constructed and maintained in accordance with the applicable local and state fire and safety laws and regulations.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Cooking, Eating, and Dining Facilities**

437-147-050 (1) In a labor camp where food or meals are prepared or served by the operator or by a concessionaire, the facilities for the practices of preparation and serving shall comply with ORS Chapter 624 which contains requirements for food storage, food preparation procedures and facilities, and other sanitation requirements relating to food handling.

(2) In camps where food or meals are prepared in a common use facility by the occupants, the facilities shall comply with the regulations cited above.

(3) Except where adequate central eating and kitchen facilities are provided, in each sleeping place a separate area, with or without partition, shall be provided and equipped for use as a kitchen and eating place and the following equipment shall be provided: (1) a mechanical refrigerator, which must be capable of maintaining food at no more than 45° F; (2) a stove or hot plate which is of adequate size to serve the intended number of occupants and, if located within 18 inches of a wall, that wall must be made of or finished with smooth cleanable, non-absorbent, grease resistant and fire resistant material; (3) food storage shelves and a food preparation area which must be constructed of or finished with smooth, non-absorbent, cleanable material; (4) and a table and chairs or equivalent seating and eating arrangements to accommodate the number of occupants living in the sleeping place. The refrigerator and stove or hot plate shall be maintained in working condition. These facilities shall be clean prior to each occupancy.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

#### **Reporting Communicable Diseases**

437-147-055 (1) The operator of the labor camp shall cause a report to be made to the local public health administrator and this Section immediately if an individual housed in the camp is known to have or is suspected to have any communicable disease or illness. This report shall include the name and address of the individual.

(2) If an outbreak of suspected food poisoning occurs in a labor camp or an unusual prevalence of any illness in which fever, diarrhea, sore throat, vomiting or jaundice is a prominent symptom, the operator of the camp shall immediately report the outbreak or unusual prevalence to the local public health administrator and the Section.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

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**First Aid**

437-147-060 OAR Chapter 437, Division 127, Medical Services and First Aid, relating to first aid and medical services shall apply to all labor camps. This rule includes requirements for: first aid supplies; the provision of a space to permit an ill or injured employe to lie down until disposition of need; an emergency medical plan; and a plan of communication.

Note: Division 127 requires all employes be knowledgeable concerning the first aid requirements and emergency medical plans. If employes' native language is other than English, this must be taken into account in meeting this requirement.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

**Access to ORS and OAR**

437-147-065 Those wishing access to any of the Oregon Revised Statutes (ORS) or Oregon Administrative Rules (OAR) referenced herein, may contact the Occupational Health Section central office or nearest Occupational Health district office.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

**Recreation Area (Note: the following is only a recommendation.)**

437-147-070 The Occupational Health Section strongly recommends for the health and safety of camp occupants, especially children, and the indirect protection of camp properties, that at each labor camp a recreational area should be provided. This area should be separate and protected from main thoroughfares and automobile parking, be cleared, leveled, and planted in grass, or prepared in such a manner that it can be used by the occupants for recreational purposes. The area should be maintained free of hazards and debris and provide at least 100 square feet of area for each housing unit occupied by children under 14 years of age. The total recreational area should not be less than 2,500 square feet. If recreational equipment is provided it should be maintained in good repair.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.

FARM OPERATIONS

Field Sanitation

437-147-075 (1) Drinking water furnished by the employer at places of employment shall conform to the required rules for purity set by the Section in OAR Chapter 437, Division 112, Water and Sanitation.

(2) Portable water containers equipped with spigots and tightfitting lids may be used for providing and storing field drinking water. These containers shall be constructed of impervious, non-toxic materials which protect the water from contamination and shall be washed with soap or detergent and sanitized with a suitable sanitizer at least every 7 days.

(3) Containers such as barrels, pails or tanks from which the water must be dipped or poured are prohibited.

(4) At places of field employment, at least one readily accessible toilet shall be provided for every 25 employes of each sex. In fields where the duration of employment is less than 5 hours per day, the toilet ratio may be reduced to one toilet for every 40 employes of each sex. When a total of ten or less persons are employed only one toilet need be provided.

(5) Construction and location of privies provided at places of employment shall conform to the regulations of the Section in OAR Chapter 437, Division 128, Subsurface Sewage and Nonwater Carried Toilet Facilities, and be maintained in good repair and in a clean and sanitary condition.

(6) Toilet facilities provided for each sex shall be distinctly marked for "women" and "men" in English and in the native language of employes expected to work in these fields or marked with easily understood pictures or symbols.

(7) Whether or not any portion of the crop being harvested is going directly to market for consumption by the public without washing or processing, water, soap, and paper towels or an effective waterless hand cleaner and paper towels shall be provided in conjunction with the toilet facilities in fields where workers are employed.

(8) Containers shall be provided for disposal of paper towels.

Hist: WCB Admin. Order Safety 3-1975, f. 10/6/75, ef. 11/1/75.