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WAR RELOCATION AUTHORITY

PREPARED BY THE ENGINEERING SECTION OF THE WASHINGTON STAFF

ON THE BASIS OF ALL EXISTING RECORDS

AS OF JUNE 30, 1943

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AUG 1 1943

## RECORD OF CONSTRUCTION OF WAR RELOCATION AUTHORITY CENTERS

### GENERAL

The Construction Program originally conceived for the War Relocation Authority was based on the requirements of Sections 5 and 7 of the "Memorandum of Agreement" dated 4-17-1942, between the War Relocation Authority and the War Department. (See Attached Copy). Later (June 8, 1942) as a guide for both Agencies a document entitled "Standards and Details, Construction of Japanese Evacuee Reception Centers" was issued. (See attached copy). This document with its several supplements outlined the basic general facilities to be provided by the United States Engineer Department for the evacuees and their families and included the following:

- a. Shelter, Mess, Recreation, Bath, Latrine and Laundry Buildings
- b. Hospital Facilities
- c. Warehouse Facilities
- d. Administrative Facilities including Store, Post Office and one Equipment Repair Shop.
- e. Limited quarters for Administrative Personnel
- f. Shelter and Facilities for Military Police Units
- g. Utilities--Water, Sewage Disposal, Electric Power and Light, Access and Service Roads and Communication Facilities.
- h. Fire Protection

The above primary construction with some exceptions was accomplished by the U. S. E. D. over a period of approximately 8 months starting



March 16, 1942 (at Manzanar) and ending in the first week in November, 1942.

In addition to the construction work carried on by the U. S. E. D. the War Relocation Authority also established a Construction and Improvement Program which was undertaken by their own forces after the camps were occupied and evacuee labor was available. The following is a description by subject of the history of the Construction and Maintenance Section of the War Relocation Authority from its inception to the present date, June 30, 1943.

Practically all of the work carried on by the U. S. E. D. was done by contract however, in some instances the U. S. E. D. purchased material with the W. R. A. agreeing to furnish labor and supervision for installation. In a few cases due to slowness of delivery of various items, work of the U. S. E. D. was so delayed and their services so greatly needed elsewhere that arrangements were made whereby W. R. A. forces assumed responsibility for the work when the material was finally received. Short time schedules allowed the contractors, inexperienced workmen, inclement weather, lower grade of material and substitutions all made for a low standard of construction which, it soon developed, raised many problems in connection with operation and maintenance.

Generally the Relocation Centers were laid out in blocks to accommodate a population of 250 to 300 people per block. A mess hall, latrines for men and women, baths and laundry buildings were provided for each block. The residential buildings or barracks were of 20' x 100'



or 20' x 120' Theatre of Operation Type, each divided into four or more apartments. These apartments usually consisted of one room 20' x 20' or 20' x 24' with some variation in size to accommodate larger or smaller families. No partitions were provided in any of these apartments making it necessary for an entire family to live and store their personal effects in one room. One outside door was provided and several single sash windows on each outside wall. In most cases the buildings were not lined or sealed and to provide insulation against severe winter weather at some projects or extreme heat at others, it was very necessary that the War Relocation Authority complete this job. Cots, mattresses, blankets and a heating stove of some type was furnished for each apartment; no individual cooking facilities were provided since all residents of a block were required to receive their meals at the common mess hall. Buildings and barracks were placed as close together as possible, fire hazards considered. This was in order to reduce as far as possible the amounts of critical material required for light, water and sewage systems. The U. S. Engineers changed their plans from time to time and there is a difference in the layout and detail of construction as made between the different district offices.

Because of the tremendous drain on building materials at this time, a great deal of difficulty was encountered in purchasing the usual or proper kinds of material suitable for the construction of these Centers, making it necessary to use a great deal of green and unsurfaced



lumber. Inability to obtain tongue and groove flooring in many cases made it necessary to use a low grade of shiplap or square edge lumber for flooring as well as for boxing and sheathing.

Much of the work of erecting the buildings was done by unskilled men, the emphasis being on production rather than on the quality of work. Foundations were provided for the minimum anticipated floor loading and were in most cases wood blocks. Some of the Centers, have concrete or brick floors. At most of the centers, wells were drilled to provide the domestic water supply. Water mains and distribution systems and storage tanks or reservoirs were provided. These posed an especially difficult problem since pumping equipment, pipe and valves were extremely difficult to obtain making many substitutions necessary. In some cases, valves were almost entirely eliminated from the water distribution system and later on when the water mains failed from one cause or another, it was found necessary to turn off the water for the entire center and pump dry or drain all of the mains before repairs could be made. Often no provisions were made for expansion in the lines, therefore, sudden changes in the temperature caused serious breaches in the main line and made extensive repairs necessary. Many of the lines were a combination of cast-iron pipe, steel pipe and wooden stave pipe. The use of second hand pipe was necessary in some instances. All these substitutions and eliminations and the very temporary nature of the camp construction, made it immediately necessary to organize and maintain Maintenance and Operation Crews on a 24-hour basis from the time camps were first occupied.



## THE WAR RELOCATION AUTHORITY BUILDING CONSTRUCTION PROGRAM

Soon after the evacuation order was issued construction organizations were set up in the San Francisco Regional Offices as well as at the various Relocation Centers and planning was started to provide Industrial Buildings and to house other activities and schools that were considered necessary to the success of the Relocation Centers. This building planning was necessarily adjusted from time to time as changes in the general policy for the conduct of the Centers were made. Early in the life of the War Relocation Authority, it was planned that Industrial Buildings would have the highest priority in order that many of the occupants of the centers could be occupied in gainful manufacturing activities that would contribute to the National Defense Program, as well as to assist in supplying their own and the needs of other centers. The U.S.E.D. constructed a Lens Gridding Factory at Heart Mountain and Camouflage Net Garnishing Plants at Colorado River, Gila and Manzanar. Tent Factory, Furniture Factory and Garment Factory Buildings were designed by W. R. A., materials ordered, and construction started. All of these buildings with exception of the Garment Factory at Manzanar were completed but with the curtailment of the Industrial Program, their use was diverted to other purposes. This in turn reduced requirements for additional warehouses, garages and other service buildings at several centers. The Furniture Factory at Tule and Garment Factory at Manzanar are still operating on reduced scale in converted warehouse buildings originally occupied as a temporary



measure. Schools and other Community Buildings were based on the anticipated population of the various centers. Later after the issuance of the "Standards and Details" by the U. S. Engineers and it was found that Staff Housing facilities were insufficient, plans for personnel housing were developed. The Farm Security Administration made available their architectural organization at San Francisco, Denver and Little Rock in developing school and housing plans, specifications and material requirements. The buildings to be undertaken for this purpose were based on the minimum requirements. Standard of construction was based on the modified theatre-of-operation type level. Other construction projects proposed were, Poultry Units, Hog Units, Dairy Units, Vegetable Storage and Vegetable Handling Buildings, Warehouses, Stores, Bakeries, Slaughter Houses, Equipment Repair Shops and many other buildings peculiar to the various centers. Canning and dehydrating plants to preserve produce were considered essential and constructed. Hostels for infirm people were built while the general hospitals were often improved, enlarged or completed by WRA crews. Original shops built by the U.S.E.D. were generally found to be inadequate to WRA needs, therefore larger buildings were erected, the original being diverted to other uses. Plans, specifications and material lists for many of the buildings listed above were made on the centers, utilizing evacuee trained professional and technical personnel. At one time, it was anticipated that the Farm Security Administration would take over the supervision of the construction program on several of the centers insofar as schools and administrative projects were concerned. Later this method of building



was abandoned generally because of the many delays encountered in obtaining delivery on building supplies and equipment. The first materials required for the building program were purchased by the Quartermaster's Corps in June of 1942. Some of the materials were delivered in June and July of 1942. In no case, however, was it possible to obtain delivery of enough material to start construction of any of the buildings planned before late in the summer of 1942.

#### PROCUREMENT OF CONSTRUCTION MATERIALS AND EQUIPMENT

The first requests for materials and equipment required for the construction program at the six western projects were placed with the Quartermaster Corps in May and June of 1942. During the early part of July 1942 the remaining requisitions for building material for schools and personnel housing were placed with this organization. The War Relocation Authority Regional and Field office construction forces then proceeded to prepare plans and material estimates for other buildings to be undertaken, emphasis still being on the need for Industrial Buildings. In August, the Regional Office Construction Staff was becoming concerned because of the delay in obtaining delivery of construction materials with project personnel being employed and organized to carry on construction work. Where the Centers were occupied evacuee crews had been recruited and were standing by waiting for delivery of materials. About the first of September, we were advised that the requisitions formerly placed with the Quartermaster Corps would be recalled excepting, of course the few miscellaneous requisitions on which



procurement action had already been taken and those requisitions for building materials and equipment placed with the U. S. Engineers for purchase. This was done and many of the requisitions were subsequently returned from the engineers, certain changes being recommended. This delayed still further procurement of construction materials. One of the changes required by the U. S. Engineers was that lumber be segregated by kind and class; for instance, all No. 2 grade Douglas Fir Lumber would be thrown into one lot and purchased in random length quantities and likewise for other types and classes of lumber. In some cases lumber was purchased on this basis rather than as specified by the War Relocation Authority and/or Farm Security Engineers and upon receipt of such lumber it was found impossible to construct the buildings in question because of the loss in cutting that resulted from random length purchases and because of the impracticability of fabricating standard roof trusses with random length material. Supplementary lists were provided in these cases and placed with the engineers and much delay was experienced in making these purchases as anything other than random lengths was considered special.

Soon after our requisitions were placed with the engineers, we were advised by them that priorities higher than those available to the engineers would be required for the purchase of much of the critical building materials needed for our construction program, and an appeal was immediately made to our National Office who made inquiries to the War Production Board. We were then advised that it would be necessary for the War Relocation Authority to prepare PD-200 applications for authority to construct the many



projects being considered at the Relocation Centers and to obtain the necessary priority assistance. The first of these applications were approved early in October but actual deliveries of materials were still a slow process. Where supplemental requisitions were placed to compensate for random length purchases additional authority for priority assistance was generally necessary. The constantly changing trend of construction in connection with the National Defense Program was beginning to have a serious effect upon the backlog of construction materials on the American Markets. Deliveries were obtained however for most of the materials required to start construction in the late winter and early spring of 1943. At the present time we are still awaiting delivery of some of the materials for which requisitions were originally placed in June and July of 1942.

Tools and equipment were also extremely scarce and our original orders were repeatedly cancelled or only partially filled. The best solution found was to locate these items in very small lots and purchase from small dealers or to secure used equipment. Heavy equipment such as RD7 or 8 caterpillar tractors was nearly impossible to obtain due to the demands of the Military forces with the result some projects have been underpowered for their major construction jobs. The second-hand equipment presented an immediate problem in maintenance work with replacement parts nearly impossible to obtain. Many pieces of automotive equipment were obtained from other government agencies. Most of these had already been driven past the economical stage of use but for lack of others had to be maintained and operated to the best of the Centers ability.



WAR PRODUCTION BOARD APPROVAL AND PRIORITY ASSISTANCE REQUIRED  
TO OBTAIN CONSTRUCTION MATERIAL

Early in September after being advised by the National Office that priority assistance and project approval by the War Production Board would be necessary, the San Francisco Office entered into agreements with the Farm Security Administration in San Francisco for the preparation of Form PD-200's that were required by the War Production Board for schools and staff housing projects on the six western centers. Applications for priority assistance were prepared for the other construction projects required at those centers mainly by the San Francisco Regional Office. The Denver and Little Rock Regional Offices also enlisted the help of the Farm Security Administration in those two cities to assist them in the preparation of plans and applications for project approval and priority assistance required by the War Production Board. Thus the first applications for schools and personnel housing were approved by the War Production Board early in October of 1942. As applications were completed they were forwarded to the National Office where a member of the War Relocation Authority Staff presented them to the War Production Board for their consideration. Early consideration and approval was, therefore, possible. Soon thereafter the War Production Board decided no more projects would be approved until all of the applications were received. Still later a request was made by the War Production Board for the War Relocation Authority to prepare and present to them an overall construction program covering all anticipated development at each center indicating the priority in which each project was to be undertaken and the estimated cost of each project.



A call was sent out from the Regional Offices asking each center to submit a program including all of the buildings and other developments anticipated at these centers. It must be realized that during this time most of the centers were receiving evacuees almost daily and they were all operating shorthanded, it being extremely difficult to employ personnel for the various activities. The placing of orders for subsistence supplies, the receipt, storage and handling of such supplies was in itself a tremendous task. The field forces were sorely pressed to carry on all of the projects that were absolutely necessary and each day brought new problems also in many cases personnel had not been recruited in the Engineering and Construction Staffs who were capable of making plans and estimates for an Overall Program. For that reason, our call for an Overall Program could not be given due consideration. Much of the first Overall Program prepared was, therefore, a very rough estimate of anticipated needs. The Regional Offices come under about the same category as the Field Offices concerning the recruitment of personnel, we had, to call upon the Centers to do most of the work on the plans while a series of conferences served to combine the various thoughts into a workable Overall Program.

Early in January, these plans were received in Washington and were revised and standardized, listed in an orderly manner and given priorities and were presented to the facilities and Review Committee of the War Production Board. At this same time projects that had been formerly approved, namely, projects for schools and personnel housing were reviewed.



The need for such projects was questioned by the Facilities and Review Committee. It was their contention at this first meeting that our construction program was conceived on entirely too elaborate a scale. They pointed out that there was a war on and it was next to impossible to obtain equipment and supplies needed for the armed forces, that our plans should be reconsidered and they requested that we present for their further perusal plans for the proposed schools and housing projects. This was done and after careful consideration, the members of the Facilities and Review Committee of the War Production Board conceded that the buildings were of a minimum standard and that to reduce the standard further would make them unsafe for occupancy. At a later meeting with the Facilities and Review Committee, our Overall Programs for the ten Relocation Centers were approved in principle. This committee, however reserved the right to review each individual project costing \$100,000 or more and a sub-committee chairman was appointed to review all projects of the War Relocation Authority that required the use of critical materials that cost in excess of \$25,000. During this period of time, many changes were made in the requirements of the War Production Board. There was an apparent turnover in their personnel organizations, and it was found that because of these changes in policy and personnel, each new project that was presented to the War Production Board for their consideration had to be resold to the new employees. Later on because of the criticism that developed from the construction of certain school buildings through contract, the Facilities and Review Committee asked for a special session to again review our Overall Program. Senator Johnson of Colorado was present at this conference



and asked many questions concerning our plans for operating the Relocation Centers. Director Myer answered all questions asked in a satisfactory manner and the Senator and the members of the Facilities and Review Committee appeared to have a very much better understanding of the War Relocation Authority program and of the problems involved in the administration of the centers as a result of this special meeting.

Because of the changes in the War Relocation Authority policy, chiefly the Relocation Program, which had made or was expected to make available a number of barracks buildings, the committee was advised by the members of the War Relocation Authority staff that certain reductions in the school program as originally conceived could be considered at this time. For that reason, it was agreed at a still later conference to eliminate the construction of all Elementary Schools as originally planned by using barracks buildings and that new applications would be prepared proposing the remodelling of these buildings for school purposes. Following this, Revocation orders were issued in February recalling the authority to construct Elementary Schools. Since all of the materials required for the Personnel Housing projects, High Schools and Elementary Schools were grouped on the same requisitions (for convenience of the U. S. Engineers in purchasing) the War Relocation Authority was faced with a tremendous problem of attempting to stop delivery of materials that had been purchased or that were in the process of being purchased for Elementary Schools without upsetting all orders for High Schools and Staff Housing. In order to comply with the revocation order and stop delivery of



materials for Elementary Schools, it was necessary to also stop the delivery of materials sorely needed for housing and high schools. As a result the purchase and delivery of materials for vitally essential units was again postponed. These orders were replaced as rapidly as possible. At this time it became evident that the high school building program could also be greatly reduced, again using available evacuee barracks buildings for high school classrooms. Except at Granada and Heart Mountain where high schools were built by contract; Tule Lake, where construction had progressed beyond a point practical to stop; and Colorado River, new construction for high schools was reduced to the Auditorium and two or three of the special shop or laboratory units. During February, March and April approval was obtained on many of the projects that had been prepared and presented to the War Production Board for their consideration. In many cases, however, critical materials required were eliminated from the application. In some cases furnaces and electric materials were eliminated, rough hardware was eliminated in others, while the other materials were eliminated, rough hardware was eliminated in others, while the other materials required were approved. This hardware in particular, rough truss hardware, was absolutely essential to the successful construction of many of the units as planned. Appeals were made on Form PD-200B and in all cases approval was finally obtained. Serious delays in the construction program and tremendous overhead costs were built up because of these and many other forced delays in obtaining material deliveries.



#### AGRICULTURAL LAND DEVELOPMENT

In selecting locations for the centers (See Memorandum of Understanding between War Relocation Authority and U. S. Army) an attempt was made to obtain an amount of agricultural land sufficient to permit the production of most of the vegetables and much of the meat, poultry and dairy supplies required to feed the evacuees in the Centers. This would provide gainful employment for the evacuees and in most cases would develop highly productive agricultural land that was critically needed during the war. Public lands were selected where possible. At Colorado River and at the Gila Centers lands held in trust for Indian Tribes were selected. At some of the Centers, Farm Security Administration land was used for locating the Centers. Some private land was leased and some lands were purchased although this constituted a very minor part of the total. Several Centers were located on land withdrawn by the Bureau of Reclamation. This made it necessary to work in cooperation with the various agencies who were responsible for the development and protection of the land being used by the War Relocation Authority. Irrigation projects had to be extended or developed to provide water for the land in the arid states. At many of the centers, extensive drainage and flood control projects were necessary. Much of the land had to be cleared from its natural state, leveled and otherwise prepared for agricultural production. This was a task requiring trained supervisors and the use of much heavy construction equipment. Evacuees in most cases were employed for skilled and semi-skilled positions as carpenters, equipment operators



and etc. During the fall and winter of 1942, the recruitment of personnel, acquisition of equipment and materials was continued. These projects had to be approved by the War Production Board, but in most cases, work was carried on without waiting for this approval where no critical materials were required, labor being available and not usable otherwise. In the spring of 1943, the development of irrigation projects and agricultural land was given the highest priority, all available equipment and men were utilized on this work. This because of the importance of producing as much of the food required as soon as possible at each of the Centers. At the Colorado River project, a major agricultural development was undertaken. A canal capable of carrying approximately 1,000 second feet of water is being constructed. Virgin land is being cleared and leveled. In spite of the tremendous efforts put forth by the crew at this center only a limited area was ready for crops in the spring of 1943. Work is being continued and it is hoped as much as 5,000 acres of land will be made available here for agricultural development.

#### IRRIGATION, DRAINAGE AND ROADS PROJECTS

Most of these centers being located in isolated areas, it was found necessary to develop or improve roads to the centers and to construct access roads to the agricultural land. As mentioned above the development and continuation of irrigation projects, the construction of distribution laterals, drainage canals and flood control work was necessary at many of the centers. Part of this work is being carried on by our own forces and equipment. In many cases, however, it was found advisable to contract



the work rather than to attempt to purchase the equipment required if work was done with our forces. Because of the nature of the projects being undertaken the equipment would be used for only a short period of time and then would be surplus to our needs. The development of roads is being kept to the minimum requirements considering the amount of wear and tear on equipment while the centers are being occupied. However most of the roads constructed by the U.S.E.D. were too light to stand actual traffic conditions and soon had to be rebuilt by W. R. A. crews in order to maintain travel in the Centers. At Colorado River and at Gila some of the roads being developed will be surfaced with an asphalt wearing coat; others will be given a dust-seal coat of oil.

#### EMPLOYED PERSONNEL

In the early stages of the War Relocation Authority and soon after the Relocation Center locations were made, personnel to staff the Engineering and Construction Divisions were recruited. It was found that the demand was so great for this type of personnel for defense construction work, it was next to impossible to employ people who had the kind of training required if a successful construction program was to be carried out. This applied first to the Regional offices then the centers themselves. Many of the employees were obtained through transfer from other Government Agencies, others were recruited from Civil Service Rolls. In every case an effort was made to obtain the services of local people who it was hoped would have a better knowledge of local conditions, weather conditions



and other factors that govern the conduct of a successful construction and/or production program. There has been a large turnover in these employees, many having been called to the service or have resigned to take over employment. In some cases employees became discouraged and resigned because of their inability to obtain materials required to carry on construction programs planned for the various centers. This condition still exists.

#### THE RECRUITMENT OF EVACUEES FOR THE CONSTRUCTION & MAINTENANCE SECTIONS

It was the aim of the Construction Section to use evacuees in all skilled, semi-skilled and common labor positions required to carry on the construction program proposed for each of the various centers. This was done with varied degrees of success. The degree of success, however, depended almost directly upon the ability of employed personnel to organize evacuees into balanced crews and to delegate authority to them and to induce them to use it. At some of the centers the appointed personnel was kept to the barest minimum, evacuee engineers, being employed to make plans and materials estimates and to layout and carry on construction work with evacuee workmen. It was found that the more authority and responsibility assumed by the evacuees, the greater was the success of the venture. Because of a decided shortage in the skilled and semi-skilled construction crafts, some of the centers carried on an apprenticeship training program in connection with their construction activities. This as well as the actual work program, only attained



varied degrees of success since it was found to be extremely hard to maintain an interest in the work being undertaken. Material shortages and temporary or permanent leaves also continually upset the planning of the division.

#### MAINTENANCE AND OPERATIONS

The construction section was also charged with the responsibility of maintaining all buildings and utilities at each of the centers. This developed into a tremendous job because of the nature of the buildings as constructed, because of the substitute or makeshift materials used in the construction of water and sewage facilities and because of the use of unskilled labor. The evacuee apartment buildings in most of the centers had to be lined and sealed, in most cases the floors proved to be faulty and it was found necessary to cover them with a prepared floor covering or to lay new floors. Fire hazards existed through the centers. Practically all of the terra cotta flues cracked excessively and had to be replaced or metal liners installed. Bases under cooking stoves and space heaters had to be insulated. Most of the plumbing was exposed to the extent that it had to be winterized, much damage was done to such installations by the frost making it necessary to replace or repair them. Some of the buildings requiring extensive additional work were; Warehouses, failure of floors due to insufficient underpinning to carry the load that it was necessary to place on them. Cold Storage Warehouses, no drainage was provided to carry away waste water from the cooling units, caused failure of foundation. The original wooden floors buckled due to excessive



moisture and had to be replaced. Crews of men were kept employed on a 24 hour basis. Tule Lake reports 10,464 maintenance or minor improvements during Fiscal Year 1943. Men were trained in the operation of pumping plants, water storage and treatment plants and in maintaining the distribution system. The sewage disposal plants posed a similar problem, many of the lines and traps froze during the cold weather and had to be dug up, cleared and repaired. Operators had to be trained to operate pumps, disposal tanks, and in the general maintenance of these plants. The same applied to the electrical distribution system. Many of those lines were overloaded without sufficient protection, the wire being too small to carry the load or transformers overtaxed. These had to be rearranged or replaced. Many fire hazards existed because of the faulty nature of much of this installation. All of these things had to be taken into consideration and corrected by using unskilled men to the greatest extent. A training program was started in connection with all of this maintenance and operations activities in order that men could be in training to replace the skilled men as they were resettled away from the centers.

At the present time applications to the WPB for approval of new construction are acted upon more expeditiously than in the earlier stages. A change over from the original PD-200 form to a new application form WPB-617 has caused considerable confusion at the Centers, chiefly because project officers concerned have not made themselves sufficiently familiar with the new instructions.



Work on the many units at the various Centers had progressed as follows as of June 30, 1943:

Central Utah

Staff Housing	56%	Complete
Schools	1.6%	"
Poultry Farm	10%	"
Hog Farm	2%	"
Irrigation Project	35%	"
Drainage	3%	"
Roads	15%	"
85 miles of irrigation ditches cleaned		
48 turnout gates constructed		

Colorado River

Elementary School Camp 1	60%	Complete
12 Year School Camp 2	50%	"
12 Year School Camp 3	60%	"
Install Mastipave in Evacuee Barracks	20%	"
Remodel Kitchens in all Mess Halls	90%	"
Rebuilt 2 Mess Halls destroyed by Fire	100%	"
Screening windows and doors, evacuee barracks	50%	"
Main Canal	80%	"
Main Canal structures	65%	"
Laterals	55%	"
Lateral structures	55%	"



Drainage	10%	Complete
Flood Control	20%	"
Subjugation	37%	"
Primary Roads	53%	"
Secondary Roads	30%	"

Contracts - C.M. Lindberg - leveling approx. 300 acres.

E. Williams - Hauling 50,000 c.y. earth for canal embankment

J. M. S. Co. - Excavate 17 miles drainage canal

H.B. Mickelson- Personnel quarters

Average No. non-evacuee employed personnel - 246

#### Gila River

Staff Housing	Nearing completion
Dairy Project	Practically complete
Hog & Poultry Farm	Less than 50% Comp.
Installation of Hospital Coolers	Completed
Field Packing Shed	Foundations poured
Fluorine Filter Reactivating Plant	Nearly Complete
Roads - Route 5-C, access road from Serape Siding-	25% Complete
Grading & draining for 3 miles south from junction with state hwy. #87- Complete with 25% of gravel base course placed.	
Bridge over canal on Route 5C between Canal and Butte-	Complete
Irrigation Construction	

Butte Camp 90% complete which includes:

2017.5 ft. of 16" concrete pipe  
1217.5 ft. of 12" concrete pipe



85 concrete entrance boxes  
50 wooden diversion boxes  
9 wooden checks  
17000 ft of lateral and head ditches

Canal Camp - 50% complete which includes installation of pump and transformer station. Ditch dug for 16" concrete pipe from well to high side of camp and for main lateral along south side of camp.  
520 ft of 16" pipe laid - street & alley crossings  
650 ft of 12" pipe laid - " " " "  
730 ft of 16" " " in main pipe line  
5500 ft of lateral and ditches dug  
18 wooden diversion boxes

Basic landscape leveling 90% complete in Canal Camp

Basic landscape leveling 70% complete in Butte Camp

Basic landscape planting 90% complete in Canal Camp

Basic landscape planting 70% complete in Butte Camp

The above includes - 456 trees planted,  
147,135 flower plants issued,  
201,560 lbs., fertilizer used  
6,800 lbs., grass seed planted  
16.5 acres graded and leveled for playgrounds and parks

23,800 lbs. scrap metal salvaged and hauled to WFB salvage depot at Phoenix, Arizona

# Granada

High School (by contract)	99%	Complete
Staff Housing	50%	"
Fish Refrigerator	40%	"
Community Stores	20%	"
Center Irrigation System	10%	"
Access Road	100%	"
Marvel Canal Checks	100%	"



1 four family unit ready for occupancy.

Heart Mountain

High School	Completed by contract- Accepted 5-27-43
Poultry Unit	13% Complete
Hog Unit	40% "
Bakery	65% "
Truck Storage Building	20% "
Filling Station	100% "
Canal Lining	100% (water turned in 5-27-43)
Roads & Streets	20% Complete
Water & Sewer (Agricultural Area)	60% "
Irrigation & Drainage Project	34% "

Road and street work consisted of 1300 linear feet of culverts installed with hand labor. Equipment in use on Canals or farm area.

Salvaged CCC buildings are being used extensively at Heart Mountain 300 Linear Feet of proposed 1600 Linear Feet completed for Truck storage building.

Jerome

Staff Housing - Completed for 40 families

Conversion Barracks to App. Personnel Apartments - started

Remodelled Ice House, work completed on plumbing shop, stove

Repair shop, Paint shop, Tofu Factory, Dark Room and  
one Barber Shop.



Leupp

Partial rehabilitation of Indian School	100%	Complete
Power station and Pumping plant rehabilitated		
Sanitary and Electrical fixtures installed		
Refrigeration Plants installed		

Manzanar

Staff Housing

2 Four family apartment buildings	100%	Complete
2 Four " " "	95%	"
5 " " "	50%	"
1 Dormitory	100%	"
2 Dormitories	75%	"

Installation of water main and service pipe - 2000'	100%	"
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Installation of 1050' 8" and 1246' 4" sewer line 100% Comp.

Laying 1½ miles 12" concrete irrigation pipe	100%	Complete
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Lining 3000' irrigation ditches	100%	"
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582 repairs on buildings  
 322 repairs to water and sewer system  
 3½ tons grease collected, dehydrated and packed for shipment.

Main Street resurfaced

Minidoka

Staff Housing	20%	Complete
Irrigation (Lat. 21.5)	60%	"
Irrigation (Temp. Lateral)	95%	"
Roads	50%	"

Behwer

Library & Auditorium	15%	"
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Staff Housing	80%	Complete
Garage	80%	"
Hog Barn	50%	"
Ice Storage	30%	"

Tule Lake

Slaughter House	73%	"
Schools	61%	"
Tent Factory	90%	"
Furniture Factory	15%	"
Ice Storage	100%	"
Conversion of Barracks	100%	"
R. R. Spur and coal hopper	15%	"
Partitions Evacuee Barracks	15%	"
Veg. Storage, Butcher Shop & Pickling Shed	90%	"
Hog and Poultry Farm	55%	"
Land Development	65%	"
Partitions-Adm. Office	100%	"

252,000 cu. yds. of earth were moved in construction of irrigation canals, laterals and drainage ditches during the quarter. 81,000 board feet of lumber used in construction of turnouts, checks, culverts and flumes.

1-3/4 mile of new road bladed instock farm area preparatory to graveling. 600 feet of road in hospital area oiled as dust preventive measure. 4 1/2 miles of road from State Highway to League of Nations tract bladed.



Miscellaneous construction jobs as follows were accomplished.

Concrete floor and office in packing sheds, farm mess hall, pump house No. 1, garbage pits, fencing lumber yard, warehouse platform, as well as considerable office furniture.

5 wells cleaned of sand. No. 1 well deepened, continued installation of automatic sprinkler system in hospital.

504 repairs to grates and chimneys, 38 repair jobs on refrigeration. Total of 1415 miscellaneous building maintenance jobs consisting of replacement of hinges, repair done, windows, glass, roofing, porches, floors, fences, barriers and signs.

Proceeding with casting 1 $\frac{1}{2}$ " new cement liner in cracked laundry tubs and repair and replacement of fly screening on project.

Total of 20,098 man days of employment.



## WAR DEPARTMENT

Office of the Assistant Secretary  
Washington, D. C.

April 17, 1942

MEMORANDUM OF AGREEMENT BETWEEN THE WAR DEPARTMENT AND WAR RELOCATION  
AUTHORITY

Preamble: The War Relocation Authority is an independent establishment created by Executive Order of the President, No. 9102 dated March 18, 1942, with a primary objective of relieving the military establishment of the burden of providing for the relocation of persons excluded from military areas by order of the Secretary of War or any designated military commander acting pursuant to Executive Order of the President, No. 9066 dated February 19, 1942. The emphasis in all War Relocation Authority activities will be increasingly to alleviate the drain on military resources with regard to all phases of evacuation and relocation. The War Relocation Authority has agreed to prepare itself as rapidly as practicable to assume those burdens now imposed on the War Department respecting such activities and particularly in connection with Pacific Coast evacuation now in progress. Accordingly the following understanding is executed between the War Department and the War Relocation Authority to meet the present situation.

1. The evacuation of combat zones is a military necessity and when determined upon must not be retarded by resettlement and relocation. In other words, the timing of evacuation is a military function which War Relocation Authority will do all in its power to accommodate.



2. Assembly Centers are staging areas and necessary because of the time required to select relocation sites and to construct Relocation Centers (Reception Centers). Assembly Centers are constructed and will be supplied and operated by the War Department.

3. Relocation sites, upon which Relocation Centers (Reception Centers) are built, are to be selected by the War Relocation Authority, subject to War Department approval.

4. The acquisition, as distinguished from selection, of sites for Relocation Centers (Reception Centers) is a War Department function. Such acquisition will be made by the War Department upon the request of the War Relocation Authority. The War Relocation Authority will reimburse the War Department for the acquisition cost of relocation sites, or pay the cost in the first instance.

a. As a part of the acquisition procedure, respecting both private and public lands, the War Department, through an appropriate military commander, will advise the Chief Executive of the State concerned of the military necessity for the location of a relocation project within that State.

b. The War Relocation Authority has full responsibility for compilation of the necessary data and descriptions in connection with 3 and 4 above.

5. Construction of initial facilities at Relocation Centers (Reception Centers) will be accomplished by the War Department. This initial construction will include all facilities necessary to provide the minimum essentials of living, viz., shelter, hospital, mess, sanitary facilities, administration building, housing for relocation staff,



post office, store houses, essential refrigeration equipment, and military police housing. (War Department construction will not include refinements such as schools, churches and other community planning adjuncts.) The placement and construction of military police housing will be subject to the approval of the appropriate military commander.

6. The War Department will procure and supply the initial equipment for Relocation Centers (Reception Centers), viz., kitchen equipment, minimum mess and barrack equipment, hospital equipment and ten days' supply of non-perishable subsistence based on the Relocation Center (Reception Center) evacuee capacity. From the date of opening, or the date on which the War Relocation Authority initiates the operation of any Relocation Center (Reception Center), as the case may be, the War Department will transfer accountability for all such equipment and property to the War Relocation Authority. The War Relocation Authority agrees to assume such accountability. Thereafter, the War Relocation Authority will maintain and replace all such equipment and property, including subsistence, and will procure whatever additional supplies, subsistence and equipment it may require. The War Department agrees that the War Relocation Authority may effect its procurement through War Department agencies.

a. As to all routine procurement effected by the War Relocation Authority through War Department Agencies, said Authority agrees that it will transmit to the War Department a forecast of its requirements semi-annually in advance and that it will confirm in writing to the appropriate War Department Agency its actual requirements from time to time as the



need for such procurement develops. The War Relocation Authority will take all possible and practicable steps to inform the War Department well in advance of its requirements.

7. After pending arrangements for existing Reception Centers are completed, the War Relocation Authority will operate Relocation Centers (Reception Centers) from the date of opening. This will include staffing, administration, project planning and complete operation and maintenance. In undertaking such operations the War Relocation Authority will not retard completion of the evacuation process but will accommodate military requirements. It will be prepared to accept successive increments of evacuees as construction is completed and supplies and equipment are delivered. In each case the War Relocation Authority will provide a project manager who will be available to the War Department local construction representative for consultation as soon as a given project is approved for construction.

8. The War Department will provide for the transportation of evacuees to Assembly Centers and from Assembly Centers to Relocation Centers (Reception Centers) under appropriate military escort. The War Department, through the Western Defense Command, has arranged for the storage of household effects of evacuees through the Federal Reserve Bank of San Francisco. At War Department expense, the Federal Reserve Bank of San Francisco has acquired warehouse space, provided civilian guards, and has arranged for inventories of goods stored by each evacuee. When evacuee goods are stored and the Federal Reserve Bank delivers inventory receipts to the War Relocation Authority, said Authority will accept such receipts from the Federal Reserve Bank of



San Francisco and, upon such acceptance, said Authority assumes the responsibility now borne by the War Department for the warehousing program, including the assumption from the date of delivery of receipts, of payment of all costs. Thereafter, the disposition of such household effects and the transportation thereof to Relocation Centers, or elsewhere, will be the sole responsibility of the War Relocation Authority.

9. In the interest of the security of the evacuees relocation sites will be designated by the appropriate military commander or by the Secretary of War, as the case may be, as prohibited zones and military areas, and appropriate restrictions with respect to the rights of evacuees and others to enter, remain in, or leave such areas will be promulgated so that ingress and egress of all persons, including evacuees, will be subject to the control of the responsible Military Commander. Each relocation site will be under Military Police patrol and protection as determined by the War department. Relocation Centers (Reception Centers) will have a minimum capacity of 5,000 evacuees (until otherwise agreed to) in order that the number of Military Police required for patrol and protection will be kept at a minimum.

10. It is understood that all commitments herein as relate to the use of War Department and/or War Relocation funds are subject to the approval of the Bureau of the Budget.

WAR RELOCATION AUTHORITY

By M. S. Eisenhower /s/  
Director

WAR DEPARTMENT

By J. J. McCLOY /s/  
Assistant Secretary of War



WAR RELOCATION AUTHORITY  
Whitcomb Hotel Building  
San Francisco, California

June 16, 1942

CIRCULAR LETTER NO. 20

MEMORANDUM TO: Project Directors

SUBJECT: Standards and Details--Construction of  
Japanese Evacuee Reception Centers

There is transmitted for your information a copy of the latest (June 8, 1942) standard for the construction of Relocation Centers.

Under the terms of this agreement, only the facilities shown shall be constructed under the direction of the United States Engineers. Our organization is without authority to request any major refinements above the facilities listed, and this standard supersedes any previous standard or arrangement in negotiation for the provision of other facilities.

It should be clearly understood that neither our employees nor the employees of the United States Engineers are authorized to enter into arrangements for additional facilities, and indeed we do not request them.

There are, however, certain matters for local purview and judgment within the terms of the agreement, in which Project Directors should consult and negotiate with the resident engineer, such as: determination of fuel type, determination of necessity for interior lining of barracks, treatment of floors with concrete or wood, electrical installations in warehouses and hospitals, refrigeration requirements for climatic conditions, necessity for screening, construction of coal bins, fences, garbage racks, etc.

These arrangements at the project level, or at the regional level, as the case may be, will treat only construction items within the scope of the approved standard.

The Regional Office will prepare a clarification of the standard, together with an outline of the minimum facilities which will be constructed, under the direction of War Relocation Authority, over and above the facilities to be provided under the direction of the United States Engineers.

(signed)

E. R. Fryer  
Regional Director



STANDARDS AND DETAILS - CONSTRUCTION OF JAPANESE EVACUEE RECEPTION CENTERS

(As agreed upon 6-8-42 by Lieutenant General John L. DeWitt and Colonel L. R. Groves from the Office of the Chief of Engineers)

1. For the purpose of providing uniformity of construction and in order to obviate the necessity of miscellaneous correspondence in connection with construction of Reception Centers in Relocation Areas, it is requested that the following standards and details be observed in all future construction and to the extent possible in current construction of Japanese Evacuee Reception Centers.

2. In general facilities to be provided by the U.S.E.D. will include the following:

- a. Shelter for evacuees arranged in rectangular block units each containing mess, recreation or vocational building, baths, latrines, and laundry.
- b. Hospital facilities based on minimum 150 beds for 10,000 population and 250 beds for 20,000.
- c. Warehouse facilities based on one (1) 20' x 100' refrigerated storehouse and twenty (20) 20' x 100' storage warehouse or equivalent in floor space per 5,000 population.
- d. Administrative facilities, including store and post office buildings, and one shop building.
- e. Quarters for administrative personnel including messing facilities.
- f. Shelter and facilities for MP units.
- g. Utilities to include:
  - (1) Adequate water for culinary, sanitary and fire protection purposes.
  - (2) Water-born sewage disposal conforming to minimum health requirements.
  - (3) Electric Power and Light.
  - (4) Necessary access and service roads.



h. Adequate fire protection.

3. Layouts should be made conforming to recommendations supplied by the Civil Affairs Division of the Western Defense Command and Fourth Army. Schools, churches, theatres, stores and shop facilities will be constructed by the operating agency, but space and basic utilities must be provided for these items in layouts made by the engineers.

4. The typical block should be designed to house not to exceed 300 persons. General standards to be as follows:

- a. Barracks to be T/O type construction modified to include partitions for family groups, asphaltic roofing weighing more than 45 lbs. per square, interior lining where warranted by climatic conditions, concrete floors, and electrical service to include one drop outlet in each apartment, with circuit capacity to permit future installation of one convenience outlet in each apartment.
- b. Bath and Toilet Facilities will generally conform to mobilization type requirements and will provide bath and toilet fixtures on the following basis per 300 persons, or per block.

(1) MEN

Showers - 12  
Bath Tubs - 0  
Lavatories - 12  
Toilets - 10  
Urinals - 4  
Slop Sink - 1

WOMEN

Showers - 8  
Bath Tubs - 4  
Lavatories - 14  
Toilets - 14  
Urinals - 0  
Slop Sink - 1

Showers will be individually controlled for women, but with central thermostatic installation for men, and control valve for maximum hot water temperature will be provided.

Individual control valves for showers will be placed low enough so as to permit operation by a person of 5'-0" height. Foot baths will be installed in the entrance to each shower room. Showers and toilets will be spaced sufficiently far apart and for women provided with separate partitions to allow reasonable degree of privacy.

- c. Laundries will contain 6 tubs with hot and cold water and six ironing boards per 100 persons. Standard benches in the laundry and tables in the ironing room should also be provided.



Convenience outlets for ironing, laundry tubs and ironing boards should be installed lower than usual due to small stature of users.

- d. Kitchen and Mess Hall to be of modified T/O construction, with concrete floor, if practicable, otherwise double wood floor.

Refrigerator of suitable capacity will be installed.

Ranges should be provided on the basis of 1 standard No. 5 Army Range or suitable substitute per 100 persons served. Certain No. 5 Army and other ranges will be supplied upon request to Headquarters Western Defense Command and Fourth Army, from evacuated Assembly Centers or from available Army stocks. When fuel other than coal and wood is to be used, the construction engineer will supply necessary type of range and advise this Headquarters so that the shipment of No. 5 ranges will not be made. When oil is to be used as fuel, suitable conversion units may be provided for the No. 5 ranges by the Engineer. Ranges will be installed with insulation to protect floors and adjacent walls, also with ventilated hood. Hot water facilities will include storage tanks of not less than 160 gallons capacity and booster heaters in addition to water jackets in ranges. Dishwashing facilities will be arranged so as to have scullery directly connected with mess hall and will include not less than two 3-compartment or one two and one three-compartment sinks with necessary drainboards and counters. Standard sit down, wooden mess tables will be provided, tables to be covered with pressed wood or plywood and varnished.

- e. Recreation Building to be modified T/O type construction with concrete or wood floor. Ten convenience outlets will be installed along walls to permit use of sewing machines, etc.

#### 5. Hospital Facilities

Hospital to be modified mobilization type construction. Instructions for layout and equipment will be provided by the Civil Affairs Division, Western Defense Command and Fourth Army.

#### 6. Warehouses

- a. Warehouse to be improved T/O type construction with heavier roofing and concrete floor. Refrigerated storehouse to be designed according to local conditions.
- b. Railroad siding should be provided in connection with warehouse area when possible, but no spurs for branch lines will be constructed. Some toilet facilities pit, chemical or



flush type and drinking water should be provided in warehouse area if such facilities are not immediately adjacent.

7. Administrative Facilities should include the following:

- a. On the basis of 10,000 population two (2) 40' x 120' buildings, one (1) 20' x 100' warehouse, garages for emergency vehicles, one shop building approximately 40' x 100', and buildings to house post office, store and fire station. Construction to be of T/C type. Suitable electric outlets and necessary plumbing to be provided in administrative buildings, post office and fire station.

8. Quarters for Administrative Personnel

On the basis of 10,000 evacuees provide modified T/O type, four dormitories, for minimum 40 persons, divided into 8' x 12' cubicles and equipped with bath and toilet facilities. Wiring should include one drop and one convenience outlet in each cubicle. One central Mess and one recreation building to be provided for a capacity of about 100 persons.

9. Shelter and Facilities for MP Personnel to be provided for a strength of a minimum of one company of four (4) officers and 126 enlisted men. Actual strength will be indicated in specific directives. Officers quarters should provide individual cubicles for sleeping quarters with bath and toilet facilities in the same manner as for administrative personnel quarters. One 20' x 100' building will be provided for each of the following: Administrative Headquarters and Unit Supply, Guard house, Recreation Room and Post Exchange, and one 20' x 30' equipped with hot water and sanitary facilities to be used as a dispensary. Garage or shed (depending on climate) to house emergency vehicles of the Unit.

10. Utilities

- a. Water supply should be designed on the basis of 100 gallons per capita per day with sufficient pressure to give adequate fire protection, and should have necessary standby supply facilities.
- b. Sewage Disposal Sewer capacity should be based on approximately 75 gallons per capita per day. Complete sewage treatment should be provided where indicated by local conditions
- c. Electric Power & Lighting. Installations should be designed on the basis of 2000 KVA per 10,000 population, so as to handle a reasonably ample load for all needs and with sufficient capacity of individual building circuits to prevent constant blowing of fuses. In lieu of street lighting, one (1) light at each end of all main buildings (one for warehouses) should be provided.



11. Fire protection, Generally to be the same as provided for mobilization type Army Camps. Barrels and buckets to be provided on the basis of one set for every four (4) buildings. Fire hydrants should be located throughout area. Two (2) trucks equipped with pumping equipment, hose and ladders to be stationed in each Center (on the basis of 10,000 evacuees.)

12. Access and Service roads should be properly graded and drained and provided with a simple type of surfacing material, preferably bituminous. A reasonable amount of surfacing materials will be left at the Center by the Engineer to be used for maintenance.

### 13. General

- a. Space heating in suitable form depending on climate and fuel most easily and economically obtained, to be provided in accordance with zone requirements established by the Chief of Engineers.
- b. Standard mobilization type plumbing fixtures to be provided in hospital, administration and MP installation.
- c. Electrical installation to provide for special requirements for equipment in hospital and warehouses as well as refrigeration, should be installed in accordance with good building practice and should have a central cut-out switch for blackout needs if the center is located within an air frontier zone. Separate circuits to be provided for central storage refrigerator and hospital installations to permit operation during blackout.
- d. Adequate refrigeration consistent with local climatic conditions to be provided in all kitchens. Meat Blocks will be provided, one for each kitchen.
- e. Suitable shelving will be constructed in kitchen store rooms and M.P. supply room, post exchange and barracks.
- f. All buildings will be screened unless local climatic conditions dictate otherwise and in any case hospitals, messes and latrines will be screened.
- g. Materials for interior lining of barracks, and screening for windows may, when not installed during normal course of construction, be left at the Center by the Engineer for installation by Camp Manager with Japanese labor.

### 14. Special Items



- a. Watch towers of a height commensurate with terrain conditions and equipped with searchlights as required shall be constructed around outside of Camp in locations and numbers requested by local M.P. Commander or Center Managers, but not more than eight to each Center without approval by this Headquarters.
- b. Standard stock fence will be built around the occupied area, excluding M.P. area. Materials may be left for construction with Japanese labor. Military Police area should be located to provide easy access to main high way serving the Center without having to pass through evacuee area.
- c. A 90' flag pole to be erected in suitable location of the M.P. area.
- d. One (1) T/O type barrack-building equipped with benches and tables and a receiving counter to be constructed near entrance to Center to be used for visiting purposes. Adequate parking space for visitors also to be provided.
- e. When required, suitable coal bins will be provided for each kitchen and in such other locations as may be indicated. materials to be provided by the Engineer, and left with Camp Manager for construction with Japanese labor. Screened garbage racks will be provided in connection with each kitchen, to be constructed in some manner as coal bins.

15. The Engineer will submit to Civil Affairs Division, W.D.C. and Fourth Army for approval the following:

- a. Site plan.
- b. Hospital plans.
- c. Kitchen and mess layout (floor plan).
- d. Bath, toilet and laundry building floor plans.



WAR RELOCATION AUTHORITY  
Whitcomb Hotel Building  
San Francisco, California

July 1, 1942

CIRCULAR LETTER NO. 20, SUPPLEMENT A

TO: Project Directors

SUBJECT: Standards and Details - Construction of Japanese Evacuee  
Reception Centers

There was transmitted to you under Circular letter No. 20, dated June 16, Standards and Details - Construction of Japanese Evacuee Reception Centers, as agreed upon June 8, 1942, by Lt. General John L. DeWitt and Colonel L. R. Groves from the office of the Chief of Engineers. Attached hereto, and made a part of this supplement, is the same document that has been furnished us by WCCA with the exception that Item 16 has been added. This, therefore, is the latest information we have concerning Standards and Details - Construction of Japanese Evacuee Reception Centers. The following items in this supplement are referred to in an attempt to clarify or bring to you the thinking of WCCA and U.S. Army Engineers and what is meant by some of the items mentioned in the Standards and Details.

Page 4, Item 7, paragraph a.--- One shop building approximately 40 feet by 100 feet. This will be a standard T/O type construction, apparently the same as is being built in the MP block. We believe it will be located in the administrative building block for use in storing and repairing transportation equipment. The primary purpose of this building is to be a service station and a storage place for the transportation equipment and service equipment used for administrative purposes.

Page 4, item 7, paragraph a.--- This store will be a T/O type building 20 feet by 100 feet, is designed to meet the needs of the administrative staff and is being constructed in the administrative building block. This building can be used in part as a warehouse for administrative purposes.

Page 4, item 7, paragraph a Fire Station---. Standards for the fire station have been changed to provide accommodations for 6 people who, it is expected, will be on 24-hour duty. It also provides storage for 4 pieces of equipment. One of those buildings will be furnished to each relocation center.

Page 4, item 8, quarters for Administrative Personnel--- In addition to the dormitories for single persons that will be built by the Army, it is planned, at present, to build 3 dormitories that will house 23 persons each, plus apartments for 50 families. Those will include 13 apartments, housing 4 families each. The additional dormitories and additional apartment buildings



Circular Letter No. 20, Supplement A

~~additional apartment buildings~~ will be built by each Relocation Center with Japanese evacuee labor after the areas have been occupied. Plans for these buildings and requisitions for material have been placed by the Regional Office.

Page 5, item 11, Fire Protection.-- This entire subject is being discussed with WCCA. Complete details of minimum requirements should be available in a few days, and an additional supplement on the minimum fire equipment that will be furnished by the contractor when camp is constructed will be furnished to you as rapidly as possible.

Additional Facilities.-- The additional facilities planned for each 10,000 relocation center are: Large shop for maintenance of transportation, agricultural, and construction equipment; one additional shop to be used as a maintenance-repair shop for plumbing, electrical, and carpenter shop. Standard plans for these buildings have been prepared by the Regional Office and will be submitted to project directors for their approval and modification so that each building may more closely meet local conditions. All materials for these buildings, including lumber and heating equipment, have now been ordered for all projects. It is understood that all Reception Centers now under construction will, before being accepted by the Army, be brought up to the Standards and Details as agreed to by the Army.

Changes from Standards and Details.-- If it is necessary to make any change from the Standards and Details, project directors should immediately communicate with the Regional Office so that an agreement can be reached with the Army Engineers office rather than attempting any major changes with the resident engineer on the job.

Major Changes or Major Buildings Constructed on Project.-- It is requested that all project directors submit to the Regional for consideration and approval any major changes in building construction or any major buildings construction that may be undertaken by the project after it is occupied by Japanese evacuees.

We realize that these standards are very brief and may vary from time to time due to the shortage of critical materials, but we do believe this understanding should assist in greatly clarifying many of the misunderstandings that have existed during construction in the past.

/s/

E. R. Fryer  
Regional Director

Enclosure



WAR RELOCATION AUTHORITY  
Whitcomb Hotel Building  
San Francisco, California

July 3, 1943

CIRCULAR LETTER NO. 20, SUPPLEMENT B

TO: Project Directors

SUBJECT: Standards and Details - Construction of Japanese Evacuee  
Reception Centers

There was submitted to you under Circular Letter No. 20, dated June 16, and Supplement A, dated July 1, "Standards and Details - Construction of Japanese Evacuee Reception Centers. Attached hereto, and made a part of this supplement, is "Supplement No. 1" to the above-mentioned document, as furnished us by WCCA.

This supplement (B) should be added to and made a part of Circular Letter No. 20 now in your file.

/s/

E. R. Fryer  
Regional Director

Attachment



STANDARDS AND DETAILS \* CONSTRUCTION OF JAPANESE EVACUEE RELOCATION CENTER

1. The following list of hospital equipment is added as a supplement to Paragraph 5 of "Standards and Details - Construction of Japanese Evacuee Reception Centers", dated June 8, 1942, as prepared by this Headquarters. Included are items to be provided by the U.S.E.D. and items to be procured by the Medical Depot upon request by the War Relocation Authority.

2. Hospital equipment to be provided and installed by the U.S.E.D. will include the following:

a. Refrigerators:

- (1) Main hospital kitchen - 1 extra large electric refrigerator of approximately 40 cu. ft. capacity.
- (2) Ward kitchen - 1 medium size electric refrigerator of approximately 8 cu. ft. capacity for each kitchen.
- (3) Neighborhood dispensary building - (when Center layout indicates need). 1 small electric refrigerator to be placed in pharmacy room of approximately 4 cu. ft. capacity.
- (4) Out-patient building - 1 medium-size electric refrigerator of approximately 8 cu. ft. capacity to be placed in laboratory.
- (5) Morgue - morgue refrigerator for 3 or 4 bodies, preferably 4.

b. Kitchen Equipment:

- (1) Large mechanical dishwasher for main hospital kitchen - 1 dishwasher, electric, large (capacity 150 to 250 hospital beds); automatic; with pump and motor; with capacity 265 gallons per minute; with 3/4" powers steam and hot water mixing valve for final rinse; including necessary racks and other equipment to operate. Equipment requires connections to maintain water for washing at 140 degrees, and to deliver rinse water at 195 degrees. Reference: Hobart Model CM preferred. Second choice, Crescent or equal. Powers valve extra on all makes.
- (2) Small mechanical dishwasher for hospital and isolation ward - and dishwasher, electric; small; semi-automatic; rack type dishwasher with three doors; with pump and motor to deliver 120 gallons per minute; with 3/4" Powers steam and hot water mixing valve; with steam sterilizer attachment; with necessary racks. For hospital isolation ward of 35 beds. Equipment



requires connections to maintain wash water at 140 degrees, and to deliver rinse water at 195 degrees. Reference: Hobart Model AM-4. Second choice: Crescent, or equal Powers valve and steam sterilizer attachment extra on all makes.

- (3) Usual drain sink in each ward kitchen.
- (4) Large double compartment drain sink in main kitchen for cook's use.
- (5) Usual vegetable preparation sink in kitchen scullery.
- (6) Small electric range for each ward kitchen, Hotpoint model RE-11 or equal. This model has 4 hot plates and one oven.
- (7) Standard Army ranges for main kitchen. Note: Other kitchen equipment such as steam tables, deep fat fryer, large coffee urn, etc., is not detailed here, assuming it is included in the Standard Army hospital kitchen. However, an electric potato peeler and other equipment of the purely labor-saving type should not be provided in these Centers.

c. Laundry Equipment:

- (1) One 42" x 84" wood washer, having one vertical partition, two doors, and two compartments; motor drive; with unit control; with water piping and automatic valves; with dial type thermometer
- (2) One 30" x 36" wood washer; one compartment; motor drive; with unit control with water piping and automatic valves and dial type thermometer.
- (3) One 30" solid curb extractor; with motor drive; with unit control with galvanized basket.
- (4) One 20" solid curb extractor; with motor drive; with unit control; with galvanized basket.
- (5) Two 36" x 30" air drying tumblers; with double steam coil; with motor drive.
- (6) One 16" x 100" single cylinder return apron flatwork ironer; steam heated; motor drive.
- (7) Two 32" x 22" x 24" galvanized washroom trucks with casters.
- (8) Two 32" x 22" x 24" wood washroom trucks with casters.
- (9) Eight canvas washroom baskets, 30" x 20"; with casters.
- (10) One 15 gallon copper starch cooker.



- (11) Four ironing boards (Tray No. 1-D or Bishop No. 7 type or equal); with suitable electric irons. Approximate weight 6 lbs.; and cords. Note: Some variation in sizes of this equipment may be necessary due to procurement difficulties.

The above laundry equipment was planned on the basis of a hospital capacity not in excess of 200 beds. Larger hospital capacity will require washers and extractors of slightly larger capacity.

d. Ventilators:

- (1) Coiling fan type with motor for:
- (a) X-ray developing room.
  - (b) Main laboratory.
  - (c) Dental laboratory.

e. Special coiling Lights:

For operating Room, Major Surgery - Standard Army Design.  
For Operating Room, Minor Surgery, and for obstetrical delivery room - see typical hospital plan.

f. Autopsy or Morticians' Table:

Standard Army type acceptable.

3. The surgery, delivery room, obstetrical ward, and all wards in the isolation building shall be so painted as to permit frequent soap and water washing.

4. The following list of hospital equipment will be requested by the War Relocation Authority for procurement by a Medical Depot. However, all items not installed by the manufacturer to be installed by the U.S.E.D.

a. Sterilizers:

- (1) Operating Room Unit - 1 four-piece battery unit for use with steam, to be installed in surgery sterilizing room. Battery unit to consist of one dressing pressure sterilizer #6 size, one water sterilizer #2 size with separate tanks for cold and hot water, one instrument sterilizer, boiling type #4 size; one utensil sterilizer, boiler type #1 size.
- (2) Obstetrical Ward Sterilizing Room - 1 utensil sterilizer #1 size for use with steam.



(3) Disinfecting Room - 1 bulk pressure sterilizer and disinfecter, rectangular type for use with steam, double door, size 36" x 42" x 84".

(4) Small electric instrument sterilizers, 1000 Watt type. Wall plug outlets should be provided in each ward utility room, the dispensary buildings, and the out-patient building, as shown on the typical hospital plan. Note: All of the above sterilizers, except the small electrical instrument sterilizers, will require water, steam, and waste outlets and proper connections after delivery of equipment. All steam supply lines should have suitable piping to permit uniformly maintained, adequate pressure at the instrument to assure a steam supply for capacity operation of the equipment.

Steam supply systems should deliver normal steam, free from moisture.

b. X-Ray Equipment:

- (1) 1 X-ray machine for fluorescence and radiography, 100 to 200 MA type.
- (2) 1 X-ray machine, portable, 15 to 50 MA type for use with base plug connection in each ward.
- (3) 1 developing tank.

Note: Necessary wiring detail and developing room arrangement are shown on the typical hospital plan. Barium plaster or lead lining should be provided on all inside walls of X-ray room, whichever is cheaper. Control Room partition should be lead shield with leaded window. Hall door and developing room door should be lead covered.

c. Operating Room Table:

No special attachments necessary.



WAR RELOCATION AUTHORITY  
Whitcomb Hotel Building  
San Francisco, California

July 17, 1942

CIRCULAR LETTER NO. 20, SUPPLEMENT C

TO: Project Directors

SUBJECT: Standards and Details - Construction of Japanese Evacuee Reception Centers

The following has been received from the office of the Commanding General, Headquarters Western Defense Command and Fourth Army, and concerns equipment for fire protection in Japanese Relocation Centers. This supplement should be made a part of Circular Letter No. 20, dated June 16.

1. Reference par. 2 h and par. 11 of "Standards and Details - Construction of Japanese Evacuee Reception Centers," the following are submitted as minimum requirements:

a. Fire trucks - Two of these to be provided for each center of 10,000 capacity or less. For centers of greater capacity one truck will be provided for each 5,000 capacity. When service pressure in water mains averages 60 pounds, or more, pumping equipment may be omitted from the trucks. These trucks will be equipped with minimum 600' of 2½" hose, wrenches, hand operated chemical extinguishers and 2 ladders 12' long. When pressure is less than average of 60 pounds conventional pumper engines with capacity of not less than 600 GPM will be provided. Not less than 600' of 2½" hose and 2 ladders 12' long will be included in the equipment.

b. Extinguishers - To be provided for each building on the following basis:

Building 1/	2½ Gal. S & A 2/	2½ Gal. Foamite	1 quart C. T. C.
Barrack	2		
Mess Hall	1	1	
H Type sanitation bldg.	1	1	
Warehouse	2		
Recreation	2		
Administration	2		
Hospital	2		
Other	2		3/

1/ When oil is used for heating purposes, one 2½ gallon foamite extinguisher will be substituted for one S & A extinguisher in each building where the oil is used.

2/ Pump type extinguishers may be substituted for S & A type when the latter are not obtainable.

3/ One qt. C.T.C. extinguishers to be provided for use in operating, delivery, and other rooms where electrical appliances, or central electric switches are located.



c. Fire Hose - Sufficient hose should be provided so that including what is carried on the trucks or engines minimum 2000' of hose is available. Hose to be 2½" single jacket, rubber lined, in 50' lengths with pin lug couplings.

2. Request that every effort be made to have the equipment listed above, actually on hand in each center at such time as may be set for completion of essential facilities required for beneficial occupation.

(signed)

E. R. Fryer  
Regional Director