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WAR DEPARTMENT
U. S. ENGINEER OFFICE
ALBUQUERQUE DISTRICT
ALBUQUERQUE, NEW MEXICO

SPECIFICATIONS
FOR
CONSTRUCTION
OF
EVACUEE LIVING QUARTERS

GRANADA RELOCATION CENTER
GRANADA, COLORADO

PREPARED BY
WILSON & COMPANY, ENGINEERS
ALBUQUERQUE, NEW MEXICO

June 23, 1942

I N F O R M A T I O N

The information contained in these Drawings and Specifications is not to be publicized in any way. It must be clearly explained to all persons to whom this information is made available that it is to be held in strict confidence, and not, under any circumstances, to be transmitted to others for publication or release to the press, periodicals or other agencies of public contact having either general or limited distribution. Any person failing to observe these restrictions may be prosecuted under the provisions of the Espionage Act, Title 50, U.S.C., Sections 31 and 32.

I M P O R T A N T N O T I C E

The attention of all bidders is invited to the fact that all capital equipment is subject to allocation by the War Production Board. It is expected that each bidder will own, or will have arranged to rent or otherwise acquire, and have available the plant and construction equipment necessary to construct the work herein specified. Delays in procurement of plant and equipment necessary for completion of the work under this contract will not constitute justification for any extension of time to the contract period as herein specified.

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GENERAL CONDITIONS

GC-1. GENERAL.- These conditions are a part of the Specifications and shall govern wherever applicable. (See "Special Conditions").

GC-2. VISITING SITE.- The Bidder should visit the site and acquaint himself as to local conditions; availability of labor, water, electric power, roads, soil conditions, the relation of finished grade of the building to existing grades and difficulties which may attend execution of the work. The submission of a proposal will be construed as evidence that such a visit and investigation has been made and later claims for labor, equipment, or materials required, or difficulties encountered will not be considered.

GC-3. SITE OF WORK. - The term "Site of Work", as used in these specifications and in Articles 17 and 19 of the contract, will embrace all areas wherein field operations are conducted by the contractor in connection with this contract, including work areas, shops, camps, yards, etc., irrespective of whether such operating areas lie within the limits of right-of-way shown on the drawings.

GC-4. CONTRACT REQUIREMENTS.- The contractor shall acquaint himself and require subcontractors to be thoroughly acquainted with all the provisions and requirements of the basic contract and exact strict compliance with all terms thereof affecting such subcontractors, particularly as to wages, reports and affidavits.

GC-5. CONTRACTOR'S REPORTS.- The contractor will report monthly, and will cause all subcontractors to report in like manner, within five days after the close of each calendar month, on forms to be furnished by the Department of Labor, the number of persons on their respective pay rolls, the aggregate amount of such pay rolls, the man hours worked, and the total expenditures for materials. He shall furnish the Department of Labor the names and addresses of all subcontractors on the work at the earliest date practicable provided that the foregoing shall be applicable only to work at the site of the construction project.

GC-6. LIABILITY FOR DAMAGES.- The contractor will be held responsible for all damage to the work under construction, whether from fire, water, high wind, or other causes, during performance and until final completion and acceptance, even though partial payments may have been made under the contract. He will be held answerable for all damages that may occur to persons, property, animals, or vehicles from want of proper shoring, bracing, lighting, watching, boarding or enclosing, and for any accident arising from defective

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scaffolding or apparatus, or any negligence on the part of himself or his employees.

GC-7. PATENTS.- The contractor shall hold and save the Government, its officers, agents, servants and employees, harmless from liability of any nature or kind including costs and expenses for or on account of any patented or unpatented invention, article or appliance manufactured or used in the performance of this contract, including its use by the Government. These specifications are furnished with the explicit understanding that when drawings, specifications and other data prepared by the War Department are furnished manufacturers and others for use in the manufacture or purchase of supplies, or for any other purpose, the Government assumes no responsibility nor obligation whatever, and the furnishing of said data by the War Department is not to be regarded by implication or otherwise as in any manner licensing the holder or conveying the rights or permission to manufacture, use, or sell any patented invention that may in any way be thereto related.

GC-8. STANDARD STOCK PRODUCTS.- All materials, supplies and articles furnished shall, wherever so specified, and otherwise wherever practicable, be the standard stock products of recognized reputable manufacturers. The standard stock products of manufacturers other than those specified will be accepted, if in the opinion of the contracting officer, they are equal in strength, durability, usefulness and convenience for the purpose intended. (See Article 7 of the contract.) Any changes required in the details and dimensions shown on the drawings for the substitution of standard stock products, other than those provided for, shall be properly made as approved by the contracting officer, and at the expense of the contractor.

GC-9. CONTROL AND ACCESS TO WORK. - The work shall be entirely under the control of the contracting officer and he or his authorized representatives shall have access to same at all times. The contracting officer may require the contractor to dismiss such employees as he deems to be incompetent or careless.

GC-10. CHARACTER OF WORK AND MECHANICS.- The work shall be executed in the best and most workmanlike manner by qualified, careful and efficient mechanics, in strict accordance with the drawings and specifications.

GC-11 SUBCONTRACTORS.- Subcontractors and their employees shall be considered to be employees of the contractor as the term "employee" is used in these specifications.

GC-12. INTERPRETATION OF CONTRACT.- Unless otherwise specifically set forth, the contractor shall furnish all materials,

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labor, etc., necessary to complete the work according to the true intent and meaning of the drawings and specifications of which intent and meaning the contracting officer shall be the interpreter. Except when otherwise indicated, no local terms or classifications will be considered in the interpretation of the contract or the specifications forming a part thereof.

GC-13. LINES, GRADES, AND STAKES.

(a). The contractor shall, at his own expense, furnish all stakes, material for batter boards, templates, patterns, plat-forms, and special labor that may be required in setting and cutting or laying out any part of the work. After lines and grades for any part of the work have been given by the Government inspectors, the contractor will be required to check their accuracy and will be held responsible for the proper execution of the work to the correct lines and grades. All stakes or other marks given shall be preserved by him until authorized by the inspector to remove them. The contracting officer may require that work be suspended at any time when for any reason such marks cannot be properly followed.

(b) The contracting officer will furnish to the contractor all location and limit marks reasonably necessary for the primary layout of the work, including grades for utility systems, to five feet outside the building lines. After primary layout of each unit has been furnished, the contractor shall make all further layout necessary for the prosecution of the work including the setting of batter boards. He shall be responsible for the preservation of the primary layout and, in case any portion is destroyed, he shall replace it as directed by the contracting officer.

GC-14. ROADS AND GROUNDS.- All building operations, and the grounds used in connection therewith, shall be confined to the limits designated by the contracting officer. Only such established and temporary roadways as the contracting officer may authorize shall be used by the contractor. Damaged roadways shall be repaired as directed by the contracting officer, at no expense to the United States. The contractor shall keep the buildings and grounds in use by him at the site of the work in an orderly and sanitary condition.

GC-15. UTILITIES.- Where water and electrical current are available from existing systems belonging to the United States, the contractor on application to the contracting officer will be furnished same through metered connections as required for his work, provided, however, that in case of emergency and/or in the opinion of the contracting officer the water supply becomes only sufficient to meet military needs, the contractor shall furnish the water necessary for his use from other approved sources.

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Connection to water mains or services shall be made by the contractor under the supervision of the contracting officer at the contractor's expense. The contractor shall provide all piping, corporation cocks, fittings, etc., required to make the connection and from it the contractor shall run such piping as he requires. Temporary piping shall be run underground in such locations as are approved by the contracting officer.

The contractor shall house connection to main or service in an accessible and approved manner and properly protect all piping against freezing. Connections, pipe, fixtures and fittings shall be maintained by the contractor. Failure to stop any leakage or other waste will be cause for use of the water to be discontinued. After temporary lines have served their purpose, the contractor shall remove all or part and restore the surface of the ground, as required by the contracting officer.

The closing of corporation cocks at mains shall be done by the contractor in a manner satisfactory to the contracting officer. Where water and/or electrical current are not available from the United States, the contractor will make his own arrangements for securing the same.

The United States will not be liable for delays or for any damage or expenses occasioned by the contractor due to any water and/or power shortage.

GC-16. ACCIDENT PREVENTION, LIABILITY AND SAFETY REQUIREMENTS.

(a) The contractor will not be allowed to block or obstruct any public highway without having secured prior permission from the contracting officer, and having provided safe, temporary detours. During the time the highways are so blocked, the contractor shall replace danger lights, barricades and warning signs in accordance with all local and State laws or as directed by the contracting officer.

(b) The contractor shall be responsible that his employees strictly observe the laws of the United States at the site under the contract.

(c) Accident Prevention.- In order to protect the life and health of employees in the performance of this contract, the contractor will comply with all pertinent provisions of the "Safety Requirements in Excavation- Building- Construction" approved by the Chief of Engineers, December 16, 1941, (a copy of which is on file in the office of the contracting officer) and as may be amended, and will take or cause to be taken such additional measures as the contracting officer may determine to be reasonably necessary for

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this purpose. The contractor will maintain an accurate record of and will report to the contracting officer in the manner and on the forms prescribed by the contracting officer, all cases of death, occupational disease and traumatic injury arising out of or in the course of employment on work under this contract. The contracting officer will notify the contractor of any non-compliance with the foregoing provisions and the action to be taken. The contractor shall, after receipt of such notice, immediately correct the conditions to which attention has been directed. Such notice, when served on the contractor or his representative and at the site of the work, shall be deemed sufficient for the purpose aforesaid. If the contractor fails or refuses to comply promptly, the contracting officer may issue an order stopping all or any part of the work. When satisfactory corrective action is taken, a start order will be issued. No part of the time lost due to any such stop order shall be made the subject of claim for extension of time or for excess costs or damages by the contractor.

(d) Particular attention is invited to Section 8302.03 of the "Safety Requirements in Excavation- Building- Construction" referred to in paragraph (c) above providing for First Aid Stations, infirmaries, medical and First Aid personnel, and ambulance services.

(e) The Infirmary and all First Aid Stations shall remain open and be completely manned as directed by the contracting officer during all hours that work is being performed.

(f) On projects employing 500 or more persons, a competent Safety Engineer shall be provided by the contractor for full-time supervision of the contractor's Safety Program. This Safety Engineer shall be an employee of the contractor and not a representative of the contractor's insurance company. The Safety Engineer shall have full authority to plan and direct an efficient Safety Program for the contractor and to correct deficiencies found by him or reported to him by representatives of the contracting officer.

(g) It will be permissible for the contractor to make arrangements to combine his facilities with the facilities of other contractors prosecuting work at the site, who have established the facilities and services specified in subparagraph (c) and (f) above, so that the combined facilities and services meet the requirements of these specifications. Such arrangements shall be subject to the prior approval of the contracting officer.

(h) Nothing in this paragraph shall be construed as modifying the responsibility of the contractor as set forth in Article 10 of the contract.

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GC-17. SUBSTITUTES FOR CRITICAL MATERIALS.- The plans and specifications for the various divisions of work have been prepared with a view toward reducing the use of critical materials to a minimum.

Where further changes in materials are deemed necessary in compliance with the lists of prohibited items as issued by the Army and Navy Munitions Board on priorities instructions, such changes will be ordered by the contracting officer. Any increase or decrease in cost occasioned by such changes to be adjusted according to Article 3 of the contract.

GC-18. PROTECTION OF STORED MATERIAL.- All materials, supplies, and articles delivered at the site, shall be adequately housed or otherwise protected against deterioration and damage to the satisfaction of the contracting officer. In case material or equipment furnished and stored by the contractor, on which payments have been made, becomes damaged or destroyed due to improper protection, the contractor shall replace such material at his own expense and to the satisfaction of the contracting officer.

GC-19. MISPLACED MATERIAL.- Any material that is deposited elsewhere than the place designated or approved by the contracting officer will not be paid for, the contractor may be required to remove such material and waste it or redeposit it as directed.

GC-20. STANDARD TESTS, QUALITY AND GUARANTEES.

(a) All materials, supplies and parts and assemblies thereof entering into the work to be done under these specifications shall be tested as specified herein, or, if not specified, in conformity with Article 6 of the contract and according to the best modern approved method for the particular type and class of work.

(b) Unless otherwise authorized or directed, where standard published specifications of recognized authorities or organizations are specified, the latest revisions of such specifications current at the time the work is executed shall govern.

(c) Unless waived in writing by the contracting officer, all tests and trials shall be made in the presence of a duly authorized representative of the contracting officer. When the presence of the inspector is so waived, sworn statements, in triplicate, of the tests made and the results thereof shall be furnished the contracting officer by the contractor as soon as possible after the tests are made.

(d) All costs of all tests and trials, excepting the

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expenses of the Government inspector and the testing of concrete aggregate and concrete cylinder tests shall be borne by the contractor and shall be included in the contract unit price for the items to which the inspections apply.

(e) In accordance with Article 7 of the contract, all materials, supplies and articles furnished and incorporated in the permanent structure shall be of the highest grade, free from defects and imperfections, of recent manufacture, and unused. Workmanship shall be of the highest grade and in accordance with the best modern standard practice.

(f) All articles, supplies, equipment parts and assemblies thereof, of standard manufacture, or for which detail designs or requirements are not prescribed in these specifications shall be guaranteed by the contractor against any failure in proper use or operation, caused by defective material, workmanship or design, for a period of one year from the date of final acceptance of the complete work under this contract. Failure in any part due to such causes within that time shall be promptly and satisfactorily remedied by the contractor without cost to the Government.

GC-21. FEDERAL SPECIFICATIONS. - All Federal Specifications hereinafter referred to shall include the latest revisions and amendments and may be seen in this office. Federal Specifications may be obtained from the Superintendent of Documents, Washington, D.C., or they may be seen at the U.S. Engineer Office, Albuquerque, New Mexico.

GC-22. MATERIAL, EQUIPMENT AND SAMPLES TO BE SUBMITTED. - As soon as practicable and within fifteen (15) days or any additional time as determined necessary by the contracting officer after the date of receipt of notice of award of the contract and before any materials, fixtures or equipment are purchased, the contractor shall submit for approval a complete list of all materials, fixtures and equipment which he intends to incorporate in the work, in triplicate, together with the names and addresses of the manufacturers, servicing agencies and their catalog numbers and trade names. The contractor shall also furnish samples or detailed information in accordance with requirements specified in the detailed specifications. Approval of materials will be based on manufacturer's published ratings. The equipment of any manufacturer who does not have an established distributing warehouse or servicing shop, conducted under responsible management and having qualified and experienced mechanics available, within a reasonable distance from the airfield, will not be considered. Failure to furnish the names of servicing agencies, or any other data called for in these specifications, will be considered sufficient reason for rejection of the equipment. Such servicing facilities shall have been established prior to the submittal of

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bids and not merely set up for the purpose of complying with this requirement of the specifications. In the event the contractor submits for approval materials, fixtures, and equipment that are not in conformity with the specifications, or not of the best quality and grade, the contracting officer reserves the right to reject such materials, fixtures, and equipment and to select a complete line; or the contractor shall submit for approval other equipment which is in conformity with the specifications. If the contractor fails to submit for approval within the specified time after the date of receipt of notice of award of the contract, the list of materials as above specified, then the contracting officer reserve the right to select a complete line of materials, fixtures and equipment. The selection made by the contracting officer shall be final and binding upon the contractor and shall be furnished and installed by the contractor without change in the contract price.

GC-23. DRAWINGS AND SPECIFICATIONS, COOPERATIVE.- The drawings and specifications shall be considered as cooperative and work and material called for by one and not shown or mentioned in the other shall be done or furnished in as faithful and thorough a manner as though fully covered by both.

GC-24. DISCREPANCIES.- Where no figures or memoranda are given, the drawings shall be accurately followed according to scale. In any case of discrepancy in the figures on drawings, the matter shall be immediately submitted to the contracting officer without whose decision said discrepancy shall not be adjusted by the contractor, save only at his risk; and in the settlement of any complications arising from such adjustment the contractor shall bear all extra expense involved.

In case of differences between drawings and specifications, the specifications shall govern.

GC-25. DRAWINGS.- The work shall conform to drawings listed in "Special Provisions."

(a) The work shall also conform to such drawings in explanation of details or modifications as may be furnished by the contracting officer from time to time during construction, including such changes as the contracting officer may consider necessary on account of special conditions encountered during prosecution of the work. (See Articles 2 and 3 of the contract.)

(b) During the prosecution of the work the contractor shall check all drawings and shall immediately report all errors and omissions found therein to the contracting officer. Parts and details not fully shown on the drawings shall be detailed by the contractor in accordance with standard architectural and engineering

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practice. The contractor shall submit three sets of prints of each of such detailed drawings and accompanying specifications to the contracting officer who will return one set with his approval or with notations of such changes as he deems necessary. Approval of drawings by the contracting officer shall not relieve the contractor of responsibility for the correct fitting together and exact position of all parts of the work and complete conformity with the specifications. After approval, the contractor shall furnish the contracting officer with five sets of prints of each approved drawing and accompanying specifications. Each print submitted for approval shall have a three-inch by four-inch white space in the lower right hand corner, just above the title, in which the contracting officer may indicate the action taken. All such approved drawings and specifications shall form a part of these specifications. Payment for the contractor's drawings, revisions thereof, and for copies furnished, shall be included in the contract prices of the various items of work.

(c) Shop and Erection Drawings. - The contractor shall submit to the contracting officer for approval five copies of all shop drawings called for under the various sections. These drawings shall be complete, giving all the required information. If approved, each copy will be identified as having received such approval by being stamped or marked thus: "THIS SHOP DRAWING APPROVED IN ACCORDANCE WITH PROVISIONS OF SPECIFICATIONS," signed and dated. Four sets will be retained by the contracting officer and one returned to the contractor. If not approved, each copy will be so identified by being stamped or marked thus: "THIS SHOP DRAWING TO BE CORRECTED AS NOTED," and dated. After being stamped and marked for correction, with the necessary changes having been indicated thereon, one copy of each drawing will be returned to the contractor for the necessary corrections. After the corrections have been made and approved, the contractor shall submit five copies of the revised drawings to the contracting officer for approval and distribution as above provided. All approved shop drawings will form a part of the specifications. The approval shall not be construed as a complete check, but will only indicate that the general method of construction and detailing is satisfactory. Approval of the drawings will not relieve the contractor of the responsibility for any error which may exist, as the contractor shall be responsible for the dimensions and design of adequate connections, details and satisfactory construction of all work.

GC-26. COMPLETE WORK REQUIRED.- It is intended that the drawings and specifications include everything requisite and necessary to finish the entire work properly notwithstanding every item necessarily involved is not particularly mentioned. All work when finished shall be delivered in a complete and undamaged state and in proper working order.

GC-27. MINOR MODIFICATIONS.- The right is reserved to make such minor changes in the execution of the work to be done under

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these specifications as, in the judgment of the contracting officer, may be necessary or expedient to carry out the intent of the contract; provided that the unit cost to the contractor of doing the work shall not be increased thereby, and no increase in unit price over the contract rate will be paid to the contractor on account of such changes. (See Articles 3, 4 and 5 of the contract).

GC-28. INTERFERENCE WITH OTHER CONTRACTORS.- The contractor shall not interfere with materials, appliances, or workmen of the United States or any other contractor who may have work at this site. As far as practicable all contractors shall have equal rights in the use of all assigned roads and grounds. In case of disagreement regarding such use the decision of the contracting officer shall govern.

GC-29. PRIORITIES.- Attention of the contractor is called to the fact that a priority rating will be established for this contract. (See "Special Provisions"). In case the contractor is unable to obtain the required delivery on materials and/or equipment which are to become a permanent part of the construction, the contractor shall notify the contracting officer, submitting with his notification supporting data to his claim that the required delivery of such materials or equipment cannot be obtained.

If the completion of the undertaking to be performed under the terms of this contract be delayed by reason of delay in the delivery of materials or supplies essential to such performance because of national defense priorities and without the fault or negligence of the contractor, the time of performance will be extended for a period equal to such delay, as determined by the contracting officer, and subject to appeal, as provided in Article 9 of the contract.

GC-30. ORDER OF WORK.- Construction shall be carried on in such order and sequence as found necessary and approved by the contracting officer.

GC-31. WORK COVERED BY CONTRACT PRICE.- The contractor shall, under his contract prices, furnish and pay for all materials, labor and all permanent, temporary, preparatory and incidental work, furnish all accessories and do everything which may be necessary to carry out the contract in good faith, which contemplates the completion of everything in good working order, of good material, and with accurate workmanship, skillfully fitted and properly connected and put together.

GC-32. HOURS OF WORK AND OVERTIME PAY.- The contractor will prosecute the work in accordance with the following conditions and will include the same provisions in all subcontracts entered into by him:

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(a) Overtime Rates. - Where a single shift is worked eight hours of continuous employment except for lunch periods shall constitute a day's work beginning on Monday and through Friday of each week. When work is required in excess of eight hours on any one day or during the interval from five p.m. Friday to seven a.m. Monday or on holidays such work shall be paid for at one and one-half times the basic rate of wages.

(b) Shifts. - Where two or more shifts are worked, five days of seven and one-half hour shifts from Sunday midnight to Friday midnight, shall constitute a regular weeks work. The pay for a full shift period shall be a sum equivalent to eight times the basic hourly rate and for a period less than the full shift shall be the corresponding proportional amount, which the time worked bears to the time allocated to the full shift period. Any time worked from Friday midnight to Sunday midnight or in excess of regular shift hours shall be paid for at one and one-half times the basic rate of wages. Wherever found to be practicable shifts should be rotated.

GC-33. WORKMEN'S COMPENSATION LAWS. - The act approved June 25, 1936, (49 Stat. 1938, 1939) provides that the several states have authority to make their workmen's compensation laws applicable to contracts for the construction, alteration or repair of a public building, or public work of the United States, and the several states are vested with the power and authority to enforce such state laws on lands of the United States.

GC-34. INSURANCE. - No partial payment will be made until the contractor has submitted satisfactory proof that the property to be paid for is covered by a fire and comprehensive coverage insurance policy with extended coverage endorsement. Such insurance shall be in a sum at least equal to the amount of the payment to be made, plus any other partial payments previously made thereon. The contractor shall keep all such property fully insured, without cost to the Government, until final inspection and acceptance of all work under the contract. The insurance policy or policies shall be written by a company or companies satisfactory to the contracting officer, and shall provide that any loss be payable to the contractor and the Government as their respective interests may appear. All insurance policies shall be filed with the contracting officer and shall be subject to his approval.

GC-35. ASSIGNMENT OF CLAIMS.

(a) In accordance with the provisions of the Assignment of Claims Act (Public No. 811, 76th Congress, 3d Session) approved October 9, 1940, payments due under this contract may be assigned to a bank, trust company, or other financing institution, including

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any Federal lending agency.

(b) Any assignment shall cover all amounts payable under this contract and not already paid and shall not be made to more than one party, except that any such assignment may be made to one party as agent or trustee for two or more parties participating in such financing.

(c) Any claim under this contract may be subject to further assignment to a bank, trust company, or other financing institution including any Federal lending agency, and to similar further assignment; provided that any such assignee shall file written notice of further assignment, together with a true copy of the instrument of further assignment with the contractor and also as provided in proviso 4 of Section 1 of the Assignment of Claims Act of 1940 (Public No. 811, 76th Congress) in respect to original assignment.

(d) No assignee shall divulge any information concerning the contract, or contained therein, except to those persons necessarily concerned with the transaction.

(e) Payments to an assignee of any claim arising under this contract shall not be subject to reduction or set-off for any indebtedness of the assignor to the United States arising independently of this contract.

(f) Further information concerning procedure for assignment may be obtained from the contracting officer.

GC-36. PAYMENTS.- Payments to the contractor will be made semi-monthly in accordance with Article 16 of the contract and in accordance with a well-balanced schedule to be prepared by the contractor and approved by the contracting officer apportioning the total amount of the contract among the main items that go to form the completed work. The total amount shown by said schedule shall equal the amount to be paid under the contract. Ten per cent (10%) of the amount of each estimate will be retained until the contract work is fifty per cent (50%) completed, after which the total amount retained will never be less than 5 per cent (5%) of the total contract amount until the full completion and acceptance of all work covered by the contract, when final payment will be made thereon, including the retained percentage.

GC-37. ORGANIZATION, PLANT AND PROGRESS.

(a) The contractor shall within seven days after issuance of the notice of award, prepare and submit to the contracting officer, for approval a practicable and feasible schedule showing the order in which the contractor proposes to carry on the work,

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the dates on which he will start the several salient features (including procurement of materials, plant and equipment) and the contemplated dates for completing the same. The schedule shall be in the form of a progress chart of suitable scale so as to indicate appropriately the percentage of work scheduled for completion at any time. The contractor shall enter the actual progress at the end of each week and shall immediately deliver to the contracting officer three blue print copies of the same.

(b) The contractor shall furnish sufficient forces, construction plant and equipment, and shall work such hours, including night shifts and Sunday and holiday work as may be necessary to insure the prosecution of the work in accordance with the approved progress schedule. If, in the opinion of the contracting officer, the contractor falls behind the progress schedule, the contractor shall take such steps as may be necessary to improve his progress and the contracting officer may require him to increase the number of shifts, days of work and/or the amount of construction plants, all without additional cost to the Government.

(c) Failure of the contractor to comply with the requirements by the contracting officer or his authorized representative under this provision shall be grounds for the determination by the contracting officer that the contractor is not prosecuting the work with such diligence as will insure completion within the time specified; and when such determination has been made, the contracting officer may provide the necessary additional personnel and/or plant at the contractor's expense to insure completion within the required time. If the work is not already being prosecuted on a multiple shift basis, the contracting officer may require work to be carried on during additional shifts at the contractor's expense.

GC-38. INSPECTION.

(a) The work will be conducted under the general direction of the contracting officer and will be inspected in accordance with Article 6 of the contract by inspectors appointed by him. The inspectors will keep a record of the work done and see that the location and limit marks are kept in proper order, but the presence of the inspector shall not relieve the contractor or his responsible agent (See Article 8 of the contract) of the responsibility for the proper execution of the work.

(b) Except as specified in this paragraph, in Article 6 of the contract, or otherwise provided for in these specifications, all expenses of inspection will be borne by the Government.

(c) It is understood that any instructions or decisions given by a superior officer through the contracting officer are to be considered instructions or decisions of the contracting officer in all cases where, under the terms of the contract, decisions rests

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with the contracting officer.

GC-39. CLAIMS, PROTEST AND APPEALS. - If the contractor considers any work demanded of him to be outside the requirements of the contract, or if he considers any action or ruling of the contracting officer or of the inspectors to be unfair, the contractor shall, without undue delay, upon such demand, action or ruling, submit his protest thereto in writing to the contracting officer, stating clearly and in detail the basis of his objections. The contracting officer shall thereupon promptly investigate the complaint and furnish the contractor his decision, in writing, thereon. If the contractor is not satisfied with the decision of the contracting officer, he may, within thirty (30) days appeal in writing to the Secretary of War, whose decision, or that of his duly authorized representative, shall be final and binding upon the parties to the contract. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions or decisions of the contracting officer shall be final and conclusive. All appeals from decisions of the contracting officer authorized under the contract shall be addressed to the Secretary of War, Washington, D. C. The appeal shall contain all the facts or circumstances upon which the contractor bases his claim for relief and should be presented to the contracting officer for transmittal within the time provided for in the contract.

GC-40. PURCHASE ORDERS. - Two copies of all purchase orders, showing firm names and addresses, shall be submitted to the contracting officer prior to the placement of orders for materials which are to be incorporated in the work. Two copies of shipping bills or invoices covering shipment of all materials received, whether they are to be incorporated in the permanent work or consumed in the course of construction, shall be furnished in each case within ten days after receipt of shipment. Such invoices or shipping bills shall clearly indicate, in the case of each shipment, the firm names and addresses, the car initials and numbers when shipped by railroad, and the weights or other units of measure. In the case of material which is to be incorporated in the permanent work, the invoices or shipping bills will be so worded or marked that each item, piece or member can be definitely identified on the drawings.

GC-41. COST DATA. - The Government will keep a record of the costs of the work performed under these specifications and the contractor shall permit the contracting officer to have access to his timekeeping, invoices and plant records for this purpose. The contractor shall also furnish the contracting officer with a statement of the initial cost and date of purchase of all plant used in connection with the work. (See paragraph IV. (d), Invitation for Bids.)

GENERAL CONDITIONS

GC-42. ADJUSTMENT OF CONTRACT PRICE BY REASON OF CHANGE IN FEDERAL, STATE OR LOCAL TAXES.- Unless otherwise indicated, the prices herein include any Federal, state and local tax or charge heretofore imposed which is applicable to the supplies or work covered hereby. If after the date of the award, the Federal Government or any state or local government shall impose, remove or change any duty, sales, use or excise tax or any other tax or charge directly applicable to the supplies or work covered hereby or the materials used in the manufacture thereof or directly upon the importation, production, processing, manufacture, construction or sale of such supplies, work, or materials, which tax or charge must be borne by the contractor because of a specific contractual obligation or by operation of law, or, in case of a decrease or elimination of a tax, where the contractor is relieved to that extent, and if in case of an increase in an existing tax or in the case of an increase in an existing tax or the imposition of a new tax the contractor has paid such tax or charge to the Federal Government or a state or local government, or any person, then the prices named herein will be increased or decreased accordingly and any amount due to the contractor as a result of such change will be charged to the Government and entered on vouchers (or invoices) as a separate item; provided, however, that the Government reserves the right to issue to the contractor in lieu of such payment a tax exemption certificate or certificates acceptable to the Federal Government or state or local government, as the case may be, and the contractor agrees, in the case of any such state or local tax or charge, to take such steps as may be requested by the Government to cause such tax or charge to be paid under protest, to preserve and to cause to be assigned to the Government any and all rights to the refund of such tax or charge, and to furnish to the Government all reasonable assistance and cooperation requested by the Government in any litigation or proceeding for the recovery of such tax or charge; and Provided further, That nothing contained herein shall be construed as requiring the Government to reimburse the contractor for any Federal, state or local income taxes, income surtaxes or excess profits taxes.

GC-43. RESTORATION OF SITE.- Before final payment is made, the contractor shall remove from the site, without expense to the Government, all rubbish, unused materials provided by him, temporary buildings and other structures erected by him, shall fill all holes or cavities made for his convenience, except as otherwise provided, and shall leave the entire site in good order and condition, all as required by the contracting officer.

GC-44. FINAL EXAMINATION AND ACCEPTANCE.- When all work called for under this contract has been completed, the contracting officer will make a thorough examination of the same and, if it is found to fully comply with the requirements of the contract, it will be accepted and final payment will be made in accordance with the provisions of Article 16 (d) of the contract.

WAR DEPARTMENT
U. S. ENGINEER OFFICE
ALBUQUERQUE DISTRICT
ALBUQUERQUE, NEW MEXICO

APPROPRIATION: 212/30905 ENGINEER SERVICE, ARMY, 1942 and 1943
(A 0905-23.)

SPECIFICATIONS: CONSTRUCTION OF EVACUEE LIVING QUARTERS, GRANADA
RELOCATION CENTER, COLORADO.

SECTION I

SPECIAL PROVISIONS

1-01. LOCATION. - The site of the work is near Granada, Colorado.

1-02. WORK TO BE DONE. - The work to be performed under this contract, in accordance with these specifications, is authorized by the Fifth Supplemental National Defense Appropriation Act, 1942, approved March 5, 1942, (Public Law 474, 77th Congress - Second Session), and consists of furnishing all plant, labor and materials, except as specified in paragraph 1-08, for the construction, in accordance with the drawings and with these specifications, of Evacuee Living Quarters, Granada Relocation Center, Colorado.

1-03. DRAWINGS.

(a) The work shall conform to the following drawings marked, "Evacuee Living Quarters, Granada Relocation Center, Colorado," which form a part of these specifications and which are filed in the U. S. Engineer Office, Albuquerque, New Mexico. There are 9 sheets of drawings with file numbers as follows:

<u>Designation</u>	<u>File No.</u>
General Layout-Site Plan	GC-B-1/1
Area A - Building Location	GC-B-1/2
Area B - Building Location	GC-B-1/3
Living Quarters & Recreation Building - Plans	GC-B-1/4
Laundry & Bath House - Plan & Details	GC-B-1/5

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

<u>Designation</u>	<u>File No.</u>
Laundry & Bath House - Plumbing Layout	GC-B-1/6
Mess Hall - Plan, Elevations, Section & Details	GC-B-1/7
Temporary Storage Building	GC-B-1/8
Theater of Operations Type Buildings, Standard Details	GC-B-1/9

(b) Ten sets of prints of necessary contract drawings and ten sets of specifications will be furnished the contractor without charge. Additional sets may be secured upon request at cost of reproduction.

(c) The work shall also conform to such modifications as may be furnished by the contracting officer, as stated under "General Conditions."

1-04. QUANTITY OF WORK. - The following quantities of work to be done under these specifications is given only to serve as basis for canvassing bids and for determining the approximate amount of the consideration of the contract. The contractor will be required to perform under the following items all the work specified in paragraph 1-02, be it more or less than the quantities listed below:

<u>Item No.</u>	<u>Designation</u>	<u>Unit</u>	<u>Quantity</u>
1	Living Quarters	Each	360
2	Recreation Buildings	Each	30
3	Mess Halls	Each	30
4	Laundry & Bath Houses	Each	30
5	Temporary Storage Building	Each	1

1-05. COMMENCEMENT, PROSECUTION AND COMPLETION.

(a) The contractor will be required to commence the work to be done within one calendar day after the date of receipt by him of notice of award, to prosecute the said work with faithfulness and energy, and to complete the entire work on or before August 31, 1942, plus any extension of time duly granted under the provisions of the contract and specifications. If any bid is accepted, a letter contract will be issued within three days after opening of bids, pending execution of the formal contract on the prescribed form. Work shall be prosecuted vigorously during all seasons of the year.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(b) In case of failure on the part of the contractor to complete the work to be done within the time thus determined and agreed upon for its completion as set forth in subparagraph (a) above, the contractor shall pay to the Government as liquidated damages none for every calendar day of delay until the entire work is completed and accepted. All such penalties assessed as liquidated damages will be deducted from the total amount of payment to be made the contractor under this work.

1-06. SUNDAYS, HOLIDAYS AND NIGHTS. - Work shall be prosecuted on Sundays and holidays on the same basis as other week days. Work at night shall be at the option of the contractor subject to the requirements of paragraphs 1-05 and GC-37.

1-07. PRIORITIES. - A priority rating of A-1-e will be established for this contract. (See General Conditions.)

1-08. EQUIPMENT FURNISHED BY THE GOVERNMENT.

(a) Kitchen Equipment. - (See Section X) - Those items of kitchen equipment shown on the drawings will be furnished to the contractor f.o.b. the railroad siding at the site, for use in construction of this contract. It is to be noted that all grease interceptors will be furnished by the Government, and installed by the contractor along with the other Government-furnished kitchen equipment. The cost of the installation of these items furnished by the Government and installed by the contractor shall be included in the contract unit price for the structures in which these items are installed. This unit price shall also include the cost of transporting the equipment from the siding to the various buildings.

(b) Cannon Stoves. - Cannon stoves, shown on the drawings, will be furnished to the contractor f.o.b. the railroad siding at the site, for use in construction of this contract. The cost of the installation of these items furnished by the Government and installed by the contractor including the necessary stove pipe to be furnished by the contractor, shall be included in the contract unit price for the structures in which these items are installed. This unit price shall also include the cost of transporting the equipment from the siding to the various buildings.

1-09. MATERIAL AND EQUIPMENT, PROCUREMENT OF WHICH IS ARRANGED BY THE GOVERNMENT.

MATERIALS SPECIFICALLY PROVIDED

(a) The United States will designate the source or sources of, and allocate to the contractor the materials and equipment listed below in sufficient quantities to construct the buildings, utilities, and appurtenances set forth in the bid form or in any addition or additions thereto. The materials and equipment to be thus allocated in the name of the contractor and to be installed by the contractor are:

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

1. Lumber
2. Water Heaters, Range Boilers and Hot Water
Storage Tanks*
3. Nails (all sizes)

* All tanks allocated without saddles or supports. Contractor to furnish this item.

(b) \$48,778.00 shall be included in the contract price to cover the cost of the materials and equipment allocated to the contractor, and also to cover freight charges to the railhead nearest the job site. The contractor shall keep an accurate record of the cost of the material and freight charges to the nearest railhead, and an equitable adjustment covering an increase or decrease in the amount set up above shall be made after the completion of the delivery of the allocated materials and equipment. The cost of unloading and transportation from the railhead to the construction site shall not be included in the sum set up above, but shall be borne by the contractor. The cost of lumber and nails which the contractor is required to furnish will not be included in the above sum.

(c) The contractor will furnish wood wall sheathing and siding and 1,000,000 F.B.M. of lumber to start the work. The United States will allocate to the contractor the balance of the lumber required to construct all buildings, equipment, and appurtenances set forth in the invitation to bid or in any addition or additions thereto. The contractor will submit to the contracting officer, within 5 days after award of contract, a requisition covering the lumber to be allocated by the United States. The contractor's requisitions shall show a complete delivery schedule. Delivery of non-structural grades will require at least 15 days prior to date of initial delivery of lumber is desired, and for structural grades at least 30 days prior to date of initial delivery.

(d) The contractor will furnish 200 kegs of nails to start the work. The United States will allocate to the contractor the balance of the nails required to construct all buildings, equipment, and appurtenances set forth in the invitation to bid or in any addition or additions thereto. The contractor will submit to the contracting officer, within 5 days after award of contract requisition covering the nails to be allocated by the United States. The contractor's requisitions shall show a complete delivery schedule. Delivery of nails will require at least 20 days from date of order.

(e) Allocations covering materials other than lumber listed in paragraph (a) will be furnished the contractor after award of this contract. Any additions or adjustments to these lists required to complete the work shall be requisitioned by the contractor 30 days prior to the date delivery is desired.

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Colorado.

(f) With the exception of lumber, the materials and equipment to be delivered from sources designated by the Government will be supplied in accordance with the delivery schedule set up by the Office of the Chief of Engineers. The contractor will arrange direct with the vendors of lumber for the delivery schedule of lumber allocated by the United States; vendors will be required to deliver in accordance with the contractor's delivery schedule providing the contractor allows not less than 15 days for the delivery of common lumber, and not less than 30 days for the delivery of structural lumber, and provided such delivery schedule does not conflict with the schedule under which lumber has already been allocated.

(g) Notwithstanding the fact that the Government designates the source of supply of these items and requires the contractor to make purchase from that source, nevertheless the contractor shall be responsible for the rigid inspection of all items entering into the construction work and shall be responsible for the removal and replacement of defective items not complying with the specifications without additional cost to the Government.

(h) No materials or equipment furnished under the provisions of this specification delivered to the site and accepted by the contracting officer's representative, shall be removed from the site either before or after the completion of the contract. Surplus materials shall become the property of the Government at the completion of the work.

(i) Wherever the contractor proposes to use permissible alternates for lumber, he shall so state in his bid, designating the alternate to be used. The contractor shall furnish wood wall sheathing and siding or the substitutes therefore which he elects to use.

(j) The contractor shall be held responsible that the cutting of the lumber allocated by the government be done in an economical manner.

(k) Lumber is to be allocated at Portland, Oregon. The contractor or his representative shall be present at such auction for the purpose of signing purchase orders for the lumber. The contractor or his representatives shall be present at no expense to the Government.

(l) Lumber to be used for all specials and millwork shall be furnished by the contractor and lumber allocated by the Government shall not be used for these purposes.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

1-10. MINIMUM WAGE RATES.

(a) The minimum wages to be paid laborers and mechanics on this project, as determined by the Secretary of Labor to be prevailing for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the pertinent locality, are as follows:

Classification of Laborers and Mechanics: Minimum Rates of Wages per Hour

(To be furnished by supplemental agreement)

(b) Any class of laborers and mechanics not listed in the preceding paragraph, which will be employed on this contract, shall be classified or reclassified conformably to the foregoing schedule. In the event the interested parties cannot agree on the proper classifications or reclassification of a particular class of laborers and mechanics to be used, the question, accompanied by the recommendation of the contracting officer, shall be referred to the Secretary of Labor for final determination.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION II

EXCAVATION, FILLING AND GRADING

2-01. SCOPE. - The work to be done under this section consists of furnishing material and equipment and performing all labor necessary to do all excavating, removal of water, transporting of excavated materials, filling, wetting, compacting, grading, trenching, backfilling, and preparation of subgrade, for the construction of structures and general grading, as required on the drawings or herein specified.

The site of each building, described as a rectangle 10 feet wider and 10 feet longer than the building itself, shall be cleared of all vegetation and shall be graded to a level plane by the necessary excavation and fill. The space between buildings shall be disturbed as little as possible except where provisions for drainage make it necessary to perform further grading operations. In this case, as much of the block as is necessary to provide proper drainage, shall be graded by excavating and filling as directed by the contracting officer.

2-02. GENERAL.

(a) Surveys. - The layout of the work necessary for the construction specified under this section, including lines and grades, shall be done in strict accordance with the provisions of GC-13.

(b) Definition. - The term, "Excavation, Filling and Grading," shall apply to any materials encountered, of whatever nature, wet or dry.

(c) Clearing and Grubbing. - All of the areas upon which earthwork is to be done shall be cleared of vegetation and natural or artificial obstructions which might interfere with any of the construction work. Vegetation shall be disposed of as directed, and in no case incorporated in the fills or backfills.

(d) Stripping.

(1) Unsuitable material as so determined by the contracting officer, shall be removed and disposed of as directed by the contracting officer.

(2) Where called for on the drawings or directed by the contracting officer, top soil shall be removed and put into stock piles as directed. The material shall subsequently be built into the top layer of the grading work where directed, and no additional payment will be allowed for the extra handling required.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(e) Borrow and Waste. - If the quantity of excavated material, is insufficient to bring the building area to grade, as shown on the drawings, the contractor will be required to obtain suitable fill material from borrow pits or other sources as directed. Borrow pits shall be located as required by the contracting officer. Side slopes and bottoms of borrow pits shall be neatly finished and well drained. Excess excavated material shall be wasted or disposed of as directed by the contracting officer.

(f) Shoring. - Where the earth walls of the excavations are of unstable materials, and might, in the opinion of the contracting officer, cave and injure workmen or the work, the contractor shall provide adequate shoring and bracing. When, in the opinion of the contracting officer, damage might result from withdrawing shoring, the shoring shall be left in place.

(g) Removal of Water. - Water shall be removed from excavations by pumps of suitable size. No pipe shall be laid in water. No reinforcing steel or concrete shall be placed in water and excavations shall be kept free of water from the time of subgrading until concrete or mortar has completed its initial set. Cofferdams shall be constructed where required or directed.

2-03. EXCAVATION FOR STRUCTURES.

(a) Excavation. - The contractor will be required to do all excavation of every description and of whatever substance encountered, to the dimensions and levels indicated on the drawings or established by the contracting officer. Excavation for footings of all buildings shall be carried to a firm bearing at least 6-inches below frost line or as otherwise directed by the contracting officer. The excavation shall be carried to a sufficient distance from foundation walls to allow for inspection and to permit the various trades to install their work. Care shall be taken that the excavation does not extend below the exact lines of footings and floor slabs. Should the excavation through accident or otherwise be taken out below such lines, the contractor shall fill in the resulting excess excavation with "Class C" concrete under walls, and footings, and with gravel or broken stone under slabs, at no additional cost to the Government.

(b) Backfill. - Backfilling around foundations, piers and walls shall be properly accomplished with selected material. No trash shall be allowed to accumulate in the space to be backfilled and spaces shall be thoroughly cleaned before backfill is placed. Material shall be wetted to secure optimum moisture content, and then be compacted by tamping or rolling to the satisfaction of the contracting officer.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(c) Fill Under Slabs and Floors. - Fill under slabs and floors shall be of gravel, broken stone or other coarse material. The fill material shall be of quality and gradation as approved by the contracting officer. Fill shall be placed to the thickness shown on the drawings or as specified by the contracting officer and shall be properly leveled to a plane and even surface.

2-04. GENERAL GRADING.

(a) Excavation. - The contractor shall excavate the general building area to the lines and grades shown on the drawings and as directed by the contracting officer. All suitable material removed from excavations shall be used as far as practicable in the formation of embankments. Where excavated materials contain excessive amounts of clay, silts, or other unsuitable material as determined by the contracting officer, the contractor may be required to waste such material in areas designated by the contracting officer. The excavation shall be made accurately to the cross-sections shown on the drawings and as directed by the contracting officer.

(b) Embankment. - Excavated material from the general building areas, borrow pits, or general grading meeting the requirements of these specifications, and with the approval of the contracting officer, shall be deposited in embankment in such quantities that after compaction the finished grade will conform at all points to the lines, grades, and cross-sections shown on the drawings, and as staked. Only suitable and satisfactory material obtained from excavations shall be used in embankment. The material shall be free from stumps, trees, roots, or other vegetable matter, and shall be free from large clods or frozen lumps.

2-05. FINAL GRADING. - In all areas of general grading and areas for disposal of surplus material as directed by the contracting officer, the contractor shall grade the surface to conform to the required finish grades, in such a manner as to prevent the accumulation of water within each of the areas affected. All areas of operation of the work required under this section, whether excavation or embankment, shall be left in a clean and neat condition. All surplus or waste construction material shall be removed from the site, and disposed of as directed by the contracting officer.

2-06. PAYMENT. - No separate payment will be made for any of the work covered under this section. All costs in connection therewith shall be included in the contract price for the various structures to which the work applies.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION III

CONCRETE WORK

3-01. SCOPE. - The work to be done under this section consists of furnishing all material and equipment and performing the necessary labor to do all concrete work shown on the drawings or hereinafter specified.

3-02. CONCRETE.

(a) Composition. - Concrete shall be composed of portland cement, fine aggregate, coarse aggregate and water so proportioned and mixed as to produce a plastic, workable mixture in accordance with all requirements under this section and suitable to the specific conditions of placement.

(b) Strength. - Except as otherwise specified herein, the mix will be designed to secure concrete having the following compressive strength at the age of seven and twenty-eight days, as determined by breaking standard 6" by 12" or 8" by 16" test specimens:

<u>Class</u>	<u>Minimum Average for any 5 consecutive cylinders</u>	<u>Minimum for any one cylinder</u>
A		Not applicable
B		Not applicable
C	2000 lbs. per sq. in.	1600 lbs. per sq. in.

(1) "Class C" Concrete. - "Class C" concrete shall be used in all work.

(c) Cement. - Cement shall be portland cement conforming to Federal Specification SS-C-191b. Only one brand of cement shall be used for work covered by these specifications.

(d) Fine Aggregate.

(1) Composition. - Fine aggregate shall be natural sand.

(2) Quality. - Fine aggregate shall consist of hard, strong, durable and uncoated particles and shall conform to Federal Specification SS-A-281a and Amendment 1, dated November 12, 1941, Class 1, except as otherwise specified.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(3) Grading. - Fine aggregate shall be well graded from coarse to fine and when tested by means of U. S. Standard sieves shall fall within the following limits of gradation:

<u>Total Passing</u>	<u>Per Cent by Weight</u>
No. 4 sieve	95 - 100
No. 16 sieve	35 - 75
No. 50 sieve	10 - 25
No. 100 sieve	2 - 8

(e) Coarse Aggregate.

(1) Composition. - Coarse aggregate shall be washed gravel or crushed stone.

(2) Quality. - Coarse aggregate shall consist of hard, tough, durable particles free from adherent coating. It shall contain no vegetable matter nor soft, friable, thin, or elongated particles in quantities considered deleterious by the contracting officer. The substances designated shall not be present in excess of the following amounts:

Soft fragments	5%
Clay lumps	1/4%
Material removed by decantation	1%
The total amount of deleterious material shall not exceed 5%	

When the material removed by decantation consists essentially of crusher dirt, the maximum amount permitted may be raised to 1-1/2 per cent. Aggregate which has disintegrated or weathered badly under exposure conditions similar to those which will be encountered by the work under consideration shall not be used. When crushed stone is used, the crusher shall be equipped with a screen system which will entirely separate the dust from the stone and convey it to a separate bin.

(3) Size. - Coarse aggregate shall be well graded from fine to coarse so that concrete of the required workability, density and strength can be made without the use of an excess amount of sand, water or cement. The maximum size mesh screen for the coarse aggregate shall be determined by the contracting officer. In general, the following provisions shall govern for the classes of concrete.

For "Class C" concrete, the maximum size mesh screen for the aggregate shall not be less than 3/4 inch nor more than 1-1/2 inch.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

The grading of coarse aggregate in the mixed concrete shall fall within the following limits:

	<u>Per Cent by Weight Passing</u>
Maximum size mesh screen (square mesh)	97 - 100
1/2 maximum size mesh screen (square mesh)	40 - 70
No. 4 sieve	0 - 6

(f) Water. - The water used in mixing concrete shall be clean and free from oil, acids, alkalies, vegetable, sewage or other deleterious matter.

(g) Proportioning. - All concrete materials will be proportioned so as to produce a workable mixture of the strength specified, in which the water content will not exceed the maximum specified. The proportions of all materials entering into the concrete shall be as directed by the contracting officer. The contractor shall provide all equipment necessary to determine and control the actual amounts of the various materials, including water, cement, fine aggregate, and coarse aggregate entering into the concrete. Proportions will be changed whenever in the opinion of the contracting officer such changes become necessary to obtain the specified strength and desired workability, and the contractor will not be compensated because of such changes. The cement content for each cubic yard of concrete shall be approximately 4.5 bags. The cement content shall be at all times subject to variation as deemed necessary by the contracting officer to obtain the results desired. The total water content per bag of cement for each batch of concrete shall not exceed 7-1/2 gallons. The total volume of aggregates to be used in each cubic yard of the concrete shall be determined by the contracting officer.

(h) Mixing and Placing.

(1) Mixing. - Mixing shall be done in batch mechanical mixers of approved type. Mixers shall be equipped with a positive automatic water measuring device to cut off flow when the desired quantity has been released. Mixers shall assure complete distribution of ingredients throughout the mass and produce homogeneous concrete of uniform color. Volume of materials mixed per batch shall not exceed rated capacity of mixer. Each batch shall be mixed for not less than 1-1/2 minutes. The entire contents shall be discharged before recharging, and the mixer cleaned frequently. Retempering of concrete or mortar which has been allowed to stand longer than 30 minutes or which has partially hardened will not be permitted.

(2) Removal of Water. - Water shall be removed from excavation prior to the depositing of concrete.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(3) Placing. - Concrete shall be taken from the mixer to the place of deposit in a continuous manner as rapidly as practicable, without separation or loss of ingredients, until the unit of operation approved by the contracting officer is completed. Concrete shall not be allowed to drop freely more than 5 feet unless approved by the contracting officer. Concrete as soon as deposited shall be worked into corners by spading, rodding, or by the use of mechanical vibrators.

(4) Placing Temperatures. - Temperatures of the concrete when placed in the forms shall not be more than 90 degrees F., nor less than 40 degrees F. Suitable means shall be provided for maintaining an ambient temperature surrounding the concrete of at least 50 degrees F. for a period of 5 days after placing.

(i) Ready Mixed Concrete. - If authorized by the contracting officer, ready mixed concrete may be used in lieu of concrete mixed at the job. All mixing requirements herein specified for the concrete mixed at the site shall be in force, and the contracting officer shall have free access to the mixing plant at all times. Concrete shall not be used in any case after a period in excess of 1/2 hour after addition of water. The organization supplying the ready mixed concrete shall have a plant of sufficient capacity and transportation facilities to assure continuous delivery at the rate required. The sequence of deliveries to the job shall meet the approval of the contracting officer.

(j) Test Specimens. - To determine whether the compressive strength of the concrete is in accordance with that specified in paragraph 3-02 (b), test specimens will be taken by the Government inspector. A sufficient number of specimens will be taken to give a comprehensive knowledge of the concrete in each section of the work. All specimens will be taken from the concrete in accordance with the current specifications of the American Society for Testing Materials. The specimens will be tested by and at the expense of the Government.

3-03. FORMS.

(a) Material.

(1) Unexposed Surfaces. - Unexposed surfaces shall have forms of No. 2 common grade or better lumber.

(2) Exposed Surfaces. - Forms for exposed surfaces, except as otherwise indicated or directed, shall be dressed T. & G. lumber of quality to produce smooth even surfaces, or plywood not less than 5/8 inch thick, 5-ply.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(b) Construction. - Forms shall be built to shape, lines and dimensions of the concrete as shown on the drawings. Footings shall have side forms. Forms shall be set to line and grade; braced and secured to maintain shape and position and be sufficiently tight to prevent leakage of mortar. Joints shall be arranged vertically or horizontally. Temporary openings shall be located where required to facilitate cleaning and inspection. Used form lumber shall have nails withdrawn and contact surfaces thoroughly cleaned before re-use. All forms shall be so constructed that they can be removed without prying or hammering against the concrete.

(1) Form Ties. - Form ties shall, in general, be bolts or rods. Wire ties will be permitted only on light work; they shall not be used where, in the opinion of the contracting officer, surface discoloration will be objectionable. Bolts and rods shall be such that when forms are removed no metal shall be within 1-1/2 inches of the finished surface.

(2) Removal of Forms. - Forms shall not be disturbed until concrete has adequately hardened.

3-04. CURING.

(a) Warm Weather. - All concrete shall be adequately protected from injurious action by the sun. Fresh concrete shall be protected from heavy rains and mechanical injury. All concrete shall be kept wet for a period of not less than ten days by covering with water, with an approved water-saturated covering, or any other approved method such as "Paper" or "Membrane" curing which will keep all surfaces continuously (not periodically) wet. Where wood forms are left in place for curing, they shall be kept wet at all times to prevent opening at the joints and drying out of the concrete. Water for curing shall conform to the requirements of paragraph 3-02 (f), and shall be clean and entirely free from any elements which, in the opinion of the contracting officer might cause staining or discoloration of the concrete.

(b) Cold Weather. - Concrete when placed during cold weather shall be kept moist for not less than ten days and provided with adequate protection, subject to the approval of the contracting officer, so that the air in contact with the concrete will be maintained at temperature between 50 degrees F. and 70 degrees F. for at least the first five days of the curing period.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

3-05. FINISHING.

(a) Rough Finish. - Concrete for which no other finish is specified shall have fins and rough edges removed.

(b) Exposed Surfaces. - All unsightly ridges or lips shall be removed and local bulging shall be remedied by tooling or rubbing to the satisfaction of the contracting officer. All voids, unless otherwise directed by the contracting officer, shall be reamed and filled with mortar mixed in the proportions as directed by the contracting officer. All top surfaces, not covered by forms, shall receive a wood float finish without additional mortar.

3-06. EMBEDDED ITEMS. - Before placing concrete, care shall be taken to determine that any embedded metal or wood parts are firmly and securely fastened in place as indicated. They shall be thoroughly clean and free from coating, rust scale, oil or any foreign matter. When wood is embedded, it shall be thoroughly soaked before the concrete is placed.

3-07. FINAL.

(a) Imperfect or Damaged Work. - Imperfect or damaged work or any material damaged before final acceptance shall be satisfactorily replaced at the contractor's expense and in accordance with all requirements of the drawings and specifications. Removal or replacement of concrete work shall be done in such manner that the strength will in no way be impaired.

(b) Cleaning. - Upon completion of work, forms, equipment, protective coverings and rubbish resulting therefrom shall be removed from premises. Finished concrete surfaces shall be left in a clean condition satisfactory to the contracting officer.

3-08. MEASUREMENT AND PAYMENT. - Concrete work specified in this section will not be measured for direct payment. All costs in connection therewith shall be included in the contract price for each of the several structures under which the concrete work is done, which shall include furnishing material and equipment and performing the necessary labor to do all excavation, filling, and grading; forming, mixing, pouring, and finishing required to complete the work.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION IV

CARPENTRY AND BUILDERS' HARDWARE

4-01. SCOPE. - The work to be done under this section includes furnishing material and equipment and performing labor necessary to do all carpentry and installing builders' hardware required for the construction of the living quarters as shown on the drawings and as specified.

4-02. GENERAL. - The work performed under this section shall be properly coordinated with the work of other trades.

Specifications cited in this section are Federal Specifications unless otherwise stated.

All materials furnished under this section shall be new and shall be the manufacturers' first line quality unless otherwise specified.

The installation of all materials not specified in detail herein, shall conform to manufacturers' recommendations for the highest class of installation.

Work not otherwise specified shall, in materials and performance, conform to the accepted standards of good building practice.

4-03. LUMBER. - Soft Wood - Federal Specifications MM-1-751b, and Amendment 1, dated February 1941.

All millwork, for doors, and sash shall be dried to a moisture content not to exceed 25 per cent. Stock, except as otherwise specified, shall be dressed to conform to Yard Size Standards of American Lumber Standards, SPR-R16-39.

Lumber for various uses shall be one of the species listed and the grade specified.

(a) Strips and boards not otherwise specified:

No. 3 Common or better Douglas Fir

or

No. 3 Common or better Ponderosa Pine

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(b) Sash. - No. 2 sash cutting

White Pine
Ponderosa Pine
Coast Type Red Cypress

4-04. MISCELLANEOUS MATERIALS.

Screen Cloth. - Federal Specification E-RR-C-451a, Type H,
16-mesh, not less than .0110-inch diameter wire.

Woven Wire Cloth. - 1/4-inch mesh, 18-gauge wire.

Putty. - Federal Specification TT-P-791a.

Saturated Felt. - Federal Specification HH-F-191, Type I,
or HH-F-201.

Screws. - Federal Specification FF-S-111.

Caulking Compound. - Caulking compound shall be light colored;
nonstaining elastic, of gun consistency, and possessing an adhesive
property that will assure permanent bond with surface to which it is
applied.

4-05. BUILDERS' HARDWARE. - Where the finished shape or size
of members taking hardware is such as to prevent or make unsuitable the
use of the exact types of hardware specified or where the exclusion of
critical materials from hardware manufacture renders the exact types
specified unavailable or unsuitable, suitable substitute types shall be
furnished having as nearly as practicable the same operation and quality
as types specified.

Where galvanized, zinc-coated or plated finish is indicated by
type or catalog numbers listed, contractor shall furnish similar items
in enameled finish. Strikes, lock faces, etc., shall be manufacturer's
standard. Brass or bronze may be used only in the working parts of locks.

Types of hardware shall be as follows:

(a) Doors.

(1) Half-surface hinges shall be 12-inch size, conform-
ing to Federal Specification E-FF-H-116b, Type 2212, except black enameled
and with steel pin.

(2) Bit key locks shall conform to Federal Specification
E-FF-H-106 and Amendment 1, dated November 1934, Type 59, black enameled.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(3) Padlocks shall conform to Federal Specification FF-P-101a and Amendment 3, dated July 1939, size 1-3/4-inch.

(4) Hinge hasps and staples shall conform to Federal Specification E-FF-H-111, and Amendment 1, dated January 1935, Type 1420, 6-inch length.

(b) Sash. - Each sliding sash unit shall be provided with one spring bolt conforming to Federal Specification E-FF-H-111 and Amendment 1, dated January 1935, Type A1060, except black enameled finish and with spring of steel.

(c) Screen Doors.

(1) Hinges shall conform to Federal Specification E-FF-H-116b, Type 2031, size 3" by 3", two to each screen door, black enameled.

(2) Door pulls shall conform to Federal Specification E-FF-H-116b, 1269B, black enameled, one to each screen door.

(3) Coil springs shall be not less than 11/32 inch outside diameter, a standard product manufactured for using on screen doors, black enameled finish, complete with attachments, one to each screen door.

4-06. FRAMING. - Framing lumber and other rough work shall be closely fitted, accurately set to the required lines and levels and rigidly secured in place. All nailing and spiking shall be done in a thorough manner with nails of ample size. Any framing members damaged by cutting shall be reinforced or replaced, as directed by the contracting officer. Roof framing shall be assembled, fitted and set to exact slopes shown or noted on the drawings. The contractor shall frame rafters on plates and ridges and against hip rafters with close joints.

Openings in roof shall be framed with headers and trimmers. Headers carrying more than two rafters and trimmers supporting headers carrying more than one rafter shall be double or triple as directed by the contracting officer, unless otherwise indicated.

4-07. RE-USE OF FORM LUMBER. - Form lumber when thoroughly cleaned and all nails are removed may be used for wall sheathing where not exposed to view.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

4-08. ROOF AND WALL SHEATHING. - Roof sheathing shall be of one-inch boards 6, 8 or 10 inches wide, T&G. Wall sheathing shall be of one-inch boards, 6, 8 or 10 inches wide, T&G, shiplap, or square edge. All sheathing shall be free of knot holes and loose knots. Each board of T&G or shiplap shall be blind and face nailed, using two 8d nails in boards 6 inches in width and three 8d nails in boards more than 6 inches in width. Joints shall be made over bearings with at least two boards between joints. Nails shall be well set to avoid puncturing the applied roofing.

4-09. STUD WALLS. - Stud walls shall have double top plates and single bottom plates laid on the floor except as otherwise specified or shown on the drawings, full width of studs. Studs and posts shall be cut to receive bracing. Diagonal bracing shall be installed at all corners and wherever indicated on the drawings.

All framing adjustments to receive detailed window frames and door frames, together with provisions for structural requirements, shall be approved by the contracting officer. Rough stud openings may be changed slightly in size to receive stock sash and frames which may vary in size in certain localities. Contractor shall ascertain exact sizes of sash and frames before fixing sizes of rough openings.

4-10. SUBFLOORS. - Subfloors shall be of the design and type called for on the drawings.

(a) On Wood Joists. - Subfloors, to be laid on wood joists, shall be one inch nominal thickness, 6, 8, 10, or 12 inches wide and shall be either T&G or S4S. The subflooring shall be laid diagonally to floor joists. Each board shall be nailed to each bearing, using two 8d nails in 6-inch boards and three 8d nails in boards more than 6 inches in width.

(b) On Concrete Slabs. - Floor supports in barracks, officers' quarters, fire station and any other building classified as living quarters, will consist of a 3-inch concrete slab on compacted earth and 2" by 2" screeds set in the fresh concrete for nailing at 2 feet on center, as shown on the drawings. The finished floor shall be nailed directly to the screeds without the subfloor specified above.

4-11. DOORS. - All doors shall be of the size and type shown on the drawings and shall be "Grade C" or better Douglas Fir, conforming to Commercial Standards CS-73-38, or No. 3 quality Pine or better, or Spruce of grade comparable to that specified for Douglas Fir. Designs other than those shown on the drawings may be used with the approval of the contracting officer, provided not more than one design is used.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(a) Exterior Doors. - Exterior doors shall have solid stiles and rails with sticking worked on the solid or moldings set in white lead. Flat panels may be laminated if a phenolresin type of waterproof glue is used. Doors to be glazed shall receive glass as specified under Section IX, "Painting and Glazing," and have not less than four panels of area as indicated on the drawings. Exterior doors, for mess halls, barracks, living quarters, and latrines, shall be provided with a removable glazed panel, and a screened frame such that the screened frame may replace the glazed panel.

(b) Interior Doors. - Interior doors shall have solid stiles and rails with moldings set in white lead. Panels may be of different species than that used for stiles and rails, provided that the material for panels is endorsed by the National Door Manufacturers' Association.

4-12. FINISHING. - Exterior of buildings will be covered with 15 pound saturated felt. Felt shall be applied with strips running horizontal, beginning at the bottom of the building and lapping each strip 2 inches over the strip below. Felt will be held in place by laths or battens applied vertically and spaced 16 inches apart. Strips will be nailed with 4d or 5d box nails or broad head lathing nails. Nails shall be spaced not further than 8 inches apart.

Partition walls in shower rooms and at other locations shall be constructed as shown on drawings.

4-13. SASH. - All sliding sash shall be of No. 2 or better sash cutting stock, of check rail type, mortised, tenoned and pinned together. Sash shall be rabbeted for glass and molded. Rails shall not be ploughed.

4-14. WINDOW FRAMES. - Frames shall be constructed in accordance with detail drawings. Holes to receive barrel bolts shall be 1/16-inch larger than bolts, and so spaced that sash will be tight fitting when closed.

4-15. FIXED WOOD LOUVERS. - Fixed wood louvers shall be constructed in close conformity with detailed drawings. All joints shall be closely framed and when installed shall be weathertight. Screen cloth herein specified shall be installed at back of louvers and shall be screened to the louver frame by means of wood battens, tacked in place.

Mess halls shall be provided with wood louvers projected above the roof line as shown on the drawings.

4-16. WINDOW SCREENS. - All window openings in mess halls, barracks, living quarters, and latrines shall be covered with 16-mesh wire cloth held in place with wood battens securely nailed.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

4-17. CAULKING. - All openings between exterior door frames, window frames and adjacent framing shall be caulked, where indicated or required, to the satisfaction of the contracting officer.

4-18. PAYMENT. - The work specified under this section will not be paid for directly and all costs in connection herewith shall be included in the contract price for the structures to which the work applies.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION V

ROOFING AND SHEET METAL

5-01. SCOPE. - The work to be done under this section includes furnishing material and equipment and performing labor necessary for all roofing and sheet metal work as shown on the drawings and as specified.

5-02. GENERAL.

(a) Where roofing is installed over roof sheathing, no nails shall penetrate through roof sheathing at eaves or other finished spaces.

(b) Samples. - If requested by the contracting officer, one sample of the material specified shall be submitted for approval.

(c) Supporting Surfaces. - Sheathing shall be securely nailed and free of curled-up corners, knot holes, and other irregularities. Knot holes and loose knots shall be covered with small pieces of 26-gauge black sheet iron securely nailed and painted with roofer's cement.

5-03. MATERIALS.

(a) Rolled Roofing, Smooth-surfaced. - Rolled roofing shall conform to Federal Specification SS-R-501, "Grade B." The width may be either 32 inches or 36 inches.

(b) Saturated Felt. - Federal Specification HH-F-191, Type I.

(c) Flashings.

(1) Sheet Metal. - Sheet metal shall be 26-gauge black iron. In lieu of the sheet metal and where recommended by the contracting officer, cotton fabric flashing shall be used, consisting of two layers of cotton fabric (each weighing not less than 7 ounces per square yard before saturation), between which shall be embedded steel wire mesh not less than 21 gauge. Each layer of cotton fabric shall be saturated and sealed with waterproofing asphalt.

(2) Solder. - Solder shall conform to Federal Specification QQ-S-571, "Grade C," not more than 40 per cent tin.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(3) Caulking Compound. - Caulking compound shall be light colored, non-staining, elastic, of gun consistency, and shall possess an adhesive property that will assure permanent bond with surfaces to which it is applied. Caulking compound shall have been tested for the above requirements with satisfactory results, by any one of the following: National Bureau of Standards, other Government Agencies and other Recognized Testing Laboratories.

(4) Mastic. - Mastic for roofing shall be a composition consisting of asphalt, volatile solvent, asbestos, and pigment, thoroughly and sufficiently mixed at the manufacturing plant, so as to give uniform homogeneous mixture free of lumps.

(d) Wood Battens. - Wood battens shall be 1" by 2" nominal dimensions of long length No. 1 or better yellow pine, fir, or other approved wood, free from large knots.

5-04. INSTALLATION OF SMOOTH-SURFACED ROLLED ROOFING. - The roofing shall consist of one layer (except as otherwise specified) of asphalt-prepared smooth-surfaced roll roofing laid with 3-inch side-lap and 6-inch end-lap, cemented full width of lap with asphalt and nailed to sheathing with $7/8$ inch large-headed nails, applied in the following manner:

(a) The roofing shall be cut into lengths 20 feet long and stacked in protected piles at a temperature not less than 50 degrees for a period of 24 hours prior to laying.

(b) All valleys shall be covered with two layers of the roofing material. The bottom layer shall be 18 inches wide and shall have its edges nailed 6 inches on centers. The top layer shall be the full width of the roofing roll and shall be nailed along its edges as specified for the bottom layer, except the edge at the eave shall be nailed 4 inches on centers. Valley roofing shall be laid in single strips full length of valley, without laps.

All angles, where roofing is to be turned up vertical surfaces for flashing shall be reinforced with a strip of the roofing material, 18 inches wide, turned up the vertical surfaces 9 inches and nailed at the edges 6 inches on centers.

Ends of roofing at valleys shall be cut parallel with and 8 inches from the low point of the valley and shall be mopped and nailed as specified for laps.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(c) All of the foregoing operations shall be completed before beginning the following operations:

(1) Apply the first course or starter sheet of 40-pound roofing parallel with the lower edge of the roof sheathing. The starter sheet shall have a line of nails spaced 4 inches on centers along the edge of the eaves. Nailing shall begin either at the center of the strip and progress toward the ends or begin at one end and progress toward the other end. In no case will wrinkles or bulges be permitted in the roofing after it is laid in place.

(2) The entire roof area shall be covered, lapping successive sheets 3 inches over the preceding sheets, so that the entire roof will be covered with a smooth-surfaced roofing with nails at all laps, and with the lower 3-inch portion of each strip being cemented to the preceding sheet with solidly mopped asphalt and nailed 4 inches on centers. Asphalt shall be applied as it comes from the containers.

(3) Care shall be exercised in mopping so that there will be no dripping over the preceding sheet. Sheets shall be pressed firmly into the asphalt so that all laps will be securely sealed.

(4) End-laps shall be 6 inches in width, mopped and the overlaying edges stepped down firmly, and nailed 6 inches on centers.

(5) Roofing at edges of roof along the rake shall be nailed as specified for laps.

(6) An 18-inch wide strip of the smooth-surfaced roofing shall be placed over ridges extending 9 inches on each side of the ridge, unless the top strips of roofing lap over the ridge from each side at least 9 inches.

(d) Installation of Wood Battens, - After the smooth-surfaced roof is installed, the contractor shall apply wood batten strips along the eaves, along the roof edges of all gables, and parallel to and over rafters approximately 4 feet on centers.

The bottom side of the batten strip shall be coated with plastic cement. The cement shall be applied generously so that when the batten is installed the plastic cement will be forced out from under the strip on both sides.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

Wood Battens shall be laid true to line, parallel with each other and with the edges of the gables. Strips shall be mitered at the ridge and fitted against the strip along the eaves. The battens shall be of long lengths and where joints occur they shall be coated with paint and butted tightly together. In addition to the strips parallel to the pitch, a horizontal strip shall be installed parallel to and at the eaves. Strips at valleys shall be cut off parallel to and 8 inches from the low point of the valley. Strips shall be nailed with 8d cement coated nails not more than 12 inches on centers through sheathing and into rafters. The plastic cement which is squeezed out from under the strips after nailing, shall be compressed against the strip and roof with a putty knife or similar tool at a 45 degree angle. After installation the strips shall be painted one coat as specified under "Painting."

(e) Installation of Flashings. - Flashings shall be furnished and installed where and as shown, specified or required to make the work watertight and weathertight. Material for all flashings shall be as hereinbefore specified.

(1) Smooth-surfaced Roofing Material. - At all points where roof surfaces abutt vertical surfaces the angle thus formed shall be reinforced with a strip of roofing material as hereinbefore specified, and the finished roofing shall be continued up the vertical surface 10 inches and mopped in place, nailed with roofing nails 4 inches on center and covered with a wood batten strip set in mastic cement.

5-05. PAYMENT. - The work specified under this section will not be paid for directly. All costs in connection therewith shall be included in the contract price for the structures to which the work applies.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION VI

VENT STACKS AND VENTILATORS

6-01. SCOPE. - The work to be done under this section includes furnishing material and equipment and performing the necessary labor to install vent stacks, flue liners, range hoods, and ventilators of the type and size shown on the drawings.

6-02. GENERAL. - Vents shall be installed, with or without ventilators, as shown on the drawings. Vents shall include any opening, through the roof, required for ventilation or smoke removal.

6-03. MATERIALS.

(a) Cement-asbestos. - Cement-asbestos material used in vent pipes shall be composed of portland cement and clean asbestos fiber properly mixed and formed under pressure to produce a dense, homogeneous structure having a smooth interior surface. The mixture of cement and asbestos fiber shall be free of all grit, organic fiber or other adulterants and the finished product shall be such that it may be cut, drilled and tapped. Cement-asbestos stacks shall be the product of a reputable manufacturer and approved by the contracting officer.

(b) Sheet Metal. - Sheet metal for vent stacks and ventilators shall be 26-gauge black iron, painted with a heat-resisting black asphaltum enamel as specified under Section IX, "Painting and Glazing."

(c) Solder. - Solder shall consist of not more than 40 per cent tin.

(d) Chimney Pipe. - Chimney pipe for coal-fired stoves shall be the same size as the stove outlet, and shall be made of standard weight, black, polished stove pipe of commercial grade. Each chimney pipe shall be equipped with a standard draft control, for manual operation, to fit the chimney.

(e) Woven Wire Cloth. - 1/2-inch mesh, 18-gauge wire, enameled

(f) Screen Cloth. - Federal Specification RR-C-451a, Type H, 16-mesh, not less than 0.0110-inch diameter wire, enameled.

(g) Fire Clay Chimney Pipe. - Fire clay chimney pipe shall be made of hard-burned fire clay, and shall be the standard product of a reputable manufacturer of fire clay flue pipe lining.

(h) Vitrified Clay Pipe. - Vitrified clay pipe shall be standard weight vitrified clay sewer pipe, conforming to Federal Specification SS-P-361, and Amendment 1, dated June 1935.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

6-04. SMOKE JACKS. - The vitrified clay and fire clay smoke jack pipe for pairs of heating stoves shall be installed in accordance with the details shown on the drawings. The portion of the pipe below the lower stove pipe connection shall be constructed of vitrified clay sewer pipe with cement-mortar joints. The upper portion of the pipe above the lower stove pipe connection shall be made of fire clay chimney pipe with joints of fire clay. The pipe shall be 8 inches in diameter throughout, with 6-inch stove pipe "T" openings. Where the pipe passes through the roof, it shall be enclosed and supported by a metal roof jack in accordance with the details shown on the drawings. The pipe shall be guyed in place as detailed, and shall terminate with a metal hood.

6-05. CEMENT-ASBESTOS VENT STACKS. - The contractor shall furnish and install cement-asbestos vent stacks for kitchen hood vents and for extensions to masonry stacks where shown on the drawings or directed by the contracting officer. Cement-asbestos vent stacks shall conform to the material herein specified for cement-asbestos. Installation shall be made in accordance with the manufacturer's recommendations and as directed by the contracting officer.

OPTION: Where cement-asbestos vent stacks are required on the drawings, the contractor will be permitted to furnish and install fire clay vent pipe and specials similar to "Simco" as manufactured by Bergstrom and French Company, Los Angeles, California, or approved equal. All vent pipe and fittings shall conform to the requirements of Section 1105 of the Building Code as recommended by the National Board of Fire Underwriters for Type B flues.

6-06. VENTILATORS.

(a) Metal Ventilators. - Ventilators shall be of the throat sizes indicated on the drawings. Ventilators shall be of sheet metal construction, of either the rotary syphon type or the turbine type, and shall be equal to the Century Rotary Syphon Ventilator manufactured by the Century Fan and Ventilator Company of New York City or the Allen Type C Turbine Ventilator manufactured by the Allen Corporation of Detroit. Ventilators shall be fabricated of 26-gauge black sheet iron, reinforced to withstand a wind velocity of 85 miles per hour, and painted at the factory with not less than two coats of iron-oxide or other acceptable paint.

(b) Rectangular Wood Louvered Ventilators. - Rectangular wood louvered ventilators projecting above the roof ridge shall be constructed where shown on the drawings, and in accordance with applicable provisions of Section IV, "Carpentry and Builders' Hardware."

6-07. SHOP DRAWINGS. - The contractor shall furnish the contracting officer with shop drawings of each ventilator required, showing complete construction and erection details. No ventilator shall be shipped prior to the approval of the contracting officer.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

6-08. RANGE HOODS. - Range hoods of cement-asbestos sheets shall be constructed and installed as shown on the drawings. The cement-asbestos sheets shall be composed of portland cement and asbestos-fiber, and shall be "Transite," manufactured by the Johns-Manville International Corporation, or equal, and shall be 1/4-inch thick.

6-09. PAYMENT. - No separate payment will be made for any of the work under this section. All costs in connection therewith shall be included in the contract price for each of the several structures in which any of the vent stacks, flue liners, and ventilators are installed.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION VII

ELECTRICAL WORK

7-01. SCOPE. - The work to be done under this section includes furnishing material and equipment and performing labor necessary to install the electrical wiring for power and for lighting in the buildings under this contract, as shown on the drawings and as specified. Service drops to the buildings will be installed as a part of the Electrical Distribution System and are not a part of this contract. This contract will include furnishing and installing wire holders, and entrance switches, and connecting the service drops thereto.

7-02. GENERAL.

(a) The contractor shall make the connections to the secondary service at the wire holder, on the outside of the building. Secondary services will be furnished by others.

(b) All lamps will be furnished by the Government except where otherwise noted, and shall be installed by the contractor.

(c) The latest published regulations of the National Electrical Code shall be considered as included in these specifications, and all requirements shall be fully met, except where specifically otherwise noted.

(d) All electrical materials shall be new, and listed by the Underwriters Laboratories, Inc.; shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.

(e) Cutting of Structural Parts. - The contractor shall do all cutting necessary for the proper installation of his work and shall repair any damage done by himself or his workmen. Cutting of structural framing members for passage of electrical work shall be done only with the approval of the contracting officer and shall be properly braced or reinforced by additional structural members if required by the contracting officer.

(f) Type of Wiring Installation. - All wiring, including entrances from service drops outside building to entrance cabinets inside the building shall be open, on cleats or on knobs and tubes.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

7-03. MATERIALS. - The following specifications with the latest revisions are referred to hereinafter and shall be included as a part of these specifications. Specifications not otherwise noted are Federal Specifications.

Insulators, open wiring	N.E.A. Code
Tape, Friction	HH-T-101a
Fuses, Non-Renewable, plug type	W-F-831, and Amendment 1, dated January 1939
Fuses, Renewable, Cartridge Type	W-F-803, and Amendment 1, dated January 1939, and W-F-805
Wire	N.E.A. Code, SN Type
Solder	QQ-S-571, "Grade C"

NOTE: Whenever reference is made to zinc coating or galvanizing, it shall mean galvanizing by the cold process or by the sherardizing process.

7-04. ENTRANCE. - All entrances from service drops outside of buildings to the entrance switches shall be run as open wiring on knobs or cleats and through the wall by means of approved tubes. Entrance switches shall conform to all applicable provisions of the National Electrical Code.

7-05. CONDUCTORS. - No wires smaller than No. 14 A.W. gauge shall be used in any branch circuits.

Con-
ductors shall be continuous from outlet to outlet and no splice shall be made, except within outlet or junction boxes. Conductors used for inside wiring shall be of one of the following types:

(a) Thermoplastic synthetic insulation (N.E. Code Type SN) to the extent it is commercially available.

(b) Varnished cambric (N.E. Code Type V)

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

The Type SN insulation shall be flame retardant, moisture resistant, approved solid synthetic insulation without fibrous covering on the outside, and shall be as specified in paragraph 3005e, page 88 of the 1940 National Electric Code. All splices shall be mechanically and electrical perfect, properly soldered and insulated with the requisite amount of tape. Solderless connectors may be utilized in lieu of soldered joints if desired. Conductors installed in concrete slabs or masonry in tubing in direct contact with moist earth and in trapped tubing or in locations subject to moisture or condensation shall be Type SN as specified above.

7-06. OPEN WIRING. - The contractor shall furnish and install open wiring in all Theater of Operations type buildings unless otherwise shown or specified. No wires smaller than No. 14 B&S gauge shall be installed and the sizes of larger wires shall be governed by the National Electrical Code.

(a) Supports. - Open wiring shall be supported by two-wire cleats, screwed to the rafters or wall studding with suitable wood screws 2-1/4 inches long, two screws per cleat. Cleats shall be spaced not more than 6 feet on center, so designed as to hold the conductors not less than 3/4 inch from wood supports.

(b) Tubes. - Each conductor shall be threaded through standard unglazed porcelain tubes when passing through walls, floors, or wood members. Each tube shall be of sufficient length to completely insulate the conductor from the wall, floor, or wood member. Tubes shall have great enough inside diameter so the conductor may be easily threaded without undue strain or pull.

OPTION: In lieu of the single conductor two wire system specified above, the contractor will be permitted to install non-metallic sheathed two-wire cable, supported on one-wire white cleats or knobs, meeting all the requirements and limitations for cleats specified above.

7-07. OUTLETS. - The location of outlets as shown on the various drawings should be considered as approximate only. The contractor shall study the general building drawings with relation to spaces surrounding each outlet in order that his work may fit the work of others and that when fixtures or other fittings are installed they will be symmetrically located according to room layout.

Outlets shall be of bakelite or porcelain similar to G.E. No. M 191 or approved equal.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

7-08. WALL SWITCHES. - Wall switches shall be of bakelite or porcelain, of the totally enclosed tumbler type, similar to G.E. No. M 190; or approved equal.

7-09. FIXTURES. - The contractor shall furnish and install all lighting fixtures in accordance with the schedules or notes on various drawings, and of the type indicated on drawings.

7-10. MAIN SERVICE ENTRANCE SWITCHES. - Each main service shall terminate outside of the building in an approved weatherproof service fitting located with proper relation to the secondary rack at which connections to the aerial service conductors, which will supply current to the buildings, are to be made. Sufficient wire shall be provided for connecting to service drop wires.

The contractor shall furnish and install enclosed safety type fusible switches of sizes indicated on plans. Current carrying parts shall be rigidly mounted on a non-absorptive insulating base in a code gauge steel enclosing cabinet with hinged door and external indicating operating handle. Cabinet shall be provided with ground lugs. Neutral connections shall be solid throughout.

7-11. FUSES. - The contractor shall install a complete set of fuses for all switches installed by him. Where sizes of fuses protecting feeder or branch circuit conductors is not given on the drawings, the size of such fuses shall be in accordance with the allowable current carrying capacity of conductors as given in the 1937 edition of the National Electric Code. Fuses for lighting branch circuits to which are connected only lighting and receptacle outlets shall be of non-renewable plug type, and shall comply with Federal Specification W-F-831, either Type I or II.

Plug fuses for other circuits must have time lag characteristics and conform to Federal Specification W-F-831, Type II.

Cartridge type fuses shall be of the renewable type with links having time lag characteristics capable of withstanding a 500 per cent load of approximately 10 seconds. Renewable cartridge type fuses shall comply with Federal Specification W-F-803 and Amendment 1, dated January 1939, and W-F-805.

7-12. PAYMENT. - No direct payment will be made for the work specified in this section. All costs in connection therewith shall be included in the contract prices for the items to which the work applies.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION VIII

PLUMBING AND HEATING

8-01 SCOPE. - The work to be done under this section includes furnishing material and equipment and performing labor necessary to install all plumbing, miscellaneous pipe work, and heating required for the buildings under this contract, as shown on the drawings and as specified.

8-02. GENERAL. - All pipes shall be terminated at a point approximately 5 feet outside the building line. The work under this contract will include the necessary trenching and backfilling under floors or outside the building within the scope of this contract.

Shop tests to be conducted in the presence of a Government representative as required in specifications referred to herein are waived.

8-03. CROSS CONNECTIONS. - No plumbing fixture, device, or construction shall be installed which will provide a cross connection between a distributing supply for drinking and domestic purposes and a polluted supply.

8-04. MATERIALS.

Steel pipe shall be standard weight galvanized pipe and shall conform to Federal Specification WW-P-403a, Type I, "Class A."

Threaded pipe fitting shall conform to Federal Specification E-WW-P-521a, "Class B."

Valves shall be of standard manufacture, of types and sizes shown on the drawings. All valves, larger than 2 inches, shall be A. W.W.A. Standard, iron body, brass mounted gate valves and shall have either screwed or flange connections. All valves up to and including 2 inch size shall be all brass, threaded, rough body, and finished trim globe or angle valves, meeting the requirements under Federal Specification WW-V-51 and Amendment I, dated November 1938. Check valves shall be horizontal swing check pattern with leather discs, or other suitable material approved by the contracting officer, and shall be designed for a steam working pressure of 125 p.s.i.

Soil pipe and fittings shall conform to Federal Specification WW-P-401.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

Plumbing fixtures shall conform to Federal Specification E-WW-P-541a and shall be of the types shown on the drawings.

8-05. SCREWED PIPE JOINTS. - Joints for threaded pipe shall be screwed joints, with tapered threads made up with graphite and oil or an approved graphite compound, applied to male threads only. Ends of pipe shall be fully reamed out before being made up with fittings. All pipe threads shall be full-cut, shall conform to Federal Specification GGG-P-351, and not more than three threads shall remain exposed on pipe.

8-06. JOINTS IN SOIL PIPE. - The joints for the soil piping shall be carefully made by packing half of the hub with specially treated packing well rammed, and on the top of which shall be carefully caulked a bituminous compound material equal in quality to G K compound, Caulktite or Presstite.

8-07. COLD WATER PIPE AND FITTINGS. - Cold water pipe and fittings for theater of operation type buildings shall be Standard Weight galvanized steel pipe with screw joints.

All pipes shall be cut accurately and worked into place without springing or forcing. Care shall be taken not to cut or weaken structural portions of the buildings. Piping shall be supported in an approved manner. Proper provision shall be made for expansion and contraction of piping.

Changes in pipe sizes shall be made with reducing fittings. Bushings shall not be used.

8-08. UNIONS. - Where union connections are indicated on the drawings for ferrous pipe, 2 inches in diameter and smaller, the unions shall be galvanized malleable iron with brass seats designed for a working pressure of 150 p.s.i., meeting the requirements of Federal Specification E-WW-U-531, Type A. Unions on water piping 2-1/2 inches in diameter and larger shall be flanged pattern, American 125 pound standard, meeting the requirements of Federal Specification WW-F-406a. Gaskets for flanged unions shall be 1/16 inch thick, of specially prepared water-proof material, conforming to Federal Specification HH-P-46, and Amendment 3, dated September 1940. No unions shall be concealed in construction, but where union connections are required, for erection purposes, right and left couplings shall be used.

8-09. SUPPORTS AND FASTENINGS. - All equipment and material shall be supported and fastened in a manner satisfactory to the contracting officer. Pipe supports shall be painted with one prime coat and one finish coat in accordance with Section IX, "Painting and Glazing."

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

8-10. TESTS OF WATER SUPPLY SYSTEM IN BUILDING. - At completion of this work the water supply system shall be tested to a hydrostatic pressure of 100 p.s.i. and proved tight at this pressure.

Water piping, if in any way concealed by structural work, shall be tested to above pressure and proved tight before pipes are concealed.

8-11. TESTS FOR SOIL, WASTE, DRAIN AND VENT PIPES. - The entire system of soil, waste, drain and vent piping specified under this section shall be tested with water or air, as directed, and proved tight to the satisfaction of the contracting officer, before trenching or backfilling or fixtures connected. All instruments, equipment and labor necessary for the tests shall be provided by the contractor.

8-12. CLEANING. - At the completion of the work all parts of the installation shall be thoroughly cleaned. All equipment, pipe, valves, and fittings shall be cleaned of grease, metal cuttings, etc.

8-13. CANNON STOVES. - All buildings will be heated by cannon stoves. Cannon stoves will be furnished by the Government and installed by the contractor. Wall protection and vent pipes for cannon stoves shall be furnished and installed by the contractor as shown on the drawings and as specified in other sections of these specifications.

8-14. HOT WATER SUPPLY.

(a) Hot Water Heaters. - Hot water heaters shall be designed to operate efficiently on bituminous coal with a calorific value of between 11,000 and 13,000 B.t.u. per pound, hand fired. They shall be designed to operate at a working pressure of 100 p.s.i., and shall be furnished complete with all accessories necessary for their operation and maintenance and installed exactly as recommended by the manufacturer for the best type of installation.

(b) Hot Water Storage Tanks. - Hot water storage tanks shall be of welded or riveted steel plate construction, designed to operate on a working pressure of 100 p.s.i., in conformity with the A.S.M.E. Code Formula for Unfired Pressure Vessels.

(c) Hot Water Relief Valves. - The contractor shall furnish and install Type A, hot water temperature relief valves which shall operate automatically to relieve excess water temperature or pressure. The valve shall be automatic in reseating action after operation and shall be so designed that it will maintain its original calibration, be readily cleanable without upsetting the temperature or pressure adjustment and shall have operating parts which may be readily removed and replaced. The valve shall be factory set to relieve temperature at 200 degrees F., or pressure at 100 p.s.i.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(d) Insulation of Tank and Heater. - The hot water storage tank and the hot water heater shall be insulated with a one-inch thick layer of rock wool, glass wool, or asbestos cement, held in place by 1-1/2-inch mesh poultry netting tightly stretched and wired in place over tile spacers one-half or three-quarters inch thick. Pieces of broken tile pipe or pieces of brick may be used as spacers. The finish coat shall be troweled smooth and hard.

(e) Insulation of Hot Water Pipes. - Water pipe connections between the hot water heater and the hot water storage tank shall be covered with 3/4 inch thick rock or glass wool pipe covering. The insulation shall be provided with a jacket of 3.8 ounce canvas, and held in place with 26-gauge sheet iron bands spaced as recommended by the manufacturer of the pipe covering. Other hot water pipes in the buildings will not be insulated.

8-15. PAYMENT. - No direct payment will be made for the work specified under this section. All costs in connection therewith shall be included in the contract prices for the buildings to which the work applies.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION IX

PAINING AND GLAZING

9-01. SCOPE. - The work specified under this section includes furnishing material and equipment and performing labor necessary to do all painting and glazing shown on the drawings or specified herein. The following items only are to be painted:

(a) Exterior doors are to receive two coats of lead base paint.

(b) Top and bottom edges of doors, after fitting, shall be given two coats of spar varnish.

(c) Running edges of sliding sash, after fitting, shall be given one coat of spar varnish and one coat of suitable hard wax.

(d) Exposed surfaces of iron or steel subject to heat shall be given two coats of asphaltum varnish having high heat resistant characteristics.

(e) Exterior surfaces of iron ventilators shall be given one field coat of iron-oxide paint after installation, in addition to the factory painting specified in Section VI, "Vent Stacks and Ventilators."

(f) Pipe hangers shall be given one coat of asphaltum varnish.

9-02. GENERAL.

(a) Materials. - All materials shall be delivered to the work in the manufacturer's sealed packages, with labels intact and seals unbroken. Samples of paints proposed for use shall be submitted to the contracting officer for approval as follows:

(1) Three color samples each 6" by 2" for each kind of paint proposed for use.

(2) One pint container of each kind of paint proposed for use.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

(b) Paint Tests. - All materials shall be subject to tests required by the contracting officer. The methods of sampling and testing will be those used by the National Bureau of Standards, Washington, D. C. Before delivery of any material to the site, the contractor shall submit to the contracting officer the name of the manufacturer, the brand, and the quality of the material. Before application, paint shall be thoroughly mixed to a good brushing consistency free of lumps and skins. Paints shall dry within 18 hours. The colors and hiding powers of the paints shall be subject to the approval of the contracting officer.

(c) Procedure. - Operations not specified herein or noted on the drawings shall be performed in conformity to the recognized standards of good workmanship and in a manner satisfactory to the contracting officer.

9-03. MATERIALS. - Materials, herein specified, shall be used unless otherwise directed by the contracting officer. Substitutes, free of lead pigment, may be used, if available, and if approved.

(a) Paint and Related Materials.

Red Lead Pigment	E-TT-R-191a
White Lead Pigment	TT-P-251a
Oil-Linseed, Raw	JJJ-O-336
Oil-Linseed, Boiled	JJJ-O-331
Drier, Liquid	TT-D-651
Thinner, Semi-paste Paints	TT-T-271
Thinner, Mineral Spirits	TT-T-291
Putty; Pure-Linseed-Oil, Type I	TT-P-791a
Wax; Floor, Water Emulsion	P-W-151

(b) Ready-mixed Paints.

Red Lead Paint for Metal Primer	E-TT-P-86
White Lead Paint	E-TT-P-156
Varnish - Spar	TT-V-121, and Amendment 2, dated April 1940

(c) Asphaltum Varnish. - Asphaltum varnish shall be a commercially prepared product, selected and approved by the contracting officer, for the specific use intended, and shall be suitable for application on high-heat surfaces such as boiler fronts.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(d) Primers and enamels herein specified shall not sag or flow from a vertical surface when exposed to an atmospheric temperature of 100 degrees F., and shall not become brittle or crack when exposed to an atmospheric temperature of 20 degrees F.

9-04. PAINT FORMULAE. - The semi-paste paints, mixed in the field, shall conform to the following formulae:

(a) Primer and shop coats for metal surfaces shall conform to the following proportions, in per cent by weight:

	<u>Per Cent by Weight</u>
Pigment	64
Vehicle	36

Pigment

Red Lead (95% grade)	40 (Min.)
Iron Oxide (70% Fe ₂ O ₃)	20 (Min.)
Zinc Oxide	10
Extenders (Siliceous Mineral Pigment)	30 (Max.)

Vehicle

Linseed Oil (raw)	88
Mineral Spirits, Thinner	10
Volatile Matter (Moisture, Etc.)	0.5
Coarse Particles	1.5

(b) Primer for wood surfaces shall conform to the following proportions, in per cent by weight:

	<u>Per Cent by Weight</u>
Pigment	64
Vehicle	36

Pigment

White Lead (Carbonate or Sulphate)	70 (Min.)
Zinc Oxide	15 - 20
Siliceous Mineral Pigment	10 (Max.)
Matter soluble in water	0.8 (Max.)

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<u>Vehicle</u>	<u>Per Cent by Weight</u>
Linseed Oil (Boiled)	88 (Min.)
Mineral Spirits, Thinner	10
Volatile Matter (Moisture, Etc.)	0.5 (Max.)
Coarse Particles	1.5 (Max.)

(c) Field coats for exposed metal and wood surfaces, both exterior and interior, shall be white lead base paint either white or tinted as required by the drawings or as directed. Field coats shall conform to the following proportions, in per cent by weight:

	<u>Per Cent by Weight</u>
Pigment	79
Vehicle	21

<u>Pigment</u>	
White Lead (Carbonate or Sulphate)	70 (Min.)
Zinc Oxide	15 - 20
Tinting colors and Siliceous Mineral Pigment	10 (Max.)
Matter soluble in Water	0.8 (Max.)

<u>Vehicle</u>	
Linseed Oil (Boiled)	98 (Min.)
Volatile Matter (Moisture, etc.)	0.5 (Max.)
Coarse Particles	1.5 (Max.)

9-05. METHODS.

(a) Preparation of Surfaces.

(1) All surfaces shall be thoroughly cleaned and dry. Surfaces to be painted must be warm and artificial heat will be required during unfavorable weather conditions.

(2) Surfaces to receive paint must be smooth, free of cracks, holes, or other irregularities. Putty-stopping will be required on wood surfaces. All putty-stopping shall be brought flush with the wood surfaces and sandpapered smooth.

Specifications: Evacuee Living Quarters, Granada Relocation Center, Colorado.

(b) Application of Paint. - Paint shall be evenly spread and well brushed. Paint shall be thoroughly worked into all joints and corners and brushed out over all surfaces. Finished paint shall be free of noticeable drops, runs, sagging, laps and brush marks. Finished paint judged to be unsatisfactory by the contracting officer shall be sanded smooth and covered with an additional coat, at no additional cost to the Government.

(c) Storing of Paints. - Care shall be exercised in storing paints in the buildings to avoid excessive strain on the floors.

(d) Fire Protection. - Care shall be exercised in storing and handling of paints and in storing and disposing of rags and waste saturated in paints, to avoid fire hazards.

(e) Cleaning. - After completion of painting work, all painted surfaces shall be thoroughly cleaned and any paint, by accident, spilled or splattered upon unpainted parts of the work, shall be removed.

9-06. GLAZING.

(a) General. - Sizes of glass indicated on drawings are approximate. Sizes of glass shall be taken from actual frames. Labels shall remain upon glass until after inspection.

(b) Materials. - Glass shall conform to Federal Specification DD-G-451, Type D, Quality B, double strength. Putty shall be wood sash glazing and shall conform to Federal Specification TT-P-791a, Type I.

(c) Methods. - Glass shall be secured with glazier's points except where beads are indicated on the drawings. Glass shall be left secure and free of rattles. Upon completion of building construction, glass shall be washed clean.

9-07. PAYMENT. - No direct payment will be made for the work specified in this section. All costs in connection therewith shall be included in the contract prices for the structures in which the work is installed.

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

SECTION X

KITCHEN EQUIPMENT - INSTALLATION

10-01. SCOPE. - The work to be done under this section consists of furnishing equipment and labor necessary to rough-in and to install kitchen equipment which is to be furnished by the Government, and to transport the equipment from the point of delivery to the site.

10-02. GENERAL. - All roughing-in and connections shall be according to the applicable provisions of the sections of these specifications covering "Plumbing and Heating" and "Electrical Work."

10-03. INSTALLATION. - The following kitchen equipment will be furnished by the U.S. Government and shall be installed by the contractor.

Types of Materials and Equipment	How Procured	Built in or Installed by	Paid for by
Heavy Duty Kitchen Equipment: Bain Mariés; Bake Ovens; Broilers; Butcher Blocks; Butcher Tables; Coffee Urns; Cook's Tables; Deep Fat Fryers; Dish Washers; Electric Water Coolers; Food Choppers; Griddles; Ice Cream Freezers; Meat and Bone Cutters; Meat Choppers; Meat Slicers; Potato Peelers; (Heavy Duty) Puree Mixers; Racks, Cup and Dish Storage; Roasting Kettles; Roasting Ovens; Scullery Sinks; Stands, Tray, Glass and Cutlery; Steam Cookers; Steam Jacketed Kettles; Steam Tables; Toasters; Trucks for Soiler Glasses; Dishes and Cutlery; Work Tables; Ice Chests (All Sizes); Ranges, (Coal); Refrigerators, (Reach- in-Type); Grease Interceptors.	OQMG (Thru QM Depots)	Contractor	OQMG

Specifications: Evacuee Living Quarters, Granada Relocation Center,
Colorado.

All equipment shall be installed in strict accordance with the manufacturer's directions or under his personal supervision. After installation shall have been completed, the contractor shall provide a competent engineer, who shall test out each piece of equipment to the entire satisfaction of the contracting officer, and who shall also instruct any designated employees in the operation and care of the equipment. All work shall be performed in harmony with the other work on the buildings and at such times as directed by the contracting officer.

The drawings show the general arrangement of the equipment, but the contractor shall lay out his work from measurements established at the building, and he shall check or verify his measurements with those shown on the drawings. Should any errors or discrepancies be discovered in the drawings and specifications or between his measurement and those shown on the drawings, he shall promptly inform the contracting officer so that the proper corrections may be made. Where equipment is to fit into space limited by partitions, columns, walls, etc., final dimensions must be adjusted to the space available.

10-04. PROTECTION. - During erection and until the adjacent work of other industries shall be completed, the non-corrodible metal surfaces shall be suitably protected against the effects of hydrochloric (Muriatic) acid fumes caused by soldering. Such protection shall be removed promptly upon direction of the contracting officer and the surfaces made clean and free from stains, marks or defects of any kind, then rubbed down with whiting and wiped clean.

10-05. PAYMENT. - No separate payment will be made for the work covered under this section. All costs in connection therewith shall be included in the contract unit price for the structure to which the work applies.

STANDARD GOVERNMENT FORM OF BID
(Construction Contract)

(Place) _____

(Date) _____

TO: The District Engineer;
U. S. Engineer Office,
Albuquerque, New Mexico.

1. In compliance with your Invitation for Bids
dated June 23, , 1942, and subject to all the conditions thereof, the
undersigned _____

a corporation organized and existing under the laws of the State of

a partnership consisting of _____

or an individual trading as _____

of the city of _____

hereby proposed to furnish all plant, labor and materials, (except as
specified in Par. 1-08), and to perform all work required for the Con-
struction of Evacuee Living Quarters, Granada Relocation Center, Colo-
rado, at the loaction shown and to the extent indicated: in strict ac-
cordance with the specifications and drawings, for the following
consideration for the corresponding items of work:

SCHEDULE OF BID ITEMS

PART A

Item No.	Quantity	Unit	Designation	Unit Price	Amount
1	360	Each	Living Quarters	\$ _____	\$ _____
2	30	Each	Recreation Buildings	\$ _____	\$ _____
3	30	Each	Mess Halls	\$ _____	\$ _____
4	30	Each	Laundry & Bath Houses	\$ _____	\$ _____
5	1	Each	Temporary Storage Buildings	\$ _____	\$ _____

NOTE: The above bid prices shall not include the cost of furnishing and delivery of the items specified in paragraph 1-08 of the specifications: but shall include the installation costs of all items specified in both 1-08 and 1-09 of the specification.

Subtotal (a) \$ _____

Part B

Lump Sum to be included in bid to cover cost of furnishing and delivering of the items listed in paragraph 1-09 of the specifications \$ 48,778.00

Subtotal (b) \$ _____

FINAL BID TOTAL (Subtotal a / b) \$ _____

- NOTE: (a) All amounts and totals given above will be subject to verification by the Government. In case of variation between unit bid price and total shown by bidder the unit price will govern.
- (b) Bids must be for the entire work and must have each blank space filled in to be acceptable.

5. The undersigned agrees, upon receipt of written notice of the acceptance of this bid for work, to execute the standard form of Government contract, in accordance with the bid as accepted, and to give performance and payment bonds, with good and sufficient surety or sureties, for the faithful performance of the contract, and for the protection of all persons furnishing material and labor in the prosecution of the work, with ten (10) days after the prescribed forms are presented for signature.

6. Performance will begin within One (1) calendar day after the date of receipt of notice of award, and all work included in this contract will be completed on or before August 31, , 1942, in accordance with provisions of paragraph 1-05 of the specifications.

By _____

(Business Address)

Witness:

Note: Read Standard Government Instructions to Bidders before preparing this bid.

