SPECIFICATION

FOR THE

CONSTRUCTION

OF THE

EXECUTIVE MANSION, LIBRARY AND MUSEUM

AT

JUNEAU, ALASKA

WASHINGTON
GOVERNMENT PRINTING OFFICE
1911

INVITATION FOR PROPOSALS.

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT,
Washington, D. C., July 7, 1911.

SEALED PROPOSALS will be received at the office of the custodian until 3 o'clock p. m. on the 8th day of August, 1911, and then opened, for the construction of the executive mansion, library and museum, at Juneau, Alaska, in accordance with drawings and specifications, copies of which may be obtained from the custodian of site at Juneau, Alaska, or at this office, at the discretion of the Supervising Architect.

JAMES KNOX TAYLOR,
Supervising Architect.

F. W. R. N. S. T.
J. W. G. P. J. F.
L. A. S. M. H.
E. C. R. E. C. S.
H. B.

N. B.—Bidders are required to return drawings and specifications without marks, notes, or mutilations thereon.

The Government frank sent to intending bidders is to be used only for the return of drawings and specifications.

General contractors who desire to submit lump-sum bids will be furnished with one set of drawings and specifications free, and one additional set will be furnished such contractor upon the receipt of a certified check for $100, drawn to the order of the Treasurer of the United States, the proceeds of which will be retained until the return of the drawings and specifications in good condition to this office.

There is on file in the plan room of the Office of the Supervising Architect a set of drawings and specifications for the use of subcontractors, etc.

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SPECIFICATION.

GENERAL CONDITIONS.

Form of proposal and signature.—Proposal must be made on the blank form hereto attached, inclosed in sealed envelope marked "Proposal," with title of building, and addressed to the Supervising Architect, stating in writing and figures (without interlineation, alteration, or erasure) the sum of money for which the bidder proposes to supply the materials and perform the work required by the drawings and this specification, and the time within which he proposes to complete the work, and the unit prices called for in proposal sheet. The proposal must be signed with the full name and address of the bidder; if a copartnership, the copartnership name by a member of the firm, with the names and addresses in full of each member; and if a corporation, by an officer in the corporate name, with the corporate seal attached to such signature. No telegraphic proposals or telegraphic modifications of proposals will be considered. Proposals received after the time advertised for the opening will be returned unopened. If proposal is sent by registered mail, allowance should be made for the additional time required for such transmission.

Certified check.—Each bidder must submit with his proposal a certified check, in a sum equal to 2 per cent of the amount of such proposal, drawn to the order of the Treasurer of the United States, and the proceeds of said check shall become the property of the United States if, for any reason whatever, the bidder, after the opening of the bids, withdraws from the competition or refuses to execute the contract and bond required in the event of said contract being awarded to him; and checks submitted by the unsuccessful bidders will be returned after the approval of the contract and bond executed by the successful bidder. Copy of contract and bond will be furnished the contractor after the approval of his bond.

Eight-hour law.—The attention of bidders is called to the act of Congress approved August 1, 1892, limiting the hours of daily service of laborers and mechanics employed upon public works of the United States to eight hours in any one calendar day.

Subcontractors.—No subcontractor or other person furnishing material or labor to the contractor will be recognized, nor will this department be responsible in any way for the claims of such persons beyond taking a bond, as required by the act of Congress approved August 13, 1894, which provides in substance that when a formal contract is let for the erection or repair of a public building, etc., the contractor, before commencing such work, shall furnish the usual penal bond, with good and sufficient sureties, with the additional obligation that such contractor will make prompt payment to all persons furnishing him labor or materials used in the prosecution of the work. Persons so furnishing materials or labor have a right of action on said bond, in the name of the United States, for their use. No formal contract is usually let, however, and no bond taken where the amount involved is less than $2,000.

Parties in interest.—No Member of or Delegate to Congress, and no officer of the Treasury Department, superintendent, inspector, clerk, employee, or other person in any manner connected with the office of the Supervising Architect, shall be interested, either directly or indirectly, in the contract or work herein provided for, or be entitled to any benefit derived therefrom; and any violation of this understanding shall work a forfeiture of all moneys which may become due to the successful bidder.

Rights reserved.—The material proposed to be used, time for completion of work, and the competency and responsibility of bidders will receive consideration before award of contract.

The Treasury Department reserves the right to accept any part or parts of the proposal made at the prices included in same; also to waive any informalities in, and to reject any and all proposals, and to require the contractor to discontinue the services of any workman employed on the work who is unskillful or otherwise objectionable.

Form of contract.—The contract which the bidder agrees to enter into shall be in the form adopted and in use in the office of the Supervising Architect, blank forms of which can be inspected at said office, and will be furnished, upon request being made, to parties proposing to submit bids. In case of the abrogation of the contract, whether by reason of the default of the contractor, his bankruptcy, or other cause, the Supervising Architect, acting for both parties, shall have the right to determine the valuation of all work performed and all materials furnished in place in connection with the contract, and of all material, machinery, tools, etc., upon the site of the building taken possession of by the Government, and his decision shall be final.

Protection of work and materials.—The contractor must obtain, at his expense, all necessary policies of insurance on work and material supplied by him, as the same will be at his risk until final completion, inspection, and acceptance; but the contractor will be relieved of any risk for that portion of the building occupied by the Government before entire completion of his contract.

Modifications.—The department reserves the right to make any additions to, omissions from, or changes in, or substitutions for, the work or material called for by the drawings and specifications, without notice to the surety or sureties on the bond given to secure satisfactory compliance with the terms of the contract; and the department further reserves the right to demand additional security when additions are made, if, in its judgment, such security is required. The unit prices called for in the proposal sheet shall be used as the basis of value of such additions, omissions, or changes, if they are deemed reasonable by the Supervising Architect. If deemed unreasonable, or if none applicable are given, and no agreement can be reached by the Supervising Architect and the contractor as to the reasonable value of the work, then the Supervising Architect shall have the right to fix the value of such additions, omissions, or changes, and no claim for damages on account of such change or for anticipated profits shall be allowed.

Payments.—Payments will be made as hereinafter stated.

Delays.—Each bidder must submit his proposal with the distinct understanding that, in case of its acceptance, time for the completion of the work shall be considered as of the essence of the contract, and that for the cost of all extra inspection, and for all amounts paid for rents, salaries of contingent force, and other expenses entailed upon the Government by delay in completing the contract, the United States shall be entitled to the fixed sum of $40 as liquidated damages, computed, estimated, and agreed upon, for each and every day's delay not caused by the United States; provided, however, that the collection of said sum may, in the discretion of the Secretary, be waived in whole or in part, and that the contractor is to be entitled to 1 day, in addition to such stipulated time, for each day the work is suspended by the Government, and a similar extension for each day's delay caused by the Government, provided written claim for such extension is made within 10 days of the occurrence of such delay.

The department, acting for the United States, reserves the right to suspend any portion of the work embraced in the contract whenever, in its opinion, it would be inexpedient to carry on said work.

Attention is directed to the following Executive orders:

EXECUTIVE ORDER NO. 1.

Whereas by an act of Congress, which received Executive approval on February 23, 1887, all officers or agents of the United States were, as a matter of public policy, forbidden, under appropriate penalties, to hire or contract out the labor of any criminal who might thereafter be confined in any prison, jail, or other place of incarceration for the violation of any laws of the Government of the United States of America:

It is hereby ordered that all contracts which shall hereafter be entered into by officers or agents of the United States involving the employment of labor in States composing the Union, or the Territories of the United States contiguous thereto, shall, unless otherwise provided by law, contain a stipulation forbidding, in the performance of such contracts, the employment of persons undergoing sentences of imprisonment at hard labor which have been imposed by courts of the several States, Territories, or municipalities having criminal jurisdiction.

EXECUTIVE ORDER NO. 2.

I. All departments of the Government under the supervision of which public works are being constructed are hereby directed to notify the representatives stationed at such public works to report at once to their respective departments all cases in which contractors or subscontractors on works now under construction have required or permitted laborers or mechanics in their employ to work over eight hours in any one calendar day.

II. All Government representatives in charge of construction of public works are further directed that it is part of their duty to report to their respective departments each and every case in which laborers or mechanics are required or permitted to work over eight hours a day on the works under supervision of such Government representatives. Wherever reports showing work in excess of eight hours a day are received by any department they are to be referred to the Department of Justice for appropriate action.

III. All departments of the Government under the supervision of which public works are being constructed by contract are further directed to have their respective legal officers prepare and forward to the President a list of such statutes and Executive orders as have a direct bearing on contracts for the construction of public works, and with which bidders on such works should be made acquainted.

NOTICE TO SURETIES.

The attention of the sureties is particularly directed to the following conditions:

The final inspection and acceptance of the work shown by the drawings and specifications forming a part of the contract shall not be binding or conclusive upon the United States if it shall subsequently appear that the contractor has willfully or fraudulently or through collusion with the representative of this department in charge of the work supplied inferior materials or workmanship, or has departed from the terms of his contract. In any such case the United States shall have the right, notwithstanding such final acceptance and payment, to cause the work to be properly performed and satisfactory material supplied to such extent as in the

opinion of the Supervising Architect may be necessary to finish the work in accordance with the drawings and specifications therefor at the cost and expense of the contractor and the sureties on his bond, and shall have the right to recover against the contractor and his sureties the cost of such work, together with such other damages as the United States may suffer because of the default of the contractor in the premises, the same as though such acceptance and final payment had not been made.

Attention is called to section 21 of the act approved June 6, 1902, which provides as follows:

That in all contracts entered into with the United States, after the date of the approval of this act, for the construction or repair of any public building or public work under the control of the Treasury Department, a stipulation shall be inserted for liquidated damages for delay; and the Secretary of the Treasury is hereby authorized and empowered to remit the whole or any part of such damages as in his discretion may be just and equitable; and in all suits hereafter commenced on any such contracts or on any bond given in connection therewith it shall not be necessary for the United States, whether plaintiff or defendant, to prove actual or specific damages sustained by the Government by reason of delays, but such stipulation for liquidated damages shall be conclusive and binding upon all parties.

Guaranty.—This specification requires that certain work be guaranteed and maintained in good condition for a specified time after its final acceptance and the payment therefor, and the bond which will be required in connection with the contract must also cover such guaranty.

Extent of the work.—This specification contemplates the construction of the entire building, including the installation of the plumbing, heating apparatus, electric conduits and wiring, and annunciator system. The interior lighting fixtures will not be included.

Proposals.—Proposals as hereinbefore called for must be based on drawings Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, HL–11, HL–12, HL–13, HL–14, miscellaneous drawing No. M–77 this specification, and the specifications for plumbing fixtures, etc., prepared by the board on uniform plumbing specifications for the Treasury, War, and Navy Departments, June, 1910.

Bidders are requested to submit three separate proposals as follows:

Proposal No. 1.—To cover the completion of the entire building, including the installation of the plumbing, heating apparatus, electric conduits and wiring, and annunciator system.

Proposal No. 2.—To cover the completion of all excavation, back-filling, waterproofing, metal work, concrete, stone and brick masonry up to line R—R on elevations, except that all iron railings in connection with areas, steps, etc., tile floors, and all work in connection with chimneys above ceiling of basement, shall be omitted.

Proposal No. 3.—To cover all work necessary for the completion of the entire building which is not covered by proposal No. 2.

The bidders should visit the site and fully inform themselves of the character of the same and the conditions under which the work is to be performed, and failure to do so will in no way relieve the successful bidder from the necessity of furnishing any materials or performing any labor that may be required to complete the work, in accordance with the true intent and meaning of the specifications and drawings, without additional cost to the Government.

Sub-bidders.—After the award of the contract, but before commencing any work the general contractor must submit the names and addresses of the sub-bidders who will execute the principal portions of the work which are not undertaken by the contractor himself. It must be understood that the sub-bidders named in the list, if satisfactory to the Supervising Architect, will execute the work against which their names are set, and no change in this list shall be made without the approval of the Supervising Architect.

Payments.—Payment of 90 per cent of the value of the work, executed and satisfactorily in place, as ascertained by the Supervising Architect, acting through the superintendent, will be made monthly, and payment of the 10 per cent retained will be made after the final acceptance by the duly authorized representative of the Treasury Department of all materials and workmanship embraced in the contract, but payment will not be made until every part of the work to the point for which payment is claimed is satisfactorily supplied and executed in every particular, and all defects therein remedied to the satisfaction of the Supervising Architect.

The Government reserves the right to withhold any payment until satisfactory samples, engineer's certificates, and shop drawings, hereinafter mentioned, are supplied in accordance with the specification requirements.

Dates for completion.—Bidders must state on the proposal sheet the dates upon which the contracts will be completed. And the dates named will be considered in awarding the contracts.

Foreman.—The contractor shall keep a competent foreman or superintendent (satisfactory to the Supervising Architect) on the ground at all times during the progress of the work, to receive instructions, and with authority to act for the contractors.

Explanation of drawings.—The general character of the detail work is shown on scale drawings, but minor modifications may be made in the full-size drawings or models, and the contractor must not get out any part of the work requiring details or models until he has received the same.

Where the word "similar" occurs on the drawings it must be used in its general sense and not as meaning "identical" and all details must be worked out in relation to their location and connection with reference to other parts of the work.

Models.—It is the intention of the Government to deliver to the contractor models of certain ornamental work, but the right is reserved to require the contractor to execute any such work from the full-size drawings.

This specification is intended to supplement the drawings, and, therefore, *it will not be the province of this specification to mention any portion of the construction which the drawings are competent to explain,* and such omission is not to relieve the contractor from carrying out such portions only indicated on the drawings, and should items be required by the specifications not indicated on the drawings, they are to be supplied, even if of such nature that they could have been indicated thereon. Any items which may not be indicated on the drawings or mentioned herein, but are necessary to complete the entire work, must be supplied in place. The decision of the Supervising Architect as to the proper interpretation of the drawings and specifications shall be final.

Key to materials.—The different materials are indicated on scale details in the following manner: Brick by alternate broken and solid line hatching, stone by stippling, concrete by stippling with triangular markings, terra cotta by wavy line hatching, woodwork by solid line hatching, and plaster by cross hatching.

Workmanship and materials.—All work must be executed in strict accordance with the drawings, such other details and models as may be furnished, the specifications, and the instructions of the superintendent. All materials and workmanship shall be of the best quality.

Materials or work that has been rejected must be promptly removed, and should the same not be done the superintendent may, 48 hours after serving written notice on the contractor, have the same removed, and the expense incurred will be deducted from any money due the contractor.

Equipment.—The contractor must furnish suitable scaffolding, machinery, tools, utensils, temporary heating apparatus, etc., necessary for the proper carrying out of his contract.

Protection.—The contractor must protect all materials and work, whether incorporated in the building or not, and shall furnish heat to prevent injury from dampness or cold, and at all times when there is concrete not thoroughly set, and after the first coat of plaster has been begun he shall maintain a temperature of at least 40° F.

The contractor shall also provide and maintain all necessary guards, lights, etc., for the protection of the public, and comply with all municipal ordinances which apply to the use of the sidewalks and streets for building operations, but such ordinances do not govern inside of lot lines.

Temporary toilet accommodations.—The contractor must provide for the use of all his workmen, where directed, ample temporary sanitary toilet accommodations, and keep such clean and free from flies; and prior to the completion of the contract all connections and appliances connected therewith are to be removed and the premises left perfectly clean.

Débris.—When directed by the superintendent the contractor must remove all dirt and débris from the building, site, or adjacent streets.

Surveys and test levels.—The contractor must employ a competent engineer to lay out the lines of the building and establish the elevations at bottoms of trenches, the elevations of floors and of the top of plate, and lines and elevations of the approaches, and forward to this office, through the superintendent, certificates of said engineer that such lines and elevations of the finished work are as required by the drawings.

Photographs.—The contractor must furnish to the Supervising Architect photographs as follows: On the first of each month, two photographs, 6½ by 8½ inches, mounted on muslin, from points selected by the superintendent; and when the building and approaches are completed, unmounted photographs 8 by 10 inches, in duplicate, from two points of view, one showing the entire front and one side elevation and the other the entire rear and remaining side.

The photographs of the finished work shall be from such point as will give the best general view of the building and must include as much of the approach work as is consistent therewith.

All photographs shall be marked on the back with the name of the building and the date upon and direction from which taken, and they must be shipped flat.

SAMPLES.

The following samples shall be forwarded, charges prepaid, to the superintendent of construction for approval.

Materials for which samples are required shall not be delivered on the site until samples of the same have been approved, and the materials delivered must correspond in every respect with the approved samples.

Portland cement.
Nonstaining cement. } Five pounds in tight cans.
Asphalt tempered as specified. }
Sand. } One quart each.
Aggregate. }

Stones, 6-inch cubes, each kind, showing finish specified.
Brick, two of each kind, as specified.
Metal fabric for reinforcing concrete, 36 square inches.
Red lead.
White lead.
White-lead putty.
} Two pounds each.
Linseed oil, one quart.
Framing lumber, 2 by 6 by 12 inches.
Sheathing, 12 inches long.
Shingles.
Roofing tin, two full sheets.
Galvanized sheet metal.
Metal lath, showing coating.
} Thirty-six square inches each.
Ornamental iron, samples to be suitable for use in accepting the finished work.
Marble, two pieces, each kind, ½ by 12 by 12 inches.
Tile, each kind.
Dressed flooring 12 inches long, finished as required.
Finishing wood, each kind, pieces 1 by 6 by 12 inches, one edge and one side finished as specified.
Painted strips, 1 by 3 by 12 inches, showing tints proposed for woodwork.
Varnish.
Shellac.
Oil drier.
Shingle stain.
} One quart each.
Glass, the several kinds, 36 square inches.
Hardware, samples of each piece required to be furnished, marked for the place it is to be used.

Locks must not be submitted in sets; neither is it desired that samples of all hardware be submitted, but simply a sample of each kind of hardware, such as one lock of each kind required, one escutcheon of each kind required, etc.

The approved samples of hardware which are in good condition, and after being marked for identification, may be used on the building.

The contractor shall also submit any other samples required by the Supervising Architect.

NOTE.—The approval of samples is generally for quality, color, and finish, and does not modify the requirements of the specification and drawings as to dimensions and design.

EXCAVATION.

The finished lines of the excavations are to conform as nearly as possible to the lines of the masonry, leaving only such space as is required for pointing and coating of walls.

Where the earth will stand, the excavations shall be made the exact size of the concrete footings; otherwise plank forms must be used, which shall be removed before any back filling is done.

The bottoms of all excavations are to be the exact level, and any spaces excavated deeper are to be filled with concrete, as the use of earth for back filling will not be permitted.

All back filling shall be done with clean earth, all filling to be thoroughly tamped or puddled.

Any back filling done before it is ordered or any earth which caves against foundations must be removed.

Any old excavations, not indicated, within 5 feet of footings and extending below the same, shall be filled in accordance with directions to be obtained from the Supervising Architect.

Any piping encountered, not required for future service, shall be removed to a point 1 foot outside foundations and capped or plugged tight, unless otherwise directed.

CEMENT.

All Portland cement shall have a specific gravity of not less than 3.10. It shall contain not more than 1.75 per cent anhydrous sulphuric acid (SO_3) nor more than 3 per cent magnesia (MgO).

The standard of fineness shall be that 92 per cent by weight shall pass a 100-mesh sieve and 75 per cent shall pass a 200-mesh sieve. It the material does not meet these requirements as to fineness it will be either rejected or the contractor will be required to use 2 per cent additional for each 1 per cent drop below the 92 per cent limit, or 3 per cent additional for each 1 per cent drop below the 75 per cent limit.

It shall develop initial set in not less than 30 minutes and a hard set in not less than one nor more than 10 hours.

Pats of neat cement about 3 inches in diameter, ½ inch thick at center and tapering to a thin edge, shall be kept in moist air for 24 hours. Should these pats not remain hard and firm, or should they show signs of

distortion, blotches, discolorations, checking, cracking, or disintegration after being exposed to the air at normal temperature for seven days, or after being kept in water at 70° F. for seven days, or after exposure to a steam bath in a closed vessel for five hours, the material will be rejected.

Nonstaining cement shall be of a brand that has been in use for at least two years to test its nonstaining qualities.

It shall have a specific gravity of not less than 2.95, and in all other respects conform to the above requirements of Portland cement.

All cement shall be delivered in the original packages, bearing the brand and name of manufacturer, and must be kept dry.

MORTAR AND CONCRETE.

NOTE.—Mortar and concrete must not be mixed or used during freezing weather.

Sand and aggregate.—All sand shall be sharp, coarse, and clean.

Stone and gravel shall be hard, and all aggregate shall be free from ash, coal, or other deleterious matter.

Aggregate for footings shall pass a 2-inch mesh and for all other purposes it shall pass a ¾-inch mesh, and all aggregate shall be held on a ¼-inch mesh screen.

Mortar.—All surfaces of limestone or sandstone coming into contact with masonry shall be completely covered with mortar composed of 1 volume of nonstaining cement to 2 of sand and all pointing of such stonework shall be done with the same kind of mortar. All other mortar, unless otherwise specified, shall be composed of 1 volume of Portland cement and 3 of sand.

The cement and sand shall be mixed until the cement is so thoroughly distributed that no particles of sand can be detected, then only enough water added to bring it to a plastic condition after being thoroughly worked. Mortar remaining unused at the time initial set occurs shall not be used in the work, and the cement and sand shall not be mixed more than one hour before the water is added.

Mixing of concrete.—All cement in connection with concrete shall be Portland. The cement and sand shall be made into mortar, as above specified, the aggregate drenched, drained, and then mixed until each piece is thoroughly coated, with mortar and immediately put in place in continuous layers. The concrete in connection with reenforcement shall be wet enough to permit pouring it in place, but of a consistency that will support the aggregate and will not be sloppy. When placed it shall be jarred with a tamper to cause it to come in close contact with the metal and fill all angles, but it must not be tamped.

All other concrete shall be a dry mixture, and it shall be tamped until free mortar appears on the surface.

Footings.—Concrete for footings shall be composed of 1 volume of Portland cement, 3 of sand, and 5 of stone or gravel aggregate.

Basement and area floors.—The concrete base of the basement and area floors shall be composed of 1 volume of cement, 2 of sand, and 4 of stone or gravel aggregate. Cement finish shall be as hereinafter specified.

There shall be an 8-inch foundation of broken stone under all area floors.

Reenforced concrete.—Concrete which is reenforced shall be composed of 1 volume of cement, 2 of sand, and 4 of stone or gravel aggregate.

The concrete shall be thoroughly worked around the metal, special care being taken to get the concrete under the metal, as the reenforcing metal must not be exposed on the bottoms nor will it be permitted to plaster the same with mortar after the concrete has set. Should the metal become exposed on the bottom that portion of the work shall be removed and replaced.

Metal reenforcement.—All reenforcement may be either wire or steel fabric with sustaining members, not less than 3 nor more than 8 inches apart, and they shall be rigidly attached to each other at intervals not exceeding 8 inches. Metal reenforcement may be galvanized, but must be free from rust or other coating when placed.

Metal fabric shall be laid with sustaining members at right angle to and continuous between bearings and have all joints lapped and secured together so as to give equivalent strength with the body of the fabric.

Forms and centers.—Forms and centers for reenforced concrete shall be of such construction and be secured in place in such a manner as to prevent deflection or vibration. Forms must not be removed until 15 days after the concrete is placed, and if in the opinion of the superintendent it is necessary, they shall not be removed for even a longer period.

Cement finish.—Cement finish shall be ½ inch thick, unless otherwise noted, composed of 2 volumes of Portland cement to 3 of sand, with only enough water to make a stiff mortar, as dry cement must not be used in connection with the finish coat.

The finish coat shall be applied within 30 minutes after laying the concrete base, and it shall be lightly tamped to insure perfect adhesion. Care must be taken to prevent sand or dirt from getting on the concrete base, and walking over the same, before laying the finish coat, will not be tolerated.

The outside steps shall have ⅛-inch wash.

Wherever smooth finish is required, it shall be produced without plastering the surface.

At all openings between rooms having cement finish, except opening to the fuel rooms, there shall be formed at the time of laying the finish coat, ½-inch high cement thresholds with beveled edges.

Where cement base is required the finish coat of the floor shall be carried up on the walls to the required height, and be finished to a straight line at the top, the outer edge shall be rounded and there shall be a cove with a 1½-inch radius at the floor line.

Filling.—The filling under tile is specified under "Interior marblework."

Fire stops.—Fill in with concrete as specified for filling under "Tile," to a height of 10 inches between the studs above each line of bridging, and at the top of partitions fill in between the joists, to underside of flooring.

STONEWORK.

Kind and quality.—All stone shall be free from defects, well seasoned, and of even texture and color, except that variations usually found in first-grade stonework will be permitted, but such variations must not be of the nature of spots, iron stains, or other discolorations, and shall be light colored.

Drawings.—Drawings in triplicate, indicating the jointing and the beds of all stonework, must be furnished as hereinbefore specified.

Finish.—Weathered surfaces of stone shall be smooth, and all other exposed surfaces shall be four-cut work.

All stone sills shall have a raised fillet at the back.

The joints and beds of all stone shall have a full, even bearing and have unexposed sides and backs pitched off at right angles to the beds.

Any stone that is damaged during the execution of the work must be removed and replaced.

Patching or hiding of defects will not be permitted, and lewis holes shall not be made on surfaces which will not be covered.

Setting.—All stone must be set with uniform joints not over ¼ inch, in a full bed of mortar, and all joints shall be thoroughly filled, except the face of joints shall be left open ¾ inch deep for pointing.

Sills, etc., subject to pressure shall be bedded only at ends.

All stone must be brushed clean and drenched immediately before being set.

The area and terrace copings shall be cramped together at every joint. Sinkages for cramps on exposed surfaces shall be dovetail in section not less than 1 inch deeper than the thickness of the metal, and after the cramps are set they must be covered with mortar composed of equal volumes of cement and sand, well tamped in, and finished smooth with the surface of the stone. Anchors, cramps, etc., are specified under "Metal work."

Pointing.—All joints shall be brushed out clean, thoroughly wet (wetting with a sponge will not be sufficient), and carefully pointed.

The mortar must be packed solidly into all joints, completely filling the same.

BRICKWORK.

Brick.—All brick shall be uniform in size, hard burned, firm in texture, and free from limestone or magnesia pebbles, laminations, or other defects.

The exterior face brick shall be light gray.

Two brick of each kind used on the building, showing the extremes in color and quality, must be submitted for approval.

There shall not be used more than 10 per cent of bats, and there shall be no bats used as headers on either face of the wall.

Laying brick.—Every sixth course in height of the facing brick shall be a full brick header course.

Every sixth course in height in common brickwork shall be an overlapping header course, extending through the wall, or to the facing, and shall lap the header courses of the facing brick.

Brick piers shall be bonded throughout each course.

The 4-inch course of brick protecting the waterproofing will not be bonded to the wall.

Lay all brick with close joints, rubbing each brick in a full bed of mortar, and fill all joints.

All brick shall be thoroughly drenched immediately before being laid.

The brickwork at the ends of joists shall be laid so as to permit the free circulation of air.

All joints in brickwork to be struck; exterior joints to be weathered.

All walls, etc., must be built plumb, true to line, and have horizontal joints level.

All plates shall be set level in full beds of mortar, and all framing and anchors shall be set and built in as the brickwork progresses.

Where pipes, except wall hydrants and bottoms of down spouts pass through walls, cast-iron or standard galvanized-iron or mild-steel pipe sleeves, generally 2 inches greater in diameter than the pipes passing through same, shall be furnished and built in place.

All flashings in connection with brickwork shall be built into the joints, as the cutting out of the joints and placing the flashings afterwards will not be permitted.

Where walls are unplastered lay headers on edge to form inside window sills.

Brick outside of sheathing to be anchored to the same with approved metal ties not over 3 feet apart in every fifth horizontal joint.

Arches.—Arches the full thickness of the walls or the full depth of reveals shall be turned over all openings not provided with lintels, and, except where otherwise indicated, arches shall have not less than three rowlocks. Arches must spring from extreme ends of lintels or centers.

The facing brick in connection with the arches shall be molded or ground to the true radial lines of the arch, so as to give smooth soffits. Arches shall be bonded to the backing. Flat arches to be cambered ½ inch.

Skewbacks with full bearings must be cut for all arches.

Centers.—All arches must be turned on strong centers, which must not be struck until the mortar has set.

Chimneys and fireplaces.—Chimney flues shall be kept full size the entire height and shall be straight. Where bends are unavoidable the same shall be as long as possible. Unless otherwise indicated all flues shall be lined with dense terra-cotta flue lining; terra cotta to be hard burned and free from defects, at least ¾ inch thick and set in mortar with close joints. There will be a 4-inch trimmer arch under all hearths, the top of which shall be not less than 5 inches below top of finished wood floor. The brick hearths shall be laid on a bed of concrete, the same as specified for base of basement floor. All brick in connection with fireplaces, facings, and hearths shall be laid with uniform joints, using special molded or ground brick if necessary. All joints to be pointed and all mortar to be colored as directed. The facing shall be anchored or bonded to the backing at least once in every square foot of superficial area.

All marble shall be free from porous streaks and other defects, and all exposed surfaces shall be highly polished. No marble shall be less than ⅞ inch finished thickness, and all marble shall be bedded and jointed as specified for brick. Each piece of marble shall be anchored in place in such a manner as to insure its remaining firm and rigid, without depending upon the mortar bedding.

Cleaning.—All face brick and stone shall be cleaned with an approved wash containing no acid or coloring matter.

WATERPROOFING.

The walls must be thoroughly seasoned and have all surfaces cleaned, any necessary pointing done, and all pipe sleeves calked and pointed around pipes before waterproofing.

The coating shall be at least ¼ inch thick, and be hot when applied.

The asphalt shall be a refined product tempered with petroleum oil from which the lighter oils have been removed by distillation. (The presence of benzine will not be permitted.) The asphalt shall be soft and pliable in a temperature of 70° F., and after being heated to 212° F. and cooling it shall not become brittle.

METAL WORK.

Steel.—All structural steel must be medium steel, of uniform quality, be finished straight and smooth, free from defects, the full weight called for, and have a tensile strength of between 60,000 and 68,000 pounds to the square inch, elastic limit not less than one-half the tensile strength.

All steel and iron must be free from rust.

Anchors.—All anchors in connection with masonry shall be built in as the work progresses. Cramps for stonework shall be not less than ½ by ¾ inch, and have both ends turned at least 1 inch.

Anchors for securing wood columns of piazza to masonry shall be of ½ by 2 inch wrought iron, and shall have lower end turned 2 inches and extend through the stone cap into brickwork not less than 18 inches, and through base of columns with end provided with nut and washer. All posts in connection with balustrade on roof shall be anchored to roof framing with ⅛ by 1¼ inch steel angles, secured at each end with at least 2 screws, and placed so as to be concealed. Columns in connection with terrace shall be securely anchored to masonry walls in an approved manner. Iron straps in connection with gutters shall be of ⅛ by 1¼ inch iron, bent down over edges of gutters, and shall extend up on to roof at least 1 foot and be securely fastened with countersunk screws.

Stirrups and hangers.—Stirrups shall be of ⅜-inch by not less than 3-inch wrought iron or mild steel, be turned over the trimmer at least 2 inches, and secured with spikes.

Hangers shall be of an approved pattern and have an ultimate tensile strength of at least 40,000 pounds.

Iron railing.—Wrought iron shall be tough, fibrous, of uniform character, and of perfect manufacture.

Castings shall be from metal suitable for the finest quality of work, and they shall have sharp angles with true edges and must come from the molds in perfect condition, as the filling of defects will not be permitted.

All sizes of members, where not given, shall be sufficient for strong work. All joints shall be of such a character that they will be as strong and rigid as adjoining sections.

The railing shall be securely fastened to masonry in an approved manner and so that it can be easily removed.

Fireplaces.—The cast-iron chimney throat and damper, and cover and frame in connection with ash dump, shall be of cast iron, not less than $\frac{5}{16}$ inch thick, with all necessary stiffening ribs and flanges for supporting brickwork, etc. The damper shall be arranged to close tightly and shall have an approved operating device to hold the damper at any angle. The cover of the ash dump shall have a ring or other approved device for lifting. The cast-iron door and frame at the base of chimneys shall have all necessary stiffening ribs, etc., the frame shall be built and anchored into brickwork, and shall have lugs cast on for hanging doors. Doors shall have hinges cast on and an approved catch.

Painting and finishing of ironwork.—All steel and iron work of every description, before leaving the shop, shall be cleaned of all scales, rust, etc., and treated in the following manner:

All anchors in connection with masonry shall be galvanized or heavily coated with asphalt.

All steel and all ironwork shall be given a coat of boiled linseed oil before leaving the shop. Where members are in contact, each surface must receive a coat of paint before being assembled. After erection all steel and iron work shall be given two coats of paint of different colors. Parts inaccessible after assembling or after erection shall be given three coats before.

All paint shall be composed of 25 pounds of red lead to 1 gallon of linseed oil.

All materials for painting must be delivered in the original packages, with seals unbroken, and be mixed on the premises or at the shops where the work is done.

All paint must be kept well stirred while being applied and must be rubbed on with a brush.

All work shall be clean and dry while being painted, and each coat shall be dry before the next is applied.

ROOFING AND SHEET-METAL WORK.

Guaranty.—All work in connection with the roofs must be maintained water-tight for a period of two years from the date of final payment for the contract, and should defects of any description, either in the workmanship or materials, develop within that time the contractor shall immediately, when called upon by the Supervising Architect, without additional expense to the Government, make good the roofs in every particular, and any work or materials displaced in repairing or replacing such work shall be made good and the work left in perfect condition.

Tin work.—All tin shall be as set forth in the following guaranty, which must be certified before a notary public or other officer duly qualified to perform such duties, and forwarded to the Supervising Architect (in duplicate) as hereinbefore specified:

I hereby certify of my own knowledge that this tin plate, bearing brand ..... and submitted by ....., is made from IX-gauge black sheets of genuine charcoal iron, free from impurities; that no steel in any form has been employed in its manufacture; that the sheets have been thoroughly cleaned and all traces of acid removed, and the sheets evenly and perfectly coated by the palm-oil process with a coating composed of 25 per cent of tin to 75 per cent of lead, and weighing not less than 40 pounds to a box of 112 sheets, 20 by 28 inches.

.....
(Manufacturers.)

Sworn to before me this ..... day of ....., 191 .

.....
(Notary public.)

Each sheet shall be stamped with the brand and name of the maker.

Where practicable turn the tin up against vertical surfaces at least 10 inches.

The tin covering of gutters, flat roofs, etc., shall extend up under the shingles as far as possible without being damaged by the nails. The outer edges of the tin in connection with the cornice shall be locked to an angle of galvanized sheet metal weighing at least 22½ ounces per square foot, which shall be countersunk and secured to the woodwork at least every 6 inches with countersunk head screws. The tin shingles extending at least 6 inches on each side shall be built in with each course of shingles in connection with hips, valleys, against dormers, chimneys, etc.

Gutters shall be without longitudinal seams in the beds, and all tin in connection with gutters on the roof shall be secured in place with three 1½ by 3 inch cleats to each sheet. The cleats shall be secured to the roof sheathing at one end and have the other end turned in with the seams. The roof ends of all cleats shall be folded after being secured.

Snow guards.—Near the eaves place three rows of approved copper snow guards, one at every other shingle in each row. The snow guards shall be securely fastened to the roof and the guards in the rows shall be staggered.

Counterflashings.—Counterflashings shall be of tin and where practicable, shall be built into the masonry at least 3 inches, but in no case shall joints be cut out and counterflashings placed after the masonry is completed. Counterflashings shall not come closer than 3 inches of the roof.

At outlets the tin must extend into down spouts at least 3 inches.

All outlets shall be fitted with ½-inch mesh No. 16 galvanized-wire baskets set in loose.

Tin must not be scratched in any manner.

Acid flux must not be used in connection with soldering.

Sheet metal.—Galvanized sheet metal not otherwise indicated shall weigh at least 18½ ounces per square foot.

All joints of sheet metal, not otherwise indicated, shall be locked, if practicable; if not, they shall be lapped and riveted.

Exterior down spouts shall be of galvanized sheet metal, enlarged at the top to twice their area and shall extend at least 6 inches under the gutter linings. They shall be secured to the walls with heavy galvanized straps.

Skylight.—The skylight over the conservatory shall be of a type that can be made water tight without the use of putty or cement. Sash bars shall be of steel or have steel reenforcement. There shall be condensation gutters at all cross joints in the glass, at sash bars, at hips and at eaves. Gutters at cross joints in glass shall spill into gutters of sash bars. There shall be storm-proof hoods at all openings at eaves.

All sheet metal in connection with the skylight, except bearings for glass, shall be of 16-ounce cold-rolled copper.

The caps shall be made adjustable and so that they will clamp down on the glass and hold it in place with the spring of the metal. The glass shall be as hereinafter specified, and shall be held in place at the eaves with a stop that will not interfere with the flow of the water. The bearings of the caps on the glass and the bearings of the glass shall be metallic, but they shall be so flexible that there shall be no possibility of breakage, and shall insure a water-tight joint.

Register.—The register in the kitchen shall be of plain lattice pattern, of black japanned finish, the frame to be set in plaster of Paris; be secured in place with the cleats on the mouthpiece and shall be provided with a brass safety-link nickel-plated operating chain with metal indicating handles.

Mouthpiece with wired ends must extend through the wall at register opening and have cleats riveted on to secure register.

Covering over boiler.—For a distance of 4 feet on each side and rear and 8 feet in front of the boiler and for a distance of 2 feet on each side of the smoke breeching, the ceiling shall be covered with asbestos board at least ¼-inch thick, and this shall be covered with bright tin. The tin shall extend over the edges of the asbestos and be secured directly to the joists.

Painting.—All surfaces of tin and galvanized sheet-metal work unexposed after being placed shall be given, before placing, a coat of paint composed of 15 pounds red lead to 1 gallon of linseed oil.

PLASTERING.

Lathing.—All lath, except as otherwise specified, shall be pine or spruce, free from sap, knots, etc. They shall be laid at least ¼ inch apart, and all joints shall be broken at least every sixth lath. Lath shall be secured at every bearing, using two nails at each end.

All beams, cornices, arches, etc., and all angles between wood framing and masonry, and studs back of wall tile and sheathing in connection with exterior plastering, shall be covered with metal lath. The metal shall be either No. 24 gauge with ribs not less than ⅛ inch wide or No. 22 gauge with ribs not less than $\frac{3}{32}$ inch wide, all to be coated to prevent rust, and secured with galvanized staples not more than 9 inches apart.

Plastering.—All plastering in finished rooms shall be three-coat work, except the finish coat may be omitted back of base and wainscoting. The finish coat shall be troweled smooth.

The ceilings of the basement shall have one heavy coat, troweled smooth.

All walls and ceilings must be swept clean, and the wood lath wet immediately before plastering.

Exterior vertical angles, not otherwise protected, shall have approved metal corner beads. The finished surface of plastering shall be brought to a true plane, and all angles must be true, and the plastering, when completed, shall be clean, free from blisters, discolorations, cracks, or other defects.

All materials for plastering, except the finish coat, will be mixed at a fully equipped factory, ready for application with the addition of water only, or should the manufacturers desire they may mix the sand at the building.

All materials for the finish coat may be mixed at the factory or at the building, but should any mixing of sand or of the finish coat be done at the building, it must be done under the superintendence and direction, during the entire progress of the work, of a competent employee of the manufacturers, and under no circumstances will the employment temporarily of a man who is connected or associated in any way either with the contractor or with a subcontractor be considered as meeting the required conditions.

In submitting the brand of plaster it must be accompanied by a specification of the manufacturers for the furnishing and application of all materials, which will not conflict with the requirements of this specification, and also with an agreement that all materials will be mixed and furnished to the contractor as above required.

All materials are to be of such nature that the finish coat can be applied within 12 days from the beginning of the plastering, and all walls when finished are to be hard and have an even-colored surface, either white or light gray in tone.

In case the finished work is unsound, discolored, or has not a hard, compact surface, etc., it will be considered that the fault is primarily with the article as manufactured, and the brand used will be, in case such defects appear, barred from use, but such action will not relieve the contractor from doing such work as in the opinion of the Supervising Architect is necessary to put the walls in good condition. The only defect which will be considered as due to unskillful application is an uneven or rough surface.

A sample, 12 by 24 inches, showing the character of the materials and the texture is to be submitted to the Supervising Architect for approval.

Ornamental plastering.—All cornices, moldings, beds for ornament, and coves shall be run in place, the plaster to be nowhere over 2 inches thick.

All modeling must be done in a spirited and artistic manner, be finished by hand after casting, and be set and pointed so joints will no show. Where necessary ornament shall be reenforced with galvanized rods or netting.

Exterior plastering.—Exterior plastering shall be composed of 1 volume of Portland cement to 2 of sand. It shall be applied in two coats, the first to have as much water as is practicable, and the second coat shall be applied while the first coat is green. The second coat shall be brought to a true plane, finished with a wooden trowel and then patted so as to give a stippled effect.

Finish of basement.—The walls and piers in the basement shall be swept clean and given two coats of approved white cold-water paint.

TILE WORK.

Floor and wall tile.—The base for floor tile shall be composed of concrete of the same composition as s specified for base of basement floor, and it shall be reenforced by placing 3-inch mesh, No. 16 gauge, metal abric ¾ inch from the bottom.

The tile in connection with the vestibule floor shall be of an approved color, at least ¾ inch thick, hard, evenly burned throughout, unwarped, and nonabsorbent. The tile shall be laid in a bed of Portland cement mortar and rolled to a true even surface.

The tile in connection with the floors of toilets and bathrooms shall be 2-inch hexagonal hard, white, nonabsorbent tile, at least ½ inch thick, and laid as specified for laying of vestibule floor tile.

Metal lath shall be nailed to studding in toilet and bath rooms and the metal covered with a bed of Portland cement mortar for tiled wainscot.

Tiled wainscot shall be of white glazed tile, 2½ by 5 inches and at least ½ inch thick, bedded in plaster of Paris, and the wainscoting shall have a simple molded cap and coved base with leg about 4 inches high at the floor line.

All tile shall be laid with close joints, all surplus mortar shall be removed, and the tile scrubbed clean.

WOODWORK.

Framing.—All framing lumber shall be of pine, spruce, or fir and must be thoroughly seasoned and free from defects that will impair strength. The dimensions of lumber indicated are to be taken as commercial sizes.

All headers and trimmers shall be doubled and thoroughly spiked together.

Headers shall be supported on wrought-iron stirrups. All joists not having other supports shown shall be carried on metal joist hangers.

All anchors, hangers, etc., are specified under "Metal work."

The sills shall be bedded in mortar and shall be halved together at joints and corners.

Partitions shall be of 2-inch studs by the proper width, spaced not more than 16 inches on centers. Studs shall be doubled around and trussed over openings. The corners shall be made solid by spiking studs together.

All filling pieces required for securing floors, finish, etc., in connection with joists and studs shall be supplied. All sills, girts, plates, posts, etc., shall be mortised and tenoned and pinned together in an approved manner.

Partition caps shall be spiked to tops of studs, and joists and rafters shall be spiked to plates, girts, sills, and partition caps with at least two 20d nails at each bearing. At least every fifth line of joists shall be lapped and thoroughly spiked together at intermediate bearings, so as to form a tie entirely across the building. Where joists can not be lapped, wrought-iron anchors ¼ by 1¼ inches shall be secured to the joists with three spikes at each end. Similar anchors shall be placed at the ends of each row of bridging and they shall extend over three joists and be spiked to the joists and plates or girts.

Bridging.—Bridging shall be 1½ by 2½ inch strips cut with full bearings and secured at both ends with two 12d. nails. There shall be two rows of bridging in the height of partitions.

Furring and grounds.—Grounds shall be provided and set plumb and straight for all finish in contact with plastering, the grounds to be set back at least ½ inch from the outer edge of the trim.

Furring for cornices, etc., shall be 2 inches, cut to follow as nearly as practicable the finished profiles of the cornices, as it will not be permitted to run the plaster more than 2 inches thick at any point. Ceilings shall have ⅞ by 2 inch furring strips 12 inches on centers.

Where grounds and furring can not be otherwise secured to masonry, metal plugs, split bolts, or expansion bolts must be used, as the use of wood plugs or blocks in any form will not be permitted.

Sheathing.—The sheathing on the outside of studs, rafters, etc., shall be ⅞-inch by not more than 5½-inch matched boards, be driven close, and secured at every bearing with two 12d. nails.

Sliding door pockets shall be lined with ½-inch tongued and grooved sheathing nailed to the studs.

Shingles.—Shingles shall be not less than 16 inches long and of the best quality cypress or redwood. They shall be laid not over 4½ inches to the weather and each shingle shall be secured with at least two nails. At the eaves the first course must be doubled; at the valleys shingles must be laid close, and along the hips a 4-inch course of shingles shall be laid parallel with the line of the hip.

Ridge board.—All ridges shall have ⅞ by 5 inch ridge boards tongued together, the joints to be set in white lead.

Paper.—The entire surface of the exterior sheathing of the building shall be covered with a sheathing paper weighing not less than 12 pounds per square. Against vertical surfaces in connection with the roof the paper must be turned up back of the flashings and at openings finished so as to be weather tight.

All double-floors shall have one layer of the same paper laid between the floors.

The paper shall be secured to sheathing with nails and shall have the joints well lapped and shall be free from holes.

Finishing lumber.—All finishing lumber, including finished flooring, shall be selected clear stock, thoroughly seasoned or kiln dried, be bright and uniform in color, and free from sap, knots, or other defects.

All woodwork on the exterior of the building shall be of white pine, redwood, or cedar.

Workmanship.—All joints shall be tongued or rebated together so as to conceal any shrinkage. Outside woodwork must be made so water will not enter the joints and must be put together with stiff white lead. Miters of interior finish shall be framed or feathered and glued together. Framed work, such as doors, shall be made up as soon as practicable, put together, and left standing until the time to use them, when they shall be clamped and glued up.

Carving shall be finished by hand in a spirited and artistic manner.

All finish, where practicable, must be secured in place from the back, or with fastenings so placed as to be concealed.

Wood columns shall be staved up with interlocking or tongued joints, staves for exterior columns to be not less than 3 inches thick, those for interior columns not less than 2 inches thick.

Balusters shall be turned from solid stock.

Composition shall be molded and have sharp lines and corners and shall be finished by hand if necessary.

The interior finish must not be brought into the building until the plastering is dry and the exterior openings have been closed. The surfaces of interior finish in contact with plastering shall be painted, and all frames and trim primed or filled as hereinafter specified before being delivered on the premises.

Door frames.—Frames for exterior doors shall be 2¼ inches thick and for interior doors shall be 1¾ inches thick.

Frames must be secured to the masonry with bolts or screws so placed as to be concealed.

Doors.—Exterior doors shall be 2¼ inches thick, matched panel doors will be three thicknesses of ⅞-inch material, doors to pantry dresser lockers to be 1⅛ inches thick, and all other doors shall be 1¾ inches thick.

The stiles and rails of all doors over 1⅛ inches thick, except matched panel doors, shall be built of white-pine or cypress strips ⅞ inch thick by the thickness of the cores and be veneered, the side veneers to be ⅛ inch thick and the edge veneers not less than ½ inch thick. The outside veneers on exterior doors, shall be of white pine.

Matched panels shall be of ⅞ inch by not more than 3¼ inches face width, V-jointed boards, and shall have stiles and rails planted on and secured so as to make doors perfectly rigid.

Double doors shall have molded astragals glued on the meeting stiles.

Window frames.—Pulley stiles and parting strips of box frames shall be of yellow pine or fir. The pockets in pulley stiles shall be as long as possible, the pocket pieces to be secured in place with countersunk heavy brass screws. Parting strips shall be tightly fitted in grooves, but not fastened. Hang No. 20 galvanized metal pendulum strips in the boxes to separate the weights.

Inside stops shall have stop adjusters with screws, one at each end and at intermediate points about 18 inches apart.

Frames for hinged and pivoted sash shall be 2¼ inches thick and be rebated.

The sills of all exterior window frames shall be 2½ inches thick, and be plowed to receive the fillet on masonry sills. Frames resting on masonry shall be bedded in mortar. The frames shall be anchored to the masonry with holdfasts of galvanized iron not over 3 feet apart.

Calking.—All exterior window and door frames in brick walls shall be tightly calked with oakum from both sides before the beads are permanently secured in place.

Sash.—All transom sash shall be the same thickness as the doors over which they come; sash in closets, pantries, bookcases, etc., shall be 1⅜ inches thick and all other sash shall be 1¾ inches thick. The bottom rail of all exterior hinged sash shall have a molded drip worked from the solid wood, or a cast brass or bronze drip secured with screws may be used.

All exterior sash shall be rebated on the outside for securing the glass with glazing points and putty and elsewhere for securing the glass with glazing beads.

All sash shall be mortised and tenoned together, the exterior sash to be pinned and the interior sash wedged and glued.

Paneling.—Panel framings may be solid or veneered. Panels 12 inches wide and less shall be solid and panels over 12 inches wide shall have a white-pine or cypress core and be veneered on each side. The veneers shall be run at right angles to the cores, and all veneers shall be at least ⅛ inch thick.

Panels with moldings on each side, as in doors, shall have hardwood splines of the same thickness as the edges of the panels let into the stiles and rail. Where glass is required, the splines shall be the same, but inner molding shall be cut off flush with the splines and a separate molding used for securing the glass. Where only one face of panel is exposed, the stiles and rails shall be rebated on the face and moldings set to receive the paneling, and the panels shall be held in place with beads secured at the back. The hardwood panels shall be finished, except the last coat, before being set.

All molding must be glued and bradded to the splines and the stiles and rails. Under no circumstances shall moldings be secured to the panels, as they must be left free to shrink.

Ceilings.—The ceilings of piazza and similar places shall be of $\frac{13}{16}$ inch by not over 3¼ inches face width boards, matched with V-joints, be driven close and blind nailed to every bearing.

Base and chair rail.—The wood base shall be put down before the floor is laid and shall extend to the underfloor. The chair rail shall be tongued or rebated to the trim, and the chair rail and the base shall be tongued or dovetailed together at internal angles.

Flooring.—The finished flooring in library, dining room, and office shall be quartered sawed oak; elsewhere, except where parquetry floor is indicated, flooring shall be of Oregon fir or hard pine, the fir and hard pine to be quarter sawed.

The flooring in each room shall be uniform in color, but may vary in different rooms. All flooring shall be $\frac{13}{16}$ inch thick by not more than 3¼ inches face width; all flooring shall be matched after being kiln dried, laid close, and blind nailed to every bearing.

Parquetry flooring shall be end matched.

Flooring shall not be laid until all finish is in place, and all flooring must be cut between the base and at the thresholds, so as to make a perfect fit, as the use of shoe molding will not be permitted. All cross joints must be closely fitted and, except in connection with parquetry floors, broken only over solid bearings. Surfaces of wood floors must be protected from stain, grit, etc., until the completion of the work, when they shall be smoothed ready for finishing.

Underflooring.—Underflooring shall be ⅞ inch thick by not more than 6 inches wide. That in connection with tile shall have square edges and shall be laid at right angles to the joists with ¼-inch open joints. Elsewhere underflooring shall be matched, laid diagonally, and driven close. All joints shall be broken on solid bearings and the underflooring shall be secured at every bearing with two 12d. nails. All matched underflooring shall be covered with a building paper that will weigh at least 12 pounds per square. The paper shall be lapped at all joints at least 2 inches.

Stairs.—The string casing and treads of stairs shall be 1⅛ inches thick, the risers shall be ⅞ inch thick. Treads and risers shall be tongued together and housed and wedged and glued into the wall strings.

The nosing and cove shall be returned across ends of treads and be doweled and glued to the strings. The brackets on the face of string casings shall be mitered to the ends of risers. Balusters shall be dovetailed into the treads and mortised and tenoned into the rails.

All handrails shall be of quarter-sawed oak.

All ramps and bends shall be worked from the solid wood, have all curves true, and they shall be secured to the straight rail with concealed rail bolts.

The newel at bottom of basement stairs shall have two ⅛ inch by 1 inch steel anchors secured to the newel with countersunk screws and to concrete floor with expansion bolts extending into the floor at least 4 inches. Other newels shall be secured to the wood framing with bolts, and the rails shall be secured to the newels with rail bolts.

Stringers to be not less than 2 by 12 inches, spaced not over 16 inches apart.

Pantries, closets, bookcases, etc.—Closets, clothes presses, etc., shall have ⅞-inch shelves, housed into 1⅛-inch standards.

Shelves over 10 inches wide shall be made up of two or more strips doweled and glued together.

Counter shelves shall be 1⅜ inches thick with the underside kerfed every 2 inches.

All clothes closets shall have at least 2 wardrobe strips secured to the walls at the proper height.

Where indicated adjustable shelves shall be furnished having approved arrangement for adjusting.

The slat shelves in the conservatory shall be constructed of 1¼ by 2 inch hardwood strips secured to cross pieces not over 3 feet apart with countersunk screws. Shelves shall be supported by framing having all necessary braces, etc., and secured to floor with angles and expansion bolts.

Thresholds.—Quarter-sawed oak thresholds ½ inch thick, with beveled edges, must be placed at all openings not otherwise provided for.

Window and door screens.—All openings in connection with exterior movable windows and doors shall be fitted with screens.

All window screens shall be placed on the outside of sash, except in connection with casement sash opening out, which will be placed inside of sash.

All screens shall fill the entire opening and be accurately fitted and secured in such a manner that they may be easily removed and replaced without damage to the existing work. In connection with all movable windows above the basement the screens shall be so arranged that at least one-half of the area of the screen at each opening shall be movable, and the screens shall be provided and fitted with all necessary guides, springs, etc.

Wherever the construction of the door and window frames is such that there is not sufficient space for the satisfactory operation of screens, all additional strips, framing, etc., necessary must be provided.

Frames for screen doors shall be made of thoroughly seasoned white oak 1⅜ inches thick. Stiles and rails, except bottom rails, to be not less than 5 inches wide; bottom rails to be not less than 11 inches wide.

All doors to have lock rails.

Frames for windows shall be made of thoroughly seasoned white pine 1⅛ inches thick by 2½ inches wide, except that in connection with sash less than 2 feet wide the frames shall be 1¼ inches wide, and screens placed inside of sash shall be of same wood as trim of windows.

Wire mesh shall be extra heavy copper or composition No. 16 mesh secured to frames with moldings. All doors shall be provided on both sides with ¼-inch mesh, galvanized and painted, No. 16 wire guards extending from bottom rail to lock rail and secured with wood moldings.

Contractors shall submit for approval cuts, sketches, or samples showing the construction, method of application, operation, etc., of all screens.

Weather strips.—All exterior windows with movable sash, except in basement, shall be equipped with approved metal weather strips; the contractor to forward drawings or cuts fully explaining the type and method of applying the strips before any work is gotten out.

The strips shall be of zinc or hard copper not less than the thickness of No. 26 United States standard gauge, and the ribs shall be not less than ⅜ inch deep and extend into grooves in the sash.

All windows shall have strips at sides, top, and bottom, and at meeting rails, where same occur, there shall be interlocking strips one attached to each sash. The ends of strips on frames shall be turned into rebates or back of moldings where practicable. For hinged sash, except on the hanging stile, the strips are to be of the interlocking type; for all windows the strips on the sills shall be reenforced if necessary or heavier metal used to prevent the strips from being bent easily.

The weather strips shall be installed by or under the direct supervision of the manufacturer.

HARDWARE.

Quality.—All hardware, unless otherwise specified, shall be either bronze or brass metal of heavy pattern and plain finish. The hardware in connection with plumbing to be as hereinafter specified.

Butts.—All butts shall have five knuckles; those for horizontally hinged sash shall have fixed pins without tips and all other butts shall have loose pins with tips. All loose-pin butts 3 inches and over shall have steel bushings and be self-lubricating.

Swinging doors and hinged sash, 3 feet or more on the hanging stile, shall have three butts. Butts for doors 1¾ inches thick or less shall be 4 inches high and weigh not less than 3 pounds per pair, and butts for doors thicker than this shall be 5 inches high and weigh not less than 4 pounds 5 ounces per pair. The butts for the small hinged sash in the vestibule, cupboard doors, and for similar places shall be 2 inches high, and all other butts for sash, glazed doors in connection with bookcases, pantry shelves, etc., shall be 3 inches high and weigh not less than 1 pound per pair.

Double-acting and screen doors shall be hung on one pair of spring hinges of sufficient size to prevent the door from sagging at any point in the arc through which it swings.

Locks.—All locks and latches for doors except to fuel room shall be of the mortise type with cylinder-key escutcheons. The center of knobs shall be not less than 2¾ inches from the face of the lock. Strike plates shall be large enough to fully protect the finish.

All latches shall have antifriction attachments, and all tumblers must differ, so that each lock can be opened only with the keys belonging to it. Provide three keys for each lock.

Lock for front entrance door shall have a dead bolt operated from both sides with a key and a latch operated from the outside with keys and from both sides with the knob, and be so arranged that the outer knob can be regulated by stop work on the face of the lock.

Double-acting doors will not have locks.

Locks for doors to toilet and bath rooms shall have a latch operated from both sides with a knob and the dead bolt operated from outside by a key and from the inside by a thumbpiece.

Locks for doors connecting bathrooms on the second story shall be the same, except there will be two deadbolts, one operated from each side by no other means than a thumbpiece.

Screen doors shall have a latch with a knob on the outside and a lever handle on the inside; the latch to be arranged so that the outside knob can be set by stopwork on the inside of the door.

Locks for sliding doors shall have a heavy dead bolt of approved form, operated from both sides by no other means than a key. There shall be no latches in connection with these locks.

There shall be a mortise flush pull in the edge of the sliding door either in connection with the lock or as a separate item.

Fuel-room doors shall have a heavy wrought-iron latch.

Locks for other doors shall be similar to toilet room door locks, except that the thumb piece will be omitted and the dead bolt will be operated from both sides by the key.

Mortise locks and latches for all doors shall be master-keyed, as directed.

Locks for the drawers shall be of the cabinet type, all brass, about 2 by 1¾ inches, with duplicate keys.

Escutcheons.—The escutcheon on outside of front entrance door shall be about 3½ by 15 inches and all other escutcheons shall be about 3 by 8 inches; all escutcheons to have machine-finished thimbles. All double doors shall be trimmed to match.

Knobs.—Knobs for doors shall be oval, 1¾ inches in their shorter diameter.

The knob on the outside shall be secured to the spindle with a pin and the other knob secured with a clamp or other approved device.

The shanks shall have machine-finished bearings, fitting closely, and the knobs shall be set so as to be free from rattle.

Sliding door hangers.—Sliding door shall have extra heavy hangers with antifriction sheaves. Provide stop in center and rubber or spring buffers at the back for the doors to strike against.

There shall also be guides on each side of the door near the center, in the nature of rollers or cams with antifriction bearings.

Pulleys.—Box frames, including frames for sliding sash, shall have pulleys with faces to match the other hardware, with brass rollers with antifriction bearings and steel bushings.

The rollers for all pulleys shall be large enough to throw the weights at least ⅛ inch clear of the pulley stiles, but in no case shall they be less than 2 inches on the running face.

Sash chains.—The sash in box frames shall be hung on composition metal sash chain having a tensile strength of not less than 400 pounds and have lead or iron weights to exactly balance the sash. Sash hinged at bottom shall have transom chains on each side or other approved device for supporting same when open.

Sash locks, lifts, etc.—Sliding sash in box frames shall have approved sash fasteners, two flush lifts on the lower sash, and socket plates on the upper sash.

Furnish each room with sash pulls, with 1¼-inch oak poles of the proper length for operating the sash.

The hinged basement sash shall have spring-ring catches. The small hinged sash in the vestibule shall have a mortise turnbuckle with bar handle.

All other exterior casement sash shall have sash adjusters and espagnolette bars. The sash bars shall be of a type that will secure the sash at any angle. The espagnolettes shall be built so that they will bring the sash close together and against the frames at all points and lock them. The bolts shall be arranged so they will adjust themselves to any change in the woodwork.

Cupboard doors and doors and sash in connection with china closets, pantries, bookcases in library, etc., shall have flush cupboard catches with escutcheon and 1-inch oval knobs. The catches shall be arranged so that they will lock with a flat key; or cabinet locks same as specified for drawers shall be placed on all doors, sash, etc., of this character, in addition to the catches.

Sash openers.—All transoms shall have a device for operating them. The device shall be of special make, if necessary, and shall be of a type that will secure the sash at any angle. The handle in all cases shall be placed at some convenient point where the sash can be easily operated from the floor.

Doorstops.—Provide metal doorstops with rubber tips for all swinging doors.

Door checks.—Front entrance door shall have a liguid check of an approved type.

Bolts.—One leaf of the fuel-room doors shall have iron top and bottom bolts, and one leaf of all other double doors (except double-acting doors) shall have mortise extension top and bottom bolts to match the other hardware. One leaf of all double doors and sash in connection with cupboards, china closets, bookcases, etc., shall have a flush top and bottom bolt set in the edge of the doors. The top bolt in each case to be easily operated from the floor.

All keepers shall be set flush, secured with bolts or screws as may be necessary, with countersunk heads-

Drawer pulls.—Pulls for drawers shall be of cast metal, at least 3 inches long.

Plates.—One side of the bottom rail of the outside and vestibule doors in connection with the front entrance to within ¾ inch of the edge shall have $\frac{1}{16}$-inch plates secured with countersunk oval-head screws.

Push bars.—Three push bars ⅜ inch in diameter shall be placed on both sides of the outside screen doors· The push bars shall be secured with through bolts or sockets.

Sash centers shall be at least 4 inches long and have steel bushings.

Hooks.—All swinging entrance, vestibule, double-acting, and screen doors shall have ⅜-inch hooks with eyes for holding them open.

Heavy double wardrobe hooks secured with countersunk oval-head screws shall be placed not over 12 inches apart on all strips in clothes closets.

Screen hardware.—All screens shall have plates with numbers securely fastened to the frames, and there shall be corresponding plates and numbers secured to the frames of openings. Provide all necessary hardware for the operation and securing of screens; same to be of an approved type and of the same material and finish as other hardware.

PAINTING AND VARNISHING.

NOTE.—All frames and all interior woodwork shall be shellacked, filled, or primed, as may be required, before leaving the shop.

Painting.—All woodwork, except shingles and that which is to be varnished, shall be given three coats of paint, the finish color to be white. All ironwork shall be given, in addition to any previous painting, three coats of paint, to be finished flat black.

The backs of all wood panels which show only one side shall be given two coats of paint.

All parts of interior finish, including wainscoting but not flooring, in contact with plaster or masonry shall be given a heavy coat of mineral paint.

Puttying must be done after priming with white-lead putty.

All tin and galvanized sheet-metal work on the exterior of the building shall be given one coat of red-lead and two coats of white-lead paint. The finish shall match that of the woodwork in color.

The metal must be cleaned and given the first coat of paint within three days after being placed.

Shingle stain.—All shingles shall be dipped two-thirds of their length before laying, and given one brush coat after same are in place, with approved shingle stain to finish silver gray.

Varnishing.—All wood which is to be varnished shall be filled and stained, and the inside of exterior sash in connection with the same stained to match, and all given three coats of varnish, each of the first two coats to be rubbed down with steel, wool, or curled hair, and the last coat with pumice stone and oil, and after the work is finished to be given a coat of raw linseed oil and wiped to a dead finish.

Oiling.—When all other woodwork is completed, the parquetry floors and floors of dining room, library, and office shall be waxed. All other floors shall be given a coat of hot raw linseed oil with sufficient stain to give the desired tint, and then one coat of boiled linseed oil. Pulley stiles of window frames shall be given two coats of raw linseed oil.

Workmanship.—All work must be thoroughly cleaned, sandpapered, and filled as soon as practicable after being made up. No subsequent coat of oil or varnish shall be applied nor rubbing or sandpapering done until the previous coat is dry.

All coats of paint must be thoroughly brushed out.

Materials.—All materials for use in painting or varnishing shall be delivered in unbroken packages bearing the brand and maker's name, be mixed on the premises, be subject to inspection, and the rejected materials must be at once removed from the premises.

Red-lead paint for sheet-metal work shall be composed of 15 pounds of red lead to 1 gallon of linseed oil, and all other paint shall be composed of white lead and raw linseed oil, the necessary color to give the desired tint, and not more than 5 per cent of oil drier may be added. White lead shall contain not less than 70 per cent carbonate of lead to 30 per cent hydroxide, nor more than 75 per cent carbonate of lead to 25 per cent hydroxide.

Varnish shall contain not less than 25 per cent imported vegetable gum and be free from rosin or petroleum products, and when dry shall have a hard, tough, elastic film. *Varnish must not be thinned in any manner*, and the temperature in any portion of the building where varnish is being applied shall not be below 70° F.

Oil shall be pure refined linseed oil, free from "foots."

Drier shall be free from gums, rosin, or petroleum products.

Putty, except for glazing, shall be composed of white-lead paste mixed with dry white lead until of the proper consistency, the putty to be colored to match the color of the paint.

Shellac shall be composed of gum shellac and pure grain alcohol.

GLAZING.

All glass shall be plate. Glass in connection with skylight over conservatory shall be clear and unpolished, not less than ¼ inch thick, with a wire mesh embedded therein. Glass for doors and windows to toilet rooms, and where obscure glass is noted, shall be chipped, and elsewhere polished. All glass except as otherwise specified, shall be set without springing, be bedded in putty, and back puttied. Glass in exterior sash shall be secured in place with glazier's points and putty, and elsewhere shall be secured with glazing beads or moldings fastened at each end and at intermediate points about 6 inches apart with brads.

Where glass is required to be set in metal frames they shall be of an approved type, with all necessary reenforcement, and all joints soldered.

MECHANICAL EQUIPMENT.

THIS SECTION OF THE SPECIFICATION INCLUDES THE PLUMBING, SANITARY AND ROOF DRAINAGE, HEATING APPARATUS, CONDUIT AND WIRING SYSTEM, AND ANNUNCIATOR SYSTEM.

Kind and quality of material.—All material, appliances, and fixtures furnished must be in strict accordance with the specification requirements in each case and of the best quality and grade.

Bidders must furnish on the proposal sheet the information required thereby as to name and address of manufacturer of plumbing and lighting fixtures they propose to supply, and also name of manufacturer and catalogue number or trade name of all other appliances therein called for.

The plumbing fixtures must be the product of one manufacturer, and must be in accordance with the "Specification for plumbing fixtures, etc., prepared by the board on uniform plumbing specification for the Treasury, War, and Navy Departments, June, 1910," which is herein referred to and which forms a part of this specification. The term "manufacturer" as used in this paragraph is to be understood as applying to the company of established reputation in that line that assembles the plumbing outfits from products of their own manufacture and assumes the responsibility of minor products in said outfits which are not manufactured by them.

The lighting fixtures must be the product of one manufacturer of established reputation in that line. The term "manufacturer" as used in this paragraph is to be understood as applying to the company, firm, or individual having the facilities for supplying all parts of the lighting fixtures except glassware, sockets, and metal reflectors.

In the event the successful bidder fails to comply with any of the requirements of the proposal sheet or of the preceding paragraphs relative to material, appliances, and fixtures, i. e.,

(1) Fails to fill out the proposal sheet with name of manufacturer (one each) of the plumbing and lighting fixtures which he proposes to use in the work, or to give name of manufacturer, trade name, etc., of other appliances as therein called for;

(2) Names appliances not strictly in accordance with specification requirements or not of best quality and grade;

(3) Fails to name a manufacturer *satisfactory to the Supervising Architect* who makes a complete line of plumbing fixtures in accordance with the specification;

the Supervising Architect reserves the right to reject the manufacturers named and any or all appliances named by said bidder and to select manufacturers and appliances in lieu thereof, which selection shall be final and binding upon the contractor, and the work must be installed on that basis for the contract price.

Patents.—The Supervising Architect will not recognize demands brought on account of infringement of patents, but will hold the contractor and his bondsmen strictly responsible for any delay or cost resulting from his failure to protect the Government fully against patent rights.

Approval of material, etc.—The approval by the Supervising Architect of any material or appliance to be used in the work is general only, subject to its strict compliance with specification requirements in all particulars.

Measurements.—The drawings are not to be scaled, and contractor is to follow the dimensions given on the mechanical equipment drawings and the lighting-fixture schedule, which are, in general, in accordance with the building plans; but the contractor will be held responsible for the proper fitting of his work and must make his own measurements at the building, and no claim for damages for his failure to comply with this requirement shall be made or allowed.

Samples.—The contractor must submit for the approval of the Supervising Architect all the samples hereinafter required, and any which are subsequently called for by the Supervising Architect, and until such approval has been obtained must not install in the building any material or appliance required to be so approved.

Each sample must be marked with the name of the building to which it relates, and the name of the contractor; and if an article previously approved by manufacturer's name, must also have the latter marked thereon.

Approved samples will be sent direct from the Supervising Architect to the superintendent of construction at the building, who will allow them to be used in the work when they have served their purpose as samples, with the understanding that they must be properly marked for identification at time of final inspection.

Rejected samples of value will be returned to the contractors unless at time of submission they have requested some other disposition to be made of them.

In order to receive attention, samples forwarded must be accompanied by a letter of advice from the contractor.

All shipping charges on samples sent to the Supervising Architect must be *prepaid* by the contractor. Rejected samples will be returned "collect."

No samples of any description in connection with the mechanical equipment are to be submitted to the Supervising Architect unless specifically called for by him or required by this specification.

Drawings.—No drawings are to be submitted to the Supervising Architect in connection with the mechanical equipment unless specifically called for by him or required by this specification.

Interpretation of drawings and specifications.—No interpretation of drawings and specifications will be made prior to award of contract.

In all questions as to the interpretation of the drawings and the specifications, the satisfactory completion of the work, and the defects necessary to be remedied, the decision of the Supervising Architect shall be final and binding upon the contractor.

In the event the contractor does not within a reasonable time remedy all defects and make all changes demanded by the Supervising Architect to complete the work satisfactorily, the right is reserved to have defects remedied or changes made and to charge the cost of same against the account of the contractor.

Inspection and tests.—No shop or final inspection or test will be made except upon formal notice to the Supervising Architect from the contractor, by letter or telegram. Where such notice relates to a "final" inspection it should be submitted through the superintendent of construction at the building. Notices of readiness for shop inspection should be submitted to the Supervising Architect direct. No consideration will be given to notices from subcontractors.

Should any inspection or test not be begun, through no fault of the contractor, within 10 days of receipt of notice by the Supervising Architect, allowance will be made as hereinbefore provided.

The contractor must furnish all necessary labor, fuel, and appliances (such as smoke machine, etc.), for the tests, and must meet all expenses of said tests, except those of the department's inspector when the case does not come under the provisions of the following paragraph.

Should inspection or test be delayed upon arrival of the inspector or require repetition for any reason for which the contractor is responsible, the cost of delayed or subsequent inspections and tests, including salary of the inspector and his traveling and other expenses, shall be at the expense of the contractor and be deducted from any money due him upon the contract.

Upon completion of the plumbing, electric conduit and wiring systems, annunciator system, heating apparatus (*except* application of nonconducting coverings) the contractor shall give written notice to the Supervising Architect, through the superintendent of construction, of his readiness for inspection and tests specified to be made by the inspector detailed by the Supervising Architect.

If the test of the heating apparatus is satisfactory the superintendent (or custodian) will so notify the contractor, who may then proceed immediately with the application of nonconducting coverings to this system.

Modifications, etc.—The right is reserved by the Supervising Architect to require the contractor to make any omissions from, additions to, or changes in the work or materials herein provided for when in the judgment of the Supervising Architect such are desirable. In the event the contractor fails to submit a satisfactory proposal for such omissions, additions, or changes, the Supervising Architect shall fix the price, and his decision shall be binding on both parties, and no claim for damages on account of such omissions, additions, or changes, or for anticipated profits, shall be made or allowed.

Personal interview.—The Supervising Architect reserves the right to require the contractor, or his authorized representative, to make one visit to this office without expense to the Government should a conference be deemed necessary to the Government's interest.

Permits, etc.—The contractor must obtain all permits, pay all fees and charges for connections to sewer, water main, etc., and use of public or private property for storage of materials, etc., and comply with the regulations of the city and local companies controlling these services relative to excavations, connections, repairing of surfaces, etc., outside the boundaries of the Government property. The local regulations in regard to plumbing, electric wiring, etc., do not apply to work inside of the lot line.

Guaranty.—The bond which will be required in connection with the contract must guarantee each and every part of the mechanical equipment. The contractor will be required to remedy at his own expense all defects which may develop by reason of the use of any inferior or defective materials or workmanship. It must also be understood and agreed that the final acceptance and payment for the work will not relieve the contractor for having installed defective materials and work not apparent at time of final inspection.

PLUMBING.

Scope of work.—This portion of the specification includes the installation, complete, of the plumbing, sanitary drainage, and the interior down spouts.

References in this Section of the Specification to Pages, Plates, etc., Mean Plate Numbers, Pages, etc., in the Specification for Plumbing Fixtures, etc., Treasury, War, and Navy Departments, June, 1910, a Copy of Which Accompanies this Specification and Forms a Part Thereof.

Cast-iron pipe.—All soil, waste, vent, and drain piping in the building below basement floor and outside of building below ground, including the main connection from the building to the sewer, to be cast-iron pipe and fittings. (See p. 13.)

Wrought-iron or steel pipe.—All soil and vent pipes above basement floor and the two interior down spouts in wood columns, and also all waste and water pipe (except the portions hereinafter specified to be brass) to be galvanized wrought-iron or mild-steel pipe. (See p. 13.)

Fittings to be as specified for pipe in question. (See p. 13.)

Brass pipe.—All flush pipes from flush tanks to water-closets and all lavatory waste pipes exposed between lavatory slab and floor line, and all water-supply pipes in toilet rooms are to be brass pipe. Waste and water piping exposed between lavatory slab and floor line in living rooms is to be brass pipe. (See p. 13.)

Jointing and connections.—All joints in piping and connections to fixtures to be made as specified for pipe or fixture in question. (See pp. 13 and 14.)

Interior down-spout connections.—See interior down-spout gooseneck, page 14. See interior down-spout nozzles, page 15.

Clean outs on cast-iron pipe.—Clean-out fittings to be installed in manholes on cast-iron pipe below basement floor line. (See p. 16.)

Clean-out plugs on wrought-iron piping.—An extra-heavy cast-iron T fitting with heavy cast-brass screw-jointed clean-out plug same size as pipe to be placed in each vertical soil, vent, and waste pipe, just above the basement floor. (See p. 15.)

Area cesspools.—Each basement entrance area to be provided with cast-iron cesspool. (See p. 15.)

Running traps.—A running trap to be placed on connection from area cesspools where indicated. (See p. 16.)

Hangers and supports, etc.—See page 14.

Pipe sleeves.—See page 14.

Floor, wall, and ceiling plates.—See page 14.

Soil, waste, vent, and drain piping.—Soil, waste, vent, and drain piping must be of the sizes noted and run as indicated on the drawings.

Pipes below basement floor to be run at grades noted on the drawings. Soil and waste pipes above basement floor to be given a grade of ¼ inch per foot where possible.

The soil and waste pipes so shown and noted on the drawings are to be extended full size to above the roof line and project above roof line not less than 12 inches nor more than 18 inches.

Where so noted or indicated on the drawings, two or more vent pipes are to be connected together and extended as one pipe above the roof.

Where an end or circuit vent pipe from a fixture or line of fixtures on an upper floor is to be connected to a vent pipe from fixture or fixtures located on a lower floor, the vent pipe from fixtures on upper floor must be run up about 4 feet above floor before connecting with the vent pipe from fixture or fixtures on lower floor, so as to prevent the use of the vent pipe as a waste.

Flashing connection.—Openings in roof for vent pipes to be flashed and soldered water tight. (See p. 15.)

Water-supply system.—The water main in lot so noted on the drawings is to be tapped at the point directed by the superintendent and approved by the water company, and a water-supply pipe of size shown on drawing is to be brought into the building.

A gate valve with tee handle, and with a cast-iron extension box and cover, to be placed on the water-supply pipe in lot where directed by superintendent. The manner of making connections with the main, the kind of pipe used, and the manner of laying same from main to inside of building wall, must be in accordance with the rules and regulations of the water company. The size of the pipe must be as shown on drawings, and if the water company object to the size of pipe shown, the matter must be referred to the superintendent, who will refer it to the Supervising Architect for decision.

On the water main just inside of the building wall a double-seat gate valve is to be placed.

Just beyond this gate valve, outlets of same size as main to be left in horizontal pipe for water meter; said outlets to have gate valves. A brass or iron locked meter cock, with brass padlock and two keys, to be placed on water main between meter outlets.

The furnishing and setting of meter is *not* included in this contract.

A drain connection with ¾-inch globe valve provided with ¾-inch hose nipple to be installed on main water pipe so that practically the entire system inside of building may be drained at this point.

After leaving meter connections the main water-supply pipe to be run up to basement ceiling and along same, with branches of the sizes noted.

In the event sizes are not shown on drawing the specification is to govern, and cold-water supply pipes to toilet rooms are to be ¾ inch diameter.

Hot-water supply pipes to be run to each lavatory, shower bath, bathtub, laundry tub, and sink in building; and such pipes to toilet rooms containing two or more fixtures to be supplied with hot water are to be ¾ inch diameter, unless otherwise shown on the drawings.

Where noted on drawings, a ½-inch diameter return circulating pipe is to be taken. Connection to risers to be taken off at a point just below the highest hot-water connection thereto.

The ½-inch return circulation pipes to be run down to basement or kitchen ceiling as noted on drawing and be connected together into one ¾-inch pipe and run back and be connected to the main circulating pipe between water heater and range boiler.

Each branch circulating pipe and the main circulating pipe near boiler is to be provided with a gate valve to correspond with valves on the hot-water pipes.

The main circulating pipe near boiler is to be provided with a check valve.

Branch water-supply pipes to all sinks and laundry tubs to be ¾ inch and to all other fixtures ½ inch diameter.

The branch water-supply pipes to the individual fixtures are not shown on the drawings. The contractor must run the same as direct as possible and comply with the specifications. No water pipe in toilet rooms will be permitted to be buried in the toilet-room floor construction. Risers supplying toilet rooms on upper floors to be run in closets or partitions as shown on drawings. Piping may be run in flooring above toilet rooms.

A plugged T for boiler supply to be provided on water main where indicated on basement plan.

The water-supply pipes at points where indicated on drawings, and the main supply to toilet rooms to be fitted with standard weight double-seat gate valve, placed in accessible position. Stopcocks will not be permitted. Valves on brass pipe to be finished brass, nickel plated; other valves to be rough brass body with finished trimmings.

Pipe covering.—After the cold-water, hot-water, and circulating pipes have been tested and approved, all the galvanized wrought-iron or steel water piping in the building (this includes all risers and all galvanized-iron piping in closets, etc.) must be covered with first-class approved nonconducting felt covering. The fittings and valves are to be provided with sectional removable coverings, or be covered with felt, or with plastic asbestos. Coverings for fittings and valves to be of same finished thickness as the pipe covering and have canvas jackets and bands similar to pipe covering. (See p. 14.)

In lieu of the brass bands and 8-ounce canvas jackets specified, brass lacquered bands No. 36 United States standard gauge in thickness and not less than ¾ inch wide, and a canvas jacket weighing not less than 5 ounces to the yard, are to be used.

No samples of the covering are to be submitted unless called for by a letter from the Supervising Architect.

After the water piping has been tested, the hot-water heater and smoke connection are to be covered with a nonconducting covering. (See p. 14.)

The amount included in lump-sum proposal for nonconducting coverings must be stated in the proposal.

Painting and bronzing.—After all prescribed tests have been made all piping and covering to be painted or bronzed. (See p. 14.)

Schedule of fixtures.

[See p. 17 for quality, etc.]

Basement.	First floor.
One water-closet, No. 54 V, pages 21 and 22. One lavatory, No. 24 RBS, page 32. Three laundry tubs, No. 30 BWB, page 61. One laundry stove and clothes dryer. One water heater. One fire-hose rack, page 15. Four wall hydrants, page 15.	One water-closet, No. 54 V, pages 21 and 22. One lavatory, No. 20 CS, page 37. Two sinks, No. 30, BRLB, page 49. One fire-hose rack, page 15. One hot-water tank. One coal range.
Second floor.	**Third floor.**
Three water-closets, No. 54 VL, pages 21 and 22. Three lavatories, No. 24 RS, page 32. One lavatory, No. 24 RBS, page 32. Three bath tubs, No. 60 AC, page 43. Three shower baths, No. 50 H, page 42. One fire-hose rack, page 15.	Two water-closets, No. 54 V, pages 21 and 22. Two lavatories, No. 24 RS, page 32. Two lavatories, No. 24 RBS, page 32. Two bath tubs, No. 54 AC, page 43. One fire-hose rack, page 15.

Water-closets.—Furnish and install in second floor toilet rooms where indicated water-closet outfits No. 54 VL. (See pp. 21 and 22.)

Furnish and install in all other toilet rooms where indicated water-closet outfit No. 54 V. (See pp. 21 and 22.)

Lavatories.—Furnish and install in toilet rooms above basement where indicated rectangular lavatories, outfits No. 24 RS. (See p. 32.)

Furnish and install in living rooms and basement toilet room where indicated rectangular lavatories, outfits No. 24 RBS. (See p. 32.)

Shower-bath fixture.—Furnish and install over bath tubs in second floor toilet rooms shower-bath fixtures outfits No. 50 H. (See p. 42.)

Bath tubs.—Furnish and install in second floor toilet rooms where indicated bath-tub outfits, No. 60 AC. (See p. 44.)

Furnish and install in third floor toilet rooms where indicated bath-tub outfits, No. 54 AC. (See p. 44.)

Laundry tubs.—Furnish and install in laundry where indicated laundry-tub outfits No. 30 BWB. (See p. 61.)

Kitchen and pantry sinks.—Furnish and install in kitchen and pantry where indicated sink outfits, No. 30 BRLB. (See p. 49.)

Drain boards in kitchen to be each 3 feet long and those in pantry are to be each 2 feet 3 inches long.

Accessories.—Furnish and install the following accessories (see p. 70):

Near each water-closet install a paper holder No. 25.

Near each lavatory install a 24-inch long towel rack No. 15.

Near each lavatory in bathrooms install a tumbler holder and tooth-brush holder No. 5.

Install in each bath tub a soap cup No. 35.

Hot-water heater.—Furnish and connect in basement where indicated on drawings one cast-iron self-contained hot-water heater with fire pot not less than 12 inches diameter. Provide smoke pipe of required size constructed of No. 20 United States standard gauge galvanized iron and connect same to smoke breeching of main heating boiler. Smoke pipe to be provided with wing damper, check damper, and a clean-out plug. The hot-water heater must be properly connected to the range boiler.

A ¾-inch diameter brass gate valve with ¾-inch hose nipple to be connected on circulating pipe between heater and range boiler to drain both heater and boiler.

Range boiler.—Furnish and install in kitchen where indicated on drawing one range boiler No. 20 (see p. 62) with the following exceptions: Boiler to contain a steam-heating coil constructed of not less than 15 linear feet of 1¼-inch outside diameter copper tubing No. 16 Browne and Sharpe gauge. Highest part of coil to be not more than 30 inches above bottom of boiler.

Boiler to be provided with a ¾-inch diameter lever pattern brass safety valve or water-relief valve set 25 pounds above high-water pressure. Relief pipe from safety valve to discharge in laundry tub. Also ¾-inch hot-water mercury thermometer graduated from 40° to 240°.

Regulator for range boiler.—Regulator or regulators as specified for hot-water tanks (p. 63) must be provided and properly connected to range boiler, water heater, and steam pipe connections.

All necessary openings for thermometer, safety valve, regulator, etc., must be provided.

Kitchen range.—Furnish and install in kitchen where indicated on drawing one kitchen range. Body of range to be constructed of heavy sheet steel, and top of heavy cast iron in sections. Range to be approximately 5 feet long, 34 inches deep, and 31 inches high, and contain large water back, one fire pot, and two ovens with double-plate heating shelf and ornamental canopy. Ovens to be each approximately 17 inches wide, 24 inches deep, and 14 inches in height. Grate to be of the revolving type and be designed for burning bituminous coal.

Smoke pipe of required size constructed of No. 20 United States standard gauge galvanized iron must be provided and connected to flue. Smoke pipe to be provided with wing damper and clean-out plug.

All necessary tools, such as shaker bar for grate, poker, lifter, shovel, etc., must be provided.

Water back in range must be properly connected to range boiler.

Laundry stove and dryer.—Furnish and install in laundry where indicated one combined dryer and laundry stove.

Stove to be approximately 24 inches by 32 inches by 22 inches high with fire box at least 9 inches by 9 inches by 18 inches long and designed for burning bituminous coal.

Stove to be arranged so that clothes can be boiled on top, flatirons heated on side, and dryer heated all at one and the same time.

Smoke pipe of required size, constructed of not less than No. 20 United States standard gauge galvanized iron, to be provided and connected to flue.

Dryer to be not less than 7 feet high by 7 feet long, provided with 4 racks, each 9 inches wide, and each equipped with 6 bars upon which to hang clothes.

Dryer to be provided with an inner and outer casing of heavy galvanized iron. Space between casing to be thoroughly packed with asbestos.

Brackets used in connection with rack panel to be of heavy cast iron and to cover full width of face of panel near top.

Overhead tracks, constructed of not less than 1-inch galvanized-iron pipe, to be provided for racks to travel on. Tracks to be properly hung from ceiling in front of dryer.

Rollers used in connection with brackets to be provided with steel or ball bearings and the whole apparatus installed so that racks slide in and out of dryer with an easy and practically noiseless operation.

Dryer to be equipped with a thorough heating and ventilating system, arranged so that no smoke, soot, or dirt can enter drying cabinet, and clothes can be dried thoroughly in a reasonably short time.

Dish warmer.—Furnish and install in butler's pantry, where indicated on drawing, one dish warmer 30 inches wide, 24 inches deep by 5 feet high, containing 4 shelves, each shelf heated with 4 rows of ¾-inch steam pipe. Dish warmer to be constructed of not less than No. 22 galvanized iron, properly braced with angle irons and supported on wrought-iron stand. Dish warmer to be provided with two sliding doors.

Pipe coil for heating dish warmer must be one continuous coil with steam and return connections at bottom of warmer.

Fire-hose racks and connections.—Furnish and install where indicated fire-hose racks and connections. (See p. 15.)

Wall hydrants.—Furnish and install where indicated wall hydrants. (See p. 15.)

A gate valve is to be placed on the supply pipe to each wall hydrant.

Tests of plumbing and drainage system.—The entire system of soil, waste, drain, and vent piping, including the interior down spouts, must be tested with water or air, as hereinafter described, and proved tight to the satisfaction of the superintendent of construction before the immediate connection is made to sewer, trenches back filled, piping covered, or fixtures connected.

Either the water or the air test may be used, except when there is danger from freezing, when the test must be made with air.

Wooden plugs are not to be used in making the tests.

The connections between the building and the sewer and the drainage system below the basement floor are to be tested separately.

Water tests.—If tests are made with water, the connection from the building to the sewer and the drainage system below basement floor are each to be filled with water to top of a vertical section of pipe 10 feet high, temporarily connected to the highest point on the lines to be tested, and the water allowed to stand at least 30 minutes for inspection, after which, if the lines prove tight, the water is to be drawn off, immediate connection made with sewer, and trenches back filled.

The soil, waste, drain, and vent piping, and the interior down spouts above the basement-floor line must have the openings plugged where necessary and the piping system above basement floor filled with water to the level of the main roof gutters or top of vent pipes and allowed to stand at least 30 minutes for inspection, after which, if the lines prove tight, the water is to be drawn off and the fixtures connected. Each vertical stack above basement floor with its branch waste and vent pipes may be tested separately by inserting plugs in the clean outs at base of verticals in lieu of filling entire system in building with water.

Air tests.—If tests are made with air, a pressure of not less than 10 pounds per square inch, equal to 20 inches of mercury, must be supplied with a force pump, and said pressure maintained at least 15 minutes without leakage.

A mercury column gauge must be used in making the air tests. Testing instruments must be furnished by the contractor.

Smoke test.—After fixtures have been connected, a smoke test must be applied to the sanitary system, and the entire system proved tight, to the satisfaction of the superintendent, when filled with smoke under pressure equal to 1 inch of water. The smoke machine must be provided by the contractor.

Test of water-supply system.—At completion of the work, except application of the nonconducting coverings, the water-supply system must be tested to a hydrostatic pressure of 100 pounds to the square inch.

Any water piping run in floor, partitions, or walls must be tested to above pressure and proved tight before the pipes are covered. The test pump must be provided by the contractor.

Cost of tests and certificate.—Cost of tests to be borne by the contractor, who must furnish this office, through the superintendent, with a certificate that the required tests have been satisfactorily made. Certificate must be countersigned by the superintendent, who will forward same to the Supervising Architect.

HEATING APPARATUS.

Scope of work.—This portion of the specification includes the installation complete of a heating apparatus for the building as described herein and indicated on the drawings.

Boiler.—Furnish and erect where shown on basement plan one steel boiler having manufacturer's guaranteed rating of not less than 1,500 square feet direct steam radiating surface.

Water line of boiler to be not more than 58 inches above the basement floor line.

Boiler is not to be set in brickwork, but is to be of portable, low-pressure, return-tube type. The ordinary vertical-tube, high-pressure type of boiler or high or low pressure locomotive boiler will not be acceptable.

Horizontal, tubular, low-pressure, portable heating type of boiler must be used; shell of boiler to be cylindrical, or, if of extended type, rear shell may be oval, properly braced and tied. Boiler to have tubes not less than 3 inches diameter connecting furnace with back connection and not less than 3 inches diameter between back connection and smoke box.

Boiler to be provided with a cast-iron or steel combustion chamber lined with fire brick and asbestos and is to be provided with a cast-iron or steel front if type of boiler requires it. Boiler to be provided with flue doors in front and rear; rear connections to be lined with asbestos ½ inch thick or with asbestos and fire brick.

Boiler tubes to be best quality iron or steel, expanded into heads and beaded.

All openings in shell of boiler 1½ inches diameter and larger must be properly reenforced.

The boiler to be provided with first-class and approved shaking and dumping grate, with wrought-iron operating lever. Boiler and grate to be designed for burning bituminous coal and must have ample room under grate for ash pit.

The boiler must be entered into building without damage to building or to boiler.

Trade name and name of manufacturer and catalogue number of boiler to be cast on or attached to the boiler front. The name of the distributing agent or of the contractor will not fill this requirement.

In the event it develops that the boiler installed has been overrated and therefore fails to have the capacity guaranteed, or if on test it shows violent or wide fluctuations in water line, or during test and in actual service develops other serious defects, said boiler is to be removed and a new and satisfactory boiler, of ample capacity, and fulfilling all the requirements of the specification, is to be installed in its stead by the contractor, without expense to the Government, which reserves the right to select the boiler to be so installed.

The foundation for boiler shall consist of one course of selected hard-burned brick laid on edge, well grouted in Portland-cement mortar, upon a 4 inch thick bed of 1–2–5 concrete. The top surface of brickwork to be flush with finished basement floor line.

The foundation shall extend for a distance of 6 feet in front of and 12 inches in rear of boiler and project 12 inches from each side of boiler.

Boiler feed and drain.—Water supply for boiler to be galvanized wrought-iron pipe taken from the water main on basement ceiling.

The connection to boiler to be of size shown on drawing, and to be made to the main return pipe and provided with a brass swinging or lifting check valve, with a gate or globe valve on each side of check valve. Valves to be located at hand height.

A ¾-inch drain pipe fitted with a ¾-inch diameter Y hose valve or a ¾-inch diameter globe valve fitted with a nipple for ¾-inch diameter hose to be placed on lowest point of main return close to boiler.

Boiler trimmings.—Boiler to be provided with the following trimmings:

(*a*) One 2-inch brass lever safety valve set to blow at 10 pounds pressure.

(*b*) One cast-iron combination gauge column with glass gauge, water-column valves, pet cock, three compression gauge cocks, and ¾-inch or larger connections to boiler. The gauge column to be so set that when boiler is filled to level of first gauge cock the water in boiler will be 1 inch over top of top row of tubes.

(*c*) A low-pressure, sensitive, positive-acting damper regulator, constructed entirely of metal, with connection to boiler, and all necessary chains, pulleys, etc. The pipe connecting damper regulator to boiler to be provided with a gate or globe valve.

(*d*) One low-pressure steam gauge of best make for registering a maximum pressure of 30 pounds, with 6-inch dial, iron body, and polished brass rim, and in accordance with the following requirements: Pinion, pinion staff, sector staff, and hairspring to be constructed of either nickel, phosphor-bronze, Tobin bronze, or German silver; solid, not plated. In addition, the top and bottom plates must be made of one of the above-named metals, solid, or of brass or steam metal with substantial bushings of one of the above-named non-corrosive metals. Levers, slides, and their adjusting and pivot screws may be made of brass or steam metal.

The connection to steam gauge to have a stop cock and siphon.

A sample of the steam gauge is *not* to be submitted unless expressly called for by a letter from the Supervising Architect.

Firing tools.—The following firing tools are to be furnished, and must be new when delivered to the superintendent upon completion of heating apparatus:

Wrought-iron poker, hoe, slice bar, scoop shovel, two tube cleaners, and one steel wheelbarrow with tray not less than 225 pounds capacity and not more than 32 inches in width.

For cleaning breeching, a scraper or hoe with a handle made of ⅜-inch pipe to be provided. Handle to be 15 feet long, in three sections, and ends of sections to be provided with couplings so that one section or all sections may be used at one time.

Smoke breeching.—Breeching to be constructed of not less than No. 12 tank steel, and to be properly connected to the smoke flue and to boiler. Branch from boiler to breeching to be size required by boiler, and to be fitted with a damper constructed of not less than No. 12 tank steel, with means for hand adjustment or connection to damper regulator.

A collar of required size is to be provided in breeching for connection of smoke pipe from water heater specified under "Plumbing."

Cast-iron or tank-steel clean-out door not less than 9 by 12 inches to be placed and secured to the smoke breeching where indicated. Plug type of clean out will not be acceptable.

Main and connecting pipes and fittings.—All pipes to be best quality standard wrought iron or mild steel, of the size noted on the plans, straight, true, and round, of the standard thickness with full-cut threads.

Sizes given are the inside diameters in all cases.

Connections for risers, basement radiator, and first-floor radiators to be taken directly out of top of steam mains or at an angle of 45 degrees.

The mains and branches are to pitch not less than ½ inch in every 10 feet.

All fittings (except right-and-left couplings, which may be malleable iron) must be of the best quality, cast iron, standard weight, steam pattern, heavily beaded, and free from sand holes.

Long screws will not be permitted to be used.

Any unions used on pipes 2 inches in diameter and smaller must be all brass ground-joint unions.

Union connections on pipes 2½ inches in diameter and larger must be standard cast-iron flange unions.

The bottom of steam mains at ends of runs must be not less than 2 feet above water line of boiler.

Steam flow and return connections to be made to the coils in range boiler and dish warmer hereinbefore specified under "Plumbing." The flow and return connections each to be provided with a gate valve, and in addition to the gate valve the return connections to be provided with a check valve and an automatic air valve located as high as possible above water line of heating apparatus.

An equalizing pipe of size noted on drawing to be installed from *bottom* of steam header into main return.

Pipe supports.—All overhead pipes to be supported not more than 10 feet apart by adjustable expansion hangers of first-class make and design. Return pipes along walls to be supported by adjustable expansion hangers. Pipes in trenches to be supported on rollers made of short sections of ¾-inch or other suitable size pipe.

Pipe sleeves, floor and ceiling plates, etc.—All woodwork coming in contact with steam pipes must be protected with a lining of No. 26 United States standard gauge galvanized iron. All vertical pipes passing through floors of any construction to be provided with galvanized-iron thimbles of sufficient length to pass through the entire thickness of floor. Thimbles to be fitted with cast or malleable iron floor plates, and above basement with ceiling plates.

Horizontal pipes above basement which pass through plastered partitions or through wood trim to be fitted with cast-iron wall plates designed to allow for expansion. All horizontal pipes passing through walls in basement to be provided with standard wrought-iron pipe sleeves two sizes larger than pipes. Any horizontal pipes run in tile floor construction to be provided with semicircular flanged edged cover plates of not less than No. 24 galvanized iron, same being for the purpose of forming space around pipe to permit of expansion without disturbing floor construction.

Pipe trenches.—Pipe trenches in basement to be constructed of brick or concrete and lined with cement mortar, as shown on drawing.

The trenches to be covered with cast-iron plates ½ inch thick, diagonally channeled on top, with lap joints, and resting 4 inches on trench walls on each side. Top of plates to be set flush with basement floor, and be straight and true.

A sheet of building paper is to be placed against iron where same comes next to cement floor, and may be removed after cement is dry.

Valves.—The name or trade-mark of the manufacturer to be clearly cast or stamped upon each and every valve installed under this contract, and sample valves to be supplied if called for.

All valves under this contract (unless otherwise specified) to be double-seat gate valves.

All gate valves 2 inches and smaller to be standard weight best red brass composition screw valves, and all gate valves 2½ inches and larger to be standard weight, iron body, brass mounted, either screwed or flanged.

Radiator valves to be best red brass composition of *highest grade*, extra-heavy pattern, with elastic disks, rough body, finished trimmings, nickel plated all over, with wood wheels and union connections. Stems of all radiator valves (except those on radiator at ceiling in basement) to be set vertical. Offset corner and offset globe valves to be used where necessary to insure proper drainage of radiators and connections.

The radiator valves are to have keyed stuffing boxes or stuffing boxes provided with follower and ball-joint unions and the angle valves must weigh not less than the following: 1 inch = 3¼ pounds; 1¼ inches = 4¾ pounds; 1½ inches = 6½ pounds; 2 inches = 9¾ pounds.

All radiators to have ⅛-inch brass nickel-plated automatic air valves, of the highest grade, of the "float type," and provided with siphon or in lieu of siphon with a drain attachment designed to remove core sand. Not less than ⅜-inch cast iron or brass automatic expansion-type valve to be placed at ends of steam mains; such valves to be cylindrical castings with expansion piece.

Radiation.—The amount of radiating surface in square feet is marked on the plans for each radiator, and the actual amount furnished must be substantially the same in each case; and the total radiation supplied for the building must not be less than the total amount required by the plans.

Radiators to be of cast iron, of the height and type noted on the drawings, and of the best quality and grade; and can be used only on the basis of the actual heating surface contained in each section or loop, which rating will be given by the Supervising Architect at time of awarding contract.

All connections of radiators between the different sections of loops to be first-class joints, iron into iron. Nipples to be either screwed or slip, and if the latter, to be malleable iron or steel; and if of steel, must be specially treated to resist corrosion. Especial attention is called to this requirement.

Radiators to be placed as close as possible to wall or panel back, be set parallel with walls against which they are placed, be out of wind, bear equally on all legs, and be placed central with windows under which they are located.

Wall radiators to be placed where noted on the plans, and supported in a first-class manner on suitable wall brackets; radiator at basement ceiling to be hung with approved hangers.

Nonconducting coverings.—After the apparatus has been tested and approved this contractor is required to cover the boiler (except combustion chamber), the smoke breeching, and all steam and return pipe, and boiler-feed piping, fittings, and valves in the basement (except return pipes in trenches), with nonconducting fireproof covering of a quality hereinafter described, put on in a first-class and approved manner. Scrap pieces must not be used where a full-length section would fit.

All risers in partitions to be covered as hereinafter specified for pipes in basement.

The covering for piping to be sectional removable covering not less than ⅞ inch thick, with a duck jacket weighing 5 ounces to the yard, all put on with brass lacquered bands, No. 36 United States standard sheet metal gauge in thickness and not less than ¾ inch wide. Bands to be spaced not over 18 inches apart on piping, and at each tee three bands are to be used and at each ell two bands are to be used.

Valves and fittings to be covered with plastic material and have canvas jacket and brass lacquered bands similar to pipe covering; or, if desired, sectional removable coverings may be used.

Plastic covering for valves and fittings to be same finished thickness as pipe covering.

The covering for breeching and boiler to be plastic material not less than 1½ inches thick; all necessary wire netting, etc., to be supplied, and covering to be finished with a hard smooth surface. A workmanlike finish will be required around manhole damper and clean-out doors. A 1-inch air space must be maintained between the breeching and the covering by the use of steel spacers properly installed and attached to wire netting.

To be acceptable under this contract, all coverings must have as a basis either carbonate of magnesia ($MgCO_3$) or long-fibered asbestos, or a combination of the two materials. The covering must contain not less than 70 per cent of the basis, the remainder to be made up of pure commercial carbonate or sulphate of lime. Any other ingredients present in the compound must not aggregate more than 10 per cent of the total compound.

Every section and bag of covering delivered at the building for use, and also all samples forwarded to the Supervising Architect, must have the manufacturer's stamp or label attached, giving name of manufacturer and brand and quality of material.

No samples of covering are to be submitted unless called for by a letter from the Supervising Architect. The amount included in lump-sum proposal for nonconducting coverings must be stated in the proposal.

The entire amount of covering required must be delivered at the building before working test of apparatus is made. No covering will be allowed to be placed until after apparatus has been tested and proved satisfactory and free from leaks.

Painting and bronzing.—All ironwork, including piping (except that to be bronzed), is to be painted all over with one coat of the best quality metallic paint, suitable for steam-heated surfaces; and all ironwork that is not to be covered is to be given one additional coat of same paint, of color selected by the superintendent.

All radiators, exposed risers, exposed radiator connections, and all floor and ceiling plates to be bronzed all over with one coat of best quality gold bronze. All work to be bronzed must first be properly painted with one coat of flat yellow priming paint, free from oil.

All pipe covering and all covering for boiler and breeching is to be painted with two coats asbestos paint, white or light colored. During the painting of pipe covering, bands to be removed, and be replaced after paint is dry.

Cleaning of apparatus.—Radiators, boiler, and piping must be thoroughly cleaned of all grease, iron cuttings, and other refuse; and should any pipe, etc., be stopped up by such refuse after the apparatus has been

accepted, the contractor will be required to pay for disconnecting, cleaning, and reconnecting such pipe. If boiler foams or primes under steam, it must be washed out with water containing soda, to free boiler from oil.

Testing of apparatus.—After the boiler is set up in the building and ready for service, the contractor will be required to subject it to a hydrostatic pressure of 80 pounds per square inch, in the presence of the representative of the Supervising Architect, just prior to the working test of apparatus hereinafter specified, under which pressure the boiler must be drop tight. After test set safety valve to lift at 10 pounds per square inch.

The contractor is to furnish sufficient fuel to make a working test of the entire apparatus with steam pressure of 10 pounds per square inch, in the presence of a representative of the Supervising Architect.

From the time of starting fires until a steam pressure of 10 pounds per square inch is maintained there must be no cracking or snapping noises in piping or radiators, and the water level in the boiler must not fluctuate violently or excessively.

CONDUIT AND WIRING SYSTEM.

Scope of work.—This portion of the specification includes the furnishing of all labor and material necessary to install a complete conduit and wiring system for electric lighting, a conduit system for bell wires, and a conduit system for telephone service, all as described herein and indicated on the drawings.

Conduit system.—For electric lighting. A main service conduit to be run underground from company's pole to the main switch cabinet and thence to the distribution cabinet. From the distribution cabinet branch conduits to be run to all outlets, as shown on drawings.

For bell service: From a junction box shown on basement ceiling, a ½-inch conduit is to be run to each of the various outlets for push buttons, bells, etc., as indicated, also to battery cabinet. Suitable outlet boxes or bushings to suit the apparatus to be installed at each particular location must be furnished.

For telephone service: A main service conduit of size noted to be run underground from company's pole as directed to a junction box just inside of basement wall and thence a ½-inch conduit is to be run to a floor box (drawing No. M–77) and a wall box in office. From the box shown the conduit is to be continued to a similar floor or wall box to be located in the chief executive's private chambers or other point as directed.

Conduits.—All conduits to be best quality steel tubing of standard pipe dimensions, smooth inside and out, electro galvanized, dry galvanized, or enameled with a compound which will not soften or become sticky and will prevent oxidation; in addition, underground conduits must have the outer surface thoroughly coated with asphaltum before being placed in the ground. Minimum depth below grade of underground conduits is to be 12 inches. Wherever possible, all service conduits are to grade uniformly downward from pole toward building. In all cases a junction box is to be placed in service conduits just inside of basement wall at lowest point of conduit which is to enter back of box.

Each length of conduit must have the maker's name, initials, or trade-mark stamped or painted thereon.

Conduits containing the wires for the lighting system, where size is not shown, must be of such size as to permit the ready insertion and withdrawal of the conductors without abrasion. Where space will not permit the installation of one conduit of sufficient size to accommodate the conductors required, two conduits are to be run, each conduit to contain conductors of opposite polarity.

Conduits to be run with long bends. Not more than the equivalent of four quarter bends to be used in any run between terminals at cabinets, outlets, and junction or pull boxes. All bends must be free from dents or bruises, and the radius of the inner curve for ½-inch conduits must, where structural conditions permit, be not less than 3½ inches; for other sizes of conduits, minimum radius to be proportionate.

Joints in conduits to be carefully made with white lead so as to be absolutely water tight. Ends of conduits at each joint to be cut square and reamed smooth.

Conduits to be continuous from outlet to outlet, and from outlet to cabinets, junction or pull boxes, and to enter and be secured to all boxes.

Conduits to be run concealed under floors, in walls, partitions, chases, behind furring, lathing, etc., with the exception of conduits in attic or roof space, and the main telephone, and feeder conduits in basement, and conduits on wall to bracket and snap switch outlets in unfinished portions of basement, which may be run exposed.

Where wood construction is used all conduits are to be run on top of joists; the joists to be notched, but no joists are to be cut a greater distance than 2 feet from supports or to a greater depth than 1½ inches.

Unless otherwise noted on plans, horizontal runs of exposed conduits in basement are to be close to ceiling beams, passing above water, or other piping, ducts, etc., when possible.

No horizontal cross runs in partitions will be allowed except by special permission from the superintendent of construction; branch lighting conduits are to be run under flooring of floor, indicated by the symbol on drawing No. M–77.

Unless otherwise noted on plans, telephone branch conduits to be run in floor upon which they are shown and bell conduits in floor above.

The conduits to be properly secured in position throughout their run by pipe straps or other approved fastenings where they are not to be embedded in concrete, etc. Unsupported piping where crossed by conduit must be properly blocked to relieve any excessive strain.

Terminals of all conduits to be furnished with lock nuts and bushings complying with the "National Electrical Code."

The entire conduit system is to be installed complete before any conductors are drawn in. Every run of conduit is to be fished before the plastering is finished, to guard against obstructions and omissions. Fish wires are to be left in all conduits in which the conductors are not placed under this contract.

Outlet boxes for lighting.—Every fixture outlet is to be provided with an approved outlet box of iron or steel not less than $\frac{1}{16}$ inch thick, protected as specified for conduits to prevent oxidation, and provided with ½-inch fixture studs.

Ceiling outlet boxes to be of circular form, not over 4 inches diameter over all, and without covers. Ceiling outlet boxes in basement are not to be located nearer than 12 inches to any girder or beam which extends below general ceiling level.

Bracket outlet boxes to be provided with covers with circular openings arranged for 4-inch diameter canopies. Boxes to be secured in position so that generally the front edge of box or cover will not project more than ¼ inch from the finished ceiling or wall, nor be more than ¼ inch back of same.

Bracket outlet boxes on unfinished basement walls may be set fully exposed.

All boxes shall have only the holes necessary to accommodate the conduit at the point of installation.

Junction and pull boxes.—Junction or pull boxes are to be installed at points indicated on drawings, and also wherever necessary for convenience in drawing in wires. Except the junction boxes in main service conduits, which must be not less than 6 inches square by 3 inches deep, and constructed of not less than ⅛-inch ron or steel, junction and pull boxes to be similar in construction to the bracket outlet boxes, but approximately 4 inches square, and provided with closed covers; they must be accessible after completion of the building.

Snap switches.—Snap switches to be installed at points indicated on plans, and about 4 feet above floor. All switches to be set in steel or iron boxes suitable for the switch approved for use in the work. Boxes to be set with front edge of cover as nearly as possible flush with the finished plaster or wainscot line; but in no case shall cover project beyond finished plaster or wainscot line or be more than ¼ inch back of same; where more than one switch is installed at a point a gang box must be used.

In unfinished portions of basement, switch boxes may be set exposed, or conduit fittings suitable to contain flush type switches may be used, but either must be securely fastened in position.

Switches to be 10-ampere, single-pole, or 3-way, flush rotary or push-button type, with nickel-plated face plates. Push-button switches in which the mechanism is supported by grounded metal will not be approved.

Unless otherwise noted, each snap switch is to control one ceiling outlet only. Any outlets beyond a ceiling outlet controlled by a snap switch must be independent of that switch, running three or more wires in one conduit as necessary to accomplish this. Switches located near doors or windows are to be placed close to trim.

Plug receptacles.—Plug receptacles are to be installed at wall and floor outlets indicated on the drawings; plug receptacles in walls are to be set in boxes similar to the snap-switch boxes, and those in floor are to be set in floor boxes similar to box snown on drawing No. M–77. Receptacles at wall outlets to be placed just above the baseboard.

Receptacles to be of flush type with hard-rubber or porcelain plugs having substantial contacts, and rectangular nickel-plated face plates for wall locations. If the face plates have hinged lid or lids, the same must be arranged to close flush with plug in position.

Floor boxes, drawing No. M–77.—Floor outlet boxes, equal to that shown in detail on miscellaneous drawing No. M–77, are to be used at all lighting, bell, and telephone floor outlets. They are to be of iron or steel, coated to prevent oxidation, and provided with an adjustable cover and with a brass floor plate fastened to the cover with tap screws. When used for bell or telephone floor outlet the studs for holding plug receptacle are to be omitted.

With each floor outlet box a brass outlet plug and bushing and a blank plug shown in detail on miscellaneous drawing No. M–77 are to be furnished.

Floor plate, blank plug, and outlet plug to be polished and lacquered and to be of same color brass.

All floor boxes to be set below flooring so that the top of brass floor plates will come flush with finished floor, which must be neatly cut to receive the same. They must be absolutely water-tight after installation and be provided with only the number of holes required for conduits at point of installation. No sample of floor box is to be submitted.

Wall boxes.—Boxes to be used at telephone wall outlets are to be similar to the boxes hereinbefore specified for snap switches, and with similar covers. Front edge of cover must not project beyond finished plaster line and is to be provided with a rectangular nickel-plated brass wall plate of same dimensions as plate on snap switches, not thinner than No. 16 Brown & Sharpe gauge, secured with screws and provided with a ⅜-inch bushed opening in center. Box is to be set just above baseboard.

Similar box to be used at any other wall outlet where a box is desirable and not otherwise specified.

Main switch cabinet and tablet.—The main switch cabinet is to be of iron or steel not less than ⅛ inch thick, provided with a hinged iron door, catch, and lock, with four keys. Cabinet is to be coated to prevent oxidation, and securely fastened in position. It must be of sufficient size to allow the door to be closed and fastened with switch either closed or open, and is to have only the holes required for the conduits.

Tablet to be of polished select quality marble not less than ¾ inch thick, having mounted on its face one 75-ampere double-pole knife switch and 65-ampere enclosed indicating fuses. All connections to be on face of tablet.

Distribution cabinet and tablet.—Distribution cabinet to be of iron or steel not less than ⅛ inch thick and provided with a wood trim and wood door with beveled plate glass panel and flush lock with four keys. Inside of door trim and frame to be lined with sheet steel. Cabinet to be secured in wall with front edge flush with finished wall line.

Tablet to be of polished select quality marble not less than ¾-inch thick back and ⅝-inch thick sides, with continuous wiring gutter on all sides. Panel is to have mounted on its face bus bars and branches arranged for two-wire feeder and 16 two-wire branches. Each branch circuit is to be protected by 10-ampere enclosed indicating fuses. All bars, connections, etc., to be on face of tablet.

Fuses.—Two complete sets of National Electrical Code standard enclosed indicating fuses of the specified capacity to be furnished for tablet and the main switch.

Wiring for lighting.—The wiring for the lighting system must be installed complete from the top of service pole to all outlets indicated on the drawings, including ends for service splice and leads for meter connection. The furnishing or connecting of meter is not included in this contract.

Feeder and branch circuits to be two-wire, with both conductors in the same conduit.

The size of conductors, unless otherwise noted on plans, is to be No. 12.

All wire sizes are Brown & Sharpe gauge.

Conductors No. 8 and larger to be stranded.

Conductors inside the building to be double-braided, rubber-covered, well-tinned, soft-drawn copper of highest conductivity, made in strict accordance with the "National Electrical Code," and having a distinctive marking of the maker.

Conductors in underground conduit to be of same quality copper as specified above and be lead covered, rubber or paper insulated, stranded cable, the paper insulation being saturated with a compound to prevent absorption of moisture.

No splices or joints will be permitted in either feeders or branches, except at outlets, and there they must first be made mechanically and electrically secure, then soldered, and taped with three layers of rubber and two of friction tape. At the time of final inspection and test, all connections at tablets, splices, etc., must be made, and the circuits continuous from tablets to all outlets. Sufficient slack in wires must be provided at ceiling and bracket outlets to permit the lighting fixtures being readily connected.

All connections of stranded conductors must be made by soldering wires in cup lugs.

Contractor must not draw any conductors into conduit until the plaster is dry and the conduit free from moisture.

Bells, etc.—Push buttons for door bells shall be placed where directed at all entrances into the first floor of the building. The plates shall be of cast bronze or brass to match the hardware at the particular entrance. Those at the main and drawing-room entrances to be rectangular, not less than 2 by 4 inches, and those at the servants' and conservatory entrances to be circular, not less than 2¼ inches in diameter.

Each push button is to be connected to a battery located in basement and to a combined bell and four-point annunciator located in servants' hall, first floor, where shown. Annunciator to be of first-class construction, push-button reset and finished to match adjacent work.

Annunciator wire is to be No. 18, double braided, rubber covered, similar to the wire hereinbefore specified for the lighting service. All permanent connections to be soldered and taped.

Furnish and place at outlet in dining room a suitable floor push and connect to battery and buzzer, the latter to be located at outlet in serving pantry.

Make and break contacts of all bells and buzzers furnished under this contract are to be platinum tipped.

Battery to be furnished in connection with the dining-room buzzer and door-bell system is to be located in a wood cabinet in basement where shown. Cabinet to be provided with door and catch and finished as specified for other woodwork. Cells to be of the nonpolarizing type, sufficient in number to properly operate the system, and are to be connected up complete and left in perfect working order.

Speaking tube.—Furnish and install a servants' speaking tube consisting of a vertical run of tubing connecting mouthpieces in the servants' halls on each floor and basement, located where shown on plan. Tube to be of best quality tin, 1 inch diameter; mouthpieces to be porcelain and supplied with whistles. Tube to be concealed.

Inspection and test.—As hereinbefore stated in this specification, the inspector detailed by the Supervising Architect to make final inspection will make the test of the wiring system first, and if any defects develop the contractor must immediately correct same in order that lighting fixtures may be hung.

The entire wiring system must test free from short circuits and from grounds and have an insulation resistance between conductors and between conductors and ground, based on maximum load, not less than the requirements of the latest edition of the National Electrical Code.

Maximum load shall be understood to mean the current that would be carried with all lights and outlets in use at one-half ampere per lamp, counting plug receptacles as 1 lamp each.

The instruments for testing the wiring will be furnished by the Government.

ANNUNCIATOR SYSTEM.

Scope of work.—This section of the specification includes the furnishing of all labor and material necessary for the installation complete of a servants' call-annunciator system, with banks of buttons located where shown, conduit, battery, three annunciators, and all connections complete.

Annunciators.—The annunciators are to be located in the servants' halls on first, second, and third floors where shown. Each annunciator is to contain three vertical rows of drops, each row containing as many drops as there are banks of buttons, and numbered to correspond with same. Unless otherwise directed, the vertical rows are to be lettered, respectively, "Butler," "Valet," and "Maid." Each bank is to contain three buttons, lettered "B," "V," and "M," each button being connected with its corresponding drop on each annunciator, so that when button is pressed all three drops will be thrown. Each vertical row of drops is to be provided with an electric setback and push button for operating same, so connected that a button on one annunciator will set back its corresponding drops on all three of the annunciators. Finish of annunciators to match adjacent work.

Conduits, etc.—The several banks of buttons are to be located where indicated on plans, about 4 feet above the floor, and are to be connected to battery and annunciator by No. 18 rubber-covered wire, run in concealed iron conduit as specified for door bells, etc. Battery is to be similar but separate from that specified for bells, but may be located in same cabinet.

All connections, etc., of annunciator system must be made complete and the system left in perfect working order.

APPROACHES.

All work in connection with approaches shall correspond with and be performed in the same manner as similar work in the building.

Foundations.—All foundations in connection with the approaches shall be of broken stone or gravel, not exceeding 3 inches. Where not otherwise indicated they shall be at least 12 inches thick. The earth and the foundations shall be thoroughly rolled or tamped.

Curbs, etc.—The concrete coping shall be of the same composition and be finished in the same manner as is specified for the walks, and they shall be laid in about 8-foot lengths and have a double thickness of asphalt felt at all joints.

The finish of all curbs shall extend at least 2 inches below the grade.

Walks.—The concrete walks shall not be laid continuously and cut through, but shall be laid in blocks containing not more than 36 square feet, and finished. There shall be a double thickness of asphalt felt at all joints. The concrete base shall be composed of 1 volume of Portland cement, 2 of sand, and 4 of ¾-inch gravel or broken stone aggregate. The finish coat shall be composed of 2 volumes of Portland cement to 3 of granite screenings that will pass a ¼-inch screen, with only enough water to make a stiff mortar, as the use of dry cement in connection with the finish coat will not be permitted. The finish coat shall be placed within 30 minutes after the laying of the concrete base, and it shall be lightly tamped to insure perfect adhesion, brought to a true plane, and finished with a wooden trowel; the use of a steel trowel will not be permitted. The concrete must be kept free from sand and dirt, and walking over the same will not be tolerated.

Protection.—The concrete in connection with the approaches shall be protected from the sun until the cement is set, then, where practicable, covered with 1 inch of sand, which shall be kept wet for at least six days and then removed. Where the use of sand is impracticable, other approved protection must be provided.

Macadam driveway.—The driveway shall be 12 inches thick when finished. The lower 9 inches shall be of broken stone not exceeding 3 inches, and the upper 3 inches shall be of hard limestone screenings. The earth and each layer of stone shall be thoroughly rolled or tamped.

Grading.—All grass areas shall have at least a 10-inch thick layer of rich loam and be left for seeding.

Any filling shall be puddled or tamped in 12-inch layers.

ALTERNATE CONSTRUCTION.

NOTE.—All workmanship and materials under any alternate must conform strictly with similar work hereinbefore specified.

The bidder shall state on the proposal sheet the amount to be added to or deducted from the proposal for any of the following alternate construction, and such figure must include any modifications that may be required in the present work, or any additional work or material not hereinbefore specified. Should the acceptance of

any alternate construction require material different from that hereinbefore specified, samples of the same must be submitted to the superintendent of construction for approval.

Alternate A.—State the amount to be deducted from the proposal if all parquetry floors are omitted and quartered sawed white oak is substituted therefor.

Alternate B.—State the amount to be deducted from the proposal if all ornamental plaster cornices are omitted and the junctions of walls and ceilings are finished with a cove having a 3-inch radius.

Alternate C.—State the amount to be added to the proposal if copper is substituted for all tin and galvanized sheet metal on the exterior of the building, the copper to be laid in sheets not over 15 by 30 inches in size, and laid and secured in place the same as specified for tin, except that all nails in connection with copper shall be of composition, and along all edges of cornices, etc., the copper shall be secured with nails not over 1½ inches apart.

Alternate D.—State the amount to be added to or deducted from the proposal if metal is substituted for all wood in connection with window screens; the doors to remain of wood as hereinbefore specified. The contractor to submit cuts or sketches showing the method of application, operation, etc., of the screens, and samples showing the wire mesh and the construction of the frames.

Alternate E.—State the amount to be added to the proposal if Keene's cement is used for all plastering, the specification for the plaster materials herein to govern in every detail.

Alternate F.—State the amount to be added to the proposal if storm sash are provided for all exterior windows, the sash to be made as hereinbefore specified for windows, and to be at least 1⅜ inches thick, glazed with first quality double strength sheet glass, the sash to be placed outside of regular windows and secured in an approved manner so as to be easily removed and replaced without damage to the building, and in connection with all movable windows above the basement a portion of the storm sash must be movable. All necessary hardware shall be provided and placed, and the sash shall be painted as specified for other exterior sash.

Alternate G.—State the amount to be added to the proposal if all wood carved ornament is substituted for wood and composition ornament in connection with exterior.

Alternate H.—State the amount to be added to the proposal if all cement plaster in connection with exterior is given an approved permanent wash finishing cream in color.

JAMES KNOX TAYLOR,
Supervising Architect.

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ADDENDUM TO THE SPECIFICATION

FOR THE

CONSTRUCTION

OF THE

EXECUTIVE MANSION, LIBRARY, AND MUSEUM

AT

JUNEAU, ALASKA

WASHINGTON
GOVERNMENT PRINTING OFFICE
1911

INVITATION FOR PROPOSALS.

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT,
Washington, D. C., December 1, 1911.

SEALED PROPOSALS will be received in this office until 3 o'clock p. m. on the 20th day of March, 1912, and then opened, for the construction of the executive mansion, library and museum, at Juneau, Alaska. The building is two stories, attic, and basement, approximately 60 by 57 feet in size, of nonfireproof construction throughout. The exterior walls are faced with brick to the first-story window sills and above this line with cement plaster. The roof is covered with wood shingles. Drawings and specifications may be obtained after December 5, 1911, from the custodian of site at Juneau, Alaska, or at this office, at the discretion of the Supervising Architect.

JAMES KNOX TAYLOR,
Supervising Architect.

F. W. R.	P. J. F.
J. C. P.	F. A. M.
J. W. G.	N. S. T.
G. W. S.	H. B.
M. H.	H.

N. B.—Bidders are required to return drawings and specifications without marks, notes, or mutilations thereon.

The Government frank sent to intending bidders is to be used only for the return of the drawings and specifications.

General contractors who desire to submit lump-sum bids will be furnished with one set of drawings and specifications free, and one additional set will be furnished such contractor upon the receipt of a certified check for $100, drawn to the order of the Treasurer of the United States, the proceeds of which will be retained until the return of the drawings and specifications in good condition to this office.

There is on file in the plan room of the Office of the Supervising Architect a set of drawings and specifications for the use of subcontractors, etc.

18277—11

ADDENDUM TO THE SPECIFICATION.

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT.

All work is to be carried out in strict accordance with the specification dated July 7, 1911, the drawings, except Nos. 1 and 4, models, and specification for plumbing fixtures, etc., mentioned therein, except as modified by this addendum specification and drawings Nos. 1A, 4A, and 15.

All drip stones at bottoms of down spouts shall be of the same composition and finished the same as specified for concrete walk.

The specification for plastering on pages 12 and 13 will be changed to read as follows:

PLASTERING.

Lathing.—All lath, except as otherwise specified, shall be pine or spruce, free from sap, knots, etc. They shall be laid at least ¼ inch apart, and all joints shall be broken at least every sixth lath. Lath shall be secured at every bearing, using two nails at each end.

All beams, cornices, arches, etc., and all angles between wood framing and masonry, and studs back of wall tile and sheathing in connection with exterior plastering, shall be covered with metal lath. The metal shall be either No. 24 gauge with ribs not less than ⅛ inch wide or No. 22 gauge with ribs not less than $\frac{3}{32}$ inch wide, all to be coated to prevent rust, and secured with galvanized staples not more than 9 inches apart.

Plastering.—All plastering in finished rooms shall be three-coat work, except the finish coat may be omitted back of base and wainscoting. The finish coat shall be troweled smooth.

The ceilings in the unfinished portion of the basement shall have one heavy coat, troweled smooth.

All walls and ceilings must be swept clean, and the wood lath wet immediately before plastering.

Exterior vertical angles, not otherwise protected, shall have approved metal corner beads. The finished surface of plastering shall be brought to a true plane, and all angles must be true, and the plastering, when completed, shall be clean, free from blisters, discolorations, cracks, or other defects.

No materials shall be used in the scratch and brown coats, except a prepared fibred plaster of some brand which has been in use at least two years, either mixed ready for application with the addition of water only, or with sand and water. Such plaster to be delivered in original packages, with the brand or maker's name thereon for identification. If the unsanded material is delivered the manufacturer's specification relative to the amount of sand to be used and the mixing thereof is to govern, and the plaster must be of such character that the browning will become thoroughly dry within 12 days after the completion of the first coat.

The finish coat and all moldings are to be of lime putty and plaster of Paris, the lime putty to be made from hydrated lime delivered on the site in original packages with the brand or name of the manufacturer thereon. The contractor is to submit the name of the brand or maker of the prepared plaster and hydrated lime, with a sample of sand and a sample 12 by 24 inches prepared by the contractor or subcontractor, who is to apply the material, showing the type of work and finish it is proposed to furnish provided the materials submitted are approved, and no material is to be delivered on the site until all materials and the sample are approved by the Supervising Architect.

Except where the contract requires a less number of coats, all surfaces required to be plaster finish shall receive scratch, brown, and finish coats. The brown coat shall be brought to a true plane and allowed to become perfectly dry before the finish is applied, and before applying the finish coat the browning is to be sprinkled with clean water.

The finish coat is to be so thoroughly troweled that it will present a hard, smooth, and compact surface.

As soon as the plastering is finished the contractor shall deliver to the superintendent a statement from the manufacturer of the prepared plaster setting forth the number of packages delivered to the contractor, together with freight receipts, etc., indicating that the full amount has been delivered, and should it appear either from the amount shown thereon or from the receipts that a larger amount of sand has been used than required by the manufacturer's specification, or if the finished work is not equal in all respects to the approved sample, it will be subject to rejection or such deduction as will, in the opinion of the Supervising Architect, reimburse the Government for the work not being as required.

Ornamental plastering.—All cornices, moldings, and beds for ornament shall be run in place, the plaster to be nowhere over 2 inches thick.

All modeling must be done in a spirited and artistic manner, be finished by hand after casting, and be set and pointed so joints will not show. Where necessary, ornament shall be reenforced with galvanized rods or netting.

Exterior plastering.—Exterior plastering shall be composed of 1 volume of Portland cement to 3 of sand. It shall be applied in two coats, the first to have as much water as is practicable, and the second coat shall be applied while the first coat is green. The second coat shall be brought to a true plane, finished with a wooden trowel, and then patted so as to give a stippled effect.

Finish of basement.—The walls, ceiling, and piers in the unfinished portion of basement shall be swept clean and given two coats of approved white cold-water paint.

Alternate E, on page 33, will be changed to read as follows:

State the amount to be added to the proposal if *Keene's cement mortar* is substituted for the hard plaster specified for doing all plastering, including the running of cornices, moldings, etc. The lime required therefor shall be mill hydrated and both the Keene's cement and lime are to be delivered on the premises in the original packages with the brand and name of manufacturer plainly indicated thereon, and, under no circumstances will the contractor be allowed to use any hand-slacked stone lime.

Samples.—Samples of Keene's cement, hydrated lime and sand are to be submitted to the Supervising Architect for approval, together with a sample, 12 by 24 inches, on metal lath, prepared by the contractor or subcontractor who is to apply the materials, showing the type of work and finish which it is proposed to furnish with such materials, provided they are approved.

Number of coats.—All brick surfaces where plastering is required shall receive a brown and finish coat, and all other surfaces shall have a scratch, brown, and finish coat.

Brown mortar for masonry.—Brown mortar shall consist of dry hydrated lime and Keene's cement in proportions—1 cubic foot of hydrated lime, 1 cubic foot of Keene's cement, and not to exceed 6 cubic feet of sand, in which shall be thoroughly and evenly incorporated an ample amount of long cattle hair after it has been thoroughly beaten and soaked.

All browned surfaces shall be brought to true planes and allowed to become dry.

For lathed surfaces.—On all lathed surfaces (either metal or wood), including those prepared for cornices, etc., the scratch coat shall be as required for brown mortar, except that not to exceed 4 cubic feet of sand are to be used instead of 6, and the surface shall be thoroughly scratched. When dry the brown coat required above for masonry walls shall be applied.

Finish coat.—Sprinkle the brown walls with clean water, and apply the finish coat composed of 5 parts of Keene's cement to 3 parts of hydrated lime, and when nearly set, trowel to a smooth, polished finish.

As soon as the plastering is finished, the contractor shall deliver to the superintendent a statement from the manufacturer of both Keene's cement and hydrated lime setting forth the number of packages of each material delivered to the contractor, together with freight, etc., receipts indicating that the full amount has been delivered; and should it appear, either from the amount shown thereon, or from the finished work that a larger proportion of sand has been used than permitted herein, or if the finished work is not in all respectes equal to the approved sample, it will be subject either to rejection or such deduction from the contract price as will, in the opinion of the Supervising Architect, amply reimburse the Government for the damage sustained.

Bidders are requested to submit one lump-sum proposal for the construction complete of the building, and alternate proposals for the following additional alternates:

Alternate I.—State the amount to be deducted from the proposal if the exterior of the building is finished in accordance with drawing No. 15 in lieu of as indicated on the drawings mentioned in the specification dated July 7, 1911.

If this alternate is accepted the conservatory will be omitted and an open porch substituted. The portico on Seventh Street elevation will be omitted and an open terrace substituted therefor. The floors of porch and terrace will be of ⅞ by not over 5½ inch wide matched sheathing, laid close and nailed to each bearing with two 12-penny nails. This wood floor shall be painted two coats of white lead and oil paint, and before the final coat is dry a covering of 12-ounce cotton duck shall be laid over the entire surface. All seams shall be lapped at least one-half inch and double-stitched, and the duck shall be securely nailed at all edges with galvanized or copper nails not over three-fourths of an inch apart, and shall be turned up at least 3 inches at the walls of building, columns, piers, etc. The upper edges shall be covered with wood or metal strips.

All work in connection with the door opening from the dining room to the conservatory will be omitted and the wall finished plain. The railing in connection with the porch and terrace shall have molded wood top and bottom rails and plain square wood balusters 1¾ by 1¾ inches. In connection with the terrace the top and bottom rails shall be secured to wrought-iron anchors built into masonry. The exterior brick walls of the building are to be carried up to the bottom of floor joists and a wood water table as indicated on drawing No. 4, section Y, provided.

All stone sills will be omitted from the first-story windows.

All paneled wood pilasters on the exterior of the building will be omitted, and plain ⅞ by 5 inch corner boards will be substituted therefor.

The wall radiators in conservatory will be omitted, and the heating main in basement, and risers and radiator connections for second-floor radiators will be changed as noted or indicated on drawing No. 15.

Galvanized metal down spouts will be substituted for the wrought-iron down spouts and nozzles on the Seventh Street side of building; certain conduit and wiring to be omitted as shown on drawing No. 15.

Alternate J.—State the amount to be deducted from the proposal if all exterior surfaces of building noted "Cement plaster" are covered with wood shingles in lieu of furring strips, lath, and plaster. The sheathing paper will remain and the shingles shall be of the same quality and stained and laid the same as specified for the roof, except that they shall be laid not over 5 inches to the weather.

Alternate K.—State the amount to be deducted from the proposal if the work is carried out in accordance with alternate I, except that all exterior surfaces of the building which are to be covered with cement plaster shall be covered with shingles as required by alternate J.

Alternate L.—State the amount to be deducted from the proposal if wood base is substituted for all wood wainscoting and the walls back of wainscoting are plastered three coats in lieu of two.

Alternate M.—State the amount to be deducted from the proposal if all beams are omitted from ceilings and the ceilings are finished plain, except that the beam over the columns and the cornice in the hall shall remain. If this alternate is accepted, 12-inch I-beam over dining room to be set so that top of same will be ½ inch lower than tops of wood joists, and furring of dining-room ceiling to be 2 inches in lieu of ⅞ inch thick.

Alternate N.—State the amount to be deducted from the proposal if the wood cornice (except in connection with mantel), paneling, and the bookcases are omitted from the library and wood trim, base, and picture molding are substituted therefor.

Alternate O.—State the amount to be deducted from the proposal if wood is substituted for all metal muntins in connection with doors and sash throughout the building.

Alternate P.—State the amount to be deducted from the proposal if all tiling on walls and floors of the bathroom adjacent to chamber D in the second story and of the bathroom adjacent to servants' rooms K and I, in the third story is omitted and the rooms finished with plaster walls, wood floor, and base, the same as specified for chambers.

Alternate Q.—State the amount to be deducted from the proposal if the following plumbing fixtures are omitted:

BASEMENT.

One laundry tub, No. 30BWB, page 61.

FIRST FLOOR.

One sink, No. 30BRLB, page 49, in serving pantry.

SECOND FLOOR.

One lavatory, No. 24RBS, page 32, in chamber E.
One water-closet, No. 54VL, pages 21 and 22, in toilet room adjacent to chamber D.
One lavatory, No. 24RS, page 32, in toilet room adjacent to chamber D.
One bathtub, No. 60AC, page 43, in toilet room adjacent to chamber D.
One shower bath, No. 50H, page 42, in toilet room adjacent to chamber D.

THIRD FLOOR.

Two lavatories, No. 24RBS, page 32.
One water-closet, No. 54V, pages 21 and 22, in toilet room adjacent to servants' rooms I and K.
One lavatory, No. 24RS, page 32, in toilet room adjacent to servants' rooms I and K.
One bathtub, No. 54AC, page 43, in toilet room adjacent to servants' rooms I and K.

If alternate Q is accepted, the main soil, waste, vent, and water connections must be run as indicated on drawings Nos. 1, 2, 3, and 4, and plugged fittings left in same for future connections to fixtures.

JAMES KNOX TAYLOR,
Supervising Architect.

O

Notice.—All proposal sheets must be filled out in duplicate.

PROPOSAL SHEET.

N. B.—After this proposal sheet is filled out it must not be forwarded under frank, but must be detached and forwarded under separate cover, with postage prepaid, by the bidder.

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TO THE SUPERVISING ARCHITECT,

Treasury Department, Washington, D. C.

SIR: ------ hereby propose to furnish all the labor and materials required for the construction (including plumbing, heating apparatus, electric conduits, and wiring, and annunciator system) of the executive mansion, library and museum, at Juneau, Alaska, in strict accordance with the specification dated July 7, 1911, the drawings, except Nos. 1 and 4, etc., mentioned therein, the addendum specification dated December 1, 1911, drawings Nos. 1A, 4A, and 15, such other drawings and models as may be furnished; the specification for plumbing fixtures prepared by the board on uniform plumbing specifications for the Treasury, War, and Navy Departments, June, 1910, and the instructions of the superintendent, for the sum of

---------- ($----------)

For Alternate A (substituting oak flooring for certain parquetry flooring, as specified):

Deduct $----------

For Alternate B (substituting cove for certain ornamental plaster cornices, as specified):

Deduct $----------

For Alternate C (substituting copper for all exterior tin and galvanized sheet metal, as specified):

Add $----------

For Alternate D (substituting metal for wood frame screens, as specified):

Add $----------

Deduct $----------

For Alternate E (substituting Keene's cement for all plastering, as specified):

Add $----------

For Alternate F (furnishing storm sash, as specified):

Add $----------

For Alternate G (substituting all wood carved ornament for wood and composition ornament in connection with exterior, as specified):

Add $----------

For Alternate H (giving all exterior cement plaster a wash, as specified):

Add $----------

For Alternate I (finishing exterior of building in accordance with drawing No. 15, as specified):

Deduct $----------

JUNEAU (ALASKA) EXECUTIVE MANSION, LIBRARY, AND MUSEUM.

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PROPOSAL SHEET.

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---------- ($----------)

For Alternate A (substituting oak flooring for certain parquetry flooring, as specified):

Deduct $----------

For Alternate B (substituting cove for certain ornamental plaster cornices, as specified):

Deduct $----------

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Add $----------

For Alternate D (substituting metal for wood frame screens, as specified):

Add $----------

Deduct $----------

For Alternate E (substituting Keene's cement for all plastering, as specified):

Add $----------

For Alternate F (furnishing storm sash, as specified):

Add $----------

For Alternate G (substituting all wood carved ornament for wood and composition ornament in connection with exterior, as specified):

Add $----------

For Alternate H (giving all exterior cement plaster a wash, as specified):

Add $----------

For Alternate I (finishing exterior of building in accordance with drawing No. 15, as specified):

Deduct $----------

Amount included in Alternate I for changes in plumbing: $----------

Amount included in Alternate I for changes in heating, $----------

Amount included in Alternate I for omissions in conduit and wiring, $----------

For Alternate J (substituting shingles for cement plaster on exterior of building, as specified):

Deduct $----------

For Alternate K (finishing building in accordance with Alternate I, except that shingles will be substituted for cement plaster on exterior walls, as specified):

Deduct $----------

For Alternate L (substituting wood base for all wood wainscoting, etc., as specified):

Deduct $----------

For Alternate M (omitting certain beams from ceilings, as specified):

Deduct $----------

For Alternate N (substituting wood trim, base, etc., for bookcases, cornices, etc., in library, as specified):

Deduct $----------

For Alternate O (substituting wood for metal muntins in windows and doors, as specified):

Deduct $----------

For Alternate P (substituting plaster walls and wood floor and base for tiling in two bath rooms, as specified):

Deduct $----------

For Alternate Q (omission of certain plumbing fixtures, as specified):

Deduct$----------

Date for completion,

----------, 191--

Amount included in proposal for weather strips,

$----------

Amount included in lump-sum proposal for all work specified under head of "Waterproofing":

$----------

Amount included in lump-sum proposal for all woodwork, including setting and finishing of same, in connection with all mantels, except those in library and dining room: $----------

Amount included in lump-sum proposal for all wood window and door screens: $----------

Amount included in lump-sum proposal for all work specified under head of "Plumbing": $----------

Amount included in lump-sum proposal for all work specified under "Heating apparatus":

$----------

Amount included in lump-sum proposal for all work specified under head of "Conduit and wiring system":

$----------

Amount included in lump-sum proposal for all work specified under head of "Annunciator system":

$----------

Amount to be deducted from lump-sum proposal if nonconducting coverings on hot and cold water piping of plumbing system are omitted: $----------

Amount to be deducted from lump-sum proposal if all nonconducting coverings for boiler, breeching, and pipes and fittings of heating apparatus are omitted:

$----------

Amount included in Alternate I for changes in plumbing: $----------

Amount included in Alternate I for changes in heating, $----------

Amount included in Alternate I for omissions in conduit and wiring, $----------

For Alternate J (substituting shingles for cement plaster on exterior of building, as specified):

Deduct $----------

For Alternate K (finishing building in accordance with Alternate I, except that shingles will be substituted for cement plaster on exterior walls, as specified):

Deduct $----------

For Alternate L (substituting wood base for all wood wainscoting, etc., as specified):

Deduct $----------

For Alternate M (omitting certain beams from ceilings, as specified):

Deduct $----------

For Alternate N (substituting wood trim, base, etc., for bookcases, cornices, etc., in library, as specified):

Deduct $----------

For Alternate O (substituting wood for metal muntins in windows and doors, as specified):

Deduct $----------

For Alternate P (substituting plaster walls and wood floor and base for tiling in two bath rooms, as specified):

Deduct $----------

For Alternate Q (omission of certain plumbing fixtures, as specified):

Deduct$----------

Date for completion,

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Amount included in lump-sum proposal for all woodwork, including setting and finishing of same, in connection with all mantels, except those in library and dining room: $----------

Amount included in lump-sum proposal for all wood window and door screens: $----------

Amount included in lump-sum proposal for all work specified under head of "Plumbing": $----------

Amount included in lump-sum proposal for all work specified under "Heating apparatus":

$----------

Amount included in lump-sum proposal for all work specified under head of "Conduit and wiring system":

$----------

Amount included in lump-sum proposal for all work specified under head of "Annunciator system":

$----------

Amount to be deducted from lump-sum proposal if noncondueting coverings on hot and cold water piping of plumbing system are omitted: $----------

Amount to be deducted from lump-sum proposal if all noncondueting coverings for boiler, breeching, and pipes and fittings of heating apparatus are omitted:

$----------

N. B.—Unit rates are to be based on the actual amount of materials in place.

Price per cubic yard for general excavation:

Additions $.....

Deductions $.....

Price per cubic yard for trench excavation:

Additions $.....

Deductions $.....

Price per cubic foot for concrete footings:

Additions $.....

Deductions $.....

Price per square foot for basement floors:

Additions $.....

Deductions $.....

Price per cubic foot for common brickwork:

Additions $.....

Deductions $.....

Price per square foot for face brickwork:

Additions $.....

Deductions $.....

Price per cubic foot for stonework:

Additions $.....

Deductions $.....

Price per M board feet for framing lumber in place:

Additions $.....

Deductions $.....

Price per square foot for matched sheathing:

Additions $.....

Deductions $.....

Price per square for shingle roofing:

Additions $.....

Deductions $.....

Price per square foot for finished oak flooring:

Additions $.....

Deductions $.....

Price per square foot for finished pine or fir flooring:

Additions $.....

Deductions $.....

Price per square yard for exterior plastering, including the metal lath and wood furring strips:

Additions $.....

Deductions $.....

Price per square yard for interior plastering on wood lath, including the lath:

Additions $.....

Deductions $.....

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N. B.—Unit rates are to be based on the actual amount of materials in place.

Price per cubic yard for general excavation:

Additions $.....

Deductions $.....

Price per cubic yard for trench excavation:

Additions $.....

Deductions $.....

Price per cubic foot for concrete footings:

Additions $.....

Deductions $.....

Price per square foot for basement floors:

Additions $.....

Deductions $.....

Price per cubic foot for common brickwork:

Additions $.....

Deductions $.....

Price per square foot for face brickwork:

Additions $.....

Deductions $.....

Price per cubic foot for stonework:

Additions $.....

Deductions $.....

Price per M board feet for framing lumber in place:

Additions $.....

Deductions $.....

Price per square foot for matched sheathing:

Additions $.....

Deductions $.....

Price per square for shingle roofing:

Additions $.....

Deductions $.....

Price per square foot for finished oak flooring:

Additions $.....

Deductions $.....

Price per square foot for finished pine or fir flooring:

Additions $.....

Deductions $.....

Price per square yard for exterior plastering, including the metal lath and wood furring strips:

Additions $.....

Deductions $.....

Price per square yard for interior plastering on wood lath, including the lath:

Additions $.....

Deductions $.....

In determining which is the lowest bid, it is understood that the Government reserves the right in awarding the contract to deduct any separate amount named in the proposal for any item mentioned therein.

NOTICE.

A CERTIFIED CHECK
Must accompany this
BID to entitle it to
CONSIDERATION.

NOTICE.—BIDDERS ARE EXPRESSLY NOTIFIED THAT THE CHECKS OF THE TWO LOWEST BIDDERS WILL BE HELD UNCOLLECTED AND AT THEIR RISK UNTIL THE BOND REQUIRED SHALL HAVE BEEN APPROVED BY THE SECRETARY OF THE TREASURY.

Signature.....

Address.....

Names of individual members of firm.....

.....

.....

.....

Name of corporation.....

Under what law corporation is organized.....

N. B.—To entitle the foregoing proposal to consideration, the bidder must submit therewith on the attached forms, a complete list, as required by the specification, of the fixtures and materials he contemplates furnishing if the contract for the work is awarded to him.

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In determining which is the lowest bid, it is understood that the Government reserves the right in awarding the contract to deduct any separate amount named in the proposal for any item mentioned therein.

NOTICE.—BIDDERS ARE EXPRESSLY NOTIFIED THAT THE CHECKS OF THE TWO LOWEST BIDDERS WILL BE HELD UNCOLLECTED AND AT THEIR RISK UNTIL THE BOND REQUIRED SHALL HAVE BEEN APPROVED BY THE SECRETARY OF THE TREASURY.

NOTICE.

A CERTIFIED CHECK

Must accompany this B I D to entitle it to CONSIDERATION.

Signature.....

Address.....

Names of individual members of firm.....

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.....

.....

Name of corporation.....

Under what law corporation is organized.....

N. B.—To entitle the foregoing proposal to consideration, the bidder must submit therewith on the attached forms, a complete list, as required by the specification, of the fixtures and materials he contemplates furnishing if the contract for the work is awarded to him.

N. B.—Before filling out the following lists of appliances, materials, and fixtures read carefully "Kind and quality of material," mechanical equipment portion of this specification.

NAME OF MANUFACTURER OF PLUMBING FIXTURES.

Give name and address of manufacturer of a complete line of plumbing fixtures, in accordance with the specification:

LIST OF APPLIANCES FOR USE IN HEATING APPARATUS.

Name and address of manufacturer and catalogue number or trade name of each of the following appliances:

Boiler—

Maker ----------

Catalogue No ----------

Rating ----------

Direct cast-iron radiators ----------

Wall radiator ----------

Nonconducting coverings ----------

Radiator valve ----------

Damper regulator ----------

Air valves for radiators ----------

Air valves for end of steam mains ----------

N. B.—Before filling out the following lists of appliances, materials, and fixtures read carefully "Kind and quality of material," miscellaneous equipment portion of this specification.

NAME OF MANUFACTURER OF PLUMBING FIXTURES.

Give name and address of manufacturer of a complete line of plumbing fixtures, in accordance with the specification:

LIST OF APPLIANCES FOR USE IN HEATING APPARATUS.

Name and address of manufacturer and catalogue number or trade name of each of the following appliances:

Boiler—

Maker.....

Catalogue No.....

Rating.....

Direct cast-iron radiators.....

.....

Wall radiator.....

.....

Nonconducting coverings.....

.....

Radiator valve.....

Damper regulator.....

Air valves for radiators.....

Air valves for end of steam mains.....

LIST OF APPLIANCES FOR USE IN CONDUIT AND WIRING SYSTEM.

Give name and address of manufacturer and trade name, if any, with catalogue number:

Cabinet and tablet.....

Conduit.....

Wire (rubber-covered).....

Marking.....

Plug receptacles.....

Catalogue No. of plug receptacles.....

Snap switches.....

Catalogue No. of snap switches (single pole).....(3-way).....

Annunciator for doorbell.....

Annunciator for servants' call.....

Batteries.....

O

LIST OF APPLIANCES FOR USE IN CONDUIT AND WIRING SYSTEM.

Give name and address of manufacturer and trade name, if any, with catalogue number:

Cabinet and panel _____

Conduit _____

Wire (rubber-covered) _____

Marking _____

Plug receptacles _____

Catalogue No. of plug receptacles _____

Snap switches _____

Catalogue No. of snap switches (single pole) _____ (3-way) _____

Annunciator for doorbell _____

Annunciator for servants' call _____

Batteries _____

O

STANDARD GOVERNMENT INSTRUCTIONS TO BIDDERS

(CONSTRUCTION AND SUPPLIES)

1. **Preparation of bids.**—Unless otherwise directed in the invitation, bids shall be submitted in triplicate. Forms furnished, or copies thereof, shall be used, and strict compliance is necessary with the requirements of the invitation, these instructions, and the instructions printed on the forms. Special care should be exercised in the preparation of bids. Bidders must make their own estimates of the facilities and difficulties attending the execution of the proposed contract, including local conditions, uncertainty of weather, and all other contingencies. All designations and prices shall be fully and clearly set forth. Copies of the bids shall be identical. The proper blank spaces in the bid and guaranty forms shall be suitably filled in.

2. **Labor and material not to be furnished by the Government.**—The Government will not furnish any labor, material, or supplies unless specifically provided for in the contract.

3. **Signature to bids.**—Each bid must give the full business address of the bidder and be signed by him with his usual signature. Bids by partnerships must be signed with the partnership name by one of the members of the partnership or by an authorized representative, followed by the signature and designation of the person signing. Bids by corporations must be signed with the name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind it in the matter. The names of all persons signing shall also be typed or printed below the signature. A bid by a person who affixes to his signature the word "president," "secretary," "agent," or other designation, without disclosing his principal, may be held to be the bid of the individual signing. When requested by the Government, satisfactory evidence of the authority of the officer signing in behalf of the corporation shall be furnished.

4. **Bids for all or part.**—Where bids are not qualified by specific limitations, the Government reserves the right of awarding all or any of the items according to its best interests. Unless otherwise required in the specifications, bids for supplies shall be submitted in accordance with the numbered item or items given in the schedule.

5. **Alternative bids.**—Alternative bids will not be considered unless called for.

6. **Specifications and schedules.**—The specifications, schedules, and drawings which form the basis of any bid will be considered as a part thereof and will form a part of the contract. Copies of these papers, together with a copy of the standard contract form, including authorized additions or deletions, if any, will be furnished to or made available for the inspection of bidders by the office indicated in the advertisement or invitation.

7. **Corrections.**—Erasures or other changes in the bids must be explained or noted over the signature of the bidder.

8. **Guaranty.**—Where security is required to insure the execution of contract and bond for performance of the service, no bid will be considered unless it is so guaranteed. The bidder, at his option, may furnish a guaranty bond, a certified check, or deposit, in accordance with Treasury Department regulations, United States bonds (at par value) as security in the amount required: *Provided*, That where not in conflict with the law, the bidder may be limited to the option of furnishing a certified check or United States bonds when the amount of the security does not exceed $1,000, notice of such requirement to be given in the invitation to bidders.

In case security is in the form of a certified check or United States bond, the Government may make such disposition of the same as will accomplish the purpose for which submitted. Certified checks may be held uncollected at the bidder's risk. Certified checks, or the amount thereof, and United States bonds of unsuccessful bidders will be returned as soon as practicable after the opening. 10—1772

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9. **Sufficiency of guarantors and sureties.**—The bond of any surety company authorized by the Secretary of the Treasury to do business, or of two responsible individual sureties, will be accepted as security for any bid or contract. Individual guarantors or sureties must make the affidavit appearing on the bond as to their sufficiency and furnish the certificate of a judge or clerk of a court of record, a United States district attorney or commissioner, or the president or cashier of a bank or trust company. Individual sureties shall justify in sums aggregating not less than double the penalty of the bond.

10. **Restrictions as to guarantors and sureties.**—A firm, as such, will not be accepted as a guarantor or surety, nor a partner for copartners or for a firm of which he is a member. Stockholders of a corporation may be accepted as guarantors or sureties provided their qualifications as such are not dependent upon their stock holdings therein. Guarantors and sureties, if individuals, must be citizens of the United States, except that sureties on bonds executed in any foreign country, the Canal Zone, the Philippine Islands, Porto Rico, Hawaii, Alaska, or any possession of the United States, for the performance of contracts entered into in these places, need not be citizens of the United States, but if not citizens of the United States must be domiciled in the place where the contract is to be performed.

11. **Seals on bonds.**—When the principal, a guarantor, or a surety is an individual, his signature to a guaranty or bond shall have affixed to it an adhesive or scroll seal. If executed in Maine, Massachusetts, or New Hampshire, an adhesive seal is required. Corporate seals shall be affixed by corporations, whether principals or sureties.

12. **Marking and mailing bids.**—Bids, with their guaranties, must be securely sealed in suitable envelopes, addressed and marked on the outside as required by the invitation.

13. **Time for receiving bids.**—Bids received prior to the time of opening will be securely kept, unopened. The officer whose duty it is to open them will decide when the specified time has arrived, and no bid received thereafter will be considered, except that when a bid arrives by mail after the time fixed for opening, but before award is made, and it is shown to the satisfaction of the officer authorized to make the award that the nonarrival on time was due solely to delay in the mails for which the bidder was not responsible, such bid will be received and considered. No responsibility will attach to an officer for the premature opening of a bid not properly addressed and identified. Unless specifically authorized, telegraphic bids will not be considered, but modifications by telegraph of bids already submitted will be considered if received prior to the hour set for opening.

14. **Withdrawal of bids.**—Bids may be withdrawn on written or telegraphic request received from bidders prior to the time fixed for opening. Negligence on the part of the bidder in preparing the bid confers no right for the withdrawal of the bid after it has been opened.

15. **Bidders present.**—At the time fixed for the opening of bids, their contents will be made public for the information of bidders and others properly interested, who may be present either in person or by representative.

16. **Award or rejection of bids.**—The contract will be awarded to the lowest responsible bidder complying with conditions of the invitation for bids, provided his bid is reasonable and it is to the interest of the United States to accept it. The bidder to whom the award is made will be notified at the earliest possible date. The United States, however, reserves the right to reject any and all bids and to waive any informality in bids received whenever such rejection or waiver is in the interest of the United States. It also reserves the right to reject the bid of a bidder who has previously failed to perform properly or complete on time contracts of a similar nature, or a bid of a bidder who is not in a position to perform the contract.

17. **Time of performance.**—When not otherwise specified in the invitation, the bidder must state the least number of calendar days (counting Sundays and holidays) after date of receipt of notice to proceed, in which he will commence performance, and the number of calendar days (counting Sundays and holidays) thereafter in which he will complete. In stating time the bidder should make due allowance for probable difficulties which may be encountered. 10—1772

R. S.) This shall not prevent a bidder from proceeding under paragraph 5 hereof, nor from quoting different prices on different qualities of material or different conditions of delivery. A party who has quoted prices on materials to a bidder is not thereby disqualified from quoting prices to other bidders or from submitting a bid directly for the materials or work.

19. **Errors in bid.**—Bidders or their authorized agents are expected to examine the maps, drawings, specifications, circulars, schedule, and all other instructions pertaining to the work, which will be open to their inspection. Failure to do so will be at the bidder's own risk, and he can not secure relief on the plea of error in the bid. In case of error in the extension of prices the unit price will govern.

20. **Preference for domestic articles.**—Preference will be given to articles or materials of domestic production, conditions of quality and price, including duty, being equal.

21. **Dealer or manufacturer.**—In bids for supplies or manufactured articles, bidders will state whether they are manufacturers of or regular dealers in the articles. If practicable to do so, bidders who are not manufacturers will give the name of the manufacturer from whom the articles are to be obtained, including catalogue references.

22. **Samples.**—When samples are required, they must be submitted by the bidder so as to reach the office designated prior to the hour set for opening the bids. Samples shall be furnished free of expense to the Government, properly marked for identification, and accompanied by a list when there is more than one sample. The Government reserves the right to mutilate or destroy any sample submitted whenever it may be considered necessary to do so for the purpose of testing. Samples not required in connection with the award or delivery of supplies will, upon request, if promptly made, be returned at the bidder's expense.

23. **Contract and bond.**—The bidder to whom award is made must, when required, enter into written contract on the standard Government form, with satisfactory security in the amount required, within the period specified or, if no period be specified, within ten days after the prescribed forms are presented to him for signature.

24. **Eight-hour law.**—The eight-hour labor statute cited in Article 11 of the construction contract does not apply to the procurement of supplies, materials, or articles which may usually be bought in the open market, whether made to conform to particular specifications or not, or to the construction or repair of levees or revetments necessary for protection against floods or overflows on the navigable waters of the United States, or to any emergency caused by fire, famine, or flood, by danger to life or to property, or by other extraordinary event or condition on account of which the President shall subsequently declare the violation to have been excusable.

25. **Patents.**—Unless specified by the Government, patented articles shall not knowingly be used in connection with the performance of the contract by the contractor, unless he is the owner or licensee thereof or procures the same in open market, or unless full information relative thereto shall have been furnished in his proposal. The contractor must notify the Government immediately of any claim or infringement of any patent in connection with the performance of the contract.

(These instructions are not to be incorporated in the contract)

GOVERNMENT PRINTING OFFICE 10—1772

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USE OF STANDARD GOVERNMENT FORMS.

1.--BEFORE EXECUTING, SIGNING, OR OTHERWISE COMPLETING THE "STANDARD GOVERNMENT FORM OF BID BOND" OR THE "STANDARD GOVERNMENT FORM OF BID", OR ANY OTHER STANDARD GOVERNMENT FORMS, IN CONNECTION WITH THIS PROJECT PROSPECTIVE BIDDERS SHOULD READ CAREFULLY ALL THE INSTRUCTIONS AND STUDY THE FORMS WITH A VIEW TO FILLING IN THE BLANK SPACES PROPERLY.

2.--ESPECIAL ATTENTION IS CALLED TO THE SIGNING OF THE STANDARD GOVERNMENT FORM OF BID. THE SPACE FOR SIGNATURE IS ON PAGE 2 OF THAT FORM.

3.--ALSO, ATTENTION IS CALLED TO THE NECESSITY OF EXECUTION OF THE STANDARD GOVERNMENT FORM FOR BID BOND IN ACCORDANCE WITH INSTRUCTIONS ATTACHED THERETO. THESE FORMS HAVE BEEN RECEIVED WITHOUT THEIR COMPLETION BY THE SURETY. IN THIS CONNECTION, A BIDDER CANNOT BE HIS OWN SURETY.

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JUNEAU, ALASKA.
FEDERAL AND TERRITORIAL BLDG.

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GENERALLY.

A CERTIFIED CHECK.--

IF THE BIDDER ELECTS TO SUBMIT A CERTIFIED CHECK AS GUARANTEE IN CONNECTION WITH HIS BID (SEE PARAGRAPH 8 OF INSTRUCTIONS TO BIDDERS), IT SHALL BE MADE PAYABLE TO THE TREASURER OF THE UNITED STATES.

B VISIT TO SITE.--

BIDDERS SHOULD TAKE SUCH STEPS AS NECESSARY TO FULLY INFORM THEMSELVES AS TO THE LOCATION OF THE SITE AND AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE. FAILURE TO TAKE THIS PRECAUTION WILL NOT RELIEVE THE SUCCESSFUL BIDDER FROM THE NECESSITY OF FURNISHING ALL MATERIAL AND LABOR NECESSARY TO COMPLETE THE CONTRACT WITHOUT ADDITIONAL COST TO THE GOVERNMENT.

C REMOVAL OF DEBRIS, CLEANING, ETC.--

THE CONTRACTOR SHALL, AS DIRECTED DURING THE PROGRESS OF THE WORK REMOVE AND PROPERLY DISPOSE OF THE RESULTANT DIRT AND DEBRIS. UPON COMPLETION OF THE WORK HE SHALL REMOVE ALL EQUIPMENT AND UNUSED MATERIALS PROVIDED FOR THE WORK AND REMOVE ALL DIRT AND RUBBISH RESULTING FROM HIS OPERATIONS, AND PUT THE PREMISES IN A NEAT AND CLEAN CONDITION, AND DO ALL SCRUBBING AND WASHING REQUIRED BY THE SPECIFICATION.

WHEN THE SITE OF THE WORK IS NOT OCCUPIED BY THE GOVERNMENT, THE CONTRACTOR SHALL, UNTIL THE COMPLETION OF THE CONTRACT, KEEP ANY ADJACENT SIDEWALKS CLEAN AND FREE FROM ICE AND SNOW.

D PREFERENCE FOR DOMESTIC ARTICLES OR MATERIALS.--

PREFERENCE WILL BE GIVEN TO ARTICLES OR MATERIALS OF DOMESTIC PRODUCTION, CONDITIONS OF QUALITY AND PRICE, INCLUDING DUTY, BEING EQUAL. UNLESS OTHERWISE STATED IN THE BID IT WILL BE UNDERSTOOD THAT DOMESTIC ARTICLES OR MATERIALS ONLY WILL BE USED, AND THE USE OF FOREIGN ARTICLES OR MATERIALS WILL NOT BE PERMITTED UNLESS (1) THEY ARE OF BETTER QUALITY, OR (2) BEING EQUAL IN QUALITY, WILL BE FURNISHED AT LOWER COST TO THE GOVERNMENT, OR (3) DOMESTIC ARTICLES OR MATERIALS ARE NOT AVAILABLE. THE TERM "DOMESTIC ARTICLES OR MATERIALS" IN THIS CONNECTION MEANS ARTICLES OR MATERIALS MANUFACTURED OR ASSEMBLED IN THE UNITED STATES OR ITS POSSESSIONS.

E PATENTS.--

THE CONTRACTOR SHALL HOLD AND SAVE THE GOVERNMENT, ITS OFFICERS, AGENTS, SERVANTS AND EMPLOYEES, HARMLESS FROM LIABILITY OF ANY NATURE OR KIND FOR OR ON ACCOUNT OF THE USE OF ANY PATENTED OR UNPATENTED INVENTION, ARTICLE, OR APPLIANCE FURNISHED OR USED IN THE PERFORMANCE OF THIS CONTRACT, EXCEPTING PATENTED ARTICLES REQUIRED BY THE GOVERNMENT IN ITS SPECIFICATIONS, THE USE OF WHICH THE CONTRACTOR DOES NOT CONTROL.

7-13-28.

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SPECIFICATION FOR THE CONSTRUCTION OF THE UNITED STATES FEDERAL AND TERRITORIAL BUILDING AT JUNEAU, ALASKA.

1. BIDS.--BIDS MUST BE BASED UPON DRAWINGS NOS. 1, 2, 3, 4, 5, 6, 7, 8, 100, 101, 102, 103, 104, 105, 106, 200, 201, 202, 203, 204, 205, 206, 207, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, P450, 451, P452, P453, P454, P455, PHL456, H457, H458, H459, H460, H461, H462, H463, CL464, CL465, CL466, CL467, CL468, CL469, MISCELLANEOUS DRAWINGS 300A, 305F, 311-B, M-352F, M370B, M371C, M372B, M373B, M374G, M375A, LIGHTING FIXTURES 324B, 325, MISCELLANEOUS LIGHTING FIXTURES 326A, AND THIS SPECIFICATION.

2. DRAWING NO. X2 RELATING TO CONDITIONS OF THE SITE IS NOT TO BECOME A CONTRACT DRAWING. IT IS FURNISHED BIDDERS ONLY FOR SUCH USE AS THEY MAY CHOOSE TO MAKE OF IT. THE ACCURACY OF DATA GIVEN ON THIS DRAWING IS NOT GUARANTEED.

3. A LUMP SUM BID IS REQUIRED FOR THE CONSTRUCTION OF THE BUILDING (EXCEPT ELEVATORS) AND APPROACHES.

4. MASTER SPECIFICATIONS.--SPECIFICATIONS REFERRED TO HEREIN BY NUMBER ARE THE LATEST ISSUES, INCLUDING REVISIONS AND ADDENDA OF UNITED STATES GOVERNMENT MASTER SPECIFICATIONS FOR MATERIALS. "MASTER SPECIFICATIONS" AND "TREASURY DEPARTMENT STANDARD SPECIFICATIONS" REFERRED TO HEREIN ARE NOT FURNISHED TO BIDDERS EXCEPT UPON REQUEST FOR THE REASON THAT THEY WERE PREPARED IN COLLABORATION WITH MATERIALS PRODUCERS AND IT IS ASSUMED THAT THE PRODUCERS ARE FAMILIAR WITH THEIR REQUIREMENTS. COPIES MAY BE OBTAINED BY BIDDERS UPON REQUEST TO THE SUPERVISING ARCHITECT, INDICATING BY NUMBER THE SPECIFICATION DESIRED.

4A. EXPLANATION TO BIDDERS.--NO VERBAL INTERPRETATION WILL BE MADE TO BIDDERS AS TO THE MEANING OF DRAWINGS AND SPECIFICATIONS. REQUESTS FOR SUCH INTERPRETATIONS SHOULD BE MADE IN WRITING, ADDRESSED TO THE SUPERVISING ARCHITECT. ANY INTERPRETATIONS MADE TO BIDDERS WILL BE IN THE FORM OF AN ADDENDUM TO THE SPECIFICATION, WHICH, IF ISSUED, WILL BE SENT TO ALL BIDDERS ON JUNE 18, 1929, UNLESS THE URGENCY OF SOME INTERPRETATION WARRANTS AN EARLIER DATE.

5. SCOPE.--THE WORK TO BE DONE HEREUNDER INCLUDES THE FURNISHING OF ALL LABOR AND MATERIAL AND PERFORMING ALL WORK FOR THE CONSTRUCTION OF THE BUILDING INCLUDING MECHANICAL WORK (EXCEPT ELEVATORS) AND APPROACH WORK, AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN.

6. WORK NOT INCLUDED.--COUNTER AND GATES IN GROUND STORY FEDERAL OFFICE AND CABLE OFFICE, IN 1ST STORY FEDERAL OFFICES AND 4TH STORY FEDERAL OFFICE, AND THE SEATS AND BENCHES IN SENATE AND HOUSE CHAMBERS OF 2ND STORY, INDICATED ON DRAWINGS NOS. 2, 3, 4, AND 6 AND THE EXTERIOR HANGING LANTERNS AND ELEVATORS ARE NOT INCLUDED IN THE CONTRACT UNDER THIS SPECIFICATION.

7. THE LOCK BOX, LETTER AND PACKAGE DROP EQUIPMENT FOR THE LOBBY SCREEN AND THE BRONZE TITLE LETTERS AND EXTERIOR HANGING LANTERNS WILL BE FURNISHED BY THE GOVERNMENT F.O.B. JUNEAU, ALASKA. THE CONTRACTOR SHALL HAVE SAME DELIVERED AT THE BUILDING AND PROPERLY INSTALLED AS PART OF THE WORK UNDER THIS SPECIFICATION.

8. TIME FOR COMPLETION.--THE TIME FOR COMPLETION OF THE CONTRACT HEREUNDER SHALL BE SEVEN HUNDRED AND THIRTY (730) CALENDAR DAYS FROM THE DATE OF RECEIPT OF NOTICE TO PROCEED.

9. LIQUIDATED DAMAGES.--THE CONTRACTOR SHALL PAY TO THE GOVERNMENT THE AMOUNT OF TWO HUNDRED DOLLARS ($200.00) AS FIXED, AGREED, AND LIQUIDATED DAMAGES FOR EACH CALENDAR DAY'S DELAY IN THE COMPLETION OF THE CONTRACT.

10. PAYMENTS.--PARTIAL PAYMENTS ON WORK SATISFACTORILY EXECUTED IN PLACE WILL BE MADE MONTHLY ON ESTIMATES MADE AND APPROVED BY THE CONTRACTING OFFICER. THESE ESTIMATES WILL NOT INCLUDE MATERIALS DELIVERED ON THE SITE AND PREPARATORY WORK. TEN PER CENT OF SUCH ESTIMATES WILL BE RETAINED UNTIL FINAL COMPLETION AND ACCEPTANCE OF THE WORK, PROVIDED, THAT IN THE DISCRETION OF THE CONTRACTING OFFICER, PAYMENT OF A PORTION OF THE RETAINED PERCENTAGE MAY BE MADE IN CASE THE CONTRACT IS PRACTICALLY COMPLETED AND THE WORK PUT TO USE BY THE GOVERNMENT BEFORE FINAL ACCEPTANCE.

11. SCHEDULE OF COSTS.--AFTER THE AWARD OF THE CONTRACT THE CONTRACTOR AND THE CONSTRUCTION ENGINEER SHALL TOGETHER MAKE UP AND AGREE ON A SCHEDULE OF THE COSTS OF THE MAIN BRANCHES OF THE WORK, THE TOTAL OF WHICH SHALL EQUAL THE AMOUNT OF THE CONTRACT. THE VALUES EMPLOYED IN MAKING THE SCHEDULE OF COSTS WILL BE USED ONLY FOR DETERMINING PARTIAL PAYMENTS AND WILL NOT BE CONSIDERED AS FIXING A BASIS FOR ADDITIONS TO OR DEDUCTIONS FROM THE CONTRACT. ONE COPY OF THE SCHEDULE SHALL BE FORWARDED TO THE SUPERVISING ARCHITECT, ONE COPY RETAINED BY THE CONTRACTOR, AND ONE COPY RETAINED BY THE CONSTRUCTION ENGINEER.

12. CONSTRUCTION ENGINEER.--THE CONSTRUCTION ENGINEER HEREIN MENTIONED WILL BE DETAILED BY THE SUPERVISING ARCHITECT TO SUPERVISE THE WORK UNDER THIS SPECIFICATION.

13. PERMITS.--THE CONTRACTOR SHALL WITHOUT ADDITIONAL EXPENSE TO THE GOVERNMENT OBTAIN ALL REQUIRED LICENSES, PERMITS, ETC.

14. DRAWINGS.--THE GOVERNMENT WILL, IN THE DISCRETION OF THE SUPERVISING ARCHITECT, FURNISH THE CONTRACTOR WITH NOT MORE THAN 25 SETS OF CONTRACT DRAWINGS AND SPECIFICATIONS; TWO COPIES OF EACH FULL SIZE DETAIL SHOWING WORK OF ONLY ONE TRADE, AND NOT MORE THAN SIX COPIES OF EACH FULL SIZE DETAIL SHOWING WORK OF MORE THAN ONE TRADE.

15. THE GENERAL CHARACTER OF THE DETAIL WORK IS SHOWN ON THE CONTRACT DRAWINGS, BUT MINOR MODIFICATIONS MAY BE MADE IN THE FULL SIZE DRAWINGS OR MODELS. THE CONTRACTOR SHALL NOT CET OUT ANY PART OF THE WORK REQUIRING FULL SIZE DRAWINGS OR MODELS UNTIL HE HAS RECEIVED THE SAME.

16. WHERE THE WORD "SIMILAR" OCCURS ON THE DRAWINGS, IT SHALL BE USED IN ITS GENERAL SENSE AND NOT AS MEANING IDENTICAL, AND ALL DETAILS SHALL BE WORKED OUT IN RELATION TO THEIR LOCATION AND THEIR CONNECTION TO OTHER PARTS OF THE WORK.

17. WHERE ON ANY DRAWINGS A PORTION OF THE WORK IS DRAWN OUT AND THE REMAINDER IS INDICATED IN OUTLINE, THE DRAWN OUT PARTS SHALL APPLY ALSO TO ALL OTHER LIKE PORTIONS OF THE WORK. WHERE ORNAMENT OR OTHER DETAIL IS INDICATED BY STARTING ONLY, SUCH DETAIL SHALL BE CONTINUED THROUGHOUT THE COURSES OR PARTS IN WHICH IT OCCURS AND SHALL ALSO APPLY TO ALL OTHER SIMILAR PARTS IN THE WORK, UNLESS OTHERWISE NOTED ON THE DRAWINGS.

18. THIS SPECIFICATION IS INTENDED TO SUPPLEMENT THE DRAWINGS, AND, THEREFORE, IT WILL NOT BE ITS PROVINCE TO MENTION ANY PORTION OF THE CONSTRUCTION WHICH THE DRAWINGS ARE COMPETENT TO EXPLAIN, AND SUCH OMISSION SHALL NOT RELIEVE THE CONTRACTOR FROM CARRYING OUT SUCH PORTIONS INDICATED ONLY ON THE DRAWINGS, AND SHOULD ITEMS BE REQUIRED BY THE SPECIFICATION NOT INDICATED ON THE DRAWINGS THEY SHALL BE SUPPLIED EVEN IF OF SUCH NATURE THAT COULD HAVE BEEN INDICATED THEREON.

19. THE DECISION OF THE CONTRACTING OFFICER OR HIS AUTHORIZED REPRESENTATIVE AS TO THE PROPER INTERPRETATION OF THE DRAWINGS AND SPECIFICATIONS SHALL BE FINAL. THE SUPERVISING ARCHITECT IS THE DULY AUTHORIZED REPRESENTATIVE OF THE CONTRACTING OFFICER.

20. CORRECTION OF DEFECTS.--IF THE CONTRACTOR FAILS TO PROCEED AT ONCE WITH THE CORRECTION OF REJECTED DEFECTIVE MATERIAL AND WORKMANSHIP IN ACCORDANCE WITH THE PROVISIONS OF ARTICLE 6 OF STANDARD GOVERNMENT FORM OF CONTRACT (CONSTRUCTION), THE GOVERNMENT MAY BY CONTRACT OR OTHERWISE HAVE THE DEFECTS REMEDIED OR CHANGES MADE AND CHARGE THE COST OF THE SAME AGAINST ANY MONEYS WHICH MAY BE DUE THE CONTRACTOR FOR THIS OR OTHER WORK UNDER THE SUPERVISION OF THE SUPERVISING ARCHITECT.

21. CLIMATIC CONDITIONS.--WHEN SO ORDERED BY THE CONTRACTING OFFICER THE CONTRACTOR SHALL SUSPEND ANY WORK THAT MAY BE SUBJECT TO DAMAGE BY CLIMATIC CONDITIONS.

22. TEMPORARY HEATING.--THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT AS NECESSARY TO PROTECT ALL WORK AND MATERIALS AGAINST INJURY FROM DAMPNESS AND COLD, TO THE SATISFACTION OF THE CONSTRUCTION ENGINEER.

23. TEMPORARY TOILET ACCOMMODATIONS.--THE CONTRACTOR SHALL PROVIDE FOR THE USE OF WORKMEN AMPLE SANITARY TOILET ACCOMMODATIONS WITH SEWER AND WATER CONNECTIONS. HE SHALL KEEP SUCH PLACES IN A SANITARY CONDITION, AND PRIOR TO THE COMPLETION OF THE CONTRACT, THE TEMPORARY TOILET ACCOMMODATIONS SHALL BE REMOVED AND THE PREMISES LEFT CLEAN.

24. SURVEYS.--THE CONTRACTOR SHALL FURNISH CERTIFICATES FROM A COMPETENT ENGINEER THAT THE LINES OF THE BUILDING, THE ELEVATIONS OF BOTTOMS OF EXCAVATIONS, LEVELS OF FLOORS, AND THE LINES AND ELEVATIONS OF APPROACHES ARE IN EVERY RESPECT AS REQUIRED BY THE DRAWINGS. EACH CERTIFICATE SHALL BE FURNISHED THROUGH THE CONSTRUCTION ENGINEER AND AT THE TIME OF THE INSTALLATION OF THAT PORTION OF THE WORK FOR WHICH CERTIFICATE IS REQUIRED.

25. IN ADDITION TO ANY MONUMENTS NOW EXISTING ON THE SITE, THE CONTRACTOR SHALL PLACE WITHIN 3 TO 5 FEET OF EACH ANGLE OF THE LOT AND WITHIN THE SITE, AS A PERMANENT MONUMENT A BRASS PIN SET IN A BLOCK OF CONCRETE (SEE MISCELLANEOUS DETAIL NO. 15,) AND SHALL FORWARD TO THE SUPERVISING ARCHITECT TWO COPIES OF A PLAT PREPARED BY HIS ENGINEER, SHOWING THE DIRECT COURSES AND EXACT DISTANCES FROM SUCH NEW MONUMENTS TO THE ACTUAL CORNERS OF THE LOT.

26. THE EXACT LOCATIONS OF TWO OF THESE MONUMENTS SHALL ALSO BE INDICATED ON THE PLAT WITH REFERENCE TO PERMANENT LAND MARKS OR MONUMENTS LOCATED NEARBY, BUT ON DIFFERENT COURSES AND FAR ENOUGH OUTSIDE OF LOT TO REMAIN UNDISTURBED BY WORK INCIDENT TO THE CONTRACT. THESE REFERENCES SHALL BE SO COMPLETELY MADE THAT THE MONUMENTS IF LOST COULD BE RESTORED.

27. THE ENGINEER MAKING THE SURVEYS AND CERTIFICATES SHALL NOT BE A REGULAR EMPLOYEE OF THE CONTRACTOR NOR SHALL HAVE ANY INTEREST IN THE CONTRACT.

28. PHOTOGRAPHS.--THE CONTRACTOR SHALL FURNISH TO THE SUPERVISING ARCHITECT PHOTOGRAPHS AS FOLLOWS: ON THE FIRST OF EACH MONTH UNTIL THE WORK IS 99 PER CENT COMPLETED, PHOTOGRAPHS IN DUPLICATE TAKEN FROM FOUR POINTS SELECTED BY THE CONSTRUCTION ENGINEER SHOWING AS MUCH AS POSSIBLE OF THE WORK INSTALLED DURING THE PREVIOUS MONTH; AND WHEN THE CONTRACT IS COMPLETED, FINAL PHOTOGRAPHS IN QUADRUPLICATE, FROM FOUR POINTS SHOWING THE COMPLETED WORK.

29. ALL PHOTOGRAPHS SHALL BE MADE WITH A LENS ADAPTED TO THE POSITION FROM WHICH THE PICTURE IS TO BE TAKEN, AND SHALL SHOW DISTINCTLY AT AS LARGE A SCALE AS POSSIBLE ALL PARTS OF THE WORK EMBRACED ON THE PICTURE. ALL PHOTOGRAPHS SHALL BE MARKED ON THE BACK WITH THE NAME OF THE WORK AND THE NAME OF THE CONTRACTOR, THE DATE WHEN TAKEN, AND THEY SHALL BE SHIPPED FLAT.

30. THE FINAL PHOTOGRAPHS SHALL BE 8 BY 10 INCHES IN SIZE AND UNMOUNTED. ALL OTHER PHOTOGRAPHS SHALL BE 6-1/2 BY 8-1/2 INCHES IN SIZE AND MOUNTED ON MUSLIN.

31. THE MONTHLY PHOTOGRAPHS SHALL BE DELIVERED TO THE CONSTRUCTION ENGINEER, WHO WILL KEEP ONE SET FOR HIS FILES AND FORWARD THE OTHER SET TO THE SUPERVISING ARCHITECT WITH HIS CERTIFICATE THAT THE PHOTOGRAPHS REPRESENT THE CONDITION OF THE WORK ON THE DATES NAMED. AS THESE PHOTOGRAPHS ARE INTENDED FOR MONTHLY RECORDS, THEY SHALL BE MADE ON THE FIRST OF EACH MONTH WHETHER OR NOT ANY WORK HAS BEEN DONE DURING THE PRECEDING MONTH.

32. THE FINAL PHOTOGRAPHS SHALL BE FORWARDED BY THE CONTRACTOR DIRECT TO THE OFFICE OF THE SUPERVISING ARCHITECT.

33. IN CASE PHOTOGRAPHS ARE NOT FURNISHED WITHIN FIVE DAYS OF THE DATE WHEN DUE OR WITHIN FIVE DAYS AFTER DEMAND FOR SAME THE GOVERNMENT REPRESENTATIVE SHALL HAVE SUCH PHOTOGRAPHS MADE AND THE COST OF SAME WILL BE DEDUCTED FROM ANY MONEY DUE THE CONTRACTOR.

34. MODELS.--IT IS THE INTENTION OF THE GOVERNMENT TO FURNISH CERTAIN MODELS INDICATED ON THE DRAWINGS. ANY ADDITIONAL MODELS AND ANY PATTERNS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR. IN CASE NO MODELS ARE FURNISHED THE WORK SHALL BE EXECUTED FROM SUCH DRAWINGS AS WILL BE FURNISHED.

35. MODELS WHEN FURNISHED WILL BE DELIVERED F.O.B. AT POINTS DESIGNATED BY THE CONTRACTOR WHO SHALL FURNISH THE SUPERVISING ARCHITECT WITH FULL SHIPPING DIRECTIONS. THE GOVERNMENT BILL OF LADING WILL BE SENT TO CONSIGNEE WHO SHALL FILL OUT THE "CERTIFICATE OF DELIVERY" AND SURRENDER THE GOVERNMENT BILL OF LADING TO THE CARRIER AS PAYMENT FOR THE SHIPPING CHARGES. THE CONTRACTOR OR HIS AUTHORIZED AGENT SHALL RECEIVE THE MODELS, PAY ALL CHARGES FOR STORAGE, ETC., AFTER NOTIFICATION THAT THE MODELS HAVE BEEN SHIPPED, AND BE RESPONSIBLE FOR THE CARE OF THE MODELS FROM THAT TIME.

36. THE MODELS SHALL BE UNPACKED IMMEDIATELY AND EXAMINED. DIMENSIONS SHALL BE VERIFIED AND ANY DISCREPANCIES OR DAMAGE SHALL BE REPORTED IN WRITING TO THE SUPERVISING ARCHITECT. NO REPAIRS OR ALTERATIONS SHALL BE MADE WITHOUT WRITTEN INSTRUCTIONS FROM THE SUPERVISING ARCHITECT.

37. THE CONTRACTOR SHALL DELIVER SUCH MODELS AT THE BUILDING FOR VERIFICATION OF THE WORK EXECUTED THEREFROM WHEN SO DIRECTED BY THE SUPERVISING ARCHITECT. AFTER COMPLETION OF THE CONTRACT THE MODELS ARE TO BE DESTROYED, UNLESS PERMISSION IS OBTAINED FROM THE SUPERVISING ARCHITECT TO DISPOSE OF THEM OTHERWISE.

38. SHOP DRAWINGS.--SHOP DRAWINGS HEREINAFTER REQUIRED, SHALL, UNLESS OTHERWISE SPECIFIED, BE SUBMITTED IN TRIPLICATE TO THE SUPERVISING ARCHITECT AND HIS APPROVAL OBTAINED BEFORE ANY WORK FOR WHICH SUCH DRAWINGS ARE REQUIRED IS COMMENCED.

39. THE APPROVAL OF SHOP DRAWINGS SHALL BE GENERAL AND SHALL NOT RELIEVE THE CONTRACTOR FROM THE RESPONSIBILITY FOR PROPER FITTING AND CONSTRUCTION OF THE WORK NOR FROM FURNISHING MATERIALS AND WORK REQUIRED BY THE CONTRACT WHICH MAY NOT BE INDICATED ON THE SHOP DRAWINGS WHEN APPROVED.

40. EACH SHIPMENT OF SHOP DRAWINGS MUST BE ACCOMPANIED BY A LETTER OF TRANSMITTAL GIVING A LIST OF THE NUMBERS OF THE DRAWINGS. ALL DRAWINGS MUST BE MARKED WITH THE NAME OF THE BUILDING AND NAME OF THE CONTRACTOR AND BE NUMBERED CONSECUTIVELY. ALL DRAWINGS MUST BE COMPLETE IN EVERY RESPECT AND BOUND IN SETS WHEN SUBMITTED.

40A. PIPE SLEEVES.--PIPE SLEEVES OF STANDARD WELDED OR CAST IRON OR STEEL PIPE SHALL BE PROVIDED AND BUILT INTO ALL FOOTINGS AND EXTERIOR WALLS WHERE PIPES PASS THROUGH SAME BELOW GRADE. THE INSIDE DIAMETER OF SLEEVES SHALL BE APPROXIMATELY 2 INCHES LARGER THAN THE GREATEST OUTSIDE DIAMETER OF THE PIPE PASSING THROUGH.

SAMPLES.

41. NO SAMPLES ARE REQUIRED TO BE SUBMITTED WITH THE PROPOSALS. THE SAMPLES REQUIRED UNDER THIS SPECIFICATION SHALL BE SUBMITTED AFTER THE AWARD OF THE CONTRACT. ANY OTHER SAMPLES OF MATERIALS FOR USE IN THE WORK SHALL BE SUBMITTED BY THE CONTRACTOR WHEN SO REQUESTED BY THE SUPERVISING ARCHITECT.

42. NO ACTION WILL BE TAKEN ON SAMPLES UNTIL AFTER ACCEPTANCE OF THE CONTRACTOR'S BOND.

42A. ALL TRANSPORTATION CHARGES ON SAMPLES SHALL BE PREPAID. ALL SAMPLES SHALL BE SUBMITTED IN SUFFICIENT TIME FOR PROPER CONSIDERATION AND ACTION BY THE GOVERNMENT BEFORE ANY MATERIALS WHICH SUCH SAMPLES REPRESENT ARE DELIVERED AT THE WORK.

43. ALL SAMPLES SHALL BE SO PACKED AS TO REACH THEIR DESTINATION IN GOOD CONDITION. EACH SAMPLE SHALL HAVE A LABEL INDICATING THE MATERIAL REPRESENTED, THE NAME OF THE CONTRACTOR AND THE NAME OF THE BUILDING OR WORK IN WHICH THE MATERIAL IS TO BE USED.

44. TO INSURE CONSIDERATION OF SAMPLES EACH SHIPMENT SHALL BE ACCOMPANIED BY A LETTER SIGNED BY THE CONTRACTOR. THIS LETTER SHALL CONTAIN A LIST OF SAMPLES, THE NAME OF THE BUILDING OR WORK ON WHICH THE MATERIALS ARE TO BE USED AND THE BRANDS AND NAMES OF THE MANUFACTURERS OF MATERIALS SUBJECT TO LABORATORY TESTS. THIS LETTER MUST NOT BE SENT IN THE SAME PACKAGE WITH THE SAMPLES.

45. THE CONTRACTOR SHALL FURNISH TO THE GOVERNMENT REPRESENTATIVE IN CHARGE OF THE WORK COPIES OF ALL LETTERS SUBMITTING SAMPLES TO THE SUPERVISING ARCHITECT.

46. THE APPROVAL OF ANY SAMPLE SHALL BE ONLY FOR THE CHARACTERISTICS OR FOR THE USES NAMED IN SUCH APPROVAL AND NO OTHER. NO APPROVAL OF A SAMPLE SHALL BE TAKEN IN ITSELF TO CHANGE OR MODIFY ANY CONTRACT REQUIREMENT.

47. SAMPLES OF MATERIALS NOT SUBJECT TO DESTRUCTIVE TESTS WHEN APPROVED BY THE SUPERVISING ARCHITECT WILL BE SENT TO THE GOVERNMENT REPRESENTATIVE AT THE BUILDING AND KEPT ON HIS FILES UNTIL THE COMPLETION OF THE WORK EXCEPT APPROVED SAMPLES OF HARDWARE IN GOOD CONDITION WHICH MAY BE SUITABLY MARKED FOR IDENTIFICATION AND USED IN THE WORK.

48. SAMPLES THAT ARE NOT APPROVED WILL BE RETURNED TO THE CONTRACTOR ONLY UPON HIS REQUEST AND AT HIS EXPENSE.

49. IN THE CASE OF STANDARD MATERIALS SUBJECT TO LABORATORY TESTS, THE CONTRACTOR MAY SUBMIT IN LIEU OF SAMPLES THE NAME OF THE MANUFACTURERS AND THE BRANDS OF THE MATERIALS PROPOSED. THOSE THAT HAVE BEEN FREQUENTLY TESTED AND FOUND BY THE SUPERVISING ARCHITECT TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS WILL BE CONDITIONALLY APPROVED. IN SUCH CASES THE GOVERNMENT REPRESENTATIVE ON THE WORK WILL TAKE SAMPLES OF THE MATERIALS WHEN DELIVERED AND FORWARD THEM TO THE SUPERVISING ARCHITECT FOR TEST. IF THEY FAIL TO MEET THE SPECIFICATION REQUIREMENTS THEIR CONDITIONAL APPROVAL WILL BE WITHDRAWN.

50. FAILURE OF SAMPLES TO PASS THE LABORATORY TESTS WILL BE SUFFICIENT CAUSE FOR REFUSAL TO CONSIDER UNDER THIS SPECIFICATION ANY FURTHER SAMPLES, FROM MANUFACTURERS WHOSE MATERIALS HAVE FAILED TO PASS THE REQUIRED TESTS.

51. THE FOLLOWING SAMPLES SUBJECT TO LABORATORY TESTS SHALL BE SUBMITTED TO THE SUPERVISING ARCHITECT WITH THE NAME OF THE MANUFACTURER AND BRAND. THE MINIMUM TIME REQUIRED FOR MAKING THESE TESTS IS GENERALLY 10 DAYS AFTER THE RECEIPT OF THE SAMPLE. THE QUANTITIES STATED ARE THE LEAST THAT CAN BE CONSIDERED.

APPLIED SURFACE WATER PROOFING, ONE QUART. Approved 12/27/29
COAL TAR PITCH FOR WATER PROOFING, ONE QUART. Approved Dec-14-29
ASPHALT FOR ROOFING, ONE QUART.
OR
COAL TAR PITCH FOR ROOFING, ONE QUART. Approved conditionally
ASPHALT SATURATED RAG FELT, FULL WIDTH OF ROLL 40" LONG.
OR
COAL TAR PITCH SATURATED RAG FELT, FULL WIDTH OF ROLL 40" LONG. Approved Dec 19-29
FLASHING FELT, FULL WIDTH OF ROLL 40" LONG. Approved July-17-30
PLASTIC ROOFING CEMENT, ONE QUART.
ELASTIC POINTING COMPOUND FOR MASONRY, 2 POUNDS.
LINSEED OIL, RAW, 3 QUARTS. Approved- Feb-3-1930
LINSEED OIL, BOILED, 3 QUARTS. " " " "
DRIER, 1 QUART. " " " "
TURPENTINE, 3 QUARTS. " " " "
FLOOR HARDENER, CRYSTALS, 1 POUND. Approved- Jan-11-1930
RED LEAD, DRY, 5 POUNDS. — — " Feb 3 1930
WHITE LEAD, PASTE, 5 POUNDS. Rej-Feb-3-30 " June 9-1930
MIXED PAINT, SEMI-PASTE, 5 POUNDS. " Feb 3 1930
ENAMEL PAINT, ONE QUART. " " " "
RADIATOR ENAMEL, ONE QUART. Rej-Feb-3-30 " " " "
SPAR VARNISH, ONE QUART. " " " "
INTERIOR VARNISH, ONE QUART. " " " "
PENETRATING FLOOR VARNISH, ONE QUART. " " " "

52. THE FOLLOWING SAMPLES NOT REQUIRING NAME OF MANUFACTURER OR BRAND SHALL BE SUBMITTED TO THE SUPERVISING ARCHITECT.

SAND FOR CONCRETE, 2 POUNDS. Approved. Oct-2-29-
SAND FOR BRICK MORTAR, 2 POUNDS. Approved. Oct-15-29. (conditional - See letter Oct 15) File 9
SAND FOR FACING BRICK MORTAR, 2 POUNDS. App " " " " " " " "
SAND FOR PLASTERING, 2 POUNDS. Approved " " " " " " " "
COMMON BRICK. Rejected Nov. 25-1929. Approved Jan-14-1930
FACING BRICK, IN SUFFICIENT NUMBER TO SHOW RANGE OF COLORS. Approved Nov-2-29
CEMENT BRICK (IF USED) AT LEAST 5 BRICK.—
FIRE BRICK. Approved Nov-9-1929
AGGREGATE. Approved Oct-11-1929
ARCHITECTURAL TERRA COTTA (PLAIN), 2" x 12" x 12", FINISHED AS SPECIFIED. Approved Dec-28-29
ARCHITECTURAL TERRA COTTA (POLYCHROME) 2" x 12" x 12" FINISHED AS SPECIFIED. Approved Feb-3-1930
STONE, 2" x 12" x 12", FINISHED AS SPECIFIED. → Approved. Sept-19-1929
GRANITE, 2" x 12" x 12" " " " " Dec-12-1929
EXTERIOR MARBLE, EACH KIND 2" x 12" x 12" FINISHED AS SPECIFIED.
INTERIOR MARBLE, EACH KIND, ABOUT 1 SQ. FT. FINISHED AS SPECIFIED.
} IN DUPLICATE SHOWING THE EXTREMES IN COLOR AND MARKING. } Approved Oct-18-1929

SMALL SECTION OF C.I. DOOR FRAMES AND CORNER OF GRILLE OVER MAIN ENTRANCES SHOWING WORKMANSHIP AND FINISH.
INSECT SCREENS.--CORNER SECTION SHOWING MATERIALS AND CONSTRUCTION.
CORK FLOOR TILE, EACH COLOR (IN DUPLICATE).
TERRAZZO, ABOUT 1 SQUARE FOOT. Approved Jan-7-1930
HOLLOW METAL WORK, CORNER SECTION OF DOOR SHOWING CONSTRUCTION GAUGES OF METAL WORKMANSHIP AND FINISH.
HARDWARE, SAMPLE OF EACH TYPE REQUIRED, EXCEPT SCREEN GRILLE LOCKING DEVICE AND TRANSOM LIFTERS. For Marble, Approved Jan-8-1930

53. THE FOLLOWING SAMPLES SHALL BE SUBMITTED TO THE GOVERNMENT REPRESENTATIVE ON THE WORK.

HOLLOW TILE. Approved - Nov 14-1929-
GYPSUM BLOCK.
METAL LATH. Approved April 7-1930
CORNER BEAD. Approved April 7-1930
GLASS. Approved Nov. 14-29

EXCAVATION, FILLING, GRADING, ETC.

54. TREES, ETC.--TREES SO NOTED ON DRAWING NO. 1 AND TREES SO LOCATED AS TO INTERFERE WITH THE WORK TO BE PERFORMED SHALL BE REMOVED. WHEN TREES AND STUMPS ARE REMOVED ALL ROOTS SHALL BE TAKEN OUT TO A DEPTH OF 18 INCHES BELOW THE FINISHED GRADE.

55. EXCAVATION.--ALL EXCAVATION SHALL BE DONE AND IN SUCH A MANNER AS TO PERMIT THE PLACING, INSPECTION, AND COMPLETION OF ALL WORK EMBRACED IN THE CONTRACT. EXCAVATED MATERIAL THAT IS UNSUITABLE OR NOT REQUIRED FOR FILLING OR GRADING SHALL BE REMOVED FROM THE PREMISES.

56. THE BID SHALL BE BASED ON EARTH EXCAVATION.

57. ALL MATERIAL WHICH IT IS PRACTICABLE TO REMOVE AND HANDLE WITH PICK AND SHOVEL OR BY HAND OR TO LOOSEN AND REMOVE WITH A POWER SHOVEL SHALL BE CLASSED AS EARTH.

58. IF EXCAVATION OF OTHER MATERIALS BECOMES NECESSARY THE ADDITIONAL EXPENSE WILL BE DETERMINED BY THE CONTRACTING OFFICER.

59. WORK NOT COVERED BY THE CONTRACT SHALL NOT BE DONE UNTIL AUTHORIZED IN THE MANNER PROVIDED IN THE CONTRACT.

60. EXCAVATIONS SHALL FOLLOW THE LINES OF THE WORK TO BE INSTALLED AND SHALL PROVIDE SUFFICIENT WORKING SPACE FOR ITS PROPER PLACEMENT AND FINISH.

61. IF PRACTICABLE, FOOTING TRENCHES SHALL BE CUT TO THE EXACT SIZE OF THE CONCRETE; OTHERWISE FORMS SHALL BE USED. IF EXCAVATIONS FOR FOUNDATIONS ARE CARRIED BELOW THE INDICATED OR SPECIFIED LEVELS THEY SHALL BE REFILLED TO THE REQUIRED LEVELS WITH CONCRETE OF THE CLASS SPECIFIED FOR FOOTINGS, OR THE FOUNDATIONS SHALL BE LAID AT THE EXCAVATED LEVEL AS DIRECTED.

62. WHEN EXCAVATIONS FOR FOUNDATIONS HAVE REACHED THE REQUIRED DEPTH AT LEAST FOUR BORINGS 8 INCHES IN DIAMETER AND 3 FEET DEEP SHALL BE MADE WHERE DIRECTED. IF THE MATERIAL DISCLOSED IS SATISFACTORY TO THE CONSTRUCTION ENGINEER THE HOLES SHALL BE FILLED WITH CONCRETE.

63. OLD CONCRETE SLAB IN PLACE INSIDE OF LOT LINE SHALL BE ENTIRELY REMOVED.

64. THE SIDES OF EXCAVATIONS SHALL BE TEMPORARILY SUPPORTED AND MAINTAINED SECURE UNTIL PERMANENT SUPPORT IS PROVIDED.

65. ALL EXCAVATIONS SHALL BE KEPT FREE FROM WATER WHILE CONCRETE OR OTHER WORK IS BEING PLACED.

66. FILLING AND GRADING.--EXCAVATIONS BELOW THE FINISHED GRADES SHALL BE BACK FILLED WITH SUITABLE MATERIAL FREE FROM PERISHABLE RUBBISH. ALL TEMPORARY PLANKING, TIMBERING, ETC., SHALL BE REMOVED AS THE BACK FILL IS PLACED. BACK FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT OVER 8 INCHES IN DEPTH AND EACH LAYER BE THOROUGHLY TAMPED, PACKED, OR PUDDLED, AS DIRECTED, THAT NO SETTLEMENT SHALL OCCUR. STONE BACKFILL OVER SUB-DRAINAGE LINES ARE SPECIFIED UNDER "SUB-DRAINAGE".

67. NO BACKFILLING SHALL BE DONE UNTIL SO DIRECTED. ANY CAVING OF EXCAVATIONS THAT MAY OCCUR OR ANY BACK FILL PLACED BEFORE INSPECTIONS ARE COMPLETE SHALL BE REMOVED AS DEEMED NECESSARY BY THE CONSTRUCTION ENGINEER.

68. ALL GRADING SHALL BE DONE AS REQUIRED TO BRING THE GROUNDS TO THE FINISHED GRADES. GRADES NOT OTHERWISE INDICATED SHALL BE UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE ELEVATIONS ARE GIVEN, OR BETWEEN SUCH POINTS AND EXISTING FINISHED GRADES.

69. FILL SHALL BE PLACED IN EVENLY DISTRIBUTED LAYERS OVER THE ENTIRE FILLED AREAS. FILL FOR DRIVEWAY, WALKS, ETC., SHALL BE PLACED IN LAYERS NOT EXCEEDING 12 INCHES IN DEPTH, AND EACH LAYER SO ROLLED OR OTHERWISE COMPACTED THAT NO SETTLEMENT IN THE COMPLETED WORK SHALL OCCUR.

70. MATERIALS FROM OTHER SOURCES SHALL BE SUPPLIED FOR ALL FILL WHEN SUFFICIENT OR SUITABLE MATERIAL IS NOT AVAILABLE ON THE SITE.

71. PORTION OF LOT NORTH-WEST OF CEMENT GUTTER AND GRASS SPACES INSIDE OF LOT LINES (SEE DRAWING No. 1), SHALL BE SURFACED WITH NOT LESS THAN 6 INCHES OF THE BEST LOAM OBTAINABLE IN THE LOCALITY. TOP SOIL FROM EXCAVATIONS ON THE SITE WHEN OF SUITABLE QUALITY MAY BE SEPARATED AND USED FOR SURFACING. ALL SUCH SURFACES SHALL BE RAKED SMOOTH AND FREE FROM CLODS OR STONES.

JUNEAU, ALASKA,
FEDERAL AND TERRITORIAL BLDG.

CONCRETE AND CEMENT WORK.

CEMENTS, AGGREGATES AND MIXTURES.

72. PORTLAND CEMENT SHALL COMPLY WITH MASTER SPECIFICATION No. 1A. WHITE CEMENT SHALL BE NON-STAINING PORTLAND CEMENT. ALL PORTLAND AND MASONRY CEMENT SHALL BE MILL TESTED.

73. MILL TESTED CEMENT SHALL BE TESTED AND PASSED AT THE MILL BY A GOVERNMENT INSPECTOR, OR SHALL BE TAKEN FROM GOVERNMENT TESTED AND SEALED BINS. EACH SHIPMENT SHALL BE CERTIFIED BY A GOVERNMENT INSPECTOR THAT THE CEMENT COMPLIES WITH MASTER SPECIFICATION 1A, AND SHALL BE SEALED OR TAGGED OR OTHERWISE IDENTIFIED AS CERTIFIED MATERIAL.

74. THE CONTRACTOR SHALL NOTIFY THE SUPERVISING ARCHITECT RELATIVE TO THE BRAND AND MAKE OF CEMENT HE INTENDS TO USE AND THE PLACE OF PRIMARY SHIPMENT IN AMPLE TIME FOR THE SUPERVISING ARCHITECT TO ARRANGE FOR INSPECTION AND CERTIFICATION OF SHIPMENTS.

75. TESTS AND INSPECTION WILL BE MADE AT GOVERNMENT EXPENSE. MASONRY CEMENT SHALL COMPLY WITH MASTER SPECIFICATION No. 443.

76. LIME SHALL COMPLY WITH MASTER SPECIFICATION No. 249 FOR HYDRATED LIME FOR STRUCTURAL PURPOSES.

77. CEMENT AND LIME SHALL BE DELIVERED IN THE ORIGINAL SACKS AND KEPT DRY UNTIL USED.

78. SAND SHALL BE SHARP, CLEAN AND WELL GRADED IN SIZE; SHALL NOT CONTAIN MORE THAN 5 PER CENT BY VOLUME IN THE AGGREGATE OF LOAM, MICA, CLAY OR OTHER DELETERIOUS SUBSTANCE. WHEN DRY, AT LEAST 80% OF SAND SHALL BE RETAINED ON A No. 50 SCREEN. SAND FOR CONCRETE SHALL PASS A No. 6 SCREEN AND AT LEAST 10 PER CENT SHALL BE RETAINED ON A No. 10 SCREEN. SAND FOR MORTAR SHALL PASS A No. 8 SCREEN AND AT LEAST 15 PER CENT SHALL BE RETAINED ON A No. 16 SCREEN.

79. AGGREGATE SHALL BE CLEAN, HARD GRAVEL OR BROKEN STONE THAT WILL BE RETAINED ON A No. 4 SCREEN AND SHALL BE WELL GRADED IN SIZE FROM FINE TO COARSE. SIZES SPECIFIED ARE THE MAXIMUM ACCEPTABLE AND REPRESENT STANDARD SCREEN SIZES THAT WILL PASS THE MATERIAL.

80. WATER SHALL BE CLEAN AND FREE FROM SALT OR OTHER DELETERIOUS SUBSTANCES.

81. MIXTURES.--PROPORTIONS SPECIFIED ARE IN EQUAL PARTS BY VOLUME. ONE SACK OF PORTLAND CEMENT (94 POUNDS NET) OR ONE BAG OF LIME (40 POUNDS NET) SHALL BE CONSIDERED EQUAL TO 1 CUBIC FOOT. ALL CEMENT SHALL BE PORTLAND CEMENT, UNLESS OTHERWISE SPECIFIED.

JUNEAU, ALASKA,
FEDERAL AND TERRITORIAL BLDG.

(A) CONCRETE MIXTURES SHALL BE AS FOLLOWS:

CLASS A. 1 OF CEMENT, 2 OF SAND AND 4 OF AGGREGATE.

(B) MORTAR MIXTURES SHALL BE AS FOLLOWS:

CLASS A. 1 OF CEMENT AND 2 OF SAND.
CLASS B. 1 OF CEMENT, 3 OF SAND AND 1/5 OF LIME.
CLASS BM. 1 OF MASONRY CEMENT AND 3 OF SAND.
CLASS C. 1 OF CEMENT, 1 OF LIME AND 6 OF SAND.
CLASS D. 1 OF WHITE CEMENT, 1 OF LIME AND 5 OF SAND.

SPECIAL TREATMENT OF CONCRETE.

82. IN GENERAL, ALL VERTICAL OR OVERHEAD SURFACES OF CONCRETE THAT ARE TO RECEIVE AN APPLIED FINISH OF MORTAR OR PLASTER AFTER THE FORMS ARE REMOVED SHALL BE GIVEN A SPECIAL TREATMENT DESIGNATED BY TYPE NUMBERS (T1, AND T2,) AS FOLLOWS:

T1. COAT THE INSIDE OF THE FORMS WITH A MATERIAL THAT WILL RETARD THE SETTING OF THE SURFACE CEMENT. WHEN THE FORMS ARE TAKEN DOWN, REMOVE THE SURFACE OF THE CONCRETE TO AN APPRECIABLE DEPTH BY WIRE BRUSHES, LEAVING A CLEAN, GRANULAR SURFACE FOR THE PERFECT ADHESION OF THE FINISH. THE CONCRETE SHALL BE DAMP WHEN THE FINISH IS APPLIED.

T2. REMOVE THE FORMS AS SOON AS THE CONCRETE HAS BECOME SAFELY SELF-SUSTAINING. ROUGHEN THE CONCRETE SURFACE WITH WIRE BRUSHES AND WASH WITH A 20% SOLUTION OF MURIATIC OR HYDROCHLORIC ACID, REMOVING ALL TRACES OF ACID BY RINSING WITH CLEAN WATER. WHILE THE CONCRETE IS STILL DAMP, APPLY A THIN GROUT COMPOSED OF EQUAL PARTS OF CEMENT AND SAND; THE GROUT TO BE APPLIED WITH FORCE AND RUBBED IN WITH STIFF BRUSHES OR WOOD FLOATS. THE FINISH SHALL BE APPLIED BEFORE THE GROUT IS DRY.

83. TREATMENT FOR CEMENT FINISH AND PLASTERING SHALL BE EITHER T1 OR T2.

CONCRETE.

84. CONCRETE SHALL BE CLASS A WITH 3/4 INCH AGGREGATE.

85. ADMIXTURES.--DIATOMACEOUS EARTH NOT EXCEEDING 4 POUNDS, OR HYDRATED LIME NOT EXCEEDING 10 POUNDS, PER SACK OF CEMENT, MAY BE USED TO INCREASE THE WORKABILITY OF CONCRETE, SUBJECT TO THE APPROVAL OF THE SUPERVISING ARCHITECT. THE RATIO OF WATER TO CEMENT, WHEN ADMIXTURES ARE USED, SHALL BE SO MODIFIED THAT THE SPECIFIED DEGREE OF PLASTICITY (SLUMP) SHALL NOT BE CHANGED.

86. PROTECTION FROM COLD.--NO CONCRETE OR CEMENT WORK SHALL BE DONE IN FREEZING WEATHER UNLESS SUITABLE MEANS ARE USED TO HEAT THE MATERIALS BEFORE PLACING AND TO PROTECT THE CONCRETE AFTER PLACING SO THAT NO DAMAGE FROM FROST OR FREEZING SHALL OCCUR. PROTECTION AFTER PLACING SHALL INCLUDE THE USE OF TEMPORARY HEAT AND COVERINGS IF NECESSARY. NO ANTI-FREEZING INGREDIENT SHALL BE MIXED WITH CONCRETE OR CEMENT WORK.

ALH

87. MIXING.--NO FROZEN, CAKED OR LUMPY MATERIAL SHALL BE USED. MATERIALS INCLUDING WATER, FOR EACH BATCH SHALL BE ACCURATELY MEASURED AND THOROUGHLY MIXED UNTIL EVENLY DISTRIBUTED THROUGHOUT. CONCRETE SHALL BE MIXED WITH THE MINIMUM QUANTITY OF WATER THAT WHEN THOROUGHLY MIXED WILL GIVE A WORKABLE CONSISTENCY THAT WILL SUPPORT THE AGGREGATE AND THAT MAY BE WORKED INTO THE SPACES TO BE FILLED. NO MORTAR OR CONCRETE SHALL BE RETEMPERED FOR USE. MIXING TOOLS AND APPARATUS SHALL BE KEPT CLEAN.

88. HAND MIXED CONCRETE SHALL NOT BE MADE IN BATCHES EXCEEDING SIX CUBIC FEET, OR ONE BAG OF CEMENT PER BATCH.

89. SLUMP TEST.--CONCRETE FOR REINFORCED WORK SHALL BE TESTED FOR CONSISTENCY AT THE MIXER. A COMPLETE BATCH SHALL BE MIXED AS SPECIFIED AND THEN DUMPED. THE SAMPLE SHALL BE TAKEN IMMEDIATELY FROM THE PILE OF CONCRETE AND TESTED UNDER THE DIRECTION OF THE CONSTRUCTION ENGINEER. THE TEST SHALL CONFORM TO TENTATIVE STANDARD D-138 OF THE AMERICAN SOCIETY OF TESTING MATERIALS. THE SLUMP SHALL NOT EXCEED 4 INCHES.

90. FORMS.--FORMS SHALL BE TIGHT AND RIGID TO SUSTAIN THE CONCRETE WITHOUT LEAKAGE OR DISTORTION AND SHALL BE CLEAN INSIDE WHEN THE CONCRETE IS POURED. FORMS SHALL BE LEFT IN PLACE UNTIL THE CONCRETE IS SAFELY SELF-SUPPORTING AND SHALL BE REMOVED WITHOUT DAMAGE TO THE CONCRETE.

91. FORMS FOR CONCRETE EXPOSED AS A FINISHED SURFACE SHALL HAVE SMOOTH FACES WITH TIGHT, FLUSH JOINTS AND SHALL BE ACCURATELY SHAPED AND SET TO THE REQUIRED LINES AND LEVELS.

92. FORMS FOR WALLS, COLUMNS OR PIERS SHALL HAVE REMOVABLE PANELS AT THE BOTTOM FOR CLEANING AND INSPECTION.

93. WIRE FASTENINGS.--WHERE FURRED OR LATHED CEILINGS OCCUR ON CONCRETE THE FORMS SHALL BE BORED AT POINTS AS INDICATED ON DRAWING NO. 408 AND GALVANIZED WIRE OF THE GAUGE NOTED SHALL BE LOOPED OVER THE REINFORCING AND EXTENDED THROUGH THE FORM A SUFFICIENT LENGTH TO FASTEN THE FURRING OR LATH. HOOK NAILS MAY BE SUBSTITUTED FOR THE WIRE FASTENINGS, AS INDICATED ON ABOVE SPECIFIED DRAWING.

94. FILLERS.--METAL TILE FILLERS SHALL BE OF SUITABLE WEIGHT AND FORM TO SECURE THE REQUIRED RIGIDITY. THEY SHALL BE IN SUCH LENGTHS AS WILL ALLOW COMBINATIONS TO COVER ALL SPANS WITHOUT CUTTING. THE ENDS OF EACH ROW OF TILE SHALL BE CAPPED.

95. WHERE THE CEILING IS NOT PLASTERED, METAL TILE SHALL BE A REMOVABLE TYPE AND BE TAKEN DOWN.

96. METAL REINFORCEMENT.--REINFORCING METAL SHALL INCLUDE STIRRUPS, SPACERS, CHAIRS, TIES, ETC., AS REQUIRED AND NECESSARY FOR ASSEMBLING, PLACING AND SUPPORTING THE REINFORCEMENT IN PLACE. METAL SHALL BE CLEAN AND FREE FROM SCALE OR FLAKE RUST OR ANY COATING. FABRIC MAY BE GALVANIZED. METAL SHALL BE KEPT CLEAN UNTIL USED, OR BE THOROUGHLY CLEANED WITH WIRE BRUSHES BEFORE PLACING.

97. RODS AND BARS SHALL CONFORM TO MASTER SPECIFICATION No. 350A OF INTERMEDIATE GRADE AND DEFORMED, UNLESS OTHERWISE SPECIFIED.

98. METAL FABRIC SHALL BE EITHER STEEL WIRE OR EXPANDED SHEET STEEL. SUSTAINING MEMBERS SHALL BE NOT LESS THAN 3 INCHES NOR MORE THAN 8 INCHES APART. THE LENGTH OF MESH SHALL NOT EXCEED 16 INCHES.

99. AREAS OF METAL FABRIC WHEN NOTED ON THE DRAWINGS ARE FOR WIRE FABRIC. WHERE AREAS OF FABRIC ARE NOT INDICATED, THE NET SECTIONAL AREA PER FOOT OF WIDTH SHALL BE AT LEAST 0.135 SQ. IN. FOR EXPANDED METAL AND 0.08 SQ. IN. FOR WIRE FABRIC. THE MANUFACTURER'S CATALOGUE DESIGNATION OF METAL FABRIC TO BE USED SHALL BE SUBMITTED FOR APPROVAL OF THE SUPERVISING ARCHITECT.

100. WHERE THE TYPE OF REINFORCEMENT IS NOT DEFINITELY INDICATED ON THE DRAWINGS METAL FABRIC SHALL BE USED.

101. FOR REINFORCEMENT FOR CONCRETE SURROUNDING STRUCTURAL STEEL, SEE DRAWING No. 412.

102. SHRINKAGE FABRIC.--REINFORCEMENT FOR FLOOR FILL OVER STRUCTURAL SLABS SHALL BE STEEL FABRIC NOT LIGHTER THAN 16 GAUGE. EXPANDED METAL SHALL BE 3" x 7" OR 3" x 8" MESH AND WEIGH AT LEAST 1.8 LBS. PER SQUARE YARD. WIRE FABRIC SHALL BE GALVANIZED AND SHALL BE EITHER 2" HEXAGONAL MESH WEIGHING 1-1/2 LBS. PER SQUARE YARD, OR 2" SQUARE MESH WEIGHING 1.17 LBS. PER SQUARE YARD, OR 4" x 4" MESH WEIGHING AT LEAST 1-1/4 LBS. PER SQUARE YARD.

103. SHOP DRAWINGS.--BENDING AND ASSEMBLING DIAGRAMS SHOWING SHAPES, DIMENSIONS AND DETAILS OF RODS AND BARS AND ACCESSORIES FOR SECURING AND SUPPORTING SAME SHALL BE SUBMITTED IN QUADRUPLICATE FOR THE APPROVAL OF THE SUPERVISING ARCHITECT.

104. PLACING REINFORCEMENT.--REINFORCEMENT SHALL BE ACCURATELY PLACED AND SECURELY FASTENED AND SUPPORTED TO PREVENT DISPLACEMENT BEFORE OR DURING THE POURING OF THE CONCRETE. THE REINFORCEMENT FOR BEAMS, GIRDERS AND COLUMNS SHALL BE ASSEMBLED AS COMPLETE UNITS BEFORE PLACING IN THE FORMS. FABRIC IN FLOORS OR HORIZONTAL SLAB WORK GENERALLY SHALL BE 3/4 INCH ABOVE THE BOTTOM OF THE CONCRETE, IN WALLS NEAR THE CENTER, AND SHALL BE LAPPED AND WIRED AT ALL JOINTS.

105. REINFORCEMENT SHALL BE INSPECTED IN THE FORMS AND APPROVED IN WRITING BY THE CONSTRUCTION ENGINEER BEFORE THE CONCRETE IS POURED. THE CONTRACTOR SHALL FORWARD A COPY OF THE WRITTEN APPROVAL TO THE SUPERVISING ARCHITECT.

106. PLACING CONCRETE.--CONCRETE SHALL NOT BE PLACED OVER PIPES, CONDUITS, WATERPROOFING, ETC., UNTIL SUCH WORK HAS BEEN TESTED, INSPECTED AND APPROVED AND DEFINITE INSTRUCTIONS GIVEN BY THE CONSTRUCTION ENGINEER TO PROCEED WITH THE WORK.

107. UNLESS OTHERWISE DIRECTED, WOOD FORMS SHALL BE WET WHEN THE CONCRETE IS PLACED. EXPOSED REINFORCEMENT AND EXPOSED FACES OF FORMS SHALL BE KEPT CLEAN AND FREE FROM HARDENED CONCRETE OR CEMENT.

108. CONCRETE SHALL NOT BE DROPPED OR DUMPED MORE THAN 6 FEET. CONCRETE SHALL BE SO HANDLED AS TO MAINTAIN ITS CONSISTENCY AND NOT PERMIT THE INGREDIENTS TO SEPARATE.

109. CONCRETE SHALL BE PLACED IMMEDIATELY AFTER MIXING. IT SHALL BE SO RODDED, TAMPED OR WORKED INTO PLACE THAT THE FINISHED WORK SHALL BE FREE FROM VOIDS AND IN CLOSE CONTACE WITH THE FORMS, REINFORCEMENT OR CONNECTING WORK. NO VOIDS OR SEGREGATION OF THE AGGREGATE SHALL SHOW WHEN THE FORMS ARE REMOVED.

110. CONCRETE WHICH IS TO BE GIVEN A FINISH COAT OF ANY DESCRIPTION SHALL BE KEPT CLEAN, AND WHERE AN APPLIED FINISH IS REQUIRED THE CONCRETE SHALL NOT BE PLACED UNTIL IT CAN BE FINISHED AS SPECIFIED.

111. THE DEPTHS OF FOOTINGS AND THICKNESS OF SLABS AS INDICATED ARE THE MINIMUM REQUIRED. FOOTINGS SHALL HAVE NO HORIZONTAL JOINTS AND MAY HAVE VERTICAL JOINTS ONLY AT JUNCTIONS OF WIDE AND NARROW SECTIONS, OR MIDWAY BETWEEN CONCENTRATED LOADS OR ON CENTER LINES OF STRUCTURAL DIVISIONS.

112. COLUMNS OR PIERS SHALL BE PLACED CONTINUOUSLY UP TO A LEVEL 1 INCH BELOW THE COLUMN HEAD OR CONNECTING BEAM OR GIRDER. COLUMNS OR PIERS SHALL BE POURED AT LEAST TWO HOURS IN ADVANCE OF THE SUPERIMPOSED CONCRETE.

113. REINFORCED SLABS, JOISTS, BEAMS, GIRDERS, ETC., SHALL BE POURED CONTINUOUSLY IF POSSIBLE. WHERE CONSTRUCTION JOINTS CANNOT BE AVOIDED THEY SHALL BE PERPENDICULAR TO THE AXIS OR SURFACE OF THE MEMBER JOINTED AND AT THE CENTER OF THE SPAN. IF AN INTERSECTING MEMBER OCCURS AT THAT POINT, THE JOINT SHALL BE OFFSET TWICE THE DEPTH OF THE INTERSECTING MEMBER.

114. ANCHORS, BOLTS, SLEEVES, DOWELS, INSERTS, ETC., AND OTHER WORK AS REQUIRED SHALL BE PROPERLY LOCATED AND BUILT IN AS THE WORK PROGRESSES.

115. EXPOSED SURFACES OF CONCRETE WHERE NO OTHER FINISH IS REQUIRED SHALL BE TRUE TO LINE, REASONABLY SMOOTH, FREE FROM DISFIGURING STREAKS, FINS, HOLES, LAITANCE, FOREIGN MATERIAL, BROKEN OR IRREGULAR ARRISES, AND UNSIGHTLY PATCHING.

116. CONCRETE THAT IS TO BE COVERED WITH WATERPROOFING OR DAMPPROOFING SHALL BE FREE FROM HOLES OR FINS, OR PROJECTING POINTS.

117. CONCRETE SHALL BE PROTECTED AGAINST RAPID DRYING AND SHALL BE KEPT MOIST FOR AT LEAST THREE DAYS.

118. CORRECTION OF IMPERFECTIONS.--ALL IMPERFECTIONS IN EXPOSED SURFACES OF CONCRETE, AFTER FORMS ARE REMOVED SHALL BE CORRECTED AND MADE GOOD. NO POINTING OR PATCHING SHALL BE DONE, OR RESTORATION OF BROKEN OR CHIPPED SURFACES OR ARRISES BE COMMENCED, UNTIL SUCH PLACES HAVE BEEN INSPECTED AND PASSED UPON BY THE CONSTRUCTION ENGINEER.

119. LOAD TEST.--SUITABLE MATERIALS AND APPARATUS SHALL BE FURNISHED AND LOAD TESTS APPLIED TO EACH FLOOR. THE TESTS SHALL BE MADE BEFORE THE FLOOR FILL IS INSTALLED, AND THE APPLIED LOAD SHALL BE 25 TONS DISTRIBUTED AS DIRECTED BY THE SUPERVISING ARCHITECT.

120. THE TEST LOAD SHALL BE OF SUCH MATERIAL AND SO APPLIED THAT THE ACTUAL LOAD AND THE RESULTS MAY BE ACCURATELY MEASURED. READINGS FOR DEFLECTION SHALL BE TAKEN AT ONE-HALF LOAD, AT FULL LOAD, AT END OF 48 HOURS WITH FULL LOAD, AND AFTER THE REMOVAL OF THE LOAD.

121. A FULL REPORT OF THE RESULT OF THESE TESTS SHALL BE FORWARDED AT ONCE BY THE CONSTRUCTION ENGINEER TO THE SUPERVISING ARCHITECT.

122. CEMENT FINISH.--CEMENT FINISH SHALL BOND PERFECTLY WITH THE CONCRETE AND SHALL BE TROWELED OR FLOATED AS SPECIFIED TO TRUE, EVEN SURFACES AND LEFT FREE FROM CHECKS, CRACKS, WAVES OR OTHER DEFECTS. JOINTS SHALL BE STRAIGHT AND TRUE, AND FINISHED WITH A JOINTING TOOL. FINISH IN CONNECTION WITH METAL FRAMES, ETC., SHALL BE FLUSH WITH THE METAL.

123. INTERIOR CEMENT FINISH AND AREA FLOORS SHALL BE TROWELED SMOOTH. EXTERIOR CEMENT FINISH NOT OTHERWISE SPECIFIED SHALL BE FLOATED.

124. CEMENT WORK SHALL BE PROTECTED AGAINST FROST OR RAPID DRYING AND KEPT MOIST FOR AT LEAST 6 DAYS, AND UNTIL SATISFACTORILY CURED.

125. INTEGRAL FINISH SHALL BE PRODUCED WITHOUT A SEPARATE TOPPING OR FINISH COAT. THE CONCRETE SHALL BE SO WORKED IN PLACING AS TO BRING THE FINE MATERIAL TO THE SURFACE, THEN FINISHED AS SPECIFIED. EXCESS WATER SHALL BE TAKEN UP BY A DRY MIXTURE OF 1 PART CEMENT AND 2 PARTS SAND WORKED INTO THE FINISH.

126. THE FOLLOWING SURFACES SHALL HAVE AN INTEGRAL FINISH: FLOORS IN COAL STORAGE, BOILER AND FUEL ROOM, MAILING VESTIBULE AND AREAS, AREA WALLS (EXCEPT BUILDING WALL) EXTERIOR STEPS, DRIVEWAY, SIDEWALKS, COPINGS, CURBS AND GUTTER.

127. EXPOSED SURFACES OF EXTERIOR CONCRETE SHALL HAVE AN INTEGRAL FLOATED FINISH UNLESS OTHERWISE SPECIFIED. AT GRADE LINES, THE FINISH SHALL EXTEND 2" BELOW GRADE. HORIZONTAL SURFACES GENERALLY SHALL BE PROPERLY GRADED TO DRAIN WATER.

128. FORMS ON SURFACES WITH INTEGRAL FINISH SHALL BE REMOVED AS SOON AS THE CONCRETE HAS BECOME SELF-SUSTAINING.

(A) THE EXPOSED SURFACES OF EXTERIOR STEPS, AREA WALLS AND EXTERIOR MAILING VESTIBULE WALL AT BUFFERS SHALL THEN BE RUBBED WITH WATER AND CARBORUNDUM TO A UNIFORM SMOOTH FINISH.

(B) THE EXPOSED SURFACES OF GUTTER, COPINGS AND CURBS SHALL BE RUBBED WITH COARSE CARBORUNDUM SUFFICIENTLY TO REMOVE ALL FINS AND CEMENT GLAZE AND LEAVE A REASONABLY UNIFORM FINISH.

129. APPLIED FINISH SHALL BE A SEPARATE TOPPING OR FINISH COAT COMPOSED OF ONE PART PORTLAND CEMENT AND TWO PARTS SAND, AND SHALL BE 3/4 INCH THICK UNLESS OTHERWISE SPECIFIED. CEMENT FINISH ON SPECIAL TREATMENT T1 OR T2 SHALL BE NO THICKER THAN NECESSARY TO PRODUCE TRUE, EVEN SURFACES. MORTAR SHALL BE A STIFF MIX AND FINISHED WITHOUT THE USE OF DRY CEMENT. THE FOLLOWING SURFACES SHALL HAVE AN APPLIED FINISH: CEMENT FINISHED INTERIOR STAIRS, CEMENT FLOORS AND BASE IN ROOMS, ETC., EXCEPT AS OTHERWISE SPECIFIED. SEE FINISH NOTES ON DRAWINGS NOS. 2 AND 4.

130. FLOOR FINISH UNDER CORK TILE SHALL BE TROWELED TO A SMOOTH AND PERFECTLY LEVEL SURFACE AND ALLOWED TO DRY AND SEASON THOROUGHLY BEFORE THE FLOOR COVERING IS LAID. THE LEVEL OF THE CEMENT FINISH SHALL BE ADJUSTED TO BRING THE TOP SURFACE OF COVERING AT THE EXACT FINISHED FLOOR LEVEL.

131. STEPS.--STAIRS AND STEPS SHALL BE ACCURATELY SPACED THAT THE FINISHED TREADS AND RISERS IN ANY FLIGHT SHALL BE UNIFORM. TREADS AND PLATFORMS OF EXTERIOR STEPS SHALL HAVE A WASH OF 1/8 INCH PER FOOT OF WIDTH UNLESS OTHERWISE NOTED ON THE DRAWINGS.

132. CEMENT BASE.--CEMENT BASE SHALL BE ONE PART PORTLAND CEMENT TO 2 PARTS SAND AND SHALL BE RUN IN PLACE. THE TOP EDGE SHALL FINISH AGAINST METAL GROUNDS (SEE MISCELLANEOUS DETAIL NO. 121) SPECIFIED UNDER "LATH AND PLASTERING", AND SHALL BE PARALLEL WITH THE SURFACES OF FLOORS, AND STAIR INCLINES. BASE SHALL BE BROUGHT TO A TRUE SURFACE AND TROWELED SMOOTH.

133. CEMENT COVES.--THE INTERSECTION OF CEMENT FLOORS WITH CEMENT BASE (EXCEPT ON STAIRS) SHALL BE FORMED WITH A 1-INCH COVE, RUN STRAIGHT AND TRUE AND FINISHED SMOOTH. FOR EXTENT OF CEMENT FINISHED FLOORS, BASE AND COVES, SEE FINISH NOTES ON DRAWINGS NOS. 2, 3 AND 4.

134. THRESHOLDS.--CEMENT THRESHOLDS SHALL BE 1/2 INCH HIGH WITH BEVELED EDGES AND MADE INTEGRAL WITH THE FLOOR FINISH. DOORS BETWEEN CEMENT FLOORED SPACES SHALL HAVE CEMENT THRESHOLDS. SEE NOTE ON INTERIOR THRESHOLDS ON DRAWING NO. 2.

135. FLOOR HARDENING.--INTERIOR CEMENT FLOORS, BASE, AND STAIRS (EXCEPT IN COAL STORAGE ROOM) SHALL BE TREATED WITH AN AQUEOUS SOLUTION OF 14% OR MORE OF COMMERCIAL MAGNESIUM

FLUOSILICATE. SURFACES SHALL BE CLEAN AND DRY WHEN TREATED. THE HARDENER SHALL BE APPLIED FREELY AND EVENLY TO PRODUCE A MAXIMUM PENETRATION. AFTER THE FINAL ACTION IS COMPLETE, SURPLUS MATERIAL SHALL BE REMOVED FROM THE SURFACE LEAVING THE CEMENT WORK CLEAN AND WITHOUT DISCOLORATION.

136. CEMENT FINISH UNDER CORK TILE SHALL BE INCLUDED IN THE SURFACES TREATED.

137. SLABS AND FILL.---WHERE CEMENT FLOOR FINISH OCCURS, THE TOP COURSE OF CONCRETE ON WATERPROOFED FLOORS, AND THE FLOOR FILL OVER STRUCTURAL SLABS, SHALL BE PLACED ONLY AS THE FINISH IS APPLIED.

138. WHERE MARBLE AND TERRAZO FLOORS OCCUR IN GROUND STORY, THE TOP OF THE CONCRETE SHALL BE KEPT DOWN AT LEAST 2-1/2" BELOW THE FINISHED FLOOR LEVEL.

139. FLOOR FILL FOR CEMENT FINISH WHEN LAID OVER STRUCTURAL FLOOR SLABS SHALL BE REINFORCED WITH SHRINKAGE FABRIC.

140. WHERE AREA FLOOR DRAINS OCCUR, THE SLABS SHALL BE FINISHED WITH A UNIFORM PITCH TOWARDS THE DRAINS.

141. CONCRETE FILL FOR TERRAZZO FLOORS IS INCLUDED UNDER THE SPECIFICATION FOR SAME.

142. FILL UNDER WOOD FLOORS SHALL BE LEVELED OFF FLUSH WITH THE TOPS OF THE SLEEPERS AND TROWELED SMOOTH. ANY SPACES UNDER THE SLEEPERS SHALL BE FILLED SOLID WITH 1 TO 3 CEMENT MORTAR BEFORE THE CONCRETE FILL IS PLACED.

143. STRUCTURAL SLABS (EXCEPT WHERE WATERPROOFING OCCURS) SHALL BE SWEPT CLEAN, THOROUGHLY WET; AND THEN DUSTED WITH NEAT PORTLAND CEMENT AS THE FILL IS PLACED.

144. PIPES, ETC.---PROVISION SHALL BE MADE FOR THE PASSAGE OF PIPES, CONDUITS, ETC., THROUGH WALLS, FLOORS, ETC., TO AVOID NEEDLESS CUTTING OF CONCRETE.

145. PIPE SLEEVES AND THIMBLES SHALL BE BUILT IN AS DIRECTED FOR ALL PIPES PASSING THROUGH WALLS, FLOORS, ETC., ABOVE GRADE.

146. SLEEVES OF WELDED IRON OR STEEL OR CAST IRON PIPE AND 2 INCHES LARGER THAN THE PIPES PASSING THROUGH SAME (EXCEPT WHERE PIPE SLEEVE SIZES ARE NOTED ON THE DRAWINGS) SHALL BE PROVIDED AND BUILT IN FOR ALL PIPES INDICATED AS PASSING THROUGH FOOTINGS, WALLS AND FLOORS BELOW GRADE. SLEEVES THROUGH MEMBRANE WATERPROOFING SHALL BE SO DESIGNED AND INSTALLED AS TO MAINTAIN THE WATERPROOF SEAL.

147. FIRE STOPS.---PIPE RISER CHASES SHALL BE STOPPED WITH CONCRETE AT EACH FLOOR AND CEILING LEVEL TO A DEPTH OF AT LEAST 4 INCHES. THIMBLES OF GALVANIZED SHEET METAL SHALL BE PLACED AROUND THE PIPES.

148. APPROACH WORK.--THE SUB-GRADE FOR DRIVEWAY, WALKS, CURBS, ETC., SHALL BE ACCURATELY SHAPED TO THE REQUIRED DEPTH AND PARALLEL TO THE FINISHED GRADES. SOFT OR SPONGY PLACES IN THE SUB-GRADE SHALL BE TAMPED OR ROLLED AND REFILLED UNTIL PROPERLY COMPACTED.

149. SUB-BASE SHALL BE CLEAN GRAVEL, CLINKERS OR BROKEN STONE, SLAG OR BRICK THAT WILL BE RETAINED ON A 1/2" MESH SCREEN AND NOT LARGER THAN 3 INCH. SUB-BASE SHALL BE WELL ROLLED OR TAMPED AND SHAPED TO THE REQUIRED DEPTHS AND PARALLEL TO THE FINISHED GRADES.

150. EXPANSION JOINT FILLER SHALL BE A BITUMINOUS COMPOUND THAT WILL NOT FLOW OR CRUMBLE AT EXTREMES OF OUTSIDE TEMPERATURE. JOINT FILLER SHALL BE EITHER IN THE FORM OF PRE-MOULDED STRIPS OR BE POURED IN PLACE.

151. CONCRETE DRIVEWAY SHALL BE 6 INCHES THICK WITH AN INTEGRAL FLOATED FINISH. DRIVEWAY SHALL HAVE 1/2 INCH EXPANSION JOINT IN THE CENTER THE FULL DEPTH OF THE CONCRETE AND FILLED WITH BITUMINOUS JOINT FILLER. SEE DRAWING NO. 1. DRIVEWAY SHALL HAVE A 6 INCH SUB-BASE.

152. CONCRETE WALKS SHALL BE 4 INCHES THICK, WITH AN INTEGRAL FLOATED FINISH. WALKS SHALL BE MARKED OFF WITH SURFACE JOINTS ABOUT 4 FEET APART, UNLESS OTHERWISE SHOWN. WALKS SHALL HAVE 3/8 INCH EXPANSION JOINTS WHERE SHOWN IN DRAWING NO. 1 AND AT INTERSECTIONS WITH OTHER WALKS OR DRIVEWAY. EXPANSION JOINTS SHALL EXTEND THROUGH THE CONCRETE AND BE FILLED WITH BITUMINOUS JOINT FILLER.

153. CONCRETE CURBS, COPINGS, GUTTER, ETC., SHALL HAVE AN INTEGRAL FLOATED FINISH. CURBS AND COPINGS SHALL BE JOINTED AT THE EXPANSION JOINTS IN WALKS. CURBS, COPINGS AND GUTTER SHALL HAVE SUB-BASE EXTENDING BELOW FROST LINE. SEE DRAWING NO. 1, AND MISCELLANEOUS DETAIL NO. 9. WHERE FROST LINE IS NOTED ON DETAILS IT IS ASSUMED TO BE 3 FEET BELOW GRADE.

154. SURFACE DRAINAGE CATCH BASINS.--SEE MISCELLANEOUS DETAIL NO. 1. CATCH BASINS LOCATED IN GRASS AREAS SHALL HAVE COVER FRAME ANCHORED TO CONCRETE WALL WITH FOUR 1/2 INCH BOLTS. THE OUTLET FITTING AND FIRST LENGTH OF PIPE SHALL BE EXTRA HEAVY CAST IRON SOIL PIPE. THE JOINT BETWEEN PIPE AND FITTING SHALL BE MADE WITH OAKUM GASKET AND PIG LEAD CAULKED SOLID. THE CONNECTION TO SEWER IS SPECIFIED UNDER "PLUMBING". THE COVER AND FRAME ARE SPECIFIED UNDER "MISCELLANEOUS METAL WORK."

ALH

JUNEAU, ALASKA,
FEDERAL AND TERRITORIAL BUILDING.

SUB-DRAINAGE SYSTEM

155. THIS SPECIFICATION INCLUDES THE COMPLETE SYSTEM OF SUB-DRAINS, CLEANOUTS, CATCH BASINS, AND THEIR OUTFALLS OR THEIR CONNECTIONS TO THE SEWERS WHEN SUCH CONNECTIONS ARE INDICATED.

156. MATERIALS.--

(A) CEMENT, SAND AND AGGREGATE SHALL BE AS SPECIFIED UNDER "CONCRETE AND CEMENT WORK."

(B) STONE BACKFILL SHALL BE STONE OR GRAVEL, OR MAY BE BROKEN BRICK, BROKEN TILE, OR SLAG, NOT LARGER THAN 3 INCHES IN SIZE AND CONTAINING NO MATERIAL THAT WILL PASS A 1/2 INCH MESH SIEVE.

(C) DRAIN TILE SHALL BE HARD BURNED, AGRICULTURAL TILE, SOUND, REASONABLY SMOOTH INSIDE, FREE FROM CRACKS, CHECKS, BROKEN ENDS OR INJURIOUS WARPING. TILE NOT OTHERWISE INDICATED SHALL BE 4 INCHES INSIDE DIAMETER.
REGULAR FITTINGS OF THE REQUIRED SHAPES SHALL BE USED AT ALL BENDS AND JUNCTIONS.

(D) IRON PIPE SHALL BE EXTRA HEAVY CAST IRON SOIL PIPE AND FITTINGS. IRON PIPE NOT OTHERWISE INDICATED SHALL BE 4 INCH INSIDE DIAMETER.

(E) BACK WATER VALVES SHALL BE EXTRA HEAVY PATTERN BRASS-GATED VALVES WITH BRASS SCREW PLUG HAND HOLES.

157. METAL WORK, ETC.--SEE DETAILS AND SPECIFICATION FOR "MISCELLANEOUS METAL WORK". THE INSTALLATION OF ALL METAL PARTS SHALL BE INCLUDED UNDER THIS SECTION OF THE SPECIFICATION.

158. WORKMANSHIP.--ALL TILE AND PIPE SHALL BE LAID TO TRUE GRADES AND ALIGNMENT, WITH A CONTINUOUS FALL IN THE DIRECTION OF THE FLOW. DRAIN TILE SHALL BE LAID WITH 1/2 INCH OPEN JOINTS WRAPPED WITH COPPER WIRE GAUZE FASTENED WITH COPPER CLIPS. (SEE MISCELLANEOUS DETAIL No. 20). JOINTS BETWEEN DRAIN TILE AND HUB FITTINGS SHALL BE FILLED SOLID WITH CEMENT MORTAR. IRON PIPE AND FITTINGS SHALL HAVE LEAD CAULKED JOINTS.

159. CONCRETE FOR BEDDING TILE SHALL BE COMPOSED OF 1 VOLUME CEMENT, 4 VOLUMES SAND AND 8 VOLUMES AGGREGATE. CONCRETE SHALL BE FRESHLY MIXED AND PLACED AS NEEDED, AND THE TILE BEDDED BEFORE THE CEMENT HAS SET. ALL DRAIN TILE SHALL BE BEDDED ON CONCRETE EXCEPT D.I. PIPE UNDER GROUND FLOOR WILL NOT BE BEDDED ON CONCRETE.

160. CATCH BASINS SHALL BE OF HARD BURNED BRICK LAID IN 1 TO 3 PORTLAND CEMENT MORTAR, WITH CONCRETE FOOTING AND SMOOTHLY FINISHED ON THE INSIDE WITH CEMENT MORTAR. THE CATCH BASIN SHALL HAVE IRON LADDER RUNGS, AND A CAST IRON COVER AND FRAME. (SEE MISCELLANEOUS DETAIL No. 14).

MWA

161. CLEANOUTS SHALL BE PLACED AT ALL SUMMITS OF SUB-DRAINS AND CONNECTED TO DRAINS WITH A VERTICAL LINE OF IRON PIPE AND AN IRON LONG SWEEP BEND AT THE FOOT. THE CLEANOUT SHALL HAVE A CAST IRON COVER AND FRAME SET IN CONCRETE. (SEE MISCELLANEOUS DETAIL No. 13.)

162. FILLING OVER SUB DRAIN TILE WHEN PLACED AGAINST WALLS SHALL BE STONE BACKFILL FOR NOT LESS THAN 2 FEET ABOVE THE TILE. (SEE MISCELLANEOUS DETAIL No. 20 MODIFIED AS ABOVE AND DETAILS ON DRAWING No. 407). FILL OVER CAST IRON SUB-DRAINS BELOW FLOORS SHALL BE AS SPECIFIED UNDER PARAGRAPH No. 66.

163. TESTS.--ALL SUB-DRAINAGE LINES SHALL BE TESTED WITH WATER BEFORE THEY ARE COVERED AND THE ENTIRE SYSTEM AGAIN TESTED AFTER THE BACK FILL IS PLACED. ANY OBSTRUCTIONS FOUND SHALL BE REMOVED AND THE SYSTEM AGAIN TESTED UNTIL SATISFACTORY.

MEMBRANE WATERPROOFING.

164. GENERAL.--THIS SECTION OF THE SPECIFICATION SHALL INCLUDE ALL MEMBRANE WATERPROOFING REQUIRED BY THE CONTRACT.

165. MEMBRANE WATERPROOFING OCCURS IN THE FOLLOWING LOCATIONS:

ALL EXTERIOR FOUNDATION WALLS EXCEPT ON THE FOURTH STREET FRONT, CONCRETE SLAB OVER OIL STORAGE, THE ENTIRE GROUND FLOOR BOTTOM LAYER OF CONCRETE EXCEPT IN COAL STORAGE ROOM. SEE DRAWINGS #400 AND #407. ALL PIPES PASSING THROUGH WATERPROOFED SURFACES SHALL BE IN PLACE AND TESTED TO THE SATISFACTION OF THE CONSTRUCTION ENGINEER BEFORE WATERPROOFING IS APPLIED.

166. MATERIALS.--COAL TAR PITCH SHALL CONFORM TO THE REQUIREMENTS OF MASTER SPECIFICATION No. 83 FOR WATERPROOFING AND DAMPPROOFING.

167. FELT SHALL COMPLY WITH MASTER SPECIFICATION No. 81 FOR COAL TAR SATURATED FELT.

168. CREOSOTE OIL SHALL BE PURE COAL TAR CREOSOTE FREE FROM ADMIXTURES OF TAR OR OTHER OILS AND SHALL NOT CONTAIN MORE THAN 2% OF WATER. THE CREOSOTE SHALL BE ENTIRELY LIQUID AT 38°C. AT THAT TEMPERATURE SHALL HAVE A SPECIFIC GRAVITY OF BETWEEN 1.03 AND 1.07. NO OIL SHALL DISTILL UNDER 170°C AND NOT MORE THAN 15% SHALL REMAIN AS UNDISTILLED RESIDUE AT 355°C AND SUCH RESIDUE SHALL BE SOFT.

169. PREPARATION OF SURFACES.--THE CONCRETE SURFACE SHALL BE THOROUGHLY CURED, SMOOTH CLEAN AND DRY AND FREE FROM HOLES OR PROJECTIONS WHICH WOULD TEND TO INJURE THE WATERPROOFING, BEFORE THE WATERPROOFING IS APPLIED.

169A. THE SPACE BETWEEN PIPE SLEEVES AND PIPE EXTENDING THROUGH SAME SHALL BE CAULKED WITH OAKUM AND POINTED SMOOTH WITH PORTLAND CEMENT MORTAR BEFORE THE WATERPROOFING IS APPLIED.

WHERE SLEEVES ARE NOT REQUIRED THE CONCRETE AROUND THE PIPE ON THE WATERPROOFING SIDE SHALL BE CUT AWAY ON A SMOOTH 45° BEVEL FOR ABOUT 3 INCHES FROM THE PIPE, THE WATERPROOFING SHALL BE CARRIED OVER THIS BEVELED SURFACE AND OUT ON PIPE FOR ABOUT 3 INCHES; AFTER WATERPROOFING IS IN PLACE THE SPACE AROUND PIPE SHALL BE POINTED UP WITH CEMENT MORTAR FLUSH WITH ADJOINING SURFACE.

169B. IN ALL CASES THE CONNECTION BETWEEN WATERPROOFING AND PIPES PASSING THROUGH SAME SHALL BE MADE ABSOLUTELY WATERTIGHT.

170. WATERPROOFING.--WATERPROOFING SHALL CONSIST OF FOUR LAYERS OF PITCH AND THREE LAYERS OF FELT.

171. ALL SURFACES TO WHICH WATERPROOFING SHALL BE APPLIED SHALL BE GIVEN A FULL COAT OF CREOSOTE OIL AND THEN COVERED WITH HOT COAL TAR PITCH INTO WHICH WILL BE EMBEDDED A LAYER OF FELT FOLLOWED BY ALTERNATE LAYERS OF PITCH AND FELT UNTIL THE REQUIRED NUMBER IS APPLIED. THE PITCH SHALL NOT BE HEATED LONGER THAN NECESSARY AND MUST NOT BE APPLIED SO HOT AS TO INJURE THE FIBRE OF THE FELT. EACH LAYER OF FELT WILL BE LAPPED OVER THE PRECEDING LAYER 4/5 OF ITS WIDTH AND WHERE GROUND FLOOR WATERPROOFING ABUTS VERTICAL WALLS THE FELTS AND PITCH SHALL BE TURNED UP ON SAME TO A HEIGHT OF 4 INCHES; WHERE END JOINTS OCCUR THEY SHALL BE LAPPED 6 INCHES AND STAGGERED AT LEAST 2 FEET IN ADJOINING LAYERS. THE FELT SHALL BE COMPLETELY COVERED WITH PITCH BETWEEN LAPS.

172. THE TOTAL AMOUNT OF PITCH USED SHALL BE NOT LESS THAN 100 LBS. PER 100 SQUARE FEET.

173. IMMEDIATELY AFTER WATERPROOFING IS APPLIED TO FLOOR SLABS IT SHALL BE COVERED APPROXIMATELY 1" THICK WITH CLASS B MORTAR SCREEDED TO A FAIRLY EVEN SURFACE.

APPLIED SURFACE WATERPROOFING.

174. GENERALLY.--THE FLOOR AND WALLS OF OIL STORAGE TO A HEIGHT OF FIVE FEET, THE FLOORS AND WALLS OF TUNNELS AND ALL PITS BELOW THE GROUND FLOOR LEVEL SHALL BE WATERPROOF. SEE DRAWINGS #400 AND #407. ALL SURFACES WATERPROOFED SHALL BE MADE PERMANENTLY WATERTIGHT.

175. THE WATERPROOFING MATERIAL SHALL HAVE A METALLIC BASIS FREE FROM BITUMEN, WAXES, OILS OR TARS AND THE METHOD OF WATERPROOFING SHALL BE ONE THAT HAS BEEN IN SUCCESSFUL USE FOR THREE OR MORE YEARS.

176. THE WORK SHALL BE DONE BY AN EXPERIENCED WATERPROOFER, WHO IS REGULARLY ENGAGED IN WATERPROOFING WORK OF THE CHARACTER REQUIRED.

177. THE NAME OF THE WATERPROOFING MATERIAL TO BE USED AND DETAIL DESCRIPTION OF THE METHOD OF APPLYING SAME TOGETHER WITH INFORMATION AS TO WHERE THE MATERIAL HAS BEEN SUCCESSFULLY USED BY THE WATERPROOFER WHO IS TO DO THE WORK SHALL BE SUBMITTED FOR THE CONSIDERATION OF THE SUPERVISING ARCHITECT.

178. SURFACES THAT ARE TO BE WATERPROOFED SHALL BE THOROUGHLY CLEANED HOLES, CRACKS AND SOFT OR POROUS PLACES SHALL BE CUT OUT AND CAREFULLY POINTED WITH CLASS A MORTAR. SPACE BETWEEN PIPES AND PIPE SLEEVES OR PIPE AND CONCRETE WHERE NO SLEEVES ARE REQUIRED SHALL BE FILLED AND POINTED FLUSH WITH THE SAME MORTAR. SURFACES SHALL BE ROUGHENED AS NECESSARY FOR THE PROPER ADHESION OF THE WATERPROOFING AND POINTING OF FINISHED COATS.

179. THE WATERPROOFING SHALL BE APPLIED BY BRUSHING OR SPRAYING SO AS TO SEAL THE PORES AND CAUSE A PERMANENT DURABLE PROTECTION IMPERVIOUS TO WATER UNDER ANY POSSIBLE HYDROSTATIC HEAD IN THE LOCATION OF THE WORK. THERE SHALL BE A MINIMUM OF THREE WATERPROOFING COATS AND AS MANY MORE AS MAY BE NECESSARY.

180. PROPER CARE SHALL BE USED IN MAKING A TIGHT JOINT AT ALL POINTS AT THE INTERSECTION OF WALLS AND FLOORS IN CORNERS AND AROUND PIPES OR OTHER PROJECTIONS THROUGH THE CONCRETE.

181. AFTER THE WALLS ARE WATERPROOFED THERE SHALL BE SUFFICIENT SLUSH COATS OF CEMENT TO RESTORE THE ORIGINAL COLOR.

182. AFTER THE FLOORS ARE WATERPROOFED THEY SHALL BE COVERED WITH CLASS A MORTAR TO A DEPTH OF ONE INCH, TOP SURFACE OF MORTAR TO BE TROWELED TO A SMOOTH FINISH.

BRICK WORK, HOLLOW TILE WORK, ETC.

183. BRICK.--COMMON BRICK SHALL CONFORM TO MASTER SPECIFICATION No. 504, CLASS H.

184. CEMENT BRICK.--CEMENT BRICK MAY BE USED WHERE COMMON BRICK IS REQUIRED PROVIDED THEY CONFORM TO FOLLOWING REQUIREMENTS:

SIZE SHALL BE SAME AS REQUIRED FOR OTHER COMMON BRICK. BRICK SHALL BE MADE OF PORTLAND CEMENT MORTAR OR CONCRETE. THEY SHALL BE FREE FROM INJURIOUS MATERIALS IN KINDS AND AMOUNTS THAT WOULD IMPAIR DURABILITY OR STRENGTH. CONCRETE BRICK SHALL BE PROPERLY SEASONED FOR AT LEAST 28 DAYS BEFORE BEING TESTED OR USED IN THE WORK.

184A. IF THE BRICK ARE NOT MADE ON THE SITE, THEY SHALL BE SEASONED AT LEAST 28 DAYS BEFORE DELIVERY.

184B. CONCRETE BUILDING BRICK SHALL MEET THE FOLLOWING REQUIREMENTS AS TO ABSORPTION AND STRENGTH.

TRANSVERSE BREAKING LOAD. POUNDS 7-INCH SPAN.		WEIGHT OF WATER ABSORBED PER WHOLE BRICK.	
MEAN OF 5 TESTS.	INDIVIDUAL MINIMUM	MEAN OF 5 TESTS	INDIVIDUAL MAXIMUM
1080 TO 810	540	8 OZ.	10 OZ.

184C. CONCRETE BUILDING BRICK WHEN TESTED SHALL NOT BE LESS THAN 28 DAYS OLD, EXCEPT THAT TESTS MAY BE MADE ON BRICKS DELIVERED AT THE BUILDING SITE, IRRESPECTIVE OF AGE. BRICKS FROM SAMPLES TAKEN AT OTHER POINTS SHALL, WHEN TESTED, BE OF APPROXIMATELY THE SAME AGE AS BRICK DELIVERED AT THE BUILDING SITE, BUT NEED NOT BE OLDER THAN 28 DAYS.

185. FACE BRICK SHALL HAVE EXPOSED FACES AND ENDS FREE FROM KILN MARKS AND SHALL BE OF THE CHARACTER, COLOR, ETC., INDICATED ON DRAWING No. 100 AND OF A QUALITY TO CONFORM TO THE REQUIREMENTS OF UNITED STATES GOVERNMENT MASTER SPECIFICATION No. 504, CLASS "H", COMMON BRICK, AS TO ABSORPTION AND TRANSVERSE STRENGTH.

186. THE STANDARD SIZE OF FACE BRICK SHALL BE APPROXIMATELY 2-1/4 x 3-3/4 x 8", WITH PERMISSIBLE VARIATIONS BETWEEN BRICKS OF NOT MORE THAN 1/8 INCH IN BREADTH OR DEPTH NOR MORE THAN 1/4 INCH IN LENGTH. NO BRICK OF THIS CLASS SHALL BE WARPED OR TWISTED MORE THAN 1/16 INCH IN ITS LENGTH.

187. CONSIDERATION WILL BE GIVEN TO FACE BRICK NOT OF STANDARD SIZE, ONLY WHEN OF A SIZE ADAPTED TO THE REQUIREMENTS OF THE BONDING, SIZE OF JOINTS, AND THE DIMENSIONS, OF THE WORK TO BE DONE.

188. SPECIAL SHAPED BRICK MATCHING THE FACE BRICK IN COLOR AND TEXTURE SHALL BE PROVIDED FOR IRREGULAR EXTERNAL ANGLES, AND WHEREVER SPECIAL SHAPES ARE REQUIRED.

189. FIRE CLAY BRICK SHALL CONFORM TO THE REQUIREMENTS OF MASTER SPECIFICATION No. 268A; CLASS "M-73".

190-191. HOLLOW TILE.--TILE FOR PARTITIONS AND FOR FURRING SHALL CONFORM TO THE REQUIREMENTS OF UNITED STATES GOVERNMENT MASTER SPECIFICATION No. 508, "CLASS M". SURFACES THAT ARE TO BE PLASTERED SHALL BE SCORED TO FORM A KEY FOR THE PLASTER. TILE SHALL BE OF STANDARD SHAPES AND DIMENSIONS AS REQUIRED TO PROPERLY BOND THEMSELVES AND BOND WITH OTHER CONNECTING WORK.

192. GYPSUM BLOCK SHALL HAVE STRAIGHT AND SQUARE EDGES AND TRUE SURFACES. THE FACES OF THE BLOCK SHALL BE SCORED OR ROUGHENED TO FORM A KEY FOR THE PLASTERING. GYPSUM BLOCK MAY BE SOLID OR CORED, AND SHALL HAVE AN ULTIMATE COMPRESSION STRENGTH WHEN DRY, AND TESTED ON EDGE, OF NOT LESS THAN 75 POUNDS PER SQ. IN. OF GROSS AREA.

193. GYPSUM BLOCK MAY BE USED AT THE OPTION OF THE CONTRACTOR IN LIEU OF HOLLOW TILE GENERALLY, EXCEPT THAT GYPSUM BLOCK SHALL NOT BE USED IN THE FOLLOWING PLACES, VIZ:

1. IN GROUND STORY.
2. IN OR AGAINST EXTERIOR WALLS.
3. AROUND STAIRWAYS OR ELEVATORS.

194. FLUE LINING FOR FLUE NEAR COL. No. 70 SHALL BE SALT-GLAZED ACID RESISTING TILE, SOUND, UNWARPED, AND FREE FROM CRACKS, OR OTHER DEFECTS.

195. METAL TIES FOR BRICK AND TILE WORK SHALL BE GALVANIZED. TILE SHALL BE SO CORRUGATED OR OTHERWISE SHAPED AS TO FORM A SECURE BOND. TIES SHALL EXTEND NOT LESS THAN 4 INCHES INTO BRICK BACKING AND EXTEND TO WITHIN 1/2 INCH OF THE FACE OF THE FURRING. SHEET METAL OR STRAP TIES SHALL BE NOT LIGHTER THAN 16 GAUGE. WIRE NETTING TIES SHALL NOT BE LIGHTER THAN 16 GAUGE 1/2 INCH MESH AND NOT LESS THAN 8 INCHES WIDE.

196. METAL TIES FOR BONDING BRICK FACING AND TILE FURRING TO CONCRETE SHALL HAVE SECURE FASTENINGS OR ANCHORAGE BUILT INTO THE CONCRETE AND TO WHICH THE TIES MAY BE ADJUSTABLY ATTACHED LATER. SEE DRAWING No. 410.

197. THE METAL TIES PROPOSED TO BE USED SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT.

198. MORTAR COLOR SHALL BE FINELY GROUND, UNFADING MINERAL PIGMENTS.

199. FIRE CLAY MORTAR SHALL BE WHOLLY OF FIRE CLAY CONFORMING TO THE REQUIREMENTS OF MASTER SPECIFICATION No. 334A, "CLASS C".

200. GYPSUM CEMENT MORTAR SHALL BE COMPOSED OF ONE VOLUME OF NEAT GYPSUM CEMENT TO 2-1/2 VOLUMES OF SAND. GYPSUM CEMENT SHALL CONFORM TO THE REQUIREMENTS OF MASTER SPECIFICATION No. 247, TYPE "N".

201. BRICK AND TILE MORTAR.--BRICK AND TILE MORTAR SHALL CONFORM TO THE REQUIREMENTS SPECIFIED UNDER "CEMENTS AGGREGATES AND MIXTURES" AND WILL BE REFERRED TO HEREUNDER BY "CLASS LETTER" ONLY.

CLASS B MORTAR SHALL BE USED FOR ALL COMMON BRICKWORK AND FOR TILE WORK BELOW FIRST FLOOR.

CLASS BM MORTAR SHALL BE USED FOR TILE WORK ABOVE FIRST FLOOR.

CLASS D MORTAR SHALL BE USED FOR FACE BRICK WORK.

202. MORTAR SHALL BE FRESHLY MADE IN SUCH QUANTITIES ONLY AS SHALL BE USED BEFORE THE CEMENT HAS COMMENCED TO SET. NO CAKED OR LUMPY OR FROZEN MATERIALS SHALL BE USED. MATERIALS FOR MORTAR SHALL BE PROPORTIONED BY ACCURATE MEASURE. MORTAR SHALL BE THOROUGHLY AND EVENLY MIXED.

203. DIMENSIONS.--ALL WORK SHALL BE ACCURATELY LAID OUT TO THE EXACT FIGURED DIMENSIONS AND TO MEET THE REQUIREMENTS OF THE BONDING. FIGURED THICKNESSES OF WALLS GENERALLY SHALL BE TAKEN AS THE THICKNESS WHICH BRICK AND TILE WILL LAY WITHOUT CLIPPING AND WITH WALL JOINTS OF 3/8 INCH TO 1/2 INCH, EXCEPT FOR RECESSES, PANELS, OR PROJECTIONS WHEN OTHER THAN WHOLE BRICK OR TILE DIMENSIONS ARE INDICATED. ANY VARIATIONS FROM FIGURED THICKNESSES OF WALLS DUE TO THE SIZE OF THE BRICK

OR TILE USED SHALL BE SO MADE AS NOT TO CHANGE ANY OUTSIDE DIMENSIONS OF OUTER WALLS OR THE CENTER LINES OF INTERIOR WALLS OR PARTITIONS. NO CHANGES WILL BE MADE FROM FIGURED DIMENSIONS FOR MASONRY UNLESS CONNECTING WORK IS PROPERLY ADJUSTED THERETO, AND NOT UNTIL SUCH CHANGES ARE APPROVED BY THE SUPERVISING ARCHITECT.

204. LAYING BRICK AND TILE.--NO BRICK WORK OR MASONRY SHALL BE LAID IN FREEZING WEATHER UNLESS SUITABLE MEANS ARE USED TO HEAT THE MATERIALS OR TO PROTECT THE WORK FROM COLD, OR BOTH AS NECESSARY, THAT THE MORTAR SHALL PROPERLY HARDEN WITHOUT FREEZING AND THAT NO DAMAGE FROM FROST SHALL OCCUR. THE MINIMUM OF PROTECTION REQUIRED SHALL BE TO MAINTAIN THE WORK AFTER PLACING AT A TEMPERATURE NOT BELOW 40°F. FOR NOT LESS THAN 24 HOURS. NO ANTI-FREEZING INGREDIENT SHALL BE MIXED WITH MORTAR UNLESS APPROVED BY THE SUPERVISING ARCHITECT.

205. BRICK, UNLESS OTHERWISE DIRECTED, SHALL BE DRENCHED WITH WATER AND LAID WET. ALL SURFACES WITH WHICH BRICK AND TILE ARE TO JOIN SHALL BE CLEAN AND WET WHEN THE WORK IS LAID. EACH BRICK SHALL BE LAID IN A FULL BED OF SOFT MORTAR IN SUCH WAY AS TO FILL ALL JOINTS AND LEAVE NO VOIDS. HOLLOW TILE SHALL BE LAID IN FULL BEDS OF MORTAR AND ALL JOINTS FILLED. BRICK AND TILE WORK LAID AGAINST METAL WORK OR MEMBRANE WATER PROOFING SHALL BE LAID 1/2 INCH AWAY FROM SAME AND HAVE THIS SPACE GROUTED FULL AS EACH COURSE IS LAID. WATERPROOFING SHALL NOT BE COVERED UNTIL INSPECTED AND APPROVED BY THE CONSTRUCTION ENGINEER.

206. ALL WORK SHALL BE LAID TO TRUE LINES AND PLUMB. HORIZONTAL JOINTS AND COURSES SHALL BE KEPT LEVEL. COMMON BRICK WORK SHALL BE BONDED WITH OVERLAPPING HEADERS EVERY SIXTH COURSE IN HEIGHT AND OVERLAPPING THE HEADERS IN THE FACING WHERE PRACTICABLE. COMMON BRICK WORK EXPOSED TO VIEW SHALL BE FACED WITH WHOLE WELL SHAPED BRICK. BRICK WINDOW SILLS IN UNPLASTERED WALLS SHALL BE LAID ON EDGE.

207. POINTING.--MORTAR JOINTS SHALL BE OF UNIFORM THICKNESS. JOINTS EXPOSED TO VIEW IN COMMON BRICK WORK SHALL BE NEATLY STRUCK. JOINTS NOT EXPOSED TO VIEW AND JOINTS TO BE COVERED WITH PLASTERING SHALL BE CUT OFF AND LEFT ROUGH.

208. FACE BRICK SHALL HAVE NEATLY FINISHED UNIFORM JOINTS OF THE TYPE NOTED ON THE DRAWINGS. SEE MISCELLANEOUS DETAIL No. 129 AND DRAWING No. 100.

209. FLUE, RISER CHASES, ETC.--SHALL BE TRUE AND SMOOTH ON THE INSIDE. FLUE LININGS SHALL BE SET WITH CLOSE SMOOTH JOINTS. CHANGES IN DIRECTION SHALL HAVE NEATLY CUT JOINTS WITHOUT OFFSETS OR SHOULDERS. FLUES, RISER CHASES, ETC., SHALL BE KEPT CLEAR OF OBSTRUCTIONS OR DROPPINGS AND SHALL BE CLEANED OUT AT COMPLETION.

210. STACK LINING SHALL BE FIRE BRICK. THE FIRE BRICK SHALL EXTEND TO THE TOP OF THE STACK. SEE DRAWING, No.8.

211. CORBELS AND OFFSETS SHALL BE FORMED AS REQUIRED FOR THE SUPPORT OF OTHER WORK. CORBELINGS HAVING MORE THAN 2 INCHES PROJECTION SHALL FINISH WITH A HEADER COURSE.

212. POCKETS, CHASES OR TOOTHINGS, AS DIRECTED, SHALL BE FORMED FOR THE PROPER BONDING OF CONNECTING WORK REQUIRED TO BE BUILT LATER.

213. REGLETS FOR COUNTERFLASHINGS SHALL BE MADE WHERE REQUIRED BY RAKING OUT THE FACE JOINT ITS FULL WIDTH TO A DEPTH OF 1-1/2 INCHES, OR BY BUILDING IN A STRIP 1-1/2 INCHES WIDE WHICH SHALL BE REMOVED AFTER THE MORTAR HAS SET.

214-215. FIRE BRICK SHALL BE LAID BY DIPPING EACH BRICK IN THIN FIRE CLAY MORTAR THEN RUBBING THE BRICK INTO PLACE SO AS TO FORCE AS MUCH OF THE MORTAR OUT OF THE JOINT AS POSSIBLE, THE SURPLUS MORTAR THEN SCRAPED OFF THE FACE.

216. FACE BRICK BOND SHALL BE LAID OUT AND ADJUSTED TO THE REQUIREMENTS OF EACH SPACE BEFORE ANY BRICK ARE LAID. SEE DRAWINGS NOS. 200 AND 202. BRICK IN RUSTICATIONS SHALL BE FULL BRICK WHERE BACKED WITH BRICK.

217. HEADERS IN COMMON BOND, EXCEPT AT CORNERS AND JAMBS, SHALL CENTER ON THE STRETCHERS OR ON THE JOINTS OF ADJOINING COURSES. THE HORIZONTAL JOINTS SHALL BE OF UNIFORM WIDTH AND THE VERTICAL JOINTS SHALL NOT VARY NOTICEABLY FROM THE WIDTH OF THE HORIZONTAL JOINTS. FACE BRICK LAID UP COMMON BOND SHALL HAVE FULL BRICK HEADERS FOR EVERY SIXTH COURSE WHEN BACKED WITH BRICK.

218. BONDING OF FACE BRICK TO CONCRETE SHALL BE BY MEANS OF METAL TIES ADJUSTABLY ATTACHED TO SECURE FASTENINGS OR ANCHORAGE PROPERLY LOCATED AND BUILT INTO THE CONCRETE. TIES SHALL BE IN EVERY FOURTH COURSE AND SPACE NOT OVER TWO FEET APART. SEE DRAWING NO. 410.

219. HOLLOW TILE AND GYPSUM BLOCK.--HOLLOW TILE SHALL BE LAID IN MORTAR ELSEWHERE SPECIFIED. GYPSUM BLOCK SHALL BE LAID IN GYPSUM CEMENT MORTAR, AND SHALL OTHERWISE BE LAID IN THE SAME MANNER AS SPECIFIED FOR HOLLOW TILE. HOLLOW TILE SHALL BE LAID TO TRUE LINES AND PLUMB AND BE REGULARLY BONDED AND PROPERLY JOINED TO OTHER WORK WITH WHICH IT IS TO CONNECT. PARTITION AND FURRING TILE TERMINATING AGAINST SOFFITS OR UNLATHED CEILINGS SHALL BE TIGHTLY WEDGED AT THE TOP AND THE JOINT FILLED WITH MORTAR. PARTITIONS TERMINATING AT LATHED CEILINGS SHALL EXTEND 2 INCHES ABOVE THE CEILING LEVEL WHERE PRACTICABLE.

220. RISER CHASES FOR PIPES SHALL BE BUILT AS REQUIRED. PIPE SPACES SHALL NOT BE ENCLOSED UNTIL SO DIRECTED.

221. TIES FOR BONDING TILE FURRING TO BRICK WORK SHALL BE OF WIRE NETTING. FOR TIES BONDING TILE FURRING TO CONCRETE SEE PARAGRAPH NO. 196. TIES SHALL BE PLACED IN STAGGERED ROWS WITH NOT LESS THAN ONE TIE FOR EVERY 3 SQUARE FEET OF FURRING.

222. OTHER WORK.--ALL WORK REQUIRED TO BE BUILT INTO MASONRY, AND ALL COUNTERFLASHINGS, ANCHORS, OR FASTENINGS FOR, OR PREPARATION FOR OTHER WORK REQUIRED TO BE ERECTED LATER, SHALL BE PROPERLY BUILT IN AS DIRECTED.

223. PREVENTION OF STAINING.--PRECAUTIONS SHALL BE TAKEN TO PREVENT STAINING OR SOILING OF MASONRY THAT IS TO BE EXPOSED TO VIEW. ALL SUCH WORK WHEN EXPOSED TO THE WEATHER SHALL, UNTIL COMPLETED, HAVE THE TOP COVERED AND SCAFFOLD BOARDS TURNED BACK FROM THE FACE AT ALL TIMES WHEN WORK IS SUSPENDED.

224. CLEANING.--FACE BRICK WORK SHALL BE THOROUGHLY CLEANED IN SO FAR AS PRACTICABLE COINCIDENT WITH THE CLEANING OF EXTERIOR MARBLE AND ARCHITECTURAL TERRA COTTA. CLEANING SHALL BE DONE WITHOUT THE USE OF ACID.

STONE WORK.

225. GENERAL.--THIS SECTION OF THE SPECIFICATION INCLUDES ALL EXTERIOR STONE, GRANITE AND MARBLE WORK REQUIRED. WHERE THE WORK "STONE" IS USED WITHOUT QUALIFICATION ON THE DRAWINGS AND IN THIS SPECIFICATION, IT REFERS TO EITHER LIMESTONE OR SAND STONE, GRANITE OR MARBLE. THE CONTRACTOR HAS THE OPTION OF EITHER LIME STONE OR SAND STONE, BUT NOT BOTH.

226. ALL STONE OF ITS COLOR AND KIND SHALL BE OBTAINED FROM ONE QUARRY, AND MILLS SHALL HAVE AMPLE CAPACITY AND FACILITIES TO INSURE PROMPT DELIVERY IN SUCH QUANTITIES AND SEQUENCE AS WILL NOT CAUSE ANY DELAY IN THE PERFORMANCE OF THE WORK.

227. STONE SHALL BE SO DELIVERED, PILED AND HANDLED AT ALL TIMES AS TO PROTECT IT AGAINST DAMAGE. ANY STONE, THAT IS CHIPPED OR STAINED SHALL BE SO REDRESSED OR CLEANED TO REMOVE ALL TRACES OF SUCH DEFECTS FROM EXPOSED SURFACES BEFORE IT IS SET IN THE WALL, PROVIDED THE WIDTH AND DEPTH OF BED IS NOT REDUCED TO LESS THAN THE REQUIRED WIDTH; OTHERWISE, THE STONE SHALL BE REJECTED. THE PATCHING OR HIDING OF DEFECTS WILL NOT BE PERMITTED.

228-229. QUALITY AND FINISH.--SEE NOTES ON DRAWING No. 100. STONE SHALL BE SOUND, DURABLE AND OF THE UNIFORM QUALITY AND TEXTURE. THESE MATERIALS SHALL BE FREE FROM DRY SEAMS, QUARRY SAP OR MINERAL STAINS. NATURAL VARIATIONS CHARACTERISTIC OF THE MATERIAL THAT DO NOT IMPAIR ITS STRENGTH OR DURABILITY, OR MAR ITS APPEARANCE SHALL BE ACCEPTABLE.

230. LIMESTONE SHALL BE VARIEGATED IN THE LIGHT BUFF AND GRAY TONES. SAND STONE SHALL BE A MEDIUM GRAINED LIGHT GRAY HARD SAND STONE.

231. GRANITE SHALL BE MEDIUM GRAINED LIGHT GRAY, PRACTICALLY FREE FROM DARK KNOTS, VEINS OR MARKING.

232. MARBLE PANELS SHALL BE TOKEEN. COLUMN DRUMS AT 4TH STREET ENTRANCE SHALL BE GRAVINA.

233. NOTE.--THE NAMING OF MARBLES IS FOR THE PURPOSE OF INDICATING THE TYPE REQUIRED, BUT IS NOT INTENDED TO EXCLUDE ANY MARBLE WHICH CORRESPONDS IN QUALITY, COLOR, FORM OF MARKING AND IN TEXTURE TO THOSE NAMED. CONSIDERATION WILL BE GIVEN TO MARBLES OBTAINED FROM QUARRIES SELECTED BY THE CONTRACTOR, PROVIDED THEY MEET THE ABOVE REQUIRMENTS.

234. LIME STONE OR SAND STONE SHALL HAVE A FINISH EQUAL TO A SAND RUBBED SURFACE.
GRANITE SHALL BE SIX CUT.
MARBLE SHALL BE POLISHED.

235. DRAWINGS.--JOINTING AND SETTING PLANS IN TRIPLICATE SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT, BEFORE ANY WORK IS GOTTEN OUT. JOINTING PLANS SHALL SHOW TYPICAL AND SPECIAL ANCHORING AND SETTING PLANS SHALL GIVE THE NUMBER AND DIMENSION OF EACH STONE.

236. REVEALS AT DOORS AND WINDOWS SHALL BE WITHOUT VERTICAL JOINTS, AND RETURNS SHALL BE NOT LESS THAN INDICATED ON THE CONTRACT DRAWINGS. STONE AT GRADE SHALL EXTEND AT LEAST 4 INCHES BELOW SAME. JOINTS SHALL BE MAINTAINED PLUMB AND NO STONE SHALL HAVE LESS THAN A 4 INCH BED, UNLESS OTHERWISE SHOWN ON DRAWINGS.

237. CUTTING.--FINISH SURFACES SHALL BE TRUE AND FACES OF STONE IN THE SAME PLANE SHALL BE FLUSH AT JOINTS. MOULDINGS AND ARRISES SHALL BE SHARP AND TRUE AND CONTINUOUS AT JOINTS. BEDS AND JOINTS SHALL BE AT RIGHT ANGLES TO THE FACE OF THE STONE AND PROJECTING COURSES SHALL GENERALLY HAVE A DRIP ON THE UNDER SIDE.

238. BEDS AND JOINTS WHEN MACHINE CUT SHALL BE FULL AND SMOOTH OVER THE ENTIRE AREA. BEDS AND JOINTS NOT MACHINE CUT SHALL BE DRESSED FULL AND SMOOTH AT LEAST 1-1/2 INCHES FROM THE FACE AND THE BEDS AND JOINTS SHALL BE POINTED AND TOOLED OVER THE REMAINDER OF THE AREA.

239. BEDS AND JOINTS OF GRANITE SHALL BE CUT FULL AND SQUARE FOR A DISTANCE OF 2 INCHES FROM THE FACE FROM WHICH POINT THEY MAY FALL OFF NOT TO EXCEED 1 INCH IN 12 INCHES AND SHALL BE REASONABLY FREE FROM LARGE CUPPINGS OR DEPRESSIONS. BACKS SHALL BE SCABBLED OR SPLIT TO APPROXIMATE VERTICAL SURFACES WITHIN 1 INCH OF THE TRUE VERTICAL SURFACE.

240. MOULDINGS OR PROJECTIONS SUBJECT TO PRESSURE SHALL HAVE SEATS CUT ON THE UPPER SURFACE TO RECEIVE THE WEIGHT OF THE WORK ABOVE; THE OUTER EDGE OF THE SEAT TO BE KEPT BACK AT LEAST 2 INCHES FROM THE FACE OR FRONT EDGE OF THE STONE.

241. DOORS AND WINDOW SILLS AND STACK CAP SHALL BE CUT WITH A WASH AND HAVE A RAISED FILLET AT THE BACK. WINDOW SILLS WHICH PROJECT SHALL HAVE A DRIP UNDER THE OUTER EDGE. FALSE JOINTS SHALL BE CUT AS REQUIRED. SEE DRAWINGS NOS. 100 AND 200.

242. LETTERS, NUMERALS, ETC., ON CORNER STONE SHALL BE CLEAN CUT TO PERFECT OUTLINES WITH SMOOTH INCISED SURFACES. SEE DRAWING No. 100.

243. STONES RESTING ON STRUCTURAL WORK SHALL HAVE BEDS CUT TO FIT THE SUPPORT. STONE COMING IN CONTACT WITH STRUCTURAL STEEL OR STRUCTURAL CONCRETE SHALL BE BACKCHECKED AS REQUIRED, BUT SUCH CHECKING SHALL NOT IMPAIR THE LATERAL STRENGTH OR BEARING CAPACITY OF THE STONE.

244. HOLES AND SINKAGES SHALL BE CUT FOR ALL ANCHORS, CRAMPS, DOWELS, ETC., REQUIRED. STONES WEIGHING MORE THAN 100 LBS. SHALL HAVE LEWIS HOLES. REGLETS SHALL BE PROVIDED FOR METAL FLASHINGS OR COUNTERFLASHINGS IN CONNECTION WITH STONE WORK. REGLETS ARE SHOWN BY MISCELLANEOUS DETAIL No. 16.

245. COPING OF PARAPET OF LOW ROOFS IN COURT SHALL HAVE CRAMPS AT ALL VERTICAL JOINTS. JOINTS IN STACK CAP SHALL HAVE SIMILAR CRAMPS. SINKAGES FOR CRAMPS ARE SHOWN BY MISCELLANEOUS DETAIL No. 77.

246. FREE STANDING BALUSTERS SHALL HAVE METAL DOWELS AT TOP AND BOTTOM. TOP RAIL SHALL HAVE DOWELS IN JOINTS THAT OCCUR OVER BALUSTERS.

247. COLUMN SHAFTS SHALL HAVE DOWELS AT EACH JOINT OF HARD STONE OR SLATE CUBES NOT LESS THAN 2 INCHES IN SIZE.

248. EACH STONE THAT DOES NOT HAVE AT LEAST ONE BED BONDED TO THE BACKING BY CONTACT WITH A BOND STONE OR COURSE THAT EXTENDS BACK INTO THE WALL SHALL HAVE AT LEAST ONE ANCHOR FOR EACH 2 FEET OR FRACTION THEREOF IN LENGTH. FIFTH STORY MARBLE PANELS SHALL HAVE SPECIAL ANCHORAGE BUILT INTO THE CONCRETE. SPECIAL ANCHORAGE SHALL BE PROVIDED FOR BELT COURSE AND LINTELS OVER COLUMNS AND STONE ABUTTING CONCRETE CONSTRUCTION. SEE DRAWING No. 402.

249. TRIMMING.--ALL IRREGULARITIES WHICH MAY OCCUR IN SETTING SHALL BE TRIMMED TO THE PROPER LINES AND FACES AND REFINISHED. ALL CUTTING OF STONE WORK SHALL BE DONE AS REQUIRED FOR FITTING TO OR CONNECTING WITH THE OTHER WORK.

250. MORTAR.--MORTAR FOR SETTING STONE AND MARBLE SHALL BE CLASS D. THE BACK OF EACH PIECE OF STONE OR MARBLE SHALL BE PLASTERED WITH SETTING MORTAR WHICH SHALL BE ALLOWED TO SET BEFORE BACKING UP.

251. MORTAR FOR SETTING AND POINTING GRANITE SHALL BE CLASS A.

252. POINTING MORTAR FOR STONE AND MARBLE WORK SHALL BE COMPOSED OF ONE VOLUMN OF WHITE CEMENT AND TWO OF SAND WITH SUFFICIENT COLD LIME PUTTY TO MAKE A STIFF MIX. POINTING MORTAR SHALL BE COLORED AS REQUIRED FOR FACE BRICK WORK. SEE NOTE ON DRAWING No. 100.

MWA

253. SETTING.--EACH STONE SHALL BE THOROUGHLY CLEANED, THEN SPONGED WITH CLEAN WATER JUST BEFORE SETTING AND APPLYING THE BACK PLASTER. SET EACH STONE LEVEL AND TRUE TO LINE IN A FULL BED OF PLASTIC MORTAR AND TAP HOME TO A FULL EVEN BEARING. JOINTS BETWEEN STONES SHALL BE UNIFORMLY 1/4 INCH WIDE AND SHALL BE LEFT AT LEAST 1/2 INCH DEEP ON THE FACE FOR POINTING. STONE IN CONNECTION WITH BRICK FACING SHALL HAVE THE BED OF THE BRICK AND STONE MORTAR JOINT COINCIDE. KEEP MORTAR OFF EXPOSED FACES OF STONE.

254. SILLS SHALL BE BEDDED AT ENDS ONLY AND AFTER THE WALLS ARE BUILT THE JOINTS UNDER SILLS SHALL BE FILLED AND POINTED.

255. FURNISH AND BUILD IN ALL CRAMPS, ANGLES, BOLTS, ANCHORS, DOWELS, ETC., REQUIRED. PIECES WITH CONSIDERABLE PROJECTION OR OVER-HANG TO BE SECURELY BRACED UNTIL ANCHORED TO THE CONCRETE COLUMNS OR THE MORTAR HAS SET AND THE WALL ABOVE SAME BUILT.

256. SET COPINGS, STACK CAP AND PROJECTING BELT COURSE WITH VERTICAL JOINTS DRY, THEN CAULK ON EXTERIOR PROFILE WITH PICKED OAKUM AND FILL THE JOINTS SOLID WITH A 1 TO 1 GROUT OF WHITE CEMENT AND FINE WHITE SAND TO WITHIN 2 INCHES OF THE TOP.

257. THE SUNK CURB OF DRIVEWAY OUTSIDE OF BUILDING LINE SHALL BE SET STRAIGHT AND TRUE ON A SUB-BASE EXTENDING BELOW FROST LINE OF COARSE GRAVEL OR BROKEN STONE. JOINTS TO BE LEFT OPEN.

258. CLEANING AND POINTING.--ON COMPLETION OF THE WORK AND AFTER THE MASONRY WORK ABOVE HAS BEEN CLEANED, ALL STONE WORK SHALL BE CLEANED WITH SOAP POWDER AND CLEAN WATER AND APPLIED WITH STIFF FIBER BRUSHES AND THEN RINSED WITH CLEAN WATER.

259. JOINTS IN THE WASH SURFACE OF COPING, TOP AND BOTTOM RAIL OF BALUSTRADE, STACK CAP, PROJECTING COURSES, ETC., SHALL BE CAULKED WITH LEAD WOOL TO WITHIN 1 INCH OF THE SURFACE, THEN FILLED SOLID WITH ELASTIC POINTING COMPOUND. SEE MISCELLANEOUS DETAIL No. 19. POINTING COMPOUND SHALL BE LIGHT IN COLOR, ELASTIC AND WATERPROOF. IT SHALL NOT STAIN THE STONE OR MARBLE NOR BE AFFECTED BY INDEFINITE EXPOSURE TO EXTREMES OF OUTSIDE TEMPERATURES.

260. ALL FACE JOINTS SHALL BE BRUSHED CLEAN 1/2 INCH IN DEPTH, WET THOROUGHLY AND POINTED FULL AND FLUSH WITH POINTING MORTAR.

261. ANCHORS, DOWELS, ETC.--METAL DOWELS SHALL BE 3 INCHES LONG AND CUT FROM 1/2 INCH BRASS PIPE OF IRON PIPE SIZES.

262. TIE RODS, BOLTS, ANGLES, ETC., FOR ANCHORING STONE WORK TO STRUCTURAL CONCRETE BACKING SHALL BE ZINC COATED.

263. ANCHORS, BOLTS, CRAMPS, ETC., SHALL BE OF WROUGHT IRON AND ZINC COATED AFTER FABRICATION.

264. CRAMPS SHALL BE 1/2 INCH BY 3/4 INCHES IN SIZE WITH ENDS TURNED 1 INCH INTO THE STONE. CRAMPS TO BE 10 INCHES LONG AFTER BENDING. SEE MISCELLANEOUS DETAIL No. 77.

265. EXPANSION BOLTS SHALL BE AT LEAST 1/2 INCH IN DIAMETER WITH DOUBLE EXPANSION SLEEVES.

266. FOR SPECIAL ANCHORS FOR COLUMN LINTELS, BELT COURSE AND ANCHORAGE OF STONE WORK TO STRUCTURAL CONCRETE SEE DRAWINGS Nos. 200 AND 402.

ARCHITECTURAL TERRA COTTA.

267. GENERAL.--THE EXTENT AND CHARACTER OF ARCHITECTURAL TERRA COTTA WORK IS INDICATED ON THE DRAWINGS. FOR DETAILS AND COLORING OF ENTABLATURE, 5TH STORY BELT COURSE, THE ARCHITRAVE OF WINDOWS, AND THE SPANDREL PANELS AT 3RD AND 4TH FLOORS SEE DRAWINGS Nos. 200 AND 201. MODELS Nos. 1 AND 3 AS FURNISHED BY THE GOVERNMENT WILL BE PAINTED IN THE DESIRED COLORS WHICH SHALL BE EXACTLY REPRODUCED IN THE FINISHED WORK.

268. QUALITY.--TERRA COTTA SHALL BE SOUND, HARD BURNED, OF EVEN TEXTURE AND FREE FROM DEFECTS. IT SHALL GIVE A CLEAR, BELL-LIKE RING WHEN STRUCK.

269. TERRA COTTA SHALL HAVE A FINISH OF THE COLORS AND TEXTURE NOTED. SEE DRAWINGS Nos. 100 AND 201. FINISH SHALL BE APPLIED BEFORE BURNING AND SHALL THOROUGHLY COAT THE EXPOSED SURFACES. COLORS AND TEXTURES SHALL BE PERMANENT.

270. PIECES THAT ARE WARPED, DISCOLORED, SPALLED, CRACKED OR SHOW A TENDENCY TO CRAZE OR PEEL WILL BE REJECTED. THE HIDING OR PATCHING OF DEFECTS SHALL NOT BE PERMITTED.

271. DRAWINGS.--JOINTING AND SETTING PLANS IN TRIPLICATE SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT BEFORE ANY OF THE WORK IS GOTTEN OUT. PLANS SHALL SHOW TYPICAL AND SPECIAL ANCHORING AND THE NUMBER AND DIMENSION OF EACH PIECE.

272. WORKMANSHIP.--WALLS SHALL BE AT LEAST 1 INCH THICK, AND PARTITIONS SHALL BE OF THICKNESS AND SPACING BEST SUITED TO THE REQUIRED DESIGN AND LOCATION. NO PIECE SHALL HAVE LESS THAN 3 INCH BED. ANCHOR HOLES SHALL BE PROVIDED AS REQUIRED IN EACH PIECE.

273. LINES AND SURFACES SHALL BE AS STRAIGHT AND TRUE AS CAN BE OBTAINED IN TERRA COTTA AND SHALL BE CONTINUOUS AT JOINTS. ORNAMENT SHALL FAITHFULLY REPRODUCE THE MODELS OR DETAILS FURNISHED. FOR JOINTING OF SPANDREL PANELS, SEE DETAILS ON DRAWING 201. ALL OTHER JOINTS SHALL BE STRAIGHT AND TRUE AND UNIFORMLY 1/4 INCH WIDE.

274. WORK SHALL BE LAID OUT AT THE FACTORY AND, WHERE NECESSARY TO SECURE ACCURATE DIMENSIONS AND JOINTS OF UNIFORM WIDTHS, THE MATERIAL SHALL BE SIZED STRAIGHT AND TRUE. EACH PIECE SHALL BE NUMBERED TO CORRESPOND WITH THE NUMBER GIVEN ON THE SETTING PLANS.

275. WINDOW SILLS SHALL BE FORMED WITH A WASH AND HAVE A RAISED FILLET AT THE BACK AND A DRIP SHALL BE FORMED IN PROJECTING SILLS.

276. SETTING.--TERRA COTTA SHALL BE CLEANED BEFORE SETTING AND SHALL BE DAMP WHEN SET. IT SHALL BE SET IN FULL MORTAR BEDS AND ALL JOINTS FILLED AND POINTED. PORTIONS OF TERRA COTTA IN THE WALL SHALL BE FILLED AS INDICATED. PROJECTING COURSES SHALL NOT BE FILLED BEYOND THE FACE OF THE WALL. ALL MORTAR SHALL BE CLASS D. POINTING MORTAR SHALL BE COLORED AS REQUIRED FOR FACE BRICK WORK. SEE DRAWING NO. 100.

277. CLEANING.--ON COMPLETION OF THE WORK, THE TERRA COTTA SHALL BE CLEANED DOWN IN THE SAME MANNER AS SPECIFIED FOR STONE WORK.

278. ANCHORS.--FOR SPECIAL ANCHORS OF CORNICE, COPINGS AND TYPICAL ANCHORAGE OF TERRA COTTA TO STRUCTURAL CONCRETE SEE DETAILS ON DRAWINGS NOS. 201 AND 406. ALL OTHER ANCHORS SHALL BE 1/4" SQUARE OR 3/8" DIAMETER ROUND RODS BENT AS INDICATE AND BUILT INTO THE MASONRY OR CONCRETE. ALL ANCHORS SHALL BE ZINC COATED.

279. THROUGH FLASHINGS.--FOR FELT FLASHING IN CORNICE SEE SPECIFICATION FOR "THROUGH PLASTIC CORNICE FLASHING."

280. THE THROUGH PLASTIC FLASHINGS SHALL BE IN PERFECT WATERTIGHT CONDITION AT THE TIME THE SUPERIMPOSED TERRA COTTA IS SET AND THIS CONTRACTOR SHALL TAKE THE UTMOST PRECAUTIONS NOT TO PUNCTURE OR OTHERWISE DAMAGE THE FLASHINGS IN THE PROCESS OF SETTING THE TERRA COTTA.

STRUCTURAL METAL WORK.

281. STEEL SHALL COMPLY WITH THE REQUIREMENTS OF MASTER SPECIFICATION NO. 352A FOR STRUCTURAL STEEL FOR BUILDINGS.

282. STEEL SHALL BE CLEAN AND FREE FROM MILL SCALE OR FLAKE RUST OR RUST PITTING.

283--284.--MILL AND SHOP INSPECTION WILL BE MADE BY GOVERNMENT REPRESENTATIVES, UNLESS SUCH INSPECTION IS WAIVED BY THE SUPERVISING ARCHITECT. AFTER THE AWARD OF THE CONTRACT THE CONTRACTOR SHALL INFORM THE SUPERVISING ARCHITECT AS TO WHERE THE MATERIAL IS TO BE ROLLED, AND WHERE IT IS TO BE FABRICATED, AND THE ESTIMATED TONNAGE.

285. IN CASE MILL INSPECTION IS WAIVED BY THE SUPERVISING ARCHITECT THE CONTRACTOR SHALL FURNISH CERTIFIED COPIES OF THE MILL ANALYSIS SHOWING THAT THE MATERIAL TO BE USED IS IN CONFORMITY TO THE CONTRACT REQUIREMENTS.

286. CASTINGS SHALL BE OF GRAY IRON, TRUE TO PATTERN, CLEAN AND FREE FROM INJURIOUS FLAWS OR DEFECTS.

287. SHOP DRAWINGS IN QUADRUPLICATE SHOWING SETTING DIAGRAMS AND DETAILS OF ALL STRUCTURAL MEMBERS, AND BASED ON THE CONTRACT REQUIREMENTS, SHALL BE SUBMITTED FOR APPROVAL OF THE SUPERVISING ARCHITECT.

288. ANY APPROVED STEEL SHAPES MAY BE USED WHICH WILL NOT CHANGE THE ARCHITECTURAL LINES. BEAMS SHALL HAVE SECTION MODULI EQUAL TO THOSE CALLED FOR. COLUMNS SHALL HAVE CROSS-SECTIONAL AREAS AND RADII OF GYRATION EQUAL TO THOSE CALLED FOR.

289. BEARING PLATES SHALL BE PROVIDED FOR TRUSSES, ETC., RESTING ON MASONRY. UNLESS OTHERWISE INDICATED BEARING PLATES SHALL BE "STANDARD" SIZES AS GIVEN IN THE STRUCTURAL STEEL MANUFACTURERS HAND BOOKS.

290. STEEL LINTELS SHALL BE PROVIDED FOR ALL SQUARE HEAD OPENINGS IN MASONRY WHERE OTHER LINTELS ARE NOT INDICATED.

291. LINTELS FOR SINGLE PARTITIONS SHALL BE STEEL CHANNELS OF WIDTHS EQUAL TO THE THICKNESS OF THE PARTITION BLOCKS. LINTELS FOR DOUBLE PARTITIONS NOT OTHERWISE INDICATED SHALL BE OF STEEL ANGLES OF WIDTHS NOT LESS THAN THE THICKNESS OF THE TILE AND A DEPTH GENERALLY EQUAL TO THE WIDTH. LINTELS SHALL HAVE BEARINGS NOT LESS THAN 4-1/2 INCHES NOR LESS THAN 1 INCH PER FOOT OF SPAN.

291A. LINTELS COMPOSED OF MORE THAN 1 MEMBER SHALL BE RIVETED OR BOLTED TOGETHER AND HAVE SUITABLE SEPARATORS. FOR LINTELS SUPPORTING STONE LINTELS OVER MARBLE COLUMNS SEE DRAWING No. 402.

291B. ANGLE LINTELS SHALL BE PROVIDED FOR ALL OPENINGS IN TILE WALL FURRING. LINTELS SHALL EXTEND TO THE FACE OF THE FURRING, HAVE EQUAL LEGS UNLESS OTHERWISE INDICATED, AND BE SECURED TO WALLS WITH EXPANSION BOLTS.

292. WORKMANSHIP.--SHEARING AND PUNCHING SHALL BE WITHOUT RAGGED OR TORN EDGES. THE DIAMETER OF THE PUNCH SHALL NOT EXCEED THAT OF THE RIVET, OR THE DIAMETER OF THE DIE EXCEED THAT OF THE PUNCH, BY MORE THAN 1/16 INCH. THE THICKNESS OF MATERIAL IN PUNCHED WORK SHALL NOT EXCEED THE NOMINAL DIAMETER OF THE RIVET PLUS 1/8 INCH. HOLES SHALL BE ACCURATELY SPACED, SO THAT WHEN PARTS ARE ASSEMBLED HOT RIVETS WILL ENTER WITHOUT DISTORTION. HOLES SHALL BE ENLARGED ONLY BY REAMING. DRIFT PINS SHALL NOT BE DRIVEN WITH SUCH FORCE AS TO ENLARGE OR DISTORT THE HOLES.

293. RIVETS SHALL HAVE WELL FINISHED CONCENTRIC HEADS IN FULL CONTACT WITH THE METAL. ALL RIVETS SHALL BE TIGHT. SHOP RIVETS SHALL BE MACHINE DRIVEN. RIVETED PARTS SHALL BE CLOSELY DRAWN TOGETHER BEFORE RIVETING. SHOP CONNECTIONS GENERALLY SHALL BE RIVETED.

294. ALL MEMBERS SHALL BE FREE FROM TWISTS, KINKS, BUCKLES OR OPEN JOINTS. PARTS ASSEMBLED WITH RIVETS OR BOLTS SHALL BE IN CLOSE CONTACT, EXCEPT WHERE SEPARATORS ARE REQUIRED. ALL MEMBERS SHALL BE SO ACCURATELY MADE THAT WHEN ASSEMBLED THE PARTS SHALL COME TOGETHER WITHOUT DISTORTION AND WITHOUT SHIMMING. BEARING STIFFENERS FOR GIRDERS SHALL HAVE THEIR ENDS CLOSELY FITTED TO THE FLANGES AT POINTS OF CONCENTRATED LOADING. SEPARATORS FOR BEAMS SHALL BE CLOSE FITTING. BEARING ENDS OF COLUMNS SHALL HAVE MACHINED BEARINGS. TOPS OF COLUMN BASES OVER 2" THICK SHALL BE PLANED FOR THE COLUMN BEARING.

295. OTHER WORK.--OPEN HOLES SHALL BE PROVIDED AS NECESSARY FOR BOLTED CONNECTIONS OF OTHER WORK TO STRUCTURAL METAL WORK.

296. ERECTION.--ALL STRUCTURAL METAL WORK SHALL BE ACCURATELY SET AND PROPERLY SECURED IN PLACE. FIELD CONNECTIONS OF STEEL WORK MAY BE BOLTED.

297. BOLTED CONNECTIONS SHALL BE MADE WITH CLOSE FITTING BOLTS OF THE EXACT REQUIRED LENGTHS. BOLTED PARTS SHALL BE CLOSELY DRAWN TOGETHER AND NUTS DRAWN UP TIGHT AND BOLT ENDS UPSET.

298. ANCHOR BOLTS AND ANCHORS SHALL BE PROPERLY LOCATED AND BUILT INTO THE CONNECTING WORK IN ADVANCE. COLUMN BASES SHALL BE SET ON METAL SHIMS AND GROUTED SOLID WITH EQUAL PARTS OF PORTLAND CEMENT AND SAND. BEARING PLATES SHALL BE SET IN 1 TO 2 PORTLAND CEMENT MORTAR.

299. ALL STRUCTURAL METAL WORK SHALL HAVE SUITABLE TEMPORARY BRACES AND STAYS TO HOLD IT IN POSITION UNTIL PERMANENTLY SECURE.

300. PAINTING.--ALL STRUCTURAL METAL SHALL BE CLEANED FREE FROM SCALE, RUST, SAND AND ALL FOREIGN MATTER, AND, AFTER INSPECTION BE GIVEN A SHOP COAT OF PAINT. SURFACES IN CONTACT OR INACCESSIBLE AFTER ASSEMBLING SHALL BE PAINTED BEFORE ASSEMBLING. MACHINE FINISHED SURFACES SHALL BE PROTECTED FROM CORROSION.

301. AFTER ERECTION THE FIELD CONNECTIONS AND ALL ABRADED PLACES SHALL BE PAINTED, AND THE ENTIRE WORK BE GIVEN AN ADDITIONAL COAT OF PAINT.

302. PAINTING MATERIALS SHALL CONFORM TO THE U.S. GOVERNMENT MASTER SPECIFICATIONS. THE PAINT SHALL BE MIXED AS FOLLOWS:

FIRST COAT		SECOND COAT.	
RED LEAD, DRY	25 LBS.	RED LEAD, DRY	25 LBS.
RAW LINSEED OIL,	1 GALLON.	RAW LINSEED OIL,	1 GALLON.
TURPENTINE,	1/2 PINT.	TURPENTINE,	1/2 PINT.
		LAMP BLACK IN OIL	4 OUNCES.

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303. NO PAINT SHALL BE USED AFTER THE PIGMENT HAS CAKED OR HARDENED. THE PAINT SHALL BE KEPT WELL STIRRED WHILE IT IS BEING APPLIED. PAINT SHALL BE THOROUGHLY BRUSHED ON AND WELL WORKED INTO JOINTS AND OPEN SPACES. ALL SURFACES SHALL BE CLEAN AND DRY WHEN PAINTED.

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MISCELLANEOUS METAL WORK.

304. GENERAL.--THIS SECTION OF THE SPECIFICATION INCLUDES METAL WORK GENERALLY NOT SPECIFIED UNDER OTHER BRANCHES.

305. IRON AND STEEL WORK IN CONNECTION WITH STRUCTURAL STEEL WORK AND METAL WORK FOR ENTRANCES TO PASSENGER ELEVATORS AND REINFORCING METAL FOR CONCRETE, ANCHORS AND FASTENINGS FOR BRICKWORK, STONE WORK, ARCHITECTURAL TERRA COTTA WORK, AND WOOD WORK, AND LIGHT METAL FURRINGS FOR PLASTERING ARE INCLUDED IN THE SEVERAL SPECIFICATIONS FOR THESE BRANCHES OF THE WORK.

MATERIALS.

306. STEEL AND WROUGHT IRON SHALL BE STANDARD, WELL FINISHED, STRUCTURAL SHAPES, OR BAR STEEL, OR BAR IRON. NO DISTINCTION WILL BE MADE BETWEEN STEEL AND WROUGHT IRON.

307. CAST IRON SHALL BE SOFT, TOUGH, GRAY IRON. BRONZE CASTINGS SHALL BE COMPOSED OF 90% PURE ELECTROLYTIC OR LAKE COPPER, 7-1/2% HIGH GRADE SPELTER; 2-1/2% PURE TIN. WIRE NOT OTHERWISE SPECIFIED SHALL BE COLD DRAWN STEEL WIRE.

308. GAUGES OF PLATE AND SHEET IRON OR STEEL ARE U. S. STANDARD.

309. PIPE SHALL BE STANDARD IRON OR MILD STEEL, SCREW JOINTED PIPE. PIPE SIZES ARE THE NOMINAL INSIDE DIAMETERS. FITTINGS SHALL BE MALLEABLE RAIL FITTINGS.

310. SHOP DRAWINGS.--SHOP DRAWINGS SHALL SHOW SIZES OF PARTS, THICKNESS OF METAL, CONNECTIONS AND METHOD OF ASSEMBLING, AND ATTACHMENT TO CONNECTING WORK AND ATTACHMENT OF HARDWARE.

311. ALL SIZES, RIBS, FLANGES, ETC., SHALL BE SUFFICIENT FOR AMPLE STRENGTH AND STIFFNESS. JOINTS EXPOSED TO THE WEATHER SHALL BE FORMED TO EXCLUDE WATER.

312. SHOP DRAWINGS IN TRIPLICATE ARE REQUIRED AS FOLLOWS:

RADIATOR AND VENT GRILLES. (EACH KIND.)
P. O. SCREEN GRILLE.
GRILLE OVER MAIN ENTRANCE DOOR.
GRILLE IN OPENING NO. 1/17A.
WIRE PARTITION INCLUDING DUTCH DOOR.
ENTRANCE DOOR FRAMES.
FLAG POLE.
WROUGHT IRON RAILINGS AND BALUSTRADES.
PENT HOUSE STAIR INTERIOR AND EXTERIOR.
MAILING VESTIBULE DOOR AND JAMBS, NOS. 112, 114.
COURT ROOM RAILING POST.
COLLAPSIBLE GATE.

313. WORKMANSHIP.--CASTINGS SHALL BE SOUND, UNWARPED, TRUE TO PATTERN, AND FREE FROM INJURIOUS DEFECTS. INTERNAL ANGLES IN UNEXPOSED SURFACES SHALL BE FILLETED. ALL SURFACES SHALL BE CLEAN. SURFACES EXPOSED TO VIEW SHALL HAVE A SMOOTH AND WORKMANLIKE FINISH, WITH SHARP, TRUE WELL DEFINED LINES AND ARRISES.

314. WROUGHT WORK SHALL HAVE TRUE BENDS AND INTERSECTIONS. WELDS AND FORGINGS SHALL BE SMOOTH. WROUGHT MEMBERS SHALL HAVE WELDED CONNECTIONS WHEREVER PRACTICABLE. CONNECTIONS OF WROUGHT MEMBERS, NOT REQUIRED TO BE WELDED, SHALL BE RIVETED OR HALVED, OR TENONED AND HEADED. SMALLER MEMBERS PASSING THROUGH WIDER MEMBERS SHALL BE TIGHTLY CAULKED IN PLACE.

315. SHEARING AND PUNCHING SHALL BE FREE FROM RAGGED OR TORN EDGES. PUNCHING SHALL NOT BE DONE IN SUCH LOCATIONS OR IN SUCH THICKNESS OF MATERIAL AS TO INJURE OR DISTORT THE METAL.

316. JOINTS SHALL BE CLOSELY FITTED. ALL BUILT UP PARTS SHALL BE OUT OF WIND, RIGID, WELL BRACED AND FREE FROM OPEN JOINTS OR LOOSE CONNECTIONS. RIVETS AND BOLTS SHALL BE OF SUCH SIZE AND SPACING AS TO DRAW THE PARTS TOGETHER AND PROVIDE RIGID CONNECTIONS OF SUBSTANTIAL CHARACTER. BOLTS OR SCREWS SHALL NOT BE USED FOR CONNECTING PARTS OF MOVABLE GRILLES, GATES OR DOORS OR FOR FASTENING HINGES OR BUTTS WHERE POSSIBLE TO USE RIVETS.

317. EXPOSED RIVETS NOT REQUIRED TO BE FLUSH SHALL HAVE HEMISPHERICAL HEADS. WELDING MAY BE SUBSTITUTED FOR RIVETING WHERE PRACTICABLE, OR WHERE RIVETS ARE NOT REQUIRED BY THE CHARACTER OF THE DESIGN.

318. EXPOSED BOLTS NOT REQUIRED TO BE FLUSH SHALL HAVE HEXAGON HEADS AND NUTS. EXPOSED BOLT ENDS SHALL BE CUT OFF FLUSH. BOLT HEADS OR NUTS BEARING ON INCLINED SURFACES SHALL HAVE WASHERS BEVELED TO FIT.

319. RIVETS AND BOLTS AND SCREWS EXPOSED TO TRAFFIC, OR WHERE SO REQUIRED FOR PROPER CLEARANCE SHALL BE FLUSH.

320. WIRE PARTITION, ETC.--WIRE PARTITION IN P. O. WORK ROOM SHALL HAVE A FRAME WORK OF SQUARE STEEL TUBING FILLED WITH WIRE GRILLE PANELS, DOOR, ETC.

321. THERE SHALL BE AN UPRIGHT AT EACH END AND AT EACH CHANGE IN DIRECTION, WITH INTERMEDIATE UPRIGHTS WHERE SHOWN ON DRAWING No. 3. THE HORIZONTAL TUBES SHALL BE SECURED TO UPRIGHTS BY WELDING OR OTHER RIGID FLUSH CONNECTIONS.

322. UPRIGHTS SHALL HAVE FLANGED SHOES SECURED TO FLOOR WITH NOT LESS THAN FOUR HEAVY SCREWS. THE TOP SHALL BE SECURED TO THE CEILING IN SIMILAR MANNER. CHANNEL FRAMES OF WIRE GRILLE PANELS SHALL BE SECURED TO THE FRAME-WORK AT POINTS APPROXIMATELY 18 INCHES APART. SEE DETAIL No. 56.

323. GRILLES, GATES, PANELS, PARTITIONS, ETC., OF WOVEN WIRE SHALL HAVE PANEL FRAMES OF HOT ROLLED CHANNELS WITH WELDED CORNERS. FIXED PANELS SHALL BE SECURED TO THE FRAME WORK AT POINTS NOT MORE THAN 18 INCHES APART. THE CHANNEL FRAMES, WHEN HINGED, OR WHEN EXPOSED TO VIEW SHALL HAVE 1/8 INCH THICK COVER BANDS, CONTINUOUS AROUND CORNERS, SECURED TO FRAME WITH COUNTERSUNK RIVETS APPROXIMATELY 8 INCHES ON CENTERS. WIRES SHALL BE CRIMPED AT INTERSECTIONS AND DRAWN TIGHT WITH ENDS LOCKED OR HEADED AND FREE FROM SAG OR RATTLE. THE SIZE OF MESH SPECIFIED SHALL BE MEASURED PARALLEL WITH THE WIRE.

324. NON-SLIP SURFACES.--ALL WORK SUBJECT TO FOOT TRAFFIC, INCLUDING STAIR TREADS, MAN HOLE COVER, GUTTER COVERS, THRESHOLDS, ETC., SHALL HAVE GROOVED OR CHECKERED NON-SLIP SURFACES.

325. THRESHOLDS SHALL BE OF CAST BRONZE OR IRON AS INDICATED ON THE DRAWINGS. THRESHOLDS AT OPENINGS 112 AND 114 SHALL BE FLUSH. ALL THRESHOLDS SHALL BE SECURED IN PLACE WITH FLUSH BOLTS OR SCREWS.

326. THRESHOLDS NOT OTHERWISE REQUIRED SHALL BE 1/2 INCH HIGH AND NOT LESS THAN 2 INCHES WIDER THAN THE THICKNESS OF THE DOOR, WITH BEVELED EDGES. THRESHOLDS FOR DOUBLE DOORS SHALL HAVE SOCKETS FOR FOOT BOLTS SPECIFIED UNDER "BUILDERS HARDWARE".

327-328. PIPE RAILINGS, ETC.--PIPE RAILINGS SHALL HAVE SCREW JOINTED CONNECTIONS SO MADE AS TO SHOW NO THREADS WHEN ASSEMBLED. JOINTS EXPOSED TO THE WEATHER SHALL BE PUT TOGETHER WITH RED LEAD. RAIL FITTINGS SHALL BE CAST TO THE REQUIRED ANGLES AND THREADED. POSTS AND RAILS SHALL HAVE SUITABLE FLANGES AND BOLTS OR SCREWS FOR CONNECTION TO OTHER WORK. FLANGED POSTS SHALL HAVE FASTENINGS EQUIVALENT TO NOT LESS THAN FOUR 1/2 x 4 INCH BOLTS.

329. BRASS AND BRONZE.--EXPOSED UNORNAMENTED SURFACES OF BRONZE SHALL BE FINISHED SMOOTH BUT NOT POLISHED. BRONZE SHALL BE OXIDIZED STATUARY BRONZE COLOR. ORNAMENTED SURFACES SHALL BE ACID DIPPED AND FINISHED TO MATCH COLOR OF THE SMOOTH SURFACES. ALL VISIBLE FASTENINGS SHALL MATCH THE MATERIAL AND FINISH OF THE BRASS OR BRONZE.

330. ANCHORS.--ALL NECESSARY ANCHORS FOR SECURING METAL WORK IN PLACE SHALL BE PROVIDED, AND SHALL BE BUILT INTO CONNECTING WORK WHEREVER PRACTICABLE.

331. HARDWARE.--HARDWARE FOR MISCELLANEOUS METAL WORK SHALL, UNLESS OTHERWISE SPECIFIED, CONFORM TO THAT SPECIFIED UNDER "BUILDERS' HARDWARE". BUTTS AND BOLTS FOR ATTACHMENT TO PAINTED IRON WORK MAY BE OF IRON OR STEEL. BUTTS SHALL BE TEMPLATE BUTTS AND SHALL BE CUT DOWN AND DRILLED AS NECESSARY TO FIT. KNOBS FOR LATCHES AND HANDLES SHALL BE OF BRONZE TO MATCH THE FINISH OF THE "BUILDERS" HARDWARE". EXPOSED PARTS OF HARDWARE FOR ATTACHMENT TO BRASS OR BRONZE WORK SHALL MATCH THE MATERIAL AND FINISH OF THE BRASS OR BRONZE. STANDARD CYLINDER LOCKS SHALL BE FITTED TO THE MASTER KEY SYSTEM. 3 KEYS FOR EACH LOCK SHALL BE FURNISHED. SEE SPECIFICATION FOR "BUILDERS HARDWARE".

332. PREPARATION FOR HARDWARE.--METAL WORK SHALL BE FITTED FOR AND HAVE SUITABLE OPENINGS, SINKAGES AND SCREW HOLES FOR THE ATTACHMENT OF ALL HARDWARE.

333. ZINC COATING.--WORK SPECIFIED TO BE ZINC COATED SHALL BE HEAVILY COATED AFTER FABRICATION. ZINC COATED BOLTS SHALL NOT HAVE THREADS RECUT AFTER COATING.

334. PAINTING.--ALL IRON AND STEEL WORK SHALL BE THOROUGHLY CLEANED AND GIVEN A SHOP COAT OF PAINT. PAINTING MATERIALS SHALL CONFORM TO THE MASTER SPECIFICATIONS. RED LEAD PAINT SHALL BE MIXED AS FOLLOWS: NOT LESS THAN 25 LBS. DRY RED LEAD TO ONE GALLON OF LINSEED OIL AND NOT EXCEEDING 1/2 PINT OF OIL DRIER.

335. ANCHORS IN CONNECTION WITH MASONRY AND CONCRETE SHALL BE COATED WITH ASPHALTUM OR WITH RED LEAD UNLESS OTHERWISE SPECIFIED. INTERIOR IRON AND STEEL WORK THAT WILL BE EXPOSED TO VIEW (EXCEPT METAL COUNTER TOPS WHICH ARE NOT TO BE PAINTED) SHALL BE PAINTED WITH LINSEED OIL. ALL OTHER IRON AND STEEL WORK SHALL BE PAINTED WITH RED LEAD. PAINT SHALL BE EVENLY BRUSHED ON, AND ON EXPOSED SURFACES SHALL NOT BE ALLOWED TO RUN OR CLOG OR FILL THE CORNERS.

352. HAND RAIL BRACKETS.--SEE DETAIL No. 39. BRACKETS SHALL BE CAST IRON AND SHALL BE PLACED NEAR EACH END OF RAIL AND AT INTERMEDIATE POINTS, NOT OVER 6 FEET APART. THEY SHALL BE SECURED TO HOLLOW TILE BY TOGGLE BOLTS AND TO OTHER MASONRY OR CONCRETE BY SCREWS IN EXPANSION SLEEVES. PIPE HAND RAILS SHALL BE SECURED TO BRACKETS WITH TAP SCREWS.

353. STAIR BALUSTRADE FOR P. O. WORK ROOM STAIRS.--SEE DETAIL No. 40. BASE OF BALUSTRADE SHALL EXTEND TO THE STRUCTURAL SUPPORT. METAL NOSING FOR LANDING SHALL BE STANDARD SAFETY TREAD WITH NOSING. THE WOOD HAND RAIL IS SPECIFIED UNDER "WOOD WORK".

354. IRON STAIRS TO PENT HOUSE FLOOR AND OUTSIDE STAIR TO PENT HOUSE ROOF.--SEE DRAWING No. 105. THICKNESS OF CAST IRON TREADS NOT LESS THAN 3/8". RAILING SHALL BE OF PIPE SIMILAR TO MISCELLANEOUS DETAIL No. 74, MODIFIED TO SUIT THE CONDITIONS. SEE DRAWING No. 105.

355. METAL BUCKS.--DOORS Nos. B/1, B/2, B/3, 1, 2, AND 3. (SEE DRAWINGS Nos. 200 AND 202) SHALL HAVE STEEL CHANNEL BUCKS OF THE SIZE INDICATED. CHANNELS SHALL EXTEND TO THE STRUCTURAL FLOOR SLAB. THE CORNERS OF JAMBS AND HEADS SHALL BE WELDED OR CONNECTED WITH PLATES AND RIVETS. ANCHORS SHALL BE 1/4" x 1-1/4" x 12" BETWEEN BENDS RIVETED TO THE CHANNELS NEAR THE TOP AND BOTTOM WITH INTERMEDIATE ANCHORS NOT OVER 3 FEET APART.

356. METAL DOOR FRAMES, ETC.--FOR DOORS Nos. 112 AND 114. SEE DETAILS Nos. 49 AND 53. STEEL CHANNEL FRAMES SHALL EXTEND TO STRUCTURAL SLAB. THE CORNERS OF JAMBS AND HEAD SHALL BE WELDED OR CONNECTED WITH PLATES AND RIVETS. ANCHORS SHALL BE 1/4" x 1-1/4" x 18", PLACED NEAR TOP AND BOTTOM, AND NOT OVER 3 FEET APART.

357. SINKAGES FOR HINGES SHALL BE MADE IN FRAME AND DOOR. YOKES SHALL BE RIVETED TO THE HINGES SPECIFIED UNDER "BUILDERS' HARDWARE". THE STRAPS AND YOKES AND BUFFERS SHALL BE SECURED TO DOORS WITH THROUGH BOLTS.

358. WIRE GRILLE FOR DOORS NOS. B/27, B/39, 1/15 AND 1/16. SEE DETAIL No. 52. THE GRILLES SHALL BE FASTENED IN PLACE WITH OVAL HEAD SCREWS SPACED NOT MORE THAN 12-INCHES ON CENTERS.

359. METAL DUTCH DOOR.--SEE DETAIL No. 56. STOP PLATES SHALL BE SECURED TO THE DOOR POST WITH COUNTERSUNK RIVETS. BOTTOM OF LOWER DOOR SHALL ALSO BE PROVIDED WITH STOP PLATE.

360. EACH PANEL SHALL BE HUNG ON TWO 3" x 3" WROUGHT STEEL BUTTS. LOWER PANEL SHALL HAVE LATCH, TYPE 134, SPECIFICATION No. 336, FITTED TO MASTER KEY. OPERATION BY KEY FROM OUTSIDE, AND BY TURN KNOB FROM INSIDE OF CAGE. UPPER SECTION OF DOOR SHALL BE EQUIPPED WITH 4" SQUARE NECKED BOLT, WHICH WILL SECURE UPPER AND LOWER SECTIONS OF DOOR TOGETHER, SO THAT DOOR WILL OPERATE AS A UNIT, WHEN DESIRED.

361. LATCH AND BOLT SHALL BE PROPERLY MOUNTED ON SUITABLE STEEL PLATES OF SUFFICIENT SIZE TO PROTECT THEM AGAINST OPERATION FROM THE OUTSIDE. WOOD SHELF IS SPECIFIED UNDER "WOODWORK".

362. COURT ROOM RAILING IRON POST.--SEE DETAIL No. 57. POST SHALL BE OF CAST IRON AND ROSETTES AND FITTINGS FOR CORDS SHALL BE OF BRONZE. BASE PLATE SHALL BE SECURED TO CONCRETE BY SCREWS IN EXPANSION SLEEVES. POSTS SHALL BE TAP SCREWED TO BASE PLATES. CASTING SHALL HAVE A SPECIALLY FINE FINISH. BRONZE SHALL BE OXIDIZED, MEDIUM DARK STATUARY COLOR. FITTINGS FOR CORDS SHALL HAVE THIMBLE TO COVER AT LEAST 2" OF CORD, AND SO SHAPED TO PERMIT END OF CORD TO BE SPREAD AND SECURED WITH SUITABLE CEMENT. CORD SHALL BE SILK COVERED COTTON ROPE OF COLOR SELECTED. SAMPLE OF CORD AND TASSEL SHALL BE SUBMITTED TO THE SUPERVISING ARCHITECT FOR HIS APPROVAL.

336. ERECTION.--ALL METAL WORK SHALL BE ACCURATELY SET AND RIGIDLY SECURED IN PLACE. HINGED OR FOLDING OR SLIDING PARTS SHALL BE ERECTED COMPLETE AND FITTED AND ADJUSTED TO GOOD WORKING CONDITION.

337. COVERS AND FRAMES, CATCH BASIN.--SEE DETAIL NO. 1. FRAME FOR COVER OF CATCH BASINS IN GRASS AREAS SHALL HAVE FOUR 1/2" x 4" EXPANSION BOLTS FOR ANCHORAGE TO CONCRETE CATCH BASIN WALL.

338. MAN-HOLE OVER OIL STORAGE IS SPECIFIED UNDER "MECHANICAL WORK".

339. MANHOLES FOR ACCESS TO TUNNEL SHALL BE SIMILAR TO DETAIL NO. 1, EXCEPT THAT COVER SHALL BE SOLID WITH COUNTERSUNK DROP HANDLES. MANHOLE COVERS SHALL HAVE CHECKERED SURFACE AND BE SET FLUSH WITH FLOOR.

340. COAL HOLE AND COVER.--SEE DETAIL NO. 5. LOCKING BAR SHALL BE WELDED OR RIVETED TOGETHER AT ENDS. LOWER END OF HOOK SHALL BE HEADED TO PREVENT LOSS OF TAIL NUT.

341. SUB-DRAINAGE CLEANOUTS.--SEE DETAIL NO. 13.

342. SUB-DRAINAGE CATCH-BASINS.--SEE DETAIL NO. 14. THE CAST IRON COVER AND FRAME SHALL WEIGH APPROXIMATELY 330 POUNDS.

343. FOR INSTALLATION OF CAST IRON FRAMES, ETC., IN CONNECTION WITH SUB-DRAINAGE WORK. SEE SPECIFICATION FOR "SUB-DRAINAGE".

NOTE.--STOCK COVERS AND FRAMES OF SIMILAR DESIGN MAY BE USED PROVIDED CUTS OR DRAWINGS OF SAME ARE FIRST SUBMITTED TO AND APPROVED BY THE SUPERVISING ARCHITECT.

344. SIDEWALK GUTTER.--SEE DRAWING NO. 1. GUTTER AND COVER SHALL BE OF NOT LESS THAN 3/4" METAL, IN ONE SECTION. EACH END OF GUTTER SECTION SHALL HAVE A CAST BRACE ABOUT 2-1/2" WIDE, ACROSS TOP AND FLUSH WITH COVER. TOP OF BRACE CHECKERED LIKE COVER. ENDS OF GUTTER SECTION SHALL HAVE OVERLAPPING OUTSIDE FLANGES AT BRACE.

345. FLAG POLE.--SEE DETAILS NOS. 24 AND 25 AND DRAWING NO. 406.

346. THE FLAG POLE SHALL BE MADE UP OF STANDARD WROUGHT IRON OR STEEL PIPE WITH TELESCOPED, METAL TO METAL, JOINTS MADE TIGHT BY CAULKING THE METAL OF THE PIPE, AND WITHOUT THE USE OF OTHER MATERIALS.

347. THE TRUCK SHALL HAVE ALL IRON AND STEEL PARTS ZINC COATED. ALL JOINTS SHALL BE MADE AS TO EXCLUDE WATER. ALL BEARINGS SHALL BE MACHINE FINISHED. BALLS FOR BALL BEARINGS SHALL BE NOT LESS THAN 1/4" DIAMETER.

348. HALYARD CLEATS SHALL BE ZINC COATED. EACH SET OF HALYARDS SHALL HAVE THE ENDS SPLICED AROUND ZINC COATED THIMBLES AND HAVE ZINC COATED SWIVEL SNAP HOOKS.

349. THE STEEL AND IRON PARTS OF POLE SHALL BE THOROUGHLY CLEANED AND GIVEN TWO SHOP COATS OF DURABLE WEATHER RESISTING ENAMEL PAINT, OF COLOR SELECTED BY THE SUPERVISING ARCHITECT.

350. WEATHER BUREAU PLATFORM SUPPORTS.--SEE DETAIL NO. 32.

351. MAILING VESTIBULE BUFFER.--SEE DETAIL NO. 33 AND DRAWING NO. 207.

363. COLLAPSIBLE GATE.--SEE DETAIL No. 60. CHANNELS AND LATTICE MEMBERS SHALL BE OF STEEL CONNECTED WITH WASHERS. FILLERS SHALL WORK FREELY WITHOUT RATTLE OR BINDING. PADLOCK EYES SHALL BE SET AND FITTED FOR 1-3/4" BRONZE PADLOCK, TYPE No. 1. (SPECIFICATION No. 413A.) PADLOCK SHALL BE INCLUDED AND FITTED TO MASTER KEY. GATE SHALL BE 5 FOOT HIGH.

364. ASH HOIST DAVIT.--SEE DETAIL No. 68. DAVIT SHALL BE OF STANDARD SCREW JOINTED PIPE. EYE BOLT SHALL BE 3/4" WITH 1-1/2" DIAMETER EYE. PIVOT PLATE FOR FLOOR AND INTERMEDIATE BRACE SHALL BE SECURED WITH EXPANSION BOLTS.

365. SLIDING GRILLES.--SEE DETAIL No. 70. GRILLE SHALL BE OF BRONZE. BRONZE SHALL HAVE A SMOOTH MEDIUM STATUARY BRONZE FINISH. GRILLES FITTED FOR COUNTERWEIGHTS AND LOCK WHICH ARE SPECIFIED UNDER "BUILDERS' HARDWARE". (SEE DETAIL No. 73.)

366. PIPE RAILINGS.--SEE DETAIL No. 74. RAILING OF PENT HOUSE STAIRS SHALL BE SIMILAR CONSTRUCTION. SEE DRAWING No. 105.

367. LADDERS.--SEE DETAIL No. 93. FOR LOCATIONS OF LADDERS IN GROUND STORY AND TUNNELS SEE DRAWINGS Nos. 2 AND 104.

368. BULLETIN AND DIRECTORY FRONTS.--SEE MISCELLANEOUS DETAIL No. 99 AND DETAILS ON DRAWING No. 202. BRONZE WORK SHALL HAVE A SPECIAL FINE FINISH AND OXIDIZED A MEDIUM STATUARY BRONZE COLOR. BUTTS SHALL BE 3 INCH CAST BRONZE, 5 KNUCKLE FIXED PIN SECURED TO FRAME AND DOOR WITH COUNTERSUNK TAP SCREWS. LOCKS SHALL BE OF BRASS WITH FLAT KEY, CASE APPROXIMATELY 1-1/8" x 3/4" x 7/16", MOUNTED ON BACK OF DOOR AND LET INTO FACE OF DOOR FRAME. EXPOSED HARDWARE SHALL BE FINISHED TO MATCH COLOR OF BULLETIN AND DIRECTORY FRAME. BULLETIN AND DIRECTORY BACKBOARDS ARE SPECIFIED UNDER "WOODWORK", AND GLASS IS SPECIFIED UNDER "GLAZING".

369. MARQUISE HANGERS, ETC.--SEE DRAWING No. 207.

370. METAL COUNTER TOP.--METAL COVERING OF PARCEL POST COUNTER SHALL BE 1/8 INCH THICK SHEET STEEL. (SEE DRAWING No. 203) WITH A POLISHED FINISH. THE METAL SHALL BE NEATLY FLANGED OVER THE WOOD COUNTER TOP AND THE EXPOSED EDGES BEVELED. THE METAL SHALL BE FASTENED WITH FLAT HEAD SCREWS ABOUT 4 INCHES APART ALONG ALL EDGES.

371. CLEANOUT DOOR.--FRAME AND DOOR AT BASE OF STACK SHALL BE CAST IRON, EXTRA HEAVY, STOCK TYPE, OF THE SIZE NOTED ON DRAWING No. 2.

371A. TRAP DOORS.--DOORS IN FLOOR OF PENT HOUSE, (SEE DRAWING No.8) SHALL BE OF 1/8" PLATE, REINFORCED WITH RAILS AND STILES OF 1/4" PLATE RIVETED ON THE UNDERSIDE OF DOOR PLATE. RIVETS TO BE ABOUT 4" APART AND STAGGERED. DOOR STOP TO CONSIST OF 1/2" x 1" BAR TAPPED TO A 3" ANGLE FRAME BUILT INTO AND ANCHORED TO THE FLOOR CONSTRUCTION. EACH LEAF OF DOOR SHALL HAVE TWO DROP HANDLES ABOUT 18" APART AT EACH END FOR LIFTING DOORS CLEAR OF FRAME. DOOR SHALL BE FLUSH WITH FINISHED FLOOR LEVEL.

372. EXTERIOR GRILLES.--FOR GRILLES IN ENTRANCES B/1, B/2 AND B/3 SEE DRAWING No. 200. FOR GRILLES IN OPENING 1/17A SEE DRAWING No.207. GRILLES SHALL BE CAST IRON OF FINE TEXTURE WITH SHARP LINES CONFORMING TO DETAILS WHICH WILL BE FURNISHED. GRILLES SHALL ACCURATELY FIT THE METAL FRAMES HEREINAFTER SPECIFIED AND BE SECURED THERETO BY COUNTERSUNK TAP SCREWS SPACED NOT OVER 10" APART.

373. RADIATOR INCLOSURE GRILLES.--SEE DRAWINGS NOS. 202, 204, 205 AND 206. GRILLES SHALL BE PUNCHED STEEL OR BRONZE AS NOTED ON THE DRAWINGS; STEEL TO BE #10 GAUGE AND BRONZE 3/16" THICK. GRILLES WHEN SET IN ANGLE FRAMED OPENINGS SHALL HAVE SUITABLE LUGS TAP SCREWED OR BOLTED TO THE BUILT IN ANGLE FRAME, AND GRILLES SHALL BE SECURED TO THESE LUGS WITH FLUSH TAP SCREWS OR BOLTS IN SUCH A MANNER AS TO BE ENTIRELY REMOVED AND REPLACED WITHOUT DAMAGE TO ADJOINING WORK. GRILLES ELSEWHERE SHALL BE SECURED IN SUITABLE REBATES FORMED IN THE WOODWORK WITH COUNTERSUNK WOOD SCREWS. RADIATOR GRILLES SHALL HAVE SMALL HINGED ACCESS DOORS WHERE SHOWN ON DRAWINGS. PROVIDE THESE ACCESS DOORS WITH SUITABLE BUTTS AND CATCHES OF THE SAME MATERIAL AS THE GRILLES. METAL LINING OF RADIATOR ENCLOSURE SPACE IS SPECIFIED UNDER "SHEET METAL WORK".

374. VENT REGISTER GRILLES.--COURT ROOM VENT REGISTER GRILLES SHALL BE OF SIMILAR DESIGN TO RADIATOR GRILLES (SEE DRAWING NO. 206) AND SHALL BE FIRMLY SECURED WITH SUITABLE FASTENINGS TO THE LOUVER FRAME SPECIFIED UNDER "SHEET METAL WORK".

375. STAIR BALUSTERS.--BALUSTERS FOR MAIN STAIRWAY (SEE DRAWING NO. 105) SHALL BE WROUGHT IRON WITH CAST IRON NEWEL POSTS. THE WOOD HAND RAIL IS SPECIFIED UNDER "WOODWORK". POSTS SHALL BE FINE HIGH GRADE CASTINGS WITH SHARP LINES AND TRUE MOULDINGS. THE NEWEL POSTS SHALL HAVE SUITABLE LUGS OR ANGLES FOR FIRMLY SECURING POSTS TO STRUCTURAL CONCRETE WITH EXPANSION BOLTS OR OTHER SUITABLE ANCHORAGE. TOP AND BOTTOM BAR OF BALUSTERS SHALL BE SECURED TO POST BY TAP SCREWS THROUGH ANGLES OR BENT ENDS. WOOD HAND-RAIL SHALL BE SECURED TO TOP RAIL BY COUNTERSUNK SCREWS FROM THE UNDERSIDE. FOR RAILING IN SENATE CHAMBER, SEE DETAILS ON DRAWING NO. 204.

376. CAST IRON FRAMES.--FRAMES, TRANSOM BARS, MULLIONS, ETC., IN OPENINGS NOS. B/1, B/2, B/3 (SEE DRAWING NO. 200) AND IN NOS. 1, 2, 3 (SEE DRAWING NO. 202) AND IN NO. 1/17 (SEE DRAWING NO. 207) SHALL BE OF CAST IRON. THE DOORS, TRANSOMS AND SIDELIGHT SASH IN THESE OPENINGS ARE SPECIFIED UNDER "HOLLOW METAL WORK". ALL CASTINGS SHALL BE OF FINE TEXTURE, THE LINES SHALL BE SHARP, PROFILES ACCURATE AND ORNAMENT TRUE TO PATTERN. THE CASTINGS SHALL BE OF SUFFICIENT SIZE AND THICKNESS OF METAL TO INSURE PERFECT WORK AND THE REQUIRED STRENGTH FOR THE PURPOSE FOR WHICH THEY ARE INTENDED. CASTINGS WHICH ARE NOT REBATED SHALL BE CAST WITH LUGS AS MAY BE REQUIRED FOR CONNECTION TO ADJACENT SECTIONS AND TO OTHER WORK. FRAMES SHALL BE TAP SCREWED OR BOLTED NOT OVER 18" APART TO EACH FLANGE OF THE CHANNEL BUCKS SPECIFIED UNDER "MISCELLANEOUS METAL WORK". ALL MITERS IN CAST WORK SHALL BE CUT AND FILED SMOOTH AND THE FIT MADE PERFECT. CAST ORNAMENT SHALL HAVE SHARP EDGES AND COME FROM THE MOULDS CLEAN AND SMOOTH. NO PLANTED ON CAST ORNAMENT WILL BE ACCEPTED. ALL FACES OF METAL IN CONTACT SHALL BE MILLED TO A HAIR JOINT WITH METAL TO METAL AND ALL EXPOSED JOINTS SHALL BE MACHINED OR FILED TO A CLOSE FIT. ALL MOULDINGS AND ORNAMENT SHALL BE IN PERFECT ALIGNMENT AT THE JOINTS. REBATES FOR DOORS AND SASH SHALL BE MACHINED STRAIGHT AND TRUE. BOLTS AND SCREW HOLES SHALL BE DRILLED AND WHERE EXPOSED SHALL BE COUNTERSUNK. ALL WORK SHALL HAVE THE NECESSARY REINFORCEMENTS AND THE VARIOUS SECTIONS ASSEMBLED WITH CONCEALED FASTENINGS INSOFAR AS PRACTICABLE. ALL WORK EXPOSED TO THE WEATHER SHALL BE DESIGNED TO PREVENT WATER ENTERING THE JOINTS.

377. WHERE TWO OR MORE PIECES OF METAL ARE USED IN BUILDING UP MEMBERS THE CONTACT SURFACES SHALL BE BROUGHT TO A TRUE, SMOOTH SURFACE AND SECURED TOGETHER SO THE JOINTS SHALL BE ABSOLUTELY TIGHT AND INVISIBLE WITHOUT THE USE OF POINTING. THE USE OF PUTTY OR OTHER POINTING MATERIAL WILL NOT BE PERMITTED. WHERE EXPOSED SCREWS, BOLTS OR RIVETS CANNOT BE AVOIDED THEY SHALL BE MALLETED TO THE METAL AND FINISHED TO MATCH THE TEXTURE OF ADJACENT WORK.

378. WHERE HARDWARE IS REQUIRED THE METAL SHALL BE PROPERLY REINFORCED AND COUNTERSUNK TO RECEIVE THE WORK. WHERE HARDWARE IS SECURED WITH TAP SCREWS THE METAL SHALL BE AT LEAST 1/4" THICK TO PROVIDE A FIRM HOLD FOR THE SCREWS AND DEVELOPE THE NECESSARY STRENGTH.

379. HARDWARE IS SPECIFIED UNDER "BUILDERS' HARDWARE". THE GENERAL CONTRACTOR SHALL FURNISH THE CONCERN MAKING THE C. I. FRAMES WITH TEMPLATES OF THE NECESSARY APPROVED HARDWARE.

380. THE FINISHED CAST WORK SHALL BE EQUAL TO THAT WHICH CAN BE PRODUCED BY THE USE OF METAL PATTERNS.

381. THE MOULDS SHALL BE OF SAND OR COMPOSITION AS WILL SECURE THE MOST SATISFACTORY RESULTS.

382. PLAIN SURFACES BOTH FLAT AND MOULDED SHALL BE THOROUGHLY CLEANED AND FINISHED SMOOTH. ORNAMENT SHALL FAITHFULLY REPRODUCE THE DETAILS FURNISHED.

STEEL WINDOWS.

383. THIS SPECIFICATION SHALL INCLUDE ALL STEEL WINDOWS.

384. GENERAL.--THE WINDOWS SHALL BE FURNISHED COMPLETE WITH ALL NECESSARY ATTACHMENTS, ANCHORS, HARDWARE, ETC.

385. GLAZING IS INCLUDED UNDER "GLASS AND GLAZING".

386. HARDWARE SHALL BE OF PLAIN, HEAVY PATTERN, SPECIALLY DESIGNED FOR USE ON STEEL WINDOWS. STEEL ATTACHMENTS FOR MOUNTING HARDWARE SHALL BE WELDED OR RIVETED IN PLACE.

387. WINDOWS ABOVE FIRST STORY SHALL BE FITTED WITH BRONZE BOLTS FOR SAFETY BELT OF WINDOW CLEANERS. PROVIDE 4 WINDOW CLEANERS BELTS WITH ATTACHMENTS TO FIT THE BOLTS.

388. GAUGES OF SHEET METAL SPECIFIED ARE U. S. STANDARD.

389. SHOP DRAWINGS SHALL BE SUBMITTED IN TRIPLICATE FOR SUPERVISING ARCHITECT'S APPROVAL. DRAWINGS TO SHOW FULL-SIZE SECTIONS OF SASH AND FRAMES, DETAILS OF CONSTRUCTION, HARDWARE AND METHODS OF ANCHORING.

389A. AIR INFILTRATION.--THE AMOUNT OF AIR INFILTRATION THROUGH THE WINDOWS SHALL NOT EXCEED 1.25 CUBIC FEET OF AIR PER FOOT OF SASH PERIMETER PER MINUTE WHEN SUBJECTED TO A STATIC AIR PRESSURE EQUIVALENT TO THE PRESSURE EXERTED BY WIND AT A VELOCITY OF 25 MILES PER HOUR.

389B. WINDOWS FROM REGULAR PRODUCTION WILL BE SUBJECT TO TEST FOR AIR INFILTRATION BEFORE OR AFTER SHIPMENT. IF TESTS ARE MADE, THEY SHALL BE CONDUCTED UNDER THE SUPERVISION OF, AND IN THE MANNER PRESCRIBED BY, THE SUPERVISING ARCHITECT.

389C. EFFICIENCY OF WEATHERING SHALL NOT BE OBTAINED BY THE USE OF WEATHER STRIPS.

See Addendum No 2.

390. WINDOW CONSTRUCTION.--ALL FRAMING AND WEATHERING MEMBERS OF WINDOWS SHALL BE OF SOLID, ROLLED STEEL SECTIONS, PROCESS STRAIGHTENED AND SMOOTH ON EXPOSED SURFACES. NO PLATE OR STRIP STEEL PARTS SHALL BE USED UNLESS DEFINITELY SPECIFIED. WINDOWS SHALL BE DESIGNED FOR OUTSIDE PUTTY GLAZING.

391. JOINTS OF FRAMES SHALL BE MITERED OR BUTT JOINTED. CORNER JOINTS OF VENTILATORS SHALL BE MITERED. ENDS OF MUNTINS OR DIVISION BARS SHALL BE COPED OR MITERED, FLUSH ON THE FACE. ALL THE ABOVE MENTIONED JOINTS SHALL BE WELDED SOLID ALONG THE ENTIRE LINE OF CONTACT AND GROUND SMOOTH ON EXPOSED SURFACES.

392. DIMENSIONS OF STEEL SECTIONS (EXCEPT MUNTINS) AS GIVEN BELOW SHALL BE THE MINIMUM ACCEPTABLE: DEPTH FRONT TO BACK 1-7/16 INCHES FOR STATIONARY FRAMING MEMBERS, AND 1-1/4 INCHES FOR VENTILATOR MEMBERS. THICKNESS OF METAL 5/32 INCH, EXCEPT FLANGE SECTIONS MAY TAPER TO 1/8 INCH THICK AT OUTER EDGES. GLASS REBATES 3/8 INCH DEEP. WEATHERING CONTACTS 1/4 INCH WIDE. A TOLERANCE OF 2-1/2 PER CENT, PLUS OR MINUS, SHALL BE ALLOWED IN ANY OR ALL THE ABOVE MINIMUM DIMENSIONS.

393. MUNTINS SHALL BE AT LEAST 1/8 INCH THICK, NOT OVER 1 INCH WIDE ON THE FACE AND OF AMPLE DEPTH TO RECEIVE THE GLAZING BEADS OF INSIDE GLAZING.

394. THE SECTIONS OF FRAMES AND VENTILATORS SHALL BE DESIGNED TO GIVE THE SAME SUB-FRAME LINES AND SIGHT LINES FOR FIXED AND MOVABLE PARTS.

395. VENTILATORS.--VENTILATORS FOR WINDOWS 3/10A AND 4/29A SHALL BE TOP AND BOTTOM PIVOTED AT THE SIDE TO OPEN OUT, AND ALL OTHER VENTILATORS SHALL BE SIDE PIVOTED AT THE TOP TO SLIDE DOWN AND OUT, EXCEPT WINDOWS NOS. 1/15A, 1/16A, 1/17A SHALL BE SIDE PIVOTED AT THE BOTTOM TO OPEN IN, AS INDICATED ON THE DRAWINGS. PIVOTS SHALL BE RIVETED TO THE SASH AND SLIDE IN THE SUPPORTING FRAME, WITH STEEL TO BRASS OR BRONZE CONTACTS, AND HAVE COMPRESSION SPRINGS OR EQUIVALENT DEVICE ACCURATELY ADJUSTED AT THE FACTORY. SASH SHALL BE SUPPORTED, AND PROPERLY BALANCE, ON TWO STEEL ARMS PIVOTED TO THE SASH AND FRAMES WITH STEEL TO BRASS OR BRONZE BEARINGS.

396. VENTILATORS SHALL BE FREE FROM RATTLE OR TWIST, OPERATE EASILY AND STAND OPEN AT ANY POSITION.

397. WEATHERING.--VENTILATORS AND THEIR SUPPORTING FRAMES SHALL BE DESIGNED TO FORM A CONTINUOUS, TWO-POINT, FLAT-CONTACT, METAL TO METAL WEATHERING ALL AROUND THE VENTILATOR. WEATHERING TO INCLUDE OUTSIDE DRIPS AT TOP AND BOTTOM OF SASH AND REMOVAL OF CONDENSATION AT THE BOTTOM.

398. GLAZING BEADS.--GLAZING BEADS SHALL BE STEEL MOULDINGS NEATLY COPED OR MITERED AT CORNERS AND SECURED BY BRASS SCREWS OR BRASS

399. PAINTING.--THE STEEL SHALL BE THOROUGHLY CLEANED AND GIVEN A SHOP PRIMING COAT OF IRON OXIDE PAINT. FIELD COATS OF PAINT ARE INCLUDED UNDER "PAINTING AND FINISHING".

400. HARDWARE.--HARDWARE SHALL BE OF BRONZE, EXCEPT IN UNFINISHED ROOMS, IT MAY BE STEEL GALVANIZED.

401. VENTILATORS PIVOTED TO SLIDE DOWN AND OUT SHALL HAVE A CAM HANDLE AT CENTER OF BOTTOM RAIL.

402. TOP AND BOTTOM SIDE PIVOTED VENTILATORS SHALL HAVE FASTENERS OF THE PIVOTED-LEVER TYPE; SINGLE-THROW.

403. HARDWARE OF SASH BEYOND EASY REACH FROM THE FLOOR SHALL BE DESIGNED FOR POLE OPERATION, AND ADDITIONAL PARTS SUPPLIED AS NECESSARY.

404. SUB-FRAMES.--SUB-FRAMES, INCLUDING MULLIONS, SHALL BE FORMED FROM 12 GAUGE PLATE. THEY SHALL BE DRILLED AND TAPPED FOR SECURING WINDOWS AND ANCHORS AND SHALL BE ASSEMBLED AT THE FACTORY. CONSTRUCTION JOINTS SHALL BE COPED OR MITERED, THEN WELDED SOLID ALONG THE ENTIRE LINE OF CONTACT. EXPOSED SURFACES SHALL BE SMOOTH.

405. SUB-FRAMES SHALL BE FORMED WITH PLASTER MOULD AND REBATES FOR WINDOWS. REBATES SHALL BE AT LEAST 3/8 INCH DEEP AND SHALL CLEAR THE FINISH JAMBS AND HEADS AT LEAST 1 INCH. SUB-FRAMES SHALL HAVE OUTSTANDING LEGS TO FORM A ONE INCH OVERLAP AGAINST THE JAMB AND LINTEL RETURNS, AND SHALL HAVE WATER-TIGHT BEARINGS AT SILLS. SUB-FRAMES SHALL HAVE AN ANGLE SHAPED METAL STRIP ON THE INSIDE FOR ATTACHMENT OF INSECT SCREEN RUNS. SUFFICIENT SPACE SHALL BE ALLOWED BETWEEN WINDOW AND SCREEN FOR SCREENS TO CLEAR WINDOW HARDWARE. SUITABLE PROVISION SHALL ALSO BE MADE FOR THE FUTURE INSTALLATION OF SHADES.

406. MULLIONS AND TRANSOM BARS SHALL BE REBATED TO MATCH THE SUB-FRAMES AND SHALL BE OF TUBULAR CONSTRUCTION WITH WEATHER TIGHT SEAMS. NO CROSS JOINTS ALLOWED. SILLS AND TRANSOM BARS SHALL HAVE WEATHER STOPS AND OUTSIDE WASH WITH DRIP.

407. FIXED SASH SHALL SET IN THE REBATES OF SUB-FRAMES, AND BE FASTENED WITH SCREWS PLACED UNDER THE GLAZING BEADS AT POINTS NOT OVER 24 INCHES APART.

408. IT SHALL BE OPTIONAL WITH THE CONTRACTOR WHETHER THE SUB-FRAMES ARE BUILT INTO THE WALL OR SET AFTER THE WALLS ARE BUILT. IN EITHER CASE THEY SHALL BE BRACED AS NECESSARY TO PREVENT DISTORTION AND SET STRAIGHT, PLUMB AND LEVEL. ANCHORS SHALL BE BUILT IN OR BOLTED TO THE JAMBS.

409. SETTING.--WINDOWS WITH SUB-FRAMES SHALL BE SET IN MASTIC CEMENT IN THE REBATES OF SUB-FRAMES AND SECURED WITH BRASS SCREWS AT POINTS NOT OVER 24 INCHES APART; SCREWS TO BE CONCEALED WHEN THE VENTILATORS ARE CLOSED. THE MASTIC CEMENT SHALL BE SPECIALLY PREPARED FOR SUCH USE AND SHALL NOT BE AFFECTED BY WEATHER CONDITIONS OR INSIDE TEMPERATURES.

410. WINDOWS SHALL BE ADJUSTED AND HARDWARE ATTACHED AFTER THE BUILDING IS ENCLOSED. WINDOWS SHALL BE LEFT IN A SUBSTANTIAL AND WEATHER TIGHT CONDITION AND PERFECT WORKING ORDER.

411. GROUTING AND CAULKING.--SPACES BETWEEN SUB-FRAMES AND WINDOW OPENINGS SHALL BE FILLED SOLID WITH CLASS B MORTAR FLUSH WITH THE INSIDE EDGE OF THE FRAMES.

412. OUTSIDE JOINTS BETWEEN THE STEEL AND WALL OPENINGS SHALL BE NEATLY CAULKED WITH AN ELASTIC POINTING COMPOUND THAT WILL NOT BE AFFECTED BY WEATHER CONDITIONS.

412A. BELTS.--WINDOW CLEANERS BELTS SHALL BE ALL-LEATHER TYPE INCLUDING CHEST STRAP, SHOULDER STRAPS AND SAFETY STRAP. GUIDES AND TERMINALS OF SAFETY STRAPS SHALL BE OF NON-FERROUS METAL. TERMINALS SHALL BE DESIGNED TO GIVE A POSITIVE LOCK ON THE BOLT HEADS UNTIL RELEASED BY THE WINDOW CLEANER.

VAULT DOORS.

413. FOR CONSTRUCTION OF VAULT DOORS AND FIREPROOF CLOSET DOORS, SEE MISCELLANEOUS DRAWING NO. M-352F.

414. THESE DOORS SHALL BE FABRICATED BY MANUFACTURERS OF RECOGNIZED STANDING. THE CONTRACTOR FOR THIS PORTION OF THE WORK SHALL SUBMIT TO THE SUPERVISING ARCHITECT WITHIN AMPLE TIME FOR FACTORY INSPECTION THE NAMES AND ADDRESSES OF THE MANUFACTURERS OF THE DOOR SETS AND OF THE LOCKS, GIVING CLASS AND TYPE OF COMBINATION AND KEY LOCKS WITH CATALOGUE NUMBERS, ALSO WHETHER RIGHT OR LEFT.

415. AFTER SUCH SUBMISSION THE CONTRACTOR WILL BE ADVISED OF THE APPROVAL OR DISAPPROVAL OF THE MANUFACTURERS OF THE DOORS; ALSO WHETHER THE LOCKS PROPOSED ARE SATISFACTORY. SHOP INSPECTION BEFORE SHIPMENT WILL BE MADE IF CONSIDERED NECESSARY.

416. SHOULD THE CONTRACTOR DESIRE TO SUBSTITUTE DOORS DEVIATING IN MINOR RESPECTS FROM THOSE SHOWN ON THE MISCELLANEOUS DETAIL DRAWING, HE SHALL SUBMIT, IN TRIPLICATE, SHOP DRAWINGS SHOWING COMPLETE DETAIL AND CONSTRUCTION OF THE DOORS HE PROPOSES TO FURNISH FOR THE APPROVAL OF THE SUPERVISING ARCHITECT.

HOLLOW METAL WORK.

417. GENERAL.--THIS SECTION OF THE SPECIFICATION INCLUDES DOORS NOS. B/1, B/2 AND B/3. DOORS, TRANSOMS AND SIDELIGHTS IN OPENINGS NOS. 1, 2 AND 3, AND DOORS NOS. 1/17.

418. CAST IRON FRAMES ARE INCLUDED UNDER THE SPECIFICATION FOR "MISCELLANEOUS METAL WORK".

419. HOLLOW METAL DOORS IN ELEVATOR HATCHWAYS ARE INCLUDED IN THE SPECIFICATION FOR "PASSENGER ELEVATOR ENTRANCES".

420. HARDWARE FOR DOORS IS INCLUDED UNDER THE SPECIFICATION FOR "BUILDERS' HARDWARE".

421. GLASS IS INCLUDED UNDER THE SPECIFICATION FOR "GLASS AND GLAZING".

422. DRAWINGS.--SHOP DRAWINGS IN TRIPLICATE SHOWING DETAILS OF CONSTRUCTION, JOINTING, GAUGES OF METAL, ETC., SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT.

423-424. MATERIAL, ETC.--EXPOSED AND FINISHED MEMBERS SHALL BE BRONZE, FINISHED AS SPECIFIED.

425. WORKMANSHIP.--HINGED DOORS AND SASH SHALL HAVE THE PROPER BEVEL FOR CLEARANCE AND SHALL OPERATE WITHOUT BINDING. SUITABLE SINKAGES SHALL BE PROVIDED IN DOORS AND SASH FOR ALL HARDWARE.

426. THE FINISHED WORK SHALL BE NEAT IN APPEARANCE AND FREE FROM ALL DEFECTS. PLAIN SURFACES SHALL BE SMOOTH AND FREE FROM WARPING, BUCKLE OR TWIST.

427. MOULDED MEMBERS SHALL BE WELL DEFINED, STRAIGHT AND TRUE. MITERS SHALL BE FORMED IN TRUE ALIGNMENT. ALL CUTTING, PUNCHING, FORMING AND MITERING SHALL BE DONE TO HAIR LINE MEASUREMENTS.

428. ALL DOORS AND SASH SHALL BE 1-3/4" THICK OF THE SIZE AND TYPE INDICATED ON THE DRAWINGS.

429. MEETING STILES OF DOORS B/1, B/2, B/3 AND 1/17 SHALL BE FORMED WITH BEVEL SHOWN IN MISCELLANEOUS DETAIL NO. 113 "C". MEETING STILES OF DOORS NOS. 1, 2, AND 3 SHALL BE FORMED WITH THE BEVEL SHOWN IN MISCELLANEOUS DETAIL NO. 113 "B".

430. RAILS AND STILES OF DOORS, EXCLUSIVE OF APPLIED MOULDINGS, SHALL BE MADE FROM SINGLE SHEETS AT LEAST .064" THICK REINFORCED ON THE INSIDE WITH STRIPS OF COMPRESSED CORK OR ASBESTOS FILLING SECURELY FASTENED IN PLACE.

431. DOORS AND SASH SHALL BE OF RIGID CONSTRUCTION. CORNERS SHALL BE REINFORCED AS NECESSARY TO PREVENT SAGGING AND TWISTING. BOTTOM RAIL OF DOORS SHALL HAVE SUITABLE CROSS BRACING.

432. MOULDINGS, MUNTINS, GLAZING BEADS, SASH, ETC., SHALL NOT BE LIGHTER THAN NO. 18 GAUGE METAL. GLAZING BEADS SHALL BE FASTENED WITH OVAL HEADED BRONZE SCREWS.

433. HARDWARE REINFORCEMENT.--REINFORCING MEMBER SHALL BE INSERTED IN DOORS AND SASH FOR ATTACHING THE HARDWARE AND SHALL BE OF AMPLE SIZE TO STIFFEN THE SHEET METAL AGAINST THE STRAIN OF THE HARDWARE. REINFORCEMENT SHALL BE FIRMLY SECURED AND SHALL BE PUNCHED OR DRILLED AND TAPPED TO RECEIVE THE HARDWARE.

434. FITTING HARDWARE.--ALL HARDWARE REQUIRED FOR HOLLOW METAL WORK IS SPECIFIED UNDER "BUILDERS' HARDWARE", BUT THE MANUFACTURER OF THE HOLLOW METAL WORK SHALL MAKE ALL PROVISION FOR ITS PROPER APPLICATION.

435. THE GENERAL CONTRACTOR SHALL FURNISH THE MANUFACTURER WITH SUITABLE TEMPLATES OF, OR THE HARDWARE, AFTER THE HARDWARE SAMPLES HAVE BEEN APPROVED BY THE SUPERVISING ARCHITECT, SO AS TO INSURE ITS PROPER APPLICATION AND OPERATION.

436. FINISH.--EXPOSED SURFACES OF BRONZE WORK SHALL BE OXIDIZED TO A MEDIUM STATUARY BRONZE COLOR.

437. PACKING.--ALL WORK SHALL BE PACKED FOR SHIPMENT IN SUCH A MANNER AS TO ASSURE ITS DELIVERY IN UNDAMAGED CONDITION.

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PASSENGER ELEVATOR ENTRANCES.

438. GENERALLY.--THIS SECTION OF THE SPECIFICATION PROVIDES THE COMPLETE AND FINISHED INSTALLATION OF PASSENGER ELEVATOR HATCHWAY ENTRANCES, INCLUDING ALL METAL WORK, THRESHOLDS, JAMBS, DOORS, HANGERS AND ALL NECESSARY PARTS AND SUPPORTS FOR SAME, BUT NOT OPERATING MECHANISM. ROUGH STEEL BUCKS ARE INCLUDED UNDER "MISCELLANEOUS METAL WORK".

439. THE OPERATING MECHANISM FOR DOORS, THE INDICATORS AND INDICATOR OPERATING MECHANISM ARE INCLUDED IN THE ELEVATOR SPECIFICATION.

440. ALL NECESSARY PROVISIONS SHALL BE MADE FOR THE CONNECTION TO OR ATTACHMENT OF OTHER CONNECTING FINISH.

441. MATERIALS AND WORKMANSHIP.--CASTINGS SHALL HAVE A FINE SMOOTH WORKMANLIKE FINISH ON ALL EXPOSED SURFACES AND HAVE SHARP WELL-DEFINED LINES AND ARRISES.

442. SHEETS SHALL BE PATENT LEVELD COMMERCIAL BRONZE SHEETS PERFECTLY FLAT AND WITHOUT ANY BUCKLES. ALL JOINTS SHALL BE CAREFULLY FITTED, REINFORCED WITH HEAVY BRASS PLATES AND RIVETED WITH BRONZE RIVETS OF THE SAME MATERIAL AND COLOR AS THE SHEETS.

443. SHOP DRAWINGS.--SHOP DRAWINGS IN TRIPLICATE SHOWING ALL DETAILS OF CONSTRUCTION AND OPERATION AND METHOD OF ERECTION AND FASTENING TO THE STRUCTURAL PARTS OF THE BUILDING SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT.

444. THRESHOLDS.--THRESHOLDS SHALL BE OF CAST BRONZE WITH MACHINE PLANED GROOVES FOR THE DOOR GUIDES AND NON-SLIP TOP SURFACE. THRESHOLDS SHALL HAVE TOE-GUARD APRONS ON THE SHAFT SIDE OF 12 GAUGE STEEL PLATE AND SUITABLE BRACKETS OR ANGLE SUPPORTS FOR ATTACHMENT TO THE STRUCTURAL CONCRETE OF THE FLOORS.

445. FRAMES.--ALL PROVISION FOR SECURELY FASTENING BRONZE FRAMES TO THE STEEL BUCKS SHALL BE MADE BY THE MANUFACTURER OF THE ELEVATOR ENTRANCES. THE BRONZE FRAMES SHALL BE CONSTRUCTED OF 12-GAUGE BRONZE AND ALL FITTING SHALL BE ACCURATELY DONE. ALL JOINTS SHALL BE PERFECTLY FITTED.

446. SUPPORTS.--SUPPORTING STRUTS SHALL BE PROVIDED FOR THE RACKS AND HANGERS INDEPENDENT OF THE SURROUNDING WALLS AND SHALL EXTEND FROM THE FLOOR TO THE CEILING CONSTRUCTION.

447. DOORS. --BRONZE DOORS SHALL BE 1-1/4 INCHES THICK, OF HOLLOW METAL CONSTRUCTION. RAILS AND STILES AND PANELS SHALL BE NOT LIGHTER THAN 14 GAUGE. MOLDINGS SHALL BE NOT LIGHTER THAN 18 GAUGE. RAILS AND STILES OF DOORS AND DOOR PANELS SHALL BE LINED OR BACKED OR FILLED WITH CORK BOARD OR ASBESTOS BOARD OR METAL, OR A COMBINATION OF SAME SO PLACED AND SECURED AS TO PREVENT BUCKLING OR RATTLING OR HOLLOW SOUND. HEAVY REINFORCEMENTS SHALL BE INSERTED AS NECESSARY FOR THE ATTACHMENT OF HARDWARE AND OPERATORS. DOORS SHALL HAVE PIVOTED RECTANGULAR BOTTOM GUIDES TO ACCURATELY FIT THE

448. GLAZING.--DOORS SHALL BE GLAZED WITH 1/4-INCH THICK POLISHED WIRE GLASS SET IN RUBBER CHANNEL INSERTS IN SUCH A MANNER AS TO PREVENT RATTLING AND BREAKAGE. THE GLASS SHALL BE SECURED IN PLACE WITH REMOVABLE METAL MOLDINGS ON THE SHAFT SIDE.

449. HANGERS.-- DOORS SHALL BE HUNG ON OVERHEAD TRACKS AND NOISELESS BALL BEARING HANGERS OF THE TYPE REQUIRED FOR THE DOOR OPERATION INDICATED ON THE CONTRACT DRAWINGS. THE TRACK AND HANGERS SHALL CONSIST OF STATIONARY AND TRAVELING MEMBERS SUPPORTED BY CASE HARDEN BALLS SET IN SPACERS. THE HANGERS SHALL HAVE PROVISIONS FOR LATERAL AND VERTICAL ADJUSTMENT. DOORS SHALL HAVE RUBBER BUMPERS. THE TRACK SHALL BE SECURED TO A HEAVY STEEL BACKING ATTACHED TO THE VERTICAL SUPPORTS BEFORE SPECIFIED.

450. FINISH.--AFTER THE DOORS AND FRAMES HAVE BEEN PROPERLY ASSEMBLED AND FINISHED WITH EMERY, THEY SHALL BE OXIDIZED A MEDIUM STATUARY BRONZE COLOR TO MATCH OTHER BRONZE WORK IN THE BUILDING.

451. ERECTION.--THE WORK SHALL BE ACCURATELY ERECTED AND RIGIDLY SECURED IN PLACE. ALL PARTS SHALL BE ACCURATELY PLUMBED AND LEVEL. ALL PARTS SHALL BE SECURED DIRECTLY TO THE STRUCTURAL PARTS OF THE BUILDING.

452. ERECTION SHALL PREFERABLY BE STARTED AT THE TOP OF THE SHAFT. THRESHOLDS SHALL BE SET LEVEL WITH THE FLOOR AND THE INNER EDGES SHALL BE PLUMB SO THAT THERE SHALL BE NO VARIATION IN THE DISTANCE BETWEEN THE EDGE OF ALL THRESHOLDS AND THE EDGE OF THE CAR PLATFORM.

453. DOORS AND HANGERS SHALL BE ACCURATELY ADJUSTED, ALL WORKING PARTS CAREFULLY CLEANED AND GREASED. GUIDE GROOVES IN THE THRESHOLDS SHALL BE CLEANED AND LIGHTLY COATED WITH GRAPHITE. THE ENTIRE INSTALLATION SHALL BE CAREFULLY CLEANED AFTER ERECTION AND LEFT IN FIRST CLASS CONDITION.

SHEET METAL WORK.

454. THIS SECTION OF THE SPECIFICATION INCLUDES SHEET METAL WORK GENERALLY, AND SHEET METAL COUNTERFLASHINGS FOR BITUMINOUS ROOFING.

455. INTERIOR DOWN SPOUTS ARE INCLUDED IN THE SPECIFICATION FOR MECHANICAL EQUIPMENT.

456. METAL GAUGES SHALL BE UNITED STATES STANDARD GAUGE; WIRE GAUGES SHALL BE U. S. STEEL WIRE GAUGE.

457. SHEET STEEL AND IRON SHALL BE WELL FINISHED SOFT STEEL OR IRON THAT WILL STAND SEAMING WITHOUT BREAKING. SHEETS SHALL BE CLEAN AND FREE FROM RUST.

458. ZINC COATED SHEET METAL SHALL BE SHEET STEEL OR IRON EVENLY COATED WITH NOT LESS THAN 1½ OUNCES OF ZINC PER SQUARE FOOT OF SHEET. ZINC COATED SHEET METAL NOT OTHERWISE SPECIFIED SHALL BE 24 GAUGE.

459. COPPER FOR MOLDINGS, DOWN SPOUTS, COUNTERFLASHINGS, AND FOR WORK EXPOSED TO VIEW, GENERALLY, SHALL BE HARD COPPER. COPPER FOR ROOFING, FLASHING, GUTTER LININGS AND FOR ALL WORK WHERE HARD COPPER IS NOT MORE SUITABLE SHALL BE SOFT COPPER. COPPER NOT OTHERWISE SPECIFIED SHALL WEIGH 16 OUNCES PER SQUARE FOOT.

460. SOLDER SHALL BE GRADE A, MASTER SPECIFICATION NO. 313, AND SHALL BEAR THE MAKER'S NAME AND BRAND.

461. NAILS AND RIVETS FOR COPPER WORK SHALL BE COPPER: FOR OTHER SHEET METAL WORK THEY SHALL BE ZINC COATED OR TINNED.

462. BOLTS AND SCREWS FOR ALL SHEET METAL WORK WHEN EXPOSED TO THE WEATHER SHALL BE BRASS.

463. FLASHING HOOKS SHALL BE TINNED.

464. PLASTIC ROOFING CEMENT SHALL COMPLY WITH MASTER SPECIFICATION NO. 380.

465. PAINTING MATERIALS SHALL COMPLY WITH MASTER SPECIFICATIONS.

466. SHOP DRAWINGS IN TRIPLICATE SHOWING THE MATERIALS, THICKNESS AND ALL DETAILS OF CONSTRUCTION SHALL BE SUBMITTED FOR THE APPROVAL OF THE SUPERVISING ARCHITECT, AS FOLLOWS, VIZ:

VENTILATORS

467. WORKMANSHIP.--SHEET METAL WORK EXPOSED TO THE WEATHER SHALL BE PERMANENTLY WATER AND WEATHER TIGHT. SUITABLE PROVISION SHALL BE MADE FOR FREE EXPANSION AND CONTRACTION WITHOUT CAUSING LEAKS.

468. SEAMS IN COPPER THAT ARE TO BE SOLDERED SHALL BE TINNED BEFORE ASSEMBLING. SEAMS IN MOULDED COPPER WORK SHALL SHOW NO SOLDER ON THE FACE. SOLDERING SHALL BE NEATLY FINISHED. SOLDERED SEAMS SHALL BE SOAKED AND FILLED WHEREVER POSSIBLE. NON-ACID FLUX ONLY SHALL BE USED FOR SOLDERING.

469. ALL SHEET METAL SHALL BE BRACED AND REINFORCED AS NECESSARY FOR STRENGTH AND STIFFNESS. LINES, MOLDINGS, ETC., EXPOSED TO VIEW SHALL BE TRUE, SHARP AND OF THE REQUIRED PROFILE. PLAIN SURFACES EXPOSED TO VIEW SHALL SHOW NO WAVES OR BUCKLES, AND WHERE PRACTICABLE SHALL BE FINELY CRIMPED. JOINTS AND SEAMS IN PLAIN SURFACES SHALL BE AVOIDED SO FAR AS POSSIBLE. JOINTS AND SEAMS SHALL BE NEATLY FORMED AND FINISHED. ALL LAPS AND LOCKS SHALL OVERLAP DOWNWARD.

470. THIMBLES.--ALL PIPES PASSING THROUGH CONCRETE FLOOR CONSTRUCTION AND THROUGH CONCRETE FIRE STOPS IN PIPE RISER CHASES SHALL HAVE GALVANIZED SHEET METAL THIMBLES 1/4 INCH LARGER THAN THE PIPES AND EXTENDING THE FULL THICKNESS OF THE CONCRETE.

471. FLASHINGS.--SHEET METAL ROOFING OF MARQUISE AND PORTICO OVER MAIN ENTRANCES SHALL BE FLASHED AND MADE WATERTIGHT AT ALL EDGES ABUTTING OR CONNECTING WITH OTHER WORK. FLASHINGS SHALL EXTEND AT LEAST 8 INCHES ABOVE THE SHEET METAL COVERING WHERE POSSIBLE. FLASHINGS SHALL BE SLIGHTLY ROUNDED AT THE INTERSECTIONS WITH ABUTTING WORK AND NOT BENT TO A SHARP ANGLE. THE TOP EDGE SHALL WHERE PRACTICABLE BE SECURED AT POINTS ABOUT 12 INCHES APART WITH FLASHING HOOKS OR OTHER SUITABLE FASTENINGS THAT WILL PERMIT FREE LONGITUDINAL MOVEMENT.

472. FLAG POLES, MARQUISE HANGER RODS, ETC., SHALL BE FLASHED WITH THIMBLES COMPLETELY SURROUNDING THEM. FLASHINGS FOR SOIL AND VENT PIPES ARE INCLUDED UNDER "PLUMBING".

473. BLOCKING FOR SUPPORTS OF WALKS AND PLATFORMS ON COMPOSITION ROOFS SHALL BE COVERED WITH METAL FLASHINGS EXTENDING 4 INCHES ON ALL SIDES ONTO THE ROOF. SEE MISCELLANEOUS DETAILS NOS. 22 AND 32.

474. SILL OF DOOR NO. 6/3 SHALL BE PROPERLY COVERED WITH 20 OUNCE COPPER. SEE DRAWING NO. 105.

475. COUNTERFLASHINGS.--COUNTERFLASHINGS FOR SHEET METAL FLASHINGS SHALL BE OF THE SAME MATERIAL AS THE FLASHINGS, AND FOR BITUMINOUS FLASHINGS THEY SHALL BE COPPER.

476. ALL FLASHINGS, BOTH METAL AND PLASTIC FLASHINGS, HAVING THE TOP EDGE EXPOSED TO THE WEATHER AND NOT OTHERWISE WATER TIGHT SHALL BE COUNTERFLASHED. THE COUNTERFLASHING SHALL BE IN PIECES NOT EXCEEDING 10 FEET IN LENGTH, SHAPED TO LIE FLAT AGAINST THE BASE FLASHING AND OVERLAP THE SAME NOT LESS THAN 4 INCHES, AND LAP 3 INCHES AT ENDS OF ADJOINING SHEETS. COUNTERFLASHINGS AT CORNERS SHALL BE CONTINUOUS AROUND THE ANGLE OR BE LOCKED AND SOLDERED.

477. COUNTERFLASHINGS WHEN SECURED IN GROOVES OR REGLETS SHALL EXTEND INTO SAME AT LEAST 1½ INCHES AND HAVE THE UNEXPOSED EDGE TURNED UP 1/4 INCH. THE EXPOSED EDGE SLIGHTLY BROKEN FOR STIFFNESS. IT SHALL BE SECURED IN PLACE WITH LEAD WEDGES OR SUITABLE METAL CLIPS SPACED ABOUT 12 INCHES APART. AFTER PLACING THE COUNTERFLASHING THE LAPPED ENDS SHALL BE SEALED WITH PLASTIC ROOFING CEMENT AND THE REGLETS FILLED AND POINTED WITH THE SAME CEMENT.

478-479. COUNTERFLASHINGS FOR MARQUISE HANGER RODS, PASSING THROUGH ROOFS SHALL BE SOLDERED TO THE RODS, THE METAL FIRST BEING THOROUGHLY CLEANED AND TINNED.

480. FLAT SEAM ROOFING.--COPPER COVERING OF MARQUISE AND PORTICO OVER MAIN ENTRANCES SHALL BE IN SHEETS NOT LARGER THAN 18 x 24 INCHES. THE SHEETS SHALL BE LAID SINGLY WITH STAGGERED SEAMS LOCKED 1/2 INCH. EACH SHEET SHALL BE SECURED ON TWO SIDES WITH CLEATS 1½ INCHES WIDE OF THE SAME MATERIAL AS THE SHEETS. SIDES OVER 14 INCHES IN LENGTH SHALL HAVE 2 CLEATS. THE CLEATS SHALL BE TURNED IN WITH AND DOUBLE NAILED TO SHEATHING OR SLEEPERS CLOSE TO THE SEAM, THEN FOLDED AND FLATTENED OVER THE NAILS. NO NAILS SHALL BE DRIVEN THROUGH THE ROOFING SHEETS. ALL SEAMS SHALL BE SOAKED WITH SOLDER. COVERING OF MARQUISE SHALL BE TURNED OVER LOW CURB AT OUTER EDGES AND BE DOUBLE LOCKED TO COPPER CORNICE.

481. DOWN SPOUTS.--INTERIOR DOWN SPOUTS AND THEIR CONNECTIONS TO ROOF AND GUTTER OUTLETS ARE INCLUDED UNDER "MECHANICAL EQUIPMENT".

482. DOWN SPOUT FROM MARQUISE SHALL BE 18 OUNCE CORRUGATED COPPER AND SHALL HAVE OFFSETS AND CHANGES IN DIRECTION MADE WITH EASY BENDS WITHOUT SHARP ANGLES. DOWN SPOUT SHALL BE SUPPORTED WITH HEAVY BRASS STRAPS SOLDERED TO THE DOWN SPOUT AND SECURED WITH EXPANSION BOLTS OR SCREWS AND PLACED WHERE SHOWN ON DRAWING NO. 101.

483. STRAPS SHALL BE SHEET COPPER NOT LIGHTER THAN 20 OUNCE.

484. CONNECTION TO ROOF OUTLETS IS SHOWN ON DRAWINGS NOS. 200 AND 207. DOWNSPOUT FROM MARQUISE SHALL DISCHARGE INTO THE OPEN THROUGH SUITABLE ELBOW.

485. STRAINERS.--THE INLET TO MARQUISE AND ROOF OF PORTICO OVER MAIN ENTRANCES SHALL HAVE STRAINER COVERING THE FULL AREA OF THE OPENING AND EXTENDING NOT LESS THAN 6 INCHES ABOVE THE SURFACE OF THE ROOF OR OUTLET BOX LINING. STRAINERS SHALL BE OF 1/2 INCH MESH WOVEN WIRE NOT LIGHTER THAN .08 INCH DIAMETER (12 GAUGE COPPER). STRAINER FOR MARQUISE DOWN SPOUT SHALL BE SHAPED IN THE FORM OF A BOX WITH HEAVILY WIRED BOTTOM EDGES SHAPED TO FIT THE OUTLET BOX. STRAINER FOR OUTLET BOX SHALL FIT THE BOX AND BE SET IN WITHOUT FASTENING. STRAINERS FOR PORTICO DOWN SPOUT SHALL BE GLOBE SHAPED AND SHALL BE FASTENED IN PLACE WITH CLIPS SOLDERED TO THE ROOF. STRAINER SHALL BE OF COPPER.

486. ROOF DRAINS.--CAST IRON ROOF DRAINS FOR BITUMINOUS ROOFING SHALL CONFORM TO SECTION 15 OF MASTER SPECIFICATION NO. 448, INCLUDING PARAGRAPH (E), AS SPECIFIED UNDER MECHANICAL EQUIPMENT.

487-488. VENTILATORS.--VENTILATORS SHALL BE OF 20 OUNCE COPPER SO CONSTRUCTED AS TO INDUCE AN OUTWARD FLOW OF AIR AT ALL TIMES AND EXCLUDE RAIN AND SNOW. VENTILATORS SHALL BE RIGIDLY BRACED AND REINFORCED. EXPOSED EDGES OF METAL SHALL BE BEADED OR WIRED OR OTHERWISE STIFFENED. VENTILATORS SHALL HAVE SQUARE BASES MOUNTED ON AND OVERLAPPING SUITABLE CURBS AND THEIR FLASHINGS.

489. SHOP DRAWINGS OR CUTS SHOWING THE CONSTRUCTION AND OPERATION OF VENTILATORS SHALL BE SUBMITTED.

490. LINTEL BARS NOT LIGHTER THAN 3/8 BY 2 INCHES, ONE BAR FOR EVERY 4 INCHES IN THICKNESS OF MASONRY, SHALL BE PROVIDED FOR ALL DUCTS AND MOUTH PIECES THROUGH TILE MASONRY.

491. DUCTS ARE SPECIFIED UNDER "MECHANICAL EQUIPMENT."

492. REGISTER GRILLE FACES FOR LOUVER FRAMES IN COURT ROOM VENT DUCTS ARE SPECIFIED UNDER "MISCELLANEOUS METAL WORK". VENT REGISTER GRILLES SHALL HAVE SUITABLE LOUVERS SET WITH THE VALVES IN A VERTICAL POSITION. WHEN SIX FEET OR MORE FROM THE FLOOR THE OPERATING MECHANISM SHALL BE PLACED AT THE BOTTOM AND HAVE NICKEL PLATED BRASS SAFETY LINK OPERATING CHAINS WITH METAL INDICATING HANDLES.

493. RADIATOR RECESSES WHERE INDICATED ON THE DRAWINGS SHALL BE PROPERLY LINED WITH 26 GAUGE LONG TERNE PLATE WITH 20 LB. COATING. EDGES SHALL BE WIRED FOR STIFFNESS. LININGS SHALL BE SECURED IN PLACE BY SCREWS OR METAL CLIPS SO PLACED AS TO PERMIT REMOVAL OF GRILLE WITHOUT DISTRUDING THE LINING.

494. LINING SHALL BE BACKED WITH 1/2" ASBESTOS BOARD GLUED ON, OR WHERE PRACTICABLE ASBESTOS PLASTER APPROXIMATELY 1/2" THICK MAY BE APPLIED TO ALL ENCLOSING SURFACES. SEE DRAWINGS NOS. 202, 204, 205 AND 206.

495. DOORS, ETC.--DOORS AND FRAMES AT MAILING OR SHIPPING ENTRANCES (DOORS NOS. 1/5, 1/16, 112 AND 114) SHOWN SHALL BE COVERED TO THE REQUIRED HEIGHTS WITH 20 GAUGE METAL FASTENED WITH OVAL HEAD SCREWS ABOUT 4 INCHES APART ALONG THE EDGES AND ABOUT 10 INCHES APART IN STAGGERED ROWS ACROSS THE WIDTH OF THE SHEET. JOINTS IN THE METAL SHALL BE BUTTED FLUSH. THE SHEET METAL SHALL BE APPLIED BEFORE ANY IRON OR STEEL STRAPS OR PLATES ARE PUT ON.

496. OUTSWINGING EXTERIOR WOOD DOORS SHALL HAVE THE TOP EDGES COVERED WITH 20 OUNCE COPPER EVENLY FLANGED DOWN 1/2 INCH ON VERTICAL FACES AND EDGES. THE COPPER LET IN FLUSH AND FASTENED WITH FLAT HEAD SCREWS. SEE MISCELLANEOUS DETAIL NO. 113 "C".

497. PAINTING OF SHEET METAL.--ALL SURFACES OF IRON AND STEEL WORK IN CONNECTION WITH EXTERIOR SHEET METAL AND THE UNEXPOSED SURFACE OF EXTERIOR ZINC COATED METAL AND SHEET STEEL COVERING OF DOORS AND FRAMES GENERALLY SHALL BE PAINTED BEFORE THE WORK IS PUT IN PLACE.

498. THE EXPOSED SURFACES OF EXTERIOR ZINC COATED METAL AND SHEET STEEL GENERALLY, SHALL BE PAINTED ONE COAT AFTER IT IS IN PLACE.

499. ALL SURFACES THAT ARE TO BE PAINTED SHALL BE THOROUGHLY CLEANED AND ALL TRACES OF FLUX REMOVED. BEFORE ZINC COATED METAL IS PAINTED IT SHALL BE WASHED WITH A SOLUTION OF 6 OUNCES OF COPPER ACETATE IN 1 GALLON OF WATER. THE METAL SHALL BE ALLOWED TO DRY BEFORE PAINTING.

500. PAINT SHALL BE COMPOSED OF 25 POUNDS OF DRY RED LEAD TO ONE GALLON OF LINSEED OIL WITH NOT MORE THAN 1/2 PINT OF LIQUID DRIER. PAINT SHALL BE WELL STIRRED WHILE BEING APPLIED.

501. PAINT SHALL BE THOROUGHLY AND EVENLY BRUSHED ON AND BE ALLOWED TO DRY UNDISTURBED. THE FINISH COATS OF PAINT ARE SPECIFIED UNDER "PAINTING AND FINISHING".

COMPOSITION ROOFING.

502. MATERIALS FOR COMPOSITION ROOFING, WHEN NOT OTHERWISE SPECIFIED, SHALL CONFORM TO THE GOVERNMENT MASTER SPECIFICATIONS. MANUFACTURED MATERIALS SHALL BE DELIVERED ON THE JOB IN ORIGINAL PACKAGES MARKED WITH THE MANUFACTURER'S NAME AND BRAND.

503. COMPOSITION ROOFING SHALL BE EITHER: TYPE 5 ACS OR TYPE 5 TCS.

504. TYPE 5 ACS SHALL HAVE NOT LESS THAN THE FOLLOWING QUANTITIES OF MATERIALS PER 100 SQ. FT.

ASPHALT PRIMER, MASTER SPECIFICATION NO. 87 (OVER CONCRETE)				7.5	LBS.
5 LAYERS ASPHALT FELT	"	"	" 86	76	"
ASPHALT	"	"	" 84	170	"
GRAVEL	"	"	" 82	400	"
OR					
SLAG	"	"	" "	300	"

TYPE 5 ACS SHALL HAVE THE CONCRETE ROOF SURFACE UNIFORMLY COATED WITH ASPHALT PRIMER, USING NOT LESS THAN ONE GALLON PER 100 SQ. FT. WHEN ROOF SURFACE IS OF GYPSUM, A SECOND COAT SHALL BE APPLIED, USING NOT LESS THAN ONE GALLON PER 100 SQ. FT., FOR EACH COAT, AND ALLOW EACH COAT TO DRY. THE ROOF SHALL THEN BE GIVEN A COATING OF HOT ASPHALT, USING NOT LESS THAN 30 POUNDS PER 100 SQ. FT. OVER THIS COATING SHALL BE LAID 5 LAYERS OF FELT. THE LAPS OF ALL SHEETS OF FELT SHALL BE MOPPED FULL WIDTH OF THE LAP, USING NOT LESS THAN 20 POUNDS PER 100 SQ. FT. IN EACH MOPPING.

505. TYPE 5 TCS SHALL HAVE NOT LESS THAN THE FOLLOWING QUANTITIES OF MATERIALS PER 100 SQ. FT.

5 LAYERS COAL-TARRED FELT...	MASTER	SPECN.	No.	81....76LBS.
COAL TAR PITCH.....	"	"	"	80...240 "
GRAVEL.....	"	"	"	82...400 "
OR SLAG.....	"	"	"	" ...300 "

TYPE 5 TCS SHALL HAVE THE ROOF SURFACE UNIFORMLY COATED WITH HOT COAL TAR PITCH, USING NOT LESS THAN 40 POUNDS PER 100 SQ. FT. OVER THIS COATING SHALL BE LAID 5 LAYERS OF FELT. THE LAPS OF ALL SHEETS OF FELT SHALL BE MOPPED FULL WIDTH OF THE LAP, USING NOT LESS THAN 25 POUNDS PER 100 SQ. FT. IN EACH MOPPING.

506. WORKMANSHIP.--ASPHALT SHALL NOT BE HEATED ABOVE 400° F. COAL TAR PITCH SHALL NOT BE HEATED ABOVE 375°F. THEY SHALL BE HOT WHEN THE FELTS ARE LAID. ASPHALT AND COAL TAR PITCH SHALL BE EVENLY APPLIED SO AS TO LEAVE NO BARE SPOTS.

507. THE SURFACING MATERIAL SHALL ALWAYS BE DRY WHEN APPLIED AND IN ADDITION SHALL BE HEATED IN COLD WEATHER.

508. THE FINAL COATING OF ASPHALT SHALL BE NOT LESS THAN 60 LBS. AND OF COAL TAR PITCH SHALL BE NOT LESS THAN 70 LBS. PER 100 SQ. FT. AND INTO WHICH WHILE HOT THE SURFACING MATERIAL SHALL BE EMBEDDED.

509. THE FLASHINGS AND ALL CONNECTIONS OF ROOFING WITH OTHER WORK SHALL BE COMPLETE BEFORE THE FINAL COATING AND THE SURFACING MATERIALS ARE APPLIED.

510. FELTS SHALL BE SMOOTHLY LAID WITHOUT WRINKLES. FELT LAID OVER ASPHALT OR PITCH SHALL BE ROLLED CLOSELY BEHIND THE MOPPING SO THAT NO VOIDS OR AIR POCKETS SHALL OCCUR UNDER THE FELT.

511. FELTS SHALL BE LAID WITH NOT LESS THAN THE FOLLOWING LAPS:

	32" FELT	36" FELT
2 LAYERS	17" LAP	19" LAP.
3 LAYERS	22" LAP	24½" LAP.
4 LAYERS	24½" LAP	27½" LAP.
5 LAYERS	26½" LAP	29½" LAP.

512. ENDS OF SHEETS SHALL BE LAPPED 6 INCHES. FELTS SHALL, SO FAR AS PRACTICABLE, BE LAID AT RIGHT ANGLES TO THE INCLINES OF THE ROOF AND STARTING AT THE LOW POINTS.

513. NOT LESS THAN TWO LAYERS OF FELT SHALL BE CARRIED UP ABOVE THE PLANE OF THE ROOF AT LEAST 5 INCHES AGAINST ALL ABUTTING STRUCTURES EXCEPT THAT ALL FELTS SHALL BE CARRIED UP AND OVER CURB

514. THE PARTS OF ALL METAL FLASHINGS AND FITTINGS OVERLAPPING THE ROOFING FELT SHALL BE BEDDED IN HOT BITUMEN OF THE TYPE SPECIFIED FOR THE ROOF AND THEN COVERED WITH NOT LESS THAN TWO STRIPS OF FELT, EACH EXTENDING AT LEAST 2 INCHES BEYOND THE EDGES OF THE UNDERLYING METAL AND FELT STRIPS, AND LAID IN HOT BITUMEN.

515. PLASTIC FLASHINGS.--PLASTIC FLASHINGS SHALL BE USED AT ALL ANGLES WHERE COMPOSITION ROOFING INTERSECTS ABUTTING WALLS OR OTHER STRUCTURES, AND WHERE NECESSARY TO MAKE THE ROOF INTERSECTIONS AND TERMINATIONS PERMANENTLY WATER-TIGHT. FLASHING FELT SHALL CONFORM TO MASTER SPECIFICATIONS No. 295. PLASTER ROOFING CEMENT SHALL CONFORM TO MASTER SPECIFICATION No. 380.

516. THE BASE FLASHING SHALL CONSIST OF THREE LAYERS OF FLASHING FELT SET IN THE ANGLES AND EXTENDING UP TO THE COUNTER-FLASHING REGLET OR TO THE HEIGHT REQUIRED WHERE NO REGLETS OCCUR. THE UNDER LAYER OF FLASHING FELT SHALL EXTEND OUT ON TO THE ROOFING NOT LESS THAN 4 INCHES, AND EACH SUCCEEDING LAYER SHALL EXTEND AT LEAST 2 INCHES BEYOND THE EDGE OF THE ONE PRECEDING. WHERE CANT STRIPS OCCUR, THE FLASHING FELTS SHALL EXTEND TO THE BOTTOM EDGE OF SAME. THE FELTS SHALL BE CEMENTED TOGETHER AND TO THE UNDERLYING MATERIALS WITH PLASTIC ROOFING CEMENT EVENLY APPLIED WITH A TROWEL. THE LAST LAYER SHALL BE EVENLY COATED WITH NOT LESS THAN 1/16" THICKNESS OF THE SAME CEMENT.

517. COUNTERFLASHINGS SHALL BE INSTALLED TO COVER TOP EDGES OF THE BASE FLASHINGS WHEREVER THEY WOULD BE OTHERWISE EXPOSED AND NOT PERMANENTLY SECURE AND WATER-TIGHT. THE COUNTERFLASHING SHALL BE INSTALLED AFTER THE BASE FLASHING IS COMPLETED.

518. METAL COUNTERFLASHINGS ARE SPECIFIED IN CONNECTION WITH THE "SHEET METAL WORK".

THROUGH PLASTIC CORNICE FLASHING.

519. THROUGH FLASHINGS.--PLASTIC FLASHINGS THROUGH CORNICE (SEE DRAWING No. 201) SHALL CONSIST OF THREE LAYERS OF FELT AND THREE LAYERS OF PLASTIC ROOFING CEMENT. FELT SHALL BE ROOFING FELT, SPECIFICATION No. 86, OR SPECIFICATION No. 81 AS USED FOR THE ROOF.

520. PLASTIC ROOFING CEMENT SHALL BE THE SAME AS USED FOR PLASTIC ROOF FLASHINGS.

521. EACH LAYER OF FELT SHALL BE BEDDED IN PLASTIC ROOFING CEMENT EVENLY APPLIED WITH A TROWEL. THE LAYERS SHALL BE OF SUCH THICKNESS AS WILL THOROUGHLY CEMENT THE LAYERS OF FELT OVER THEIR ENTIRE SURFACES. THE STRIPS OF FELT SHALL BE BUTTED TOGETHER AT END JOINTS AND THE JOINTS BROKEN AT LEAST 12 INCHES IN ADJACENT LAYERS. NO LONGITUDINAL JOINTS SHALL OCCUR IN THE FELT.

522. FLASHINGS SHALL EXTEND TO WITHIN 1" OF THE FACE OF THE CORNICE JOINT AND BE TURNED UP AT THE BACK AS SHOWN IN DETAILS.

523. THE THROUGH FLASHINGS SHALL BE WHOLE AND IN PERFECT WATER TIGHT CONDITION AT THE TIME THE SUPERIMPOSED TERRA COTTA IS SET.

PLASTERING,-LATHING, FURRING, ETC.

524. UNDER THIS HEADING IS INCLUDED INTERIOR PLASTERING AND LATHING, METAL CORNER BEADS AND GROUNDS AND LIGHT METAL FURRING. PORTLAND CEMENT BASE IS INCLUDED UNDER "CONCRETE AND CEMENT WORK". THE INCLOSING OF EXTERIOR OPENINGS IS INCLUDED UNDER "WOODWORK".

525. FOR EXTENT AND CHARACTER OF PLASTER WORK SEE NOTES AND DETAILS ON DRAWINGS. THE INSIDE OF VAULTS WILL NOT BE PLASTERED. PLASTER, EXCEPT THE FINISH COAT, SHALL BE CARRIED TO THE FLOOR BACK OF WOOD BASE AND WAINSCOT. PLASTERING ON MASONRY AND CONCRETE SHALL BE 2 COAT WORK GENERALLY, AND PLASTERING ON LATH SHALL BE 3 COAT WORK. THE PLASTERING WILL BE OMITTED FROM MASONRY BEHIND MARBLE WALL FINISH.

MATERIALS.

526. GYPSUM PLASTER SHALL CONFORM TO MASTER SPECIFICATION No. 247 AND SHALL BE EITHER NEAT OR WOOD FIBERED.

527. CALCINED GYPSUM SHALL CONFORM TO MASTER SPECIFICATION No. 248, CLASS "C" FOR CAST AND RUN WORK; CLASS "F" FOR PLAIN FINISH COAT.

528. LIME SHALL CONFORM TO MASTER SPECIFICATION No. 249 FOR HYDRATED FINISHING LIME.

529. HAIR AND FIBER SHALL BE CLEAN AND FREE FROM FOREIGN MATTER. THE LENGTH OF INDIVIDUAL HAIRS OR FIBERS SHALL BE FROM 1/2 TO 2 INCHES.

530. SAND SHALL BE CLEAN HARD PARTICLES WELL GRADED IN SIZE. ALL SAND SHALL PASS A No. 8 STANDARD SIEVE, NOT MORE THAN 80 PER CENT PASS A No. 30 SIEVE, NOR MORE THAN 20 PER CENT PASS A No. 50 SIEVE. SAND SHALL NOT CONTAIN MORE THAN 5 PER CENT OF SILT OR OTHER FOREIGN MATTER.

531. WATER SHALL BE CLEAN AND FREE FROM INJURIOUS SUBSTANCES.

532. LATH SHALL CONFORM TO MASTER SPECIFICATION No. 553. LATH SHALL BE FLAT, EXPANDED METAL, PAINTED LATH NOT LIGHTER THAN 3.4 POUNDS PER SQ. YD. OR 2-1/2 MESH PER INCH 19 GAUGE WOVEN WIRE PAINTED LATH NOT LIGHTER THAN 2.48 POUNDS PER SQ. YD. LATH SHALL BE FREE FROM RUST.

533. METAL CORNER BEADS SHALL BE GALVANIZED SHEET METAL NOT LIGHTER THAN 26 GAUGE. CORNER BEADS SHALL HAVE PERFORATED OR EXPANDED FLANGES NOT LESS THAN 3-1/2 INCHES WIDE OR HAVE BRACES OR STAYS SO SHAPED AS TO SECURE A GOOD BOND WITH THE PLASTER AND FORM A SUBSTANTIAL RIGID CORNER.

534. ALL VERTICAL EXTERNAL PLASTER CORNERS NOT COVERED BY OTHER FINISH SHALL HAVE METAL CORNER BEADS.

535. METAL GROUNDS AND METAL SCREEDS SHALL BE GALVANIZED SHEET METAL NOT LIGHTER THAN 26 GAUGE AND KEYED FOR THE PLASTER. THE TOP EDGE OF CEMENT BASE SHALL FINISH TO METAL GROUNDS. SEE MISCELLANEOUS DETAIL No. 121.

536. METAL FURRING FOR CORNICES, SUSPENDED CEILINGS, ETC., GENERALLY IS INDICATED ON THE DRAWINGS. SEE DRAWING No. 408.

537. FURRING SHALL INCLUDE ALL BOLTS, INSERTS, CLIPS, FASTENINGS AND HANGERS AND ALL MATERIAL (OTHER THAN STRUCTURAL STEEL) NECESSARY FOR A COMPLET INSTALLATION.

538. ATTACHMENTS FOR HANGERS, BRACKETS AND ALL FURRING MEMBERS SHALL BE OF SUCH SIZE, NUMBER AND DESIGN AS WILL DEVELOP THE FULL STRENGTH OF THE MEMBERS. WIRE FOR HANGERS AND FASTENINGS SHALL BE GALVANIZED.

539. METAL FURRING GENERALLY SHALL BE PROVIDED FOR ALL LINES, CONTOURS AND PLANES WHERE LATH IS REQUIRED FOR PLASTERING.

540-541. WORKMANSHIP.--METAL FURRING SHALL BE ERECTED TO TRUE LINES AND SURFACES AND BE RIGIDLY SUPPORTED AND FASTENED IN PLACE TO FORM A SUBSTANTIAL FOUNDATION FOR THE ATTACHEMENT OF THE LATH AND GROUNDS. FURRING FOR CORNICES AND FOR IRREGULAR SURFACES SHALL BE SHAPED TO FOLLOW THE FINISHED PROFILES AND SET AT THE REQUIRED DISTANCE (GENERALLY 2") FROM THE FINISHED SURFACES.

542. LATH SHALL BE LAID WITH EDGES OF SHEETS LAPPED 1/2 INCH AND ENDS OF SHEETS LAPPED AT LEAST 1 INCH. WIRE LATH SHALL BE TIGHTLY STRETCHED. END JOINTS OF SHEETS SHALL BE MADE ONLY AT BEARINGS AND SHALL BE STAGGERED. SHEETS SHALL NOT BE JOINTED AT ANGLES. LATH AT VERTICAL AND HORIZONTAL ANGLES SHALL BE BENT AND EXTENDED NOT LESS THAN 4 INCHES BEYOND THE ANGLE. LATH AT JUNCTIONS WITH PLASTERED MASONRY SHALL EXTEND ONTO THE MASONRY NOT LESS THAN 4 INCHES.

543. SEPARATE ANGLE SHAPED STRIPS OF LATH AT CORNERS EXTENDING NOT LESS THAN 6 INCHES EACH WAY FROM THE ANGLE, AND SECURELY FASTENED IN PLACE OVER THE LATH MAY BE USED AT ANGLES IN LIEU OF CONTINUING THE LATH AROUND THE CORNER AS SPECIFIED.

544. LATH SHALL BE SECURED TO BEARINGS AT ALL EDGES AND ACROSS THE SHEETS WITH FASTENINGS SPACED NOT MORE THAN 6 INCHES APART. THE SIDES OF SHEETS OF FLAT LATH AND WIRE LATH SHALL BE LACED WITH WIRE MIDWAY BETWEEN BEARINGS.

545. FASTENINGS FOR LATH SHALL BE ANNEALED GALVANIZED WIRE NOT LIGHTER THAN No. 19 GAUGE, OR LATH MAY BE FASTENED TO METAL SUPPORTS WITH SUITABLE PRONGS FORMED FOR THAT PURPOSE ON THE SUPPORTS. SPECIAL FASTENINGS SHALL BE PROVIDED FOR SECURING LATH TO CONCRETE AND SHALL BE BUILT INTO THE CONCRETE IN ADVANCE IF NECESSARY.

546. CORNER BEADS, METAL GROUNDS, ETC., SHALL BE ERECTED AND RIGIDLY SECURED TO STRAIGHT TRUE LINES. JOINTS SHALL BE NEATLY AND CLOSELY FITTED.

547. NAILING PLUGS OR OTHER APPROVED SPECIAL FASTENINGS SHALL BE PROVIDED AND BUILT INTO CONCRETE AS NECESSARY FOR PROPERLY SECURING BEADS AND GROUNDS. THE USE OF WOOD PLUG OR BLOCK IS STRICTLY PROHIBITED.

548. PLASTERING.--THE EXTERIOR OPENINGS SHALL BE KEPT CLOSED AS NECESSARY TO PROPERLY REGULATE THE DRYING AND CURING OF THE PLASTERING. PLASTERING SHALL BE PROTECTED FROM RAPID DRYING AND FROM FROST.

549. ALL MATERIALS THAT ARE TO RECEIVE PLASTER SHALL BE CLEAN AND FREE FROM DUST, EFFLORESCENCE, GREASE OR OTHER FOREIGN MATTER. CONCRETE SHALL BE PREPARED FOR PLASTERING BY ONE OF THE METHODS SPECIFIED UNDER "SPECIAL TREATMENT OF CONCRETE". SEE SPECIFICATION FOR "CONCRETE AND CEMENT WORK".

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550. CONCRETE, BRICK AND CLAY TILE, AND ALL UNDER COATS OF PLASTER, SHALL BE WETTED OR MOISTENED TO THE PROPER DEGREE THAT THE PLASTER WHEN APPLIED WILL ADHERE WELL AND SPREAD EASILY.

551. NO LUMPY OR CAKED OR FROZEN MATERIALS SHALL BE USED FOR PLASTER. ALL INGREDIENTS SHALL BE ACCURATELY MEASURED. THE MORTARS SHALL BE THOROUGHLY AND EVENLY MIXED AND WORKED. THE MATERIAL SHALL BE APPLIED BEFORE IT BEGINS TO SET. ALL TOOLS AND UTENSILS SHALL BE CLEAN AT THE BEGINNING OF THE MIXING OF EACH BATCH. NO PART OF ONE BATCH OF MORTAR SHALL BE MIXED WITH ANOTHER BATCH. NO MORTAR SHALL BE RETEMPERED OR USED AFTER IT HAS BEGUN TO SET.

552. GYPSUM PLASTER.--NEAT GYPSUM PLASTER SHALL BE MIXED 1 PART PLASTER TO 2 PARTS SAND, BY WEIGHT, FOR SCRATCH COAT, WITH HAIR OR FIBER AS NECESSARY - AND 1 PART PLASTER TO 3 PARTS SAND, BY WEIGHT, FOR BROWN COAT AND FOR USE ON MASONRY.

552A. WOOD FIBERED GYPSUM PLASTER SHALL BE USED WITHOUT SAND FOR SCRATCH COAT, AND MIXED 1 PART PLASTER TO ONE PART SAND, BY WEIGHT, FOR BROWN COAT AND FOR USE ON MASONRY.

553. FINISH COAT FOR GYPSUM PLASTER SHALL BE A PREPARED WHITE FINISH, OR SHALL BE A MIXTURE OF LIME PUTTY AND PLASTER OF PARIS THAT WILL PRODUCE A SMOOTH, HARD, WHITE FINISH.

554. LIME PUTTY SHALL BE A STIFF MIXTURE OF HYDRATED LIME AND WATER, ALLOWED TO SOAK AT LEAST 24 HOURS, AND KEPT MOIST UNTIL USED.

555. SCREEDS SHALL BE RUN ON ALL SURFACES AT SUCH INTERVALS AS SHALL ESTABLISH THE EXACT SURFACE OF THE BROWN COAT AND SERVE AS GUIDES FOR RODDING WHEREVER GROUNDS FOR THE FINISH SURFACE ARE NOT AVAILABLE.

556. PLASTER SHALL BE APPLIED WITH SUFFICIENT FORCE TO CAUSE PERFECT ADHESION, AND TO FORM GOOD KEYS ON LATH. THE SCRATCH COAT SHALL BE CROSS SCRATCHED OR BROOMED IN BOTH DIRECTIONS BEFORE THE MORTAR HAS SET.

557. THE BROWN COAT OF GYPSUM PLASTER SHALL BE APPLIED AFTER THE SCRATCH COAT HAS SET UNTIL IT TAKES CONSIDERABLE PRESSURE TO BREAK DOWN THE EDGES OF THE SCRATCHES WHEN RUBBED WITH THE THUMB, BUT BEFORE THE SCRATCH COAT ID DRY.

558. THE BROWN COAT SHALL BE RODDED AND BROUGHT TO TRUE UNIFORM SURFACES WITHIN 1/8 INCH OF THE FACE OF THE FINISHED WORK, THEN LIGHTLY BROOMED TO FORM A BOND FOR THE FINISH COAT. THE BROWN COAT SHALL EXTEND BACK OF ALL WOOD FINISH AND FILL ALL SPACES BETWEEN GROUNDS.

559. NO FINISH COAT IS REQUIRED ON BOILER ROOM SIDE OF TILE PARTITION, BUT, THE BROWN COAT SHALL BE FLOATED TO A TRUE UNIFORM SURFACE.

560. THE FINISH COAT FOR GYPSUM PLASTER SHALL BE APPLIED AFTER THE BROWN COAT HAS BECOME DRY. THIS COAT SHALL NOT EXCEED 1/8 INCH IN THICKNESS, AND SHALL BE OF SUFFICIENT THICKNESS THAT THE UNDER COAT SHALL NOT SHOW THROUGH. THE FINISH COAT SHALL BE BRUSHED WITH WATER AND TROWELED TO A DENSE, EVEN, CLOSE GRAINED

561. THE FINISHED WORK SHALL BE TRUE TO THE GROUNDS AND GUIDE LINES AND BE STRAIGHT, LEVEL AND PLUMB, WITH TRUE, SHARP ANGLES, LINES AND ARRISES. THE FINISHED WORK SHALL SHOW NO VISIBLE JOINTS, CRACKS, CRAZING, TOOL MARKS, WAVES, DISCOLORATIONS OR OTHER DEFECTS.

562. ALL PLASTERING SHALL BE PROPERLY CONNECTED TO AND FINISHED AGAINST OR AROUND OTHER WORK. ALL SUCH OTHER WORK TO WHICH PLASTERING CONNECTS SHALL BE CLEANED OFF AFTER THE COMPLETION OF THE PLASTERING.

563. ORNAMENTAL PLASTERING.--CORNICES, MOLDINGS, BEDS FOR ORNAMENT AND ORNAMENTAL PLASTER WORK SHALL BE ACCURATELY RUN TO THE FULL SIZE DETAILS AND PROFILES AND NEATLY MITERED AT INTERSECTIONS. CAST OR MODELED WORK SHALL BE SOLIDLY BEDDED AND SECURED IN PLACE AND POINTED TO SHOW NO JOINTS.

564. CAST ORNAMENT SHALL ACCURATELY REPRODUCE THE FORM AND SPIRIT OF THE DRAWINGS OR MODELS FURNISHED BY THE SUPERVISING ARCHITECT. CAST WORK SHALL BE REINFORCED WITH FIBER OR WITH GALVANIZED WIRE NETTING, AS NECESSARY TO ASSURE SATISFACTORY AND SUBSTANTIAL RESULTS.

565. PATCHING, ETC.--PATCHING, REPAIRING, POINTING UP, ETC., OF ALL GYPSUM PLASTER WORK DISTURBED OR DAMAGED INCIDENT TO THE INSTALLATION OF OTHER WORK SHALL BE DONE BY THIS CONTRACTOR.

566. ACOUSTICAL PLASTER.--SENATE CHAMBER, HOUSE CHAMBER AND COURT ROOM SHALL HAVE THIS MATERIAL APPLIED WHERE INDICATED ON THE DRAWINGS. SEE DRAWINGS NOS. 204, 205 AND 206.

567. ACOUSTICAL PLASTER SHALL SHOW UPON TESTING A COEFFICIENT OF SOUND ABSORPTION OF AT LEAST 0.21 AT THE FREQUENCY OF 512 CYCLES PER SECOND.

568. PLASTER SHALL BE APPLIED ONE HALF INCH THICK AS A FINISHED COAT IN STRICT CONFORMITY WITH THE MANUFACTURERS SPECIFICATION.

569. REPAIRING PLASTER.--PATCHING, REPAIRING AND POINTING UP OF ACOUSTICAL PLASTER DAMAGED INCIDENT TO WORK PERFORMED UNDER THIS CONTRACT, AFTER OTHER WORK IS IN PLACE SHALL BE DONE BY THE CONTRACTOR.

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MARBLE AND TERRAZZO.

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570. THIS SECTION OF THE SPECIFICATION INCLUDES INTERIOR MARBLE AND TERRAZZO FINISH, AND METAL TRIMMINGS, FASTENINGS AND SUPPORTS FOR MARBLE WORK AND DOOR HARDWARE FOR MARBLE INCLOSURES. THE FIGURES REFERRED TO HEREIN BY NUMBER ARE SHOWN IN MASTER SPECIFICATION No. 448.

571. MARBLE.--THE NAMING OF MARBLES ON THE DRAWINGS IS FOR THE PURPOSE OF INDICATING THE TYPE THAT IS REQUIRED, BUT IS NOT INTENDED TO EXCLUDE ANY MARBLE WHICH CORRESPONDS IN QUALITY, COLOR, FORM OF MARKING, AND IN TEXTURE, TO THOSE SCHEDULED ON THE DRAWINGS. FULL CONSIDERATION, THEREFORE, WILL BE GIVEN TO MARBLES OBTAINED FROM QUARRIES SELECTED BY THE CONTRACTOR, PROVIDED THEY MEET THE ABOVE REQUIREMENTS.

572. MARBLE SHALL BE SOUND AND FREE FROM DEFECTS IMPAIRING ITS STRENGTH OR APPEARANCE. MARBLES SHALL NOT SHOW MARKED DIFFERENCES FROM THE APPROVED SAMPLES.

573. MARBLES SHALL HAVE THE FINISH NOTED ON THE DRAWINGS. SEE DRAWINGS Nos. 2 AND 3.

574. TRIMMINGS.--METAL FASTENINGS AND SUPPORTS FOR BAFFLES, INCLOSURES AND WALL FINISH FOR PLUMBING FIXTURES AND DOOR HARDWARE FOR MARBLE INCLOSURES SHALL BE HEAVY PATTERN CAST BRASS, AND BRASS TUBING. METAL WORK SHALL BE SECURED IN PLACE WITH 1/4 INCH BOLTS OR SCREWS HAVING HEXAGONAL, ROUND HEAD AND CAP NUTS. ALL METAL WORK SHALL BE FINISHED AND NICKEL PLATED. SEE FIGURES 20, 23.

575. MARBLE BAFFLE IN TOILETS SHALL HAVE LEGS, UPRIGHTS, TOP BAR, ETC., SIMILAR TO SECTION "Z -Z" FIGURE 20, EXCEPT THAT TOP BAR SHALL BE CROSS BRACED TO WALL AT EACH END WITH SIMILAR TUBE BAR, FITTINGS, ETC.

576. ANCHORS, DOWELS, ETC., FOR SECURING MARBLE WORK GENERALLY SHALL BE BRASS OR BRONZE, AND NOT LIGHTER THAN No. 6 B AND S GAUGE.

577-584. SHOP DRAWINGS IN TRIPLICATE SHOWING JOINTING AND ANCHORING OF WORK GENERALLY (EXCEPT FOR TOILET ROOMS) SHALL BE SUBMITTED FOR APPROVAL OF THE SUPERVISING ARCHITECT.

585. WORKMANSHIP.--FINISHED SURFACES SHALL BE FREE FROM WAVES OR IRREGULARITIES. POLISHED SURFACES SHALL SHOW A BRIGHT GLOSS WITHOUT SCRATCHES. HONED FINISH SHALL SHOW A FINE SMOOTH SURFACE WITHOUT GLOSS AND WITHOUT SCRATCHES. SLABS SHOWING BOTH SIDES SHALL BE FINISHED TO THE REQUIRED THICKNESS. EXPOSED EDGES SHALL SHOW THE FULL THICKNESSES. MOULDINGS SHALL BE ACCURATELY CUT. ARRISES SHALL BE FULL AND TRUE. CONTINUOUS SURFACES, LINES AND ARRISES SHALL MEET ACCURATELY AT THE JOINTS.

586. FLOOR SLABS SHALL NOT BE LESS THAN 7/8 INCH THICK. WALL SLABS SHALL NOT BE LESS THAN 3/4 INCH THICK. STAIR TREADS AND PLATFORMS SHALL NOT BE LESS THAN 1½ INCHES THICK UNLESS OTHERWISE INDICATED. THRESHOLDS SHALL NOT BE LESS THAN 1-3/8 INCH THICK. WINDOWS HAVING MARBLE JAMBS SHALL HAVE SILLS TO MATCH. MARBLE BASES SHALL HAVE PLINTHS FOR TRIM AT OPENINGS.

587. FLOOR BORDERS SHALL EXTEND TO THE BACK OF THE BASE. BASE AND FLOOR BORDERS SHALL BE IN AS LONG PIECES AS PRACTICABLE AND JOINTED

WALL SLABS IN TOILETS SHALL BE IN AS LARGE PIECES AS PRACTICABLE. JOINTS AT EXTERNAL ANGLES IN TOILETS SHALL BE MADE ON THE SIDE LEAST EXPOSED TO VIEW. JOINTS IN PLAIN SURFACES AT EXTERNAL ANGLES SHOWING IN PUBLIC LOBBIES, VESTIBULES, CORRIDORS, ETC., SHALL BE MITERED TO A 1/8 INCH QUIRK, EXCEPT WHEN THE FULL RETURNS ARE CUT FROM ONE PIECE.

588. LETTERING.--LETTERS OVER DOOR No. 210 SHALL BE CLEAN CUT TO PERFECT OUTLINE WITH SMOOTH INCISED SURFACES. SEE DRAWING No. 204.

589. SETTING.--COLORS AND VEININGS SHALL BE SO SELECTED AND MATCHED AS TO HARMONIZE ADJOINING PIECES.

590. FLOOR SLABS, THRESHOLDS, STAIR TREADS, PLATFORMS AND RISERS SHALL BE SET IN PORTLAND CEMENT MORTAR. WORK NOT OTHERWISE SPECIFIED SHALL BE SET IN PLASTER OF PARIS. EACH PIECE WHEN SET IN PORTLAND CEMENT SHALL BE SOLIDLY BEDDED WITHOUT AIR POCKETS.

591. INCLOSURES AND WALL FINISH FOR PLUMBING FIXTURES AND BAFFLES SHALL BE SECURED WITH METAL FASTENINGS AND SUPPORTS. ALL WORK ELSEWHERE (EXCEPT FOR FLOORS) SHALL BE RIGIDLY SECURED WITH CONCEALED ANCHORS, IN SUCH A MANNER AS TO BE FIRM AND SUBSTANTIAL WITHOUT DEPENDING ON THE BEDDING. NO PIECE SHALL HAVE LESS THAN 2 ANCHORS.

592. JOINTS IN ALL WORK SHALL BE CLOSE AND FLUSH AND SHALL BE THOROUGHLY FILLED. LINES AND ARRISES SHALL BE CONTINUOUS. FLOOR SLABS SHALL BE GROUND FLUSH TO A TRUE PLANE AND RUBBED SMOOTH AFTER SETTING. MARBLE SHALL BE CLEANED AFTER SETTING AND REPOLISHED WHERE NECESSARY.

593. CONCRETE FILL UNDER MARBLE AND TERRAZZO FLOORS SHALL BE CLASS A CONCRETE WITH SHRINKAGE FABRIC EMBEDDED NEAR THE CENTER. SEE SPECIFICATION FOR MATERIALS UNDER "CONCRETE AND CEMENT WORK".

594. CONCRETE FILL SHALL BE LAID OVER A 1/2 INCH THICK SAND CUSHION EVENLY LEVELED AND COVERED WITH ROOFING FELT. THE FELT AND SAND CUSHION SHALL BE SO PROTECTED IN PLACING THE CONCRETE BEDDING AS TO REMAIN INTACT AND UNDISTURBED.

595-596. TERRAZZO SHALL BE COMPOSED OF PORTLAND CEMENT AND HARD MARBLE CHIPS. THE CHIPS SHALL BE THE COLORS, ETC., NOTED ON DRAWING No. 2. THE CHIPS SHALL BE A MIXTURE OF 2 PARTS PASSING A 5/8 INCH MESH, AND RETAINED ON A 3/8 INCH MESH SIEVE, AND ONE PART PASSING A 3/8 INCH AND RETAINED ON A 1/8 INCH SIEVE. TWO PARTS OF THIS MIXTURE SHALL BE MIXED WITH 1 PART PORTLAND CEMENT WITH ONLY SUFFICIENT WATER TO PROVIDE A WORKABLE DEGREE OF PLASTICITY AFTER BEING THOROUGHLY MIXED.

597. THE CONCRETE FILL FOR TERRAZZO SHALL BE LEVELED OFF NOT LESS THAN 3/4 INCH BELOW THE FINISHED SURFACE, THEN COVERED WITH THE TERRAZZO BEFORE THE CONCRETE HAS SET. THE TERRAZZO SHALL BE LEVELED AND TAMPED OR ROLLED AND TROWELED TO THE REQUIRED LEVEL. MARBLE CHIPS SHALL BE ROLLED INTO THE SURFACE UNTIL NO MORE CAN BE EMBEDDED, THEN THE TERRAZZO SHALL BE ROLLED TO AN EVEN SURFACE. AFTER THE CEMENT HAS SET THE TERRAZZO AND THE FLOOR BORDERS AND STRIPS SHALL BE GROUND SMOOTH AND EVEN TO A TRUE PLANE WITH ALL SURFACE CEMENT GROUND AWAY, AND FREE FROM HOLES AND PITS, THEN BE WASHED CLEAN.

598. TERRAZZO SHALL BE JOINTED ON STRAIGHT TRUE LINES AS INDICATED ON THE DRAWINGS. THE JOINTS IN TERRAZZO AND BETWEEN MARBLE AND TERRAZZO SHALL BE MADE WITH BRASS DIVIDING STRIPS NOT LESS THAN .032 INCH

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THICK, EXTENDING THE FULL DEPTH OF THE TERRAZZO WITH FIRM ANCHORAGE, AND SHOWING ON THE SURFACE WHEN FINISHED.

599. TOILET INCLOSURE DETAILS.--SEE FIGURES NOS. 20 AND 23. THESE DETAILS ARE STANDARD AND APPLY GENERALLY TO TOILET ROOM INCLOSURES AND BAFFLES. THE DIMENSIONS GIVEN ON THESE DETAILS ARE IN ALL CASES SUBJECT TO MODIFICATIONS NECESSARY TO FIT THE WORK TO THE BUILDING. THE WORK SHALL BE MADE FROM MEASUREMENTS TAKEN AT THE BUILDING.

600. THE WOOD DOORS ARE INCLUDED IN THE SPECIFICATION FOR "MILL WORK AND FINISH". THE PAPER HOLDERS, COAT HOOKS, SOAP CUPS, TOWEL RACKS, ETC., ARE INCLUDED IN THE "MECHANICAL EQUIPMENT" SPECIFICATION. ALL CUTTING, DRILLING, ETC., SHALL BE DONE AS NECESSARY FOR THE PROPER CONNECTION TO OTHER WORK AND FOR ALL ATTACHMENTS.

601. TOILET ROOMS, HAVING TERRAZZO FLOORS SHALL HAVE COVED FLOOR BORDERS OF THE SAME MATERIALS AS WALL SLABS. SEE FIGURE NO. 21.

602. MARBLE STAIRS.--SEE MISCELLANEOUS DETAIL NO. 38, AND DRAWING NO. 105.

CORK TILE FLOORS.

603. GENERAL.--CORK TILE FLOOR IS REQUIRED IN THE FOLLOWING LOCATIONS:

COURT ROOM, INCLUDING PLATFORMS. SEE DRAWINGS NOS. 7 AND 206.
SENATE CHAMBER, INCLUDING PLATFORMS AND GALLERY. SEE DRAWINGS NOS. 4 AND 204.
HOUSE CHAMBER, INCLUDING PLATFORM AND GALLERY. SEE DRAWINGS NOS. 4 AND 205.

604. FLOORS READY FOR THE APPLICATION OF CORK TILE ARE INCLUDED ELSEWHERE IN THE SPECIFICATION.

605. TILE SHALL BE 1/2" THICK AND OF THE SIZES INDICATED ON THE DRAWINGS.

606. COLORS SHALL BE MEDIUM BROWN AND DARK BROWN, USED AS INDICATED ON THE DRAWINGS.

607. TILE SHALL BE MADE ENTIRELY OF BEST QUALITY PURE, NATURAL CORK SHAVINGS HEAVILY COMPRESSED IN STEEL MOULDS AND THOROUGHLY BAKED. THEY SHALL BE FREE FROM ALL FOREIGN SUBSTANCES AND CEMENT OF ANY KIND OTHER THAN THE NATURAL GUM OF CORK AND SHALL WEIGH AT LEAST 18 OUNCES PER SQUARE FOOT. TILE SHALL BE MADE TO THE EXACT SIZES REQUIRED WITH SQUARE CLEAN OUTER EDGES.

608. BEFORE LAYING TILE ON CONCRETE OR WOOD A LINE SHALL BE STRETCHED ON BOTH AXES AND TILE SHALL BE SPACED FROM THE CENTER IN BOTH DIRECTIONS SO THAT ALL MARGINS AND BORDERS WILL WORK OUT UNIFORM SIZE. TILE LAID OVER CONCRETE SURFACES SHALL BE SET IN WATERPROOF CEMENT SPECIALLY PREPARED FOR SUCH USE AND SO APPLIED TO THE TILE AND FOUNDATION AS TO SECURE PERFECT ADHESION AND HERMETICALLY SEAL AND BIND ALL JOINTS. TILE LAID OVER WOOD SURFACES SHALL BE UNDERLAID WITH ROSIN-SIZED PAPER AND OVER THIS THE TILE SHALL BE LAID. THE EDGES OF THE TILE SHALL BE COATED WITH WATERPROOF CEMENT, SECURELY FITTED AGAINST THE ADJOINING TILE AND THE TILE SHALL BE SECURED IN POSITION WITH HEADLESS STEEL BRADS. THE SURFACE OF ALL FLOORS AND TREADS SHALL BE TRUE AND LEVEL. SURFACE CEMENT SHALL BE WIPED OFF AND ALL

FLOORS AND TREADS SURFACED WITH AN ELECTRIC MACHINE AND LEFT SMOOTH AND CLEAN. FOR PAINTERS FINISH SEE SPECIFICATION FOR "PAINTING AND FINISHING".

WOODWORK.

CARPENTRY.

609. GENERAL.--THE CLASSIFICATION, BASIC GRADES AND SIZES OF STRUCTURAL MATERIAL, BOARDS AND STRIPS, INCLUDING ROUGH, SURFACED OR WORKED LUMBER, SHALL BE IN ACCORDANCE WITH MASTER SPECIFICATION No. 533A.

610. THE GRADES OF MATERIALS SHALL BE AS DEFINED BY THE RULES OF THE RECOGNIZED ASSOCIATION OF LUMBER MANUFACTURERS PRODUCING THE MATERIALS SPECIFIED, BUT THE MAXIMUM DEFECTS AND BLEMISHES PERMISSIBLE IN ANY SPECIFIED GRADE SHALL NOT EXCEED THE LIMITATIONS OF AMERICAN LUMBER STANDARDS.

611. DEFECTS OR BLEMISHES PROHIBITED BY THIS SPECIFICATION, EVEN THOUGH PERMISSIBLE IN THE SPECIFIED SPACE, SHALL NOT APPEAR IN THE MATERIAL USED.

612. SIZES SPECIFIED ARE NOMINAL (BOARD MEASURE) DIMENSIONS, UNLESS OTHERWISE NOTED.

613. MATERIALS.--LUMBER AND TIMBER GENERALLY SHALL BE OF PINE, FIR OR SPRUCE, SOUND, WELL MANUFACTURED AND COMMERCIALLY DRY. LUMBER SHALL BE No. 1 COMMON, OR ITS EQUIVALENT GRADE, UNLESS OTHERWISE SPECIFIED.

614. WOODWORK EXPOSED TO VIEW ON THE OUTSIDE OF THE BUILDING OR IN FINISHED INTERIOR SPACES, SHALL BE DRESSED.

615. MATERIAL GENERALLY SHALL BE FREE FROM WARP THAT CANNOT BE CORRECTED IN PROCESS OF BRIDGING OR NAILING.

616. MATERIAL SHALL BE SO DELIVERED, PILED AND HANDLED AS TO PROTECT IT AGAINST DAMAGE.

617. FRAMING.--WOODWORK SHALL BE PROPERLY FRAMED, CLOSELY FITTED, ACCURATELY SET TO THE REQUIRED LINES AND LEVELS AND RIGIDLY SECURED IN PLACE. SHIMS SHALL NOT BE USED FOR LEVELING ON WOOD OR METAL BEARINGS. SLATE OR TILE SHIMS WITH FULL BEARINGS MAY BE USED AS NECESSARY FOR LEVELING ON MASONRY OR CONCRETE.

618. SLEEPERS AND NAILERS.--SLEEPERS UNDER FLOORS AND COPPER ROOFING OF PORTICO OVER MAIN ENTRANCES SHALL BE OF 2 BY 3 INCH STOCK, AND CREOSOTED. THEY SHALL BE SPACED NOT MORE THAN 16 INCHES ON CENTERS FOR FLOOR NOR 18 INCHES FOR COPPER ACCURATELY LEVELED AND ANCHORED TO THE CONSTRUCTION AT 24 INCH INTERVALS. THE SPACE BENEATH SLEEPERS SHALL BE FILLED SOLID WITH CLASS B MORTAR AND THE SPACES BETWEEN FILLED WITH CONCRETE SPECIFIED UNDER "CONCRETE AND CEMENT WORK."

619. CURBS.--ROOF OPENINGS FOR VENTILATORS SHALL HAVE 2 INCH PLANK CURBS NOT LESS THAN 7 INCHES HIGH ABOVE THE ROOF. THE TOP EDGE

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OF CURBS FOR VELTILATORS SHALL BE LEVEL, AND THE CURBS SHALL BE FIRMLY ANCHORED TO THE CONCRETE.

620. SHEATHING.--SHEATHING FOR MARQUISE SHALL BE WORKED FROM 1 BY 6 INCH STOCK AND SHALL BE DRESSED AND MATCHED. SHEATHINGS SHALL BE DRIVEN CLOSE AND DOUBLE-NAILED AT ALL BEARINGS. END JOINTS SHALL BE WELL DISTRIBUTED AND MADE AT BEARINGS ONLY, UNLESS END MATCHED.

621-622. SHEATHING SHALL BE LAID CLOSE AGAINST WALL.

623. MARQUISE AND PORTICO ROOF SURFACE SHALL BE FORMED WITH CRICKETS, ETC., FOR PROPER DRAINAGE.

624. FURRING.--WOOD FURRINGS SHALL BE PROVIDED WHERE AND AS NECESSARY TO OBTAIN THE REQUIRED LINES, CONTOURS OR LEVELS IN THE FINISHED EXTERIOR OR INTERIOR SURFACES, EXCEPT WHERE METAL OR TILE FURRING IS SPECIFIED.

625. WOOD GROUNDS.--GROUNDS SHALL BE SET FOR PLASTER AT POINTS WHERE OTHER FINISH WILL CONNECT THEREWITH. GROUNDS GENERALLY SHALL BE CONTINUOUS AND SET BACK 1/2 INCH FROM THE EXPOSED EDGES OF OVERLAPPING FINISH. THEY SHALL BE STRAIGHT AND PLUMB OR LEVEL, IN TRUE ALIGNMENT AND FASTENED AT POINTS ABOUT 12 INCHES APART. SPOT GROUNDS SET IN PLASTER OF PARIS NOT MORE THAN 12 INCHES ON CENTERS MAY BE USED WHERE CONTINUOUS GROUNDS ARE NOT PRACTICABLE.

626. GROUNDS AT OPENINGS IN GYPSUM BLOCK PARTITIONS SHALL BE NAILED TO THE WOOD BUCKS. OTHER GROUNDS ON GYPSUM BLOCK SHALL BE WIRED THROUGH THE BLOCK, OR SPOT GROUNDS SHALL BE USED.

627. GROUNDS FOR MATCHED WAINSCOTING SHALL BE NOT OVER 18 INCHES APART. WOOD BASE SHALL HAVE HORIZONTAL GROUNDS AT TOP AND BOTTOM EDGES AND VERTICAL GROUNDS NOT OVER 2 FEET APART.

628. GROUNDS SHALL BE 13/16 INCH THICK FOR LATH, AND 5/8 INCH THICK ON MASONRY. GROUNDS GENERALLY SHALL BE 1-1/2 INCHES WIDE AND KEYED FOR PLASTER.

629. TEMPORARY GROUNDS SHALL BE SET TO PROVIDE 1/2 INCH CLEARANCE BETWEEN THE PLASTER EDGE AND OTHER FINISH REQUIRING THE REMOVAL OF GROUNDS BEFORE IT IS INSTALLED.

630. BUCKS.--OPENINGS FOR WOOD FRAMES IN GYPSUM OR HOLLOW TILE PARTITIONS SHALL HAVE WOOD BUCKS OF 2" DRESSED STOCK BY THE FULL THICKNESS OF THE PARTITION. BUCKS SHALL HAVE JAMBS AND HEADS AND, AT WINDOW OPENINGS, SHALL HAVE SILLS. BUCKS SHALL BE BRACED, SET STRAIGHT AND PLUMB AND HAVE BUILT-IN JAMB ANCHORS NEAR THE TOP AND BOTTOM AND AT POINTS BETWEEN NOT OVER 2 FEET APART.

631. TEMPORARY CLOSURES.--TEMPORARY DOORS AND CLOTH COVERED FRAMES FOR WINDOWS SHALL BE PROVIDED FOR ALL EXTERIOR OPENINGS DURING PLASTERING AND UNTIL THE BUILDING HAS DRIED OUT.

632. CUTTING AND FITTING.--WOODWORK SHALL BE PROPERLY CUT AND FITTED FOR OR TO ALL OTHER CONNECTING WORK.

633. WALKS AND RAILINGS.--ROOF WALKS, SEE MISCELLANEOUS DETAIL No. 22. WALKS SHALL BE 2 BY 6 INCH SQUARE-EDGED PLANK LAID LENGTHWISE,

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WITH 1 INCH OPEN JOINTS. THE PLANK SHALL BE SECURED TO SUPPORTS LAID ON BEARING BLOCKS AND ANCHORED TO THE ROOF WITH 1/2 INCH BOLTS. OGEE WASHERS TO BE BEDDED IN WHITE LEAD. SUPPORTS SHALL BE SPACED NOT OVER 6 FEET APART. ALL MATERIAL SHALL BE EITHER GRADE C FINISH AND BETTER CYPRESS DRESSED FOR PAINT, OR NO. 1 COMMON PINE OR FIR CREOSOTED.

634. ROOF PLATFORM FOR WEATHER BUREAU.--SEE MISCELLANEOUS DETAIL No. 32. GIRDERS SHALL BE SPACED NOT OVER 6 FEET APART. MATERIAL EXCEPT FLASHING BLOCKS, SHALL BE EITHER GRADE C FINISH AND BETTER CYPRESS DRESSED FOR PAINT, OR NO. 1 COMMON PINE OR FIR CREOSOTED. METAL WORK IS INCLUDED UNDER MISCELLANEOUS METAL WORK.

635. BUFFER AT MAILING VESTIBULE.--SEE MISCELLANEOUS DETAIL No. 33. THE 6 BY 12 INCH TIMBER SHALL BE OAK OR DENSE SELECT GRADE SOUTHERN PINE OR DOUGLAS FIR. METAL WORK IS INCLUDED UNDER "MISCELLANEOUS METAL WORK".

636. ANCHORS, ETC.--ANCHORS FOR WOOD SLEEPERS SHALL BE GALVANIZED AND SO DESIGNED THAT THEY CANNOT BE PULLED OUT AFTER THE CONCRETE HAS SET. THEY SHALL BE OF ANNEALED STEEL WIRE AT LEAST .14" IN DIAMETER OR OF NOT LIGHTER THAN 20 U. S. STANDARD GAUGE METAL 1-1/4" WIDE.

637. ANCHORS FOR WOOD FRAMES AND BUCKS SHALL BE 1/8 BY 1-1/4 INCH FLATS WITH ENDS TURNED 2 INCHES, EXTENDED 8 INCHES INTO MASONRY, AND SECURED TO FRAMES AND BUCKS WITH SCREWS.

638. FASTENINGS FOR WOOD GROUNDS, FRAMING, ETC., TO MASONRY OR CONCRETE SHALL BE OF METAL AND OF TYPE AND SPACING BEST SUITED TO CONDITIONS. HARDENED STEEL NAILS, EXPANSION SCREWS, TOGGLE BOLTS, SELF-CLINCHING NAILS, BUILT IN METAL NAILING PLUGS OR SIMILAR FASTENINGS SHALL BE USED. WOOD PLUGS OR NAILING BLOCKS ARE NOT ACCEPTABLE.

639. NAILS, SPIKES, SCREWS, ETC., SHALL BE OF SUITABLE TYPES AND SIZES TO DRAW THE MEMBERS INTO PLACE AND SECURELY HOLD SAME.

640. CREOSOTING.--CREOSOTING SHALL BE DONE BY EITHER THE FULLCELL PROCESS OR THE EMPTY CELL PROCESS. LUMBER 4 INCHES OR LESS IN THICKNESS SHALL BE PENETRATED THROUGHOUT. HEAVIER TIMBERS SHALL BE PENETRATED AT LEAST 2 INCHES ON ALL SIDES.

641. CREOSOTE OIL SHALL BE THE BEST GRADE OF PURE, COAL-TAR CREOSOTE, FREE FROM ANY SUSPENDED MATTER. AT A TEMPERATURE OF 38°C, THE OIL SHALL BE COMPLETELY LIQUID AND HAVE A SPECIFIC GRAVITY OF NOT LESS THAN 1.03, NOR MORE THAN 1.14. THE OIL SHALL NOT CONTAIN MORE THAN 2 PER CENT WATER AND, ON THE BASIS OF DRY OIL, SHALL GIVE NO DISTILLATE BELOW 200° C.

642. MATCHED WAINSCOTING, PANELED WORK, ETC., ARE SPECIFIED UNDER "MILLWORK AND FINISH".

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MILLWORK AND FINISH

643. GENERAL.--WOOD FLOORING AND ALL MILLWORK AND WOOD FINISH REQUIRED UNDER THE CONTRACT SHALL BE INCLUDED UNDER THIS HEADING WHETHER OR NOT EVERY ITEM OF WORK IS SPECIFICALLY MENTIONED HEREIN.

644. THE TERMS "NATURAL FINISH" OR "FINISHED NATURAL" SHALL MEAN ANY APPLIED FINISH THAT SHOWS THE GRAIN OF THE WOOD.

645. STOCK.--LUMBER SHALL BE LIVE, SOUND STOCK THOROUGHLY SEASONED, WELL MANUFACTURED AND KILN DRY. STOCK IS SPECIFIED BY NOMINAL (BOARD MEASURE) THICKNESS. ALL OTHER DIMENSIONS SPECIFIED ARE ACTUAL. WHERE NO OTHER THICKNESS IS SPECIFIED 1 INCH STOCK IS UNDERSTOOD.

646. WORK THAT IS TO BE FINISHED IN PAINT OR ENAMEL SHALL HAVE EXPOSED SURFACES FREE FROM DEFECTS OR BLEMISHES THAT WILL SHOW AFTER BEING FINISHED AS SPECIFIED UNDER "PAINTING AND FINISHING."

647. WORK THAT IS TO BE FINISHED TO SHOW THE GRAIN SHALL BE BRIGHT AND UNIFORM IN COLOR AND FREE FROM ANY DEFECTS OR BLEMISHES ON EXPOSED SURFACES.

648. IMITATION MAHOGANY PANEL STOCK SHALL BE SELECTED FOR ORNAMENTAL GRAIN.

649. EXTERIOR FINISH.--EXTERIOR WOOD DOORS AND SASH SHALL BE CLEAR WHITE PINE; OTHER EXTERIOR WOOD FINISH SHALL BE WHITE PINE, FIR OR RED HEART CYPRESS.

650. INTERIOR FINISH.--WOOD HEREINAFTER CALLED "IMITATION MAHOGANY" SHALL BE A WOOD GROWN IN THE PHILIPPINES CLOSELY RESEMBLING GENUINE MAHOGANY AND FORMERLY SO CALLED.

651. NOTE.--SEE SCHEDULE OF PAINTER FINISH UNDER "PAINTING AND FINISHING".

652. INTERIOR FINISH OF GROUND FLOOR.--CORRIDOR, LOBBY, VESTIBULE, ELEVATOR HALL, STAIR HALL, FEDERAL OFFICES, PUBLIC OFFICE AND OPERATING ROOM OF CABLE OFFICES SHALL BE IMITATION MAHOGANY FOR VARNISH FINISH - ELSEWHERE FINISH SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

653. INTERIOR FINISH OF FIRST FLOOR.--IMITATION MAHOGANY FOR VARNISH FINISH, EXCEPT IN THE FOLLOWING SPACES: INTERIOR OF P. O. AND M. O. WORK ROOMS (INCLUDING WORK ROOM SIDE OF SCREENS) AND MAILING VESTIBULE SHALL BE YELLOW PINE FOR VARNISH FINISH, EXCEPT THAT THE SCREEN COUNTER TOP AND SHELF OF DUTCH DOOR SHALL BE BIRCH, VARNISHED. JANITORS CLOSET AND ALL TOILETS SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

654. INTERIOR FINISH OF SECOND FLOOR.--IMITATION MAHOGANY FOR VARNISH FINISH THROUGHOUT EXCEPT IN THE FOLLOWING SPACES: HOUSE CHAMBER, STORAGE ROOM AND JANITOR CLOSET AND ALL TOILETS WHICH SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

655. INTERIOR FINISH FOR THIRD FLOOR.--IMITATION MAHOGANY FOR VARNISH FINISH THROUGHOUT, EXCEPT IN THE FOLLOWING SPACES: PRIVATE OFFICE, CLOSET, LOBBY AND PASSAGES OF GOVERNOR'S SUITE, ALL TOILETS, STORAGE ROOMS, BLUE PRINT ROOM AND JANITORS CLOSET WHICH SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

656. INTERIOR FINISH FOR FOURTH FLOOR.--IMITATION MAHOGANY FOR VARNISH FINISH THROUGHOUT, EXCEPT IN THE FOLLOWING SPACES: STORAGE, DETENTION ROOM AND ALL TOILETS WHICH SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

657. INTERIOR FINISH OF FIFTH FLOOR.--IMITATION MAHOGANY FOR VARNISH FINISH THROUGHOUT, EXCEPT IN THE FOLLOWING SPACES: COURT ROOM, ALL TOILETS AND JANITOR'S CLOSETS WHICH SHALL BE PINE OR FIR FOR ENAMEL OR PAINTED FINISH.

658. PENT HOUSE.--PINE OR FIR FOR PAINTED FINISH.

659. PROTECTION.--WOODWORK SHALL BE DELIVERED DRY AND PROTECTED AT ALL TIMES FROM INJURY OR DAMPNESS. DOORS, SASH, FLOORING AND INTERIOR FINISH SHALL NOT BE STORED OR INSTALLED IN ANY PART OF THE BUILDING UNTIL AFTER THE CONCRETE AND PLASTER WORK IN SUCH PART ARE COMPLETED AND THAT PART OF THE BUILDING IS THOROUGHLY DRY.

660. WORKMANSHIP.--WOODWORK GENERALLY SHALL BE FINISHED SMOOTH. INTERIOR WOODWORK SHALL HAVE A FINE, SMOOTH FINISH AND SHALL BE FREE FROM MACHINE OR TOOL MARKS, ABRASIONS, RAISED GRAIN, E ETC.

661. JOINTS SHALL BE TIGHT AND SO FORMED AS TO CONCEAL SHRINKAGE. SHOP MITERS 4 INCHES OR MORE FROM HEEL TO POINT SHALL BE GLUED AND FEATHERED, LOCKED OR SPLINED. TENONS AND DOWELS SHALL BE MADE TO A DRIVING FIT. DOWELS SHALL BE OF HARD WOOD AND AT LEAST TWO SHALL BE USED IN EACH JOINT.

662. JOINTS OF OUTSIDE WORK SHALL EXCLUDE WATER AND BE SET IN WHITE LEAD PASTE OR WATERPROOF GLUE. SHOP JOINTS OF INTERIOR WORK SHALL BE HOT-GLUED UNDER PRESSURE.

663. DOOR AND WINDOW TRIM SHALL BE IN SINGLE LENGTHS WITHOUT SPLICING. RUNNING FINISH, SUCH AS BASE, PICTURE MOULD, ETC., SHALL BE IN LONG LENGTHS AND JOINTED ONLY WHERE SOLID FASTENINGS CAN BE MADE. BUTT JOINTS SHALL BE KEPT TO THE MINIMUM NUMBER POSSIBLE IN COMMERCIAL LENGTHS, AND IN BUILT UP MEMBERS THEY SHALL BE WELL BROKEN AND DISTRIBUTED.

664. PANELS (EXCEPT MATCHED PANELS) SHALL BE SET LOOSE AND SO SECURED AS TO PREVENT CHECKS OR WARP. APPLIED MOULDINGS SHALL NOT BE FASTENED TO THE PANELS.

665. CARVED WORK SHALL REPRODUCE THE FORM AND SPIRIT OF THE MODELS OR DETAILS FURNISHED.

666. VENEERED WORK.--CORES SHALL BE OF WHITE PINE, POPLAR, CHESTNUT OR SIMILAR NON-RESINOUS WOOD SUITABLE FOR GLUING. STAVED CORES SHALL BE GLUED UP OF STRIPS NOT OVER 7/8 INCH WIDE ON THE FACE. LAMINATED CORES SHALL HAVE THE GRAIN OF ADJOINING LAYERS CROSSED, AND THE GRAIN OF OUTER LAYERS AT RIGHT ANGLE TO THAT OF THE VENEERS. CORES SHALL BE GLUED UP, THEN WORKED TO THE REQUIRED DIMENSIONS.

667. PANEL CORES GENERALLY SHALL BE LAMINATED NOT LESS THAN 3 PLIES. CORES FOR RAILS AND STILES SHALL BE STAVED. CORES OF FLUSH PANELS, COUNTER TOPS AND SIMILAR WIDE SECTIONS SHALL BE STAVED AND CROSS BANDED OR LAMINATED NOT LESS THAN 5 PLIES.

668. VENEERS ON OPPOSITE FACES OF CORES SHALL BE SELECTED TO EQUALIZE THE PULL OF THE VENEER. THE APPROXIMATE THICKNESS OF VENEERS SHALL BE 1/16 INCH ON PANELS AND 1/8 INCH ON RAILS AND STILES. FACE VENEERS ON COUNTER TOPS AND SIMILAR MEMBERS SHALL BE AT LEAST 1/8 INCH THICK. EDGE VENEERS SHALL BE AT LEAST 3/8 INCH THICK.

669. EXPOSED IMITATION MAHOGANY VENEERS SHALL BE SELECTED FOR ORNAMENTAL GRAIN.

670. PANELED WORK.--RAILS AND STILES SHALL BE DOWELED OR TENONED. PANELS WITH APPLIED MOLDINGS SHALL BE DOUBLE REBATED ON THE FACE FOR THE PANELS AND MOLDINGS WHEN ONLY ONE SIDE IS EXPOSED. WHERE BOTH SIDES ARE EXPOSED, THEY SHALL HAVE SPLINES TO RECEIVE THE PANELS AND MOLDINGS. RAILS AND STILES OF OUTSIDE WORK SHALL BE SOLID, AND OF INTERIOR WORK SHALL BE EITHER SOLID OR VENEERED AS SPECIFIED.

671. PANELS OF OUTSIDE WORK SHALL BE SOLID AND, IF MORE THAN 10 INCHES WIDE, SHALL BE BUILT UP OF STRIPS NOT OVER 4 INCHES WIDE AND DOWELED OR SPLINED TOGETHER WITHOUT CROSS JOINTS. PANELS OF INSIDE WORK THAT ARE MORE THAN 10 INCHES WIDE SHALL BE VENEERED, AND PANELS 10 INCHES OR LESS IN WIDTH MAY BE EITHER SOLID OR VENEERED.

672. DOOR FRAMES.--FRAMES GENERALLY SHALL BE OF 2 INCH STOCK, GROOVED OR KERFED ON THE BACK AND REBATED AT BOTH EDGES FROM THE SOLID. OUTSIDE FRAMES IN MASONRY OPENINGS SHALL HAVE APPLIED STAFF BEADS INSTALLED AFTER THE FRAMES ARE SET AND CAULKED.

673. FRAMES OF OUTSIDE DOORS TO MAILING VESTIBULE SHALL BE WORKED FROM 2-1/2 INCH STOCK.

674. FRAMES IN NATURAL FINISH SHALL BE OF THE SAME WOOD AS THE FINISH.

675. FRAMES OF DOUBLE-ACTING DOORS WITH JAMB HINGES SHALL HAVE FILLETS WORKED FROM THE SOLID TO RECEIVE THE DOORS AND HINGES.

676. WOOD THRESHOLDS SHALL BE OF OAK, 1/2 INCH THICK WORKED HOLLOW BACK AND WITH BEVELED EDGES.

677. DOORS.--DOORS SHALL BE 1-3/4 INCHES THICK, UNLESS OTHERWISE SPECIFIED. ALL DOORS SHALL BE FREE FROM OPEN JOINTS, WARP OR TWIST.

678. OUTSIDE WOOD DOORS AND DOORS 112 AND 114 SHALL BE SOLID WHITE PINE. GLASS AND WOOD PANELS SHALL BE SET WITH SPLINES AND MOLDINGS.

679. ALL INTERIOR DOORS SHALL BE VENEERED WITH IMITATION MAHOGANY EXCEPT AS OTHERWISE SPECIFIED. DOORS IN GROUND FLOOR CONNECTING WITH PAINTED FINISH ON BOTH SIDES, SHALL BE SOLID WHITE PINE, OR FIR. DOORS IN TOILET INCLOSURES AND CUPBOARD DOORS IN P. O. SCREEN SHALL BE YELLOW PINE. WOOD PANELS AND GLASS SHALL BE SET WITH SPLINES AND MOLDINGS.

680. DUTCH DOOR SHALL HAVE COUNTER SHELF OF BIRCH SUPPORTED ON BRACKET AND BED MOLDS. SEE MISCELLANEOUS DETAIL No. 56.

681. DOORS FOR MARBLE INCLOSURES IN TOILET ROOMS SHALL BE 1-1/4 INCHES THICK. SEE FIGURE 20 OF MASTER SPECIFICATION No. 448.

682. DOORS OF CUPBOARDS SHALL BE SOLID WITH RAILS AND STILES WORKED FROM 1 INCH STOCK.

683. DOORS THAT ARE TO BE COVERED WITH PANTASOTE SHALL BE WHITE PINE WITH FLUSH PANELS. THE COVERING SHALL BE GLUED IN PLACE, STRETCHED TIGHT AND FASTENED AT CLOSE INTERVALS WITH UPHOLSTERER'S NAILS AS INDICATED ON DRAWINGS Nos. 204, 205 AND 206. SEAMS SHALL OCCUR ONLY ON THE LINES OF NAILING AND NEAR THE INTERSECTIONS OF WIDE AND NARROW AREAS. GLASS PANELS SHALL BE SET IN BRASS FRAMES SECURED WITH OVAL HEAD BRASS SCREWS.

684. METAL COVERED DOORS SHALL HAVE FLUSH PANELS - SEE DETAIL No. 53.

685. BUILT UP DOORS N/B AND O/B SHALL HAVE PANELS OF MATCHED AND V-JOINTED PARTITION STUFF WITH CHAMFERED RAILS AND STILES OF 1 INCH STOCK PLANTED ON AND SECURED WITH SCREWS. ALL CONTACT SURFACES SHALL BE COATED WITH WHITE LEAD PAINT IMMEDIATELY BEFORE ASSEMBLING. SEE DETAIL No. 82.

686. MEETING STILES OF DOUBLE DOORS SHALL BE REBATED, UNLESS OTHERWISE SPECIFIED. MEETING STILES OF DOUBLE ACTING DOORS SHALL BE ROUNDED. MEETING STILES OF DOUBLE MAIN ENTRANCE DOORS B/27 AND 1/27 SHALL BE WORKED TO STANDARD BEVEL WITH EDGES SLIGHTLY ROUNDED. SEE MISCELLANEOUS DETAIL No. 113.

687. ALL DOORS (EXCEPT BUILT UP DOORS) SHALL HAVE THE RAILS TONGUED AND TENONED OR TONGUED AND DOWELED TO THE STILES. TENONS AND DOWELS TO BE CONCEALED. DOWELED JOINTS MORE THAN 3-1/2 INCHES WIDE SHALL HAVE THREE DOWELS. JOINTS MORE THAN 7 INCHES WIDE SHALL HAVE DOUBLE TENONS OR AT LEAST FOUR DOWELS.

688. THE CONSTRUCTION OF PANELS SHALL BE AS SPECIFIED FOR PANELED WORK IN SIMILAR LOCATIONS.

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689. WINDOW FRAMES.--FOR FRAMES OF SLIDING WINDOWS AND GRILLES IN P. O. SCREEN, SEE DRAWING No. 203. PULLEY STILES SHALL HAVE WEIGHT POCKETS, FOR ACCESS TO PULLEYS. POCKET PIECES SHALL BE SECURED IN PLACE WITH BRASS SCREWS.

690. PLANK FRAMES FOR PIVOTED OR FIXED SASH IN P. O. SCREEN SHALL HAVE JAMBS AND HEADS CONSTRUCTED IN SIMILAR MANNER TO THAT INDICATED ON DRAWING No. 203. FRAMES FOR SASH IN JANITOR CLOSET SHALL BE SIMILAR TO DOOR FRAMES. FRAMES FOR FIXED SASH SHALL BE REBATED. FRAMES FOR PIVOTED SASH SHALL HAVE BEADED AND REBATED FILLETS TO MATCH THE SASH.

691. SASH.--SASH SHALL BE 1-3/4 INCHES THICK, UNLESS OTHERWISE SPECIFIED. EXTERIOR TRANSOM SASH SHALL BE REBATED ON THE OUTSIDE FOR PUTTY GLAZING. INTERIOR SASH AND EXTERIOR SIDELIGHTS SHALL BE REBATED ON THE INSIDE AND HAVE GLAZING BEADS.

692. PIVOTED SASH SHALL HAVE EDGES REBATED AND BEADED TO MATCH THE FILLETS ON FRAMES.

693. ALL SASH SHALL HAVE MORTISE AND TENON JOINTS; EXTERIOR SASH PINNED, AND INTERIOR SASH WEDGED AND GLUED.

694. DOOR AND WINDOW TRIM.--WOOD TRIM CONNECTING WITH PLASTER SHALL BE WORKED HOLLOWBACK. PLAIN TRIM SHALL BE BUTT-JOINTED, AND MOULDED MEMBERS MITERED. TRIM EXTENDING TO FLOOR SHALL HAVE PLINTH BLOCKS IN CONNECTION WITH WOOD BASE. ARCHITRAVES SHALL HAVE MOULDED BACK BANDS, UNLESS OTHERWISE SHOWN. BACK BANDS IN WORK ROOMS SHALL MEMBER WITH THE TOP MOULDING OF WOOD WAINSCOT.

695. WINDOWS IN FINISHED SPACES AND NOT OTHERWISE INDICATED SHALL HAVE WOOD STOOLS WITH MOULDED APRON AND BED MOULD.

696. FIXED AND SLIDING SASH GENERALLY SHALL HAVE MOULDED STOPS 1/2 INCH THICK. STOPS FOR SLIDING SASH BORED AND COUNTERSUNK FOR STOP ADJUSTERS NEAR THE ENDS AND AT INTERVALS OF 15 INCHES.

697. BASE, PICTURE MOULD, ETC.--BASE ON WOOD FLOORS SHALL EXTEND TO THE SLEEPERS. BASE AND PICTURE MOULD SHALL BE KERFED ON THE BACK OR WORKED HOLLOW BACK. PICTURE MOULD IS REQUIRED ONLY IN THE OFFICE OF COMMISSIONER OF AGRICULTURE, 4TH FLOOR.

698. BULLETIN BOARDS.--SEE MISCELLANEOUS DETAIL No. 99.

699. BACK BOARDS SHALL HAVE THREE-PLY LAMINATED CORES VENEERED BOTH SIDES; CORES AND VENEERS OF CLEAR WHITE PINE. FELT COVERING SHALL BE HEAVY WOOL FELT OF COLOR SELECTED GLUED AND STRETCHED TIGHT.

700. DIRECTORIES.--SEE DETAIL ON DRAWING No. 202. BACKS SHALL BE IN TWO LAYERS, THE BACKING VENEERED BOTH SIDES ON A THREE-PLY LAMINATED CORE. THE FACE SHALL BE GROOVED FOR A CHANGEABLE LETTER SYSTEM AND COVERED WITH ALL-WOOL BROADCLOTH OF FINE, DURABLE QUALITY, BLACK OR DARK GREEN AS SELECTED.

701. LETTERS AND NUMERALS SHALL BE WHITE AND HAVE INTEGRAL PRONGS FITTING THE GROOVES AND HOLDING THE LETTERS AND NUMERALS IN PERFECT ALIGNMENT. ROOM NUMBERS AND NAMES OF OCCUPANTS SHALL BE 3/8 INCH HIGH, OFFICE OR BUREAU DESIGNATIONS 1/2 INCH HIGH, AND FLOOR DESIGNATIONS 1 INCH HIGH. A SUPPLY OF TWENTY ASSORTED LETTERS AND NUMERALS PER ROOM SHALL BE FURNISHED.

702. PANELED WAINSCOTING.--SEE REQUIREMENTS FOR "PANELED WORK".

703. PANELED WAINSCOT SHALL BE TONGUED TO DOOR TRIM, AND TONGUED TOGETHER AT INTERNAL ANGLES. EXTERNAL ANGLES SHALL BE TONGUED AND MITERED. CAP AND BASE SHALL BE AS INDICATED.

704. MATCHED WORK.--MATCHED PANELS AND WAINSCOTING SHALL BE NOT OVER 3-1/4 INCHES WIDE MATCHED STRIPS WITH V-JOINTS. WAINSCOTING SHALL BE TONGUED TO DOOR AND RETURNED AT WINDOW REVEALS AND SHALL HAVE A REBATED CAP WITH TOP MOULD, PLAIN BEVELED BASE, AND REBATED APRON UNDER WINDOW STOOLS.

705. PLATFORMS, GALLERYS, STEPS, ETC., IN SENATE AND HOUSE CHAMBERS AND COURTROOM SHALL HAVE RISERS AND NOSINGS OF THE SAME KIND OF WOOD AS THE ROOM FINISH. THEY SHALL BE PROPERLY FRAMED WITH NOSINGS, RISERS, TREADS, ETC., TONGUED, GROOVED AND GLUED TOGETHER AND ALL WORK SHALL BE RIGID AND FREE FROM CREAK OR OPEN JOINTS. NOSINGS SHALL BE SET THE PROPER HEIGHT ABOVE THE SUB-FLOOR TO FINISH FLUSH WITH THE CORK TILE.

705A. STAIR HAND RAILS SHALL BE IMITATION MAHOGANY GROOVED ON THE UNDER SIDE FOR METAL TOP RAIL AND SHALL BE SECURED WITH SCREWS FROM UNDERNEATH, SPACED NOT OVER 18" APART.

706. COUNTERS, CUPBOARDS, ETC.--COUNTER TOPS AND DROP TABLES OF POST OFFICE SCREENS SHALL BE VENEERED ON BOTH SIDES AND ALL EXPOSED EDGES. CORES SHALL BE STAVED AND CROSS BANDED, OR LAMINATED NOT LESS THAN 5 PLIES. COUNTER TOPS SHALL FINISH 1-3/4 INCHES THICK. VENEERS FOR COUNTER TOPS SHALL BE 1/8 INCH THICK. THE VENEERS SHALL BE BIRCH.

707. METAL COVERED COUNTER TOPS SHALL HAVE CORES BUILT UP AS SPECIFIED FOR VENEERED TOPS, BUT WILL NOT BE VENEERED.

708. DRAWERS SHALL HAVE SIDES DOVETAILED TO THE FRONTS. SIDES SHALL EXTEND BACK AS FAR AS THE SPACE PERMITS. BOTTOMS SHALL BE THREE-PLY LAMINATED, LET INTO THE FRONTS, SIDES AND BACKS. DRAWERS SHALL HAVE HARDWOOD RUNS AND GUIDE STRIPS. DUST PANELS SHALL BE PLACED UNDER ALL DRAWERS. PARTITIONS AND COIN POCKETS IN MONEY DRAWERS SHALL BE HARD MAPLE. SEE MISCELLANEOUS DETAIL NO. 100. METAL DIVISIONS FOR MONEY AND STAMP DRAWERS SHALL BE AS DETAILED. SEE DRAWING NO. 203.

709. CONDUIT DUCTS WITH REMOVABLE FRONTS SHALL BE PROVIDED FOR PIPES AND CONDUITS ON THE BACK OF THE POST OFFICE SCREEN AS INDICATED. THE FRONTS SHALL BE SECURED WITH ROUND HEAD SCREWS.

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710. THE WORK ROOM SIDE OF SCREENS BELOW THE CONDUIT DUCT, INCLUDING CUPBOARDS AND THE OPEN SPACES UNDER COUNTERS SHALL BE FINISHED WITH MATCHED WAINSCOTING, EXCEPT WHERE SASH AND DOORS OCCUR.

711. SHELVES AND PARTITIONS FOR CUPBOARDS SHALL BE GLUED UP IN THE REQUIRED WIDTHS - SHELVES SHALL BE ADJUSTABLE AND SUPPORTED ON METAL RESTS. SEE MISCELLANEOUS DETAIL No. 112.

712. LOCK BOXES AND DRAWERS AND METAL FRONT MAIL DROPS FURNISHED BY THE GOVERNMENT SHALL BE INSTALLED IN THE POST OFFICE SCREENS; THE CONTRACTOR TO PROVIDE ANY FILLER PIECES, MOULDINGS, ETC., REQUIRED.

713. DROP TABLE.--SEE MISCELLANEOUS DETAIL No. 110.

714. SHOP PAINTING.--THE SURFACES OF FRAMES AND INTERIOR WOOD FINISH (EXCEPT FLOORING) THAT ARE CONCEALED AFTER ASSEMBLING AND ERECTION SHALL BE PRIMED WITH LEAD AND OIL PAINT, AND THE SURFACES OF SAME EXPOSED AFTER ERECTION SHALL BE PRIMED, OR FILLED AND STAINED, OR FIRST COATED FOR THE FINISH SPECIFIED, BEFORE LEAVING THE SHOP. PANELS SHALL BE TREATED AS SPECIFIED ABOVE BEFORE THEY ARE SET. MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE SPECIFICATIONS UNDER "PAINTING AND FINISHING."

715. ERECTION.--WOOD FINISH SHALL BE SET STRAIGHT, PLUMB, LEVEL, IN TRUE ALIGNMENT, CLOSELY FITTED AND RIGIDLY FASTENED IN PLACE. NAIL HEADS OF EXPOSED NAILING SHALL BE SUNK FOR FACE PUTTY. OTHER FASTENINGS SHALL BE CONCEALED WHERE POSSIBLE.

716. FRAMES SHALL BE ACCURATELY SET AND BRACED TO HOLD THEIR POSITION AND SHAPE. FRAMES IN PREPARED OPENINGS SHALL BE WEDGED ON THE BACK. FRAMES WITHOUT BUCKS IN MASONRY OR CONCRETE SHALL HAVE JAMB ANCHORS NEAR THE TOP AND BOTTOM AND AT POINTS BETWEEN NOT OVER 3 FEET APART. ANCHORS SHALL BE AS SPECIFIED UNDER "CARPENTRY" FOR WOOD FRAMES AND BUCKS.

717. FRAMES IN EXTERIOR MASONRY WALLS SHALL BE SET TO PROVIDE A CAULKING SPACE, AND SHALL BE TIGHTLY CAULKED WITH OAKUM AGAINST THE MASONRY BOTH INSIDE AND OUTSIDE BEFORE THE STAFF BEADS ARE FASTENED IN PLACE.

718 BASE ON WOOD FLOORS SHALL BE SET BEFORE THE FLOORS ARE LAID AND WITH THE BOTTOM EDGE CLOSE TO SLEEPERS. BASE (EXCLUSIVE OF MOULDINGS) SHALL BE TONGUED TOGETHER AND MOULDINGS COPED AT ALL INTERNAL ANGLES.

719. PICTURE MOULD SHALL BE COPED AT INTERNAL ANGLES.

720. DOORS, SASH, DRAWERS AND ALL MOVABLE PARTS SHALL BE ACCURATELY FITTED WITH PROPER CLEARANCE AND LEFT IN PERFECT WORKING ORDER.

721. WORK GENERALLY SHALL BE LEFT CLEAN AND FREE FROM WARP, TWIST, OPEN JOINTS OR OTHER DEFECTS.

722. HARDWARE SHALL BE ACCURATELY FITTED AND ADJUSTED. WHERE PRACTICABLE, AFTER FITTING, HARDWARE SHALL BE TAKEN OFF AND BE REPLACED AFTER COMPLETION OF PAINTING OR FINISHING. DOOR KNOBS SHALL BE KEPT COVERED WITH HEAVY CLOTH UNTIL THE BUILDING IS OCCUPIED.

723. DOOR KNOBS GENERALLY SHALL CENTER 38 INCHES ABOVE THE FLOOR. SINGLE PUSH BARS SHALL CENTER 48 INCHES ABOVE THE FLOOR. DOOR PULLS GENERALLY SHALL CENTER 45 INCHES ABOVE THE FLOOR.

724. SUB-FLOORING.--FLOORING OF PLATFORMS, GALLERYS, TREADS, ETC., IN SENATE AND HOUSE CHAMBERS AND COURT ROOM UNDER CORK TILE SHALL BE MATCHED AND DRESSED No. 1 COMMON PINE FLOORING NOT OVER 3" WIDE LAID PERFECTLY SMOOTH AT THE REQUIRED LEVEL WHICH IS DETERMINED BY THE THICKNESS OF THE CORK TILE USED. ALL JOINTS SHALL BE TIGHT AND THOROUGHLY NAILED. ALL HIGH OR UNEVEN BUTTS AND JOINTS SHALL BE PLANED SMOOTH. NO BOARDS WITH KNOT-HOLES NOR ANY CUPPED BOARDS SHALL BE USED.

724A. FINISHED FLOORING.--FLOORS OF FINISHED SPACES SHALL BE OF WOOD, UNLESS OTHERWISE REQUIRED. SEE NOTES ON DRAWINGS NOS. 2, 3 AND 4. FLOORING SHALL BE STRAIGHT AND CLOSE GRAINED, DRESSED SMOOTH, WORKED HOLLOW BACK AND MATCHED WITH CLOSE FITTING TONGUES. STRONGLY DISCOLORED PIECES SHALL NOT BE USED.

725. BEFORE ANY FLOORING IS LAID THE BEARINGS SHALL BE TESTED WITH A STRAIGHT-EDGE MADE TRUE AND LEVEL.

726. FLOORING SHALL BE LAID AFTER ALL OTHER WOOD FINISH IS INSTALLED. IT SHALL FIT TIGHT AGAINST ALL BASE, PERMANENT FIXTURES, ETC. NO SHOE MOULD SHALL BE USED IN CONNECTION WITH WOOD FLOORS. SHOE MOULDING MAY BE USED IN MAILING VESTIBULE ONLY.

727. FLOORING SHALL BE DRIVEN TIGHT, WITH END JOINTS WELL DISTRIBUTED AND BROKEN AT LEAST 16" IN ADJOINING STRIPS. END JOINTS SHALL HAVE FIRM BEARINGS AND, IF NOT MATCHED, SHALL BE MADE ONLY OVER SLEEPERS. FLOORING SHALL BE NAILED EVERY 16 INCHES WITH CUT FLOORING NAILS. END JOINTS THAT ARE NOT MATCHED SHALL BE FACE NAILED AND THE NAILS SUNK.

728. FLOORING GENERALLY EXCEPT IN P. O. WORKROOMS SHALL BE SCRAPED AND SANDED OR MACHINE FINISHED TO A SMOOTH, EVEN SURFACE AFTER LAYING AND PROTECTED FROM DIRT, STAIN, GRIT, ETC., UNTIL THE COMPLETION OF THE CONTRACT. WORK ROOM FLOORS SHALL BE SMOOTH WITH FLUSH JOINTS BUT NEED NOT BE SCRAPED OR SANDED.

729. KINDS OF FLOORING.--MAPLE FLOORING SHALL BE FIRST GRADE 1" x 3" STOCK, END MATCHED AND WORKED TO STANDARD THICKNESS. PINE OR FIR FLOORING SHALL BE A GRADE HEART FACE, EDGE GRAIN AND WORKED FROM 1" x 3" CLOSE GRAINED STOCK.

730. P. O. WORK ROOM AND M. O. WORKROOM FLOORS SHALL BE MAPLE, ALL OTHER WOOD FLOORS SHALL BE PINE OR FIR.

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FIXTURES

731. MATERIALS.--ALL LUMBER SHALL BE CLEAR SELECTED STOCK, FREE FROM ALL DEFECTS, THOROUGHLY SEASONED AND KILN DRY.

732. WORKMANSHIP.--ALL WORK SHALL BE THE HIGHEST GRADE OF CABINET WORK, PUT TOGETHER WITH CONCEALED FASTENINGS AND GLUED UNDER PRESSURE IN SUCH MANNER AS NOT TO SHOW SHRINKAGE, WARP, SPLITS OR OPEN JOINTS. THE WORK SHALL BE FINISHED COMPLETE BEFORE DELIVERY, OR MAY BE GIVEN THE LAST COAT OF FINISH AFTER INSTALLATION. PANELS SHALL BE FILLED OR STAINED AS REQUIRED AND GIVEN NOT LESS THAN 2 COATS OF FINISH BEFORE THEY ARE SET.

733. HARDWARE.--ALL METAL PARTS REQUIRED SHALL BE FURNISHED WITH THE FIXTURES. THE NECESSARY CUTTING AND FITTING SHALL BE DONE AT THE SHOP AND, WHERE PRACTICABLE, HARDWARE SHALL BE APPLIED BEFORE DELIVERY.

734. HARDWARE SHALL BE SOLID BRONZE OF PLAIN, HEAVY PATTERN, AND SHALL MATCH THE COLOR AND FINISH OF ADJACENT HARDWARE AS SPECIFIED UNDER "BUILDERS HARDWARE". THE TYPE NUMBERS CALLED FOR REFER TO MASTER SPECIFICATION No. 336.

735. BUTTS SHALL GENERALLY BE TYPE 2028. LOCKS SHALL BE TYPE 650, ALL LOCKS FOR EACH FIXTURE KEYED ALIKE. KNOBS SHALL BE CAST, 1 INCH DIAMETER AND FASTENED WITH SCREW AND WASHER FROM THE INSIDE. ALL DOORS SHALL HAVE KNOBS AND LOCKS, ALL DRAWERS SHALL HAVE LOCKS.

736. FINISH.--FINISHING MATERIALS SHALL BE HIGH GRADE PRODUCTS AND SHALL MEET THE REQUIREMENTS OF THE MASTER SPECIFICATIONS FOR MATERIALS OF THEIR KINDS. ALL SURFACES SHALL BE CLEANED AND SMOOTHED PERFECTLY BEFORE ANY FINISH IS APPLIED. WHERE ACID STAINS ARE USED, THE WOOD SHALL BE SPONGED WITH CLEAR WATER TO RAISE THE GRAIN, THEN SANDED SMOOTH BEFORE THE STAIN IS APPLIED. THE FINISH SHALL MATCH THE COLOR OF THE SAMPLES THAT WILL BE FURNISHED ON REQUEST BY THE SUPERVISING ARCHITECT.

737. THE NUMBER OF COATS SPECIFIED INCLUDES THE FINAL COAT. EACH COAT OF STAIN, FILLER OR FINISH SHALL BE ALLOWED TO DRY AND BE RUBBED SMOOTH AND CLEANED OFF BEFORE THE NEXT COAT IS APPLIED. THE FINAL COAT SHALL BE RUBBED TO A DULL FINISH AND WIPED CLEAN.

738. NATURAL FINISH SHALL HAVE THREE COATS OF VARNISH IN ADDITION TO THE STAIN AND FILLER. SHELLAC SHALL BE USED ONLY AS A LIQUID FILLER AND MUST BE THIN. STAIN AND FILLER SHALL NOT CLOUD THE GRAIN, AND THE FINISHED WORK SHALL PRODUCE CLEAR, TRANSPARENT COLORS.

739. PAINT FINISH SHALL BE FOUR-COAT WORK, INCLUDING PRIMER.

740. ALL SURFACES OF FIXTURES THAT ARE ORDINARILY VISIBLE SHALL BE FINISHED AS FOLLOWS:

LOBBY DESKS - NATURAL FINISH.
COURT ROOM DESKS - PAINTED FINISH.

741. THE INSIDE OF DRAWERS, SLIP BOXES AND SIMILAR UNEXPOSED SURFACES THAT ARE ACCESSIBLE SHALL BE STAINED, SHELLACKED AND SANDED SMOOTH.

742. LOBBY DESKS.--SEE MISCELLANEOUS DETAILS NOS. 147 AND 148.

743. EXPOSED WOOD SHALL BE PHILIPPINE IMITATION MAHOGANY WELL MATCHED IN FIGURE, GRAIN AND COLOR.

744. THE TOPS, BASES AND PEDESTALS SHALL BE BUILT UP SEPARATELY, THE PARTS DOWELED AND BOLTED TOGETHER. PROVISION SHALL BE MADE FOR ANCHORS AND FOR CONCEALED ELECTRIC WIRING.

745. DESK TOPS SHALL BE IN TWO LAYERS. THE BOTTOM LAYER OF GLUED UP STAVED CORE CONSTRUCTION WITH EDGE VENEER AT LEAST 1/2 INCH THICK. THE TOP LAYER VENEERED BOTH SIDES ON A THREE-PLY LAMINATED CORE, WITH RIM AND BEDMOULD AT ALL EDGES. THE TWO LAYERS SHALL BE GLUED TOGETHER AND FASTENED WITH COUNTERSUNK SCREWS 9 INCHES APART IN BOTH DIRECTIONS UNDER THE LINOLEUM.

746. LINOLEUM SHALL BE DARK GREEN, HEAVY BATTLESHIP GRADE AND COMPLY WITH MASTER SPECIFICATION NO. 209. IT SHALL BE CEMENTED TO THE DESK TOP AND FINISH FLUSH WITH THE RIM. THE LINOLEUM SHALL BE TREATED WITH A SEALER THAT WILL PREVENT ALL INK OR WATER STAINS OR OTHER DISCOLORATIONS AND NOT PRESENT A GREASY OR GLOSSY SURFACE.

747. PEN TRAYS AND THE METAL COVERING OF PEDESTAL BASE SHALL BE OF BRONZE, POLISHED ON EXPOSED SURFACES AND FINISHED A MEDIUM STATUARY COLOR. CASTINGS SHALL HAVE SHARP LINES AND ACCURATE PROFILES, AND BE FREE FROM DEFECTS. TRAYS SHALL BE SECURED FROM THE UNDERSIDE WITH SCREWS AND WASHERS.

748. ANCHOR RODS SHALL EXTEND THROUGH THE FLOOR CONSTRUCTION WITH BOTH ENDS THREADED AND FITTED WITH HEXAGON NUTS, AND WASHERS; THE UPPER END THREADED 6 INCHES AND LOWER END 10 INCHES. FASTENINGS EXPOSED IN FINISHED SPACES SHALL HAVE ORNAMENTAL CAP NUTS AND WASHERS.

749. COURT ROOM DESKS.--SEE MISCELLANEOUS DETAILS NOS. 117 AND 118. EXPOSED WOOD SHALL MATCH THE WOOD FINISH OF COURT ROOM. INTERIOR PARTS SPECIFIED TO BE "HARDWOOD" SHALL BE OF BEACH, BIRCH OR HARD MAPLE.

750. THE INCLINED PORTIONS OF DESK TOPS SHALL BE OF FLUSH LAMINATED PANEL CONSTRUCTION AND COVERED WITH DARK GREEN PANTASOTE IN PEBBLED EFFECT, GLUED ALL OVER, BROUGHT FLUSH WITH THE FRAME AND FINISHED CLOSE AT EDGES.

751. DRAWERS SHALL HAVE HARDWOOD SIDES AND BACKS AND THREE-PLY BOTTOMS. THE SIDES SHALL BE DOVETAILED TO THE FRONTS AND BACKS, AND THE BOTTOMS LET IN ALL AROUND. DRAWER PULLS SHALL BE OF WOOD GLUED ON AND SECURED FROM THE BACK WITH SCREWS. DRAWERS SHALL HAVE HARDWOOD GUIDES AND RUNS. DUST PANELS SHALL BE PLACED OVER ALL DRAWERS.

752. SLIDES SHALL BE FLUSH PANEL LAMINATED CONSTRUCTION.

753. SLIP BOXES SHALL BE OF HARD WOOD AND FASTENED TO THE DESK CONSTRUCTION.

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FEDERAL AND TERRITORIAL BUILDING.

INSECT SCREENS

754. THIS SPECIFICATION INCLUDES INSECT SCREENS FOR EXTERIOR OPENINGS GENERALLY, NOT SPECIFICALLY EXCEPTED.

755. SCREENS ARE NOT REQUIRED IN GROUND FLOOR STORAGE ROOMS, FEDERAL SUPPLY ROOM AND BOILER ROOM, NOR FOR ANY DOORS.

756. SCREENS SHALL BE FITTED AND INSTALLED COMPLETE WITH ALL NECESSARY ATTACHMENTS TO FRAMES OF OPENINGS AND ALL HARDWARE.

757-758. WIRE CLOTH.--SCREENS SHALL BE FILLED WITH CLOTH OF HARD DRAWN BRONZE OR HARD DRAWN COPPER WIRE NOT LIGHTER THAN .015 INCH DIAMETER AND NOT LESS THAN 16 MESHES PER LINEAR INCH. BRONZE SHALL BE A COPPER-ZINC ALLOY CONTAINING NOT MORE THAN 10% ZINC. WIRE CLOTH SHALL HAVE A DARK OXIDIZED FINISH.

759. FRAMES.--FRAMES SHALL FIT IN AN ANGLE PROVIDED ON THE METAL SUB-FRAME AND SHALL COVER THE ENTIRE OPENINGS. SLIDING SCREENS SHALL BE IN THREE PARTS TO EACH OPENING, EACH PART ARRANGED TO SLIDE PAST THE OTHER. VERTICAL SLIDING SCREENS SHALL HAVE THE MEETING RAILS LOCATED IN LINE WITH RAILS OF WINDOWS. FRAMES FOR OPENING 3/10A AND 4/29A SHALL BE IN ONE PIECE AND BE SIDE HINGED IN ANGLE PROVIDED ON THE METAL SUB-FRAME.

760. METAL FRAMES.--FRAMES FOR ALL WINDOW SCREENS SHALL BE WHOLLY OF BRONZE OR HARD ROLLED COPPER. RAILS AND STILES SHALL NOT BE LESS THAN 1 INCH WIDE.

761. HOLLOW OR TUBULAR METAL MEMBERS SHALL BE NOT LESS THAN 3/8 INCH THICK, AND OF METAL NOT LESS THAN .0269 INCH THICK.

761-A. METAL FRAMES SHALL HAVE ALL CONNECTIONS OF RAILS AND STILES REINFORCED AND RIVETED, WELDED OR BRAZED, MADE RIGID AND STRONG, AND FINISHED FLUSH. FRAMES SHALL BE REINFORCED AND STIFFENED AT ALL POINTS WHERE HARDWARE IS TO BE ATTACHED. FRAMES SHALL HAVE REMOVABLE MEMBERS FOR HOLDING THE WIRE CLOTH TAUT AND FIRM, AND PERMIT ITS REPLACEMENT WITHOUT RECONSTRUCTION OF THE FRAME OR RENEWAL OF ITS PARTS. BRONZE OR COPPER FRAMES SHALL HAVE A DARK OXIDIZED FINISH.

762. HARDWARE FOR METAL FRAMES SHALL BE ALL BRONZE SPECIAL TYPES ADAPTED IN EACH CASE TO PROVIDE SUBSTANTIAL FASTENINGS, CONVENIENT OPERATION, REMOVAL AND REPLACEMENT.

763. VERTICALLY SLIDING SCREENS SHALL HAVE BRONZE RUNS THE FULL HEIGHT OF THE OPENING TAP-SCREWED IN REBATE PROVIDED IN METAL SUB-FRAME OF WINDOW. EACH SCREEN SHALL HAVE NON-CORROSIVE FRICTION SPRINGS THAT WILL HOLD THE SCREEN IN PLACE, AND HAVE SUITABLE BRONZE LIFTS. SIDE HINGED SCREENS SHALL HAVE SUITABLE BUTTS AND FASTENERS.

764. NUMBER PLATES.--ALL OPENINGS HAVING SCREENS SHALL BE NUMBERED, EACH OPENING SHALL HAVE A NUMBER PLATE AND EACH SECTION OF SCREEN HAVE A NUMBER PLATE CORRESPONDING TO ITS OPENING. NUMBERS SHALL BE STAMPED ON BRASS PLATES FASTENED IN PLACE WITH 2 SCREWS OR RIVETS TO EACH PLATE.

BUILDER'S HARDWARE.

765. GENERAL.-- ALL HARDWARE REQUIRED FOR THE PROPER OPERATION OF DOORS, SASH, ETC., SHALL BE FURNISHED, TOGETHER WITH THE NECESSARY SCREWS, BOLTS, ETC., FOR APPLICATION. EXPOSED SCREWS TO HAVE COUNTERSUNK OVAL HEADS WHERE POSSIBLE. STRIKE PLATES SHALL BE FURNISHED FOR ALL LOCKS, AND KEEPERS FOR ALL BOLTS, CATCHES, ETC., OF PROPER DESIGN TO FIT THE WORK. DOORS OR SASH OVER 5 FEET HIGH AND TRANSOMS OVER 4 FEET WIDE SHALL HAVE THREE BUTTS OR HINGED EACH. BUTTS NOT OTHERWISE SPECIFIED SHALL BE 4-1/2 INCHES HIGH.

766. HARDWARE FOR DOORS TO ELEVATOR HATCHWAYS IS INCLUDED UNDER ELEVATOR ENTRANCES.

767. HARDWARE FOR "MISCELLANEOUS IRON AND STEEL WORK", "STEEL WINDOWS", FOR "VAULTS" AND FOR "FIXTURES" ARE INCLUDED IN THE SPECIFICATIONS UNDER CORRESPONDING HEADINGS.

768. HARDWARE FOR DOORS TO INCLOSURES IN TOILET ROOMS IS INCLUDED UNDER "MARBLE AND TERRAZZO".

769. TYPE NUMBERS GIVEN HEREIN ARE TAKEN FROM MASTER SPECIFICATION No. 336 AND THE ADDENDA THERETO DATED DECEMBER 15, 1927, OR No. 413A, AND HARDWARE FURNISHED SHALL CONFORM TO SUCH SPECIFICATION, UNLESS MODIFIED HEREIN.

770. EXPOSED PORTIONS OF HARDWARE SHALL BE SOLID BRONZE METAL No. US9 FINISH, UNLESS OTHERWISE SPECIFIED.

771. HARDWARE FOR BRONZE WORK SHALL HAVE A MEDIUM STATUARY BRONZE FINISH, MATCHING THE COLOR OF THE BRONZE.

772. HARDWARE EXPOSED IN TOILETS SHALL HAVE FINISH No. US14. FINISH OF DOOR CLOSERS TO BE ALUMINUM BRONZE.

773. HARDWARE EXPOSED IN UNFINISHED SPACES SHALL BE OF STEEL OR IRON, ZINC COATED, UNLESS OTHERWISE SPECIFIED.

773A. ALL MORTISE LOCKS WITH KNOBS SHALL HAVE COMPENSATING BRASS OR BRONZE HUBS WITH MACHINED BEARINGS. } See Addendum No. 2.

774. KICK PLATES SHALL BE 8" HIGH AND EXTEND TO WITHIN 3/4" OF THE EDGES OF BOTTOM RAILS, UNLESS OTHERWISE SHOWN.

775. ESCUTCHEON PLATES FOR INTERIOR DOORS AND THE INSIDE OF EXTERIOR DOORS SHALL BE 3" X 2-1/2" IN SIZE. ALL KNOB THIMBLES SHALL HAVE MACHINE FINISHED BEARINGS.

776. HOLDERS FOR DOORS WITH CLOSERS UNLESS OTHERWISE SPECIFIED SHALL BE OF THE FULCRUM OR LEVER TYPE, IN CAST BRONZE METAL AND WITH CORRUGATED RUBBER SHOE. THEY SHALL BE FOOT OPERATED AND POSITIVE IN ACTION. TOILET ROOM DOORS WILL NOT HAVE HOLDERS.

777. WHERE POSSIBLE, AND AFTER FITTING, KEEP HARDWARE OFF OF DOORS UNTIL COMPLETION OF PAINTING OR FINISHING. DOOR KNOBS SHALL BE KEPT COVERED WITH HEAVY CLOTH UNTIL THE BUILDING IS OCCUPIED.

778. TEMPLATES SHALL BE FURNISHED FOR HARDWARE AS REQUIRED IN ORDER THAT THE WORK OF THE VARIOUS BRANCHES SHALL FIT TOGETHER IN PROPER MANNER. TEMPLATES WILL BE REQUIRED FOR ALL HARDWARE APPLIED TO HOLLOW METAL DOORS (EXCEPT AT ELEVATOR ENTRANCES) AND TO CAST IRON DOOR FRAMES.

779. BUTTS AND HINGES.

DOORS B/1 TO B/3 INCLUSIVE, 1 TO 3 INCLUSIVE AND 1/17.
BUTTS #2001, SIZE 5 X 5 INCH.
DOORS B/27, B/39, 6/3.
BUTTS #2001, SIZE 4-1/2 X 4-1/2 INCH.
DOORS 8, 9, 9A, D/B, E/B, F/B, G/B, H/B, I/B, J/B, K/B, L/B, 600, 601, 602.
BUTTS #B-2014 WITH JOINTS CUT FOR PAINTING.
DOORS N/B AND O/B.
T-HINGES, REVERSE PAD, #2212. SIZE 12 INCHES.
DOORS 112 AND 114.
SPRING HINGES #2330A. SIZE 10" DULL BLACK FINISH.
DOORS 210A, 224A, 512A.
SPRING HINGES #2330A. SIZE 7 INCHES.
DOORS NOT OTHERWISE SPECIFIED, BUTTS #2010B.
HINGED TRANSOMS, BUTTS 2030C, SIZE 3 X 3 INCHES.
CUPBOARDS, BUTTS #2014, SIZE 2-1/2 X 2-1/2 INCHES.

780. DOORS WITHOUT LOCKS.

VESTIBULE DOORS NOS. 1, 2, 3.
PULLS #450, ON PULL SIDE. } ON EACH LEAF.
PUSH BARS #1009 ON PUSH SIDE }
KICK PLATES #1224 (ON BOTH SIDES)
CLOSER #1228-B, SIZE IV WITH OVERHEAD HOLDERS.

TOILET DOOR NO. M/B.
PULL #1274 ON PULL SIDE.
PUSH PLATE #462 ON PUSH SIDE.
KICK PLATE #1224 ON PUSH SIDE.
CLOSER #1228-B.

DOUBLE ACTING DOORS NOS. 210A, 224A, 512A.
KICK PLATES #1224 } BOTH SIDES.
PUSH PLATES #460 }

MAILING VESTIBULE DOORS NOS. 1/15 AND 1/16.
HEAVY PATTERN IRON OR STEEL SURFACE EXTENSION BOLTS ON INSIDE OF EACH LEAF OF DOOR 1/15 AND ONE LEAF OF DOOR 1/16 OPERATED BY LEVER OR T-HANDLE ON ENCLOSED CASE NEAR CENTER. OTHER LEAF OF DOOR 1/16 HAS LOCK HEREAFTER SPECIFIED.

D.A. DOORS TO MAILING VESTIBULE NOS. 112 AND 114.
CHAINS - WELDED LINK STEEL CHAIN TO PASS THROUGH ONE INCH HOLE IN DOORS.
PADLOCKS - TYPE #1, SIZE 1-3/4" (SEE MASTER SPECIFICATION NO. 413A) KEYED ALIKE.
FURNISH PLATED STAPLE MOUNTED ON PLATE AT SIDE OF EACH DOOR TO HOLD CHAIN WHEN NOT IN USE AND EXTRA FLOOR SOCKETS TO HOLD DOORS OPEN.

DOORS N/B AND O/B.
THUMB LATCH #1189, PADLOCK EYES #1430.
BOLTS #1022B ROUND CASE 8" x #1050B, 8" ON STANDING LEAF.

781. DOORS WITH LOCKS.

ENTRANCE DOORS B/1 TO B/3 INCLUSIVE, B/27, 1/17, 1/27.
LOCK #117 x 320 (KEYED ALIKE, GROUP A)
PULLS #450 } EACH LEAF.
PUSH BARS #1009 }
BOLTS FOR STANDING LEAF OF DOUBLE DOORS #1044B.
T & B LENGTH OF RODS 9" AND 18".
KICK PLATES #1224 (BOTH SIDES)
CLOSERS #1128-B, SIZE V WITH CORNER BRACKET TO MATCH CLOSER. OVERHEAD HOLDERS.

ENTRANCE DOOR B/39.
LOCK #94A x #210 x #300A.
BOLTS #1022A x #1049A, SIZE 8" ON STANDING LEAF.

M. V. DOOR NO. 1/16.
LOCK #126 (REBATED FRONT) x #420 x #320.
BOLTS #1022A x 1049A, SIZE 8". ONE EXTRA SOCKET FOR FOOT BOLT TO HOLD DOOR OPEN. THE ABOVE HARDWARE ON ONE LEAF ONLY. HARDWARE FOR STANDING LEAF HEREINBEFORE SPECIFIED.

DOORS NOS. 210, 224, 512 (MAIN DOORS).
LOCK #94A x 211 OUTSIDE, DROP HANDLE INSIDE x #300A.
BOLTS FOR STANDING LEAF #1044B T & B LENGTH OF ROD 9" AND 18".
KICK PLATES #1224, LOBBY ON CORRIDOR SIDE ONLY.
STOPS #1336.

GENERAL TOILETS - ALL STORIES.
LOCK #106 x #211 x #300A, CLOSERS #1228B, SIZE IV.
OUTSIDE CYLINDER OF LOCK FOR GENERAL TOILETS SHALL BE OPERATED BY ALL KEYS OF CORRIDOR AND LOBBY DOORS TO OFFICES AND WORK SPACES ON THE SAME FLOOR AS THE TOILETS AND OUTSIDE CYLINDER FOR ALL GENERAL TOILETS SHALL BE OPERATED BY THE KEY TO SPACES MARKED "JANITOR" ON PLANS.

PRIVATE TOILETS (TOILETS HAVING NO TOILET ENCLOSURES)
LOCK #93 x #211 x #300A.
CLOSERS #1228-B. SIZE IV.

DOORS FROM CORRIDORS TO SPACES MARKED "JANITOR" ON PLANS AND DOORS NOS. 600 AND 602.
LOCK #106A x #211 x #300A (KEYED ALIKE, GROUP B)
CLOSERS #1228-B; SIZE IV EXCEPT FOR DOORS 600 AND 602.
DOORS FROM OFFICES AND ROOMS TO CORRIDORS, LOBBIES AND PASSAGES NOT OTHERWISE SPECIFIED IN ALL

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LOCK #91 x #211 x #300A.
CLOSER #1228-B. SIZE IV.

COMMUNICATING DOORS BETWEEN OFFICES.
LOCK #94 x #211 x #300A.
STOPS #1334.

DYNAMO ROOMS, SUPPLY ROOM, STORAGE ROOM, ALL STORIES.
LOCK #106A x #211 x #300A.
STOPS #1334.

ALL DOORS NOT OTHERWISE SPECIFIED.
LOCK #94 x #211 x #300A.
STOPS #1334.

782. MASTER KEYING.--ALL LOCKS IN EACH STORY (EXCEPT LOCKS THAT ARE KEYED ALIKE) SHALL BE MASTER KEYED IN A SEPARATE SYSTEM.
INTERIOR DOOR LOCKS IN ALL STORIES SHALL BE GRAND MASTER KEYED IN ONE SYSTEM.
FURNISH 3 MASTER KEYS FOR EACH SYSTEM AND 3 GRAND MASTER KEYS.

783. CABINET HARDWARE.
DRAWERS - LOCK #655.
PULLS #1297.
CUPBOARDS- LOCK #655
CUPBOARD TURN #1082.
ELBOW CATCH #1080 (FOR TWO LEAF DOORS).

784. SERVICE WINDOWS. (VERTICALLY SLIDING SASH IN P.O. SCREEN)
CAR WINDOW FASTENER, TWO ON EACH SASH. SASH OVER 3 FEET WIDE SHALL HAVE MORTISE BOLTS #1053A AND LIFTS #1219 INSTEAD OF FASTENERS.
PULLEYS - CAST BRASS OR BRONZE CASE AND WHEEL AND STEEL AXLE. WHEEL GROOVED FOR 1/8" WIRE CORD, STEEL BUSHED AND WITH ANTI-FRICTION BEARINGS, WIRE CORD, PHOSPHOR BRONZE, 6 STRANDS OF 19 WIRES EACH, COTTON CORE. TOTAL DIAMETER 1/8 INCH. TENSILE STRENGTH 432 POUNDS.
SOCKET EYE AT SASH END AND CLAMP AT WEIGHT END, BOTH SOLDERED TO CORD. WEIGHTS #1701 OR 1701B AS REQUIRED TO CLEAR BOX.

785. SLIDING GRILLES IN P.O. SCREEN.
FASTENERS AS SHOWN BY MISCELLANEOUS DETAIL #73
PULLEYS, CORDS AND WEIGHTS AS SPECIFIED FOR SERVICE WINDOWS.

786. BOTTOM HINGED SASH. (OVER EXTERIOR ENTRANCE DOOR).
TRANSOM CATCH #1097.
CHAINS #1122, ONE PAIR PER SASH, LENGTH 12 INCHES.

787. BOTTOM HINGED TRANSOM SASH. (OVER INTERIOR DOORS).
TRANSOM LIFTER #1198C. LENGTH OF ROD 4 FEET.

788. PIVOTED SASH, P.O. SCREEN.
FRICTION PIVOTS #1115.
TRANSOM CATCH FOR POLE OPERATION.

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789. SASH POLE HOOK. #1264A, MOUNTED ON 1-1/8" DIAMETER OAK POLE - FURNISH 75.

790. SASH POLE HANGER. #1262 - FURNISH 75.

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PAINTING AND FINISHING.

791. GENERALLY.--THIS SECTION OF THE SPECIFICATION INCLUDES ALL PAINTING AND FINISHING REQUIRED FOR THE COMPLETION OF ALL WORK EMBRACED IN THE CONTRACT, EXCEPT CERTAIN SHOP AND FIELD COATS FOR METAL WORK WHICH ARE INCLUDED IN THE SPECIFICATION FOR THAT WORK; AND EXCEPT WORK SPECIFIED TO BE FINISHED BY THE MANUFACTURER. NO PAINTING OF PLASTERING IS REQUIRED, EXCEPT IN SENATE CHAMBER.

792. COLOR SAMPLES.--SAMPLES OF THE COLORS AND FINISHES FOR THE WORK WILL BE FURNISHED BY THE SUPERVISING ARCHITECT TO THE CONTRACTOR UPON REQUEST.

793. MATERIALS.--SHALL BE HIGH GRADE PRODUCTS OF WELL KNOWN MANUFACTURERS. MATERIALS SHALL BE DELIVERED ON THE WORK IN ORIGINAL UNBROKEN PACKAGES BEARING THE MAKERS NAMES AND BRANDS. MATERIALS KNOWN TO THE SUPERVISING ARCHITECT AS ACCEPTABLE MAY BE CONDITIONALLY APPROVED BY NAME OF BRAND IF SUBMITTED, OR SAMPLES OF ANY MATERIALS SHALL BE SUBMITTED AS REQUIRED BY THE SUPERVISING ARCHITECT.

794. MATERIALS NOT OTHERWISE SPECIFIED SHALL CONFORM TO THE LATEST ISSUES OF THE GOVERNMENT MASTER SPECIFICATIONS FOR SAME, VIZ:

LINSEED OIL, RAW.....	No. 4B
LINSEED OIL, BOILED.....	" 475B
WHITE LEAD.....	" 5
TURPENTINE, GUM SPIRITS OR WOOD....	" 7B
ZINC OXIDE, FRENCH PROCESS.....	" 8
RED LEAD, 95 PER CENT.....	" 11
SPAR VARNISH.....	" 18B
DRIER.....	" 20A
INTERIOR VARNISH.....	" 22
PUTTY, WHITE LEAD-WHITING.....	" 283
SHELLAC VARNISH, TYPE 2, BLEACHED, LIGHT BODY, (UNLESS OTHERWISE SPECIFIED).....	" 376.

795. COLORS SHALL BE PURE, NON-FADING PIGMENTS FINELY GROUND IN LINSEED OIL.

796. STAINS SHALL BE CLEAR TONES, PENETRATING, NON-FADING MATERIALS THAT WILL NOT CLOUD OR OBSCURE THE GRAIN OF THE WOOD.

797. FILLER SHALL BE FINELY GROUND SILICA, LINSEED OIL AND DRIER, TINTED AS REQUIRED.

798. WAX FINISH SHALL BE EQUAL PARTS OF CARNAUBA AND BEESWAX CUT WITH TURPENTINE.

799. FLOOR VARNISH SHALL BE A PENETRATING VARNISH WITH A CHINA WOOD OIL BASE AND FREE FROM WAX. THE VARNISH SHALL SEAL THE PORES OF THE WOOD AGAINST MOISTURE, GREASE, OILS, DIRT, ETC., AND PRODUCE A FINISH SIMILAR TO A WAXED AND POLISHED SURFACE WITHOUT LEAVING A FILM ON THE SURFACE. THE MATERIAL SHALL HAVE A RECORD OF SUCCESSFUL USE FOR AT LEAST 4 YEARS.

800. RADIATOR ENAMEL SHALL BE ZINC OXIDE GROUND IN DAMAR VARNISH, THINNED WITH SPAR VARNISH AND TURPENTINE, TINTED AS REQUIRED. THE ENAMEL SHALL COVER WELL IN TWO COATS AND DRY WITH A GOOD GLOSS.

801. ENAMEL PAINT SHALL BE ZINC OXIDE GROUND IN VARNISH AND THINNED WITH VARNISH AND TURPENTINE. ENAMEL PAINT SHALL HAVE THE WORKING PROPERTIES AND WATER RESISTANCE SPECIFIED FOR INTERIOR VARNISH, AND SHALL HAVE A BRIGHT LUSTER.

802. COLDWATER PAINT SHALL NOT CHIP, SCALE, POWDER, OR RUB OFF; SHALL HAVE NO OFFENSIVE ODOR AND SHALL READILY REMIX TO A WORKING CONSISTENCY AFTER STANDING 16 HOURS.

803. CEMENT PAINT SHALL BE A LIGHT COLORED WASHABLE WATER AND ALKALI RESISTING PAINT THAT WILL NOT DISINTEGRATE OR DISCOLOR WHEN APPLIED TO MATERIALS CONTAINING PORTLAND CEMENT.

804. GOLD LEAF SHALL BE 23 KARAT FINE.

805. SIZE FOR GILDING SHALL BE SLOW DRYING FAT OIL GOLD SIZE.

806. PAINT NOT OTHERWISE SPECIFIED SHALL BE COMPOSED OF LINSEED OIL, TURPENTINE, INTERIOR VARNISH, DRIER, WHITE LEAD, ZINC OXIDE, AND THE NECESSARY TINTING COLORS, PROPORTIONED APPROXIMATELY IN ACCORDANCE WITH THE FOLLOWING TABLES. PRIMING COATS MAY HAVE A GREATER PROPORTION OF LIQUIDS WHEN REQUIRED BY THE NATURE OF THE SURFACE TO BE PRIMED.

(A) PAINT FOR OUTSIDE WOOD WORK.

COATS	W. LEAD	OIL	TURP.	DRIER
PRIMING	100 LBS.	5 GALS.	2 GALS.	1 PINT
BODY	100 LBS.	2½ GALS.	2½ GALS.	1 PINT
FINISH	100 LBS.	4½ GALS.	1 QUART	1 PINT

(B) PAINT FOR INSIDE WOOD WORK.

COATS	W. LEAD	OIL	TURP.	DRIER
PRIMING	100 LBS.	3½ GALS.	3½ GALS.	1 PINT
BODY	100 LBS.	2½ GALS.	2½ GALS.	1 PINT
		VARNISH		
FINISH	100 LBS.	1¼ GALS.	3 GALS.	½ PINT

IN ANY OF THE ABOVE MIXTURES ZINC OXIDE PASTE NOT TO EXCEED 20 POUNDS MAY BE SUBSTITUTED FOR AN EQUAL AMOUNT OF WHITE LEAD.

807. WHITE LEAD PAINT FOR EXTERIOR METAL WORK SHALL BE AS REQUIRED FOR OUTSIDE BODY AND FINISH COATS.

808. PAINT FOR INTERIOR METAL WORK SHALL BE A FLAT PAINT.

809. WORKMANSHIP.--ALL SURFACES SHALL BE DRY AND DUSTED CLEAN AT THE TIME ANY COATING IS APPLIED; ALL PREVIOUS COATS SHALL BE THOROUGHLY DRY BEFORE ANY SUBSEQUENT COAT IS APPLIED, AND BEFORE ANY RUBBING IS DONE.

810. ALL KNOTS, PITCH STREAKS, ETC., SHALL BE PROPERLY SHELLACKED BEFORE PAINTING.

311. ALL NAIL HOLES, CRACKS AND OTHER IMPERFECTIONS SHALL BE NEATLY PUTTIED AND MADE UNNOTICEABLE AFTER THE PRIMING OR FIRST COAT OF FINISH HAS BEEN APPLIED AND BEFORE ANY SUBSEQUENT COATS ARE APPLIED.

812. ALL PAINTS, VARNISHES AND OTHER MATERIALS SHALL BE STRAINED CLEAR AND BE FREE FROM SKINS, LUMPS OR ANY FOREIGN MATERIALS. ALL PAINTS AND STAINS SHALL BE KEPT THOROUGHLY STIRRED WHILE BEING APPLIED.

813. EACH SUCCEEDING COAT OF PAINT SHALL BE OF A DIFFERENT TINT FROM THAT OF THE PRECEDING COAT. ALL FINISH COATS SHALL BE OF THE EXACT SHADES AND TEXTURES SELECTED.

814. ALL COATS OF PAINT SHALL BE THOROUGHLY AND EVENLY BRUSHED OUT. ALL FINISH SHALL BE FREE FROM NOTICEABLE BRUSH MARKS, OR CLOGGING OF LINES OR ANGLES.

815. ALL WORK THAT IS NOT TO BE PAINTED OR VARNISHED SHALL BE PROTECTED FROM SPATTERS, STAINS, OR SOILING. ALL EDGES OF PAINTED OR VARNISHED WORK ADJOINING OTHER MATERIALS SHALL BE FULL AND CLEAN WITHOUT OVERLAPPING.

816. THE UNEXPOSED EDGES OF ALL DOORS AND MOVABLE SASH SHALL BE FINISHED AS REQUIRED FOR THE EXPOSED PARTS.

817. VARNISH SHALL NOT BE THINNED IN ANY MANNER. VARNISH SHALL NOT BE APPLIED IN A TEMPERATURE BELOW 70° F., NOR IN ANY PLACE NOT PROPERLY CLOSED AND PROTECTED FROM DRAFTS AND FROM DUST. VARNISH SHALL BE EVENLY FLOWED ON WITHOUT RUNS, SAGS OR BRUSH MARKS.

818. RUBBING.--ALL WORK SPECIFIED TO BE RUBBED SHALL HAVE ALL UNDER COATS RUBBED WITH FINE SAND-PAPER OR WITH OTHER SUITABLE MATERIAL TO SMOOTH CLEAR SURFACES FREE FROM UNEVENNESS OR ROUGHNESS OR SCRATCHES OR RAISED GRAIN THAT WOULD SHOW THROUGH THE SUCCEEDING COAT.

819. WHERE ACID STAINS ARE USED, THE WOOD SHALL BE SPONGED WITH WATER, ALLOWED TO DRY THEN SANDPAPERED SMOOTH BEFORE STAIN IS APPLIED.

820. ALL SURFACES OF VARNISHED AND ENAMELED WORK AND ALL UNDER COATS OF THE SAME, SHALL BE RUBBED DOWN SMOOTH AND WIPED CLEAN. THE FINISH COAT, (UNLESS SPECIFIED TO BE LEFT BRIGHT) SHALL BE RUBBED TO A SOFT DEAD FINISH, FREE FROM SCRATCHES, AND THOROUGHLY WIPED OFF.

821. SHOP COATING.--ALL FRAMES AND ALL INTERIOR WOOD FINISH (EXCEPT FLOORING) SHALL BE STAINED, FILLED, SHELLACKED, OR OTHERWISE PREPARED FOR THE FINISH SPECIFIED; AND ALL UNEXPOSED SURFACES, AND SURFACES THAT ARE TO BE PAINTED SHALL BE GIVEN A PRIMING COAT OF PAINT BEFORE LEAVING THE SHOP WHERE FABRICATED.

822. IMITATION MAHOGANY PANELS SHALL BE STAINED AND FILLED AND GIVEN ONE COAT OF FINISH BEFORE THEY ARE SET IN PLACE.

823. PAINTING.--ALL EXTERIOR WOOD-WORK SHALL BE PRIMED AND PAINTED THREE ADDITIONAL COATS.

824. INTERIOR WOOD-WORK IN PRIVATE OFFICE, CLOSET, LOBBY AND PASSAGES OF GOVERNOR'S SUITE AND IN HOUSE CHAMBER AND COURT ROOM, EXCEPT DOORS AND FLOORS SHALL BE PRIMED AND PAINTED 3 COATS - ALL UNDER COATS SHALL BE RUBBED SMOOTH AND THE FINAL COAT RUBBED TO AN EGG SHELL FINISH.

825. INTERIOR WOOD-WORK (EXCEPT FLOORS) OTHER THAN ABOVE WHERE SPECIFIED TO BE PAINTED SHALL BE PRIMED AND PAINTED TWO ADDITIONAL COATS.

825A. THE UNEXPOSED SURFACES OF INTERIOR WOOD FINISH GENERALLY (EXCEPT FLOORS) SHALL BE PAINTED ONE COAT IN ADDITION TO THE SHOP PRIMING.

826. METAL WORK.--ALL EXPOSED INTERIOR AND EXTERIOR IRON AND STEEL WORK, AND SHEET METAL WORK (EXCEPT COPPER AND EXCEPT COUNTER TOPS) SHALL BE PAINTED TWO COATS IN ADDITION TO ANY PREVIOUS PAINTING. THE PAINT FOR INTERIOR METAL WORK SHALL BE FLAT.

827. ALL UNPLATED IRON OR STEEL HARDWARE SHALL BE FINISHED TO MATCH THE WORK TO WHICH IT IS ATTACHED.

828. ENAMELED FINISH.--WORK SPECIFIED TO BE ENAMELED SHALL BE PAINTED THREE COATS AS SPECIFIED FOR INTERIOR FINISH, THEN BE GIVEN TWO COATS OF ENAMEL PAINT, OF THE DESIRED COLOR. ALL UNDERCOATS SHALL BE RUBBED SMOOTH.

829. FLOORS.--ALL PINE OR FIR FLOORS SHALL BE GIVEN THREE COATS OF PENETRATING VARNISH, APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS, AND EACH COAT MACHINE BUFFED WITH STEEL WOOL TO A SMOOTH UNIFORM FINISH. ENOUGH STAIN OF THE REQUIRED COLOR SHALL BE MIXED WITH THE FIRST COAT OF VARNISH TO PRODUCE THE DESIRED SHADE. MAPLE FLOORING WILL NOT BE GIVEN A PAINTERS FINISH.

830. CORK FLOOR IN COURT ROOM, SENATE AND HOUSE CHAMBER SHALL BE GIVEN TWO COATS OF WAX, FINISHED TO A DULL POLISH.

831. RADIATORS.--ALL EXPOSED RADIATORS AND ALL EXPOSED PIPE CONNECTIONS TO SAME AND THE FLOOR AND CEILING PLATES (EXCEPT NICKEL PLATED WORK) SHALL BE GIVEN TWO COATS OF RADIATOR ENAMEL. PAINTING OF CONCEALED RADIATORS IS SPECIFIED UNDER "MECHANICAL WORK".

832. COLD WATER PAINTING.--WALLS AND CEILINGS OF BOILER AND FUEL ROOM SHALL BE SWEPT CLEAN AND GIVEN TWO COATS OF WHITE COLD WATER PAINT.

833. VARNISHING.--WORK REQUIRED TO BE VARNISHED SHALL BE STAINED AND SHELLACKED OR FILLED AS SPECIFIED AND GIVEN NOT LESS THAN TWO COATS OF VARNISH. WORK REQUIRED TO BE RUBBED TO A DEAD FINISH SHALL BE GIVEN NOT LESS THAN THREE COATS OF VARNISH. ALL VARNISH FINISH THROUGHOUT THE BUILDING EXCEPT IN P.O. WORK ROOM, M.O. WORK ROOM AND MAILING VESTIBULE SHALL BE RUBBED TO A DEAD FINISH.

834. SPAR VARNISH SHALL BE USED FOR WINDOW STOOLS AND FOR SCREEN COUNTER TOP. SCREEN COUNTER TOP SHALL HAVE THE FINAL COAT RUBBED TO A DULL FINISH.

SCHEDULE OF PAINTERS FINISH. (EXCEPT FLOORS)

835. GROUND FLOOR.--CORRIDOR, LOBBY VESTIBULE, ELEVATOR AND STAIR HALL, FEDERAL OFFICES, PUBLIC AND OPERATING ROOM OF CABLE OFFICES, SHALL BE STAINED AND VARNISHED, INCLUDING DOORS, EXCEPT AS SPECIFIED BELOW. ALL TOILET ROOMS SHALL HAVE AN ENAMEL FINISH.

BALANCE OF GROUND FLOOR SHALL BE PAINTED.

DOORS 7, 10, 11, 12 AND B/8 PAINTED ON ONE SIDE, STAINED AND VARNISHED ON THE OTHER. DOORS ADJOINING PAINTED FINISH ON BOTH SIDES SHALL BE PAINTED.

836. FIRST FLOOR.--ENTIRE STORY, EXCEPT AS SPECIFIED BELOW, SHALL BE STAINED AND VARNISHED, INCLUDING ALL DOORS AND P.O. LOBBY DESKS. MEN'S TOILET SHALL BE ENAMEL FINISH. JANITOR'S CLOSET SHALL BE PAINTED.

837. SECOND FLOOR.--ENTIRE STORY, EXCEPT AS SPECIFIED BELOW, SHALL BE STAINED AND VARNISHED, INCLUDING ALL DOORS. HOUSE CHAMBER, STORAGE ROOM AND JANITOR'S CLOSET SHALL BE PAINTED. ALL TOILETS SHALL HAVE ENAMEL FINISH.

838. THIRD FLOOR.--ENTIRE STORY, EXCEPT AS SPECIFIED BELOW, SHALL BE STAINED AND VARNISHED, INCLUDING ALL DOORS.

PRIVATE OFFICE, CLOSET, LOBBY AND PASSAGES OF GOVERNOR'S SUITE, STORAGE ROOMS, BLUE PRINT ROOM AND JANITOR'S CLOSET SHALL BE PAINTED. ALL TOILETS SHALL HAVE ENAMEL FINISH.

839. FOURTH FLOOR.--ENTIRE STORY, EXCEPT AS SPECIFIED BELOW, SHALL BE STAINED AND VARNISHED, INCLUDING ALL DOORS.

STORAGE AND DETENTION ROOM SHALL BE PAINTED ALL TOILETS SHALL HAVE ENAMEL FINISH.

840. FIFTH FLOOR.--ENTIRE STORY, EXCEPT AS SPECIFIED BELOW, SHALL BE STAINED AND VARNISHED, INCLUDING ALL DOORS.

COURT ROOM AND JANITOR'S CLOSET SHALL BE PAINTED. ALL TOILETS SHALL BE ENAMEL FINISH.

841. PENT HOUSE SHALL BE PAINTED FINISH INCLUDING DOORS.

842. VAULTS.--WALLS AND CEILINGS OF ALL VAULTS SHALL BE GIVEN TWO COATS OF CEMENT PAINT.

843. GILDING.--FLAG STAFF HEAD, AND INCISED LETTERS IN WOOD AND MARBLE WORK, AND LETTERS IN INTERIOR METAL WORK GENERALLY AND WORK SO SPECIFIED OR INDICATED SHALL BE GILDED WITH XX GOLD LEAF. GILDING EXPOSED TO THE WEATHER SHALL BE DONE WITH TWO LAYERS OF GOLD LEAF.

844. ALL SURFACES TO BE GILDED SHALL BE THOROUGHLY CLEANED AND ALL RUST REMOVED. EXTERIOR METAL WORK SHALL BE GIVEN ONE COAT OF RED LEAD AND TWO COATS OF YELLOW LEAD PAINT. ALL OTHER SURFACES TO BE GILDED (EXCEPT GLASS) SHALL BE GIVEN TWO COATS OF YELLOW LEAD PAINT.

845. LETTERING.--INTERIOR DOORS GENERALLY SHALL BE NUMBERED WITH THE NUMBERS GIVEN ON THE PLANS. DOORS OPENING FROM LOBBIES, CORRIDORS AND 5TH STORY PASSAGE AND DOORS TO TOILET ROOMS EXCEPT PRIVATE TOILETS SHALL BE LETTERED WITH THE NAMES OF THE ROOMS OR THE TITLES OF THE OCCUPANTS AS DIRECTED. ENTRANCES TO ELEVATORS SHALL BE LETTERED AS DIRECTED ON THE OUTSIDE AND WITH THE STORY NUMBERS ON THE INSIDE. OPENINGS IN LOBBIES AND CORRIDORS FOR THE TRANSACTION OF PUBLIC BUSINESS, AND FOR THE DEPOSIT OF MAIL SHALL BE LETTERED WITH THEIR TITLES AS DIRECTED.

846. IT IS ASSUMED THAT OFFICE DOORS WILL AVERAGE 20 LETTERS 2 INCHES HIGH; IF A GREATER OR LESS AMOUNT OF LETTERING IS REQUIRED THE DIFFERENCE IN COST WILL BE SUBJECT TO ADJUSTMENT.

847. LETTERING SHOWING IN PUBLIC PLACES SHALL BE IN GOLD LEAF, OUTLINED IN BLACK. INCISED LETTERS SHALL BE IN GOLD ONLY. LETTERING ELSEWHERE SHALL BE IN BLACK.

848. TOUCHING UP.--AT THE COMPLETION OF OTHER BRANCHES OF THE WORK ALL PAINTED AND FINISHED WORK SHALL BE TOUCHED UP AND RESTORED WHERE DAMAGED OR DEFACED, AND THE ENTIRE WORK LEFT FREE FROM BLEMISHES.

PLASTER PAINTING.

849. GENERAL.--THE SCOPE OF WORK UNDER THIS SECTION OF THE SPECIFICATION CONSISTS OF PAINTING AND STENCILLING THE SENATE CHAMBER CEILING, INCLUDING BEAMS, GIRDERS AND CONSOLES.

850. ALL PLASTER SURFACES THAT ARE TO BE PAINTED SHALL BE GIVEN A PREPARATORY WASH OF THREE POUNDS OF ZINC SULPHATE TO ONE GALLON OF WATER AND ALLOWED TO DRY BEFORE SIZING.

851. COLORS.--A SKETCH IN COLOR OF THE STENCIL REQUIRED WILL BE FURNISHED BY THE SUPERVISING ARCHITECT AND SHALL BE FAITHFULLY REPRODUCED.

852. PAINT FOR PLASTER.--ALL MATERIALS SHALL CONFORM TO REQUIREMENTS SPECIFIED FOR SIMILAR MATERIAL UNDER "PAINTING AND FINISHING".

MATERIALS AND PROPORTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

COATS	WHITE LEAD PASTE	LINSEED OIL	TURPENTINE	OIL DRIER	
SIZING COAT	100 LBS.	3 GALS.	5 GALS.	1 GAL.	TINTED AS REQUIRED TO MATCH THE APPROVED SAMPLES.
SECOND "	100 LBS.	2 GALS.	3 GALS.	1 PINT	
FINISH "	100 LBS.	4-1/2 GALS.	1 QUART	1 PINT	

853. PROPORTIONS OF STENCIL COLORS SHALL BE SUCH AS WILL PRODUCE THE BEST RESULTS.

854. TINTING AND STENCILLING SHALL BE DONE WITH PURE COLORS IN OIL, GROUND IN PURE LINSEED OIL. THE SECOND COAT OF PAINT SHALL BE OF A DIFFERENT TINT THAN EITHER THE SIZING OR FINISH COAT.

855. WORKMANSHIP.-- ALL SURFACES SHALL BE DRY AND CLEAN AND FREE FROM DUST WHEN PAINT IS APPLIED.

856. ANY CRACKS IN PLASTER SHALL BE FILLED WITH PUTTY COLORED TO MATCH THE FINISH COAT AFTER THE SIZING IS APPLIED AND BEFORE ANY SUBSEQUENT COATS ARE APPLIED.

857. PUTTY SHALL BE FINISHED FLUSH AND SMOOTH AND NOT SHOW THROUGH THE FINISH. ALL COATS OF PAINT SHALL BE THOROUGHLY AND EVENLY BRUSHED OUT AND FREE FROM BRUSH MARKS, LUMPS, RUNS OR SAG. THE FINISH COAT SHALL BE POUNCED WITH A DRY BRUSH TO PRODUCE UNIFORM DULL FINISH. STENCIL WORK SHALL BE SHARP AND CLEAN.

GLASS & GLAZING.

858. THIS SECTION OF THE SPECIFICATION INCLUDES ALL GLASS REQUIRED FOR THE COMPLETION OF THE WORK, EXCEPT GLASS FOR ELEVATOR ENTRANCES, WHICH IS INCLUDED UNDER "PASSENGER ELEVATOR ENTRANCES".

859. GLASS NOT OTHERWISE SPECIFIED SHALL BE GRADED IN ACCORDANCE WITH MASTER SPECIFICATION NO. 123. EACH PIECE OF WINDOW GLASS SHALL BEAR THE MANUFACTURER'S LABEL INDICATING ITS QUALITY.

860. GLASS NOT OTHERWISE INDICATED SHALL CONFORM TO THE FOLLOWING SCHEDULE, AND SHALL BE CLEAR GLASS EXCEPT WHERE REQUIRED TO BE OBSCURE:

app (A) POLISHED PLATE, GLAZING QUALITY, 1/4" THICK;
ALL ENTRANCE DOORS, INCLUDING SIDELIGHTS AND TRANSOMS.
DOORS WITHOUT MUNTINS.
LOBBY VESTIBULE DOORS, SIDELIGHTS AND TRANSOMS.
LOBBY SCREEN, BELOW THE PIPE SPACE.
BULLETINS.
DIRECTORIES.

App. (B) WINDOW GLASS, A QUALITY, DOUBLE STRENGTH; ALL GLASS NOT OTHERWISE SPECIFIED.

app (C). WINDOW GLASS, B QUALITY, DOUBLE STRENGTH;
UNFINISHED GROUND FLOOR.
UNFINISHED PENT HOUSE.

app (D) WIRE GLASS, 1/4" THICK;
DOORS SO INDICATED.

app (E) OBSCURE GLASS:
CORRIDOR DOORS (CHIPPED DOUBLE PROCESS, POLISHED ONE SIDE.
CORRIDOR WINDOWS (CHIPPED DOUBLE PROCESS, POLISHED

LOBBY SCREEN, LOWER SECTION, EXCEPT SERVICE WINDOWS.
SASH IN JANITOR'S CLOSETS.
CHIPPED DOUBLE PROCESS, POLISHED ONE SIDE.

861. PUTTY NOT OTHERWISE SPECIFIED SHALL BE WHITING PUTTY AND CONFORM TO MASTER SPECIFICATION No. 283.

862. PUTTY FOR METAL SASH SHALL BE A HIGH GRADE SPECIAL PUTTY FOR METAL SASH.

863. GLASS SHALL BE SET WITHOUT SPRINGING. GLASS NOT OTHERWISE SPECIFIED SHALL BE BEDDED IN PUTTY AND BACK PUTTIED. PUTTYING SHALL BE SMOOTHLY FINISHED TO TRUE EVEN LINES. REBATES THAT ARE TO RECEIVE PUTTY SHALL BE PRIMED BEFORE PUTTYING. REBATES AND EDGES OF BEADS IN CONTACT WITH GLASS SHALL BE FINISHED TO MATCH THE COLOR OF ADJOINING WORK BEFORE THE GLASS AND BEADS ARE SET.

864. OBSCURE GLASS SHALL GENERALLY BE SET WITH THE SMOOTH SIDE OUT AND THE ROUGHENED SIDE TOWARD THE PLACE TO BE OBSCURED.

865. GLASS FOR WOOD SASH AND FOR DOORS, GENERALLY, AND FOR SASH NOT OTHERWISE SPECIFIED SHALL BE SET WITH GLAZING BEADS. BEADS FOR DOORS AND SIDELIGHTS SHALL BE FASTENED WITH BRASS SCREWS; WOOD BEADS FOR SASH FASTENED WITH BRADS.

866. GLASS FOR METAL SASH SHALL BE SET WITH GLAZING CLIPS AND PUTTY.

867. GLASS SHALL BE CLEAN AND WHOLE AT TIME OF FINAL INSPECTION.

JUNEAU, ALASKA, FEDERAL AND TERRITORIAL BUILDING.

MECHANICAL EQUIPMENT.

868. THIS SECTION OF THE SPECIFICATION INCLUDES THE PLUMBING, SANITARY AND ROOF DRAINAGE, HEATING APPARATUS, CONDUIT AND WIRING SYSTEM AND INTERIOR LIGHTING FIXTURES.

869. KIND AND QUALITY OF MATERIAL.--ALL MATERIAL, APPLIANCES, AND FIXTURES FURNISHED MUST BE IN STRICT ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS IN EACH CASE AND OF THE BEST QUALITY AND GRADE.

870. ESPECIAL ATTENTION IS CALLED TO THE FACT THAT WITHIN 90 DAYS AFTER THE DATE OF RECEIPT OF NOTICE TO PROCEED, THE CONTRACTOR MUST SUBMIT FOR APPROVAL A COMPLETE LIST OF THE FOLLOWING MATERIAL THAT HE PROPOSES TO USE IN THE WORK (NO CONSIDERATION WILL BE GIVEN TO PARTIAL LISTS SUBMITTED FROM TIME TO TIME), GIVING THE NAME AND ADDRESS OF MANUFACTURER AND ALSO, WHEN SO REQUIRED FOR PROPER IDENTIFICATION, THE TRADE NAME OR CATALOGUE NUMBER:

MATERIAL	NAME OF MANUFACTURER	CATALOGUE No. OR TRADE NAME.
PLUMBING FIXTURES		
PRESSURE REDUCING VALVES ON WATER SUPPLY		
BACK WATER VALVES		
BACK WATER CESSPOOLS		
BOILERS		
OIL BURNERS		
OIL HEATERS		
TUBE RADIATORS		
WALL RADIATORS		
NONCONDUCTING COVERING FOR HEATING		
NONCONDUCTING COVERING FOR PLUMBING		
RADIATOR VALVES		
THERMOSTATIC TRAPS		
VACUUM PUMPS		
LIGHTING DISTRIBUTING PANELS		
FEEDER PANELS		
RUBBER COVERED WIRE (GIVE MARKING)		

MATERIAL	NAME OF MANUFACTURER	CATALOGUE NO. OR TRADE NAME
FLUSH SWITCHES		
PENDENT SWITCHES		
SOCKETS (TYPES)		
GLASSWARE (TYPE FOR EACH FIXTURE)		
LIGHTING FIXTURES		

871. IN THE EVENT THE CONTRACTOR FAILS TO COMPLY WITH ANY OF THE REQUIREMENTS OF THE PRECEDING PARAGRAPHS RELATIVE TO MATERIAL, APPLIANCES, AND FIXTURES, I.E.--

(1) FAILS TO SUBMIT FOR APPROVAL WITHIN 90 DAYS AFTER THE DATE OF RECEIPT OF NOTICE TO PROCEED, THE LIST OF MATERIAL, APPLIANCES, ETC., IN ACCORDANCE WITH THE ABOVE SCHEDULE:

(2) NAMES MATERIALS, APPLIANCES, ETC., NOT STRICTLY IN ACCORDANCE WITH SPECIFICATION REQUIREMENTS OR NOT OF THE BEST QUALITY AND GRADE:

THEN THE SUPERVISING ARCHITECT RESERVES THE RIGHT TO SELECT A FULL LINE OF MATERIAL AND APPLIANCES, IN THE EVENT NONE ARE NAMED AT THE TIME STATED AND IN THE EVENT THOSE NAMED ARE NOT SATISFACTORY, THE SUPERVISING ARCHITECT RESERVES THE RIGHT TO REJECT THE SAME AND TO SELECT THE MANUFACTURERS AND A FULL LINE OF MATERIAL AND APPLIANCES, WHICH SELECTION SHALL BE FINAL AND BINDING UPON THE CONTRACTOR, AND THE MATERIAL SELECTED OR APPROVED AS THE CASE MAY BE BY THE SUPERVISING ARCHITECT, MUST BE USED IN THE WORK.

872. INSPECTION AND TESTS.--NO SHOP OR FINAL INSPECTION OR TEST WILL BE MADE EXCEPT UPON FORMAL NOTICE TO THE SUPERVISING ARCHITECT FROM THE CONTRACTOR BY LETTER OR TELEGRAM. WHERE SUCH NOTICE RELATES TO A "FINAL" INSPECTION IT SHALL BE SUBMITTED THROUGH THE CONSTRUCTION ENGINEER AT THE BUILDING. NOTICES OF READINESS FOR SHOP INSPECTION SHALL BE SUBMITTED TO THE SUPERVISING ARCHITECT DIRECT. NO CONSIDERATION WILL BE GIVEN TO NOTICES FROM SUBCONTRACTORS. SHOULD ANY INSPECTION OR TEST NOT BE BEGUN, THROUGH NO FAULT OF THE CONTRACTOR, WITHIN 10 DAYS OF RECEIPT OF NOTICE BY THE SUPERVISING ARCHITECT, ALLOWANCE WILL BE MADE AS HEREINBEFORE PROVIDED.

873. THE CONTRACTOR MUST FURNISH ALL NECESSARY LABOR, FUEL, AND APPLIANCES (SUCH AS SMOKE MACHINE, MERCURY GAUGE, AIR PUMP, BOILER MAKERS' FORCE PUMP FOR BOILER TEST, ETC.) FOR THE TESTS AND MUST MEET ALL EXPENSES OF SAID TESTS, EXCEPT THOSE OF THE DEPARTMENT'S INSPECTOR, WHEN HIS CASE DOES NOT COME UNDER THE PROVISIONS OF THE FOLLOWING PARAGRAPH.

874. SHOULD INSPECTION OR TEST BE DELAYED UPON ARRIVAL OF THE INSPECTOR OR REQUIRE REPETITION FOR ANY REASON FOR WHICH THE CONTRACTOR IS RESPONSIBLE, THE COST OF DELAYED OR SUBSEQUENT INSPECTIONS AND TESTS, INCLUDING SALARY OF THE INSPECTOR AND HIS TRAVELING AND

OTHER EXPENSES, SHALL BE AT THE EXPENSE OF THE CONTRACTOR AND BE DEDUCTED FROM ANY MONEY DUE HIM UPON THE CONTRACT.

875. UPON COMPLETION OF THE PLUMBING, GAS PIPING, ELECTRIC CONDUIT AND WIRING SYSTEMS, LIGHTING FIXTURES AND HEATING APPARATUS, (EXCEPT APPLICATION OF NONCONDUCTING COVERINGS ON EXPOSED PIPES ON GROUND FLOOR AND TUNNELS) THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO THE SUPERVISING ARCHITECT THROUGH THE CONSTRUCTION ENGINEER OF HIS READINESS FOR INSPECTION AND TESTS SPECIFIED TO BE MADE BY THE INSPECTOR DETAILED BY THE SUPERVISING ARCHITECT. IF THE TEST OF THE HEATING AND PLUMBING SYSTEMS ARE SATISFACTORY, THE CONSTRUCTION ENGINEER (OR CUSTODIAN) WILL SO NOTIFY THE CONTRACTOR, WHO MAY THEN PROCEED IMMEDIATELY WITH THE APPLICATION OF THE NONCONDUCTING COVERINGS.

876. IF THESE TESTS SHOW THAT THE WORK IS IN ANY WAY DEFECTIVE OR AT VARIANCE WITH THE SPECIFICATION REQUIREMENTS THE CONTRACTOR MUST IMMEDIATELY MAKE ALL CHANGES NECESSARY TO CORRECT THE SAME AND REMEDY ALL DEFECTS TO THE SATISFACTION OF THE SUPERVISING ARCHITECT. IN THE EVENT THE CONTRACTOR DOES NOT WITHIN A REASONABLE TIME REMEDY ALL DEFECTS AND MAKE ALL CHANGES DEMANDED BY THE SUPERVISING ARCHITECT TO COMPLETE THE WORK SATISFACTORILY THE RIGHT IS RESERVED TO HAVE DEFECTS REMEDIED OR CHANGES MADE AND TO CHARGE THE COST OF SAME AGAINST THE ACCOUNT OF THE CONTRACTOR.

877. PIPING, HANGERS, ETC., GENERALLY.--ALL PIPING, CONDUITS, ETC., EXCEPT ELECTRIC CONDUITS RUN IN FLOOR CONSTRUCTION OR ROOF SPACE, SHALL BE RUN PARALLEL WITH THE LINES OF THE BUILDING UNLESS OTHERWISE DISTINCTLY SHOWN OR NOTED ON DRAWINGS. SUCH SERVICE PIPES AS ARE PRACTICABLE, EXCEPT STEAM PIPES, SHALL BE PLACED AT SAME ELEVATION AND HUNG ON MULTIPLE HANGERS. ELECTRIC CONDUITS SHALL NOT BE HUNG ON HANGERS WITH ANY OTHER SERVICE, AND SO FAR AS POSSIBLE, SHALL BE HUNG ABOVE ALL OTHER SERVICE PIPES. BRANCH PIPES FROM SUCH SERVICE LINES SHALL BE TAKEN OFF TOP OF MAIN, BOTTOM OF MAIN, OR SIDE OF MAIN, USING CROSSOVER FITTINGS, AS MAY BE REQUIRED BY STRUCTURAL AND OPERATING CONDITIONS. ALL THE DIFFERENT SERVICE PIPES, VALVES, FITTINGS, ETC., SHALL BE KEPT A SUFFICIENT DISTANCE FROM OTHER WORK TO PERMIT FINISHED COVERING NOT LESS THAN 1/2 INCH FROM SUCH OTHER WORK AND NOT LESS THAN 1/2 INCH BETWEEN FINISHED COVERINGS ON THE DIFFERENT SERVICES. ALL HANGERS MUST BE SPACED NOT MORE THAN 10 FEET APART ON ALL SERVICES, AND THOSE ON DIFFERENT SERVICE LINES RUNNING PARALLEL WITH EACH OTHER AND NEAR TOGETHER MUST BE IN LINE WITH EACH OTHER AND PARALLEL TO THE LINES OF THE BUILDING. ALL FINISHED BRASS PIPING RUN ON FACE OF MARBLE OR PLASTER SHALL BE SET WITH NOT LESS THAN 3/4 INCH NOR MORE THAN 1 INCH CLEAR SPACE BETWEEN BACK OF PIPE AND FACE OF MARBLE OR PLASTER.

878. JOINTING AND CONNECTIONS.--ALL JOINTS IN PIPING AND CONNECTIONS TO FIXTURES SHALL BE MADE AS SPECIFIED FOR PIPE OR FIXTURE IN QUESTION. NO THREADS SHALL BE EXPOSED ON FINISHED BRASS WASTE PIPE.

PLUMBING

879. SCOPE OF WORK.--THIS PORTION OF THE SPECIFICATION INCLUDES THE INSTALLATION, COMPLETE, OF THE PLUMBING, SANITARY, AND ROOF DRAINAGE. REFERENCES IN THIS SECTION OF THE SPECIFICATION TO PAGES, FIGURES, ETC., MEAN PAGES, FIGURES, ETC., IN THE UNITED STATES GOVERNMENT MASTER SPECIFICATION FOR PLUMBING FIXTURES (FOR LAND USE) FEDERAL SPECIFICATIONS BOARD SPECIFICATION NO. 448, WHICH IS A PART OF THIS SPECIFICATION AND A COPY OF WHICH MAY BE SECURED ON APPLICATION TO THE SUPERVISING ARCHITECT.

880. CAST IRON SOIL PIPE, FITTINGS AND CONNECTIONS (SEE P. 11 AND U. S. GOVERNMENT MASTER SPECIFICATION, F. S. B. SPECIFICATION No. 343A).- ALL SOIL, WASTE, VENT, AND DRAIN PIPING IN THE BUILDING BELOW THE GROUND FLOOR AND OUTSIDE OF BUILDING BELOW GROUND, INCLUDING MAIN CONNECTIONS FROM THE BUILDING TO THE CITY SEWERS AND ONE WASTE AND VENT STACK HEREINAFTER SPECIFIED SHALL BE EXTRA HEAVY CASTIRON SOIL PIPE AND FITTINGS. EITHER COATED OR UNCOATED PIPE MAY BE USED AND PIPE AND FITTINGS MAY BE WITH OR WITHOUT LEAD GROOVES AS DESIRED BY CONTRACTOR.

881. BACKFILLING OF TRENCHES.--BACKFILLING MUST BE DONE IN A MANNER TO SECURE A STABLE SURFACE, AND APPROVED BY THE CONSTRUCTION ENGINEER.

882. WROUGHT-IRON OR STEEL, SOIL, WASTE, DRAIN AND VENT PIPE, FITTINGS AND CONNECTIONS (SEE P. 12).--ALL SOIL, WASTE, AND VENT PIPES, AND ALL INTERIOR DOWN SPOUTS AND INTERIOR ROOF DRAINAGE PIPING ABOVE GROUND FLOOR (EXCEPT THE PORTIONS HEREINAFTER SPECIFIED TO BE FINISHED BRASS OR NOTED ON DRAWINGS TO BE CAST IRON), SHALL BE GALVANIZED WROUGHT-IRON OR GALVANIZED MILD-STEEL PIPE. FITTINGS SHALL BE AS SPECIFIED FOR PIPE IN QUESTION. SPECIAL "UPRIGHT Y" BRANCHES SHALL BE USED WHERE VENTS CONNECT IN CHASES AND OTHER PLACES WHEN REQUIRED BY STRUCTURAL OR SPACE CONDITIONS. THE WASTE AND VENT STACK FROM BLUE PRINT ROOM IS TO BE CAST IRON AS NOTED ON DRAWINGS.

883. SOIL, WASTE, VENT AND DRAIN PIPING.--SOIL, WASTE, VENT AND DRAIN PIPING MUST BE OF THE SIZES NOTED AND RUN AS INDICATED ON THE DRAWINGS. PIPES BELOW GROUND FLOOR AND GROUND SHALL BE RUN AT GRADES NOTED. SOIL AND WASTE PIPES ABOVE GROUND FLOOR OR GROUND SHALL BE GIVEN A GRADE OF ¼ INCH PER FOOT WHERE POSSIBLE, EXCEPT WHERE PIPE WOULD REDUCE HEAD ROOM MATERIALLY. IN SUCH CASES THE GRADE SHALL BE REDUCED TO NOT LESS THAN 1/10 INCH PER FOOT IF SO DIRECTED BY THE CONSTRUCTION ENGINEER. NOTE THAT TWO SEPERATE CONNECTIONS ARE TO BE MADE TO CITY SEWERS.

884. THE SOIL AND WASTE PIPES SO SHOWN AND NOTED ON THE DRAWINGS SHALL BE EXTENDED AS VENT PIPES TO ABOVE THE ROOF LINE AND PROJECT ABOVE ROOF LINE NOT LESS THAN 12 INCHES NOR MORE THAN 18 INCHES. WHERE SO NOTED OR INDICATED ON THE DRAWINGS TWO OR MORE VENT PIPES SHALL BE CONNECTED TOGETHER AND EXTENDED AS ONE PIPE. CONNECTIONS OF VENT PIPES SHALL BE MADE IN ROOF SPACE OR AT LEAST 4 FEET ABOVE FLOOR ON WHICH THE FIXTURE VENTED IS LOCATED SO AS TO PREVENT THE USE OF ANY VENT LINE AS A WASTE. VERTICAL SOIL, WASTE, AND VENT PIPES IN FINISHED ROOMS ARE TO BE CONCEALED EXCEPT WHERE SHOWN TO BE RUN EXPOSED.

885. THE DRAIN PIPES FROM OUTLETS OF CATCH BASINS IN LAWN AT REAR OF BUILDING ARE INCLUDED IN THIS SECTION OF THE SPECIFICATION AND SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS. THE CATCH BASINS AND THE IMMEDIATE PIPE CONNECTIONS TO OUTSIDE OF SAME ARE NOT INCLUDED IN THIS SECTION OF THE SPECIFICATION.

886. A Y WITH 4 INCH BRANCH CONNECTION FROM SUBSOIL DRAIN SPECIFIED UNDER ANOTHER SECTION OF THIS SPECIFICATION SHALL BE PROVIDED IN EACH MAIN SEWER LINE WHERE NOTED.

887. THE STORM WATER AND SANITARY DRAINAGE SYSTEMS AND THE DRAINS FROM CESSPOOLS IN TUNNELS ARE TO BE KEPT SEPARATE INSIDE BUILDING AS SHOWN ON DRAWINGS.

888. RUNNING TRAPS ON MAIN SEWERS (SEE DETAIL No. 1, P. 22 AND FIG. 4).--SHALL BE INSTALLED IN MANHOLES BETWEEN BUILDING AND EACH CITY SEWER WHERE INDICATED ON SCALE DRAWINGS. MANHOLES SHALL BE 4' 6" INSIDE

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DIAMETER IN LIEU OF 3' 0" SHOWN IN FIG. 4.

889. BRICKWORK, CONCRETE, ETC, FOR MANHOLES (SEE P. 23).

890. CLEANOUTS ON CAST-IRON PIPE.--RODDING HOLES SHALL BE INSTALLED ON CAST-IRON PIPE BELOW GROUND FLOOR, TUNNEL FLOORS OR GROUND WHERE SHOWN ON DRAWINGS. SEE MISCELLANEOUS DRAWING NO. 305F.

891. WHEN ROOF DRAINAGE LINES PASS OUT OF BUILDING ABOVE TUNNEL FLOORS THE FITTING AT END OF EACH RUN SHALL BE A HUB AND SPIGOT SANITARY T BRANCH WITH A BRASS CALKING FERRULE AND A CAST BRASS TRAP SCREW IN HUB ON RUN OF THE FITTING.

892. CLEAN-OUT PLUGS ON WROUGHT-IRON PIPING (SEE DETAIL NO. 4 P. 18 AND FIG. 1).--SHALL BE FITTED IN EACH VERTICAL SOIL, VENT, AND WASTE PIPE JUST ABOVE THE GROUND FLOOR OR FLOOR OF TUNNEL. SIMILAR CLEAN-OUT PLUGS SHALL BE PLACED JUST ABOVE BASE OF ALL INTERIOR DOWN SPOUTS.

893. SCREWED CAST-BRASS PLUGS SAME SIZE AS PIPE SHALL BE FITTED FOR CLEAN OUTS ON PIPES ABOVE GROUND OR WHERE SHOWN OR NOTED ON DRAWINGS.

894. TRAPS.--RUNNING TRAPS OR P TRAPS, AS INDICATED, SHALL BE PLACED ON CONNECTION FROM ALL CESSPOOLS, ON DOWN-SPOUT CONNECTIONS FROM LOW ROOFS ON WASTES FROM URINALS, AND AT OTHER POINTS INDICATED ON DRAWINGS. TRAPS SHALL BE EXTRA-HEAVY CAST-IRON HUB-AND-SPIGOT PATTERN WHEN CONNECTED TO CAST-IRON PIPING, AND RECESSED, SCREW JOINTED, WHEN CONNECTED TO WROUGHT-IRON OR STEEL PIPING.

895. RUNNING TRAPS SHALL HAVE CLEAN OUT ON EACH SIDE AND WHEN BELOW FLOOR OR GRADE CLEAN OUTS SHALL BE EXTENDED UP TO FLOOR LEVEL OR GRADE AND SHALL BE PROVIDED WITH BRASS CALKING FERRULES AND BRASS TRAP SCREWS WITH COUNTERSUNK HEADS. (SEE MISCELLANEOUS DRAWING 305F DETAIL NO. 10 FOR FERRULE AND TRAP SCREW.) FERRULES AND TRAP SCREWS ARE TO BE INSTALLED DIRECTLY IN CLEANOUTS OF RUNNING TRAPS ABOVE FLOORS OF TUNNELS. RUNNING TRAPS BELOW TUNNEL FLOORS MUST HAVE CLEANOUTS EXTENDED TO TUNNEL FLOORS. P TRAPS ABOVE GROUND FLOOR SHALL HAVE BRASS SCREW CLEAN-OUT PLUGS IN BOTTOMS OF SAME.

896. BACKWATER VALVES.--TWO 4 INCH BACKWATER VALVES AND GATE VALVES SHALL BE PLACED WHERE SHOWN ON SCALE DRAWINGS. BACKWATER VALVES SHALL BE HUB AND SPIGOT, OF BALANCE DISK TYPE WHICH NORMALLY STAND OPEN, BUT WILL POSITIVELY CLOSE AGAINST WATER BACKING UP. ALL PINIONS, BUSHINGS, ETC., MUST BE OF NONCORROSIVE METAL. A 3/4-INCH IRON PIPE SIZE AND THICKNESS BRASS AIR RELIEF LINE SHALL BE TAKEN FROM BODY OF EACH VALVE AND CONNECTED TO NEAREST VENT LINE OF THE PLUMBING SYSTEM, AS NOTED ON PLANS.

897. GATE VALVES SHALL BE STANDARD WEIGHT, DOUBLE HUB, WITH NON-RISING STEM, IRON BODY, NONCORROSIVE SEAT AND DISK, AND SHALL BE PLACED ON SEWER SIDE OF BACKWATER VALVES. THESE VALVES SHALL BE PLACED IN MANHOLES SAME AS SPECIFIED FOR FLOOR CLEANOUT, (SEE DETAIL NO. 5, P. 20 AND FIG. 2), EXCEPT THAT THE MANHOLES SHALL BE OF SIZE AS NOTED ON SCALE DRAWINGS. THE MANHOLES, CAST-IRON FRAMES AND COVERS SHALL BE FURNISHED AND INSTALLED IN THIS SECTION OF THE SPECIFICATION.

898. IN LIEU OF THE BALANCED DISK TYPE OF BACK WATER VALVE, THE VALVES MAY BE AN OPEN SEAT BACK WATER SEWER TYPE HAVING HUB AND SPIGOT HEAVY PATTERN CAST IRON BODIES PROVIDED WITH BRONZE FLAPS, CHECKS AND

BRASS SEATS, EACH VALVE TO HAVE A CAST IRON COVER FITTED WITH A GASKET AND BOLTED TO THE BODY OF THE VALVE. EACH FLAP CHECK SHALL BE FITTED WITH A GASKET AND BOLTED TO THE BODY OF THE VALVE. EACH FLAP CHECK SHALL BE FITTED WITH BRONZE COMPOUND ACTING DOUBLE FULCRUM BEARINGS AND SHALL BE CONSTRUCTED SO THAT UNDER NORMAL CONDITIONS THE FLAP CHECK WILL BE OPEN ABOUT 3/4 INCH, BUT WILL BE PERMITTED TO SWING WIDE OPEN SO AS NOT TO RETARD THE FLOW OF SEWAGE AND WILL ABSOLUTELY CLOSE AGAINST A BACK-FLOW OF SEWAGE. THE 3/4 INCH VENT PIPES REQUIRED FOR THE BALANCED DISK TYPE OF BACK WATER VALVES WILL NOT BE REQUIRED, BUT THE GATE VALVES MUST BE INSTALLED.

899. BACKWATER CESSPOOLS.--FURNISH AND INSTALL IN BOILER ROOM FLOOR, IN FLOORS OF TUNNELS AND IN AREAS, WHERE SHOWN ON DRAWINGS, BACKWATER CESSPOOLS OF APPROVED PATTERN HAVING A RUBBER COVERED BALL OR A BALL OF ALL METAL CONSTRUCTION. ALL MOVING PARTS AND SEAT SHALL BE OF BRONZE OR OTHER NON-CORROSIVE METAL. CESSPOOLS MUST HAVE OUTLET OF SIZE SHOWN ON DRAWINGS AND MUST BE SUITABLE FOR CONDITIONS AS TO ELEVATION OF OUTLET, ETC.

900. ROOF OUTLET CONNECTIONS.--ALL CONNECTIONS FROM ROOF OUTLETS FOR INTERIOR DOWN SPOUTS IS INCLUDED IN THIS SECTION OF THE SPECIFICATION. ROOF OUTLETS ON MAIN ROOF, ON PENT HOUSE ROOF AND ON ROOFS AT SECOND FLOOR LEVEL WILL BE CAST IRON ROOF DRAINS AS SPECIFIED ON PAGE 9, PARAGRAPH 15 AND WILL BE FURNISHED AND INSTALLED UNDER THE CONSTRUCTION SECTION OF THIS SPECIFICATION.

901. EACH CONNECTION EXCEPT FROM PENT HOUSE ROOF IS TO BE PROVIDED WITH AN EXPANSION JOINT AS SPECIFIED ON PAGE 9. EXPANSION JOINTS ARE INCLUDED IN THIS SECTION OF THE SPECIFICATION AND SHALL BE INSTALLED IN ROOF SPACES EXCEPT FROM LOW ROOF WHERE THEY MAY BE INSTALLED AT FIRST STORY CEILING.

902. ROOF OUTLETS ON PORTICO ROOF ARE TO BE MADE AS SPECIFIED ON PAGES 8 AND 9 AND THE LEAD BENDS, COPPER STRAPS TO SUPPORT THE LEAD AND ALSO THE EXPANDING AND CONNECTING LEAD BENDS TO ROOF OUTLET BOXES ARE INCLUDED IN THIS SECTION OF THE SPECIFICATION. (SEE MISCELLANEOUS DRAWING SHOWING ROOF OUTLETS AS SPECIFIED UNDER "CONSTRUCTION" SECTION OF THIS SPECIFICATION; ALSO DETAILS ON SCALE DRAWINGS.) THE BRASS SOLDERING COUPLINGS REFERRED TO ON PAGE 9 SHALL NOT BE USED EXCEPT ON VERTICAL PIPES. THE WIRE STRAINERS AND THIMBLES IN CONNECTION WITH SAME ARE IN ANOTHER SECTION OF THIS SPECIFICATION. IN LIEU OF THE WEIGHTS GIVEN ON PAGE 9 THE 3" LEAD PIPES MAY WEIGH 6 POUNDS PER RUNNING FOOT.

903. DOWNSPOUT DISCHARGES.--THE DOWNSPOUTS FROM ROOF OF PENT HOUSE ARE TO DISCHARGE ON MAIN ROOF AND ARE EACH TO BE PROVIDED WITH A DISCHARGE NOZZLE AS SHOWN ON MISCELLANEOUS DRAWING No. 305F, DETAIL No. 5.

904. FLASHING CONNECTIONS.--OPENINGS IN ROOF FOR VENT PIPES SHALL BE FLASHED AND SOLDERED WATER-TIGHT. (SEE DETAIL No. 5 P. 18, AND FIG. 1.)

905. BRASS WATER SUPPLY PIPE, FITTINGS AND CONNECTIONS, (SEE P. 13 AND U. S. GOVERNMENT SPECIFICATION, F.S.B. SPECIFICATION No. 342A).--ALL COLD WATER, HOT WATER, AND HOT WATER CIRCULATING WATER SUPPLY PIPES IN THE BUILDING, SHALL BE ALL BRASS PIPE, GRADE A. ALL NIPPLES SHALL BE OF SAME MIXTURE, ETC., AS THE PIPE AND MUST CONFORM TO SAME SPECIFICATION REQUIREMENTS.

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906. ALL EXPOSED WATER SUPPLY PIPES IN TOILET AND OFFICE ROOMS FROM FLOORS TO 6 FEET ABOVE SAME SHALL BE NICKEL PLATED.

907. ESPECIAL ATTENTION IS CALLED TO THE FACT THAT TO AVOID CONFUSION AND DELAY CONTRACTOR MUST IN PLACING HIS ORDER FOR THIS BRASS PIPE, PLAINLY STATE THEREIN THAT IT MUST BE GRADE "A" IN STRICT ACCORDANCE WITH FEDERAL SPECIFICATION No. 342A, AND THAT ALL PIPE MUST BE MARKED WITH THE TRADE MARK OF THE MANUFACTURER AND WITH GRADE LETTER "A".

908. THE USE OF WICKING WILL NOT BE ALLOWED AND ALL THE THREADED JOINTS MUST BE MADE TIGHT WITHOUT RECOURSE TO FILLERS OTHER THAN RED LEAD MIXED TO A PASTE WITH LINSEED OIL. SCREWED JOINTS SHALL BE MADE UP METAL TO METAL AND THE CALKING OF SCREWED JOINTS TO STOP OR PREVENT LEAKS WILL NOT BE PERMITTED.

909. IN ERECTING PIPE, FRICTION WRENCHES AND VISES SHALL BE USED EXCLUSIVELY, AND ANY PIPE CUT, DENTED OR OTHERWISE DAMAGED, SHALL BE REPLACED BY THE CONTRACTOR WITH NEW BRASS PIPE. ALL PIPES SHALL BE REAMED OUT BEFORE BEING SCREWED INTO FITTING.

910. ESPECIAL ATTENTION IS CALLED TO THE FACT THAT AFTER THE PIPE HAS BEEN DELIVERED TO THE BUILDING AND BEFORE ANY PORTION OF THE PIPE HAS BEEN INSTALLED THE CONSTRUCTION ENGINEER WILL SELECT A SAMPLE OF THE PIPE WITH THE NAME OR TRADE MARK OF THE MANUFACTURER AND THE GRADE LETTER STAMPED THEREON, APPROXIMATELY 12 INCHES LONG, AND FORWARD SAME TO THE SUPERVISING ARCHITECT FOR HIS APPROVAL.

911. SWING JOINTS, OFFSETS, ETC., SHALL BE USED IN BRASS PIPE TO TAKE UP EXPANSION AND WHERE NECESSARY PIPE MUST BE ANCHORED TO THROW THE EXPANSION TO THE POINT DESIRED. ESPECIAL CARE MUST BE TAKEN TO AVOID CLOSE RIGID CONNECTIONS AT LAVATORIES CONNECTED DIRECTLY TO RISERS.

912. FITTINGS.--FITTINGS AND COUPLINGS FOR BRASS WATER PIPE SHALL BE RED BRASS WITH FLAT BAND GUARANTEED FOR 150 POUNDS WATER PRESSURE. COMPOSITION TO BE NOT LESS THAN 83% COPPER, 4-1/2% TIN, NOT MORE THAN 5% LEAD, BALANCE ZINC. FITTINGS ON ROUGH BRASS PIPE TO BE UNFINISHED, AND ON N. P. PIPE, FINISHED AND NICKEL-PLATED, SHALL WEIGH NOT LESS THAN THE FOLLOWING:

INCH	45° ELLS	90° ELLS	TEES	COUPLINGS
1/2	.18	.20	.27	.16 POUNDS
3/4	.28	.33	.45	.24 "
1	.46	.52	.72	.39 "
1-1/4	.75	.84	1.11	.62 "
1-1/2	.98	1.20	1.56	.83 "
2	1.62	1.98	2.58	1.38 "

913. LARGER SIZES ARE TO BE OF CORRESPONDING WEIGHTS.

914. NO BUSHINGS IN FITTINGS WILL BE PERMITTED.

915. UNIONS.--ALL UNIONS 2" AND SMALLER ARE TO BE HEAVY PATTERN, ALL BRASS GROUND JOINT UNIONS WITH BOTH SCREW ENDS HEXAGONAL OR OCTAGONAL. OPENINGS THROUGH UNIONS MUST BE FULL AREA OF PIPE AND UNIONS ON NICKEL PLATED PIPE MUST BE NICKEL PLATED. UNIONS ON PIPE 2-1/2" AND LARGER TO BE CAST BRASS FLANGED UNIONS WITH RUBBER GASKETS.

916. VALVES (SEE P. 14).--SHALL BE INSTALLED WHERE SPECIFIED OR INDICATED. THOSE ON NICKEL PLATED BRASS PIPE SHALL BE FINISHED AND NICKEL PLATED.

917. ALL VALVES MUST BE ALL ... BRASS AND VALVES 3-1/2" AND LARGER MAY HAVE PARALLEL SEATS, BOLTED BONNETS AND BE DESIGNED FOR 100 POUNDS STEAM PRESSURE IN LIEU OF BEING AS SPECIFIED ON PAGE 14.

918. WALL HYDRANTS (SEE P. 18 AND FIG. 1).--SHALL BE INSTALLED WHERE INDICATED.

919. WATER-SUPPLY SYSTEM.--THE WATER MAIN IN STREET SO NOTED ON THE DRAWINGS SHALL BE TAPPED AT THE POINT DIRECTED BY THE CONSTRUCTION ENGINEER AND APPROVED BY THE WATER AUTHORITIES, AND A WATER-SUPPLY PIPE OF SIZE SHOWN ON DRAWINGS SHALL BE BROUGHT INTO THE BUILDING. A GATE VALVE WITH T HANDLE SUPPLIED WITH A SPOON KEY AND WITH A CAST-IRON EXTENSION BOX AND COVER SHALL BE PLACED ON THE WATER-SUPPLY PIPE NEAR THE CURB LINE. THE MANNER OF MAKING CONNECTIONS WITH THE STREET MAIN, THE KIND OF PIPE USED, AND THE MANNER OF LAYING SAME FROM STREET MAIN TO INSIDE OF BUILDING WALL MUST BE IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE WATER WORKS AUTHORITIES. THE SIZE OF THE PIPE MUST BE AS SHOWN ON DRAWINGS, AND IF THE WATER WORKS AUTHORITIES OBJECT TO THE SIZE OF PIPE SHOWN THE MATTER MUST BE REFERRED TO THE CONSTRUCTION ENGINEER, WHO WILL REFER IT TO THE SUPERVISING ARCHITECT FOR DECISION.

920. ON THE WATER MAIN JUST INSIDE OF THE TUNNEL WALL A GATE VALVE SHALL BE PLACED AND WATER MAIN SHALL BE RUN AS SHOWN TO METER OUTLETS IN BOILER ROOM NEAR FLOOR. A CONNECTION TO SUPPLY FIRE HOSE RACKS SHALL BE MADE ON STREET SIDE OF METER. OUTLETS OF SAME SIZE AS MAIN SHALL BE LEFT IN HORIZONTAL PIPE NEAR BOILER ROOM FLOOR FOR WATER METER; SAID OUTLETS SHALL HAVE GATE VALVES. A BRASS LOCKED GATE VALVE WITH BRASS PADLOCK AND TWO KEYS SHALL BE PLACED ON WATER MAIN BETWEEN METER OUTLETS.

921. A DRAIN CONNECTION WITH 3/4-INCH GLOBE VALVE PROVIDED WITH 3/4-INCH HOSE NIPPLE SHALL BE INSTALLED ON MAIN WATER PIPE ON HOUSE SIDE OF METER CONNECTIONS. AFTER LEAVING METER CONNECTIONS THE MAIN WATER SUPPLY PIPE SHALL BE RUN UP TO GROUND FLOOR CEILING AND ALONG SAME, WITH BRANCHES OF THE SIZES NOTED. PIPES IN MAIN CORRIDOR ARE TO BE ABOVE FURRED CEILING AS NOTED ON PLANS. THE ARRANGEMENT OF WATER PIPES AT METER, CONNECTIONS, ETC., SHALL BE AS DIRECTED BY THE LOCAL WATER AUTHORITIES.

922. THREE 2" BRASS PRESSURE-REDUCING VALVES AS HEREINAFTER SPECIFIED, EACH FITTED WITH A REMOVABLE STRAINER SHALL BE PLACED WHERE SHOWN ON PLANS ON THE MAIN WATER PIPE IN BASEMENT THAT SUPPLIES THE PLUMBING FIXTURES; GATE VALVES SHALL BE PLACED ON EACH SIDE OF EACH REDUCING VALVE, AND A BY-PASS CONNECTION (PROVIDED WITH A GATE VALVE) SHALL BE INSTALLED AROUND THE REDUCING VALVES. A 3-1/2-INCH DIAL, JAPANNED-IRON CASE, PRESSURE GAUGE, GRADUATED TO 200 POUNDS, SHALL BE PROVIDED ON THE WATER MAIN ON EACH SIDE OF THE PRESSURE-REDUCING VALVES.

923. PRESSURE REDUCING VALVES SHALL BE EXTRA HEAVY BRASS, OPERATED BY MEANS OF A SPECIAL COMPOSITION DIAPHRAGM AND A SPRING. DIAPHRAGM AND SPRING MUST BE ARRANGED TO ACT DIRECTLY ON THE VALVE STEM AND THE ARRANGEMENT MUST BE SUCH THAT THE DELIVERED PRESSURE WILL NOT VARY MORE THAN 1 POUND FOR EACH 10 POUNDS VARIATION OF THE INLET PRESSURE. ALL PARTS SUBJECT TO WEAR MUST BE READILY RENEWABLE. PRESSURE REDUCING

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VALVES MUST BE OF TYPE WHICH DO NOT REQUIRE EXTERNAL REGULATING PIPES. EACH PRESSURE REDUCING VALVE MUST BE PROVIDED WITH A SEPARATE, EASILY CLEANABLE, STRAINER ON THE INLET SIDE. PRESSURE REDUCING VALVES WITH INTEGRAL STRAINERS WILL NOT BE ACCEPTED.

924. IN THE EVENT SIZES OF PIPING ARE NOT NOTED ON DRAWINGS, THE SPECIFICATION IS TO GOVERN, AND COLD WATER SUPPLY PIPES TO FIXTURES SHALL BE AS FOLLOWS: URINALS AND SINKS; 2 TO 3, 1" DIAMETER; 4 TO 8, 1¼" DIAMETER, LAVATORIES AND TANK WATER CLOSETS, 2 TO 3, 3/4" DIAMETER; 4 TO 8, 1" DIAMETER; 9 OR MORE, 1¼" DIAMETER.

925. COLD WATER BRANCH SUPPLY SHALL BE RUN TO EACH PLUMBING FIXTURE IN THE BUILDING AND SHALL BE 1/2" TO EACH WATER CLOSET TANK, 3/4" TO EACH URINAL AND EACH SINK AND 1/2" TO EACH OTHER FIXTURE. HOT WATER SUPPLY SHALL BE RUN TO EACH LAVATORY, AND SINK AND SHALL BE THE SAME SIZE AS THE COLD WATER SUPPLY. ROUGH IN AS DIRECTED FOR FUTURE SINK IN BLUE PRINTING ROOM ON SECOND FLOOR.

926. THE ABOVE SIZES APPLY TO THE ROUGHING IN BELOW FLOOR OR IN PARTITIONS; A REDUCING FITTING IS TO BE USED TO SUIT THE SIZE OF FIXTURE CONNECTION WHICH IS TO BE IN ACCORDANCE WITH MASTER SPECIFICATION No. 448.

927. SEPARATE HIGH PRESSURE LINES ARE TO BE RUN TO SUPPLY WALL HYDRANTS AND FIRE HOSE RACKS.

928. FROM EACH HOT WATER RISER TO FIXTURES ABOVE FIRST STORY A 1/2-INCH DIAMETER RETURN CIRCULATING PIPE SHALL BE TAKEN. CONNECTION TO RISERS SHALL BE MADE AT A POINT JUST BELOW THE HIGHEST HOT-WATER CONNECTION THERETO. ALL THE 1/2-INCH RETURN CIRCULATING PIPES SHALL BE RUN DOWN TO GROUND FLOOR AND CONNECTED TO A RETURN CIRCULATING MAIN WHICH IS TO BE CONNECTED TO THE HOT-WATER STORAGE TANK. THE MAIN CIRCULATING LINE AT TANK SHALL BE PROVIDED WITH A GATE VALVE, A CHECK VALVE, AND A UNION BETWEEN GATE VALVE AND TANK. BRANCH CIRCULATING LINES SHALL BE PROVIDED WITH GATE VALVES IN LOCATIONS CORRESPONDING TO THOSE ON HOT-WATER SUPPLY LINES. CIRCULATING PIPES SHALL BE RUN PARALLEL WITH HOT-WATER PIPES BACK TO TANK UNLESS OTHERWISE SHOWN ON SCALE DRAWINGS.

930. NO WATER PIPE IN TOILET ROOMS WILL BE PERMITTED TO BE BURIED IN THE FLOOR CONSTRUCTION.

931. UNLESS OTHERWISE INDICATED OR NOTED ON DRAWINGS, WATER SUPPLIES TO FIXTURES IN TOILET ROOMS SHALL BE RUN AS FOLLOWS:

932. FOR GROUND FLOOR TOILET ROOMS AND FIXTURES.--THE MAIN SUPPLIES SHALL BE RUN NEAR CEILING; BRANCHES TO BATTERIES OF TANK WATER CLOSET OUTFITS SHALL DROP TO HEADERS BELOW THE TANKS; BRANCHES TO LAVATORIES AND SLOP SINKS SHALL DROP NEAR ENDS OF FIXTURES TO BELOW STOPS. ALL PIPING SHALL BE EXPOSED, EXCEPT TO LAVATORIES WHERE PIPING SHALL BE CONCEALED IN PARTITIONS OR FURRED SPACES.

933. FOR TOILET ROOMS AND FIXTURES ABOVE GROUND FLOOR.--THE MAIN SUPPLIES SHALL GENERALLY BE RUN AT CEILING BELOW THE TOILET ROOM OR FIXTURE IN QUESTION AND RISE THROUGH FLOOR TO THE INDIVIDUAL FIXTURES. BRANCHES TO LAVATORIES GENERALLY SHALL RISE IN PARTITIONS OR FURRED SPACES. SUPPLIES FOR FIXTURES IN GOVERNOR'S TOILET ARE TO BE RUN AT CEILING OF TOILET.

934. RISERS SUPPLYING TOILET ROOMS AND FIXTURES SHALL BE RUN IN CHASES, FURRED SPACES, OR IN CLOSETS AS SHOWN ON DRAWINGS. A BRANCH FOR BOILER SUPPLY SHALL BE PROVIDED WHERE INDICATED ON BASEMENT PLAN. BRANCHES SHALL BE RUN AND CONNECTED TO EACH WALL HYDRANT AND FIRE HOSE RACK AS SHOWN.

935. THE WATER-SUPPLY PIPES AT POINTS INDICATED ON DRAWINGS SHALL BE FITTED WITH GATE VALVES, PLACED IN ACCESSIBLE POSITIONS. STOP COCKS WILL NOT BE PERMITTED. NO VALVES OF ANY KIND SHALL BE PLACED IN ANY FURRED OR INACCESSIBLE SPACE.

936. EACH HOT AND COLD WATER SUPPLY TO EACH SLOP SINK SHALL BE FITTED WITH A GATE OR ANGLE VALVE PLACED IN AN ACCESSIBLE LOCATION WHERE SHOWN ON OR (WHERE NOT SHOWN) CLOSE TO THE FIXTURE. A GATE VALVE SHALL BE INSTALLED ON CONNECTION TO EACH WALL HYDRANT AND ON FIRE LINES AS SHOWN.

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SCHEDULE OF FIXTURES.

937. ATTENTION IS DIRECTED TO THE REFERENCES IN THE FIRST PARAGRAPH OF DESCRIPTION OF FIXTURES SHOWN IN THE FIGURES IN THE PLUMBING FIXTURE SPECIFICATION.

GROUND FLOOR.

4 WATER CLOSETS, No. 48 E V L.
2 URINALS, No. 18 V F.
2 LAVATORIES, No. 20 R V.
3 LAVATORIES, No. 20 R V B.
2 SLOP SINKS, No. 22 V G.
1 WATER HEATER AND HOR. STORAGE TANK, No. 200 H. P.
3 FIRE HOSE RACKS.

FIRST FLOOR.

3 WATER CLOSETS No. 48 E V L.
1 URINAL, No. 18 V F.
3 LAVATORIES No. 20 R V.
11 LAVATORIES No. 20 R V B.
1 SLOP SINK No. 22 V G.
2 FIRE HOSE RACKS.

SECOND FLOOR.

6 WATER CLOSETS No. 48 E V L.
2 URINALS, No. 18 V F.
4 LAVATORIES, No. 20 R V.
9 LAVATORIES, No. 20 R V B.
1 LAVATORY, No. 17 C V B.
1 SLOP SINK, No. 22 V G.
2 FIRE HOSE RACKS.

THIRD FLOOR.

7 WATER CLOSETS No. 48 E V L.
1 URINAL No. 18 V F.
4 LAVATORIES, No. 20 R V.
15 LAVATORIES, No. 20 R V B.
1 LAVATORY, No. 17 C V B.
1 SLOP SINK, No. 22 V G.
2 FIRE HOSE RACKS.

FOURTH FLOOR.

4 WATER CLOSETS No. 46 E V L.
1 URINAL, No. 18 V F.
2 LAVATORIES, No. 20 R V.
25 LAVATORIES No. 20 R V B.
1 LAVATORY No. 17 C V B.
1 SLOP SINK, No. 22 V G.
2 FIRE HOSE RACKS.

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FIFTH FLOOR.

9 WATER CLOSETS No. 48 E V.L.
1 URINAL, No. 18 V F.
6 LAVATORIES, No. 20 R V.
17 LAVATORIES, No. 20 R V B.
1 SLOP SINK, No. 22 V G.
2 FIRE HOSE RACKS.

FOR TESTING PURPOSES.

1 WATER CLOSET BOWL FOR OUTFIT No. 48 E V L.
1 LAVATORY BOWL FOR OUTFIT No. 20 R V B.

938. THESE BOWLS ARE FOR REPLACING BOWLS WHICH WILL BE BROKEN AND TESTED (SEE P. 15). SPECIAL ATTENTION IS DIRECTED TO THE SPECIFICATION REQUIREMENT THAT BOWLS TO BE BROKEN FOR TEST WILL BE SELECTED AT RANDOM FROM THE LOT, BY THE GOVERNMENT REPRESENTATIVE.

939. THE CONTRACT WILL BE BASED ON THE ABOVE SCHEDULE AS TO THE ACTUAL NUMBER OF FIXTURES TO BE FURNISHED AND INSTALLED, BUT WILL BE BASED ON THE DRAWINGS FOR THE NUMBER OF FIXTURES TO BE ROUGHED IN COMPLETE. FOR MODIFICATION OF FIXTURES, SEE SPECIFICATION HEREINAFTER FOR FIXTURE IN QUESTION. FIXTURES SHOWN ON THE DRAWINGS, BUT NOT IN SCHEDULE SHALL BE ROUGHED IN AND CONNECTIONS PLUGGED GAS AND WATER-TIGHT. FIXTURES INCLUDED IN SCHEDULE BUT NOT SHOWN ON DRAWINGS SHALL BE STORED IN THE BUILDING WHERE DIRECTED AT COMPLETION OF SAME.

940. FLOOR AND WALL PLATES, SECTION V, PAR. 17, APPLIES TO ALL FIXTURE OUTFITS.

941. WATER-CLOSETS.--FURNISH AND INSTALL IN TOILET ROOMS WHERE INDICATED WATER-CLOSET OUTFITS No. 48 E V L. (SEE P. 23 AND FIG. 5).

942. SLOP SINKS.--FURNISH AND INSTALL IN TOILET ROOMS WHERE INDICATED SLOP SINKS, OUTFITS No. 22 V G. (SEE P. 33 AND FIG. 11.)

943. SETTING OF FLANGES.--PARTICULAR ATTENTION IS CALLED TO THE FACT THAT THE OUTLET FLANGES FOR CLOSETS AND SLOP SINKS MUST BE SET WITH FACE THE PROPER DISTANCE FROM FLOOR TO MAKE A FIRST-CLASS JOINT WITH THE GASKET AND FIXTURE USED. NO FIXTURE SHALL BE SET IN PLACE UNTIL THE CONSTRUCTION ENGINEER HAS EXAMINED AND APPROVED SUCH FLANGE.

944. URINALS.--FURNISH AND INSTALL WHERE SHOWN ON DRAWINGS URINAL OUTFITS No. 18 V F. (SEE P. 27 AND FIG. 7).

945. THE URINALS SHALL BE SET WITH THE GROUND BACKS AGAINST THE MARBLE WAINSCOTS.

946. EACH URINAL WASTE SHALL BE FITTED WITH A 3 INCH DIAMETER CAST-IRON P TRAP HAVING A WATER SEAL NOT LESS THAN 2-1/2 INCHES IN DEPTH. TRAPS FOR GROUND FLOOR URINALS SHALL HAVE HUBS FOR CALKED-JOINT CONNECTIONS AND TRAPS FOR URINALS ABOVE GROUND FLOOR SHALL HAVE RECESSED SCREW-JOINTED CONNECTIONS.

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947. LAVATORIES.--IN ALL TOILET ROOMS EXCEPT WHERE CORNER LAVATORIES ARE INDICATED ON PLANS FURNISH AND INSTALL WHERE INDICATED RECTANGULAR LAVATORY OUTFITS No. 20 R V., (SEE P. 30 AND FIG. 9).

948. IN OFFICE ROOMS, FURNISH AND INSTALL WHERE INDICATED, RECTANGULAR LAVATORY OUTFITS No. 20 R V B. (SEE P. 30 AND FIG. 9).

949. FURNISH AND INSTALL WHERE INDICATED IN TOILET AND OFFICE ROOMS CORNER LAVATORY OUTFITS No. 17 C V B. (SEE P. 30 AND FIG. 9). CORNER LAVATORIES IN TOILETS SHALL HAVE GROUND BACKS TO FIT AGAINST MARBLE WAINSCOTS.

950. WASTES FOR LAVATORIES SHALL GENERALLY BE MADE TO ROUGHINGS IN WALLS OR PARTITIONS, BUT WHERE THE WASTE IS NOTED TO BE IN FLOOR FILL OR AT CEILING BELOW FIXTURE THE WASTE SHALL BE FITTED WITH THE NON-SIPHON TRAP No. 7 (SEE P. 63 AND FIG. 27) IN LIEU OF A "P" TRAP. SUPPLIES GENERALLY ARE TO BE RUN TO WALL.

951. ON ALL LAVATORIES THE CHAIN STAY INDICATED ON FIG. 26 SHALL BE OMITTED AND SOAP DISH WITH CHAIN STAY (SEE FIG. 24, DETAIL No. 4) SHALL BE INSTALLED.

952. ACCESSORIES.--FURNISH AND INSTALL THE FOLLOWING ACCESSORIES (SEE PP. 59, 60 AND FIGS. 24, 25).

953. NEAR EACH WATER-CLOSET INSTALL A PAPER HOLDER No. 9 AND A COAT HOOK No. 10. NEAR EACH LAVATORY INSTALL A TOWEL RACK No. 6.

953A. WATER HEATER AND STORAGE TANK.--FURNISH AND INSTALL IN BOILER ROOM WHERE INDICATED, OUTFIT No. 200 H.P. (SEE P. 49 AND FIG. 18) EXCEPT THAT TAPPINGS FOR HOT AND COLD WATER SHALL BE 2-1/2" IN LIEU OF 1-1/2". CONNECTIONS TO BE AS INDICATED ON FIG. 18.

954. PROVIDE SMOKE PIPE OF REQUIRED SIZE FROM CAST IRON HEATER CONSTRUCTED OF No. 20 UNITED STATES STANDARD GAUGE GALVANIZED IRON AND CONNECT SAME TO SMOKE FLUE AS INDICATED. SMOKE PIPE SHALL BE PROVIDED WITH A WING DAMPER, CHECK DRAFT AND A CLEAN-OUT.

955. FIRE HOSE RACKS.--FURNISH AND INSTALL WHERE INDICATED FIRE HOSE RACKS. (SEE P. 17 AND FIG. 1). RACKS SHALL BE COMPLETE WITH VALVE, WALL PLATE, HOSE, HOSE PINS, NOZZLE, COUPLINGS, ETC. VALVE SHALL BE AS SPECIFIED ON PAGE 19, ROUGH BRASS FINISH. EACH RACK SHALL BE PROVIDED WITH 75 FEET OF 1-1/2" DIAMETER, UNLINED LINEN HOSE, FITTED WITH A CAST-BRASS NOZZLE AND COUPLINGS.

956. HOSE AND COUPLINGS SHALL BE IN ACCORDANCE WITH U. S. GOVERNMENT MASTER SPECIFICATION No. 527. NOZZLE SHALL BE 10" TO 12" LONG, FINISHED ALL OVER. COMPOSITION OF NOZZLE SHALL BE SUBSTANTIALLY THE SAME AS SPECIFIED FOR COUPLINGS.

957. HANGERS AND SUPPORTS, ETC.--ALL PIPING ABOVE GROUND FLOOR AND IN TUNNELS SHALL BE HUNG WITH HANGERS CONSTRUCTED IN ACCORDANCE WITH MISCELLANEOUS DRAWING No. 305 F, SPACED NOT OVER 10 FEET APART. IN LIEU OF THE RIGHT AND LEFT THREADED TURNBUCKLE INDICATED, CONTRACTOR MAY USE A TURNBUCKLE THREADED ON ONE END ONLY, THE HANGER ROD AT THE OTHER END TO SLIP THROUGH THE BORE OF THE TURNBUCKLE, AND BEADED OVER BORE OR OTHERWISE SECURED.

958. IN CASE OF SOIL AND WASTE PIPES FROM INDIVIDUAL TOILET ROOMS TO THE MAIN STACKS AND OTHER PIPING CLOSE TO CEILINGS WHICH ARE NOT OF NECESSITY LOW ENOUGH TO PERMIT HANGERS No. 2 TO BE USED WITH TURNBUCKLE, THE TURNBUCKLE MAY BE OMITTED.

959. BRASS NICKEL PLATED PIPE SHALL BE SUPPORTED BY SUITABLE CAST-BRASS FINISHED NICKEL-PLATED SUPPORTS. ALL BOLTS, SCREWS, ETC., FOR SECURING SUCH SUPPORTS SHALL HAVE ALL EXPOSED HEADS, ETC., FINISHED NICKEL PLATED. PIPES RUN ON FACE OF PLASTER OR MARBLE SHALL HAVE NOT LESS THAN 3/4 INCH AND NOT OVER 1 INCH CLEARANCE BETWEEN PIPE AND FACE OF MARBLE OR PLASTER.

960. PIPE SLEEVES.--(SEE PP. 9, 10) ALL PIPE SLEEVES MUST BE BUILT IN PLACE AS THE WALLS, ETC., ARE LAID UP.

961. SLEEVES FOR PIPES PASSING THROUGH FOOTINGS AND EXTERIOR WALLS BELOW GRADE WILL BE PROVIDED UNDER ANOTHER SECTION OF THE SPECIFICATION. ALL OTHER SLEEVES ARE INCLUDED UNDER THIS SECTION OF THE SPECIFICATION. NOTE THAT SLEEVES MUST BE PROVIDED FROM PIPES PASSING THROUGH TOPS OF TUNNELS.

962. FLOOR WALL AND CEILING PLATES.--(SEE P. 10). ONE PIECE PLATES ARE PREFERRED, BUT FLAT PATTERN, HINGED PLATES WITH SET SCREW ON THOSE FOR WALL AND CEILING, WILL BE ACCEPTED.

963. NONCONDUCTING COVERING.--(SEE PP. 10, 11). ALL COLD WATER AND HOT WATER SUPPLY AND HOT WATER CIRCULATING PIPES IN THE BUILDING, AFTER BEING TESTED SHALL BE CLEANED AND COVERED. THIS INCLUDES ALL PIPES IN FURRED SPACES, IN WALL CHASES, IN PARTITIONS, IN FLOOR FILL AND PIPING IN TOILET ROOMS, EXCEPT THE FINISHED BRASS PIPE, AND PIPES USED EXCLUSIVELY AS FIRE LINES. NO UNIONS OF ANY KIND ARE TO BE COVERED, AND COVERING SHALL BE NEATLY TERMINATED ON EACH END OF SUCH UNIONS WITH PLASTIC MATERIAL.

964. IN GROUND FLOOR TOILET ROOMS WHERE EXPOSED FIXTURE SUPPLIES DROP FROM MAINS OR BRANCHES OVERHEAD, THE COVERING SHALL STOP ON VERTICAL PIPES 6 FEET ABOVE THE FLOOR AND SUPPLIES FROM THIS POINT TO FLOOR SHALL BE NICKELPLATED AND NOT COVERED. A CEILING PLATE (SEE P. 10) SHALL BE INSTALLED AT POINT WHERE COVERING STOPS ON ALL PIPES.

965. ALL ROOF DRAINAGE PIPING IN ATTIC OR ROOF SPACE SHALL BE CLEANED AND COVERED. (SEE PP. 10, 11).

966. THE CAST IRON WATER HEATER AND THE HOT WATER STORAGE TANK SHALL BE CLEANED AND COVERED (SEE P. 11) AFTER BEING TESTED.

967. ALL PLASTIC ASBESTOS SHALL BE NOT LESS THAN 35 PER CENT PURE LONG FIBER ASBESTOS.

968. NO SAMPLES OF COVERING ARE TO BE SUBMITTED UNLESS CALLED FOR BY A LETTER FROM THE SUPERVISING ARCHITECT. SUCH SAMPLES WHEN CALLED FOR MUST BEAR THE LABEL OF THE MANUFACTURER. THE LABEL OF THE JOBBER OR CONTRACTOR WILL NOT FULFILL THIS REQUIREMENT.

969. EXTRA WASHERS, ETC.--FURNISH AND DELIVER TO THE CONSTRUCTION ENGINEER ONE COMPLETE SET OF WASHERS, FULLER BALLS, TANK BALLS, ETC., FOR ALL FAUCETS, BIBBS, BALL COCKS, CLOSET TANKS, FLUSHING VALVES, WALL HYDRANTS, ETC. THIS EXTRA EQUIPMENT IS TO BE ENCLOSED IN A WOOD OR METAL BOX WITH HINGED COVER. BOX TO HAVE COMPARTMENTS FOR THE DIFFERENT SIZES AND KINDS OF WASHERS.

970. PAINTING.--ALL PIPING RUN IN OR THROUGH CONCRETE, CINDER FILL OR TILE FLOORS SHALL BE GIVEN ONE COAT OF ACID RESISTING PAINT HAVING A BITUMASTIC BASE. THIS INCLUDES BRASS PIPE IN FLOOR FILL WHICH IS TO BE COVERED. ALL EXPOSED THREADS ON GALVANIZED PIPE THROUGHOUT THE BUILDING SHALL BE GIVEN ONE COAT OF SAME ACID RESISTING PAINT.

971. AFTER SPECIFIED TESTS (EXCEPT SMOKE TEST) HAVE BEEN MADE ALL EXPOSED IRON WORK (EXCEPT PIPING TO BE COVERED) SHALL BE GIVEN TWO COATS OF LEAD AND OIL PAINT. GALVANIZED PIPE SHALL BE VARNISHED BEFORE BEING PAINTED. UNCOVERED ROUGH BRASS PIPE TO BE PAINTED SAME AS IRON WORK. HOT WATER TANK AND HEATER TO BE PAINTED BEFORE BEING COVERED.

972. ALL NONCONDUCTING COVERING SHALL BE GIVEN TWO COATS OF COLD WATER PAINT, WHITE OR LIGHT COLORED. DURING THE PAINTING OF PIPE COVERING THE BANDS SHALL BE REMOVED AND REPLACED WHEN PAINT IS DRY.

973. FINISHING TINTS SHALL BE AS DIRECTED BY CONSTRUCTION ENGINEER, BUT VARIOUS COLORS TO DESIGNATE THE DIFFERENT SERVICES (HOT, COLD CIRCULATING, ETC.) WILL NOT BE REQUIRED.

974. TESTS OF PLUMBING AND DRAINAGE SYSTEM.--EACH ENTIRE SYSTEM OF SOIL, WASTE, DRAIN, AND VENT PIPING, INCLUDING THE INTERIOR DOWNSPOUTS AND RAIN WATER DRAINAGE SYSTEMS, MUST BE TESTED WITH WATER OR AIR, AS HEREINAFTER DESCRIBED, AND PROVED TIGHT TO THE SATISFACTION OF THE CONSTRUCTION ENGINEER BEFORE THE IMMEDIATE CONNECTION IS MADE TO CITY SEWERS, TRENCHES BACK FILLED, PIPING COVERED, OR FIXTURES CONNECTED. TESTING INSTRUMENTS MUST BE FURNISHED BY THE CONTRACTOR.

975. TESTS MUST BE MADE WITH WATER, EXCEPT WHEN THERE IS DANGER FROM FREEZING, WHEN THE TEST MUST BE MADE WITH AIR. WOODEN PLUGS ARE NOT TO BE USED IN MAKING THE TESTS. THE CONNECTIONS BETWEEN THE BUILDING AND THE CITY SEWERS AND THE DRAINAGE SYSTEMS BELOW THE GROUND FLOOR ARE TO BE TESTED SEPARATELY.

976. WATER TESTS.--EACH CONNECTION FROM BUILDING TO THE CITY SEWER AND EACH DRAINAGE SYSTEM BELOW GROUND FLOOR ARE TO BE FILLED WITH WATER TO TOP OF A VERTICAL SECTION OF PIPE 10 FEET HIGH, TEMPORARILY CONNECTED TO THE HIGHEST POINT ON THE LINES TO BE TESTED, AND THE WATER ALLOWED TO STAND AT LEAST 30 MINUTES FOR INSPECTION, AFTER WHICH, IF THE LINES PROVE TIGHT, THE WATER IS TO BE DRAWN OFF, IMMEDIATE CONNECTIONS MADE WITH CITY SEWERS, AND TRENCHES BACK FILLED.

977. THE SOIL, WASTE, DRAIN, AND VENT PIPING, THE INTERIOR DOWNSPOUTS, AND RAIN-WATER DRAINAGE SYSTEM ABOVE THE GROUND FLOOR LINE MUST HAVE THE OPENINGS PLUGGED WHERE NECESSARY AND THE PIPING SYSTEM ABOVE GROUND FLOOR FILLED WITH WATER TO THE LEVEL OF THE MAIN ROOF GUTTERS OR TOP OF VENT PIPES AND ALLOWED TO STAND AT LEAST 30 MINUTES FOR INSPECTION, AFTER WHICH, IF THE LINES PROVE TIGHT, THE WATER IS TO BE DRAWN OFF AND THE FIXTURES CONNECTED. EACH VERTICAL STACK ABOVE GROUND FLOOR WITH ITS BRANCH WASTE AND VENT PIPES MAY BE TESTED SEPARATELY BY INSERTING PLUGS IN THE CLEANOUTS AT BASE OF VERTICALS IN LIEU OF FILLING ENTIRE SYSTEM IN BUILDING WITH WATER AT ONE TIME.

978. AIR TESTS.--A PRESSURE OF NOT LESS THAN 10 POUNDS PER SQUARE INCH, EQUAL TO 20 INCHES OF MERCURY, MUST BE SUPPLIED WITH A FORCE PUMP AND SAID PRESSURE MAINTAINED AT LEAST 15 MINUTES WITHOUT LEAKAGE. A MERCURY COLUMN GAUGE MUST BE USED IN MAKING AIR TESTS.

979. SMOKE TESTS.--AFTER ALL FIXTURES HAVE BEEN PERMANENTLY CONNECTED, A SMOKE TEST MUST BE APPLIED TO THE SANITARY SYSTEM, AND EACH ENTIRE SYSTEM PROVED TIGHT, TO THE SATISFACTION OF THE CONSTRUCTION ENGINEER WHEN FILLED WITH SMOKE UNDER PRESSURE EQUAL TO 1 INCH OF WATER. THE SMOKE MUST NOT BE PRODUCED BY CHEMICAL MIXTURES.

980. TEST OF WATER SUPPLY SYSTEM.--AT THE COMPLETION OF THE WORK, EXCEPT APPLICATION OF THE NONCONDUCTING COVERING, THE WATER-SUPPLY SYSTEM MUST BE TESTED TO A HYDROSTATIC PRESSURE OF 100 POUNDS TO THE SQUARE INCH.

981. ANY WATER PIPING RUN IN CHASES, IN WALLS, IN FURRED CEILINGS, OR IN ANY WAY CONCEALED BY STRUCTURAL WORK MUST BE TESTED TO ABOVE PRESSURE AND PROVED TIGHT BEFORE THE PIPES ARE CONCEALED.

982. COSTS OF TESTS AND CERTIFICATE.--COST OF TESTS TO BE BORNE BY THE CONTRACTOR, WHO MUST FURNISH THIS OFFICE THROUGH THE CONSTRUCTION ENGINEER, WITH A CERTIFICATE THAT THE REQUIRED TESTS HAVE BEEN SATISFACTORILY MADE.

983. CERTIFICATE MUST BE COUNTERSIGNED BY THE CONSTRUCTION ENGINEER, WHO WILL FORWARD SAME TO THE SUPERVISING ARCHITECT.

14,000 sq ft direct steam radiation

JUNEAU, ALASKA.

FEDERAL AND TERRITORIAL BUILDING.

HEATING APPARATUS.

984. SCOPE OF WORK.--THIS PORTION OF THE SPECIFICATION INCLUDES ALL LABOR AND MATERIALS REQUIRED FOR THE INSTALLATION COMPLETE OF A TWO PIPE VACUUM HEATING SYSTEM, OIL BURNERS, ETC., AS DESCRIBED HEREIN AND INDICATED ON THE DRAWINGS.

985. REFERENCES IN THIS PORTION OF THE SPECIFICATION TO PAGES AND PARAGRAPHS MEAN PAGES AND PARAGRAPHS IN THE SPECIFICATION FOR STANDARD HEATING MATERIALS, ETC., FOR BUILDINGS UNDER THE TREASURY DEPARTMENT, OFFICE OF THE SUPERVISING ARCHITECT, APRIL 1, 1926, WHICH IS A PART OF THIS SPECIFICATION AND A COPY OF WHICH MAY BE SECURED ON APPLICATION TO THE SUPERVISING ARCHITECT.

14183 Sq.ft. Exact

986. BOILERS.--FURNISH AND INSTALL WHERE SHOWN TWO DOUBLE PASS, PORTABLE, SMOKELESS, STEEL BOILERS. SEE PAGES 2 AND 3, PARAGRAPHS 20 TO 39, INCLUSIVE. EACH BOILER IS TO HAVE A MANUFACTURERS GUARANTEED RATING OF NOT LESS THAN 14,000 SQUARE FEET OF DIRECT STEAM RADIATION. SHELLS OF BOILERS ARE TO BE 72 INCHES DIAMETER, AND BOILERS ARE TO BE ABOUT 16'-7" LONG, EXCLUSIVE OF SMOKE BOXES ON FRONTS. FIRE BOXES ARE EACH TO BE ABOUT 65" BY 96" AND THE AREA OF THE WATER TUBE GRATE MUST BE NOT LESS THAN 28.5 SQUARE FEET. THE WATER LINE OF BOILERS IS TO BE NOT OVER 96 INCHES ABOVE BOILER ROOM FLOOR. EACH BOILER MUST HAVE NOT LESS THAN 1200 SQUARE FEET OF HEATING SURFACE.

987. BOILER FOUNDATION.--BOILERS TO BE SET DIRECTLY ON BOILER ROOM FLOOR AND MUST NOT BE SET IN PLACE UNTIL THE FLOOR UNDER SAME IS FINISHED.

988. ALTERATIONS OF BOILER FIRE BOXES FOR BURNING OIL.--THE LOWER GRATES OF THE BOILERS HEREINBEFORE SPECIFIED, TOGETHER WITH THE OPERATING LEVERS, ASH DOORS, ASH FRONTS, ETC., SHALL BE FURNISHED BUT ARE NOT TO BE INSTALLED ON THE BOILERS. SUCH GRATES, ETC., SHALL BE DELIVERED TO THE CONSTRUCTION ENGINEER AND BE STORED IN THE BUILDING.

989. THE BOILER FIRE BOXES ARE TO BE ARRANGED FOR BURNING OIL AS SHOWN ON DRAWINGS. PROVIDE FIRE BRICK LINING, BAFFLE WALL, SECONDARY AIR INLETS, ETC. WALLS TO BE LAID IN FIRE CLAY WITH PROPER PROVISION FOR EXPANSION OF BRICK WORK. FLOOR OF COMBUSTION CHAMBER TO BE LAID LOOSE WITHOUT FIRE CLAY AND TO BE SUPPORTED ON HEAVY TEES OR ANGLES AS SHOWN.

990. PROVIDE STEEL PLATES NOT LESS THAN 1/4" THICK WITH OPENINGS CUT FOR OIL BURNERS, INSPECTION POSTS AND SECONDARY AIR INLETS. PLATES TO BE SECURED TO BRICK FOUNDATION OF BOILER BY MEANS OF PROPER ANCHOR BOLTS. SECONDARY AIR INLETS TO BE PROVIDED WITH BUTTERFLY DAMPERS OPERATED BY THE AUTOMATIC CONTROL APPARATUS OF OIL BURNING APPARATUS.

991-992. BOILER TRIMMINGS.--EACH BOILER IS TO BE PROVIDED WITH TRIMMINGS AS SPECIFIED ON PAGE 4, PARAGRAPH 63. SAFETY VALVE TO BE IN ACCORDANCE WITH A.S. M.E. BOILER CODE. THE PRESSURE GAUGES MUST BE COMPOUND TYPE GRADUATED FOR 30 POUNDS PRESSURE AND 30 INCHES VACUUM, IN LIEU OF STRAIGHT PRESSURE TYPE.

993. BOILER FEED AND DRAIN.--FURNISH AND INSTALL BOILER FEED AND BOILER DRAIN FOR EACH BOILER AS SHOWN ON DRAWINGS. SEE PAGE 5, PARAGRAPHS 67 AND 68. FEEDS ARE TO BE 1" AND DRAINS ARE TO BE 1-½" IN LIEU OF 3/4".

994. FIRING TOOLS.--FURNISH TWO TUBE CLEANERS WITH 3/8" PIPE HANDLES AND A SCRAPER OR HOE FOR CLEANING BREECHING. SCRAPE TO HAVE A 3/8" PIPE HANDLE 20 FEET LONG IN 4 SECTIONS.

995. SMOKE BREECHING.--FURNISH AND INSTALL SMOKE BREECHING. SEE PAGE 5, PARAGRAPH 70.

996. PIPES, FITTINGS, ETC.--FURNISH AND INSTALL ALL MAINS, BRANCHES, ETC., AS SHOWN ON DRAWINGS. SEE PAGE 6, PARAGRAPHS 77 TO 83 INCLUSIVE. STEAM AND RETURN MAINS ARE TO BE INSTALLED AT THE ELEVATIONS NOTED ON DRAWINGS UNLESS OTHERWISE DIRECTED.

997. STEAM MAINS GENERALLY ARE TO PITCH DOWN FROM BOILER TO ENDS OF RUNS WITH A UNIFORM GRADE OF NOT LESS THAN 1/2 INCH IN 10 FEET.

998. RETURN MAINS ARE TO PITCH DOWN IN DIRECTION OF FLOW WITH A UNIFORM GRADE OF NOT LESS THAN 1/2" IN 10 FEET.

999. BRANCH CONNECTIONS FROM MAINS TO RADIATORS AND RISERS ARE TO PITCH UP FROM MAINS NOT LESS THAN 2-1/2" IN 10 FEET IF POSSIBLE. BRANCH CONNECTIONS FROM RISERS TO RADIATORS ARE TO PITCH UP FROM RISERS AS MUCH AS POSSIBLE.

1000. STEAM AND FLOW CONNECTIONS FOR RADIATORS AND RISERS ARE GENERALLY TO BE TAKEN OUT OF TOPS OF MAINS OR AT AN ANGLE OF 45 DEGREES. RETURN CONNECTIONS GENERALLY, ARE TO BE MADE DIRECTLY INTO SIDES OF MAINS, UNLESS OTHERWISE NOTED ON DRAWINGS OR DIRECTED BY CONSTRUCTION ENGINEER.

1001. ALL STEAM AND RETURN RISERS ARE TO BE SECURELY ANCHORED AT THIRD FLOOR LEVEL. ALL RISERS ARE TO BE TAKEN OFF MAINS WITH SWING CONNECTIONS AND SWING CONNECTIONS ARE TO BE PROVIDED FOR FIFTH FLOOR RADIATORS ALL AS INDICATED ON PLANS.

1002. INSTALL ECCENTRIC FITTINGS WHERE NOTED ON DRAWINGS.

1003. AN EQUALIZING PIPE IS TO BE INSTALLED FROM BOTTOM OF MAIN STEAM PIPE INTO MAIN RETURN. THIS PIPE MUST HAVE A UNION. DRIP CONNECTIONS ARE TO BE INSTALLED AT ENDS OF STEAM MAINS AND AT OTHER POINTS NOTED ON DRAWINGS OR REQUIRED TO DRAIN THE SYSTEM.

1004. A 1-½ DRAIN WITH VALVE AND HOSE NIPPLE SAME AS BOILER DRAIN IS TO BE INSTALLED AT LOW POINT OF MAIN RETURN.

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1005. STEAM FLOW AND RETURN CONNECTIONS TO BE MADE TO THE COIL IN HOT WATER TANK HEREINBEFORE SPECIFIED UNDER "PLUMBING". THE STEAM CONNECTION TO BE PROVIDED WITH A GATE VALVE, REGULATING VALVE AND A GROUND JOINT UNION. THE STEAM REGULATING VALVE CONTROLLED BY TANK REGULATOR WILL BE FURNISHED UNDER "PLUMBING" BUT IS TO BE INSTALLED UNDER THIS SECTION OF THE CONTRACT.

1006. THE RETURN CONNECTION FROM TANK IS TO BE PROVIDED WITH A UNION, A CHECK VALVE AND A COMBINATION FLOAT AND THERMOSTATIC TRAP. TRAP TO BE FLOAT TYPE HAVING A GUARANTEED CAPACITY OF NOT LESS THAN 7000 SQUARE FEET OF EQUIVALENT DIRECT RADIATION WITH 1" CONNECTIONS. TRAP IS TO BE EQUIPPED WITH A THERMOSTATICALLY CONTROLLED BYPASS FOR ELIMINATING THE AIR BUT PREVENTING PASSAGE OF STEAM. THERMOSTATIC ELEMENT IS TO BE SAME AS SPECIFIED FOR RADIATOR TRAPS. TRAP DISCHARGE IS TO BE PROVIDED WITH A UNION, CHECK VALVE AND A GATE VALVE AND IS TO BE CONNECTED TO MAIN RETURN AS SHOWN ON SCALE DRAWINGS.

1007. STEAM FLOW AND RETURN CONNECTIONS ARE TO BE MADE TO COIL IN OIL TANK. STEAM CONNECTION IS TO HAVE A GLOBE VALVE AND UNION AND RETURN CONNECTION IS TO HAVE A 3/4" THERMOSTATIC TRAP, A UNION, AND A GATE VALVE.

1008. PIPE TRENCH.--SEE PAGE 7 AND PARAGRAPHS 91 TO 93. THE PIPE TRENCH WILL BE BUILT UNDER THE CONSTRUCTION SECTION OF THIS SPECIFICATION BUT THE FRAME AND COVER SHALL BE FURNISHED AND INSTALLED UNDER THIS SECTION. SEE DETAIL 6, DRAWING No. 305F.

1009. HANGERS AND SUPPORTS.--ALL PIPES TO HAVE HANGERS AS SPECIFIED ON PAGE 6, PARAGRAPH 84. A HANGER MUST BE INSTALLED NOT OVER 24 INCHES FROM EACH CHANGE IN DIRECTION OF MAINS. HANGERS FOR RADIATORS ARE TO BE OF A TYPE WHICH WILL SUPPORT RADIATORS FROM BRICKWORK INDEPENDENT OF TERRA COTTA FURRING. SINGLE END TURNBUCKLES AS SPECIFIED UNDER "PLUMBING" MAY BE USED IN LIEU OF DOUBLE END TURNBUCKLES. INSERTS FOR HANGERS IN TUNNELS WILL BE PROVIDED UNDER THE CONSTRUCTION SECTION OF THIS SPECIFICATION.

1010. PIPE SLEEVES, PLATES, ETC.--FURNISH AND INSTALL PIPE SLEEVES, PLATES, ETC., AS SPECIFIED ON PAGE 7, PARAGRAPHS 85 TO 90 INCLUSIVE. THIS INCLUDES SLEEVES IN TOP OF TUNNELS.

1011. VALVES.--VALVES ARE TO BE INSTALLED WHERE SHOWN ON DRAWINGS. SEE PAGES 7 AND 8 PARAGRAPHS 94 TO 98, INCLUSIVE. ALL RISERS ARE TO BE VALVED.

1012. EXPANSION JOINT AND ANCHORS.--FURNISH AND INSTALL ON STEAM MAIN WHERE SHOWN ON PLANS IN TUNNEL A CORRUGATED COPPER EXPANSION JOINT. EXPANSION JOINT TO BE DESIGNED FOR 100 POUNDS PRESSURE AND 2" EXPANSION AND TO BE EQUIPPED WITH HEAVY EQUALIZING RINGS SO AS TO AUTOMATICALLY DISTRIBUTE THE EXPANSION BETWEEN THE DIFFERENT CORRUGATIONS.

1013. THE STEAM MAIN IS TO BE ANCHORED BY SUBSTANTIAL PIPE CLAMPS PROPERLY SECURED TO TUNNEL WALLS AT THE POINTS INDICATED. RISERS ARE TO BE ANCHORED AS HEREINBEFORE SPECIFIED.

1014. RADIATOR VALVES.--EACH RADIATOR IS TO HAVE A VALVE ON STEAM CONNECTION. STEMS OF ALL RADIATOR VALVES, EXCEPT ON WALL RADIATOR HUNG FROM CEILINGS, ARE TO BE SET VERTICAL.

1015. RADIATOR VALVES ARE TO BE BEST RED BRASS COMPOSITION OF THE HIGHEST GRADE, ROUGH BODY, FINISHED TRIMMINGS, NICKEL-PLATED ALL OVER, AND WITH BALL JOINT UNIONS. RADIATOR VALVES ARE TO BE OF THE GRADUATED TYPE WITH LEVER HANDLES AND WITH EITHER MULTIPORT OR GLOBE TYPE SEATS. HANDLES SHALL BE COVERED WITH WOOD OR COMPOSITION AND THE METAL SHALL PASS ENTIRELY THROUGH THE COVERING AND BE SECURED WITH A NICKEL-PLATED BRASS NUT, OR EQUIVALENT, ON OUTER END.

1016. RADIATOR VALVES MAY BE (1) "BELOWS" TYPE USING A SERIES OF BRONZE DIAPHRAGMS OR A BRONZE BELLOWS ARRANGED TO FORM A METAL WALL BETWEEN INSIDE AND OUTSIDE OF VALVE; (2) METAL TO METAL TYPE ESPECIALLY DESIGNED TO RESIST AIR LEAKAGE AND BE PROVIDED WITH REINFORCING PACKING; OR (3) A TYPE WHICH USES THE LATEST IMPROVED TYPE OF PACKING TO INSURE A MINIMUM OF AIR LEAKAGE. ALL VALVES MUST OPERATE EASILY AND MUST BE WELL CONSTRUCTED THROUGHOUT.

1017. THERMOSTATIC TRAPS.--THERMOSTATIC TRAPS ARE TO BE INSTALLED ON THE RETURN END OF EACH RADIATOR, ON RETURN FROM OIL TANK COIL, AT EACH DRIP POINT OF STEAM MAINS, WHERE NOTED ON DRAWINGS AND WHEREVER NECESSARY TO DRAIN THE SYSTEM. SEE PAGES 8 AND 9, PARAGRAPHS 106 TO 110, INCLUSIVE. UNLESS OTHERWISE NOTED ON DRAWINGS, TRAPS ON RADIATORS ARE TO BE 1/2 INCH AND ON RETURN FROM OIL TANK COIL AND AT DRIP POINTS OF STEAM MAINS ARE TO BE 3/4 INCH. AT DRIP POINTS THERE MUST BE NOT LESS THAN 4 FEET OF PIPE BETWEEN STEAM MAIN AND TRAPS. A COMBINATION FLOAT AND THERMOSTATIC TRAP AS HEREINBEFORE SPECIFIED IS TO BE INSTALLED ON RETURN FROM HOT WATER TANK.

1018. A GATE VALVE MUST BE PLACED ON STEAM SIDE OF TRAPS AT DRIP POINTS OF STEAM MAINS AND, UNLESS TRAP HAS AN INTEGRAL UNION, A UNION MUST BE INSTALLED BETWEEN GATE VALVE AND TRAP. A SCALE POCKET MUST BE INSTALLED AT EACH DRIP POINT. SEE DETAIL ON SCALE DRAWINGS.

1019. THE THERMOSTATIC ELEMENTS , MUST NOT BE PLACED IN TRAPS UNTIL THE SYSTEM HAS BEEN OPERATED AND ALL SEDIMENT POCKETS, ETC., CLEARED OF DIRT, SCALE, ETC. TEMPORARY COVERS, ETC., MUST BE PROVIDED BY CONTRACTOR FOR USE PRIOR TO THIS TIME.

1020. RADIATION.--FURNISH AND INSTALL RADIATORS AS NOTED ON DRAWINGS. SEE PAGE 9, PARAGRAPHS 111 TO 118, INCLUSIVE. RADIATORS EXCEPT WALL TYPE ARE TO BE NARROW TUBE TYPE HOT WATER PATTERN WITH SUPPLY CONNECTION AT THE TOP AND RETURN CONNECTION AT BOTTOM. THE INTERMEDIATE LEG SECTION WILL NOT BE REQUIRED. CERTAIN RADIATORS ARE TO BE HUNG ON WALL AS NOTED AND ARE TO BE LEGLESS.

1021. RADIATOR SHIELDS.--RADIATOR SHIELDS ARE TO BE FURNISHED AND INSTALLED FOR 8 RADIATORS WHICH ARE NOT LOCATED UNDER WINDOWS, VIZ., ONE IN GROUND FLOOR ELEVATOR HALL, ONE IN FIRST FLOOR ELEVATOR HALL, TWO IN FIRST FLOOR ENTRANCE VESTIBULE AT N.E. CORNER OF BUILDING, TWO IN SENATE AND TWO IN HOUSE. SEE PAGE 9, PAR. 119.

1022. NON-CONDUCTING COVERINGS.--AFTER THE APPARATUS HAS BEEN TESTED AND APPROVED THIS CONTRACTOR MUST COVER THE BOILERS, THE SMOKE BREECHING, AND ALL STEAM AND RETURN PIPES, BOILER-FEED PIPING, FITTINGS, AND VALVES IN THE BUILDING (EXCEPT AS HEREINAFTER SPECIFIED) WITH NON-CONDUCTING FIREPROOF COVERING PUT ON IN A FIRST-CLASS AND APPROVED MANNER. SEE PAGE 10, PARAGRAPHS 120 TO 126 INCLUSIVE. SCRAP PIECES MUST NOT BE USED WHERE A FULL-LENGTH SECTION WOULD FIT. AFTER CONCEALED RUNOUTS AND THE RISERS IN CHASES AND IN FURRING HAVE BEEN TESTED AND PROVED TIGHT, AS HEREINAFTER SPECIFIED, THEY MUST BE COVERED.

1023. THE FOLLOWING PIPES ARE NOT TO BE COVERED; VIZ., EXPOSED RETURN PIPES IN GROUND FLOOR AND TUNNELS, EXPOSED STEAM AND RETURN RISERS ABOVE FIRST FLOOR, EXPOSED RUNOUTS FROM RISERS TO RADIATORS ABOVE FIRST FLOOR AND RISERS NOS. S-16, S-50 AND S-85 IN GROUND STORY WHICH ARE RUN EXPOSED.

1024. WHERE SPACE DOES NOT PERMIT SECTIONAL COVERING TO BE USED ON PIPES IN CHASES OR FURRED SPACES, THE CHASES OR FURRED SPACES CONTAINING RISERS MAY BE PACKED FULL OF ASBESTOS OR PLASTIC MATERIAL. BOILER-FEED PIPING TO BE COVERED SAME AS OTHER COLD-WATER PIPE IN "PLUMBING".

1025. PLASTIC COVERING FOR VALVES AND FITTINGS TO BE FINISHED FLUSH WITH PIPE COVERING WHERE POSSIBLE.

1026. NO FLANGES OR UNIONS TO BE COVERED, BUT THE COVERING MUST BE NEATLY TERMINATED ON EACH END OF SAME WITH PLASTIC MATERIAL TROWELED ON A BEVEL.

1027. THE BREECHING TO BE COVERED WITH PLASTIC MATERIAL, NOT LESS THAN 1-1/2 INCHES THICK, REINFORCED WITH WIRE NETTING, AND FINISHED WITH A HARD, SMOOTH SURFACE, A WORKMANLIKE FINISH WILL BE REQUIRED AROUND DAMPERS AND CLEANOUT DOORS. A 1-INCH AIR SPACE MUST BE MAINTAINED BETWEEN THE BREECHING AND THE COVERING BY THE USE OF STEEL SPACERS PROPERLY INSTALLED (NOT OVER 3" ON CENTERS) AND ATTACHED TO WIRE NETTING.

1028. IN LIEU OF ABOVE COVERING FOR BREECHING, CONTRACTOR, IF HE ELECTS, MAY USE 2" THICK MAGNESIA BLOCKS APPLIED OVER 1" V-RIB EXPANDED METAL TO FORM A 1" AIR SPACE AND FINISHED WITH 1/2" THICK COAT OF INSULATING AND FINISHING CEMENT TROWELED TO A SMOOTH SURFACE OVER GALVANIZED IRON HEXAGONAL WIRE.

1029. BOILERS SHALL BE COVERED "SAME" AS BREECHING, EXCEPT THAT COVERING IS TO BE 2" THICK, AND LAST 1/4 INCH SHALL BE ONE-HALF PORTLAND CEMENT. THE AIR SPACE MAY BE REDUCED TO 3/8" ON BOILERS.

1030. VACUUM PUMPS.--FURNISH AND INSTALL WHERE SHOWN TWO VACUUM PUMPS. SEE PAGE 10, PARAGRAPHS 127 TO 131, INCLUSIVE. EACH PUMP MUST HAVE A GUARANTEED CAPACITY OF NOT LESS THAN 26,000 SQUARE FEET OF DIRECT RADIATION, MUST BE CAPABLE OF DISCHARGING AGAINST A PRESSURE OF 20 POUNDS PER SQUARE INCH, AND MUST MAINTAIN A VACUUM OF 10 INCHES OF MERCURY ON THE HEATING SYSTEM. PUMPS ARE TO BE SET ON PIT FLOOR AND BE SECURED WITH EXPANSION BOLTS 6" LONG.

1031. MOTORS TO BE WOUND FOR 220 VOLTS, 60 CYCLES, 3 PHASE, ALTERNATING CURRENT.

1032. ALL ELECTRICAL CONNECTIONS FROM A FUSED SWITCH WHICH WILL BE INSTALLED NEAR PUMPS UNDER ANOTHER SECTION OF THE SPECIFICATION, TO THE CONTROLLERS, MOTORS, ETC., MUST BE MADE COMPLETE. A SEPARATE SWITCH WILL BE PROVIDED FOR EACH MOTOR. CONNECTIONS TO BE AS SPECIFIED FOR OIL PUMP MOTORS.

1033. LIFT FITTING.--A LIFT FITTING IS TO BE INSTALLED ON MAIN VACUUM SUCTION. LIFT FITTING MUST BE OF AMPLE SIZE AND BE CONSTRUCTED AND INSTALLED AS RECOMMENDED BY THE MANUFACTURER OF VACUUM PUMPS AND BE GUARANTEED TO GIVE SATISFACTORY SERVICE.

1034. PAINTING.--PAINT ALL IRON WORK AS SPECIFIED ON PAGE 11, PARAGRAPHS 132 TO 136, INCLUSIVE. THIS INCLUDES ALL CONCEALED RADIATORS AND UNCOVERED PIPE CONNECTIONS THEREWITH.

1035. CLEANING OF APPARATUS.--RADIATORS, BOILERS AND PIPING MUST BE THOROUGHLY CLEANED OF ALL GREASE, IRON CUTTINGS, AND OTHER REFUSE, AND SHOULD ANY PIPE, ETC., BE STOPPED UP BY SUCH REFUSE, OR SHOULD THE BOILERS FOAM OR PRIME DUE TO OIL OR GREASE IN THE SYSTEM AFTER THE APPARATUS HAS BEEN ACCEPTED, THE CONTRACTOR WILL BE REQUIRED TO PAY FOR DISCONNECTING, CLEANING AND RECONNECTING SUCH PIPE AND FOR WASHING OUT BOILERS WITH WATER CONTAINING SODA TO REMOVE OIL AND GREASE.

1036. IMMEDIATELY BEFORE FINAL TEST OF THE SYSTEM, THE BOILERS MUST BE WASHED OUT WITH WATER CONTAINING SODA TO FREE BOILERS FROM OIL. AFTER THE WASHING IS COMPLETED, THE SODA WATER SHALL BE REMOVED THROUGH A TEMPORARY CONNECTION IN SAFETY VALVE OPENING WHILE THE BOILERS ARE HOT BY FEEDING COLD WATER THROUGH THE FEED LINES INTO BOTTOMS OF BOILERS.

1037. OIL BURNING EQUIPMENT.--FURNISH AND INSTALL COMPLETE AN OIL BURNING APPARATUS CONSISTING OF STORAGE TANK, AIR BLAST MACHINES, OIL PUMPS, MOTORS, BURNERS, OIL HEATERS, AND ALL NECESSARY ACCESSORIES CONTROL, AND SAFETY DEVICES, ETC., FOR THE OPERATION OF THE HEATING BOILERS.

1038. OIL STORAGE TANK.--TANK TO BE OF SIZE SHOWN ON DRAWINGS. TANK OF APPROXIMATELY SAME OVER ALL DIMENSIONS, HAVING THE SAME CAPACITY WILL BE ACCEPTABLE, PROVIDED SAME CAN BE INSTALLED ON THE CONCRETE ENCLOSURE. SHELL TO BE MADE OF 1/4 INCH THICK TANK STEEL; DISHED OR BUMPED HEADS 3/8 INCH THICK RIVETED AND CAULKED. TANK SHALL BE PAINTED ONE COAT OF RED LEAD AND OIL AT THE FACTORY AND ONE HEAVY COAT OF TAR OR ASPHALTUM PAINT AT TIME OF ERECTION. PROVIDE 11" X 15" MANHOLE IN TOP OF TANK, WITH MANHOLE COVER, YOKE, ETC. CONSTRUCT BRICK MANHOLE AROUND MANHOLE IN TANK, AND PROVIDE SAME WITH SOLID CAST IRON COVER AND FRAME, SET FLUSH WITH FINISHED GRADE, AS SHOWN ON DRAWINGS.

1039. TANK TO BE PROVIDED WITH 8" FILLER PIPE AND TEST PIPE 2" VENT PIPE, 2-INCH OIL SUCTION PIPE, 1-1/2" OIL RETURN PIPE, 1-1/2 INCH STEAM AND 1 INCH RETURN PIPE. VENT PIPE SHALL BE RUN TO POINT NEAR BUILDING, AND SHALL TERMINATE AS INDICATED ON DRAWINGS WITH A RETURN BEND AND SCREEN. OIL SUCTION AND RETURN PIPES SHALL BE RUN TO BUILDING, AND CONTINUED TO OIL PUMP AND BURNERS AS NOTED AND HEREINAFTER SPECIFIED. STEAM FLOW AND RETURN PIPES SHALL BE EXTENDED THROUGH BUILDING WALL, AND BE CONNECTED TO STEAM AND RETURN MAINS AS SHOWN AND SPECIFIED. ALL ABOVE PIPING EXCEPT THAT INSIDE BUILDING, SHALL BE RUN BELOW GRADE, AND SHALL BE EXTRA HEAVY WROUGHT IRON OR STEEL WITH CAST IRON FITTINGS. ALL PIPES EXCEPT STEAM AND RETURN CONNECTIONS OUTSIDE OF TANK WHICH MAY BE BLACK MUST BE GALVANIZED.

1040. ALL OPENINGS IN TANK TO BE PROPERLY REINFORCED, AND PIPE OPENINGS SHALL HAVE HEAVY FLANGES RIVETED TO TANK. FLANGES GENERALLY ARE TO BE TAPPED FOR SCREWED CONNECTIONS, EXCEPT FOR STEAM COIL WHICH MUST HAVE PACKED JOINTS THROUGH TOP OF TANK.

1041. PROVIDE WITH THE TANK A SUITABLE GAUGING ROD, GRADUATED TO INDICATE THE NUMBER OF BARRELS OF OIL IN TANK.

1042. TANK IS TO BE PLACED IN A CONCRETE ENCLOSURE WHICH IS INCLUDED UNDER ANOTHER SECTION OF THIS SPECIFICATION. TANK MUST BE INSTALLED BEFORE THE CONCRETE TOP IS PUT ON AND THIS CONTRACTOR MUST PROVIDE AND INSTALL PIPE SLEEVES FOR ALL PIPES PASSING THROUGH WALLS OR TOP OF CONCRETE ENCLOSURE. TANK IS TO BE SUPPORTED ON CONCRETE CRADLES BUILT BY THIS CONTRACTOR. AFTER TANK IS INSTALLED AND CONNECTED THE ENTIRE SPACE BETWEEN TANK AND CONCRETE ENCLOSURE MUST BE FILLED WITH CLEAN DRY SAND.

1043. TANK SHALL BE PROVIDED WITH A SPIRAL BRASS PIPE COIL FOR STEAM CONTAINING NOT LESS THAN 30 LINEAL FEET OF 1-1/2" PIPE. PIPE SHALL BE IRON PIPE SIZE AND THICKNESS. OIL SUCTION PIPE TO BE IN CENTER OF SPIRAL COIL. COIL TO BE TESTED TO 100 POUNDS PRESSURE. CONNECTIONS OF STEAM AND RETURN PIPES TO COIL TO BE MADE OUTSIDE OF TANK.

1044. FILLING PIPE.--FILLING PIPE AND GAUGE PIPE SHALL BE 8" AND SHALL BOTH BE EXTENDED TO GRADE AS INDICATED AND NOTED AND FITTED WITH LOCKING CAPS, WATER-TIGHT. HEAVY CAST IRON BOXES, BEDDED IN CONCRETE, AND WITH HINGED COVERS, SHALL BE PLACED ON ENDS OF FILLING PIPE AND GAUGE PIPE. FURNISH KEYS FOR LOCKING CAPS. FILL AND GAUGE PIPE SHALL EXTEND TO 4" OF BOTTOM OF TANK.

1045. OIL SUCTION PIPE.--SUCTION PIPE SHALL BE RUN FROM TANK INTO BUILDING, AS NOTED. LOWER END OF PIPE SHALL EXTEND TO WITHIN 4" OF BOTTOM OF TANK, AND UPPER END SHALL TERMINATE AT GRADE, AS SHOWN, WITH BRASS PLUG, AND CAST IRON BOX WITH HINGED COVER, SIMILAR TO BOX ON FILLING PIPE, AT GRADE. SUCTION PIPE TO HAVE 2 INCH ALL BRASS FOOT VALVE AT BOTTOM, WITH CHAIN ATTACHMENT EXTENDING UP TO TOP OF PIPE. SUCTION PIPE SHALL HAVE AN APPROVED ANTI-SYPHON VALVE AT HIGH POINT TO PREVENT SYPHONING OIL OUT OF TANK IN CASE OF BROKEN PIPES.

1046. MOTOR BLOWER UNITS.--FURNISH AND INSTALL TWO MOTOR BLOWER AND PUMP UNITS FOR THE HEATING BOILERS. EACH UNIT SHALL HAVE A MANUFACTURERS GUARANTEED CAPACITY OF NOT LESS THAN 21000 SQUARE FEET OF DIRECT STEAM RADIATION. EACH UNIT SHALL CONSIST OF A SINGLE STAGE, MOTOR DRIVEN FAN DIRECT CONNECTED TO MOTOR SHAFT AND AN OIL PUMP OF THE ROTARY OR GEAR TYPE DIRECT CONNECTED TO MOTOR. THE ARRANGEMENT MUST BE SUCH THAT EITHER UNIT MAY BE USED WITH EITHER BOILER OR BOTH UNITS MAY BE USED AT ONE TIME, AND ALL NECESSARY VALVES, CROSS CONNECTIONS, TRANSFER SWITCHES, ETC., MUST BE FURNISHED.

1047. EACH FAN MOTOR AND PUMP SHALL BE MOUNTED ON A CAST IRON BASE LOCATED IN CORNER OF BOILER ROOM NEAR POINT OF ENTRANCE OF OIL SUCTION PIPE. BLOWER UNITS MAY BE SET ON A SUITABLE SHELF OR ON FLOOR AS DESIRED BUT MUST BE SECURELY FASTENED IN POSITION.

1048. BURNERS.--FURNISH AND INSTALL THE PROPER NUMBER OF BURNERS FOR EACH BOILER OF AMPLE CAPACITY FOR 21000 SQ. FT. OF DIRECT RADIATION OR 150 PER CENT OF RATED BOILER CAPACITY.

1049. BURNERS TO BE OF THE ROTATING CUP TYPE, WITH OIL ENTERING NOZZLE IN CENTER OF SAME AND PRIMARY AIR ENTERING AROUND OIL NOZZLE. BURNERS SHALL BE ARRANGED TO SWING OR SLIDE BACK OUT OF OPENINGS IN STEEL FRONTS AND SHALL BE DESIGNED TO AUTOMATICALLY STOP FLOW OF OIL WHEN BURNERS ARE PULLED OUT OF FURNACES. BURNERS SHALL BE OF THE SAME MANUFACTURER AS MOTOR BLOWER UNITS.

1050. BURNERS, MOTOR BLOWER UNITS, PUMPS, ETC., SHALL BE DESIGNED FOR HANDLING AND BURNING HEAVY FUEL OIL OF 180 BAUME GRAVITY WITHOUT PREHEATING.

1051. PIPING.--PROVIDE ALL NECESSARY PIPING BETWEEN MOTOR BLOWER UNITS TANK AND BURNERS. OIL AND AIR PIPING BETWEEN MOTOR BLOWER UNITS AND BURNERS SHALL BE ALL BRASS PIPE RUN OVERHEAD AS DIRECTED AND PROPERLY SUPPORTED FROM CEILING. PIPES MUST BE FREE FROM VIBRATION.

1052. STRAINERS.--ON THE SUCTION SIDE OF EACH OIL PUMP PROVIDE A 2" STRAINER, AND IN THE OIL PIPE TO EACH SET OF BURNERS INSTALL AN ADDITIONAL FINE MESH STRAINER OF REQUIRED SIZE BETWEEN THE RETURN CIRCULATING CONNECTION AND THE BURNERS. IT IS THE INTENTION TO FORCE ONLY THE OIL USED BY THE BURNERS THROUGH THE SECOND STRAINER.

1053. RELIEF VALVE.--PROVIDE A SUITABLE RELIEF VALVE ON DISCHARGE FROM PUMPS OR AFTER CONNECTION OF LAST BURNER AND CONNECT OUTLET OF RELIEF VALVE TO RETURN OIL PIPE.

1054. PRESSURE GAUGE.--PROVIDE IN THE RETURN OIL PIPE NEAR PUMPS AN APPROVED PRESSURE GAUGE TO INDICATE THE BACK PRESSURE ON THE RELIEF VALVE.

1055. REGULATORS, ETC.--WITH WHATEVER TYPE OF OIL BURNING APPARATUS IS INSTALLED UNDER THIS CONTRACT THERE MUST BE FURNISHED AND INSTALLED IN COMPLETE WORKING ORDER, A DEVICE OR DEVICES THAT WILL ACCOMPLISH THE FOLLOWING:

(A) REGULATE THE QUANTITY OF OIL TO THE BURNERS NECESSARY TO MAINTAIN, PRACTICALLY CONSTANT, ANY DESIRED PRESSURE IN THE BOILERS FROM 0 POUNDS GAUGE TO 10 POUNDS GAUGE PRESSURE. THE DEVICE WHICH REGULATES THE OIL MUST ALSO REGULATE THE PRIMARY AIR ON THE BURNERS AND ALSO MUST REGULATE THE SECONDARY AIR TO CORRESPOND TO THE REGULATION OF OIL AND PRIMARY AIR AND TO SECURE PROPER COMBUSTION.

(B) IN CASE OF FAILURE OF ELECTRIC CURRENT TO SHUT OFF THE MAIN SUPPLY OF OIL AND OPEN MAIN LINE CIRCUIT.

(C) IN CASE OF EXTINGUISHED FIRE IN FURNACES, TO STOP MOTOR AND CLOSE MAIN OIL SUPPLY.

(D) RING AN 8-INCH ELECTRICALLY OPERATED GONG LOCATED AS DIRECTED UPON FAILURE OF CURRENT OR IN CASE FIRE IS EXTINGUISHED. THE GONG TO BE PROVIDED WITH PROPER MEANS FOR SWITCHING OUT OF SERVICE WHEN FURNACE IS NOT BEING FIRED.

(E) IN ADDITION TO ALL OTHER REGULATORS FURNISH AND INSTALL A DEVICE WHICH WILL SHUT OFF FLOW OF OIL TO BURNERS AND STOP MOTOR BLOWER UNITS IN CASE OF LOW WATER.

1056. CONTRACTOR SHALL FURNISH ALL NECESSARY EQUIPMENT, SUCH AS ALL METAL REGULATORS, ETC., TO ACCOMPLISH THE ABOVE RESULTS.

1057. OIL HEATERS.--FURNISH AND INSTALL WHERE INDICATED ON EACH BOILER TWO COPPER COIL OIL HEATERS WITH CAST IRON SHELLS OF PROPER SIZE TO HEAT THE MAXIMUM AMOUNT OF FUEL OIL REQUIRED TO A TEMPERATURE OF 120°F A BOILER WATER TEMPERATURE OF 212°F. HEATERS ARE TO BE CONNECTED BELOW WATER LINE OF BOILERS WITH HOT WATER SUPPLY TAKEN FROM DOWN DRAFT FURNACE HEATERS AND HOT

WATER RETURN CONNECTED INTO MAIN RETURNS OF BOILERS. HEATERS SHALL BE CONNECTED IN SERIES INTO OIL LINE BETWEEN PUMPS AND BURNER. THERE SHALL BE A VALVE ON EACH SIDE OF HEATERS, AND A VALVED BY-PASS AROUND HEATERS. PROVIDE VALVES IN BOTH WATER CIRCULATING CONNECTIONS TO HEATERS.

GENERAL.

1058. ALL VALVES, APPLIANCES, PIPING, ELECTRICAL WORK, ETC., NECESSARY TO PROVIDE A COMPLETE AND SATISFACTORY OIL BURNING INSTALLATION SHALL BE PROVIDED WHETHER SPECIFICALLY MENTIONED IN THIS SPECIFICATION OR NOT.

1059. MOTORS AND CONNECTIONS.--MOTORS ARE TO BE WOUND FOR 220 VOLTS, 60 CYCLES, 3 PHASE, ALTERNATING CURRENT AND ARE TO BE OF AMPLE SIZE AND RUGGED DESIGN. THE RISE IN TEMPERATURE OF ANY PART OF MOTORS MUST NOT BE OVER 40 DEGREES CENTEGRADE ABOVE THE SURROUNDING AIR FOR CONTINUOUS OPERATION. MOTORS SHALL BE IN ACCORDANCE WITH THE STANDARDIZATION RULES OF THE AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.

1060. ALL ELECTRICAL CONNECTIONS FROM FUSED SWITCHES WHICH WILL BE INSTALLED NEAR OIL PUMPS UNDER ANOTHER SECTION OF THIS SPECIFICATION TO CONTROLLERS, MOTORS, REGULATING DEVICES, GONGS, ETC., MUST BE MADE COMPLETE. ALL WIRES TO BE RUBBER COVERED AND (EXCEPT IMMEDIATE CONNECTIONS TO MOTORS, ETC., WHICH MAY BE CORD WRAPPED OR OTHERWISE PROTECTED FROM MECHANICAL INJURY) MUST BE RUN IN RIGID STEEL CONDUIT PROPERLY SUPPORTED. ELECTRICAL WORK GENERALLY MUST BE AS SPECIFIED UNDER THE "CONDUIT AND WIRING" SECTION OF THIS SPECIFICATION. A SEPARATE SWITCH WILL BE INSTALLED FOR EACH MOTOR.

1061. MOTORS MUST BE ARRANGED SO THAT SAME CAN BE STARTED AND STOPPED BY HAND INDEPENDENT OF AUTOMATIC CONTROL APPARATUS. ALL CONTROL APPARATUS, ETC., MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

1062. PAINTING.--FANS, MOTORS, PUMPS, BEDPLATES, ETC., SHALL BE FILLED RUBBED DOWN AND BE PAINTED TWO COATS AT FACTORY. AFTER ERECTION ALL APPARATUS SHALL BE PAINTED TWO COATS OF LEAD AND OIL PAINT. PIPING, ETC., SHALL BE CLEANED AND PAINTED AS SPECIFIED ON PAGE 11, PARAGRAPHS 132 TO 136.

1063-1064. EXTRA BURNER.--FURNISH AND DELIVER TO CONSTRUCTION ENGINEER ONE COMPLETE EXTRA BURNER READY TO INSTALL UNDER BOILER.

1065. ALTERNATE BURNERS.--IN LIEU OF THE OIL BURNERS, PUMPS, FANS AND MOTORS HEREINBEFORE SPECIFIED, CONSIDERATION WILL BE GIVEN TO THE INSTALLATION OF ROTARY OIL BURNERS, OF A TYPE WHICH COMBINES MOTOR, FAN, PUMPS AND BURNER IN ONE UNIT. BURNERS SHALL BE SECURED TO FRONTS OF BOILERS AND BE ARRANGED ON HINGES TO SWING OUT OF POSITION.

1066. ONE ADDITIONAL SPARE BURNER MUST BE FURNISHED COMPLETE AND BE PROPERLY BOXED AND STORED IN THE BUILDING.

1067. EACH UNIT IS TO BE FITTED WITH A FULL AUTOMATIC AIR AND OIL CONTROL, WITH MEANS OF MAINTAINING ANY DESIRED PRESSURE IN BOILER FROM 0 TO 10 POUNDS. CONTROL MUST REGULATE BOTH PRIMARY AND SECONDARY AIR AND GIVE PERFECT COMBUSTION AT BOTH MINIMUM AND MAXIMUM OPERATION.

1068. THE INSTALLATION OF TANK, PIPING, VALVES, STRAINERS, HEATERS, GAUGES, ELECTRICAL CONNECTIONS, PAINTING, ETC., IS ALL TO BE AS HEREINBEFORE SPECIFIED.

1069. DUCTS, ETC.--FURNISH AND INSTALL ALL VENT DUCTS FROM REGISTERS IN COURT ROOM TO VENTILATORS ON ROOF. ALSO FURNISH AND INSTALL VENT DUCT FROM REGISTERS IN CABLE SUPPLIES AND BATTERY ROOM ON GROUND FLOOR TO THE CLAY VENT FLUE. ALL REGISTERS AND THE VENTILATORS ON ROOF WILL BE FURNISHED UNDER ANOTHER SECTION OF THIS SPECIFICATION BUT CONNECTION OF DUCTS TO SAME IS INCLUDED UNDER THIS SECTION.

1070. DUCTS ARE TO BE MADE OF GALVANIZED SHEET STEEL IN STRICT ACCORDANCE WITH MISCELLANEOUS DRAWING NO. 300A, AS TO THICKNESS OF METAL, JOINTS, CORNERS, ETC. ALL BENDS MUST BE MADE TO A TRUE CIRCLE WITH A RADIUS OF THROAT NOT LESS THAN LEAST DIMENSION OF THE DUCT, UNLESS OTHERWISE SHOWN ON DRAWINGS.

1071. TESTING OF APPARATUS.--ALL STEAM AND RETURN PIPES RUN IN FURRED SPACES, CHASES, OR PARTITIONS MUST BE TESTED, IN THE PRESENCE OF THE CONSTRUCTION ENGINEER, TO A HYDROSTATIC PRESSURE OF 80 POUNDS PER SQUARE INCH AND PROVED TIGHT UNDER THIS PRESSURE BEFORE SAME ARE CONCEALED. EXPOSED PIPES ARE TO BE TESTED TO 50 POUNDS PER SQUARE INCH. OIL TANK TO BE TESTED TO 25 POUNDS AIR PRESSURE AND BE ABSOLUTELY TIGHT UNDER THIS PRESSURE. OIL PIPING TO BE TESTED TO 50 POUNDS AIR PRESSURE AND BE ABSOLUTELY TIGHT. STEAM COIL IN TANK TO BE TESTED TO 100 POUNDS HYDROSTATIC PRESSURE.

1072. AFTER THE BOILERS ARE SET UP IN THE BUILDING BUT BEFORE BEING COVERED, THE CONTRACTOR WILL BE REQUIRED TO SUBJECT THEM TO A HYDROSTATIC PRESSURE OF 50 POUNDS PER SQUARE INCH, IN THE PRESENCE OF THE CONSTRUCTION ENGINEER, UNDER WHICH PRESSURE THE BOILERS MUST BE DROP TIGHT. IF DIRECTED BY THE REPRESENTATIVE OF THE SUPERVISING ARCHITECT THE HYDROSTATIC TEST TO BE REPEATED AT TIME OF FINAL INSPECTION. CERTIFICATE THAT SUCH TEST HAS BEEN SATISFACTORILY MADE MUST BE FURNISHED BY THE CONTRACTOR, THROUGH THE CONSTRUCTION ENGINEER, WHO WILL COUNTERSIGN SAME AND FORWARD TO SUPERVISING ARCHITECT. CONTRACTOR MUST FURNISH AND CONNECT A SUITABLE PRESSURE GAUGE AND A SUITABLE BOILER MAKER'S FORCE PUMP FOR MAKING TEST UNLESS THE CITY WATER PRESSURE IS ABOVE 50 POUNDS PER SQUARE INCH. CONTRACTOR MUST ALSO FURNISH AN AIR COMPRESSOR FOR OIL TANK AND OIL PIPING TESTS.

1073. BEFORE MAKING FOLLOWING WORKING TEST, SET SAFETY VALVE TO LIFT AT 10 POUNDS PER SQUARE INCH. THE CONTRACTOR IS TO FURNISH SUFFICIENT FUEL OIL TO MAKE A WORKING TEST OF THE ENTIRE APPARATUS INCLUDING OIL BURNERS WITH STEAM PRESSURE OF 10 POUNDS PER SQUARE INCH IN THE PRESENCE OF A REPRESENTATIVE OF THE SUPERVISING ARCHITECT. FROM THE TIME OF STARTING FIRES UNTIL A STEAM PRESSURE OF 10 POUNDS PER SQUARE INCH IS MAINTAINED, THERE MUST BE NO CRACKING OR SNAPPING NOISES IN PIPING OR RADIATORS AND THE WATER LEVEL IN THE BOILER MUST NOT FLUCTUATE VIOLENTLY OR EXCESSIVELY.

1074. VACUUM PUMPS MUST OPERATE SATISFACTORILY AND DEVELOP THE CAPACITIES SPECIFIED.

1075. THE OIL BURNING APPARATUS WILL BE TESTED AT THE SAME TIME AS TEST OF HEATING SYSTEM AND IT MUST BE CLEARLY DEMONSTRATED THAT THE OIL BURNING PLANT IS OF AMPLE CAPACITY TO OPERATE BOILERS AT THE CAPACITY SPECIFIED. ALL SAFETY AND REGULATING DEVICE MUST OPERATE SATISFACTORILY.

1076. THE HEATING SYSTEM MUST BE OPERATED A TIME BEFORE FINAL TEST AND BEFORE THE THERMOSTATIC ELEMENTS ARE PLACED IN TRAPS, TO CLEAR THE SYSTEM OF OIL AND SCALE.

JUNEAU, ALASKA, FEDERAL & TERRITORIAL BLDG.

CONDUIT AND WIRING SYSTEM.

1077. SCOPE OF WORK.--THIS PORTION OF THE SPECIFICATION INCLUDES THE FURNISHING OF ALL LABOR AND MATERIAL NECESSARY TO INSTALL A COMPLETE CONDUIT AND WIRING SYSTEM FOR ELECTRIC LIGHTING AND FANS, A CONDUIT AND WIRING SYSTEM FOR ELECTRIC POWER, A CONDUIT SYSTEM FOR TELEPHONE SERVICE, A CONDUIT SYSTEM FOR SIGNAL SERVICE AND A CONDUIT FOR TELEGRAPH SERVICE FROM POLE TO BUILDING ALL AS DESCRIBED HEREIN AND INDICATED ON THE DRAWINGS.

1078. REFERENCES IN THIS PORTION OF THE SPECIFICATION TO PAGES AND PARAGRAPHS MEAN PAGES AND PARAGRAPHS IN THE SPECIFICATIONS FOR STANDARD ELECTRICAL MATERIALS, GAS PIPING, ETC., FOR BUILDINGS UNDER THE CONTROL OF THE TREASURY DEPARTMENT, DATED APRIL 1, 1926, WHICH IS A PART OF THIS SPECIFICATION AND A COPY OF WHICH MAY BE SECURED ON APPLICATION TO THE SUPERVISING ARCHITECT.

1079. DESCRIPTION OF SYSTEMS.--FOR ELECTRIC LIGHTING: FROM A POINT NEAR TOP OF A COMBINATION ELECTRIC AND TELEPHONE POLE, TO BE FURNISHED AND SET WHERE NOTED ON THE DRAWING, A MAIN SERVICE CONDUIT SHALL BE RUN DOWN POLE AND UNDER GROUND TO THE LIGHTING SERVICE ENTRANCE CABINET, AND THENCE TO THE FEEDER CABINET. FROM THIS CABINET, FEEDER CONDUITS SHALL BE RUN TO THE VARIOUS DISTRIBUTION CABINETS, FROM WHICH BRANCH CONDUITS SHALL BE RUN TO ALL ELECTRIC OUTLETS SHOWN ON DRAWINGS.

1080. FOR ELECTRIC POWER: FROM A POINT NEAR TOP OF THE ABOVE SPECIFIED POLE, A MAIN SERVICE CONDUIT SHALL BE RUN DOWN POLE AND UNDERGROUND TO THE POWER SERVICE ENTRANCE CABINET AND THENCE TO THE FEEDER CABINET. FROM THIS CABINET, FEEDER CONDUITS SHALL BE RUN TO THE VARIOUS SUB-FEEDER CABINETS SHOWN ON DRAWINGS.

1081. FOR TELEPHONE SERVICE: FROM A POINT NEAR TOP OF THE ABOVE SPECIFIED POLE, A MAIN SERVICE CONDUIT SHALL BE RUN DOWN POLE AND UNDERGROUND TO A JUNCTION BOX JUST INSIDE BASEMENT WALL AND THENCE OF SIZES NOTED TO THE VARIOUS TELEPHONE TERMINAL CABINETS. ALL MAIN CONDUITS SHALL ENTER AND LEAVE TERMINAL CABINETS NEAR DIAGONAL CORNERS.

1082. FROM THE VARIOUS TERMINAL CABINETS, 3/4" CONDUITS SHALL BE RUN TO THE VARIOUS WALL AND FLOOR BOXES, AS SHOWN ON PLANS.

1083. FOR SIGNAL SYSTEMS.--INSTALL SPECIAL SIGNAL FLOOR BOXES ON SECOND, THIRD AND FIFTH FLOORS AT LOCATIONS SHOWN ON DRAWINGS WITH TWO 1-INCH CONCEALED CONDUITS, RUN PARALLEL, INTERCONNECTING SAME AS SHOWN. FROM THESE FLOOR BOXES 3/4-INCH CONCEALED CONDUITS SHALL BE RUN TO THE VARIOUS OUTLETS.

1084. FOR WEATHER BUREAU SIGNAL SYSTEM.--FROM WEATHER BUREAU PLATFORM AND THE PENT HOUSE ROOF, AT EXACT LOCATIONS AS DIRECTED, CONDUITS OF SIZES NOTED SHALL BE RUN DOWN TO A FLOOR BOX IN WEATHER BUREAU OFFICE.

1085. FOR TELEGRAPH SERVICE.--FROM A POINT NEAR TOP OF THE ABOVE SPECIFIED POLE, A 3" CONDUIT SHALL BE RUN DOWN POLE AND UNDERGROUND TO A JUNCTION BOX JUST INSIDE BASEMENT WALL WHERE SHOWN ON DRAWING.

1086. WEATHERPROOF ENTRANCE FITTINGS.--EACH SERVICE CONDUIT ON POLE SHALL BE EQUIPPED WITH A WEATHERPROOF ENTRANCE FITTING. SEE PAGE 1, PARAGRAPH 4.

1087. CONDUITS.--EACH CONDUIT SYSTEM MUST BE INSTALLED COMPLETE FROM END OF SERVICE CONDUIT AT POLE TO ALL OUTLETS SHOWN ON DRAWINGS OR HEREIN SPECIFIED. ALL CONDUITS SHALL BE RIGID STEEL CONDUITS. SEE PAGES 1 AND 2 PARAGRAPHS 5 TO 13 INCLUSIVE. IN ADDITION TO METHODS NAMED IN PARAGRAPH 5 HOT DIPPED GALVANIZED CONDUIT WILL BE ACCEPTABLE. IN ADDITION TO ALL OTHER COATINGS, UNDERGROUND CONDUITS MUST HAVE THE OUTER SURFACE THOROUGHLY COATED WITH ASPHALTUM BEFORE BEING PLACED IN THE GROUND. MINIMUM DEPTH OF UNDERGROUND CONDUITS BELOW GRADE IS TO BE 12 INCHES. A JUNCTION OR PULL BOX SHALL BE PLACED ON EACH SERVICE CONDUIT INSIDE OF BASEMENT WALL AT LOWEST POINT OF CONDUIT WHICH IS TO ENTER BACK OF BOX.

1088. EACH BRANCH CIRCUIT SHALL HAVE ITS OWN HOME RUN CONDUIT. NO HOME RUNS ARE TO BE GROUPED OR BRANCH CIRCUITS CONNECTED TO A COMMON NEUTRAL EXCEPT WHERE SPECIFICALLY NOTED OR SHOWN ON THE DRAWINGS.

1089. CEILING AND WALL OUTLET BOXES.--EACH FIXTURE, EXTENSION, SWITCH AND RECEPTACLE OUTLET AND EACH TELEPHONE AND EACH SIGNAL OUTLET SHALL BE PROVIDED WITH AN OUTLET BOX. SEE PAGES 2 AND 3, PARAGRAPHS 14 TO 27, INCLUSIVE. SIMILAR SQUARE AND OCTAGONAL BOXES WILL ALSO BE ACCEPTABLE. WHERE OUTLETS OCCUR ON FURRED OR SUSPENDED CEILINGS, SUITABLE HANGERS OR SUPPORTS SHALL BE PROVIDED.

1090. NO OUTLET BOXES ARE TO BE PROVIDED FOR TWO OUTSIDE BRACKETS AT SIDE AND REAR ENTRANCES AND ONE OUTSIDE OUTLET OVER PENT HOUSE. CONDUIT AT THESE LOCATIONS SHALL EXTEND 3/4" BEYOND WALL OR AS NOTED ON DRAWING, AND FITTED WITH AN IRON GOOSENECK AND A WATERTIGHT DROP FIXTURE CONSISTING OF A CAST BRASS BODY THREADED TO RECEIVE SCREW GLOBE AND HEAVY BRASS GUARD. PROVIDE HIGH HEAT KEYLESS LAMP RECEPTACLE, CLEAR GLOBE WITH THREAD AND RUBBER GASKET. BOTTOM OF FIXTURE SHALL NOT EXTEND MORE THAN 8" BELOW OUTLETS AT TWO ENTRANCES AND SHALL BE MOUNTED UPRIGHT ON OUTLET OVER PENT HOUSE. FINISH OF FIXTURE SHALL BE BLACK. THREE OUTLETS ARE TO BE EQUIPPED WITH THIS FIXTURE.

1091. NO OUTLET BOXES ARE TO BE INSTALLED FOR OUTLETS OVER PORTICO. CONDUITS SHALL BE RUN IN ROOF SPACE OVER STONE SLAB AS SHOWN ON DRAWING AND EXTEND DOWN THROUGH HOLES IN STONE PROVIDED FOR SAME AT OUTLET LOCATIONS. TERMINATE WITH SUITABLE FITTINGS OR PROVIDE HANGERS AT THESE LOCATIONS FOR INSTALLING FIXTURES WHICH ARE TO BE FURNISHED BY THE GOVERNMENT AND SHALL BE PROPERLY INSTALLED BY THIS CONTRACTOR.

1092. CONDUIT AND OUTLET BOXES IN CEILING OF TUNNEL SHALL BE LOCATED SO AS NOT TO INTERFERE WITH STEAM PIPES, ETC., IN TUNNEL.

1093. JUNCTION AND PULL BOXES.--JUNCTION AND PULL BOXES SHALL BE INSTALLED WHERE SHOWN ON DRAWINGS, IN EACH SERVICE CONDUIT AND WHERE NECESSARY OR CONVENIENT FOR INSTALLING THE WIRES. SEE PAGE 3, PARAGRAPHS 28 AND 29.

1094. FLOOR BOXES.--FURNISH AND INSTALL FLOOR BOXES AT ALL LIGHT, TELEPHONE AND SIGNAL FLOOR OUTLETS APPROXIMATELY 5 FEET FROM OUTSIDE WALLS WHERE POSSIBLE AND AT SIGNAL JUNCTION POINTS. SEE PAGE 3, PARAGRAPHS 30 TO 32 INCLUSIVE. WHERE TWO OR MORE OUTLETS ARE SHOWN NEAR EACH OTHER THEY ARE TO BE SET CLOSE TOGETHER ON A LINE PARALLEL TO ONE WALL OF THE ROOM. TO AVOID CONFUSION ON THE DRAWING THIS ARRANGEMENT IS FREQUENTLY NOT SHOWN.

1095. FLUSH SWITCHES.--FURNISH AND INSTALL FLUSH SWITCHES AT ALL POINTS SHOWN OR NOTED ON DRAWINGS. SEE PAGES 3 AND 4, PARAGRAPHS 33 TO 36 INCLUSIVE. WHERE MORE THAN ONE SWITCH IS SHOWN AT A POINT THEY MUST BE SET UNDER ONE GANG PLATE.

1096. PLUG RECEPTACLES.--FURNISH AND INSTALL PLUG RECEPTACLES AT ALL WALL AND FLOOR OUTLETS SHOWN ON PLANS. SEE PAGE 4, PARAGRAPHS 37 AND 38. FURNISH TO THE CONSTRUCTION ENGINEER 100 PARALLEL BLADE COMPOSITION CAPS TO FIT THE RECEPTACLES.

1097. IN ADDITION TO THOSE SHOWN ON DRAWINGS, A PLUG RECEPTACLE SHALL BE PROVIDED IN WORKROOM FOR FUTURE CONNECTION OF STAMP CANCELLING MACHINE MOTOR. THIS RECEPTACLE SHALL BE LOCATED ON WALL OR COLUMN AS DIRECTED. IF THE OUTLET IS DESIRED IN AN OPEN SPACE, RIGID CONDUIT SHALL EXTEND ABOUT 6" ABOVE WORKROOM FLOOR AND A SCREW JOINTED FITTING, TO RECEIVE THE RECEPTACLE, SHALL BE INSTALLED. THIS RECEPTACLE SHALL BE CONNECTED TO A CIRCUIT PROVIDED WITH OUTLETS FOR EXTENSIONS AND MAY BE RUN EXPOSED BELOW FLOOR IF DESIRED.

1098. LAMP RECEPTACLES.--FURNISH AND INSTALL LAMP RECEPTACLES AT LAMP RECEPTACLE OUTLETS SHOWN ON DRAWINGS. SEE PAGE 4, PARAGRAPH 39.

1099. LAMP RECEPTACLE AT SIDE ENTRANCE UNDER MARQUISE TO BE PROVIDED WITH A SUITABLE 3-1/4" SHADE HOLDER AND 6 INCH OPAL BALL GLOBE.

1100. CABINETS.--FURNISH AND INSTALL CABINETS AT ALL LIGHTING AND POWER SERVICE ENTRANCES, FEEDER AND SUB-FEEDER PANELS, DISTRIBUTION PANELS AND TELEPHONE STRIP BOX LOCATIONS. SEE PAGE 5, PARAGRAPHS 41 TO 49 INCLUSIVE. TELEPHONE TERMINAL CABINETS SHALL BE NOT LESS THAN 36" WIDE BY 54" LONG BY 5" DEEP.

1101. LIGHTING AND POWER CABINETS SHALL BE INSTALLED WITH TOPS 6'-6" ABOVE FLOOR, AND TELEPHONE CABINETS JUST ABOVE BASEBOARD UNLESS OTHERWISE NOTED ON DRAWINGS. THOSE IN FINISHED SPACES SHALL BE SET FLUSH IN WALLS AND THOSE ON UNFINISHED WALLS OR WHERE SO NOTED ON DRAWINGS SHALL BE SET EXPOSED. ALL CABINETS MUST BE RIGIDLY SECURED IN PLACE; THOSE SET EXPOSED BEING SECURED BY EXPANSION BOLTS THROUGH BACK. ALL CABINETS MUST HAVE FRONTS STRAIGHT AND PLUMB AND ARRANGED SO THAT PANEL BOARDS WILL BE CENTERED IN DOOR OPENING.

1102. SERVICE ENTRANCE SWITCHES.--FURNISH AND INSTALL IN THE CABINETS HEREINBEFORE SPECIFIED FUSED SERVICE SWITCHES AT LIGHTING AND POWER ENTRANCES. SEE PAGE 5, PARAGRAPHS 50 AND 51. SWITCHES AND FUSES SHALL BE OF SIZES, NUMBER OF POLES, VOLTAGE, ETC., NOTED ON DRAWINGS.

1103. FEEDER AND SUB-FEEDER PANELS.--FURNISH AND INSTALL IN THE CABINETS HEREINBEFORE SPECIFIED, LIGHTING AND POWER FEEDER AND SUB-FEEDER PANELS. SEE PAGE 5, PARAGRAPHS 53 TO 57 INCLUSIVE. THE SIZES OF SWITCHES, FUSES, NUMBER OF POLES, VOLTAGE, ETC., ARE TO BE AS NOTED OR SHOWN IN DIAGRAMS ON DRAWINGS.

1104. LIGHTING DISTRIBUTION PANELS.--FURNISH AND INSTALL IN THE CABINETS HEREINBEFORE SPECIFIED LIGHTING DISTRIBUTION PANELS, EACH HAVING THE NUMBER OF BRANCHES NOTED ON DRAWINGS.

1104A. PARAGRAPHS 58, 59 AND 60, PAGE 5, OF THE STANDARD SPECIFICATIONS FOR ELECTRICAL MATERIALS, ETC., ARE TO BE OMITTED AND THE FOLLOWING TO BE SUBSTITUTED:

1105. DISTRIBUTION PANELS FOR LIGHTING SHALL BE OF THE DEAD FRONT SAFETY TYPE. THEY MAY BE OF EITHER 7/8 INCH CLEAR ELECTRICAL MARBLE, GENUINE MONSON MAINE SLATE OR SECTIONS OF APPROVED MOULDED ASBESTOS COMPOSITION, ARRANGED FOR MAIN AND BRANCH CIRCUIT CONNECTIONS. MAIN FEEDER CONNECTIONS SHALL BE FOR 125-250 VOLT, 3 WIRE FEEDERS WITH BUS BARS OF AMPLE CAPACITY AND DESIGNED ON THE BASIS OF NOT LESS THAN 15 AMPERES PER BRANCH CIRCUIT AND WITH LUG CONNECTIONS ON THE BUS BARS.

1106. EACH SECTION OF THE DISTRIBUTION PANEL SHALL HAVE TWO OR MORE 30 AMPERE, 250 VOLT, DOUBLE POLE, TUMBLER SWITCHES WITH N. E. C. EDISON PLUG FUSE CONNECTIONS IN EACH LEG. EACH SWITCH SHALL HAVE A CARD HOLDER ADJACENT TO SAME OR BE DESIGNATED BY A NUMBER. TUMBLER SWITCHES MUST BE OF RUGGED CONSTRUCTION, WITH FEW PARTS AND A SAMPLE MUST BE SUBMITTED TO THE SUPERVISING ARCHITECT, IF HE ELECTS TO CALL FOR SAME.

1107. EACH DISTRIBUTION PANEL MUST BEAR THE MANUFACTURER'S NAME PLATE AND THE UNDERWRITERS LABORATORIES INSPECTION LABEL. EACH DISTRIBUTION PANEL IS TO BE INSTALLED IN A STEEL CABINET CONSTRUCTED AS HEREINBEFORE SPECIFIED AND MUST BE ERECTED STRAIGHT AND PLUMB IN THE DOOR OPENING OF CABINET.

1108. DIRECTORIES OF CIRCUITS.--FURNISH DIRECTORIES OF CIRCUITS. SEE PAGE 6, PARAGRAPH 61.

1109. FUSES.--FURNISH TWO COMPLETE SETS OF FUSES FOR ALL SERVICE SWITCHES, FEEDER PANELS, SUB-FEEDER PANELS, AND DISTRIBUTION PANELS. FUSES FOR DISTRIBUTION PANELS ARE TO BE 15 AMPERES AND FOR OTHER SWITCHES ARE TO BE OF SIZES NOTED ON DRAWINGS. FURNISH 4 EXTRA 25 AMPERE FUSES FOR USE ON CANCELLING MACHINE CIRCUIT. ONE SET OF FUSES IS TO BE INSTALLED COMPLETE AND THE OTHER SET IS TO BE DELIVERED IN THE ORIGINAL BOXES TO THE CONSTRUCTION ENGINEER. SEE PAGE 6, PARAGRAPHS 62 AND 63.

1110. POLE.--FURNISH AND INSTALL WHERE SHOWN OR NOTED ON DRAWINGS A WOOD POLE.

1111. WOOD POLE TO BE SELECT QUALITY CEDAR OR CREOSOTED PINE, 30 FEET TOTAL LENGTH, TOP 6 INCHES DIAMETER. TOP TO BE ROOFED AND PAINTED WITH RED LEAD AND OIL. POLE SHALL BE FREE FROM DEFECTS WHICH IMPAIR STRENGTH, DURABILITY OR APPEARANCE, CUT FROM LIVE TIMBER, THOROUGHLY SEASONED, BUTT MOPPED WITH CREOSOTE TO A HEIGHT

OF 7 FEET. POLE SHALL BE SET 6 FEET IN THE GROUND AND THE BACK FILLING THOROUGHLY TAMPED TO 6 INCHES BELOW GRADE. THE REMAINDER OF HOLE SHALL BE FILLED WITH CONCRETE, WHICH IS TO BE NEATLY HEADED AROUND POLE TO ABOUT 6 INCHES ABOVE SURROUNDING GRADE. PROVIDE TWO 6-PIN ANGLE IRON CROSS ARMS WITH METAL PINS AND SUITABLE INSULATORS; CROSS ARMS SHALL BE SECURED TO POLE WITH BOLTS AND IRON BRACES. ALL METAL SHALL BE GALVANIZED. PAINT POLE TWO COATS OF LEAD AND OIL PAINT OF COLOR DIRECTED.

1112. METER BOARD.--FURNISH AND INSTALL METER BOARDS. SEE PAGE 6, PARAGRAPH 65.

1113. WIRING.--NO TELEPHONE OR SIGNAL WIRES ARE INCLUDED IN THIS CONTRACT. THE WIRING FOR ELECTRIC LIGHTING INCLUDING OUTLETS FOR EXTENSIONS AND CEILING FANS, AND FOR ELECTRIC POWER MUST BE FURNISHED AND INSTALLED COMPLETE FROM TOP OF SERVICE POLE TO ALL OUTLETS INDICATED ON DRAWINGS. AMPLE LEADS MUST BE PROVIDED FOR METER LOOPS AND ENDS ON POLE FOR SERVICE CONNECTIONS. ALL BRANCH LIGHTING CONDUCTORS ARE TO BE NO. 12 B & S GAUGE. FEEDERS ARE TO BE OF SIZES NOTED. SEE PAGE 6, PARAGRAPH 68.

1114. ALL CONDUCTORS SHALL BE RUBBER-COVERED COPPER IN ACCORDANCE WITH SPECIFICATION FOR RUBBER-COVERED WIRES AND CABLES, FEDERAL SPECIFICATIONS BOARD SPECIFICATION NO. 587. WIRES FROM SERVICE SWITCHES TO TOP OF POLE SHALL BE LEAD ENCASED.

"WIRES AND CABLES OF ALL KINDS DESIGNED TO MEET THE ABOVE SPECIFICATIONS SHALL HAVE A DISTINCTIVE MARKING THE ENTIRE LENGTH OF THE COIL SO THAT THEY MAY BE READILY IDENTIFIED IN THE FIELD. TWIN OR TWISTED-PAIR WIRES (14 OR 12 GAUGE) SHALL HAVE THE BRAID OF ONE CONDUCTOR FINISHED WHITE OR A NATURAL GRAY COLOR. THE FINISH OF THE BRAID ON THE OTHER CONDUCTOR SHALL NOT BE OF A COLOR THAT MAY BE CONFUSED WITH THE WHITE OR GRAY FINISH WHICH IS TO INDICATE THE GROUND WIRE. GROUND WIRE TO BE CONNECTED TO WHITE SCREWS IN WIRING DEVICES. ALL WIRES INSTALLED IN A JOB SHALL BE OF SAME MAKE AND HAVE THE APPROVED MARKING. EACH COIL TO BEAR THE UNDERWRITERS LABEL GIVING NAME OF MANUFACTURER, GAUGE, DESIGNATING TYPE LETTER AND TRADE NAME". SAMPLES FOR MECHANICAL AND CHEMICAL TESTS WILL IN THE DISCRETION OF THE SUPERVISING ARCHITECT BE CUT FROM THE WIRE DELIVERED ON THE JOB. SHOULD THE SAMPLES INDICATE A PRODUCT OF INFERIOR GRADE THAN THAT SPECIFIED, THE ENTIRE LOT, INCLUDING ANY THAT MAY HAVE BEEN INSTALLED, MAY BE REJECTED.

1115. NO SPLICES OR JOINTS WILL BE PERMITTED IN EITHER FEEDERS OR BRANCHES, EXCEPT AT OUTLETS OR ACCESSIBLE JUNCTION BOXES. JOINTS MUST BE MADE MECHANICALLY AND ELECTRICALLY SECURE AND THEN SOLDERED OR BE MADE WITH APPROVED SOLDERLESS CONNECTORS. ALL JOINTS MUST BE TAPED WITH RUBBER AND FRICTION TAPE IN A MANNER WHICH WILL MAKE THEIR INSULATION EQUAL TO THE INSULATION OF THE CONDUCTORS. ALL CONNECTIONS OF FEEDERS MUST BE MADE BY SOLDERING WIRES IN CUP LUGS.

1116. CONTRACTOR MUST NOT DRAW ANY CONDUCTORS INTO CONDUIT UNTIL THE PLASTER IS DRY AND THE CONDUIT FREE FROM MOISTURE. IN DRAWING WIRES INTO CONDUITS, CONTRACTOR MUST ALLOW SUFFICIENT SLACK TO PERMIT THE CONNECTIONS OF FIXTURES, SWITCHES, ETC., WITHOUT ADDITIONAL SPLICES.

1117. INSPECTION AND TEST.--AT THE TIME OF THE FINAL INSPECTION AND TEST ALL CONNECTIONS AT PANELS AND ALL SPLICES, ETC., MUST BE MADE. ALL FUSES MUST BE IN PLACE AND THE CIRCUITS CONTINUOUS FROM TOP OF POLE TO ALL RECEPTACLES, OUTLETS, ETC. EACH ENTIRE WIRING SYSTEM, WITH RECEPTACLES, ETC., CONNECTED, MUST TEST FREE FROM SHORT CIRCUITS AND FROM GROUNDS AND HAVE AN INSULATION RESISTANCE BETWEEN CONDUCTORS AND BETWEEN CONDUCTORS AND GROUND, BASED ON MAXIMUM LOAD, NOT LESS THAN THE REQUIREMENTS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE. MAXIMUM LOAD SHALL BE UNDERSTOOD TO MEAN THE CURRENT AT 110 VOLTS THAT WOULD BE CARRIED WITH ALL LIGHTS AND OUTLETS IN USE, AT THE NUMBER OF WATTS NOTED ON DRAWINGS, COUNTING OUTLETS FOR EXTENSIONS AT 300 WATTS EACH, EACH SINGLE PLUG RECEPTACLE OUTLET AS 50 WATTS, WIRELESS CLUSTERS AS 200 WATTS EACH, AND FAN OUTLETS AS 150 WATTS EACH.

1118. THE INSTRUMENTS FOR TESTING THE WIRING WILL BE FURNISHED BY THE GOVERNMENT.

INTERIOR LIGHTING FIXTURES.

1119. SCOPE OF WORK.--THIS PORTION OF THE SPECIFICATION COVERS THE FURNISHING AND INSTALLATION OF INTERIOR LIGHTING FIXTURES FOR ALL OUTLETS IN THE BUILDING, INCLUDING THE CONNECTION OF THE FIXTURES TO THE ELECTRIC WIRING OF THE BUILDING.

1120. ALL FIXTURES SHALL BE MADE IN ACCORDANCE WITH DRAWINGS 326-A, 324-B, 325, AS HEREINAFTER SPECIFIED, AND AS SPECIFIED IN THE SPECIFICATIONS FOR STANDARD LIGHTING FIXTURES DATED APRIL 1ST., 1926, WHICH SPECIFICATION FORMS A PART OF THIS CONTRACT. METAL PARTS OF ALL FIXTURES SHALL BE FINISHED LIGHT OXIDIZED BRASS UNLESS OTHERWISE NOTED.

SCHEDULE OF FIXTURES.

1121. ABBREVIATIONS IN SCHEDULE: B = BALL GLOBE; G = SQUAT SHAPED ENCLOSING GLOBE; OR = GLASS REFLECTOR; MR = METAL REFLECTOR; S = SPECIAL GLOBE; ETC. THE OFFICE NUMBERS REFERRED TO ARE ROOM NUMBERS AS SHOWN ON ARCHITECT'S FLOOR PLANS.

No. Req'd.	Fixt. No.	Elec. Lamps Watts	LOCATION	Reflector or Globe Type	Fixt. Length Ft. In.
			ATTIC		
4	405	100	PENT HOUSE.	NONE	3-9
1	422	60	PENT HOUSE (PROVIDE KEYLESS SOCKET).	G-12-IN.	1-6
1	422	60	AT HEAD OF PENT HOUSE STAIRS (PROVIDE KEYLESS SOCKET).	G-12-IN.	1-6
1	407A	60	PENT HOUSE STAIR LANDING (PROVIDE KEYLESS SOCKET).	OR-75	--
1	405	25	CLOSET AT PENT HOUSE STAIR LANDING.	NONE	2-0

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SCHEDULE OF FIXTURES (CONTINUED)

No. Req'd.	Fixt. No.	Elec. Lamps Watts	LOCATION	Reflector or Globe Type	Fixt. Length Ft. In.
			FIFTH FLOOR		
12	422	100	Grand Jury, Commissioners Court Room.	G-16-IN.	2-0
10	422	150	Special Examiners, Stenog. and Files, General Office, Private Office, and Recording.	G-16-IN.	2-0
				OR-75	3-0
1	417	60	Vault.	G-16-IN.	2-0
4	422	100	Attorney's Private Office.	G-16-IN.	2-0
4	422	150	2 Attorney Offices.	G-16-IN.	2-0
2	422	100	Witness.		
9	422	150	Public Office, Stenog. and Deputy Private Office, Cable Office.	G-16-IN.	2-0
1	404	25	Vault in Private Office (Provide keyless socket).	None	4-0
				G-16-IN.	2-0
2	422	150	U. S. Clerk Public.	G-16-IN.	2-0
1	422	100	U. S. Clerk Public.	OR-75	3-0
1	417	60	U. S. Clerk Public Vault.		
4	422	150	Private Office, Files and consultation.	G-16-IN.	2-0
				G-16-IN.	2-0
4	422	100	Library.	G-16-IN.	2-0
2	422	150	Stenog. and Court Reporter.	S-14-A	2-0
2	558	150	Judge (See Note B).	OR-25	3-0
1	417	25	Judge's Toilet.	G-16-IN.	2-0
2	422	150	Petit Jury.	OR-25	3-0
2	417	25	Men's and Women's Toilets.	See Note	"G"
8	"Z"	4-100	Court Room.	Special	--
2	574	--	Judge's Bench.	G-16-IN.	2-0
1	422	100	Men's Toilet.	S-14-A	2-0
1	558	150	Court Room Lobby (See Note B).	B-8	2-0
4	422	60	Passage, Court Room.	B-8	2-0
1	422	60	Passage to Court Room.	OR-100	3-0
1	417	60	Women's Toilet.	None	4-0
1	404	25	Janitor.	S-14-A	2-0
12	558	100	Corridor (See Note B).	S-14-A	2-0
1	558	150	Elevator Hall (See Note B).	S-14-A	6-6
1	558	100	Stair Hall. (See Note B).		

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JUNEAU, ALASKA.

FEDERAL AND TERRITORIAL BLDG.

SCHEDULE OF FIXTURES CONTINUED.

No. Req'd.	Fixture No.	Elec. Lamps Watts	Location	Reflector or Globe Type	Fixt. Length Ft. In.	Ceil. Hght. Ft. In.
			FOURTH FLOOR			
8	422	100	Office 425	G-16 in.	1'-6"	-
4	422	150	Office 421-423	G-16 "	1'-6"	-
6	422	150	Office 417-419-415	G-16 "	1'-9"	-
3	422	100	Office 413	G-16 "	1'-9"	-
4	422	100	Office 411	G-16 "	1'-9"	-
20	422	150	Office 409-405-403-401-400-402-404-406-408-410	G-16 "	1'-9"	-
2	407-A	25	Office 409 Barometer Lights	See Note A		
4	422	100	Office 412	G-16 in.	1'-9"	-
2	422	150	Office 414	G-16 "	1'-9"	-
2	404	25	Closet E/4 - D/4	None	2'-9"	-
4	422	100	Office 416	G-16 "	1'-9"	-
4	422	150	Office 420-424	G-16 "	1'-9"	-
4	422	150	Office 428-430	G-16 "	1'-6"	-
8	422	100	Office 432-434	G-16 "	1'-6"	-
6	422	100	Office 426-422-418	G-16 "	1'-9"	-
1	422	100	Men's Toilet	G-16 "	1'-9"	-
1	410	60	Detention	OR-75	-	-
1	410	25	" Toilet	OR-25	-	-
3	558	100	Ends of side corridor	S-14-A	1'-6"	(See Note B)
16	558	100	Corridor and stair hall	S-14-A	1'-9"	(See Note B)
1	558	150	Elevator hall	S-14-A	1'-9"	(See Note B)
2	407-A	60	Stair landing	OR-75	-	-
			THIRD FLOOR			
2	422	100	Office 311 part.	G-16 "	1'-9"	-
9	422	100	Office 311 remainder	G-16 "	1'-6"	-
4	422	100	Office 319	G-16 "	1'-6"	-
2	422	150	Office 317	G-16 "	1'-6"	-
4	422	150	Office 315	G-16 "	1'-9"	-
1	422	60	Office 313 part.	G-12 "	1'-9"	-
1	422	150	Office 313 remainder	G-16 "	1'-9"	-
1	404	25	Vault office 311 (Provide keyless socket)	None	3'-9"	-
1	417	25	Stores	OR-25	2'-9"	-
1	422	60	Blue Printing Rm.	G-12 "	1'-9"	-
1	422	100	Blue Printing Rm.	G-16 "	1'-9"	-
6	422	100	Office 309	G-16 "	1'-9"	
5	422	150	Offices 305 & 301	G-16 "	1'-9"	-
1	404	25	Vault in office 301 (Provide keyless socket)	None	3'-9"	-

JUNEAU, ALASKA.

FEDERAL AND TERRITORIAL BLDG.

SCHEDULE OF FIXTURES CONTINUED.

No. Req'd	Fixture No.	Elec. Lamps Watts	Location	Reflector or Globe Type	Fixt. Length Ft. In.	Ceil. Hght. Ft. In.
			THIRD FLOOR CONTINUED			
2	422	100	Office 300	G-16 "	1'-9"	-
4	422	150	Offices 302-304	G-16 "	1'-9"	-
6	422	150	Governor's Suite	G-16 "	1'-9"	-
4	422	100	Governor's Suite	G-16 "	1'-9"	-
1	404	25	Governor's Suite vault	NONE	2'-9"	-
2	422	40	Governor's Suite passage	B-8	1'-9"	-
1	422	25	Governor's Suite passage	B-8	1'-9"	-
1	558	100	Governor's Suite Lobby (See Note B)	S-14-A	1'-9"	-
				OR-25	2'-9"	-
1	417	25	Governor's Toilet	S-14-A	1'-9"	-
1	558	200	Governor's Room (See Note B)			
6	560	60	Governor's Room (One arm electric brackets, provide canopy switches)	Special	See Note "C"	
				G-16 in.	1'-9"	-
4	422	150	Office 322	G-16 "	1'-9"	-
5	422	100	Office 328	OR-75	2'-6"	-
1	417	60	Vault in office 328	G-16 "	1'-6"	-
4	422	100	Office 326	G-16 "	1'-6"	-
1	422	150	Office 324	NONE	2'-6"	-
1	404	25	Store Room (Provide keyless socket)			
6	422	150	Offices 320-318-316	G-16 "	1'-9"	-
1	422	100	Men's toilet	G-16 "	2'-9"	-
1	404	25	Storage (Provide keyless socket)	NONE	2'-9"	-
1	417	60	Women's toilet	OR-75	2'-9"	-
1	404	25	Janitor (Provide keyless socket)	NONE	2'-9"	-
2	558	100	At end of side corridor	S-14-A	1'-6"	See Note
14	558	100	Corridor & stair hall (See Note B)	S-14-A	1'-9"	-
1	558	150	Elevator hall (See Note B)	S-14-A	1'-9"	-
2	407-A	60	Stair landing	OR-75	-	-