

1907.

THESIS.



# TOWN-LIBRARY

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ORIGINAL

DRAWINGS - AND - SPECIFICATIONS

BY

HENRY-W-BRINKMAN

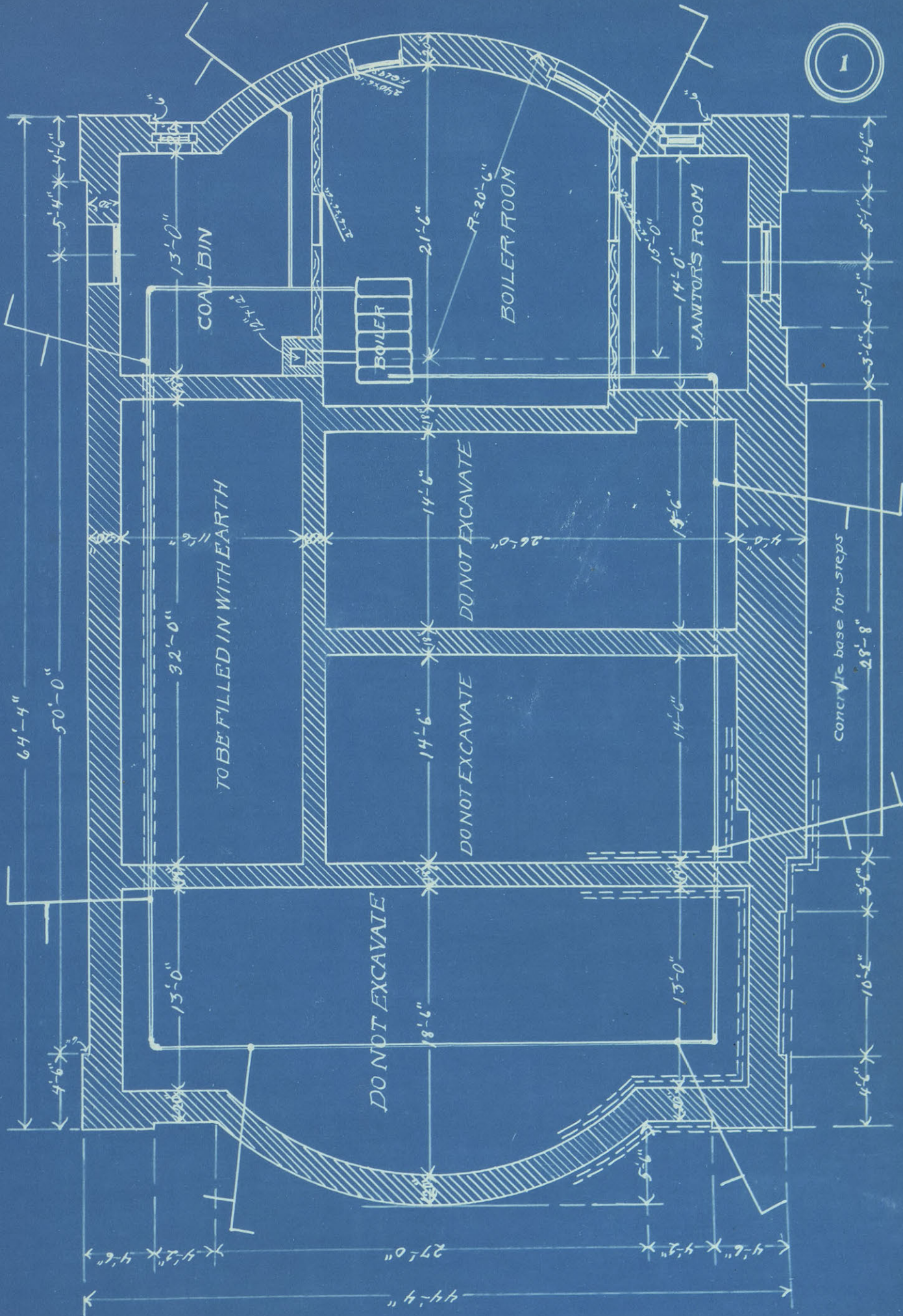
STUDENT - OF - ARCHITECTURE

K-S-AGRI-COLLEGE.

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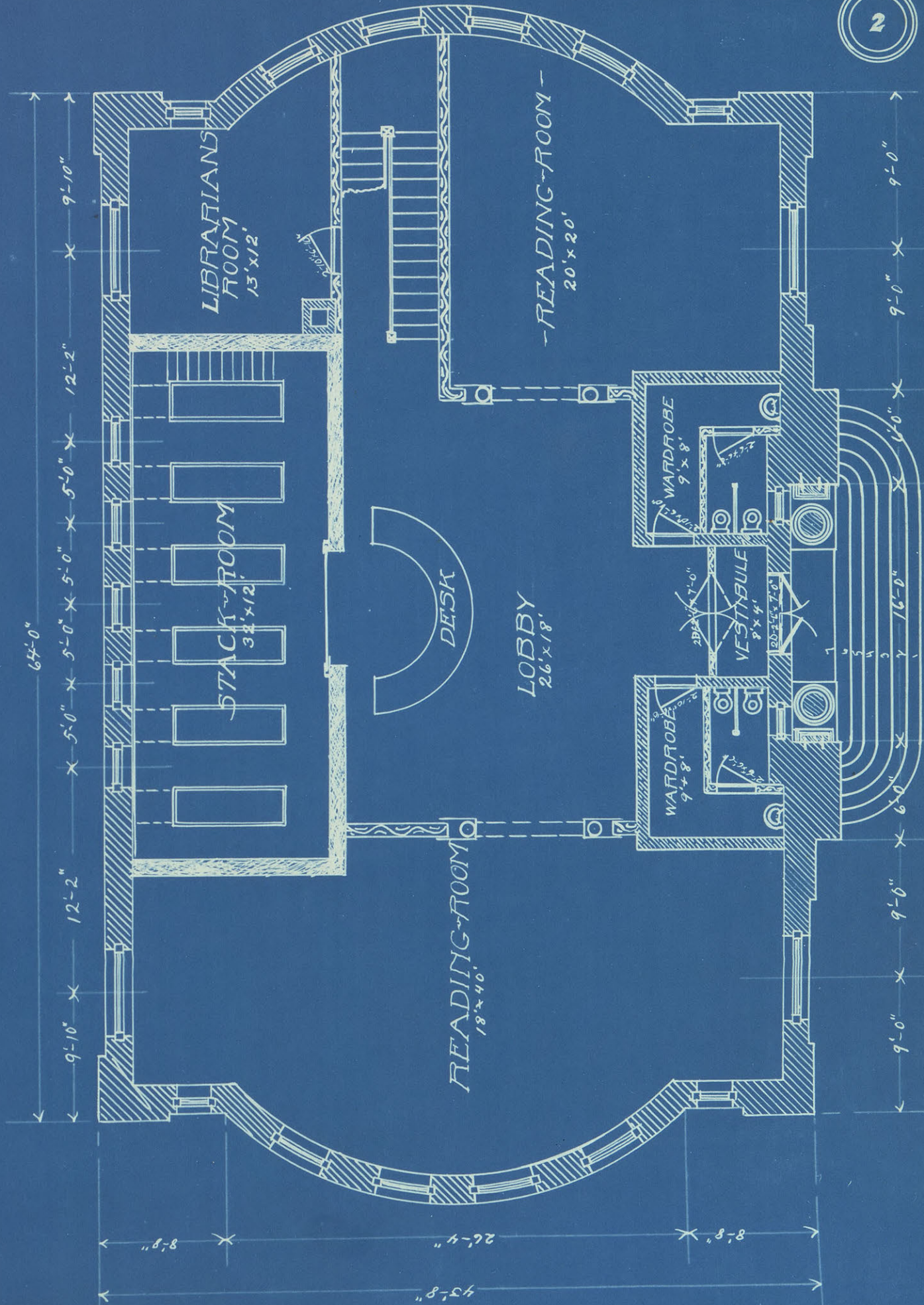
~ BASEMENT PLAN ~

1



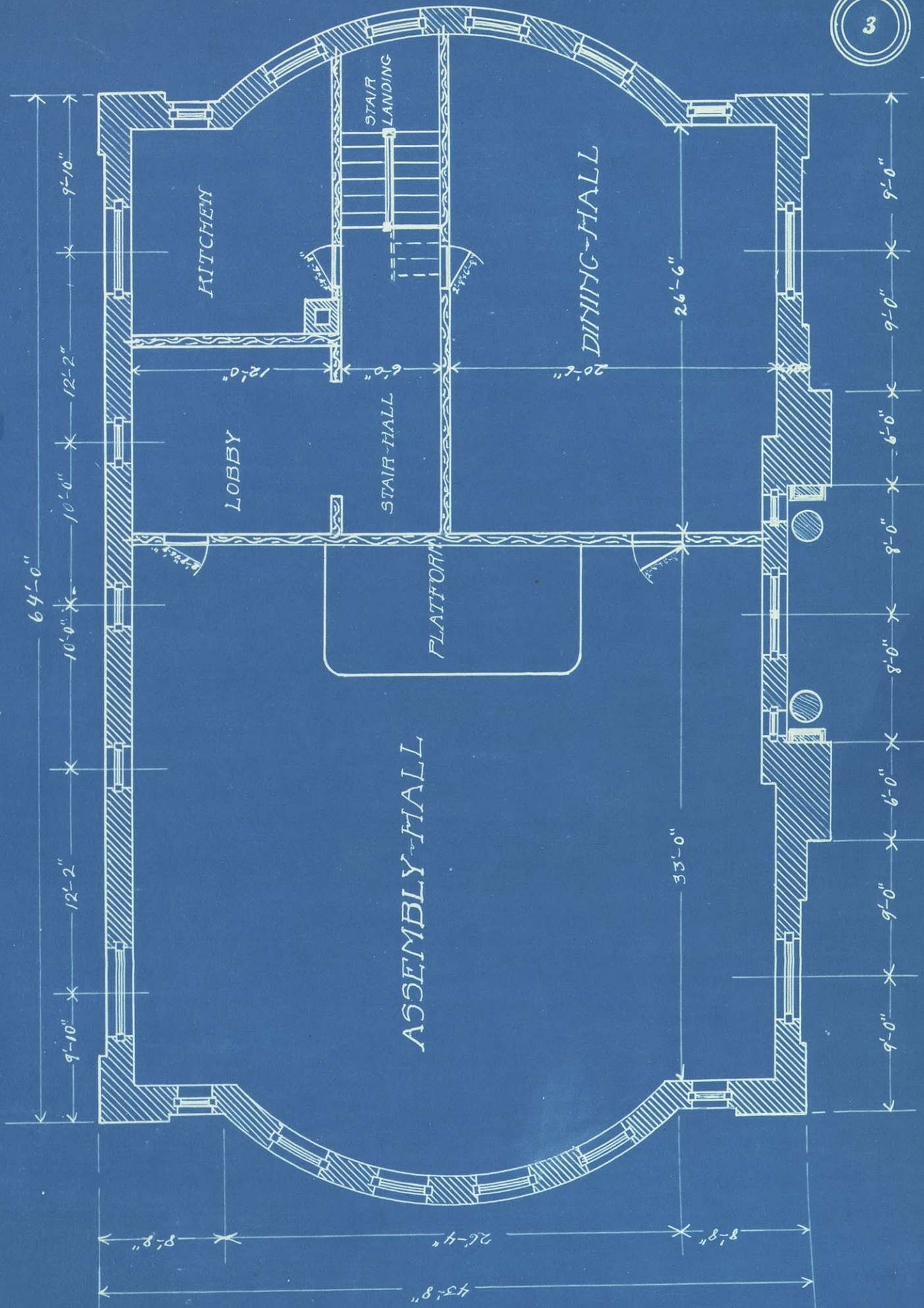
FIRST FLOOR PLAN

2



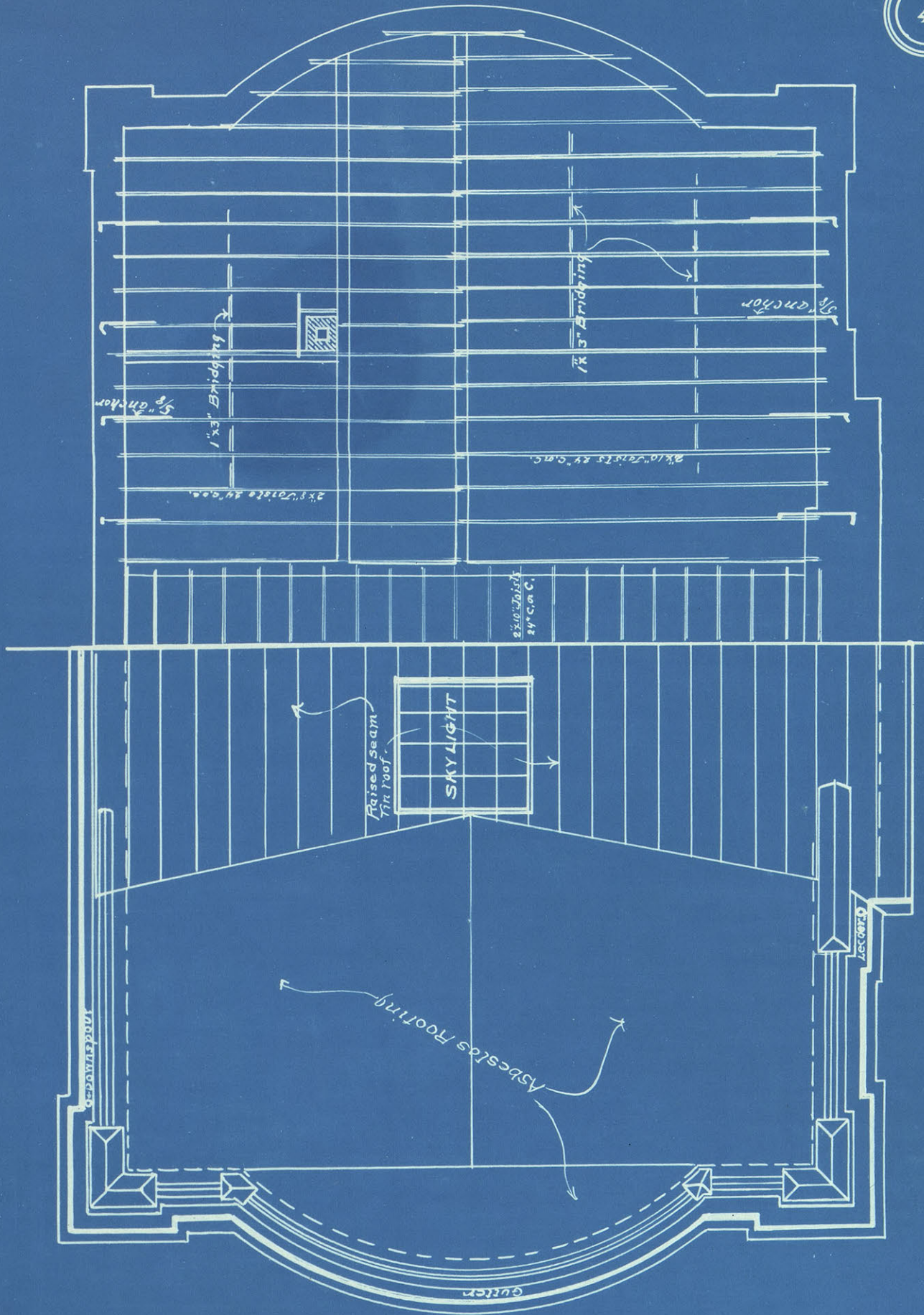
# SECOND-FLOOR-PLAN

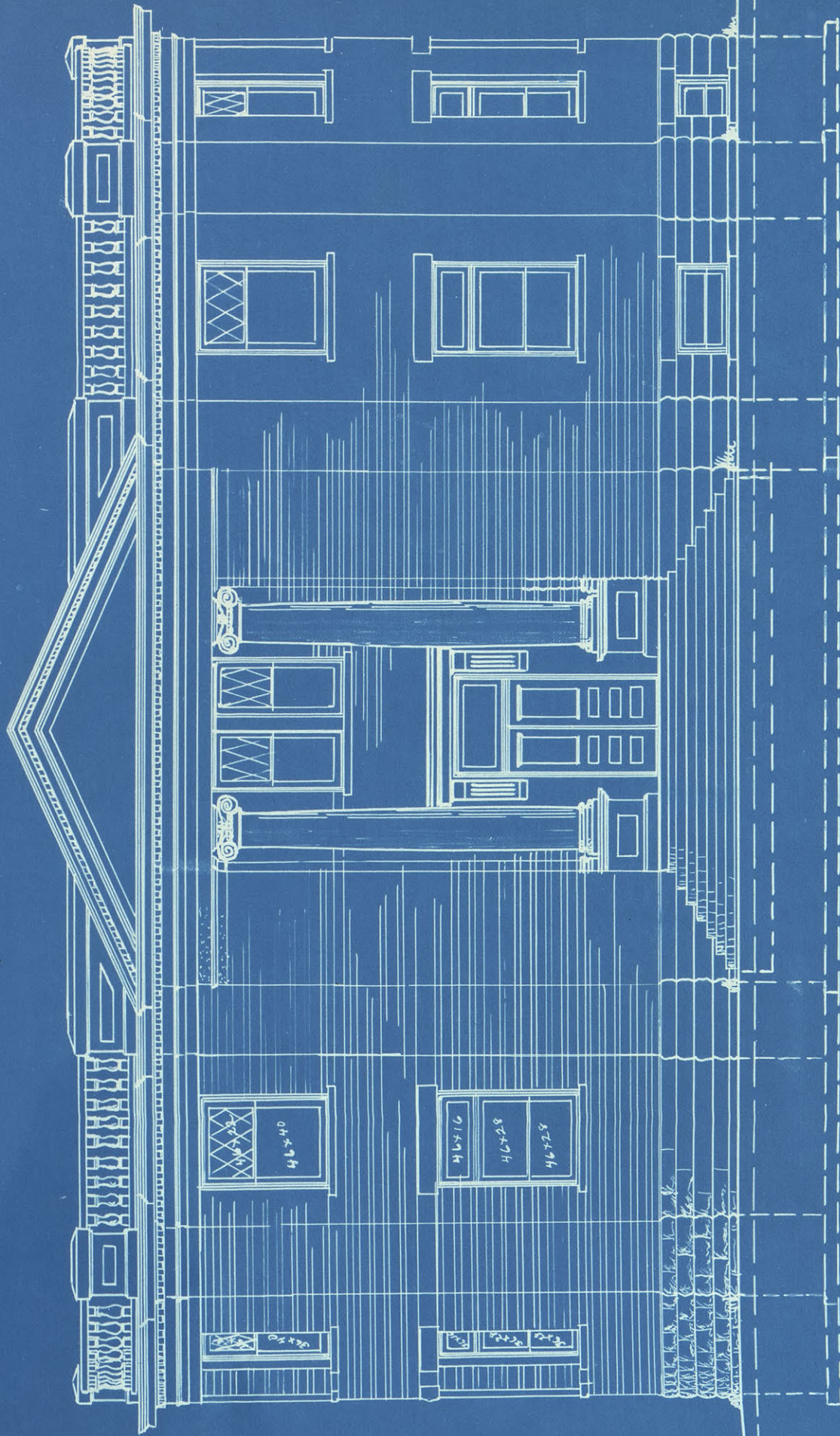
3



ROOF & ATTIC-TIMBER-PLAN

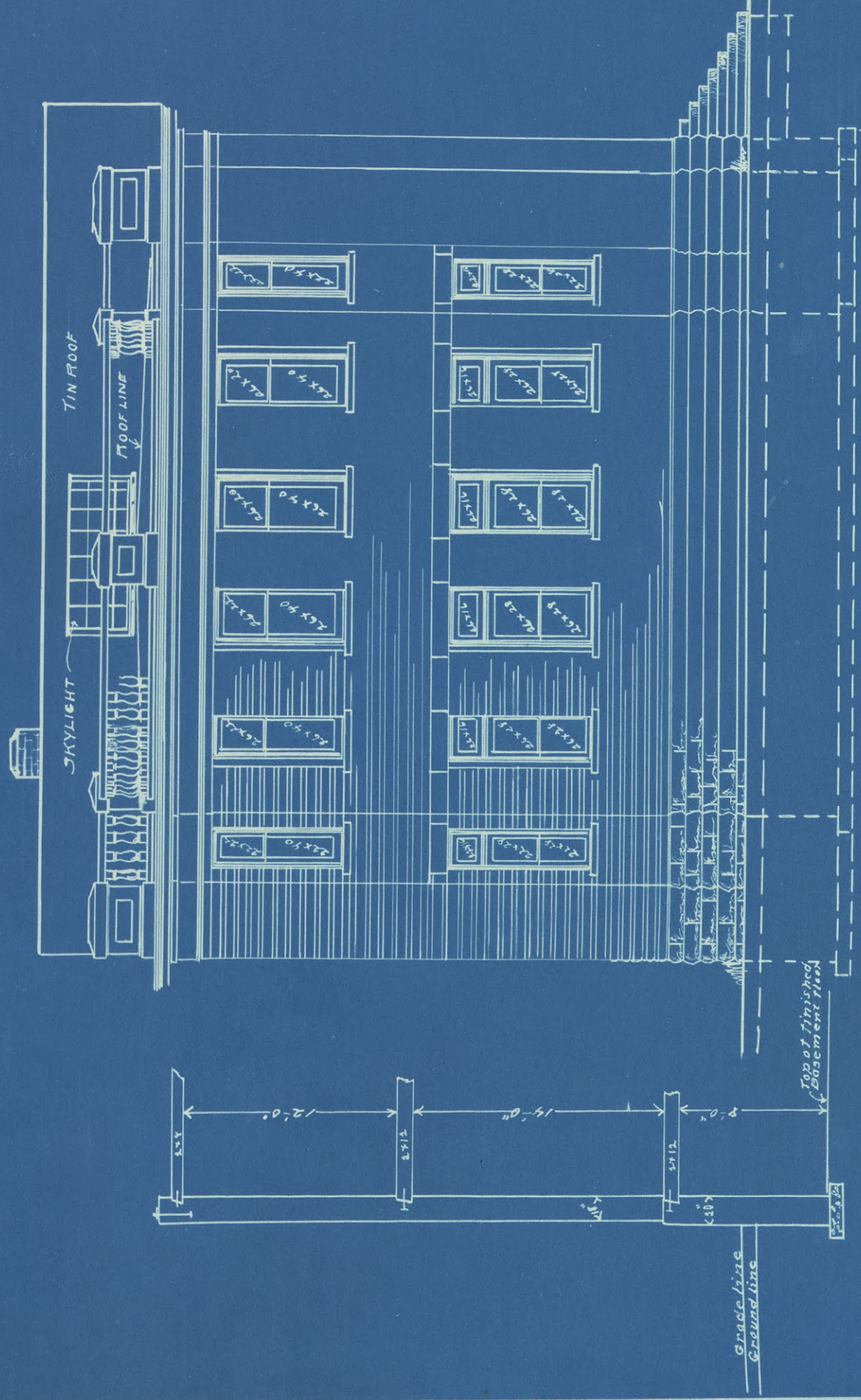
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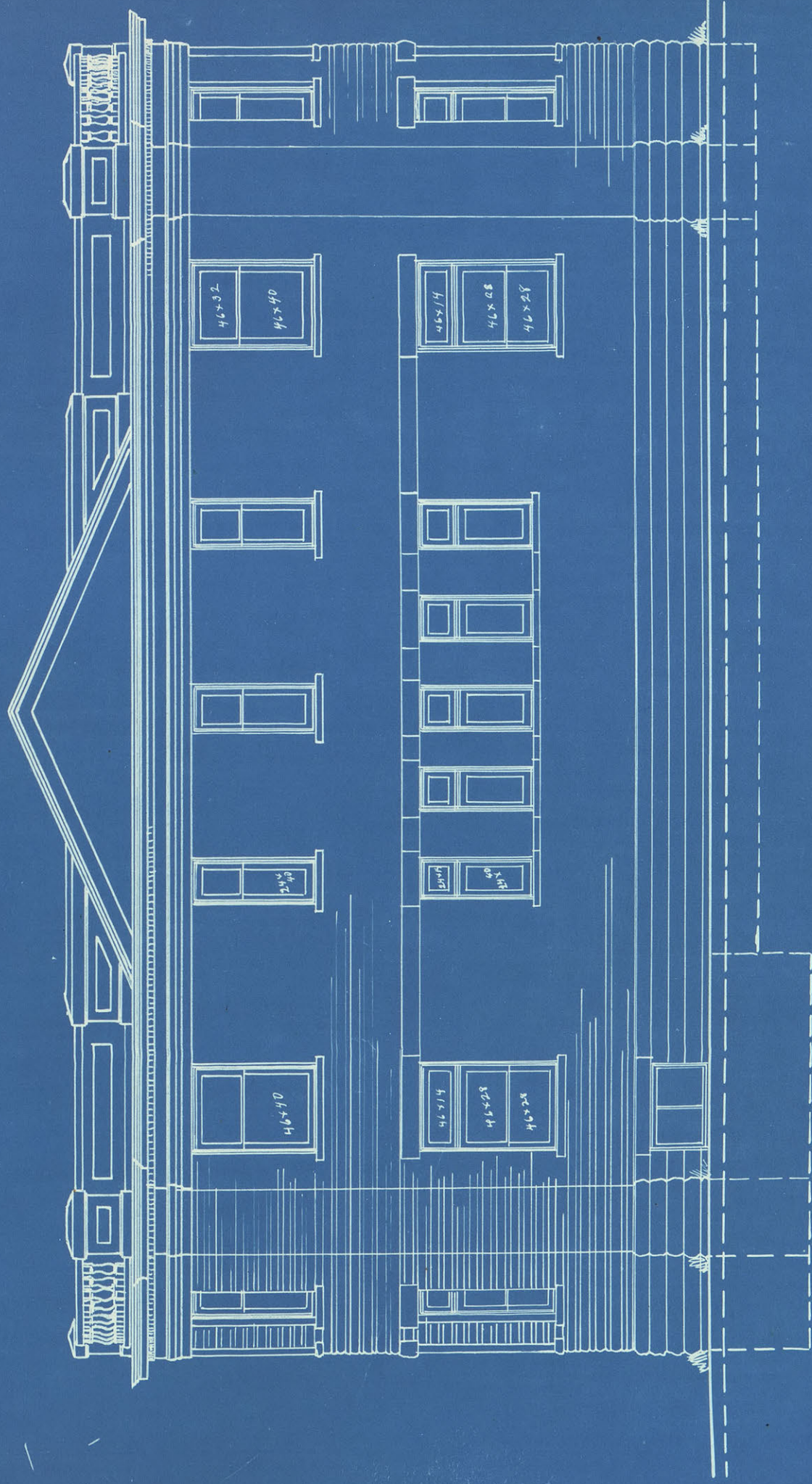


5

~ FRONT ELEVATION ~

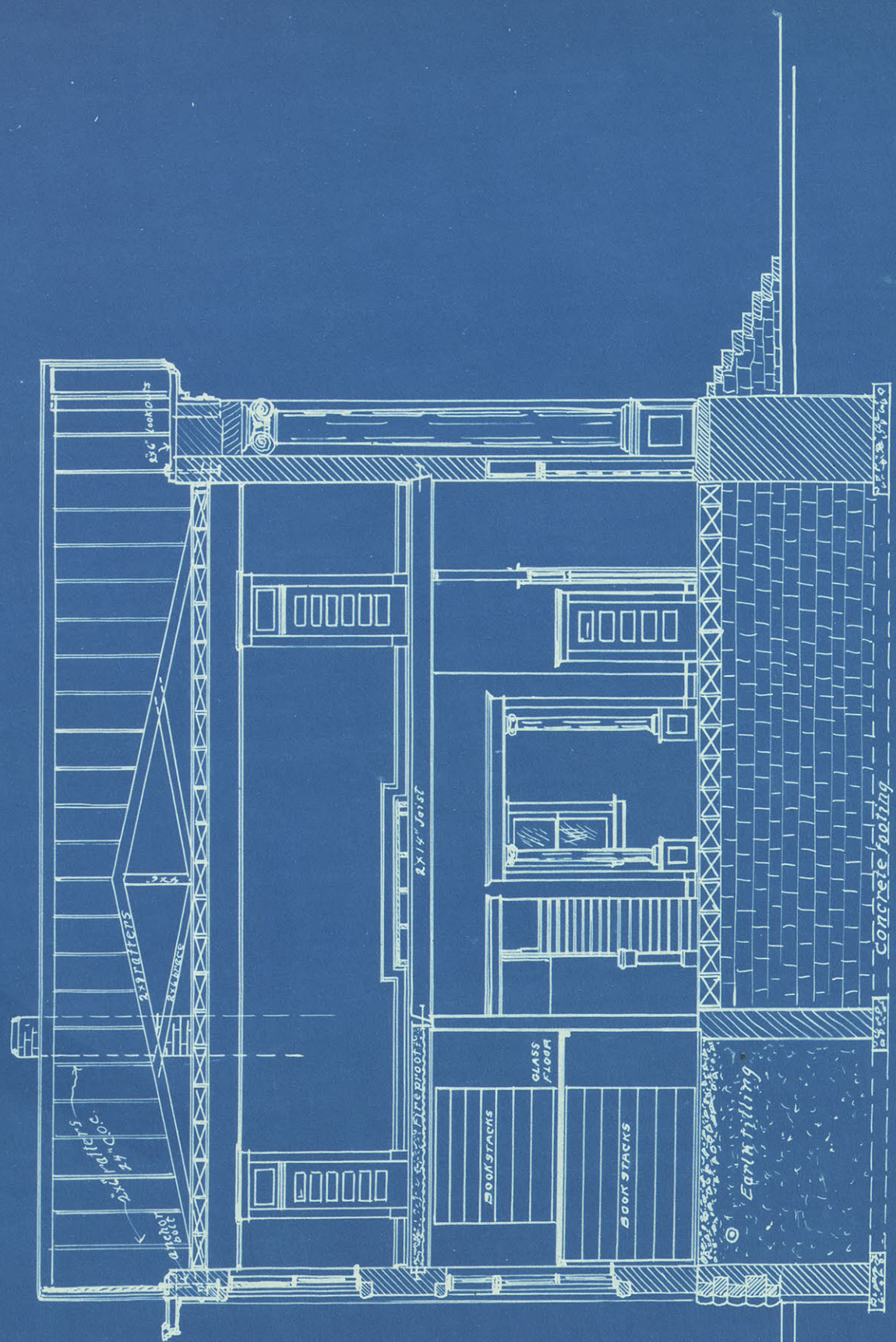


~ SIDE ~ ELEVATION ~  
 NOTE - Opposite side is identical.



~REAR-ELEVATION~

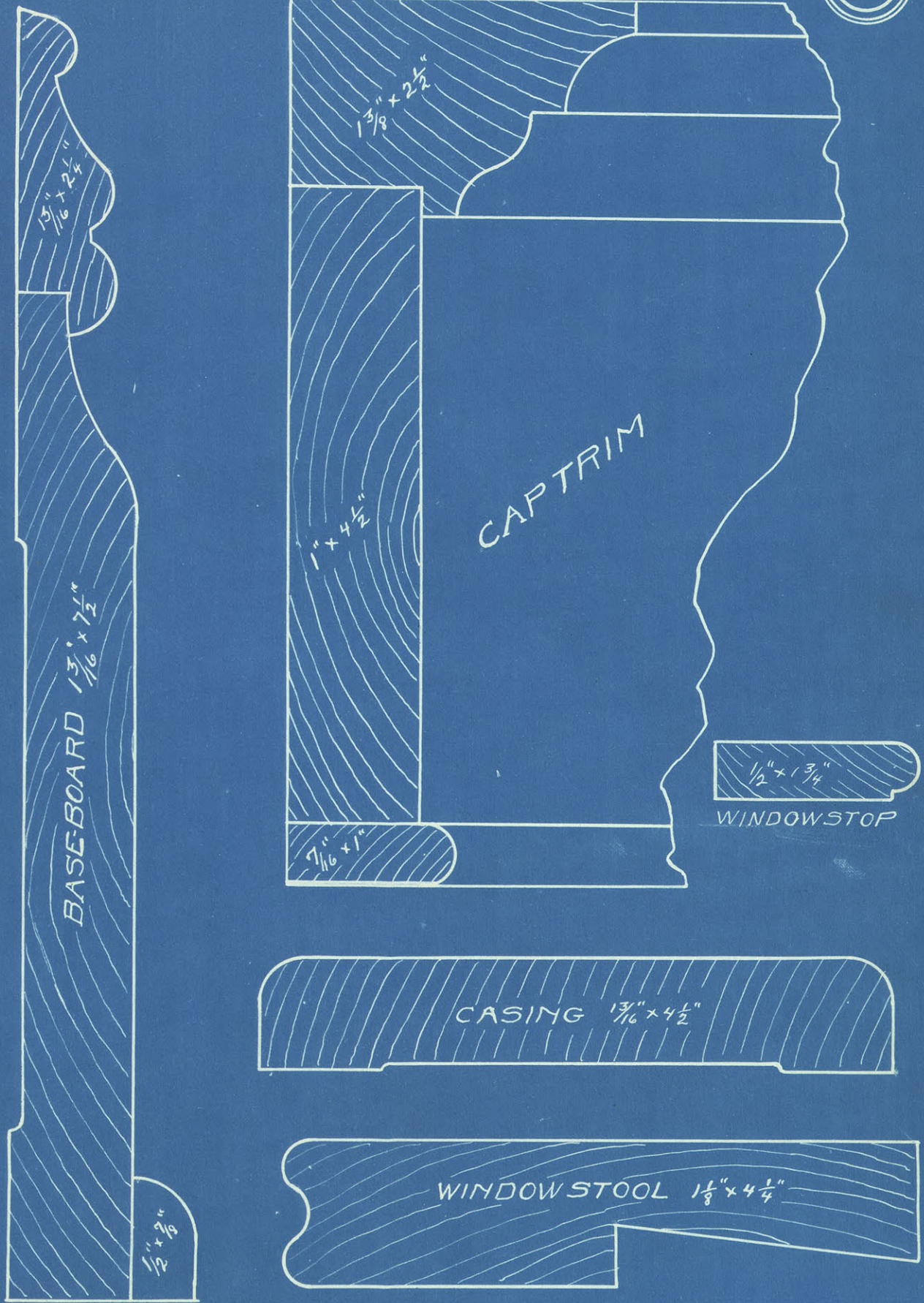


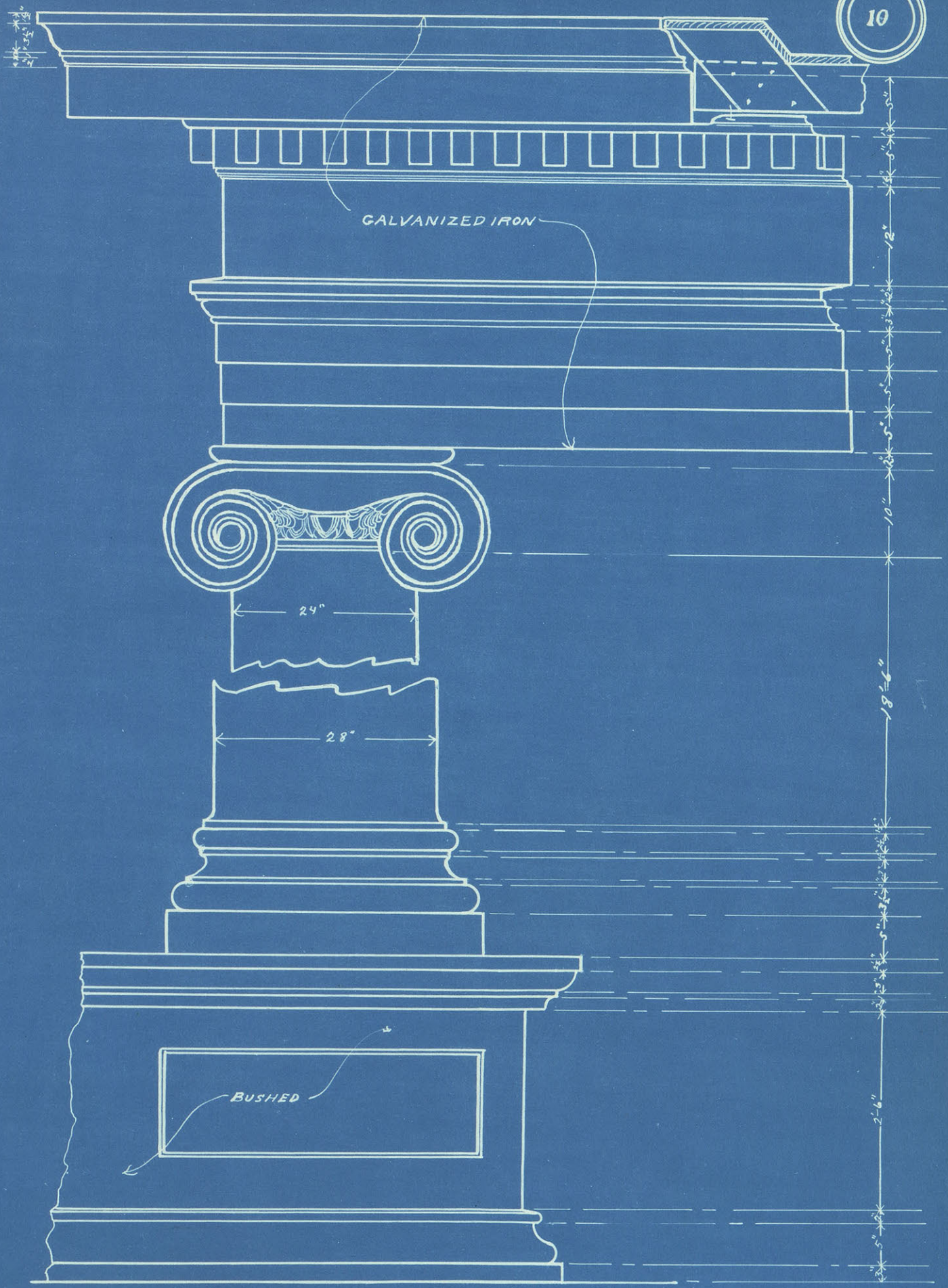


CROSS-SECTION

~DETAIL-OF-INTERIOR-FINISH~

9





~DETAIL OF COLUMN & CORNICE~

S P E C I F I C A T I O N S  
O F  
MATERIALS AND LABOR REQUIRED FOR THE ERECTION AND COMPLETION  
O F  
A LIBRARY BUILDING, TO BE LOCATED IN THE  
CITY OF....., STATE  
O F....., ACCORD -  
ING TO THE  
SPECIFICATIONS  
AND  
ACCOMPANYING DRAWINGS BY HENRY W. BRINKMAN, ARCHITECT,  
MANHATTAN, KANSAS.

S P E C I F I C A T I O N S .

Specifications of material and labor required for the erection of a library building to be built in the City of.....  
....., State of....., for the citizens thereof, who will be represented by a Library Board or Agent, transacting business and the building operations for them. Said library is to be built according to plans and specifications prepared for the same by Henry W. Brinkman, Architect, Manhattan, Kansas.

These plans, etc., referred to herein, consist of the following drawings, all drawn to a scale of 1/8" to one foot, except when otherwise stated.

- No. 1.....Plate of Basement.
- No. 2..... " " First Floor.
- No. 3..... " " Second Floor.
- No. 4..... " " Roof & Attie.
- No. 5..... " " Front Elevation.
- No. 6..... " " Side Elevation.
- No. 7..... " " Rear Elevation.
- No. 8..... " " Cross Section.
- No. 9..... " " Detail of Bases & Casings.
- No. 10.... " " " " Columns & Cornice.

The drawings, together with these specifications and oral dictations from the Architect or Superintendent, are intended to be sufficient for the necessary guidance to the furnishing of material to be used, and the required work to be done in the

construction and completion of the aforesaid building.

DUTIES OF THE CONTRACTOR.

He shall be held strictly to execute such work and to use such materials as hereinafter described, and in all cases where the drawings are figured, the figures must be taken by him as the given dimensions, without reference to what they measure according to scale. He will be further held to submit as to the character of the material used, and the work done, to the judgment of the superintendent, and to procure from him all necessary interpretations of the designs and plans and all necessary certificates regarding his payments on the contract; also for all additions or deductions which may result from changes of designs or plans.

Payments made on work during its progress, on account of the contract or extra work, shall in no case be construed as an acceptance of work executed, but the contractor shall be liable to all the conditions of the contract until the work is finished and accepted. The contractor must have some competent person on the work to receive instructions and see when his particular work is required. Sub-contractors will not be recognized.

The contractor or his foreman being bound in all cases, to remove all improper work and materials upon being directed to do so by the superintendent, at any time and at all times within forty eight hours after receiving written notice to that effect from the superintendent.

But if the contractor, after having been directed as above

to remove the same, would refuse or neglect to do so, he shall not only suffer deduction from the contract price of the difference in value of proper and improper work and material, but shall also be liable for all damages of whatsoever nature or kind that may result from such cause. The Library Board under the direction of the superintendent, shall be at liberty, if in his judgment the cause requires, to replace the same and make good every part at the cost of the contractor.

In case of delay by the contractor, in providing and delivering the required materials or in the advancement of the building or work, or of a deficiency of workmen, or from misconduct, inattention or inability, the Library Board shall be at liberty, (after the superintendent has given too or left for the contractor his foreman, three days notice in writing) to provide, at the expense of the contractor, all such material and to employ such number of workmen at such wages as the superintendent may think proper, and the cost charges incurred, shall be retained out of the contract amount, and paid by a reservation from the estimates from time to time, or amounts thereof which may be due to recoverable, as liquidated damages.

The contractor will be required, in all cases, to use proper care and diligence in bracing and securing all parts of the work against wind storms, insomuch as they may interfere with the stability and perfection of the work; also in all cases, to judge as to the amount of diligence and care required for the same, and for the proper executions of the various constructions, and excuse of ordinary care or quality of work will be allowed

when the nature of the work requires extra care.

The Library Board reserves the right by conferring with the superintending architect, to alter or modify the plans, and specifications in any particular, and the architect shall be at liberty to make any deviation in the construction, detail or execution, without in either case invalidating or rendering void the contract. And in case any such alteration shall increase or diminish the cost of doing the work, the amount to be allowed to the contractor or Library Board shall be such as may be equitable and just. And any such amount, whether, increase or diminish, shall be endorsed on the back of the contract before such work of alteration is done.

The Library Board has engaged, Architect, Henry W. Brinkman, to furnish all plans, details and specifications and to give all necessary information, to properly illustrate the designs given, also to make estimates for the contractor of the amount due him on the contract, and when the building is completed to issue a certificate to the contractor, which certificate if unconditional, shall be an acceptance of the contract, and shall release him from all further responsibility on account of the work. The Library Board being in all cases bound to recognize the acts of the superintendant.

All the plans, designs, details and sections of each and every kind that the contractor may have received, must be preserved and returned to the architect before the final certificate is given, and the Library Board or their legally authorized authorized agent or agents must be notified by the contractor that he is ready to make a settlement, so that if the Library Board



or parties in interest have any bills to file in or statements to make, they can do so before the superintendent, who will make final certificates or adjustment between the parties.

The architect's opinion, certificate, report and decision on all matters to be binding and conclusive in all respects.

This building to be erected of stone materials, on Lot, No. ...., in the City of....., State of....., and must be finished throughout as hereinafter described, and anything shown on the drawings and not hereinafter described and the converse thereof, must be completely supplied and inserted. The work of the building must be done at the cost of the contractor, notwithstanding such omissions.

It is to be understood by the contractor, that the building and work is entirely at his risk, until the same is accepted, and he will be held liable for its safety to the amount of money paid him by the Library Board on account of the same.

Each contractor is to co-operate with the other contractors (if any) on the building, so that as a whole the job shall be a complete one of its kind, and shall arrange and carry on his work in such a manner that any of the co-operating contractors shall not be unnecessarily hindered or delayed in the progress of his work; and when his part of the work is finished, all tools, machinery, debris, etc., and (so far as he is concerned) leave the building and adjacent premises clear and free from all obstructions or hinderances.

The contractor must obtain all concessions and permissions and will be held responsible for all violations of city ordinances, as regards the obstructions of streets, either by tearing

up the same, or the accumulation of materials and shall in all cases repair and make good any damage to the street that may be caused by any operation connected with the work, also as to damages to adjoining property, such as trees, etc., which must be made good, free from extra cost, erect proper barricades and keep lights at night on all obstructions or materials in the street. He shall hold the Library Board free from any damages or expense from neglect or accident on the part of himself or his men, and he will protect them against suit for infringement of any patent device he may use.

GRADE LINE AND MEASUREMENTS.

The grade line will be determined by the Library Board, who will also locate the South east corner of the Building. All other measurements will be made by the contractor and he will be held responsible for their correctness.

EXCAVATION.

Excavate for the basement as indicated by drawings; allowing four (4) inches for finishing basement floor. Further excavation for all footing, piers and areas as shown.

The excess in width of trenches shall be back filled, after the walls are inspected and all surplus earth and rubbish will be hauled away.

FOOTINGS.

All walls where shown and the interior piers will have a single footing course of concrete 12" thick. The concrete must fill the trenches entirely in every case, whether the trenches are to wide or not, without additional expense to the Library Board.

Concrete to be composed of good, clean limestone, river sand, and Kansas Portland cement, in the proportion of one part cement, two parts sand, and five parts of stone, the stone to be broken to the size of a two and one half ( $2\frac{1}{2}$ ) inch cube. The sand and cement will be mixed dry, then tempered with water, after which the stone shall be thrown in and thoroughly coated by turning with shovel. Each batch to be mixed and put in place in quick time and rammed into position.

FOUNDATION.

Properly lay up the foundation walls of good, flat building stone of fairly level beds, the same to be laid by and full to a line on both faces and to be flushed and pointed. Through stone bonds to be incorporated every four (4) feet horizontally and every two (2) feet vertically. All outside walls below grade line to be laid in cement mortar, composed of one part Iola cement to three parts of coarse clean sand, temper the mortar with lime, using about one bucket of lime to one barrel of cement.

The backing of all face stone work shall conform to this specification for rubble, and particular attention must be paid to obtain a comparatively even surface for all plastered surfaces. After foundation walls are dry, and well set, the outside of same in contact with earth, to be plastered from footing to surface of ground with Portland cement, not less than  $\frac{1}{2}$ " thick, trowelled smooth, using one part cement and one part clean sharp sand.

CUT STONE.

The exposed sides and front of the building, from the grade line to the cornice line is to be laid up of course range work in thick and thin courses alternately, of the best quarried lime stone found in the vicinity. The thin course is to form the bond. All stone work on these fronts must have hammered dressed level beds and vertical joints which shall not exceed  $\frac{1}{2}$ " inch in thickness, and the stone must be boldly pitched and faced.

The water table to have a 45 degree wash; bush hammered or crandled, carved column caps, to be crandled and the front door and lobby sill and external steps to be finely bush hammered.

The columns of front entrance to be built of the best Cottonwood Falls stone, in two pieces, the upper joint being flase, and the lower joint being pivoted, the surface of column must be turned and finely bush hammered to conform to the detail as shown by Plate No. "10," and will be finely crandled with vertical lines.

The capitals will be carved out of the best Cottonwood Falls stone and will be of the Ionic order as shown on Plate "10".

All stone work above grade line to be laid in fat lime mortar, composed of not less than four bushels of Ash Groove lime to one yard of clean, course sharp sand.

The joints of face stone work to be cleaned out to a depth of  $\frac{3}{4}$ " and hollow pointed with a mortar composed of two parts of Iola cement, one of sand and one of lime.

IRON WORK.

The character of the metal will be mill steel for the girders, and tough gray iron for cast iron work, which in regard to quality and workmanship shall be governed by the Manufacturer's standard specifications, making all the girders in stack room of size and weight necessary for their respective places.

Each "I" beam for the floor of stack room will contain a 5/8" government anchor, and the beams will be tied together with a 5/8" rod where shown. Ends of beams will rest on cast iron plates of suitable sizes.

All structural iron will receive two coats of mineral paint.

FIRE PROOFING.

Segmental brick arches of 4" row lock will be laid on the lower flanges of the beams of the stack room floor. The filling will be of concrete brought to a level line and will be composed of one part Iola cement, two parts of sand and four parts of cinders. Build the partition enclosing the book stack room, with hollow tile. Partition to be 10" thick.

CORNICE.

The main cornice with return and the parapet moulding and front gable cornice and the hood at the main entrance will be of No. 26, galvanized iron, made to form, strictly as shown by detail, with joints riveted and soldered together, the whole to form straight and continuous joints and lines with even corners. All plain surfaces over 4" inches wide will be crimped except in soffits and washes of cornices. All iron work will be neatly executed and put on. Lookouts in a substantial manner.

Place downspouts of suitable sizes where required and make all connections necessary to enter the storm sewer. These pipes will be of No. 26, galvanized iron and secured in position by galvanized iron straps, soldered to same and secured to wall every five feet in height.

HARDWARE.

The sum of Seventy Five (75) Dollars must be allowed by the contractor in his estimate for furnishing door hardware which will be of approved design and selected by the Library Board, and set in place by the contractor. This sum is exclusive of nails, screws, anchors, bolts, weights and pulleys, and must be of sufficient and good quality and will be furnished by the contractor.

BOOKS STACKS.

The interior furniture and book stacks are not included in this contract.

CONCRETE FLOORS.

All excavated portion is to be laid with a concrete floor, concrete to be 3" thick, composed of one part of fresh, best Portland cement, four parts broken stone, not larger than a 2½" cube, and two parts clean, sharp sand, mixed dry, after which water will be added and the mortar mixed to the proper consistency, then the stone will be dumped on top, and the whole worked over to a uniform mass. This to be covered before the base is set, with one inch of top dressing, composed of 1 part of best Portland cement and 1½ parts of clean, sharp sand, trowelled true and smooth.

All flooring including the finishing coat, to be laid in

strips about 3' wide, leaving spaces between strips of the same width; as soon as these strips have set, the alternate spaces to be filled in with concrete, making floor complete, this method is adopted so as to avoid walking on or soiling base, which would prevent the finishing coat from properly adhering. All concrete floors to be marked off in blocks about 3' square, the joints to be cut through to top of base.

#### ROOF.

Cover the entire roof space with 1" X 8" common boards, well nailed down. On this lay one layer of good building paper, before laying tin. The tin on the flater portion of roof is to be laid with flat seam, while tin on the gable portion is to be laid with raised seam tin. For roofing use Taylor's Old Style I. C. roofing tin, and for the lining of valleys and gutters use Taylor's Old Style IX roofing tin.

Build skylight through, similar to Hayes patent, and glaze the glaze the same with  $\frac{1}{4}$ " ribbed glass.

#### LATHING AND PLASTERING.

Grounds will be put up by the carpenter and the plasterer will work to them. The basement (except the coal room), first and second floors will be plastered. Lath with sound W. P or Cypress lath  $\frac{1}{4}$ " apart, all stud walls and  $\frac{3}{8}$ " apart on ceilings. Securely nail to every bearing with solid corners and break joints every 18" on the run. Put on no vertical lath in corners to finish out.

Plaster with Acme cement plaster, put on according to the rules prescribed for the material, one coat on stone walls inside of basement and two coats on lath work. Rub hard

to get a good key and finish, brown coat to grounds with straight edge, making all surfaces even, and angles and corners straight. Finish all except basement with a white coat of lime putty run off at least three weeks before use, sifted and trowelled down with brush and water.

The wainseating will extend around vestibule and lobby and the main halls of both stories. It will be made of a hard plaster finish of approved brand, lined to imitate marble blocks. Do all necessary patching and clean up after plastering.

The ceiling of stack room to be lined with  $1\frac{1}{4}$ " scagloid with joints properly run with cement filling.

The entire basement, except the coal room, will have two good coats of brown plaster, and floated to a true surface.

#### CARPENTER WORK.

The carpenter will be required to do all work properly coming under this heading, furnishing centers, lookouts, grounds, cutting for plumbers and steam fitters, hardware, etc.

Trim around the furnace flue and allow no woodwork to come within one inch of flue.

The dimension lumber shall be of the best long leaf yellow Pine, free from all large, loose or dead knots, that may impair the durability of the material. The finish exterior lumber shall be of Northern White Pine or Cypress.

All joints, trimmers, girders, studs, etc., must be prepared and planed according to plans and detail. Studs and joists to be sized and the joists crowned  $1/30$ " per foot span with a heavy iron anchor on the end of every third joist, to se-



cure masonry, and make a continuous tie through the building by spiking joists together.

Stud partitions will be of 2" X 6" stock, as shown, and will be cross braced twice in their height, and have double studs at openings, trussed over and made solid corners by doubling studs. Headers and trimmers will be doubled and hung in stirrup irons.

Bridge joists 6' on centers with 1" X 3" stock, cut square instead of mitred. All roofs will be covered with 7/8" ship-lap No. 2.

#### FURRING.

Furr all exterior stone walls where plastered with 1 1/4" X 3 strips, 16" on centers, furr where necessary also, for doors and window finish, for all beams, projections: for plumber, for plasterers, and for everything required to carry out the design. All furring strips on walls to be securely fastened to same with 20 penny nails, driven into holes drilled into the wall.

Lookouts must be secured to structural work and put up to line, with gutters lined and graded. Furr down and around all beams and wherever else required.

#### WINDOW FRAMES.

All window frames throughout, including basement, to be of sizes shown and figured on the drawings. All to be made of a selected quality of Cypress, with stiles in one place, housed into heads and sills, and double hung with cast iron weights, and anti-friction pulleys and strong sash cord. Window stops on the inside to be put on with screws. Sash to be 1 3/4" of Northern White Pine, mortised and tremoned, wedged, glued and

and pinned. Provide all windows with copper bronze sash lifts and sash locks of approved make.

D O O R S .

The doors in the basement and the three outside doors of first floors will be of well seasoned white Pine, and doors of first floor to be veneered with strips of red Oak, with solid Oak panels and stiles to have soft wood cores. All doors shall be put together, carefully, with concealed mortises, wedged, glued, and pinned. All doors of the first floor to be flush mould, and those of the basement and the second floor, P. G. mould. Frames will be of 1 3/4" stock and of same wood as finish, all secured well where in contact with masonry.

All doors will be 1 3/4" thick, except the front entrance doors, which will be 2" thick and the basement doors 1 3/8" thick.

F L O O R S .

The first and second floors shall be laid on construction floors after plastering is finished, with best quality of V. G. narrow yellow pine flooring. Floors to be deadened with two heavy layers of flooring felt.

F I N I S H .

The entire building will be finished with trim as shown, except the coal room and boiler room.

The window and door casings, jambs, mouldings, base, etc., throughout will be made in accordance with detail.

The intention is to have the basement and second floor finished of Cypress, and the Librarian's office, and the toilet rooms on the main floor the same, and the entire first floor, the exposed finish in the rotunda, reading rooms and lobby will

be of red Oak. The main stairway from first to second floor will be of red Oak throughout.

All finish will be of clear stock, seasoned, kiln dried, hand smoothed and put up with invisible nails on grounds.

PICTURE MOULDING.

Run a two inch picture moulding around all principal rooms of first and second floors, and two inch bed mould around ceiling of stack room, the same to be of the kind of wood specified for trim.

S T A I R S .

Stairs have been described before generally. Each flight will contain three or more carriers of 2" X 12" stock, and the treads and risers will be tongued, grooved, glued and wedged up and housed into wall stringers.

The railing of main stairway must be secured to floor and newels in a substantial manner, and a stock design of an approved pattern will be allowed.

Newel posts will be put together with solid corners and secured with vestibule dowels.

PAINTING.

All exterior woodwork will be primed with one coat as soon as erected, covering knots with shellac.

Putty up well after priming. The exterior exposed woodwork will be finished with two coats of lead and linseed oil paint, of color as directed. The galvanized iron work will receive one coat of mineral red paint, and will be finished with two coats of lead and oil paint, the last coat sanded in imitation of stone.

Pulley stiles will be oiled. Yellow Pine and Cypress finish will receive three coats of Sherman-William varnish, puttied with stained putty. The hard wood will receive a coat of wood filler of desired shade and be finished with three coats of Sherman-William's varnish, the last to be rubbed to a dull finish with punice stone and oil.

Ceiling of stack room to be covered with two coats of Muresco cold water paint.

The flooring of main floor and treads of stairs will receive a coat of light stain and be finished with one coat of Elastic floor finish, or Johnson's floor wax.

#### GLAZING.

The large panel of front entrance door will be of bevel edge plate glass. Windows of second story will be of clear glass set in copper ribs and stiffened with iron supports where necessary. The skylight over rotunda and ceiling light in second story will be of opalescent rolled glass. All other glass will be of A quality D. S. sheet glass, cut to fit, bedded, sprigged, puttied, and back puttied.

#### ELECTRIC WIRING.

All wiring shall be for the two wire alternating current system, 110 volts.

Place lights and switches where directed by the Library Board.

All cut-outs used in this installation shall be of the Edison Plug Type.

The hall lights of the first and second floors will be controlled from the first and second floors. Each principal

room of the building to be controlled by a switch. All boxes for plugs and switches to be enclosed in slate lined iron boxes with glass doors. The switches to be located by the architect or Library Board; main switch box to be on the main floor in catalogue partition, and the stack room to be controlled from the inside.

P L U M B I N G .

The plumbing fixtures will be as follows, all connected up with hot and cold water:

One cast iron Janitor's sink and 100 gallon G. I. tank in the boiler room, not shown. Two wash down closets with tanks, seats, etc., similar to the No. 1, Nature combination.

Lavatories with 14 X 17 overflow basins and Italian marble slabs with backs and sides and Fuller cocks.

Trenches will be excavated to a even fall, and pipe will be calked with lead in clean joints, and when in position will be tested in the manner prescribed by the city ordinances. Cleanouts will come flush with the floor. Connections to lead traps to soil pipes will be made by means of brass ferrules. Drainage from boiler will be of two inch pipe connection. The traps of all fixtures to be vented by g. i. pipe, which will not enter the stack until near the floor line. Lead pipe connections will have wiped joints. The storm water system will be of a 6" tile pipe, laid where directed and connected with the downspouts, area drains and house trap laid below first line with wiped joints and connected to sewer in a manner as prescribed by the city ordinances.

Cold water supply will be taken from the city corporation

cock from nearest water main, run through a  $7/8$ " g. i. pipe to the boiler room, from which connection will be made to the different fixtures and the boiler.

Place a hose bib with cock near the corner, extending through the wall.

In every respect this work must be done in accordance with the city ordinance.

#### STEAM HEATING APPARATUS.

The apparatus to be known as the low pressure gravity return system. The radiators on the main floor will return directly to steam main. The main will be drained with a bleeder to return main at the proper point, and the whole system must be noiseless in operation.

The boiler will be of the Ideal sectional type or equivalent, with a catalogue capacity of at least 1500 sq. ft. of radiation, and a grate size of at least 900 sq. in., equipped with soft coal, and trimmed with regular fittings including the damper regulations.

There will be 1300 feet of approved design cast iron radiation radiators, located approximately as shown on floor plans. The exact disposition of the sizes of radiators, will be fixed by the contractor in connection with the architect.

All radiators will be equipped with hand air valves, and be supplied with brass seated corner valves with wood handles.

The main piping will be as directed and of sizes to be hereafter determined by exact size of each radiator, but the main steam connection will be  $4\frac{1}{2}$ " in diameter. Horizontal pipes will be suspended on expansion hangers, and have a uniform

fall of 1" to 10" in the direction of the drops. Vertical risers will be plumb and will be fitted with floor and ceiling plates and be so connected as to allow for expansion, and taken from top of main. Where pipes pass through floors, they will be insulated by g. i. sleeve.

Fittings will be of best quality and of exact sizes. Unions of over two inches will have flanges and gaskets. All pipe to be of mill steel.

Radiators and piping will be neatly painted in maroon, relieved with gold bronze.

The steam must really circulate on a pressure of one pound above that of the atmosphere.

All workmanship and material to be used must be strictly first class, and at completion the entire piping system will be tested, and must be left in good working order. Any item not specifically mentioned which in the opinion of the architect is necessary for the full completion of the apparatus, must be supplied by the contractor without additional charge, the intention being to secure a simple, yet strong and neat appearing job as a whole.