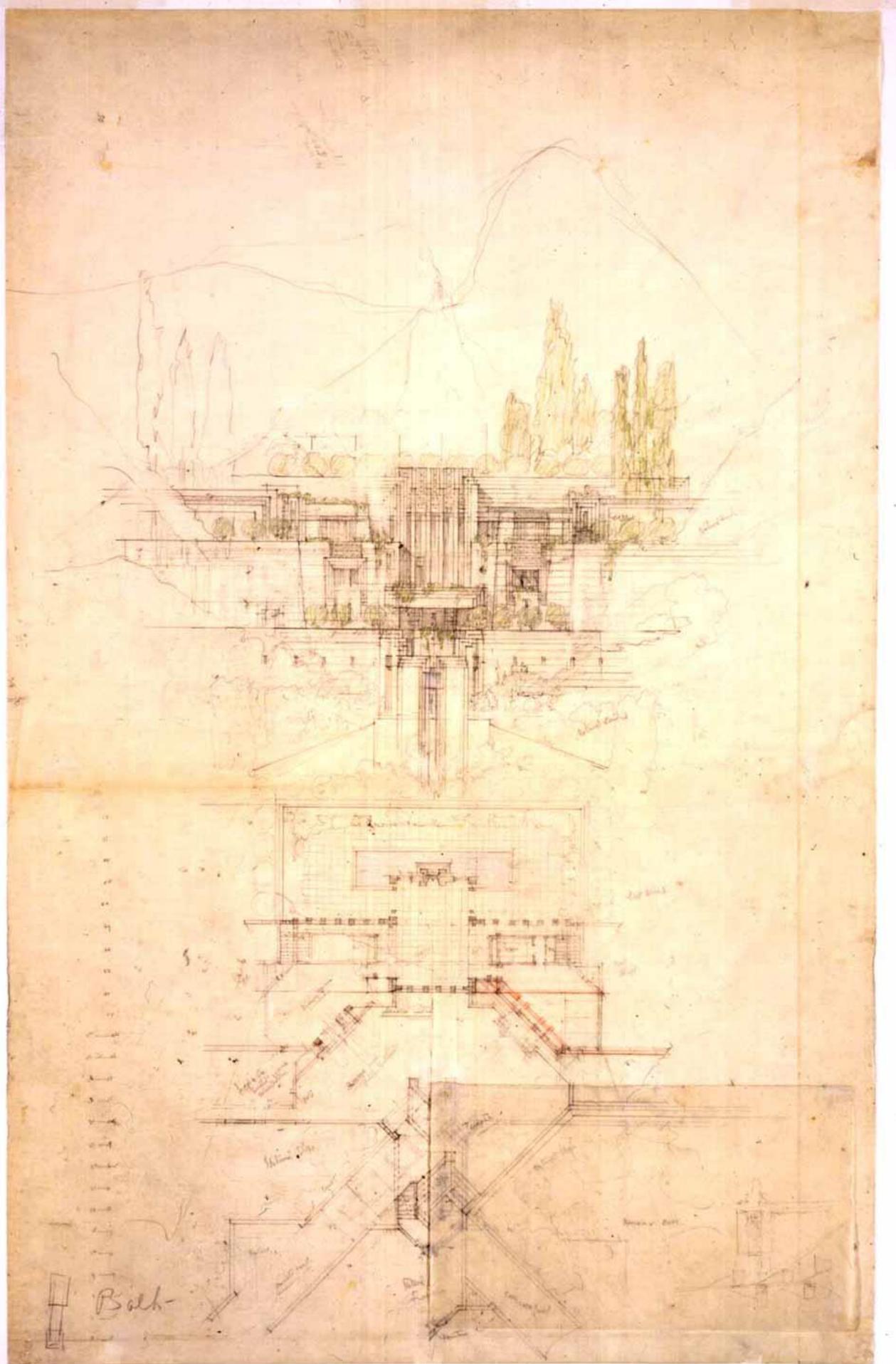


# CMCE 1110: Construction Drawings I

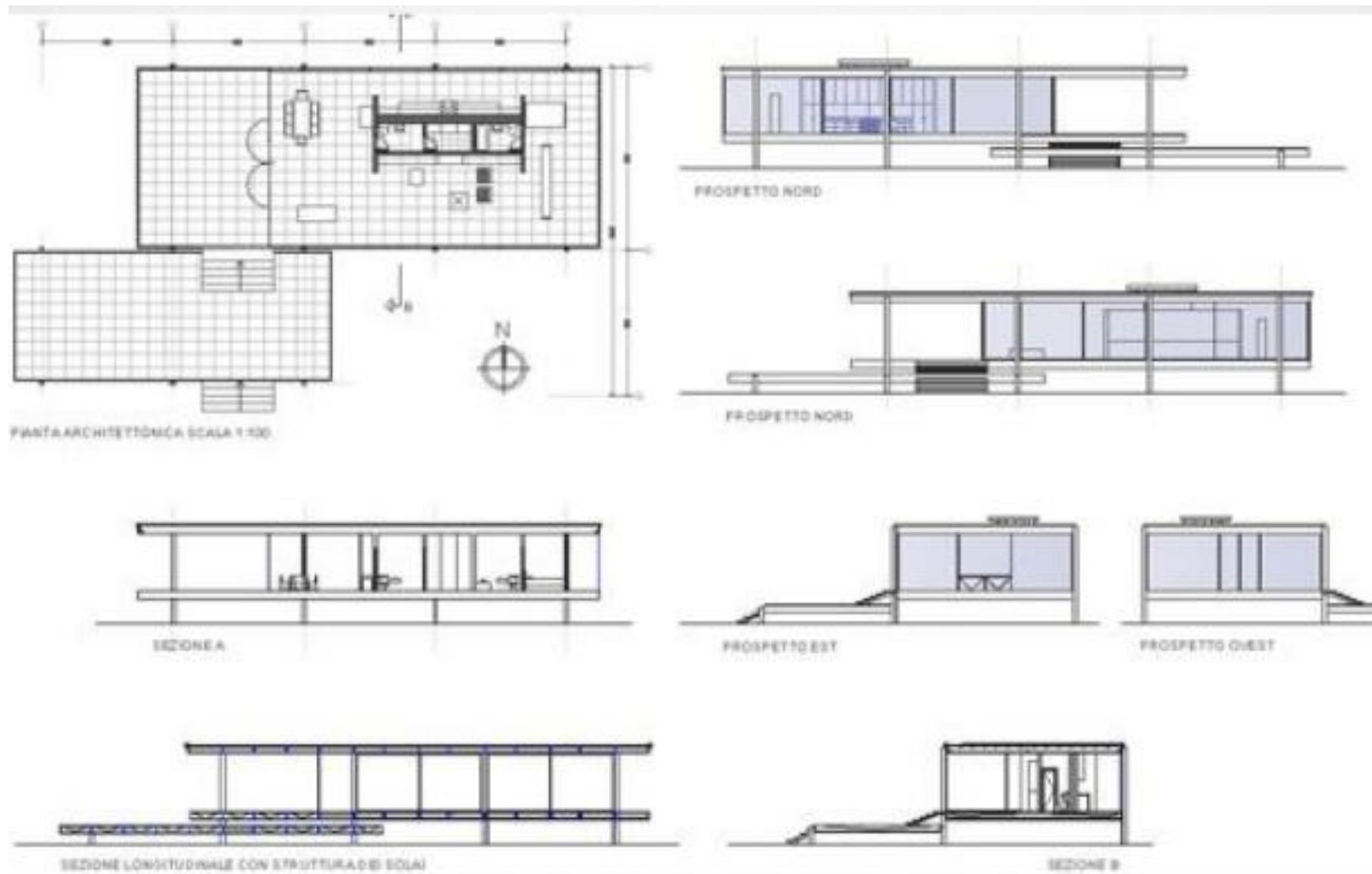
Professor Anderson  
nanderson@citytech.cuny.edu



# Who am I?

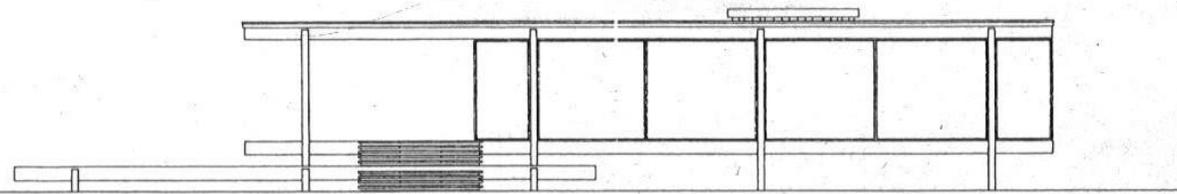
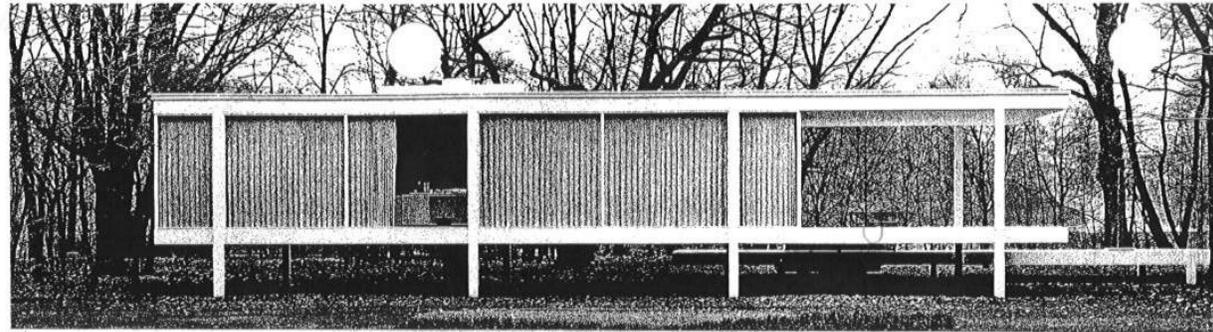


# What are CONSTRUCTION DRAWINGS?

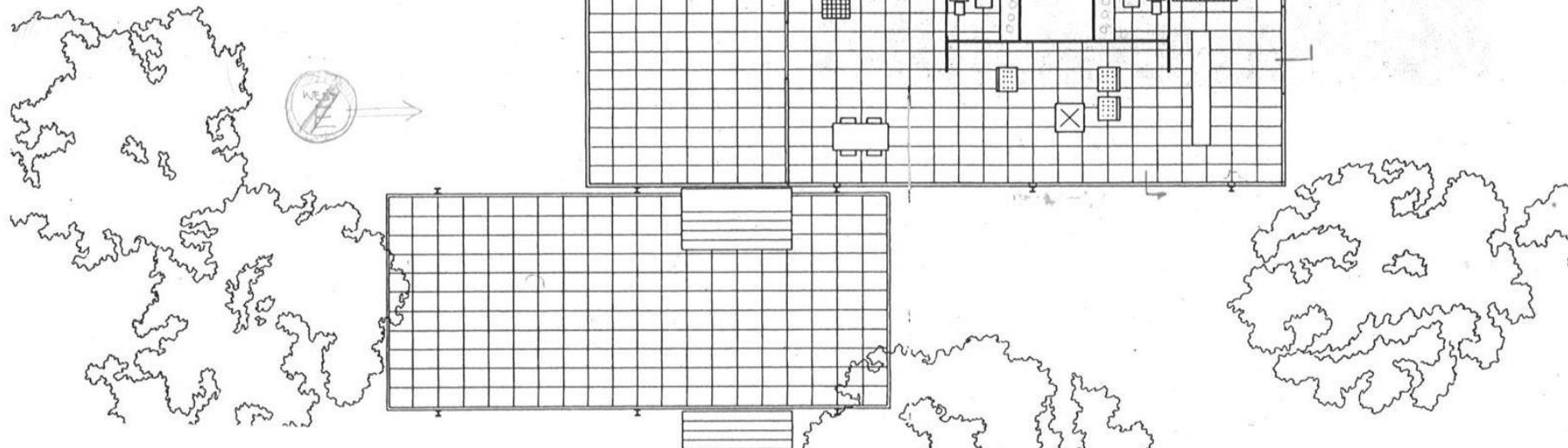


**CONSTRUCTION DRAWINGS** consist of a **GRAPHIC LANGUAGE** to describe the shape of something. Our TOOLS:

- Linework (lineweight and type)
- Geometric Construction
- Orthographic Projection

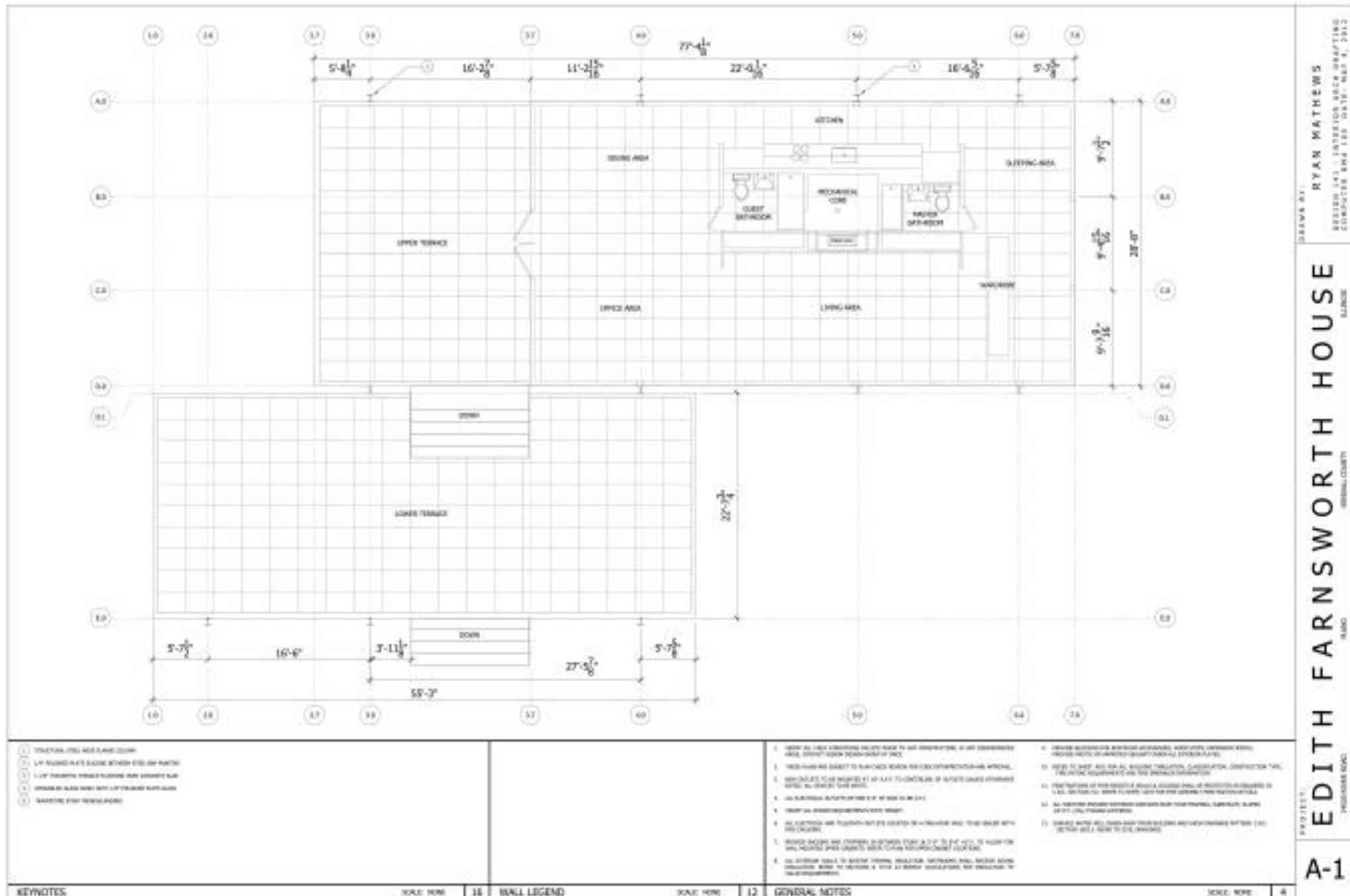


ELEVATION



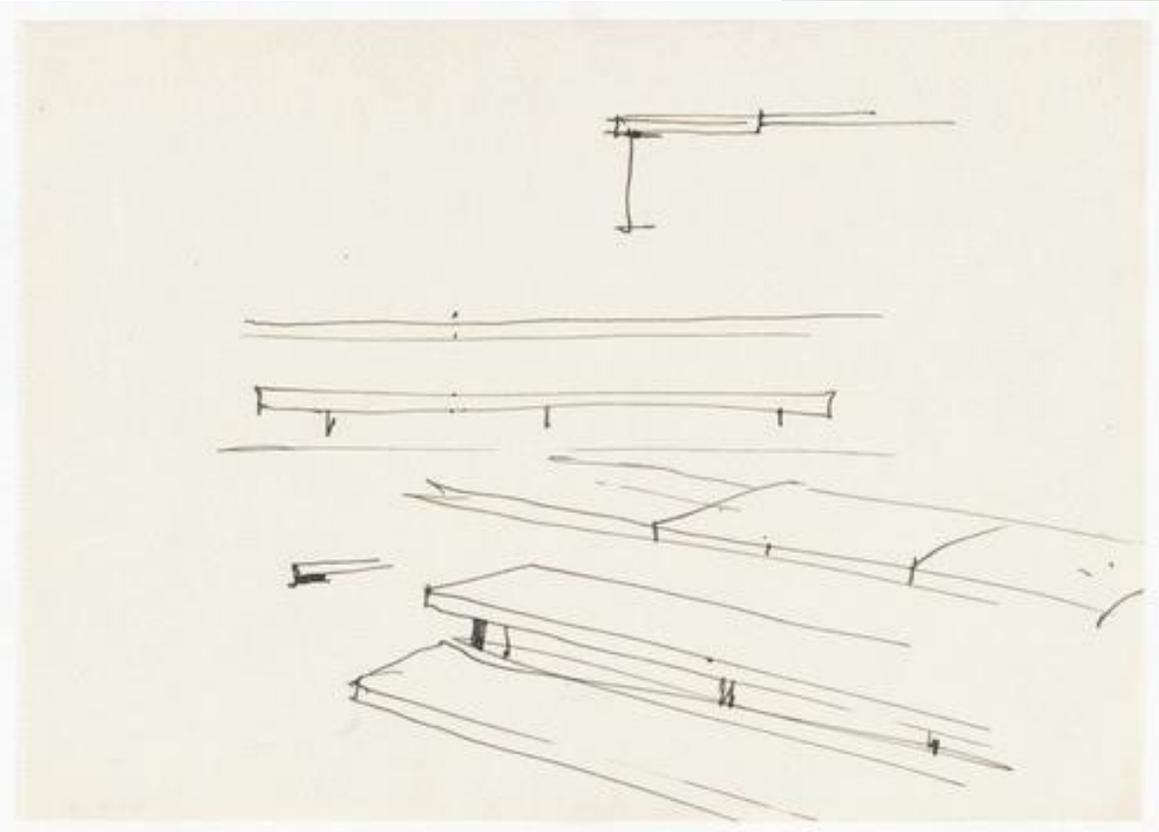
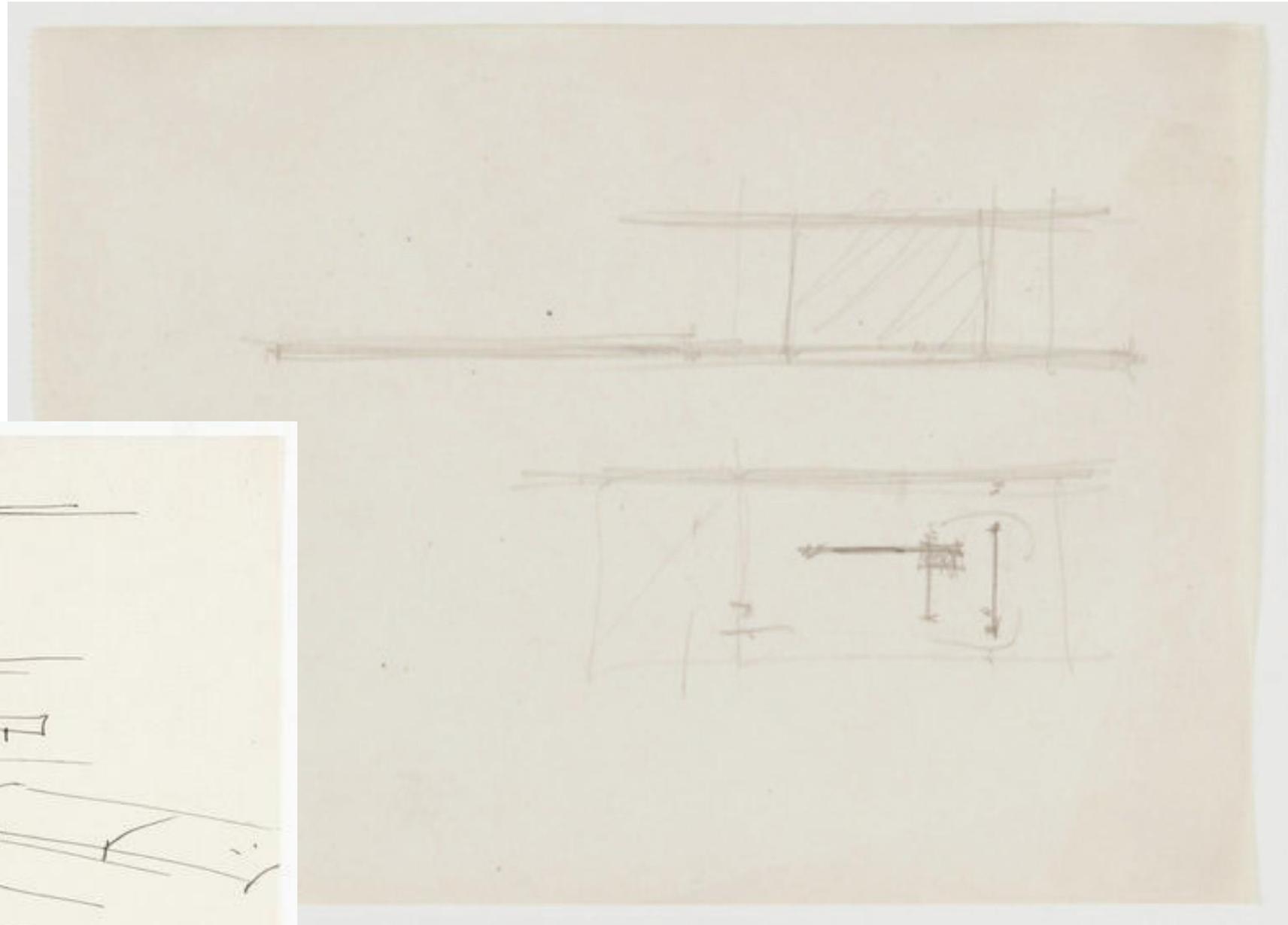
**CONSTRUCTION DRAWINGS** also contain **TEXT** to describe the size, location and specifics about that object. Our TOOLS:

- Dimensions
- Notes
- Symbols



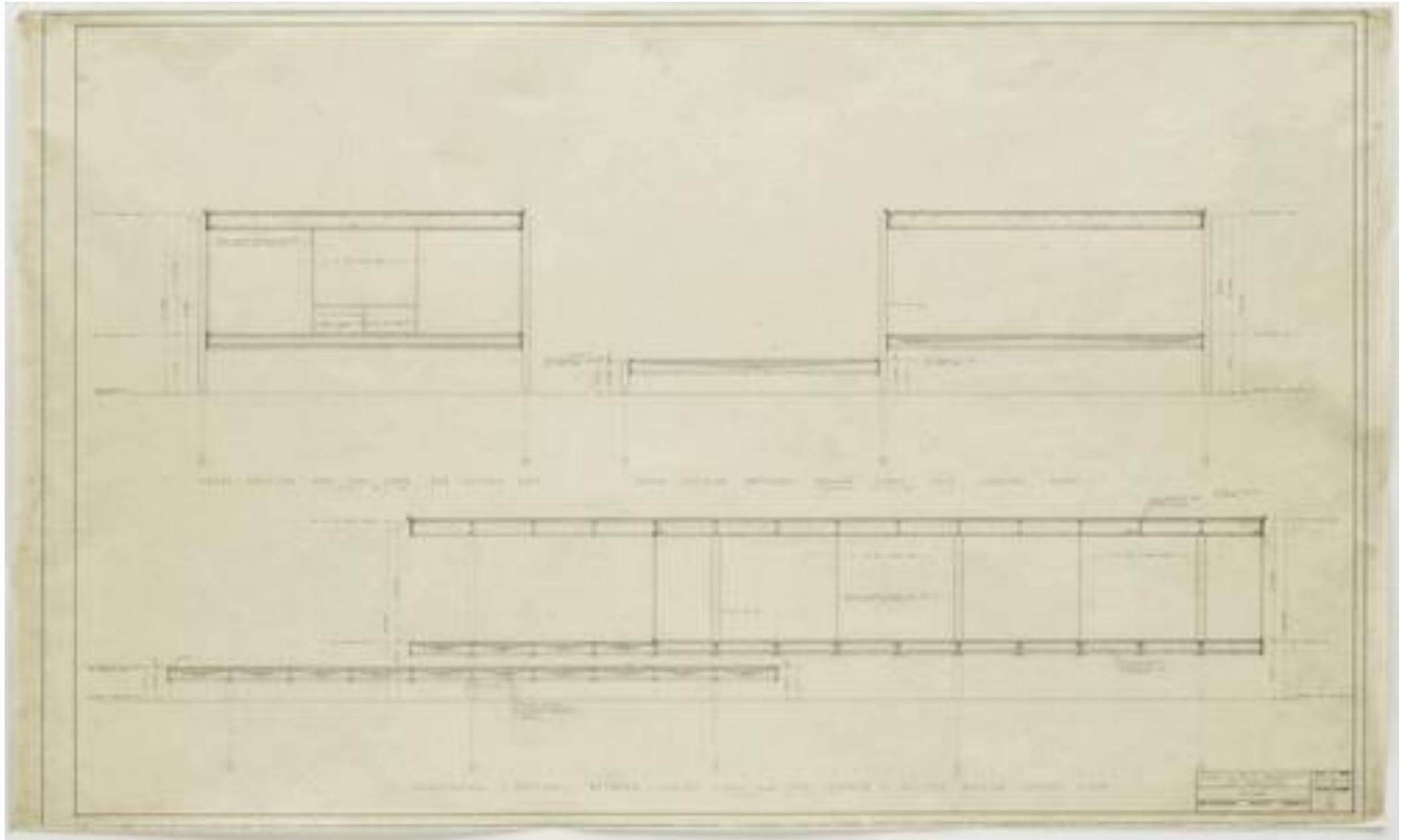


# DRAWING METHODS:



**SKETCH - FREEHAND**

# DRAWING METHODS:



**DRAFTING BY HAND**

# DRAWING METHODS:

**PROJECT:** EDITH FARNSWORTH HOUSE  
**ARCHITECT:** RYAN MATHEWS  
**DATE:** 08/09/2011  
**SCALE:** 1/8" = 1'-0"

**KEYNOTES**

<ul style="list-style-type: none"> <li>1 STRUCTURAL STEEL WIDE FLANGE BEAM</li> <li>2 FIBERGLASS GROUT OVER PRECAST CONCRETE CHANNEL SLAB</li> <li>3 LIGHTWEIGHT CONCRETE FILL</li> <li>4 STRUCTURAL STEEL COLUMN</li> <li>5 STEEL PLANK/WALK PLATE</li> <li>6 METAL LATH AND PLASTER CEILING</li> <li>7 CEILING UTILITY DUCT</li> <li>8 FORM WINDOW</li> </ul>	<ul style="list-style-type: none"> <li>9 ENTRY DOORS BEYOND</li> <li>10 TRANSPARENT STEEL BRACK/SLANDING</li> <li>11 GROUT TO MECHANICAL ROOM</li> <li>12 BRICK/STONE FILL AND TRANSOMING</li> <li>13 CERAMIC TILE</li> <li>14 CERAMIC TILE</li> </ul>
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**WALL LEGEND**

SCALE: NONE	16
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**GENERAL NOTES**

SCALE: NONE	12
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**GENERAL NOTES**

1. VERIFY ALL FIELD CONDITIONS BEFORE FIELD TO BE CONSTRUCTION, IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY.
2. VERIFY ALL FIELD CONDITIONS BEFORE FIELD TO BE CONSTRUCTION, IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY.
3. VERIFY ALL FIELD CONDITIONS BEFORE FIELD TO BE CONSTRUCTION, IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY.
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15. VERIFY ALL FIELD CONDITIONS BEFORE FIELD TO BE CONSTRUCTION, IF ANY DISCREPANCIES ARE FOUND, NOTIFY ARCHITECT IMMEDIATELY.

**KEYNOTES**

SCALE: NONE	4
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# COMPUTER AIDED DRAFTING

# DRAWING STANDARDS:

Standard conventions are essential for clear, unambiguous written, oral, and graphical communication. Drawings are used by a variety of trades to communicate their ideas: engineers, architects, contractors, vendors, fabricators...

**Standards ensure that a drawing conveys the same meaning to all who read them.**

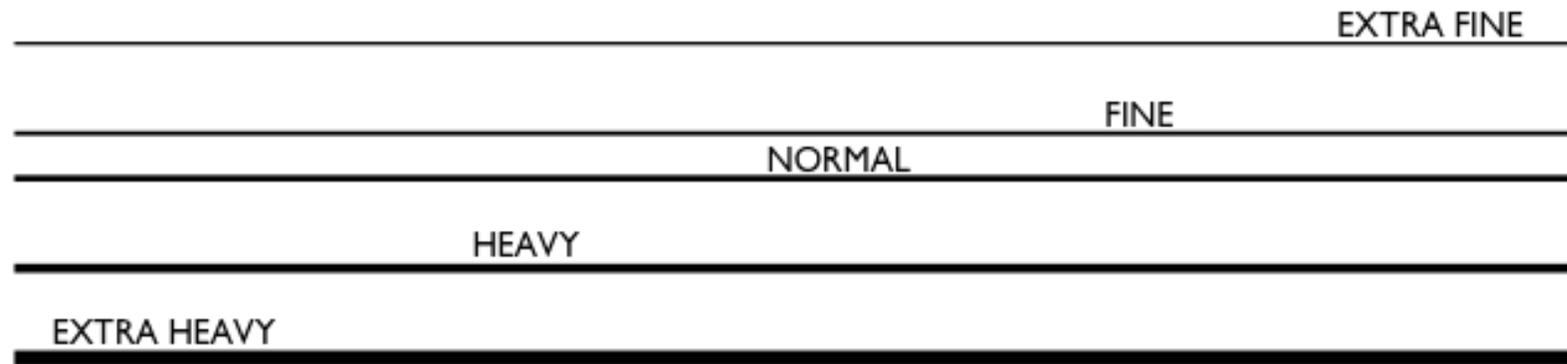
	ESHERICK HOUSE 204 SUNRISE LANE PHILADELPHIA, PA 19118 LOUIS KAHN, 1961
	NOTES:
	NEW YORK CITY COLLEGE OF TECHNOLOGY
	DRAWN BY: YOUR NAME
	DATE:
	SCALE: AS NOTED
	CELLAR PLAN & DETAIL
	A-100

## TITLEBLOCK and SHEET FORMAT

# DRAWING STANDARDS:

## LINEWORK

### LINEWEIGHT



### LINETYPE

#### THIN LINE:



- EDGES IN VIEW
- SURFACE FEATURES

#### NORMAL LINE:



- WALLS IN PLAN
- PRINCIPAL ELEMENTS
- LEADERS
- DIMENSION LINES

#### HEAVY LINE:



- FINISH GRADE
- ELEMENTS CUT IN SECTION

#### CENTERLINE:



- BUILDING CONTROL LINES
- COLUMN CENTERLINES

#### HIDDEN LINE:

(OBJECT NOT SEEN **IN FRONT OF** THE VISION PLANE)



- HIDDEN ELEMENTS
- FOOTINGS

#### OVERHEAD LINE:

(OBJECT NOT SEEN **BEHIND** THE VISION PLANE)



- OVERHANGS
- CABINETS
- CEILING FEATURES

#### PROPERTY LINE:



- PROPERTY LINES
- BUILDING CONTROL LINES

#### MATCH LINE:



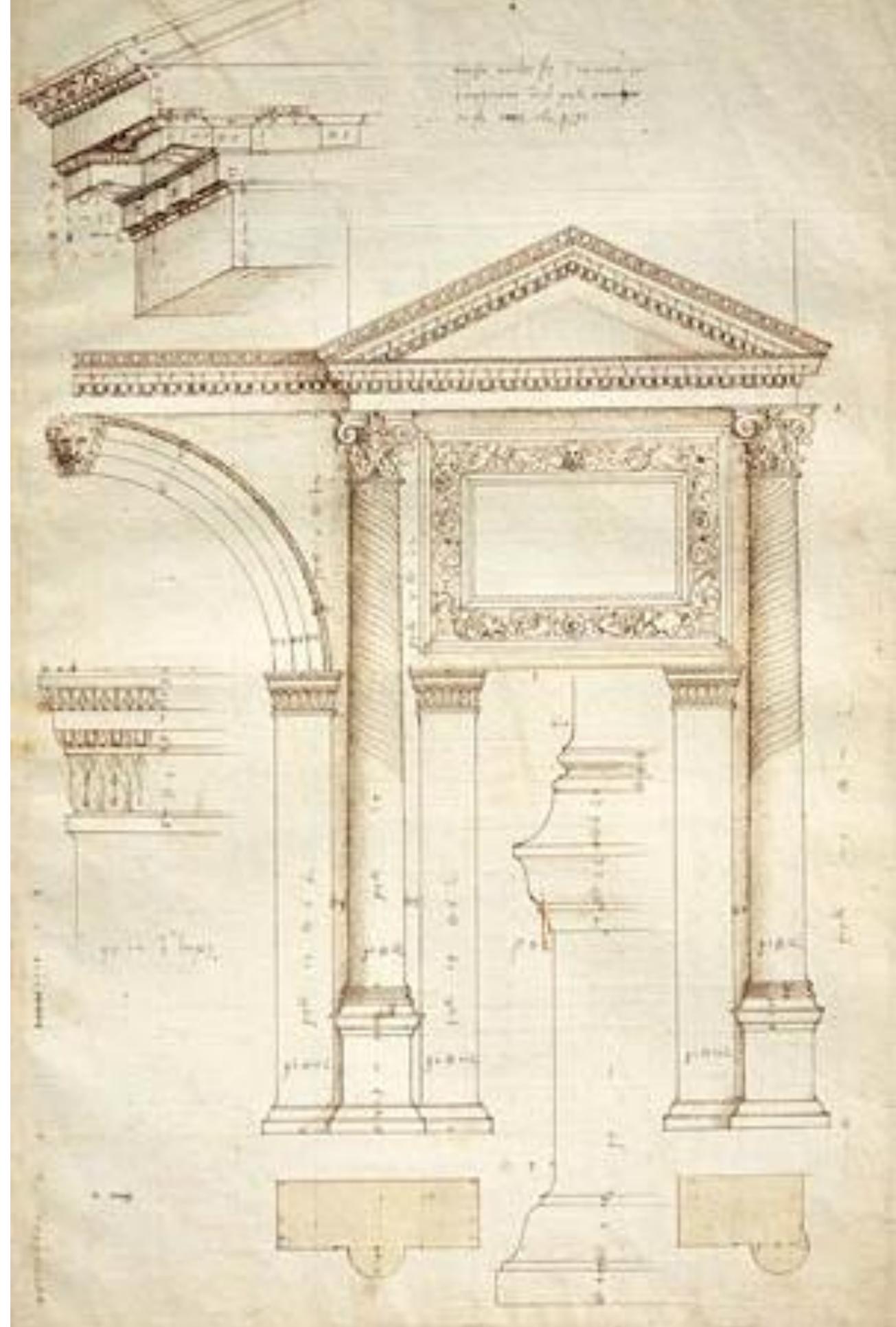
MATCH LINE - SEE SHEET A204

MATCH LINE - SEE SHEET A205

USED TO DIVIDE A DRAWING INTO AREAS  
WHEN DRAWING SIZE EXCEEDS SHEET SIZE

# DRAWING STANDARDS:

**SCALE** - A RATIO THAT  
COMPARES THE  
MEASUREMENTS USED  
IN THE DRAWINGS TO  
THE ACTUAL  
MEASUREMENTS



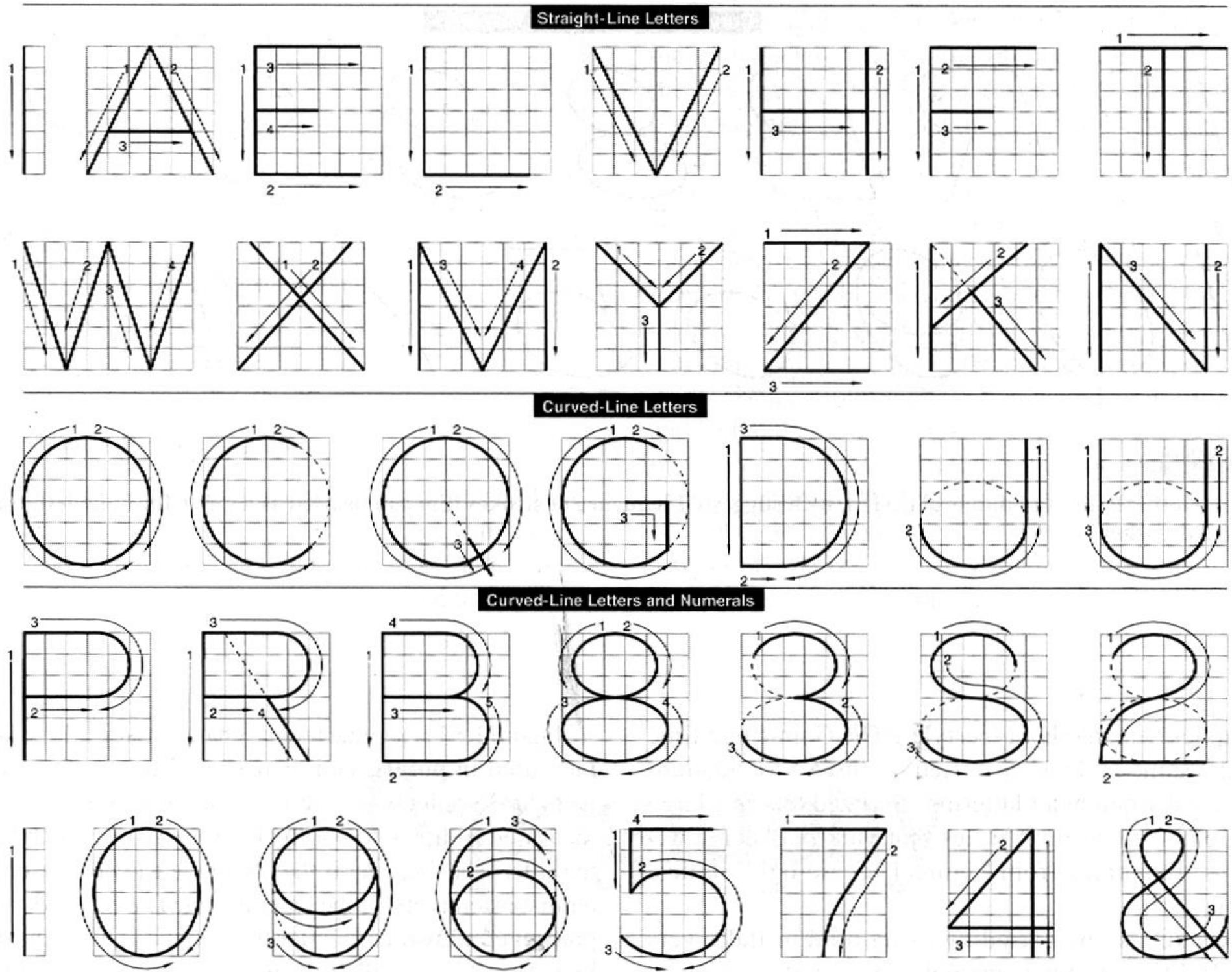
# DRAWING STANDARDS: LETTERING

THE IMPORTANCE OF GOOD LETTERING CANNOT BE OVER-EMPHASIZED. THE LETTERING CAN MAKE OR BREAK AN OTHERWISE GOOD DRAWING.

*PENCIL LETTERING SHOULD BE DONE WITH A FAIRLY SOFT SHARP PENCIL AND SHOULD BE CLEAN-CUT AND DARK. ACCENT THE ENDS OF THE STROKES.*

# LETTERING TECHNIQUE:

USE ONLY CAPITAL LETTERS, SINGLE STROKE GOTHIC TYPE



# LETTERING ERRORS TO AVOID:

ESTIMATE

**GOOD EXAMPLE!**

ESTIMaTE

Letters not uniform in style.

ESTIMATE  
ESTIMATE

Letters not uniform in height.

ESTIMATE  
ESTIMATE

Letters not uniformly vertical or inclined.

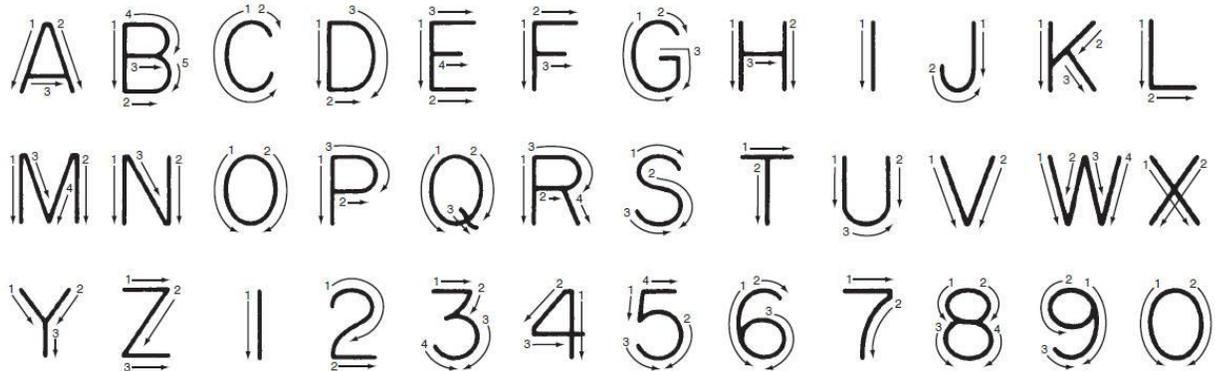
ESTIMATE  
ESTIMATE

Letters not uniform in thickness of stroke.

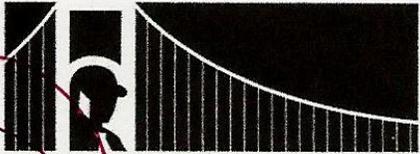
ESTIMATE

Areas between letters not uniform.

# LETTERING ASSIGNMENT



Recommended  
Stroke  
Sequences



**CMCE** New York City College of Technology  
Management & Civil Engineering Technology

Computations for: CMCE 1110 Sheet No. 1 of 1

Made by: NAME Date: DATE

Checked by: \_\_\_\_\_ Date: \_\_\_\_\_

*Handwritten dimensions:* 1/8", 1/4", 1/8" (vertical); 1/2" (horizontal)

A	B	C	D	E	F	G	H	I	J	K	L	M	N
O	P	Q	R	S	T	U	V	W	X	Y	Z		
1	2	3	4	5	6	7	8	9	0				

*Handwritten dimensions:* 1/4", 1/8" (vertical); 1/2" (horizontal)

A	B	C	D	E	F	G	H	I	J				
K	L	M	N	(CONTINUE TO O)									