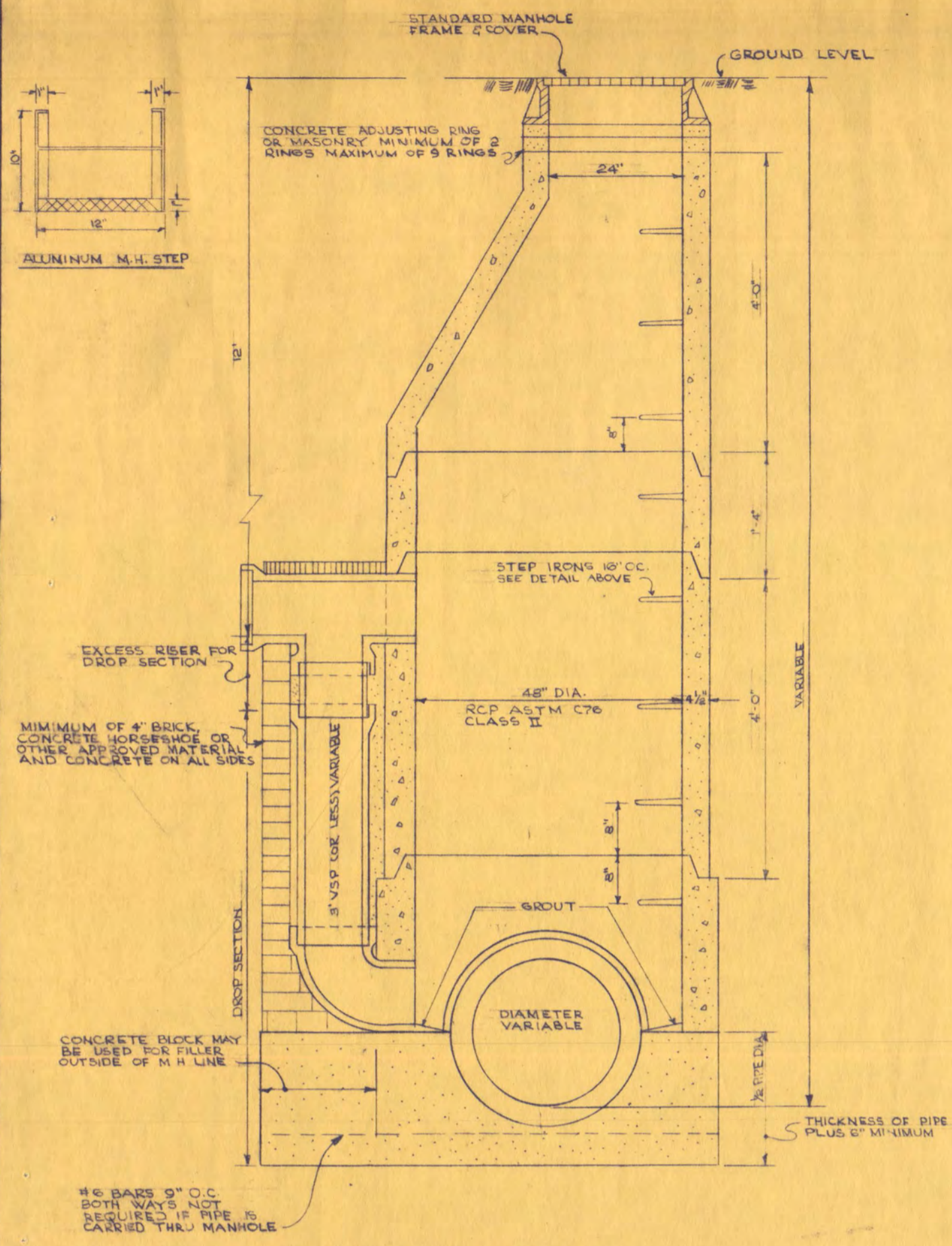


ROOF BEAM SCHEDULE												
MARK	SIZE	B	D	REINFORCING			POSITION OF REINF.	STIRRUPS OR TIES	NO.	SIZE	SPACING EA. END	REMARKS
				NO. SITE	LENGTH	TOP						
RB1	12	42	2	#7	21-3"	✓	C	12	#3	3x3 3/2		
RB2	12	42	2	#7	24-6"	✓	C	12	#3	4		
RB3	12	42	2	#7	21-3"	✓	C	12	#3	4		
RB4	12	42	2	#7	22-6"	✓	C	12	#3	4		
RB5	12	42	2	#7	17-0"	✓	C	6	#3	3x1/2		
RB6	12	42	2	#7	22-6"	✓	C	12	#3	3x3 3/2		
RB7	12	42	2	#7	13-0"	✓	C	6	#3	3x1/2		
RB8	12	42	2	#7	23-6"	✓	C	12	#3	3x3 3/2		
RB9	12	42	2	#7	18-0"	✓	C	12	#3	3x3 3/2		
RB10	12	42	2	#7	17-3"	✓	C	6	#3	3x1/2		
RB11	12	42	2	#7	25-9"	✓	C	12	#3	3x3 3/2		
RB12	12	42	2	#7	18-6"	✓	C	12	#3	3x3 3/2		
RB13	12	22	2	#7	21-6"	✓	C	12	#3	3x3 3/2		
RB14	12	22	2	#7	16-3"	✓	C	12	#3	4		
RB15	12	22	2	#7	16-3"	✓	C	12	#3	4		
RB16	24	18 1/2	2	#7	21-3"	✓	C	12	#3	3x3 3/2		
RB17	24	18 1/2	2	#7	21-3"	✓	C	12	#3	4		
RB18	24	18 1/2	2	#7	21-3"	✓	C	12	#3	4		
RB19	18	18 1/2	2	#7	21-3"	✓	C	6	#3	3x1/2 TIES		
RB20	18	18 1/2	2	#7	21-3"	✓	C	6	#3	4		
RB21	18	18 1/2	2	#7	21-3"	✓	C	6	#3	4		
RB22	24	18 1/2	2	#7	21-3"	✓	C	12	#3	2x3 3/2		
RB23	12	42	2	#7	11-6"	✓	C	6	#3	3x1/2	TOP BAR END AT SOUTH END OF RB24	
RB24	8	20	2	#7	12-4"	✓	C	8	#3	2x2 2x3	SEE RB23 FOR TOP BARS	
RB25	24	18 1/2	2	#7	21-3"	✓	C	12	#3	2x3 3/2	TOP BAR END AT RB22 AT GRID B.	
RB26	18	18 1/2	2	#7	21-3"	✓	C	6	#3	3x1/2 TIES		
RB27	24	18 1/2	2	#7	21-3"	✓	C	12	#3	2x3 3/2	TOP BAR END AT RB22 AT GRID B.	
RB28	24	18 1/2	2	#7	21-3"	✓	C	12	#3	4		
RB29	12	42	2	#7	11-3"	✓	C	6	#3	3x1/2	TOP BAR END AT SOUTH END OF RB30	
RB30	12	42	2	#7	11-3"	✓	C	6	#3	3x1/2	SEE RB29 FOR TOP BARS	
RB31	18	20	2	#7	19-0"	✓	C	6	#3	3x3 3/2		
RB32	24	20	2	#7	19-0"	✓	C	12	#3	6x6 AT CHG. END 4x8 EACH IMPLY		
RB33	16	14 1/2	2	#7	17-6"	✓	C	8	#3	4x1/2 TIES		
RB34	16	14 1/2	2	#7	27-6"	✓	C	14	#3	3x3 3/2		
RB35	16	14 1/2	2	#7	18-0"	✓	C	8	#3	4x1/2 TIES		
RB36	12	14 1/2	2	#7	18-0"	✓	C	6	#3	3x1/2 TIES		
RB37	12	42	2	#7	18-0"	✓	C	6	#3	3x1/2		
RB38	16	14 1/2	2	#7	27-6"	✓	C	14	#3	3x3 3/2	2" x 2 1/2" x 6" END AT NORTH END OF RB39	
RB39	12	42	2	#7	19-6"	✓	C	6	#3	3x1/2		
RB40	12	42	2	#7	27-3"	✓	C	8	#3	4x1/2		
RB41	12	42	2	#7	20-9"	✓	C	8	#3	4x1/2		
RB42	12	42	2	#7	19-6"	✓	C	6	#3	3x1/2		
RB43	12	42	2	#7	12-9"	✓	C	6	#3	3x1/2		
RB44	12	42	2	#7	5-3"	✓	C	6	#3	3x1/2		
RB45	12	42	2	#7	25-0"	✓	C	6	#3	3x1/2		
RB46	12	42	2	#7	20-9"	✓	C	6	#3	3x1/2		
RB47	12	42	2	#7	25-3"	✓	C	6	#3	3x1/2		
RB48	12	42	2	#7	22-9"	✓	C	6	#3	3x1/2		
RB49	12	42	2	#7	20-6"	✓	C	10	#3	5x1/2		
RB50	16	14 1/2	2	#7	19-6"	✓	C	6	#3	3x1/2 TIES		
RB51	16	14 1/2	2	#7	15-9"	✓	C	12	#3	3x3 3/2		
RB52	20	14 1/2	2	#7	22-0"	✓	C	14	#3	3x3 3/2		
RB53	20	14 1/2	2	#7	17-3"	✓	C	6	#3	3x1/2 TIES		
RB54	20	14 1/2	2	#7	22-0"	✓	C	14	#3	3x3 3/2		
RB55	12	42	2	#7	13-0"	✓	C	6	#3	3x1/2		

ROOF JOIST SCHEDULE											
MARK	B	D	REINFORCING			REMARKS					
			STRAIGHT	BENT	TOP						
RJ1	7	16+2 1/2	2" #3 x 33-9		1 1/2" #3 x 33-9	NO TOP BAR AT EXTERIOR END					
RJ2	7	16+2 1/2	2" #3 x 33-3		2" #3 x 33-9	NO TOP BARS AT EACH END.					
RJ3	7	16+2 1/2	2" #3 x 30-3		1 1/2" #3 x 33-9	NO TOP BAR AT EXTERIOR END.					
RJ4	5	16+2 1/2	1" #3 x 33-9		1 1/2" #3 x 33-9	do RJ3					
RJ5	7	16+2 1/2	2" #3 x 33-9		1 1/2" #3 x 33-9	NO TOP BARS AT EXTERIOR END.					
RJ6	7	16+2 1/2	2" #3 x 30-3		2" #3 x 33-9	NO TOP BARS EACH END					
RJ7	6	12+2 1/2	2" #3 x 21-0		1 1/2" #3 x 26-6	NO TOP BAR AT REB.					
RJ8	6	12+2 1/2	2" #3 x 18-6		1 1/2" #3 x 23-0	NO TOP BAR AT EXTERIOR END.					
RJ9	6	12+2 1/2	2" #3 x 18-6		2" #3 x 19-6	NO TOP BARS EACH END					
RJ10	6	12+2 1/2	2" #3 x 7-9		1 1/2" #3 x 13-0	NO TOP BAR AT RB36.					
RJ11	6	12+2 1/2	2" #3 x 18-6		2" #3 x 19-6	do RJ9					
RJ12	9	12+2 1/2	2" #3 x 18-3		1 1/2" #3 x 22-6	NO TOP BAR AT NORTH END					
RJ13	6	12+2 1/2	2" #3 x 18-3		1 1/2" #3 x 22-6	NO TOP BAR AT NORTH END.					
RJ14	11	12+2 1/2	4" #3 x 18-3		2" #3 x 22-6	do RJ13					
RJ15	6	12+2 1/2	2" #3 x 12-0		1 1/2" #3 x 16-9	NO TOP BAR AT HEADER					
RJ16	9	12+2 1/2	2" #3 x 12-7		1 1/2" #3 x 18-0	NO TOP BAR AT EXTERIOR END.					
RJ17	6	12+2 1/2	2" #3 x 12-9		1 1/2" #3 x 18-0	NO TOP BAR AT EXTERIOR END.					
RJ18	11	12+2 1/2	4" #3 x 12-9		2" #3 x 18-0	do RJ17					
RJ19	6	12+2 1/2	2" #3 x 12-9		1 1/2" #3 x 12-9	NO TOP BAR AT EXTERIOR END					
RJ20	7	16+2 1/2	2" #3 x 33-9		1 1/2" #3 x 33-9	NO TOP BAR AT EXTERIOR END AT CORNS.					

NOTE: PROVIDE 2" #3 HORIZ. EXTRA IN ALL 3" x 4" BEAMS AND 2" #4 HORIZ. E.P. EXTRA IN ALL 12" x 24" BEAMS. SEE SHEETS 35 & 36 FOR ADDED TOP BARS AT JOISTS IN CORRIDOR SLABS.

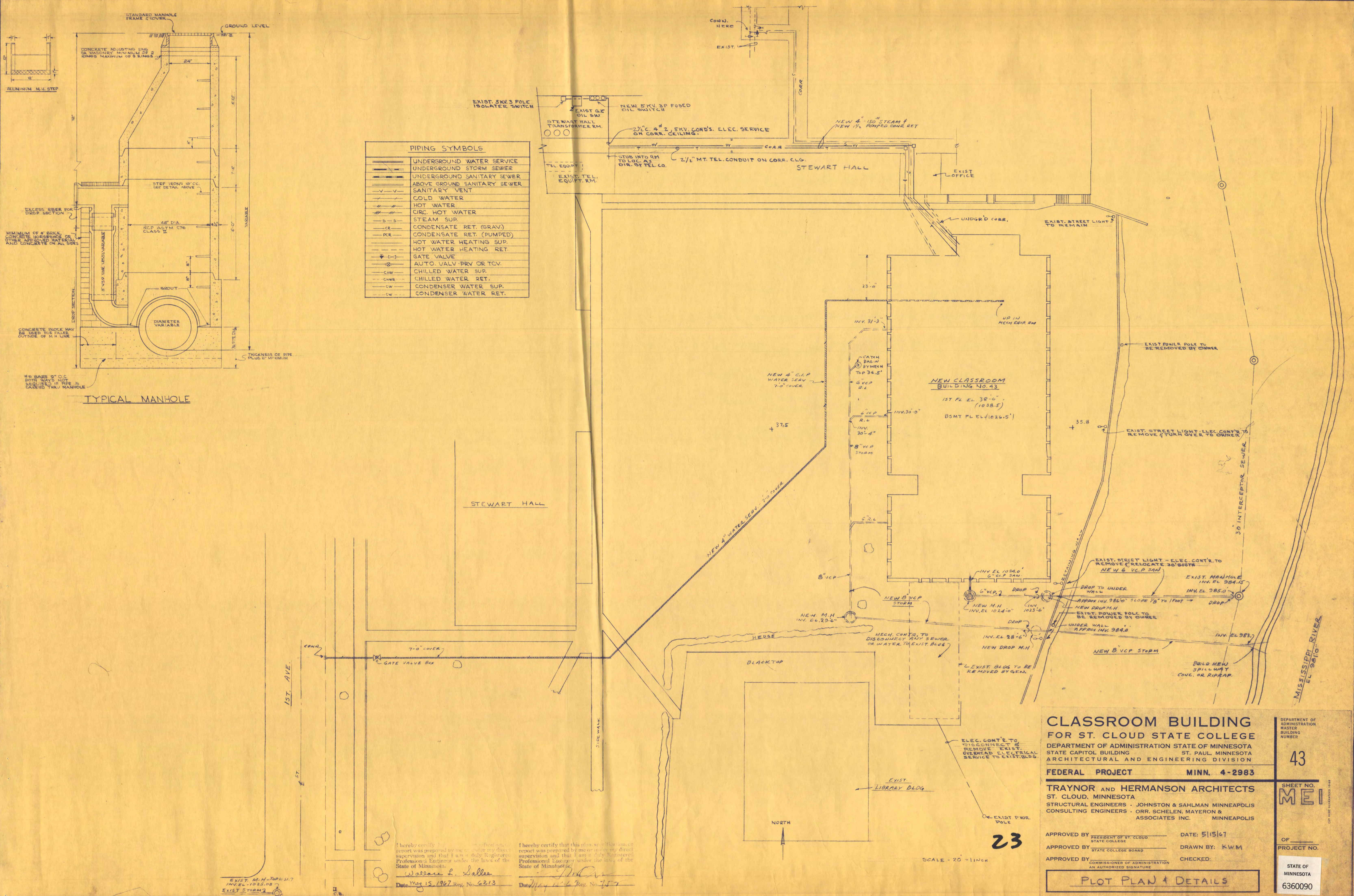
THIRD FLOOR BEAM SCHEDULE												
MARK	SIZE	B	D	REINFORCING			POSITION OF REINF.	STIRRUPS OR TIES	NO.	SIZE	SPACING EA. END	REMARKS
				NO. SITE	LENGTH	TOP						
3B1	8	42	1	#8	21-9"	✓	C	14	#3	2x4 3x3 2x1/2		
3B2	8	42	1	#8	16-3"	✓	C	14	#3	4		
3B3	8	42	1	#8	21-9"	✓	C	14	#3	4		
3B4	8	42	1	#8	22-9"	✓	C	12	#3	3x3 3x1/2		
3B5	8	42	1	#8	17-3"	✓	C	4	#3	2x1/2		
3B6	8	42	1	#8	17-3"	✓	C	12	#3	3x3 3x1/2		
3B7	8	42	1	#8	18-0"	✓	C	10	#3	3x4 2x3		
3B8	8	42	1	#8	11-6"	✓	C	6	#3	3x1/2		
3B9	8	42	1	#8	23-9"	✓	C	6	#3	3x1/2		
3B10	8	42	1	#8	18-0"	✓	C	6	#3	3x1/2		
3B11	8	42	1	#8	25-9"	✓	C	6	#3	3x1/2		
3B12	8	42	1	#8	16-3"	✓	C	6	#3	3x1/2		
3B13	12	42	2	#7	13-0"	✓	C	6	#3	3x1/2		
3B14	12	22	2	#7	21-6"	✓	C	16	#3	3x3 3x3 2x1/2		
3B15	12	22	2	#7	16-3"	✓	C	16	#3	4		
3B16	12	22	2	#7	24-6"	✓	C	16	#3	4		
3B17	30	18 1/2	7	#6	21-3"	✓	C	14	#3	2x4 3x3 2x1/2		
3B18	30	18 1/2	7	#6	16-3"	✓	C	14	#3	4		
3B19	30	18 1/2	7	#6	24-6"	✓	C	14	#3	4		
3B20	21	18 1/2	5	#6	16-3"	✓	C	12	#3	2x4 2x3 2x1/2		
3B21	21	18 1/2	5	#6	24-6"	✓	C	12	#3	4		
3B22	21	18 1/2	5	#6	16-3"	✓	C	12	#3	4		
3B23	18	22	2	#7	24-6"	✓	C	18	#3	4x4 3x3 2x1/2		
3B24	12	42	2	#7	11-6"	✓	C	6	#3	3x1/2		
3B25	8	20	2	#7	15-0"	✓	C	10	#3	2x4 3x3		
3B26	30	18 1/2	3	#6	21-3"	✓	C	14	#3	2x4 3x3 2x1/2		
3B27	28	14 1/2	4	#6	24-6"	✓	C	8	#3	2x4 2x1/2		
3B28	28	14 1/2	4	#6	18-0"	✓	C	3	#3	2x4 2x1/2 TIES		
3B29	28	14 1/2	4	#6	18-0"	✓	C	3	#3	2x4 2x1/2 TIES		
3B30	8	24	2	#7	18-0"	✓	C	10	#3	2x4 3x3		
3B31	28	14 1/2	4	#6	27-6"	✓	C	10	#3	2x4 3x1/2 TIES	2x4x6" TOP BARS IN 2 LAYERS WITH TOP BARS OF 3B32.	
3B32	12	42	1	#8	27-3"	✓	C	8	#3	4x1/2		
3B33	12	42	1	#8	27-3"	✓	C	8	#3	4x1/2		
3B34	8	42	1	#8	19-6"	✓	C	6	#3	3x1/2		
3B35	8	42	1	#8	23-0"	✓	C	6	#3	3x1/2		
3B36	12	42	3	#7	5-3"	✓	C					
3B37	12	42	1	#8	25-0"	✓	C	6	#3	3x1/2		
3B38	12	42	1	#8	20-9"	✓	C	6	#3	3x1/2		
3B39	12	42	3	#7	5-3"	✓	C					
3B40	8	42	1	#8	23-0"	✓	C					
3B41	8	26	2	#9	22-0"	✓	C	14	#3	2x4 3x3 2x1/2		



TYPICAL MANHOLE

PIPING SYMBOLS

(Symbol)	UNDERGROUND WATER SERVICE
(Symbol)	UNDERGROUND STORM SEWER
(Symbol)	UNDERGROUND SANITARY SEWER
(Symbol)	ABOVE GROUND SANITARY SEWER
(Symbol)	SANITARY VENT
(Symbol)	COLD WATER
(Symbol)	HOT WATER
(Symbol)	CIRC. HOT WATER
(Symbol)	STEAM SUP.
(Symbol)	CONDENSATE RET. (GRAV.)
(Symbol)	CONDENSATE RET. (PUMPED)
(Symbol)	HOT WATER HEATING SUP.
(Symbol)	HOT WATER HEATING RET.
(Symbol)	GATE VALVE
(Symbol)	AUTO. VALV. PRV OR TCV.
(Symbol)	CHILLED WATER SUP.
(Symbol)	CHILLED WATER RET.
(Symbol)	CONDENSER WATER SUP.
(Symbol)	CONDENSER WATER RET.



**CLASSROOM BUILDING FOR ST. CLOUD STATE COLLEGE**

DEPARTMENT OF ADMINISTRATION  
STATE CAPITOL BUILDING ST. PAUL, MINNESOTA  
ARCHITECTURAL AND ENGINEERING DIVISION

FEDERAL PROJECT MINN. 4-2983

TRAYNOR and HERMANSON ARCHITECTS  
ST. CLOUD, MINNESOTA  
STRUCTURAL ENGINEERS - JOHNSTON & SAHLMAN MINNEAPOLIS  
CONSULTING ENGINEERS - ORR, SCHELEN, MAYERON & ASSOCIATES INC. MINNEAPOLIS

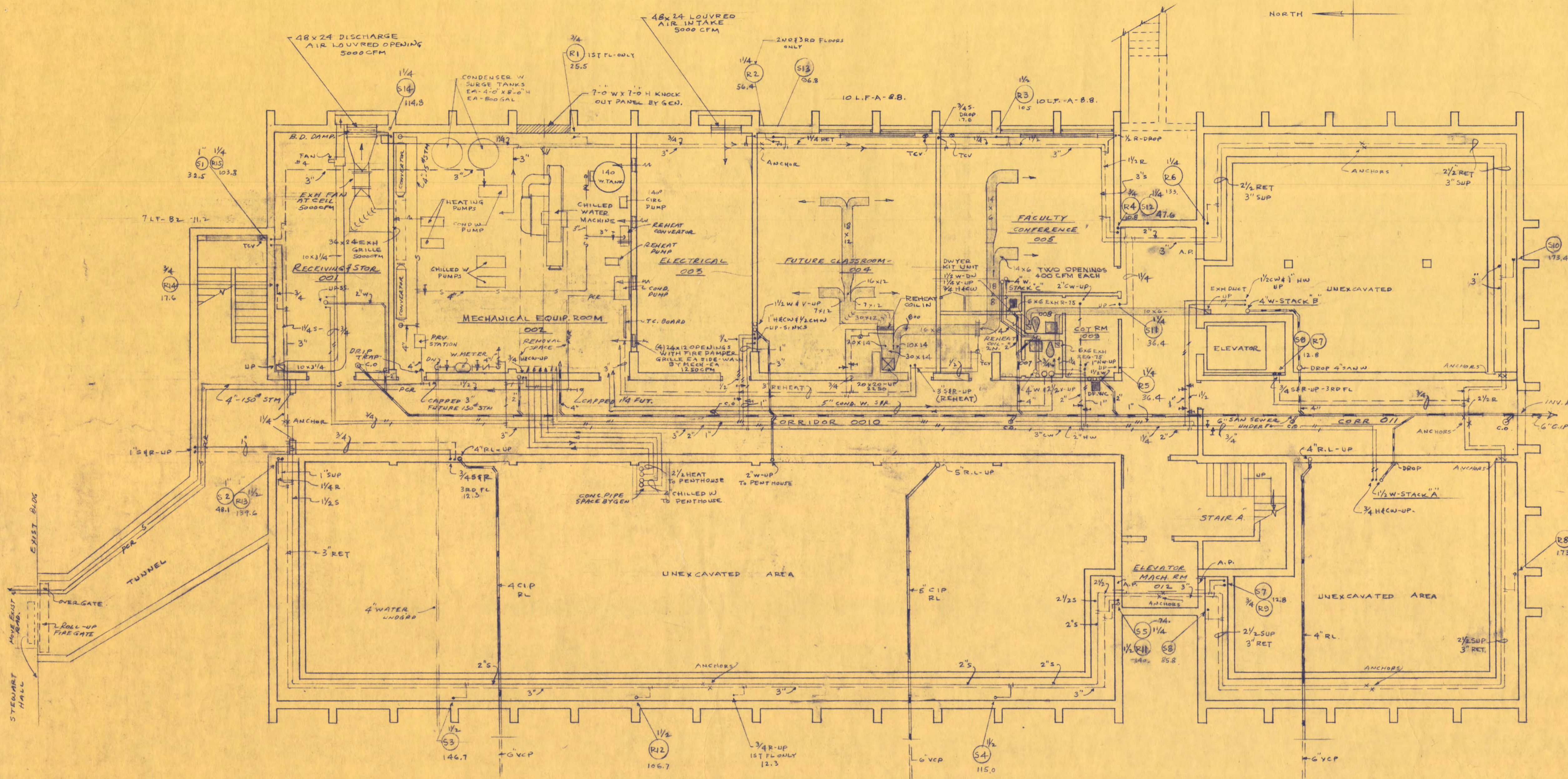
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APPROVED BY: \_\_\_\_\_ DRAWN BY: KWM  
APPROVED BY: \_\_\_\_\_ CHECKED: \_\_\_\_\_

23  
SCALE - 20' = 1" INCH  
**PLOT PLAN & DETAILS**

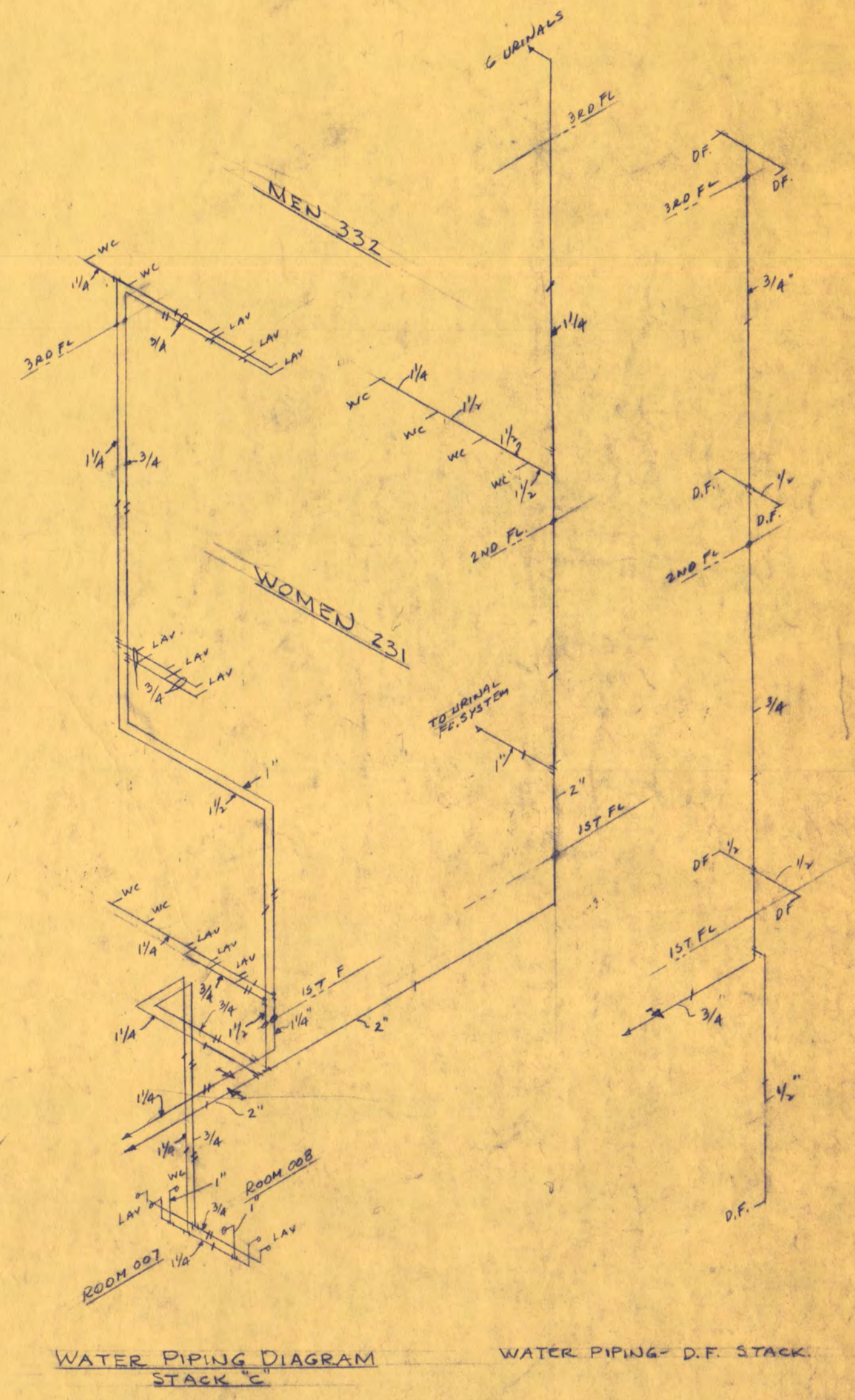
DEPARTMENT OF ADMINISTRATION  
MASTER BUILDING NUMBER  
**43**  
SHEET NO. **MEI**  
OF \_\_\_\_\_ PROJECT NO. \_\_\_\_\_  
STATE OF MINNESOTA  
6360090

I hereby certify that this plot plan and details report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
Wallace L. Lalleu  
Date May 15, 1967 Reg. No. 6213

I hereby certify that this plot plan and details report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.  
Date May 15, 1967 Reg. No. 787



**BASEMENT FLOOR PLAN**  
 PLUMBING, HEATING, AIR CONDITIONING  
 1/8" = 1'-0"



**WATER PIPING DIAGRAM**  
 WATER PIPING - D.F. STACK

**CLASSROOM BUILDING**  
 FOR ST. CLOUD STATE COLLEGE  
 DEPARTMENT OF ADMINISTRATION STATE OF MINNESOTA  
 STATE CAPITOL BUILDING ST. PAUL, MINNESOTA  
 ARCHITECTURAL AND ENGINEERING DIVISION

DEPARTMENT OF ADMINISTRATION  
 MASTER BUILDING NUMBER

43

FEDERAL PROJECT MINN. 4-2983

TRAYNOR AND HERMANSON ARCHITECTS  
 ST. CLOUD, MINNESOTA  
 STRUCTURAL ENGINEERS - JOHNSTON & SAHLMAN MINNEAPOLIS  
 CONSULTING ENGINEERS - ORR, SCHELEN, MAYERON & ASSOCIATES INC. MINNEAPOLIS

SHEET NO. M2

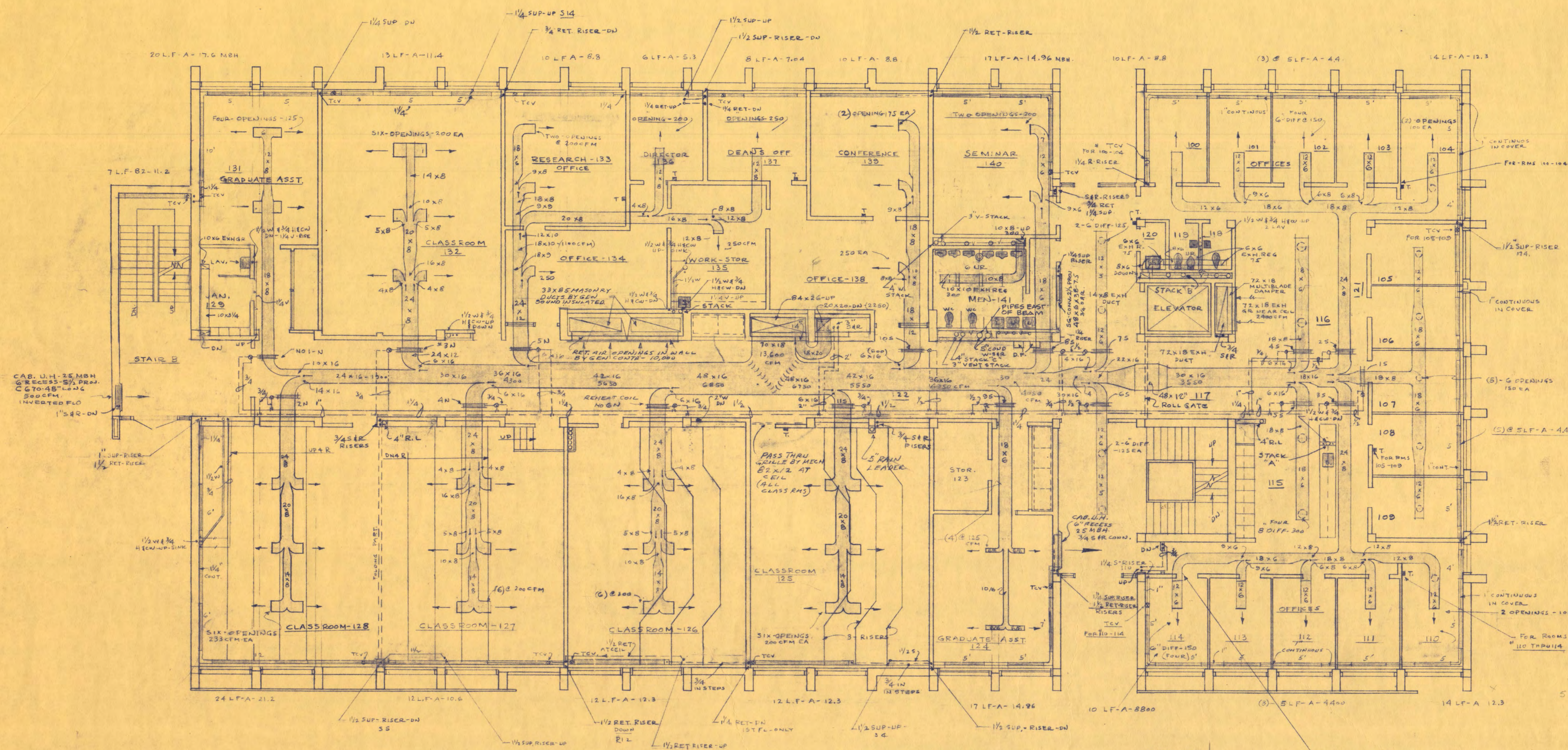
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 APPROVED BY: \_\_\_\_\_ DRAWN BY: KWM  
 APPROVED BY: \_\_\_\_\_ CHECKED: \_\_\_\_\_

OF PROJECT NO.

STATE OF MINNESOTA  
 6360090

**BASEMENT PLAN**

24



**FIRST FLOOR PLAN**  
 PLUMBING, HEATING, AIR CONDITIONING  
 1/8" = 1'-0"

**SCHEDULE OF FIN RADIATION**

MARKED A-1 1/4" X 3/4" FIN-40-02B 1 ROW-12" HIGH COVER-880 BTU RATING  
 MARKED A-2 1/4" X 3/4" FIN-40-02B 2 ROW-18" HIGH COVER-1240 BTU RATING  
 MARKED B-1 1/4" X 1/4" FIN-40-02B 1 ROW-18" HIGH COVER-1270 BTU RATING  
 MARKED B-2 1/4" X 1/4" FIN-40-02B 2 ROW-18" HIGH COVER-1780 BTU RATING  
 ALL COVERS WALL TO WALL-BAKED ENAMEL FINISH-ACCESS SECTIONS AT TCV.  
 ALL RATINGS WITH AV. W.T. 180°-CORRECTED FOR VEL. & 75° EAT. 20° T.D.

NOTE: VENTL-WHERE OPENINGS ARE SHOWN-USE VOL DAMPERS-GEN CONTR TO FURNISH PERFORATED CEIL OF PROPER DESIGN FOR VELOCITIES

INSULATE ALL DUCTS TO REHEAT COILS ONLY (60TEMP)  
 INSULATE ALL REHEAT WATER PIPING ONLY

NOTE: FURNISH ALL METAL PASS THRU GRILLES FROM CLASS ROOMS TO CORR. # AS SHOWN-REFER TO ARCH. PLANS

**CLASSROOM BUILDING**  
 FOR ST. CLOUD STATE COLLEGE  
 DEPARTMENT OF ADMINISTRATION STATE OF MINNESOTA  
 STATE CAPITOL BUILDING ST. PAUL, MINNESOTA  
 ARCHITECTURAL AND ENGINEERING DIVISION

DEPARTMENT OF ADMINISTRATION  
 MASTER BUILDING NUMBER  
**43**

**TRAYNOR AND HERMANSON ARCHITECTS**  
 ST. CLOUD, MINNESOTA  
 STRUCTURAL ENGINEERS - JOHNSTON & SAHLMAN MINNEAPOLIS  
 CONSULTING ENGINEERS - ORR, SCHELEN, MAYERSON & ASSOCIATES INC. MINNEAPOLIS

SHEET NO.  
**M3**

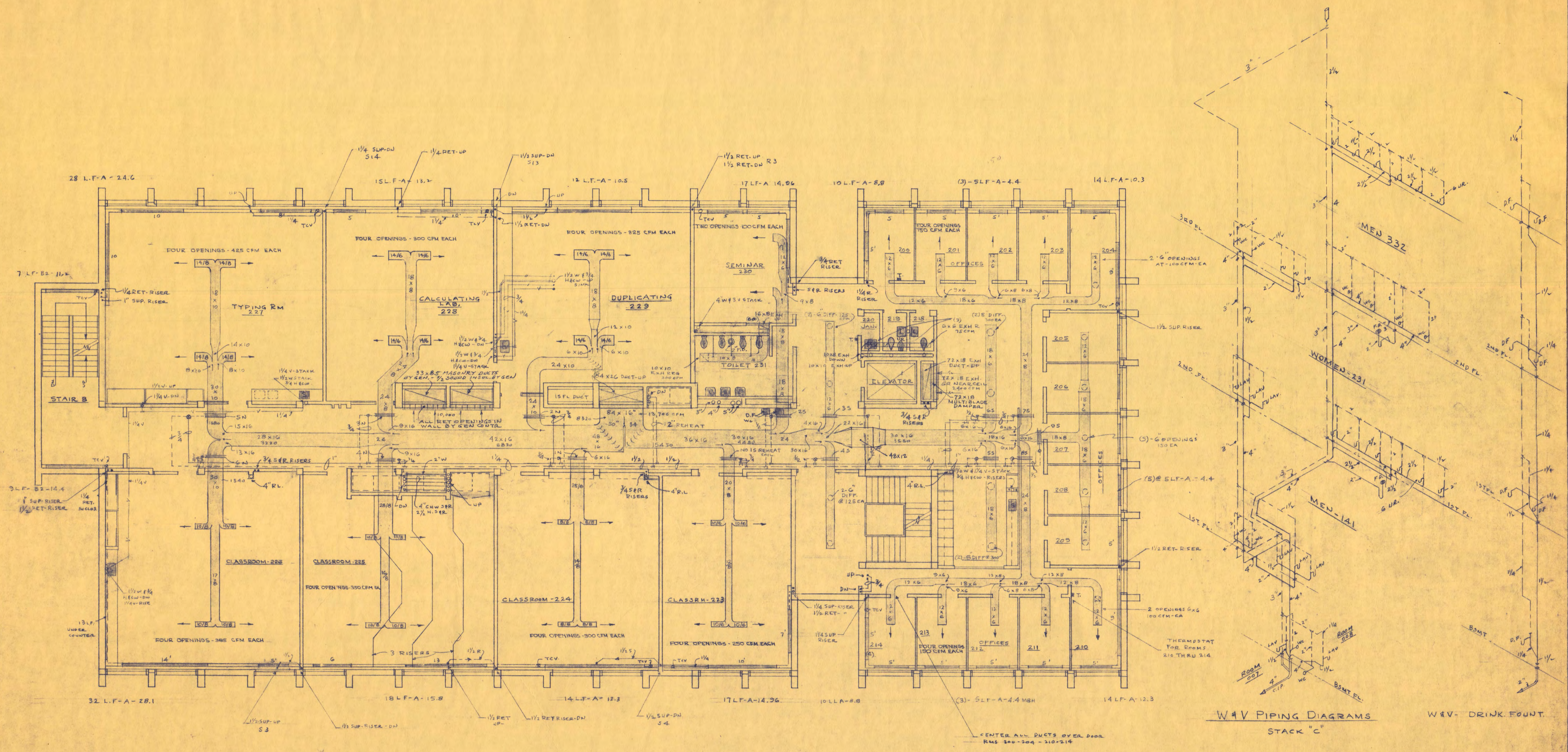
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 APPROVED BY: \_\_\_\_\_ DRAWN BY: KWM  
 APPROVED BY: \_\_\_\_\_ CHECKED: \_\_\_\_\_

OF PROJECT NO.

**FIRST FLOOR PLAN**

STATE OF MINNESOTA  
 6360090

25



SECOND FLOOR PLAN  
 PLUMBING, HEATING & AIR CONDITIONING  
 1/8" = 1'-0"

**CLASSROOM BUILDING**  
 FOR ST. CLOUD STATE COLLEGE  
 DEPARTMENT OF ADMINISTRATION STATE OF MINNESOTA  
 STATE CAPITOL BUILDING ST. PAUL, MINNESOTA  
 ARCHITECTURAL AND ENGINEERING DIVISION

DEPARTMENT OF  
 ADMINISTRATION  
 MASTER  
 BUILDING  
 NUMBER

43

TRAYNOR AND HERMANSON ARCHITECTS  
 ST. CLOUD, MINNESOTA  
 STRUCTURAL ENGINEERS - JOHNSTON & SAHLMAN MINNEAPOLIS  
 CONSULTING ENGINEERS - ORR, SCHELEN, MAYERSON &  
 ASSOCIATES INC. MINNEAPOLIS

SHEET NO.  
 M4

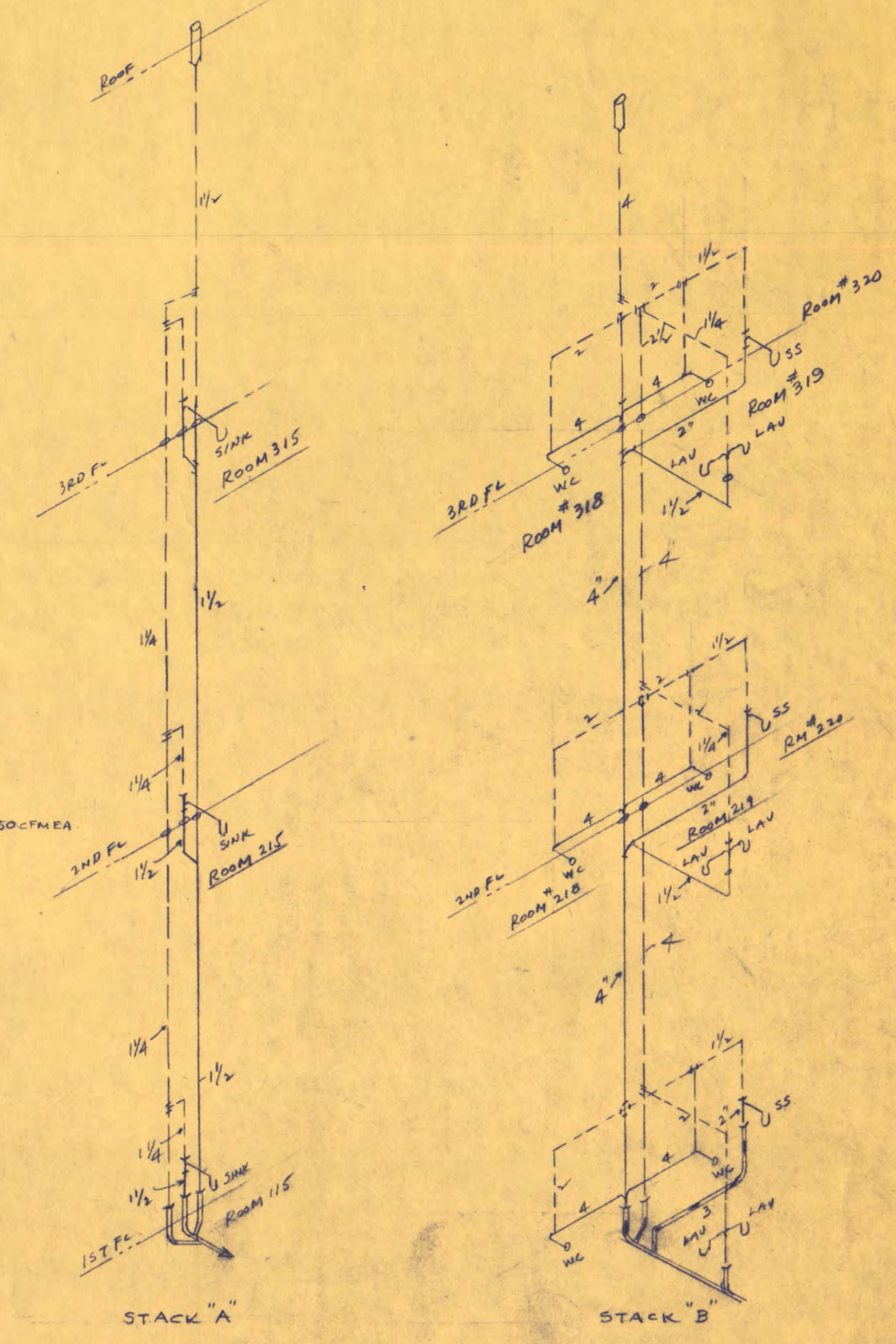
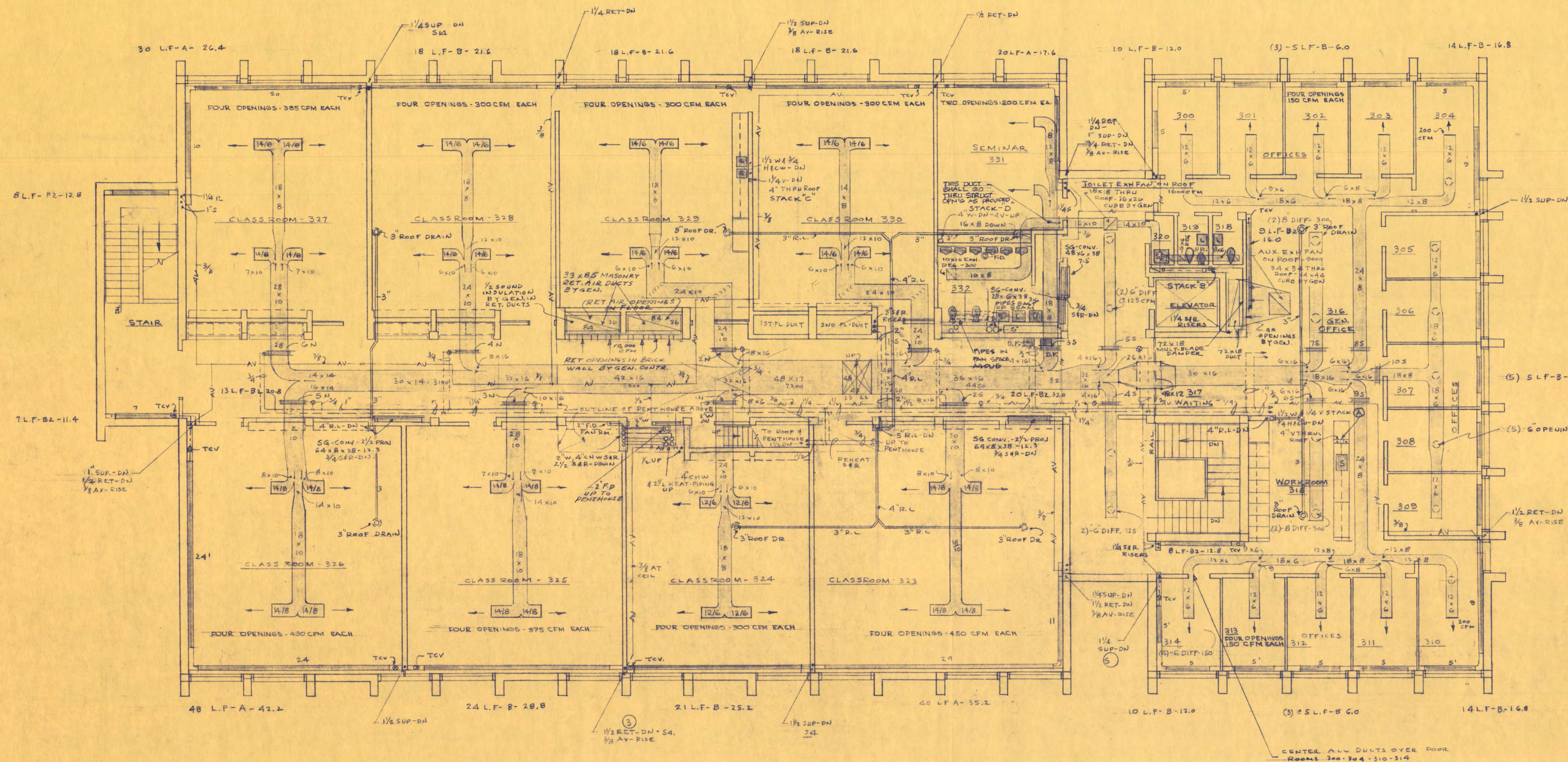
OF 8  
 PROJECT NO.

APPROVED BY: PRESIDENT OF ST. CLOUD STATE COLLEGE DATE: 5/15/67  
 APPROVED BY: STATE COLLEGE BOARD DRAWN BY: KWM  
 APPROVED BY: COMMISSIONER OF ADMINISTRATION AN AUTHORIZED SIGNATURE CHECKED:

STATE OF MINNESOTA  
 6360090

SECOND FLOOR PLAN

26



THIRD FLOOR PLAN  
 PLUMBING, HEATING & AIR CONDITIONING  
 1/8" = 1'-0"

**CLASSROOM BUILDING**  
 FOR ST. CLOUD STATE COLLEGE  
 DEPARTMENT OF ADMINISTRATION STATE OF MINNESOTA  
 STATE CAPITOL BUILDING ST. PAUL, MINNESOTA  
 ARCHITECTURAL AND ENGINEERING DIVISION

DEPARTMENT OF  
 ADMINISTRATION  
 MASTER  
 BUILDING  
 NUMBER

43

TRAYNOR AND HERMANSON ARCHITECTS  
 ST. CLOUD, MINNESOTA  
 STRUCTURAL ENGINEERS - JOHNSTON & SAHLMAN MINNEAPOLIS  
 CONSULTING ENGINEERS - ORR, SCHELEN, MAYERSON & ASSOCIATES INC. MINNEAPOLIS

SHEET NO.  
**M5**

OF  
 PROJECT NO.

APPROVED BY \_\_\_\_\_ DATE: 5/15/47  
 STATE COLLEGE  
 APPROVED BY \_\_\_\_\_ DRAWN BY:  
 STATE COLLEGE BOARD  
 APPROVED BY \_\_\_\_\_ CHECKED:  
 COMMISSIONER OF ADMINISTRATION  
 AN AUTHORIZED SIGNATURE

THIRD FLOOR PLAN

STATE OF  
 MINNESOTA  
 6360090

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