

LEGEND			
[Symbol]	FILL	[Symbol]	SANDY CLAY
[Symbol]	COBBLE ROCK	[Symbol]	CLAYSTONE

LOG OF BORINGS

MATERIALS SYMBOLS		ABBREVIATIONS	
[Symbol]	CONCRETE IN SECTION	CONC.	CONCRETE
[Symbol]	GRAVEL FILL IN SECTION	GYP. BRD.	GYPSUM BOARD
[Symbol]	EARTH IN SECTION	ELEV. EL.	ELEVATION
[Symbol]	CONCRETE OR GYPSUM BOARD IN ELEV.	W.W.F.	WELDED WIRE FABRIC.
[Symbol]	CONCRETE BLOCK IN SECTION	MIN.	MINIMUM
[Symbol]	EXISTING CONTOUR OR ELEVATION	TYP.	TYPICAL
[Symbol]	RIGID INSULATION	INSUL.	INSULATION
[Symbol]	WOOD IN SECTION NOT PLYWOOD	EXIST.	EXISTING
[Symbol]	WOOD IN SECTION	T.O.	TOP OF
[Symbol]	GYPSUM BOARD IN SECTION	B.O.	BOTTOM OF
[Symbol]	PLYWOOD IN SECTION	DET.	DETAIL
[Symbol]	PARTICLE BOARD IN SECTION	FIN.	FINISH
[Symbol]	METAL IN ELEVATION OR DUBBED BASE	BRG.	BEARING
		SPEC.	SPECIFICATIONS
		G.I.	GALVANIZED IRON
		REIN.	REINFORCE
		CONC.	CONNECTION
		SHT.	SHEET
		H.M.	HOLLOW METAL

SHEET INDEX	
A1	PLOT PLAN, INDEX, SOIL LOG
A2	FLOOR PLAN
A3	ELEVATIONS, DETAILS, OPENING SCHEDULE
A4	SECTIONS, DETAILS
S1	FOOTING & FOUNDATION PLAN & DETAILS
S2	ROOF FRAMING PLAN & DETAILS
M1	MECHANICAL PLANS & DETAILS
E1	ELECTRICAL PLANS & DETAILS

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE \_\_\_\_\_

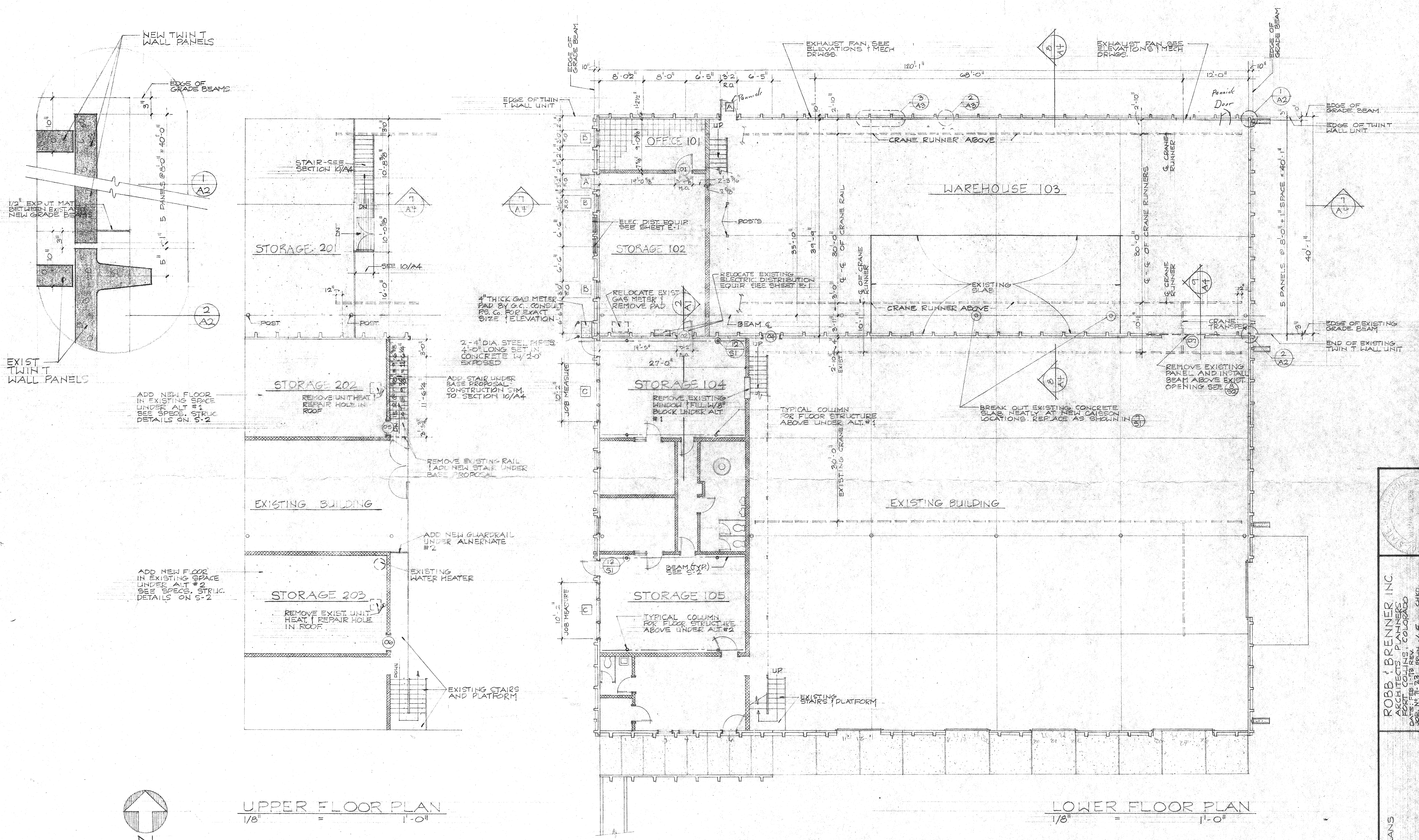
set 2

ROBB & BRENNER INC.  
ARCHITECTS - PLANNERS  
3400 W. 10TH AVENUE, DENVER, CO 80202  
PHONE: 333-1111 FAX: 333-1111

SITE PLAN - ABBREVIATIONS LOG OF BORINGS

AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY  
1450 W. 14TH AVENUE, LOVELAND, CO 80530

1



UPPER FLOOR PLAN  
1/8" = 1'-0"

LOWER FLOOR PLAN  
1/8" = 1'-0"

ROOM FINISH SCHEDULE

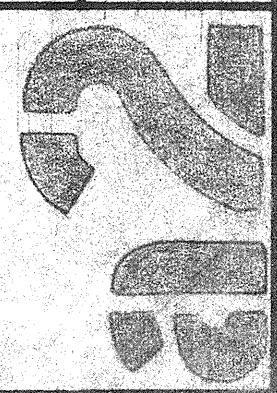
NO.	NAME	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	OTHER	REMARKS
101	OFFICE	A	B	E <sub>3</sub>	C <sub>5</sub>	C <sub>5</sub>	E <sub>5</sub>	F <sub>5</sub>		TROWEL FINISH TEE PANELS TO B-4"
102	STORAGE	D <sub>HS</sub>		C <sub>5</sub>	C <sub>5</sub>	G <sub>5</sub>	E <sub>5</sub>	F <sub>5</sub>		TROWEL FINISH TEE PANELS TO B-4"
103	WAREHOUSE	D <sub>HS</sub>		E <sub>5</sub>	E <sub>5</sub>	G <sub>5</sub>	I <sub>5</sub>	E <sub>5</sub>		
104	STORAGE (EXIST BLDG)	G		E	H	H	E <sub>5</sub> J	F <sub>5</sub>		
105	STORAGE	G		H	H	H	E <sub>5</sub> J	F <sub>5</sub>		
201	STORAGE	C <sub>HS</sub>		E <sub>5</sub>			E <sub>5</sub>	E <sub>5</sub>		
202	STORAGE (ALT #1)	L <sub>HS</sub>		E <sub>5</sub>	H	H	E <sub>5</sub>	E <sub>5</sub>		
203	STORAGE (ALT #2)	D <sub>HS</sub>		H	H	H	E <sub>5</sub>	E <sub>5</sub>		

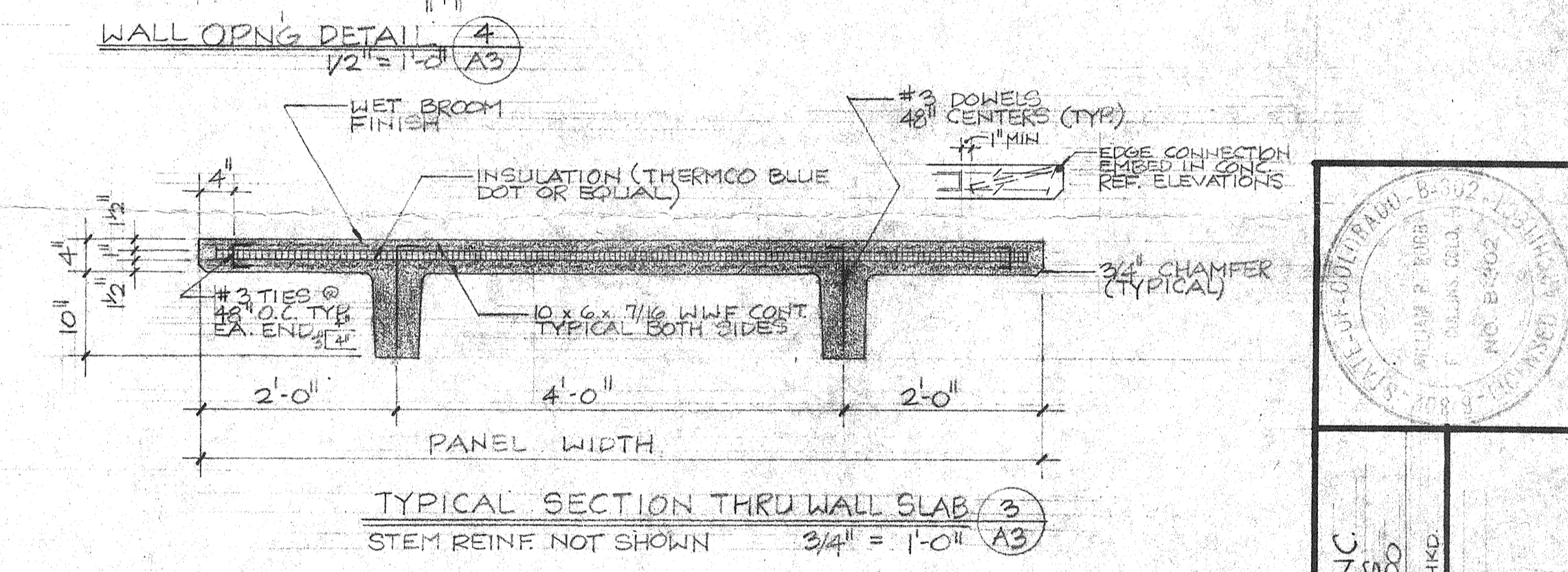
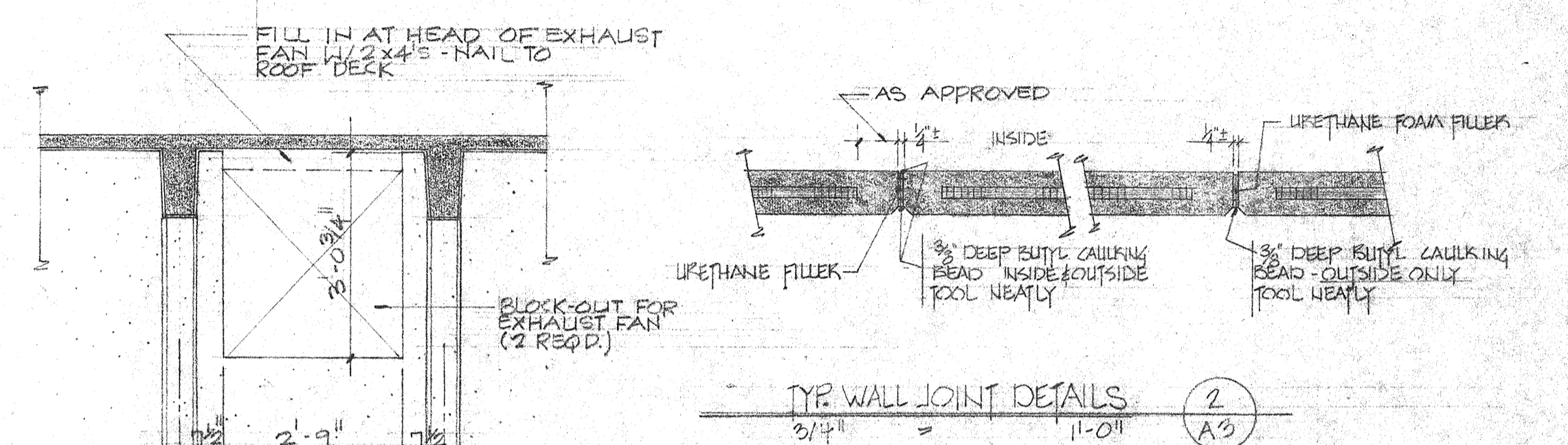
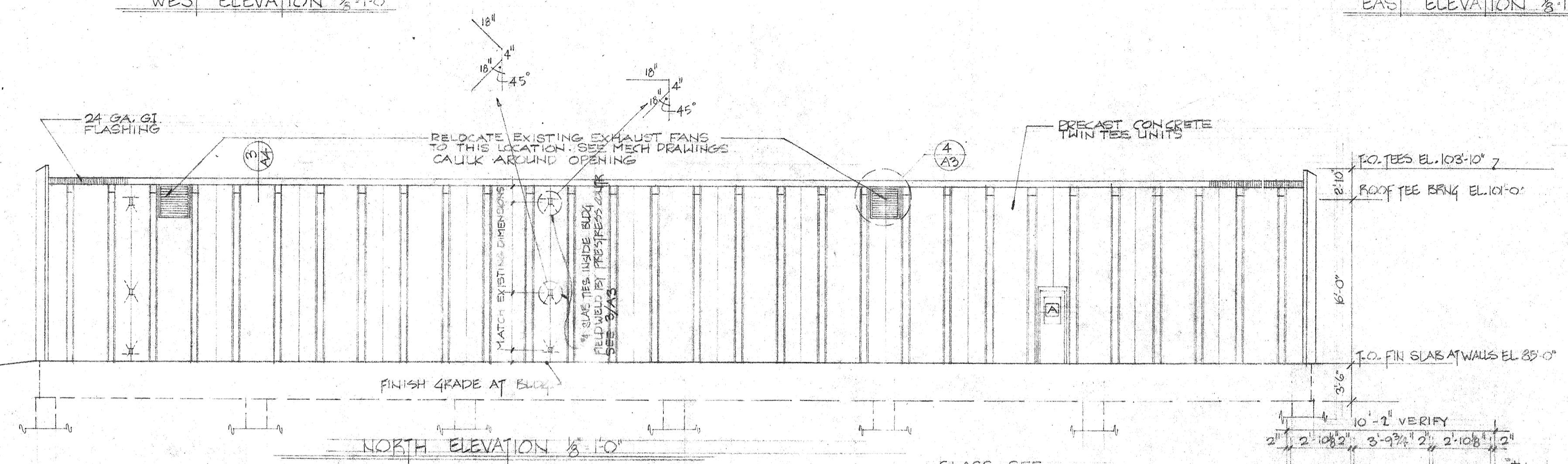
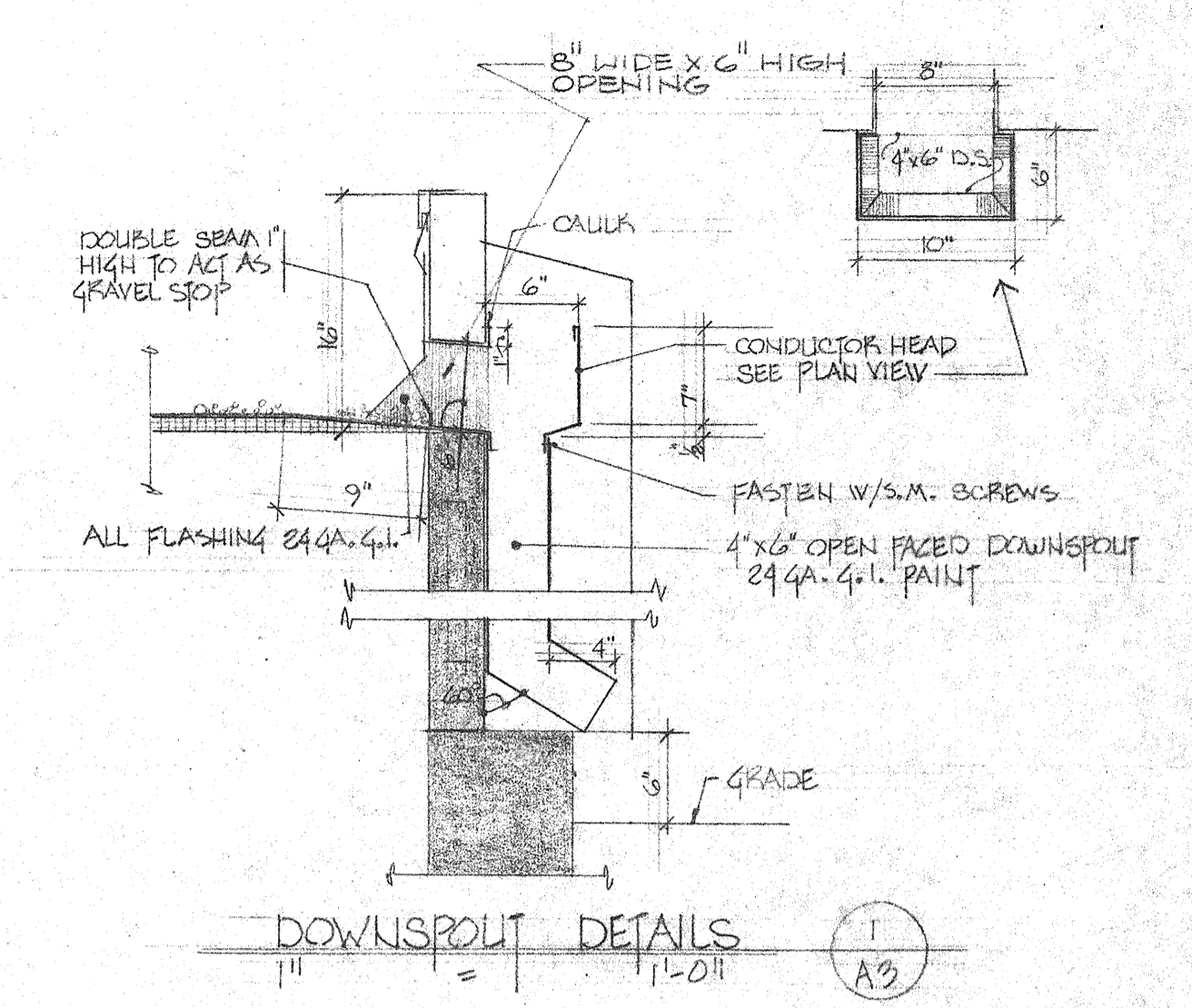
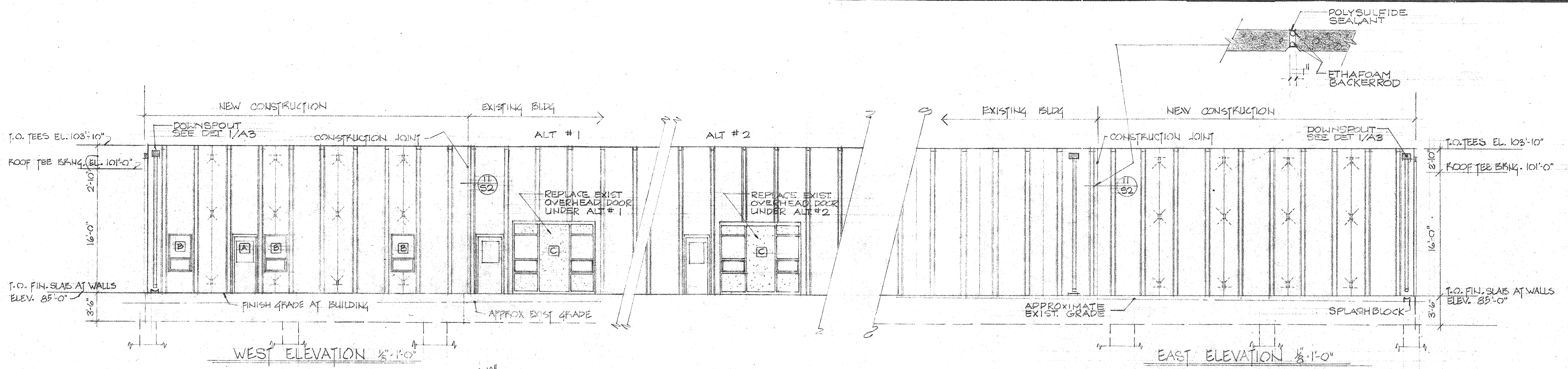
LEGEND

KEY	GENERAL NOTES
A - VINYL ASBESTOS TILE	1. SUBSCRIPTS 'E' INDICATE ENAMELED SURFACE. SEE SPEC.
B - 4" RUBBER EDGE	2. SUBSCRIPTS 'HS' INDICATE HARDENER & SEALER. SEE SPEC.
C - CONCRETE BLOCK	3. SUBSCRIPTS 'B' INDICATE BROOM FINISH ON CONCRETE.
D - CONCRETE	4. SUBSCRIPTS 'T' INDICATES TAPE & SPACKLE ONLY.
E - CONCRETE TEE UNITS	5. SUBSCRIPTS 'X' INDICATES EXISTING TWIN T.
F - GYPSUM BOARD	6. ENAMEL ALL H.M. DOORS AND FRAMES.
G - EXISTING CONCRETE	7. ENAMEL ALL EXPOSED WOOD IN STAIRS, PLATFORMS ETC.
H - EXISTING MASONRY	
I - EXISTING CEILING	
J - CEH. ASP. BD.	

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE \_\_\_\_\_

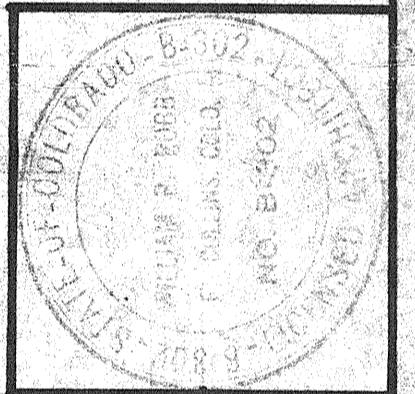
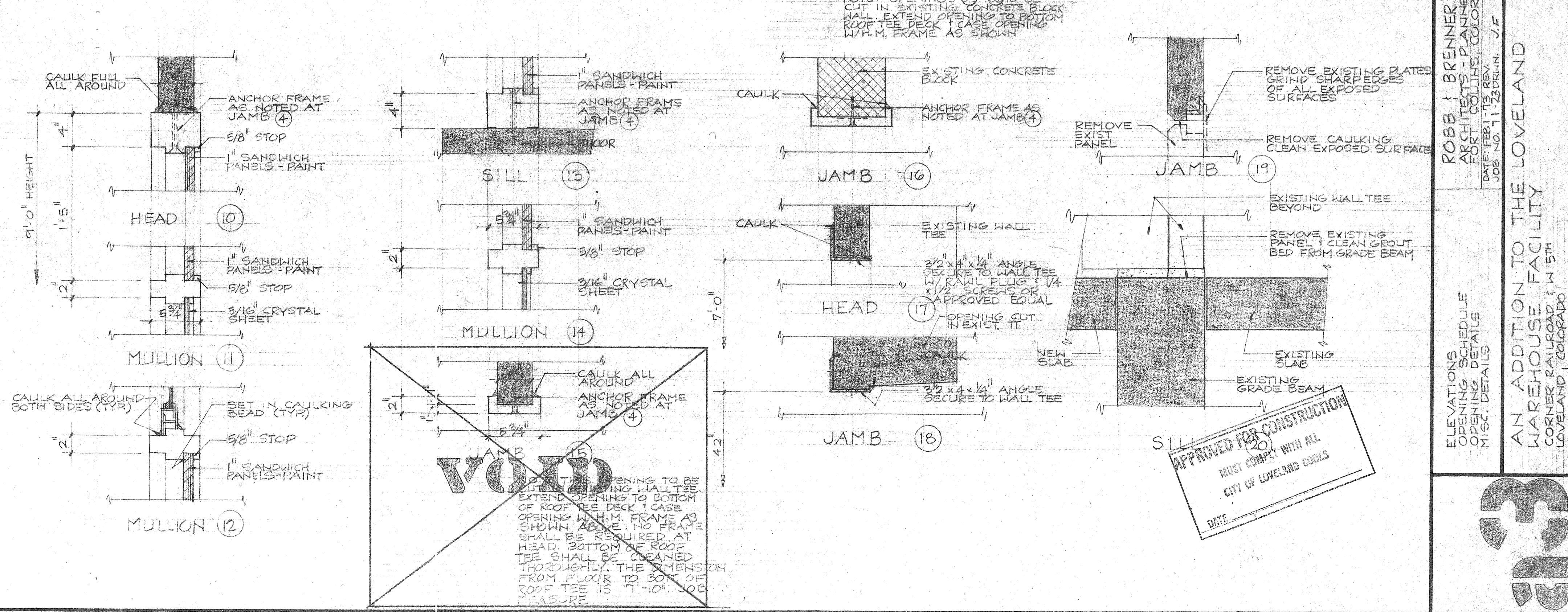
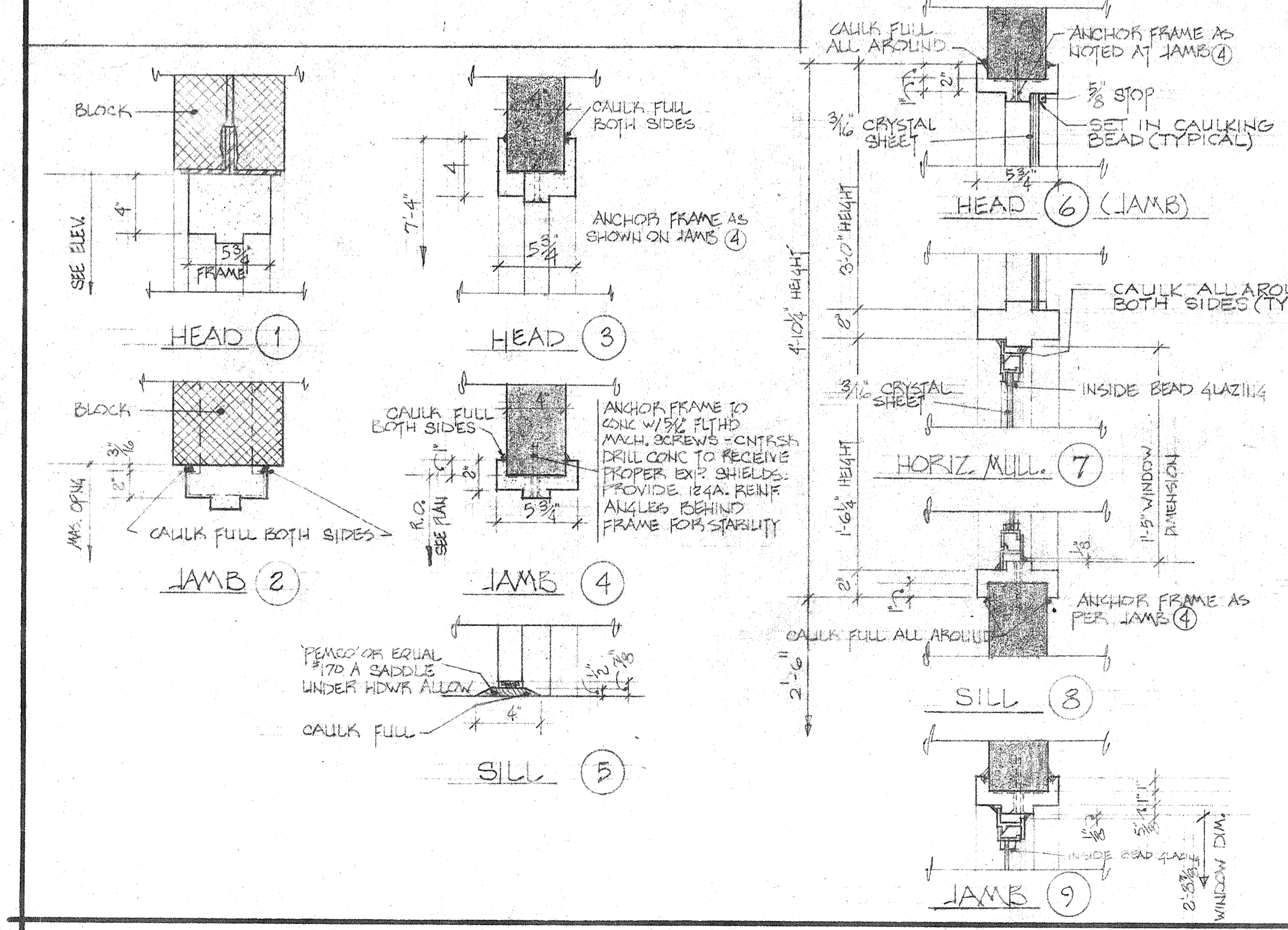
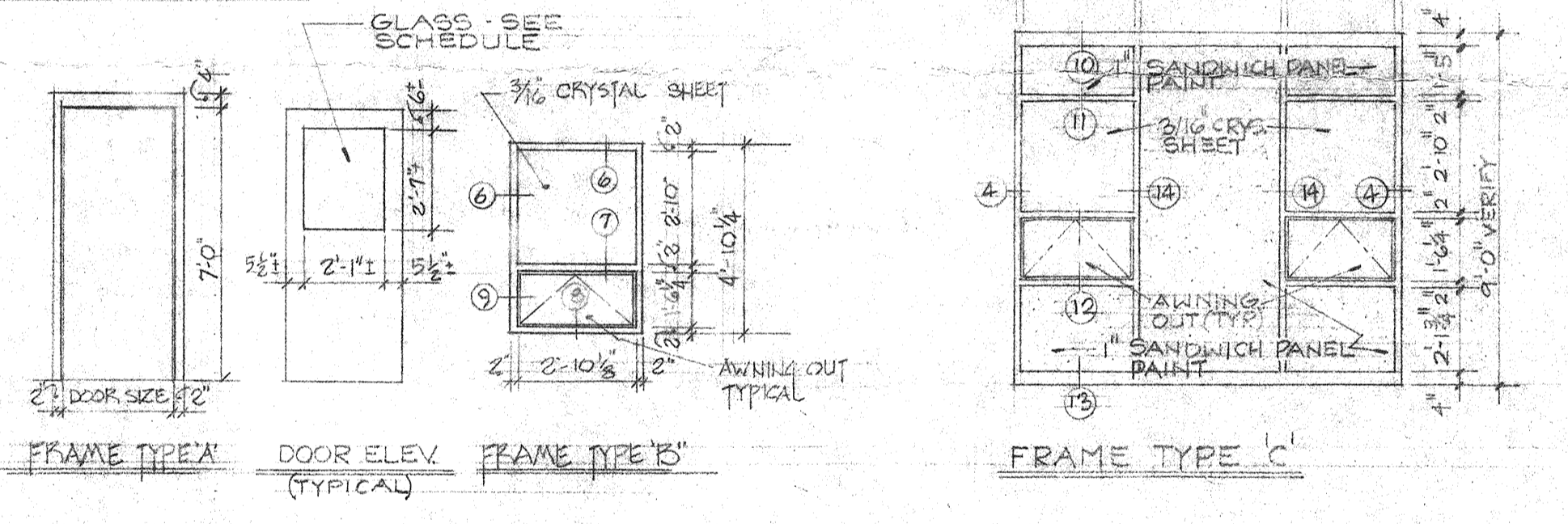
FLOOR PLANS  
ROBB & BRENNER INC.  
ARCHITECTS PLANNERS  
FORT COLLINS, COLORADO  
DATE: FEB 1, 1978 REV. 1/78  
JOB: N-11-23 - BROWN V. F. - CHFD.  
AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
CORNER RAILROAD 1 1/2 5TH  
LOVELAND, COLORADO





INTERIOR AND EXTERIOR OPENING SCHEDULE

MARK	DESCRIPTION	FRAME TYPE	SIZE	FINISH	FRAME	LITEL	DETAILS			REMARKS
							H	J	M	
01	HOLLOW METAL DOOR	A	3\"/>							



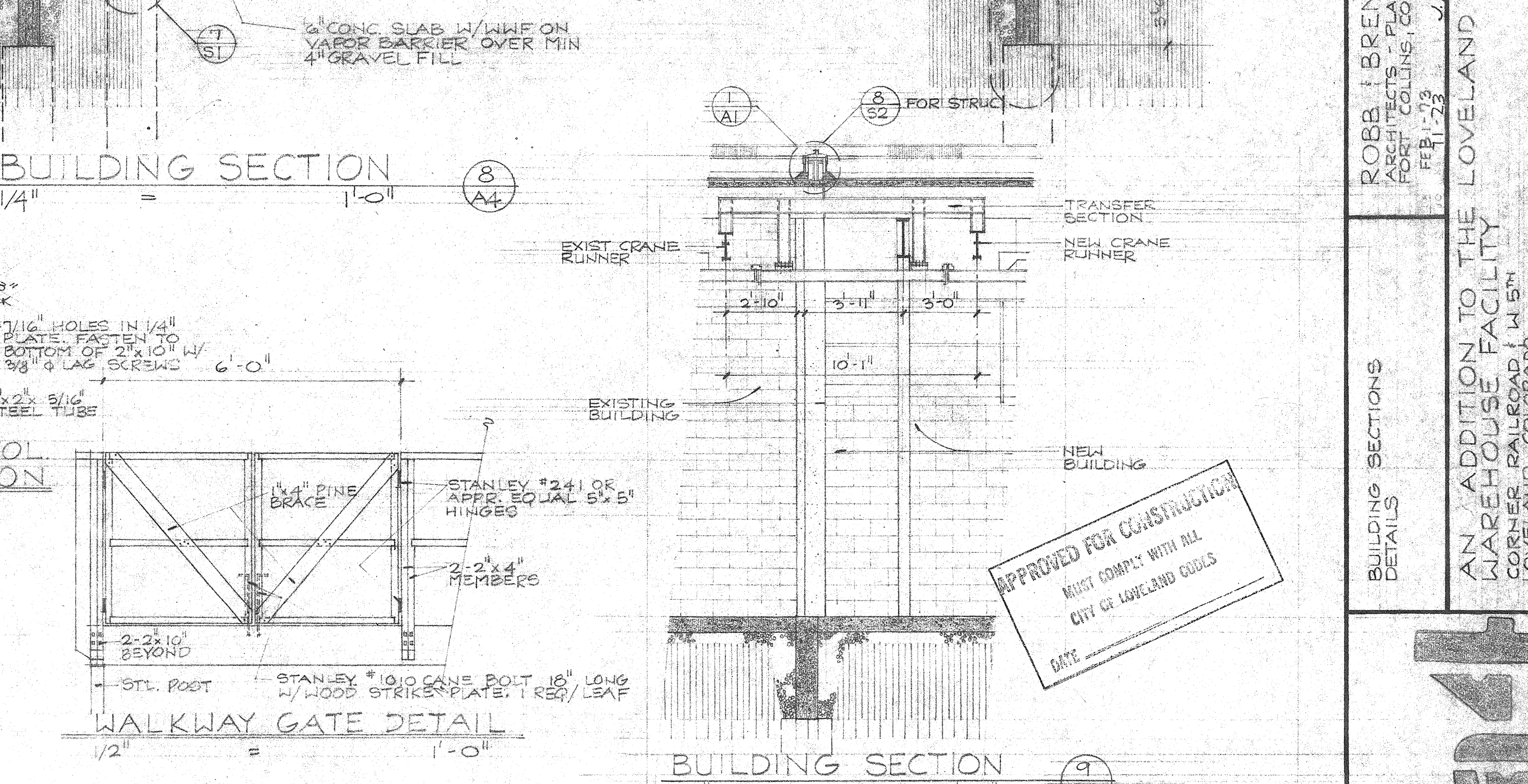
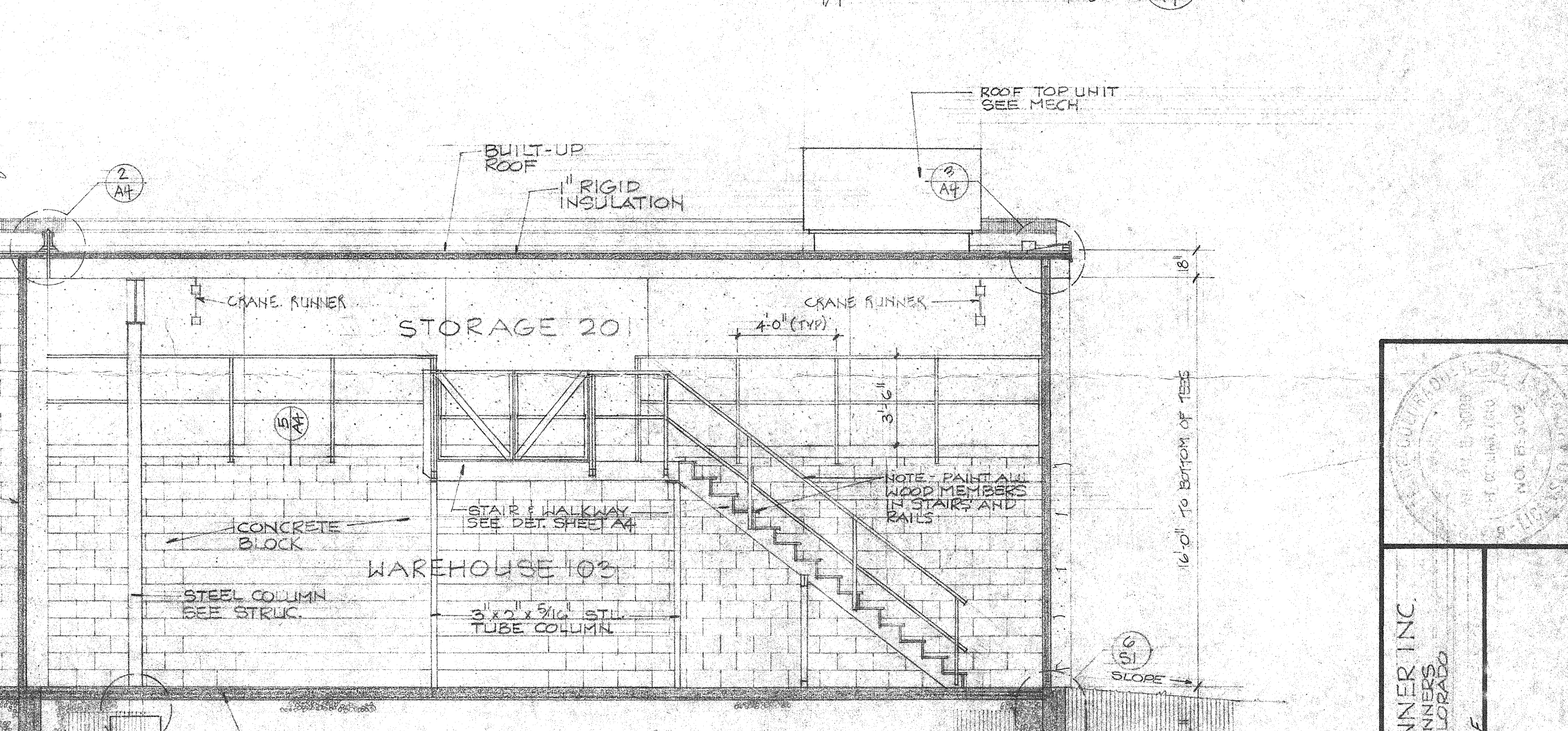
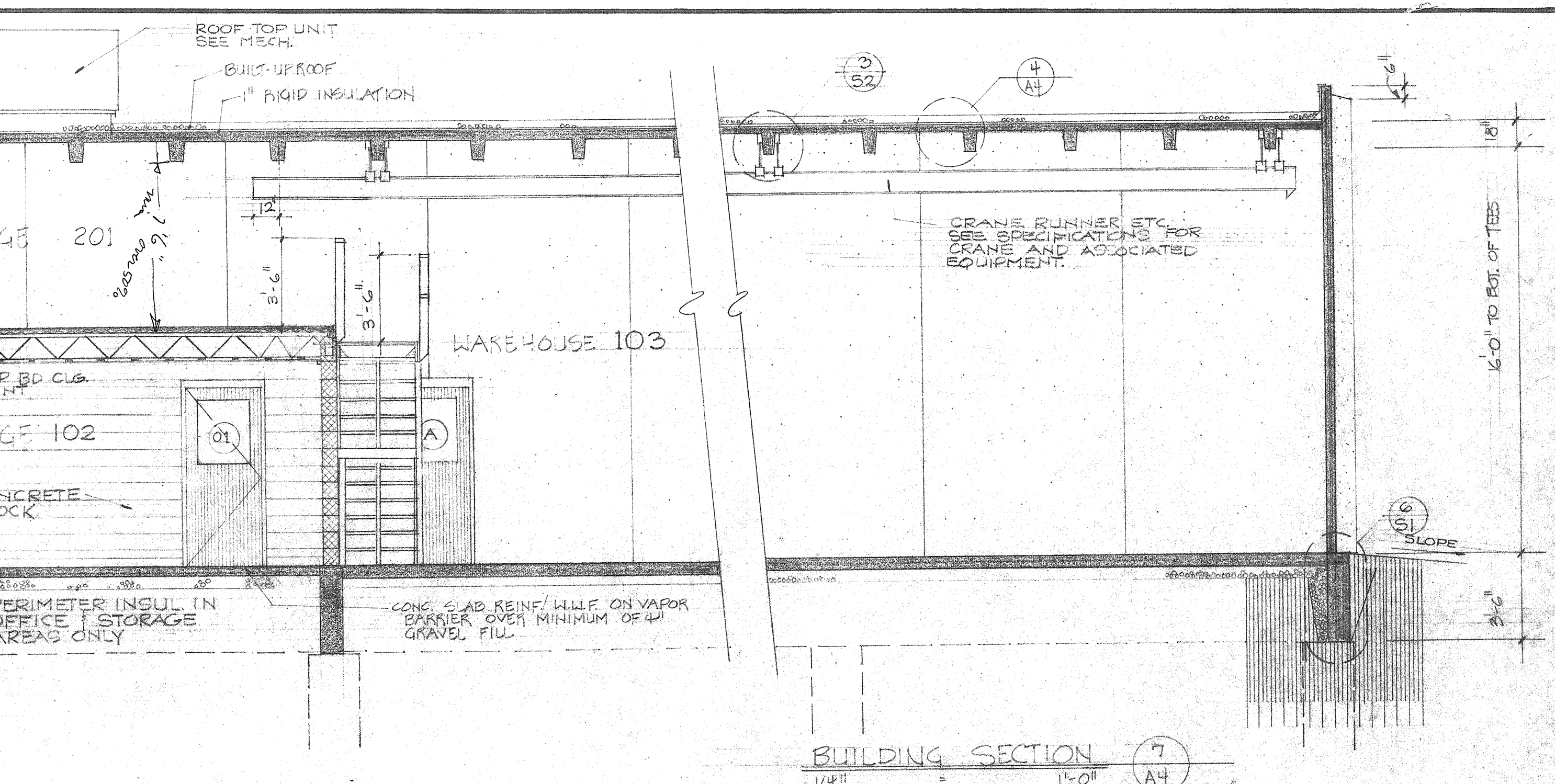
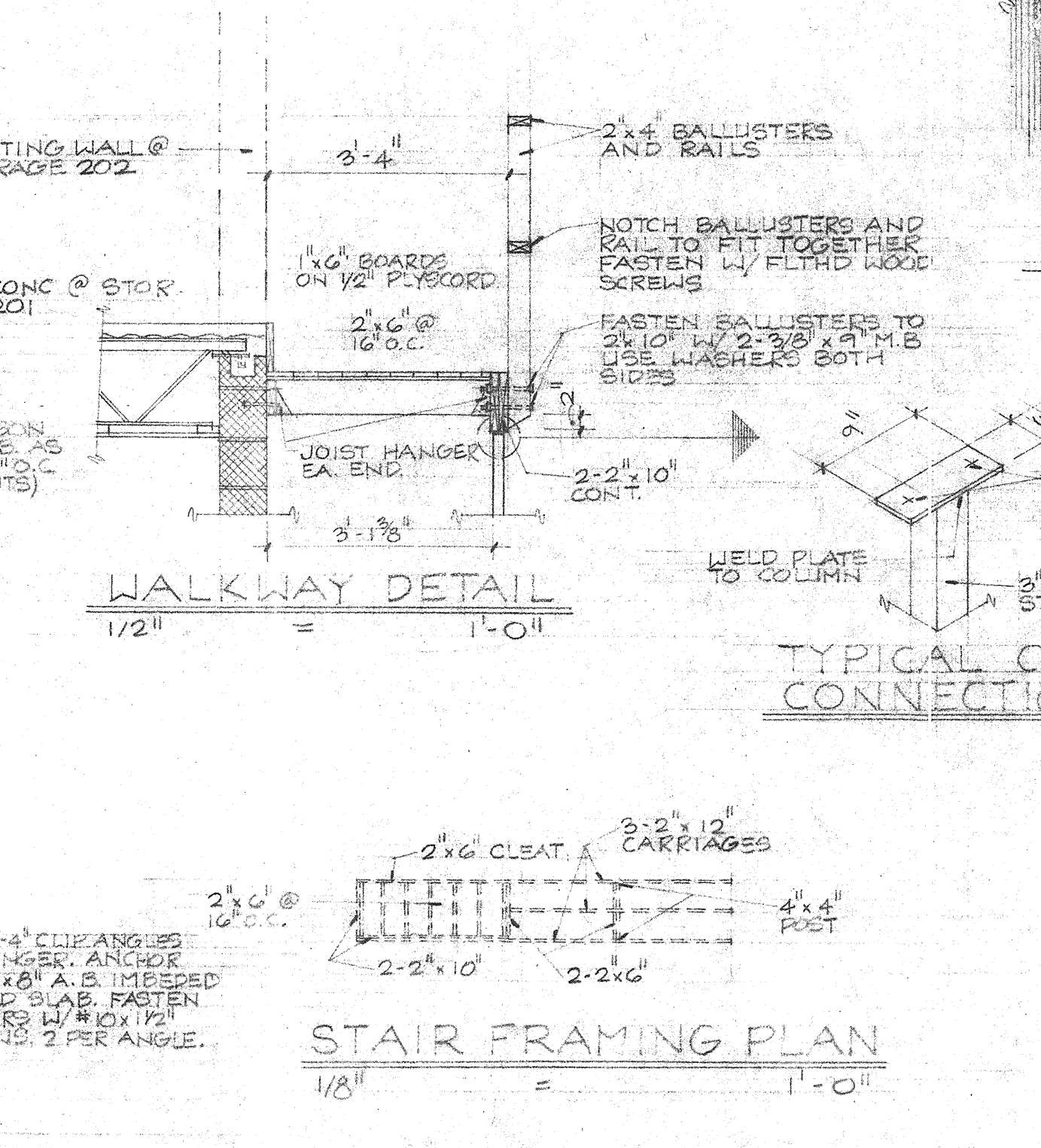
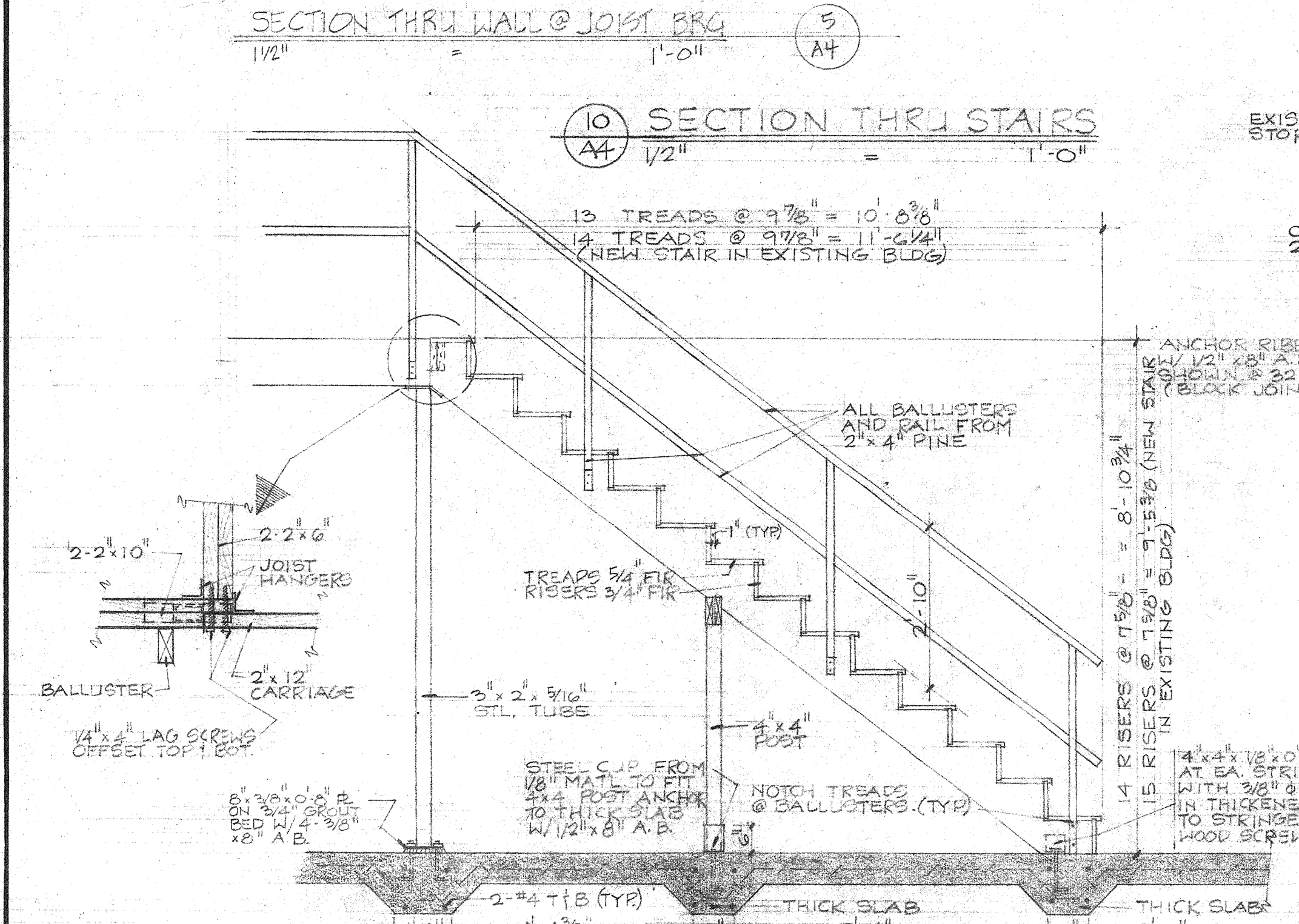
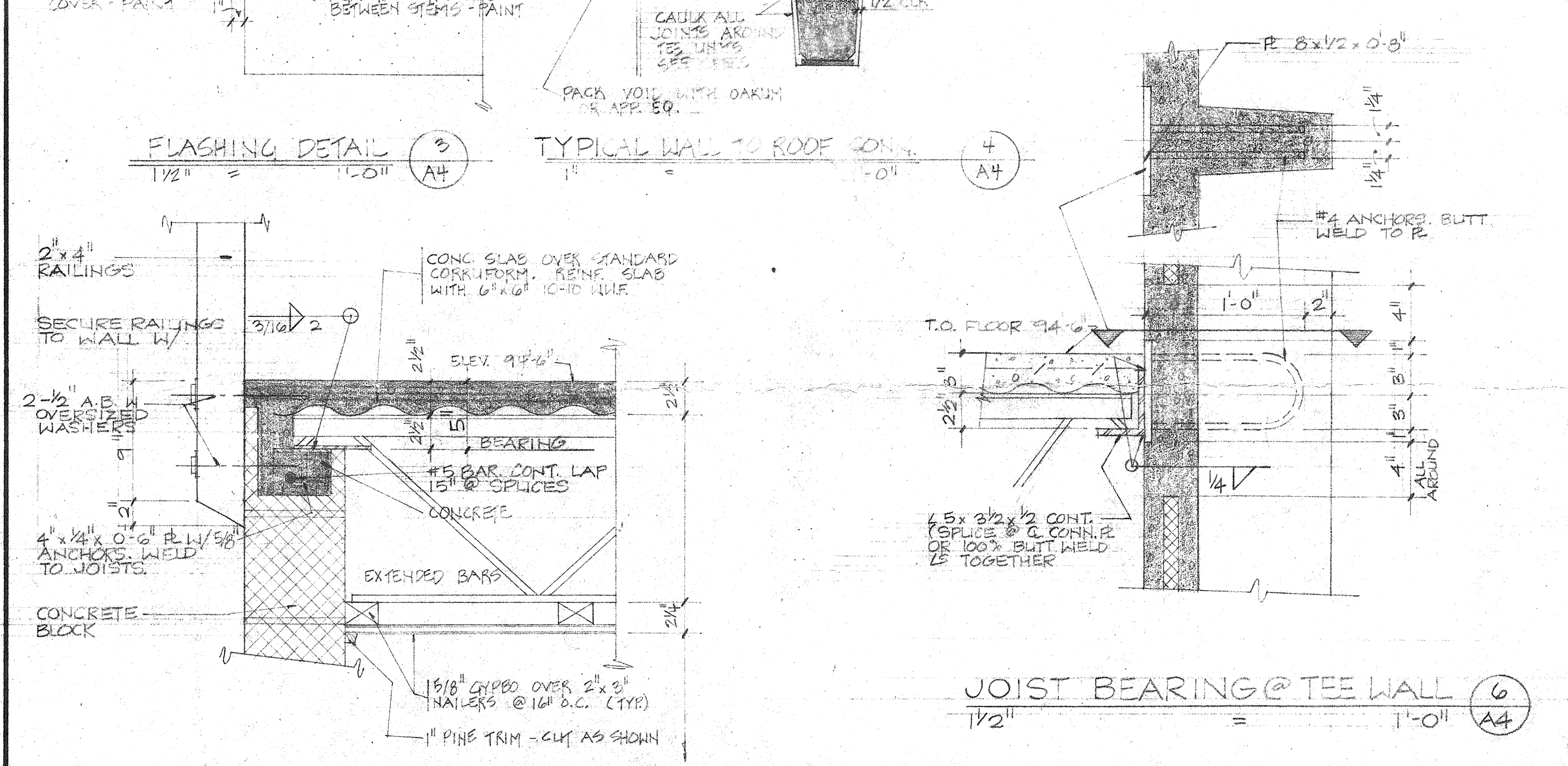
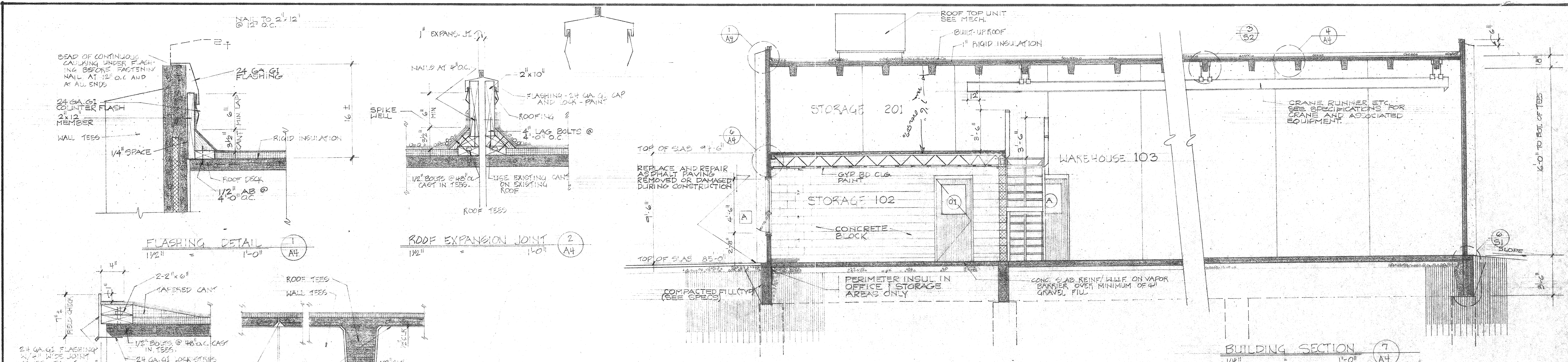
ROBB BRENNER, INC.  
ARCHITECT-PLANNERS  
1200 SOUTH BROADWAY, SUITE 100  
DENVER, COLORADO 80202  
PHONE: 333-1111  
FAX: 333-1111

AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
CORNER RAILROAD & 5TH  
LOVELAND, COLORADO

APPROVED FOR CONSTRUCTION  
MAY 20 2001  
CITY OF LOVELAND CODES  
DATE: \_\_\_\_\_

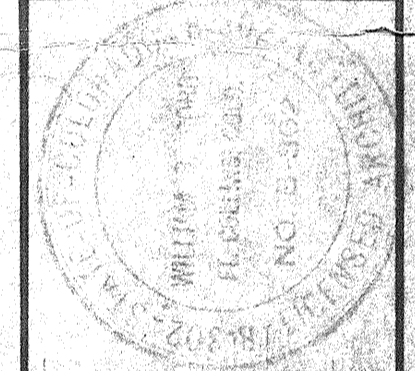
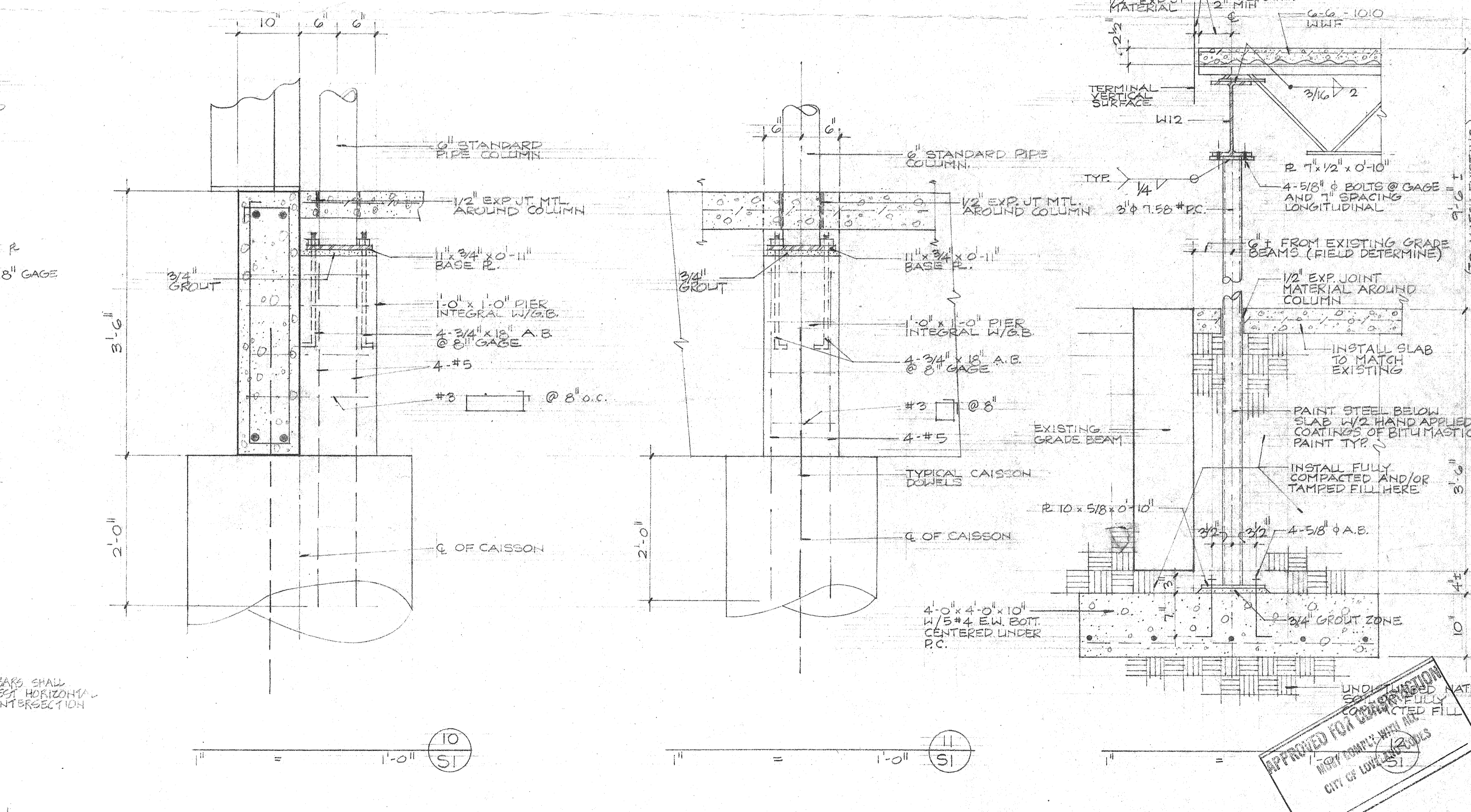
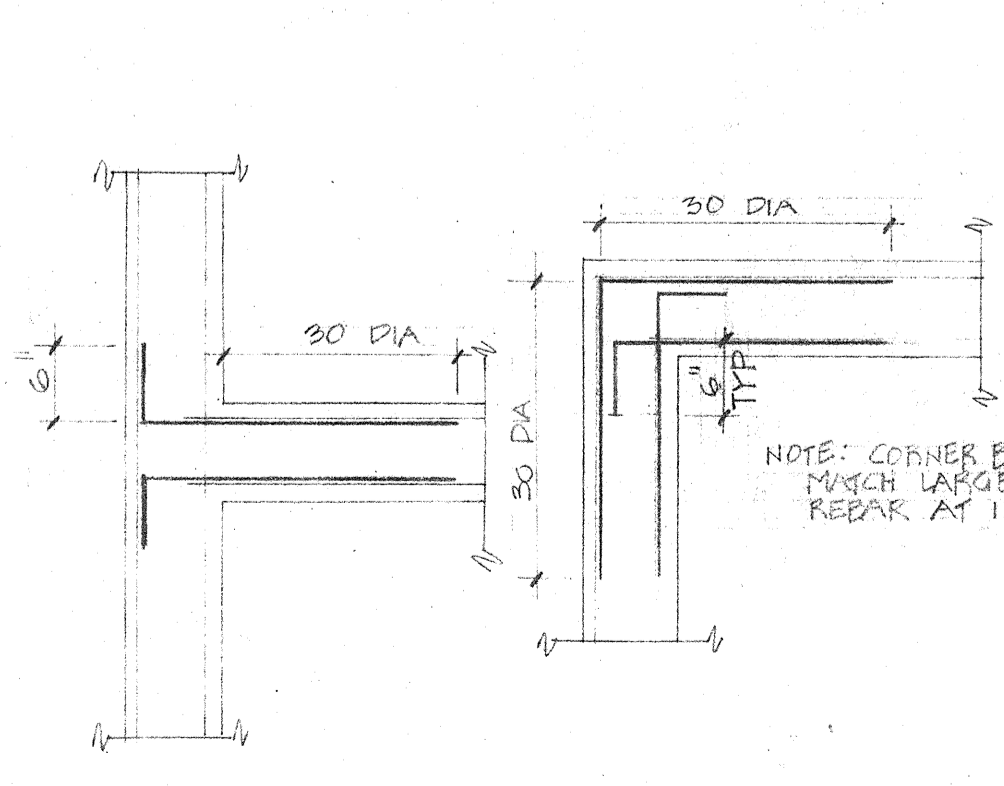
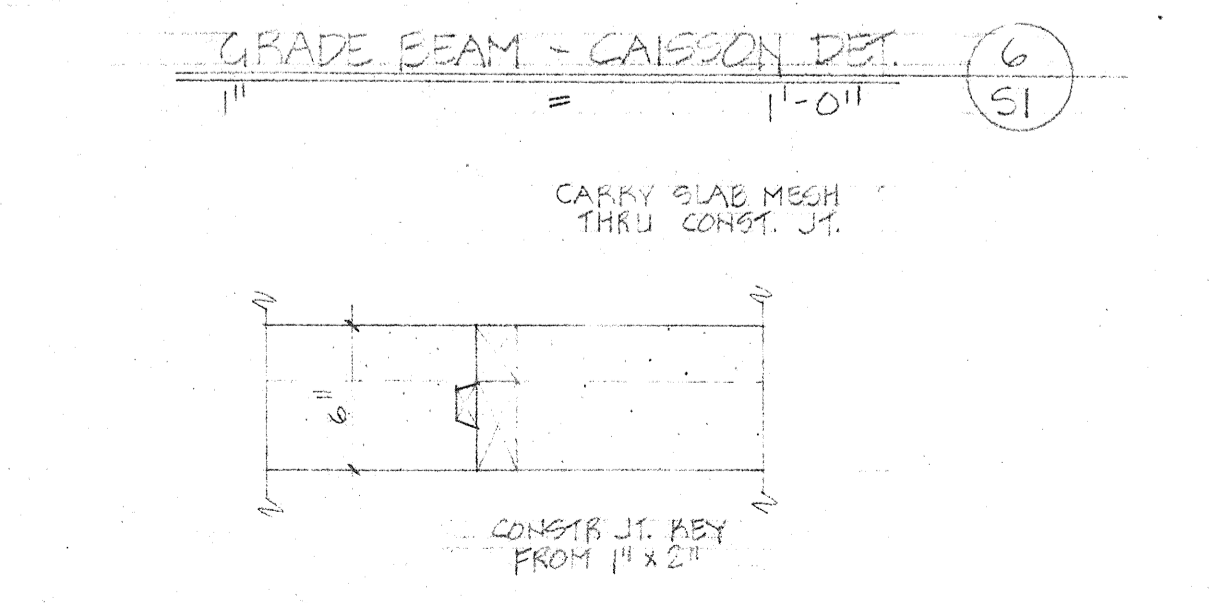
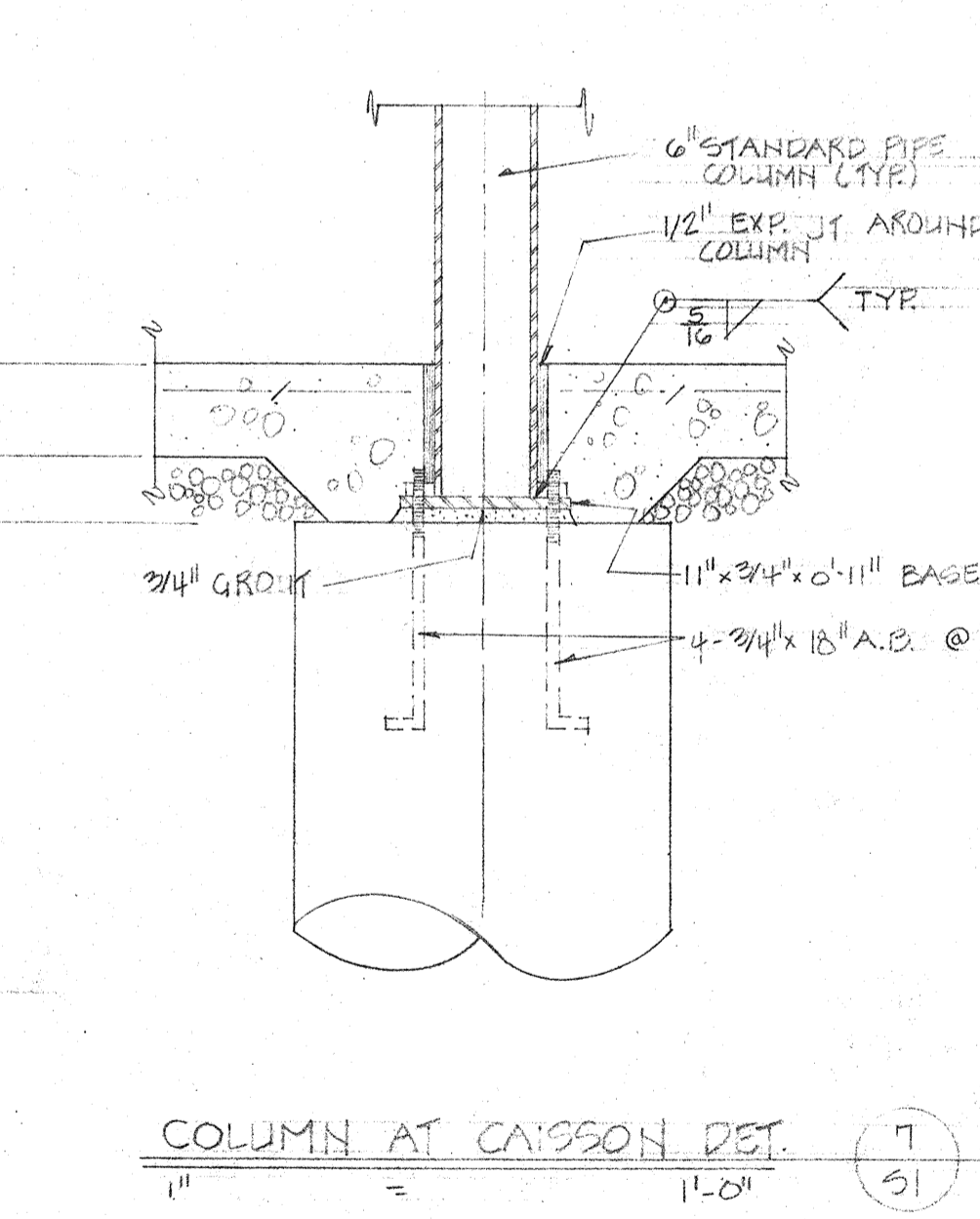
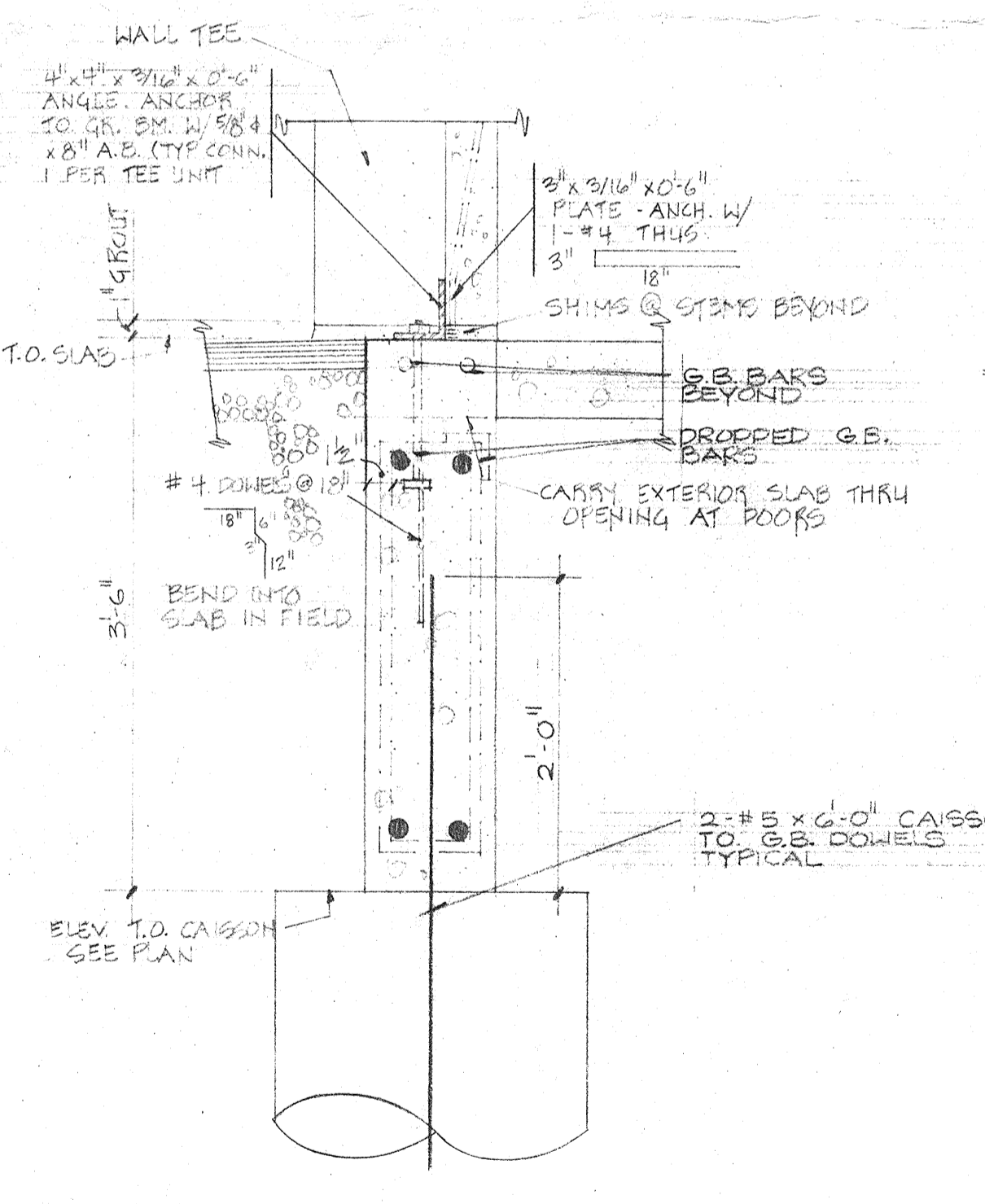
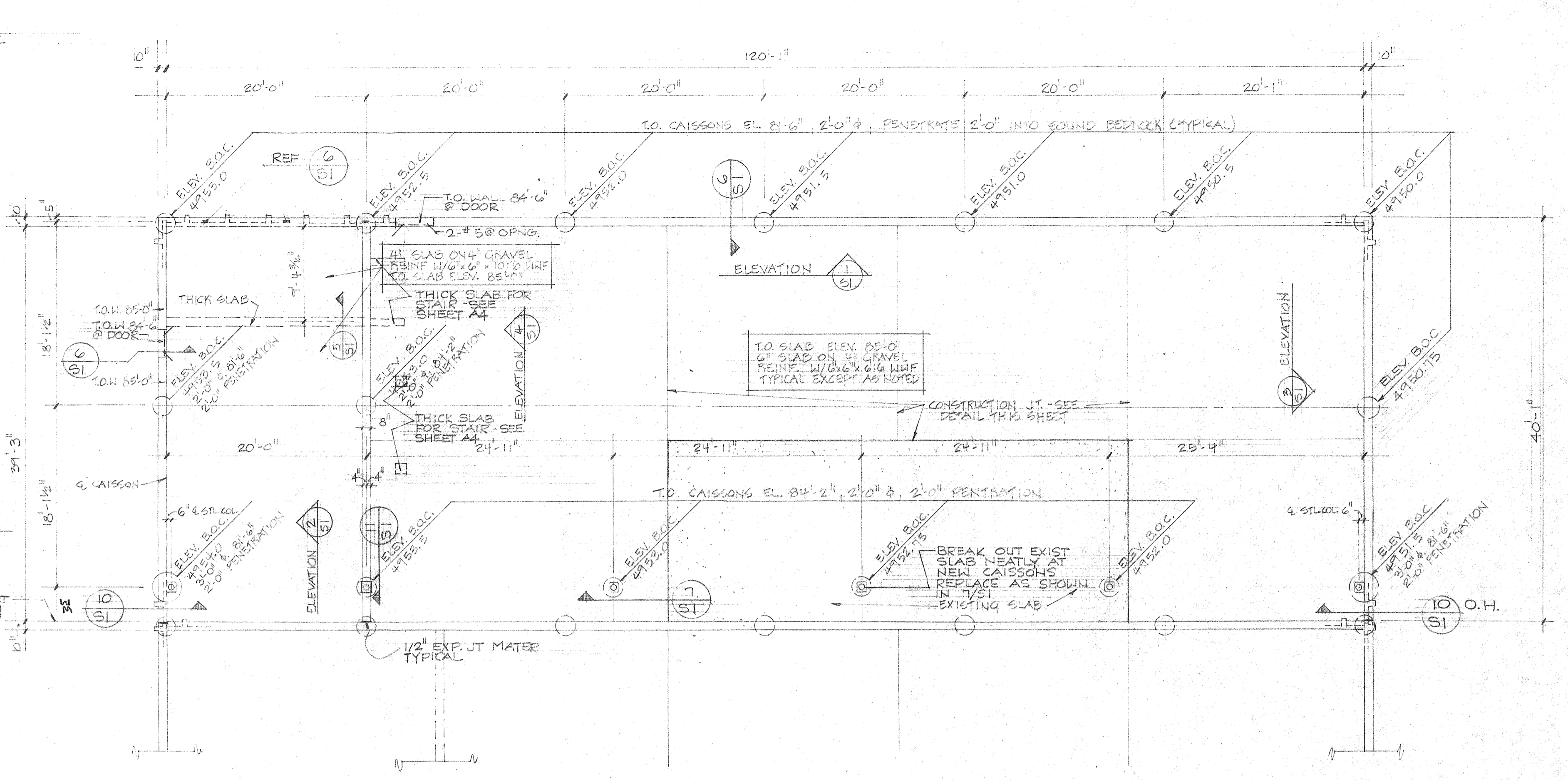
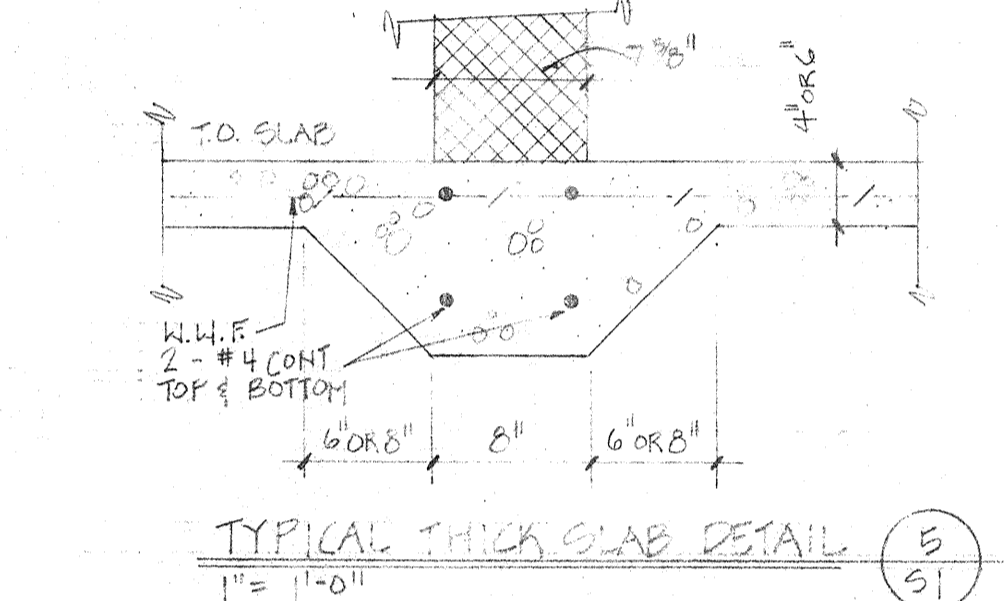
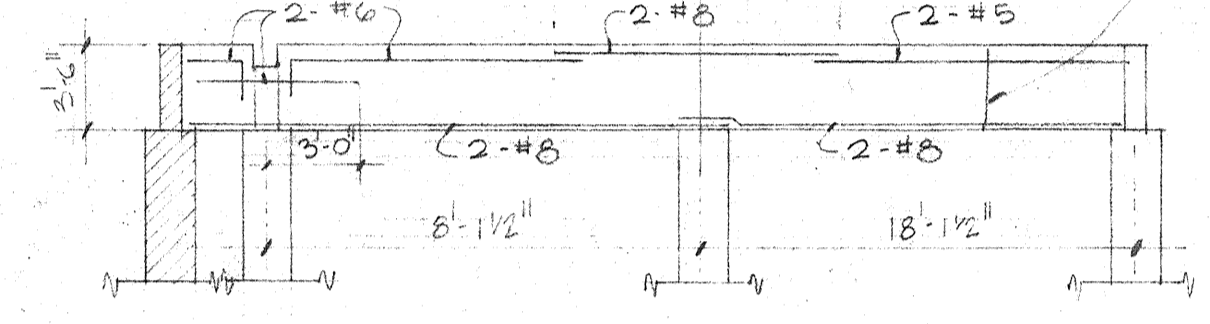
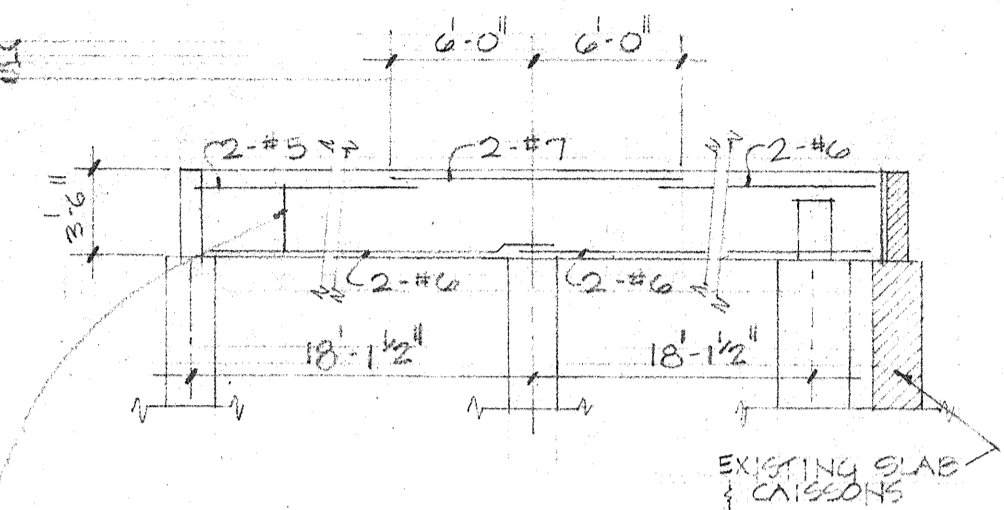
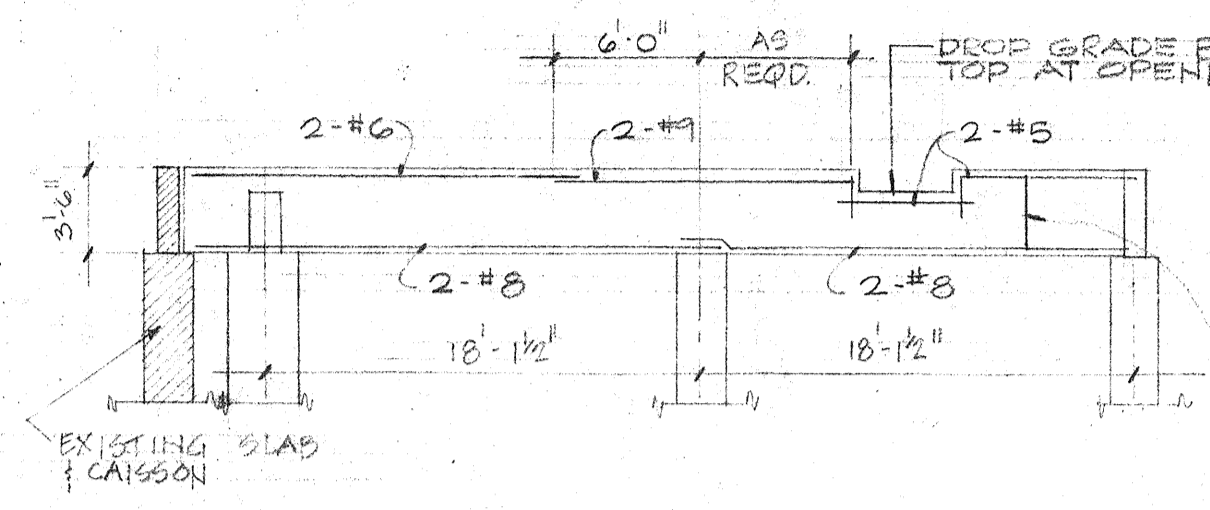
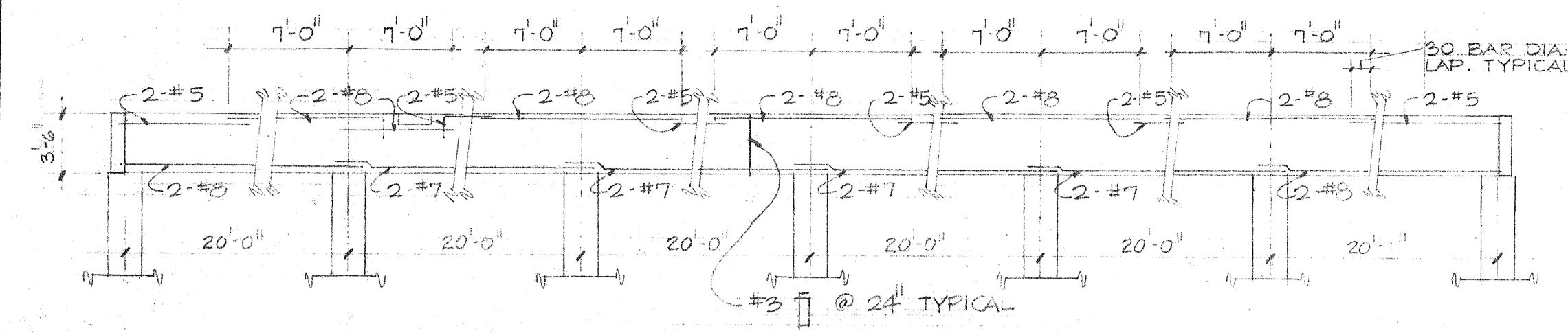
**VOID**

THIS SEALING TO BE USED ONLY FOR OPENING TO BE EXTENDED THROUGH WALL TO BOTTOM OF ROOF TEE DECK. IN CASE OF OPENING WITH H.M. FRAME AS SHOWN, NO TEE IS REQUIRED. SHALL BE REQUIRED AT HEAD, BOTTOM OF ROOF TEE SHALL BE EXTENDED THOROUGHLY THROUGH FROM FLOOR TO BOTTOM OF ROOF TEE IS 7'-10\"/>



**APPROVED FOR CONSTRUCTION**  
 MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
 DATE \_\_\_\_\_

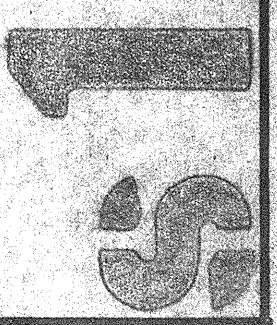
ROBB BRENNER INC.  
 ARCHITECTS PLANNERS  
 FORT COLLINS, COLORADO  
 FEB 11, 2013  
 AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY  
 CORNER RAILROAD & W 5TH  
 LOVELAND, COLORADO

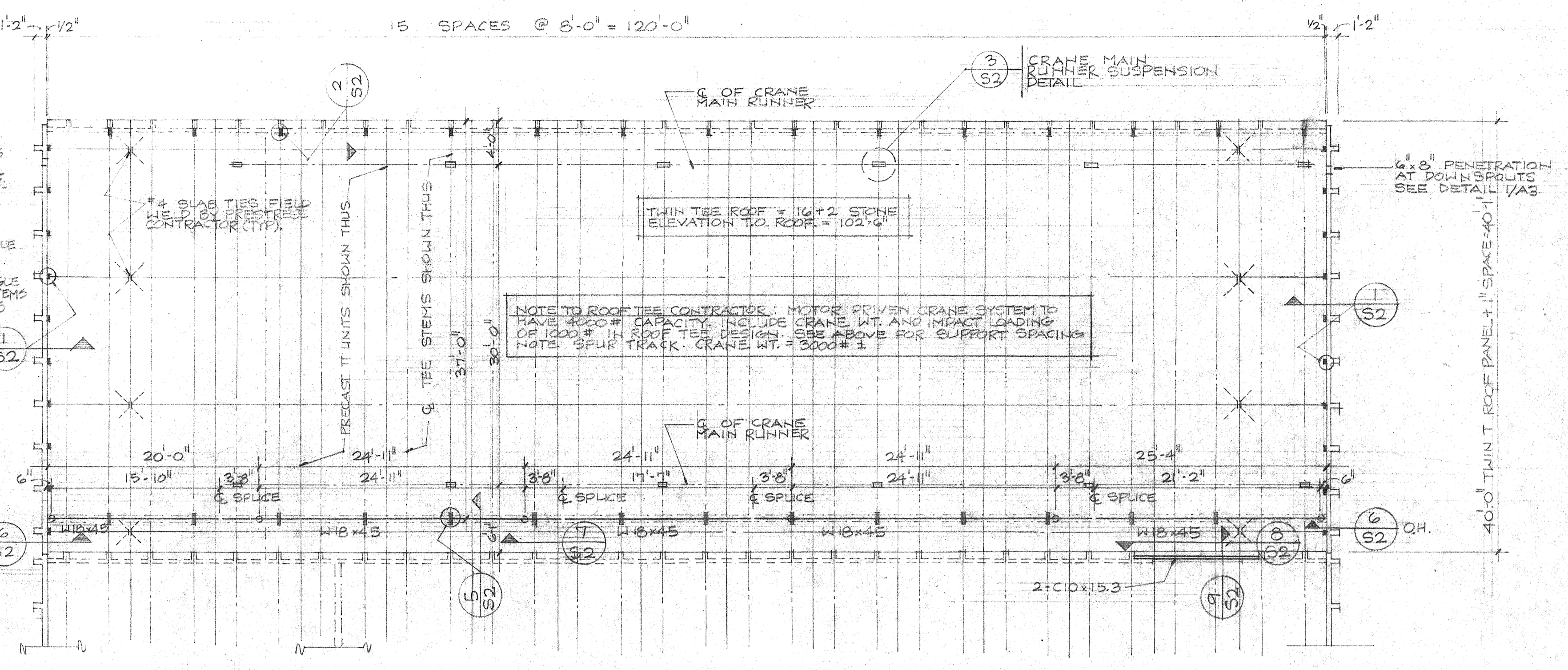
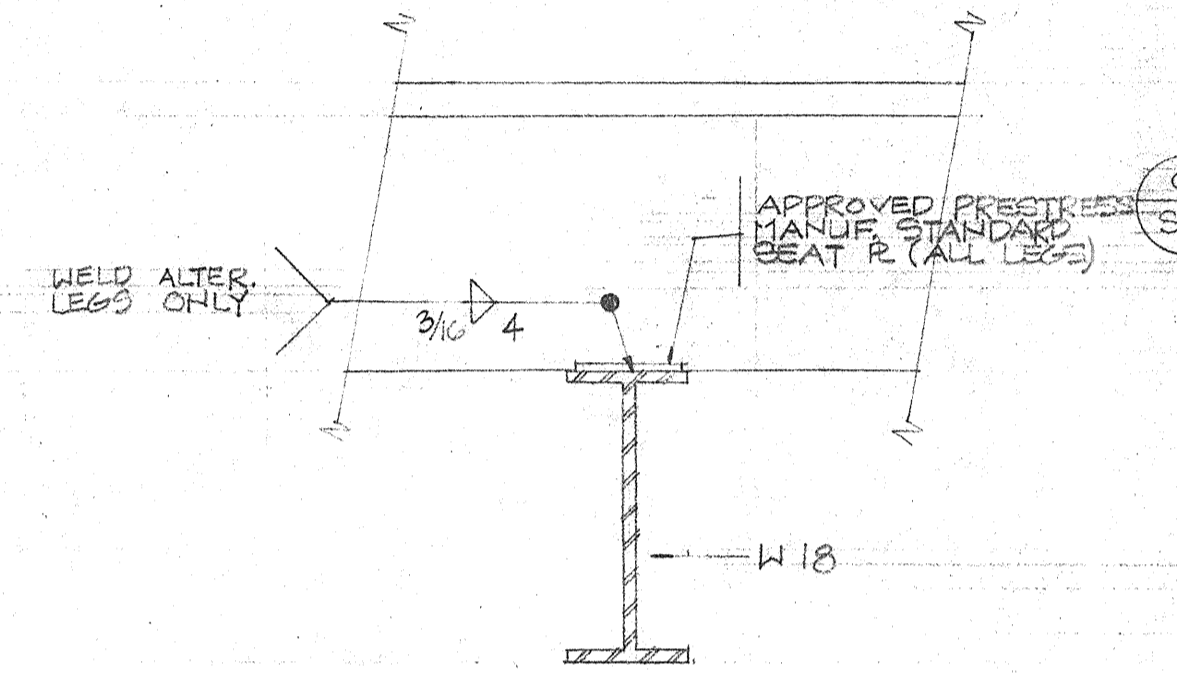
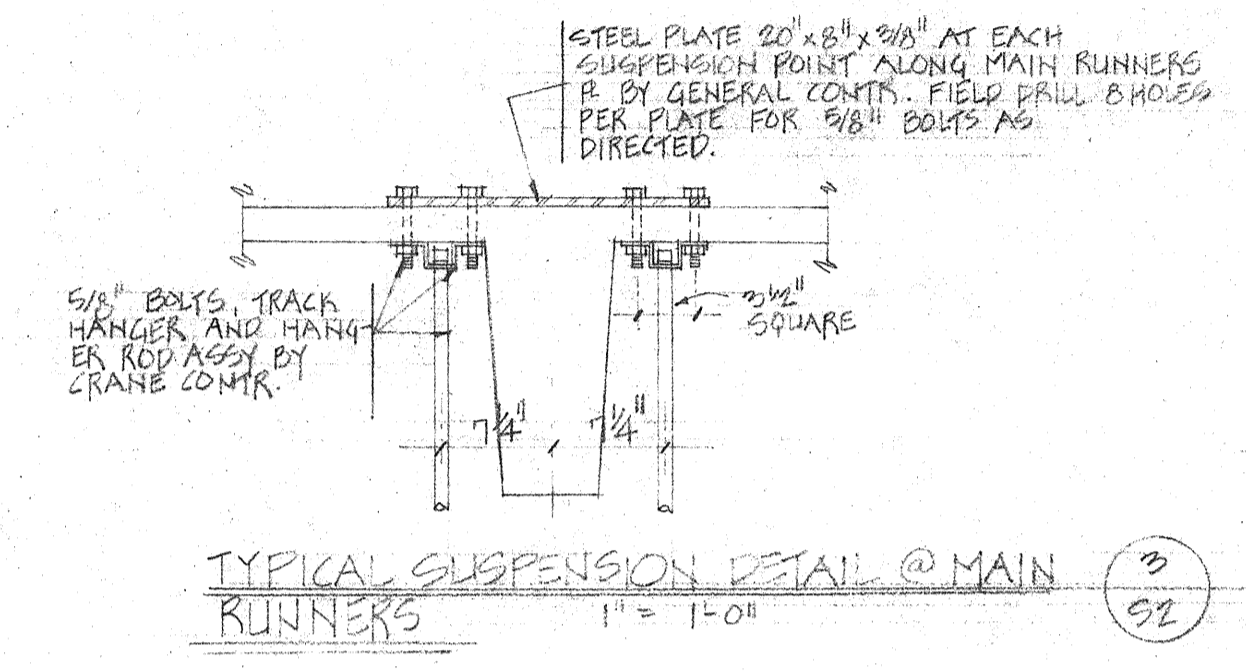
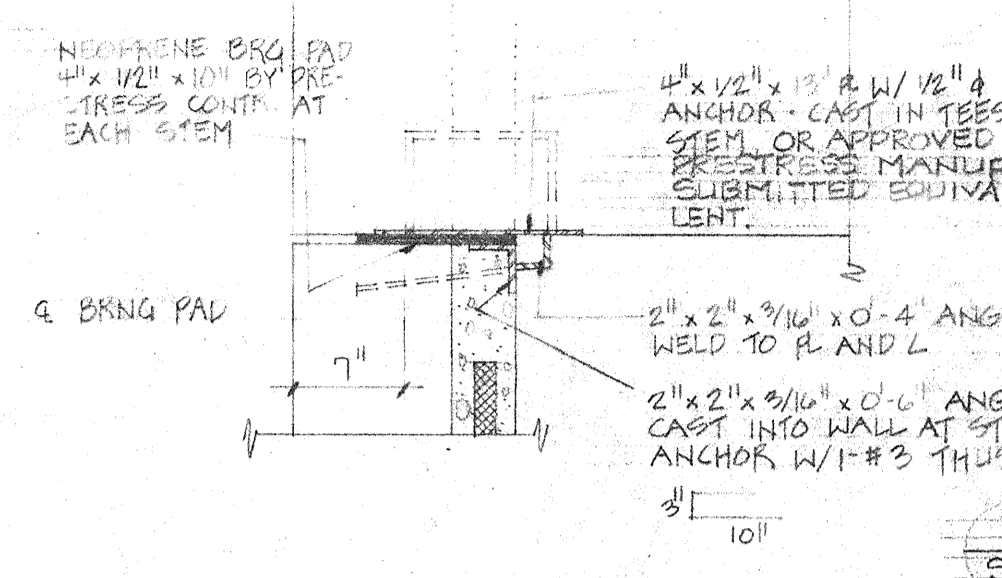
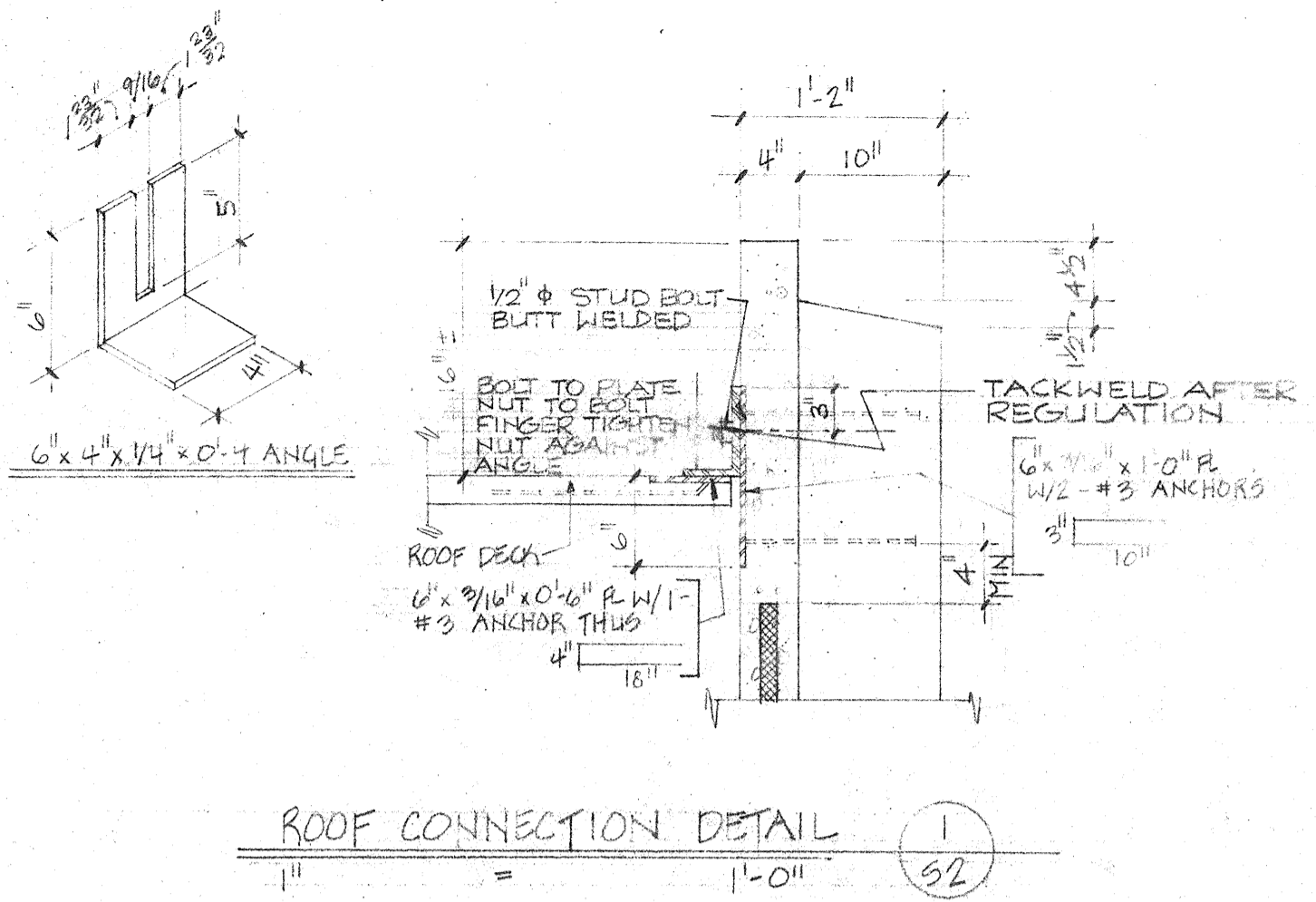


ROBB BRENNER, INC.  
ARCHITECTS - PLANNERS  
FORT COLLINS, COLORADO  
DATE: FEB 11-22  
SCALE: 1/8" = 1'-0"

FOUNDATION PLAN DETAILS  
AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
CORNER RAILROAD W. 5TH STREET  
LOVELAND, COLORADO

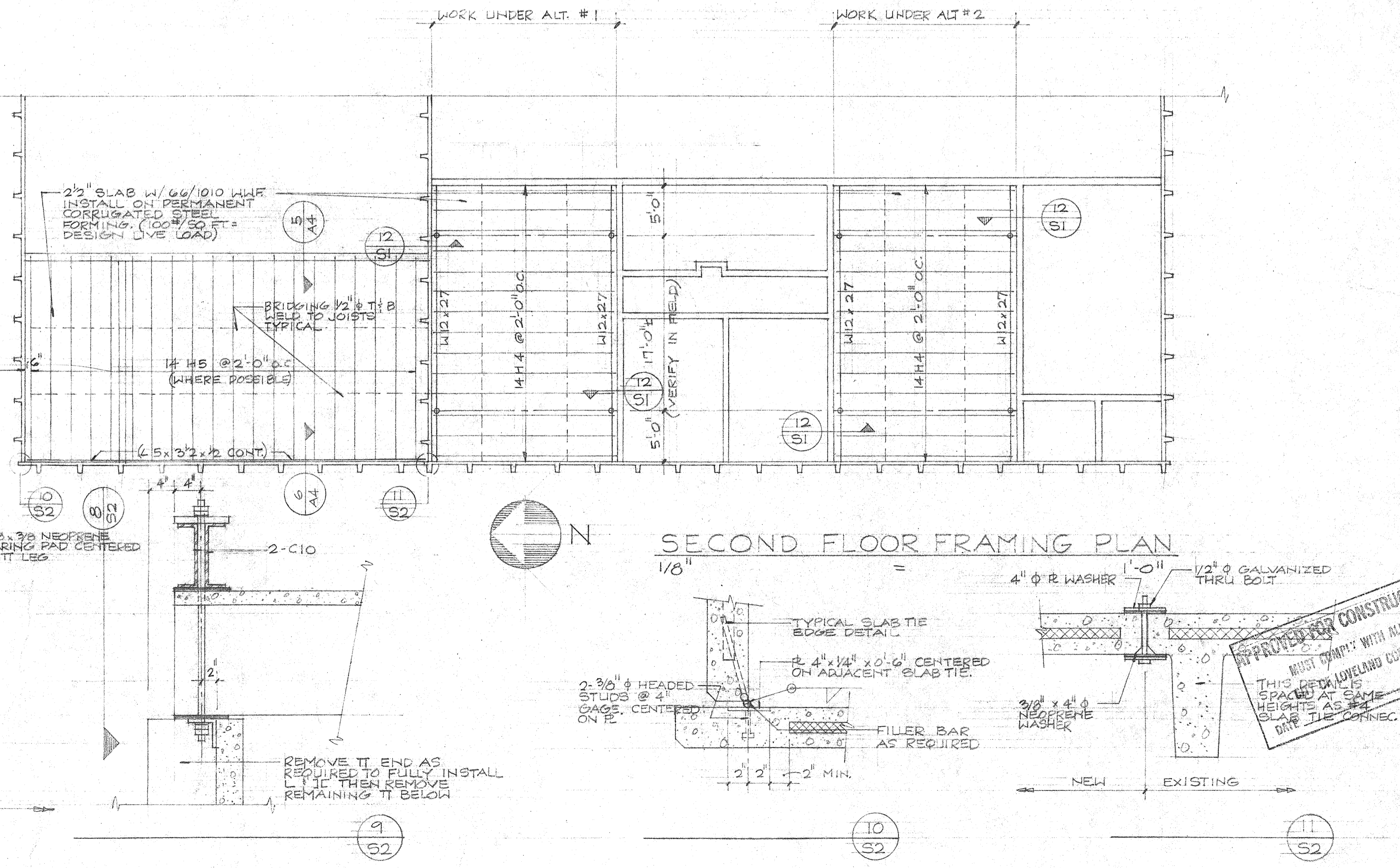
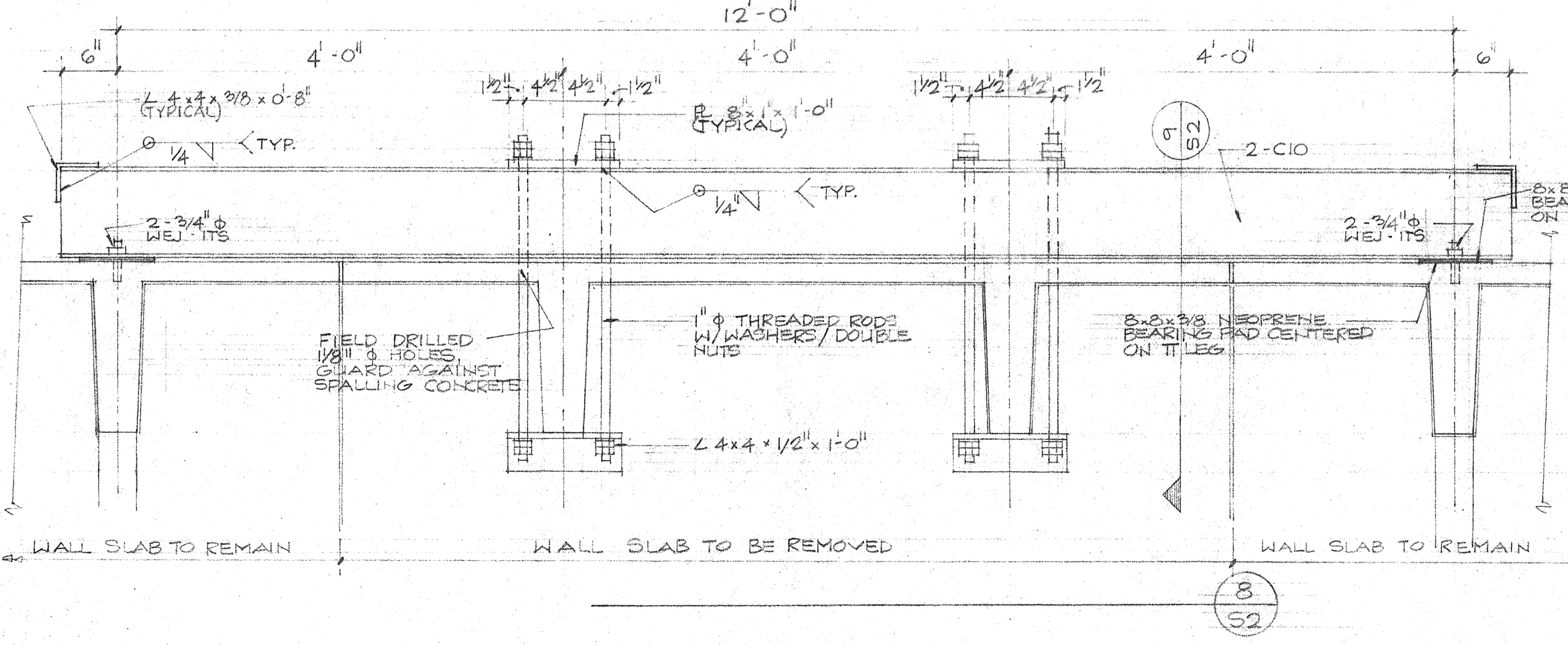
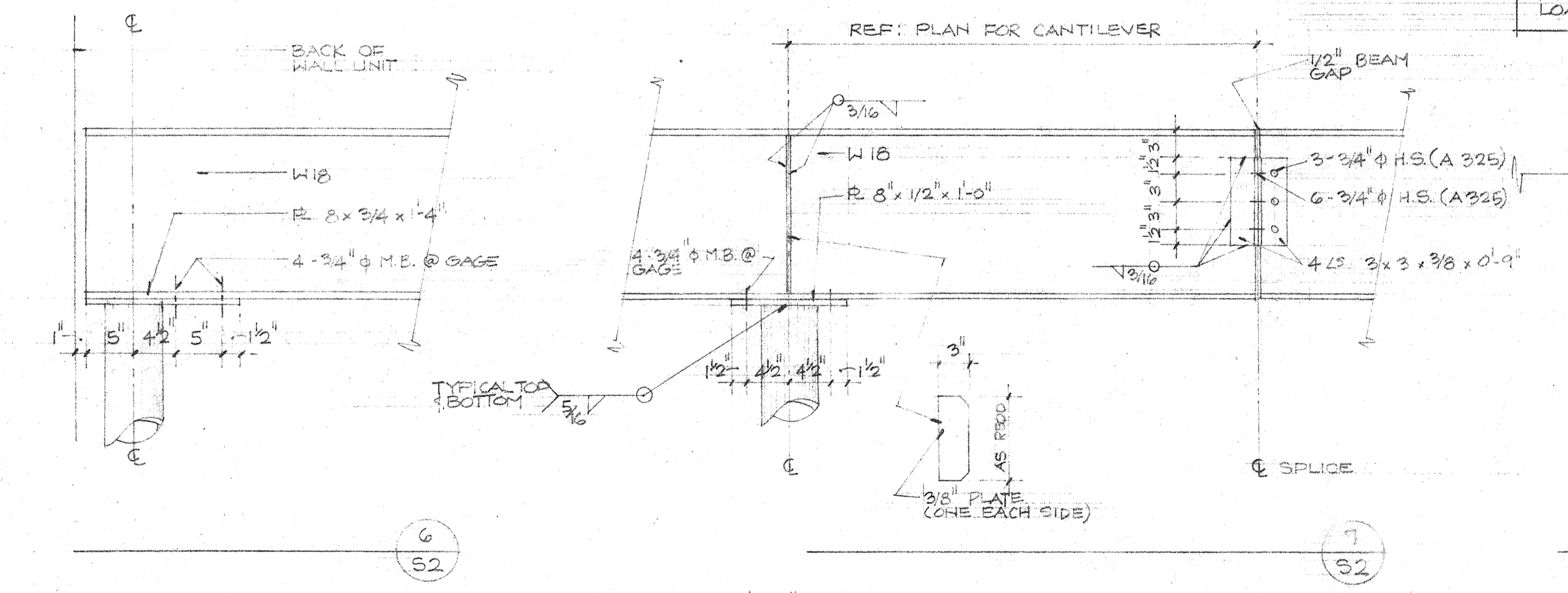
APPROVED FOR CONSTRUCTION  
CITY OF LOVELAND





ROOF FRAMING PLAN  
1/8" = 1'-0"

**GENERAL NOTES**  
 DESIGN LOADS: SNOW LOAD = 30 PSF  
 WIND LOAD = 30 PSF  
 DESIGN ALL ROOF TEES FOR SNOW LOAD PLUS ALL OTHER LIVE AND DEAD LOADS. PROVIDE 0" CAMBER FOR FULL DEAD LOAD PLUS 1/3 LIVE LOAD



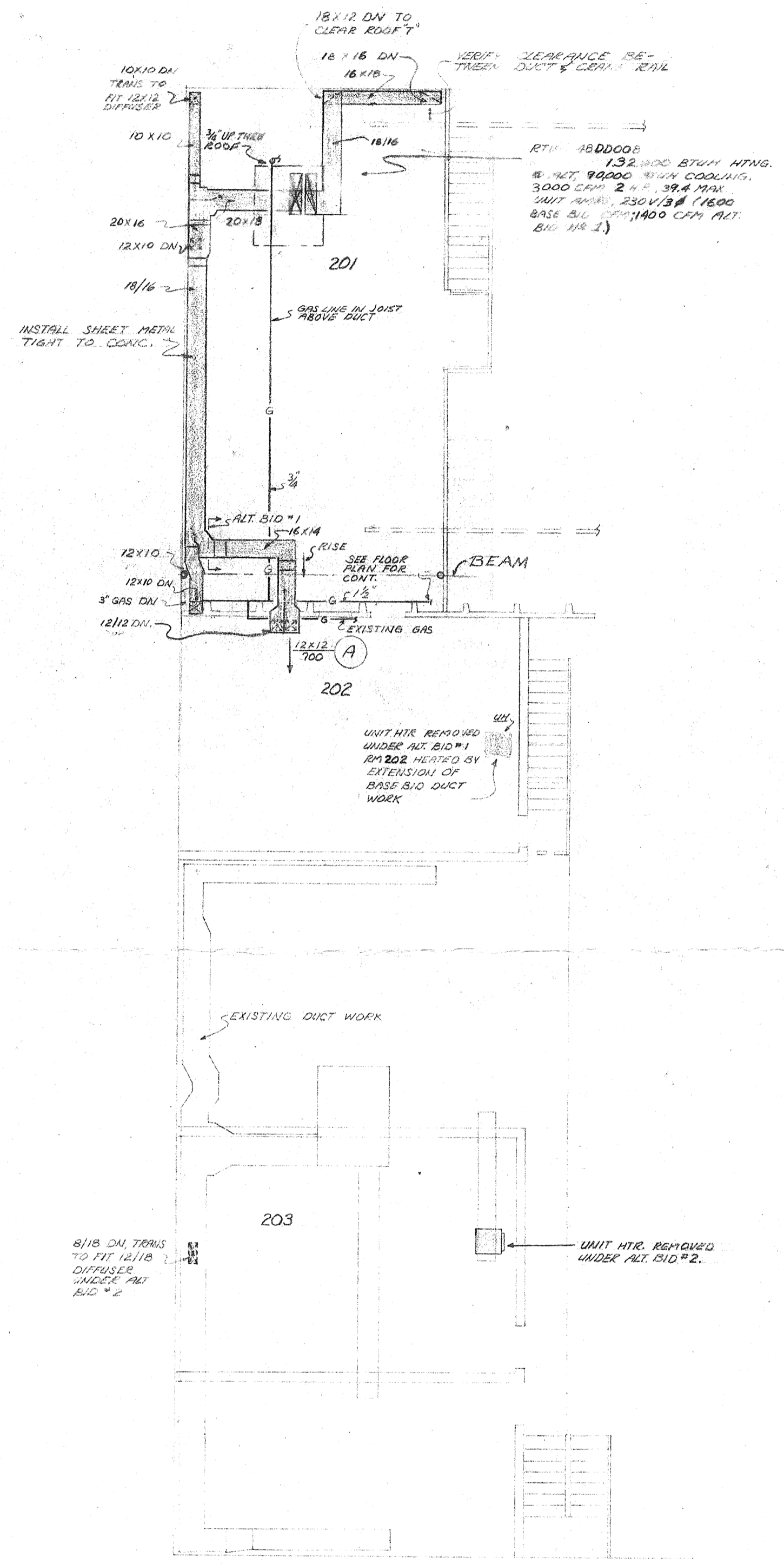
SECOND FLOOR FRAMING PLAN  
1/8" = 1'-0"

SEAL OF PROFESSIONAL ARCHITECT  
 WILLIAM A. SPOFFORD  
 ARCHITECT  
 1000 N. W. 10TH AVE.  
 DENVER, CO. 80202  
 NO. B. 5002

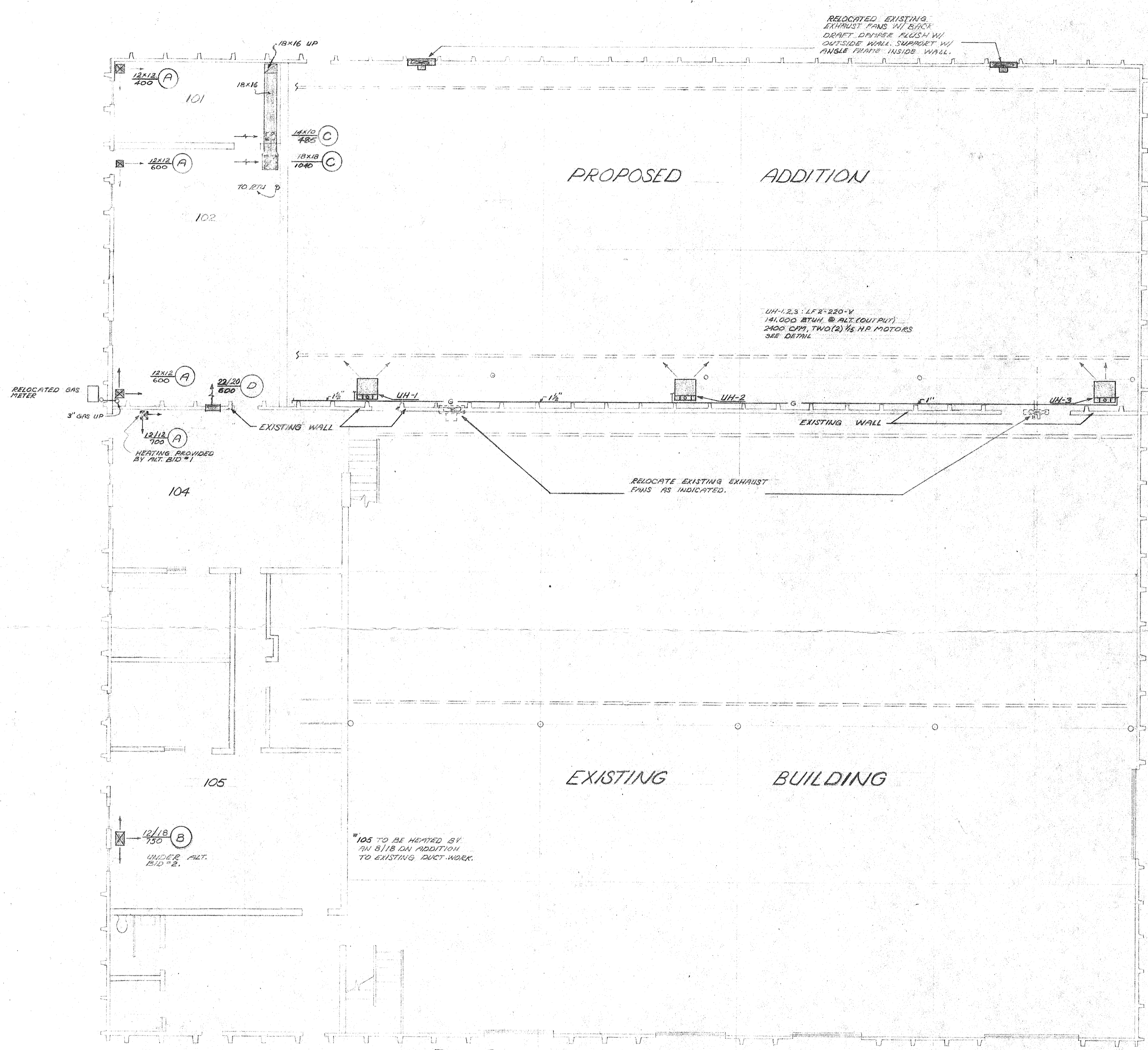
ROBB BRENNER INC.  
 ARCHITECT-PLANNERS  
 800 COLLEGE BLVD.  
 LOVELAND, CO. 80538  
 FEB. 11-23 V.F.

AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY  
 CORNER RAILROAD & W 5TH  
 LOVELAND, COLORADO

APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL THIS CITY OF LOVELAND LOCAL ORDINANCES AS APPLICABLE TO THIS PROJECT.  
 FEB. 11-23 V.F.

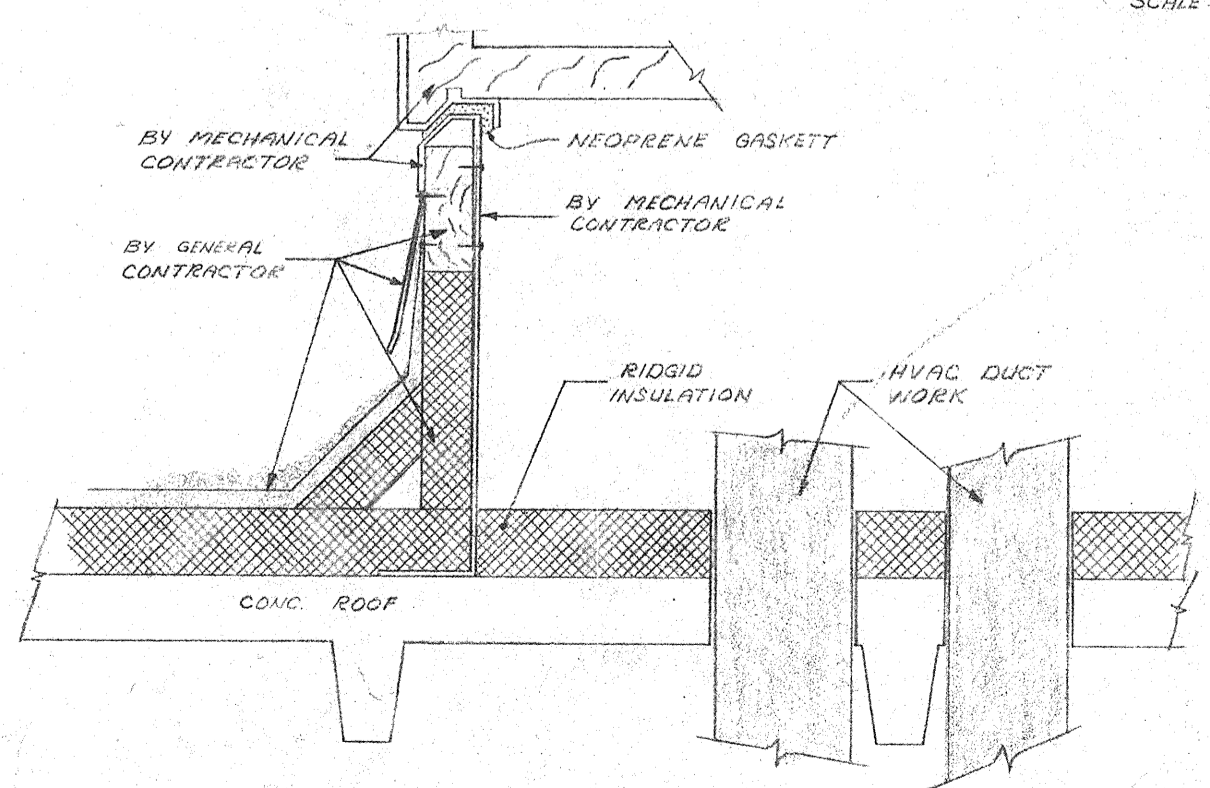


SECOND FLOOR PLAN  
SCALE: 1/8" = 1'

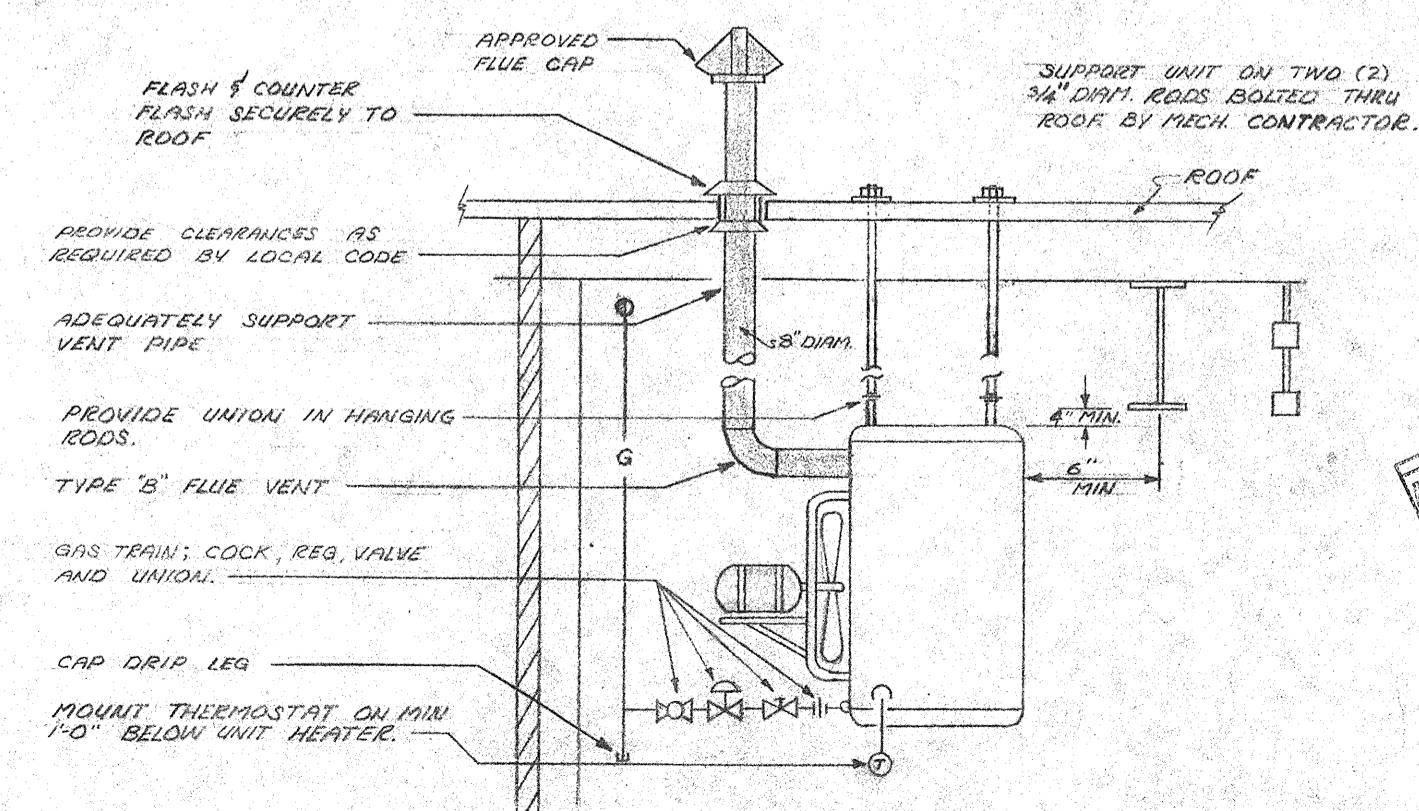


FLOOR PLAN  
SCALE: 1/8" = 1'

GRILLE REGISTER AND DIFFUSER SCHEDULE						
SYM	TYPE	USE	PATTERN	ACCESSORIES	MFG. NR.	REMARKS
(A)	DIFFUSER	SUPPLY	2-WAY		TDC-S-1-25-25	
(B)	DIFFUSER	SUPPLY	3-WAY		TDC-S-1-302-25	
(C)	REGISTER	RETURN	FIXED 30°		25-MPL-0-0-0-1	
(D)	GRILLE	TRANSFER	FIXED		T-8000-BF	

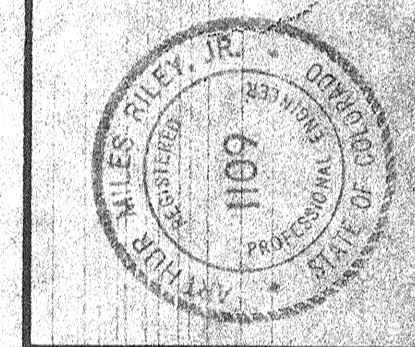
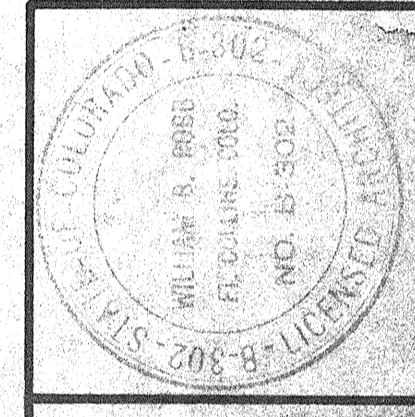


ROOF MOUNTING  
NO SCALE



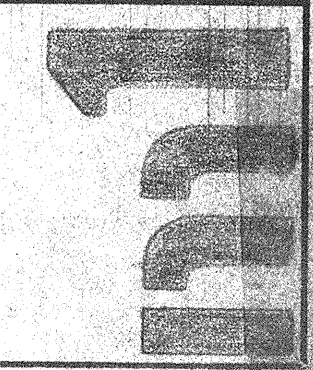
GAS UNIT HEATER DETAIL  
NO SCALE

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE



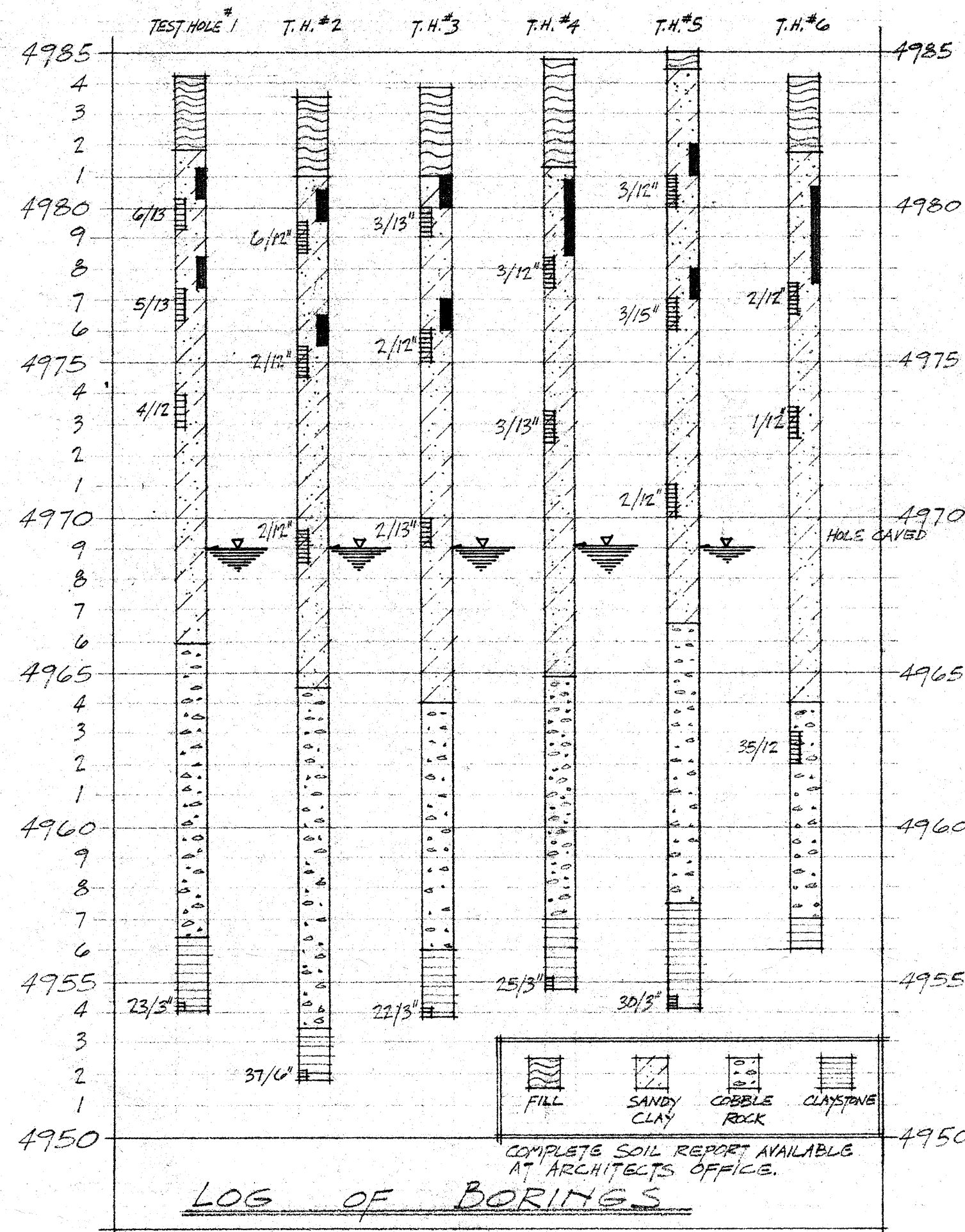
ROBB BRENNER INC.  
ARCHITECTS PLANNERS  
FORT COLLINS COLORADO  
DATE: FEB 11 1984  
JOB NO. 11-25344 J.F. CHD.

FLOOR PLAN  
MISCELLANEOUS DETAILS  
AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
CORNER RAILROAD LN 5TH  
LOVELAND, COLORADO

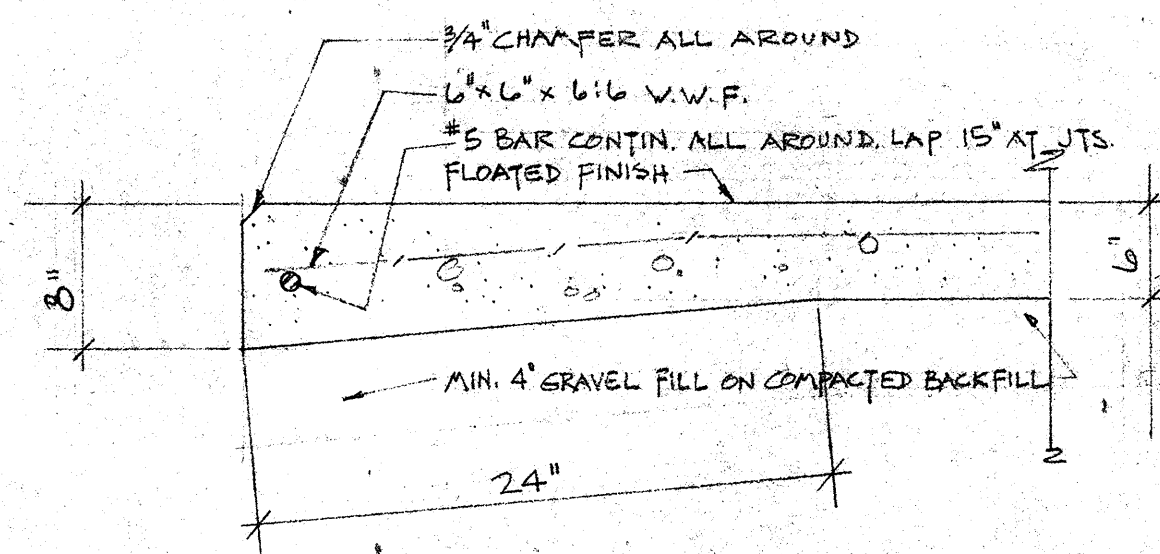




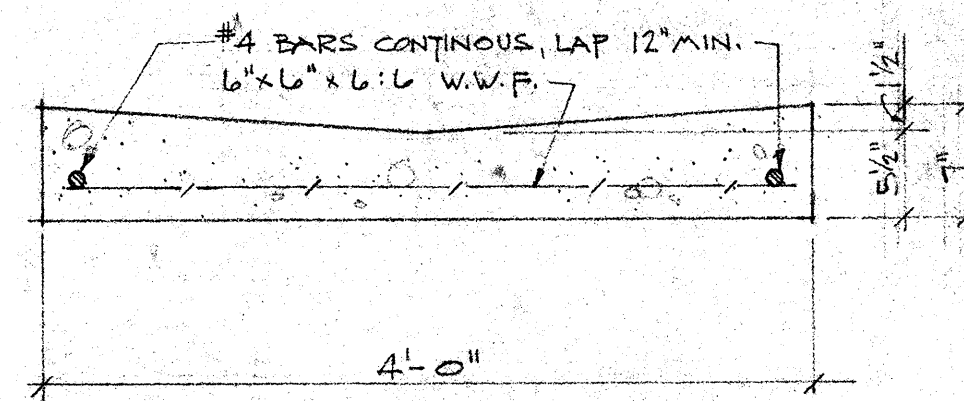




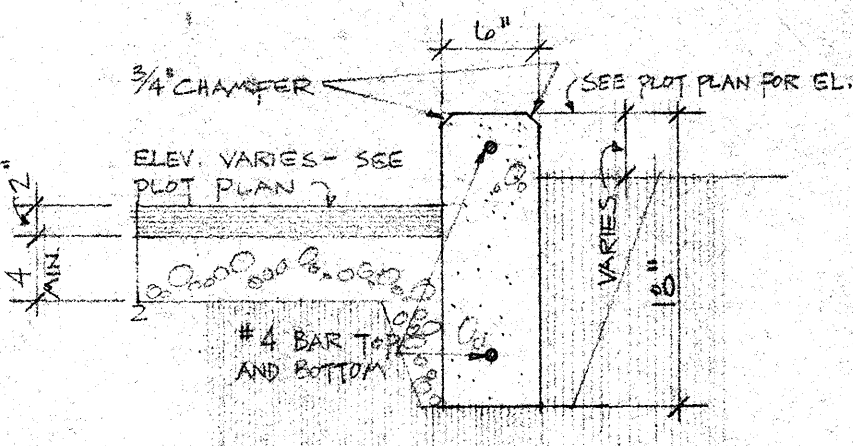
LOG OF BORINGS



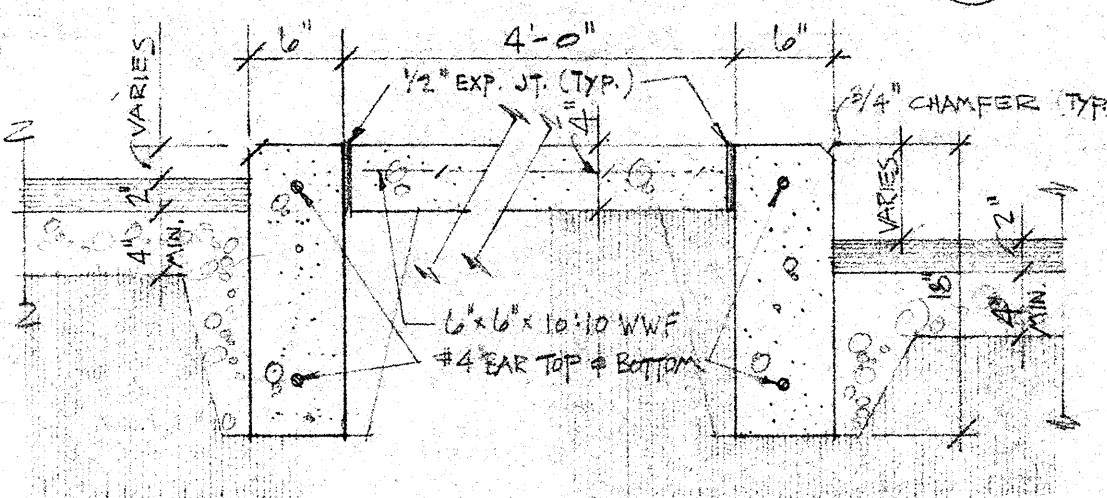
SLAB PERIMETER DETAIL



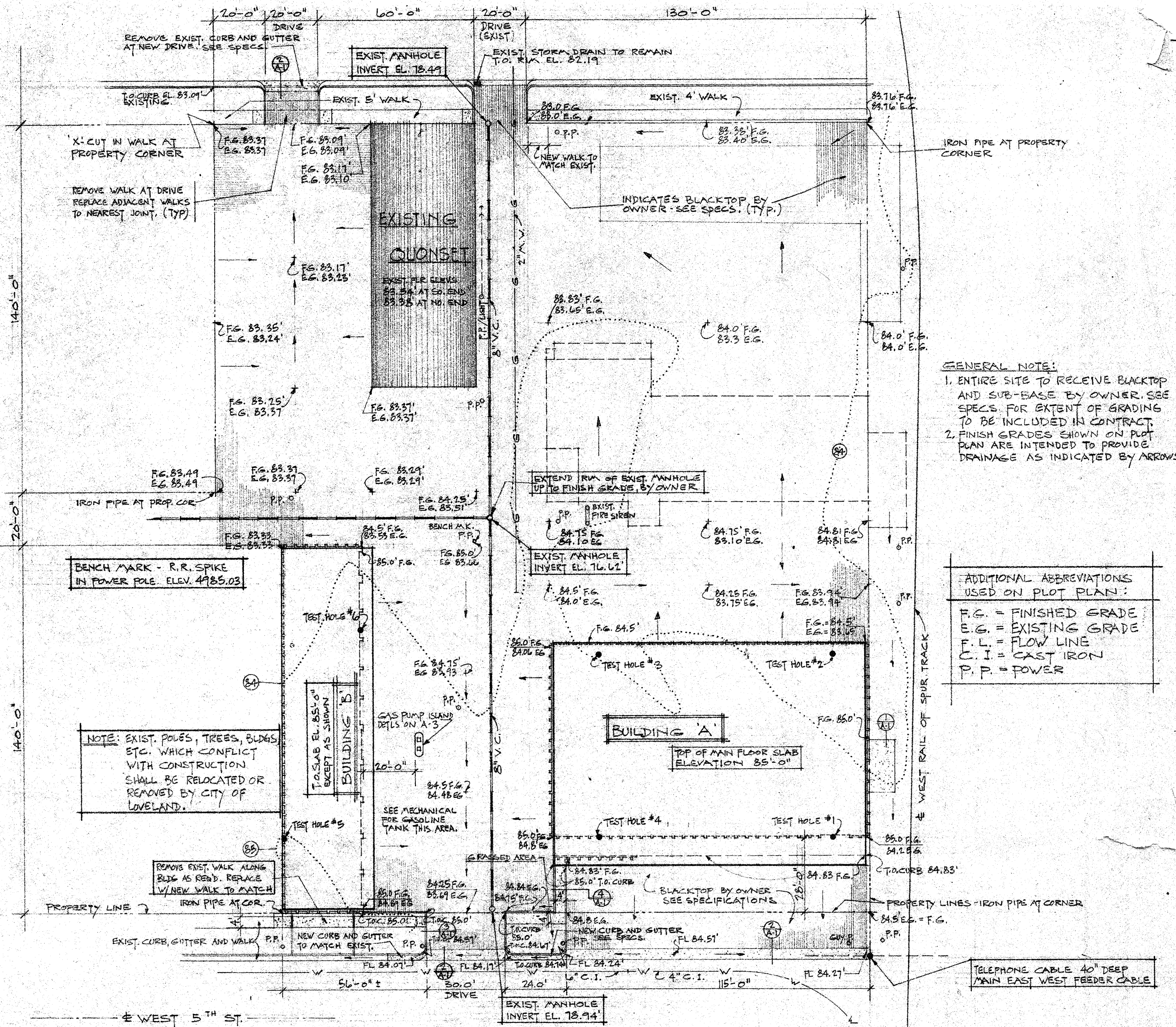
CONCRETE WASH DETAIL



CURB DETAIL



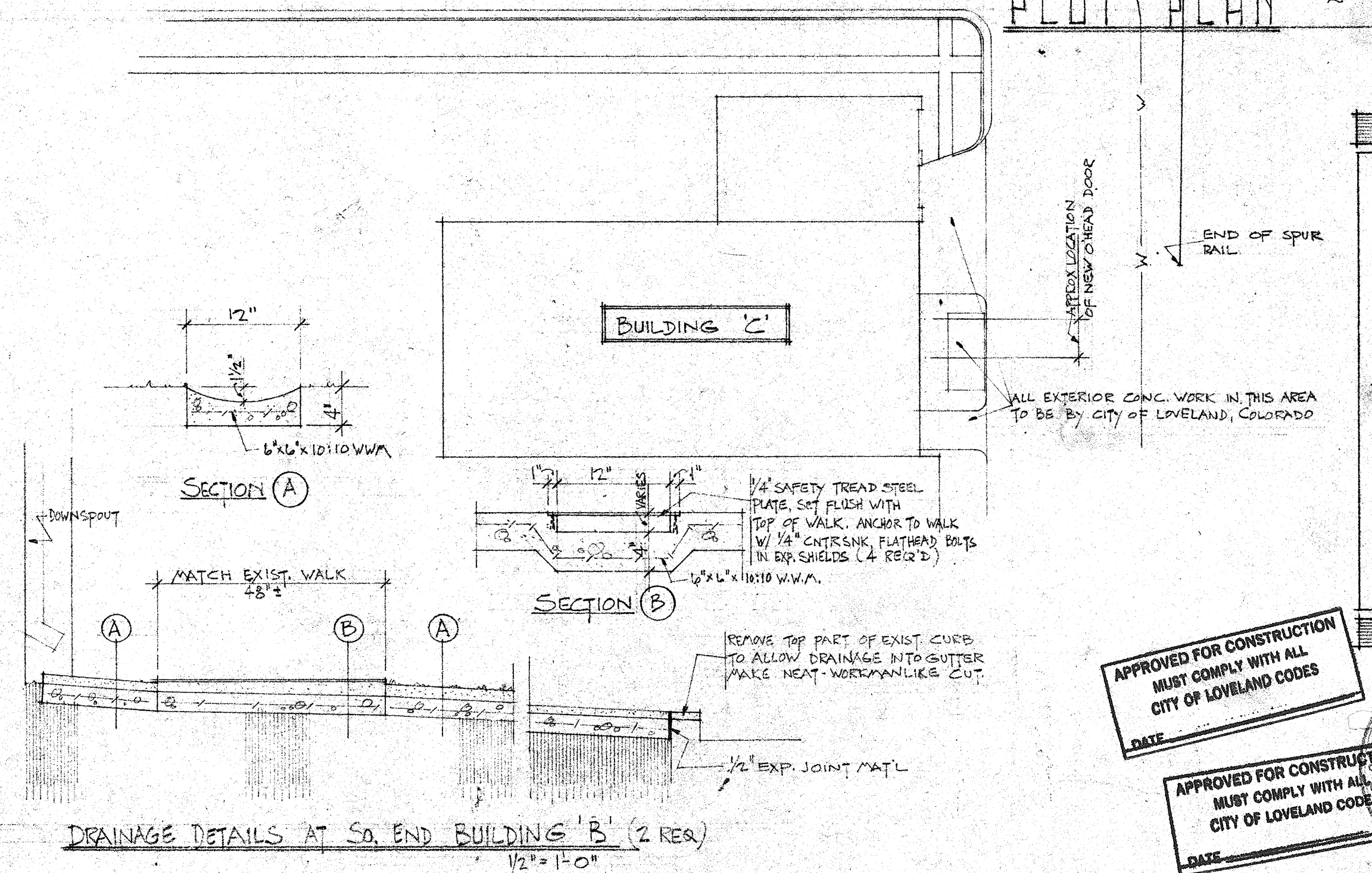
CURB AND WALK DETAIL



PLOT PLAN - 1" = 30'

MATERIAL SYMBOLS		ABBREVIATIONS	
[Symbol]	CONCRETE IN SECTION	CONC.	CONCRETE
[Symbol]	GRAVEL FILL IN SECTION	SP. BD.	GYPSUM BOARD
[Symbol]	EARTH IN SECTION	ELEV. EL.	ELEVATION
[Symbol]	CONCRETE OR GYPSUM BOARD IN ELEVATION	W.W.F.	WELDED WIRE FABRIC
[Symbol]	CONCRETE BLOCK IN SECTION	MIN.	MINIMUM
[Symbol]	EXISTING CONTOUR OR ELEVATION	TYP.	TYPICAL
[Symbol]	RIGID INSULATION	INSUL.	INSULATION
[Symbol]	WOOD IN SECTION (NOT PLYWOOD)	EXIST.	EXISTING
[Symbol]	WOOD IN SECTION	T.O.	TOP OF
[Symbol]	GYPSUM BOARD IN SECTION	B.O.	BOTTOM OF
[Symbol]	PLYWOOD IN SECTION	DET.	DETAIL
[Symbol]	PARTICLE BOARD IN SECTION	FIN.	FINISH
[Symbol]	METAL IN ELEVATION, OR RUBBER BASE	BRNG.	BEARING
		SPECS.	SPECIFICATIONS
		G.I.	GALVANIZED IRON
		REINF.	REINFORCE
		CONN.	CONNECTION
		SHT.	SHEET
		H.M.	HOLLOW METAL

SHEET INDEX	
SHEET NO.	DESCRIPTION
A-1	PLOT PLAN, EXTERIOR CONC., INDEX
A-2	MAIN FLOOR PLAN, SECOND FLOOR PLAN, BUILDING 'A'
A-3	MAIN FLOOR PLANS, BLDGS 'B' & 'C', ELEVATION & SECTIONS, BLDG 'C'
A-4	ELEVATIONS BUILDINGS 'A' & 'B'
A-5	BUILDING SECTIONS, BUILDINGS 'A' & 'B'
A-6	ROOM FINISH SCHEDULE, MILLWORK DETAILS
A-7	OPENING SCHEDULE AND DETAILS
S-1	FOOTING AND FOUNDATIONS & DETAILS, BLDGS 'A' & 'B'
S-2	ROOF FRAMING PLANS & DETAILS, BLDGS 'A' & 'B'
M-1	PLAT PLAN, MAIN & SECOND FLOOR PLANS BLDG 'A', SCHEDULES, SYMBOLS
M-2	FLOOR PLANS, BLDGS 'B' & 'C', MISC. DETAILS
E-1	PLOT PLAN, PANELS, SCHEDULES, LEGEND, ONE LINE & GEN. NOTES
E-2	BUILDING 'A' LIGHTING AND POWER PLANS
E-3	BUILD. 'B' LIGHTING AND POWER PLANS, BLDG 'C' FLOOR PLAN



DRAINAGE DETAILS AT SO. END BUILDING 'B' (2 RES)

GENERAL NOTE:  
 1. ENTIRE SITE TO RECEIVE BACKTOP AND SUB-BASE BY OWNER. SEE SPECS. FOR EXTENT OF GRADING TO BE INCLUDED IN CONTRACT.  
 2. FINISH GRADES SHOWN ON PLOT PLAN ARE INTENDED TO PROVIDE DRAINAGE AS INDICATED BY ARROWS.

ADDITIONAL ABBREVIATIONS USED ON PLOT PLAN:  
 F.G. = FINISHED GRADE  
 E.G. = EXISTING GRADE  
 F.L. = FLOW LINE  
 C.I. = CAST IRON  
 P.P. = POWER

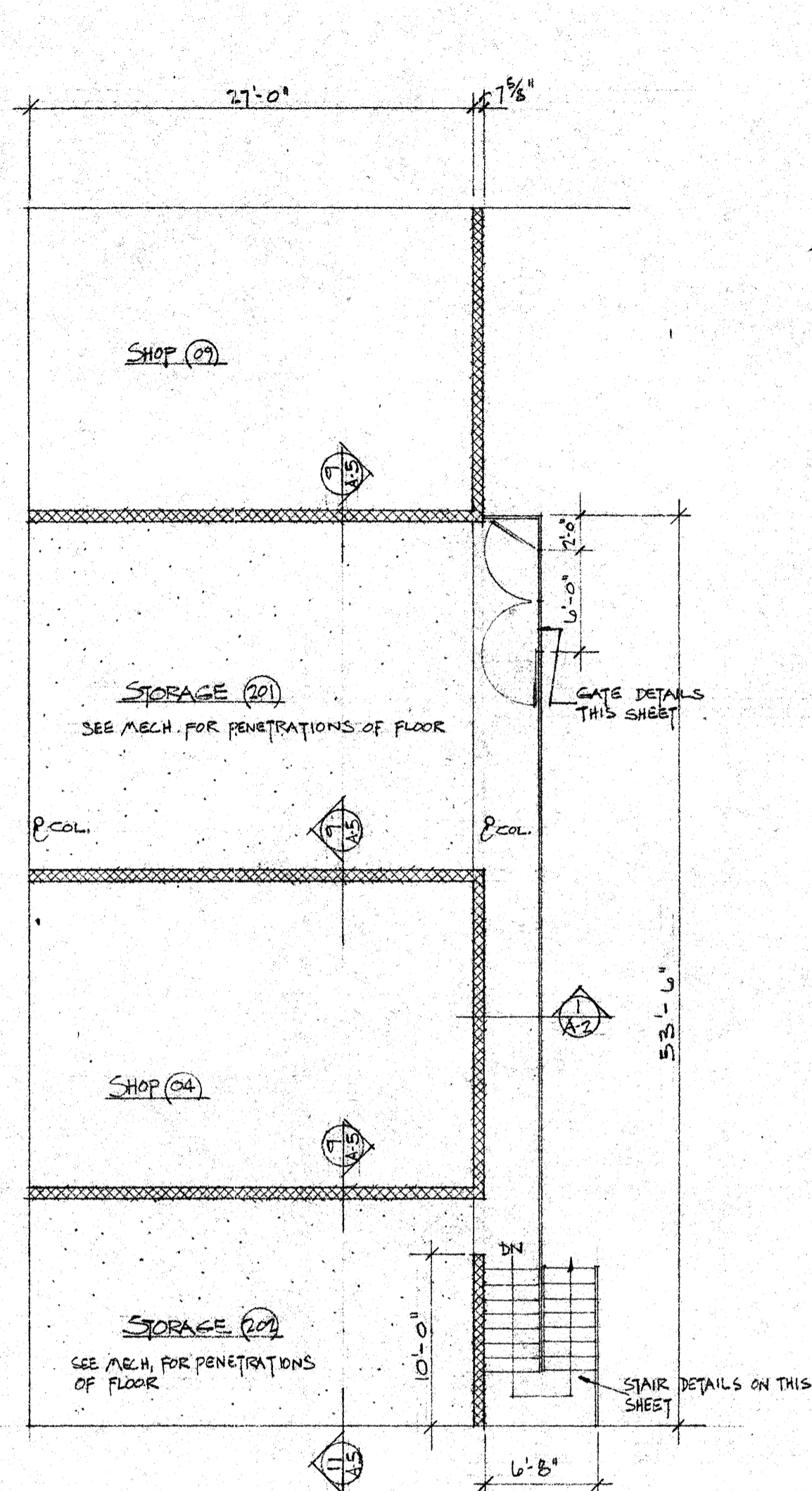
"Reliable Electric of Loveland" 4/68

APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
 DATE

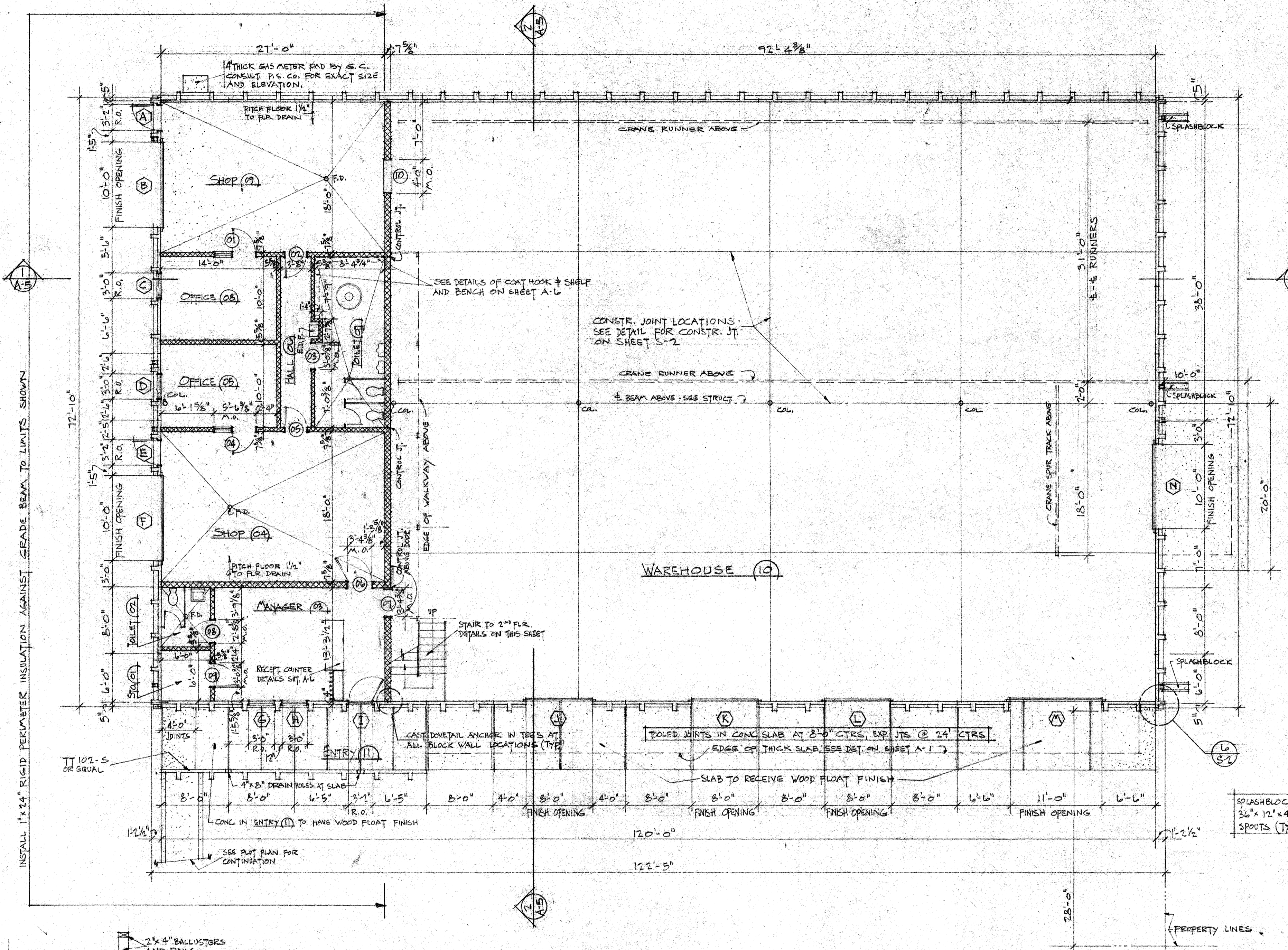
APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
 DATE

MUNICIPAL WAREHOUSE FACILITY  
 CORNER RAILROAD & W. 5<sup>TH</sup> ST. - LOVELAND, COLORADO  
 WILLIAM B. ROBB  
 LICENSE NO. B-302  
 STATE OF COLORADO  
 LICENSED ARCHITECT

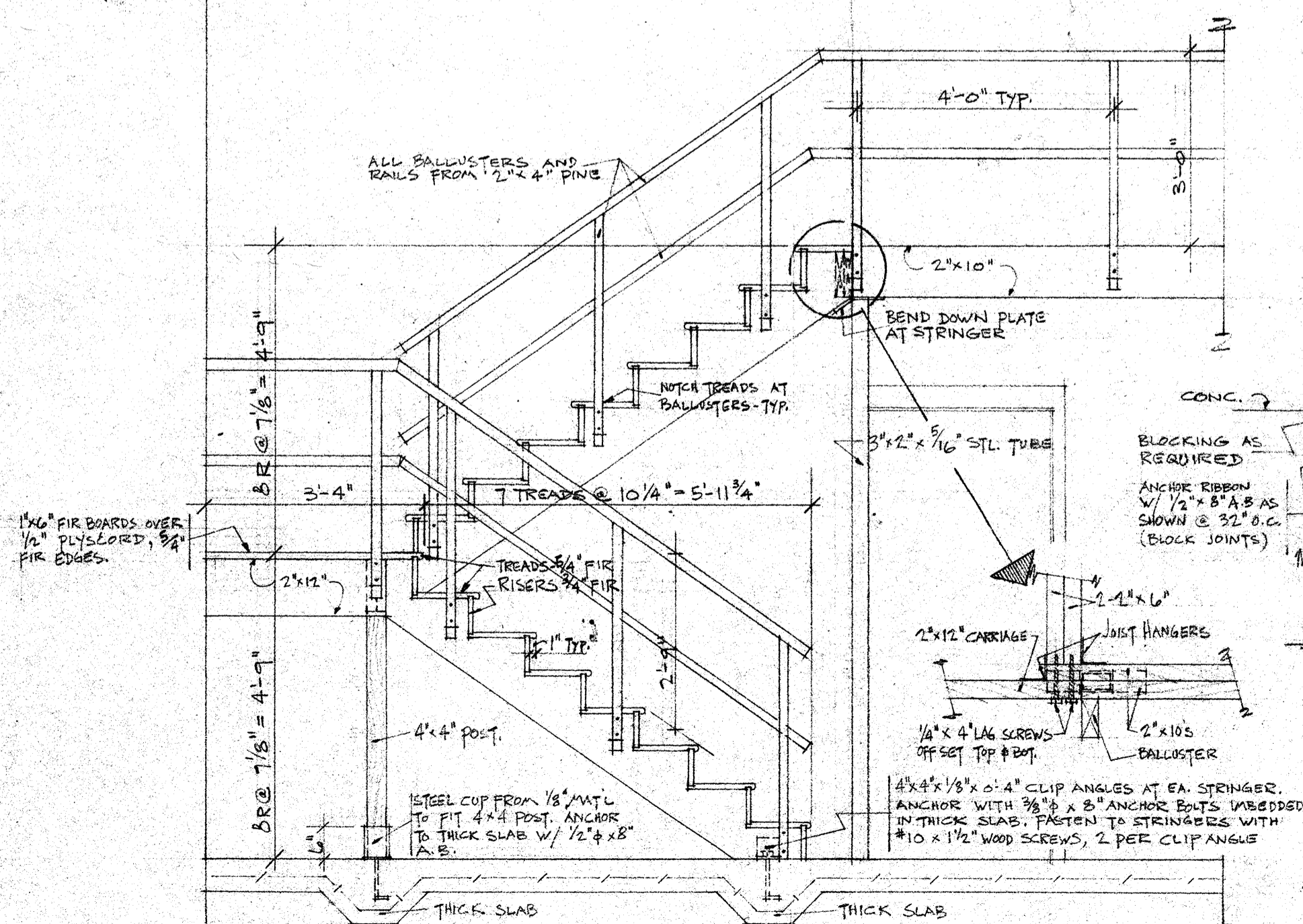
#19 A-I



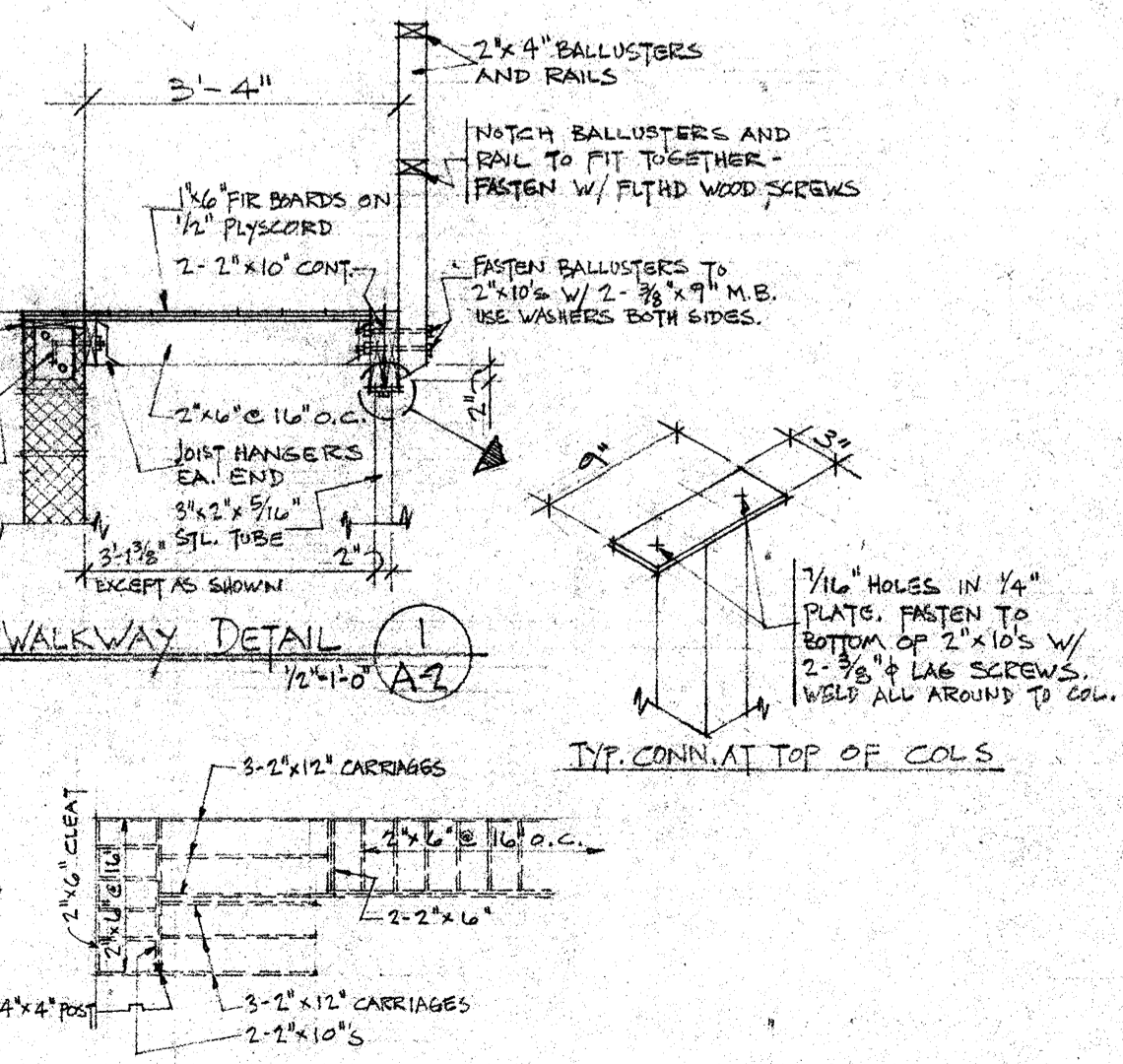
SECOND FLOOR PLAN 1/8" = 1'-0"  
BUILDING NO. 'A'



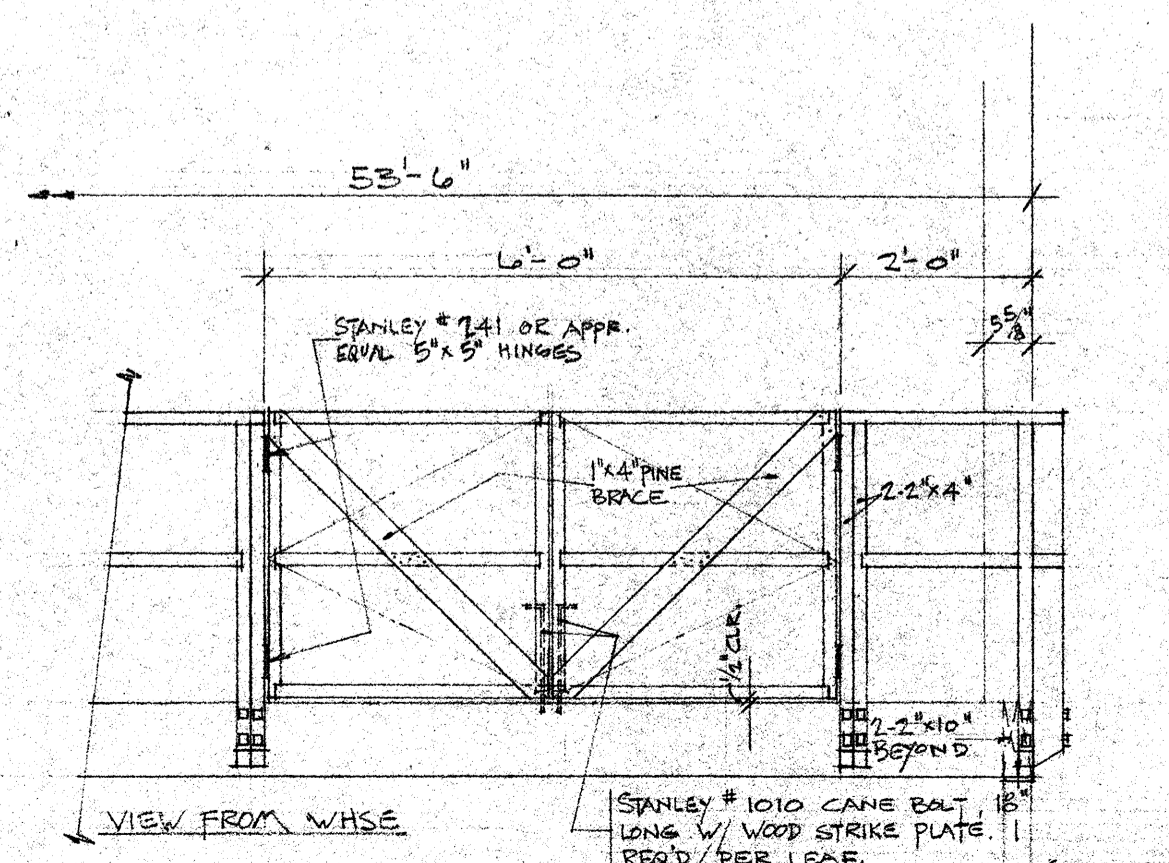
MAIN FLOOR PLAN 1/8" = 1'-0"  
BUILDING NO. 'A'



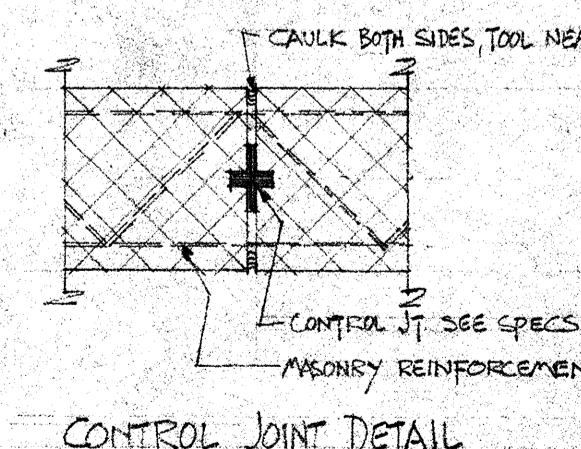
DETAILS - STAIR TO 2ND FLOOR



WALKWAY GATE DETAIL 1/8" = 1'-0"



WALKWAY GATE DETAIL 1/2" = 1'-0"



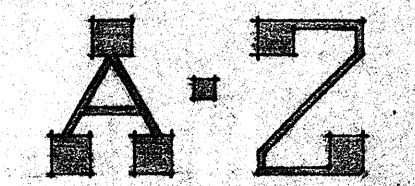
CONTROL JOINT DETAIL 1/2" = 1'-0"

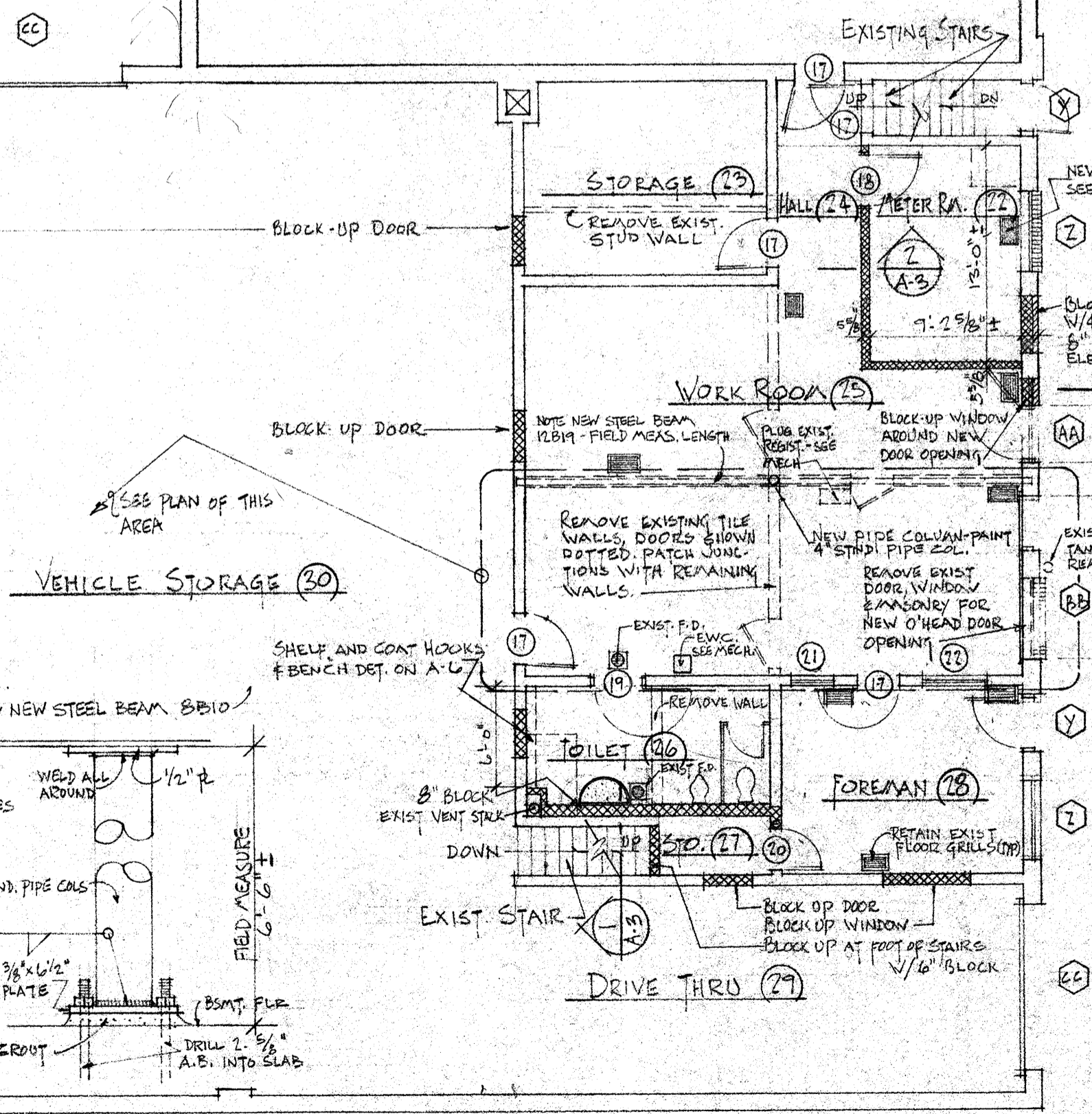
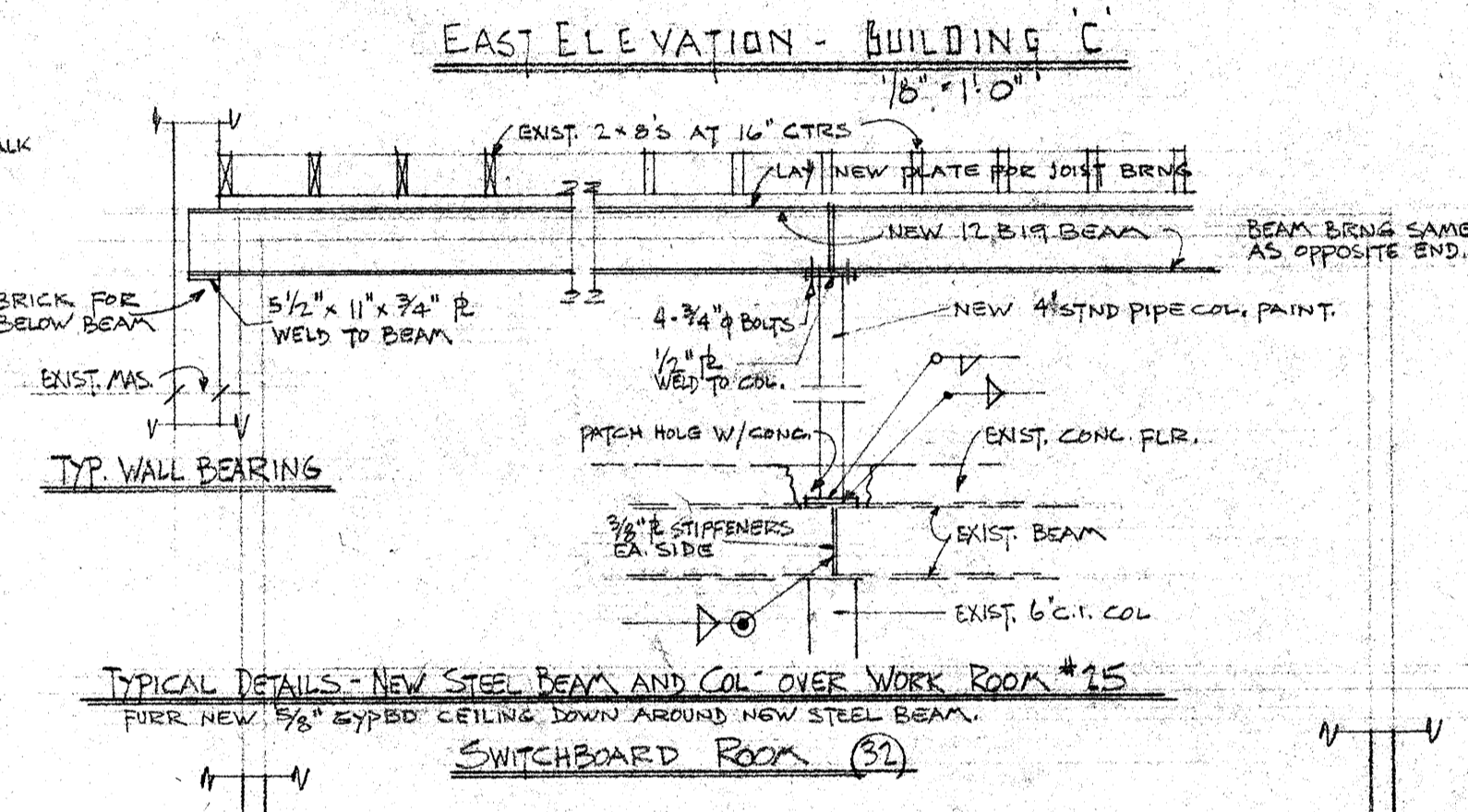
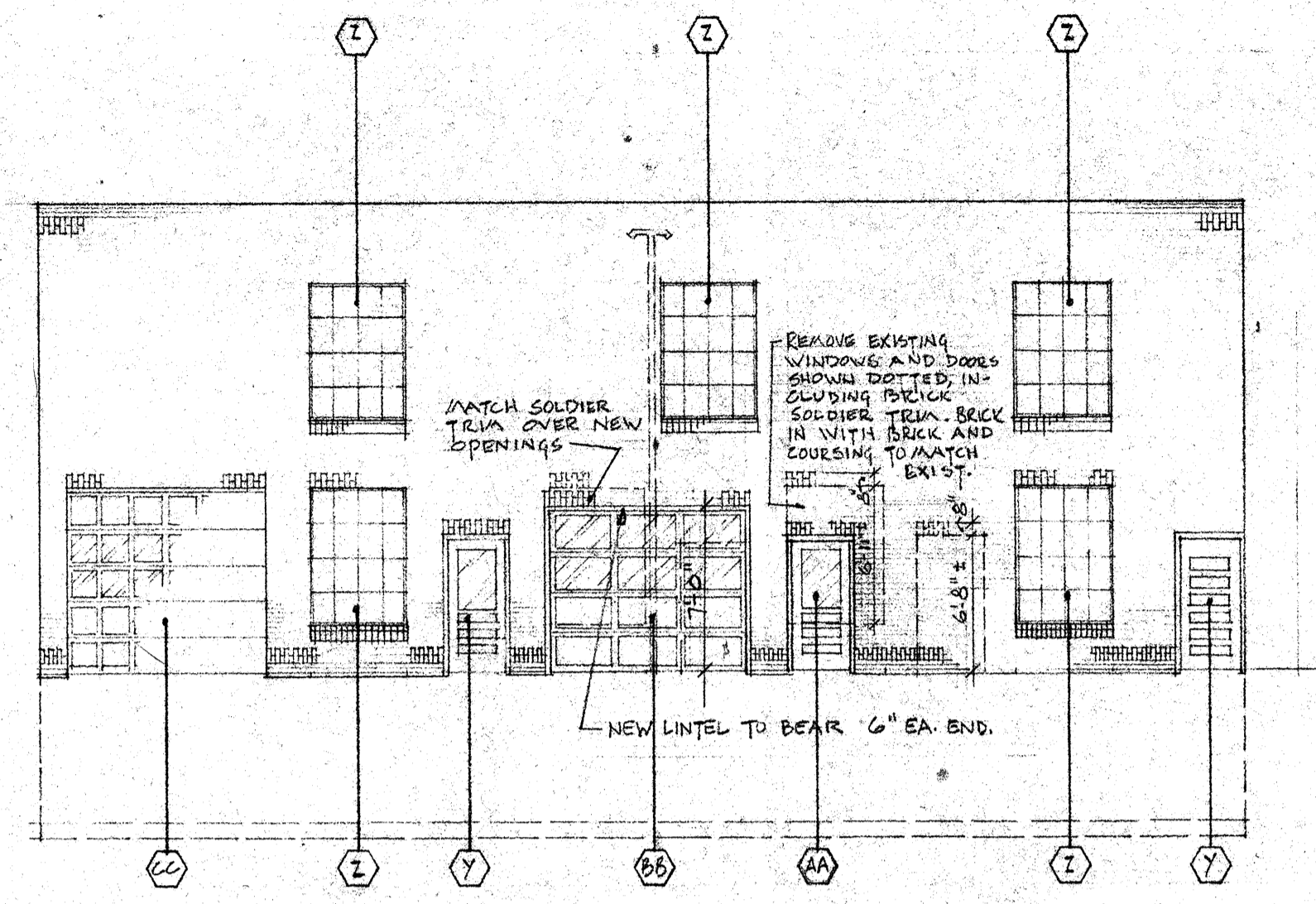
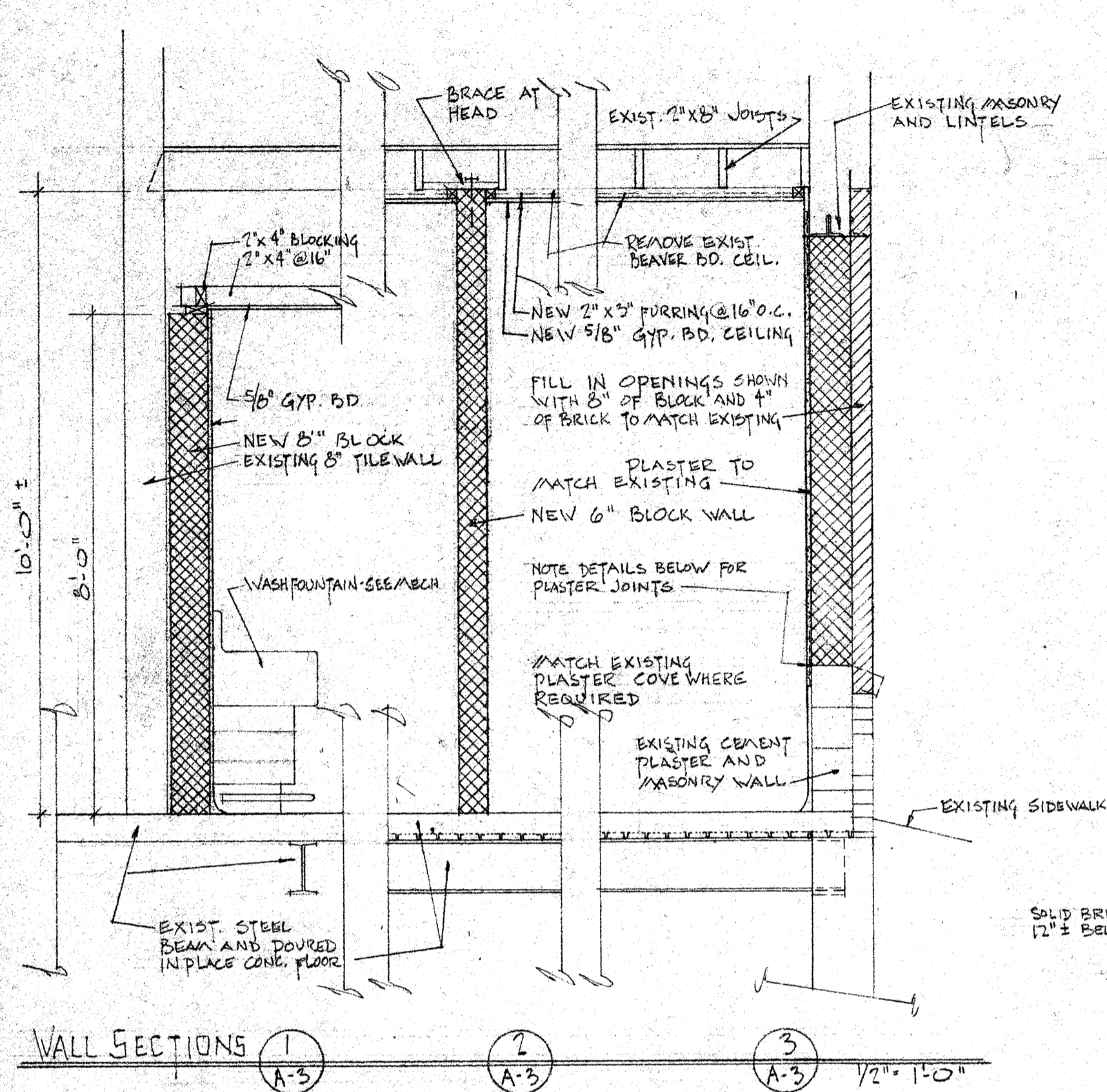
SPLASHBLOCKS BY GENL. CONTR. 36" x 12" x 4" TO FIT 4" x 6" DOWN-SPOUTS (TYP.)

MUNICIPAL WAREHOUSE FACILITY  
CORNER BROADWAY & W. 5th ST. - LOVELAND, COLORADO  
WILLIAM B. ROBB  
ARCHITECT  
407 7th STREET, FORT COLLINS, COLO.  
STATE OF COLORADO  
EXPIRES 12/31/2017  
LICENSED ARCHITECT - 2009

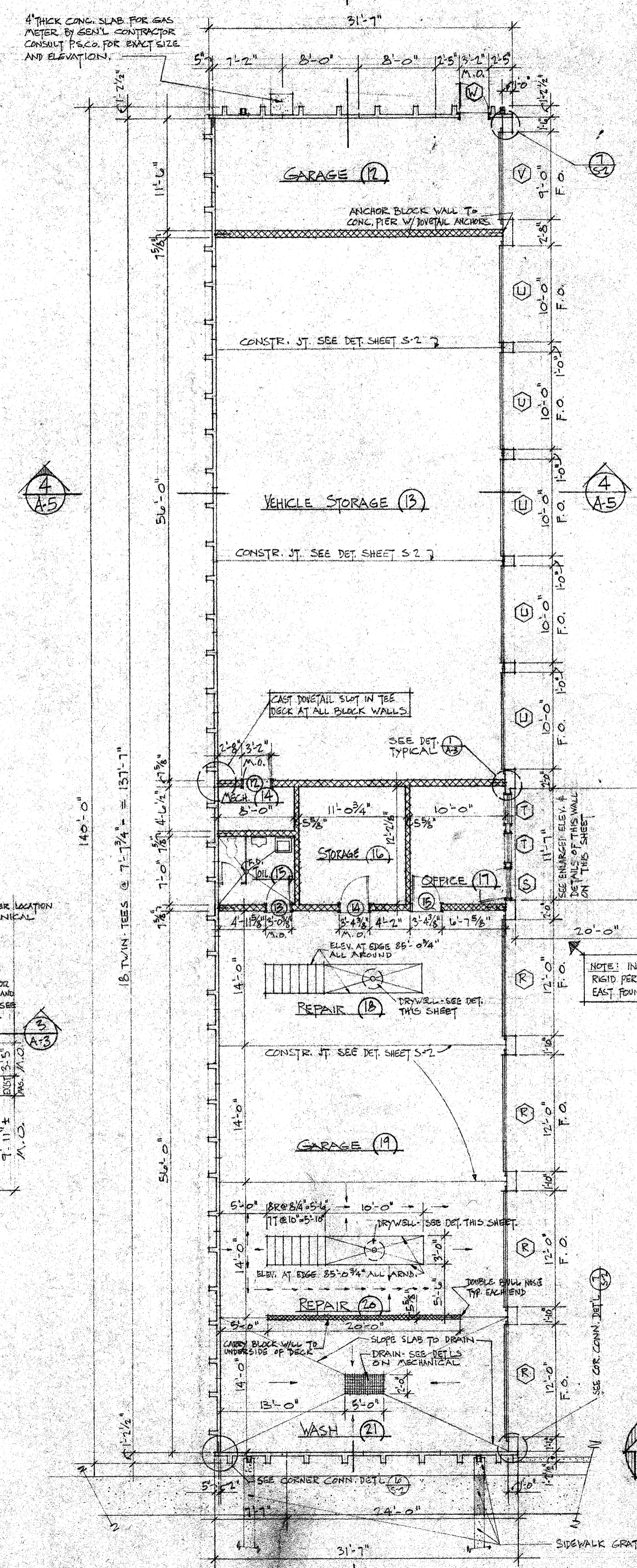
APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE

WILLIAM B. ROBB  
FT. COLLINS, COLO.  
NO. B-302  
LICENSED ARCHITECT - 2009

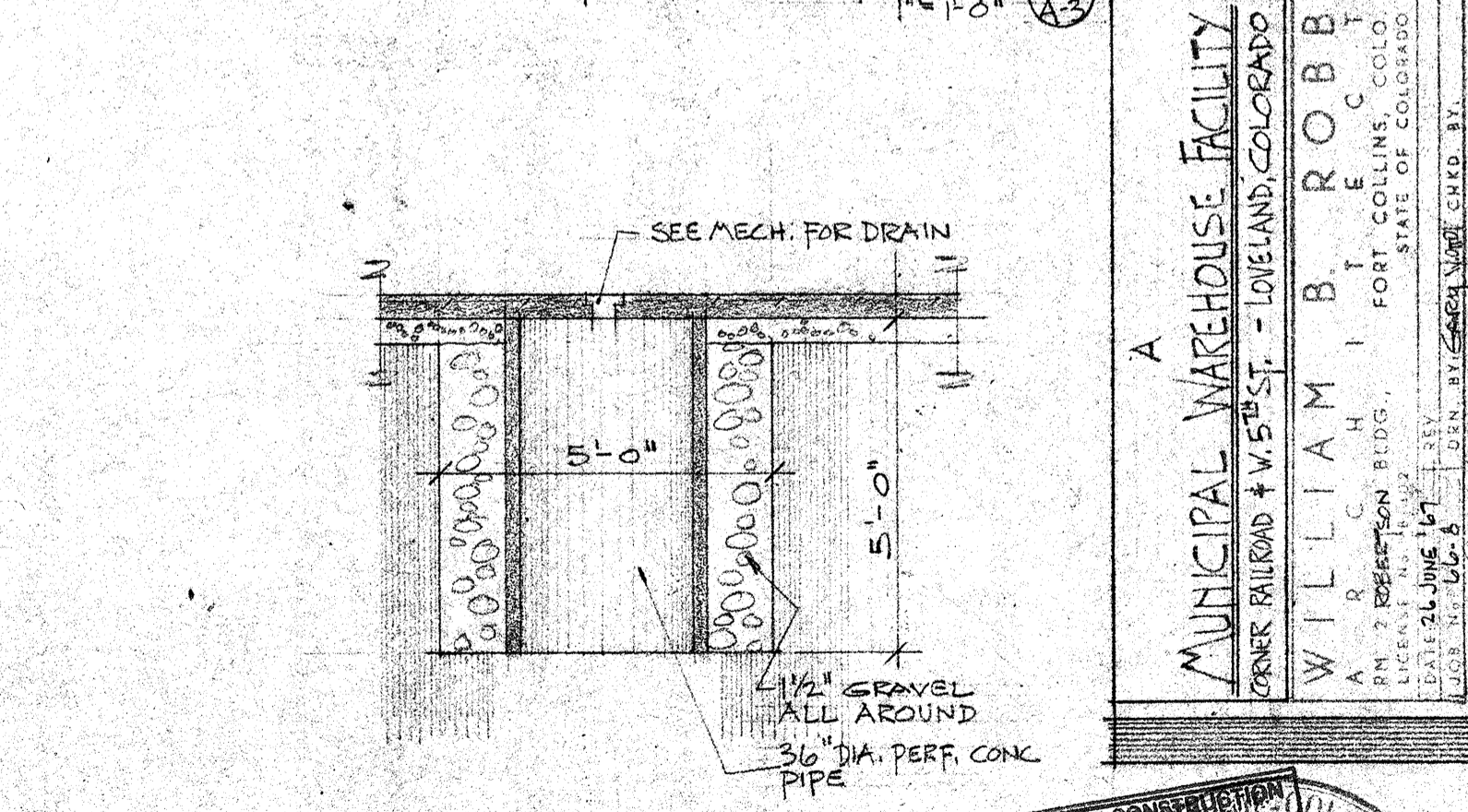
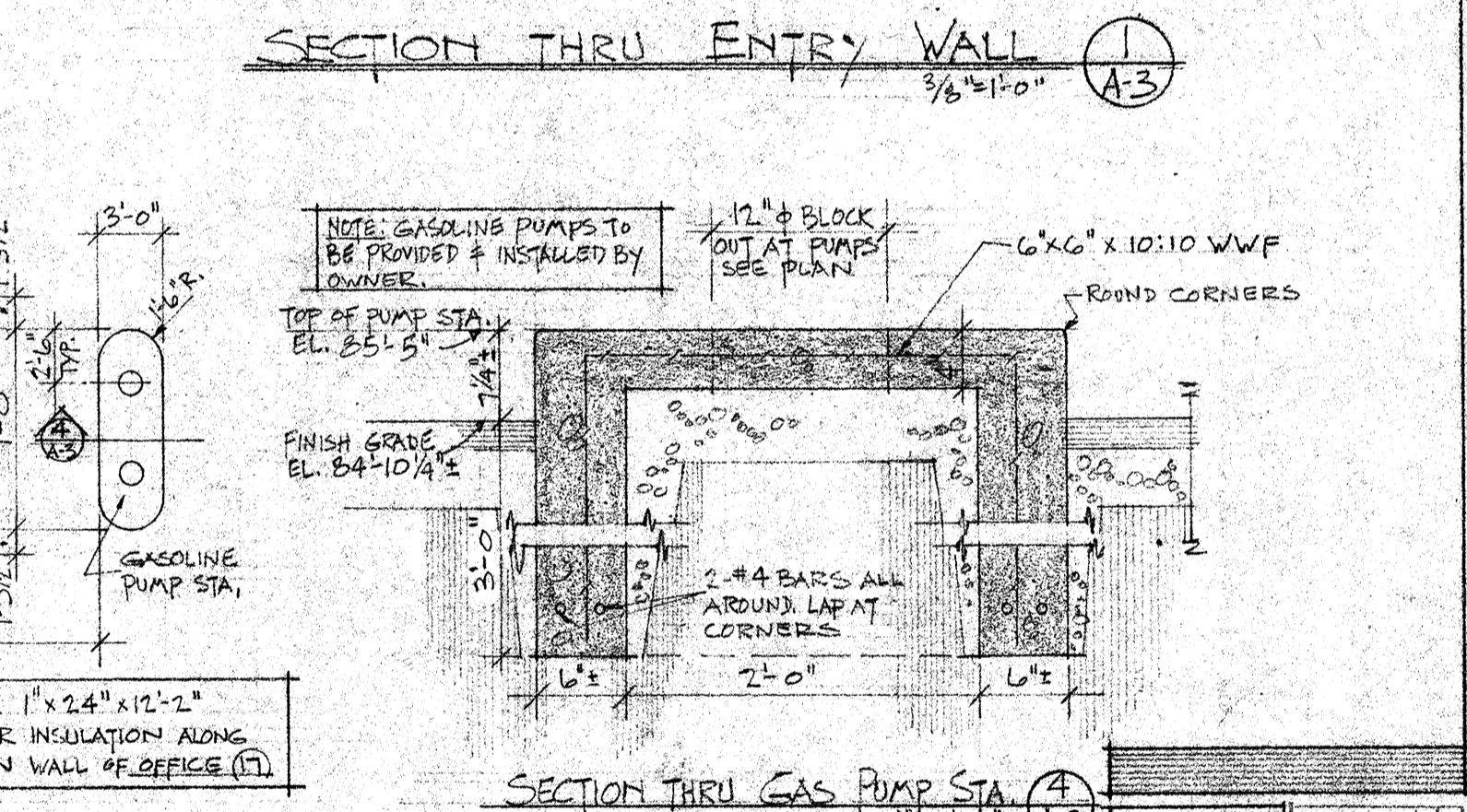
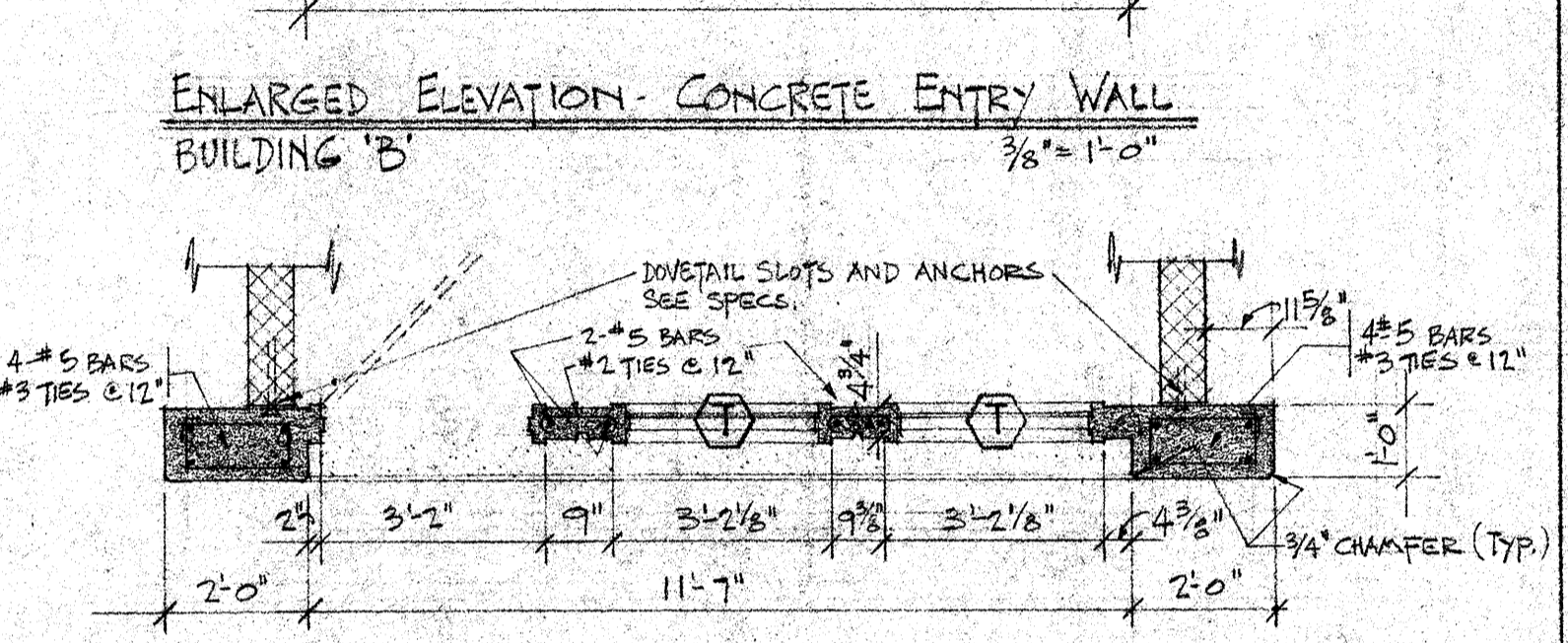
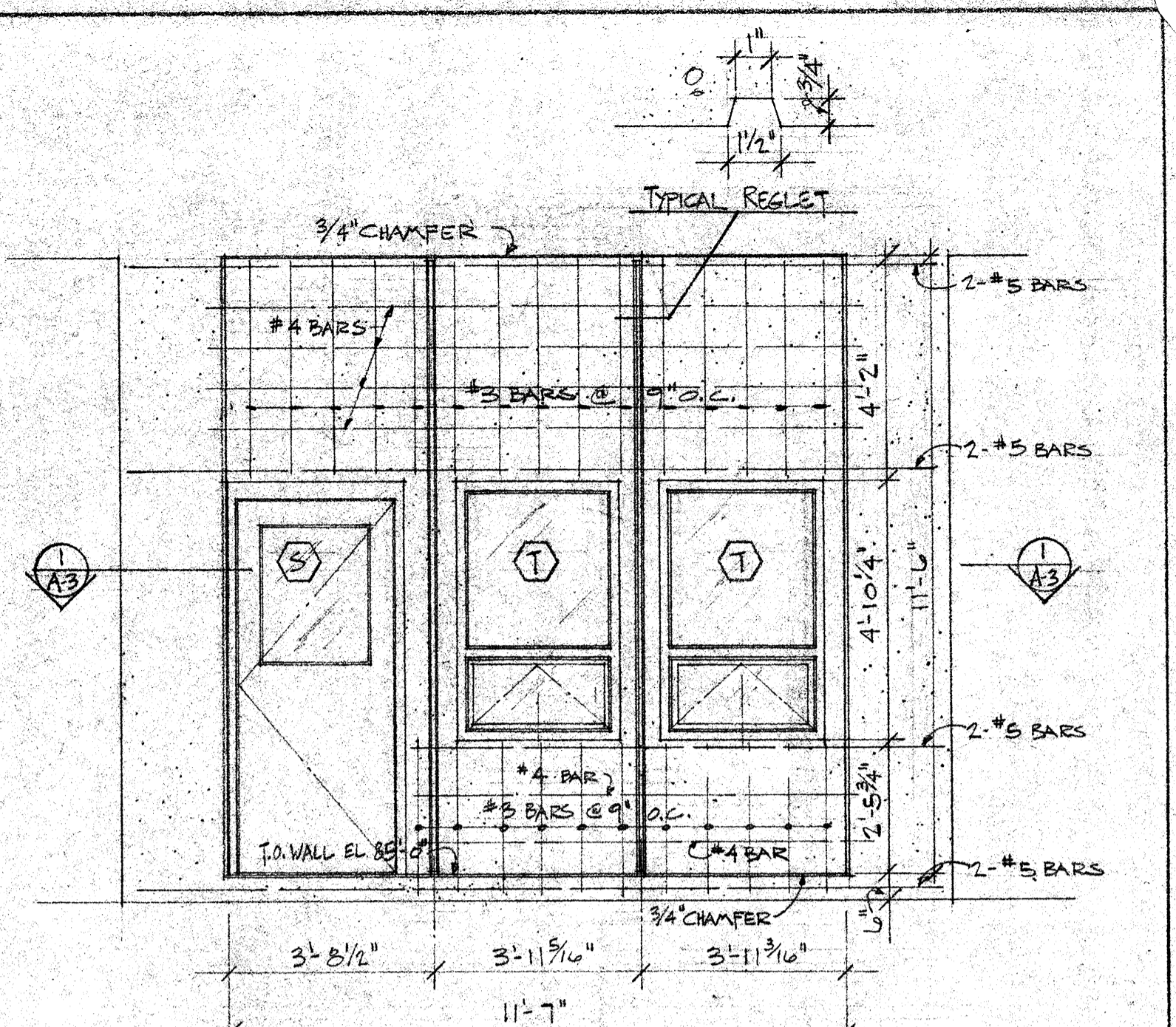




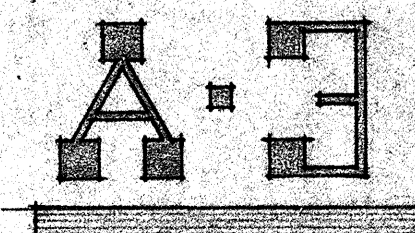
FLOOR PLAN - BUILDING 'C'  
1/8" = 1'-0"



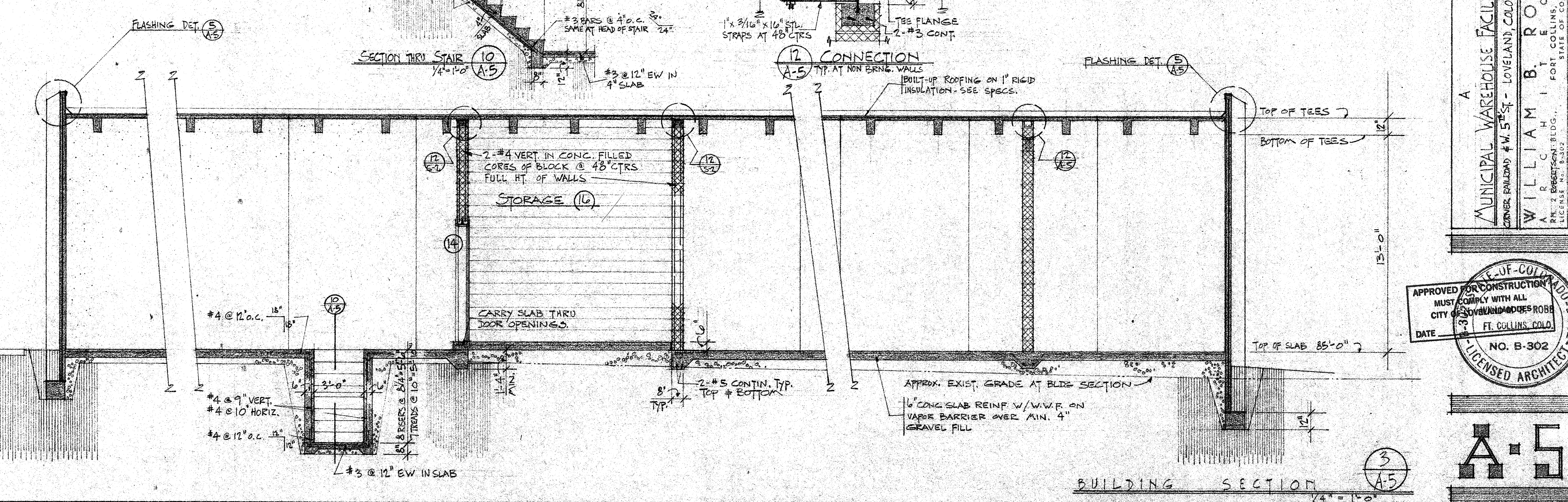
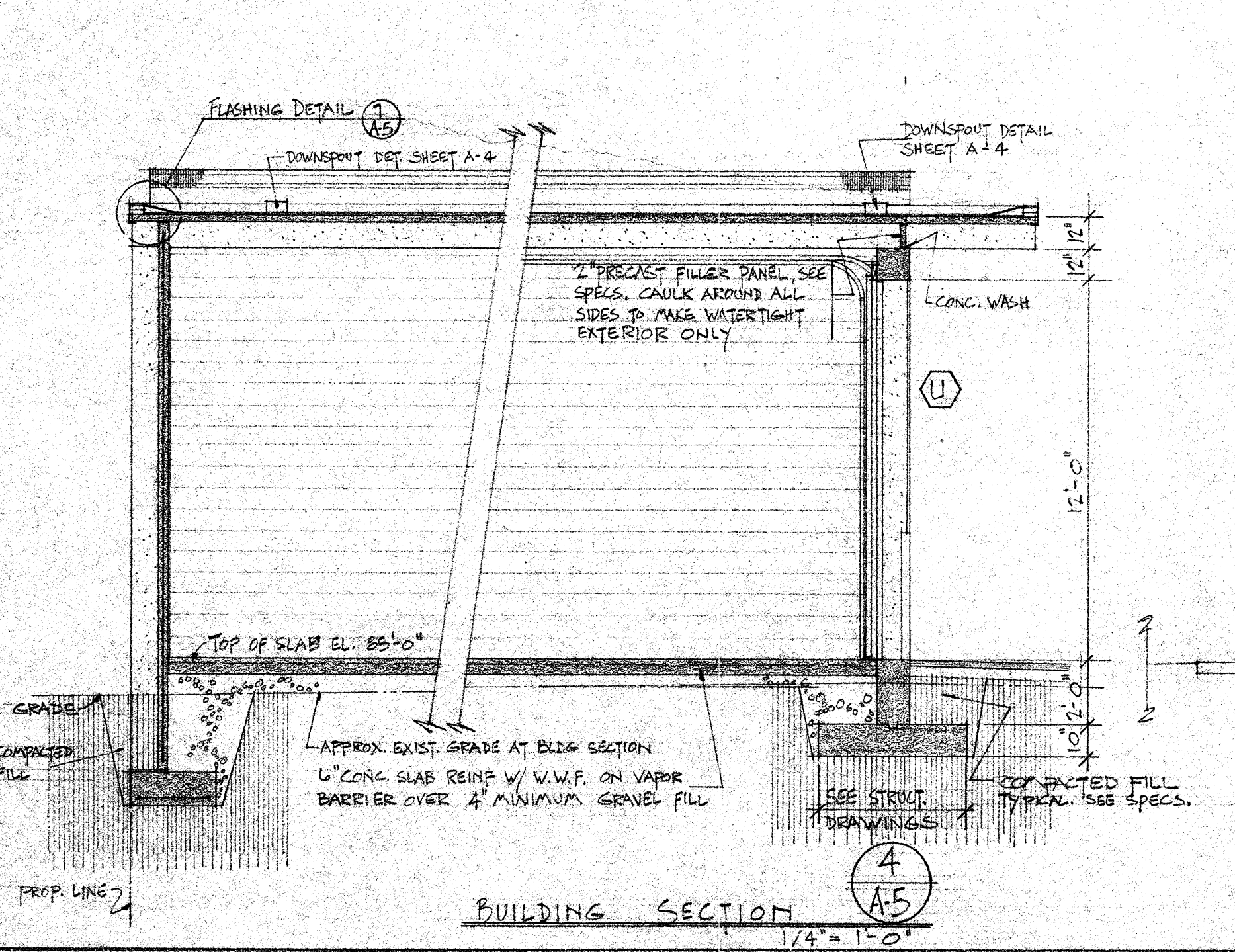
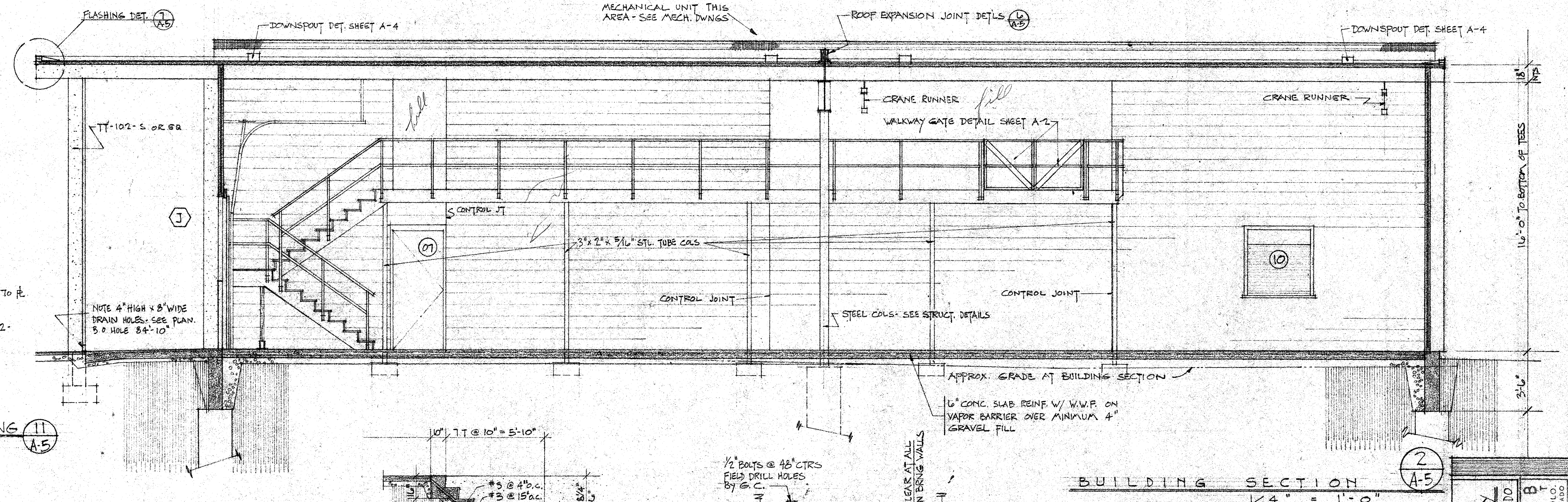
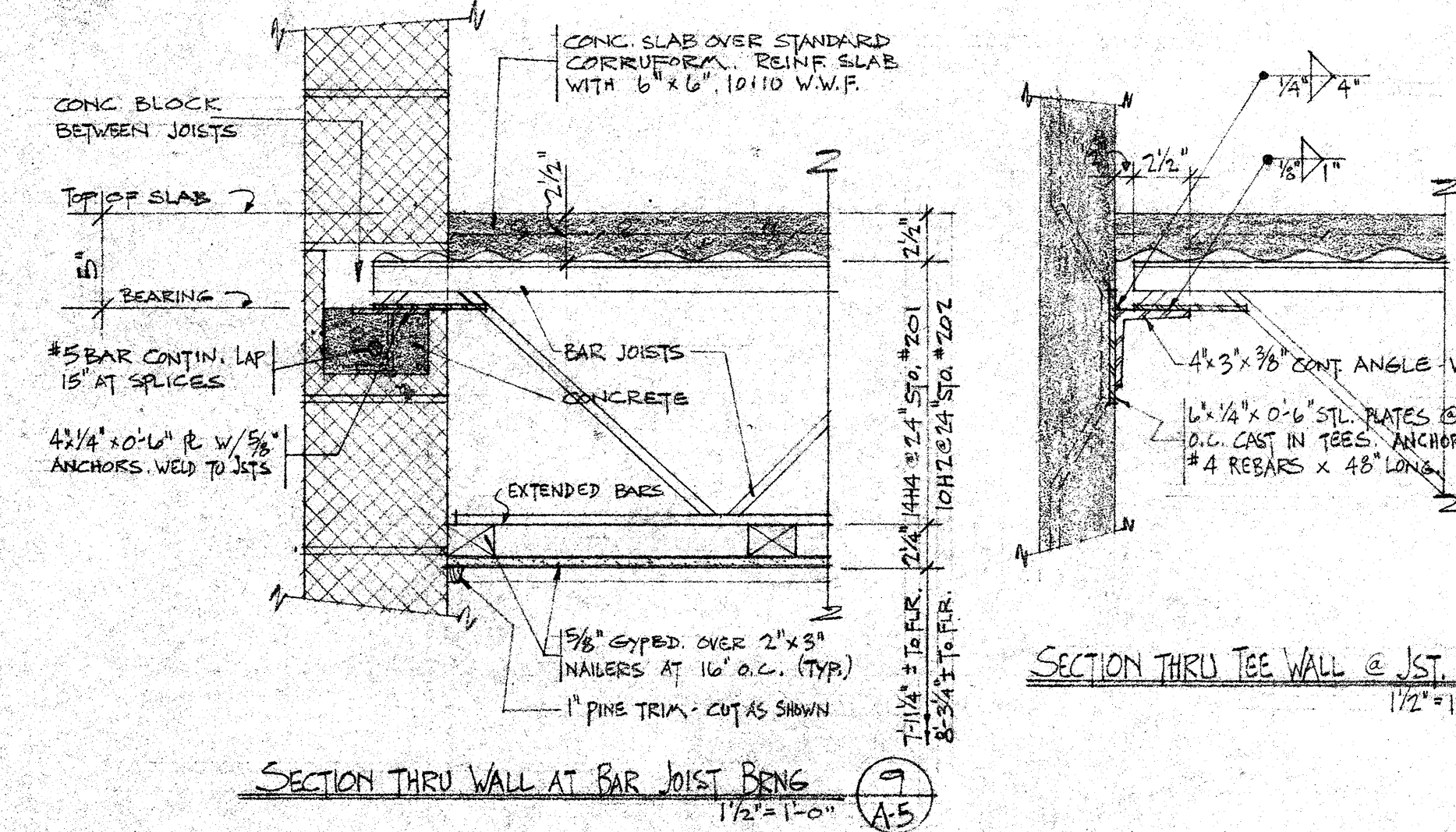
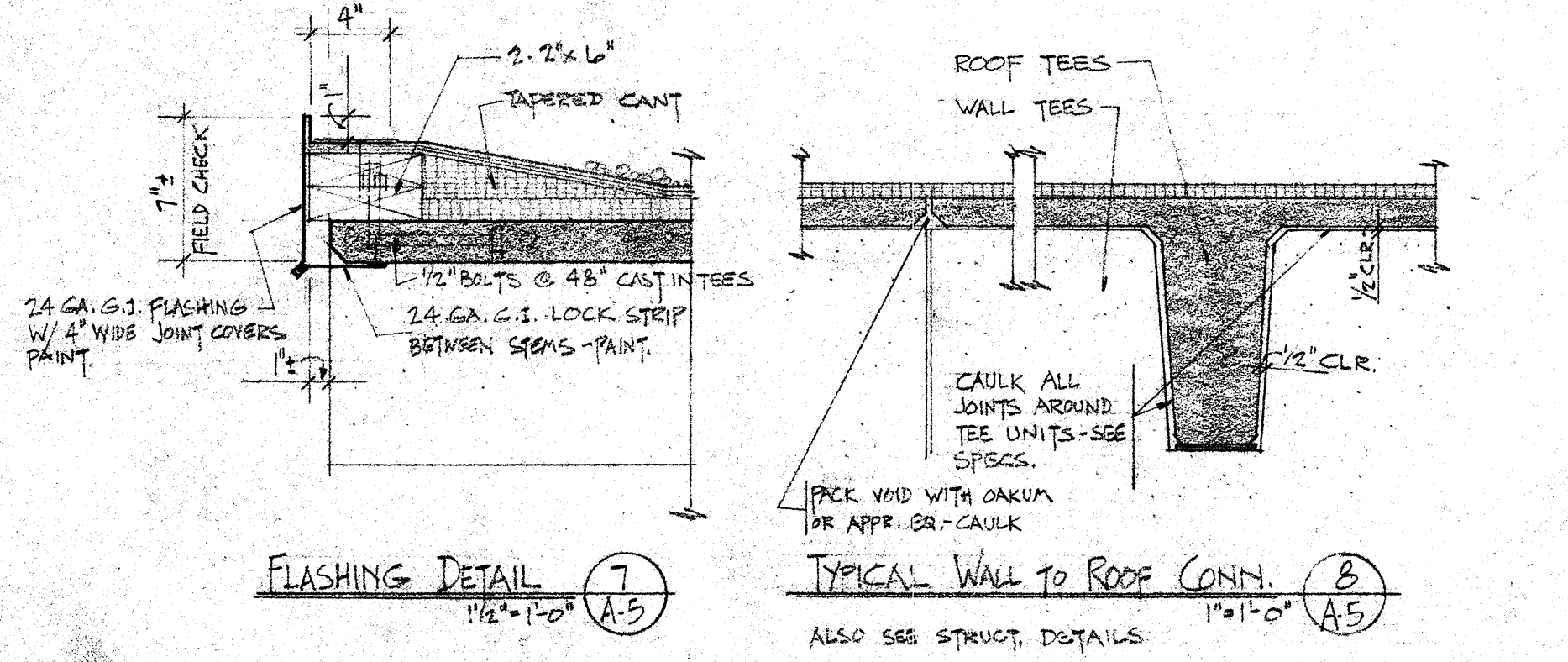
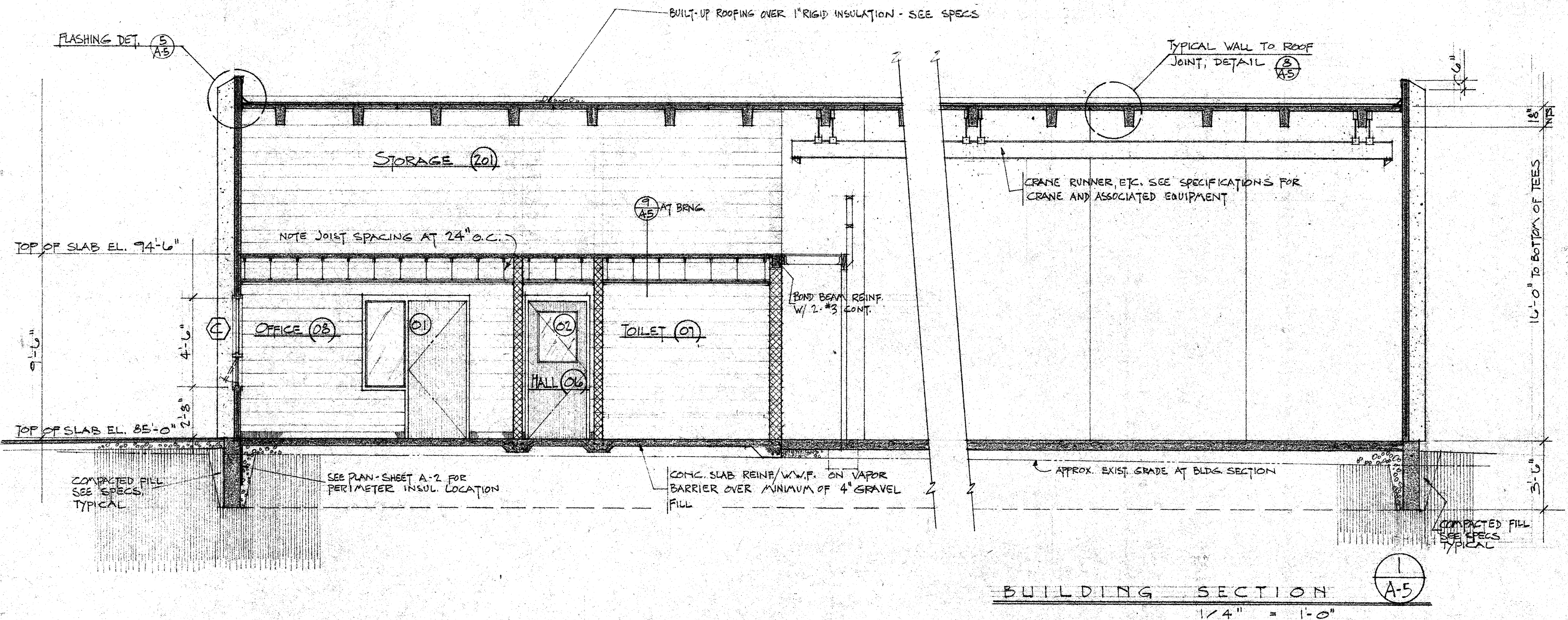
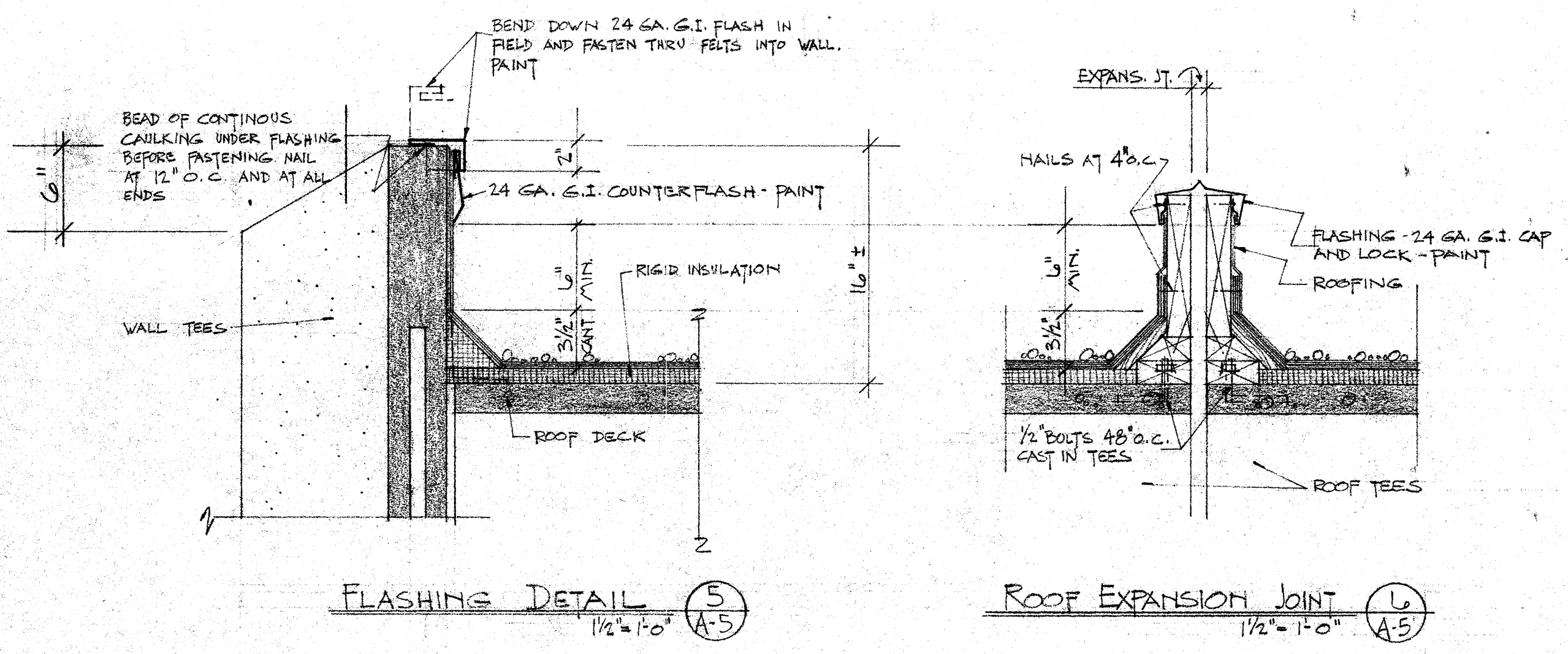
FLOOR PLAN - BUILDING 'B'  
1/8" = 1'-0"



APPROVED FOR CONSTRUCTION  
MAY COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE \_\_\_\_\_  
BY WILLIAM B. ROBB  
P.E. GULLING, COLO.  
STATE OF COLORADO  
LICENSED ARCHITECT - 200-302







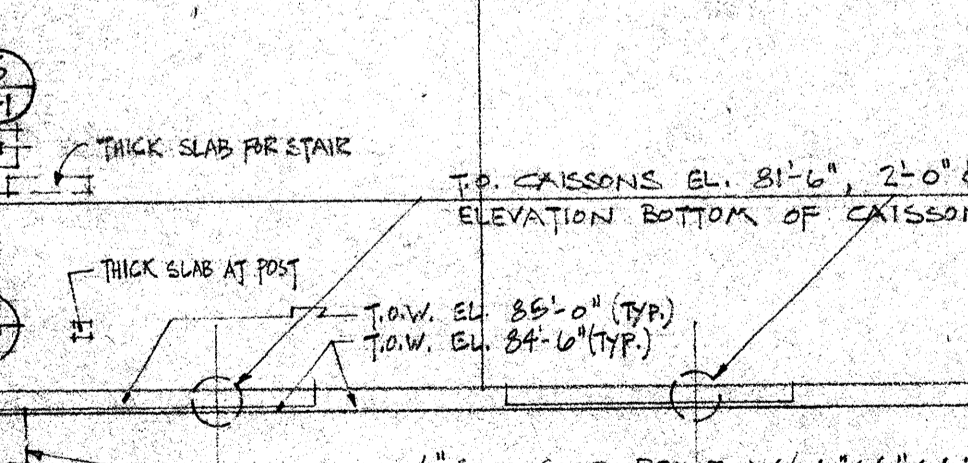
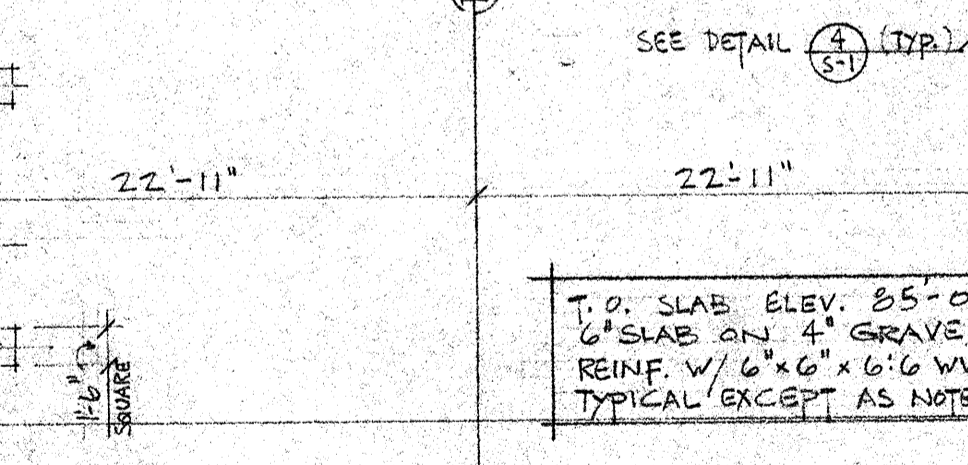
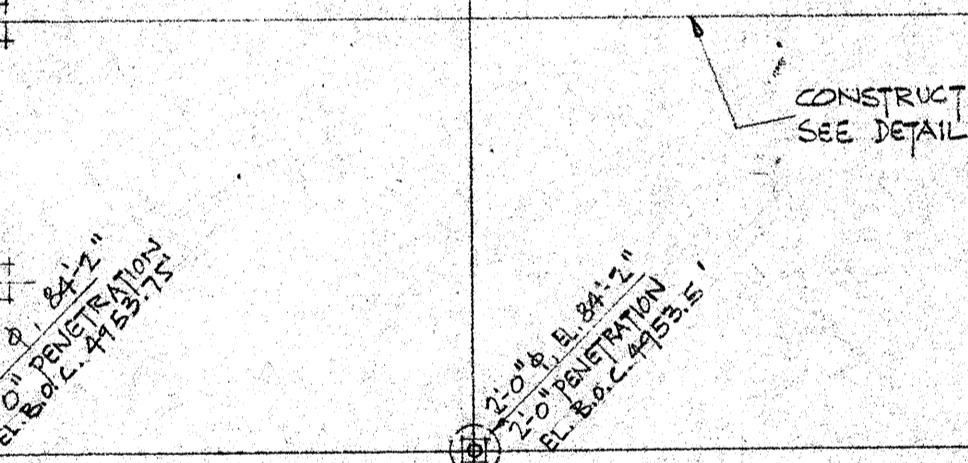
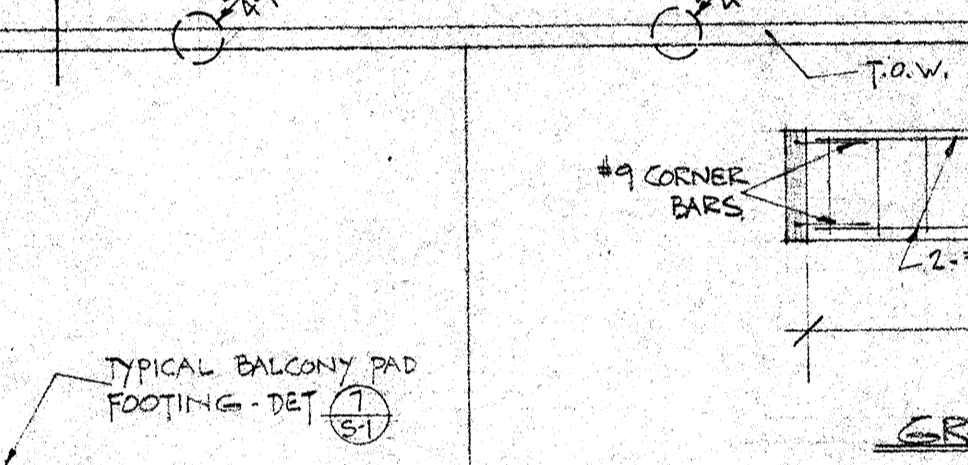
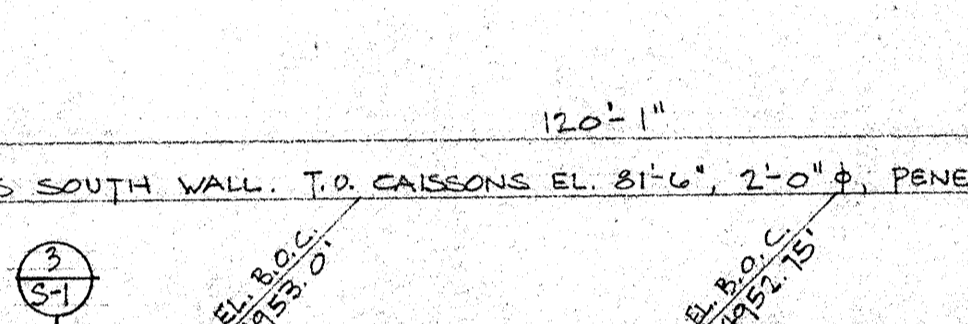
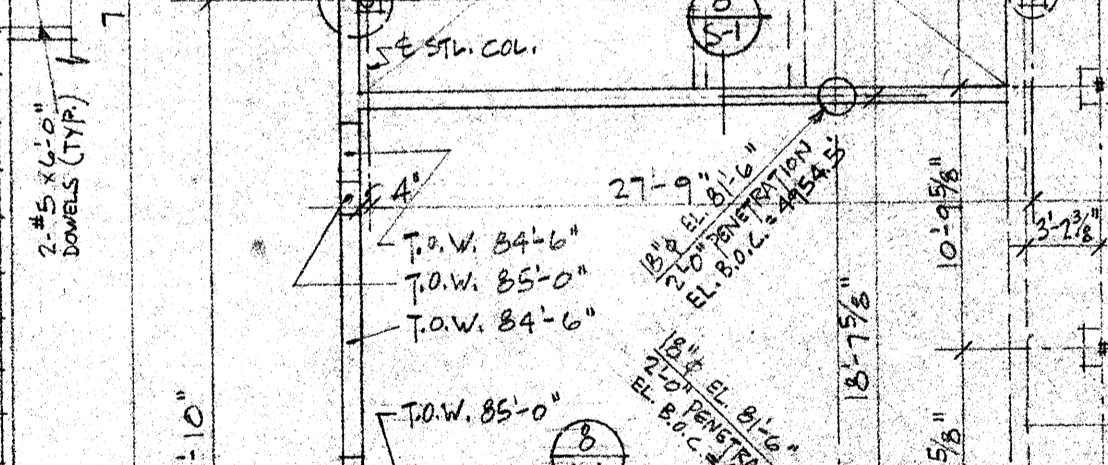
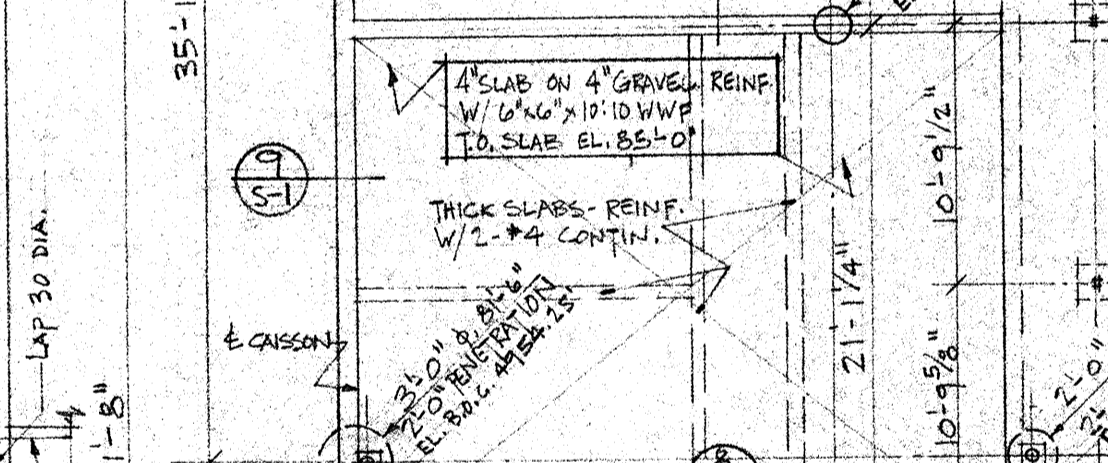
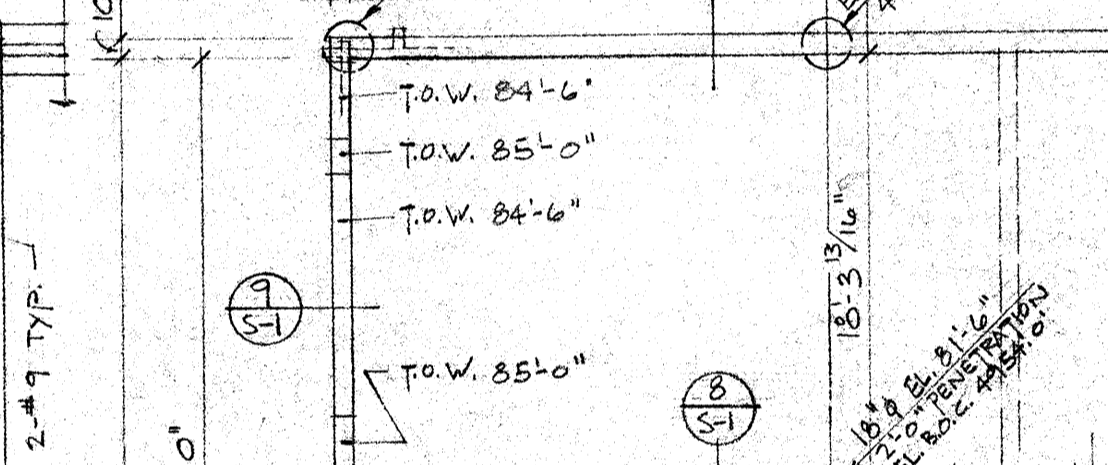
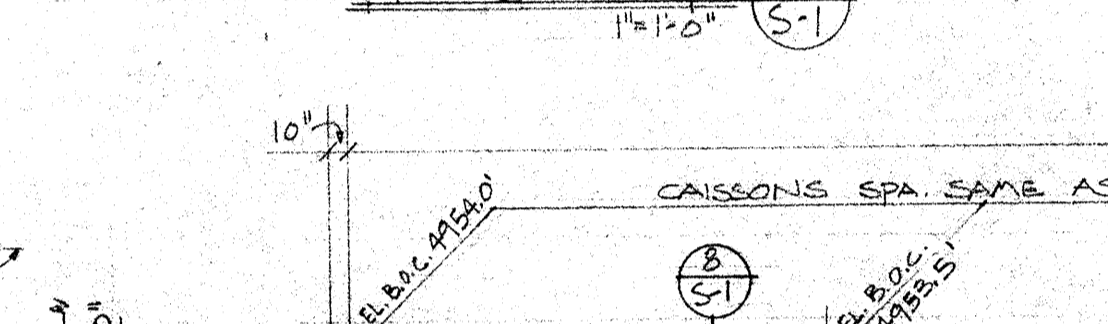
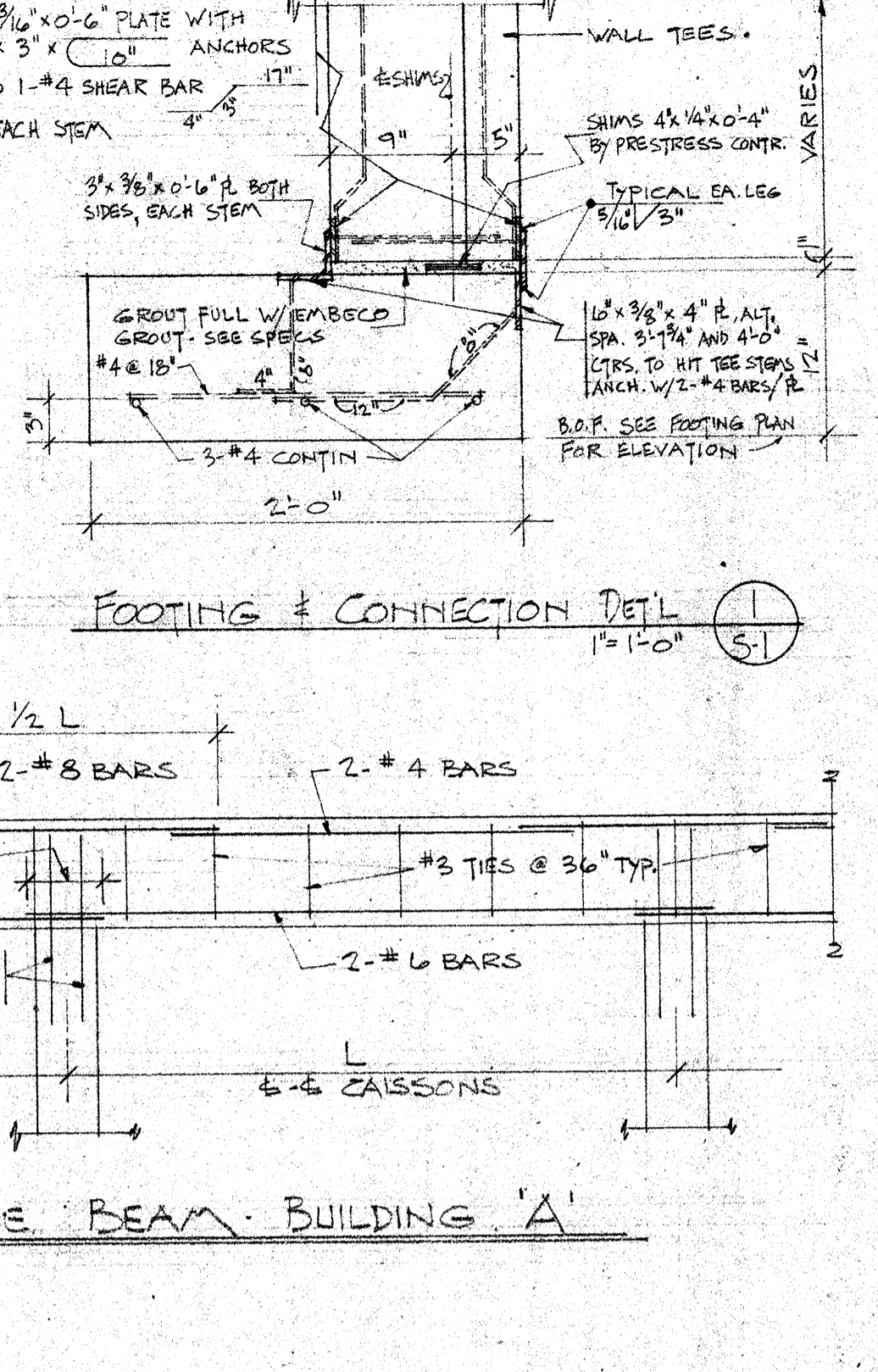
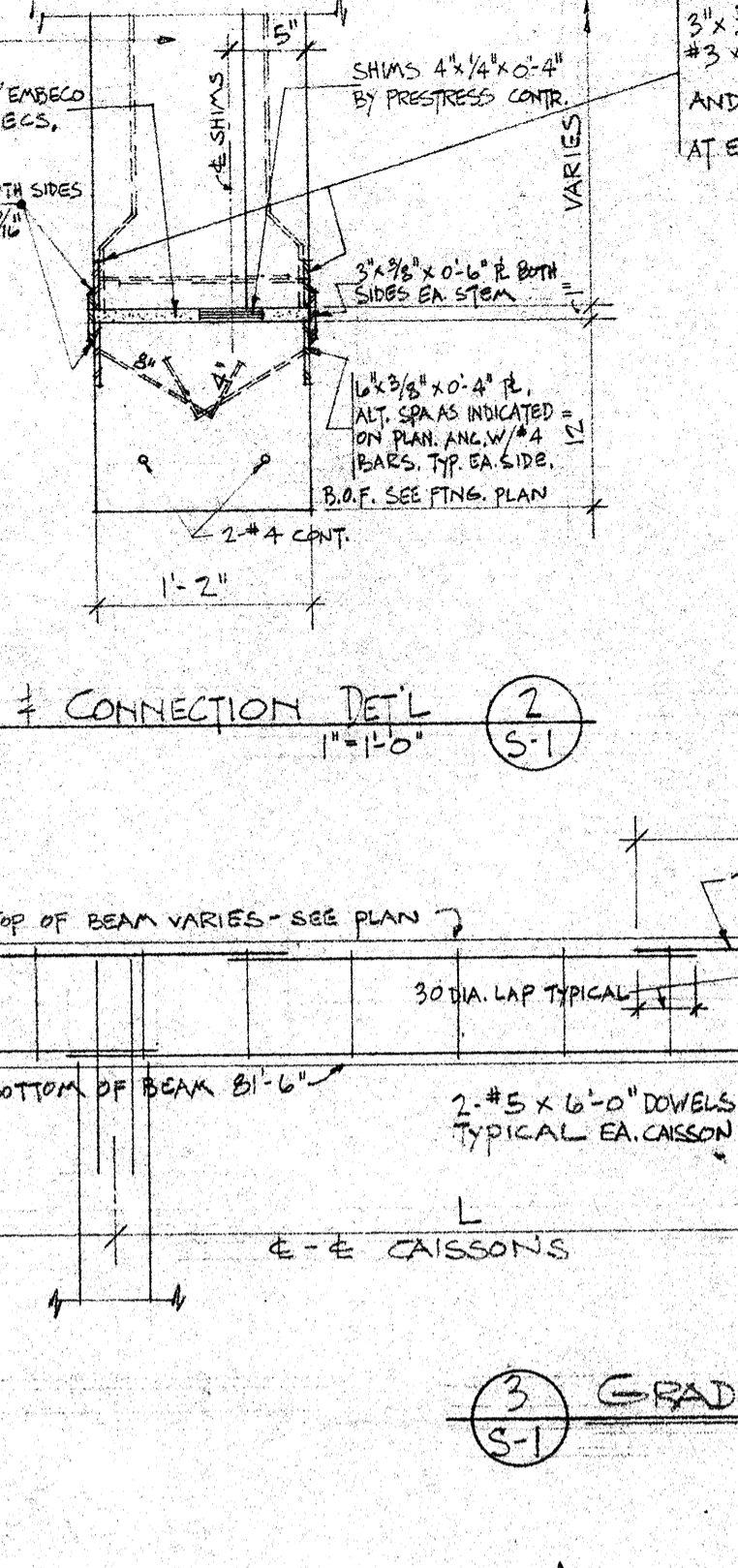
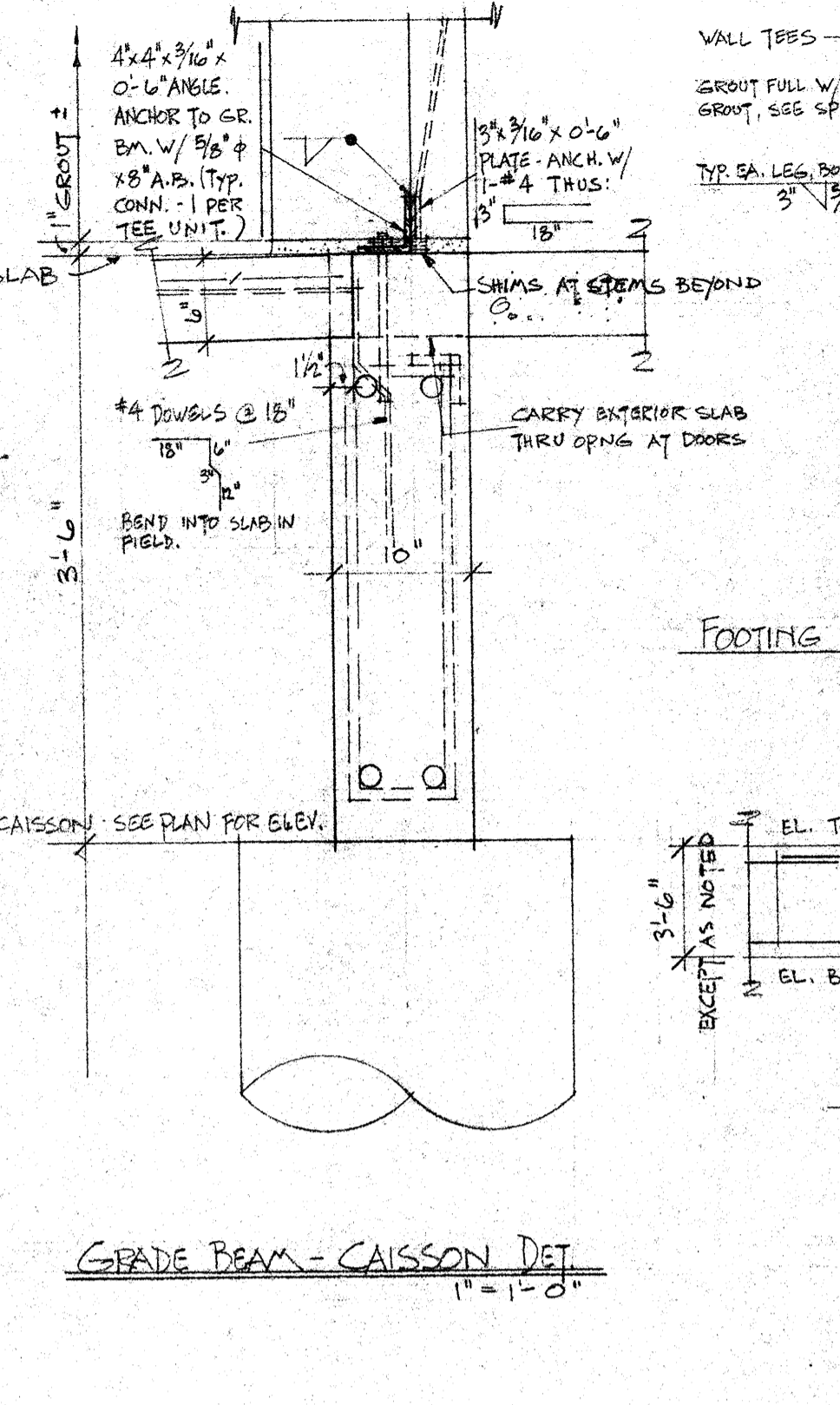
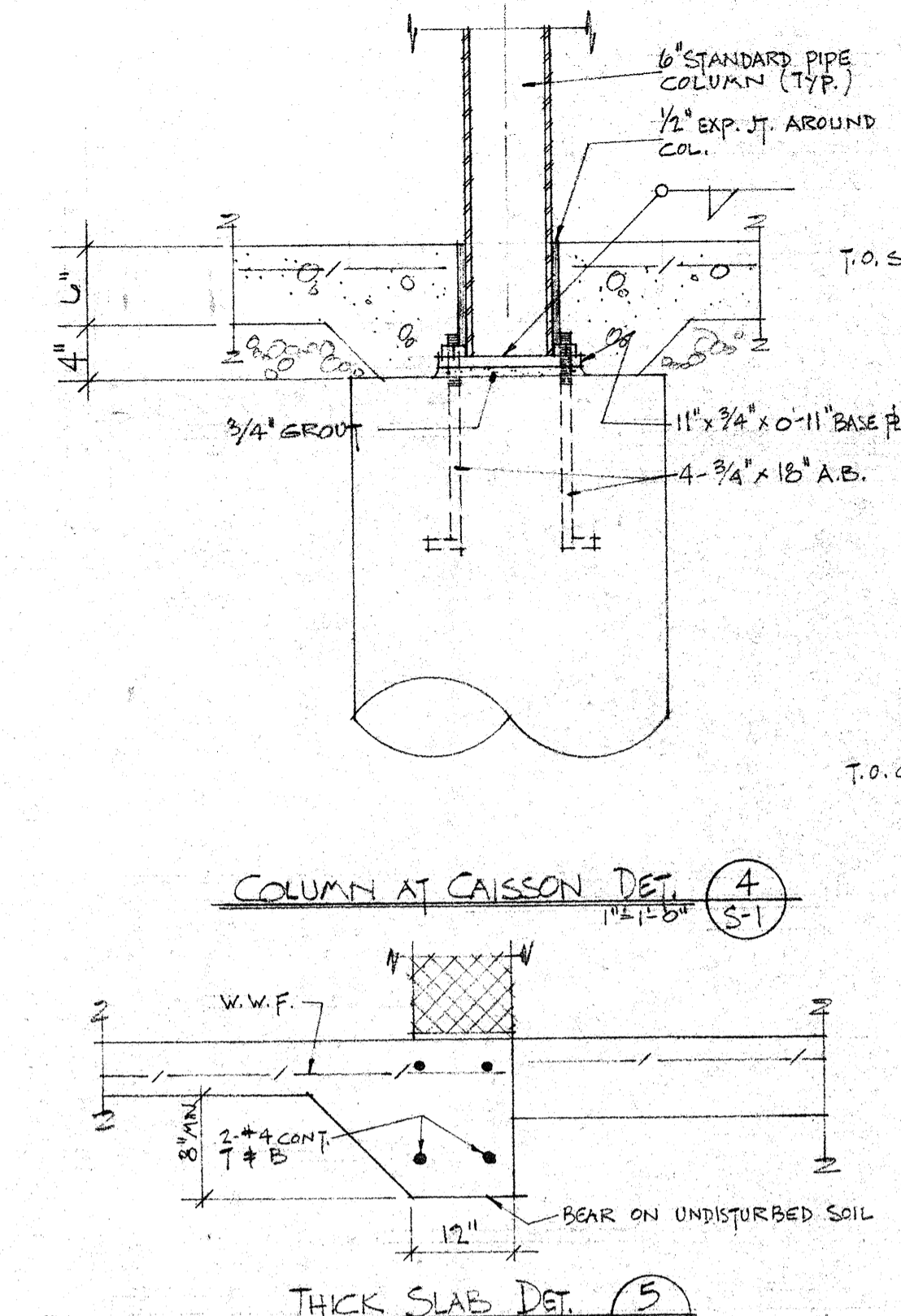
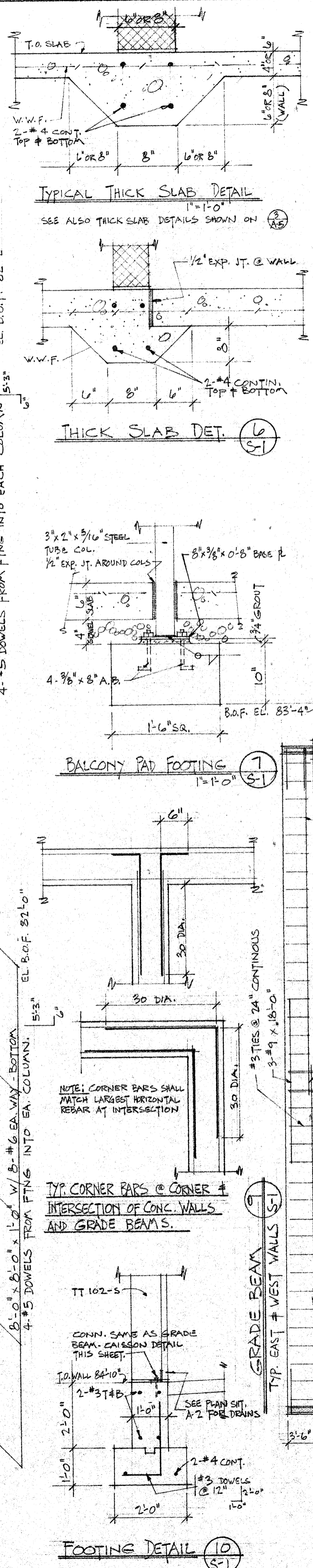
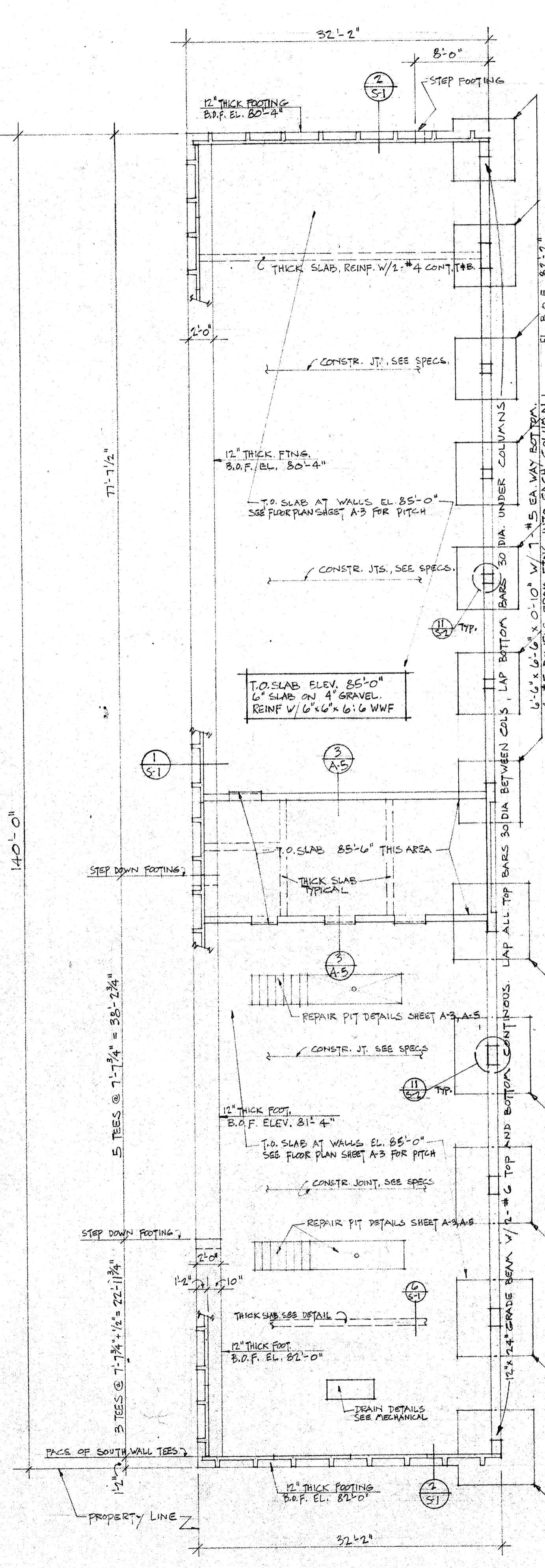
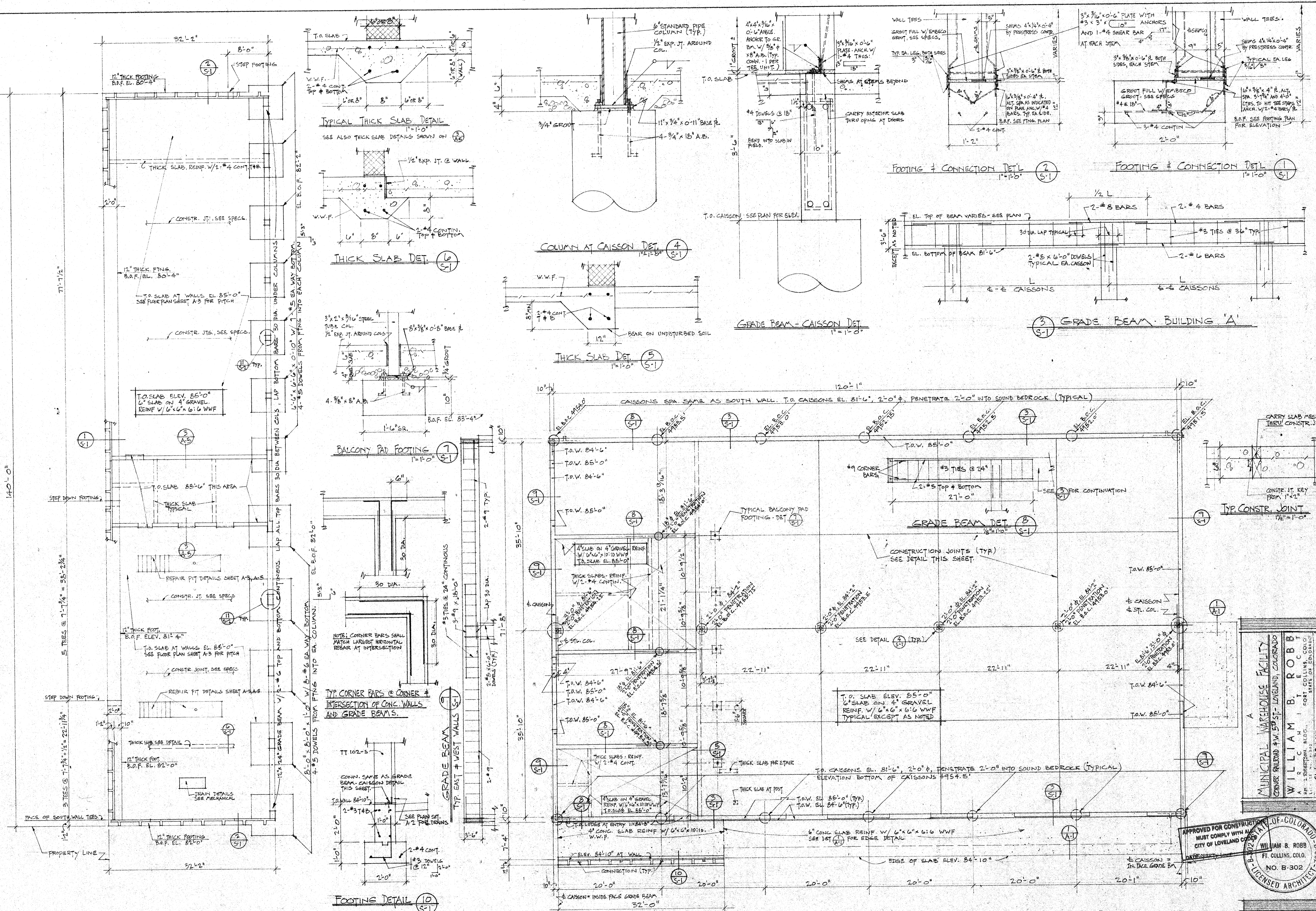
MUNICIPAL WAREHOUSE FACILITY  
 CORNER RAILROAD & W. 5th ST. - LOVELAND, COLORADO  
 WILLIAM B. ROBB  
 ARCHITECT  
 PORTLAND, OREGON  
 LICENSED ARCHITECT - NO. B-302

APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL  
 CITY OF LOVELAND ORDINANCES  
 DATE 10/13/50  
 FT. COLLINS, COLO.  
 LICENSED ARCHITECT - NO. B-302

A-5







FOOTING AND FOUNDATION PLAN  
BUILDING 'B' 1/8" = 1'-0"

FOOTING AND FOUNDATION PLAN  
BUILDING 'A' 1/8" = 1'-0"

MUNICIPAL WAREHOUSE FACILITY  
CORNER W. 5th ST. - LOVELAND, COLORADO

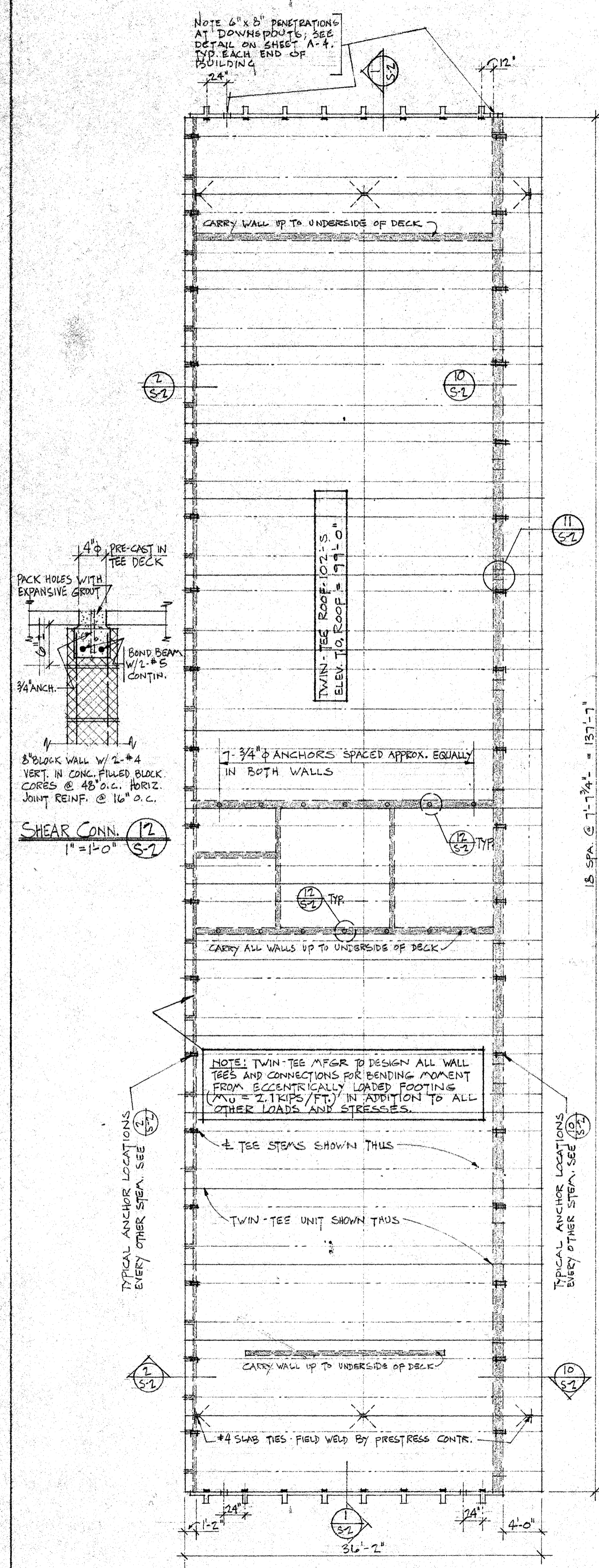
WILLIAM B. ROBB  
STATE OF CO. OF CO.  
REGISTERED ARCHITECT  
NO. B-302

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES

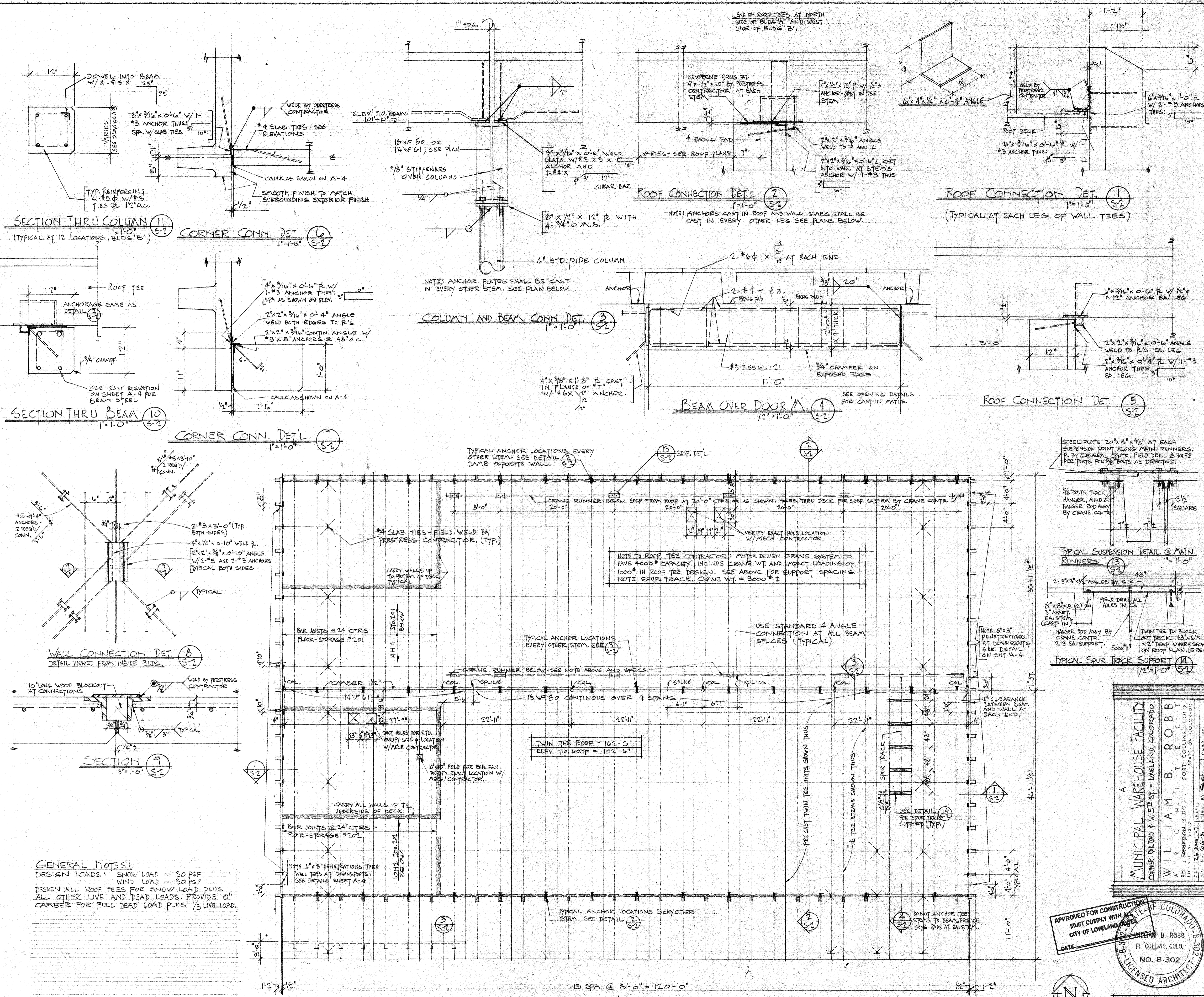
WILLIAM B. ROBB  
FT. COLLINS, COLO.  
NO. B-302

REGISTERED ARCHITECT

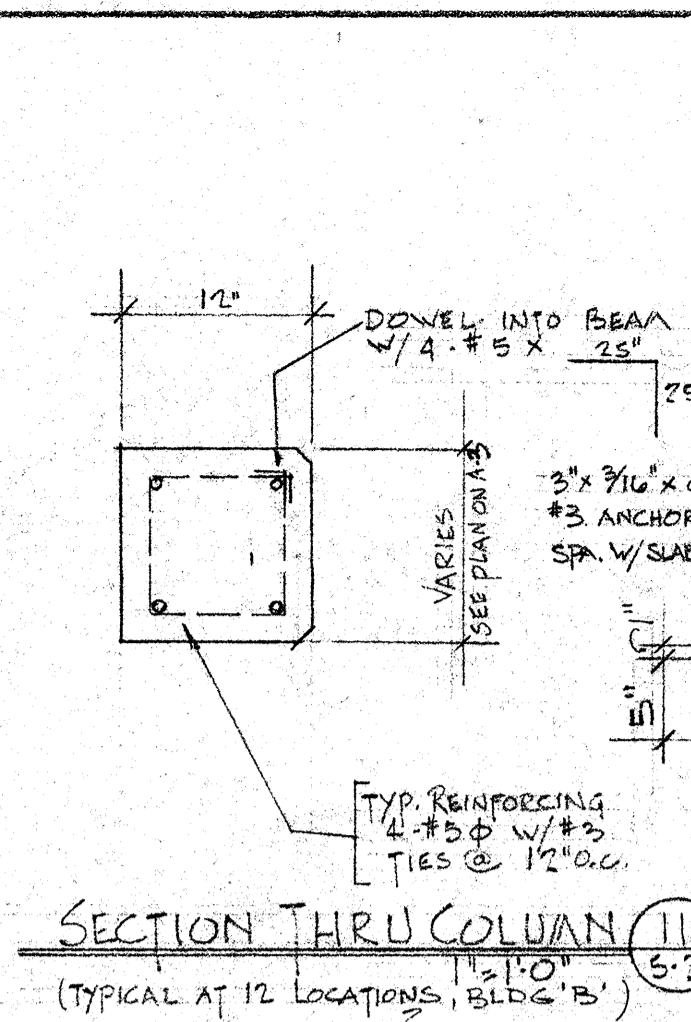




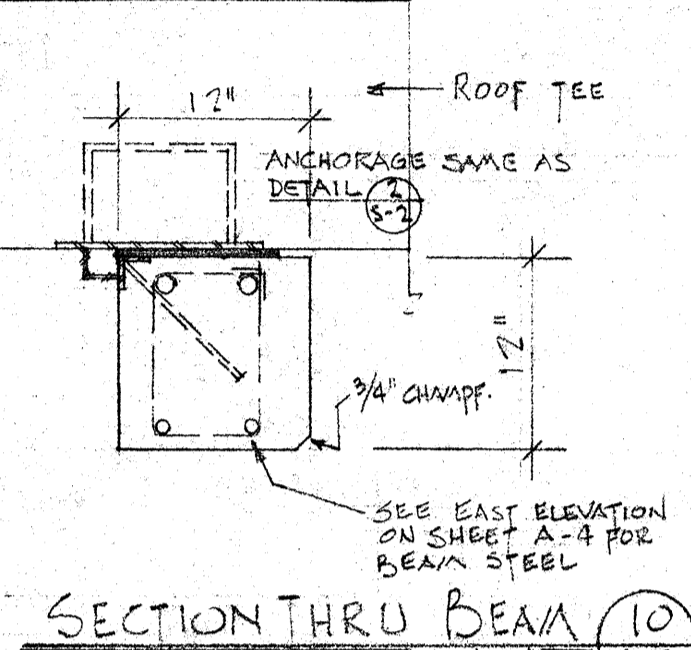
ROOF FRAMING PLAN  
BUILDING B  
1/8" = 1'-0"



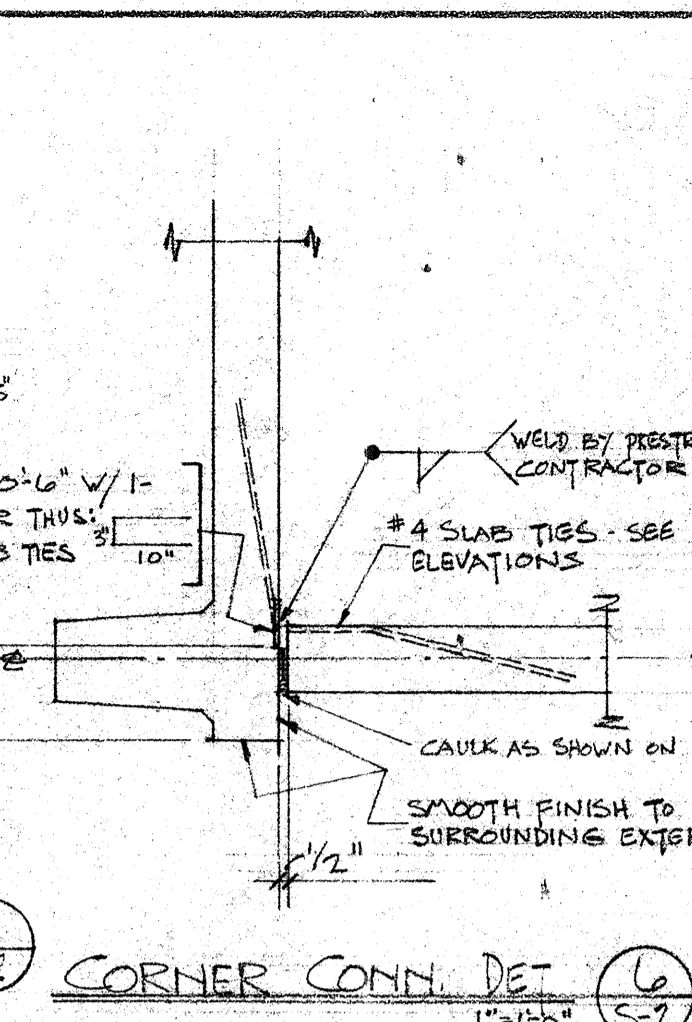
ROOF FRAMING PLAN  
BUILDING A  
1/8" = 1'-0"



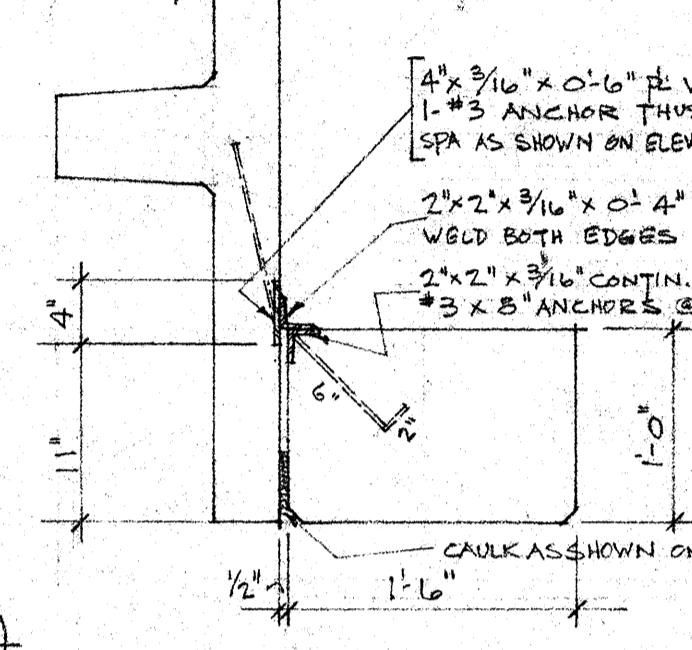
SECTION THRU COLUMN 11  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



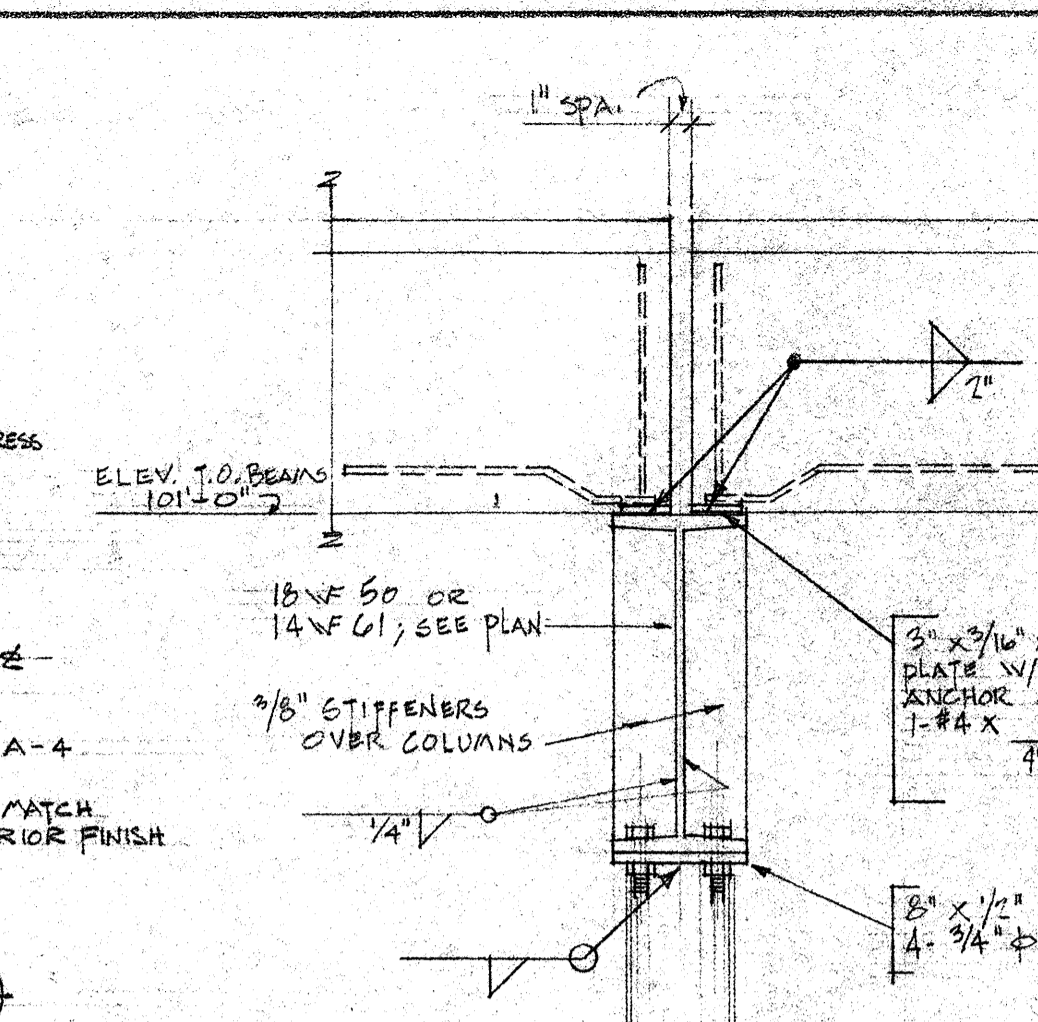
SECTION THRU BEAM 10  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



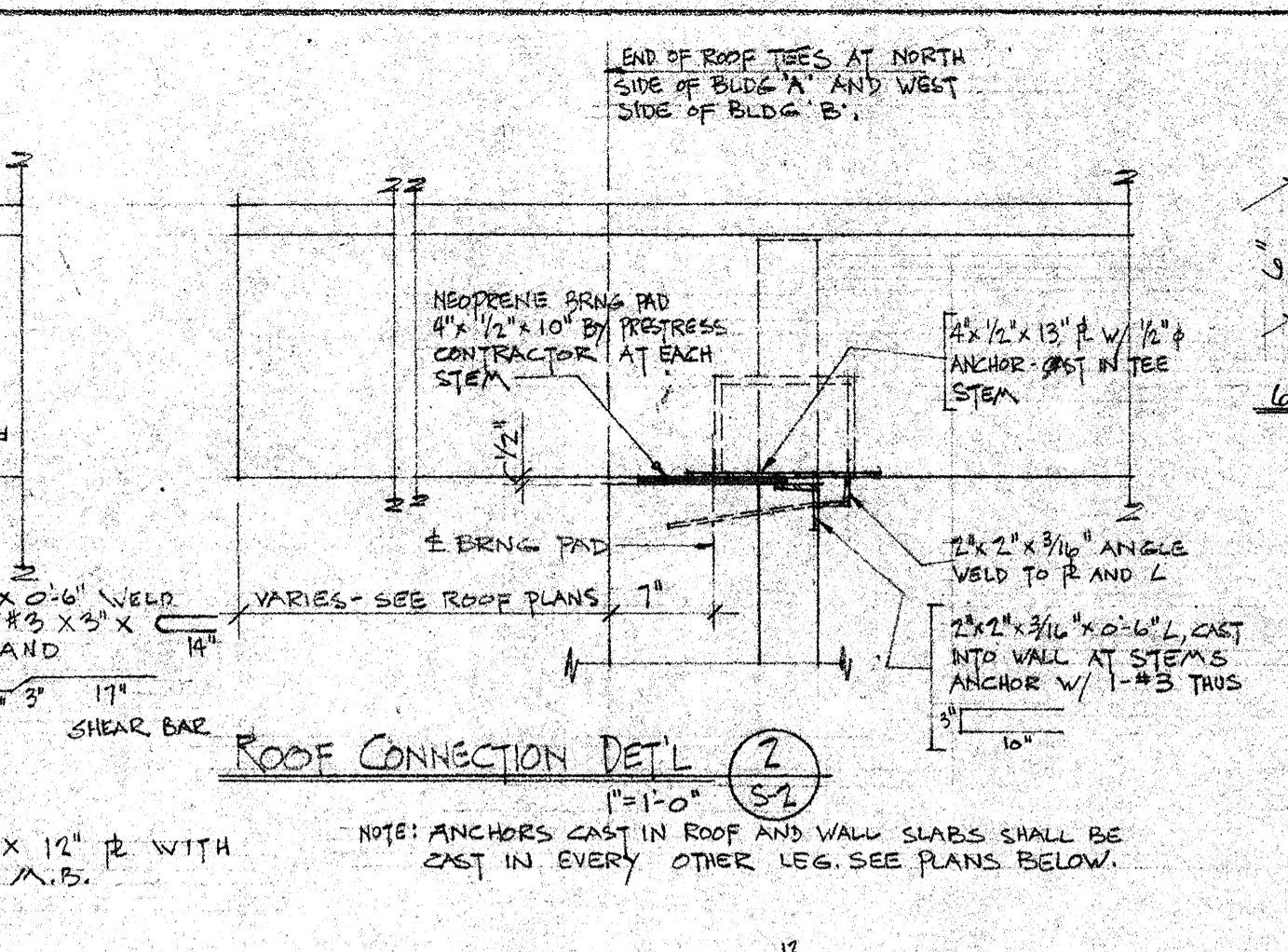
CORNER CONN. DET. 6  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



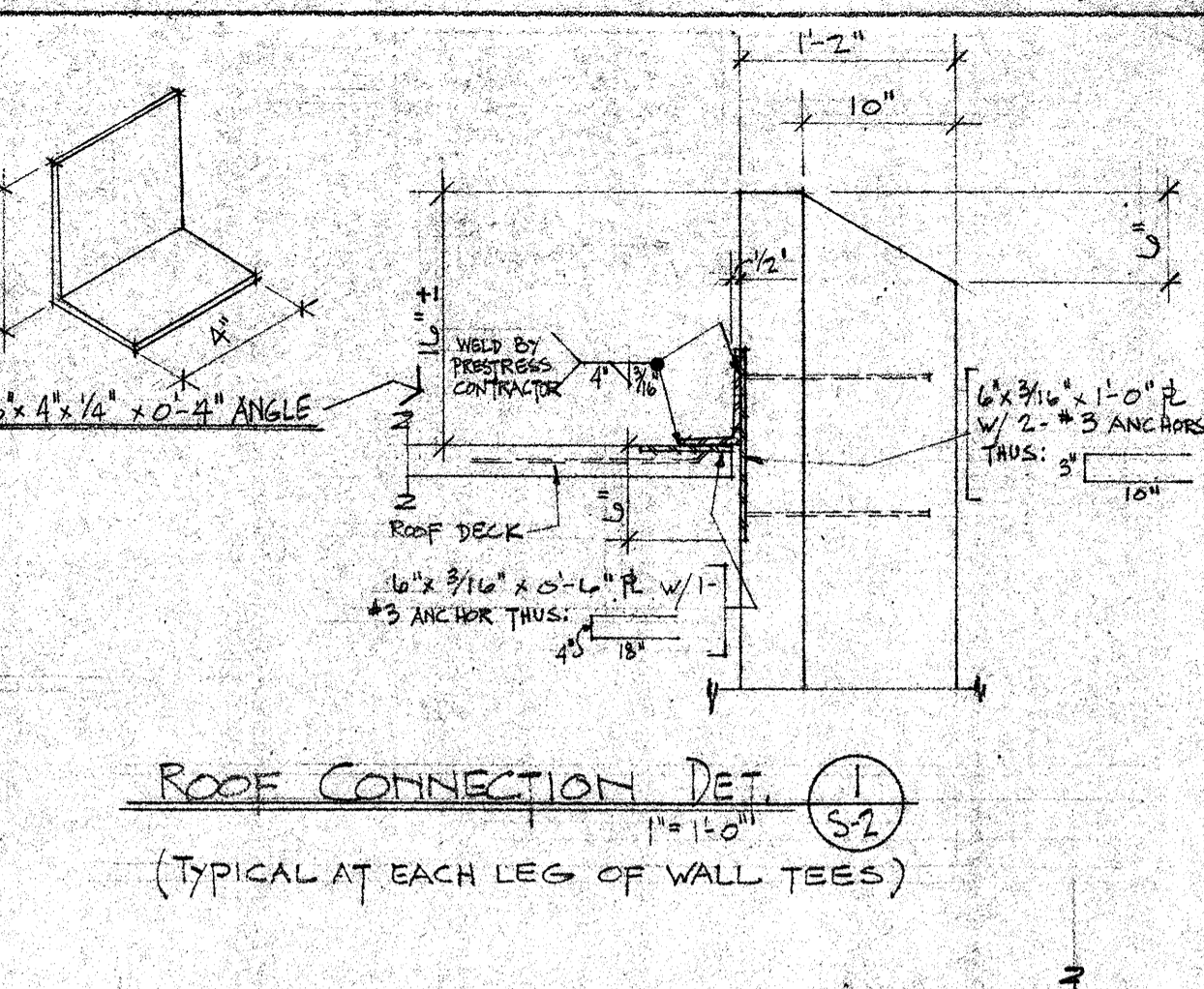
CORNER CONN. DET. 7  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



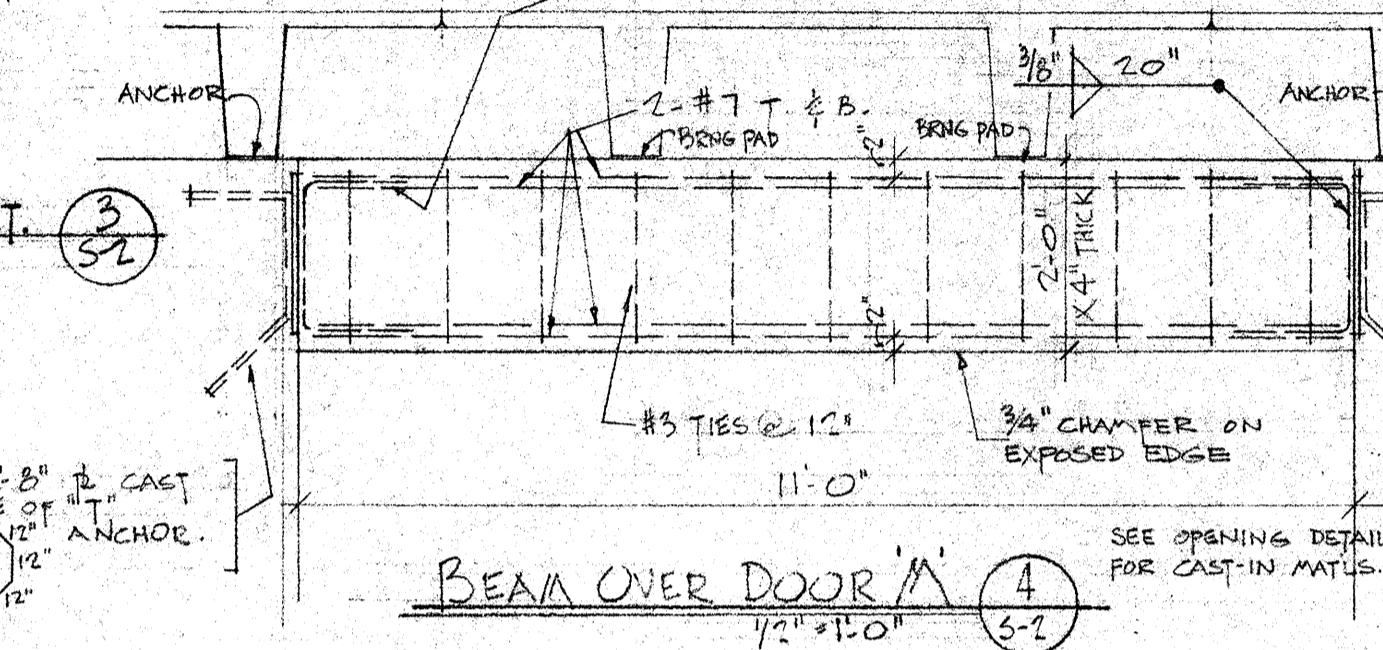
COLUMN AND BEAM CONN. DET. 3  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



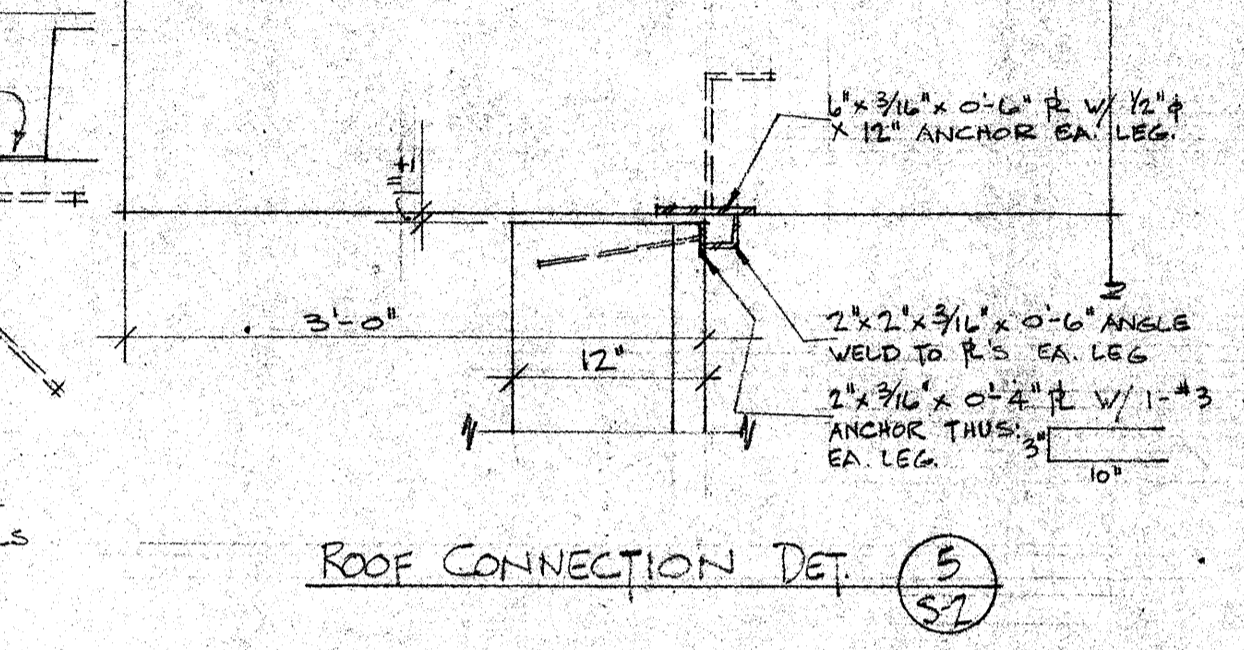
ROOF CONNECTION DET. 2  
(TYPICAL AT EACH LEG OF WALL TEES)



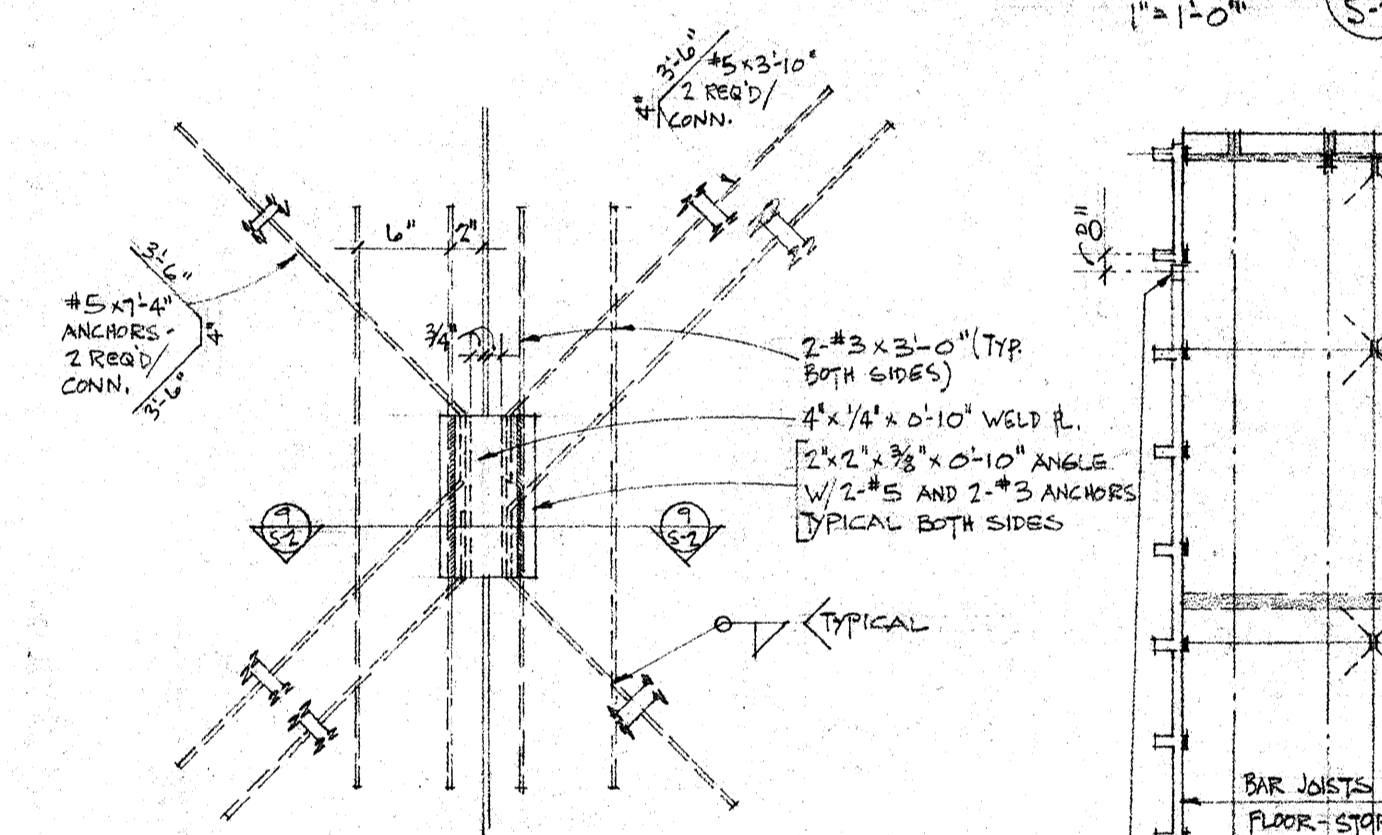
ROOF CONNECTION DET. 1  
(TYPICAL AT EACH LEG OF WALL TEES)



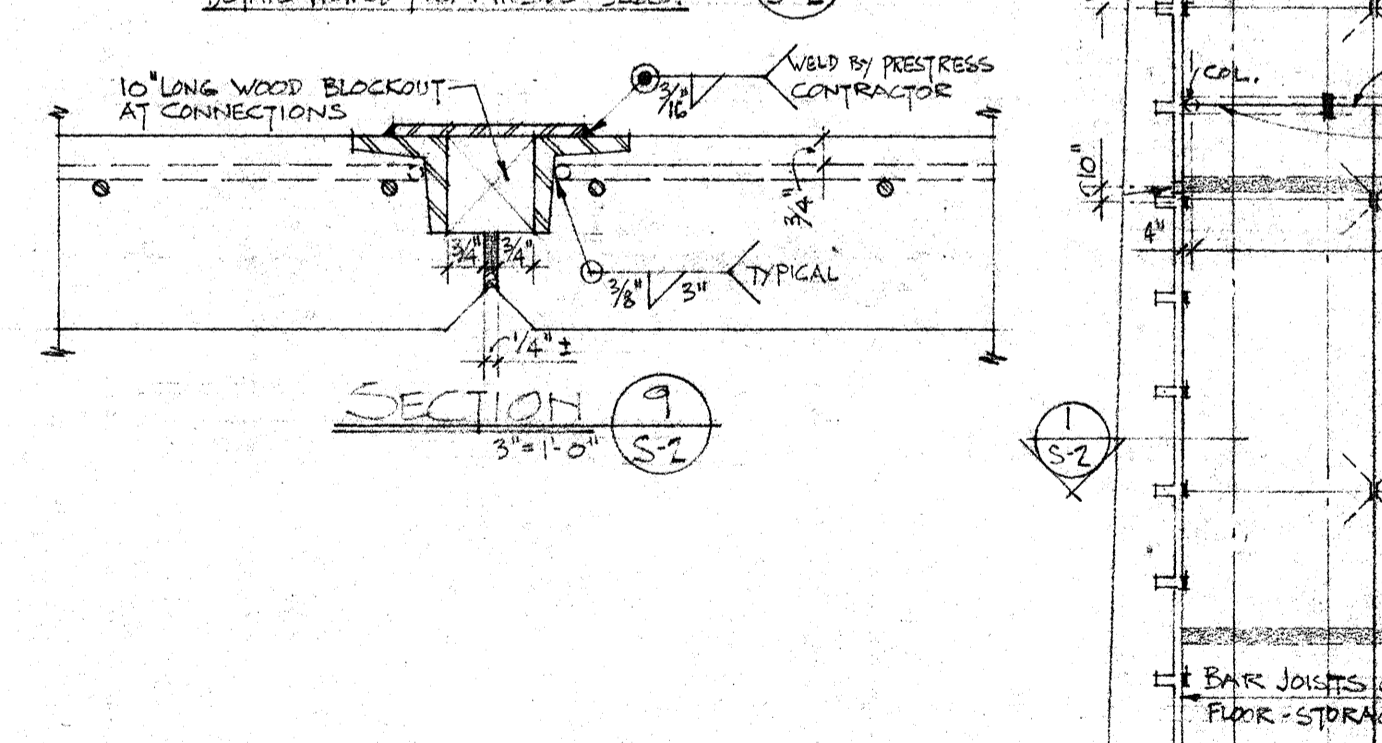
BEAM OVER DOOR DET. 4  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



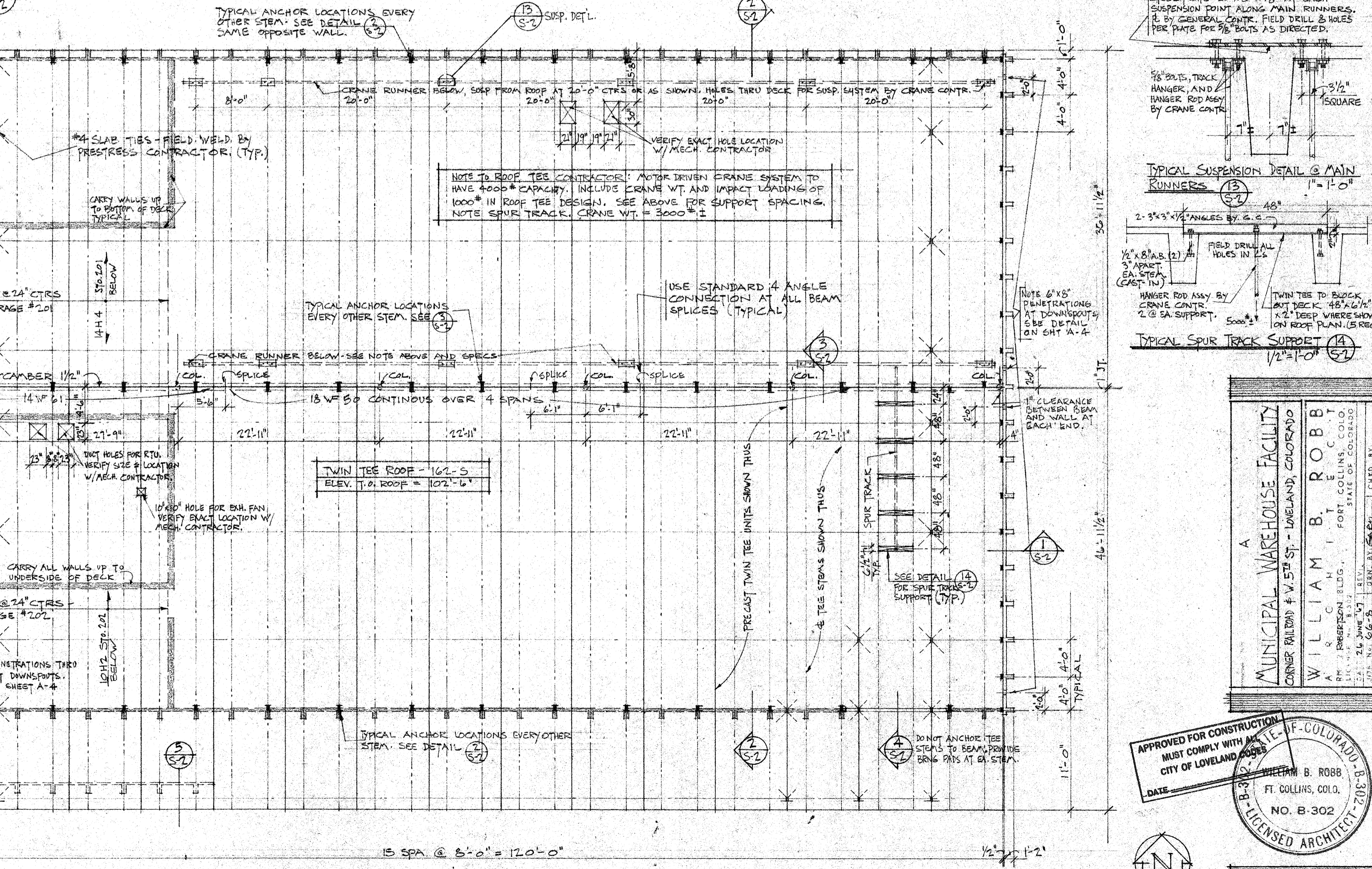
ROOF CONNECTION DET. 5  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



WALL CONNECTION DET. 8  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



SECTION 9  
(TYPICAL AT 12 LOCATIONS, BLDG 'B')



GENERAL NOTES:  
DESIGN LOADS: SNOW LOAD = 30 PSF  
WIND LOAD = 50 PSF  
DESIGN ALL ROOF TEES FOR SNOW LOAD PLUS ALL OTHER LIVE AND DEAD LOADS. PROVIDE 0" CAMBER FOR FULL DEAD LOAD PLUS 1/3 LIVE LOAD.

NOTE: ALL OPENINGS OR HOLES THRU ROOF DECK ON EDGES A & B, NOT SHOWN TO BE CUT BY THE RESPECTIVE CONTRACTORS REQUIRING SUCH HOLES, HOLES SHOWN AND DIMENSIONED SHALL BE CAST IN PLACE BY TWIN-TEE SUPPLIER.

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL CITY OF LOVELAND ORDINANCES  
DATE: \_\_\_\_\_  
WILLIAM B. ROBB  
REGISTERED ARCHITECT  
NO. 8-302

MUNICIPAL WAREHOUSE FACILITY  
CORNER BLDG. # 1515 ST. - LOWLAND, COLORADO  
WILLIAM B. ROBB  
REGISTERED ARCHITECT  
NO. 8-302

52

### LEGEND OF SYMBOLS AND ABBREVIATIONS

GAS (G) — G  
 SANITARY SEWER LINES ABOVE FLOOR (S OR IV)  
 SANITARY SEWER LINES BELOW FLOOR (S DR IV)  
 COMPRESSED AIR LINE — A — A

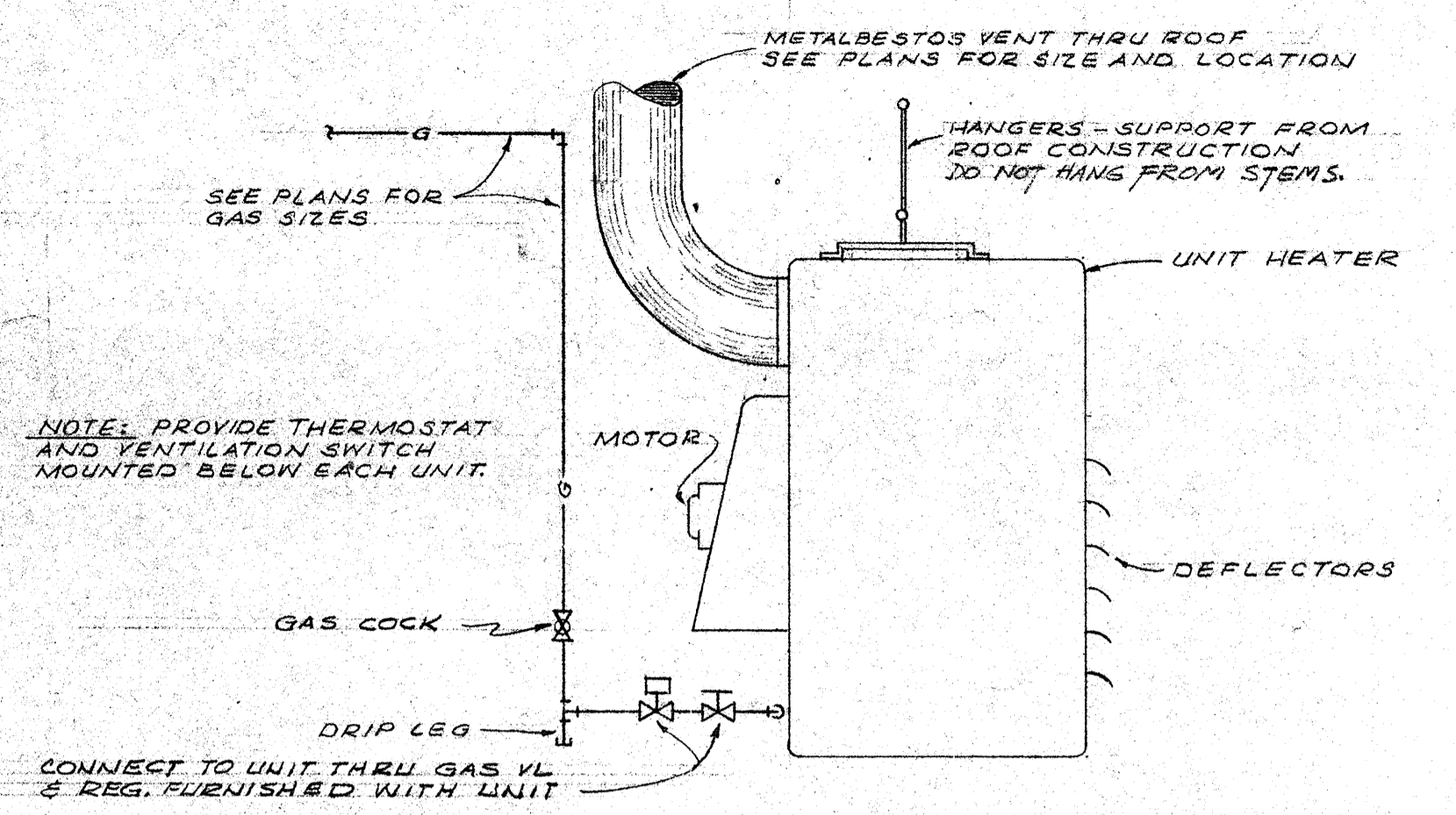
SANITARY VENT (V) — V — V  
 COLD WATER (CW) — CW — CW  
 HOT WATER (HW) — HW — HW  
 HOT WATER CIRCULATING (HWC) — HWC — HWC

WATER CLOSET WC  
 URINAL U  
 LAVATORY L  
 SINK S  
 ELECTRIC WATER COOLER EWC  
 WASH FOUNTAIN WF  
 ROOF TOP UNIT RTU  
 FLOOR DRAIN FD  
 CLEANOUT CO  
 VITRIFIED CLAY PIPE VCP  
 CAST IRON CI  
 UNDERCUT DOOR 1" UC-1"  
 METALBESTOS VENT MBV  
 THRU ROOF TR  
 HOSE BIBB HB

THERMOSTAT  
 SILL COCK  
 GATE VALVE  
 BALANCING COCK  
 STRAINER  
 UNION

PLUMBING RISER DIAGRAM  
 GAS FIRED UNIT HEATER  
 GRILLE, REGISTER OR DIFFUSER

### GAS FIRED UNIT HEATER DETAIL



### GRILLE, REGISTER AND DIFFUSER SCHEDULE

SYM	TYPE	USE	PATTERN	ACCESSORIES	MFGRS. NO.	REMARKS
A	DIFFUSER	SUPPLY	1-WAY	AG 95 & AG 125	TMDC-SI-15	TITUS
B	DIFFUSER	SUPPLY	2-WAY	AG 93 & AG 125	TMDC-SI-2B	TITUS
C	DIFFUSER	SUPPLY	3-WAY	AG 95 & AG 125	TMDC-SI-3B	TITUS
D	REGISTER	RET-EXH	FIXED 30°	INTEGRAL	RL-251	TITUS
E	GRILLE	RET-EXH TRANSF	FIXED 30°	NONE	RL-250	TITUS
F	GRILLE	TRANSF	FIXED	NONE	T-700-BF	TITUS
G	REGISTER	SUPPLY	REL DIFFUSION	INTEGRAL	410	U.S. REGISTER

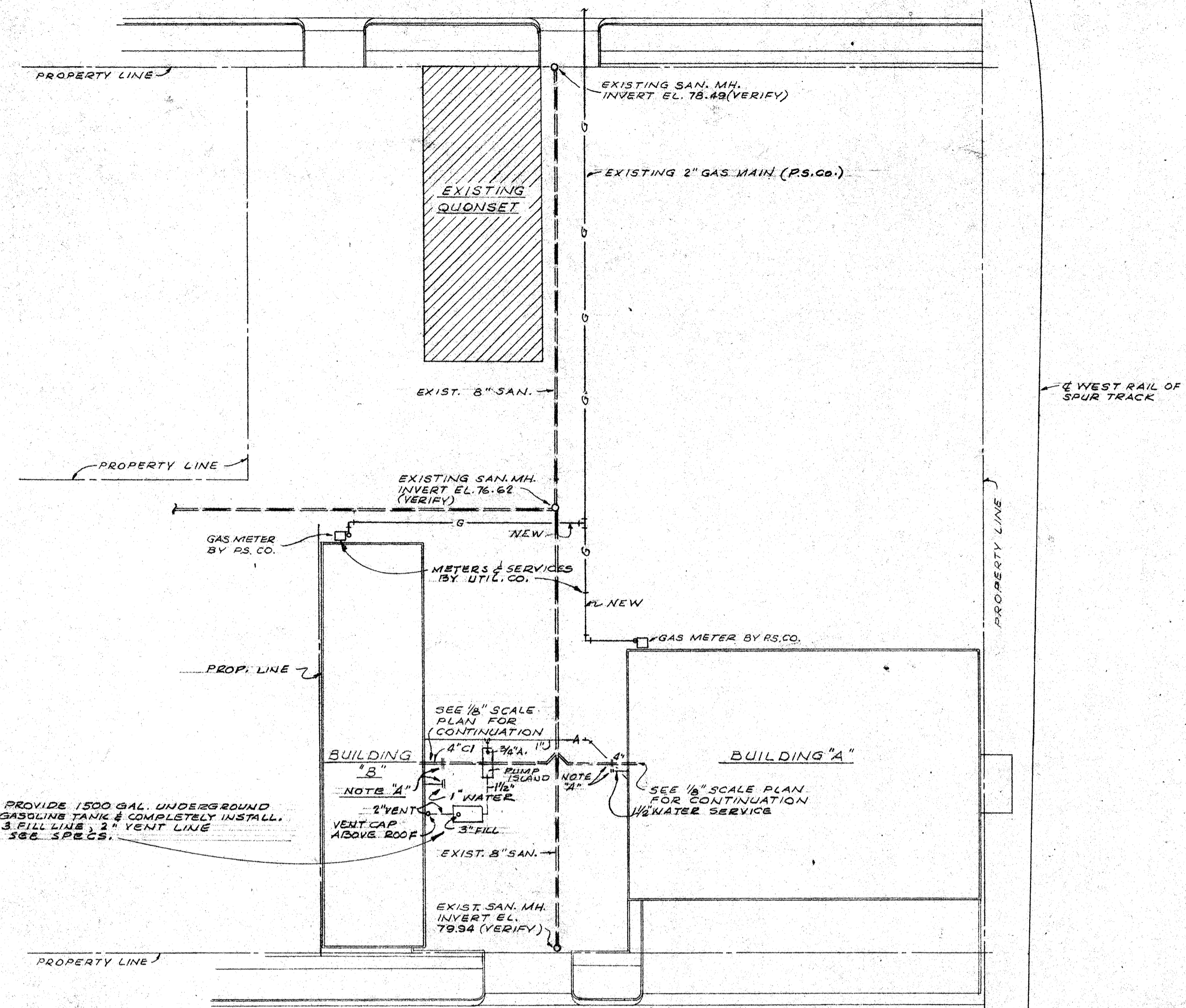
### EXHAUST FAN SCHEDULE

NO.	AREA SERVED	CFM REQD	SR	RPM	MAX OV	HP	CURS CAP.	BACK DRAHT DAMPER	TYPE	MFGRS. NO.	REMARKS
1	TOILET RM. 02 BLDG 'A'	100	—	—	—	50W	—	YES	CEIL	TRADEWIND 1208	WIRE TO ROOM LIGHT SWITCH
2	TOILET RM. 07 BLDG 'A'	345	1/4	1100	—	1/2	14 1/2	NO	ROOF	LX 1029	8 X 8 DUCT COUPL. & DAMPER SIZE
3	WAREHOUSE 10	1650	1	510	—	1/2	—	YES	WALL	GREENHECK SR-30-S	PLUMB SWITCH TO EXHAUST FAN
5	TOILET RM. 06 BLDG 'C'	300	1/8	900	—	1/2	16 1/2	YES	ROOF	LX-1024	8 X 8 DUCT COUPL. & DAMPER SIZE

### GAS UNIT HEATER SCHEDULE

SYM	CAP. MBH	CFM	RPM	H.P.	FLUE SIZE	REZ NOR NO.	REMARKS
1	32.0	617	1140	1/6	4" ROUND	XA-50	
2	48.0	927	1050	1/6	5" ROUND	XA-75	
3	64.0	1236	1050	1/4	6" ROUND	XA-100	
4	96.0	2160	1140	1/2	8" ROUND	XA-150	
5	128.0	2110	458-649	1/3	—	RXE-200	CFM AT 0.70-3 E.S.P. PROVIDE THERMOSTAT

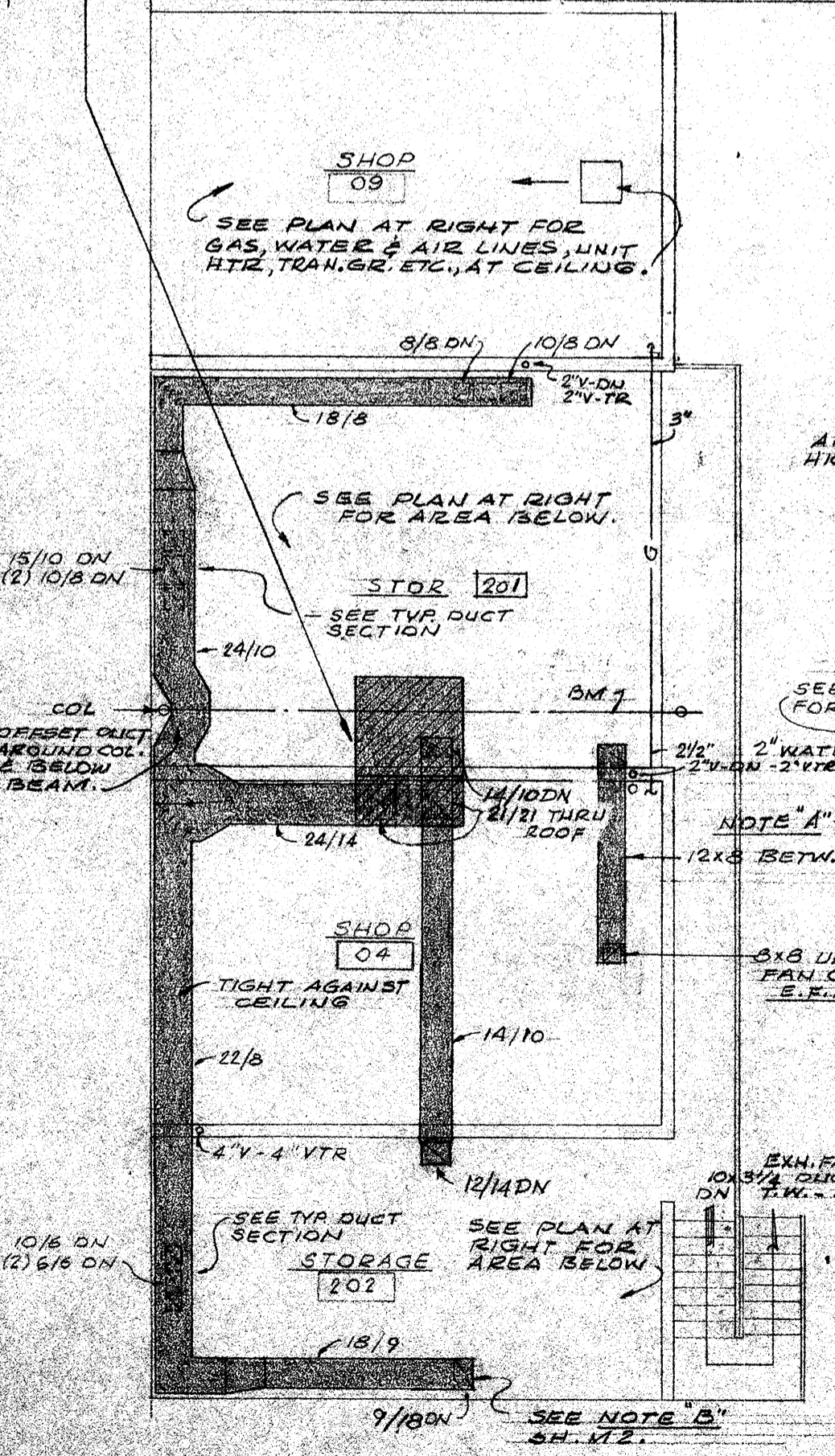
NOTE: CAP. IN MBH IS OUTPUT AT 3000' ELEVATION.  
 ALL UNITS - 1/2" GAS CONN. W/ COCK  
 ALL UNITS - METALBESTOS VENT THRU ROOF - SIZE LISTED. EXCEPT ROOF TOP U.N.  
 ALL UNITS - VERTICAL & HORIZONTAL DEFLECTORS.



### PLOT PLAN

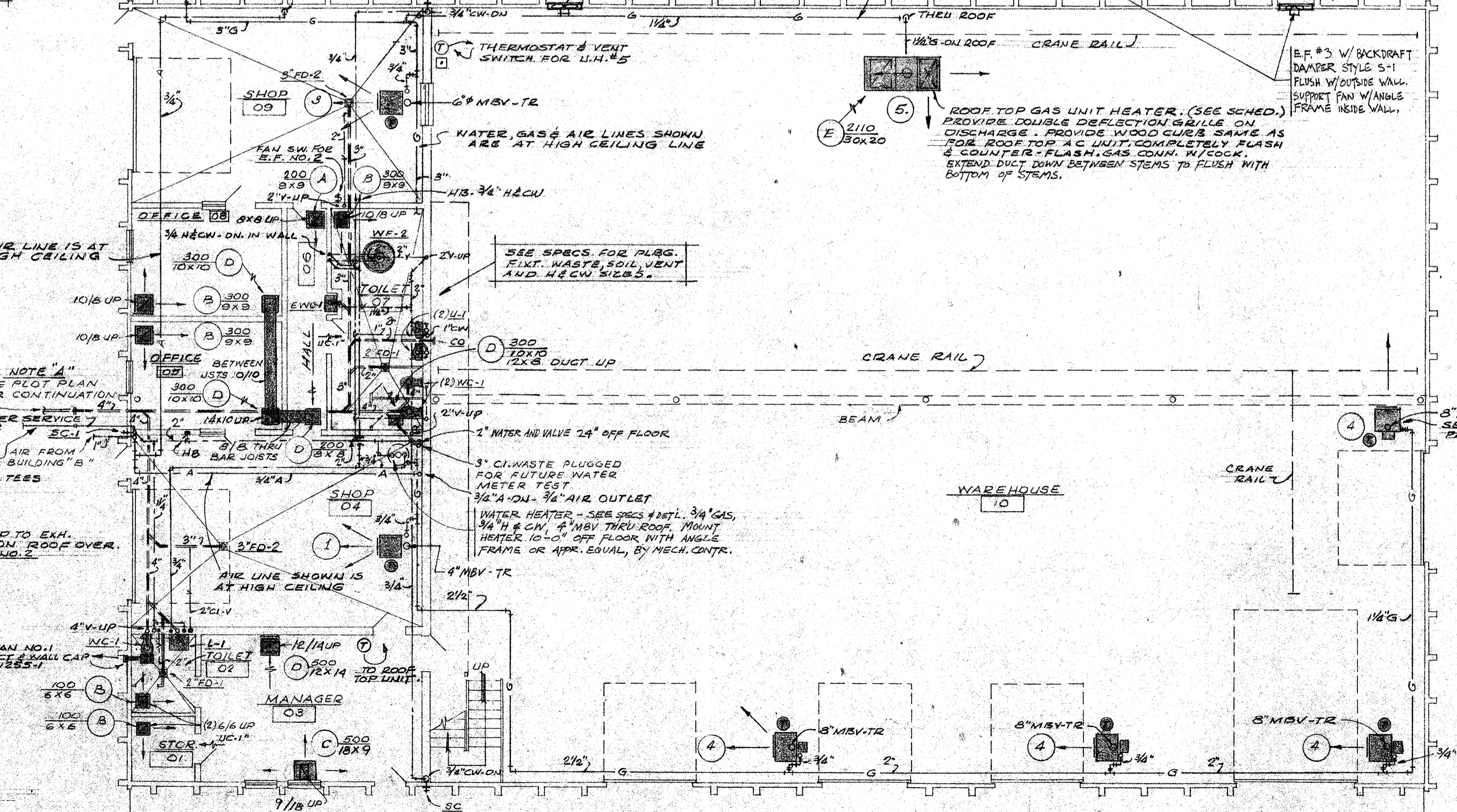
SCALE 1" = 30'-0"

ROOF TOP UNIT - ON ROOF OVER LENOX BCSI-653-150-STON. WITH RT3 DUCT ENCL. SIZE - 1300 CFM - 5" E.S.P. - 835 RPM 1.64 BHP - 34HP - 150,000 BTU INP @ 5L 3/4" GAS CONN. W/ COCK. 50,400 OOL CAP. AT 67°F. EXH. 95°F AMBIENT 7150 COMP. WATTS - 13HP COUL. FAN. - MAX. AMPS. - 28.5



### SECOND FLOOR PLAN-BLDG 'A'

SCALE 1/8" = 1'-0"



### MAIN FLOOR PLAN-BUILDING 'A'

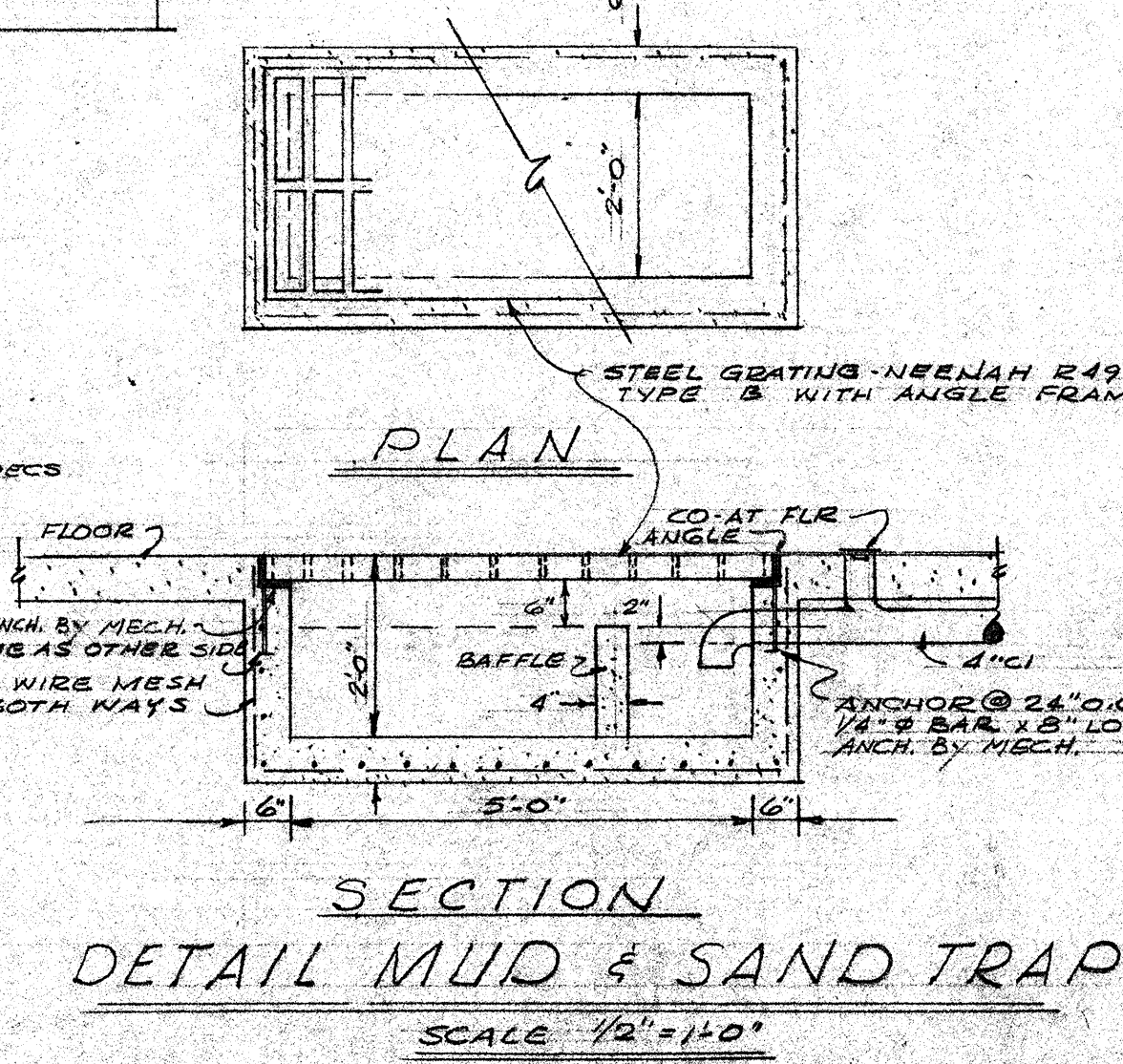
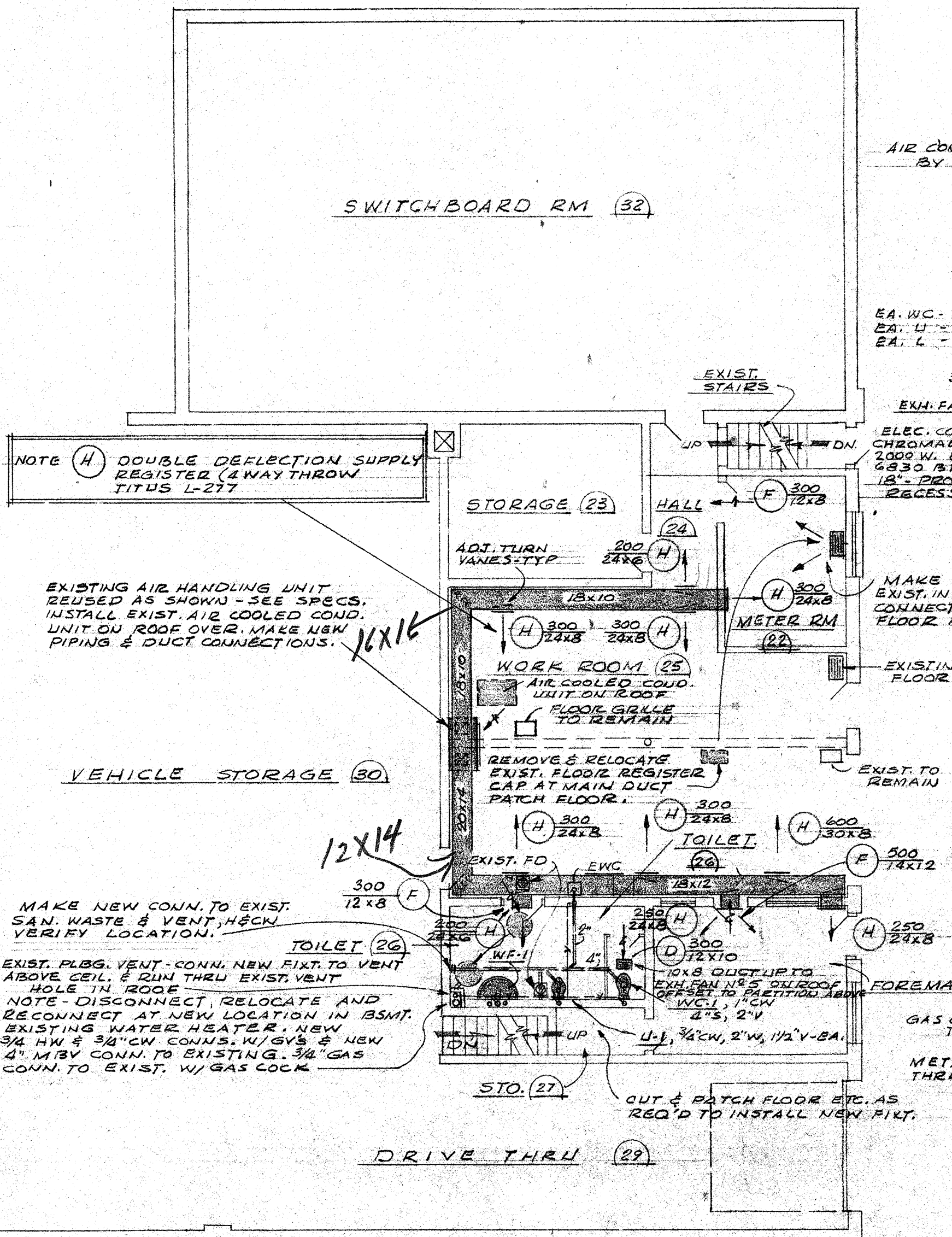
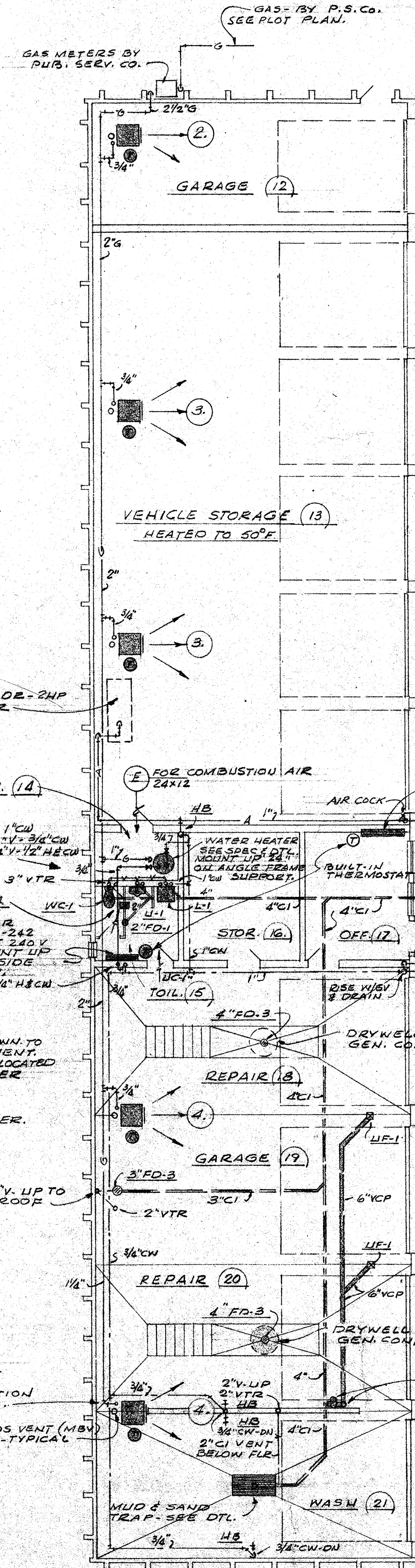
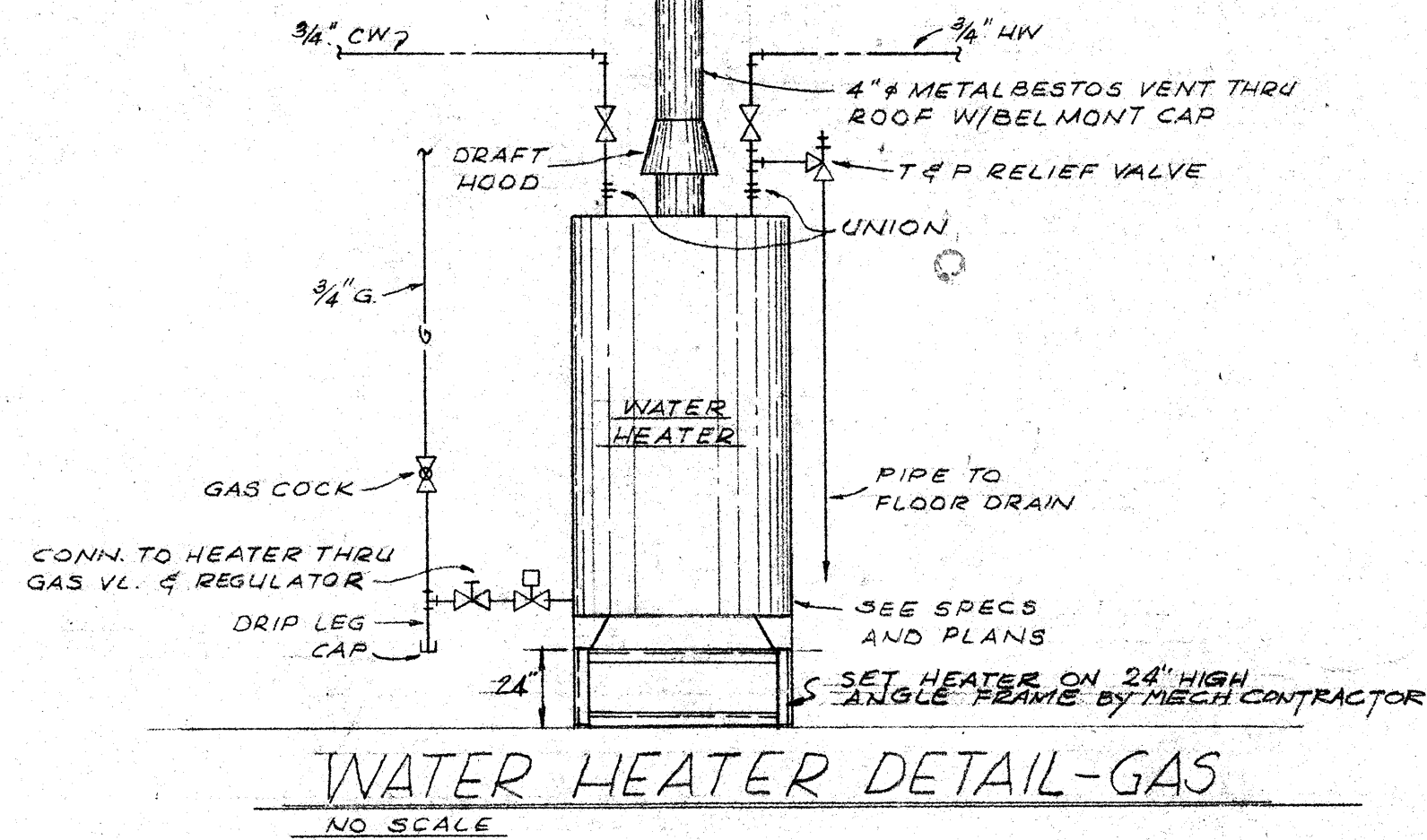
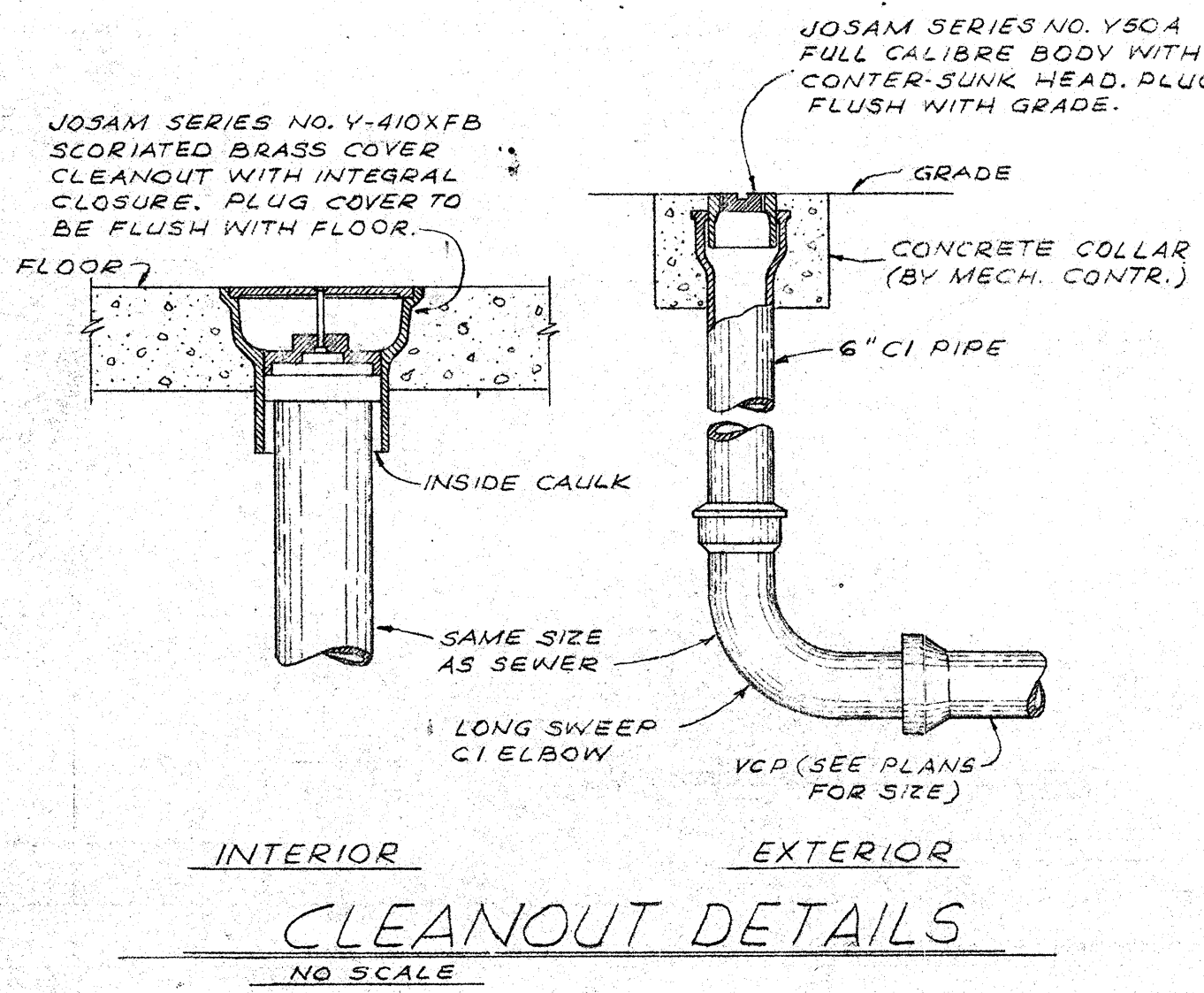
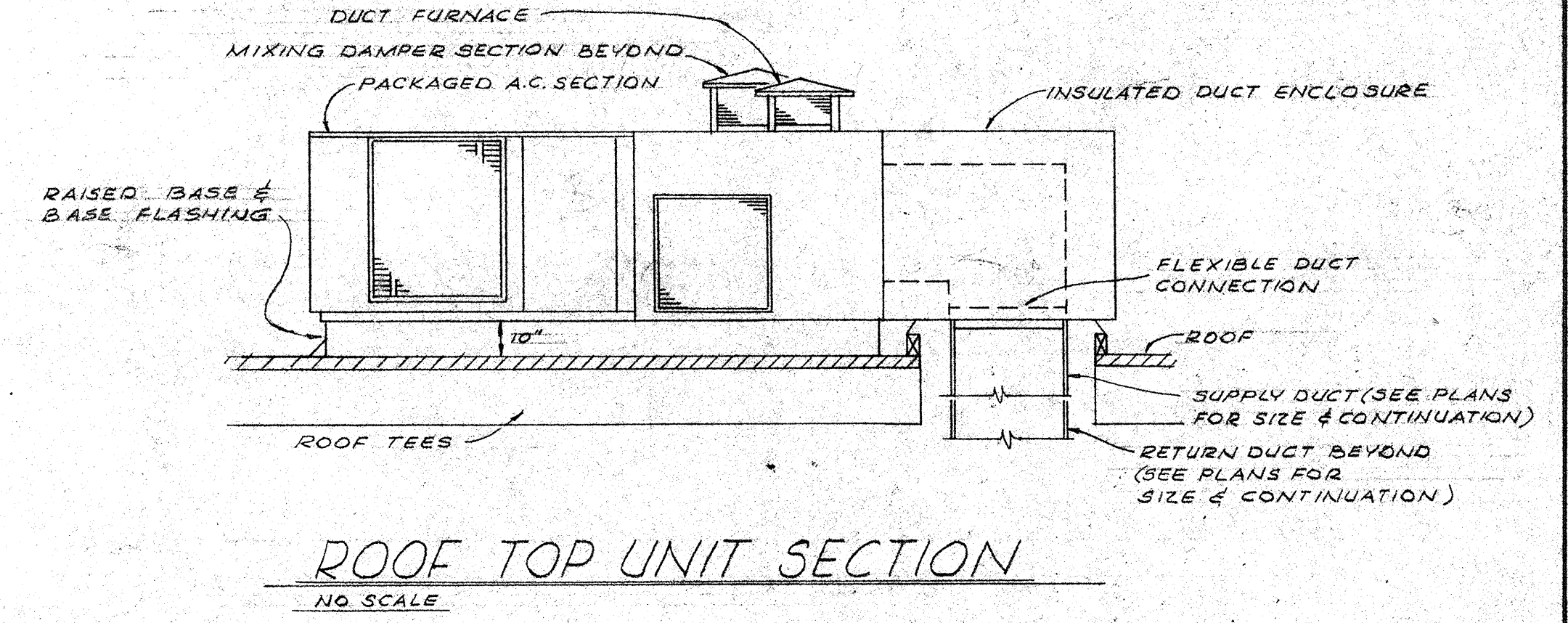
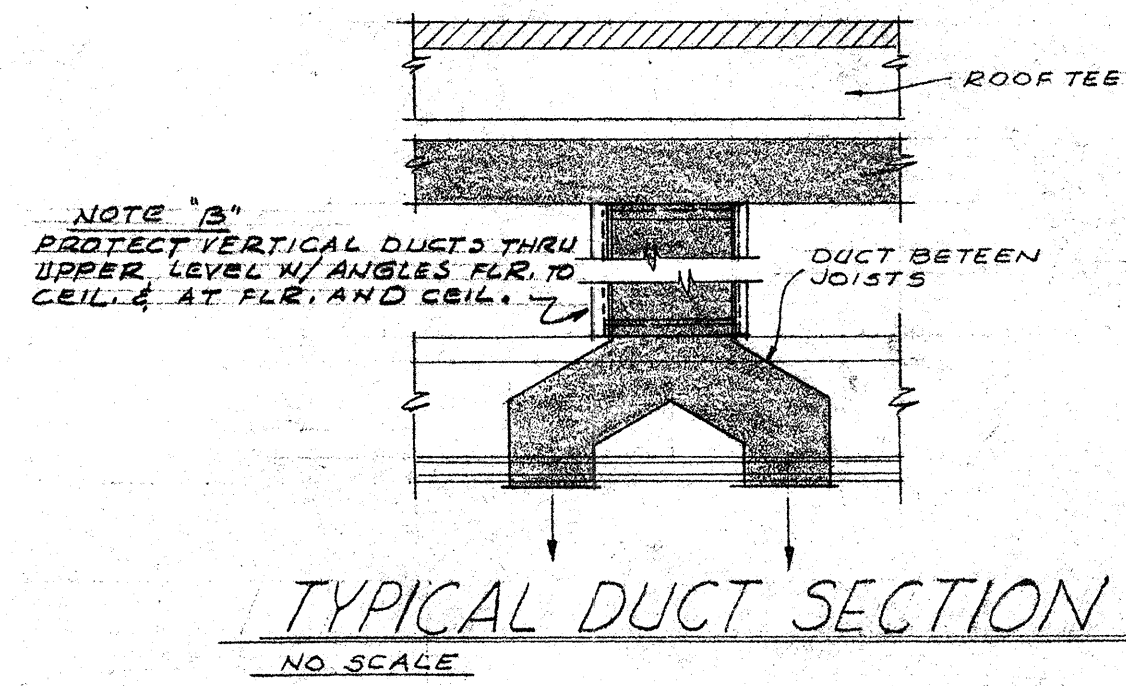
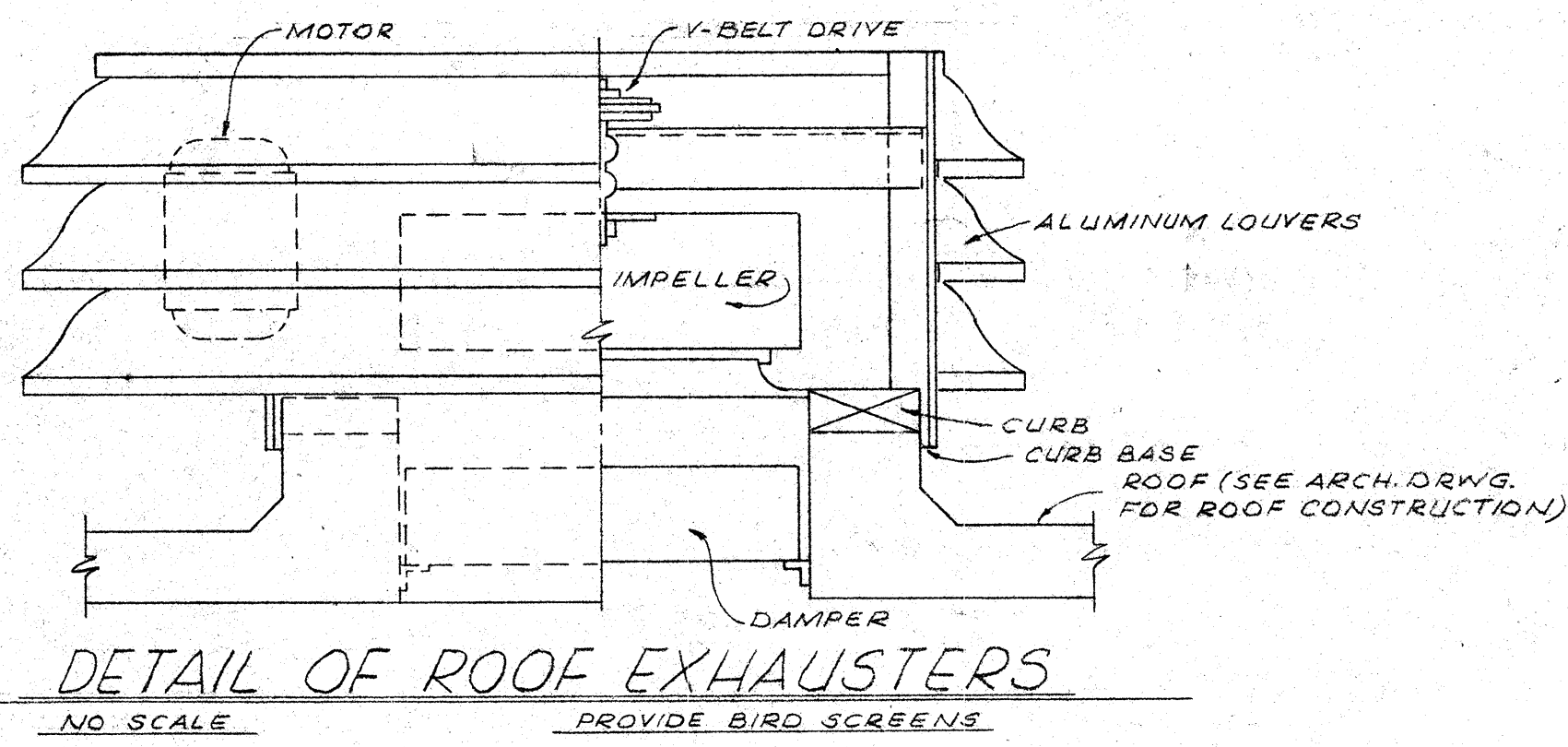
SCALE 1/8" = 1'-0"

NOTE 'A'  
 BUILDING CONTRACTOR TO EXTEND SEWERS AND WATER SERVICES TO 5'-0" OUTSIDE BUILDING LINES TO MAINS BY CITY OF LOVELAND WATER & SEWER DEPTS.

ARTIST AND ARCHITECT  
 WILLIAM B. ROBB  
 ARCHITECT  
 1105  
 STATE OF COLORADO  
 LICENSED ARCHITECT 708-302

MUNICIPAL WAREHOUSE FACILITY  
 CRANE RAILWAY # V. 5TH ST. - LOVELAND, COLORADO  
 WILLIAM B. ROBB  
 ARCHITECT  
 1105  
 STATE OF COLORADO  
 LICENSED ARCHITECT 708-302

APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
 DATE



MUNICIPAL WAREHOUSE FACILITY
   
 CORNER RAILROAD & W. 5TH ST. - DENVER, COLORADO
   
 WILLIAM B. ROBB
   
 REGISTERED PROFESSIONAL ENGINEER
   
 STATE OF COLORADO
   
 LICENSE NO. 1109
   
 JUNE 24, 1948
   

 APPROVED FOR CONSTRUCTION
   
 MUST COMPLY WITH ALL
   
 CITY OF DENVER CODES
   
 DATE

LEGEND

- INCANDESCENT LIGHTING FIXTURE - LARGE LETTER INDICATES FIXTURE TYPE INDICATED IN FIXTURE SCHEDULE - SMALL LETTER REFERS TO CONTROLLING SWITCH.
- BRACKET MOUNTED INCANDESCENT FIXTURE, SUBSCRIPTS AS NOTED ABOVE APPLY.
- ▭ FLUORESCENT LIGHTING FIXTURE, SUBSCRIPTS AS NOTED ABOVE APPLY.
- ▭ BRACKET MOUNTED FLUORESCENT, SUBSCRIPTS NOTED ABOVE APPLY.
- JUNCTION BOX - SIZE AS REQUIRED.
- S SINGLE POLE TOGGLE SWITCH, SMALL LETTER REFERS TO FIXTURES CONTROLLED.
- S<sub>3</sub> THREE-WAY TOGGLE SWITCH.
- ⊕ DUPLEX CONVENIENCE OUTLET.
- ⊕ SPECIAL 120V. AND 240V. DOUBLE OUTLET - SEE SPECIFICATIONS.
- ⊕ WEATHER-PROOF CONVENIENCE OUTLET.
- ⊕ SPECIAL PURPOSE OUTLET, 20A. RATED - SEE SPECIFICATIONS.
- ⊕ SINGLE TWIST-LOCK RECEPTACLE - SEE SPECIFICATIONS.
- ⊕ DOUBLE TWIST-LOCK RECEPTACLE - SEE SPECIFICATIONS.
- #— BRANCH CIRCUIT CONCEALED IN CEILING OR WALL, #TCS INDICATE NUMBER OF CONDUCTORS.
- #— BRANCH CIRCUIT CONCEALED IN FLOOR.
- CONDUIT UNDERGROUND.
- BRANCH CIRCUIT EXPOSED.
- TELEPHONE CONDUIT.
- A-L HOMERUN TO PANEL, LETTER INDICATES PANEL - NUMBER INDICATES CIRCUIT. 1/2 CONDUIT MINIMUM SIZE, LARGER SIZES AS INDICATED.
- HOMERUN TO TELEPHONE TERMINAL LOCATION. 3/4" MINIMUM SIZE.
- ⊕ MOTOR SYMBOL - SEE MOTOR EQUIPMENT SCHEDULE.
- ⊕ REFERS TO MOTOR EQUIPMENT SCHEDULE.
- DISCONNECT SWITCH
- ⊕ TELEPHONE OUTLET - WALL.
- CONDUIT WITH CONDUIT SEALING DEVICE INSTALLED.
- ⊕ THERMOSTAT - LINE VOLTAGE WIRE BY ELECTRICAL.

PANEL "A"														
COND. NO.	SZ	SERVING	CONN WATT H.P.	BKR			NEUTRAL	BKR			COND. NO.	SZ		
				AMP	FM	CKT		CKT	FM	AMP				
2	10	WAREHOUSE 10 LIGHTING	2000	30	C	1		2	C	30	2000	WAREHOUSE 10 LIGHTING	2	10
2	10	WAREHOUSE 10 LIGHTING	2000	30	C	3		4	C	30	2000	WAREHOUSE 10 LIGHTING	2	10
2	12	LIGHTING RMS. 1, 2 & 3.	1084	20	C	5		6	C	20	1484	LIGHTING ROOMS 5, 6, 7 & 8	2	12
		LIGHTING ROOM SHOP 04	1376			7		8			1376	LIGHTING SHOP ROOM 03		
		RECEPTACLES WARE. 01 AND OUTSIDE	900			9		10			1400	OUTSIDE PERIMETER LIGHTING		
		RECEPTACLES ROOM 03	900			11		12			900	SECOND LEVEL LIGHTING		
		SHOP 09 RECEPTACLES	360			13		14			780	RECEPTACLES RMS. OF FOS AND WAREHOUSE		
		WAREHOUSE 01 RECEPTACLES	900			15		16			1080	RECEPTACLES RMS. 05 & 08		
		BROOM MACHINE OUTLET RM. 08	21P.	40		17		18			2-1/4P.	WAREHOUSE UNIT HEATERS.		
		SHOP 08 RECEPTACLES	360	20		19		20			2-1/4P.	WAREHOUSE UNIT HEATERS		
		SHOP 08 UNIT HTR.	1/2P.			21		22			1-1/4P. 1-1/2P.	WAREHOUSE AND SHOP OF OFFICE.		
		TRILET 07 EXHAUST FAN	1/2P.			23		24			5P.	SECOND LEVEL RECEPTACLES		
2	12	OVERHEAD DOOR MOTOR UNIT	1/3			25		26			900	RECEPTACLES AREAS 04, 06 & 07	2	12
2	12	WAREHOUSE 10 EXHAUST FANS	2-1/2	20		27		28				SPACE		
		SPACE				29		30				SPACE		
		SPACE				31		32				SPACE		

120/240V. 10-3W. 5/11 CIRCUIT BREAKER PANEL, WITH 225A. MAIN LOGS ONLY - SUITABLE FOR AL-CU CONDUCTORS. PROVIDE E9-P 100-110 CIRCUIT BREAKERS AND SPARES AND SPACES AS NOTED ABOVE. ITC NPAB 34-36. (2 ADDITIONAL 1-POLE SPACES)

FIXTURE SCHEDULE						
KEY	MANUFACTURER		LAMP			REMARKS
	NAME	CAT. NO.	QTY	TYPE	SZ	
A	BENJAMIN	V9644	1	PS-40IF	500	SURFACE MOUNT ON BOTTOM OF THIN" FLANGES. LEVEL.
B	BENJAMIN	V9643	1	PS-30	200	SURFACE MOUNT ON BOTTOM OF THIN" FLANGES. LEVEL.
C	GENERAL ELECTRIC	5740-7	1	A-23	150	CEILING SURFACE MOUNT
D	ART METAL	15-1015AA	1	A-23	150	CEILING RECESS MOUNT
F	ART METAL	603	2	A-21	100	CEILING SURFACE MOUNT
G	ART METAL	3111-60	1	A-21	100	MOUNT 6" ABOVE MIRROR SEE ARCH. DRAWINGS.
H	ART METAL	3111	1	A-21	100	MOUNT 10" ABOVE DOOR.
K	STONCO	P8301 RM	1	A-23IF	200	SEE DRAWINGS FOR MOUNTING HEIGHT.
L	HOLOPHANE	480	1	PS-30	300	SEE DRAWINGS FOR MOUNTING HEIGHT.
M	ART METAL	3677A	1	PS-30	200	SURFACE MOUNT ON BOTTOM OF THIN" FLANGES. LEVEL.
N	BENJAMIN	FL-1025-4	2	F48712	60	PENDANT AT W/TOP OF FIX. LEVEL WITH BOTTOM OF THIN"
P	LITHONIA	WA-440-RH	4	F40CH	40	CEILING SURFACE MOUNT
R	WHEELER REFLECTOR	CL2408DP	2	F48712	60	MOUNT HORIZONTAL ON WALLS AT 10'-0", CRASHED

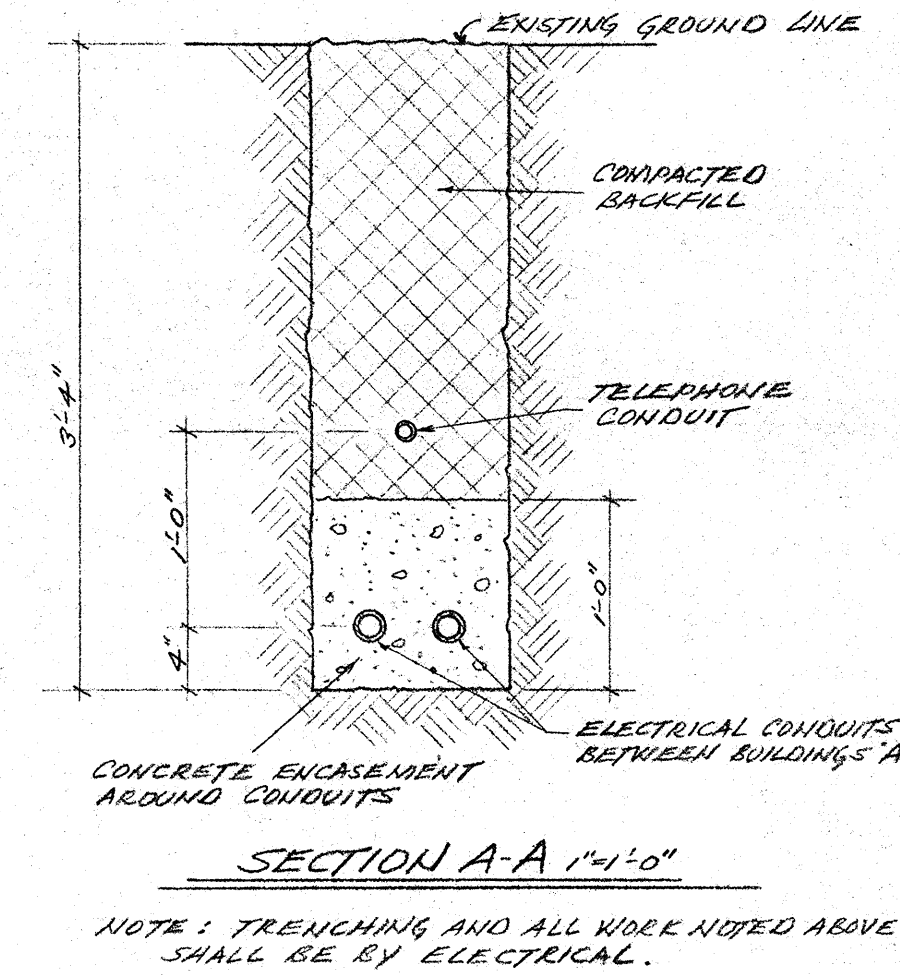
PANEL "B"														
COND. NO.	SZ	SERVING	CONN WATT H.P.	BKR			NEUTRAL	BKR			COND. NO.	SZ		
				AMP	FM	CKT		CKT	FM	AMP				
2	12	LIGHTING - GARAGE 12 AND VEHICLE STGE 13	1300	20	C	1		2	C	20	1042	LIGHTING ROOMS 14, 15, 16 & 17	2	12
		LIGHTING - VEHICLE STORGE 13	1200			3		4			1204	LIGHTING GARAGE AREAS 18, 19 & 20		
		LIGHTING - GARAGE AND WASH AREAS	1892			5		6			900	OUTSIDE PERIMETER LITG.		
		STORAGE AREA 12 RECEPTACLES	720			7		8			720	GARAGE & OUTSIDE RECEPTACLES		
		STORAGE & GARAGE AREAS 12, 13 RECEPT.	720			9		10			360	RECEPTACLES REPAIR 18		
		RECEPTACLES ROOMS 13, 16 & 17	900			11		12			360	RECEPTACLES GARAGE 19		
		STORAGE AREA 13 UNIT HEATERS	3-1/4P			13		14			5P.	RECEPTACLES REPAIR/WASH 20 & 21		
		GARAGE AREA UNIT HEATERS	2-1/4			15		16			20	4.0 OFFICE 17, ELEC.	2	12
		GARAGE AREA EX. FAN AT CEILING	1P.			17		18			2P.	2.0 WALL CONV. HEATER		
		SPACE				21		20			15	2.0 TRINET 15, ELEC.	2	12
		SPACE				25		22			2P	2.0 WALL CONV. HEATER		
		SPACE				27		24			20	SPACE		
		SPACE				29		26				SPACE		
		SPACE				29		28				CIRCUIT FOR		
		SPACE				29		30				OUTSIDE PUMP MOTORS & CONTROL		

120/240V. 10-3W. 5/11 CIRCUIT BREAKER PANEL, WITH 225A. MAIN LOGS ONLY - SUITABLE FOR AL-CU CONDUCTORS. PROVIDE E9-P 100-110 CIRCUIT BREAKERS, SPARES AND SPACES AS NOTED ABOVE. ITC NPAB 30-36. PROVIDE 1-1/2" SWITCHED NEUTRAL 30A. BREAKER. PROVIDE TWO ADDITIONAL 1P. 20A. SPACES FROM THOSE SHOWN ABOVE.

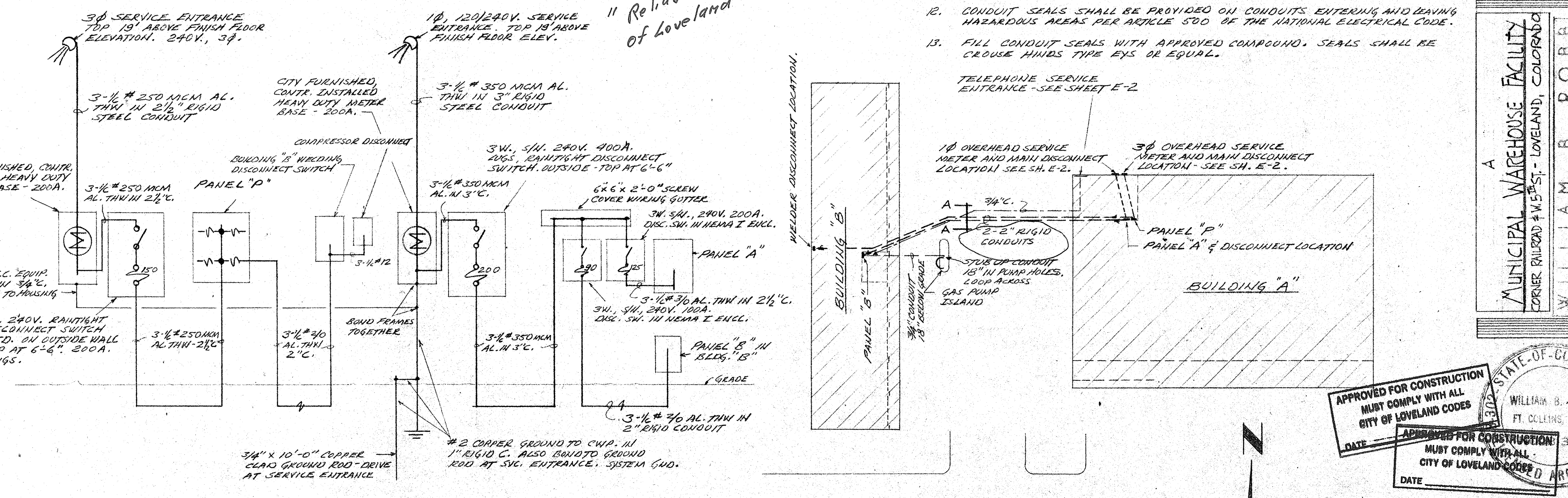
PANEL "P"											
COND. NO.	SZ	SERVING	CONN WATT H.P.	FUSE & LOGS			SERVING	COND. NO.	SZ		
				RISE	LOGS	CKT					
3	10	OVERHEAD CRANE CIRCUIT	3AP+ 1/4 1/2 HP.	25 FRN	30	1	3	6			
3	10	WELDER AND COMPRESSOR CKT.	30P+ 2P.	125 FRN	200	7	11				

240V. 3P-3W. FUSIBLE POWER DISTRIBUTION PANELBOARD. 400A. MAIN BUS WITH BRANCH FUSIBLE SWITCHES SIZED PER SCHEDULE ABOVE. LOGS FOR AL-CU CONDUCTORS. ITC V5-23 TYPE OR EQUAL.

MECHANICAL EQUIPMENT SCHEDULE					
KEY	DESCRIPTION	H.P.	VOLTS	DISCONNECT DATA	REQ.
1	UNIT HEATERS	1/4	120	BUSS S5U	8
2	UNIT HEATERS	1/6	120	BUSS S5U	5/10
3	OVERHEAD DOOR MOTOR	1/3	120	BUSS S5U AT UNIT CONTROL PANEL	9
4	EXHAUST FAN #2	1/2	120	BUSS S5U UNDER ROOF HOOD	12
5	CRANE CIRCUIT	3/4	240	SEE DRAWING E-2	
6	ROOFTOP HEATING AND A/C UNIT - omitted by Arch.	3/4	240	CONNECT TO FURNISHED DISK. IN PACKAGE UNIT.	
7	EXHAUST FAN	1	240	3P. D" CLASS 2510 2P.	
8	ELECTRIC CONV. HEATER	4.0 KW	240	ON UNIT	
9	ELECTRIC CONV. HEATER	2.0 KW	240	ON UNIT	
10	A.C. COMPRESSOR & FANS ON MAIN FLOOR - omitted by Arch.	1 1/2	240	60A. 3P. 110V. FUSIBLE - MT ON UNIT AT CONTROL PANEL	
11	WALL EXHAUST FANS	1/2	240	3P. D" CLASS 2510 2P.	
12	UNIT HEATER - ROOFTOP	1/6	120	WEMA SR. 2W. 5/11. 30A. RATED @ 120V.	9



- ### GENERAL NOTES
- BUILDING "C"**
- PLACE FILL BOXES IN CONDUIT RUNS BETWEEN BASEMENT 10 AND 3P DISCONNECTS AND MAIN FLOOR EQUIPMENT.
  - SURFACE MOUNT CONDUITS ON EXISTING WALLS. CONCEAL CONDUITS IN CEILING SPACE TO BE FURRED DOWN. HOMERUNS IN CEILING.
  - REMOVE ALL OLD WIRING AND APPARATUS WITHIN NEW CONSTRUCTION AREA UNLESS INDICATED OTHERWISE. PULL OUT OLD CONDUCTORS BACK TO NEAREST USED OUTLET BOX. SEAL AND BLANK OFF CONDUITS AS REQUIRED.
  - SURFACE MOUNT NEW FLUORESCENT FIXTURES UNLESS INDICATED OTHERWISE.
  - SEE ENGINEER FOR LOCATION OF CONDUITS IN BASEMENT LOCATION.
- BUILDINGS "A" AND "B"**
- RUN ALL WIRING OVERHEAD UNLESS INDICATED OTHERWISE.
  - USE RIGID GALVANIZED STEEL CONDUITS IN ALL SLEWS AND BELOW GRADE. RIGID STEEL CONDUIT SHALL BE USED IN BUILDING "B" WASH AREA AND ALL OUTSIDE AREAS.
  - ON BUILDING "A" WAREHOUSE LIGHTS, FIXTURES SHALL HAVE HEAVY DUTY LAMPHOODS AND FIXTURES SHALL BE CONNECTED TO THE BRANCH CIRCUITS WITH #14 MINIMUM SIZE FIXTURE WIRE.
  - INSTALL CONDUIT SEALS AT 18" ABOVE FINISH FLOOR.
  - INSTALL CONDUIT SEALS BETWEEN SERVICE CONDUITS AT BUILDINGS "A" AND "B" WHERE CONDUITS EMERGE ABOVE GRADE.
  - TWIN" WEBS SHALL NOT BE DRILLED OR SHOT ON BOTTOM. FASTEN TO SIDE OF WEBS OR ON FLANGES, AS APPROVED BY ARCHITECT.
  - CONDUIT SEALS SHALL BE PROVIDED ON CONDUITS ENTERING AND LEAVING HAZARDOUS AREAS PER ARTICLE 500 OF THE NATIONAL ELECTRICAL CODE.
  - FILL CONDUIT SEALS WITH APPROVED COMPOUND. SEALS SHALL BE GROUSE HUBS TYPE EYS OR EQUAL.
- TELEPHONE SERVICE ENTRANCE - SEE SHEET E-2

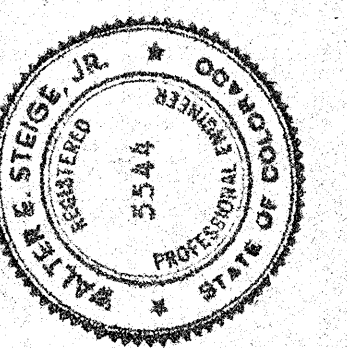


PANEL "D" - SEE SHEET E-3, BUILDING "C" LOCATION AND DESCRIPTION.

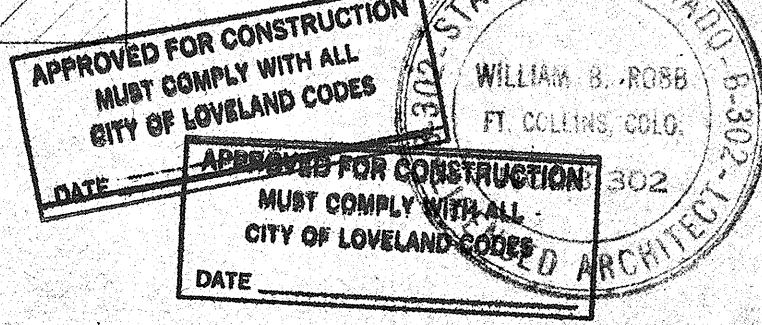
3P SERVICE 1P SERVICE ONE-LINE POWER DISTRIBUTION DIAGRAMS

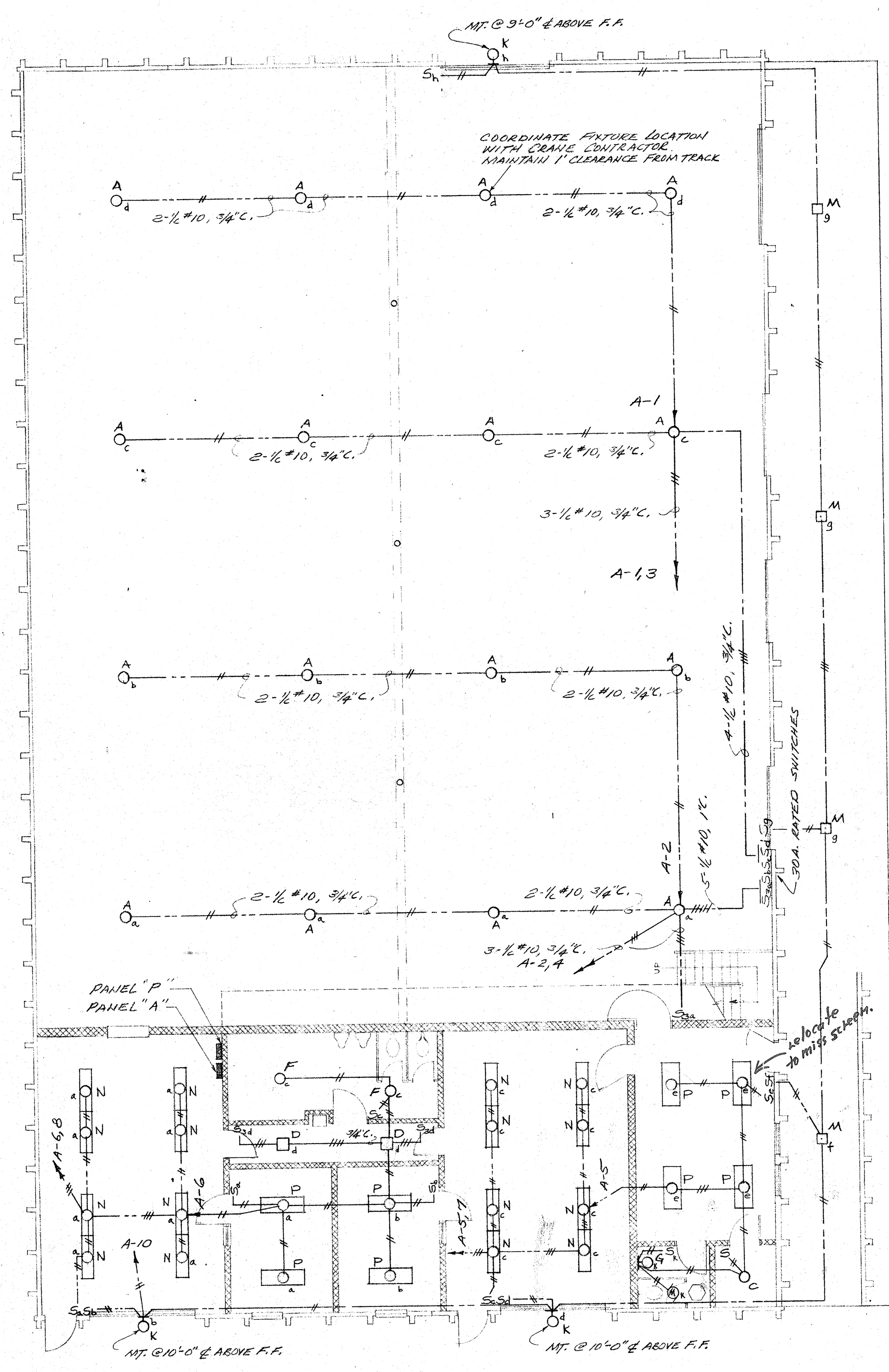
SCALE: 1"=30'

PLOT PLAN



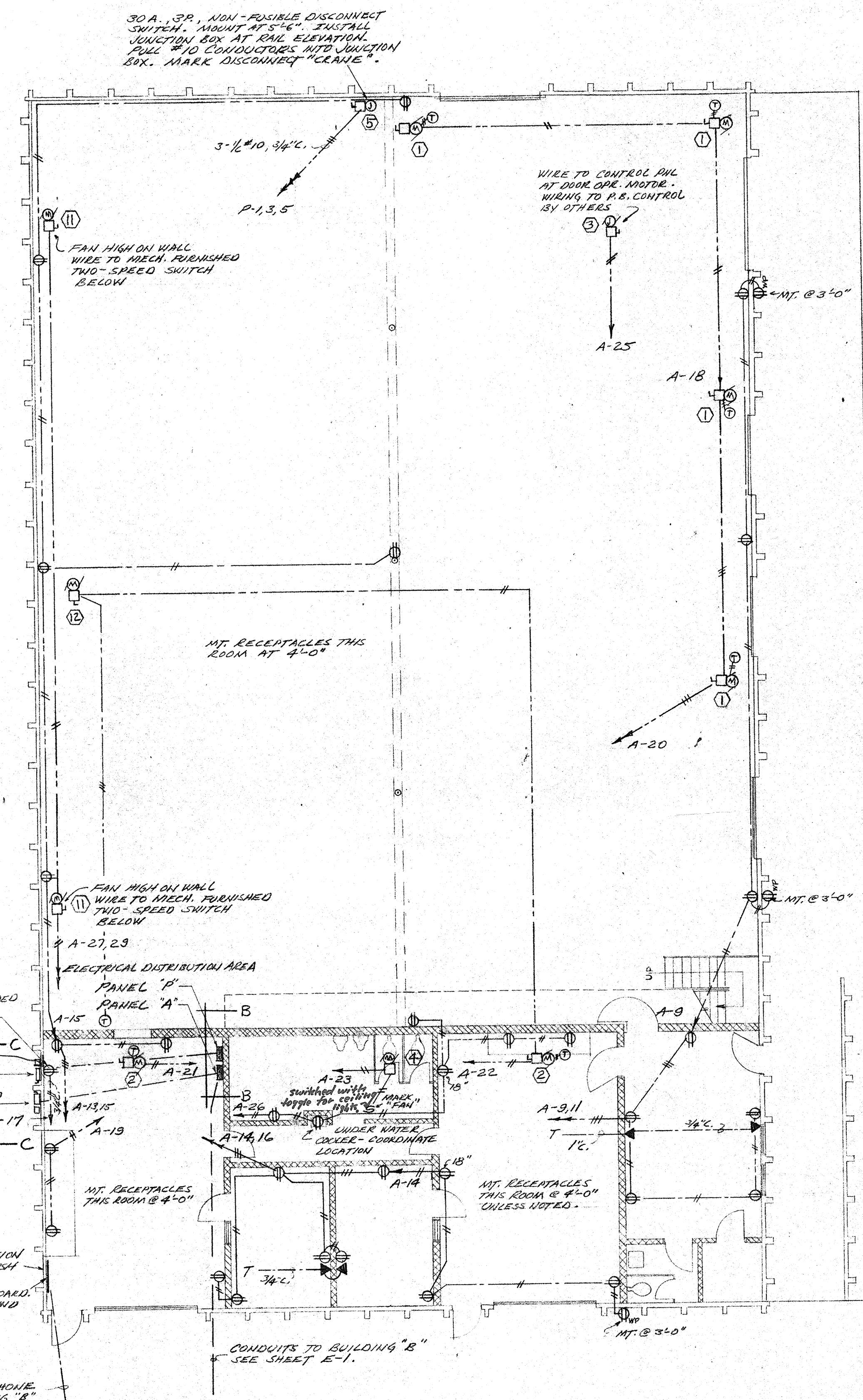
MUNICIPAL WAREHOUSE FACILITY  
CORNER RAILROAD & B-151 - LOVELAND, COLORADO  
WILLIAM B. ROBE  
ARCHITECT



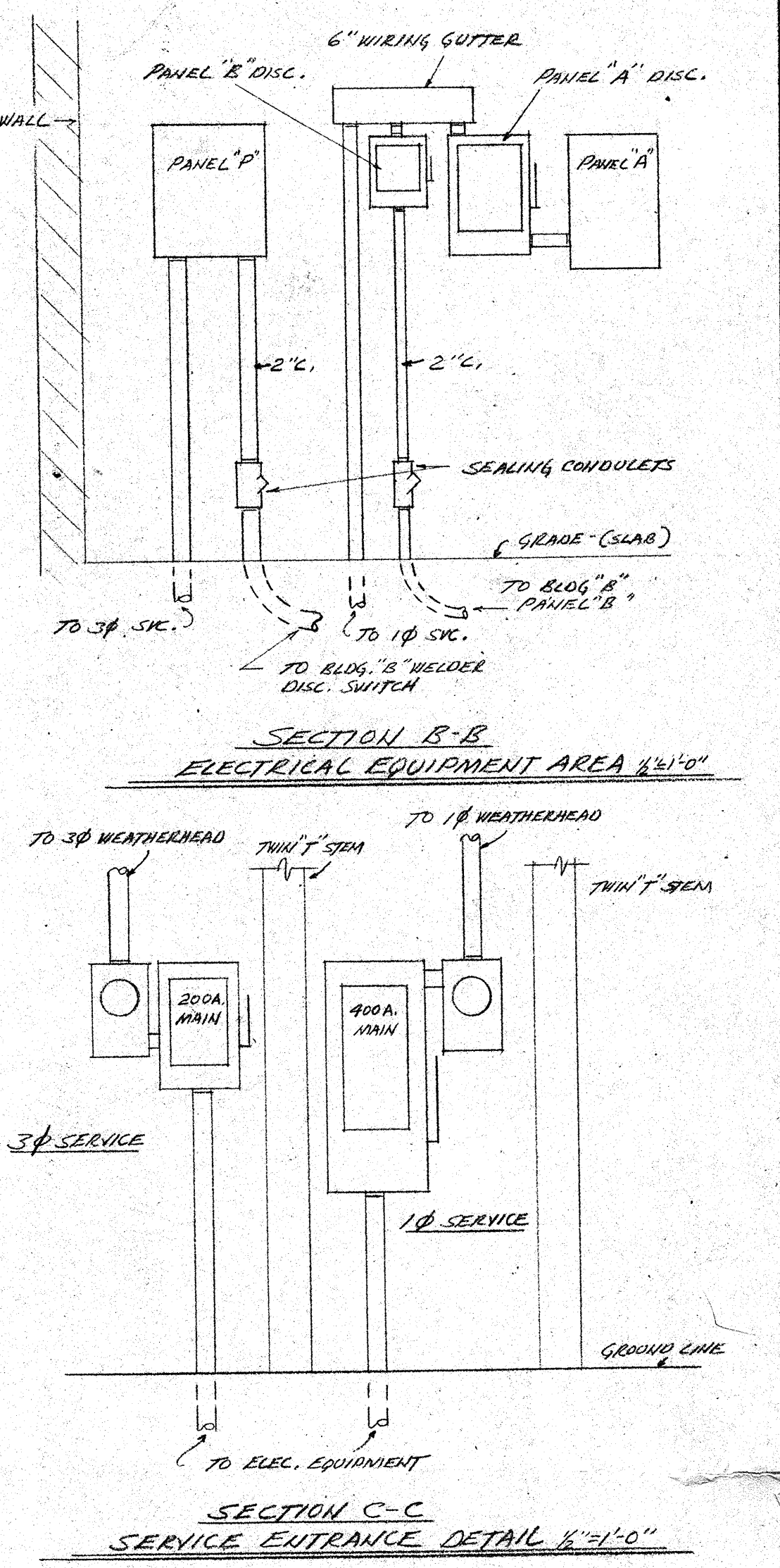


BUILDING "A" - LIGHTING PLAN 1/8"=1'-0"

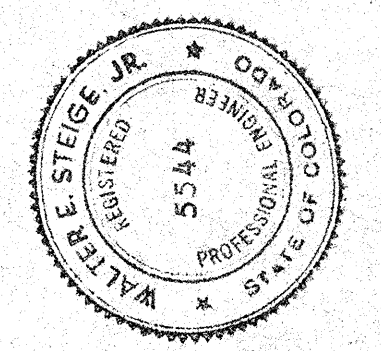
"Reliable Electric of Loveland"



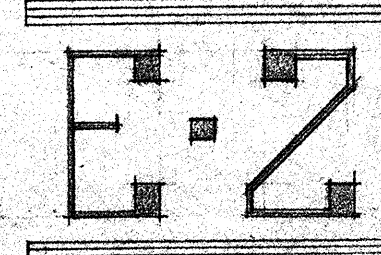
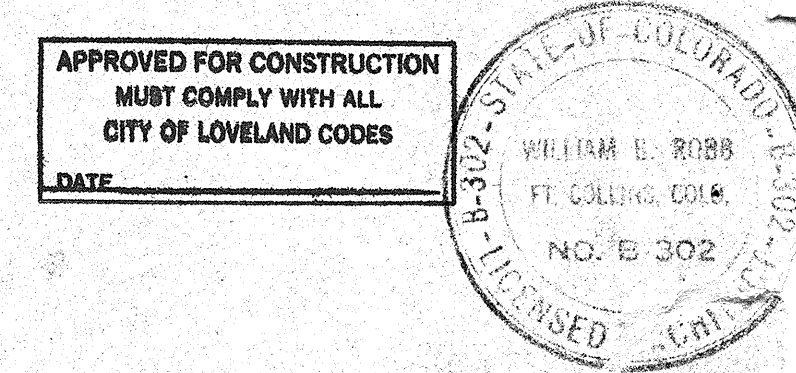
BUILDING "A" - POWER PLAN 1/8"=1'-0"

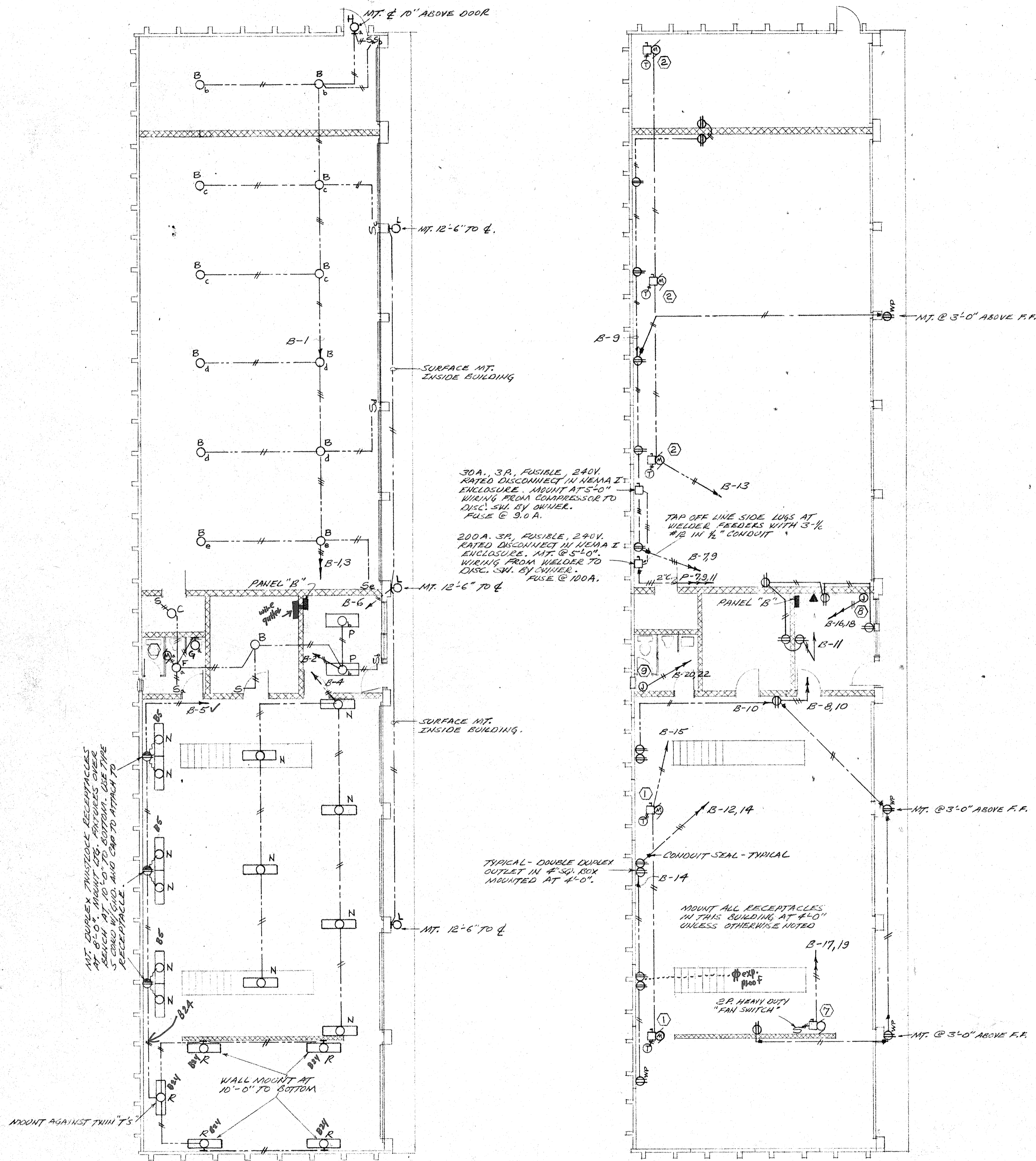


All thermostat and temperature control wiring installed by latent heating under mechanical contract.



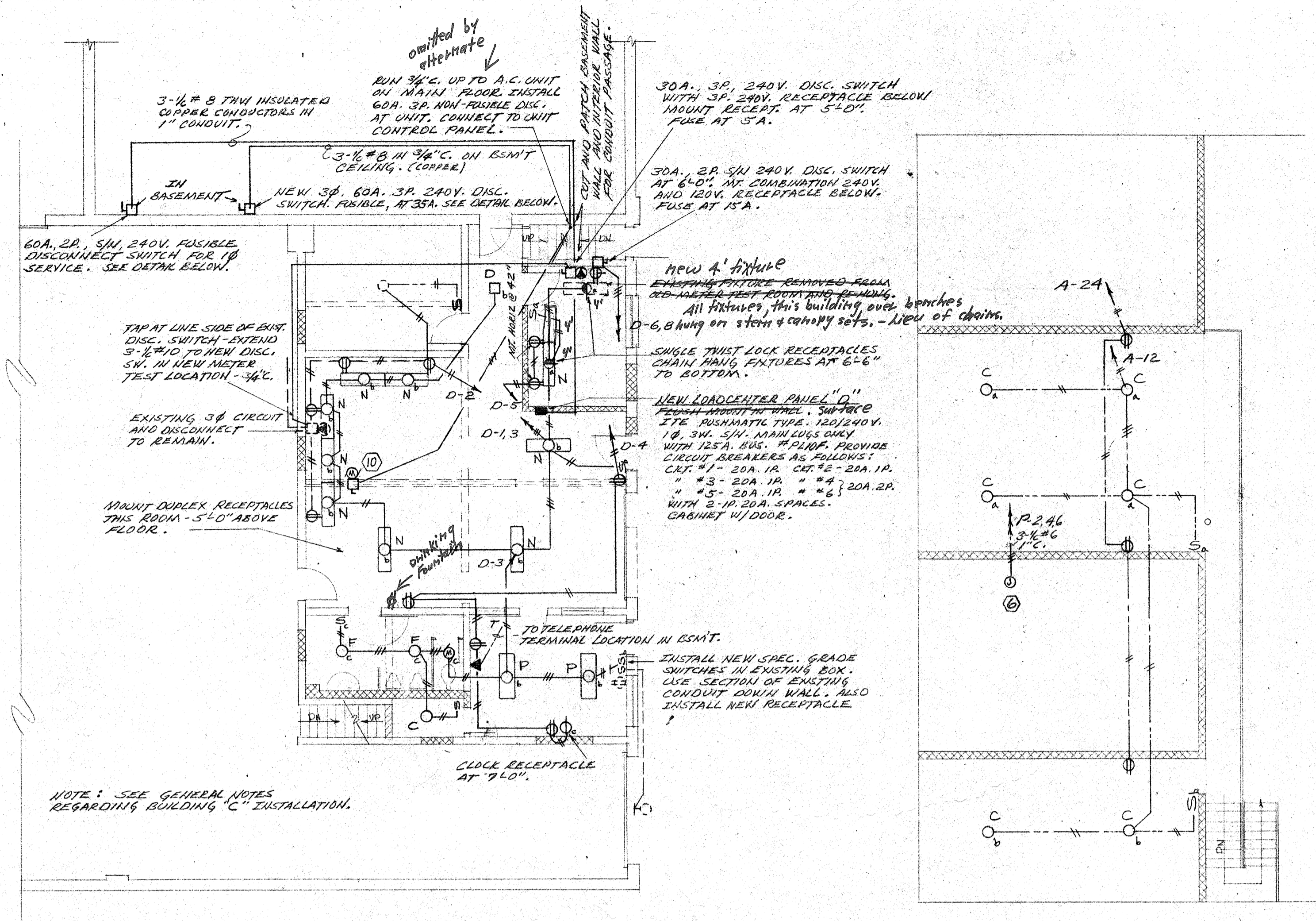
MUNICIPAL WAREHOUSE FACILITY  
CORNER BROAD & W. 5TH ST. - LOVELAND, COLORADO  
WILLIAM B. ROBB  
PROFESSIONAL ENGINEER  
STATE OF COLORADO  
NO. 5544





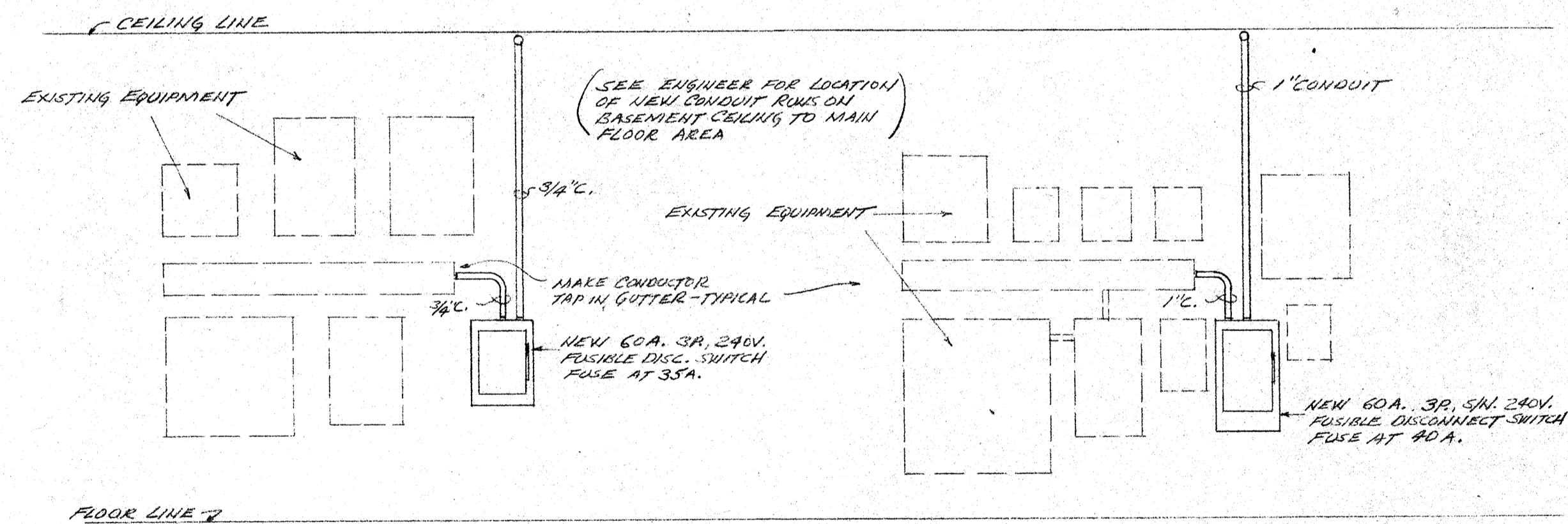
BUILDING "B" - LIGHTING PLAN 1/2"=1'-0"

BUILDING "B" - POWER PLAN 1/2"=1'-0"



FLOOR PLAN - BUILDING "C" 1/2"=1'-0"

SECOND FLOOR PLAN BUILDING "A" 1/2"=1'-0"

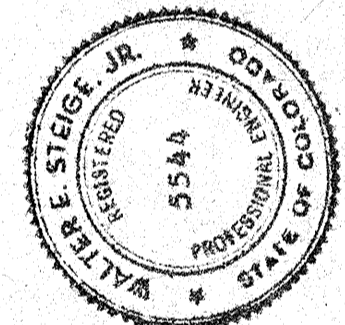


NEW 3/4" TAP OFF EXISTING 3/4" SERVICE IN BUILDING "C" BASEMENT. NO SCALE

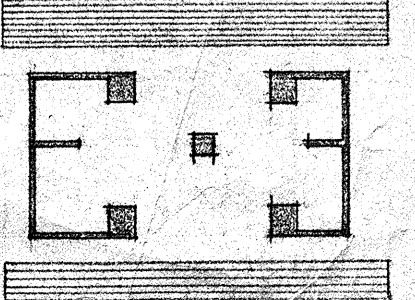
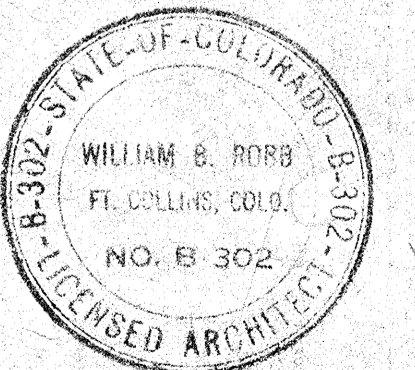
NEW 1" TAP OFF EXISTING 1" SERVICE IN BUILDING "C" BASEMENT. NO SCALE

*"Reliable Electric of Loveland"*

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE



MUNICIPAL WAREHOUSE FACILITY  
CREEK RAILROAD + N. 53 ST. - LOVELAND, COLORADO  
WILLIAM B. ROBB  
ARCHITECT  
STATE OF COLORADO  
LICENSED ARCHITECT  
NO. B-302



GENERAL NOTES

PROJECT DESCRIPTION

- 1. Project is a remodel of the existing storage floor into an office to be remodeled.
2. This section is for general orientation only. The Contractor is responsible for all scope items described on the drawings and specifications as well as for all material and labor that can reasonably be inferred there from.

GENERAL APPLICATION

- 1. These drawings must be used in conjunction with the owners drawings on the project to clearly define all requirements for construction.
2. No Contractor should attempt to bid nor construct any portion of this project without consulting the project architectural, mechanical, and electrical specifications, and/or General Notes.
3. These General Notes are intended to function as the structural portion of project specifications.
4. All things which, in the opinion of the Contractor, appear to be deficiencies, omissions, contradictions or ambiguities in the drawings shall be brought to the attention of the Structural Engineer.
5. The Contractor shall inform the Structural Engineer, clearly and explicitly, in writing of any deviation or substitution from requirements of the contract documents.
6. All elevations are referenced as follows: Datum 100'-0" = first floor elevation.

DESIGN CRITERIA

- 1. Building Code: 2003 International Building Code.
2. Superimposed Gravity Loading:
a. Dead Loads = 25 psf
b. Live Loads = 50 psf
c. Partition Loads = 20 psf
3. Load and Resistance Factor Design (Specification for Structural Steel Buildings), by American Institute of Steel Construction (AISC).
4. "AISC Code of Standard Practice" by AISC.
5. Specification for Structural Joints using ASTM A325 or A490 Bolts" by AISC.
6. "Structural Welding Code-Steel (AWS D1.1), Structural Welding Code-Sheet Steel (AWS D1.3), Structural Welding-Reinforced Concrete (AWS D1.4), all by the American Welding Society (AWS).
7. "National Design Specification for Wood Construction" by the National Forest Products Association.
8. All references are latest edition unless noted otherwise.

EXISTING CONSTRUCTION

- 1. Information on existing construction is available in a set of original documents by Architecture One.
2. All information, dimensions, elevations, etc. shall be considered approximate and shall be field verified by contractor prior to ordering and/or fabricating material.
3. Report all discrepancies to the Owner, General Contractor and Engineer.
4. In as much as the condition, remodeling, retrofit, renovation or rehabilitation of an existing building requires that certain assumptions be made regarding existing conditions, the contractor must inmediately notify the structural engineer if any existing condition deviates from those indicated in the contract documents.
5. Contractor shall verify all existing conditions prior to ordering materials or proceeding with new work in areas affected by existing conditions.
6. No openings nor any changes in addition shall be made in any existing structural elements without written approval of the Structural Engineer.

MISCELLANEOUS NOTES

- 1. The Contractor is solely responsible for all safety regulations, programs and precautions related to all work on this project.
2. The Contractor is solely responsible for the protection of persons and property either on or adjacent to the project and shall protect it against injury, damage, or loss.
3. Means and methods of construction and erection of structural materials are solely the Contractor's responsibility.
4. The structure is designed to function as a unit upon completion of construction of the project and then, only to support the design loads indicated.
5. No openings, nor any change in size, dimension or location shall be made in any structural element without written approval of the Structural Engineer.
6. Openings 1'-4" or less on a side are generally not shown on the structural drawings.
7. Show all openings through structural members on shop drawings and submit for review.
8. Fireproofing of structural elements is not shown on the structural drawings.
9. Do not scale these drawings, use the dimensions shown.
10. No structural modifications, alterations, or repairs shall be made without prior review by Structural Engineer. Submit details.

SUBMITTALS

- 1. See Material sections of these General Notes for required shop drawings.
2. Manufacturers Data: Submit two (2) copies of manufacturer's specifications and installation instructions for each product specified.
3. Shop Drawings: Submit one (1) reproducible and five (5) prints of each shop drawing.
4. Field corrections of fabrication errors in the structural framing will be permitted only when approved by the Structural Engineer.

QUALITY CONTROL

- 1. The Contractor is responsible for quality control, including workmanship and materials furnished by his subcontractors and suppliers.
2. Inspection or testing by the Owner does not relieve the Contractor of his responsibility to perform the Work in accordance with the Contract Documents.
3. Workmanship: The Contractor is responsible and shall bear the cost of correcting work which does not conform to the specified requirements.
4. Correct deficient work by means acceptable to the Architect. The cost of extra work incurred by the Architect to approve corrective work shall be borne by the Contractor.

STRUCTURAL STEEL

- 1. Steel sections:
W8's thru W40's u.n.o.
A572 GR 50 50 ksi
A992 GR 50 50 ksi
If I-olated Otherwise
A36 36 ksi
Rolled Channels and angles
A36 36 ksi
Pipes
A35 35 ksi
Tubes
A500 GR B 46 ksi
All Else
A36 36 ksi
2. Structural steel has been designed in accordance with Load and Resistance (LRFD) Design procedures as required by "AISC Manual Of Steel Construction Load And Resistance Design", Latest Edition, unless noted otherwise.
3. Connections:
a. Engineer of Record (EOR) has designed all connections.
b. Contractor deviations fabricated without prior approval of the Structural Engineer will be deemed a contractor design with total design responsibility remaining with the contractor.
c. Weld or bolt.
d. Minimum thickness: angles 5/16", plates 1/4".
4. Connection design forces: Unfactored ASD values
a. Loads shown include compensation for code permitted stress increases and load reductions for connection design.
5. Bolted connections:
a. Minimum bolt diameter: 1/4" unless noted.
b. Two bolts minimum per connected member.
c. Use fully tensioned A325SC or A490SC bolts for bracing, moment connections, cantilevers, tension members and all oversized or slotted holes where the force on the joint is not normal to the axis of the slot.
d. Snug tight bolts.
e. A307 bolts may be used only where indicated.
f. Oversized and long slotted holes permitted only where shown.
g. Alternate design tension control bolts may be used of contractor's option.
6. Welded connections:
a. Electrodes: E70 series electrodes, except E70-T-4 not allowed.
b. Fillet welds: AISC minimum but not less than 3/16", unless noted otherwise.
c. Groove welds: full penetration, unless noted otherwise.
d. Welds are continuous unless noted otherwise.
7. Shop Cleaning and Painting
a. Clean steel in accordance with Steel Structures Painting Council (SSPC):
i. SP-2 "Hand Tool Cleaning"
ii. SP-3 "Power Tool Cleaning"
iii. SP-6 "Commercial Blast Cleaning"
b. Coordinate all shop painting of structural steel with Architect's painting requirements as specified on the architectural drawings and specifications.
c. Shop prime all structural steel with primer standard with the fabricator, except as follows:
i. Structural steel surfaces to be welded or high-strength bolted with slip-critical connections.
ii. Structural steel surfaces scheduled to receive sprayed fireproofing.
iii. Structural steel top flange surfaces that are to receive shear connectors field welded through composite metal deck.
iv. Structural steel members or those members or portions of members to be embedded in concrete or mortar.
v. Contact milled bearing surfaces.
vi. Do not paint surfaces that are to be galvanized.
vii. Surface Preparation - Unpainted Steel: All structural steel that is not specified to receive a shop coat of primer paint shall be cleaned of oil and grease in accordance with SSP2-"Hand Tool Cleaning" or SP3-"Power Tool Cleaning"-contractors option.
d. Apply two (2) coats of paint to surfaces which are inaccessible after assembly or erection.
e. Members that are exposed to earth or weather in the finished structure shall be hot-dipped galvanized unless noted otherwise.
f. Clean structural steel scheduled to receive standard primer paint.
g. Field corrections of fabrication errors in the structural framing will be permitted only when approved by the Structural Engineer.
h. No final bolting or welding shall be done until as much of the Structure as will be stiffened thereby has been properly aligned.
i. Special inspection is required for structural steel, see Special Inspection Program.
11. Shop Drawings:
a. Submit Shop Drawings including complete details and schedules for fabrication and shop assembly of members, and details, schedules, procedures and diagrams showing the sequence of erection.
i. Include details of cuts, connections, cambr, holes and other pertinent data.
ii. Provide setting drawings, templates and directions for the installation of anchor bolts and other anchorages to be installed under other Sections of Work.
iii. Do not use reproducible copies of the Contract documents as erection drawings.
b. Machine Applied Nailing: The use of machine applied nailing is subject to satisfactory jobsite demonstration for each project and the approval by the project Architect or Structural Engineer.

WOOD FRAMING

- 1. General
a. Codes:
i. International Building Code 2003(IBC 2003)
ii. National Design Specification for Wood Construction (NDS)
b. The contractor is expected to employ competent journeymen who are knowledgeable with respect to "Conventional Construction Practices" and nailing requirements as presented in the IBC.
c. Products: Unless noted otherwise on the drawings or in these notes, all wood framing shall have the following minimum properties (normal duration) and be of a moisture content of 19% or less:
a. Stud:
i. Doug Fir Stud Grade or better @ 16" o.c.
ii. Hem Fir Stud Grade or better @ 16" o.c.
b. Light Framing(4x or less):
i. Hem-Fir, Select Structural
Flexural Stress 1400 psi
Compressive Stress 1500 psi
Horizontal Shear Stress 150 psi
Modulus of Elasticity 1,600,000 psi
ii. Hem-Fir, No. 1:
Flexural Stress 975 psi
Compressive Stress 1350 psi
Horizontal Shear Stress 150 psi
Modulus of Elasticity 1,500,000 psi
iii. Hem-Fir, No. 2:
Flexural Stress 850 psi
Compressive Stress 1300 psi
Horizontal Shear Stress 150 psi
Modulus of Elasticity 1,300,000 psi
c. Heavy Timbers (5x5 or larger):
i. Hem-Fir No. 1:
Beams (d>b+2) 850 psi
Columns (d<=b+2) 850 psi
Compressive Stress 750 psi
Flexural Stress 1050 psi
Horizontal Shear Stress 140 psi
Modulus of Elasticity 1,300,000 psi
ii. Hem-Fir No. 2:
Beams (d>b+2) 500 psi
Columns (d<=b+2) 575 psi
Compressive Stress 675 psi
Horizontal Shear Stress 140 psi
Modulus of Elasticity 1,100,000 psi
d. Manufactured Lumber (VL, PSL, LSL)
i. Laminated Strand Lumber (LSL):
Flexural Stress 2250 psi
Horizontal Shear Stress 400 psi
Modulus of Elasticity 1,500,000 psi
ii. Laminated Veneer Lumber (LVL):
Flexural Stress 2600 psi
Horizontal Shear Stress 285 psi
Modulus of Elasticity 1,900,000 psi
iii. Parallel Strand Lumber (PSL):
Flexural Stress 2900 psi
Horizontal Shear Stress 290 psi
Modulus of Elasticity 2,000,000 psi
iv. Wood I-Joists: Where framing members are noted "IJI" use engineered wood I-joists products by Trus-Joist MacMillan.
a) Submit layout shop drawings for wood I-joists.
b) Substitution may of equal product is acceptable upon submitter equal by contractor and approval by structural engineer.
e. Structural Panels (Plywood or OSB):
i. Sheathing for roofs and walls shall conform to APA PS-1 standards.
ii. Use the following panel grades and thicknesses:
Roof over trusses and rafters APA Rated 1/2"
Roof over TAG decking APA Rated 3/8"
Floors APA Stud-1-floor 3/4"
Shear Walls Ext Struct 1 1/2"
Other Walls APA Rated 1/2"
f. Sills: All sill plates shall be pressure treated Douglas fir stamped to show compliance with ANPA standards.
3. Connectors
a. Provide 5/8" diameter embedded bolts @ 48" (max.) tops of all walls for attaching sill plates except provide 5/8" anchor bolts at 16" under shear walls.
b. Nails:
i. Nailing shall conform with the minimum requirements contained in Table 23-1-1 of the IBC.
ii. All nails are to be common nails.
iii. Pre-drill nail holes when necessary to prevent splitting.
c. Bolts:
i. Where bolts and plates are called for on the drawings, plates shall conform to ASTM A36 and bolts to ASTM A307.
ii. ALL EXPOSED BOLTS IN WOOD STRUCTURE TO BE PLAIN, UNCOATED STEEL.
iii. Holes for bolts shall be 1/16" oversize.
iv. Retighten all bolts prior to closing in.
d. Lag Screws:
i. Lag screws shall penetrate the main member a minimum of 8 times the shaft diameter.
ii. Diagonal Lags (tee-nail) shall be installed with a minimum edge distance of 4 times the diameter.
e. Machine Applied Nailing: The use of machine applied nailing is subject to satisfactory jobsite demonstration for each project and the approval by the project Architect or Structural Engineer.

WOOD FRAMING CONT.

- 4. Installations:
a. Built-up Columns: When hidden in a wall, at contractor's option, wood columns may be built up from 2x laminations.
b. Sheathing:
i. Horizontal
a) Floors: Unless noted otherwise on plans, glue and nail 8d @ 4" o.c. edge and 8d @ 12" field
b) Roofs: Unless noted otherwise on plans, nail 8d @ 4" o.c. edges and 8d @ 12" field
c) See plans for areas of special blocking and nailing requirements.
ii. Vertical (Walls): for walls not designated as Shear Walls, nail vertical sheathing 8d @ 6" o.c. edges, 8d @ 12" o.c. field.

Legend table with symbols and definitions: EDGE OF SLAB, INDICATES DIRECTION OF DECK SPAN OR DIRECTION OF REINFORCEMENT, STEP IN SLAB, SECTION CUT XX - DETAIL NUMBER YY - SHEET NUMBER S-YY, ELEVATION CUT XX - DETAIL NUMBER YY - SHEET NUMBER S-YY, TOP OF CONCRETE ELEVATION.

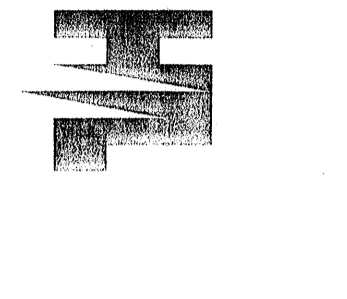
Structural Abbreviations table with columns for ABBREV., DEFINITION, ABBREV., DEFINITION. Includes terms like ANCHOR BOLTS, ADDNL, A.F.F., ALT, ARCH, B. BOT, B.B., B.L., BLDG, BM, B.O.D., BRG, B.S., BTWN, CANT'L, CJ, CIP, CL,CLR, CMU, COL, CONC, CONN, CONST, DET.DTL, DIM, DK, DS, DWCS, DWL, EA, EE, EF, EFF, EJ, EL,ELEV, EOC, EOD, EOM, EOS, EW, EXIST, EXP, EXT, FL, FOS, FP, FS, FG.

Structural Drawing List table with columns for drawing title and status (X or blank). Includes items like GENERAL NOTES, PARTIAL FIRST FLOOR PLAN, PARTIAL SECOND FLOOR PLAN, PARTIAL ROOF PLAN, BUILDING SECTIONS AND STAIR DETAILS.

SPECIAL INSPECTOR REQUIRED. SUBMIT WRITTEN INSPECTION REPORT TO BUILDING OFFICIAL.

061302

THARTMANN Engineering Consulting Structural Engineers. 6750 NORTH FRANKLIN AVENUE, LOVELAND, CO 80538. PH: (970) 933 6223 FAX: (970) 933 6227 www.thartmann.com



LOVELAND, CO

LOVELAND MOC III

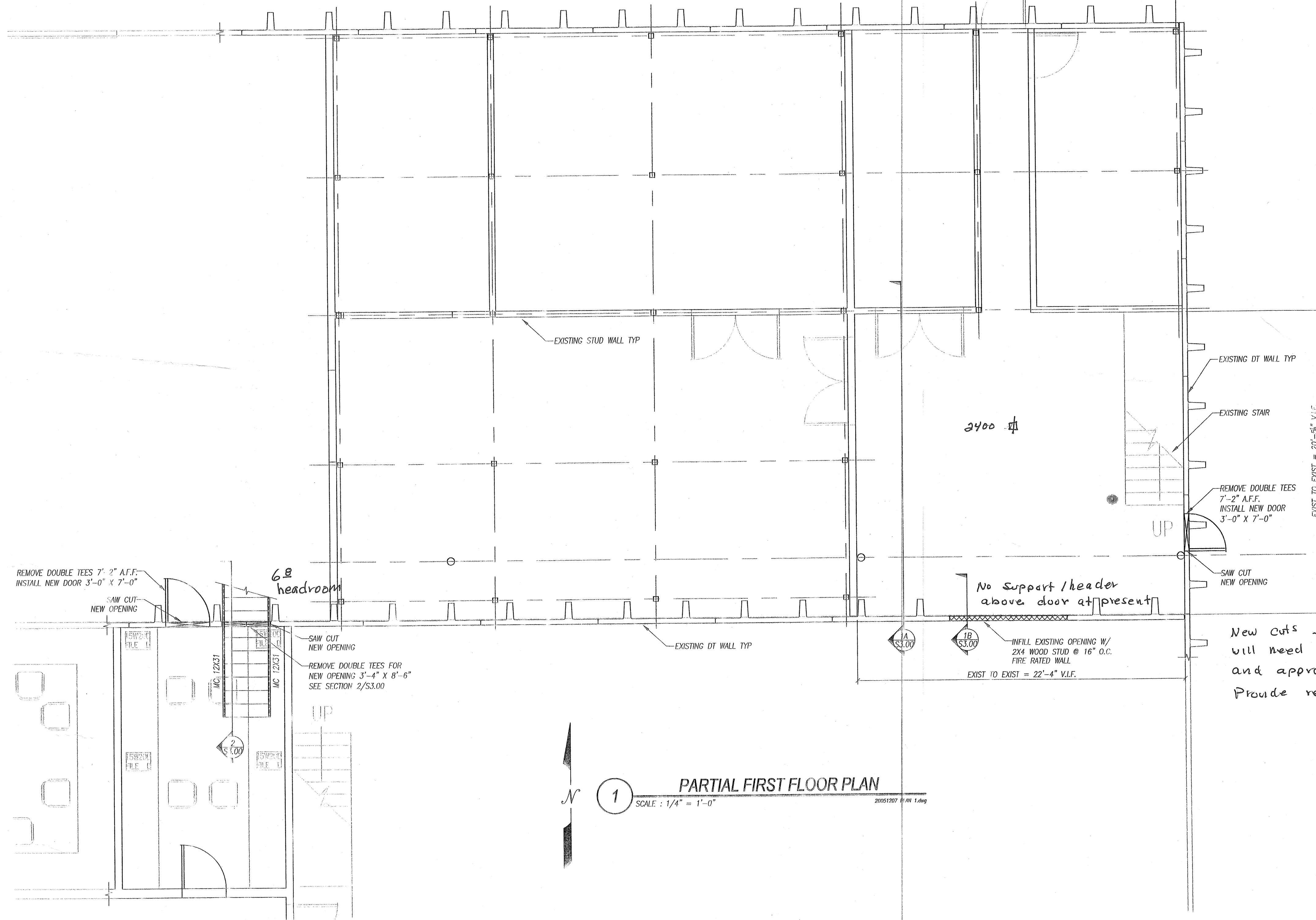
GENERAL NOTES, STRUCTURAL ABBREVIATIONS, LEGEND AND STRUCTURAL DRAWING LIST. Includes a circular stamp with '2006' and 'THARTMANN ENGINEERS'.

DRAWN BY: NAK
DESIGNED BY: TWH
CHECKED BY: TWH
ISSUED FOR PERMITS:
FOUNDATION PERMITS:
FOUNDATION PERMIT PACKAGE:

TWH20051207

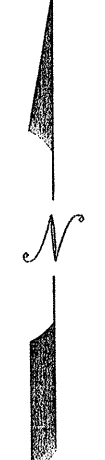
\$1.00

11/2/2005 12:18:01 PM H:\2005 Projects\20051207 Loveland MOC III\Drawings\Current Structural\20051207\_S2.DWG, 4/27/2005 12:18:01 PM



Provide light on exterior side of door

New cuts for openings will need to be supervised and approved by an engineer. Provide report from engineer



1

PARTIAL FIRST FLOOR PLAN

SCALE : 1/4" = 1'-0"

20051207 01.R1 1.dwg

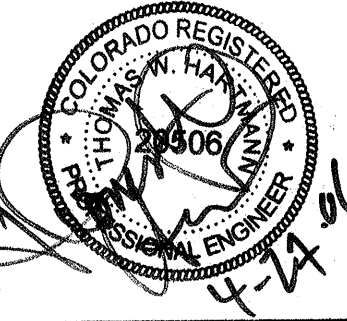
THIS DOCUMENT IS THE PROPERTY OF TWH ENGINEERING. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. IT IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF TWH ENGINEERING. THE USER OF THIS DOCUMENT AGREES TO HOLD TWH ENGINEERING HARMLESS FROM AND AGAINST ALL LIABILITY, DAMAGES, LOSSES, AND EXPENSES, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING OUT OF OR RESULTING FROM THE USE OF THIS DOCUMENT.

**TWH ENGINEERING**  
 Consulting Structural Engineers  
 6790 NORTH FRANKLIN AVENUE  
 LOVELAND, CO 80538  
 PH: (970) 593 6223 FAX: (970) 593 6227  
 www.twhengineering.com

LOVELAND, CO

LOVELAND MOC III

PARTIAL FIRST FLOOR PLAN



DRAWN BY: NAK  
 DESIGNED BY: TWH  
 CHECKED BY: TWH  
 ISSUED FOR PERMIT:  
 ISSUED FOR CONSTRUCTION: 04/27/2005  
 FOUNDATION PERMIT:  
 DRILLED PIER PACKAGE:  
 FOUNDATION PERMIT PACKAGE:

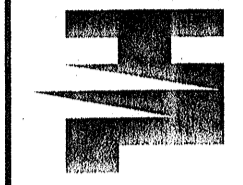
SPECIAL INSPECTOR REQUIRED. SUBMIT WRITTEN INSPECTION REPORT TO BUILDING OFFICIAL.

061302

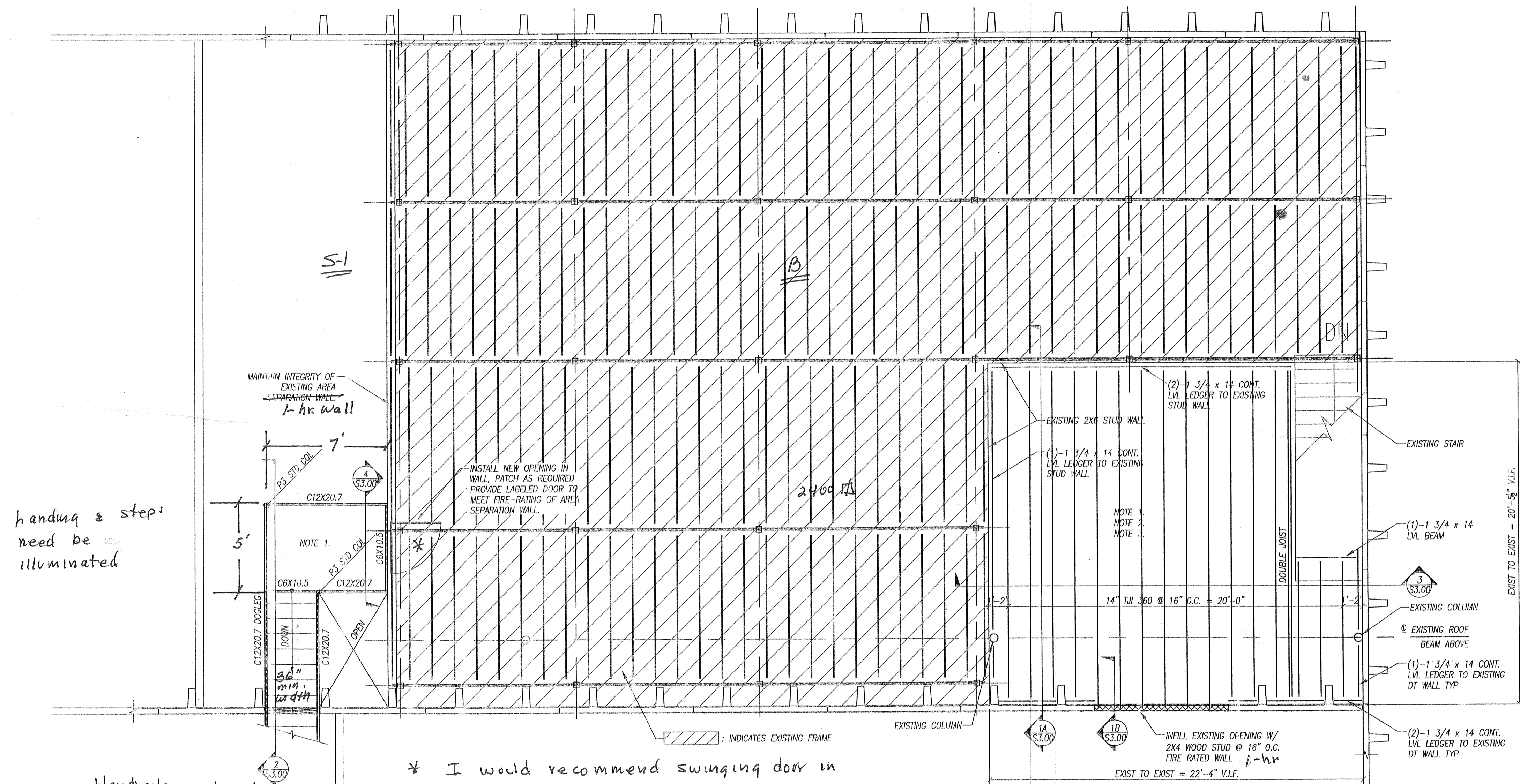
TWH20051207

S2.00





LOVELAND MOC III



handing & steps need be illuminated

Handrails each side of stairways extend 12" beyond bottom riser.

\* I would recommend swinging door in direction of egress

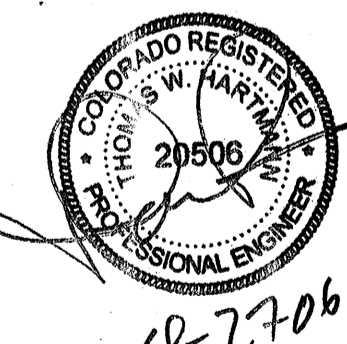
Minimum ceiling height 7'6" (1208.2)

See 2006 IBC - fire barrier

**1 PARTIAL SECOND FLOOR PLAN**  
 SCALE: 1/4" = 1'-0"  
 20051207 PLAN 2.dwg

- FLOOR PLAN NOTES**
1. Verify finish floor elevation in field, match existing.
  2. Provide rated ceiling below 5" type X (minimum) to meet occupancy separation requirements.
  3. Sheath per general notes S1.00.

PARTIAL SECOND FLOOR PLAN



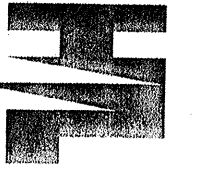
DRAWN BY: NAK  
 DESIGNED BY: TWH  
 CHECKED BY: TWH  
 ISSUED FOR PERMITS  
 ISSUED FOR CONSTRUCTION: 04/27/2006  
 FOUNDATION PERMITS  
 DRILLED PER PACKAGE  
 FOUNDATION PERMITS PACKAGE

SPECIAL INSPECTOR REQUIRED. SUBMIT WRITTEN INSPECTION REPORT TO BUILDING OFFICIAL.

TWH20051207

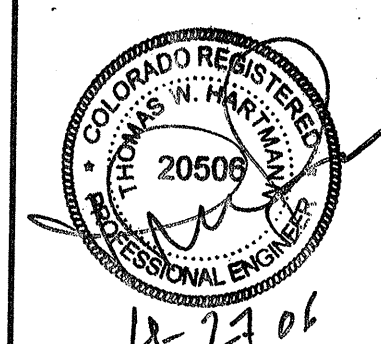
061802

S2.10



LOVELAND MOC III

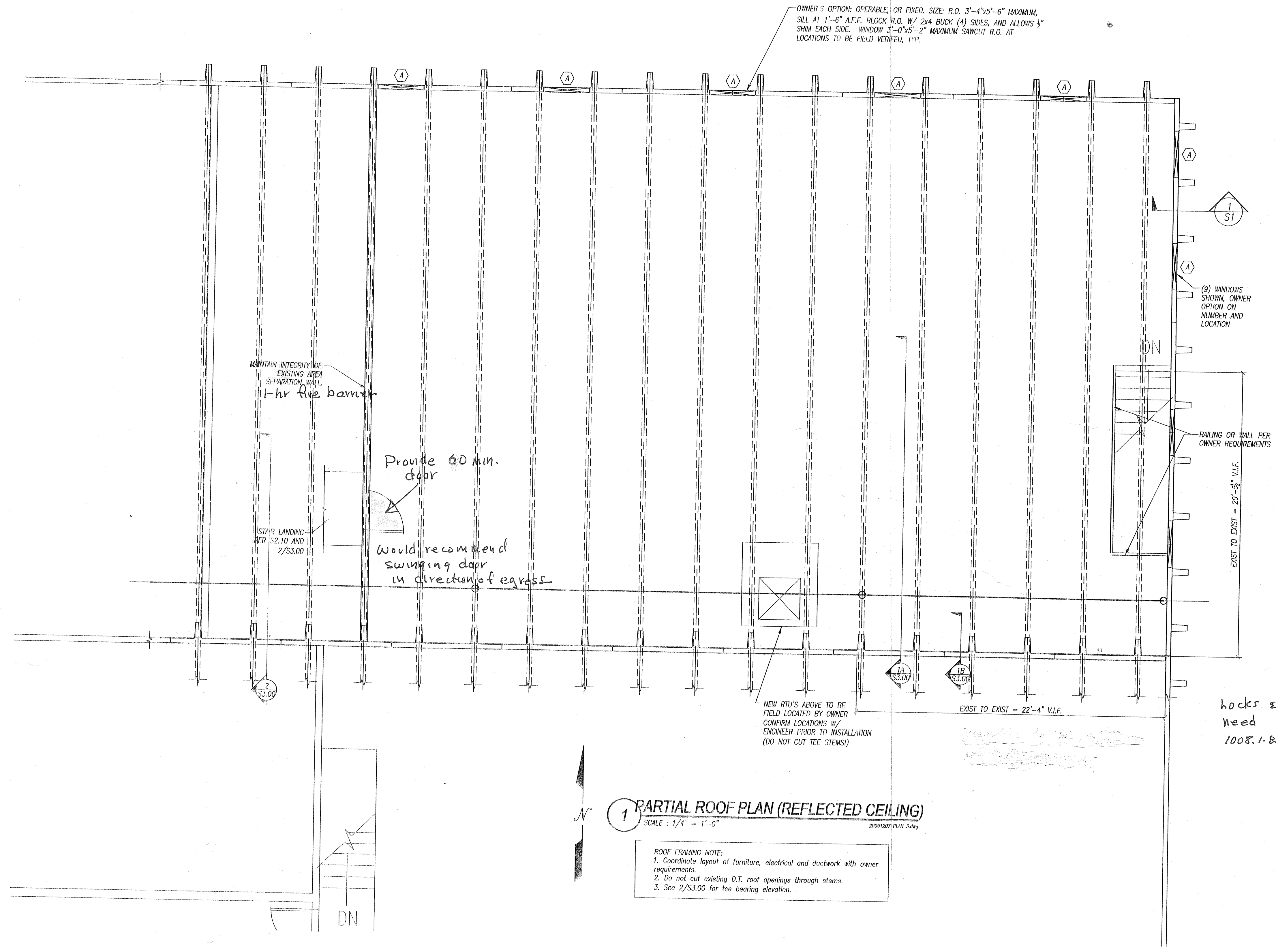
PARTIAL ROOF PLAN



DRAWN BY: NAK  
DESIGNED BY: TWH  
CHECKED BY: TWH  
ISSUED FOR PERMITS: 04/27/2006  
FOUNDATION PERMITS:  
UNLTD PERMITS PACKAGE:  
FOUNDATION PERMITS PACKAGE:

TWH20051207

S2.20



**1 PARTIAL ROOF PLAN (REFLECTED CEILING)**  
SCALE: 1/4" = 1'-0"  
20051207 PLN 3.dwg

**ROOF FRAMING NOTE:**  
1. Coordinate layout of furniture, electrical and ductwork with owner requirements.  
2. Do not cut existing D.I. roof openings through stems.  
3. See 2/S3.00 for tee bearing elevation.

locks & latches will need to comply with 1008.1.8.3 (Doors)

SPECIAL INSPECTOR REQUIRED. SUBMIT WRITTEN INSPECTION REPORT TO BUILDING OFFICIAL.

061302



# GENERAL MECHANICAL NOTES AND OUTLINE SPECIFICATIONS

- THE GENERAL CONTRACTOR SHALL OBTAIN ALL PERMITS, PATENT RIGHTS, AND LICENSES THAT ARE REQUIRED FOR PERFORMING THE WORK UNDER ALL LAWS, ORDINANCES, RULES AND REGULATIONS OR ORDERS OF ANY OFFICER AND/OR GOVERNING BODY, HAVING JURISDICTION FOR THE WORK UNDER THIS SECTION. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY IN CONNECTION WITH ALL FEES RELATING TO AND ALL COSTS AND EXPENSES INCURRED ON ACCOUNT OF THE WORK UNDER THIS SECTION. NO WORK SHALL BE COVERED BEFORE INSPECTION BY THE JURISDICTIONAL INSPECTOR AND THE OWNER'S REPRESENTATIVE. POST PERMITS AS REQUIRED.
- THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC, SHOWING CERTAIN PHYSICAL RELATIONSHIPS WHICH MUST BE ESTABLISHED WITHIN THE MECHANICAL WORK AND ITS INTERFACE WITH OTHER WORK. SUCH ESTABLISHMENT IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACT DOCUMENTS INDICATE THE AVAILABLE INFORMATION ON EXISTING UTILITIES AND SERVICES, AND ON NEW SERVICES TO BE PROVIDED TO THE PROJECT BY UTILITY COMPANIES AND AGENCIES. COORDINATE ALL UTILITY INTERFERENCE WITH THE OWNER AND THE UTILITY COMPANY. PLAN WORK SO THAT THESE INTERRUPTIONS ARE KEPT TO A MINIMUM.
- THE EQUIPMENT INDICATED ON THE CONTRACT DOCUMENTS REPRESENT A STANDARD OF QUALITY TO BE MAINTAINED. SUBSTITUTIONS MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND UNUSED AND INSTALLED BY ONLY QUALIFIED PERSONNEL. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, IN ADDITION TO ANY STATE AND LOCAL CODES THAT MAY APPLY. WORKMANSHIP: ALL LABOR SHALL BE CAREFULLY SKILLED FOR THIS KIND OF WORK, THOROUGH IN ALL RESPECTS AND UNDER THE DIRECTION OF A COMPETENT FOREMAN.
- SUBMIT (6) COPIES OF SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS FOR ENGINEER'S REVIEW. SUBMITTAL INFORMATION SHALL INDICATE ALL PERFORMANCE DATA (RATED FOR THE ALTITUDE OF THIS PROJECT) THAT COMPLIES WITH THE SCHEDULED DATA LIST ALL DEVIATIONS AND REASONS FOR DEVIATION. SUBMITTALS WITHOUT PROPER INFORMATION SHALL BE IMMEDIATELY REJECTED.
- EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL HAVE A PERMANENT LABEL CLEARLY INDICATING THE MAINTENANCE TO BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT OPERATING CONDITION. EQUIPMENT SUPPLIERS SHALL FURNISH THE FULL AND PARTIAL INPUT AND OUTPUT CAPACITIES TO ENABLE THE DETERMINATION OF COMPLIANCE WITH THE ENERGY CONSERVATION CODE.
- SUBMIT THREE TYPED AND BOUND COPIES OF OPERATING AND MAINTENANCE MANUALS PRIOR TO SCHEDULING SYSTEM'S DEMONSTRATION FOR THE OWNER. MANUALS SHALL HAVE INDEX WITH TAB DIVIDERS FOR EACH MAJOR EQUIPMENT SECTION TO FACILITATE LOCATING INFORMATION ON A SPECIFIC PIECE OF EQUIPMENT. ALPHABETICAL LIST OF SYSTEM COMPONENTS, WITH THE NAME, ADDRESS AND 24 HOUR TELEPHONE NUMBER OF THE COMPANY RESPONSIBLE FOR SERVICING EACH ITEM DURING THE FIRST YEAR OF OPERATION.
- DELIVERY AND STORAGE OF MATERIALS: PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. REPLACE ALL DAMAGED AND DEFECTIVE WORK BEFORE FILING APPLICATION FOR FINAL ACCEPTANCE.
- BEFORE SUBMITTING HIS BID, THE CONTRACTOR FOR THE WORK UNDER THIS SECTION SHALL CAREFULLY STUDY ALL DRAWINGS, AND SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES. HE SHALL DEFINITELY DETERMINE IN ADVANCE, THE METHODS OF INSTALLATION AND CONNECTING THE APPARATUS AND THE MEANS TO BE PROVIDED FOR GETTING THE EQUIPMENT INTO PLACE. AFTER AWARD OF THE CONTRACT, NO SUBSEQUENT ALLOWANCES WILL BE MADE TO THE CONTRACTOR DUE TO HIS FAILURE TO COMPLY WITH THE ABOVE REQUIREMENTS AND ANY OTHER CONDITIONS AFFECTING THE INSTALLATION AND COMPLETION OF ALL WORK.
- ACCURATELY RECORD ALL CHANGES TO THE CONTRACT DOCUMENTS ON ONE SET OF DRAWINGS. TRANSMIT THE INFORMATION TO THE ENGINEER.
- FURNISH WRITTEN CERTIFIED GUARANTEE, IN ACCEPTANCE FORM, TO THE OWNER AGAINST DEFECTIVE WORKMANSHIP, MATERIALS AND OPERATING EQUIPMENT. IN ADDITION TO THE GUARANTEES REQUIRED ELSEWHERE, ALL WORK, MATERIALS AND EQUIPMENT PROVIDED UNDER THE MECHANICAL SECTIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR UNDER THIS GUARANTEE SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY EQUIPMENT AND MATERIALS FURNISHED UNDER THIS SECTION. PROVIDE CERTIFICATES FOR ALL EQUIPMENT HAVING WARRANTIES IN EXCESS OF (1) YEAR.
- ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH CURRENT SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL ELECTRIC CODE, LOCAL BUILDING CODES, THE INTERNATIONAL MECHANICAL CODE, THE INTERNATIONAL PLUMBING CODE, THE INTERNATIONAL BUILDING CODE AND OTHER APPLICABLE CODES, LAWS OR REGULATIONS OF BODIES LAWFULLY EMPOWERED AND HAVING JURISDICTION OVER THIS PROJECT. NOTHING IN THE PLANS OR THESE SPECIFICATIONS IS TO BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THESE CODES.
- RESOLVE ALL QUESTIONS, DISCREPANCIES OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
- PROVIDE IDENTIFICATION TAGS FOR ALL SCHEDULED EQUIPMENT.
- COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES AND PROVIDE OFFSETS AS NECESSARY TO ACCOMMODATE STRUCTURE AND OTHER TRADES.
- M.C. TO PROVIDE ALL NECESSARY MOTOR STARTERS FOR THE EQUIPMENT THEY ARE RESPONSIBLE FOR. COORDINATE WITH E.C. TO INSTALL AND WIRE. M.C. TO PROVIDE & INSTALL ALL NECESSARY LOW VOLTAGE WIRING.
- PROVIDE ACCESS PANELS IN CEILING AND/OR DUCTWORK WHERE REQUIRED FOR ACCESS TO ALL MOTORS, CONTROLS, FIRE DAMPERS, SMOKE / FIRE DAMPERS, AND BALANCING DAMPERS.
- LEVEL ALL EQUIPMENT CURBS / BASES PRIOR TO INSTALLATION OF ANY EQUIPMENT.
- SEAL ALL WALL AND ROOF PENETRATIONS WATERTIGHT WITH SILICONE CAULKING AND BACKER ROD, UL CLASSIFIED AND FM1 APPROVED SEALANTS SHALL BE USED AT ALL PENETRATIONS OF RATED WALLS, CEILINGS AND FLOORS.
- COORDINATE TO PROVIDE ALL THE MISCELLANEOUS SUPPORT AND FRAMING REQUIRED FOR THE MECHANICAL EQUIPMENT.
- COORDINATE AND VERIFY ALL OPENINGS IN STRUCTURAL WALLS, ABOVE CEILING, AND FLOORS WITH THE STRUCTURAL CONTRACTOR.
- ALL SUPPLY AND RETURN DUCTWORK UNLESS SPECIFICALLY INDICATED SHALL BE IN ASTM A521 LOCK FORMING QUALITY GALVANIZED SHEET METAL WITH ASTM A528 G30 ZINC COATING INSTALLED IN ACCORDANCE WITH CHAPTER 6 OF THE 2003 IMC AND THE SMACNA DUCT CONSTRUCTION STANDARDS, FOR PRESSURE CLASS "A" FOR 3" SP AND ABOVE, CLASS "B" FOR 2" TO 3" SP AND CLASS "C" FOR 1 1/2" TO 2" SP, WITH "HARD CAST" SEALED JOINTS. THE USE OF PRESSURE SENSITIVE TAPE WILL NOT BE ACCEPTABLE. DIMENSIONS SHOWN ARE SHEET METAL DIMENSIONS. ALLOWANCES HAVE BEEN MADE FOR 1" DUCT LINER WHERE CALLED FOR.
- INSTALL FULL SIZE CONDENSATE DRAIN WITH TRAP SEAL DEPTH EQUAL TO 15 x UNIT TOTAL STATIC PRESSURE FOR EACH COOLING COIL.
- ALL TYPE "B" VENTS SHALL HAVE JOINTS SEALED WITH "HARD CAST". THE USE OF PRESSURE SENSITIVE TAPE TO SEAL JOINTS WILL NOT BE ACCEPTABLE.
- EXTERNALLY INSULATE ALL NEW SUPPLY AIR DUCTS FROM HVAC UNITS (EXCEPT FOR DUCTS EXPOSED TO CONDITIONED SPACE) WITH MINIMUM 1 1/2" THICK 150 DENSITY FIBERGLASS. INTERNALLY INSULATE RETURN AIR DUCT WORK TO HVAC UNITS WITH MINIMUM 1" THICK FLEXIBLE FIBERGLASS. ALL INSULATION SHALL HAVE MINIMUM INSTALLED "R" VALUE OF 5.0, FLAME SPREAD RATING OF 25 OR LESS, SMOKE DEVELOPED RATING OF 50 OR LESS AND BE RATED FOR OPERATING TEMPERATURES UP TO 250° F. DUCT LINERS SHALL HAVE AN ACRYLIC COATING ON SURFACE IN CONTACT WITH THE AIR STREAM. DUCT WRAP SHALL HAVE AN ALUMINUM FOIL FACING. SUPPLY AIR AND RETURN AIR DUCTWORK RUN EXPOSED WITHIN THE SPACE SHALL NOT BE INSULATED. INTERNALLY INSULATE ALL NEW SUPPLY AIR AND RETURN AIR DUCTS THAT ARE INSTALLED OUTSIDE OF THE BUILDING OR IN UN-CONDITIONED SPACES WITH INSULATION HAVING A MINIMUM "R" VALUE OF 6.0.
- ALL DUCT PENETRATIONS THRU FIRE RATED WALLS, FLOORS, DEMISING WALLS TO HAVE APPROVED AUTOMATIC FIRE DAMPERS OR TO PROVIDE APPROPRIATE FIRE RATED SHAFTS FOR ALL SUCH PENETRATIONS. VERIFY WITH U.B.C.A.I.C. AND RESPECTIVE CITY.
- ALL CONCEALED ROUND SUPPLY AIR DUCTS 12" AND SMALLER SHALL BE GALVANIZED SHEET METAL SNAP-LOCK. ROUND SUPPLY AIR DUCT GREATER THAN 12" SHALL BE GALVANIZED SHEET METAL SPIRAL. PROVIDE 1" FIBERGLASS INSULATION WRAP. INSULATED FLEXIBLE DUCT MAY BE USED FOR THE CONNECTION TO THE AIR OUTLET PROVIDED THE LENGTH OF THE FLEXIBLE DUCT DOES NOT EXCEED 6 LINEAR FEET.
- ALL BRANCH DUCT CONNECTIONS TO AIR OUTLETS AND AIR INLETS SHALL BE THE SAME SIZE AS THE DEVICE NECK UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
- ALL GENERAL EXHAUST AND OUTSIDE AIR DUCTWORK SHALL BE GALVANIZED SHEET METAL WITH NO DUCT LINERS.
- PROVIDE EQUIPMENT VIBRATION ISOLATION FROM STRUCTURE AND ASSOCIATED DUCT/TIPE SYSTEMS.
- ALL BALANCING SHALL BE COMPLETED BY A QUALIFIED AND CERTIFIED TECHNICIAN, WITH (3) OR MORE YEARS EXPERIENCE IN TESTING, ADJUSTING AND BALANCING HVAC SYSTEMS. AS NECESSARY TO OBTAIN AIR QUANTITIES SHOWN, PROVIDE COMPLETE WRITTEN TEST AND BALANCE REPORT INDICATING QUANTITIES AT INLET AND OUTLET. USE VOLUME DAMPERS FOR ALL REGISTERS FOR BALANCING OF THE SYSTEMS. AIR DISTRIBUTION SHALL BE BALANCED FOR WITHIN 5% OF INDICATED CFM'S.
- ALL DUCT AND EQUIPMENT LOCATIONS INDICATED ON THESE DOCUMENTS ARE FOR REFERENCE ONLY AND SHALL BE USED AS A GUIDE. ALL ELEVATIONS AND FLOOR TO FLOOR HEIGHTS SHALL BE VERIFIED PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY DUCT OR PIPING SYSTEM. TOP OF DUCT (TOD) AND BOTTOM OF DUCT (BOD) ELEVATIONS INDICATED INCLUDE AN ALLOWANCE FOR DUCT FLANGES AND INSULATION.
- THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE MECHANICAL REQUIREMENTS FOR ALL CUTTING AND PATCHING OF EXISTING FACILITIES TO BE COMPLETED BY THE GENERAL CONTRACTOR OR OTHERS.

\* Provide copy to Building Division

INSTALL SERVICE RECEPTACLE WITHIN 25 FEET AND THE SAME LEVEL AS HVAC EQUIPMENT.

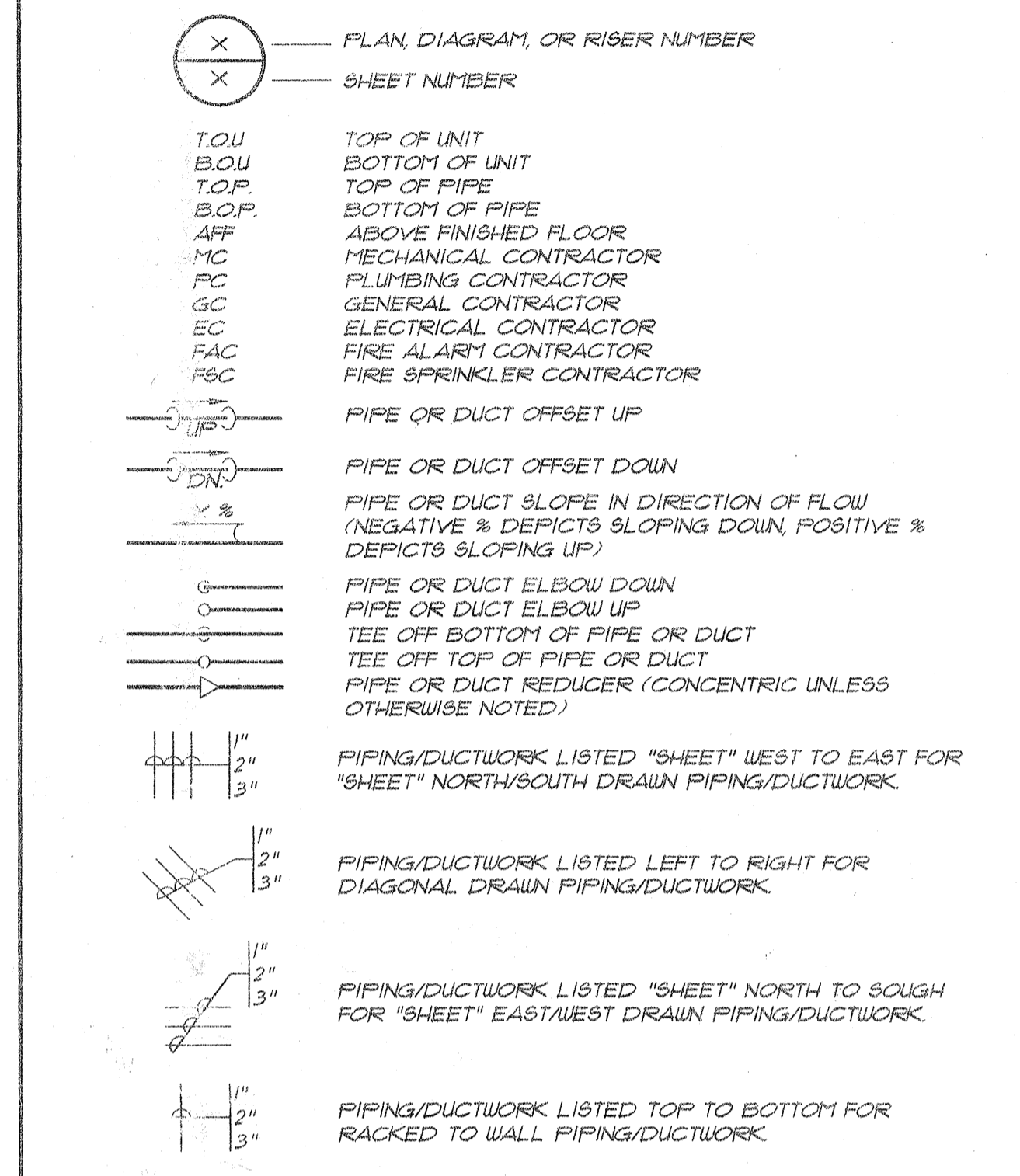
FIELD COPY  
NOTE: THIS PLAN SET SHALL REMAIN AT THE JOB SITE FOR INSPECTION.

INSPECTIONS REQUIRED (970) 962-2100

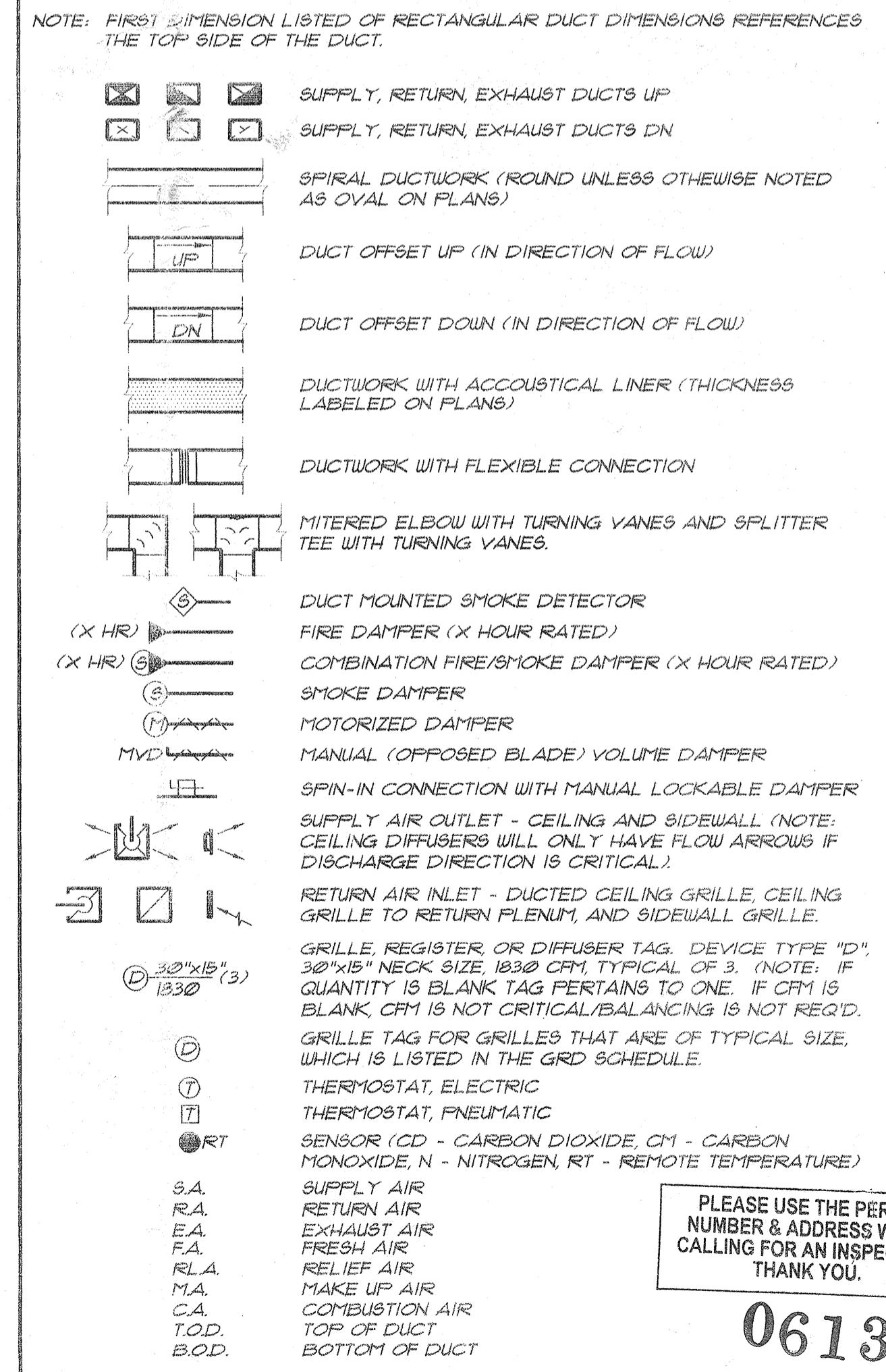
REVIEWED PLANS  
REVIEWED PLANS ARE NOT APPROVED PLANS. FILED INSPECTORS MAY REQUIRE CHANGES AS NECESSARY TO MEET ORDINANCES OR BUILDING CODE PROVISIONS ON THE JOB.

SPECIAL INSPECTOR REQUIRED. SUBMIT WRITTEN INSPECTION REPORT TO BUILDING OFFICIAL.

## GENERAL SYMBOL LEGEND



## DUCTWORK SYMBOL LEGEND



## DRAWING INDEX

NUMBER	DRAWING TITLE	PERMIT/CD SET	DATE
M10	HVAC - LEGEND, INDEX, GENERAL NOTES/SPEC'S AND CRITERIA	•	06/20/2006
M21	HVAC - SCHEDULES & DIAGRAMS	•	
M10	HVAC - FLOOR PLAN	•	
M11	HVAC - ROOF PLAN	•	
COORDINATION:			
	04/21/06 - ARCHITECTURAL DRAWING SET		
	NA - CIVIL DRAWING SET		
	04/21/06 - STRUCTURAL DRAWING SET		
	06/16/06 - ELECTRICAL DRAWING SET		

## DESIGN CRITERIA

PROJECT SITE:	LOVELAND, COLORADO
PROJECT ELEVATION:	4,380 FEET
SUMMER OUTSIDE:	95° DB / 60° WB
WINTER OUTSIDE:	0° DB
EXTERIOR CONSTRUCTION "U" VALUES:	WALLS: U=0.166 ROOF: U=0.104 (R=30) GLAZING: U=0.683/RC=0.147
CODES:	2003 INTERNATIONAL BUILDING CODE 2003 INTERNATIONAL MECH. CODE 2003 INTERNATIONAL PLUMBING CODE

OUTSIDE AIR VENTILATION CALCULATIONS ARE BASED ON POPULATION DENSITIES AS SET FORTH BY CHAPTER 4 OF THE INTERNATIONAL MECHANICAL CODE. FOR A NON-SMOKING FACILITY.

DESCRIPTION	OCCUPIED AREA	* USE	DENSITY * (38/PERSON)	SYSTEMS	O.A. AT 15 CFM / PERSON	REG'D.	PROVIDED
OPEN OFFICE	141	OFFICE	20	RTU-1	225	300	
OPEN OFFICE	147	OFFICE	20	RTU-2	210	300	
TOTAL	288	---	---	---	435	600	

\* PEOPLE DENSITY AND AIR QUANTITY COORDINATED WITH LARIMER COUNTY.

THE GROUP  
BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE 4, FORT COLLINS, COLORADO 80524  
PH: 970.266.6888 FAX: 970.266.8878

LOVELAND MOC III  
Loveland, Colorado

LEGEND, INDEX, GENERAL NOTES SPEC'S/CRITERIA.

DESIGNED: MDR/MS

DRAWN: BH

CHECKED: MDR

DATE: JUNE 20, 2006

PROJECT NO: 06019

MO

PLEASE USE THE PERMIT NUMBER & ADDRESS WHEN CALLING FOR AN INSPECTION THANK YOU.

061302

## REVISED ROOF TOP UNIT SCHEDULE

NOTES:															FACTORY INSTALLED OPTIONS:										FIELD INSTALLED OPTIONS:																																																																																																																							
1. ADJUSTABLE PITCH MOTOR SHEAVE.					2. THRU CURB SINGLE POINT POWER CONNECTION.					3. COMPRESSOR MOTOR THERMAL AND CURRENT OVERLOADS.					4. CRANKCASE HEATER ON RECIP. COMPRESSOR.					5. EXTERNAL RUBBER ISOLATORS FOR COMPRESSORS.					6. REFRIGERANT SERVICE VALVES ON COMPRESSOR.					7. COMPRESSOR W/LOW PRESSURE SAFETY SWITCHES WITH RESET.					8. LIQUID LINE SERVICE VALVE FILTER DRIER AND FIXED ORIFICE METERING SYSTEM.					9. INDEPENDENT CIRCUITS ON MULTI COMPRESSOR UNITS.					10. ALUMINUM FINCOEFFERTUBE EVAPORATOR COIL.					11. REDUNDANT MAIN GAS VALVE.					12. INSULATED (1/2" FIBERGLASS) HEATING SECTION AND EVAPORATOR CABINET.					13. DIRECT DRIVE INDUCED DRAFT BURNER.					14. DIRECT SPARK IGNITION.					15. ALUMINIZED STEEL TUBULAR HEAT EXCHANGER.					16. FLAME PROVING SWITCH & HIGH TEMPERATURE LIMIT SWITCH.					17. EVAP. FAN ON/OFF DELAY.					18. NON CORROSIVE STEEL SLOPED CONDENSATE DRAIN PAN.					A. INTEGRATED MICROPROCESSOR BASED DRY BULB 100% O.A. ECONOMIZER WITH PARALLEL BLADE LOW LEAKAGE O.A. DAMPER.					B. ALTERNATE HIGH STATIC MOTOR AND DRIVE.					C. COMPRESSOR ANTI-CYCLE TIMER.					D. BAROMETRIC RELIEF DAMPER.					E. DISCONNECT.					F. ECONOMIZER O.A. HOOD WITH BIRDSCREEN.					G. CONDENSER COIL HAIL GUARD.					H. 14" TALL GALV. STEEL ROOF CURB.					I. ELECTRONIC PROGRAMMABLE THERMOSTAT.					J. CO2 SENSOR CARRIER 33C58NCO2.					K. CONVENIENCE GFI OUTLET. WIRED IN BEFORE THE DISCONNECT BY E.G.				
SUPPLY FAN DATA															HEATING COIL DATA @ 5,000 FT. ELEVATION										COOLING COIL DATA @ 5,000 FT. ELEVATION										COMPRESSORS					RA. FILTERS					RELIEF FAN DATA					UNIT					UNIT					OF					MIN. UNIT					NOTES					OPTIONS					TAG																																																																
TAG	SERVICE	MANUFACTURER	MODEL	QTY	SIZE	TYPE	CFM	ESP	MIN O.A.	VENT O.A.	MAX O.A.	HP	DRIVE	RPM	FUEL TYPE	MEH INPUT	MEH OUTPUT	EAT (°F)	LAT (°F)	GAS CONN	COIL TYPE	TOTAL	SENS.	ROWS/PIES	EAT	LAT	APES °F	REPG TYPE	TYPE	QTY	TYPE	QTY	SIZE	QTY	SIZE	TYPE	CFM	ESP	FLA	V/FH	UNIT MCA	UNIT MOCB	UNIT WEIGHT (LBS)	MIN. UNIT EER	NOTES	OPTIONS	TAG																																																																																																	
RTU-1	2ND FLOOR WEST	CARRIER	48TFM005	1	10x10	DW/DI FC	2,000	0.60	350	350	ECON.	1 1/2	BELT	1045	NAT. GAS	115	73.6	56	101	1/2"	DX	44	44	2/15	80	56	105	R22	RECIP.	1	TAW	2	16x25x2	---	---	---	---	---	---	208/3	25.9	30	700	10	1 THRU 1B	A THRU K	RTU-1																																																																																																	
RTU-2	2ND FLOOR EAST	CARRIER	48TFM005	1	10x10	DW/DI FC	2,000	0.60	350	350	ECON.	1 1/2	BELT	1045	NAT. GAS	115	73.6	56	101	1/2"	DX	44	44	2/15	80	56	105	R22	RECIP.	1	TAW	2	16x25x2	---	---	---	---	---	---	208/3	25.9	30	700	10	1 THRU 1B	A THRU K	RTU-2																																																																																																	

CFM in excess of 2,000 will require smoke detectors and automatic shutdown upon smoke detection

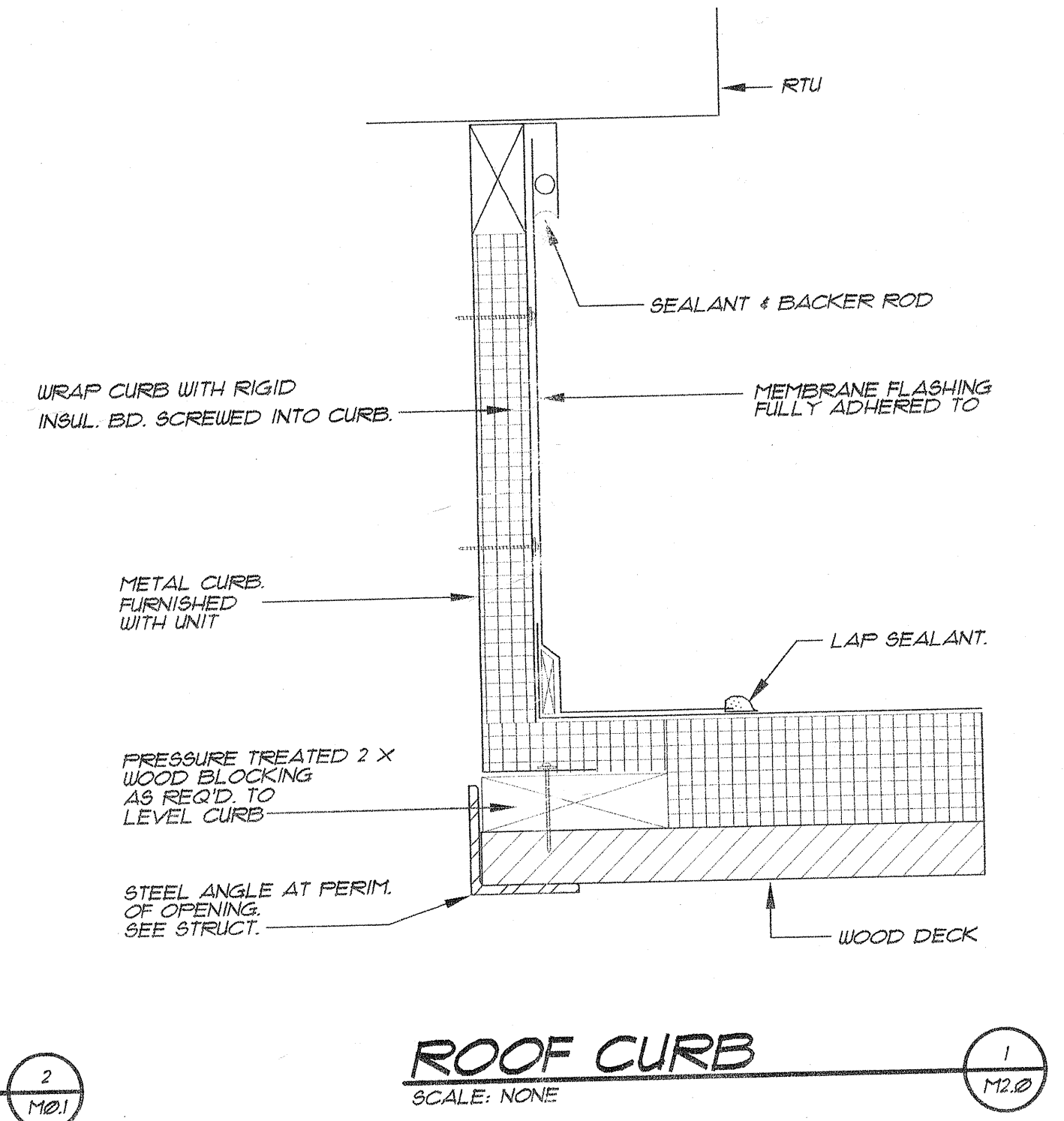
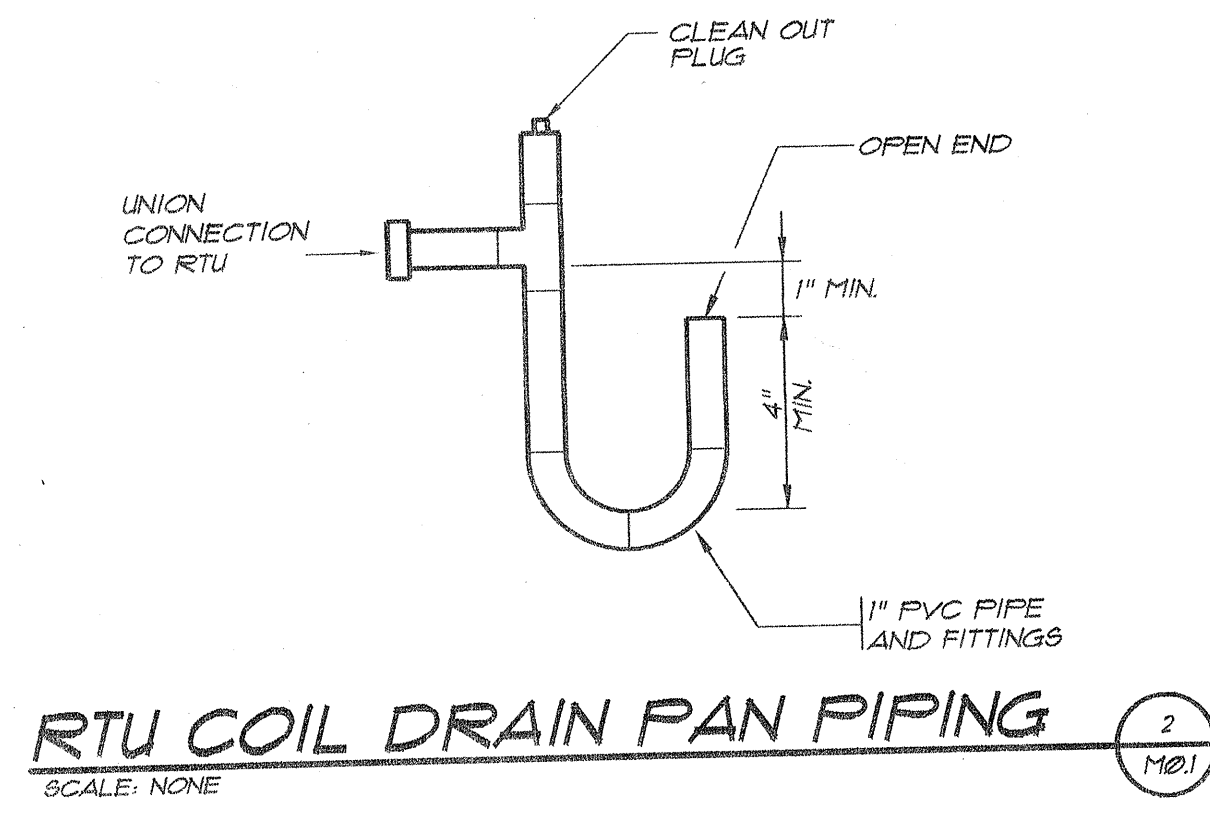
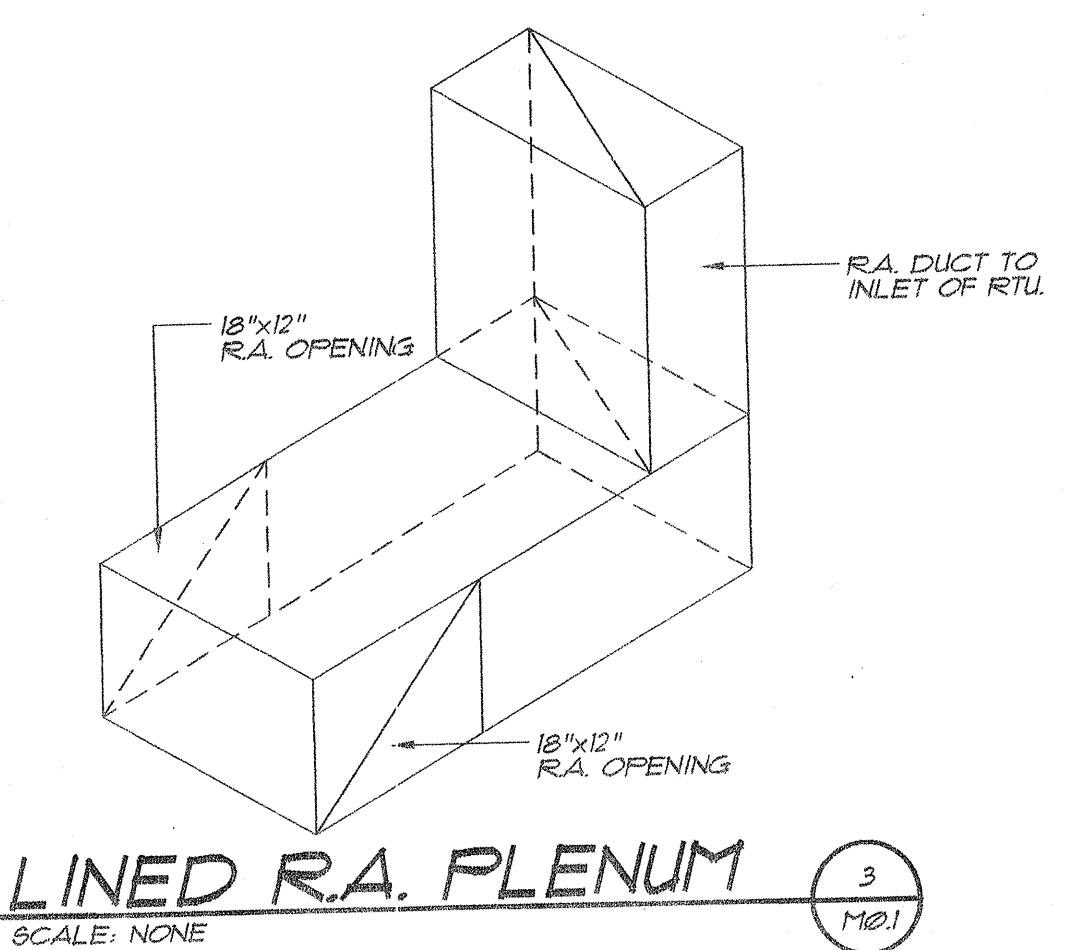
### SZCV CONTROL SEQUENCES

- RTU-1 & 2**
- THE UNITS FAN SHALL RUN CONTINUOUSLY IN THE 'OCCUPIED' CYCLE AS DETERMINED BY THE HEATING AND COOLING PROGRAMMABLE THERMOSTATS 'OCCUPIED' SCHEDULE.
  - O.A. DAMPERS SHALL OPEN TO ALLOW THE MINIMUM O.A. QUANTITY AS SCHEDULED ON THE DRAWINGS. AS BUILDING OCCUPANCY VARIES TO LESS THAN THE DESIGNED OCCUPANCY THE O.A. DAMPERS TO MODULATE BETWEEN THE MIN. O.A. POSITION AND THE VENTILATION POSITION AS CONTROLLED BY THE RESIDENT LOGIC IN THE ECONOMIZER AND CO2 DETECTOR.
  - HEATING/COOLING CHANGE OVER WILL BE DETERMINED BY THE PROGRAMMABLE THERMOSTAT.
  - COMPRESSOR AND BURNER OPERATION STAGING SHALL BE DETERMINED BY THE PROGRAMMABLE THERMOSTAT.
  - 1ST STAGE COOLING CALL FROM THE STAT SHALL BE ECONOMIZER
  - 2ND STAGE COOLING CALL FROM THE STAT SHALL BE COMPRESSOR
  - THE O.A. DAMPERS WILL OPEN TO THE 100% POSITION BASED ON THE UNITS DRY BULB TYPE ECONOMIZER.
  - A BAROMETRIC DAMPER SHALL RELIEVE THE BUILDING PRESSURE DURING THE ECONOMIZER OPERATION.
  - IN THE 'UNOCCUPIED' CYCLE THE SUPPLY FAN SHALL REMAIN DE-ENERGIZED AND SHALL CYCLE 'ON' BASED ON A CALL FOR COOLING AND/OR HEATING TO MAINTAIN THE SET UP SET BACK TEMPERATURES PER THE PROGRAMMABLE THERMOSTAT SCHEDULE.
  - THE O.A. DAMPERS SHALL REMAIN CLOSED.
  - A UNIT MOUNTED SMOKE DETECTOR IN THE SUPPLY SHALL SHUT DOWN THE SUPPLY FAN UPON DETECTION OF SMOKE/PRODUCTS OF COMBUSTION.

### GRILLE, REGISTER AND DIFFUSER SCHEDULE

NOTES: 1. FACTORY STANDARD WHITE FINISH. 2. REFER TO DRAWINGS FOR NECK SIZE AND AIR QUANTITY. 3. REFER TO ARCHITECTURAL DRAWING FOR CEILING TYPE.

TYPE	MANUF.	MODEL	DESCRIPTION	NOTES
A	SOFT AIRE	CC	CEILING DIFFUSER	1, 2, 3
B	TITUS	350RL	ANGLED BAR GRILLE, 18"x12"	1, 2
C	TITUS	350RL	ANGLED BAR GRILLE, 12"x12"	1, 2



**THE CE GROUP**  
 BUILDING SYSTEMS ENGINEERING  
 400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
 PH: 970.266.6888 FAX: 970.266.6876

**LOVELAND MOC III**  
 Loveland, Colorado

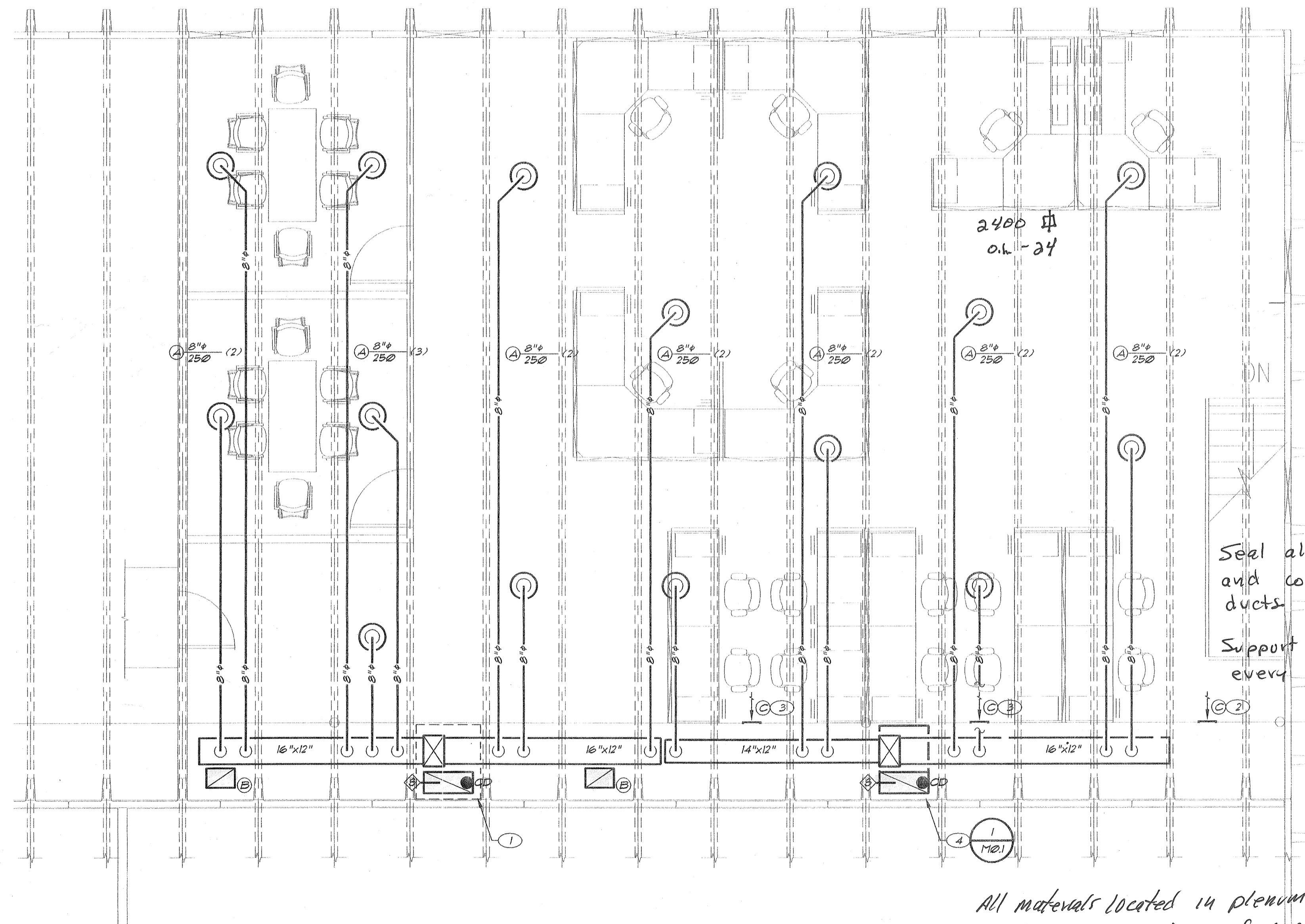
**LEGEND, INDEX, GENERAL NOTES SPEC'S/CRITERIA.**  
 DESIGNED: MDR/MS  
 DRAWN: BH  
 CHECKED: MDR  
 DATE: JUNE 20, 2006  
 PROJECT NO: 06019  
**MO.1**

**061302**

DRAWINGS, SPECIFICATIONS, GENERAL NOTES AND OUTLINE SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA, THE CE GROUP). COPIES OF THESE DOCUMENTS RETAINED BY THE CLIENT ARE FOR THE CLIENTS USE IN THE CONSTRUCTION OF THE PROJECT FOR WHICH THESE DOCUMENTS WERE PREPARED. ANY USE OF THESE DOCUMENTS IN WHOLE OR IN PART, BY ANY MEANS WHATSOEVER, TO CONSTRUCT ANY OTHER PROJECT OR THE USE OF THESE DOCUMENTS IN WHOLE OR IN PART, AS STOCK PLANS OR PROTOTYPIC DESIGN FOR MULTIPLE BUILDING PROJECTS IS STRICTLY PROHIBITED, EXCEPT WITH THE SPECIFIC WRITTEN CONSENT OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA, THE CE GROUP), A COLORADO COMPANY.

**REFERENCE NOTES**

- ① G.C. TO PROVIDE PLENUM RATED SOUND INSULATION ON TOP OF SOFFIT FRAMING BELOW "TWIN-TEE" BAY CONTAINING RETURN AIR DROP.
- ② MOUNT BOTTOM OF RETURN GRILLE 1" AFF. COORD. LOCATION WITH COFFEE BAR.
- ③ MOUNT TOP OF RETURN GRILLE 6" BELOW BOTTOM OF BEAM.
- ④ PROVIDE RETURN BOOT BELOW S.A. DUCT.



All materials located in plenum shall meet restrictions of 602.2.1, 2003 IMC

**FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

Seal all joints, seams, and connections in ducts.  
Support all ductwork every 10 feet

**LOVELAND MOC III**

Loveland, Colorado

HVAC - FLOOR PLAN

DESIGNED: MDR/MS

DRAWN: BH

CHECKED: MDR

DATE: JUNE 20, 2006

PROJECT NO: 06019

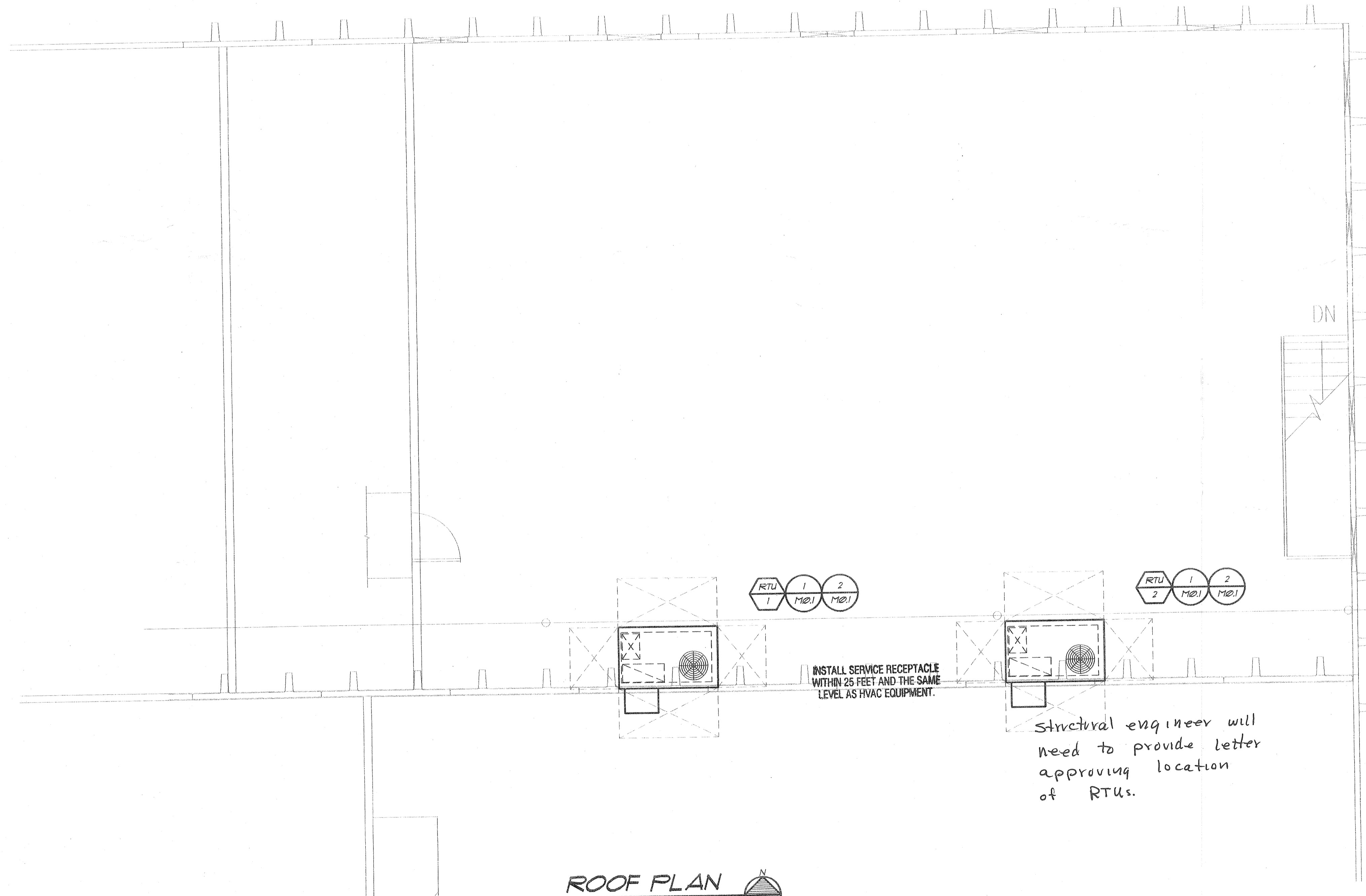
061302

**M1.0**

**THE CE GROUP**  
BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.266.8858 FAX: 970.266.8876

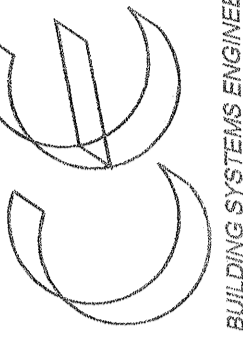
REFERENCE NOTES

① xxx



**ROOF PLAN**  
SCALE: 1/4" = 1'-0"

THE CE GROUP



BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.266.8865 FAX: 970.266.8876

LOVELAND MOC III

Loveland, Colorado

HVAC - ROOF PLAN

DESIGNED: MDR/MS

DRAWN: BH

CHECKED: MDR

DATE: JUNE 20, 2006

PROJECT NO: 06019

061302

M1.1

# GENERAL PLUMBING NOTES AND OUTLINE SPECIFICATIONS

- THE GENERAL CONTRACTOR SHALL OBTAIN ALL PERMITS, PATENT RIGHTS, AND LICENSES THAT ARE REQUIRED FOR PERFORMING THE WORK UNDER ALL LAWS, ORDINANCES, RULES AND REGULATIONS, OR ORDERS OF ANY OFFICER AND/OR GOVERNING BODY, HAVING JURISDICTION FOR THE WORK UNDER THIS SECTION. THE CONTRACTOR SHALL GIVE ALL NOTICES NECESSARY IN CONNECTION WITH PAY ALL FEES RELATING TO AND ALL COSTS AND EXPENSES INCURRED ON ACCOUNT OF THE WORK UNDER THIS SECTION. NO WORK SHALL BE COVERED BEFORE INSPECTION BY THE JURISDICTIONAL INSPECTOR AND THE OWNER'S REPRESENTATIVE. POST PERMITS AS REQUIRED.
- THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC, SHOWING CERTAIN PHYSICAL RELATIONSHIPS WHICH MUST BE ESTABLISHED WITHIN THE MECHANICAL WORK AND ITS INTERFACE WITH OTHER WORK SUCH ESTABLISHMENT IS THE EXCLUSIVE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACT DOCUMENTS INDICATE THE AVAILABLE INFORMATION ON EXISTING UTILITIES AND SERVICES, AND ON NEW SERVICES TO BE PROVIDED TO THE PROJECT BY UTILITY COMPANIES AND AGENCIES. COORDINATE ALL UTILITY INTERRUPTIONS WITH THE OWNER AND THE UTILITY COMPANY. PLAN WORK SO THAT THESE INTERRUPTIONS ARE KEPT TO A MINIMUM.
- THE EQUIPMENT INDICATED ON THE CONTRACT DOCUMENTS REPRESENT A STANDARD OF QUALITY TO BE MAINTAINED. SUBSTITUTIONS MAY BE SUBMITTED TO THE ENGINEER FOR REVIEW. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND UNUSED AND INSTALLED BY ONLY QUALIFIED PERSONNEL. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS, IN ADDITION TO ANY STATE AND LOCAL CODES THAT MAY APPLY. WORKMANSHIP, ALL LABOR SHALL BE CAREFULLY SKILLED FOR THIS KIND OF WORK, THROUGHOUT IN ALL RESPECTS AND UNDER THE DIRECTION OF A COMPETENT FOREMAN.
- EQUIPMENT FURNISHED UNDER THIS CONTRACT SHALL HAVE A PERMANENT LABEL CLEARLY INDICATING THE MAINTENANCE TO BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT OPERATING CONDITION. EQUIPMENT SUPPLIERS SHALL FURNISH THE FULL AND PARTIAL INPUT AND OUTPUT CAPACITIES TO ENABLE THE DETERMINATION OF COMPLIANCE WITH THE ENERGY CONSERVATION CODE.
- SUBMIT (6) COPIES OF SHOP DRAWINGS ON ALL EQUIPMENT AND MATERIALS FOR ENGINEER REVIEW. SUBMITTAL INFORMATION SHALL INDICATE ALL PERFORMANCE DATA (RATED FOR THE ALTITUDE OF THIS PROJECT) THAT COMPLIES WITH THE SCHEDULED DATA LIST ALL DEVIATIONS AND REASONS FOR DEVIATION. SUBMITTALS WITHOUT PROPER INFORMATION SHALL BE IMMEDIATELY REJECTED.
- SUBMIT THREE TYPED AND BOUND COPIES OF OPERATING AND MAINTENANCE MANUALS PRIOR TO SCHEDULING SYSTEMS DEMONSTRATION FOR THE OWNER. MANUALS SHALL HAVE INDEX WITH TAB DIVIDERS FOR EACH MAJOR EQUIPMENT SECTION TO FACILITATE LOCATING INFORMATION ON A SPECIFIC PIECE OF EQUIPMENT. ALPHABETICAL LIST OF SYSTEM COMPONENTS, WITH THE NAME, ADDRESS AND 24 HOUR TELEPHONE NUMBER OF THE COMPANY RESPONSIBLE FOR SERVICING EACH ITEM DURING THE FIRST YEAR OF OPERATION.
- DELIVERY AND STORAGE OF MATERIALS; PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL MATERIALS AND EQUIPMENT UNTIL FINAL ACCEPTANCE BY THE OWNER'S REPRESENTATIVE. PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. REPLACE ALL DAMAGED AND DEFECTIVE WORK BEFORE FILING APPLICATION FOR FINAL ACCEPTANCE.
- BEFORE SUBMITTING HIS BID, THE CONTRACTOR FOR THE WORK UNDER THIS SECTION SHALL CAREFULLY STUDY ALL DRAWINGS, AND SHALL MAKE A CAREFUL EXAMINATION OF THE PREMISES. HE SHALL DEFINITELY DETERMINE IN ADVANCE THE METHODS OF INSTALLATION AND CONNECTING THE APPARATUS AND THE MEANS TO BE PROVIDED FOR GETTING THE EQUIPMENT INTO PLACE. AFTER AWARD OF THE CONTRACT, THE SUBSEQUENT ALLOWANCES WILL BE MADE TO THE CONTRACTOR DUE TO HIS FAILURE TO COMPLY WITH THE ABOVE REQUIREMENTS AND ANY OTHER CONDITIONS AFFECTING THE INSTALLATION AND COMPLETION OF ALL WORK.
- ACCURATELY RECORD ALL CHANGES TO THE CONTRACT DOCUMENTS ON ONE SET OF DRAWINGS. TRANSMIT THE INFORMATION TO THE ENGINEER.
- FURNISH WRITTEN CERTIFIED GUARANTEE, IN ACCEPTANCE FORM, TO THE OWNER AGAINST DEFECTIVE WORKMANSHIP, MATERIALS AND OPERATING EQUIPMENT. IN ADDITION TO THE GUARANTEES REQUIRED ELSEWHERE, ALL WORK MATERIALS AND EQUIPMENT PROVIDED UNDER THE MECHANICAL SECTIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR UNDER THIS GUARANTEE, SHALL BE RESPONSIBLE FOR ALL DAMAGE TO ANY PART OF THE PREMISES CAUSED BY EQUIPMENT AND MATERIALS FURNISHED UNDER THIS SECTION. PROVIDE CERTIFICATES FOR ALL EQUIPMENT HAVING WARRANTIES IN EXCESS OF (1) YEAR.
- ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH CURRENT SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY, THE NATIONAL ELECTRICAL CODE, LOCAL BUILDING CODES, THE INTERNATIONAL PLUMBING CODE, THE INTERNATIONAL BUILDING CODE AND OTHER APPLICABLE CODES, LAWS OR REGULATIONS OF BODIES LAWFULLY EMPOWERED AND HAVING JURISDICTION OVER THIS PROJECT. NOTHING IN THE PLANS OR THESE SPECIFICATIONS IS TO BE CONSTRUED AS TO PERMIT WORK NOT CONFORMING TO THESE CODES.
- RESOLVE ALL QUESTIONS, DISCREPANCIES OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
- PROVIDE IDENTIFICATION TAGS FOR ALL SCHEDULED EQUIPMENT.
- COORDINATE THE INSTALLATION OF PLUMBING SYSTEMS WITH OTHER TRADES AND PROVIDE OFFSETS AS NECESSARY TO ACCOMMODATE STRUCTURE AND OTHER TRADES.
- LEVEL ALL EQUIPMENT CURBS / BASES PRIOR TO INSTALLATION OF ANY EQUIPMENT.
- SEAL ALL WALL AND ROOF PENETRATIONS WATER TIGHT WITH SILICONE CAULKING AND BACKER ROD. U/L CLASSIFIED AND RTI APPROVED SEALANTS SHALL BE USED AT ALL PENETRATIONS OF RATED WALLS, CEILING AND FLOORS.
- COORDINATE TO PROVIDE ALL THE MISCELLANEOUS SUPPORT AND FRAMING REQUIRED FOR THE PLUMBING EQUIPMENT.
- COORDINATE AND VERIFY ALL OPENINGS IN STRUCTURAL WALLS, ABOVE CEILING, AND FLOORS WITH THE STRUCTURAL CONTRACTOR.
- PROVIDE EQUIPMENT VIBRATION ISOLATION FROM STRUCTURE AND ASSOCIATED PIPING SYSTEMS.
- COORDINATE WITH THE GENERAL CONTRACTOR TO PROVIDE OPENINGS THROUGH CONCRETE FOR PIPE PENETRATIONS AND SIMILAR SERVICES BY CORE DRILLING AND SAWING. REVIEW THE PROPOSED CUTTING WITH THE INSTALLER OF THE WORK TO BE CUT, AND COMPLY WITH HIS RECOMMENDATIONS TO MINIMIZE DAMAGE.
- THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE PLUMBING REQUIREMENTS FOR ALL CUTTING AND PATCHING OF EXISTING FACILITIES TO BE COMPLETED BY THE GENERAL CONTRACTOR OR OTHERS.
- USE ADJUSTABLE PIPE HANGERS ON SUSPENDED PIPE. ISOLATE HANGERS COMING IN CONTACT WITH BARE COPPER PIPE WITH DIELECTRIC HANGER LINERS. PROVIDE SUPPORTS BETWEEN PIPING AND BUILDING STRUCTURE WHERE NECESSARY TO PREVENT SWAYING. CONFORM TO THE UNIFORM PLUMBING CODE FOR HANGER SIZES AND SPACING. DO NOT SUPPORT PIPE FROM OTHER PIPE OR DUCT SYSTEMS. INSTALL HANGERS AND SUPPORTS TO ALLOW CONTROLLED MOVEMENT OF PIPING SYSTEM AND TO PERMIT PROPER MOVEMENT BETWEEN PIPE ANCHORS.
- INSTALL PIPE, TUBE AND FITTINGS IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES WHICH WILL ACHIEVE PERMANENTLY-LEAKPROOF PIPING SYSTEMS, CAPABLE OF PERFORMING EACH INDICATED SERVICE WITHOUT PIPING FAILURE. INSTALL EACH RUN WITH A MINIMUM OF JOINTS AND COUPLINGS, BUT WITH ADEQUATE AND ACCESSIBLE UNIONS FOR DISASSEMBLY, MAINTENANCE OR REPLACEMENT OF VALVES AND EQUIPMENT. REDUCE SIZES BY USE OF REDUCING FITTINGS. INSTALL PIPING WITHOUT SPRINGS OR FORCING. SUPPORT PIPING INDEPENDENTLY AT EQUIPMENT SO ITS WEIGHT WILL NOT BE SUPPORTED BY THE EQUIPMENT. FURNISH ALL DEVICES NECESSARY FOR FINAL CONNECTION, INCLUDING BUT NOT LIMITED TO TAIL PIECES, STOPS AND SUPPLIES. LOCATE PIPING RUNS, EXCEPT AS OTHERWISE INDICATED, VERTICALLY AND HORIZONTALLY. AVOID DIAGONAL RUNS WHEREVER POSSIBLE. ORIENT HORIZONTAL RUNS PARALLEL WITH WALLS AND COLUMN LINES. HOLD PIPING CLOSE TO WALLS, OVERHEAD CONSTRUCTION, COLUMNS AND OTHER STRUCTURAL AND PERMANENT-ENCLOSURE ELEMENTS OF THE BUILDING. LIMIT CLEARANCE OF 90" WHERE FURRING IS SHOWN FOR ENCLOSURE OR CONCEALMENT OF PIPING, BUT ALLOW FOR INSULATION THICKNESS, IF ANY. WHERE POSSIBLE, LOCATE INSULATED PIPING FOR 18" CLEARANCE OUTSIDE INSULATION. WHEREVER POSSIBLE IN FINISHED AND OCCUPIED SPACES, CONCEAL PIPING FROM VIEW BY LOCATING IN COLUMN ENCLOSURES, IN HOLLOW WALL CONSTRUCTION OR ABOVE SUSPENDED CEILING.
- FLUSH OUT PIPING SYSTEMS WITH CLEAN WATER BEFORE PROCEEDING WITH THE REQUIRED TESTS. PROVIDE TEMPORARY EQUIPMENT FOR TESTING, INCLUDING PUMP AND GAUGES. TEST PIPING SYSTEM BEFORE INSULATION IS INSTALLED WHEREVER FEASIBLE. TEST EACH NATURAL SECTION OF EACH PIPING SYSTEM INDEPENDENTLY, BUT DO NOT USE PIPING SYSTEM VALVES TO ISOLATE SECTIONS WHERE TEST PRESSURE EXCEEDS VALVE PRESSURE RATING. FILL EACH SECTION OF WATER DRAIN OR VENT PIPING WITH WATER AND PRESSURIZE TO TWO HOURS AT 100% OF OPERATING PRESSURE BUT NOT LESS THAN 50 PSIG FOR PRESSURE PIPING AND TEN FEET FOR DRAIN AND VENT PIPING. TEST FAILS IF LEAKAGE IS OBSERVED OR IF PRESSURE DROP EXCEEDS 5% OF TEST PRESSURE. REPAIR PIPING SYSTEMS SECTIONS WHICH FAIL BY DISASSEMBLY AND RE-INSTALLATIONS, USING NEW MATERIALS TO THE EXTENT REQUIRED TO OVERCOME LEAKAGE. DO NOT USE CHEMICALS, STOP-LEAK COMPOUNDS, PASTES OR OTHER TEMPORARY REPAIR METHODS. AFTER TESTING AND REPAIR WORK HAVE BEEN COMPLETED, DRAIN TEST WATER FROM PIPING SYSTEMS.
- FILL ALL DOMESTIC WATER LINES WITH A CHLORINE WATER SOLUTION OF 50 PARTS PER MILLION MINIMUM. HOLD SOLUTION IN PIPE FOR AT LEAST 24 HOURS. OPEN AND CLOSE ALL VALVES 3 TIMES DURING CHLORINATION. WASTE CHLORINE SOLUTION FROM EACH OUTLET. MEASURE SOLUTION AT END. IF NOT 10 PPM, REPEAT. ALL NEW POTABLE WATER SYSTEMS SHALL BE CLEANED AS HEREIN SPECIFIED PRIOR TO TESTING OR APPLICATION OF INSULATION. COMPLY WITH APPLICABLE COUNTY STANDARDS OR COLORADO STATE DEPARTMENT OF HEALTH REQUIREMENTS WHICHEVER IS MORE STRINGENT.
- BALL VALVES 1" AND SMALLER: NIBCO T505 (THREADED ENDS) OR NIBCO 5805 (SOLDERED ENDS), RATED FOR 400 PSI NON-SHOCK WOG, 2-PIECE CAST BRONZE BODIES, 1/2" SEAT, FULL PORT, BRONZE TRIM, BLOWOUT PROOF STEEL BRASS/BRONZE BALL. VALVE ENDS SHALL HAVE FULL DEPTH ANSI THREADS OR EXTENDED SOLDER CONNECTIONS. BALL VALVES 1 1/2" THRU 3": NIBCO T-590 (THREADED ENDS) OR 9-590 (SOLDER ENDS), RATED FOR 400 PSI NON-SHOCK WOG, 3-PIECE CAST BRONZE BODY, 1/2" SEAT, CONVENTIONAL PORT, BRONZE TRIM, BLOWOUT PROOF STEEL BRONZE BALL. VALVE ENDS SHALL HAVE FULL DEPTH ANSI THREADS OR EXTENDED SOLDER CONNECTIONS. CHECK VALVES 2 1/2" AND SMALLER: NIBCO T413 (THREADED ENDS) OR NIBCO 9413 (SOLDERED ENDS). Y-PATTERN HORIZONTAL SWING-TYPE, CLASS 125, RATED FOR 200 PSI WOG BRONZE ASTM B-62 BODY WITH THE SEAT DISC. GAS VALVES: ALL SIZES- CORROSION RESISTANT LUBRICATED PLUG TYPE WITH CORROSION RESISTANT BEARINGS SUITABLE FOR INTENDED SERVICE, LEVER OPERATED.
- INSTALL VALVES WITH STEMS POINTING UP, AND AS CLOSE TO VERTICAL AS POSSIBLE. INSTALL VALVES AT EACH PIECE OF EQUIPMENT, FIXTURE OR APPLIANCE SO THAT THE SUPPLY AND RETURN SERVICES CAN BE SHUT OFF TO REMOVE THE ITEM WITHOUT DISTURBING THE PIPING SYSTEM. INSTALL VALVES WHERE REQUIRED FOR PROPER OPERATION OF PIPING AND EQUIPMENT, INCLUDING VALVES IN BRANCH LINES TO ISOLATE SECTIONS OF PIPING WHERE BRANCH FLOW IS MORE THAN 10% OF THE TOTAL.
- NATURAL GAS PIPING ABOVE GROUND 2" AND SMALLER SHALL BE SCHEDULE 40 BLACK STEEL SCREWED WITH 150 LB. MALLEABLE IRON, THREADED FITTINGS. NATURAL GAS ABOVE GROUND OVER 2" SHALL BE SCHEDULE 40 BLACK STEEL, FLAN END WITH STANDARD WEIGHT BUTT WELD FITTINGS. REMOVE CUTTING AND THREADING BURRS BEFORE ASSEMBLING PIPING. DO NOT INSTALL DEFECTIVE PIPING OR FITTINGS. DO NOT USE PIPE WITH THREADS WHICH ARE CHIPPED, STRIPPED OR DAMAGED. USE TEFLON TAPE ON MALE PIPE THREADS. PLUG EACH GAS OUTLET INCLUDING VALVES WITH A THREADED PLUG OR CAP IMMEDIATELY AFTER INSTALLATION, AND RETAIN UNTIL CONTINUING PIPING OR EQUIPMENT CONNECTION IS COMPLETED. AFTER ROUGH-IN OR PRIOR TO INITIAL OPERATION TEST AND PURGE GAS PIPING IN ACCORDANCE WITH UNIFORM PLUMBING CODE. TEST PIPING SYSTEM AT 100 PSIG. REPAIR OR REPLACE PIPING AS REQUIRED TO ELIMINATE LEAKS AND RETEST. AFTER EQUIPMENT INSTALLATION, TEST ALL PIPING AND VALVES UP TO GAS REGULATOR WITH "U" TUBE MANOMETER AT 10 PSIG. EPOXY PAINT ALL GAS PIPING EXPOSED TO THE ELEMENTS.
- DOMESTIC WATER PIPING: ABOVE GROUND INSIDE BUILDINGS, SIZE 4" AND UNDER SHALL BE COPPER TUBE, HARD TEMPER, TYPE "L" PIPE WITH WROUGHT COPPER OR CAST BRONZE FITTINGS AND ANTIMONY FREE AND LEAD FREE SOLDER. BELOW GROUND, SIZE 2" AND UNDER SHALL BE COPPER TUBE, ANNEALED, TYPE K PIPE WITH WROUGHT COPPER BRAZED FITTINGS.
- SOIL AND VENT PIPING: ABOVE GROUND SHALL BE SCHEDULE 40 PVC WITH SOLVENT GULDED FITTINGS AND JOINTS. STEEL SLEEVE JOINT. BELOW GROUND SHALL BE SCHEDULE 40 PVC WITH SOLVENT GULDED FITTINGS AND JOINTS.
- LAY UNDERGROUND PIPING TRUE TO THE GRADES AND ALIGNMENT INDICATED WITH UNBROKEN CONTINUITY OF INVERT. INSTALL GASKETS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR THE USE OF LUBRICANTS, CEMENTS AND OTHER SPECIAL INSTALLATION REQUIREMENTS. CLEAR THE INTERIOR OF CONDUIT OF DIRT AND OTHER SUPERFLUOUS MATERIAL AS THE WORK PROGRESSES. PLACE PLUGS IN THE END OF UNCOMPLETED CONDUIT AT THE END OF THE DAY OR WHENEVER WORK STOPS. FLUSH LINES, IF REQUIRED, TO REMOVE COLLECTED DEBRIS. MAKE JOINTS BETWEEN CAST IRON PIPE AND OTHER TYPES OF PIPE WITH STANDARD MANUFACTURED CAST IRON ADAPTERS AND FITTINGS. SET GRADE CLEANOUTS LOCATED IN UNPAVED AND ASPHALT PAVED AREAS IN 12"x14" CONCRETE PADS.
- CLEAN AND DRY PIPE SURFACES PRIOR TO INSULATING. EXTEND PIPING INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE INDICATED. INSTALL PROTECTIVE SHEETMETAL SHIELD AROUND BOTTOM HALF OF PIPE INSULATION AT EACH PIPE SUPPORT. SUFFICIENT TO PREVENT CRUSHING OF THE INSULATION. AT CONTRACTOR'S OPTION, INSTALL FIRE-MANUFACTURED HEAVY DENSITY PIPE SHIELDS IN LIEU OF PIPE INSULATION AT EACH PIPE SUPPORT. EXCEPT AS NOTED, COVER VALVES, FLANGES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN. DO NOT COVER VALVE OPERATORS, THREADED OR SOLDER JOINT STRAINERS OR BLOWOUT END OF STRAINERS. MARK LOCATION OF UNIONS AND FLANGES COVERED BY INSULATION WITH PERMANENT PAINT OR INK PAINTED STENCIL OR APPROVED LABEL. MAINTAIN INTEGRITY OF VAPOR-BARRIER JACKETS ON INSULATION OF COLD PIPES AND PROTECT TO PREVENT PUNCTURE OR OTHER DAMAGE. INSULATE BETWEEN PIPE AND PIPE SADDLES. ON UNDERGROUND PIPE INSULATION, INSTALL UNCELLULAR INSULATION ON PIPE WITHOUT SLITTING INSULATION. SEAL ALL TRANSVERSE JOINTS WITH ADHESIVE. PROVIDE COMPOSITE INSTALLATION (INSULATION JACKET, COVERING SEALER, MASTIC AND ADHESIVE) COMPLYING WITH THE FOLLOWING: FLAME SPREAD: 25 OR LESS. SMOKE DEVELOPED: 50 OR LESS. METHOD: ASTM E84 (NFPA 255). FIBERGLASS PIPE INSULATION: SCHULLER MICRO-LOK 850, HEAVY DENSITY PIPE INSULATION WITH AP-T JACKET, FIBERGLASS FITTING INSULATION: SCHULLER "ZESTON" FITTING COVERS WITH FACTORY-CUT FIBERGLASS INSULATION INSERT. DOMESTIC HOT WATER PIPING (ABOVE GRADE): 2" AND SMALLER PIPING: 1" FIBERGLASS, RUNOUT PIPING UP TO 2" NOT EXCEEDING 12 FEET IN LENGTH) 1/2" FIBERGLASS. DOMESTIC COLD WATER PIPING (ABOVE GRADE): ALL SIZES = 1/2" FIBERGLASS. HORIZONTAL ROOF DRAINS AND BOULDS (NOT OVER FLOW DRAINS): 1/2" FIBERGLASS.
- BUILDING PLUMBING SYSTEMS WILL BE CONNECTED TO THE APPLICABLE EXISTING SERVICES. SERVICE SIZE AND INVERT ELEVATIONS SHALL BE VERIFIED PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK INDICATED UNDER THIS TENANT FINISH PHASE.
- ROOF DRAINAGE PROVIDED UNDER CORE 4 SHELL TO REMAIN AS IS.
- STORM DRAIN PIPING: EXISTING TO REMAIN AS IS.

DRAWING INDEX		REVISION NO.	DATE
NUMBER	DRAWING TITLE		
P0	PLUMBING - LEGEND, INDEX, GENERAL NOTES/SPEC'S, CRITERIA		
F1	PLUMBING - FLOOR PLAN DOMESTIC WATER AND GAS		
F2	PLUMBING - ROOF PLAN DOMESTIC WATER AND GAS		
F2.1	PLUMBING - FIRST FLOOR SANITARY SEWER AND VENT		
F3.1	PLUMBING - ROOF PLAN		
COORDINATION:		04/21/06 - ARCHITECTURAL DRAWING SET	
		NA - CIVIL DRAWING SET	
		04/21/06 - STRUCTURAL DRAWING SET	
		06/16/06 - ELECTRICAL DRAWING SET	

DESIGN CRITERIA & UTILITY LOADS			
CODES:	2003 INTERNATIONAL BUILDING CODE 2003 INTERNATIONAL MECH. CODE W/ AMENDMENTS 2003 INTERNATIONAL PLUMBING CODE		
	GAS	SEWER	WATER
TOTALS:	230 MBH (MAX)	4 FU (MAX)	3 FU (MAX)

LEGEND	
--- SS ---	SANITARY SEWER PIPING (BELOW GRADE)
SS	SANITARY SEWER PIPING (ABOVE GRADE)
CW	DOMESTIC COLD WATER PIPING
HW	DOMESTIC HOT WATER
G	NATURAL GAS
PC	PIPE CAP
GC	GAS COCK
U	UNION
IR	INCREASER/REDUCER
BV	BALL VALVE
PRV	PRESSURE REDUCING VALVE
RPV	REDUCED PRESSURE BACKFLOW PREVENTER
OFU	PIPE OFFSET UP
OFD	PIPE OFFSET DOWN
X %	PIPING SLOPE IN DIRECTION OF FLOW
ED	PIPE ELBOW DOWN
EU	PIPE ELBOW UP
TSB	TEE OFF BOTTOM OF PIPE
TST	TEE OFF TOP OF PIPE
GM	GAS METER BY UTILITY COMPANY
AF	ABOVE FINISHED FLOOR
IE	INVERT ELEVATION
X	DIAGRAM OR RISER
X-X	SHEET NUMBER

## GENERAL QUALIFICATION NOTES

- A DOMESTIC HW CIRC. PUMP AND PIPING SYSTEM MAY BE ADDED TO THE PLUMBING SYSTEM AS AN ADD ALTERNATE SELECTED BY THE BUILDING OWNER.
- EXERCISE CAUTION AND CARE IN THE REMOVAL OF ANY EXISTING EQUIPMENT AND FIXTURES INDICATED AS SUCH ON THESE DRAWINGS. ALL SHALL BE SAVED AND TURNED OVER TO THE OWNER FOR THEIR USE.

## GENERAL NOTES

- ALL PROPOSED PIPING AND EQUIPMENT ELEVATIONS INDICATED ON THESE DOCUMENTS ARE FOR REFERENCE ONLY AND SHALL BE USED AS A GUIDE. ALL ELEVATIONS AND FLOOR TO FLOOR HEIGHTS SHALL BE VERIFIED PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY PIPING SYSTEM.
- ALL PIPING ARRANGEMENTS INDICATED ON THE FLOOR PLANS ARE SHOWN FOR CLARITY. COORDINATE ALL PIPING INSTALLED ABOVE CEILING SPACES PRIOR TO FABRICATION.
- PROVIDE ACCESS PANELS IN CEILING WHERE REQUIRED FOR ACCESS TO ALL MOTORS, CONTROLS AND VALVES.
- ALL DOMESTIC WATER PIPING SHALL BE ROUTED THROUGH THE CEILING SPACES.

THE GROUP

BUILDING SYSTEMS ENGINEERING  
400 REIMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.296.6666 FAX: 970.296.8876

LOVELAND MOC III

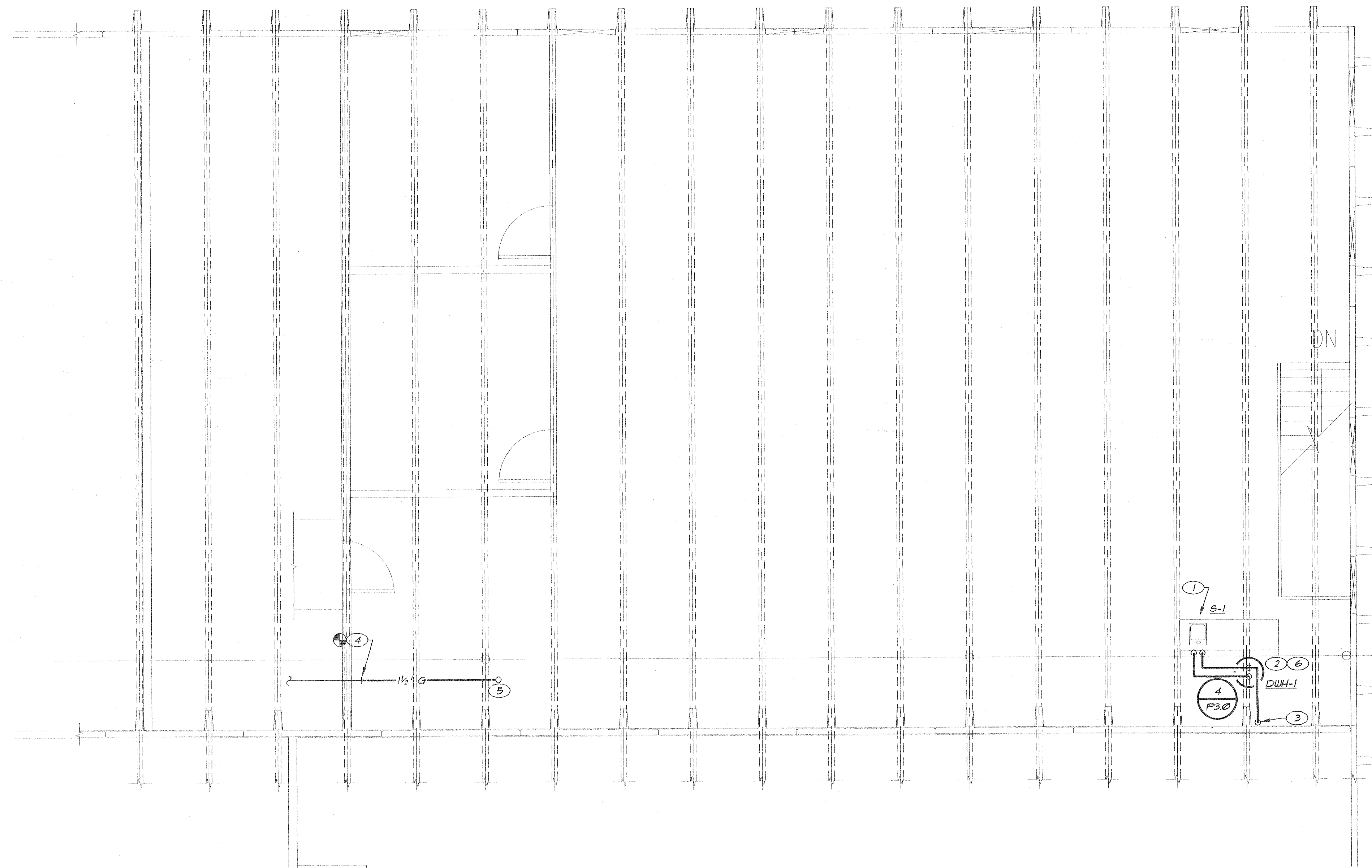
Loveland, Colorado

LEGEND, INDEX, GENERAL NOTES, SPEC'S/CRITERIA
DESIGNED: MDR/MS
DRAWN: BH
CHECKED: MDR
DATE: JUNE 20, 2006
PROJECT NO: 06019
P0



**REFERENCE NOTES (THIS SHEET ONLY)**

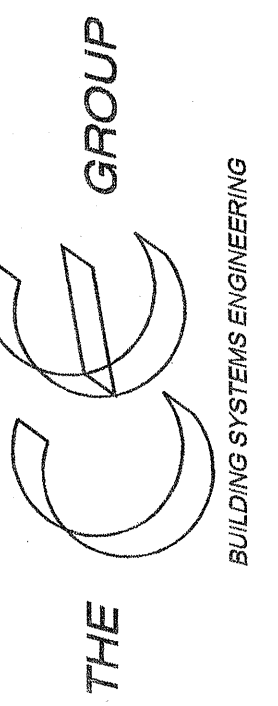
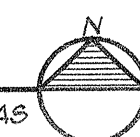
- ① COFFEE BAR TO BE LOCATED IN THIS GENERAL AREA. VERIFY EXACT LOCATION.
- ② LOCATE DWL-1 UNDER COUNTER, VERIFY EXACT LOCATION.
- ③ 1/2" CW UP FROM BELOW, CONNECT TO NEAREST EXISTING CW LINE. VERIFY LOCATION.
- ④ CONNECT 1/2" G TO EXISTING 1/2" G LINE. REMOVE SMALLER EXISTING GAS LINE IN THIS AREA.
- ⑤ 1/2" G UP TO ROOF.
- ⑥ PIPE T & P RELIEF FULL SIZE TO FD-1.



**FLOOR PLAN**

SCALE: 1/4" = 1'-0"

DOMESTIC WATER AND GAS



THE CE GROUP  
BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.266.8888 FAX: 970.266.8876

**LOVELAND MOC III**

Loveland, Colorado

FLOOR PLAN  
DOMESTIC WATER  
AND GAS

DESIGNED: MDR/MS

DRAWN: BH

CHECKED: MDR

DATE: JUNE 20, 2006

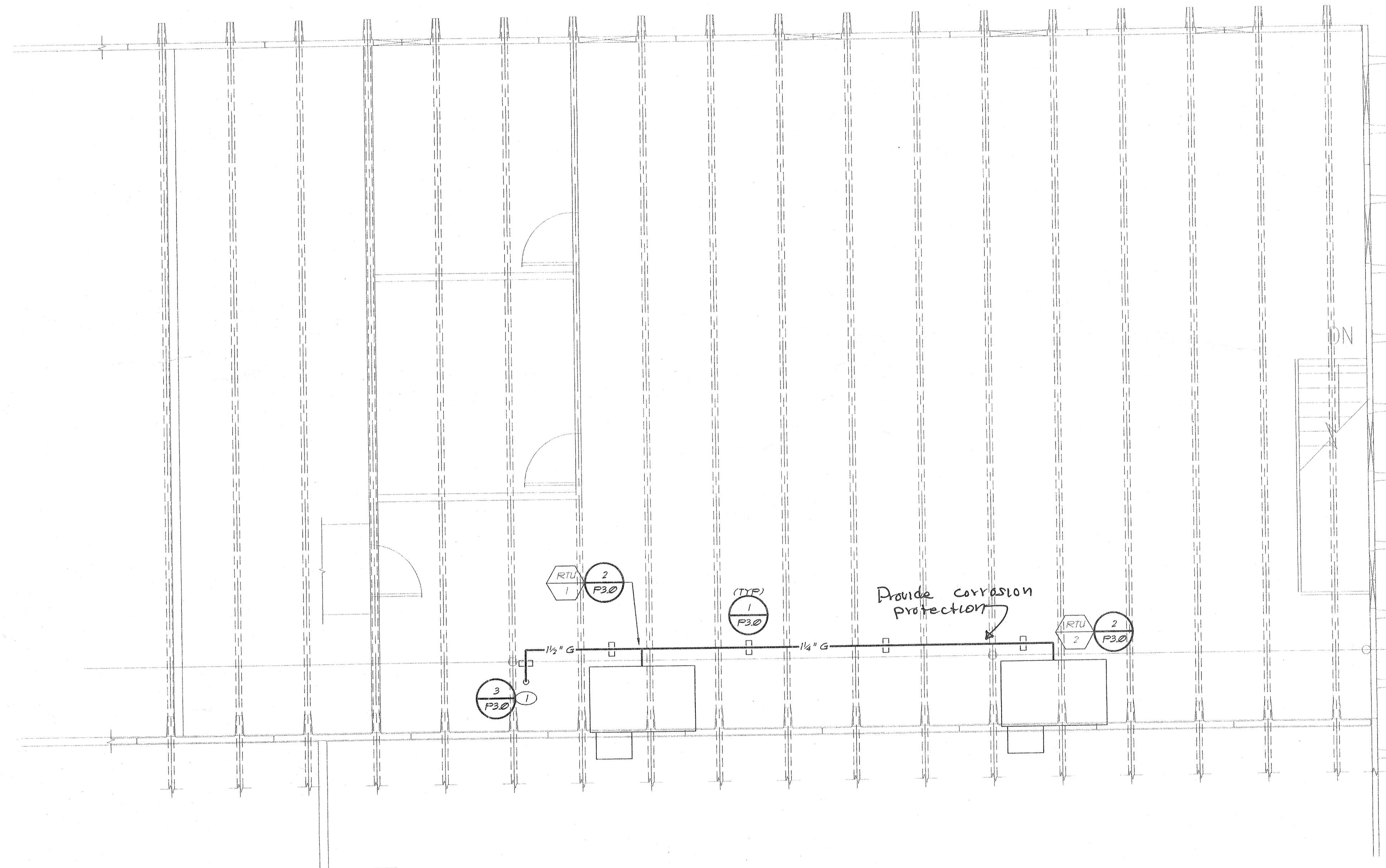
PROJECT NO: 06019

061302

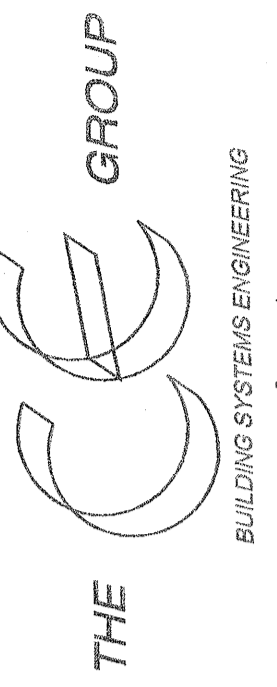
P1.1

REFERENCE NOTES (THIS SHEET ONLY)

① 1/2" G UP FROM BELOW



**ROOF PLAN**  
SCALE: 1/4" = 1'-0"  
DOMESTIC WATER AND GAS



THE  
CE  
GROUP  
BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.266.8868 FAX: 970.266.8876

LOVELAND MOC III

Loveland, Colorado

ROOF PLAN  
DOMESTIC WATER  
AND GAS

DESIGNED: MDR/MS

DRAWN: BH

CHECKED: MDR

DATE: JUNE 20, 2006

PROJECT NO: 06019

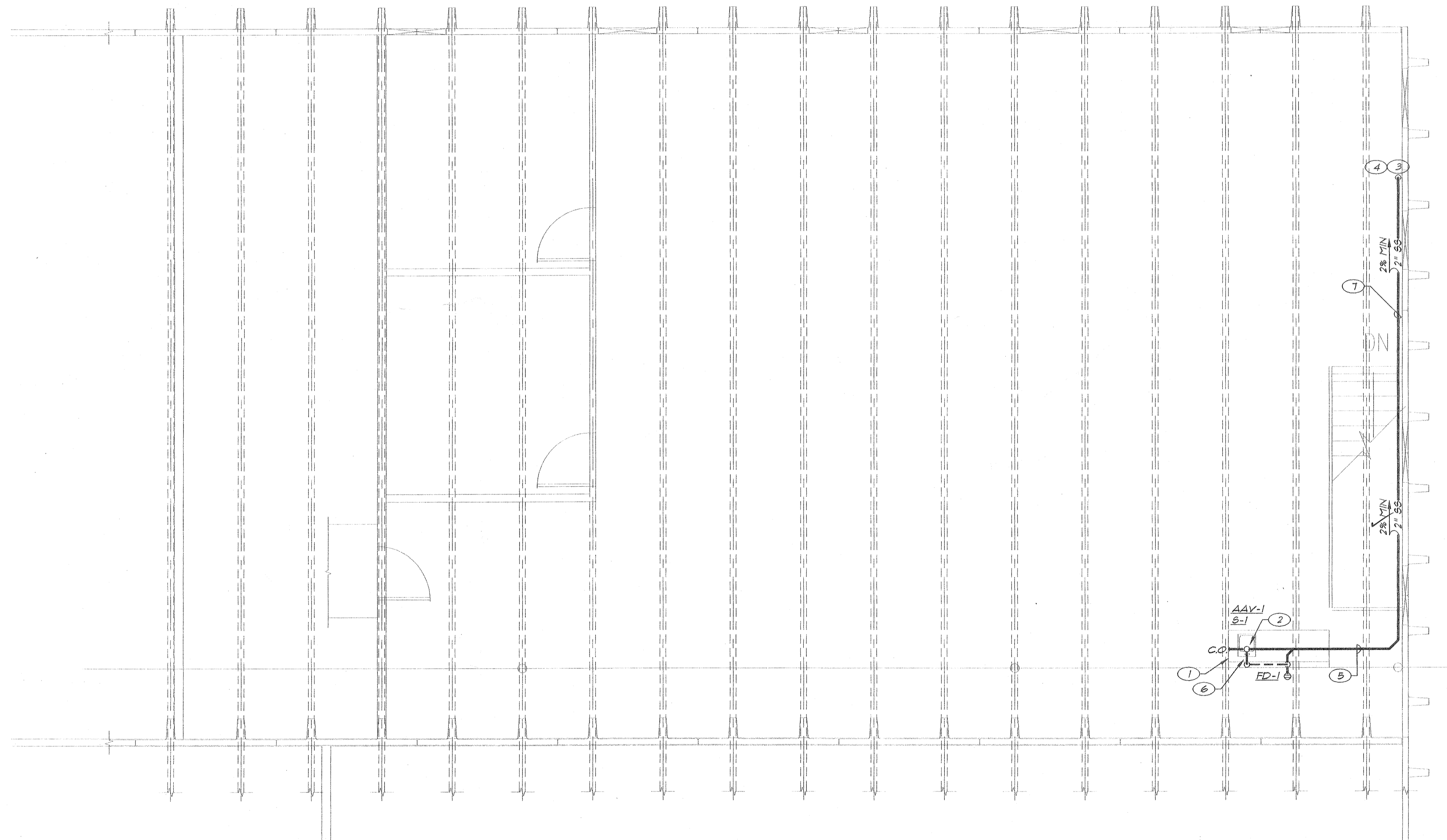
061302

P1.2

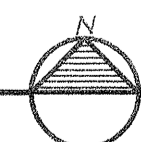
DRAWINGS, SPECIFICATIONS, GENERAL NOTES AND OUTLINE SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA, THE CE GROUP). COPIES OF THESE DOCUMENTS RETAINED BY THE CLIENT ARE FOR THE CLIENTS USE IN THE CONSTRUCTION OF THE PROJECT FOR WHICH THESE DOCUMENTS WERE PREPARED. ANY USE OF THESE DOCUMENTS, IN WHOLE OR IN PART, BY ANY MEANS WHATSOEVER TO CONSTRUCT ANY OTHER PROJECT OR THE USE OF THESE DOCUMENTS, IN WHOLE OR IN PART, AS STOCK PLANS OR PROTOTYPE DESIGN FOR MULTIPLE BUILDING PROJECTS IS STRICTLY PROHIBITED, EXCEPT WITH THE SPECIFIC WRITTEN CONSENT OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA, THE CE GROUP) A COLORADO COMPANY.

**REFERENCE NOTES** (THIS SHEET ONLY)

- ① COFFEE BAR TO BE LOCATED IN THIS GENERAL AREA. VERIFY EXACT LOCATION.
- ② LOCATE AAV-1 BELOW COUNTER TOP, 1/2" SS DOWN THRU FLOOR TO 1ST FLOOR CEILING SPACE. PROVIDE CLEANOUT.
- ③ VERIFY EXACT LOCATION OF EXISTING VENT.
- ④ 2" SS IN 1ST FLOOR CEILING SPACE TO CONNECT TO EXISTING VENT LINE. BECOMES WET VENT, SERVING FLOOR DRAIN, IN THIS APPROXIMATE AREA.
- ⑤ 2" SS IN 1ST FLOOR CEILING SPACE.
- ⑥ TIE 1/2" VENT FROM FD-1 TO AAV-1 BELOW COUNTER TOP.
- ⑦ 2" SS TO BE RAN IN NEW METAL STUD WALL.



**FLOOR PLAN**  
SCALE: 1/4" = 1'-0"  
SANITARY SEWER AND VENT

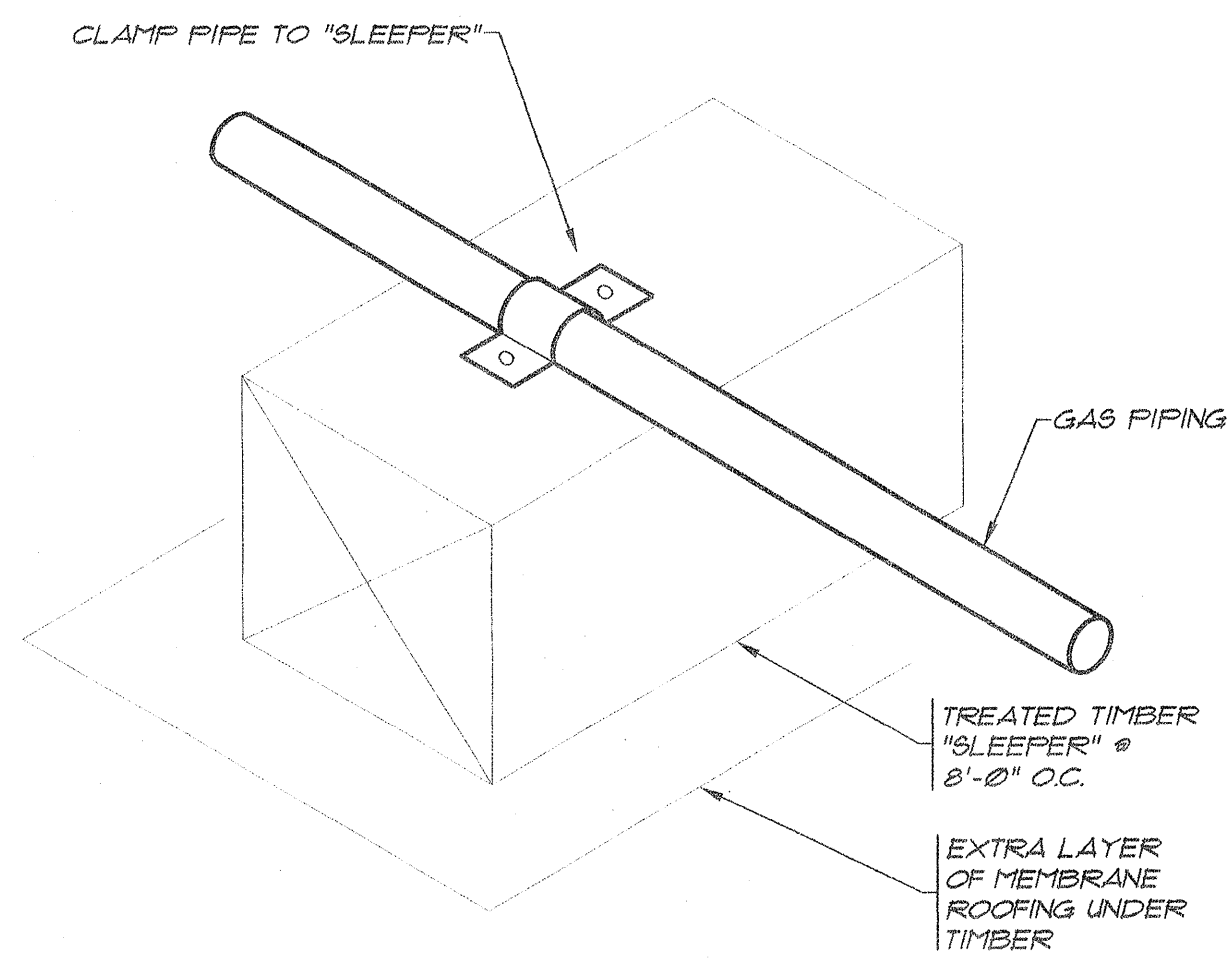


<b>FLOOR PLAN SANITARY SEWER AND VENT</b>	
DESIGNED:	MDR/MS
DRAWN:	BH
CHECKED:	MDR
DATE:	JUNE 20, 2006
PROJECT NO:	06019

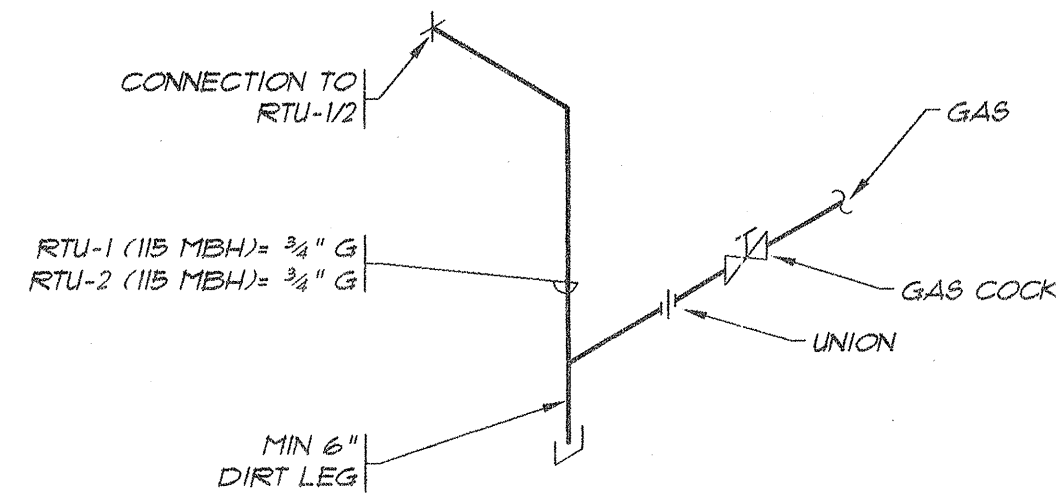
061309

P2.1

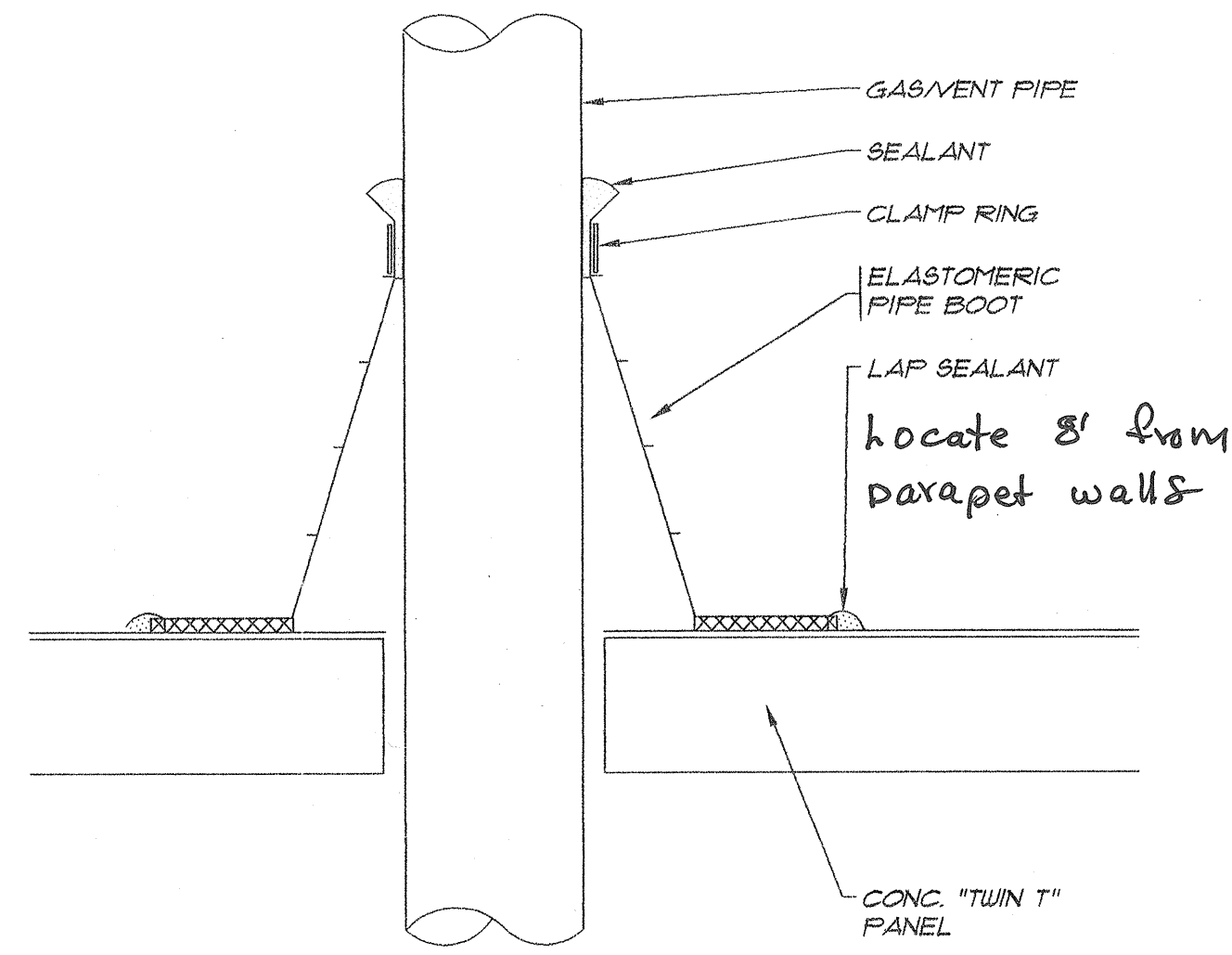
DRAWINGS, SPECIFICATIONS, GENERAL NOTES AND OUTLINE SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA THE CE GROUP). COPIES OF THESE DOCUMENTS RETAINED BY THE CLIENT ARE FOR THE CLIENTS USE IN THE CONSTRUCTION OF THE PROJECT FOR WHICH THESE DOCUMENTS WERE PREPARED. ANY USE OF THESE DOCUMENTS, IN WHOLE OR IN PART, BY ANY MEANS WHATSOEVER TO CONSTRUCT ANY OTHER PROJECT OR THE USE OF THESE DOCUMENTS, IN WHOLE OR IN PART, AS STOCK PLANS OR PROTOTYPE DESIGN FOR MULTIPLE BUILDING PROJECTS IS STRICTLY PROHIBITED, EXCEPT WITH THE SPECIFIC WRITTEN CONSENT OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA THE CE GROUP), A COLORADO COMPANY.



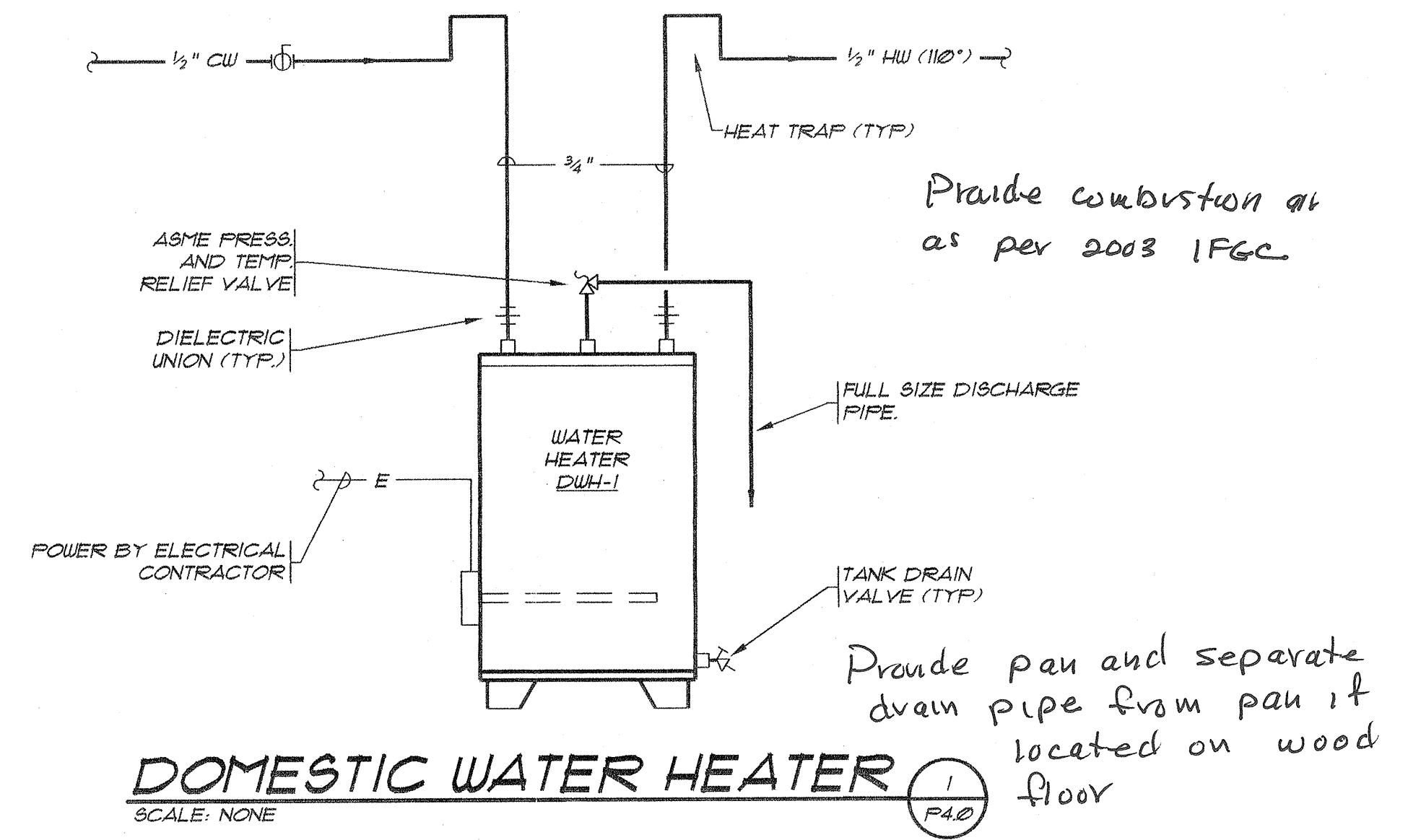
**GAS PIPING ON ROOF** (1)  
SCALE: NONE (P3.0)



**RTU GAS PIPING** (2)  
SCALE: NONE (P3.0)



**PIPE PENETRATION AT ROOF** (3)  
SCALE: NONE (P3.0)



**DOMESTIC WATER HEATER** (4)  
SCALE: NONE (P4.0)

PLUMBING FIXTURE SCHEDULE		CONNECTION SIZES (IN.)				
TAG	DESCRIPTION	SB	V	HW	CW	G
AAV-1	AIR ADMITTANCE VALVE. STUDOR VENT. MINIMAXI VENT WITH SCREEN, THREADED/SOLVENT WELD CONNECTION.	---	---	---	---	---
DWH-1	DOMESTIC WATER HEATER. STATE MODEL P6-10-1018K, ELECTRIC, 10 GALLON TANK, 240 V/1P INPUT, 1650 WATTS, 8 GALLONS PER HOUR RECOVERY @ 90° F RISE, T4F VALVE, GLASS-LINED. SET TEMPERATURE AT 110° F.	---	---	3/4	3/4	---
FD-1	FLOOR DRAIN. ZURN FD2210-FV, ADJUSTABLE PVC FLOOR DRAIN WITH NICKEL HEAD, 5" ROUND STRAINER, WITH PROSET TRAP GUARD MODEL # TG22	SEE FLANS	2	---	---	---
S-1	BAR SINK. MOEN MODEL E-1515-2, 15"x15"x5" DEEP 18 GAUGE TYPE 301 S.S., SELF RIMMING 3 1/2" BASKET STRAINER / DRAIN ASSEMBLY. P-TRAP, STOPS AND SUPPLIES. DELTA MODEL 711-WHDF CHROME PLATED SINGLE HANDLE DECK MOUNTED FAUCET, 11" HIGH GOOSENECK.	1 1/2	1 1/2	1/2	1/2	---

**THE CE GROUP**

BUILDING SYSTEMS ENGINEERING  
400 REMINGTON STREET, SUITE A, FORT COLLINS, COLORADO 80524  
PH: 970.286.8888 FAX: 970.286.8878

---

**LOVELAND MOC III**

Loveland, Colorado

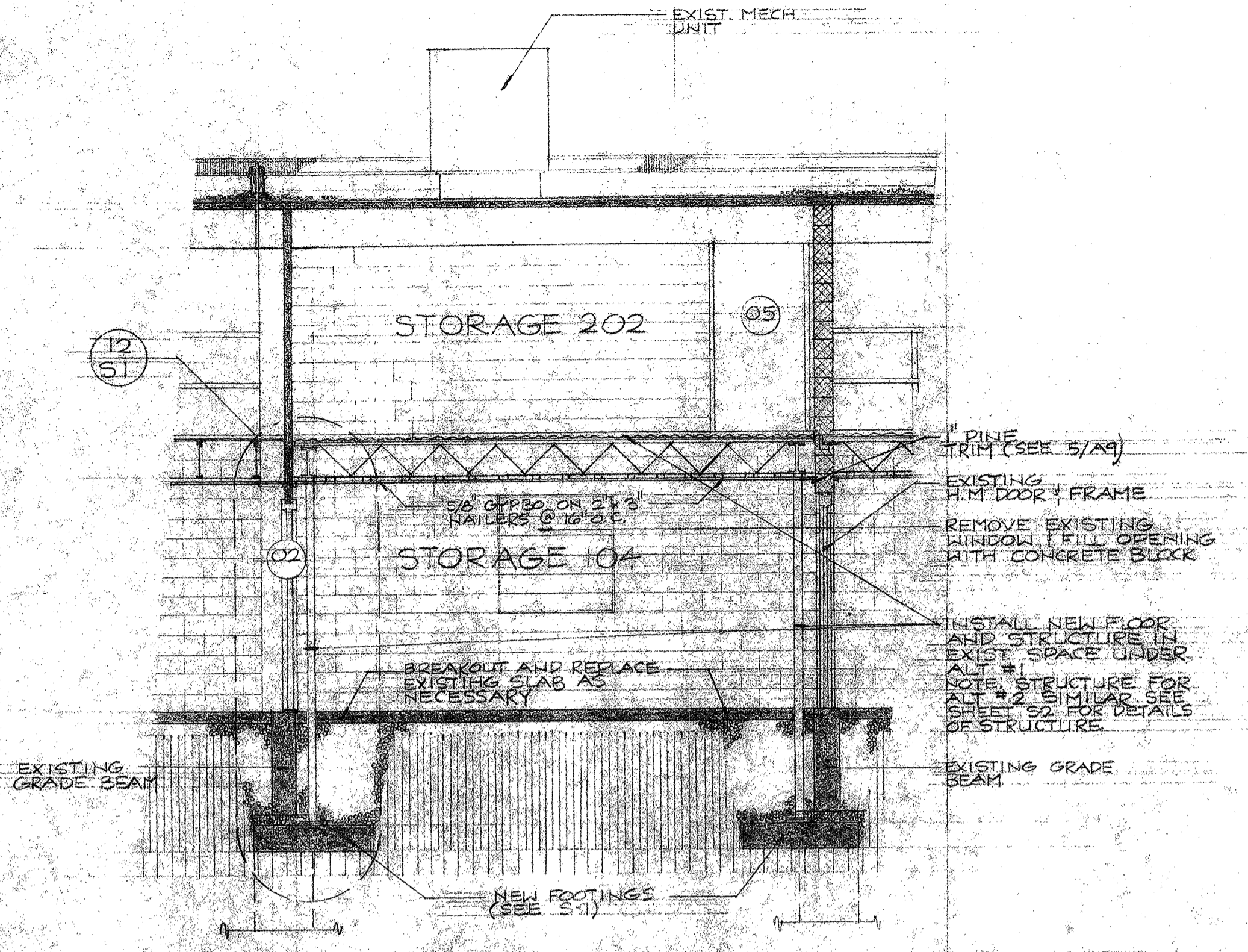
---

**DIAGRAMS AND SCHEDULES**

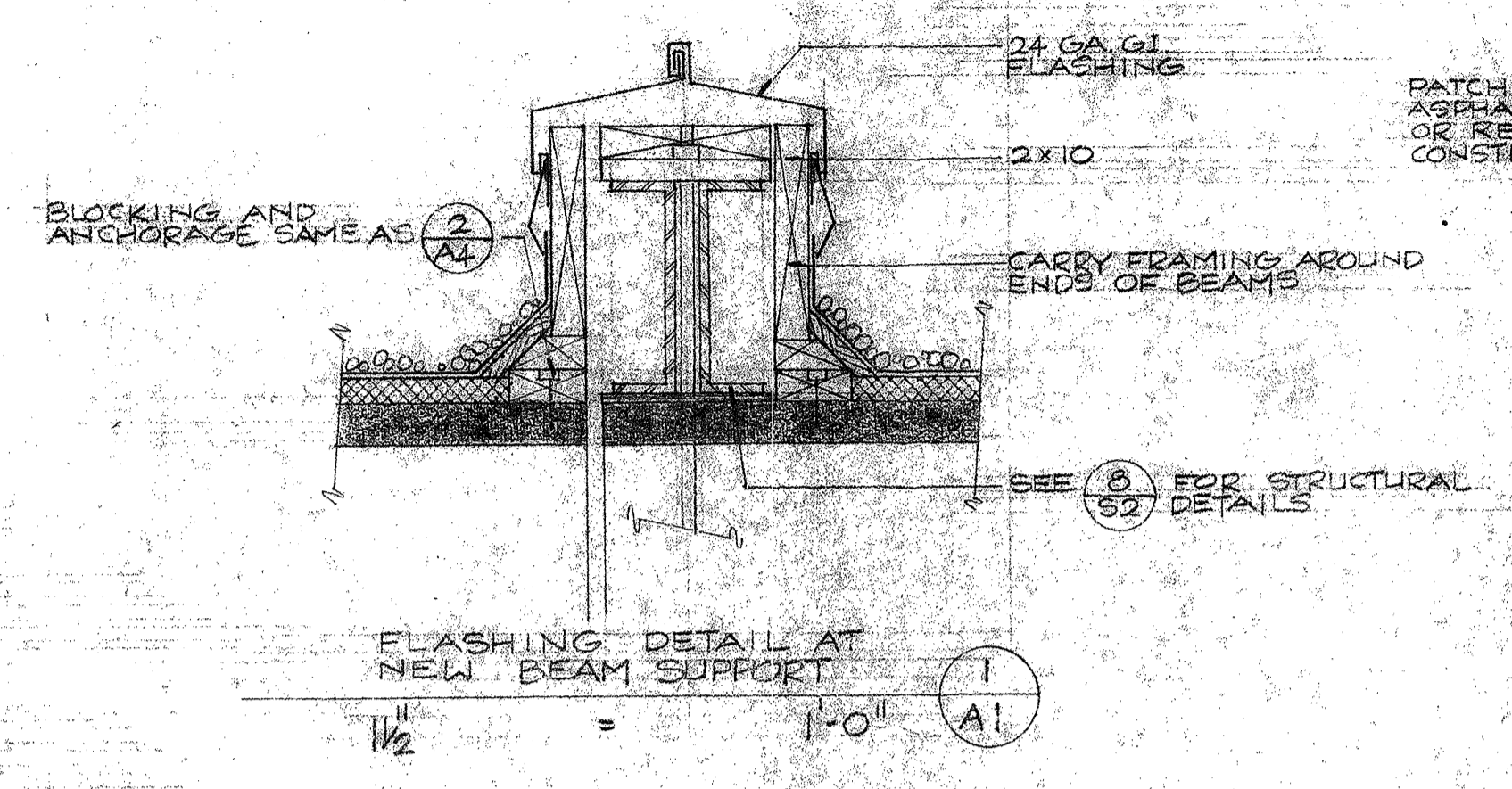
DESIGNED: MDR/MS  
DRAWN: BH  
CHECKED: MDR  
DATE: JUNE 20, 2006  
PROJECT NO: 061302 06019

**P3.0**

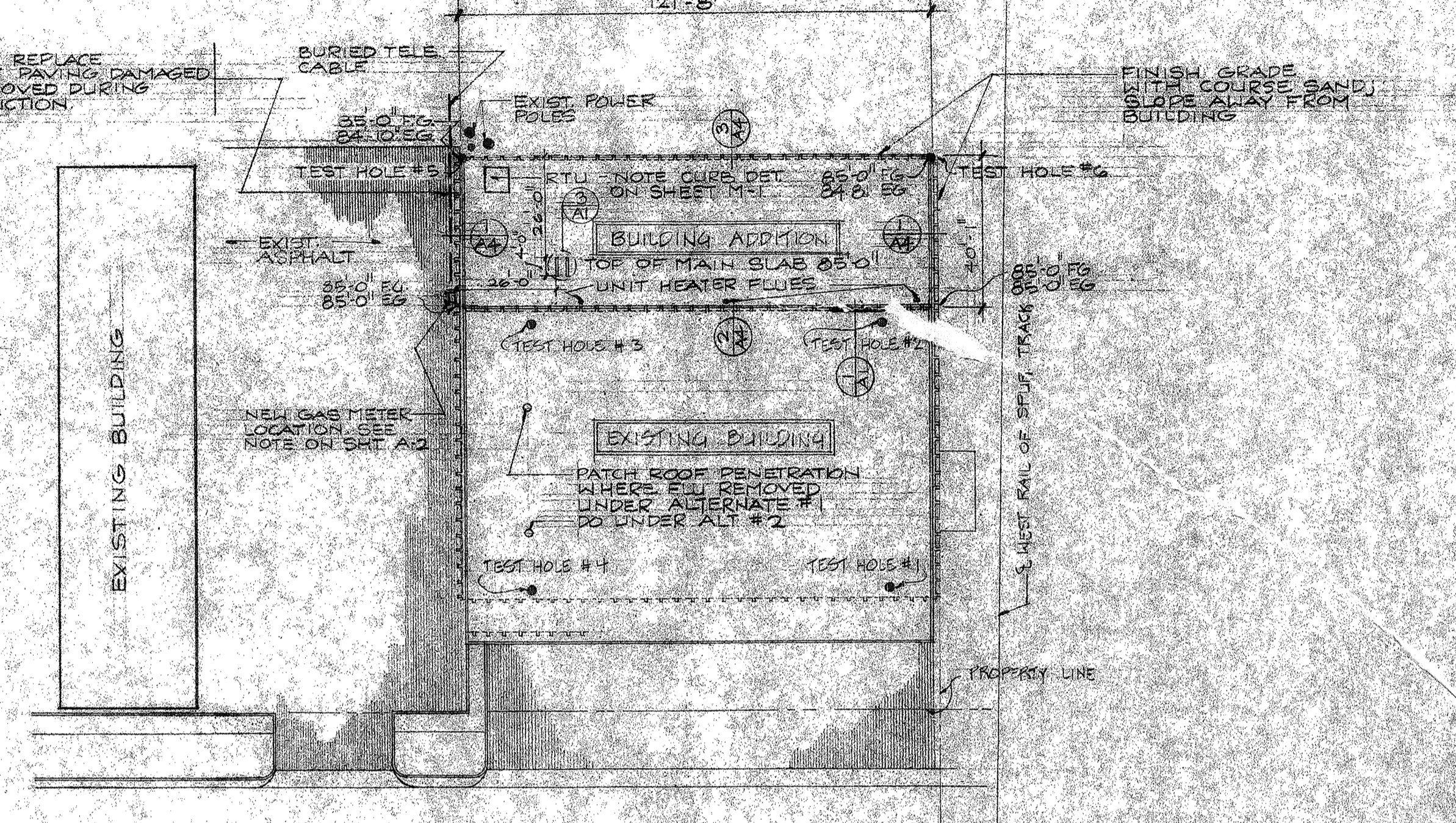
DRAWINGS, SPECIFICATIONS, GENERAL NOTES AND OUTLINE SPECIFICATIONS ARE INSTRUMENTS OF SERVICE AND SHALL REMAIN THE PROPERTY OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA THE CE GROUP). COPIES OF THESE DOCUMENTS RETAINED BY THE CLIENT ARE FOR THE CLIENTS USE IN THE CONSTRUCTION OF THE PROJECT FOR WHICH THESE DOCUMENTS WERE PREPARED. ANY USE OF THESE DOCUMENTS IN WHOLE OR IN PART, BY ANY MEANS WHATSOEVER TO CONSTRUCT ANY OTHER PROJECT OR THE USE OF THESE DOCUMENTS, IN WHOLE OR IN PART, AS STOCK PLANS OR PROTOTYPE DESIGN FOR MULTIPLE BUILDING PROJECTS IS STRICTLY PROHIBITED, EXCEPT WITH THE SPECIFIC WRITTEN CONSENT OF THE CONSULTING ENGINEERING GROUP L.L.C. (AKA, THE CE GROUP), A COLORADO COMPANY.



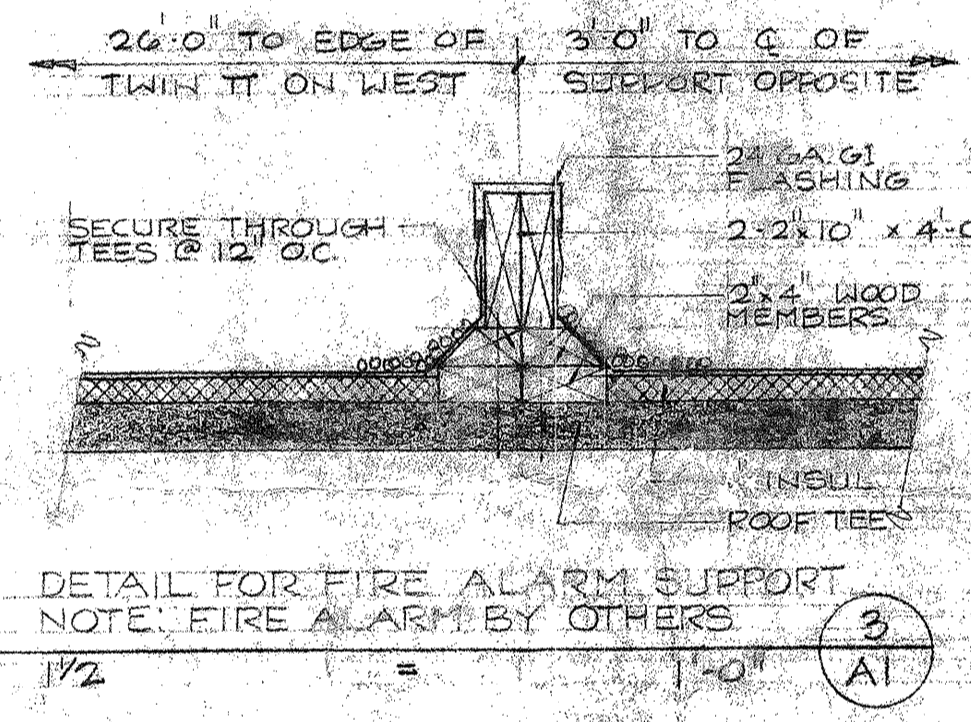
BUILDING SECTION  
1/4" = 1'-0" (A1)



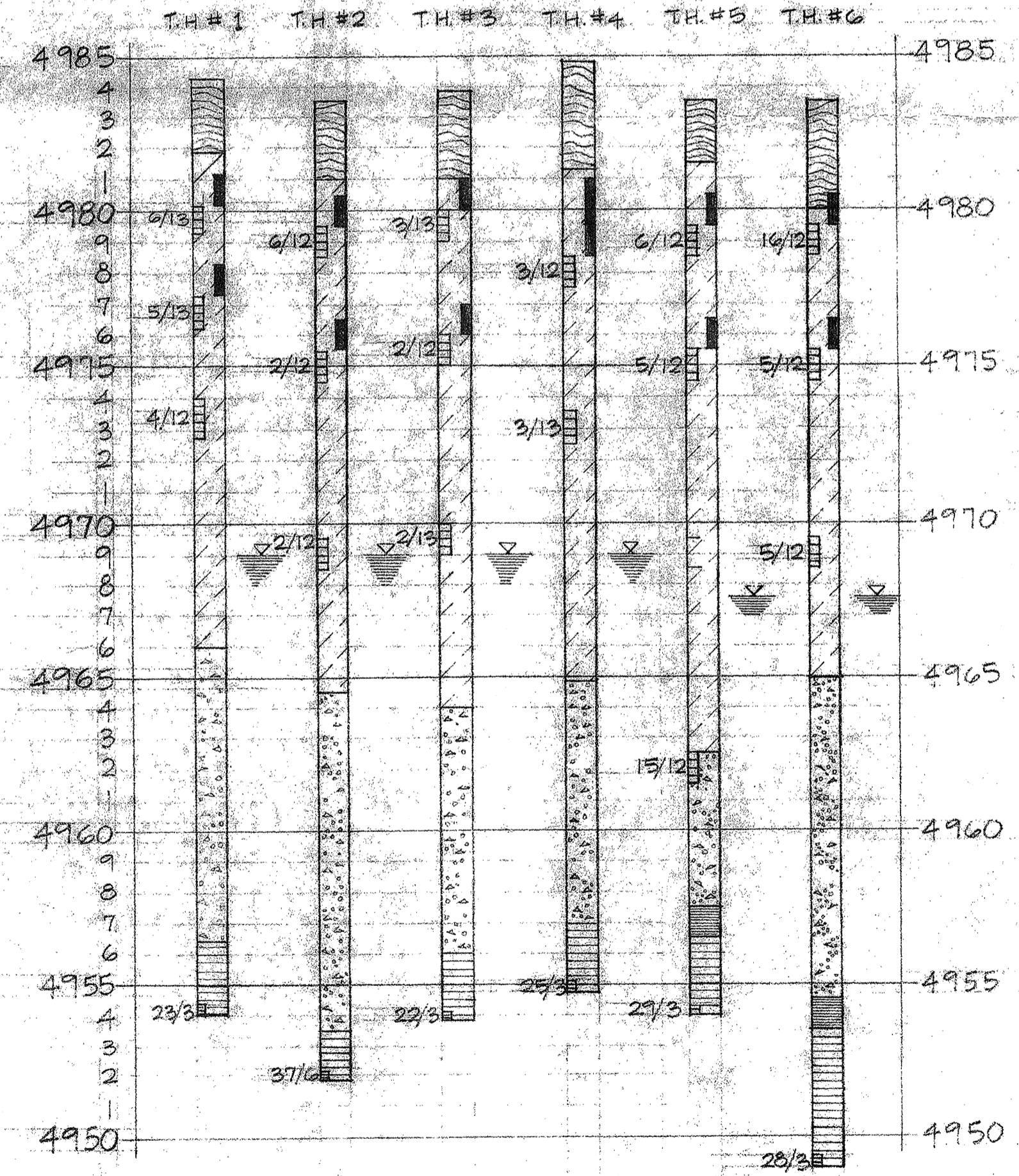
FLASHING DETAIL AT NEW BEAM SUPPORT  
1 1/2" = 1'-0" (A1)



PLOT PLAN  
1" = 30'-0" (N)



DETAIL FOR FIRE ALARM SUPPORT  
NOTE: FIRE ALARM BY OTHERS  
1/2" = 1'-0" (A1)



LEGEND

[Pattern]	FILL	[Pattern]	SANDY CLAY	[Pattern]	COBBLE ROCK	[Pattern]	CLAYSTONE
-----------	------	-----------	------------	-----------	-------------	-----------	-----------

LOG OF BORINGS

MATERIALS SYMBOLS		ABBREVIATIONS	
[Pattern]	CONCRETE IN SECTION	CONC.	CONCRETE
[Pattern]	GRAVEL FILL IN SECTION	GYP. BR.	GYPSUM BOARD
[Pattern]	EARTH IN SECTION	ELEV. EL.	ELEVATION
[Pattern]	CONCRETE OR GYPSUM BOARD IN ELEV.	W.W.F.	WELDED WIRE FABRIC
[Pattern]	CONCRETE BLOCK IN SECTION	MIN.	MINIMUM
[Pattern]	EXISTING CONTOUR OR ELEVATION	TYP.	TYPICAL
[Pattern]	GLUE INSULATION	INSUL.	INSULATION
[Pattern]	WOOD IN SECTION NOT PLYWOOD	EXIST.	EXISTING
[Pattern]	WOOD IN SECTION	T.O.	TOP OF
[Pattern]	GYPSUM BOARD IN SECTION	B.O.	BOTTOM OF
[Pattern]	PLYWOOD IN SECTION	DET.	DETAIL
[Pattern]	PARTICLE BOARD IN SECTION	FIN.	FINISH
[Pattern]	METAL IN ELEVATION OR RUBBER BASE	BRG.	BEARING
		SPEC.	SPECIFICATIONS
		G.I.	GALVANIZED IRON
		REIN.	REINFORCE
		CONC.	CONNECTION
		SHT.	SHEET
		H.M.	HEAVY METAL

SHEET INDEX	
A1	PLOT PLAN, INDEX, SOIL LOG
A2	FLOOR PLAN
A3	ELEVATIONS, DETAILS, OPENING SCHEDULE
A4	SECTIONS, DETAILS
S1	FOOTING & FOUNDATION PLAN & DETAILS
S2	ROOF FRAMING PLAN & DETAILS
M1	MECHANICAL PLANS & DETAILS
E1	ELECTRICAL PLANS & DETAILS

APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
DATE

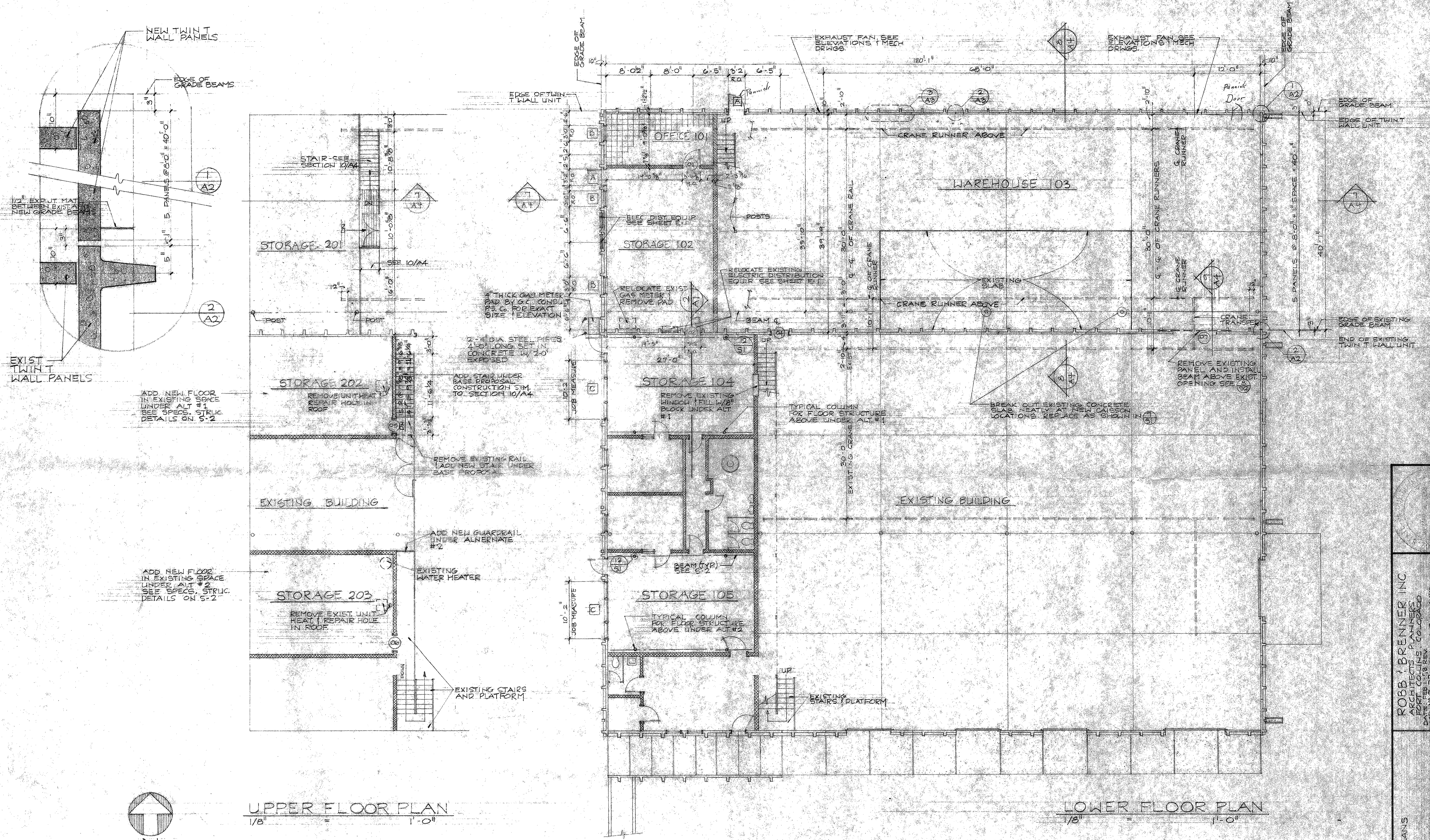
Sheet 2

ROBB & BRENNER INC  
ARCHITECTS - PLANNERS  
FORT COLLINS, COLORADO  
DATE: FEB 12, 2009 REV. 01  
JOB NO. 11233 DRAWING OF / F / CLHP

SITE PLAN ABBREVIATIONS LOG OF BORINGS

AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY  
COSTER RAILROAD 1/4 5TH LOVELAND, COLORADO

11



UPPER FLOOR PLAN  
1/8" = 1'-0"

LOWER FLOOR PLAN  
1/8" = 1'-0"

ROOM FINISH SCHEDULE

NO.	NAME	FLOOR	BASE	NORTH WALL	EAST WALL	SOUTH WALL	WEST WALL	CEILING	OTHER	REMARKS
101	OFFICE	A	B	E <sub>s</sub>	C <sub>e</sub>	C <sub>b</sub>	E <sub>e</sub>	F <sub>e</sub>		TROWEL FINISH TEE PANELS TO 8-1/2"
102	STORAGE	D <sub>HS</sub>		C <sub>e</sub>	C <sub>e</sub>	G <sub>e</sub>	C <sub>e</sub>	F <sub>e</sub>		TROWEL FINISH TEE PANELS TO 8-1/2"
103	WAREHOUSE	D <sub>HS</sub>		E <sub>b</sub>	E <sub>b</sub>	G	J <sub>e</sub>	E		
104	STORAGE (EXIST BLDG)	G		E	H	H	E <sub>1</sub> J	F <sub>T</sub>		
105	STORAGE	G		H	H	H	E <sub>1</sub> J	F <sub>T</sub>		
201	STORAGE	D <sub>HS</sub>		E <sub>b</sub>	H	H	E <sub>b</sub>	E		
202	STORAGE (ALT #1)	D <sub>HS</sub>		E <sub>x</sub>	H	H	E <sub>x</sub>	E <sub>x</sub>		
203	STORAGE (ALT #2)	D <sub>HS</sub>		H	H	H	E <sub>x</sub>	E <sub>x</sub>		

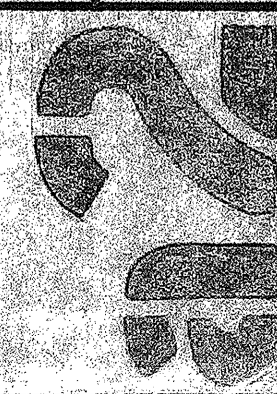
LEGEND

KEY	GENERAL NOTES
A - VINYL ASBESTOS TILE	1. SUBSCRIPTS 'E' INDICATE ENAMELED SURFACE. SEE SPEC.
B - 1" RUBBER BASE	2. SUBSCRIPTS 'HS' INDICATE HARDENER & SEALER SEE SPEC.
C - CONCRETE BLOCK	3. SUBSCRIPTS 'B' INDICATE BROOM FINISH ON CONCRETE
D - CONCRETE	4. SUBSCRIPTS 'T' INDICATES TAPE & SPACKLE ONLY
E - CONCRETE TEE UNITS	5. SUBSCRIPTS 'X' INDICATES EXISTING TWIN T.
F - GYPSUM BOARD	6. ENAMEL ALL H.M. DOORS AND FRAMES
G - EXISTING CONCRETE	7. ENAMEL ALL EXPOSED WOOD IN STAIRS, PLATFORMS ETC.
H - EXISTING MASONRY	
I - EXISTING CEILING	
J - GEN. ASP. PD.	

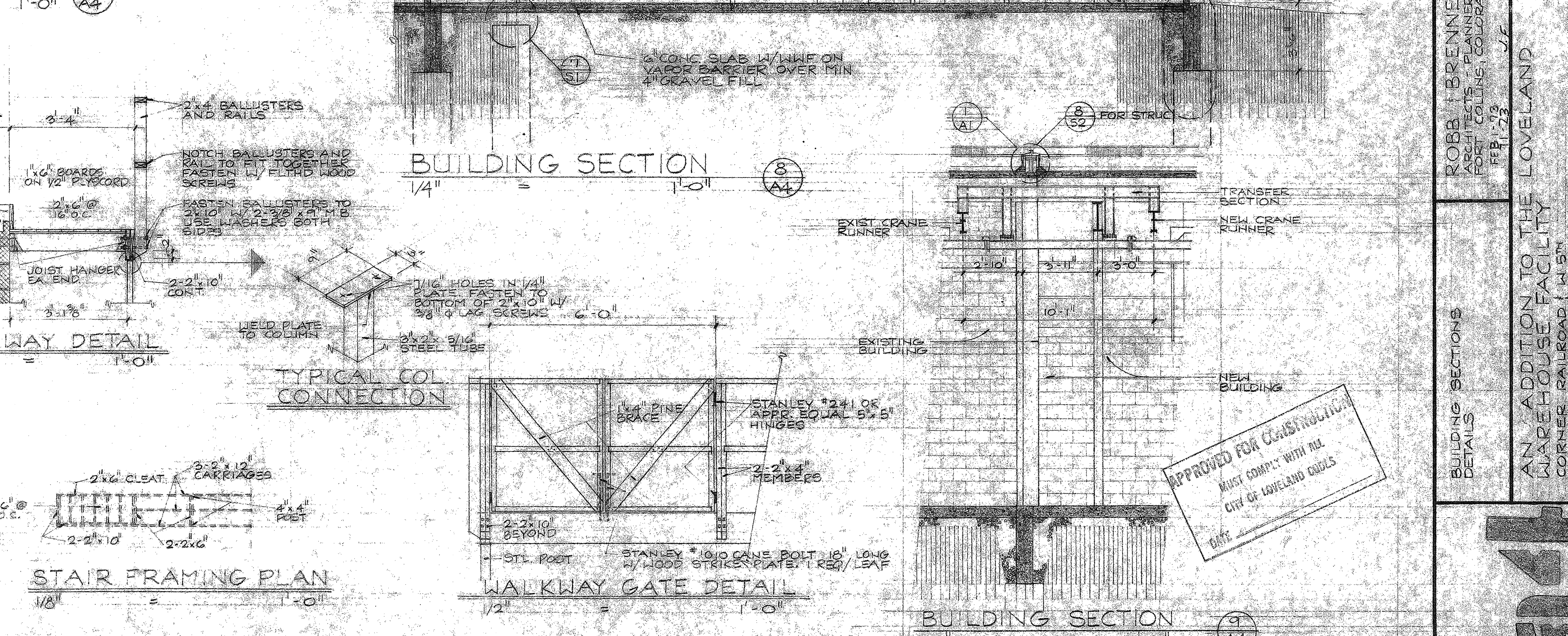
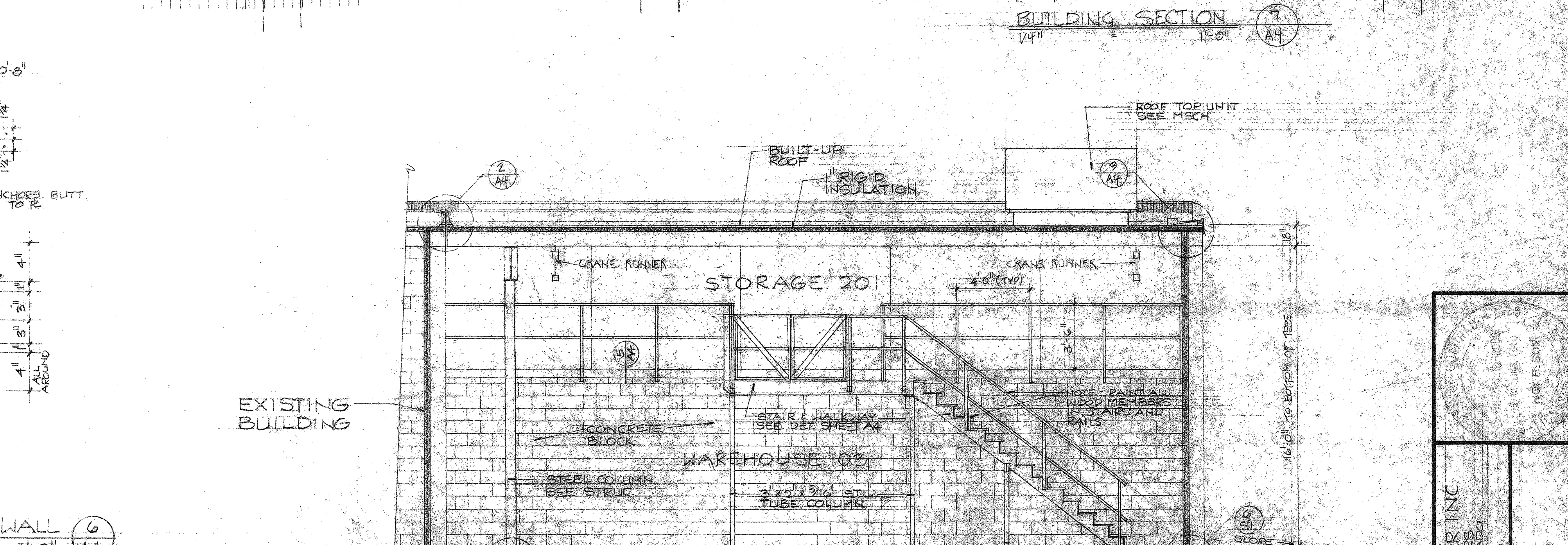
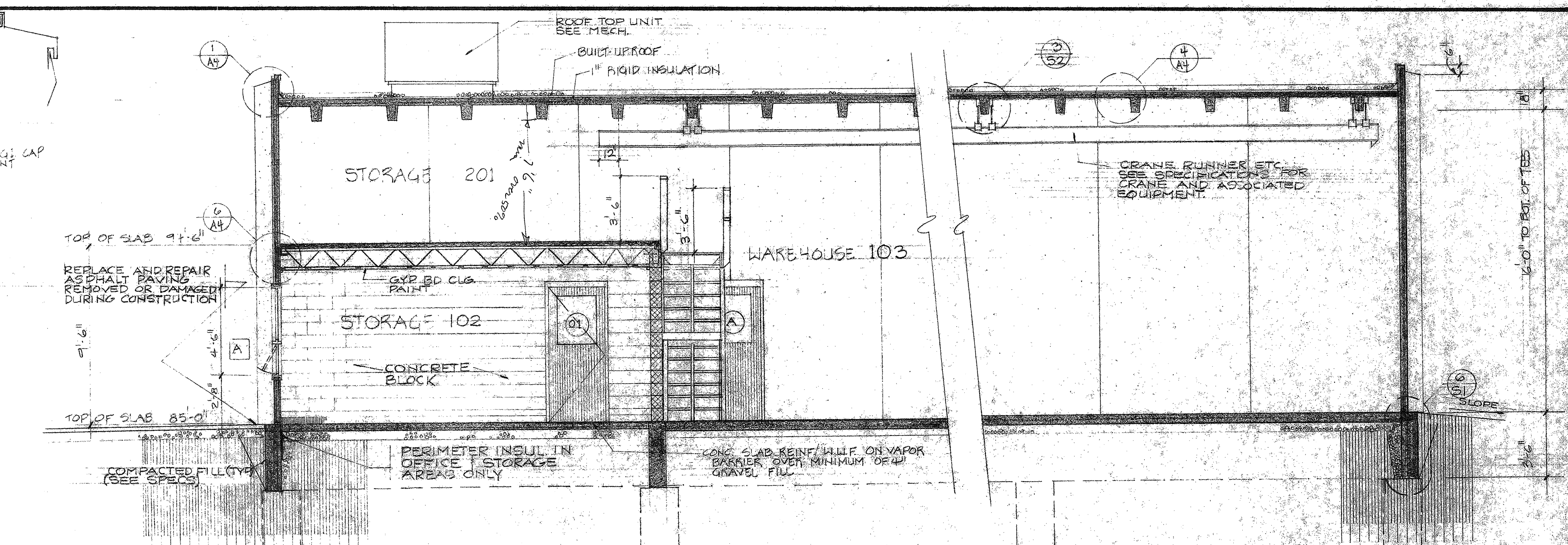
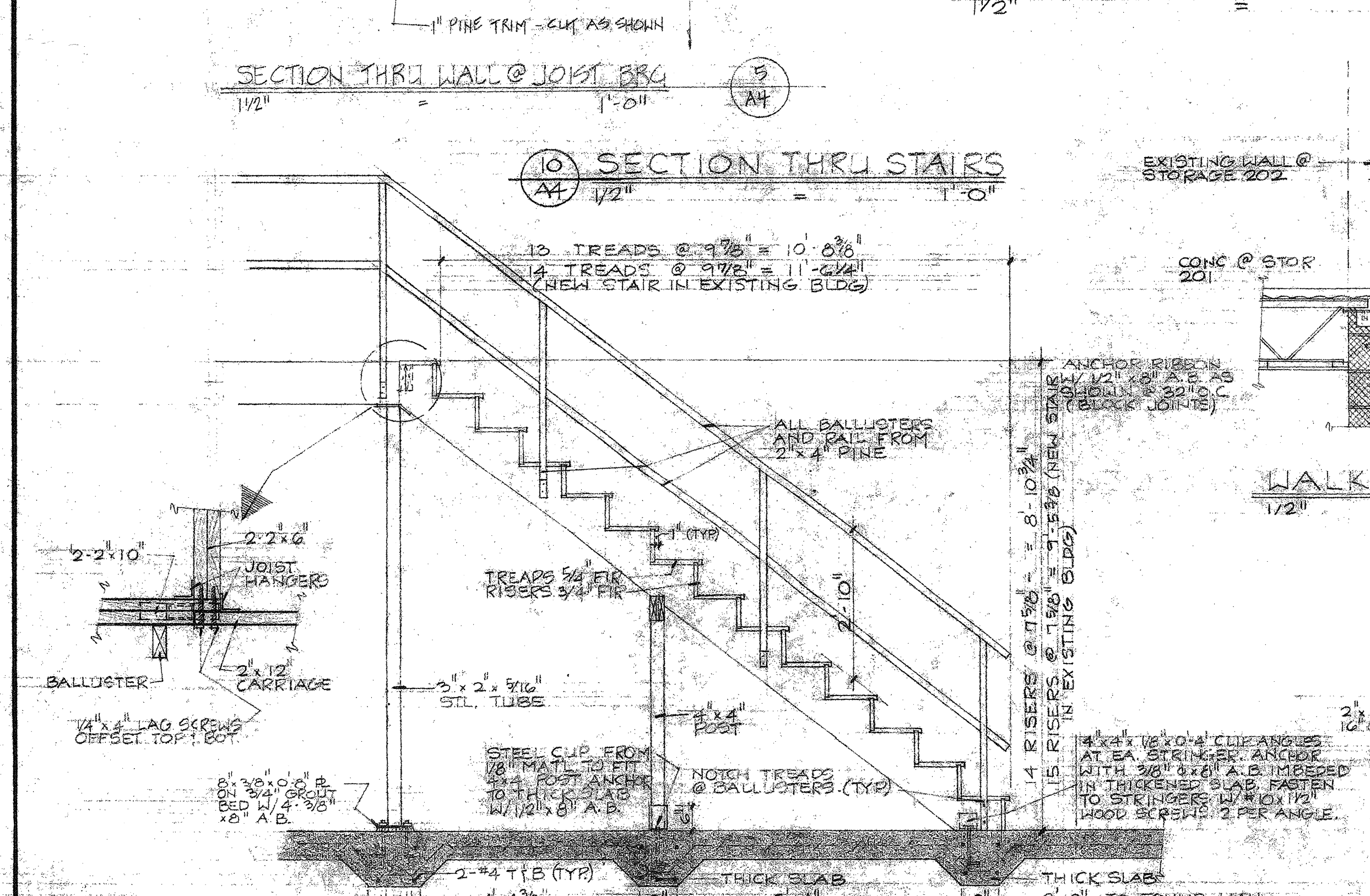
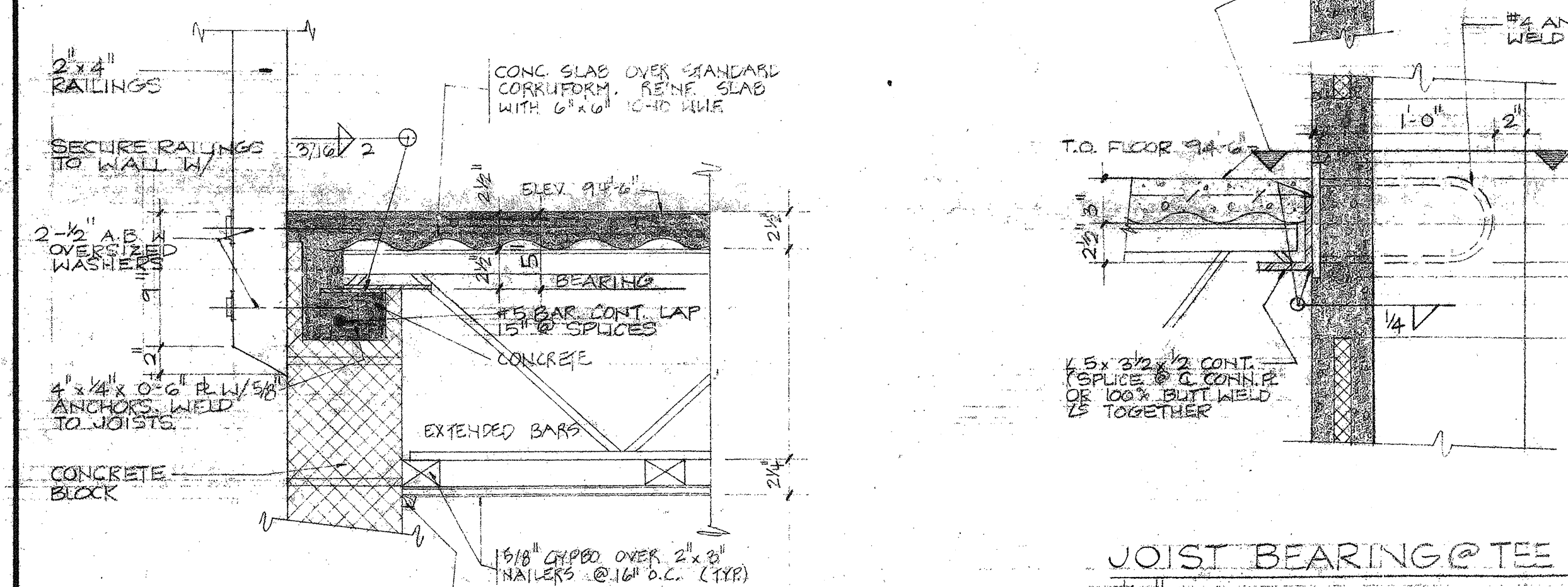
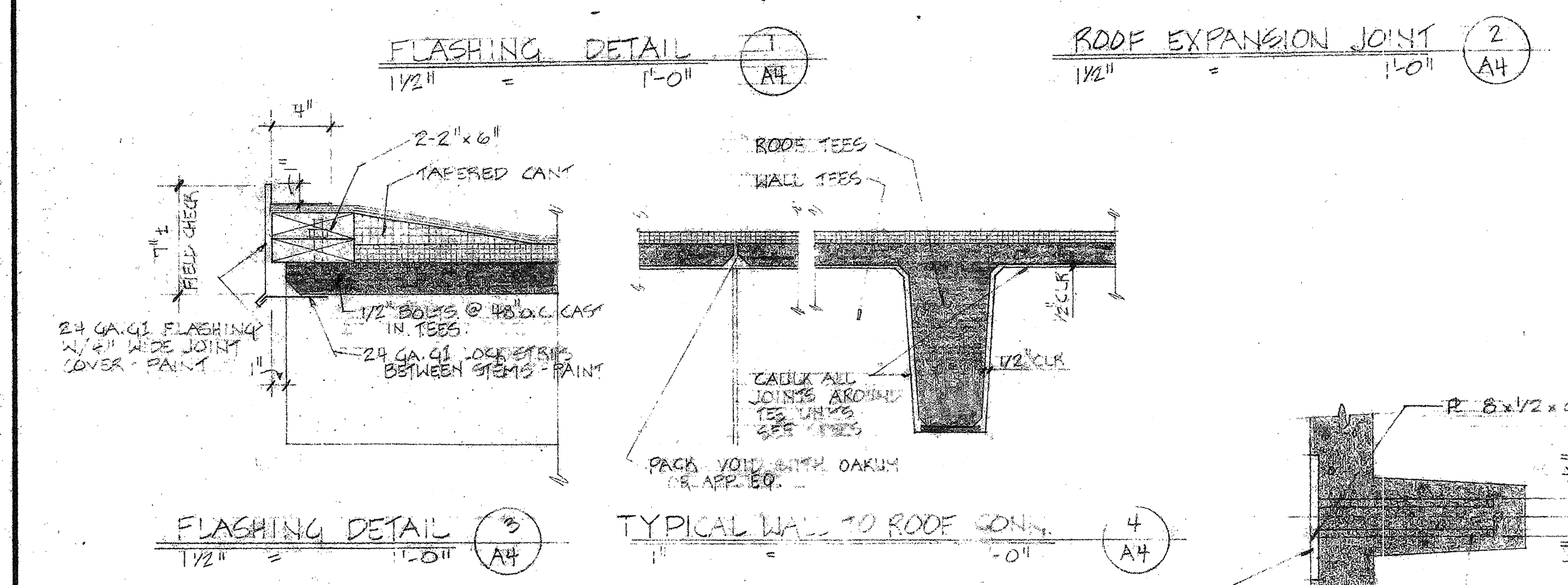
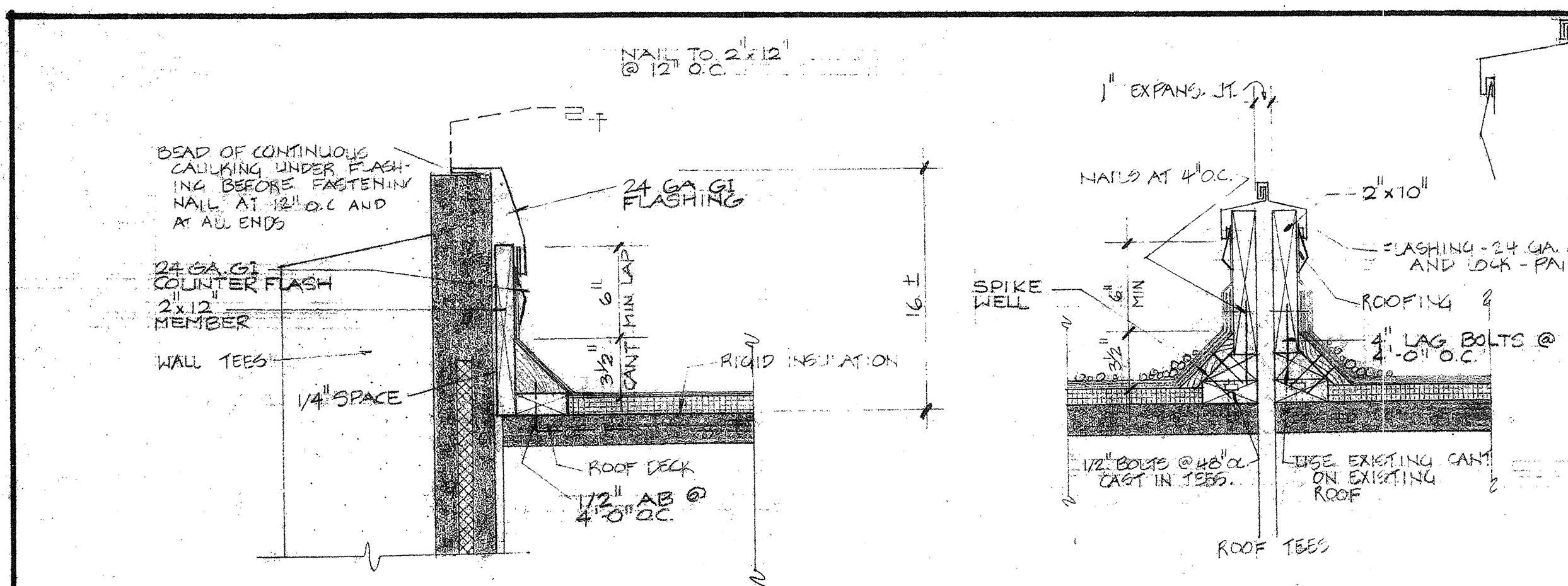
APPROVED FOR CONSTRUCTION  
MUST COMPLY WITH ALL  
CITY OF LOVELAND CODES  
DATE

ROBB BRENNER INC  
ARCHITECTS & PLANNERS  
1000 1/2 ST. W. #100  
DENVER, CO 80202  
DATE: FEB 1988 REV. 1/88  
JOB NO: 71-23 DRAWN: V.F. CHD.

FLOOR PLANS  
AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
CORNER RAILROAD & 11<sup>TH</sup>  
LOVELAND, COLORADO







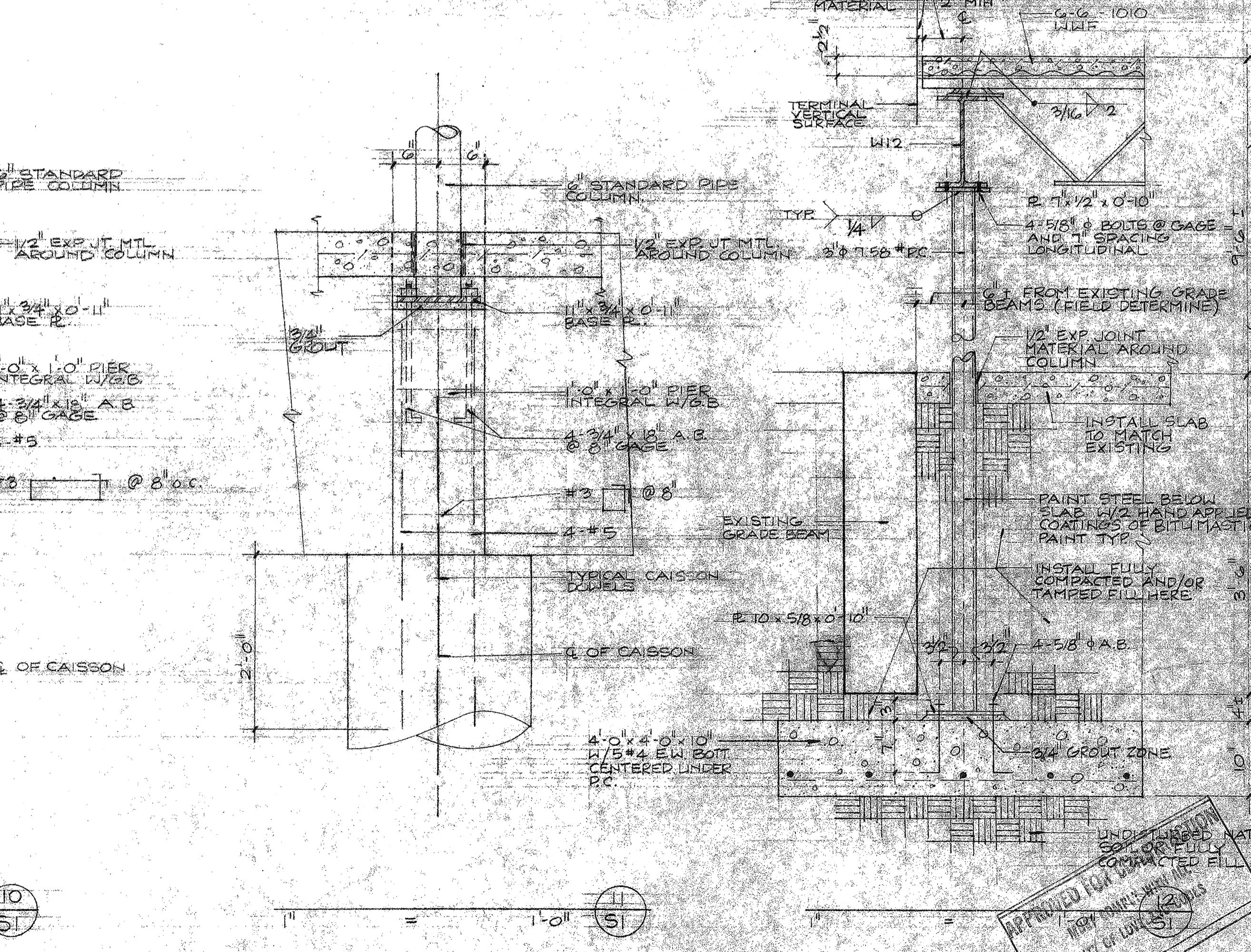
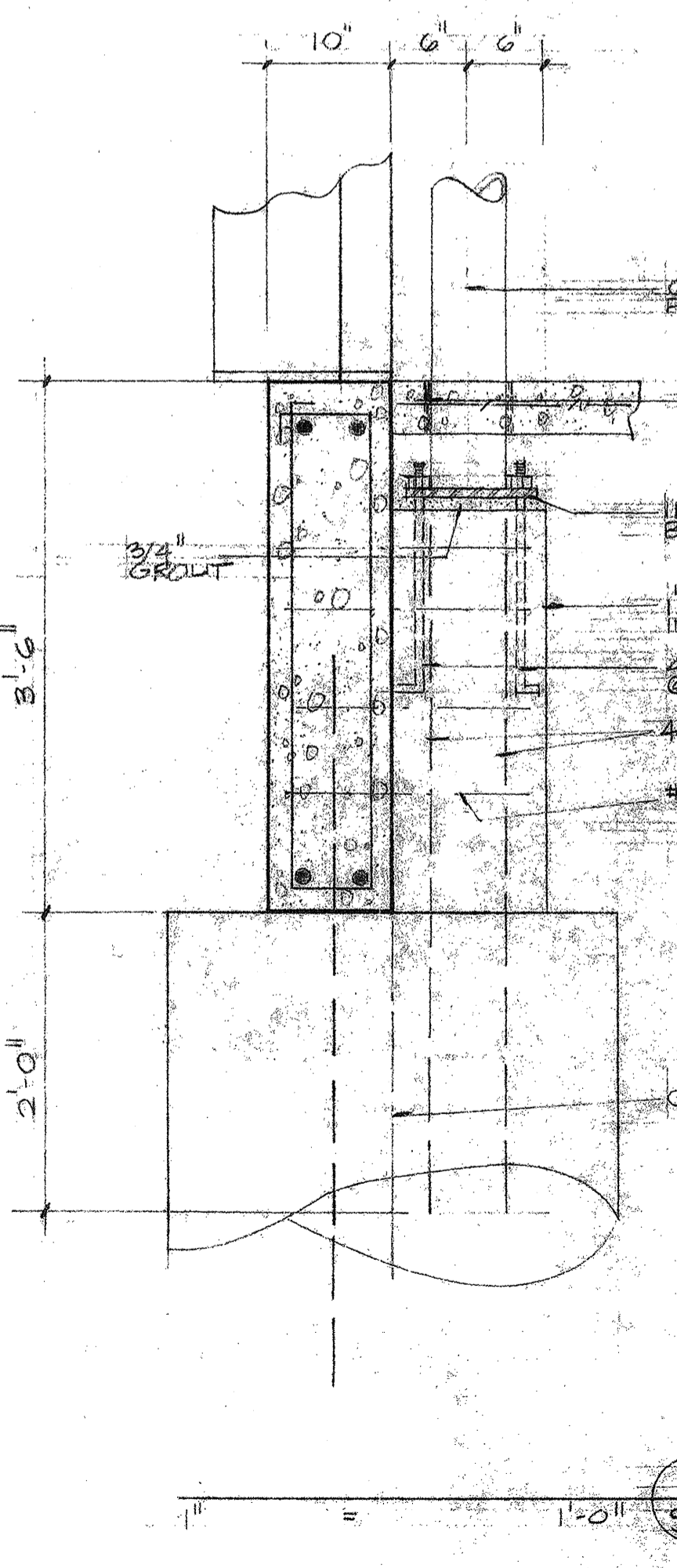
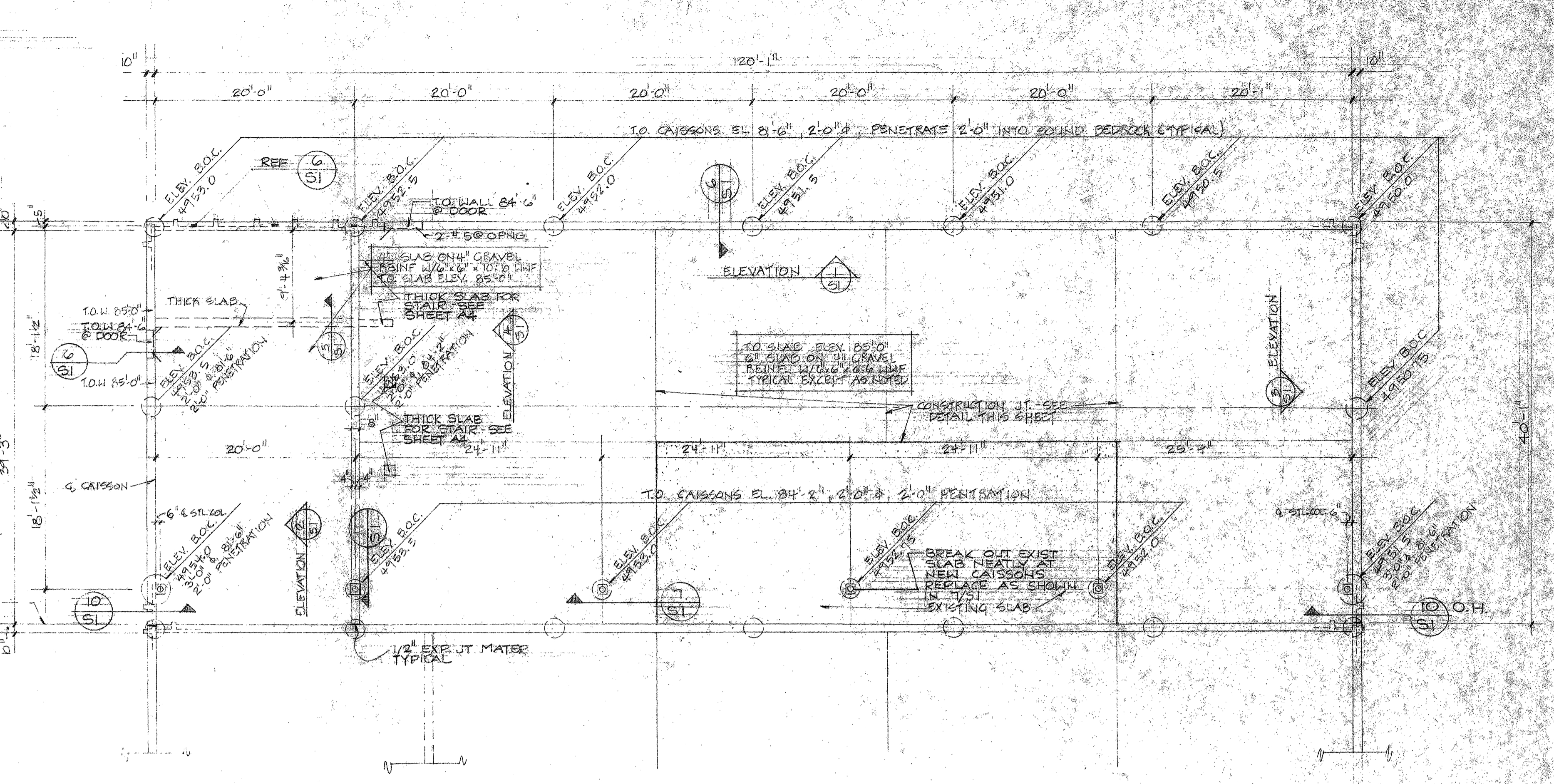
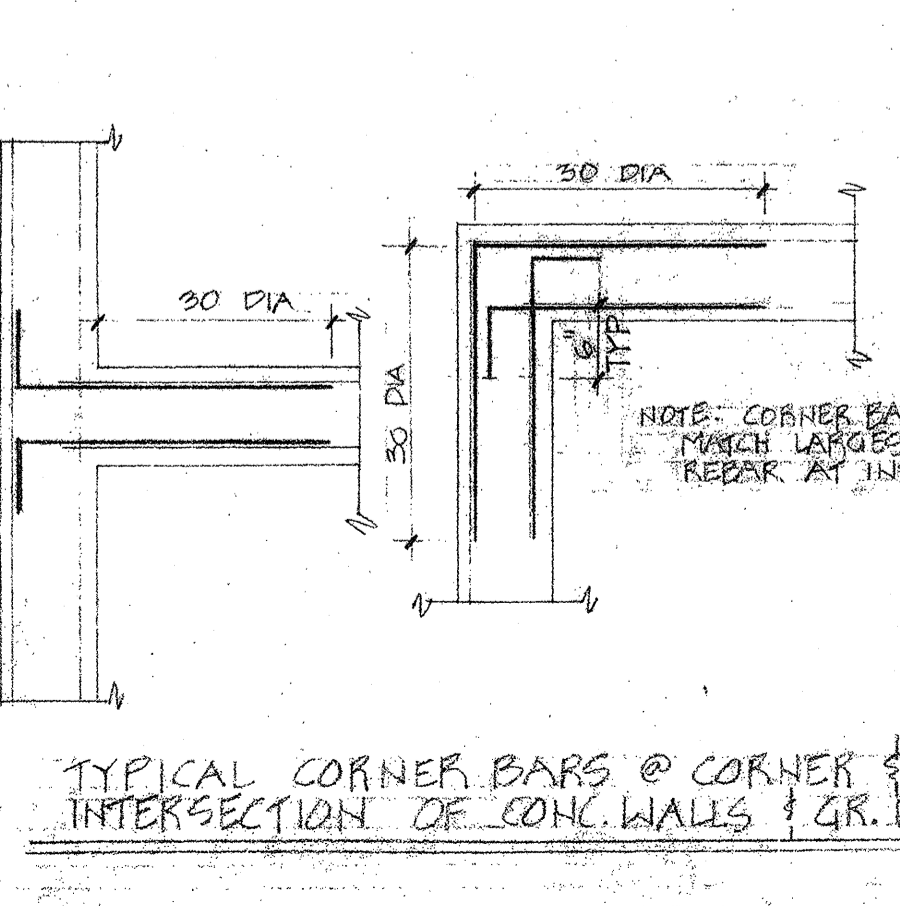
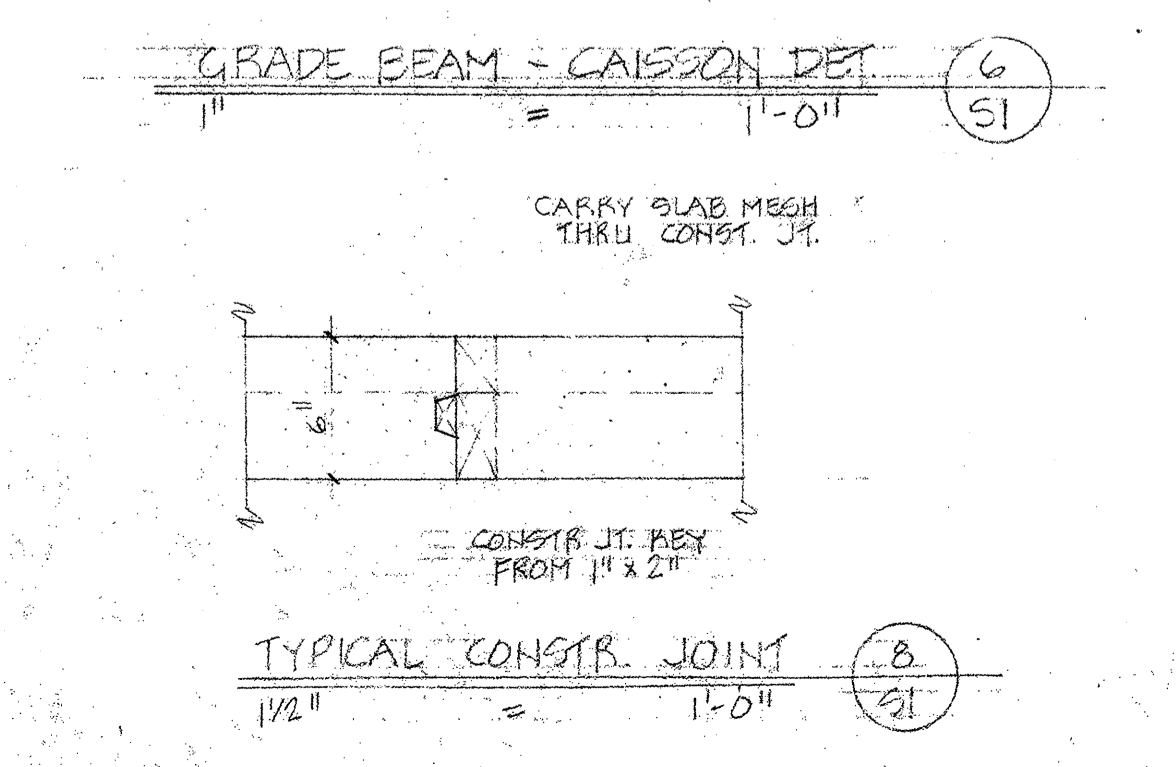
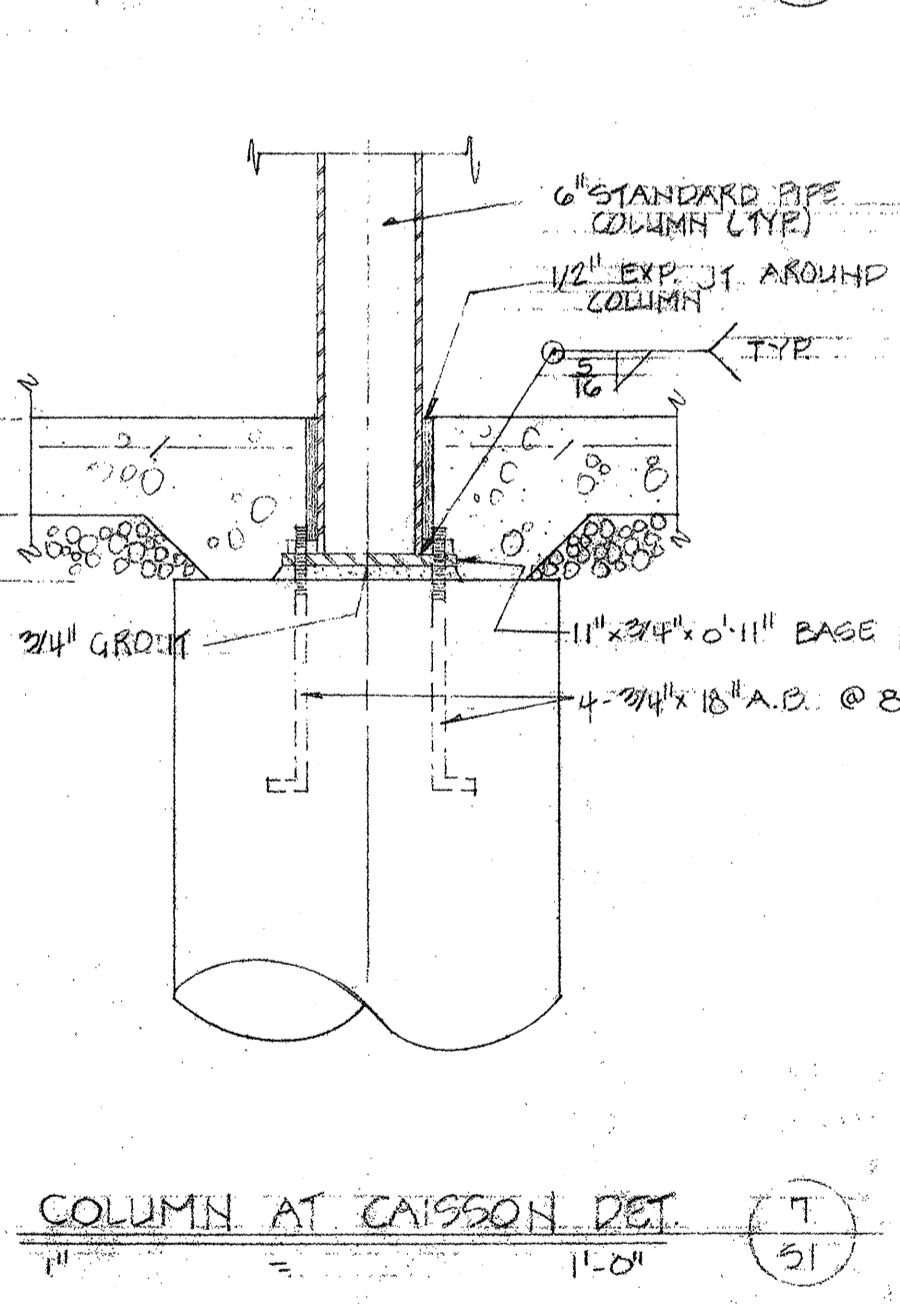
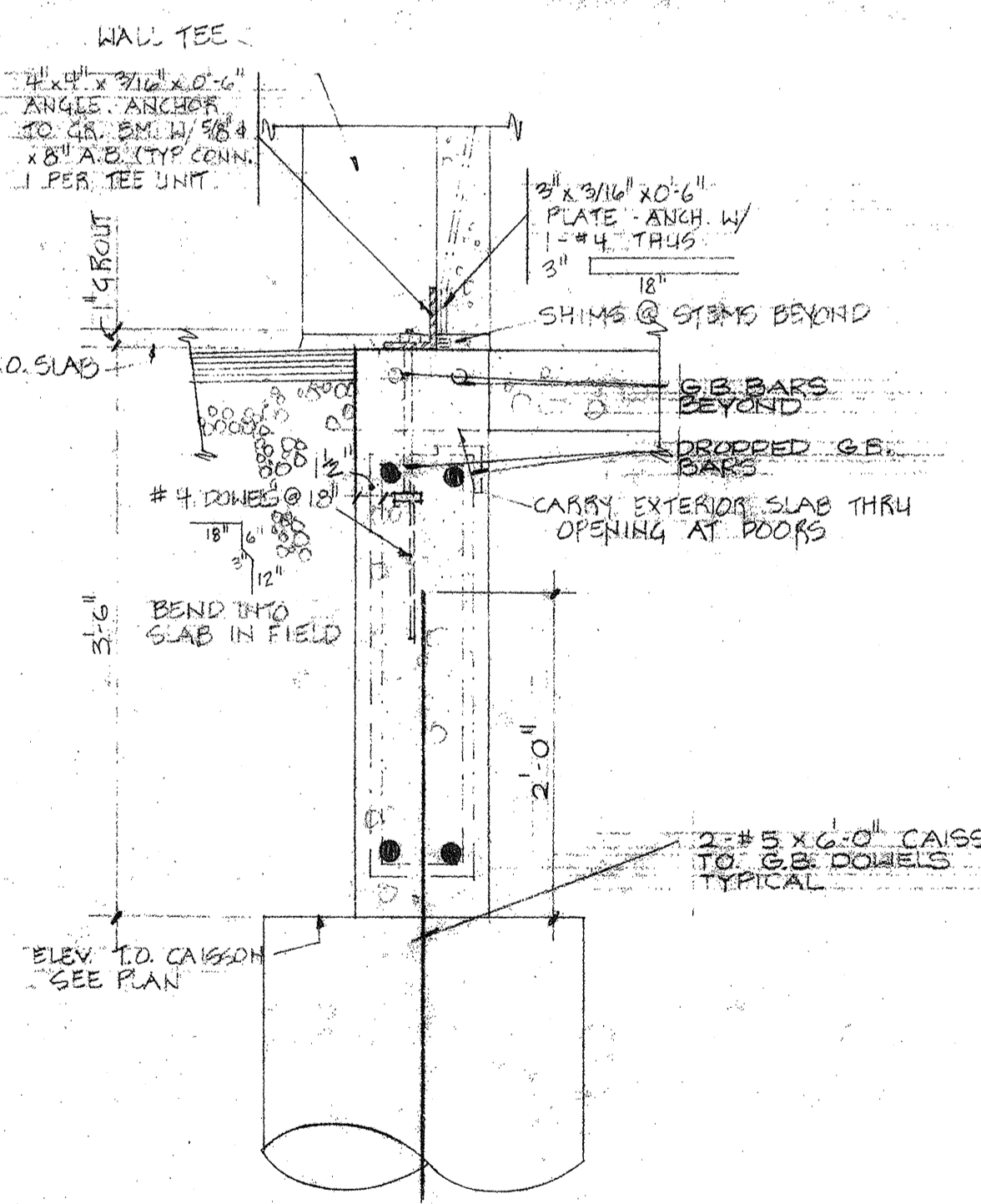
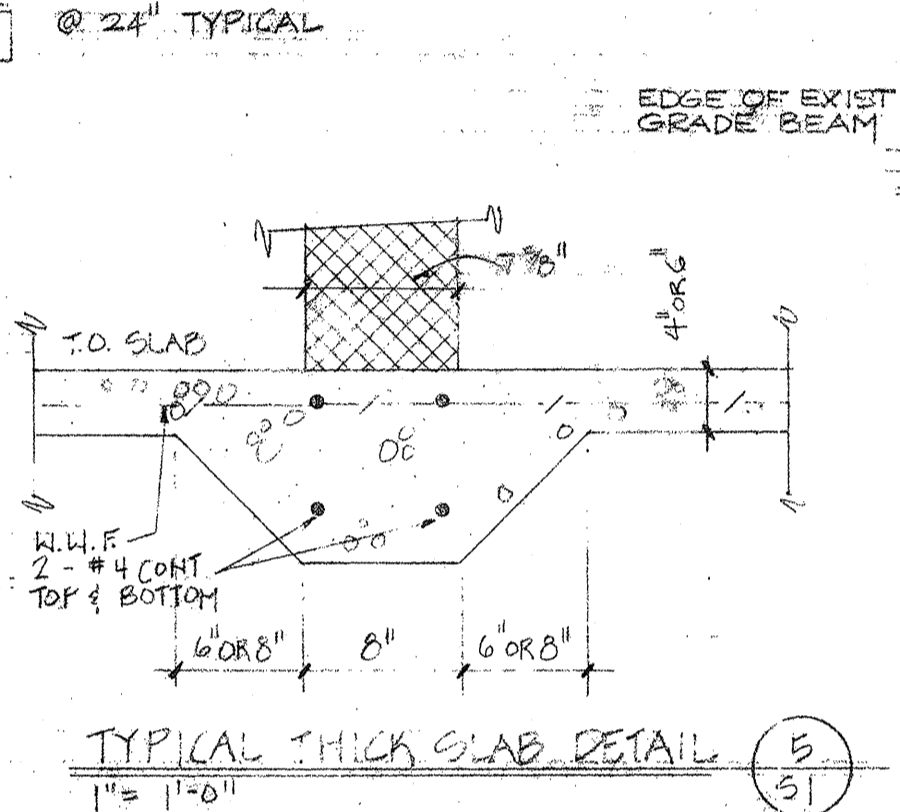
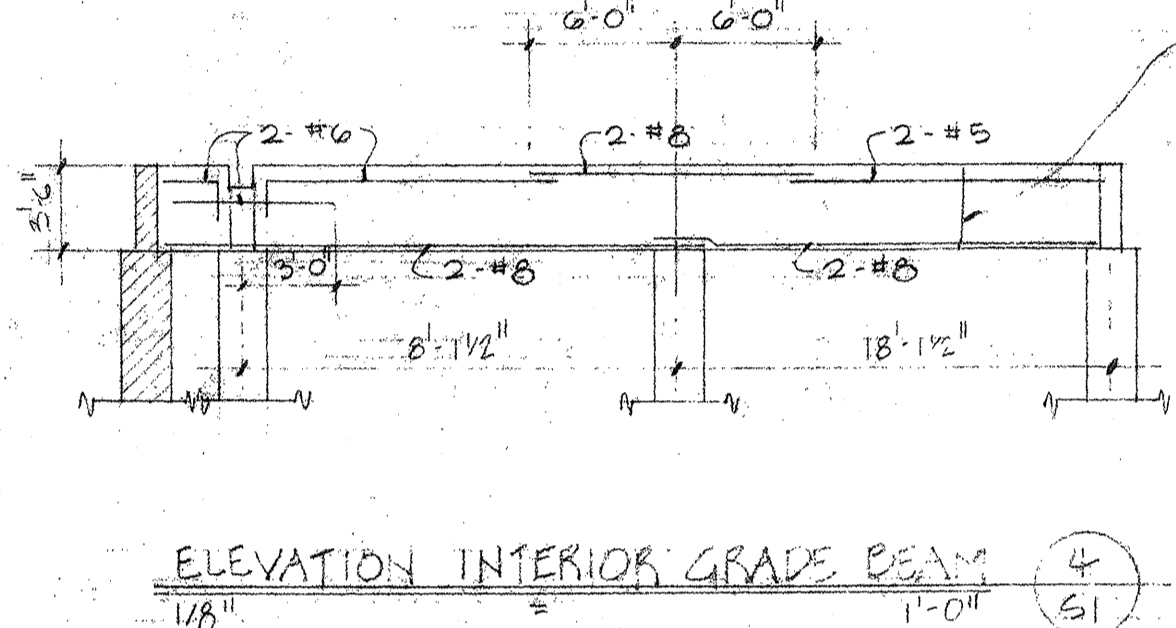
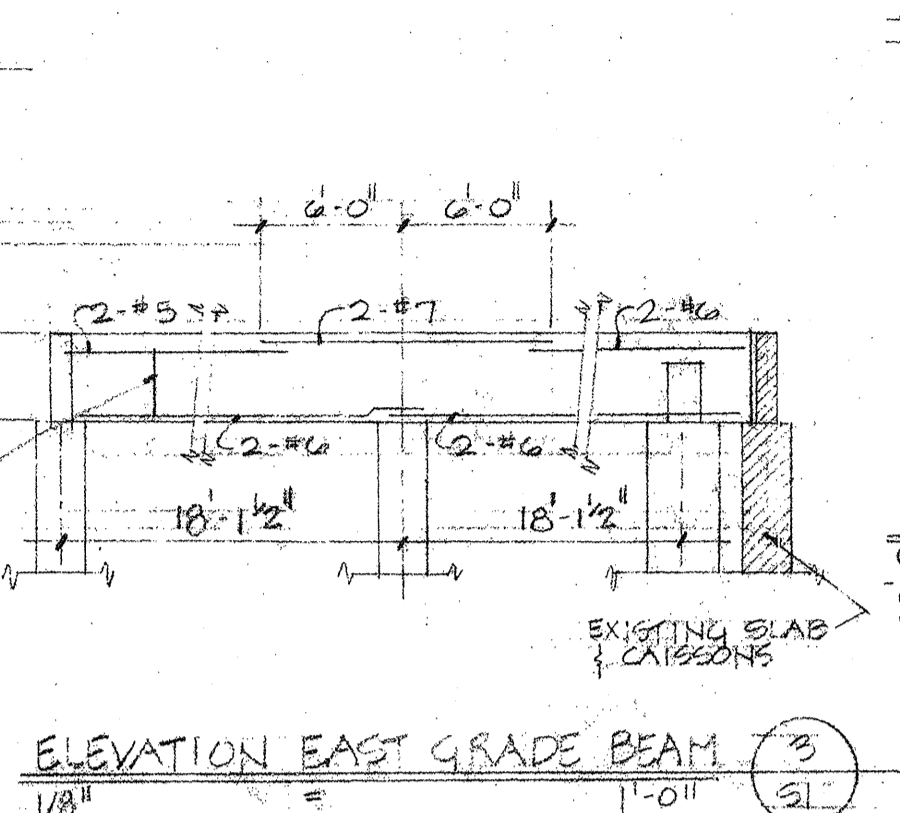
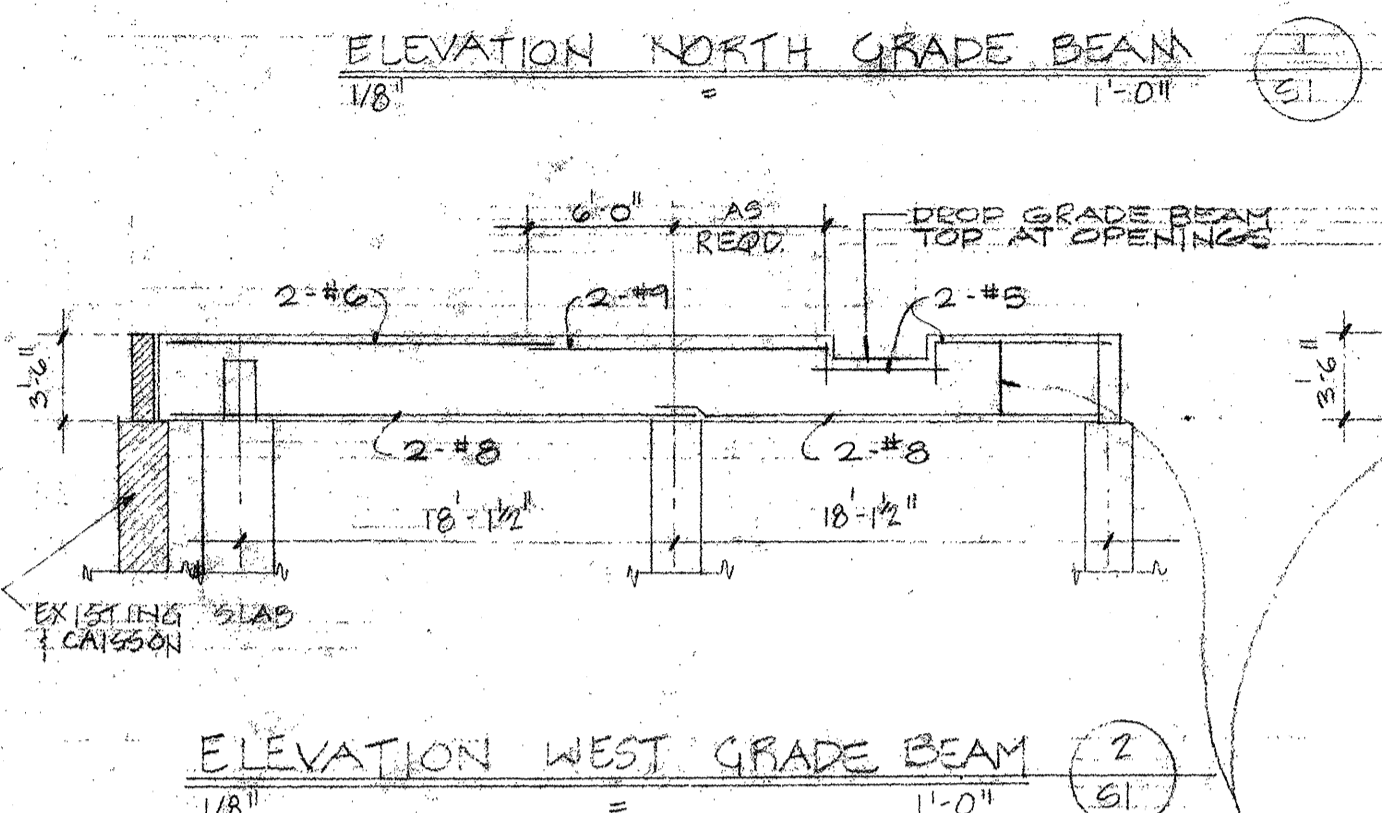
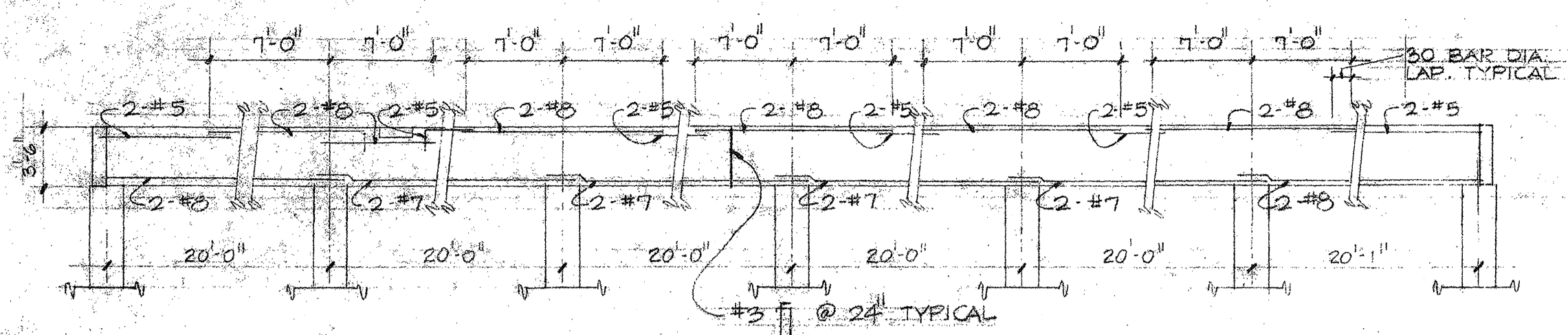
ROBB BRENNER INC.  
 ARCHITECTS  
 1000 N. 10TH ST.  
 DENVER, CO 80202  
 FEB 1978

BUILDING SECTIONS  
 DETAILS

AN ADDITION TO THE LOVELAND  
 WAREHOUSE FACILITY  
 CORNER RAILROAD WEST  
 LOVELAND, COLORADO

APPROVED FOR CONSTRUCTION  
 MUST COMPLY WITH ALL  
 CITY OF LOVELAND ORDINANCES

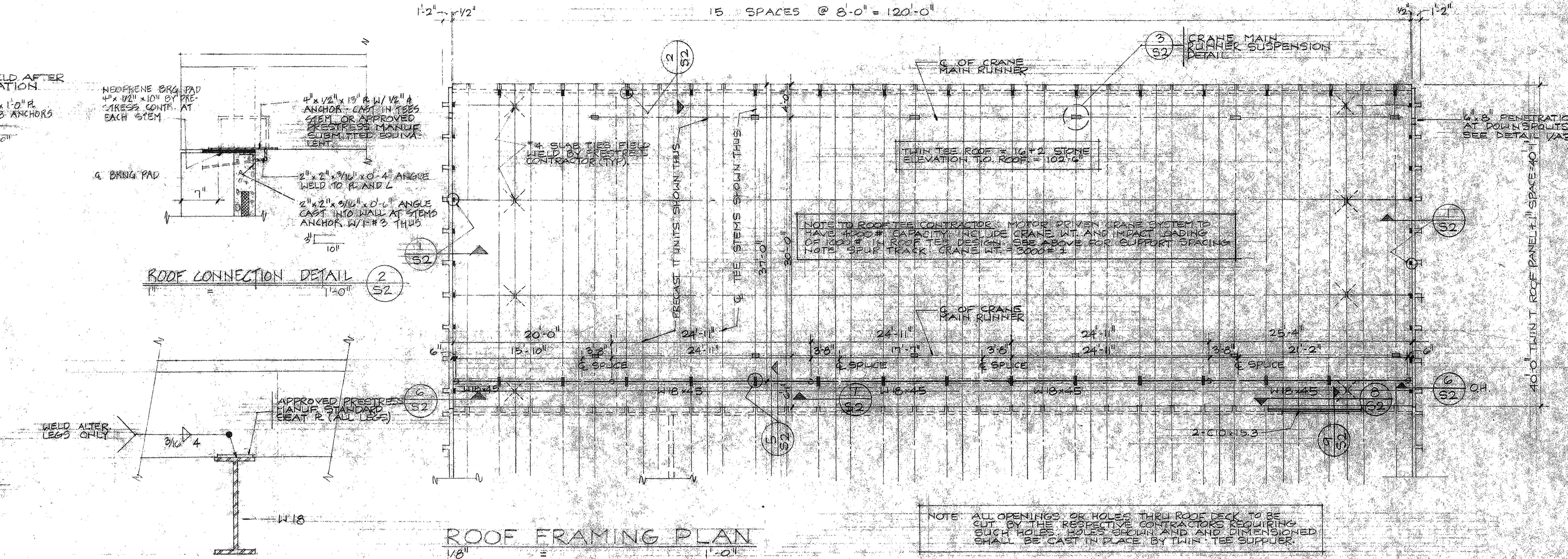
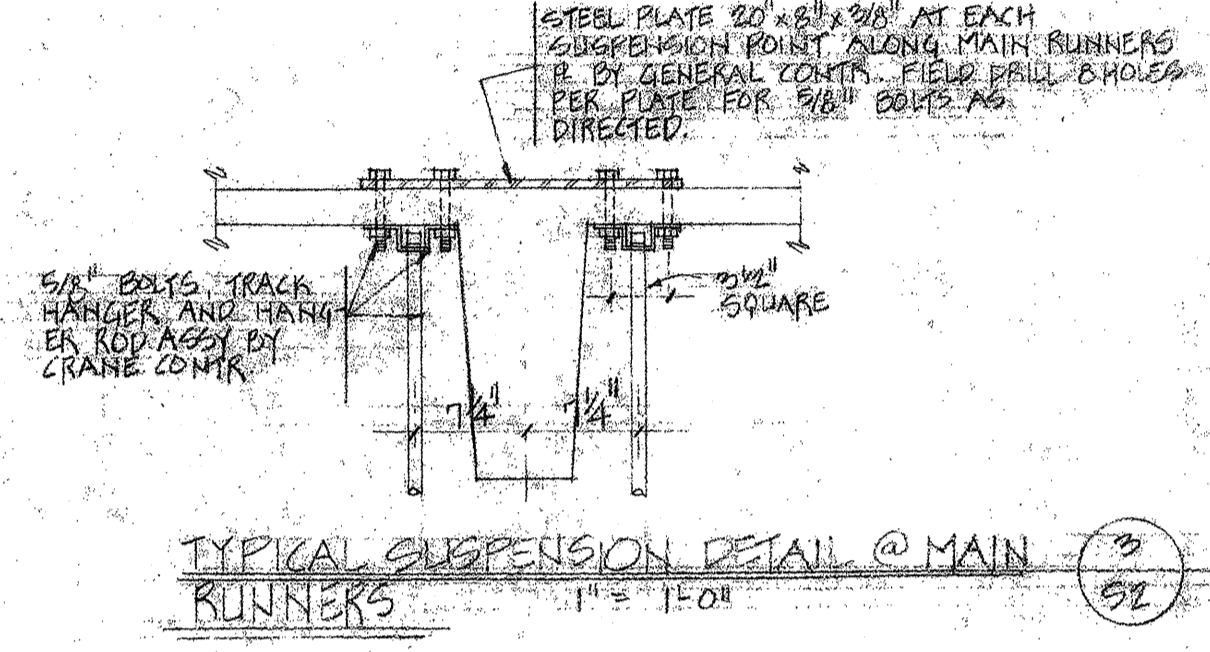
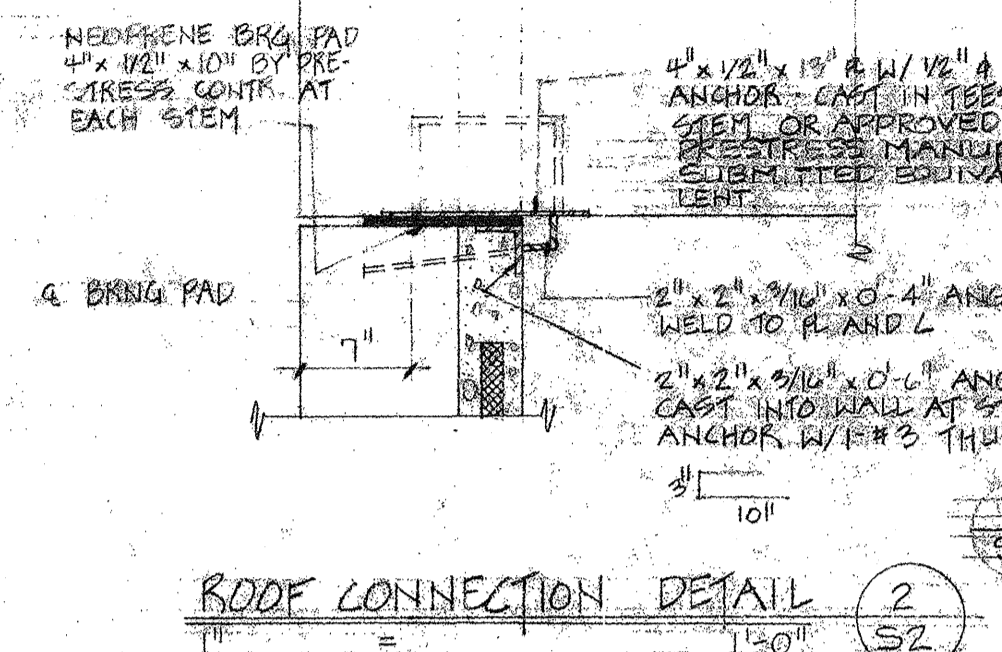
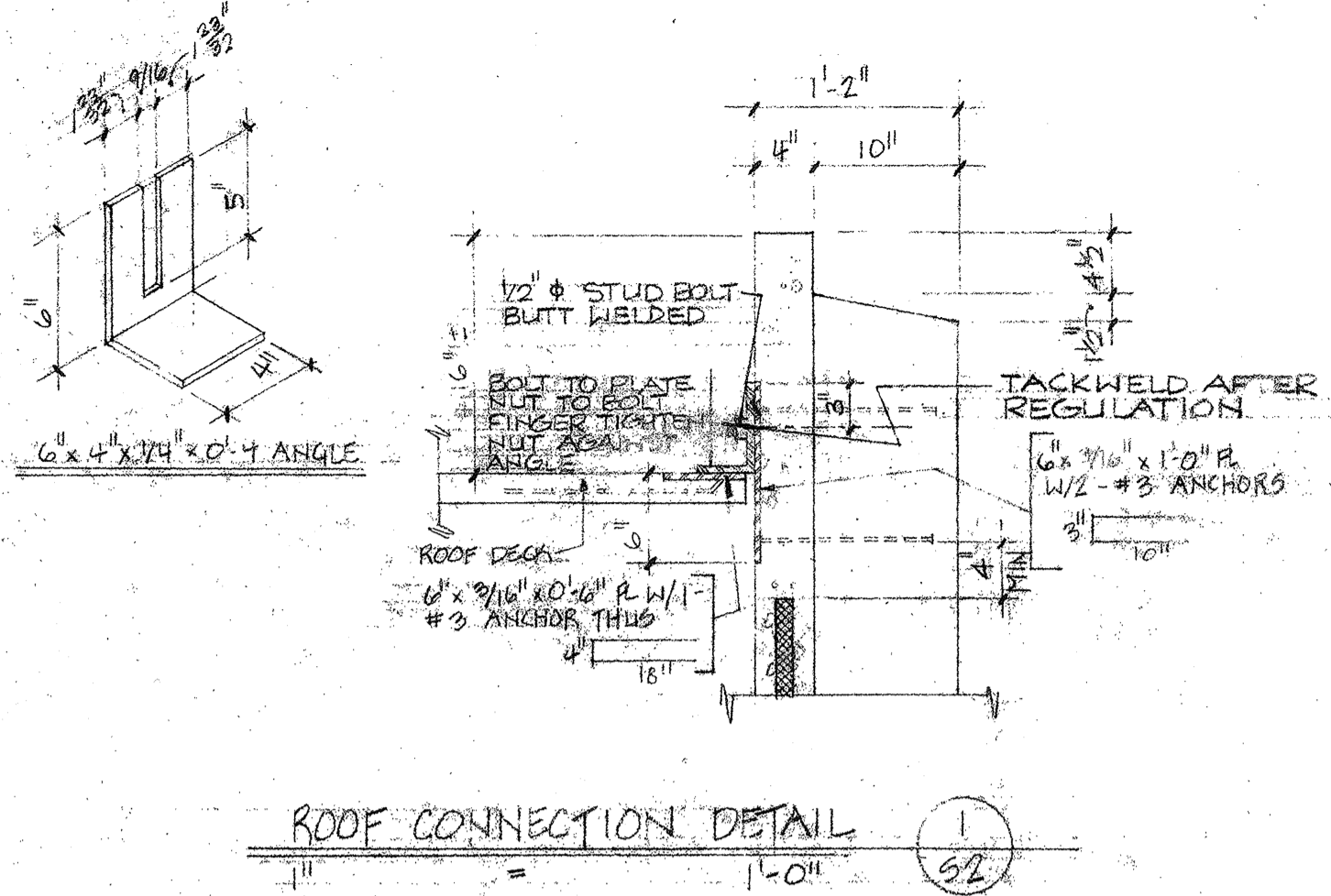




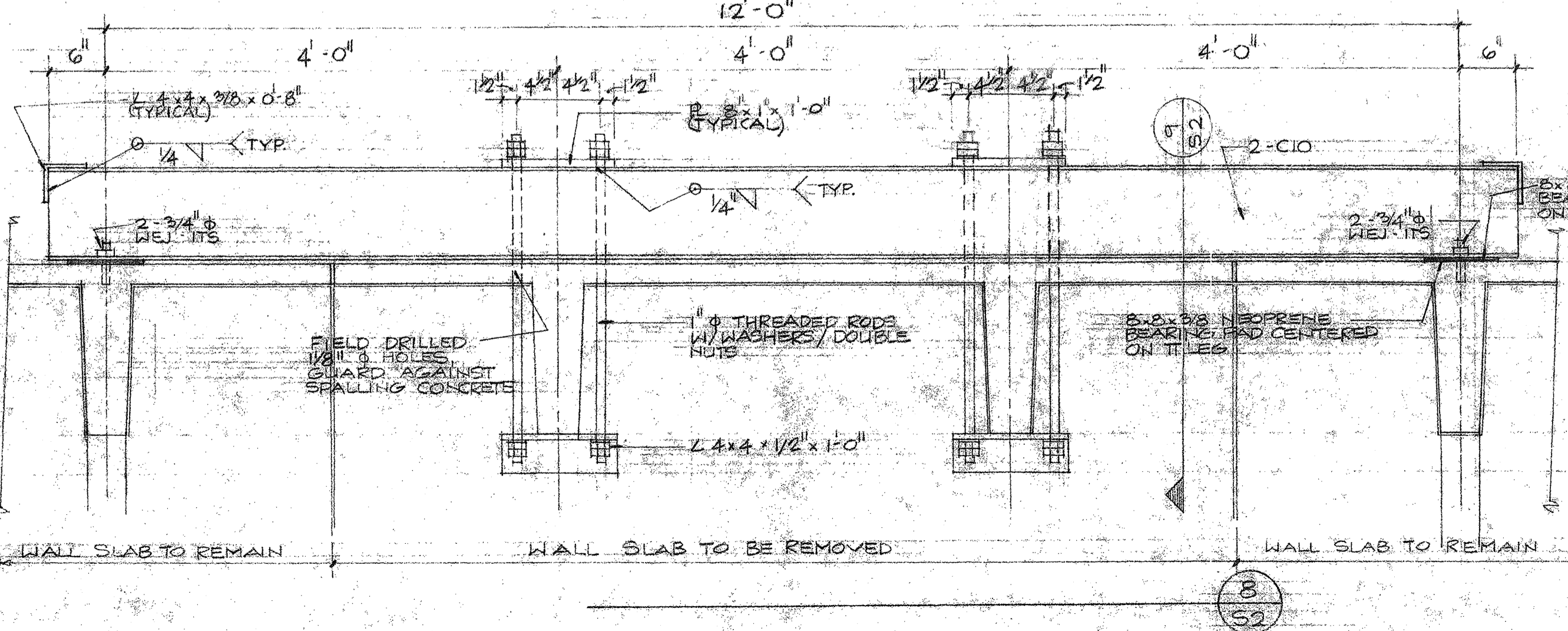
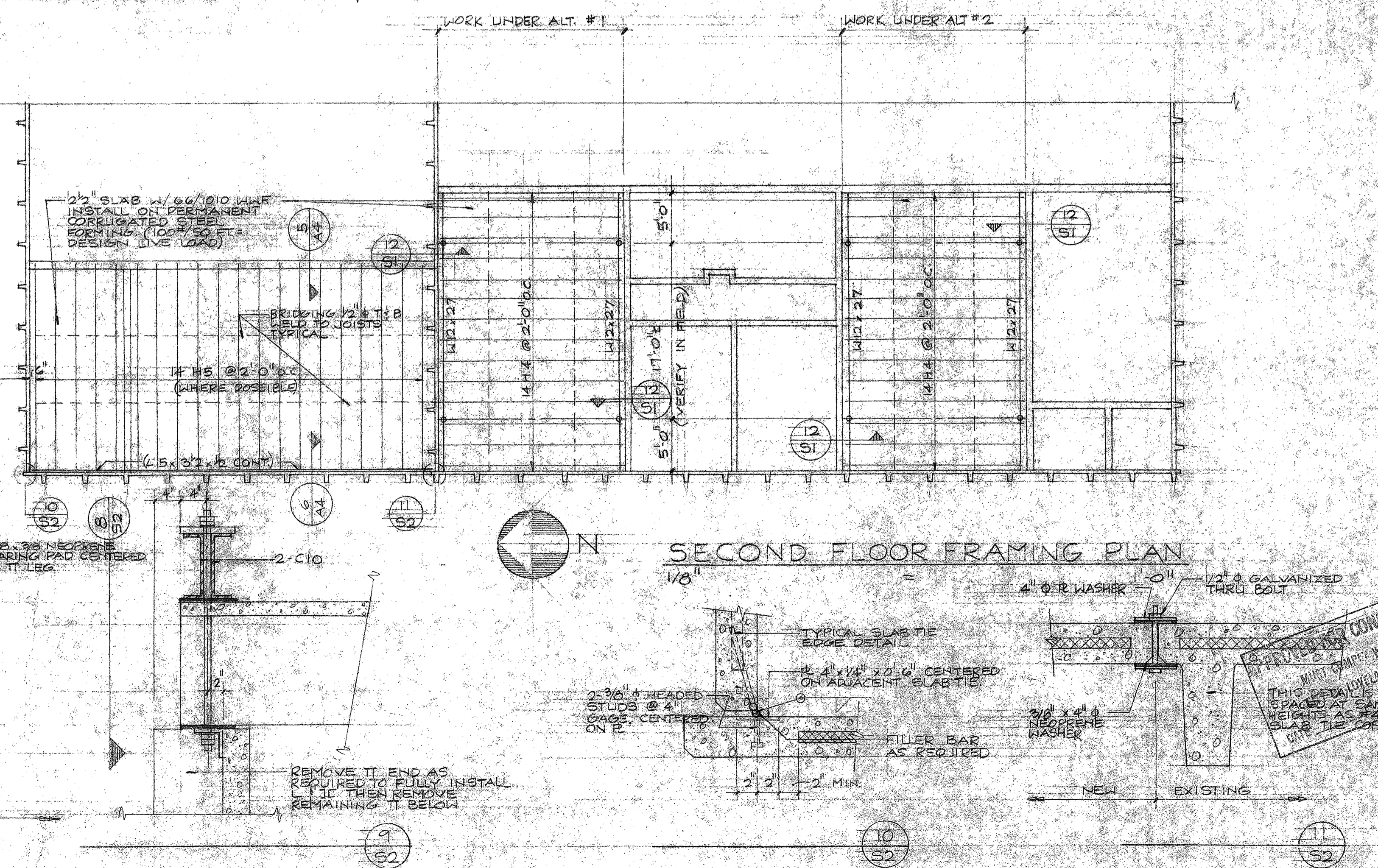
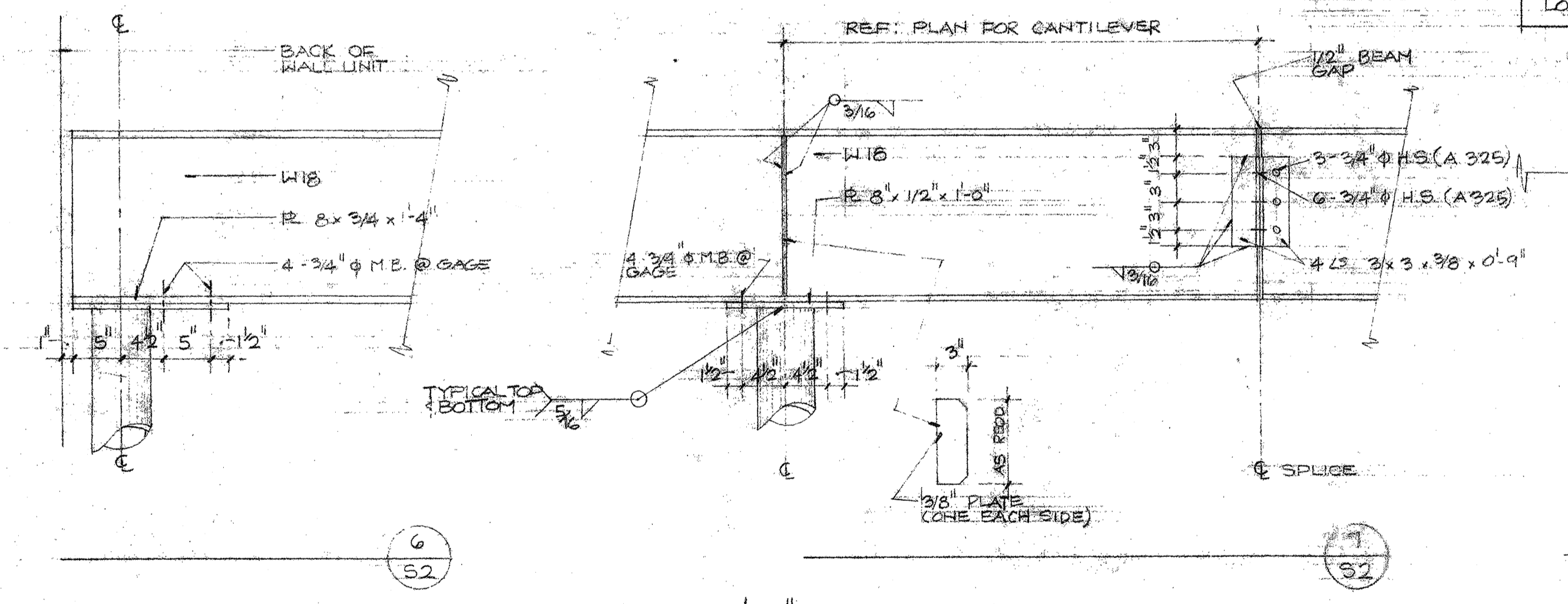
ROBB BRENNER INC  
ARCHITECTS PLANNERS  
FOUNDATION DETAILS  
11/15/13

AN ADDITION TO THE LOVELAND  
WAREHOUSE FACILITY  
COSTER FERRY ROAD, 14.5TH STREET  
LOVELAND, COLORADO

151



**GENERAL NOTES**  
 DESIGN LOADS: SNOW LOAD = 30 PSF  
 WIND LOAD = 30 PSF  
 DESIGN ALL ROOF TEES FOR SNOW LOAD PLUS ALL OTHER LIVE AND DEAD LOADS PROVIDE 0' CAMBER FOR FULL DEAD LOAD PLUS 1/3 LIVE LOAD



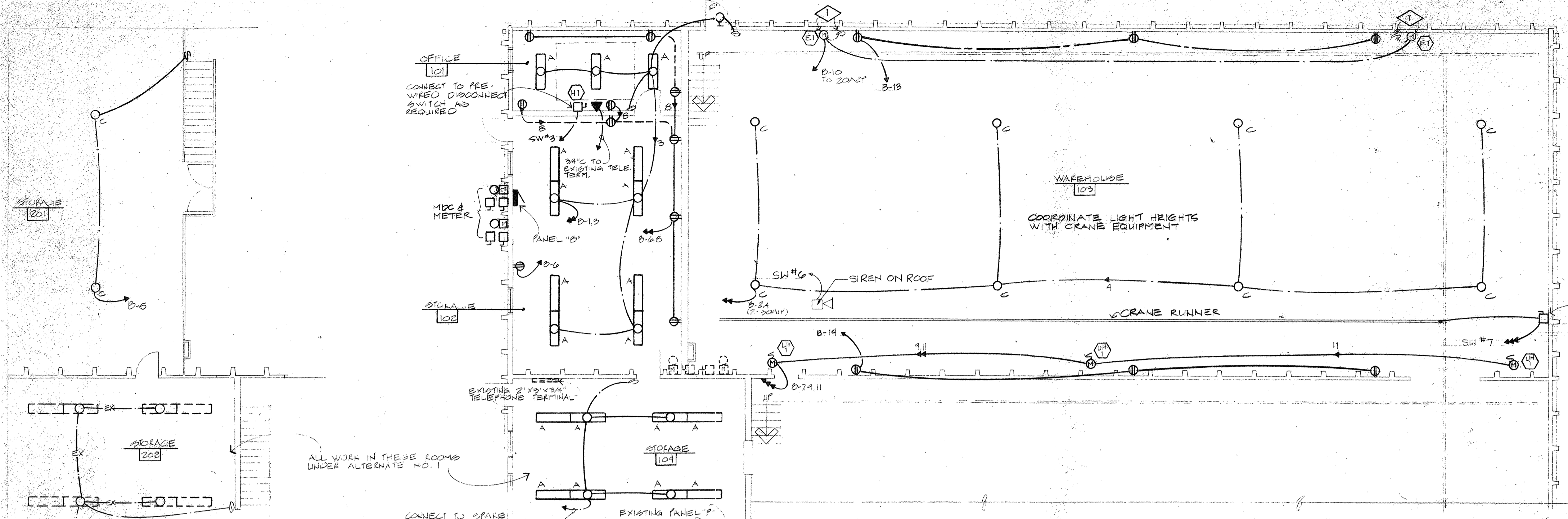
**ROBB BRENNER, INC.**  
 ARCHITECTS - COLORADO  
 1500 13TH AVENUE, SUITE 100  
 BOULDER, COLORADO 80502  
 PHONE: 303.440.1100  
 FAX: 303.440.1101  
 WWW: WWW.ROBBBRENNER.COM

**AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY**  
 CORNER RAILROAD BLVD. 5th  
 LOVELAND, COLORADO

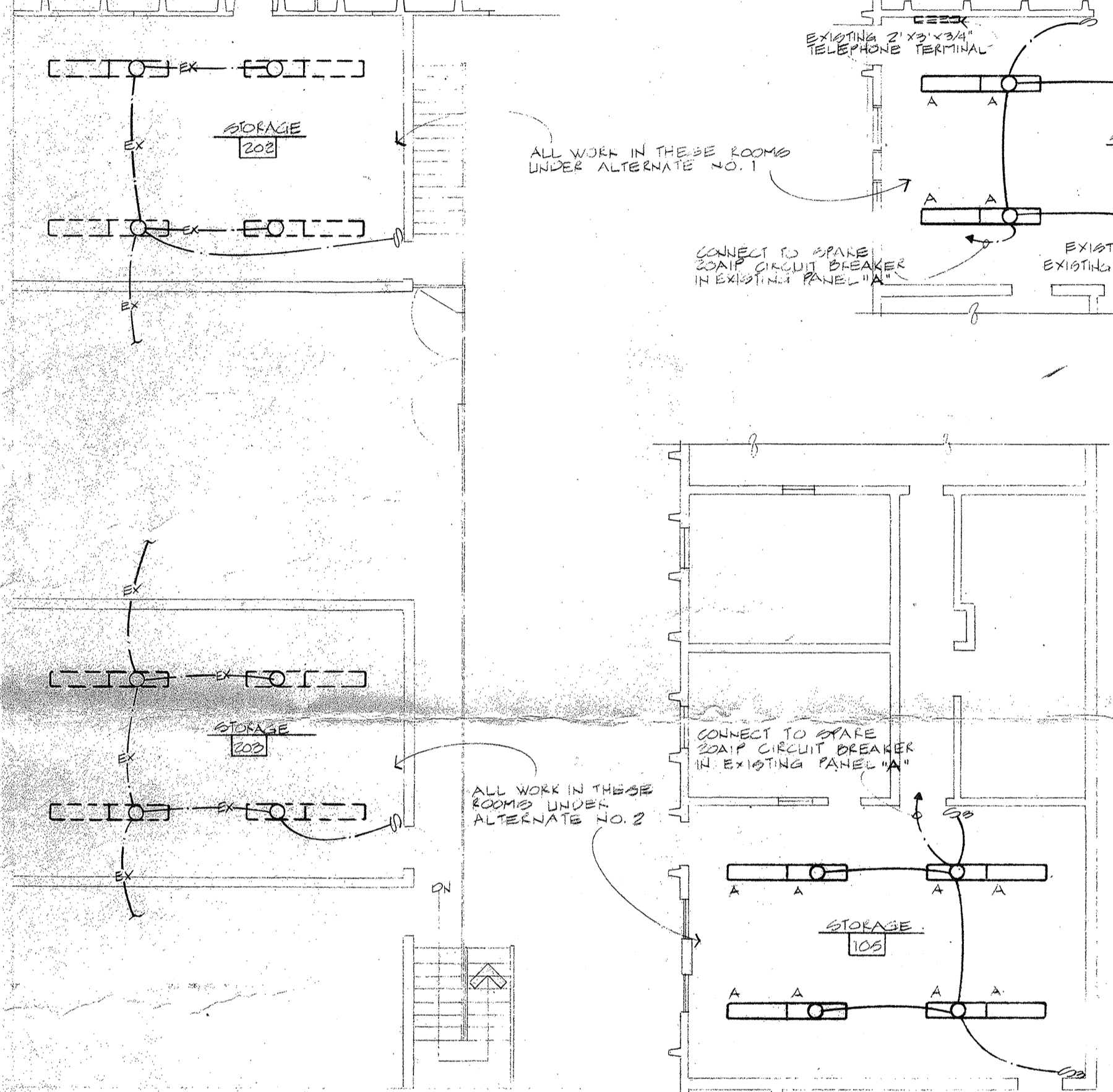
**CONSTRUCTION**  
 FRAMING PLANS  
 FIELD DETAILS

**52**





**First Floor Electrical Plan**  
Scale 1/8" = 1'0"



**Second Floor Electrical Plan**  
Scale 1/8" = 1'0"

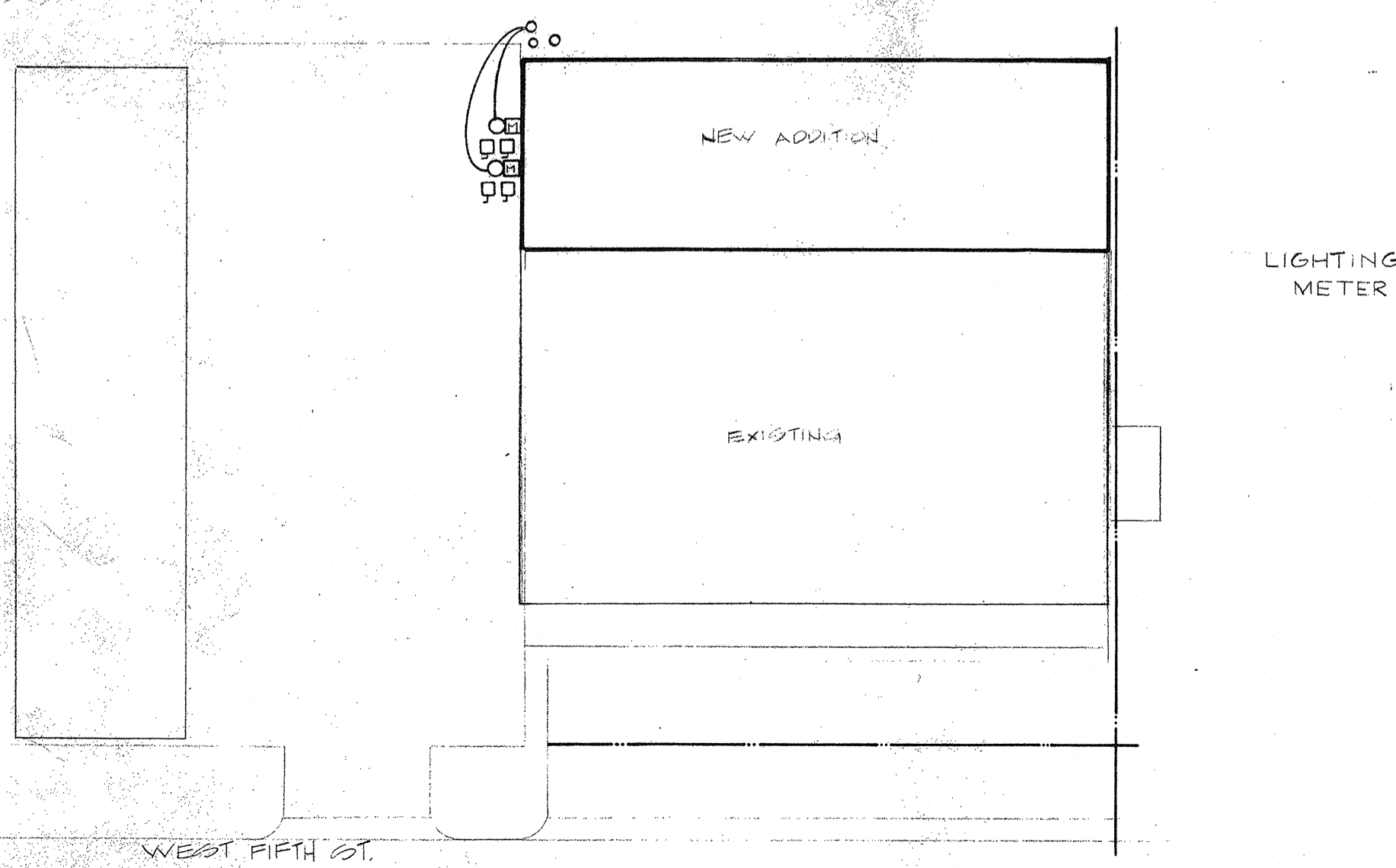
**Detail Notes This Sheet**

- ◇ RELOCATE EXISTING EXHAUST FAN AND TWO-SPEED SWITCH AS REQUIRED
- ◇ 30 A 3P NON-FUSIBLE DISCONNECT SWITCH - MOUNT @ 5'6" INSTALL JUNCTION BOX AT RAIL ELEVATION PULL #10 CONDUCTORS INTO JUNCTION BOX. MARK DISCONNECT CRANE

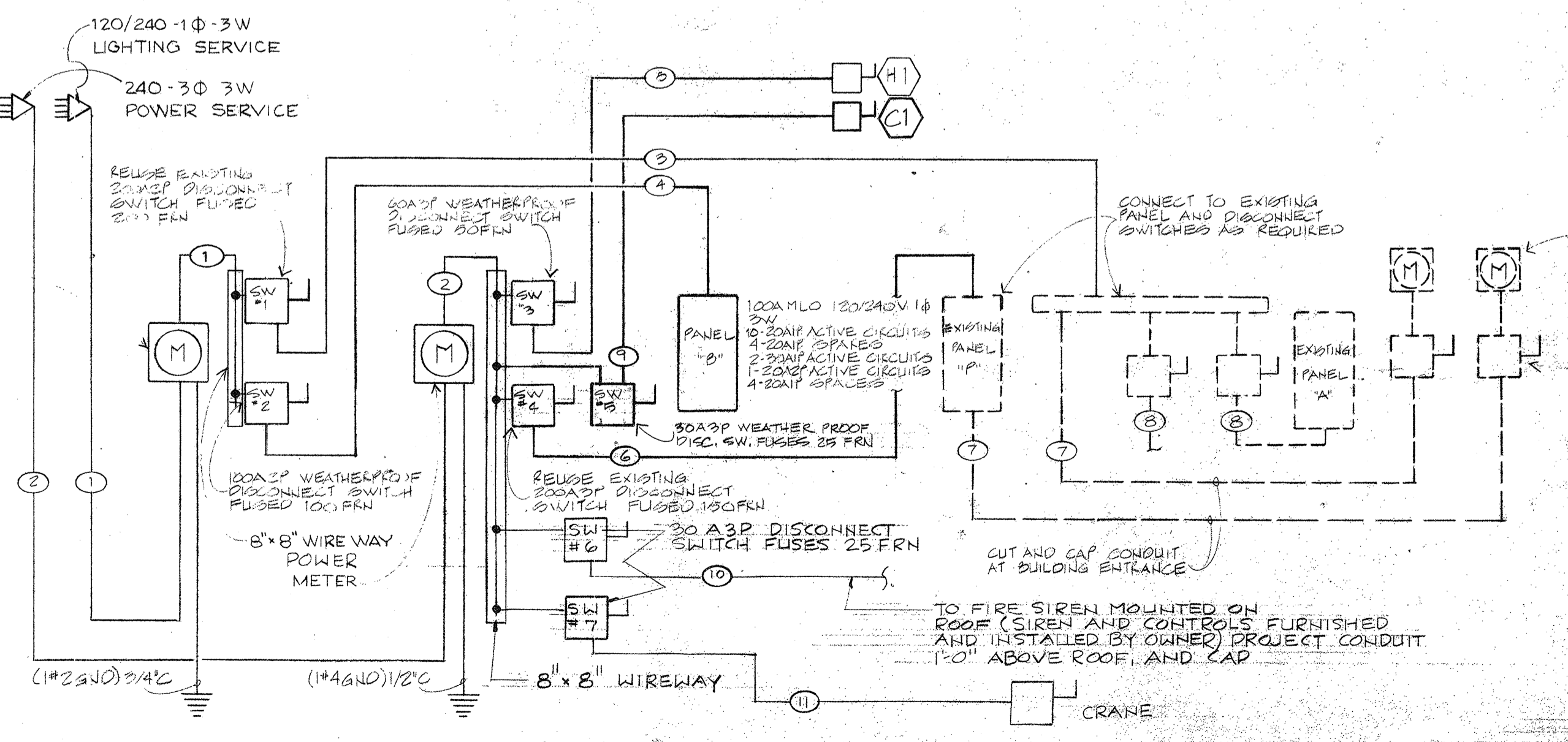
Symbol	Description
[Symbol]	Electrical Panelboard
[Symbol]	Telephone Terminal
[Symbol]	Circuit Run
[Symbol]	Home Run; arrows are no. of circuits
[Symbol]	Ceiling Outlet; letter gives fixt. type
[Symbol]	Wall Outlet
[Symbol]	Fluorescent Fixture
[Symbol]	Fluorescent Striplight
[Symbol]	Exit Light
[Symbol]	Porcelain Lampholder; Bryant 5228 with 150A lamp
[Symbol]	Junction Box
[Symbol]	Duplex Receptacle Outlet
[Symbol]	" " " one-half switched
[Symbol]	Receptacle Outlet; floor
[Symbol]	Special Purpose Outlet; noted
[Symbol]	Motor Outlet & Connection
[Symbol]	Magnetic Starter or Contactor
[Symbol]	Fused Safety Switch
[Symbol]	Circuit Breaker; diagramatic
[Symbol]	Single Pole Switch
[Symbol]	Three Way Switch
[Symbol]	Thermal Overload Switch
[Symbol]	Switch & Pilot Light
[Symbol]	Switch & Receptacle Outlet
[Symbol]	Telephone Outlet
[Symbol]	T.V. Outlet
[Symbol]	Pushbutton Station
[Symbol]	Meter
[Symbol]	Dimmer; as noted
[Symbol]	Thermostat
[Symbol]	Hood Connection
[Symbol]	Conduit up; down
[Symbol]	Electrical Service Entrance
[Symbol]	Telephone Service Entrance
[Symbol]	Disposer Connection
[Symbol]	Indicates Detail Note
[Symbol]	Indicates Mechanical Equipment

Fixture Schedule						
Key	Lamps	Description	Finish	Mounting	Manufacturer	Cat. No.
A	2-F40CW	11"x42" FLUORESCENT WITH ACRYLIC W/FRANGLING LENS	WHITE	SURFACE	LITHONIA	W4242N
B		OMMITTED				
C	250WIP	STANDARD DOME VENTED WITH 250A HEAVY DUTY LAMPHOLDER	WHITE	SURFACE	BENJAMIN	V8044
D	100W	CAST ALUMINUM WALL BRACKET WITH WHITE OVAL GLOBE-GASKETED	ALUM	WALL	ART METAL	9111

Mechanical Equipment Schedule									
Key	Description	HP	Watts	φ	Volts	Feeder	Breaker	Circuit	Remarks
UH1	UNIT HEATER #1	(2)	6000	1	120	(2" x 12) 1/2" C	20A1P	SEE PLAN	MOUNT TO SILE SWITCH ON ROOF
H1	HYAL UNIT		9000	3	220	(3" x 12) 1" C	20FPN	SEE PLAN	ON ROOF
EF1	EXISTING EXHAUST FAN	1/2	1200	1	220	(2" x 12) 1/2" C	20A1P	SEE PLAN	RELOCATE
C1	EXISTING CRANE	4	6200	3	220	(3" x 12) 1/2" C	25FPN	SW #3	CEILING



**Electrical Site Plan**  
Scale 1" = 30'

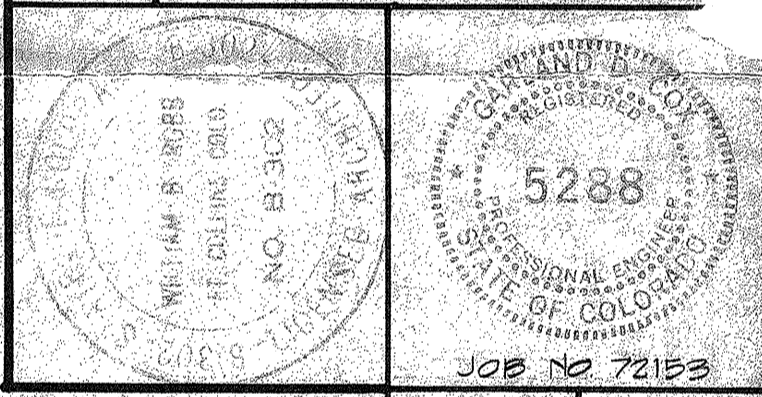


**Electrical 1-Line Diagram**

**Feeder Schedule**

- ① (3" x 12) 1/2" C
- ② (3" x 10) 2" C
- ③ (3" x 10) 2" C
- ④ (3" x 10) 2" C
- ⑤ (3" x 8) 3/4" C
- ⑥ (3" x 10) 1/2" C
- ⑦ DISCONNECT EXISTING SERVICE PULL WIRE OUT OF CONDUIT CUT AND CAP CONDUIT FLUSH WITH FLOOR
- ⑧ EXISTING FEEDER TO REMAIN
- ⑨ (3" x 10) 2" C
- ⑩ (3" x 12) 1/2" C
- ⑪ (3" x 10) 2" C

**APPROVED FOR CONSTRUCTION**  
MUST COMPLY WITH ALL CITY OF LOVELAND CODES  
DATE \_\_\_\_\_

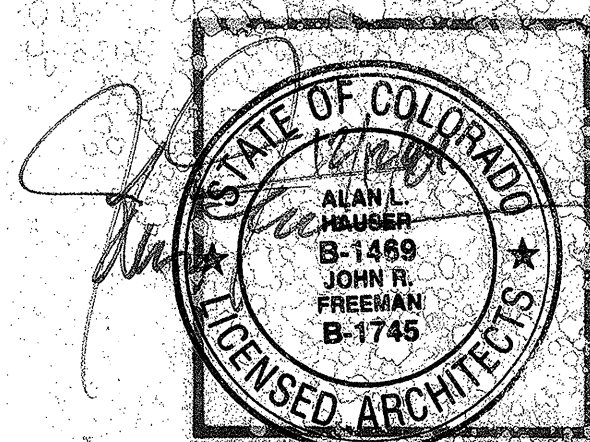


ROBB E. BENNER, INC.  
ELECTRICAL ENGINEERS  
P.O. BOX 1000  
LOVELAND, COLORADO  
DATE: JUL 11, 2014  
CHKD: \_\_\_\_\_

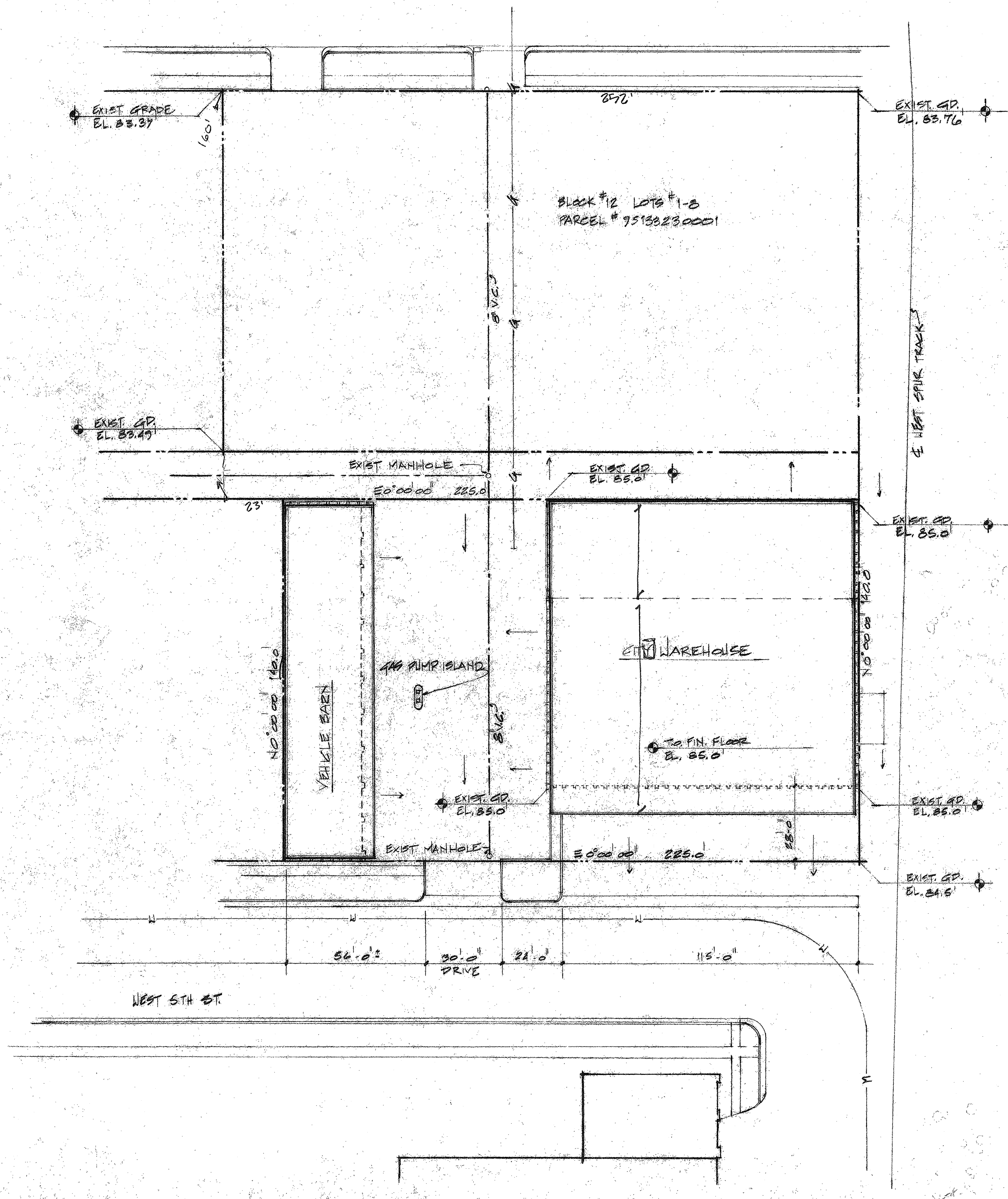
ELECTRICAL PLANS  
SCHEDULES  
DETAILS

AN ADDITION TO THE LOVELAND WAREHOUSE FACILITY  
CORNER RAILROAD 1 W 5TH  
LOVELAND, COLORADO





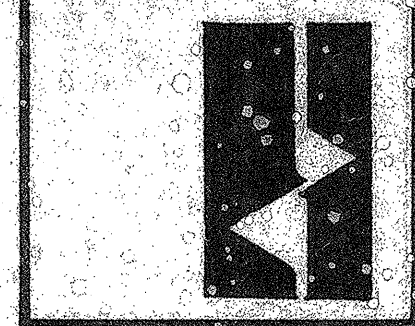
CITY OF LOVELAND WAREHOUSE  
 BLOCK 12 LOTS #19-24  
 ORIGINAL TOWN  
 LARIMER COUNTY  
 STATE OF COLORADO  
 PARCEL # 95133239119



SITE PLAN  
 1"=30'  
 NORTH

**ARCHITECTURE ONE**  
 ARCHITECTS/PLANNERS, P.C.  
 PALMER GARDENS, SUITE 200  
 150 EAST 29th STREET, LOVELAND, COLORADO 80538  
 303/669-9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
 CITY OF LOVELAND



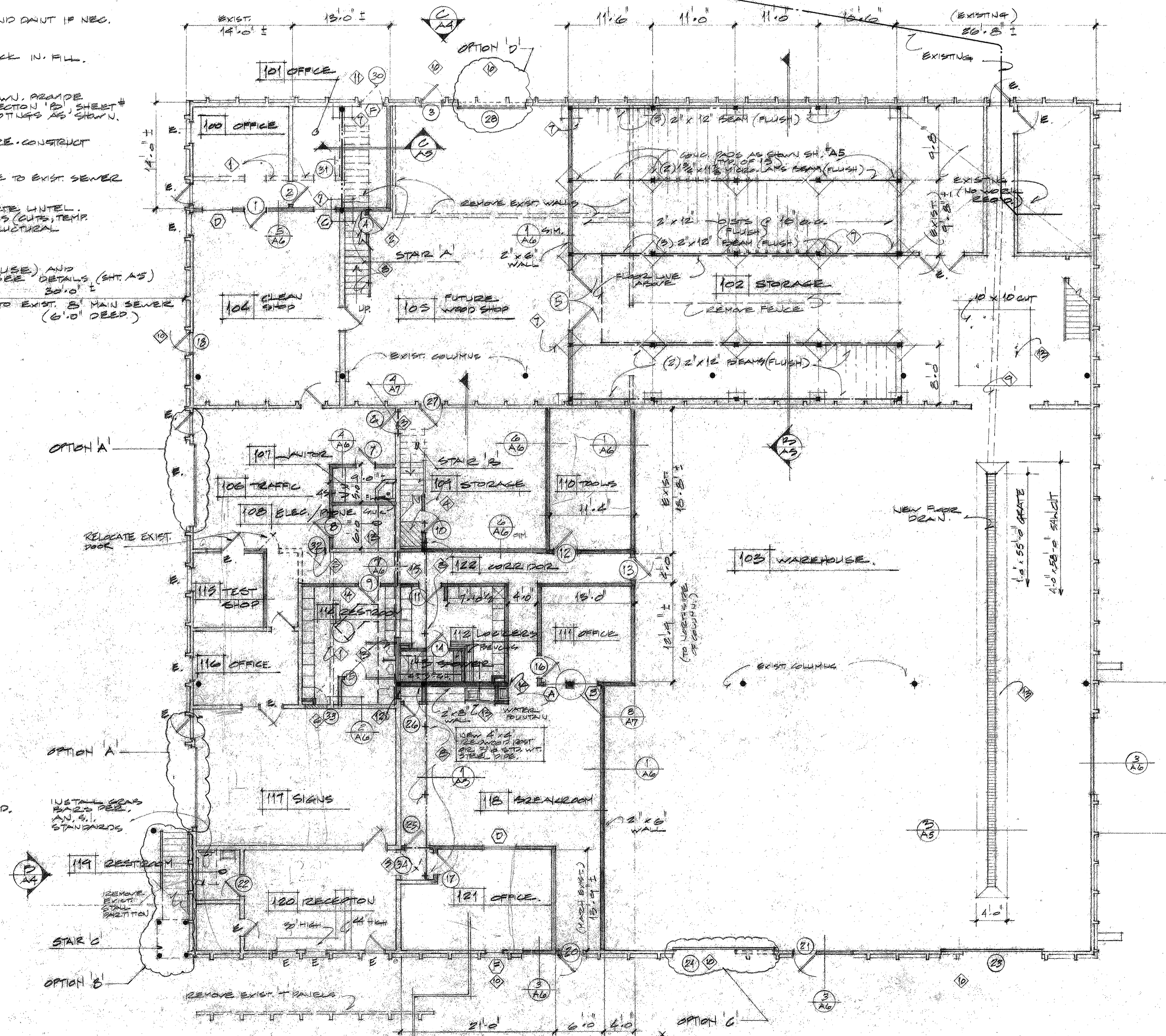
PROJECT NO.	126-02	DATE	11/21/18
REVISIONS	CHECKED	DATE	
	ENTERED	DATE	
		DEC. 14, 1988	

# DEMOLITION/CONSTRUCTION NOTES:

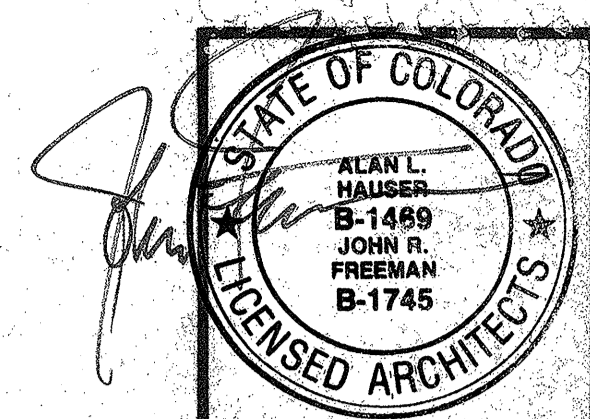
- 1 REMOVE EXIST. 8" CONC. BLOCK WALL (FLOOR TO BOTTOM OF BAR WOLFS) PAINT FLOOR TO MATCH
- 2 DISMANTLE EXIST. STAIR (IN ONE PIECE) REMOVE HAND RAIL, AND RE-LOCATE TO NEW LANDING AREA AS SHOWN. REMOVE EXIST. LANDING. RE-BUILD ALL HAND RAILS PER DETAILS. (SHEET A5)
- 3 CUT NEW HOLE IN EXIST. 8" CONC. BLOCK WALL FOR NEW 30" DOOR. HOLE TO BE 5'4" X 7'4" FOR HOLLOW METAL FRAME. PROVIDE LINTEL AS SHOWN IN DETAILS. (SHEET A5)
- 4 DISMANTLE EXIST. STAIR/RAILING (IN ONE PIECE). REMOVE EXIST. 5" SECTION OF LANDING. SLIDE STAIR FORWARD AND RE-ATTACH TO EXIST. LANDING. RE-BUILD RAILING TO MATCH EXIST.
- 5 REMOVE EXIST. DOOR AND HINGES. REPAIR AND PAINT IF NEC. AND RE-LOCATE TO NEW DOOR LOCATION.
- 6 REMOVE EXIST. DOOR AND FRAME, 8" CONC. BLOCK IN-FILL. PAINT AND PATCH UP TO MATCH EXIST.
- 7 CUT EXIST. SLAB @ COLUMN LOCATION AS SHOWN. GRADE NEW CONC. PAD FOOTINGS AS DETAILED IN SECTION 102, SHEET A5. SAW-CUT CONTROL JOINTS BETWEEN PAD FOOTINGS AS SHOWN.
- 8 REMOVE EXIST. 2'X3' STEEL COLUMN AND RE-CONSTRUCT LANDING ABOVE AS DETAILED ON (1/A5)
- 9 CUT SLAB AND LAY 4" Ø PVC DRAIN PIPE, TIE TO EXIST. SEWER
- 10 CUT EXIST. T PANELS AND PROVIDE ENG. CONCRETE LINTEL. ALL DEMOLITION AND CONSTRUCTION THESE AREAS (CUTS, TEMP. SUPPORTS, LINTEL CONSTRUCTION, ETC.) PER STRUCTURAL ENG. DETAILS, SPECIFICATIONS.
- 11 REMOVE EXIST. DOOR FRAME (SAVE & RE-USE) AND REPLACE W/ NEW DOUBLE HUNG WINDOW. SEE DETAILS (SHT. A5)
- 12 DEMOLISH BLOCK WALL AS NECESSARY TO ALLOW FOR NEW PLUMBING VENTS.
- 13 CUT AND REMOVE FLOOR SLAB FOR PLUMBING WORK.
- 14 RELOCATE EXIST. WATER COOLER IN HALLWAY TO ROOM 115 BREAKROOM.
- 15 CUT 4" OPENING IN CONC. BLOCK WALL.

## LEGEND

- 1 SEE DEMOLISH NOTES THIS SHEET
- 2 NEW DOOR NUMBERS. SEE SHEET #7
- 3 WINDOW DESIGNATION. SEE SHEET #7
- 4 EXIST. WINDOW OR DOOR. NO WORK REQ'D.

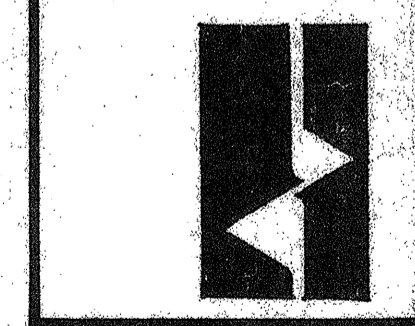


MAIN FLOOR PLAN  
SCALE: 1/8" = 1'-0"

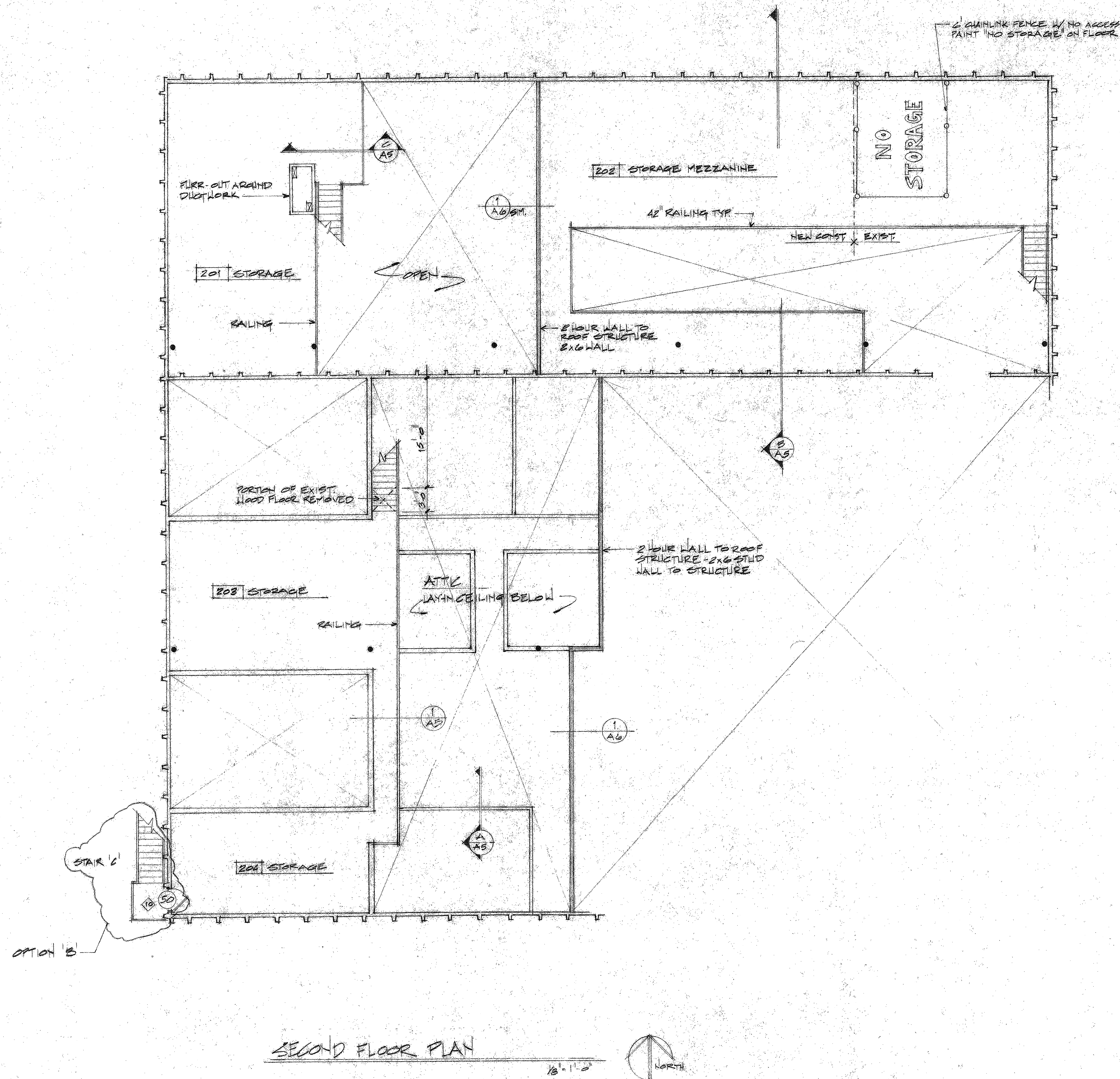
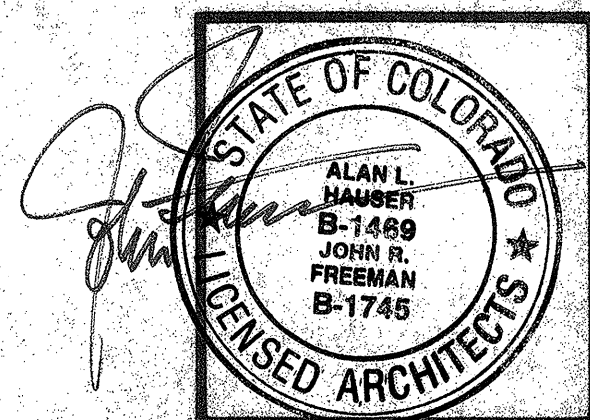


**ARCHITECTURE ONE**  
ARCHITECTS / PLANNERS, P.C.  
FIRESIDE SQUARE, SUITE 200  
107 WEST 29th STREET LOVELAND, COLORADO 80538  
303/669-9060

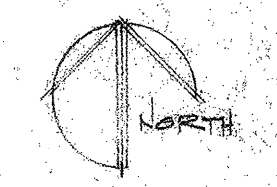
RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND



PROJECT NO.	426-02	M/L/W	
REVISIONS	CHECKED		
	ENTERED DEC 14 1989		11/24/89

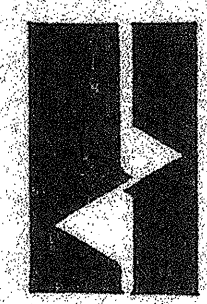


SECOND FLOOR PLAN  
1/8" = 1'-0"

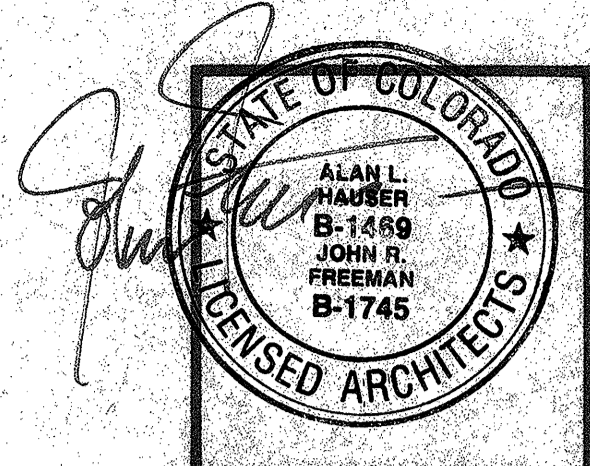


**ARCHITECTURE ONE**  
ARCHITECTS/PLANNERS - P.C.  
PALMER GARDENS, SUITE 200  
150 EAST 29th STREET LOVELAND, COLORADO 80538  
303/669-9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND

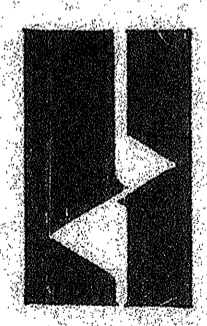


PROJECT NO. 126-02	CW	1/1/99
REVISIONS	CHECKED	
	ENTERED DEC 14 1999	

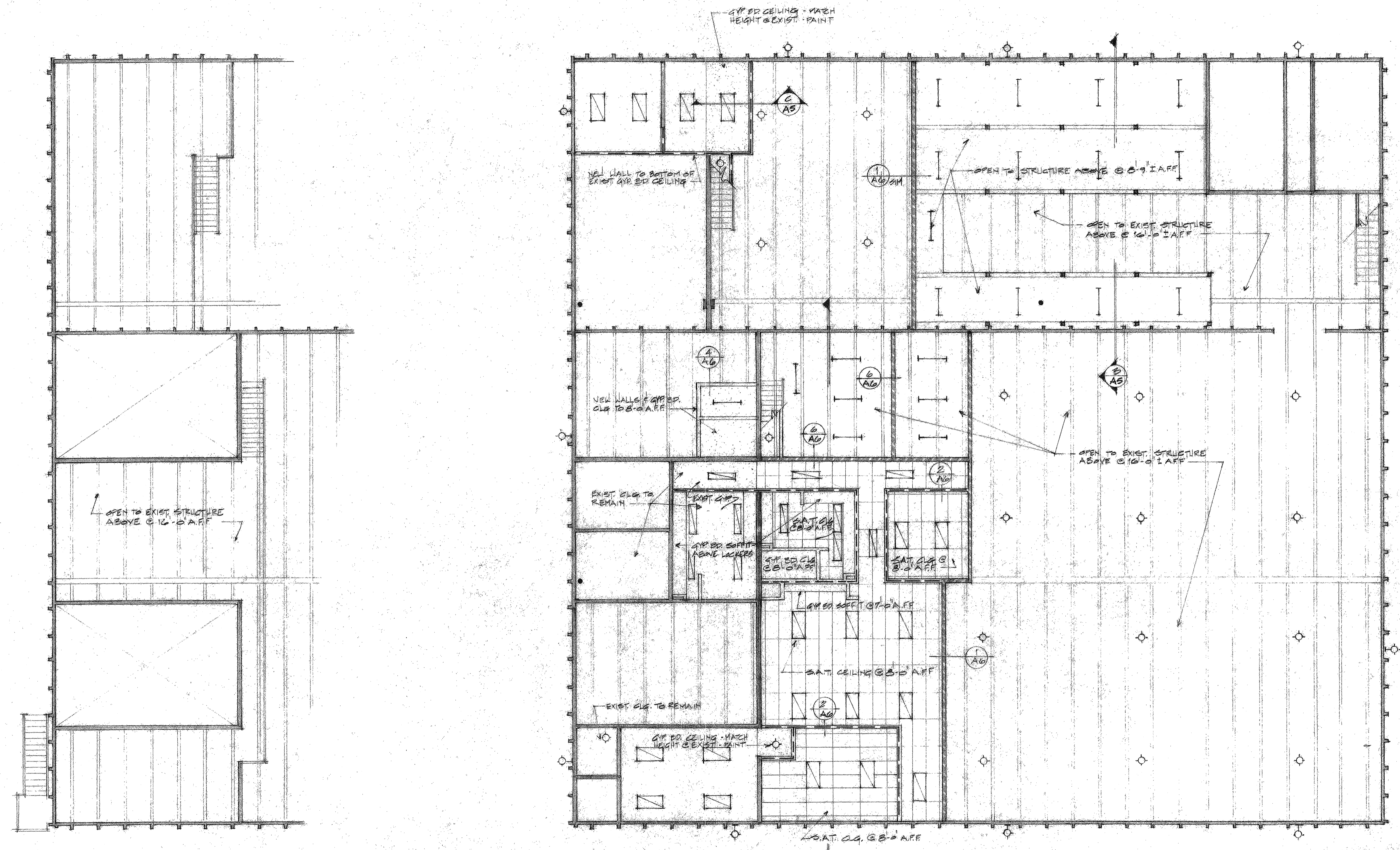


**ARCHITECTURE ONE**  
 ARCHITECTS/PLANNERS, P.C.  
 303 / 669-9060  
 PALMER GARDENS, SUITE 200  
 150 EAST 29th STREET, LOVELAND, COLORADO 80538

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
 CITY OF LOVELAND



PROJECT NO. 116-02	CW 11/10/04
REVISIONS	CHECKED
ENTERED DEC 14 1999	



**SECOND FLOOR - REFLECTED CEILING PLAN**  
 1/8" = 1'-0"

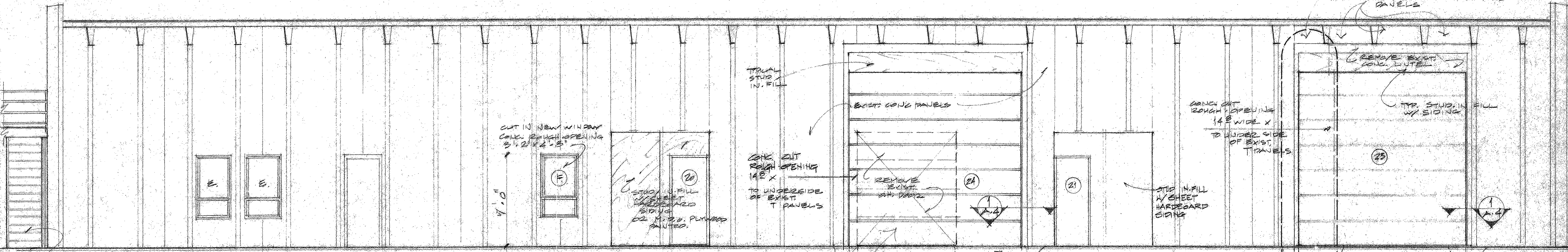
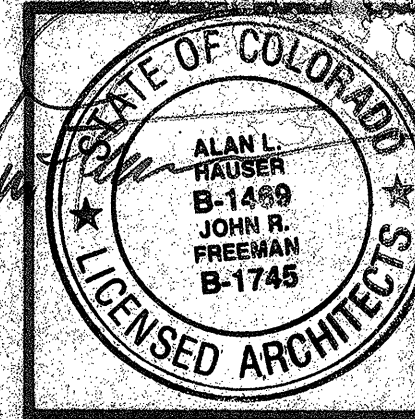
**REFLECTED CEILING PLAN - MAIN FLOOR**  
 1/8" = 1'-0"

**LEGEND**

	EXIST. WALLS
	WALLS TO STRUCTURE ABOVE -
	WALLS TO BE 8'-0" OR 8'-6"
	FLUORESCENT FIXTURES SEE ELEC. PLAN
	INCANDESCENT FIXTURES SEE ELEC. PLAN
	HID FLOODLIGHTS SEE ELEC. PLANS

TELETYPE POST

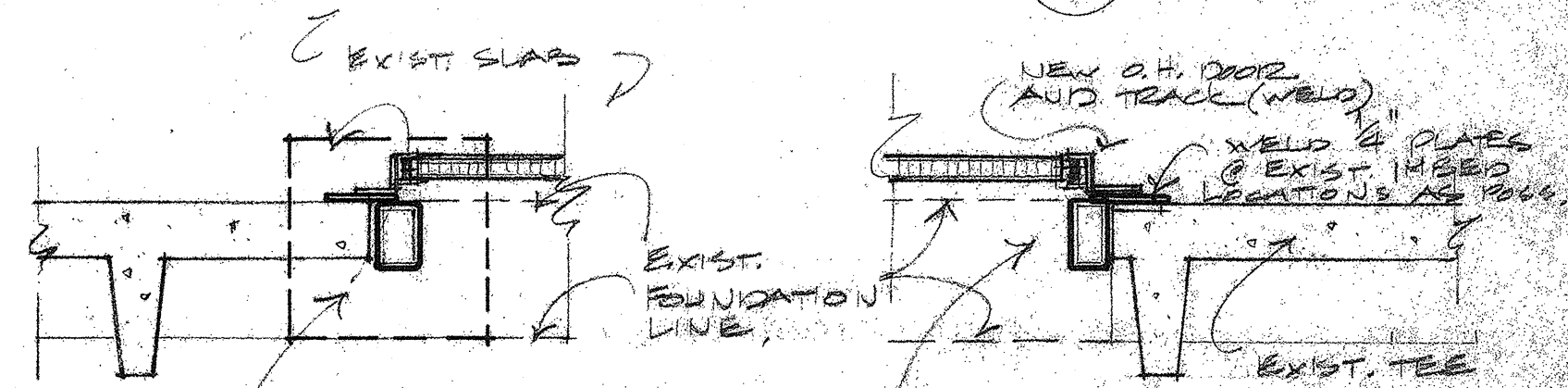




**SOUTH ELEVATION**

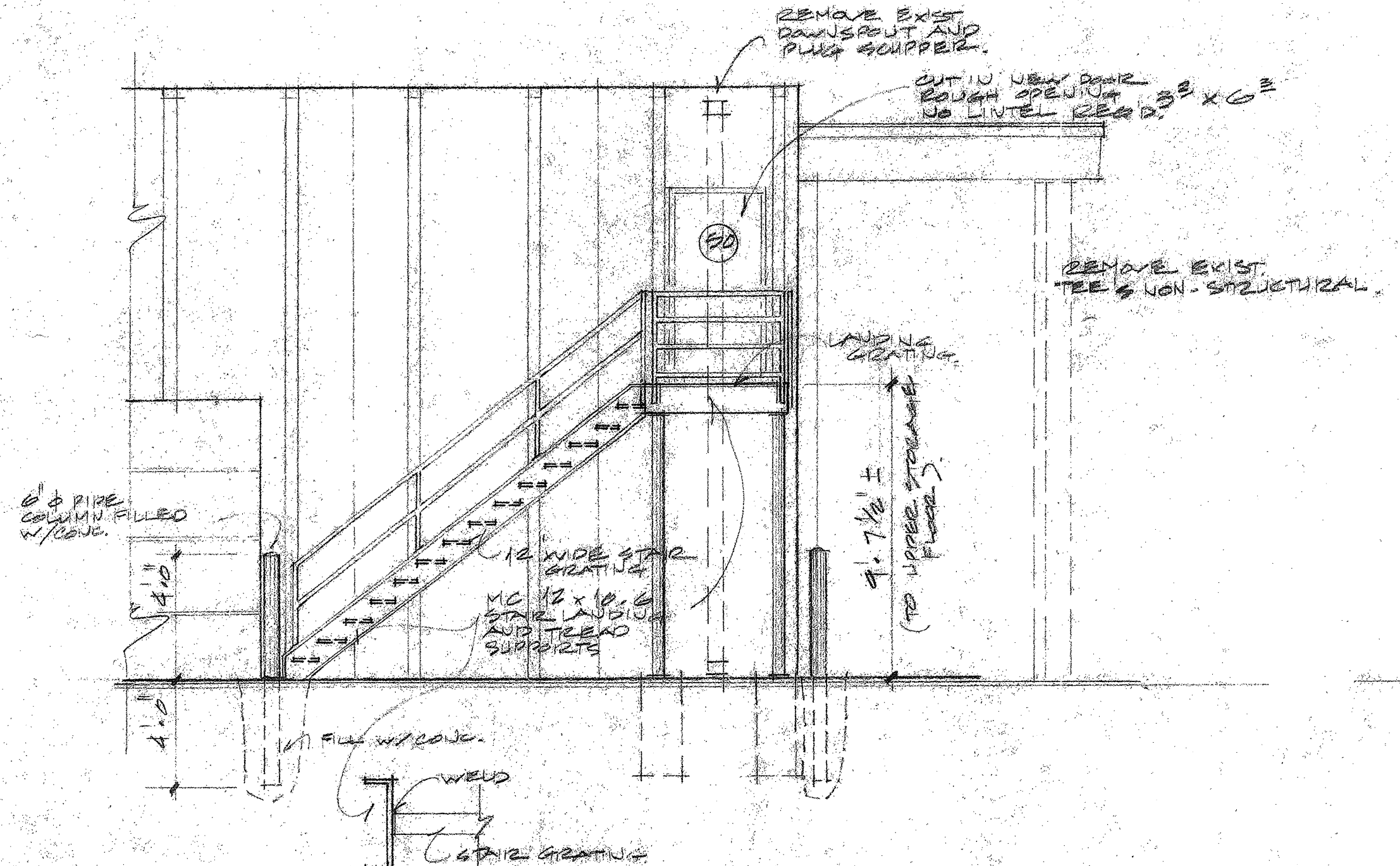
1/4" = 1'-0"

EXTERIOR ACCESS STAIR AND LANDING SEE ELEVATION THIS SHEET AND DETAILS FOR RAILING SHEET # AS.



**RAMP DETAIL**

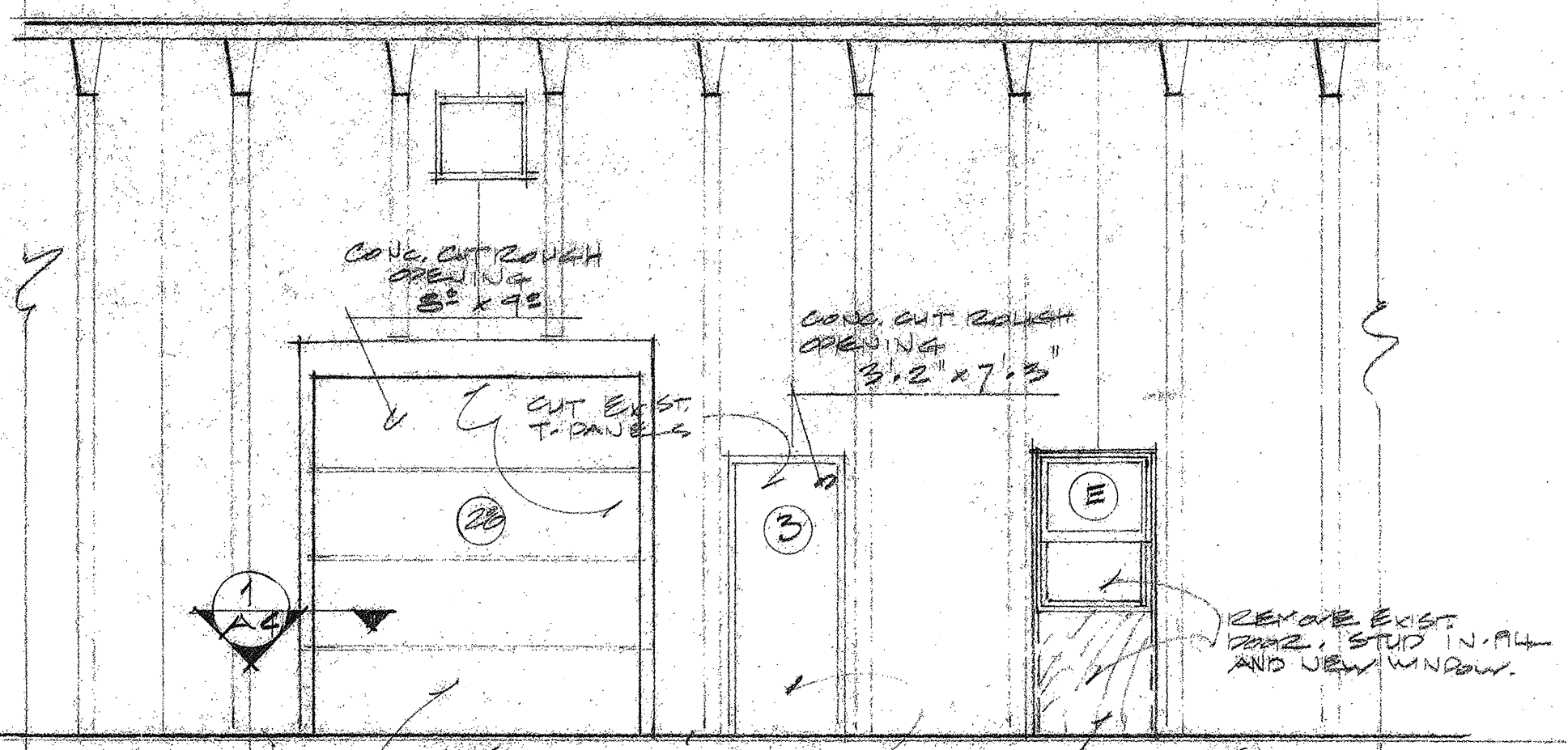
3/4" = 1'-0"



**PARTIAL WEST ELEVATION**

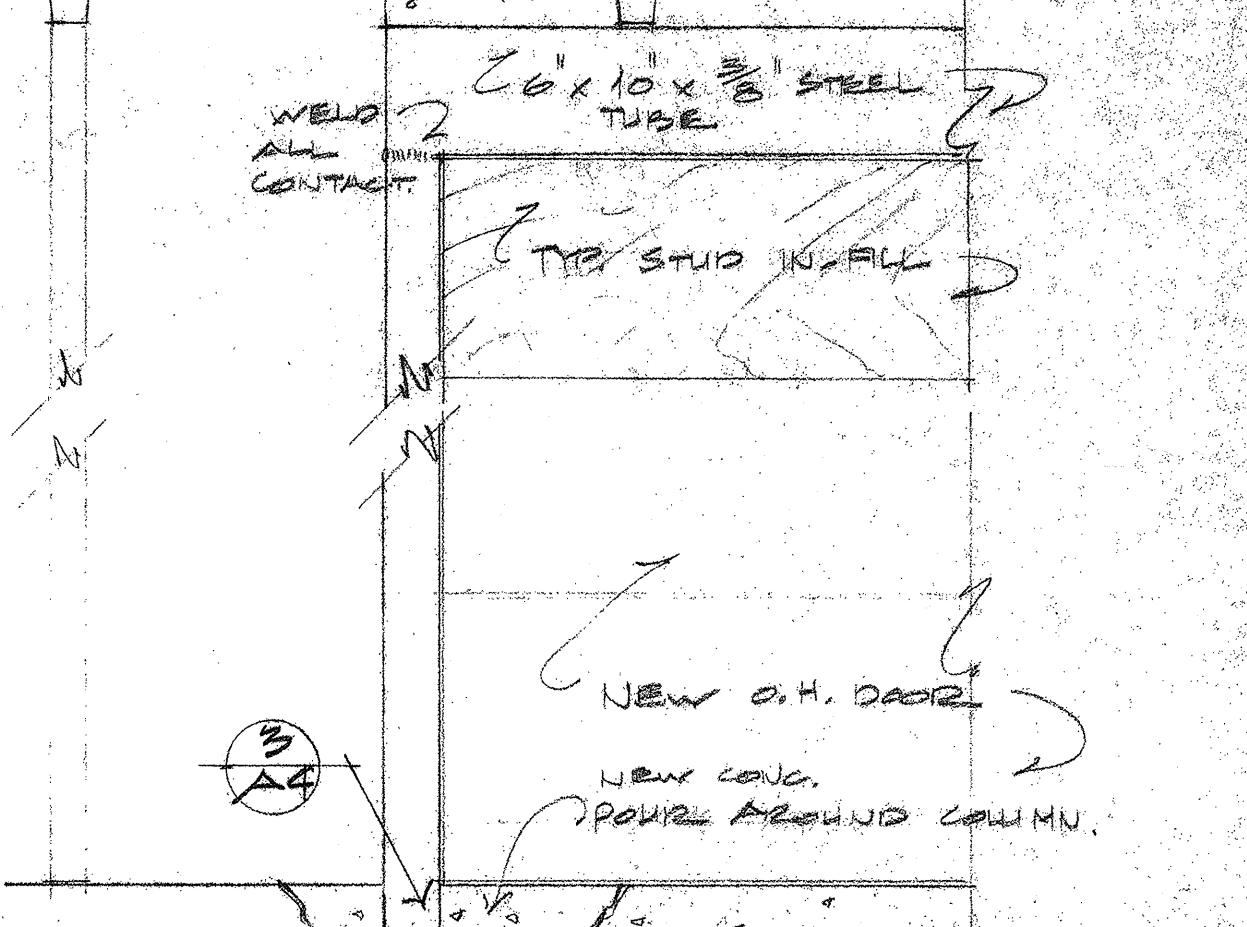
1/4" = 1'-0"

STAIR 'C' - THIS STAIR & DOOR ARE OPTION 'B'



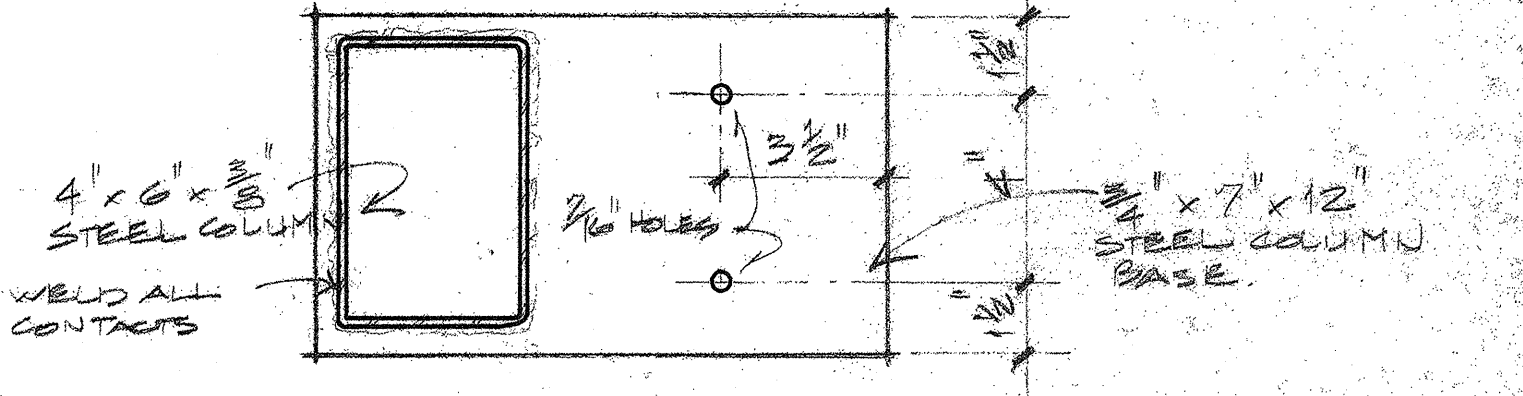
**PARTIAL NORTH ELEVATION**

1/4" = 1'-0"



**COLUMN HEAD DETAIL**

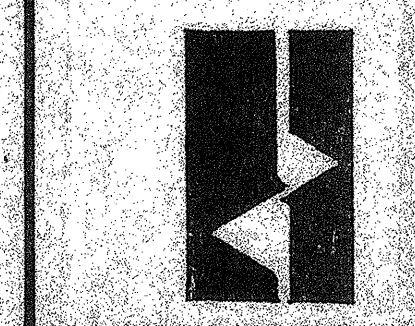
3/4" = 1'-0"



**COLUMN BASE**

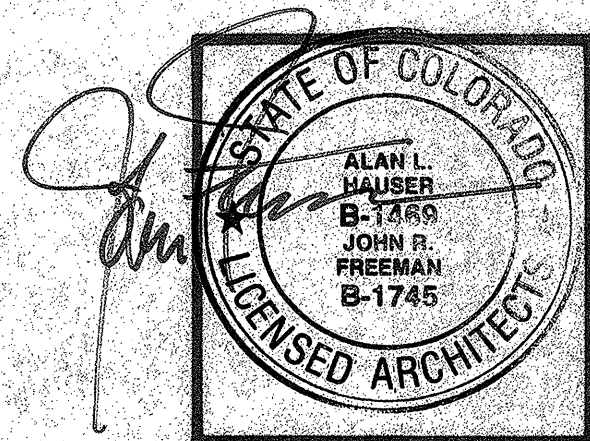
3" = 1'-0"

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND



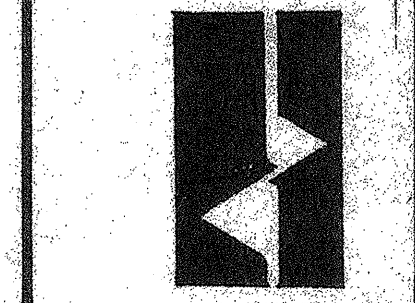
PROJECT NO.	486-02	DATE	1/27/99
REVISIONS	CHECKED	DATE	1/27/99
ENTERED DEC. 1 & 1999		DATE	1/27/99



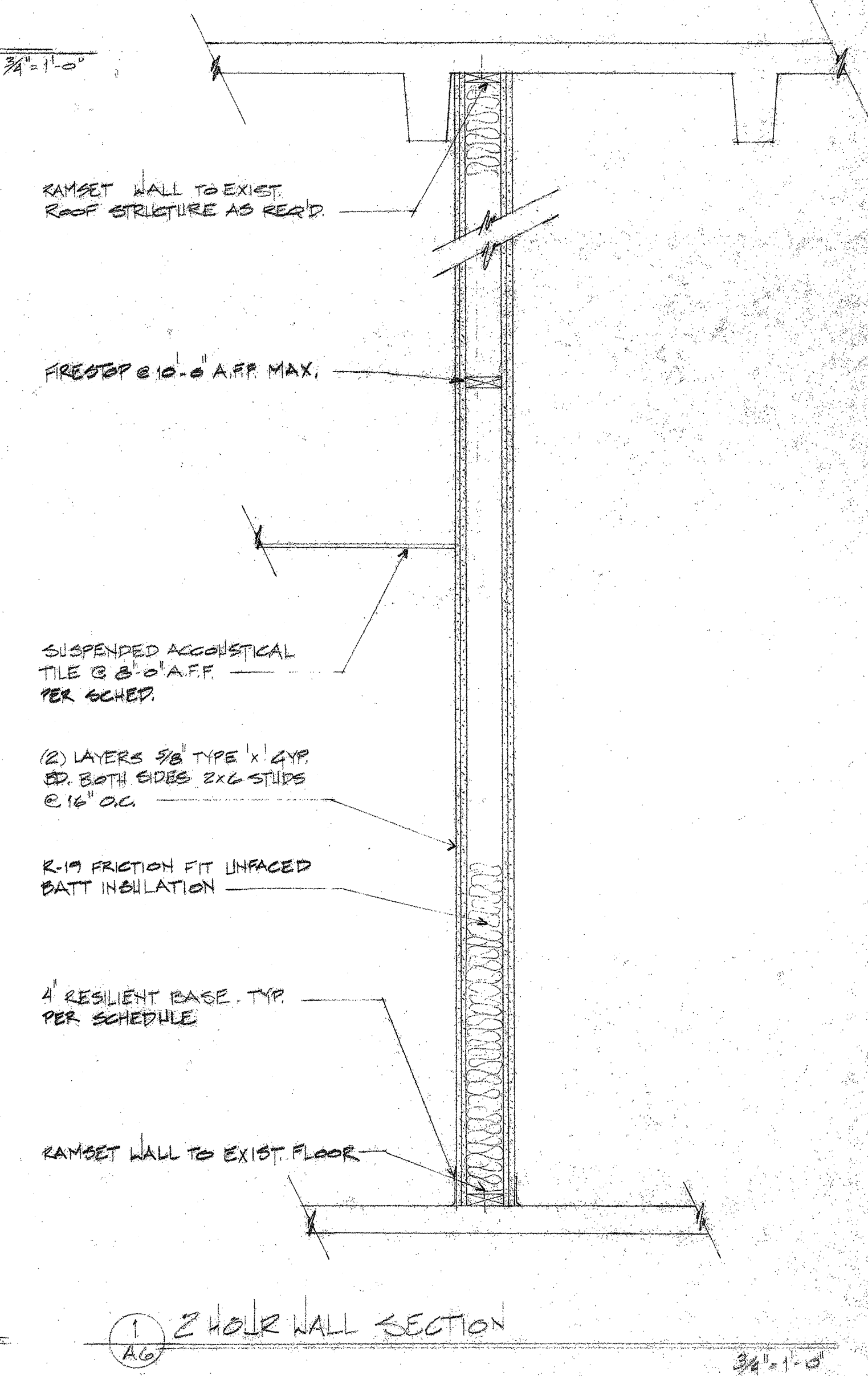
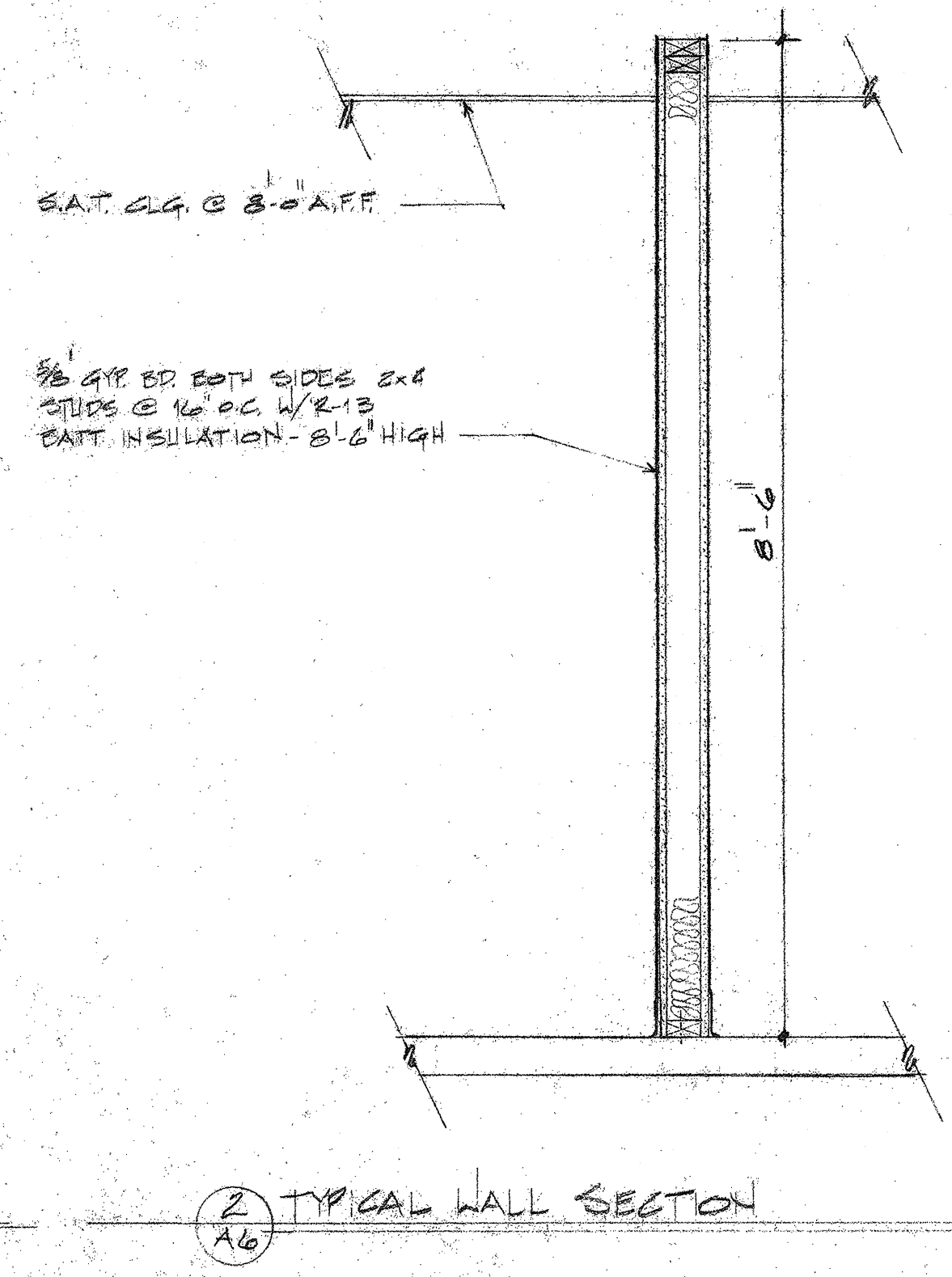
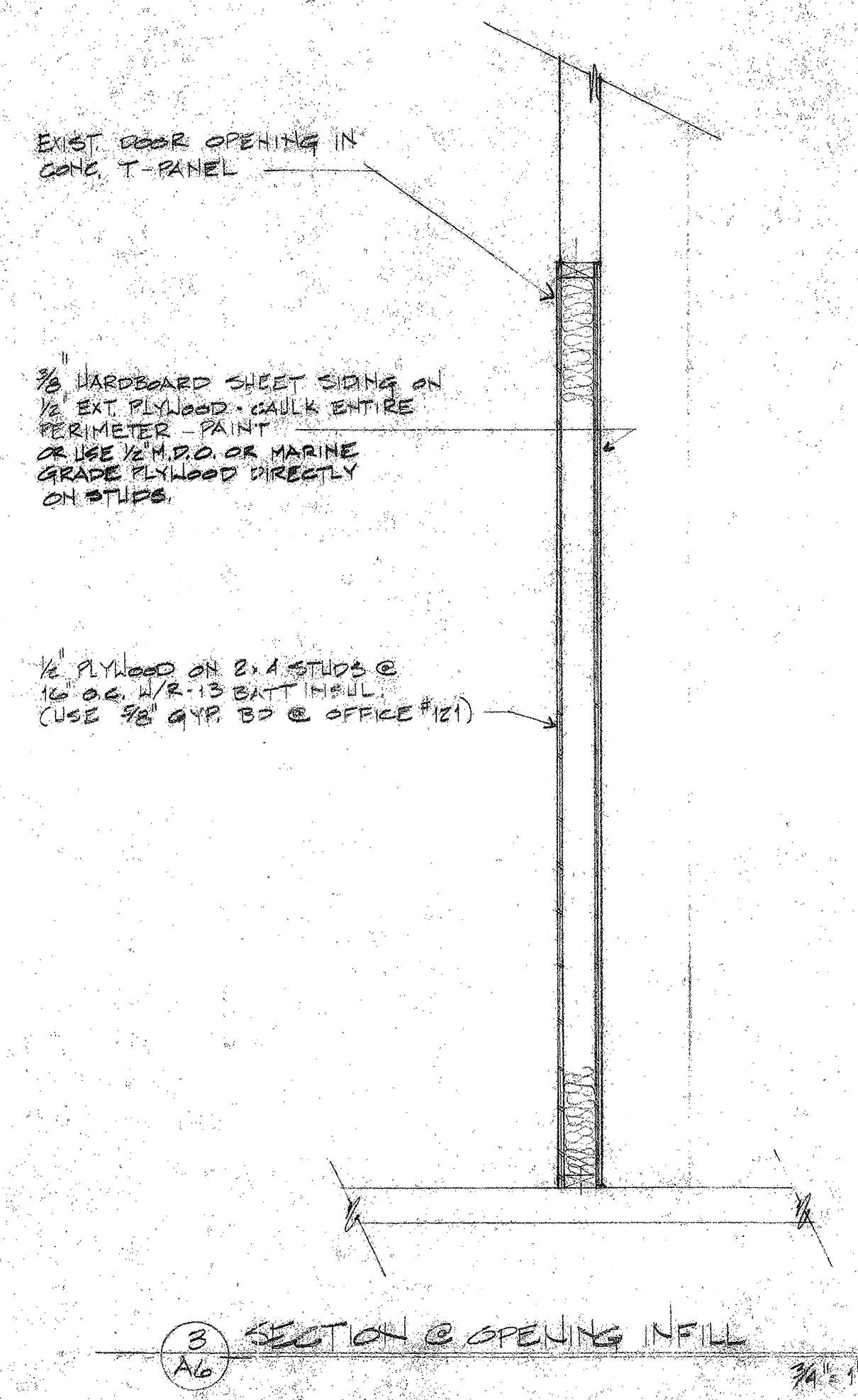
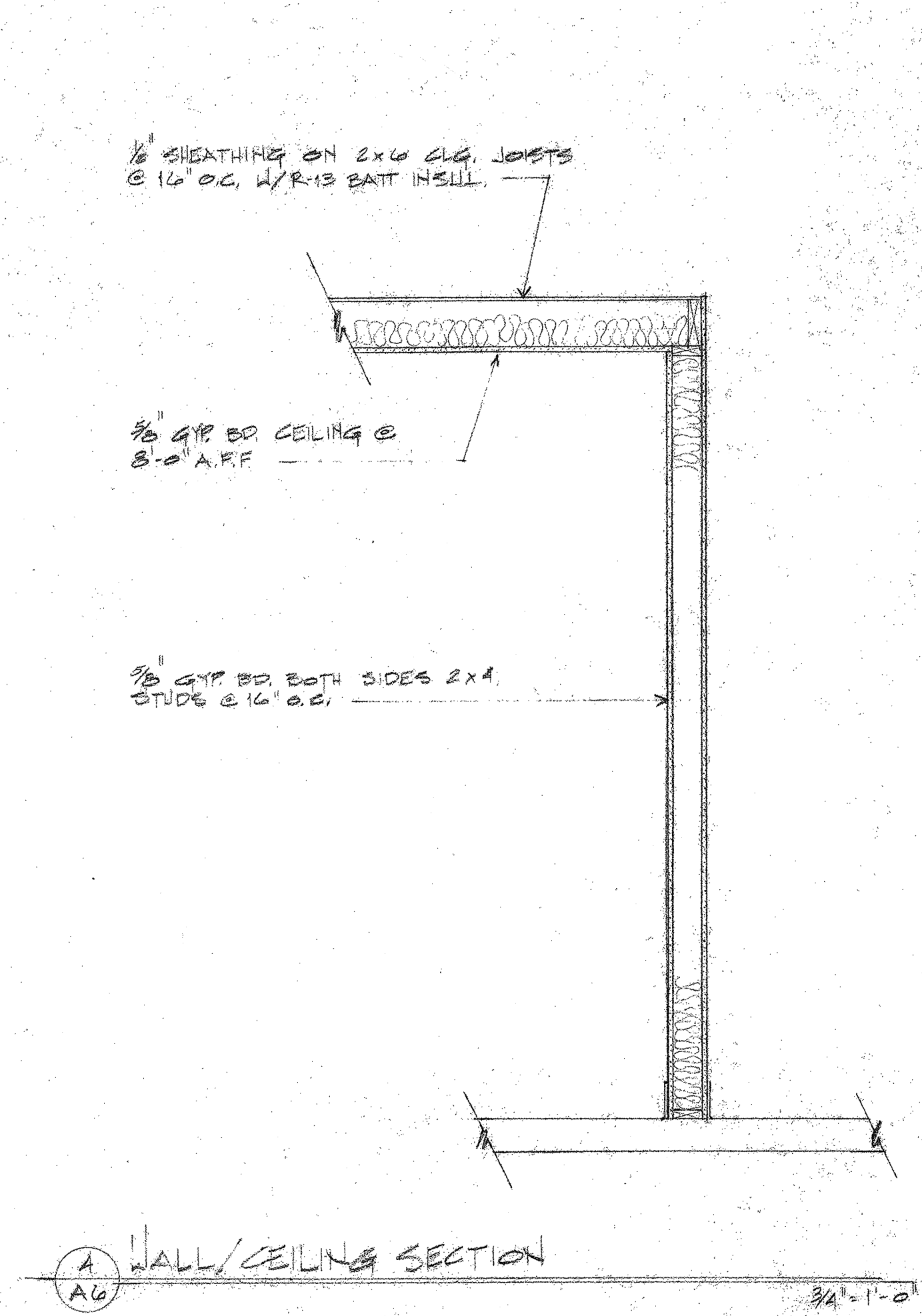
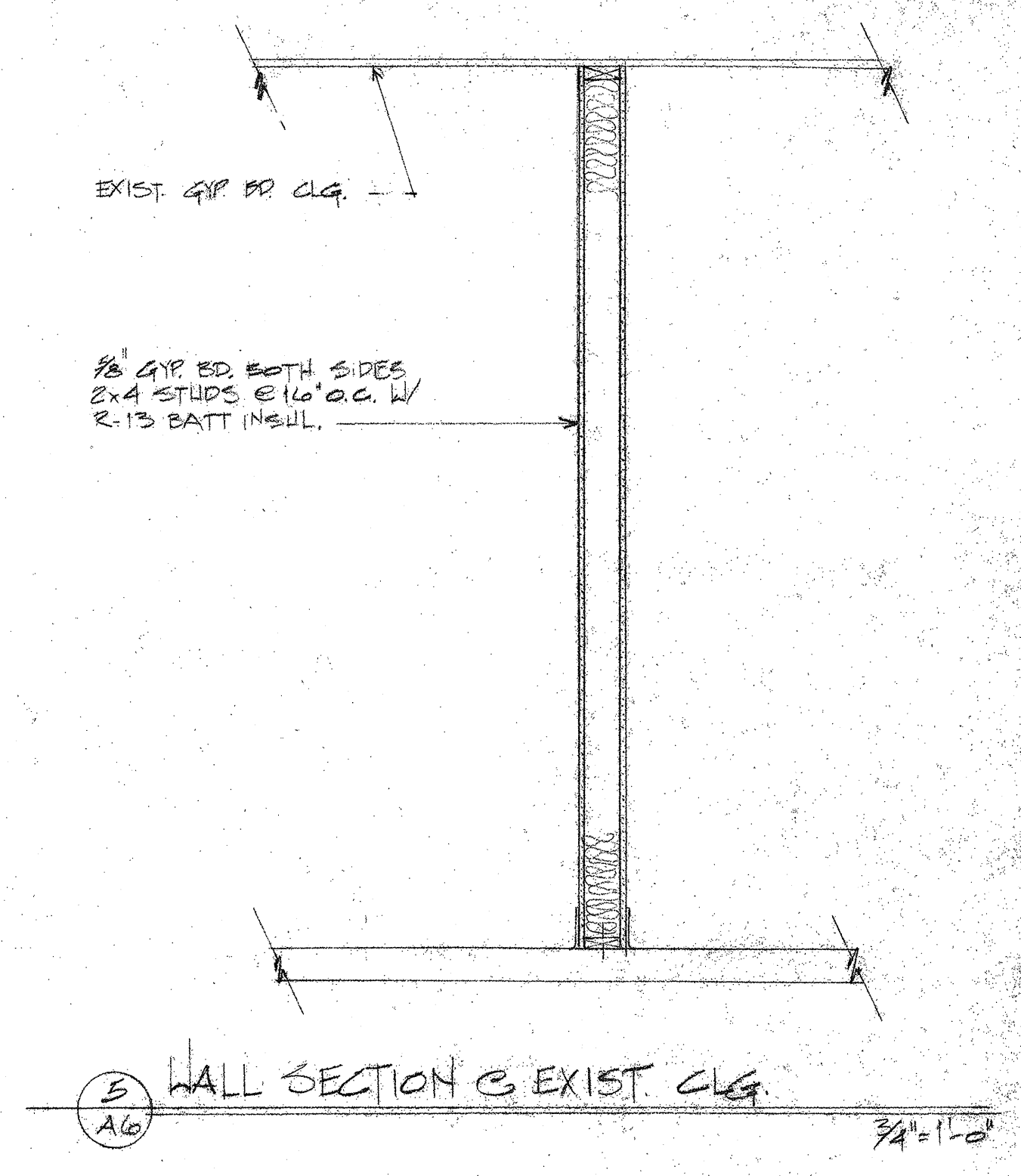
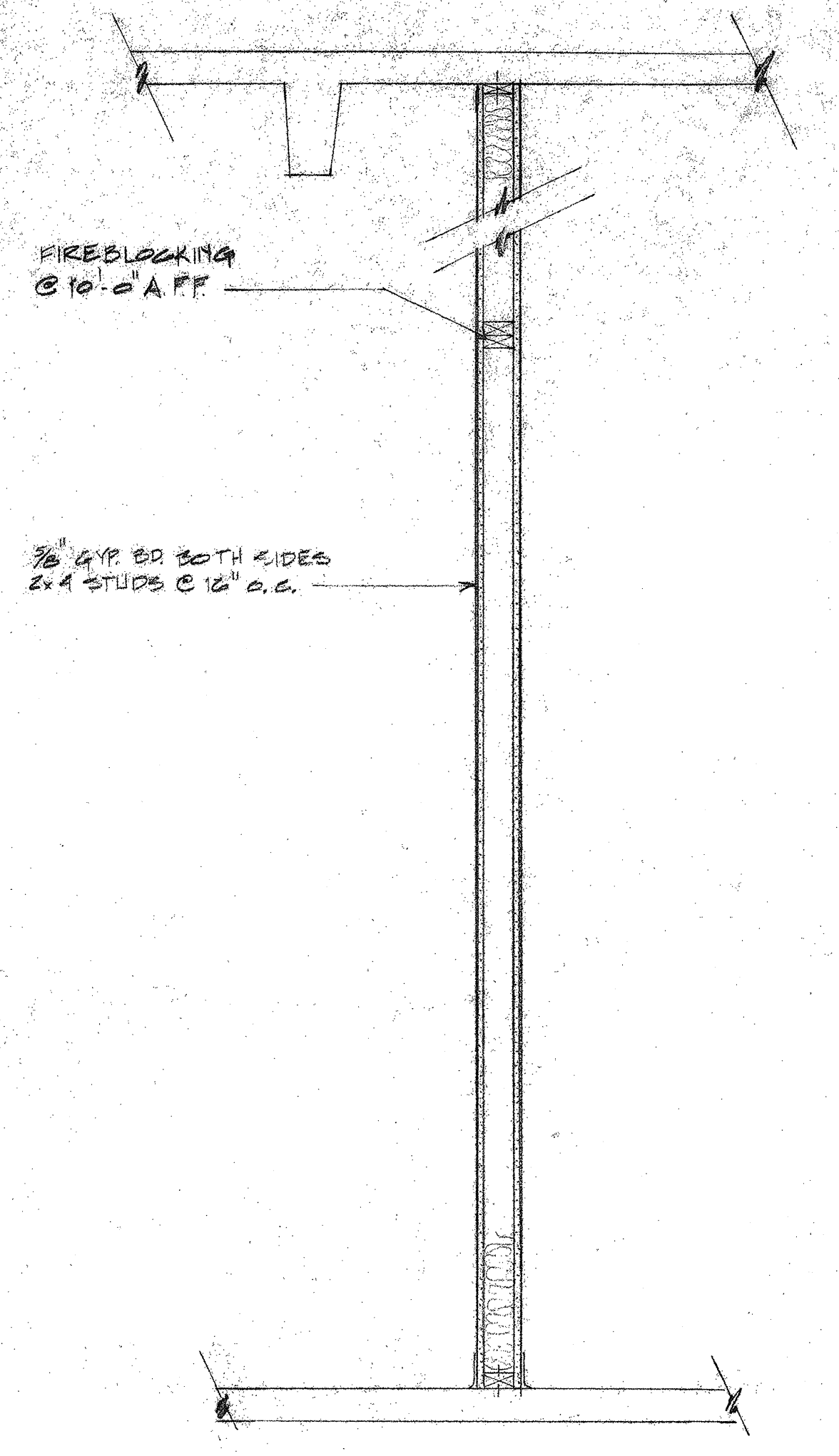
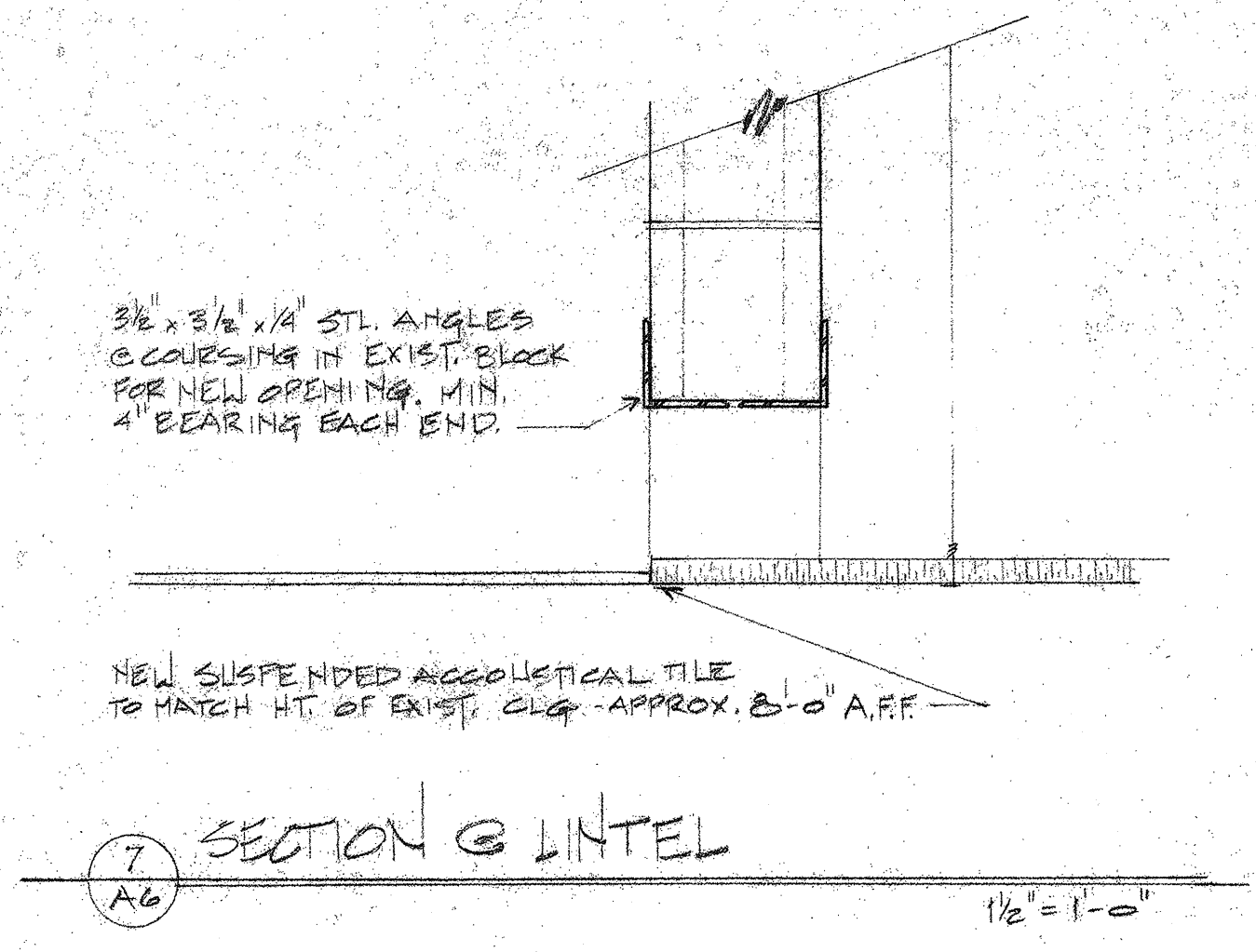


**ARCHITECTURE ONE**  
 ARCHITECTS/PLANNERS, P.C.  
 PALMER GARDENS, SUITE 200  
 150 EAST 29th STREET LOVELAND, COLORADO 80538  
 303/669-9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
 CITY OF LOVELAND



PROJECT NO. 226-02	CHECKED
REVISIONS	ENTERED DEC 14 1989
DATE	11/11/89



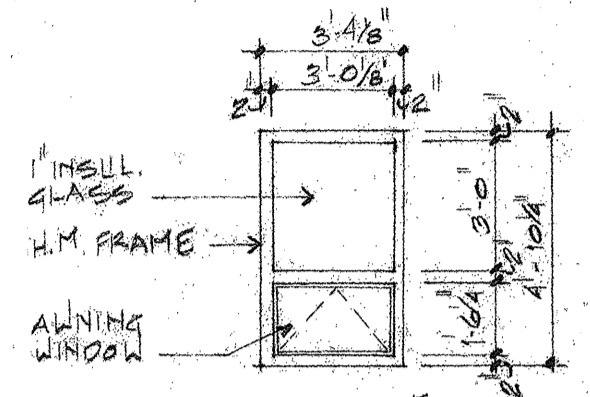
TELETYPE UNIT

**ROOM FINISH SCHEDULE**

ROOM NO.	ROOM NAME	FLOORING		WALLS				CEILING		REMARKS
		MAT'L	BASE	NORTH	EAST	SOUTH	WEST	MAT'L	FIN. HT.	
100	OFFICE	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	---
101	OFFICE	EXIST'G	---	---	---	---	---	---	---	---
102	STORAGE	---	---	---	---	---	---	---	---	UNFINISHED
103	WAREHOUSE	---	---	---	---	---	---	---	---	UNFINISHED
104	CLEAN SHOP	---	---	---	---	---	---	---	---	EXIST. FINISHES
105	WOOD SHOP	---	---	---	---	---	---	---	---	UNFINISHED
106	TRAFFIC	---	---	---	---	---	---	---	---	EXIST. FINISHES
107	JANITOR	---	---	---	---	---	---	---	---	EPOXY PAINT
108	ELEC./PHONE	---	---	---	---	---	---	---	---	---
109	STORAGE	---	---	---	---	---	---	---	---	UNFINISHED
110	TOOLS	---	---	---	---	---	---	---	---	UNFINISHED
111	OFFICE	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	---
112	LOCKERS	---	---	---	---	---	---	---	---	---
113	SHOWER	PRECAST CONCRETE	TILE	---	---	---	---	---	---	EPOXY PAINT
114	RESTROOM	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	EPOXY PAINT
115	OFFICE	---	---	---	---	---	---	---	---	EXISTING FINISHES TO REMAIN
116	OFFICE	---	---	---	---	---	---	---	---	EXISTING FINISHES TO REMAIN
117	SIGNS	---	---	---	---	---	---	---	---	VARIES
118	BREAK ROOM	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	---
119	RESTROOM	---	---	---	---	---	---	---	---	EXISTING FINISHES TO REMAIN
120	RECEPTION	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	---
121	OFFICE	V.C.T.	4" RES'L CONC.	---	GYP BR PT	GYP BR PT	---	---	---	---

**WINDOW SCHEDULE**

MARK	SIZE	GLAZING	TYPE	FRAME MAT'L	DETAIL	REMARKS
A	3'-0" x 3'-6"	1/4" PLATE	---	1 1/2" HD	5/A7	NO STOPS
B	3'-0" x 3'-6"	---	---	---	5/A7	---
C	3'-0" x 3'-6"	---	---	---	5/A7 SIM	---
D	4'-0" x 3'-6"	---	---	---	---	---
F	RO. 3'-2 1/2" x 4'-8 1/4"	1" INSUL	F	H.M.	5/A7	2 REQUIRED



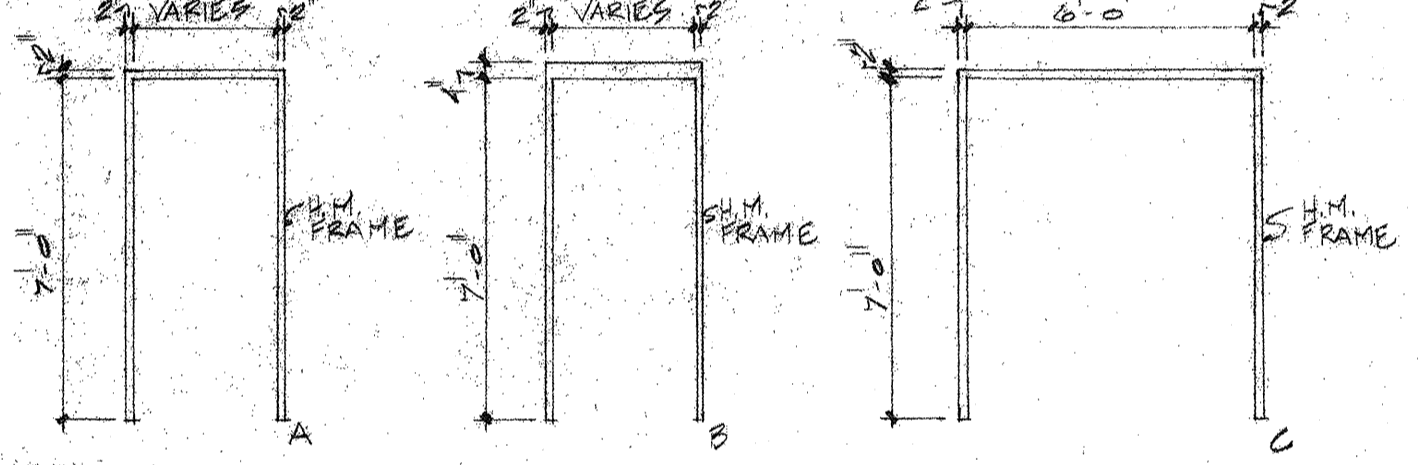
WINDOW TYPES  
1/4" = 1'-0"

**HARDWARE GROUPS:**

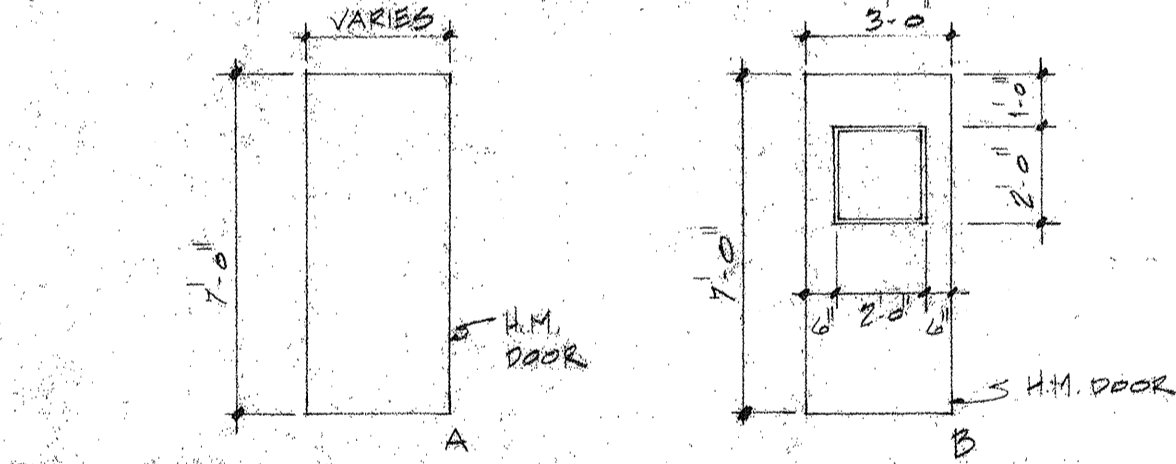
- 1) ALL DOOR HARDWARE BY DOOR MANUFACTURER
- 2) 3 PAIR BUTTS  
1 LOCKSET  
1 PULLY KNOB  
1 CLOSER (ACTIVE LEAF)  
2 FLUSH BOLTS (INACTIVE LEAF)
- 3) 1/2 PAIR BUTTS  
1 LOCKSET  
1 CLOSER  
1 THRESHOLD  
1 WEATHERSTRIP
- 4) 1/2 PAIR BUTTS  
1 LOCKSET
- 5) 1/2 PAIR BUTTS  
1 LOCKSET  
1 CLOSER
- 6) 1/2 PAIR BUTTS  
1 PUSH PLATE  
1 PULL BAR  
1 KICK PLATE
- 7) 1/2 PAIR BUTTS  
1 PRIVACY LATCHSET

**DOOR SCHEDULE**

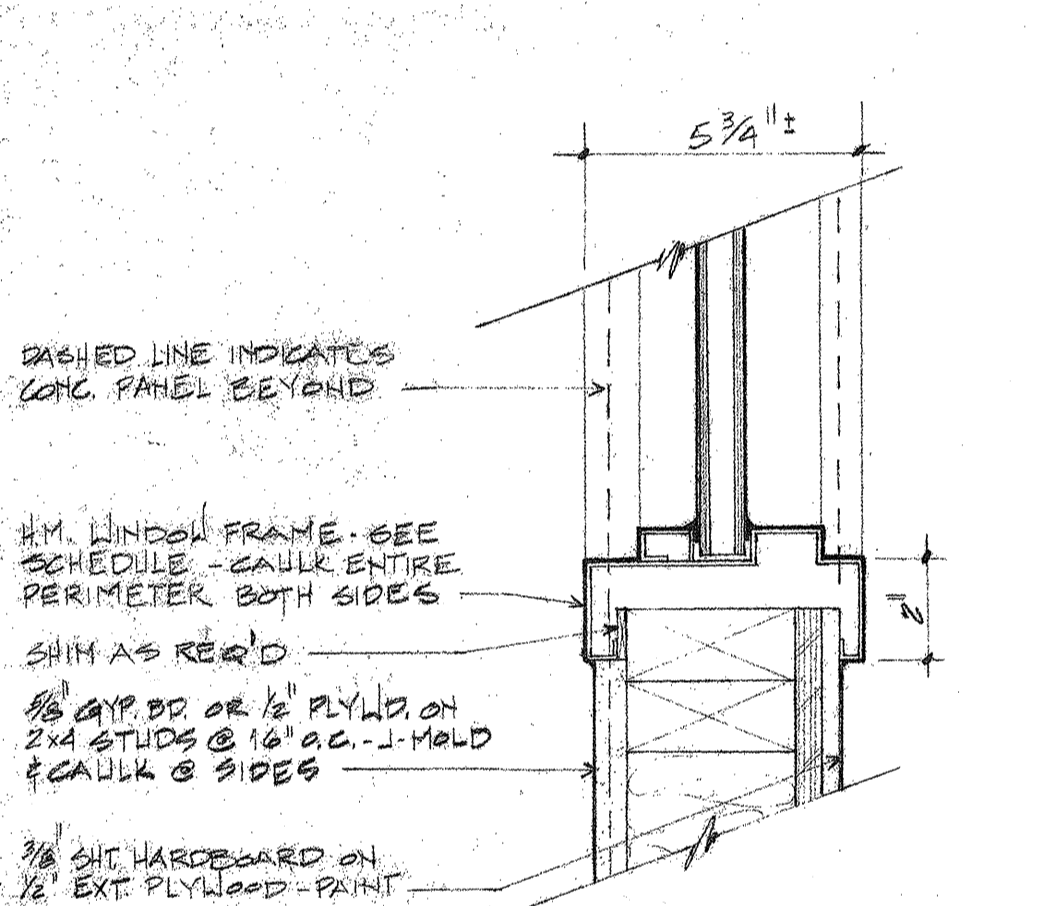
MARK	SIZE	DOOR			FRAME			REMARKS
		TYPE	MAT'L	HORIZ. GROUP	TYPE	WIDTH	DETAIL	
1	3'-0" x 7'-0"	B	H.M.	4	A	5 3/4"	1/A7	---
2	3'-0" x 7'-0"	RELOCATED EXIST'G	---	---	A	5 3/4"	1/A7	---
3	3'-0" x 7'-0"	RELOCATED EXIST'G	---	---	A	5 3/4"	3/A7	---
4	2'-0" x 7'-0"	A	H.M.	4	A	5 3/4"	1/A7	---
5	(B) 3'-0" x 7'-0"	---	---	---	C	9"	2/A7	2 HOUR RATING
6	3'-0" x 7'-0"	---	---	---	A	5 3/4"	1/A7	---
7	3'-0" x 7'-0"	---	---	---	A	5 3/4"	1/A7	---
8	3'-0" x 7'-0"	---	---	---	---	---	---	---
9	3'-0" x 7'-0"	---	---	---	---	---	---	---
10	2'-0" x 7'-0"	---	---	---	---	---	---	---
11	3'-0" x 7'-0"	---	---	---	---	---	---	---
12	3'-0" x 7'-0"	---	---	---	---	---	---	---
13	1'-0" x 7'-0"	---	---	---	---	---	---	---
14	2'-0" x 7'-0"	---	---	---	---	---	---	---
15	DOOR & HARDWARE BY MTL PARTITION SUPPLIER							
16	3'-0" x 7'-0"	B	H.M.	4	A	5 3/4"	1/A7	---
17	3'-0" x 7'-0"	RELOCATED EXIST'G	---	---	---	---	---	---
18	3'-0" x 7'-0"	B	H.M.	3	---	---	3/A7	---
19	NOT USED							
20	3'-0" x 7'-0"	RELOCATED EXIST'G	---	---	A	5 3/4"	6/A7	VERIFY FRAME SIZE
21	3'-0" x 7'-0"	A	H.M.	---	---	---	6/A7	---
22	3'-0" x 7'-0"	RELOCATED EXIST'G	---	---	---	---	1/A7 SIM	---
23	14" x 14"	---	---	---	---	---	---	MATCH EXISTING O.H. DOOR
24	14" x 14"	---	---	---	---	---	---	---
25	3'-0" x 7'-0"	A	H.M.	4	A	5 3/4"	1/A7	---
26	2'-0" x 7'-0"	---	---	---	---	---	---	---
27	3'-0" x 7'-0"	---	---	---	---	---	---	---
28	8" x 9"	---	---	---	---	---	---	MATCH EXISTING O.H. DOOR
29	3'-0" x 6'-0"	SEE NOTE	H.M.	3	---	5 3/4"	3/A7	DOOR & FRAME SIM. TO TYPE A @ 6'-0"



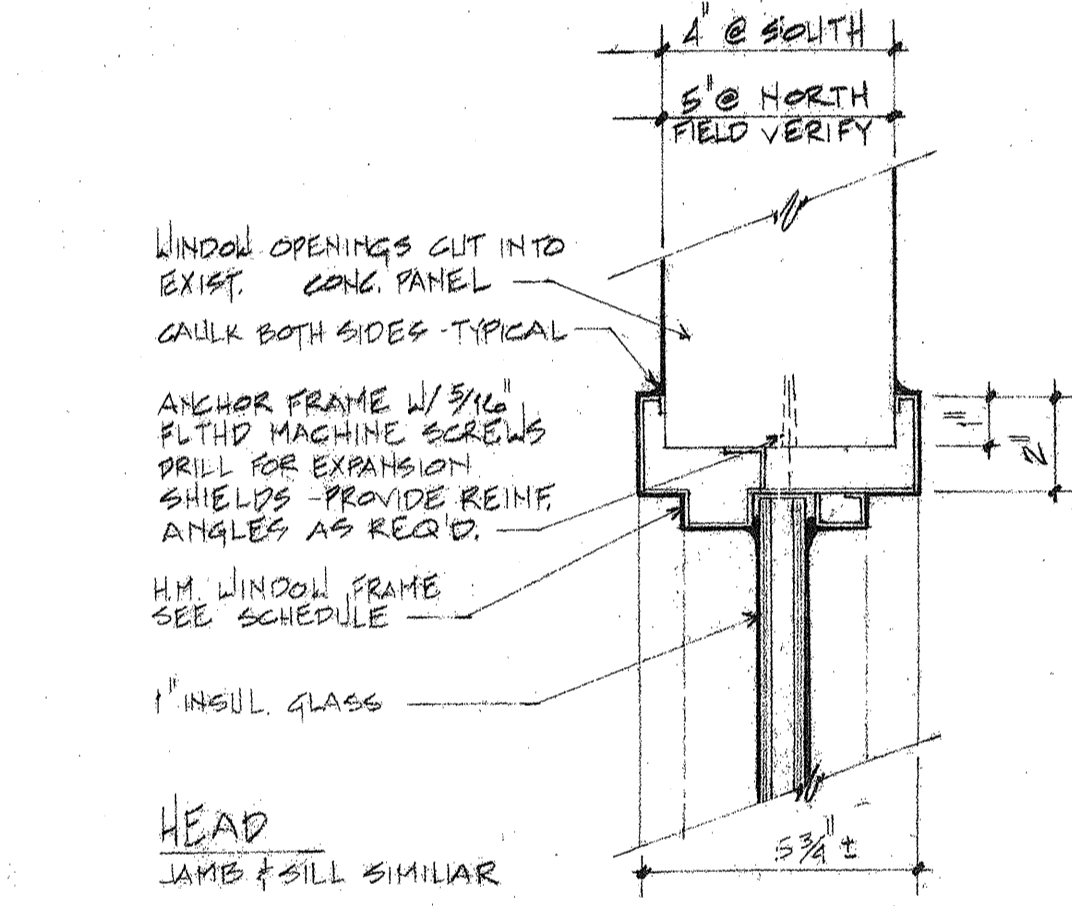
FRAME TYPES  
1/4" = 1'-0"



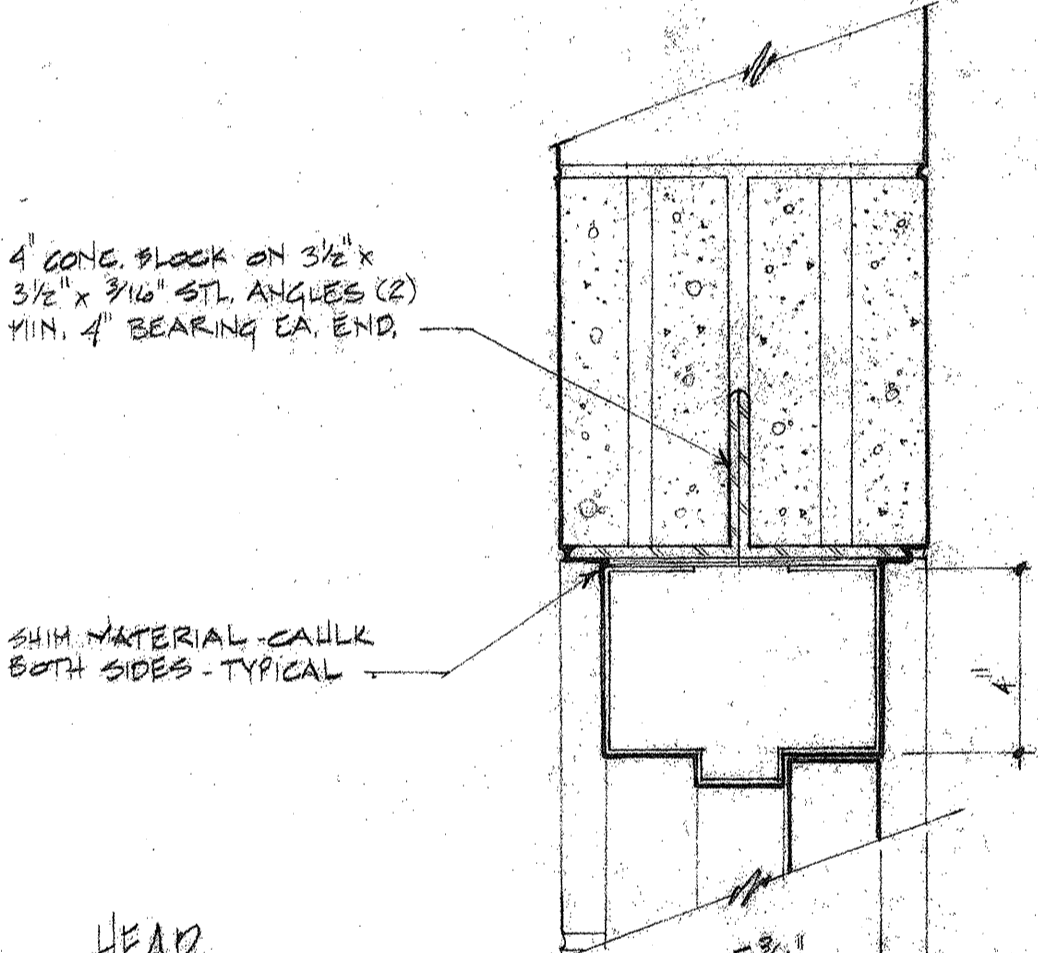
DOOR TYPES  
1/4" = 1'-0"



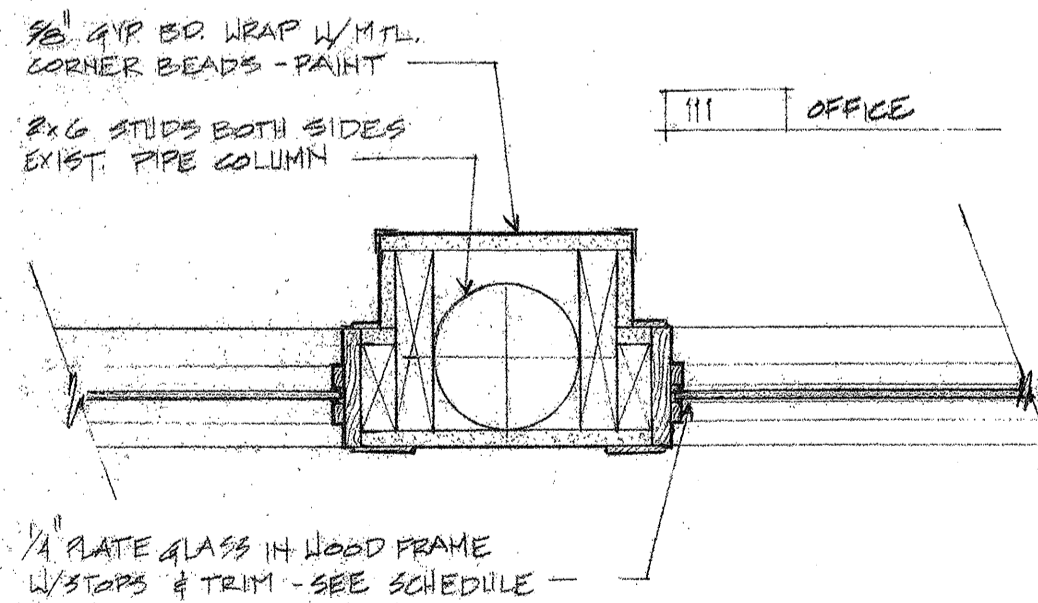
7 SECTION @ WINDOW SILL/WALL INFILL  
SCALE: 3'-1'-0"



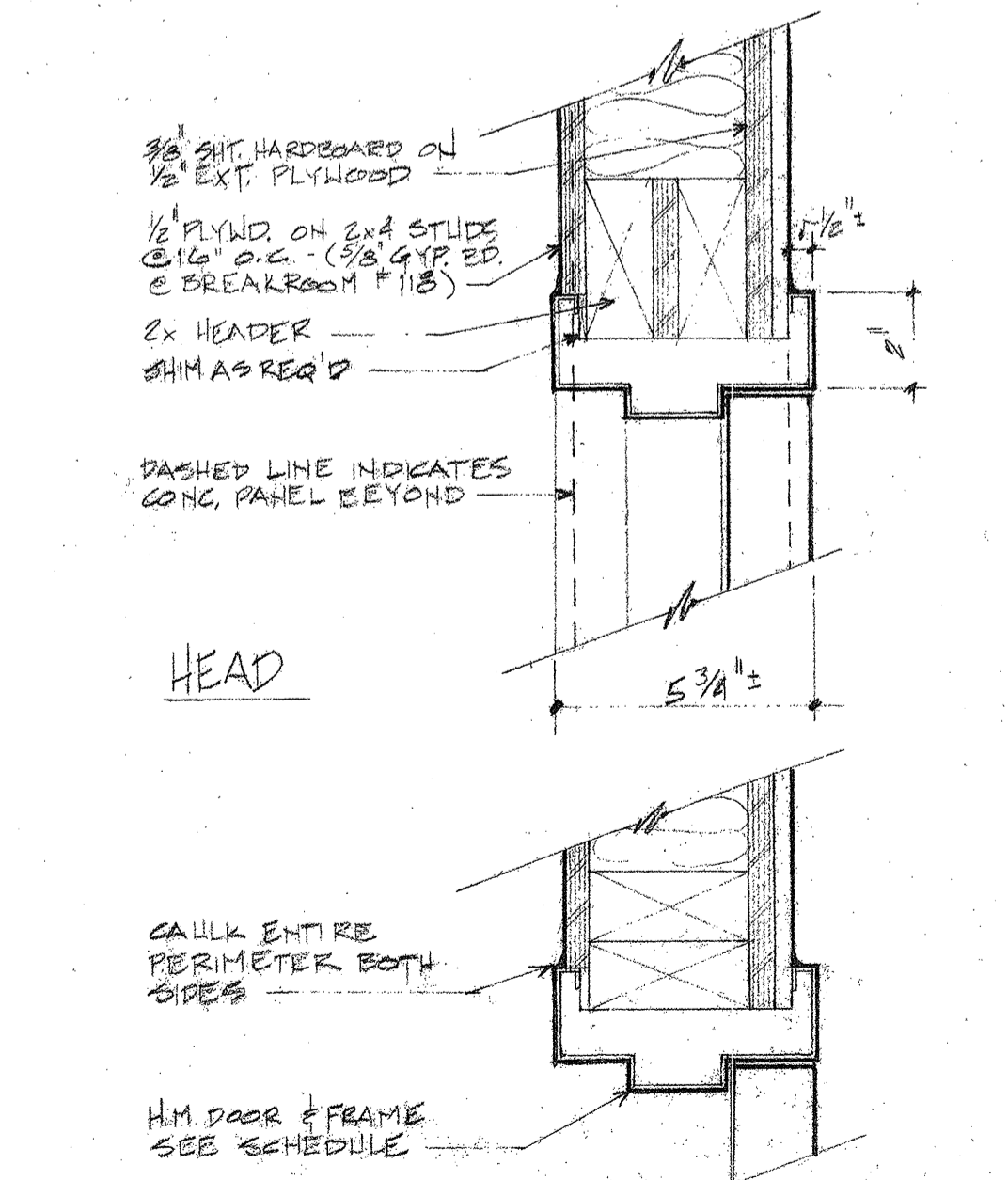
5 WINDOW @ EXIST. CONC. WALL  
SCALE: 3'-1'-0"



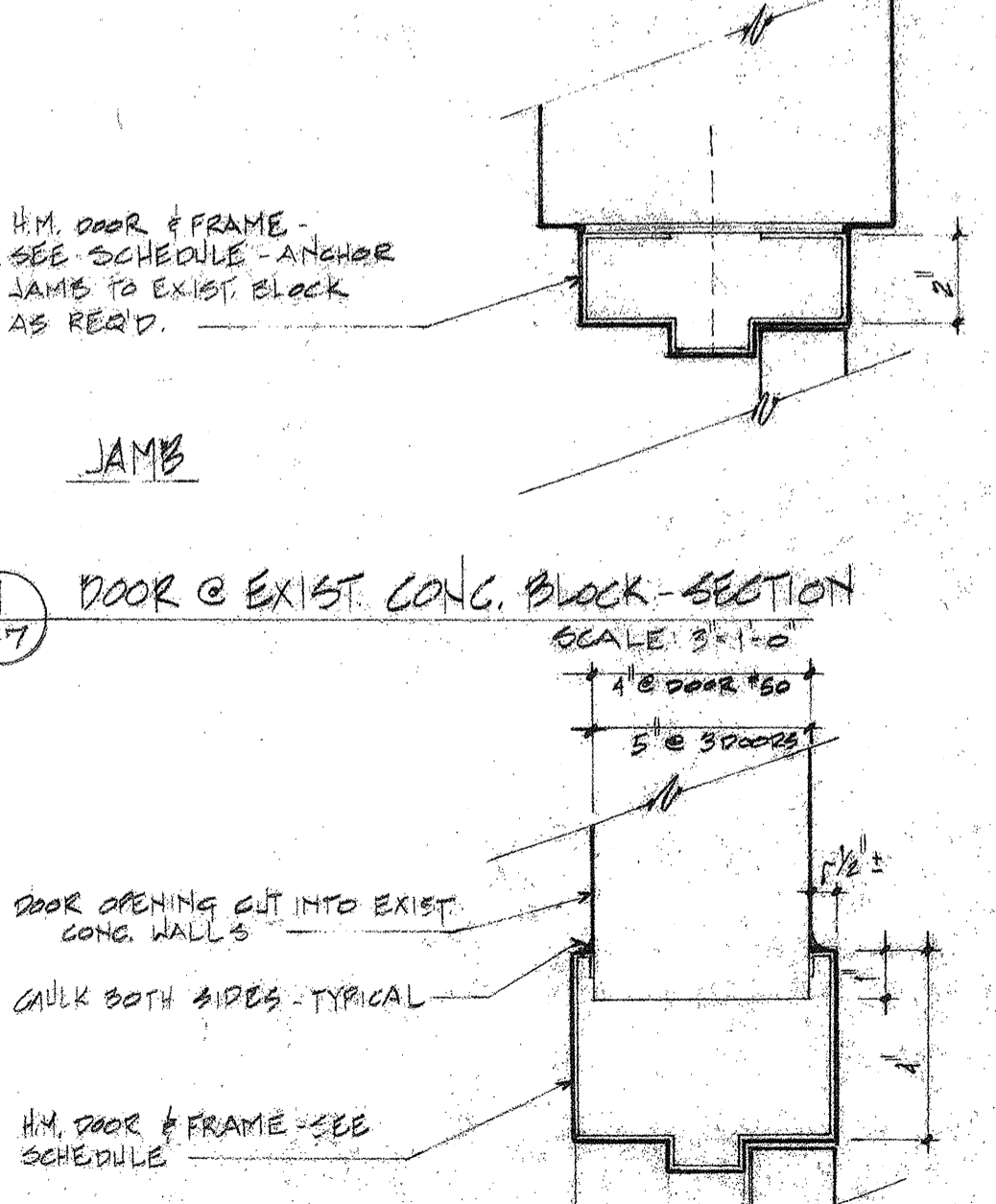
4 DOOR @ EXIST. CONC. BLOCK-SECTION  
SCALE: 3'-1'-0"



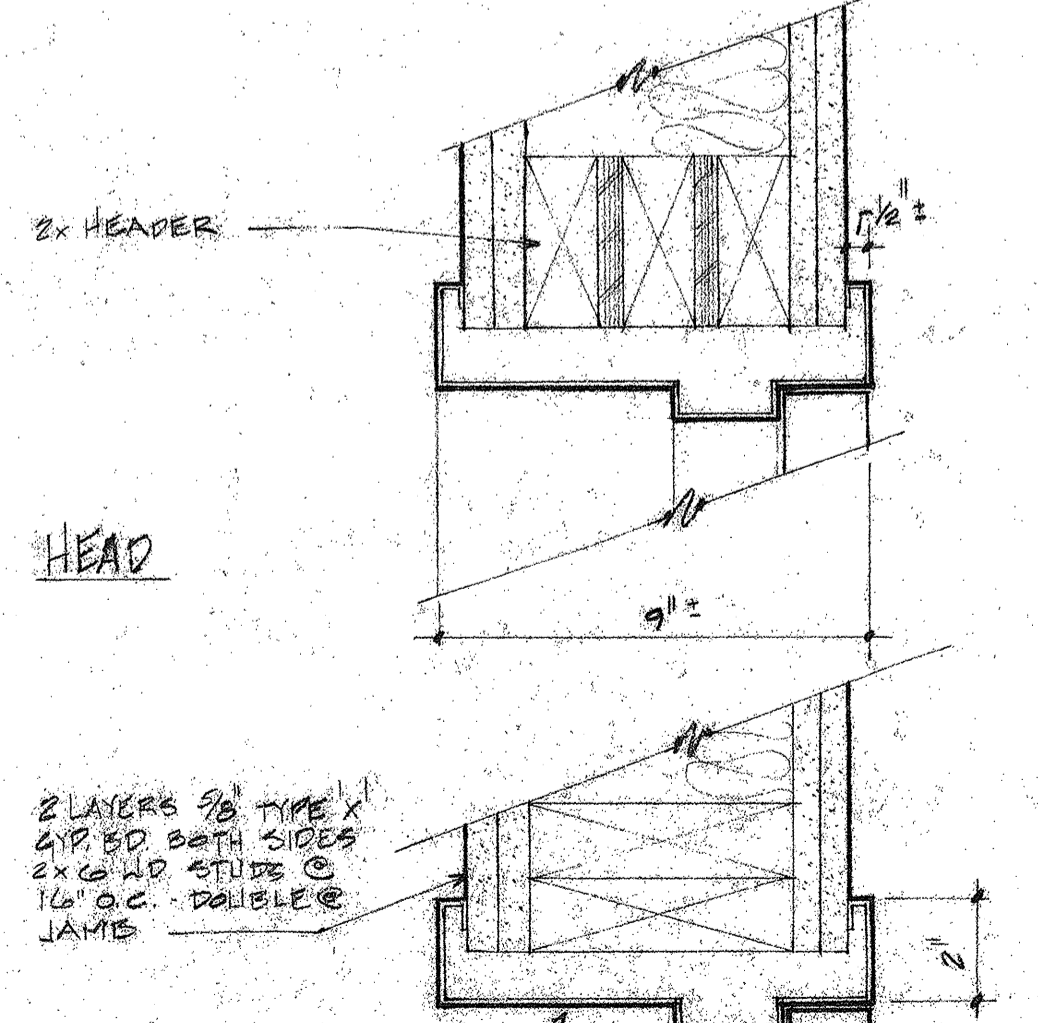
8 WINDOWS @ PIPE COLUMN - SECTION  
SCALE: 1/2" = 1'-0"



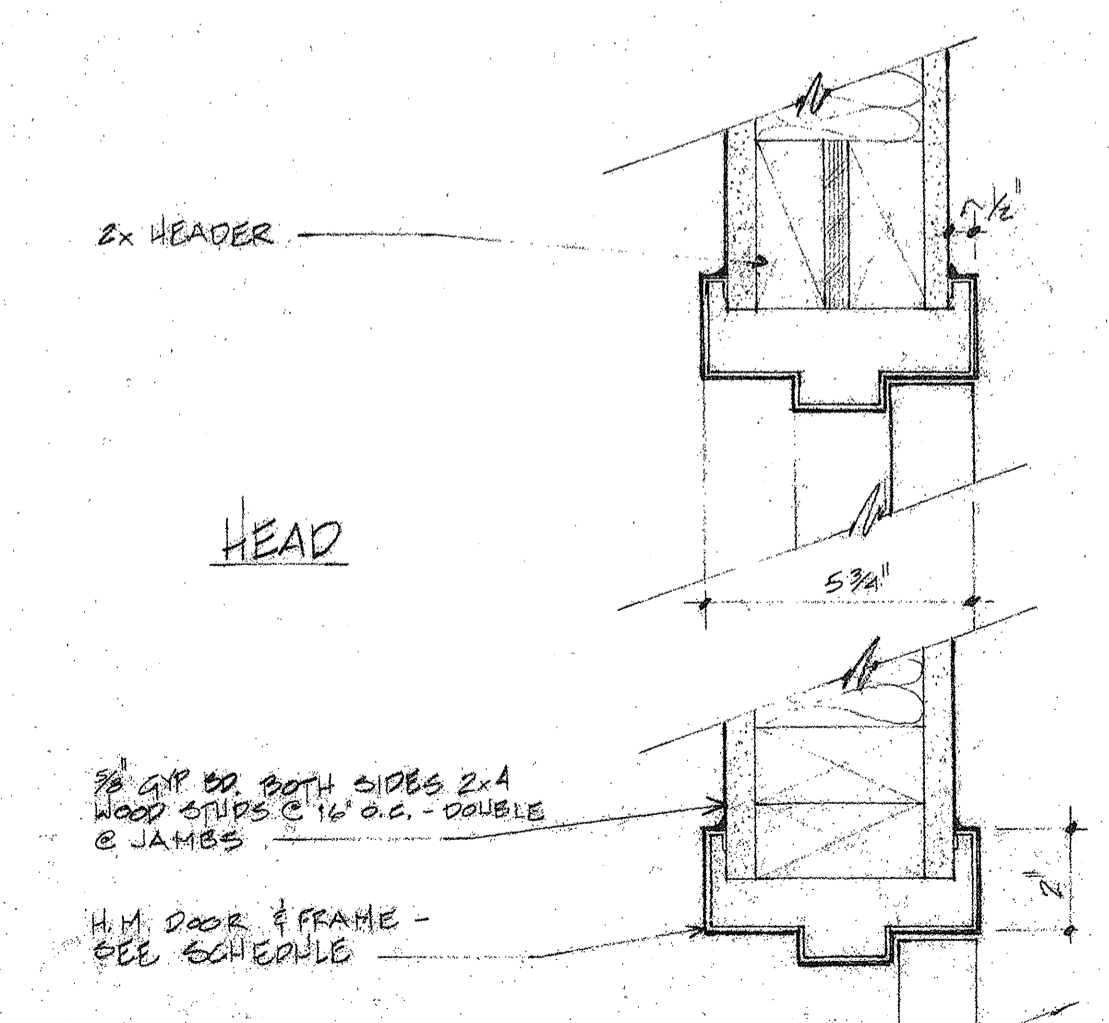
6 DOOR SECTION @ EXT. WALL INFILL  
SCALE: 3'-1'-0"



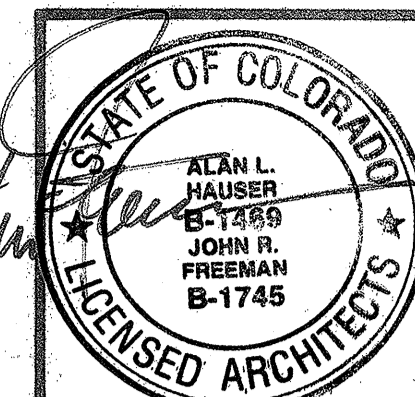
3 DOOR SECTION @ EXIST. CONC. WALL  
SCALE: 3'-1'-0"



2 DOOR SECTION @ 2 HOUR WALL  
SCALE: 3'-1'-0"

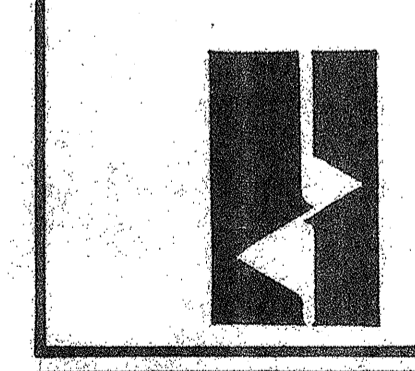


1 DOOR SECTION - TYPICAL  
SCALE: 3'-1'-0"

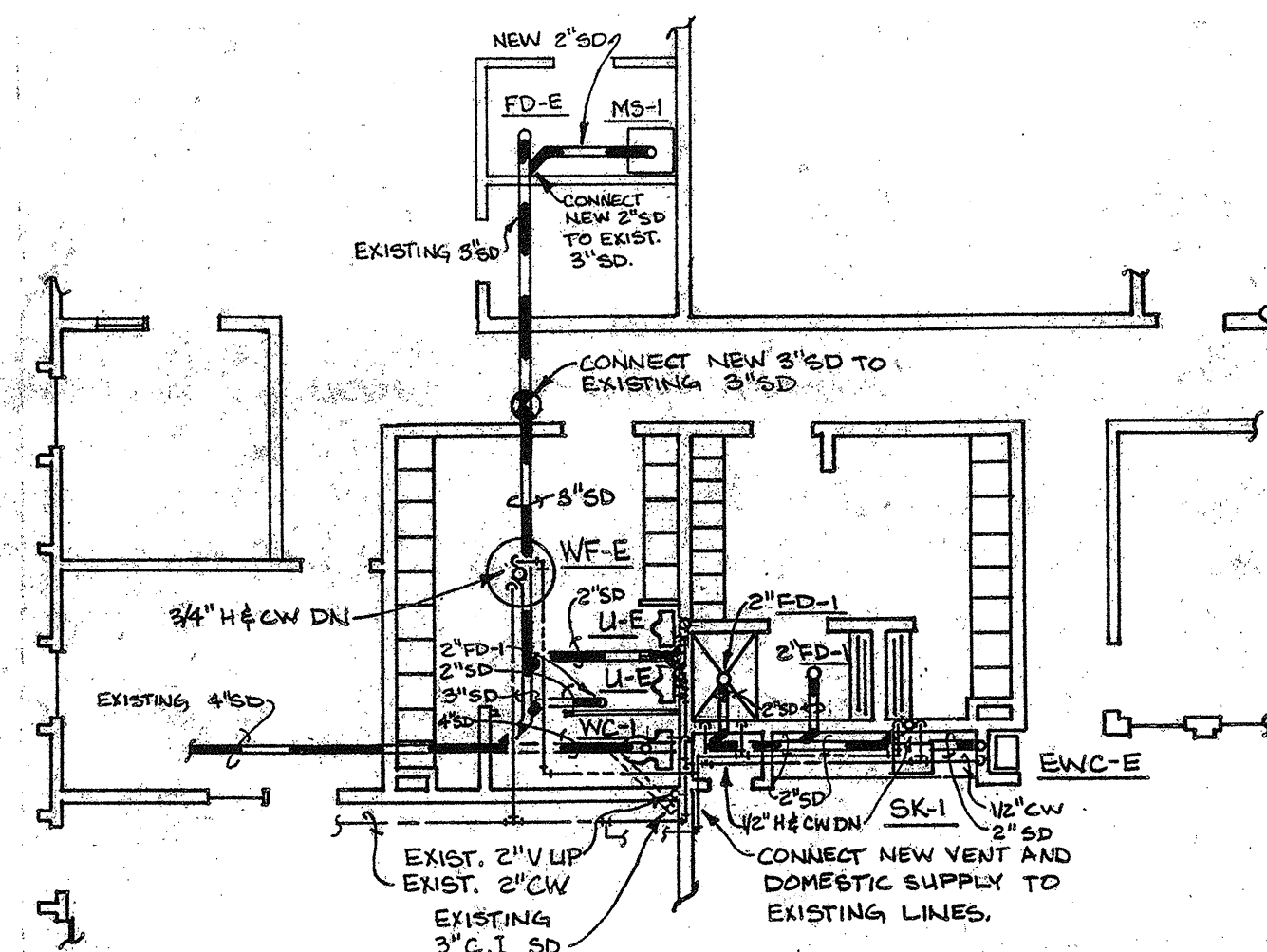


**ARCHITECTURE ONE**  
ARCHITECTS/PLANNERS, P.C.  
PALMER GARDENS, SUITE 200  
150 EAST 29th STREET, LOVELAND, COLORADO 80538  
303/669-9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND

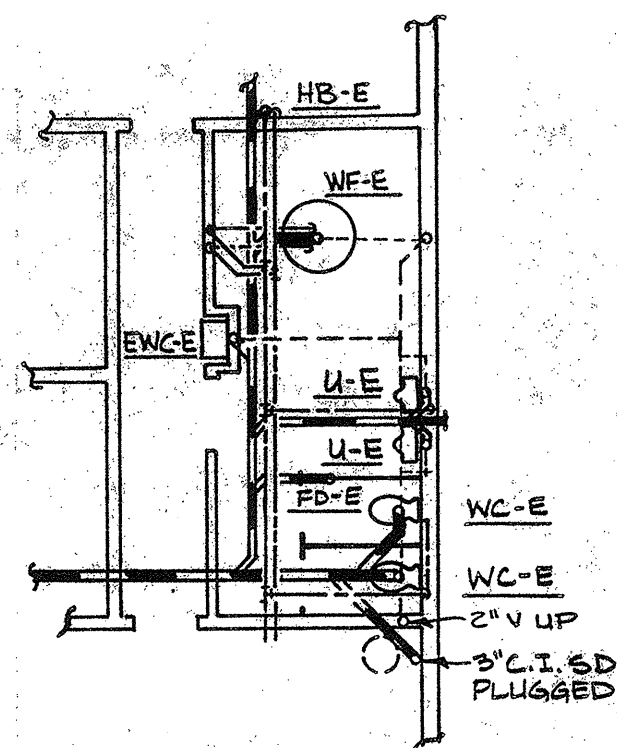


PROJECT NO. 426-02	CN 11/19/99
REVISIONS	CHECKED
ENTERED DEC 14 1999	



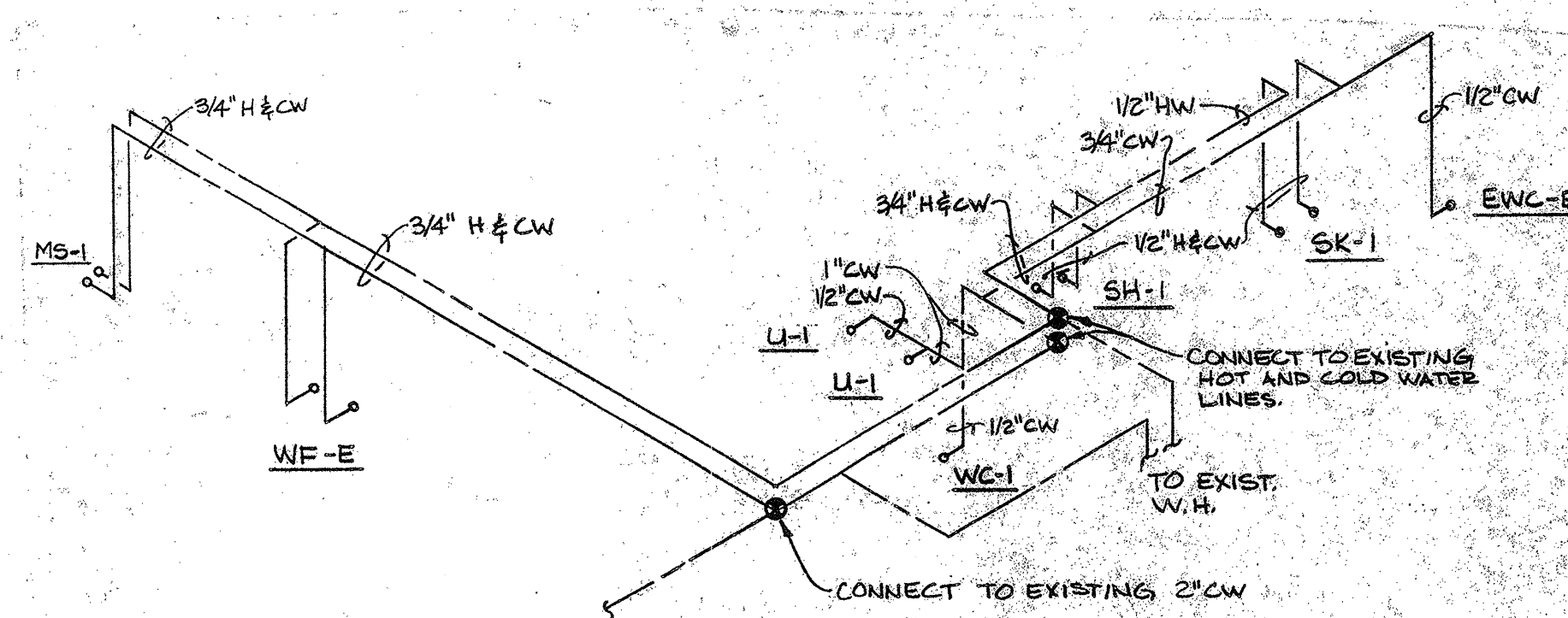
**NEW DOMESTIC SUPPLY,  
WASTE & VENT LAYOUT**

SCALE: 1/8" = 1'-0"



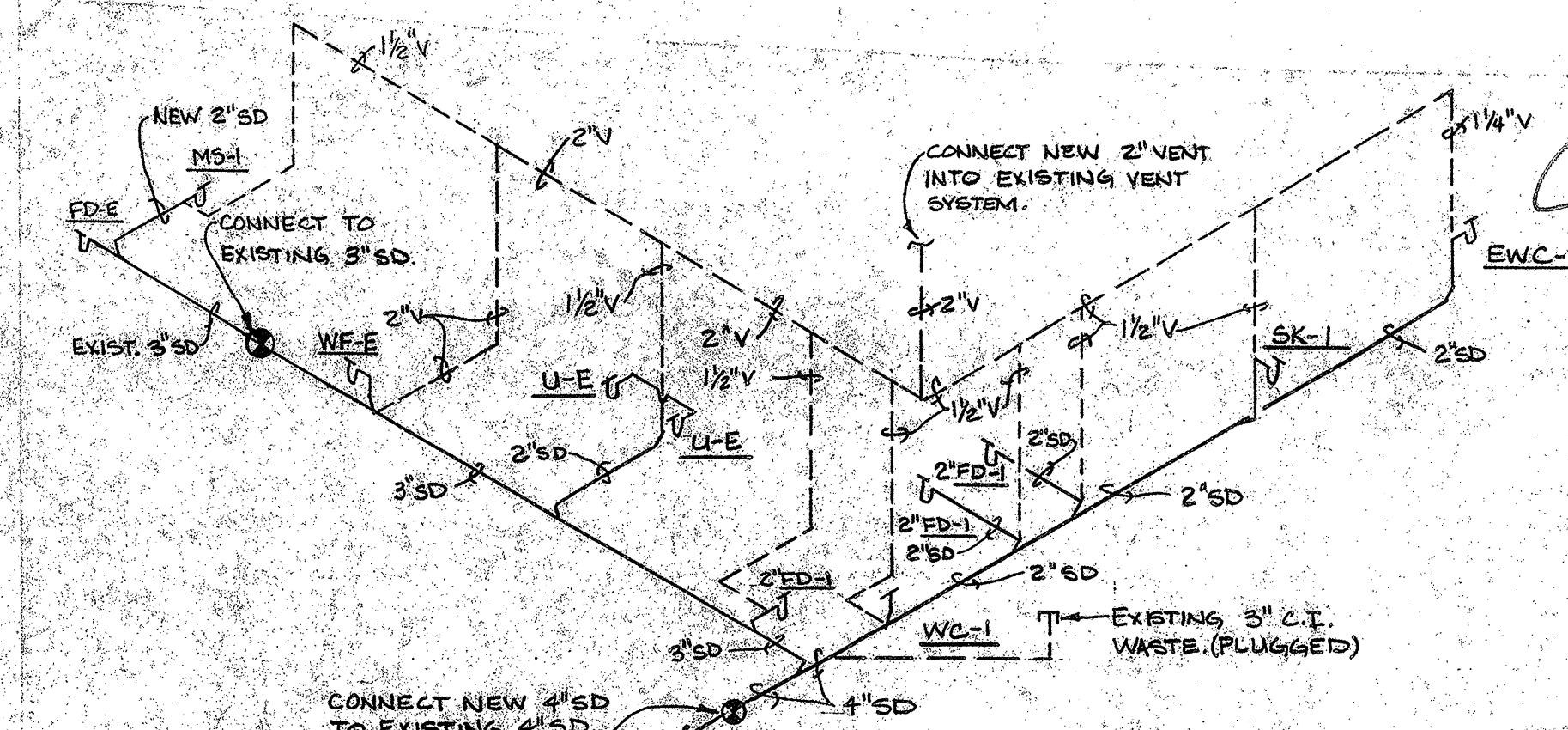
**EXISTING DOMESTIC SUPPLY,  
WASTE & VENT LAYOUT**

SCALE: 1/8" = 1'-0"



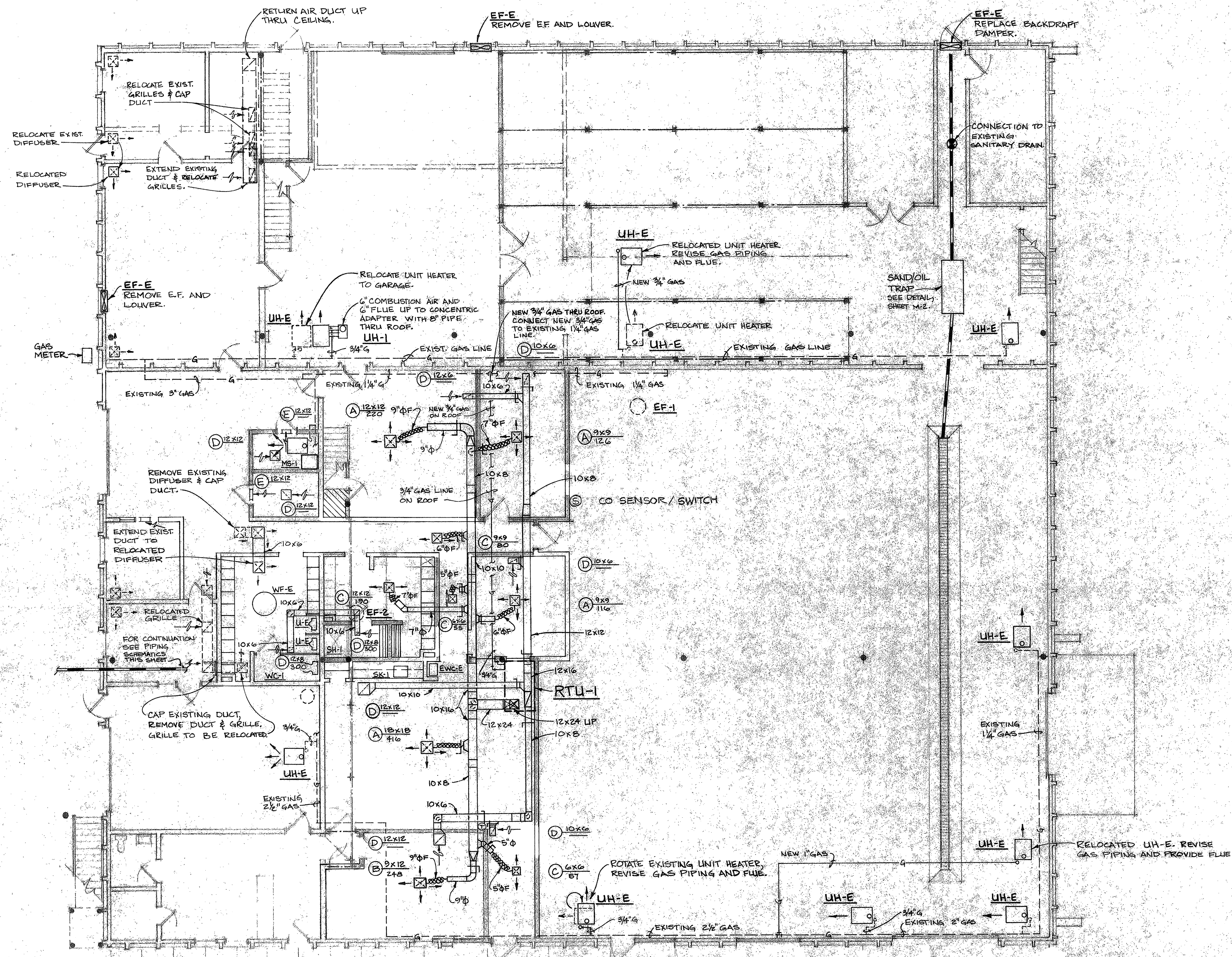
**DOMESTIC SUPPLY  
PIPING SCHEMATIC**

NO SCALE



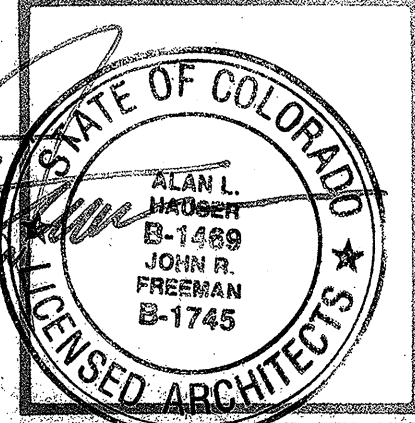
**WASTE & VENT  
PIPING SCHEMATIC**

NO SCALE



**FIRST FLOOR MECHANICAL PLAN**

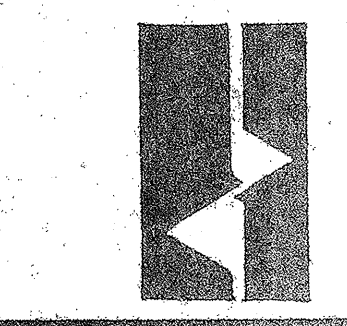
SCALE: 1/8" = 1'-0"



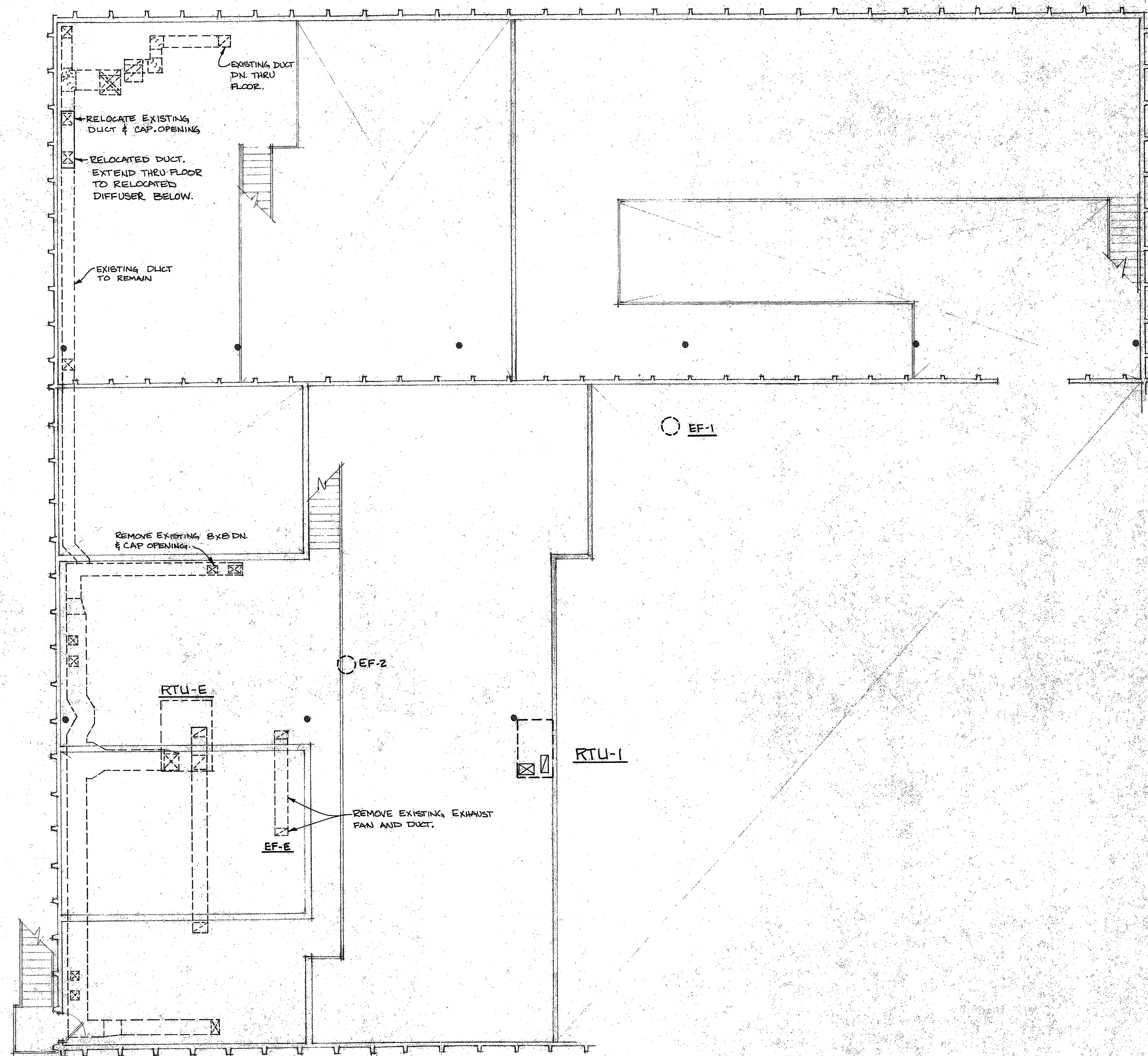
STATE OF COLORADO  
LICENSED ARCHITECT  
COLORADO ENERGY  
ASSOCIATES  
2829 Beckwith Rd., Ste. 116  
Ft. Collins, CO 80528  
970-228-2485

**ARCHITECTURE  
ONE**  
ARCHITECTS/PLANNERS, P.C.  
107 WEST 29th STREET, LOVELAND, COLORADO 80538  
303.669.9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND

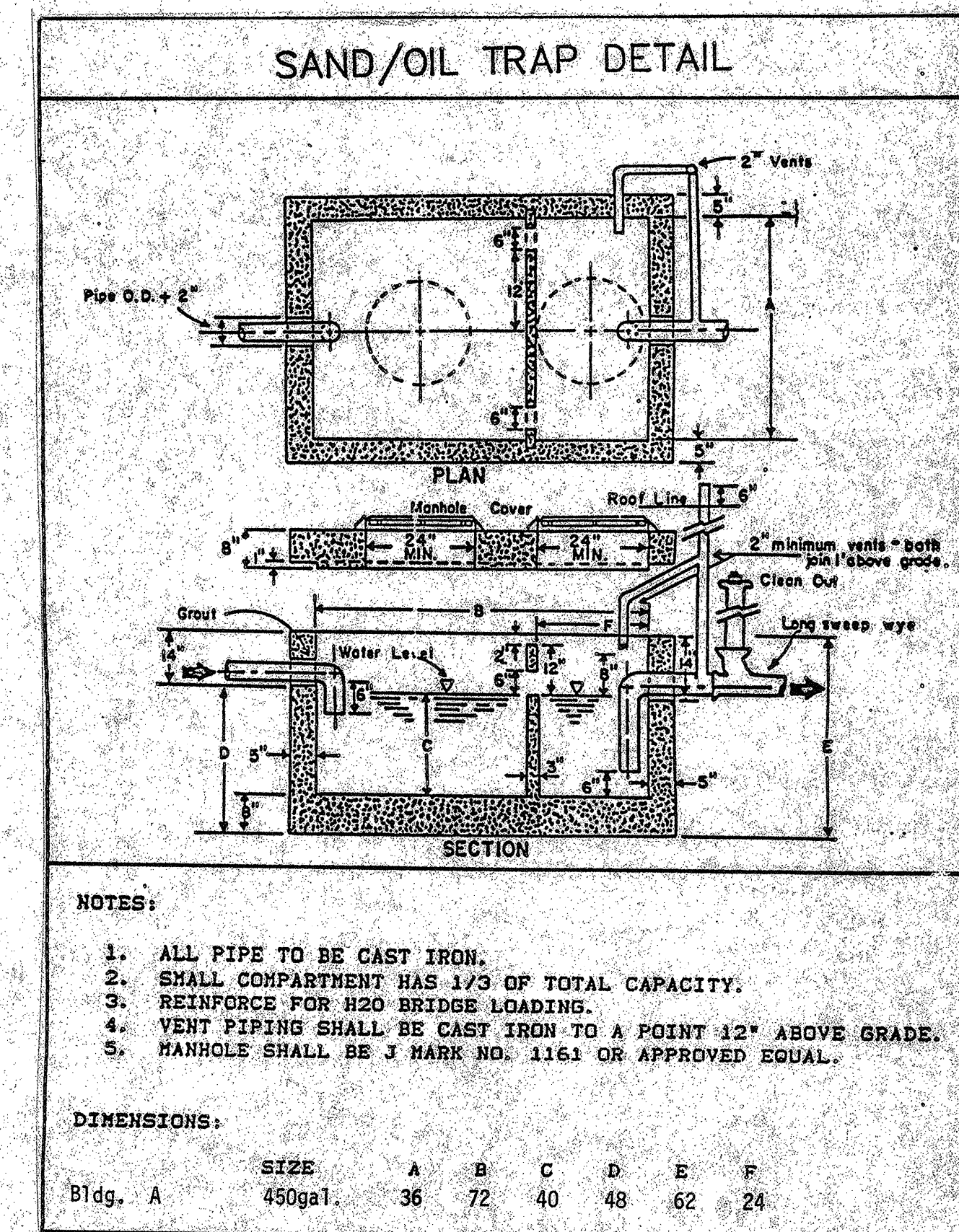


PROJECT NO. 8752	CHECKED (GEN)
REVISIONS:	ENTERED DEC 14 1998



SECOND FLOOR MECHANICAL PLAN

SCALE 1/8" = 1'-0"

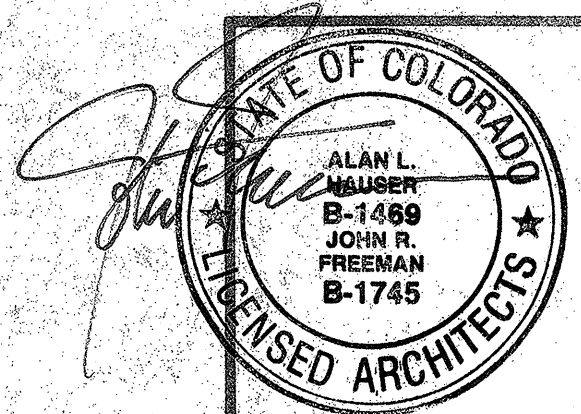


NOTES:

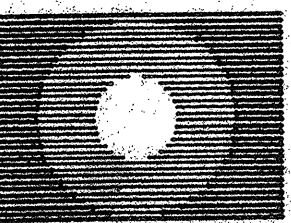
1. ALL PIPE TO BE CAST IRON.
2. SMALL COMPARTMENT HAS 1/3 OF TOTAL CAPACITY.
3. REINFORCE FOR H2O BRIDGE LOADINGS.
4. VENT PIPING SHALL BE CAST IRON TO A POINT 12" ABOVE GRADE.
5. MANHOLE SHALL BE J MARK NO. 1161 OR APPROVED EQUAL.

DIMENSIONS:

SIZE	A	B	C	D	E	F
Bldg. A	450gal.	36	72	40	48	62 24

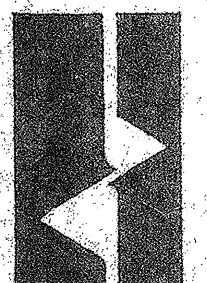


COLORADO ENERGY ASSOCIATES  
2855 Beavering Rd., Ste. 115  
Ft. Collins, CO 80526  
222-2483



**ARCHITECTURE ONE**  
ARCHITECTS / PLANNERS, P.C.  
PALMER GARDENS, SUITE 200  
150 EAST 29th STREET LOVELAND, COLORADO 80538  
303/669-9060

RENOVATION TO  
LOVELAND WAREHOUSE FACILITY  
CITY OF LOVELAND



PROJECT NO. 8752	CHECKED	GEN
REVISIONS	ENTERED DEC 14 1999	

**LEGEND**

SYMBOL	DESCRIPTION
[FACP]	FIRE ALARM CONTROL PANEL
[F.A.]	FIRE ALARM ANNUNCIATOR PANEL
[M.P.S.]	MANUAL PULL STATION 4"-6" AFF UON
[HORN]	AUDIBLE HORN 7"-6" AFF UON
[BELL]	AUDIBLE BELL 7"-6" AFF UON
[CRT]	CRT OUTLET
[SMOKE]	SMOKE DETECTOR: CEILING
[THERM]	THERMAL DETECTOR: CEILING
[DOOR]	DOOR CLOSER
[DUCT]	DUCT HEAT DETECTOR
[DUCT]	DUCT SMOKE DETECTOR
[HORN]	EXTERIOR HORN & LIGHT
[LIGHT]	REMOTE INDICATING LIGHT
[SW]	FLOW SWITCH
[TAMP]	TAMPER SW.: OS & Y
[RES]	END OF LINE RESISTOR
[AMP]	AMPLIFIER
[VOL]	VOLUME CONTROLLER: WALL 4"-6" AFF UON
[TELE]	TELEVISION OUTLET 12" AFF UON
[SPEAK]	SPEAKER
[MICRO]	MICROPHONE OUTLET
[INDIC]	INDICATES EXISTING DEVICE TO REMAIN
[INDIC]	INDICATES EXISTING DEVICE TO BE REMOVED
[EXIST]	EXISTING CIRCUIT RUN TO REMAIN
[EXIST]	EXISTING CIRCUIT RUN TO BE REMOVED
[PT'S]	PT'S
[CT'S]	CT'S
[GND]	GROUND BUS
[GND]	GROUND
[WEATH]	WEATHERHEAD
[FLAG]	FLAG NOTE
[MECH]	MECHANICAL EQUIPMENT SYMBOL
[SPEC]	SPECIAL EQUIPMENT SYMBOL
[SW & FUSE]	SWITCH & FUSE
[CIRCUIT]	CIRCUIT BREAKER
[INDIC]	INDICATES NL OR EM CIRCUIT
[SPOT]	SPOT LIGHT
[INDIC]	INDICATES AIMING DIRECTION
[EXIT]	EXIT LIGHT
[EMER]	EMERGENCY BATTERY LIGHT w/ LAMPS
[INDIC]	INDICATES NO HEADS
[REMOTE]	REMOTE EM LIGHTS
[TELE]	TELEPHONE OUTLET: FLUSH FLOOR S-SURFACE PEDESTAL
[THERM]	THERMOSTAT
[MOTOR]	MOTOR OUTLET & CONNECTION
[MAGNET]	MAGNETIC STARTER OR CONTACTOR
[DISCONNECT]	DISCONNECT SWITCH:
[N.F.]	N.F. - NON FUSED
[F.]	F. - FUSED
[PUSH]	PUSHBUTTON STATION
[TIME]	TIME SWITCH
[PHOTO]	PHOTO CELL FLEC.
[LIGHTNING]	LIGHTNING ARRESTER
[LIGHTING]	LIGHTING OUTLET: CEILING RECESSED
[LIGHTING]	LIGHTING OUTLET: WALL MOUNTED
[FLUORESCENT]	FLUORESCENT FIXTURE: SURFACE
[POLE]	POLE MOUNTED FIXTURE
[PORCELAIN]	PORCELAIN KEYLESS P6S110 W/150 W. A21 LAMP - pc
[FLUORESCENT]	FLUORESCENT FIXTURE: WALL MOUNTED
[FLUORESCENT]	FLUORESCENT FIXTURE: RECESSED DRYWALL
[FLUORESCENT]	FLUORESCENT STRIP
[TRACK]	TRACK FIXTURE
[DUPLEX]	DUPLEX RECEPTACLE
[GFI]	-GROUND FAULT INTERRUPTER
[EWC]	ELECTRIC WATER COOLER
[SD]	AUTOMATIC DOOR SWITCH
[DOUBLE]	DOUBLE DUPLEX RECEPTACLE
[FLUSH]	FLUSH FLOOR DUPLEX OUTLET
[S-SURFACE]	S-SURFACE PEDESTAL
[J-BOX]	J-BOX: CEILING
[J-BOX]	J-BOX: WALL
[DUPLEX]	DUPLEX RECEPTACLE SPLIT WIRED
[MULTI-CELL]	MULTI-CELL FLOOR BOX
[SPECIAL]	SPECIAL PURPOSE OUTLET AS NOTED
[CLOCK]	CLOCK OUTLET 7"-0" AFF UON
[TELEPHONE]	TELEPHONE OUTLET: W-WALL P-PAYPHONE 54" AFF UON

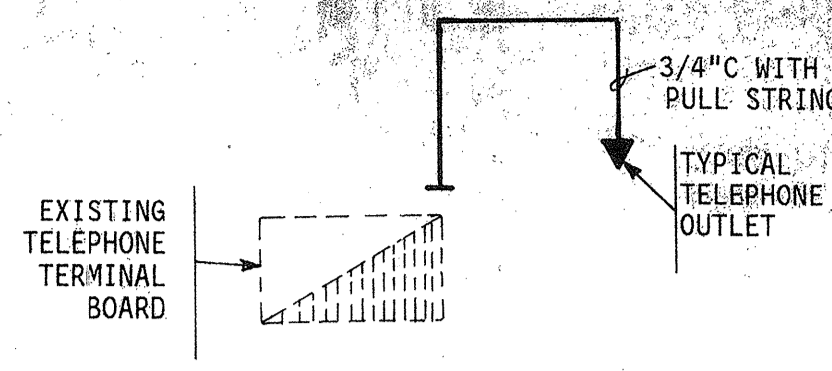
**LEGEND**

SYMBOL	DESCRIPTION
[M.D.P.]	MAIN DISTRIBUTION PANEL
[TRANSFORMER]	TRANSFORMER
[A-TRANSFORMER]	A-TRANSFORMER DESIGNATION
[TELEPHONE]	TELEPHONE TERMINAL BOARD
[ELECTRICAL]	ELECTRICAL PANEL
[A-DESIGNATION]	A-DESIGNATION
[MOUNTING]	MOUNTING BACKBOARD
[CIRCUIT RUN]	CIRCUIT RUN: WALLS OR CEILING
[CIRCUIT RUN]	CIRCUIT RUN: UNDERFLOOR
[CIRCUIT RUN]	CIRCUIT RUN: EXPOSED
[CIRCUIT RUN]	CIRCUIT RUN: UNDERGROUND
[LV]	LOW VOLTAGE CIRCUIT
[CIRCUIT]	CIRCUIT TURNS UP
[CIRCUIT]	CIRCUIT TURNS DOWN
[UNDERGROUND]	UNDERGROUND TELEPHONE RUN
[UNDERGROUND]	UNDERGROUND SECONDARY OR PRIMARY SERVICE
[SR]	SURFACE RACEWAY
[PS]	PLUG STRIP AS NOTED
[MOISTURE]	MOISTURE OR EXPLOSION PROOF SEAL
[HOME RUN]	HOME RUN:
[A-1,3,5]	A-PANEL DESIGNATION
[1,3,5]	1,3,5 CIRCUIT NUMBER, 4 CONDUCTORS UON
[FLUORESCENT]	FLUORESCENT FIXTURE RECESSED IN GRID
[LIGHTING]	LIGHTING OUTLET: CEILING SURFACE
[A-FIXTURE]	A-FIXTURE TYPE
[B-SWITCHING]	B-SWITCHING
[SINGLE POLE]	SINGLE POLE SWITCH 20 AMP UON
[S2]	DOUBLE POLE SWITCH 20 AMP UON
[S3]	3-WAY SWITCH 20 AMP UON
[S4]	4-WAY SWITCH 20 AMP UON
[SK]	KEYED SWITCH 20 AMP UON
[SP]	PILOT SWITCH SW. ON. LT. ON. 20A UON
[STO]	SWITCH W/THERMAL OVERLOAD 20 AMP UON
[SSU]	SWITCHED FUSED 20A UON
[DIMMER]	DIMMER SW. AS NOTED 20 AMP UON
[COMBINATION]	COMBINATION SWITCH/RECEPTACLE
[SINGLE POLE]	SINGLE POLE SW. 20 AMP UON
[a-SWITCHING]	a-SWITCHING 3-THREE WAY
[Svs]	SWITCH VARIABLE SPEED
[Sv]	SWITCH LOW VOLTAGE
[AC]	ABOVE COUNTER
[AFF]	ABOVE FINISHED FLOOR
[AFG]	ABOVE FINISHED GRADE
[AIC]	AMP. INTERRUPTING CAPACITY
[ANN]	ANNUNCIATOR
[ARCH]	ARCHITECT
[BFG]	BELOW FINISHED GRADE
[BKR]	BREAKER
[BWE]	BAKED WHITE ENAMEL
[C]	CONDUIT
[CATV]	CABLE TELEVISION
[CKT]	CIRCUIT
[CLG]	CEILING
[DISC]	DISCONNECT
[DN]	DOWN
[DPDT]	DOUBLE POLE DOUBLE THROW
[DPST]	DOUBLE POLE SINGLE THROW
[EC]	ELECTRICAL CONTRACTOR
[ELEC]	ELECTRICAL
[EM]	EMERGENCY
[EXIST]	EXISTING
[FIX]	FIXTURE
[FLUOR]	FLUORESCENT
[FLR]	FLOOR
[GC]	GENERAL CONTRACTOR
[GRC]	GALVANIZED RIGID CONDUIT
[GRD]	GROUND
[ISC]	AMP. SHORT CIRCUIT AVAILABLE
[J-BOX]	JUNCTION BOX
[LTC]	LIGHTING
[LOC]	LOCATION
[MDP]	MAIN DISTRIBUTION PANEL MAIN LUG ONLY
[MC]	MECHANICAL CONTRACTOR
[MECH]	MECHANICAL
[MTD]	MOUNTED
[MCB]	MAIN CIRCUIT BREAKER
[NL]	NIGHTLIGHT
[PNL]	PANEL
[PH]	PHASE
[PWR]	POWER
[PC]	PULL CHAIN
[RT]	RAINTIGHT, NEMA 3R

**RECEPT RECEPTACLE**

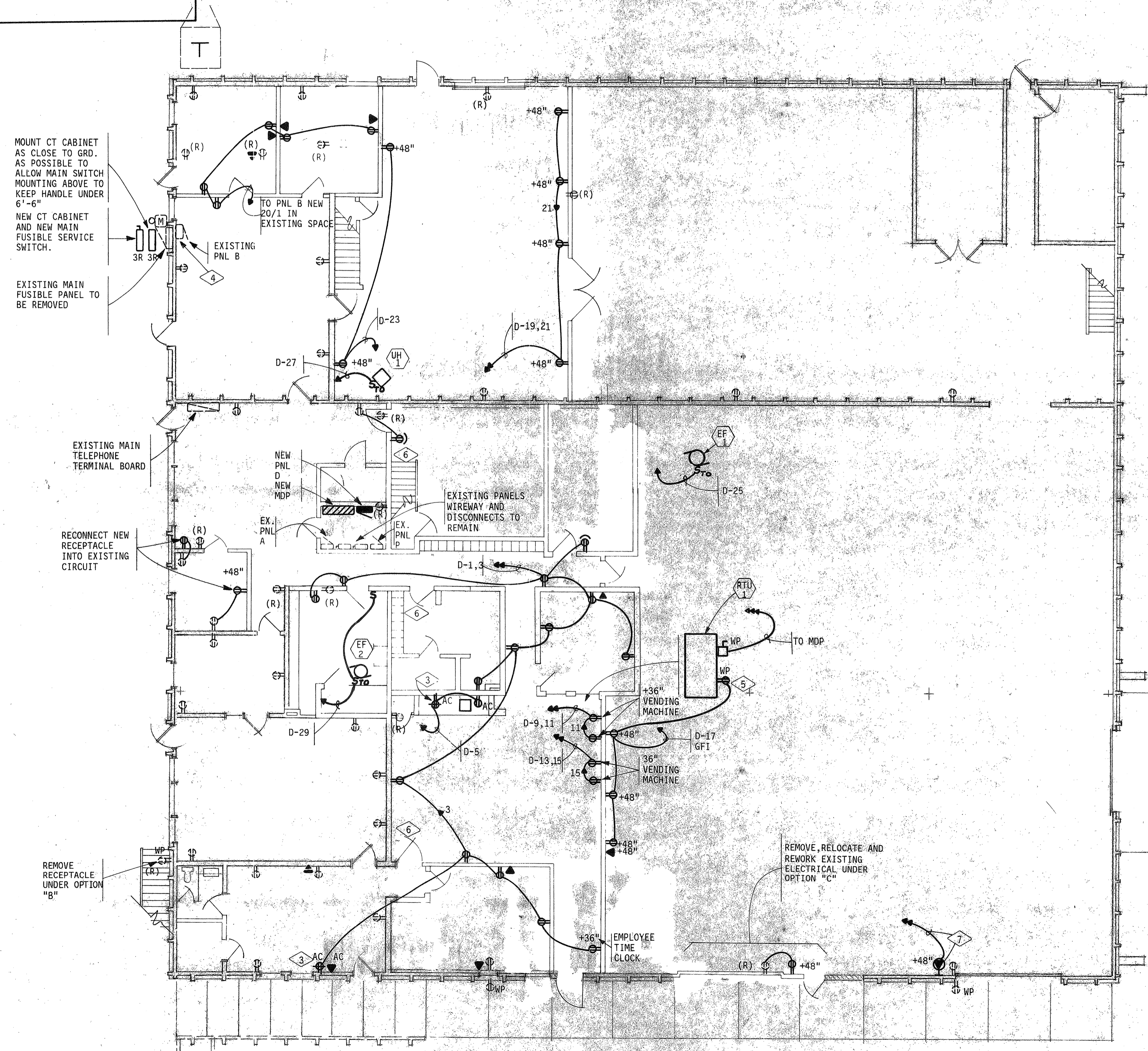
SS	SAFETY SWITCH
SPDT	SINGLE POLE DOUBLE THROW
SPST	SINGLE POLE SINGLE THROW
S/N	SOLID NEUTRAL
SPR	SPARE
SPC	SPACE
SW	SWITCH
T-STAT	THERMOSTAT
TRANSF	TRANSFORMER
TYP	TYPICAL
UC	UNDER COUNTER
UON	UNLESS OTHERWISE NOTED
V	VOLTS
W	WATTS
WP	WEATHERPROOF
W/O	WITHOUT
W/	WITH

**TELEPHONE ONE LINE**  
N.T.S.

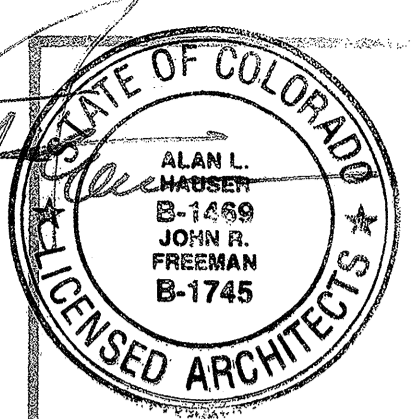


**MECHANICAL EQUIPMENT SCHEDULE**

DESCRIPTION	HP.	KW.	AMP.	VOLT.	WIRE	COND.	BREAKER	SWITCH & FUSE	REMARKS
RTU-1 ROOF TOP UNIT #1			25.3 MCA	240 3 PH	3#10 THWN	3/4	40/3	30/3RT 30A FRN-R	
EF-1 EXHAUST FAN #1	1/3			120	2#12 THWN	1/2	20/1	STO	
EF-2 EXHAUST FAN #2	1/4			120	2#12 THWN	1/2	20/1	STO	
UH-1 UNIT HEATER #1	1/8			120	2#12 THWN	1/2	20/1	STO	



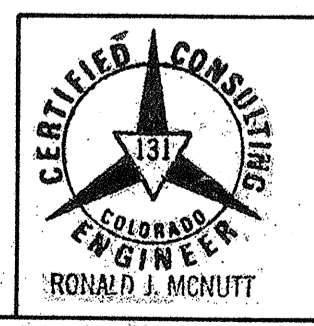
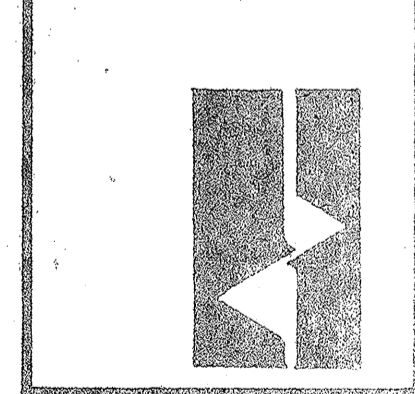
- GENERAL CONSTRUCTION NOTES**
- THE ELECTRICAL CONTRACTOR SHALL VERIFY THAT ALL ELECTRICAL ITEMS TO REMAIN OR TO BE RELOCATED AND REUSED ARE IN WORKING ORDER PRIOR TO ANY DEMOLITION WORK. IF THE EXISTING MATERIAL IS FOUND TO BE INOPERABLE, CONTRACTOR SHALL INFORM THE OWNER. ONCE ANY DEMOLITION WORK HAS BEGUN, ANY INOPERABLE OR DAMAGED MATERIAL SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
  - VERIFICATION OF EXISTING CONDITIONS. "INASMUCH AS THE REMODELING AND/OR REHABILITATION OF THE EXISTING BUILDING REQUIRES THAT CERTAIN ASSUMPTIONS BE MADE REGARDING EXISTING CONDITIONS, AND BECAUSE SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF THE BUILDING, THE GENERAL CONTRACTOR AGREES THAT, EXCEPT FOR NEGLIGENCE ON THE PART OF THE DESIGN PROFESSIONAL THE CONTRACTOR WILL HOLD HARMLESS, INDEMNIFY AND DEFEND THE DESIGN PROFESSIONAL FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF THE PROFESSIONAL SERVICES PROVIDED."
  - ANY ELECTRICAL ITEMS SHOWN OR NOT SHOWN ON THE PLANS, OR WHERE CIRCUITS IN EXISTING WALLS ARE REMOVED BY DEMOLITION, SHALL UPON COMPLETION OF REMODEL WORK BE LEFT IN WORKING CONDITION.
  - ALL PHASES OF THE ELECTRICAL WORK SHALL BE COORDINATED WITH THE ARCHITECT. WORK SHALL BE DONE IN A FASHION TO CAUSE AS LITTLE INCONVENIENCE AS POSSIBLE TO THE OWNER.
  - ELECTRICAL DEVICES NOTED TO BE REMOVED SHALL BE REMOVED BACK TO A POINT WHERE EXISTING CONDUIT CAN BE ABANDONED IN CONCEALED SPACES. REMOVE ALL WIRING FROM ABANDONED CONDUIT. ALL BOXES TO BE REMOVED SHALL BE TAKEN OUT OF WALLS AND HAVE HOLES REFINISHED TO MATCH WALL FINISH.
  - ELECTRICAL CONTRACTOR SHALL NOT DEFACE ANY AREAS OF THE BUILDING WHERE REMODELING IS NOT BEING DONE.
  - RACEWAYS: ALL CONDUIT SHALL BE CONCEALED WHEREVER POSSIBLE. CONDUIT SHALL NOT BE EXPOSED IN FINISHED AREAS (EXCLUDES MECHANICAL ROOMS, STORAGE CLOSETS, AND SIMILAR AREAS). EXPOSED RACEWAYS SHALL BE SURFACE RACEWAYS PER SPECIFICATIONS.
  - ROUTING OF EXISTING CONCEALED CONDUIT NOT KNOWN. LOCATION DETERMINED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL RE-CIRCUIT AS NOTED UTILIZING ANY EXISTING CONDUIT. HE SHALL REMOVE EXISTING WIRE AND REPULL NEW. ALL NEW CONDUIT ADDED SHALL BE CONCEALED WHEREVER POSSIBLE.
  - SURFACE RACEWAY: WHEREVER CONCEALED CONDUIT IN FINISHED AREAS IS NOT POSSIBLE, ELECTRICAL CONTRACTOR SHALL INSTALL SURFACE MOUNTED RACEWAYS EQUAL TO WIREMOLD. RUN SURFACE RACEWAYS IN CORNER OF WALL AND CEILING. ALL RACEWAYS THAT ARE EXPOSED SHALL BE APPROVED BY ARCHITECT PRIOR TO ROUGH-IN.
  - TERMINATING AND SPLICING: MAKE ALL JOINTS AND SPLICES IN BRANCH CIRCUIT WIRING WITH APPROVED SOLDERLESS TOOL APPLIED OR TWIST-ON CONNECTORS, IN THE VARIOUS BOXES, GUTTERS, AND SIMILAR LOCATIONS, BUT NOT IN RACEWAYS. LEAVE SUFFICIENT SLACK TO PERMIT TWO (2) OR MORE SPLICES OR JOINTS TO BE REMADE IN CASE OF FAULT.
  - ELECTRICAL CONTRACTOR SHALL RECEIVE, FROM SYSTEM SUPPLIERS, ALL WIRING DIAGRAMS FOR ALL EQUIPMENT. PRIOR TO ANY ROUGH-IN, TO ASSURE PROPER ELECTRICAL CHARACTERISTICS ARE PROVIDED. ELECTRICAL CONTRACTOR SHALL PROVIDE ARCHITECT WRITTEN NOTIFICATION PRIOR TO ROUGH-IN, THAT ALL WIRING DIAGRAMS HAVE BEEN RECEIVED AND REVIEWED FOR CORRECTNESS. ANY INCORRECT WIRING OR DEVICES INSTALLED BY ELECTRICAL CONTRACTOR WITHOUT WIRING DIAGRAMS SHALL BE CORRECTED AT ELECTRICAL CONTRACTORS EXPENSE.
  - EXACT ELECTRICAL DEMOLITION REQUIREMENTS NOT SHOWN ON THE DRAWINGS. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO BIDDING TO DETERMINE EXACT DEMOLITION WORK TO BE DONE AND SHALL INCLUDE ALL DEMOLITION COSTS IN THEIR BID.



**ELECTRICAL ENGINEERS**  
R. J. McHUTT AND ASSOCIATES, INC.  
105 37TH AVENUE (SUITE 202)  
GREENWOOD, COLORADO 80645  
GREENWOOD (303) 556-5093 • DENVER (303) 654-1441

**ARCHITECTURE**  
ARCHITECTS/PLANNERS/P.C.  
FIRESIDE SQUARE, SUITE 200  
107 WEST 29TH STREET, LOVELAND, COLORADO 80538  
303.669.9060

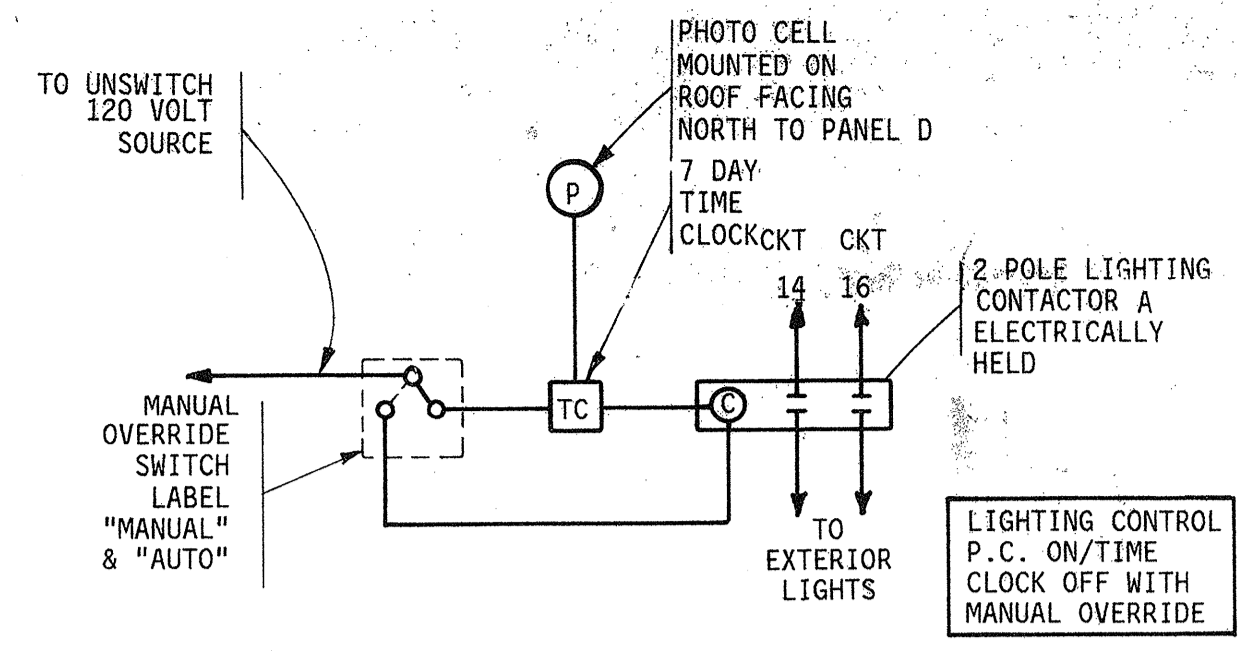
RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND



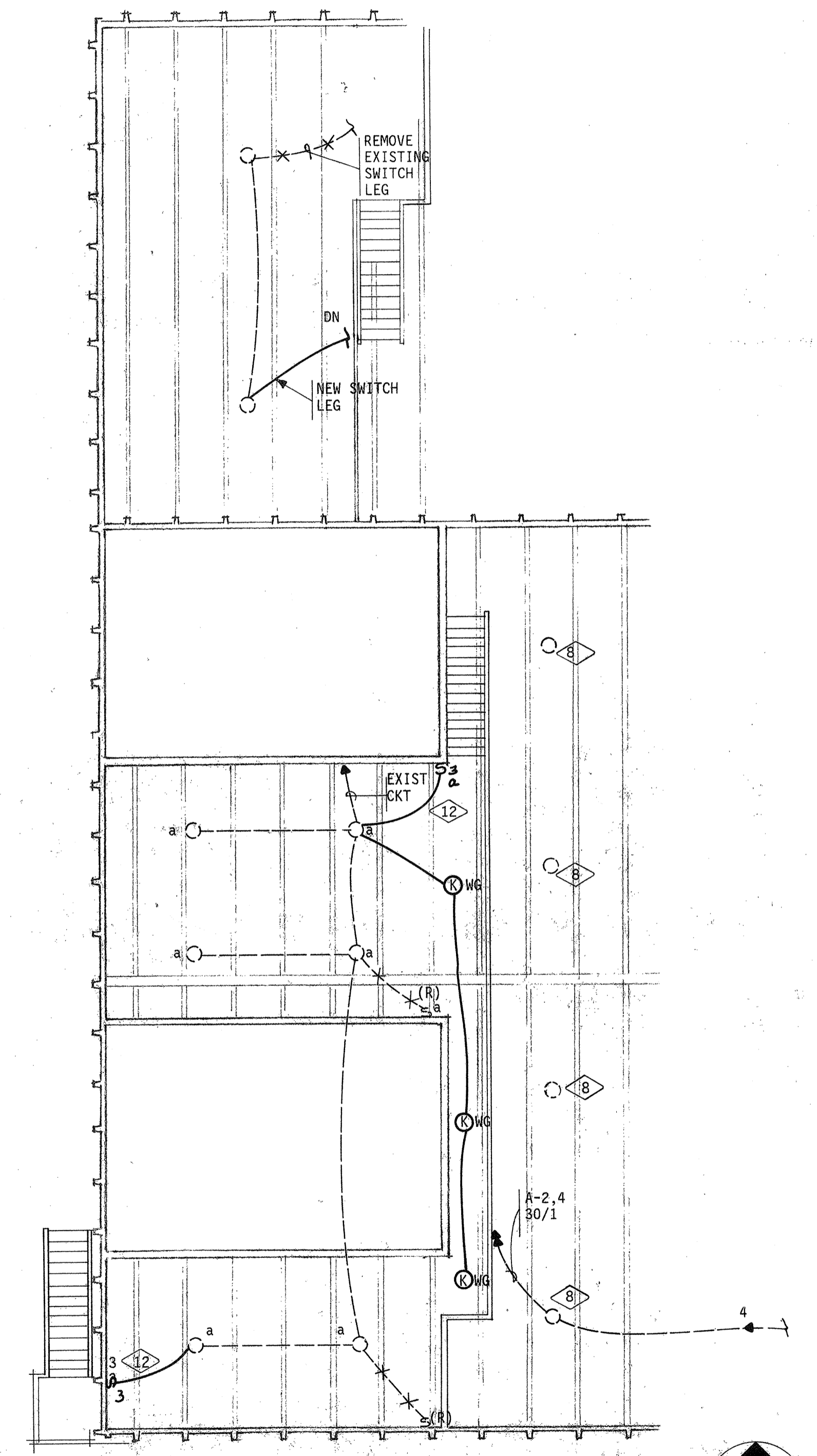
THIS SEAL AND SIGNATURE AFFIXED TO THIS DRAWING IS VERIFICATION THAT THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH UBC 1985 CHAPTER 53 ENERGY STANDARDS AND THAT THE DESIGN MEETS OR EXCEEDS THE ESTABLISHED ENERGY EFFICIENCY STANDARDS.

PROJECT NO.	CHECKED
	ENTERED DEC 14 1999

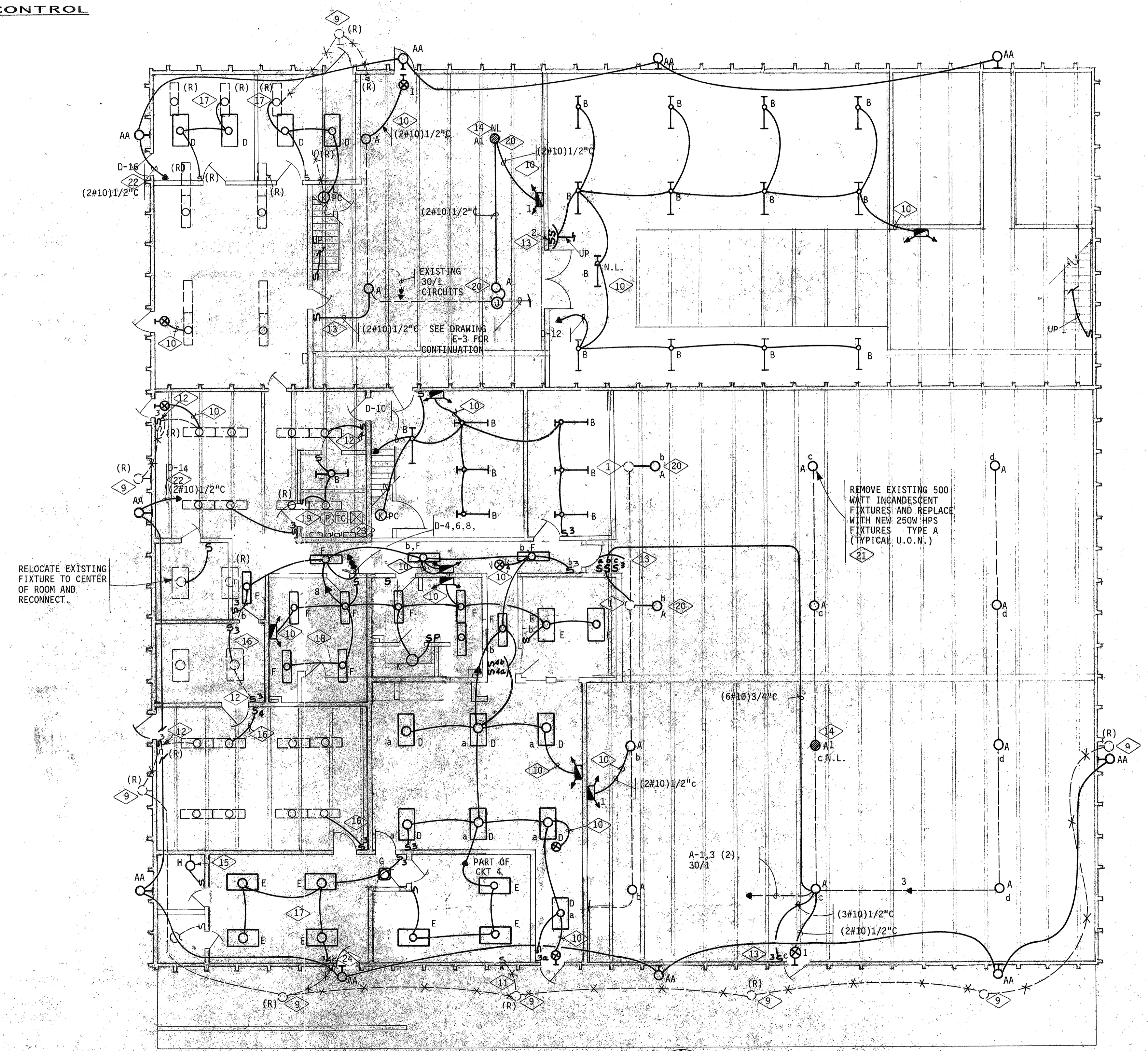
**MAIN LEVEL FLOOR PLAN - ELECTRICAL PLAN**  
SCALE: 1/8"=1'-0"



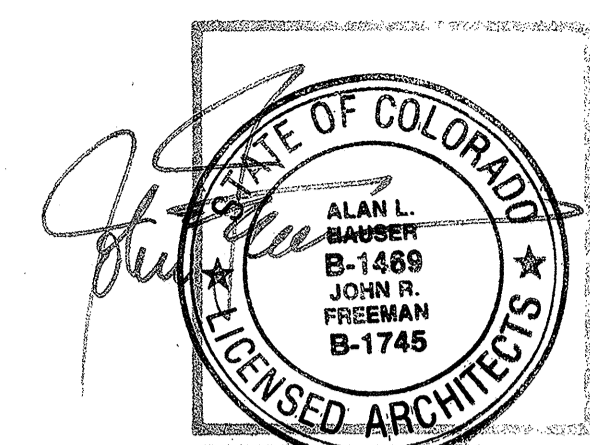
**EXTERIOR LIGHTING CONTROL**  
\_N.T.S.



**SECOND LEVEL - ELECTRICAL PLAN**  
SCALE: 1/8"=1'-0"



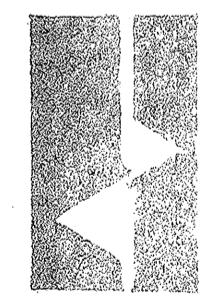
**MAIN LEVEL - ELECTRICAL POWER PLAN**  
SCALE: 1/8"=1'-0"



ELECTRICAL ENGINEERS  
**R. J. McHITT AND ASSOCIATES, INC.**  
1015 37TH AVENUE, SUITE 200  
DENVER, COLORADO 80202  
TEL: (303) 751-0003  
FAX: (303) 751-0003  
CAREER: (303) 751-0003 • PHONE: (303) 654-1441

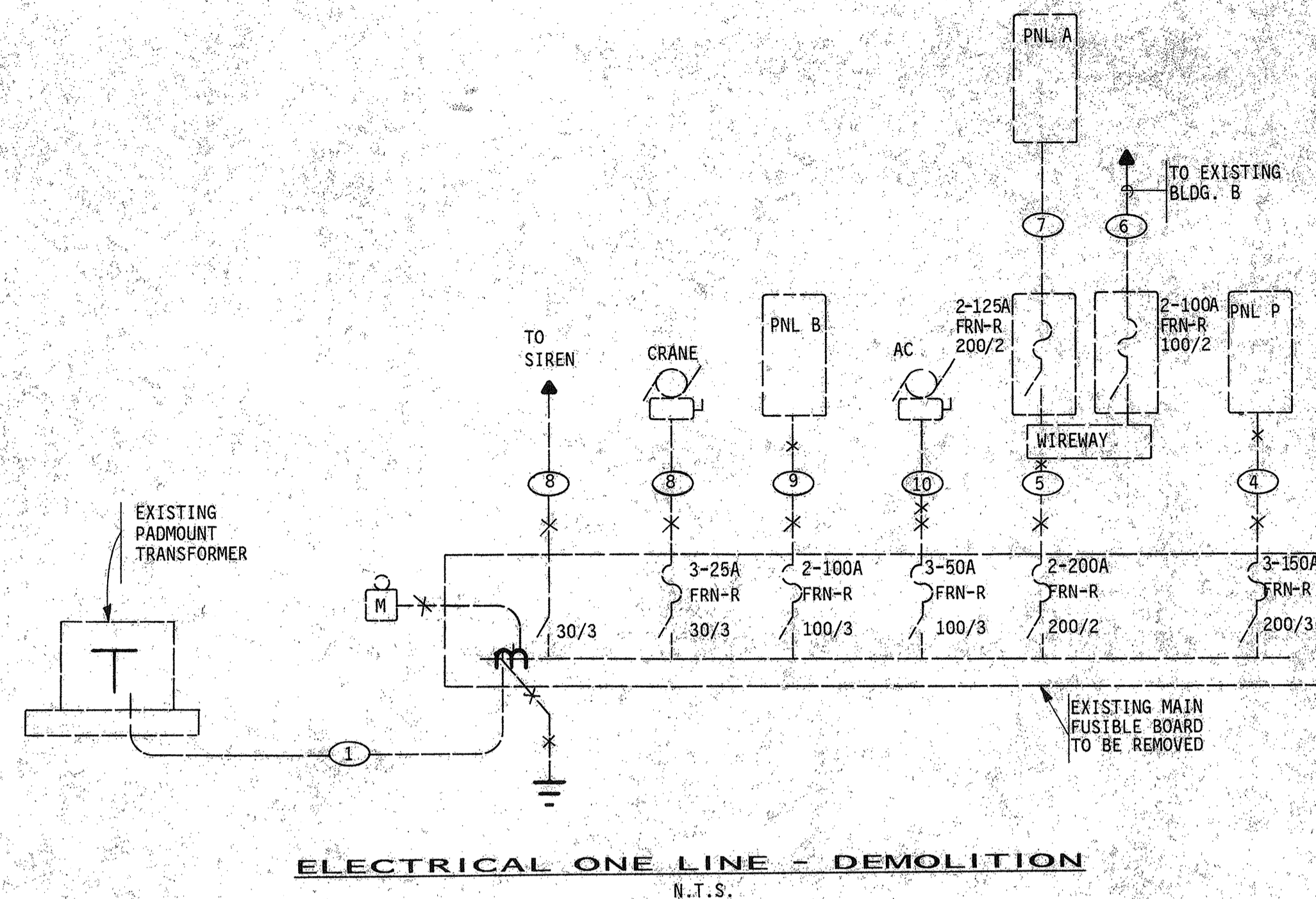
**ARCHITECTURE ONE**  
ARCHITECTS / PLANNERS / P.C.  
PALMER GARDENS, SUITE 200  
150 EAST 8TH STREET, LOVELAND, COLORADO 80536  
303/669-9060

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
CITY OF LOVELAND



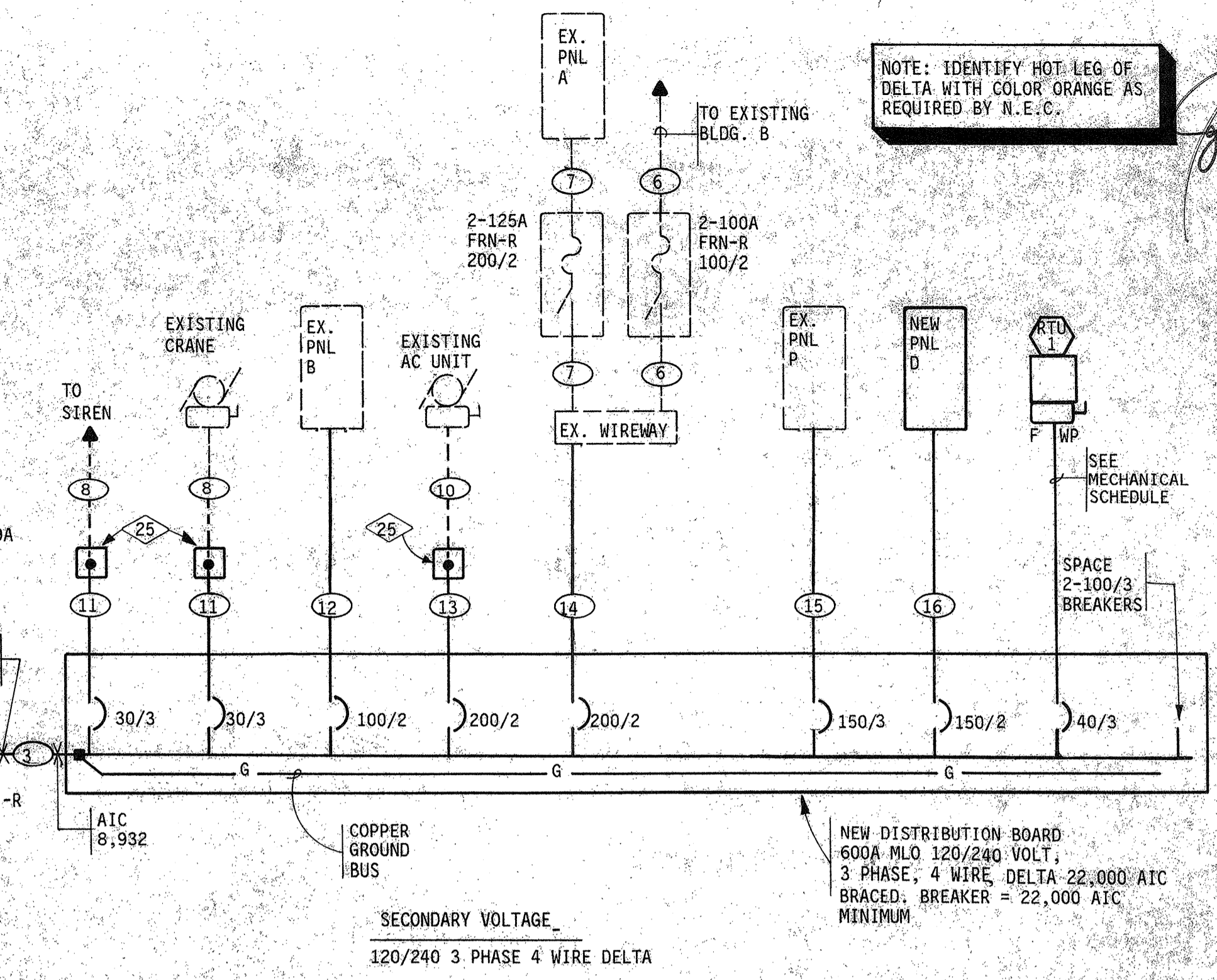
PROJECT NO.	CHECKED
REVISIONS	ENTERED DEC. 14 1989



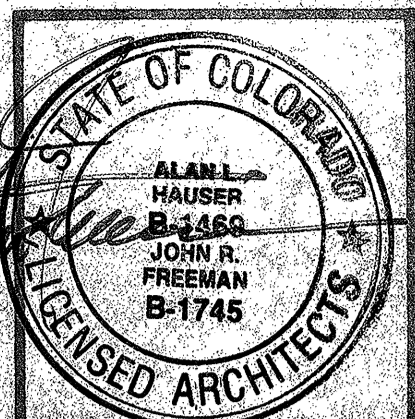


FEEDER SCHEDULE	
KEY	DESCRIPTION
1	EXISTING 2 RUNS [(4#350 MCM THW AL) 3" C].
2	NEW 2 RUNS [(4#350 MCM THW AL) 3" C].
3	NEW 2 RUNS [(4#350 MCM THW AL & #1/0 CU GRD) 3 1/2" C].
4	EXISTING (3#250 MCM THW AL) 2" C.
5	EXISTING (3#350 MCM THW AL) 3" C.
6	EXISTING (3#2/0 THW AL) 2" C.
7	EXISTING (3#3/0 THW AL) 2 1/2" C.
8	EXISTING (3#10 THW) 1 1/2" C.
9	EXISTING (3#1 THW AL) 1 1/2" C.
10	EXISTING (3#8 THW) 3/4" C.
11	NEW (3#10 THWN) 1 1/2" C.
12	NEW (3#1 THW AL) 1 1/2" C.
13	NEW (3#8 THWN) 3/4" C.
14	NEW (3#350 MCM THW AL) 3" C.
15	NEW (3#250 MCM THW AL) 2" C.
16	NEW (3#250 MCM THW AL) 2 1/2" C.
17	NEW 1" C.
18	NEW (#2/0 CU GRD) 3/4" C.

SERVICE RECAP	
EXISTING HIGHEST KW DEMAND OVER LAST YEAR=	44KW
44KW x 85PF=	51.76 KVA
51.76 KVA x 1.25 PER NEC=	64.70 KVA
NEW PANEL D=	28.447 KVA
RTU-1=	10.715 KVA
<b>NEW SERVICE TOTAL =</b>	<b>103.86 KVA</b>
	103.86 KVA x 240 = 432.75 AMPS



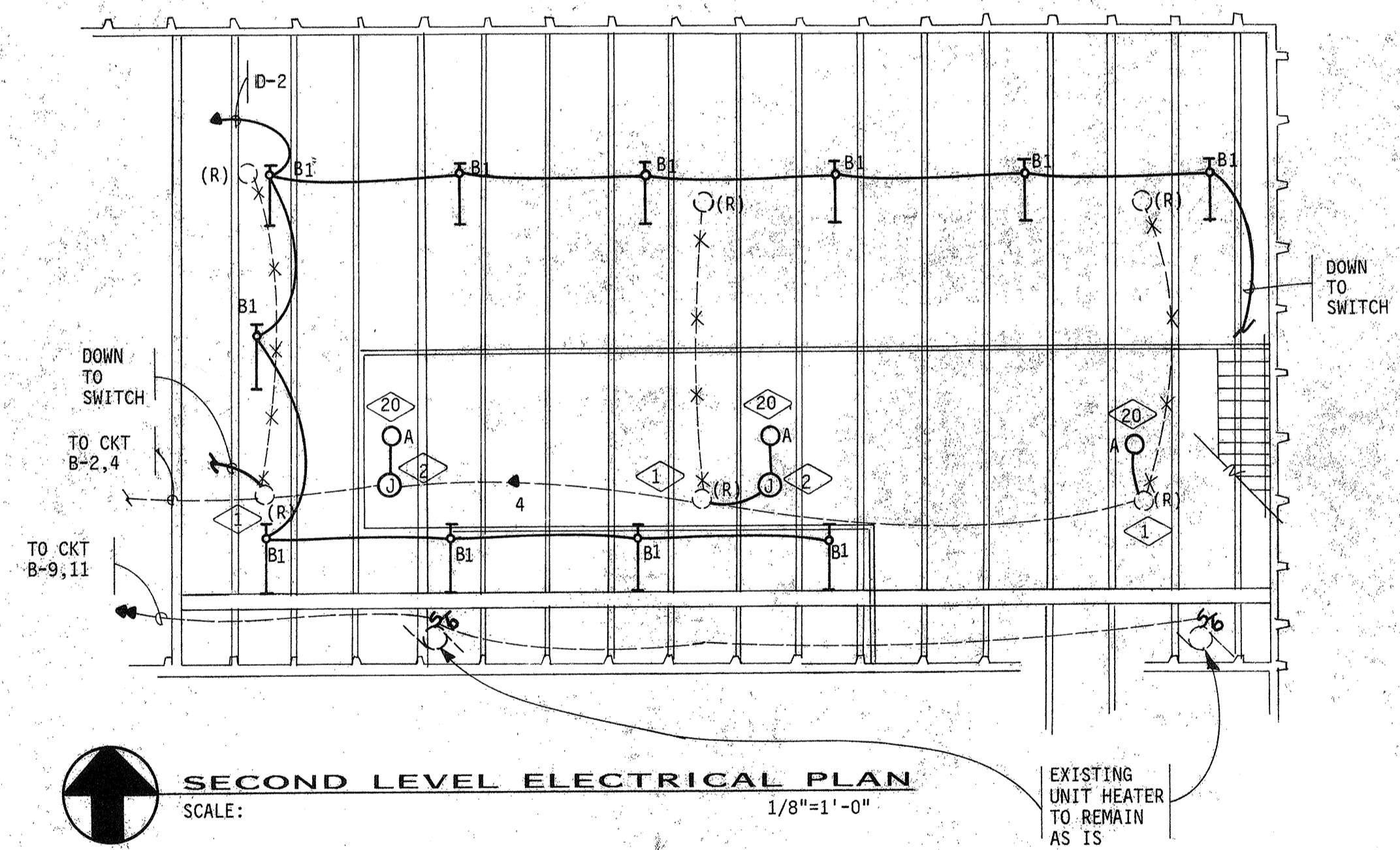
NOTE: IDENTIFY HOT LEG OF DELTA WITH COLOR ORANGE AS REQUIRED BY N.E.C.



ELECTRIC ENGINEERS  
**R.J. MCINTYRE AND ASSOCIATES, INC.**  
 1015 37th Avenue, Suite 208  
 Greeley, Colorado 80639  
 (303) 351-0000  
 (303) 350-8000 • Fax (303) 351-1414

**ELECTRICAL ONE LINE - DEMOLITION**  
N.T.S.

**ELECTRICAL - ONE LINE - NEW**  
N.T.S.



**SECOND LEVEL ELECTRICAL PLAN**  
SCALE: 1/8"=1'-0"

PANELBOARD SCHEDULE											
PANEL	ACTIVE CIRCUIT	SPARES	VOLT.	PH	W.	MAINS	NO. OF SECT.	POLES PR. SECT.	MOUNTING	DEMAND	TYPE
D	21-20/1, 1-20/1 GFI	6-20/1	120/240	1	3	225A MLO	1	42	SURFACE	28.447 KVA	LOAD CENTER

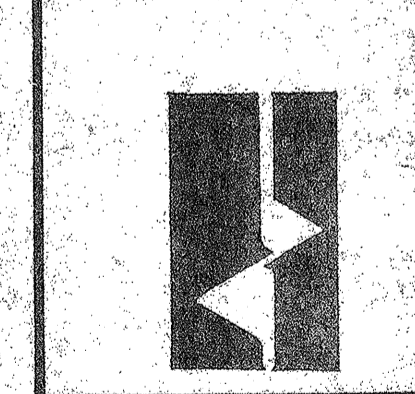
- FLAG NOTES**
- REMOVE EXISTING LIGHT FIXTURE. PROVIDE BLANK COVER PLATE. CIRCUIT TO REMAIN ACTIVE.
  - INTERCEPT EXISTING CIRCUIT AND EXTEND TO NEW LIGHT FIXTURE TYPE 'A' (2#10) 1/2" C.
  - DOUBLE-DUPLEX RECEPTACLE.
  - EXISTING FEEDERS FOR EXISTING PANELS AND DISCONNECTS SHALL BE REMOVED BACK TO NEW ELECTRICAL ROOM.
  - MOUNT WEATHERPROOF RECEPTACLE ON SIDE OF RTU-1, 12" ABOVE ROOF DECK.
  - REMOVE ALL EXISTING ELECTRICAL EQUIPMENT ALONG EXISTING WEST WALL OF SHOP AREA.
  - RELOCATED EXISTING 50 AMP, 2-POLE RECEPTACLE REMOVED FROM ALONG EXISTING WEST WALL OF SHOP AREA. PROVIDE NEW (3#6 THW CU) 1" C TO REFEED RECEPTACLE FROM EXISTING CIRCUIT.
  - REMOVE EXISTING 500 WATT INCANDESCENT FIXTURES AND PROVIDE BLANK COVER PLATE OVER EXISTING J-BOX. CIRCUIT TO REMAIN ACTIVE.
  - REMOVE EXISTING EXTERIOR LIGHTING FIXTURES AND CIRCUIT.
  - NOT SWITCHED.
  - EXISTING SWITCH BANK TO BE REMOVED.
  - REMOVE EXISTING SINGLE POLE SWITCH AND REPULL NEW CONDUCTORS FOR 3-WAY SWITCHING.
  - 30 AMP RATED SWITCH(ES).
  - REWIRE LIGHTING CIRCUIT TO BE NON-SWITCH. FIXTURE TO BE A NIGHT LIGHT.
  - RECONNECT NEW FIXTURE INTO EXISTING CIRCUIT.
  - PROVIDE NEW THREE- AND FOUR-WAY SWITCH. PROVIDE NEW CONDUCTORS AND CONDUIT.
  - REMOVE EXISTING FIXTURES FROM THIS ROOM AND REPLACE WITH NEW FIXTURES. RECONNECT INTO EXISTING CIRCUIT.
  - REMOVE EXISTING FIXTURES AND CIRCUITS FROM THIS AREA.
  - PROVIDE NEW SWITCH TO CONTROL EXISTING FIXTURE. CENTER EXISTING FIXTURE IN ROOM.
  - NEW TYPE 'A' FIXTURE LOCATION. PROVIDE NEW J-BOX AND RIGID MOUNTING ARRANGEMENT TO SUPPORT FIXTURE.
  - PROVIDE ADDITION MOUNTING ARRANGEMENT TO SUPPORT ADDITIONAL WEIGHT OF NEW TYPE 'A' & 'A1' LIGHT FIXTURES.
  - RUN CIRCUIT THROUGH EXTERIOR LIGHTING CONTACTOR 'A'.
  - EXTERIOR LIGHTING CONTACTOR 'A', TIME CLOCK, PHOTO CELL (TO BE MOUNTED ON ROOF), AND MANUAL OVERRIDE SWITCH. SEE DETAIL.
  - REMOVE TWO EXISTING SINGLE POLE SWITCHES AND REPLACE WITH ONE NEW 3-WAY SWITCH. PROVIDE NEW COVER PLATE.
  - J-BOX TO INTERCEPT EXISTING FEEDERS. SIZE AS REQUIRED BY N.E.C.

LIGHTING FIXTURE SCHEDULE										
TYPE	LAMPS	DESCRIPTION	FINISH	MOUNTING	MANUFACTURER	CAT. NO.	VOLT.			
A	LU/250	250 WATT HPS, LOW BRIGHTNESS, LOW BAY FIXTURE. ACRYLIC REFRACTOR. 120 VOLT BALLAST 20 AMP FUSE. SAFETY CHAIN.	STD	PENDANT BETWEEN TEE'S	HUBBELL	BL-250 59-LB-BL-SOF-BL-TLR	120			
B	2-F40 WW	2 LAMP 4-FOOT FLUORESCENT STRIP FIXTURE. 120 VOLT ENERGY SAVING BALLAST. WIRE GUARD.	BWE	SURFACE	MIDWEST	S-240R WG 240-ESB	120			
B1	2-F40 WW	2 LAMP 4-FOOT FLUORESCENT STRIP FIXTURE. 120 VOLT ENERGY SAVING BALLAST. WIRE GUARD.	BWE	PENDANT LAMPS FLUSH BOTTOM TEE'S	MIDWEST	S-240R WG 240-ESB	120			
*C	4-F40 WW	2' X 4' 4-LAMP SURFACE FLUORESCENT 120 VOLT ENERGY SAVING BALLAST. .125 NOM LENS. SOLID METAL SIDES.	BWE	SURFACE	MIDWEST	2SPAX-440HL .125-ESB	120			
D	4-F40 WW	2' X 4' LAMP, WRAP AROUND FLUORESCENT FIXTURE. 120 VOLT ENERGY SAVING BALLAST.	BWE	SURFACE	MIDWEST	F-94-40RA-ESB	120			
E	4-F40 WW	2' X 4' 4-LAMP SURFACE FLUORESCENT FIXTURE. WOOD SIDES. 120 VOLT ENERGY SAVING BALLAST. .125 NOM LENS	WOOD	SURFACE	MIDWEST	W2SPAX-440HL-ESB	120			
F	2-F40 WW	1' X 4' 2-LAMP WRAP AROUND FLUORESCENT FIXTURE. 120 VOLT ENERGY SAVING BALLAST.	BWE	SURFACE	MIDWEST	F-92-40RA-ESB	120			
G	75A19	75 WATT INCANDESCENT RECESSED FIXTURE. REGRESSED LENS. THERMAL PROTECTION.	BWE	RECESSED	JUNO	TC2-20	120			
H	3-40G 40	LIGHT BAR 3 - LAMP. INCANDESCENT.	CHROME	WALL 6" ABOVE MIRROR	PROGRESS	P3333-15	120			
K	100A19	9 3/4" DIA. GLASS DOME INCANDESCENT FIXTURE	WHITE	SURFACE	PROGRESS	P3410-30	120			
AA	LU/150	150 WATT HPS ADJUSTABLE FLOOD LIGHT. HIGH POWER FACTOR BALLAST.	BRONZE	WALL 16'-0" AFG	HUBBELL	MIC-0150S-258	120			
A1	LU/250-Q250/T4	SAME AS TYPE A EXCEPT PROVIDE QUARTZ RESTRIKE.	STD	PENDANT	HUBBELL	BL-250-59-LB-BL-SOF-QSS-BL-TLR	120			
⊗	WITH UNIT	EXIT LIGHT. WHITE/GREEN UNIVERSAL ARROWS AND MOUNTING. SINGLE OR DOUBLE FACE.	WHITE	UNIVERSAL	SILTRON	WX-U-WG-CPY	120			
⊗ <sub>1</sub>	WITH UNIT	EXIT LIGHT. WHITE/GREEN UNIVERSAL ARROWS AND MOUNTING. CONTRACTOR INSTALLED IN LINE FUSE (20A).	WHITE	UNIVERSAL	SILTRON	WX-U-WG-CPY-6FLR	120			
⊗ <sub>2</sub>	WITH UNIT	EM BATTERY PACK WITH TWIN HEADS.	STD	WALL 7'-6" AFF	SILTRON	EM-40	120			
⊗ <sub>3</sub>	WITH UNIT	EM BATTERY PACK WITH TWIN HEADS. CONTRACTOR INSTALLED IN LINE FUSE (20A).	STD	WALL 7'-6" AFF	SILTRON	EM-40-GFLR	120			

\* PROVIDE ALTERNATE TO OWNER TO USE TYPE 'C' FIXTURES IN LIEU OF TYPE 'E' FIXTURES.

**ARCHITECTURE ONE**  
 ARCHITECTS/PLANNERS, P.C.  
 PALMER GARDENS, SUITE 200  
 150 EAST 29th STREET - LOVELAND, COLORADO 80538  
 303/669-9000

RENOVATION TO  
**LOVELAND WAREHOUSE FACILITY**  
 CITY OF LOVELAND



PROJECT NO.	
REVISIONS	CHECKED
ENTERED DEC 14 1999	

# Loveland Traffic Operation Center Remodel

**Maintenance Operation Center**  
**105 West 5th Street**  
**Loveland, Colorado**

**Owner:**

City of Loveland  
410 East 5th Street  
Loveland, CO 80537  
Phone: 970.962.2365  
Contact: Devin Davis

**Client:**

Loveland Traffic Operations Center  
105 West 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

**Intelligent Transportation Systems:**

APEX Design PC  
910 16th Street, Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440  
Fax: 303.325.7743  
Contact: Jason Osaki

**Architect:**

Belford Watkins Group, LLC  
231 South Howes St.  
Fort Collins, CO 80521  
Phone: 970.407.0070  
Contact: Don Watkins

**Mechanical & Plumbing Engineer:**

AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040  
Contact: Alicia Thorpe

**Electrical Engineer:**

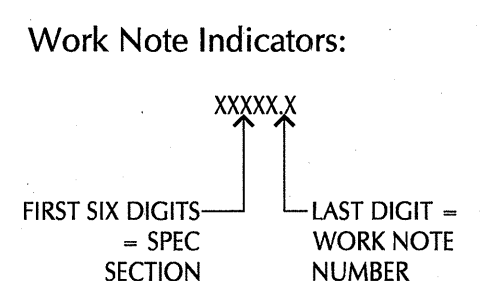
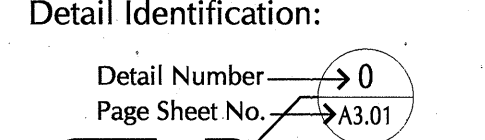
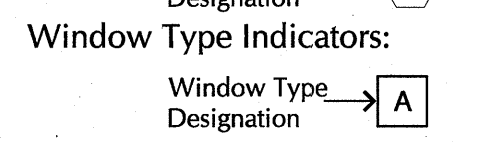
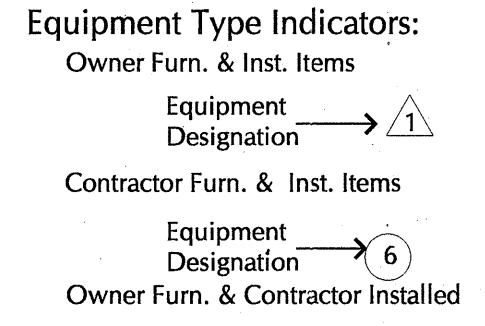
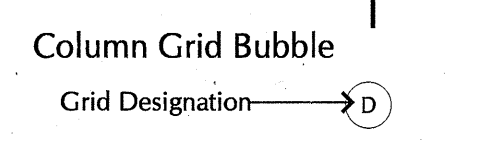
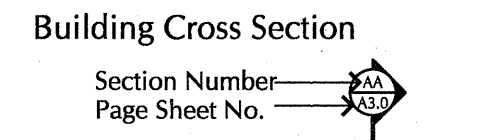
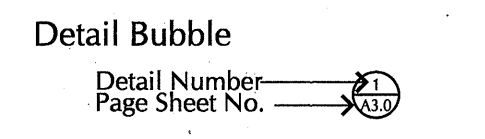
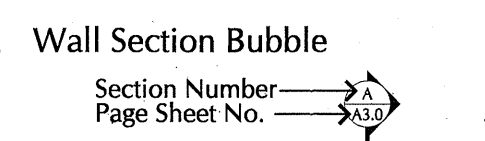
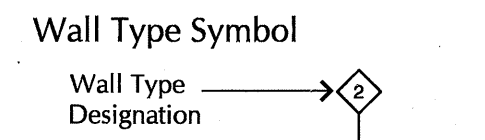
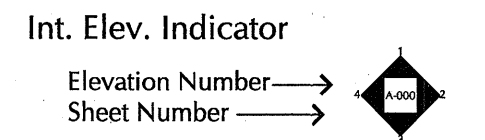
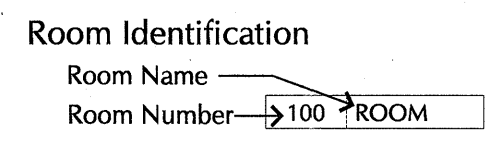
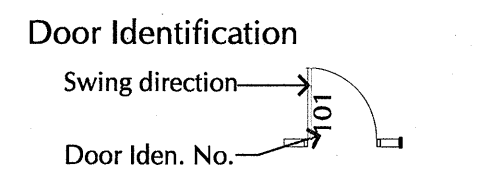
Scanlon Szynskie Group, Inc  
3045 S. Parker Road Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0812  
Contact: Keedran Thorpe

# ABBREVIATIONS

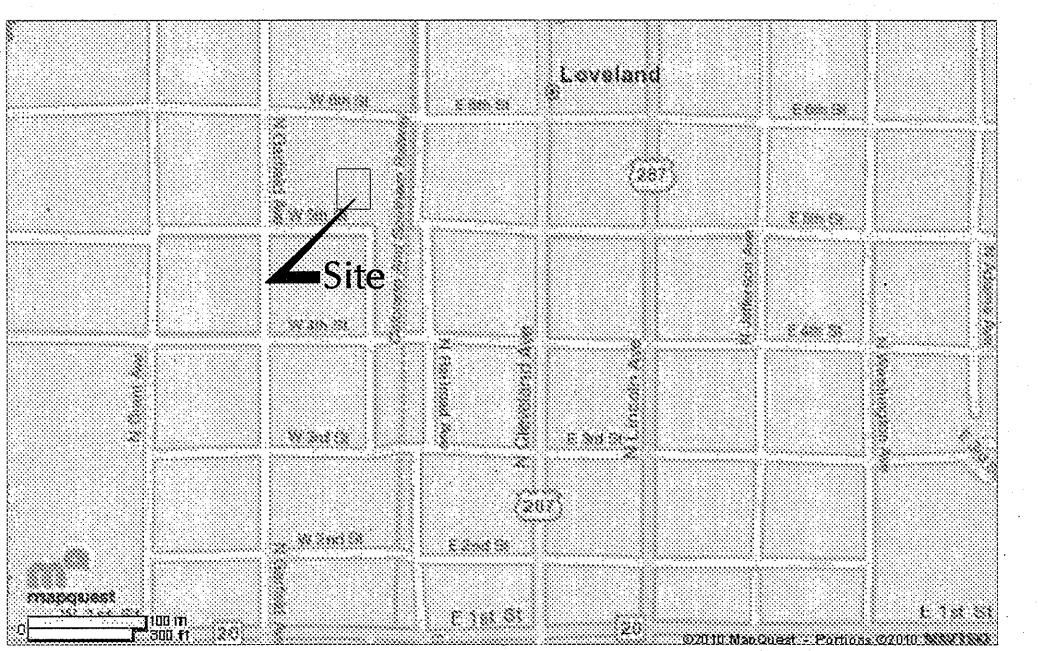
AC	AIR CONDITIONING	LAB	LABORATORY
ACST	ACOUSTIC	LAM	LAMINATE (D)
ACR	ACRYLIC	LAV	LAVATORY
ADC	ACOUSTICAL TILE	LB	POUNDS
AD	AREA DRAIN	LIB	LIBRARY
ADD	ADDENDUM	LIN	LINEAL
ADH	ADHESIVE	LKR	LOCKER
ADJ	ADJACENT	LT	LIGHT
ADST	ADJUSTABLE	MAINT	MAINTAIN (NANCE)
AFF	Above FINISHED FLOOR	MAS	MASONRY
AHU	AIR HANDLING UNIT	MAX	MAXIMUM
ALUM	ALUMINUM	MC	MECHANICAL CONTRACTOR
AL	ALTERNATE	MECH	MECHANIC (AU)
AND	AND/OR	MET	METAL
APPROX	APPROXIMATE (LY)	MFR	MANUFACTURE (ER)
ARCH	ARCHITECT (RAU)	MH	MANHOLE
ASPH	ASPHALT	MIN	MINIMUM
AUTO	AUTOMATIC	MIR	MIRROR
		MISC	MISCELLANEOUS
BD	BOARD	MO	MASONRY OPENING
BTWN	BETWEEN	MR	MOISTURE RESISTANT
BLDG	BUILDING	MT	MOUNT (ED, ING)
BLK(G)	BLOCK (ING)	MTR	MATERIAL (S)
BM	BEAM	NA	NOT APPLICABLE
BO	BY OTHERS	NIC	NOT IN CONTRACT
BOT	BOTTOM	NO	NUMBER
BR	BACKER ROD	NOH	NOMINAL
BRC	BEARING	NR	NONE REQUIRED
BRK	BRICK	NRC	NOISE REDUCTION
BS	BOTH SIDES	NTS	NOT TO SCALE
BSMT	BASEMENT		
BUR	BUILT UP ROOFING		
		CA	CABINET
		CFM	CUBIC FEET MINUTE
		CG	CORNER GUARD
		CIPC	CAST-IN-PLACE CONCRETE
		QT	CONTROL JOINT
CL	CENTERLINE		
CLG	CEILING		
CLO	CLOSET		
CLR	CLEAR (ANCE)		
CMU	CONCRETE MASONRY UNIT		
CTR	CENTER		
CO	CLEANOUT		
COL	COLUMN		
COMP	COMPRESSED (ION, BLE, OR)		
CONST	CONSTRUCTION		
CONC	CONCRETE		
CONT	CONTINUOUS OR CONTINUE		
CONTR	CONTRACT (OR)		
COORD	COORDINATE		
CDR	CORRIDOR		
CORRUG	CORRUGATED		
CPT	CARPET (ED)		
CT	CERAMIC TILE		
CSNK	COUNTERSINK/COUNTERSUNK		
CW	COLD WATER		
		PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
		PTN	PARTITION
		PVC	POLY VINYL CHLORIDE
		PWAT	PAVEMENT
		PWD	PLYWOOD
		QTY	QUANTITY
		R	RESISTANCE, THERMAL, RISER
		RB	RUBBER BASE
		RD	RADIUS
		REF	REFLECTED CEILING PLAN
		RD	ROOF DRAIN
		REF	REFERENCE, REFER TO
		REN	REINFORCING
		REQ	REMOVE (D)
		RJ	RUSTICATION JOINT
		RM	ROOM
		RO	ROUGH OPENING
		ROW	RIGHT OF WAY
		RR	RESTROOM
		SBK	SPLASH BLOCK
		SC	SOLID CORE
		SCH	SCHEDULE
		SD	STORM DRAIN
		SEC	SECTION
		SHT	SHEET
		SHTH	SHEATHING
		SM	SMILAR
		SOG	SLAB ON GRADE
		SPEC	SPECIFICATION (S)
		SPL	SPECIAL
		SQ	SQUARE
		SST	STAINLESS STEEL
		STC	SOUND TRANSMISSION CLASS
		STD	STANDARD
		STL	STEEL
		STO	STORAGE
		STRUC	STRUCTURAL
		SUS	SUSPENDED
		SYM	SYMMETRICAL
		T	TREAD
		T&B	TOP AND BOTTOM
		T&G	TONGUE AND GROOVE
		TEL	TELEPHONE
		TEMP	TEMPERATURE
		THK	THICK (NESS)
		THR	THRESHOLD
		THRU	THROUGH
		TO	TOP OF
		TOB	TOP OF BEAM
		TOC	TOP OF CURB
		TOI	TOP OF INSULATION
		TOP	TOP OF PARAPET
		TOM	TOP OF MASONRY
		TOS	TOP OF SLAB
		TOSTL	TOP OF STEEL
		TOW	TOP OF WALL
		TPD	TOILET PAPER DISPENSER
		TPART	TOILET PARTITION
		TR	TRANSOM
		TS	TUBE STEEL
		TV	TELEVISION
		TYP	TYPICAL
		TZ	TERRAZZO
		UL	UNDERWRITERS LABORATORY
		UNFIN	UNFINISHED
		UNOT	UNLESS OTHERWISE NOTED
		UR	URINAL
		VAR	VARIABLE (VARIES)
		VB	VAPOR BARRIER
		VCT	VINYL COMPOSITION TILE
		VERT	VERTICAL
		VEST	VESTIBULE
		VIF	VERIFY IN FIELD
		W	WIDE OR WIDTH
		W	WITH
		W/O	WITHOUT
		WC	WATER CLOSET
		WD	WOOD
		WP (G)	WATERPROOF (ING)
		WR	WATER RESISTANT
		WWF	WELDED WIRE FABRIC
		EA	EACH
		EJ	EXPANSION JOINT
		ELEV	ELEVATION
		ELEC	ELECTRIC (AL)
		ENC	ENCLOSE (URE)
		ENT	ENTRANCE
		EP	EPOXY PAINT
		EQ	EQUAL
		EQP	EQUIPMENT
		EW	ELECTRIC WATER COOLER
		EXH	EXHAUST
		EXST	EXISTING
		EXP	EXPOSED
		EXPN	EXPANSION
		EXT	EXTERIOR
		FBO	FURNISHED BY OWNER
		FD	FLOOR DRAIN
		FDC	FIRE DEPARTMENT CONNECTION
		FEC	FIRE EXTINGUISHER CABINET
		FEK	FIRE EXTINGUISHER
		FIN	FINISHED
		FLNG	FLOOR (ING)
		FND	FOUNDATION
		FR	FACE OF STUD
		FR	FIRE RESISTIVE
		FT	FOOT, FEET
		FTG	FOOTING
		FUT	FUTURE
		GA	GALVE, GAGE
		GALV	GALVANIZED
		GB	GYPNUM BOARD
		GBAR	GRAB BAR
		GC	GENERAL CONTRACT (OR)
		GL	GLASS, GLAZING
		GR	GRILLE
		HB	HOSE BIB
		HC	HOLLOW CORE
		HCAP	HANDICAPPED
		HDW	HARDWARE
		HM	HOLLOW METAL
		HOR	HORIZONTAL
		HPT	HIGH POINT
		HR	HOUR
		HSS	HOLLOW STRUCTURAL SECTION
		HT	HEIGHT
		HTR	HEATER
		HVAC	HEATING/VENTILATION/AC
		HW	HOT WATER
		HWH	HOT WATER HEATER
		ID	INSIDE DIAMETER
		IN	INCHES
		INCAN	INCANDESCENT
		INCL	INCLUDE (D, ING)
		INFO	INFORMATION
		INS	INSULATE (D, ION)
		INT	INTERIOR
		INV	INVERT
		IT	JOINT

NOTE: NOT ALL ABBREVIATIONS AND SYMBOLS ARE USED ON DRAWINGS CONTAINED IN THE SET. SYMBOLS AND ABBREVIATIONS ON THIS SHEET APPLY ONLY TO ARCHITECTURAL DRAWINGS

# GRAPHIC SYMBOLS



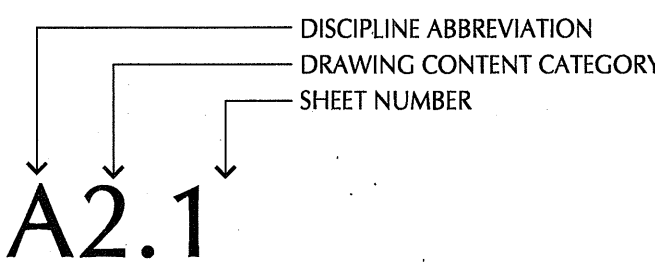
# VICINITY MAP



LOVELAND MAINTENANCE & OPERATIONS CENTER LOVELAND, COLORADO



# SHEET NUMBERING



# CONTENT INDEX

0	GENERAL INFORMATION AND STANDARDS
1	SITE PLANS AND DETAILS
2	PLANS INCLUDING FLOOR, CEILING, ENLARGED AND ROOF DRAWINGS
3	EXTERIOR ELEVATIONS & BUILDING SECTIONS
4	WALL SECTIONS
5	INTERIOR ELEVATIONS
6	DETAILS

# DISCIPLINE INDEX

A	ARCHITECTURAL DRAWINGS
C	CIVIL OR SURVEY DRAWINGS
E	ELECTRICAL DRAWINGS
G	GENERAL INFORMATION
L	LANDSCAPE DRAWINGS
M	MECHANICAL DRAWINGS
P	PLUMBING DRAWINGS
S	STRUCTURAL DRAWINGS

# MATERIAL PATTERNS

	BATT INSULATION
	BRICK WALLS
	CAST-IN-PLACE CONCRETE
	CONCRETE BLOCK WALLS
	EARTH OR BACKFILL
	METAL
	PLASTER, GYPSUM BOARD, PARTICLE BOARD
	PLYWOOD
	WOOD STUD
	STEEL STUD
	RIGID INSULATION

# TEXT SYMBOLS

&	AND
@	AT
X	BY
#	POUND OR NUMBER
/ OR :	PER
'	00 FEET
"	00 INCHES

# INDEX TO DRAWINGS

**GENERAL**

G0.0	COVER SHEET
G0.1	INDEX SHEET
G1.1	CODE PLAN

**ARCHITECTURAL**

A1.0	DEMOLITION, FLOOR AND FINISH PLANS
A1.1	REFLECTED CEILING PLAN, PARTIAL SECOND FLOOR PLAN
A2.0	DETAILS

**MECHANICAL**

M0.1	INDEX, LEGEND AND NOTES
M1.1	MECHANICAL FLOOR PLANS

**ELECTRICAL**

E0.0	ELECTRICAL COVER SHEET
E1.0	DEMOLITION POWER PLANS
E1.1	DEMOLITION LIGHTING PLANS
E2.0	POWER AND SYSTEMS PLANS
E2.1	LIGHTING PLANS
E3.0	LIGHTING SCHEDULE, PANEL SCHEDULES, ELECTRICAL ONE-LINE

**Owner**  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

**Client**  
Loveland Traffic Operations  
Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

**Intelligent Transportation Systems**  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

**Architect**  
Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

**Mechanical & Plumbing**  
AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

**Electrical**  
Scanlon Szynskie Consulting  
Engineers  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0812

# City of Loveland Traffic Operations Center Remodel

105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Dec.	12-01-2010
60% Construction Dec.	12-05-2010
95% FOR	12-16-2010
Final Bid Set	2-9-2011

City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: pw  
Reviewed By: dw  
Approved By: dw

CONSTRUCTION DESIGN REQUIREMENTS

CITY OF LOVELAND BUILDING CONSTRUCTION CODES

- 2006 INTERNATIONAL PLUMBING CODE
- 2006 INTERNATIONAL BUILDING CODE
- 2008 NATIONAL ELECTRIC CODE
- 2006 INTERNATIONAL MECHANICAL CODE
- 2006 INTERNATIONAL FIRE CODE
- ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES, ICC/ANSI A17.1-2003, STATE LAW CRS 9-5

CODE ANALYSIS APPROACH

THIS AREA OF THE BUILDING BEING REMODELED IS CURRENTLY A "B" TYPE OCCUPANCY AND WILL CONTINUE AS A "B" TYPE OCCUPANCY. OCCUPANT LOADS AND EXITING PATHWAYS HAVE BEEN ANALYZED BUT, GIVEN NO CHANGE IN OCCUPANCY OF THE AREA TO BE REMODELED OR IN THE SURROUNDING USES, OCCUPANCY SEPARATIONS ARE ASSUMED TO BE ADEQUATE IN CURRENT CONFIGURATIONS. BY THE SAME TOKEN, OVERALL BUILDING AREA, HEIGHT AND FIRE PROTECTION, IS ASSUMED TO BE ADEQUATE GIVEN NO CHANGES IN OCCUPANCY MIX. HISTORICAL OCCUPANCIES AT THE TIME OF THE NORTH ADDITION IN 1989 ARE SHOWN ON THE CODE PLAN AS WELL AS OCCUPANT TYPES BY CURRENT CODE.

CODE INFORMATION

- EXISTING BUILDING**
- CONSTRUCTION TYPE: V-B (BASED UPON BLDG. PERMIT APPLICATION DATED 5/22/89 AND A CERTIFICATE OCCUPANCY DATED NOV. 13, 2008)
  - OCCUPANCY TYPE: SEE CODE PLAN, BUILDING USES TO REMAIN UNCHANGED
  - OCCUPANCY SEPARATION: NO OCCUPANCY CHANGES PROPOSED THEREFORE, NO REVISIONS TO OCCUPANCY SEPARATIONS
  - FIRE PROTECTION SYSTEMS IN PLACE:
    - AUTOMATIC SPRINKLER SYSTEMS - NONE
    - AUTOMATIC FIRE ALARM SYSTEMS - NONE

Owner

City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

Client

Loveland Traffic Operations Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

Intelligent Transportation Systems

Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

Architect

Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

Mechanical & Plumbing

AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

Electrical

Scanlon Szynskie Consulting Engineers  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0812

City of Loveland Traffic Operations Center Remodel

105 West 5th Street  
Loveland, Colorado

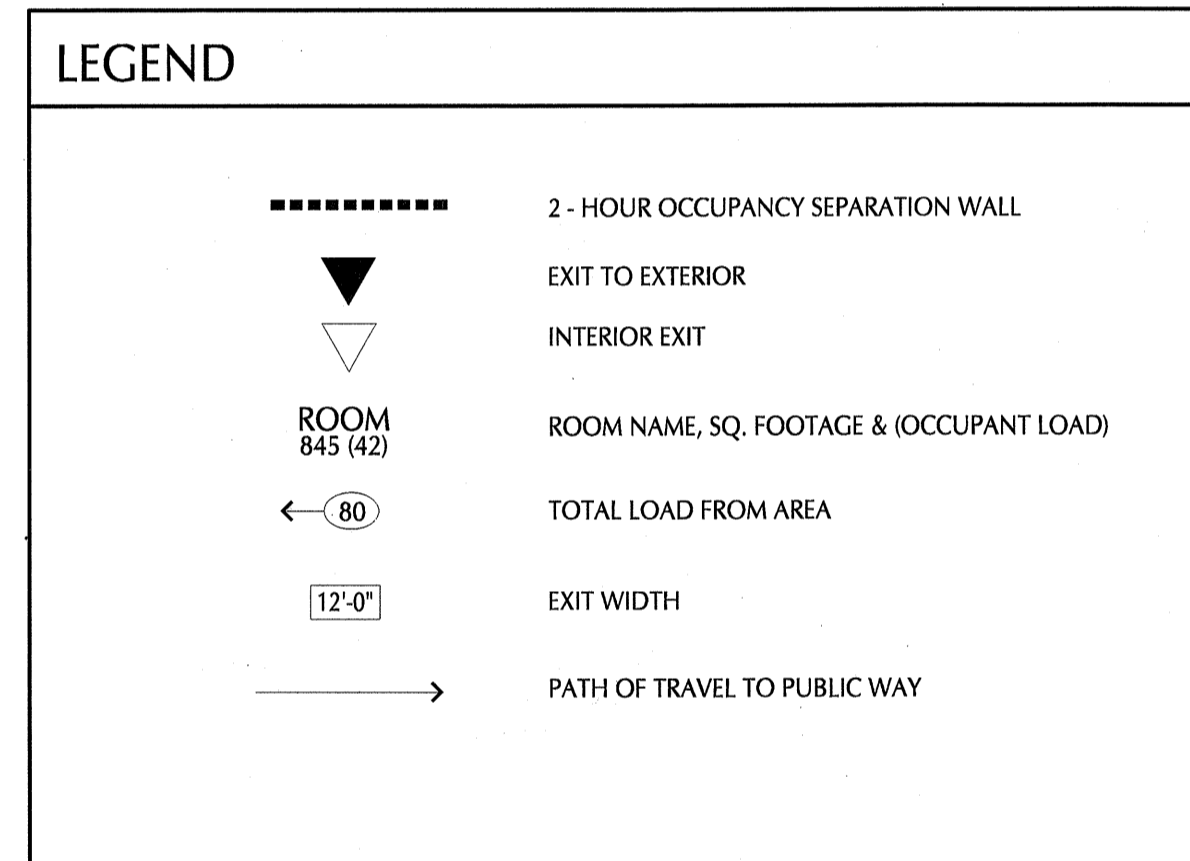
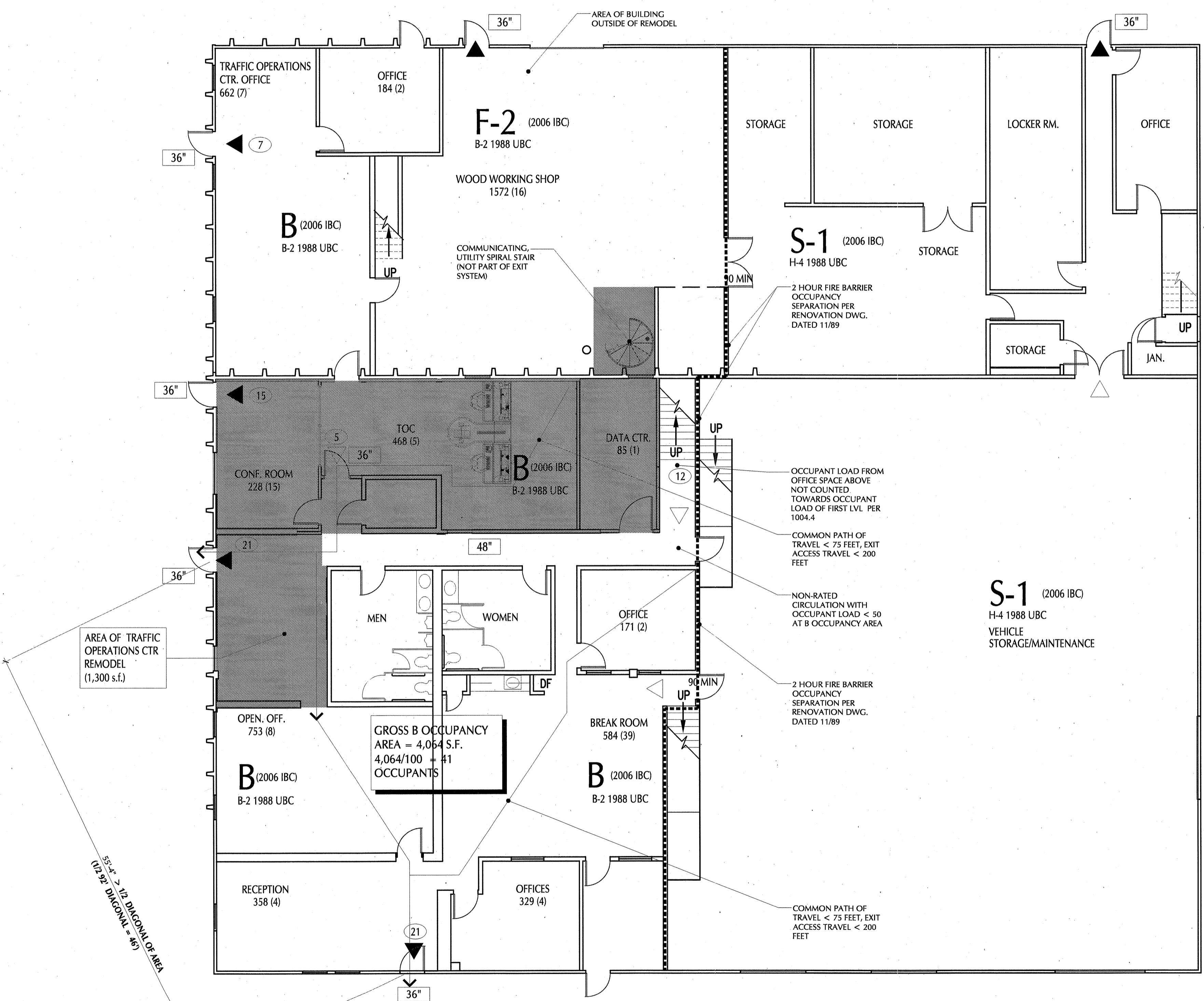
Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FOR	12-16-2010
Final Bid Set	2-5-2011

Copyright Belford Watkins Group Architects 2011. This document may not be reproduced, scanned, or copied in any manner without the written permission of Belford Watkins Group Architects.

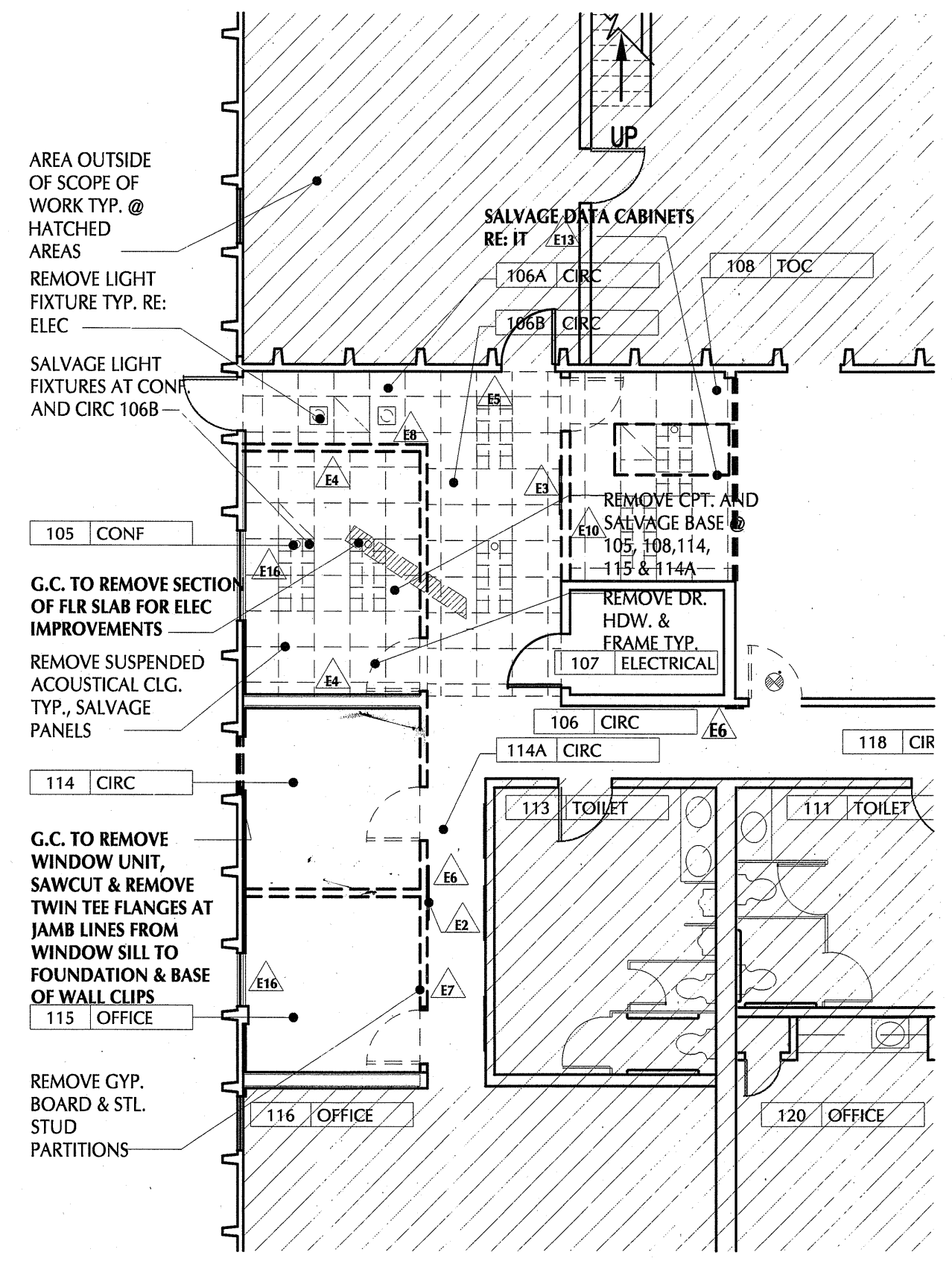
City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: pw  
Reviewed By: dw  
Approved By: dw

G1.1

CODE PLAN



FIRST LEVEL OVERALL CODE PLAN  
SCALE: 1/8" = 1'-0"

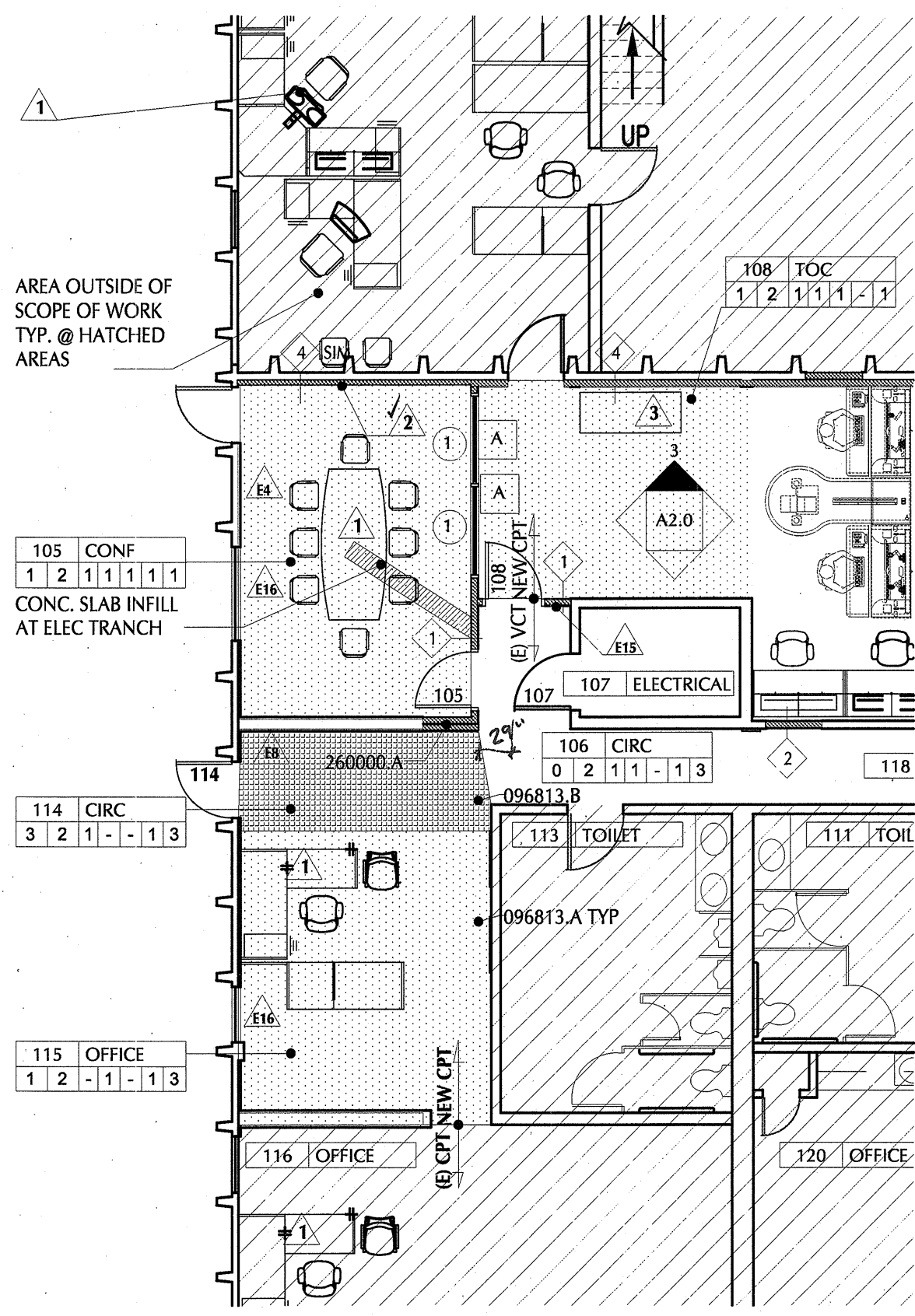
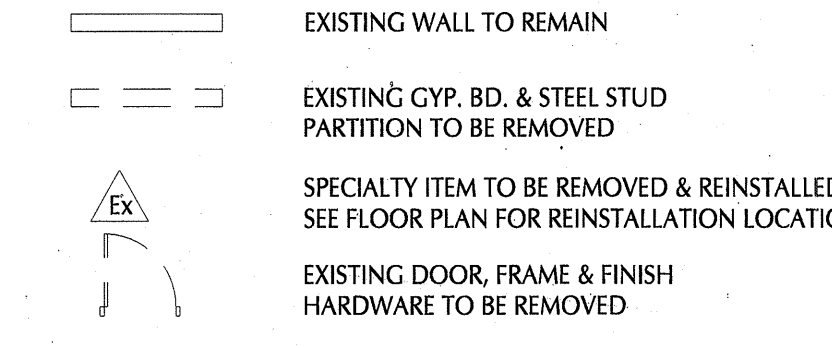


**PHASE II DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"

**GENERAL DEMOLITION NOTES**

- SEE SECTION 024119 OF THE PROJECT MANUAL FOR SELECTIVE DEMOLITION REQUIREMENTS.
- GENERAL DEMOLITION ACTIVITIES INDICATED WILL BE PERFORMED BY THE OWNER, UNLESS NOTED TO BE CONDUCTED BY G.C., WITH THE EXCEPTION OF CERTAIN HVAC AND ELECTRICAL ACTIVITIES TO BE PERFORMED BY THE HVAC AND ELECTRICAL SUBCONTRACTORS
- HAZARDOUS MATERIALS ARE NOT EXPECTED IN THE AREA OF REMODEL.
- DEMOLITION PLAN SHOWS GENERAL EXTENT OF DEMOLITION. G.C. IS RESPONSIBLE FOR DETERMINING FULL EXTENT OF DEMOLITION; CUTTING & PATCHING REQUIRED TO ACCOMPLISH SCOPE OF WORK REQUIRED BY THE CONSTRUCTION DOCUMENTS.
- SEE SEPARATE MECHANICAL & ELECTRICAL DEMOLITION DRAWINGS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
- THE OWNER SHALL KEEP EXITS FREE OF CONSTRUCTION DEBRIS.
- THE OWNER SHALL COORDINATE THE SALVAGE OF EXISTING MATERIAL & EQUIPMENT W/ THE CONTRACTOR.
- THE CONTRACTOR SHALL COORDINATE & IMPLEMENT ALL SAFETY MEASURES REQUESTED & REQUIRED BY THE LOCAL FIRE MARSHAL, HEALTH DEPT., BUILDING DEPT. & OTHER GOVERNING AGENCIES.
- THE G.C. SHALL MAINTAIN SECURITY OF THE BUILDING THROUGHOUT DEMOLITION OPERATIONS.
- OWNER IS RESPONSIBLE FOR DISPOSAL OF ITEMS TO BE REMOVED.
- AT DEMOLITION OF WEBS AT TWIN TEE WALL AND ROOF, DRILL HOLES AT CUT INTERSECTIONS TO PREVENT CROSSING OF SAW CUTS BEYOND THE AREA TO BE REMOVED. DO NOT CUT INTO THE LEGS OR INTO RADIUS BETWEEN THE LEGS AND WEBS.

**DEMOLITION PLAN LEGEND**



**PHASE II FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

**OWNER SUPPLIED, CONTRACTOR INSTALLED EQUIP.**

- 1 CARPET BASE

**OWNER SUPPLIED & INSTALLED EQUIPMENT**

- 1 FURNISHINGS
- 2 SMART BOARD
- 3 PLOTTER
- 4 MONITORS
- 5 OPERATORS CONSOLE

**CONTRACTOR SUPPLIED & INSTALLED EQUIPMENT**

- 1 MINI BLINDS (TOC SIDE)
- 2 LADDER RACKS
- 3 DATE/TIME CLOCK
- 4 DATA CABINETS

**REMOVE & REINSTALL EQUIP. SCHEDULE (BY OWNER)**

- E1 MAP AND PLEXIGLASS
- E2 MAP CASE
- E3 MAP CASE
- E4 WHITEBOARD
- E5 SIGN
- E6 GARY'S SIGN
- E7 BILL'S SIGN
- F.E.
- E8 STAIR SIGN
- E9 MONITORS
- E10 VENDING MACHINE
- E11 WHITEBOARD
- E12 DATA CABINET
- E13 OVERHEAD LADDER RACK
- E14 TOC SIGN
- E15 BLINDS

**FINISH SCHEDULE KEY**

FLOOR	BASE	WALL	CEILING
0 EXISTING FINISH	0 EXISTING FINISH	0 EXISTING FINISH	0 EXISTING FINISH
1 CARPET (096813)	1 RESILIENT BASE (096513)	1 PAINT (099100)	1 ACoust. PNL (095113)
2 SEALED CONC	2 CPT. BASE (096516)	2 EXPOSED STRUCT. - PT	2 EXPOSED STRUCT. - PT
3 WALK-OFF	3 PATCH (E) BASE		3 PAINT (099100)

**DOOR SCHEDULE**

PLAN NO.	DOOR TYPE	MAT.		WIDTH	HGT.	FRAME		DETAILS		LABEL	HDW GROUP	REMARKS
		TYPE	MAT.			TYPE	MAT.	HEAD	JAMB			
100	B	MTL		3'-0"	7'-0"	1	H.M.	10/A2.0	10/A2.0 SIM		5	
105	C	MTL		3'-0"	7'-0"	1	H.M.	5/A2.0	4/A2.0		1	
107	D	MTL	EXIST	EXIST	EXIST	-	EXIST	-	-		6	LOUVER AT EXIST DOOR
108	B	MTL		3'-0"	7'-0"	1	H.M.	5/A2.0	4/A2.0		2	
108A	A	MTL		4'-0"	7'-0"	1	H.M.	5/A2.0	4/A2.0		2.1	
114	B	MTL		3'-0"	7'-0"	1	H.M.	10/A2.0	10/A2.0 SIM		3	
201	B	MTL		2'-8"	7'-0"	1	H.M.	8/A2.0	7/A2.0	90 MIN	4	

**NOTES / SPECIFICATION LIST**

- 055100.A SPIRAL STAIR
- B STEEL DOOR
- C LANDING
- 075419.A PVC ROOFING
- 079200.A SEALANT
- 081113.A STEEL FRAME
- B STEEL DOOR
- 088000.A HEAT STRENGTHENED FLOAT GLASS
- B HEAT-TREATED TEMPERED FLOAT GLASS
- C FIRE-PROTECTION-RATED GLAZING
- 092900.A STL STUDS
- B STL STUD DEFLECTION TRACK
- C 3/4" GYPSUM BOARD
- D 3/4" SUSPENDED, NON-SAG CEILING GYP BD
- E SOUND BATS
- 095113.A ACUSTICAL CLG PNL & SUSPENSION SYSTEM (GRID)
- 096513.A RUBBER BASE
- 096813.A CARPET TILES
- B WALK-OFF MATT
- 096816.A CARPET BASE
- 104416.A BRACKET MOUNTED FIRE EXTINGUISHER
- 230000.A SUPPLY AIR DIFFUSER RE: MECH
- B RETURN AIR GRILLE RE: MECH
- 260000.A ELEC. PANEL RE: ELEC
- 265000.A LIGHT FIXTURE RE: ELEC

**Owner**  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2835  
Fax: 970.962.2922

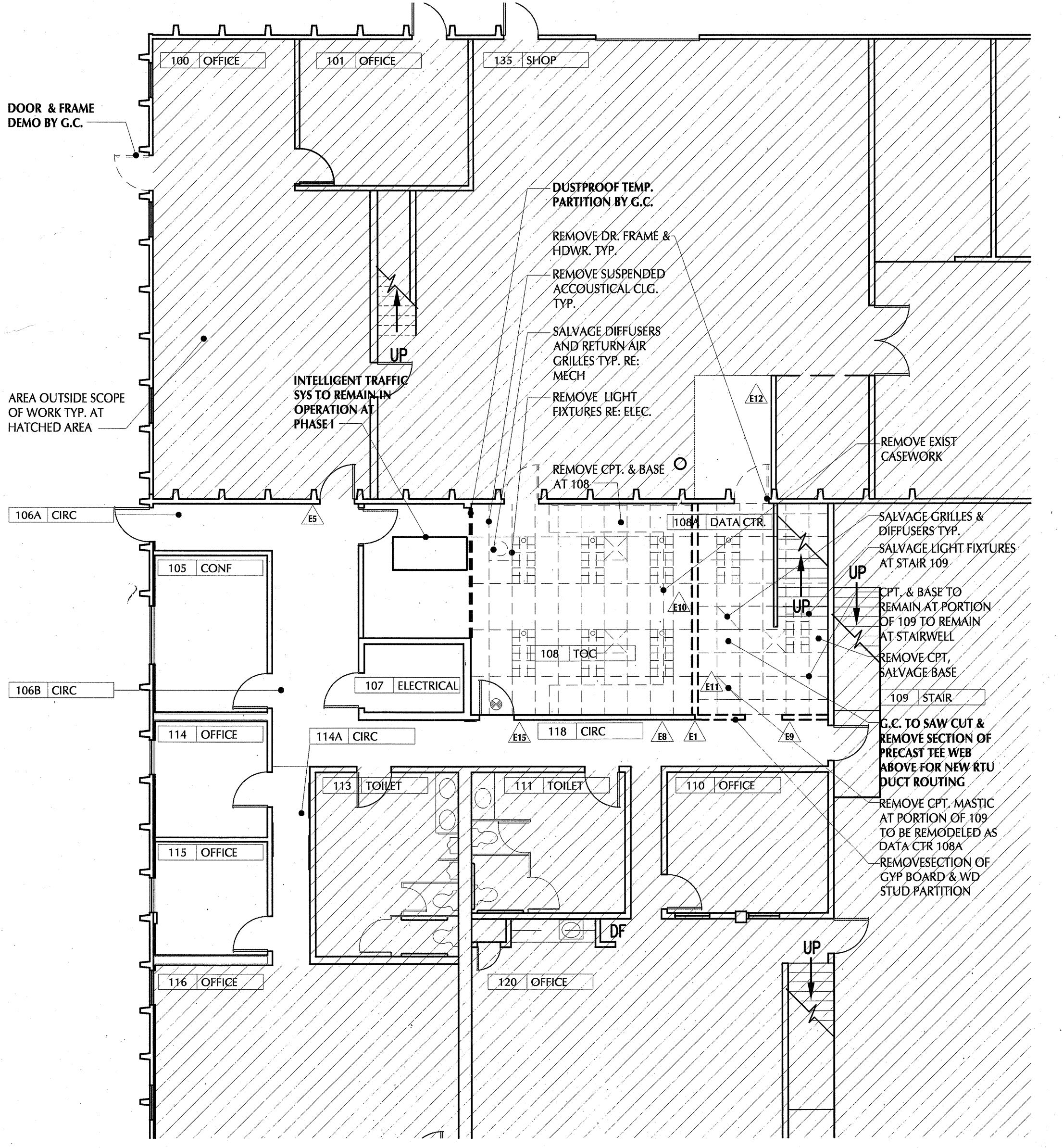
**Client**  
Loveland Traffic Operations  
Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

**Intelligent Transportation Systems**  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

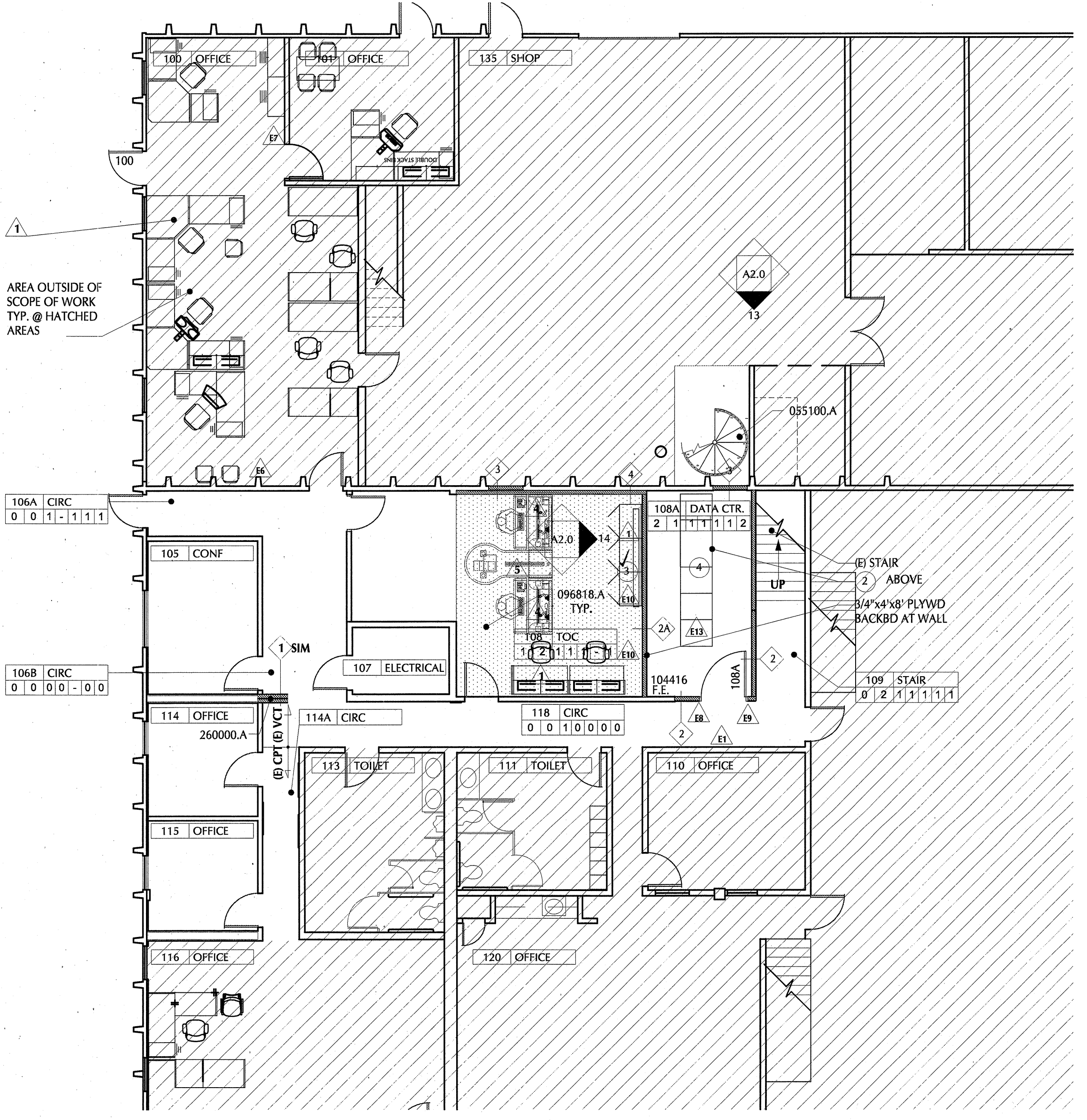
**Architect**  
Balford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

**Mechanical & Plumbing**  
AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

**Electrical**  
Scanlon Szynskie Consulting  
Engineers  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0812



**PHASE I DEMOLITION PLAN**  
SCALE: 1/8" = 1'-0"

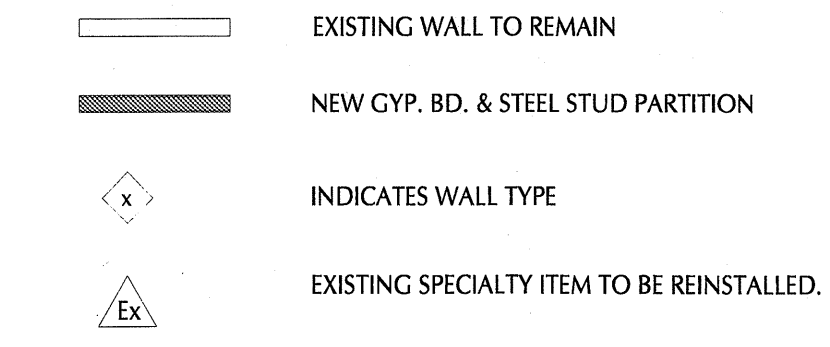


**PHASE I FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

**FLOOR PLAN GENERAL NOTES**

- DO NOT SCALE DRAWINGS. FIELD VERIFY ALL DIMENSIONS. NOTIFY ARCHITECT IMMEDIATELY WHEN DISCREPANCIES ARE DISCOVERED.
- IT IS THE RESPONSIBILITY OF THE MECHANICAL AND ELECTRICAL SUBCONTRACTORS TO REVIEW ALL OF THE DRAWINGS, INCLUDING ARCHITECTURAL, FOR WORK UNDER THEIR RESPECTIVE CONTRACTS. ROOF PLANS AND REFLECTED CEILING PLANS DESCRIBE MECHANICAL AND ELECTRICAL WORK AS DO OTHER ARCHITECTURAL DRAWINGS. NO EXTRAS WILL BE ALLOWED FOR WORK SHOWN IN ANY PART OF THESE DRAWINGS, OR DESCRIBED IN ANY PART OF THE SPECIFICATIONS.
- DIMENSIONS ARE FROM FACE OF STUD, FACE OF MASONRY, OR FACE OF CONCRETE.
- PROVIDE BLOCKING AT ALL ACCESSORIES (GRAB BARS, ETC.), HARDWARE WHERE REQUIRED, AND WALL HUNG CABINETS.
- ALL DOOR ROUGH FRAME OPENINGS (HINGE SIDE) 4" FROM ROOM CORNER UNLESS DIMENSIONED OTHERWISE.
- ALL INTERIOR PARTITIONS SHALL BE 3-5/8" MTL STUD FRAMING UNLESS OTHERWISE NOTED
- INDICATES WALL TYPE. REFER TO SHEET A1.1 FOR WALL TYPES.
- PATCH ALL WALL SURFACES WHERE WALLS TO BE REMOVED INTERSECT W/ WALLS TO REMAIN

**FLOOR PLAN LEGEND**



**City of Loveland  
Traffic Operations  
Center Remodel**

105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FDR	12-16-2010
Final Bid Set	2-5-2011

Copyright Balford Watkins Group Architects 2011.  
THIS DRAWING MAY NOT BE REPRODUCED, COPIED, PHOTOCOPIED, OR TRANSMITTED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF Balford Watkins Group Architects.

City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: pw  
Reviewed By: dw  
Approved By: dw

**A1.0**  
DEMOLITION & FLOOR  
PLANS



**Owner**  
 City of Loveland  
 410 E. 5th Street  
 Loveland, CO 80537  
 Phone: 970.962.2635  
 Fax: 970.962.2922

**Client**  
 Loveland Traffic Operations Center  
 105 W. 5th Street  
 Loveland, CO 80537  
 Phone: 970.962.2528  
 Fax: 970.962.2907

**Intelligent Transportation Systems**  
 Apex Design PC  
 910 16th Street, Suite 1022  
 Denver, CO 80202  
 Phone: 303.339.0440

**Architect**  
 Belford Watkins Group, LLC  
 231 South Howes  
 Fort Collins, CO 80521  
 Phone: 970.407.0070

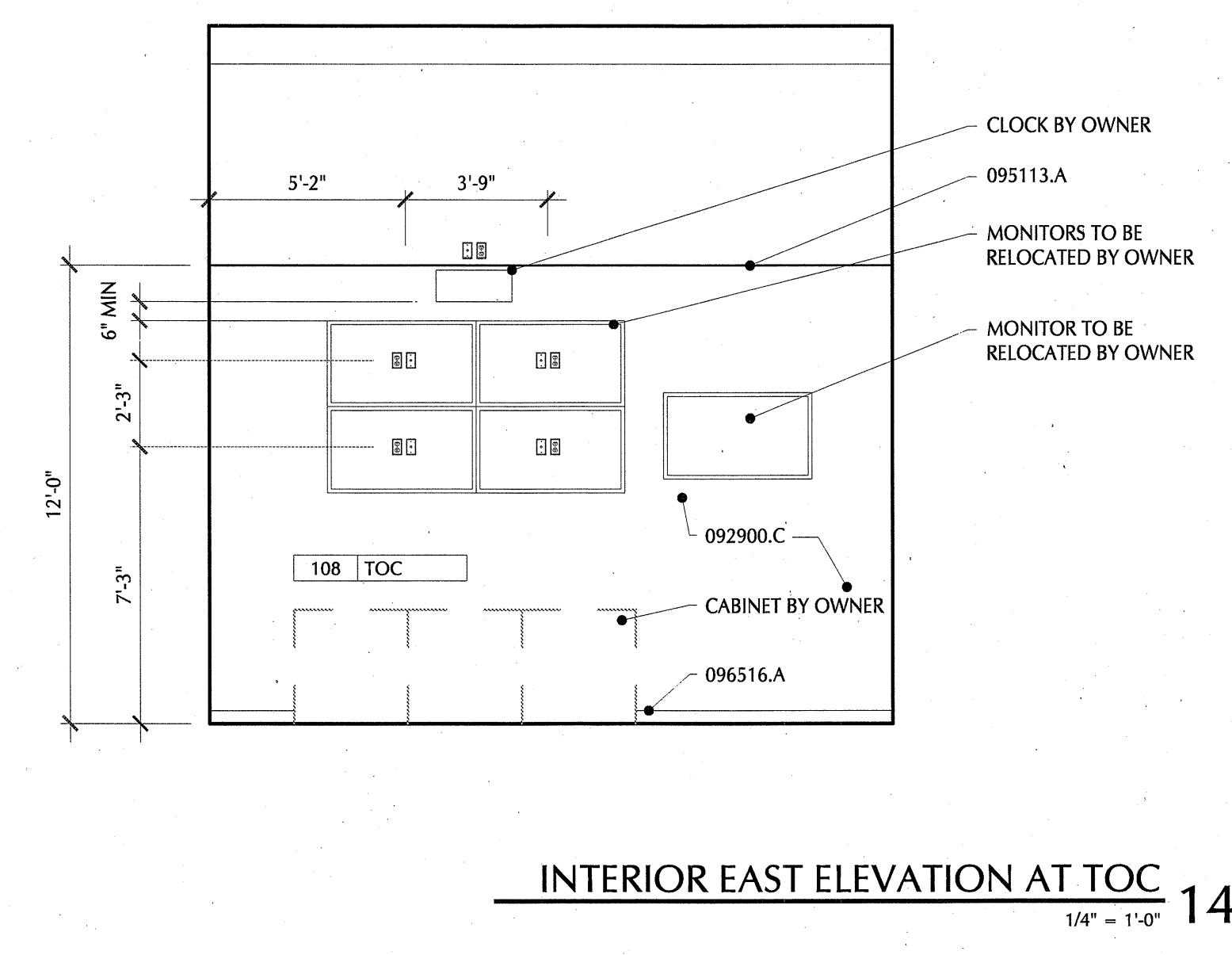
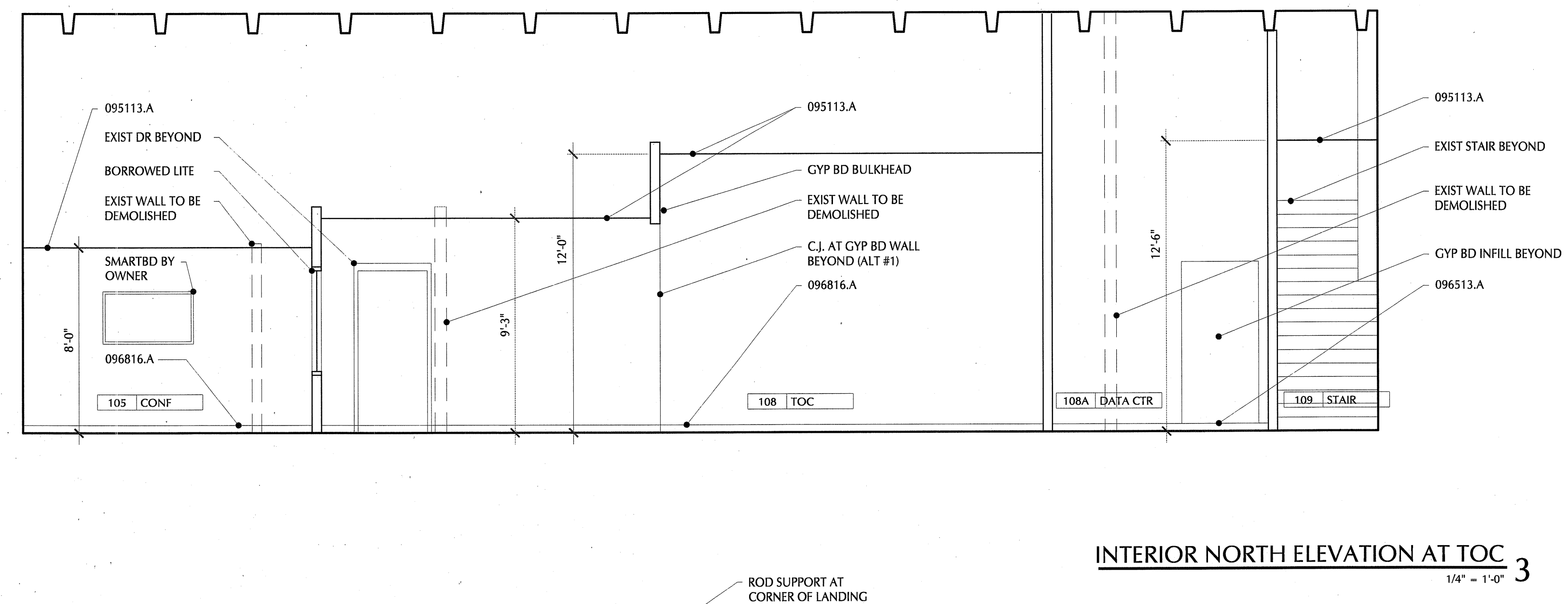
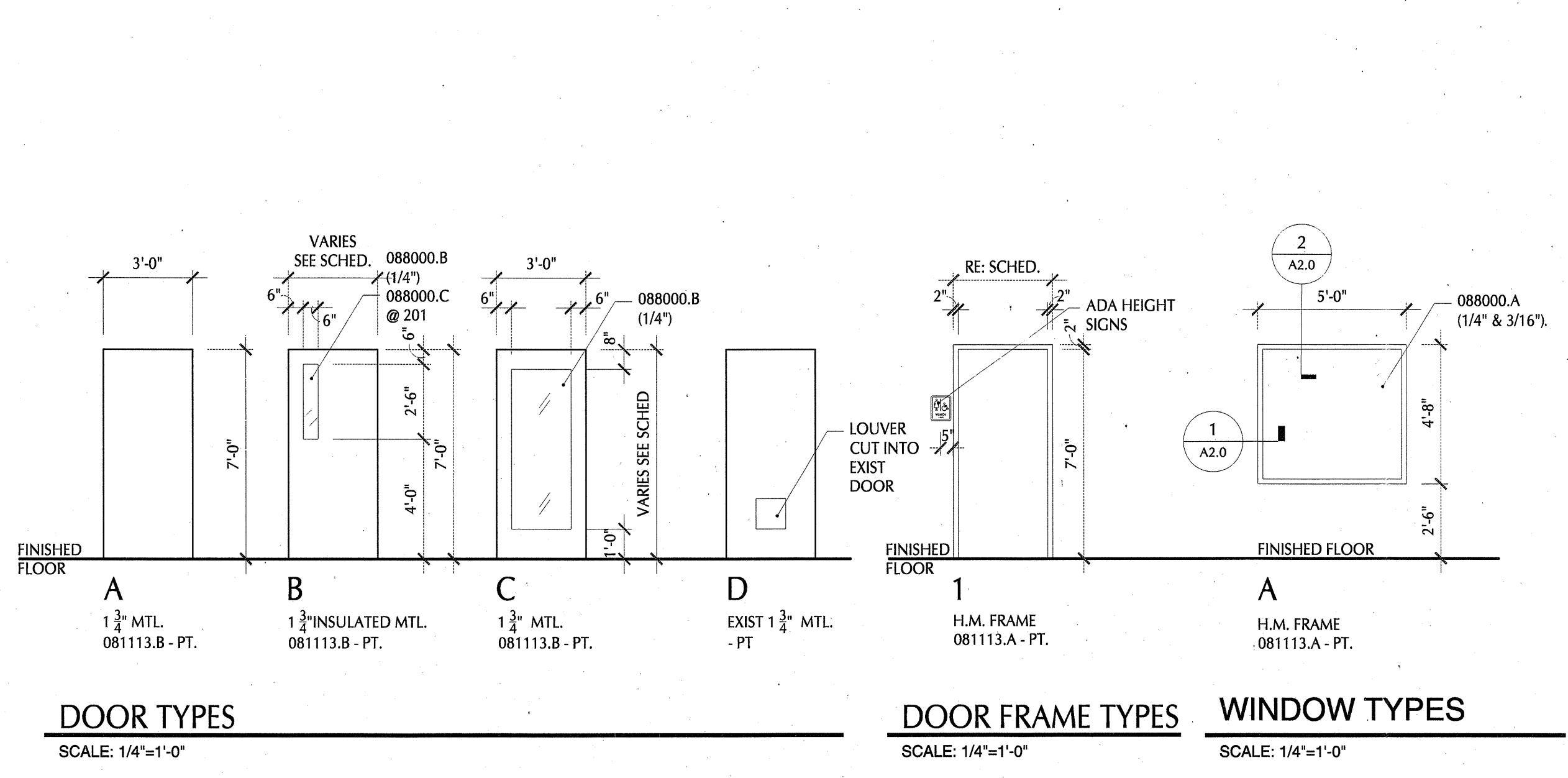
**Mechanical & Plumbing**  
 AE Associates, Inc.  
 5587 West 19th St.  
 Greeley, CO 80634  
 Phone: 970.330.5587  
 Fax: 970.330.3040

**Electrical**  
 Scanlon Szynskie Consulting Engineers  
 3045 S. Parker Road  
 Suite 225  
 Aurora, CO 80014  
 Phone: 303.696.2602  
 Fax: 303.696.0812

**City of Loveland Traffic Operations Center Remodel**  
 105 West Fifth Street  
 Loveland, Colorado

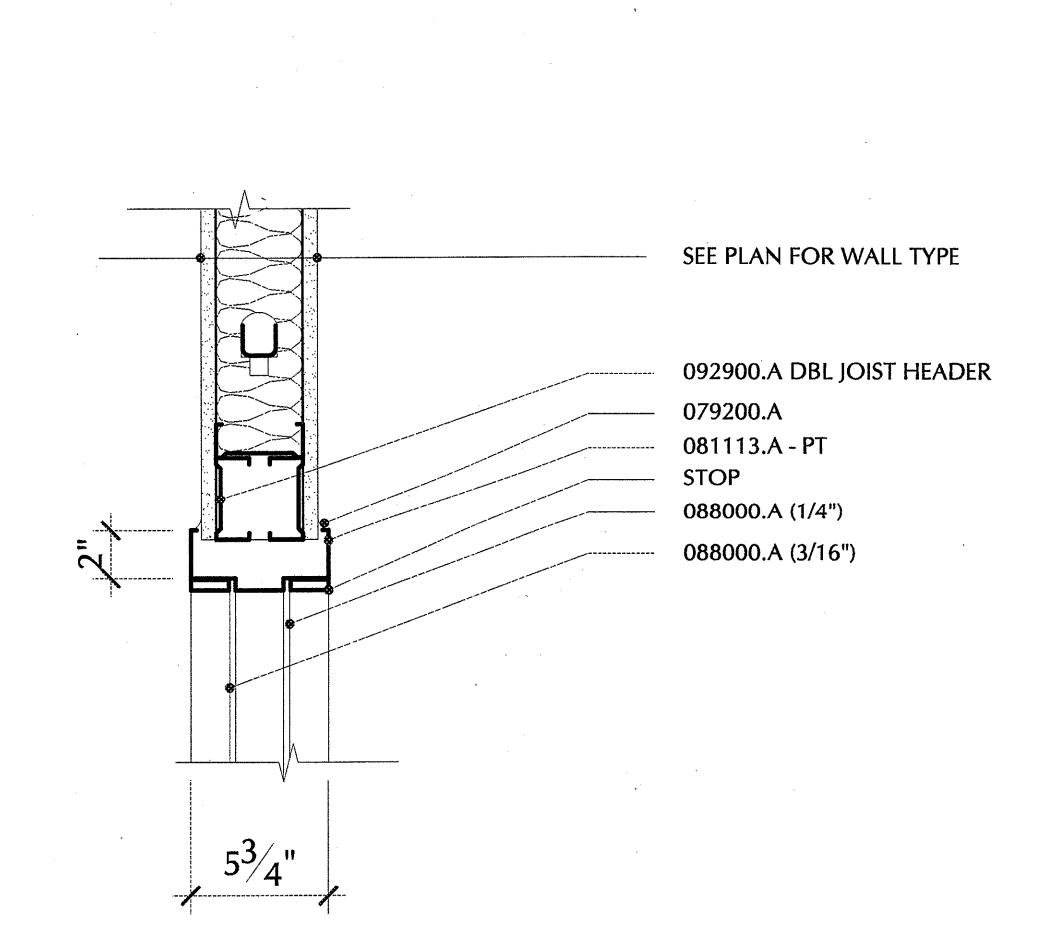
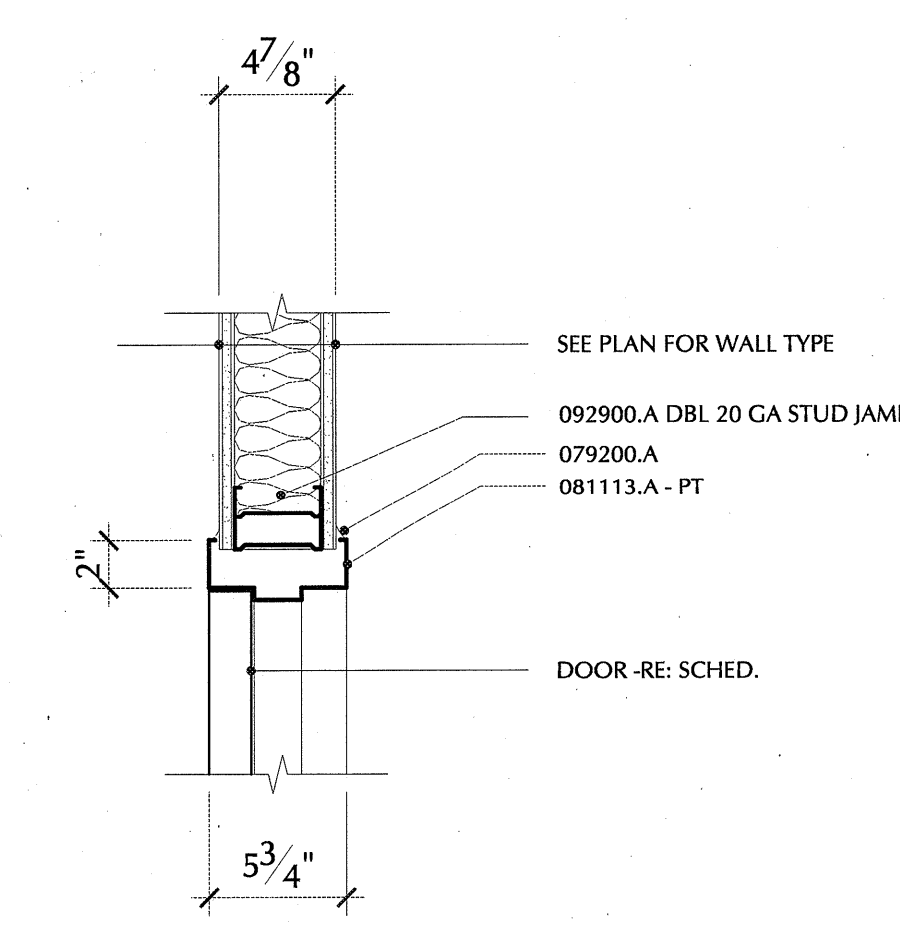
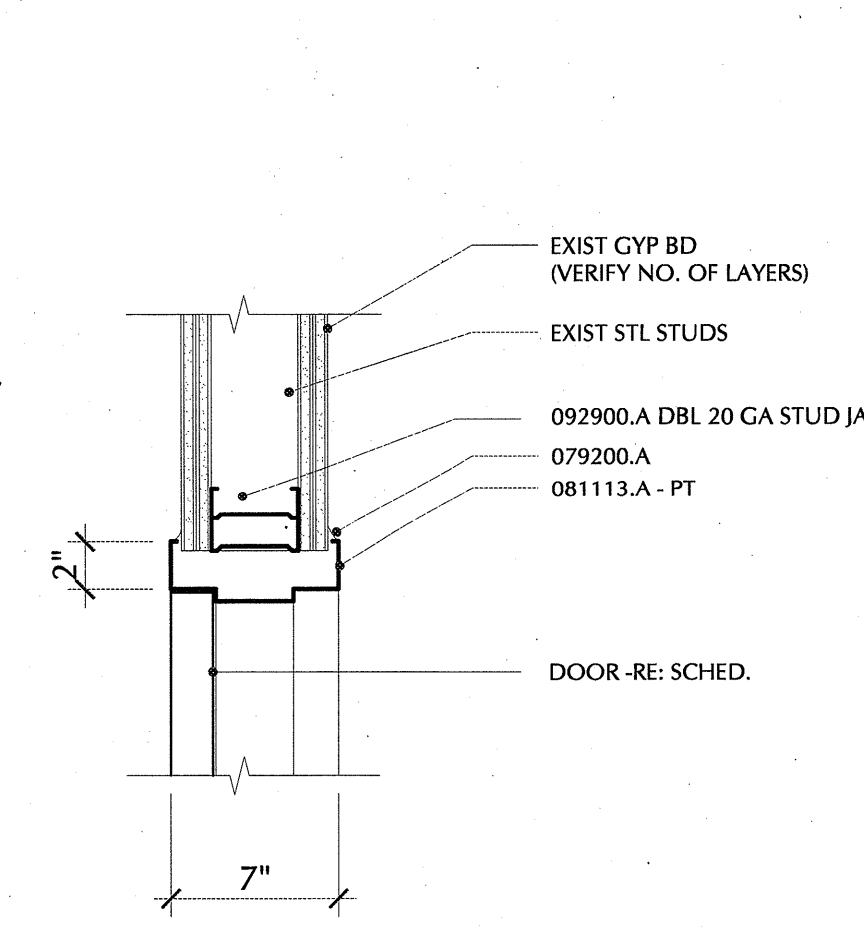
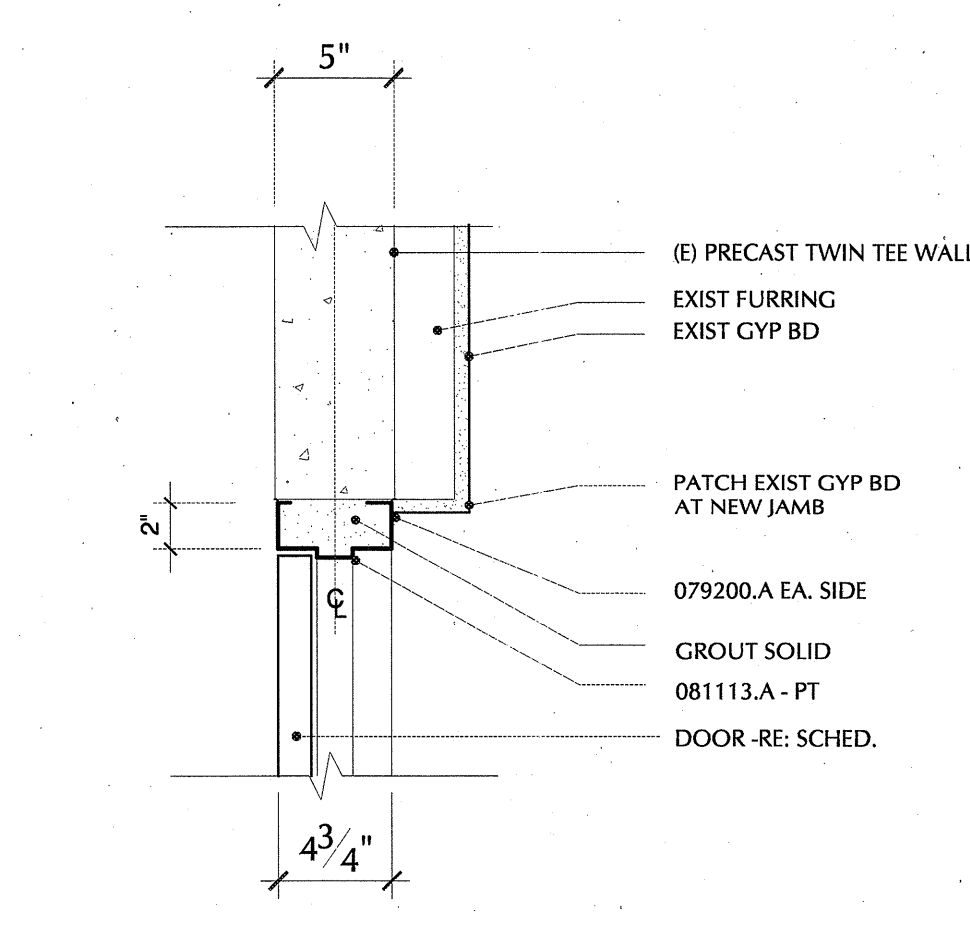
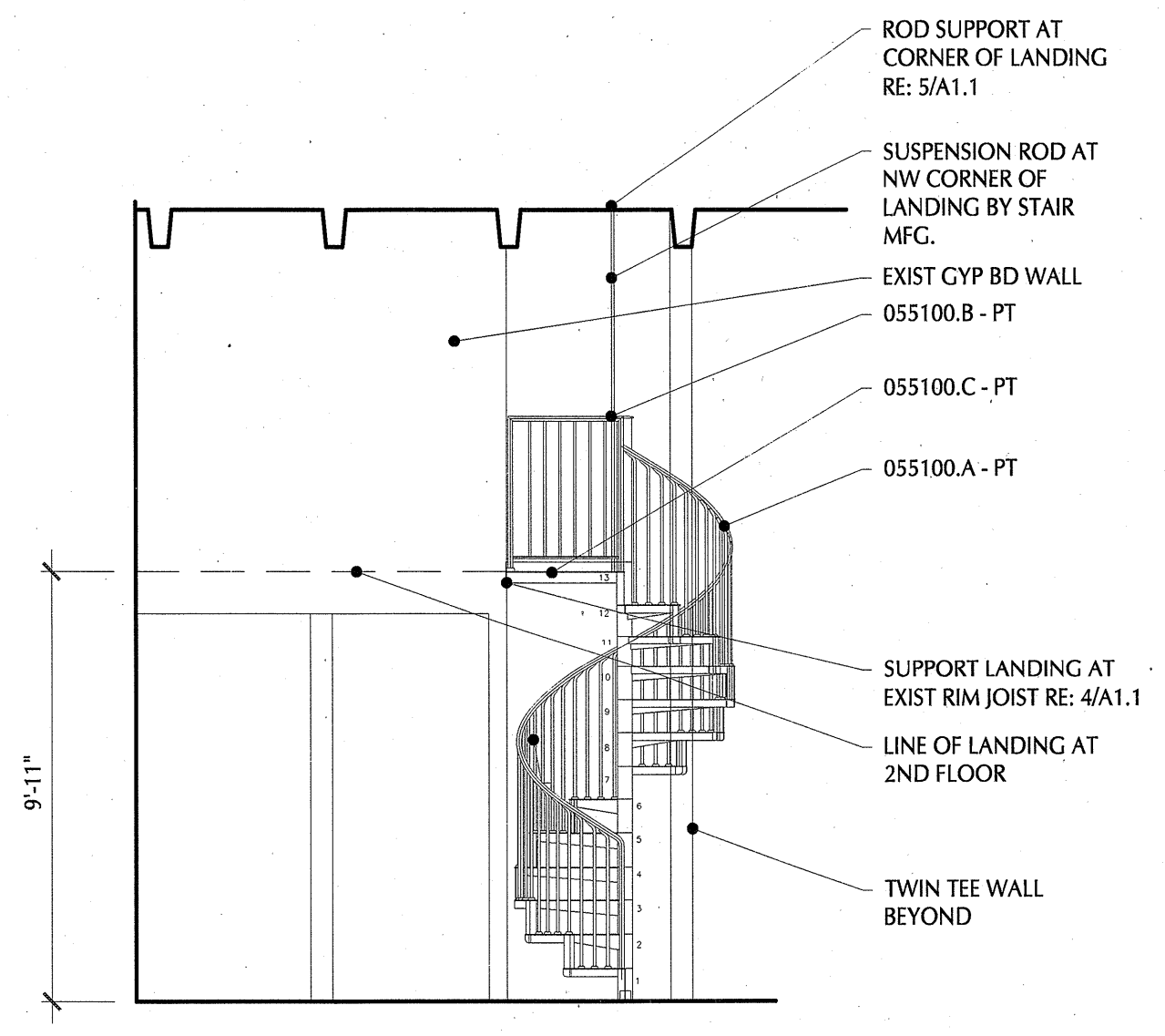
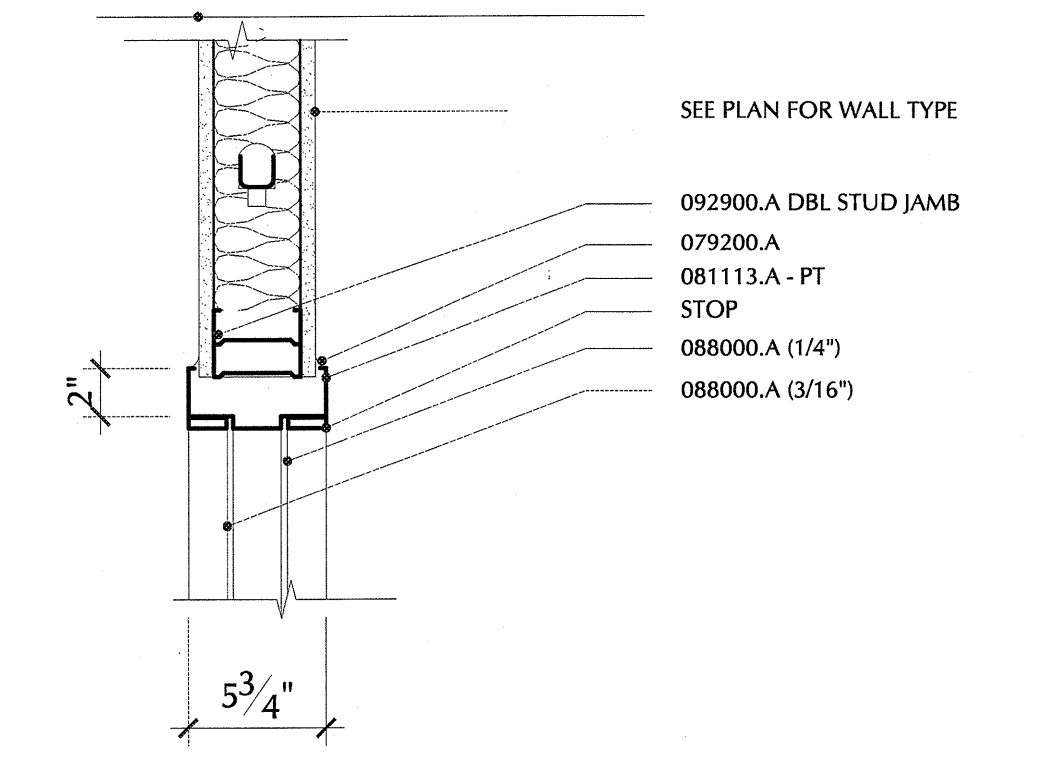
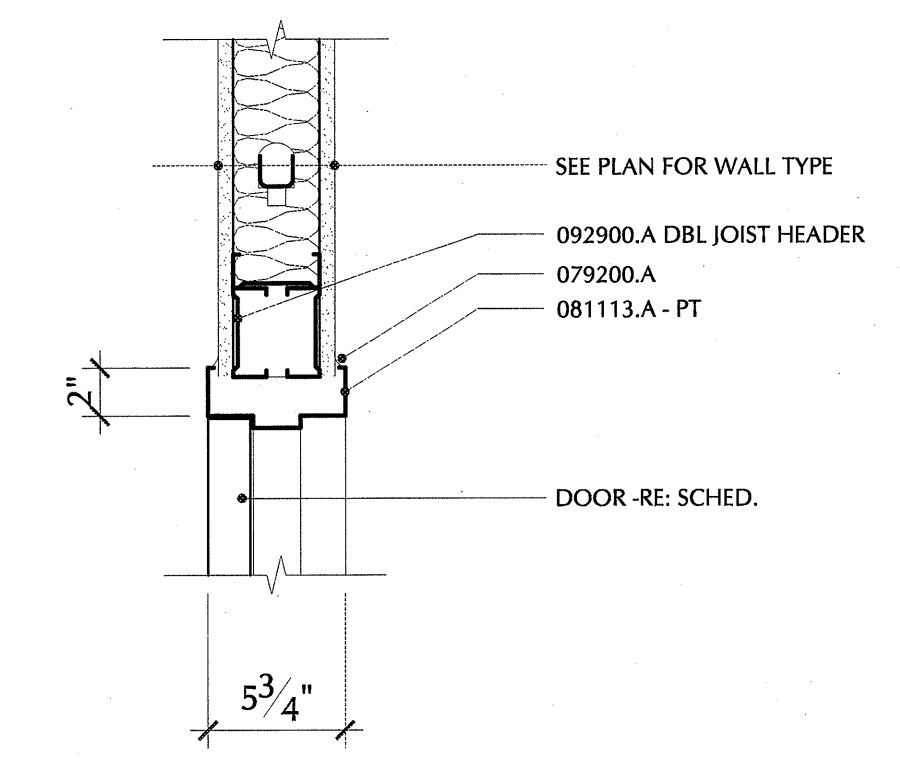
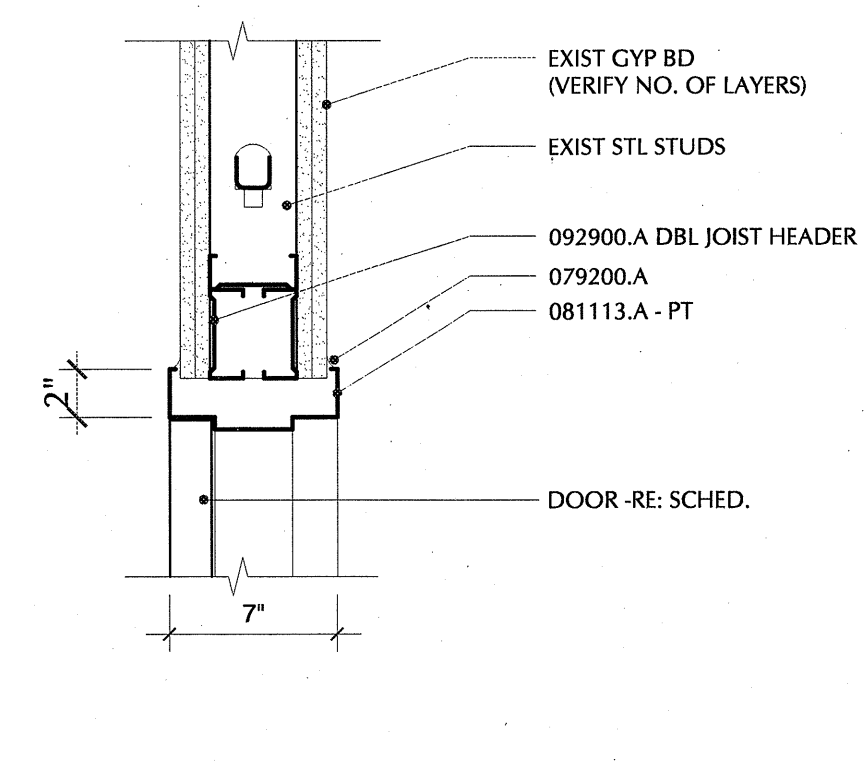
Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FCR	12-16-2010
Final Bid Set	2-5-2011

City Project Number: TS 0708  
 BWG Project Number: 09-081  
 Drawn By: pw  
 Reviewed By: dw  
 Approved By: dw



**NOTES / SPECIFICATION LIST**

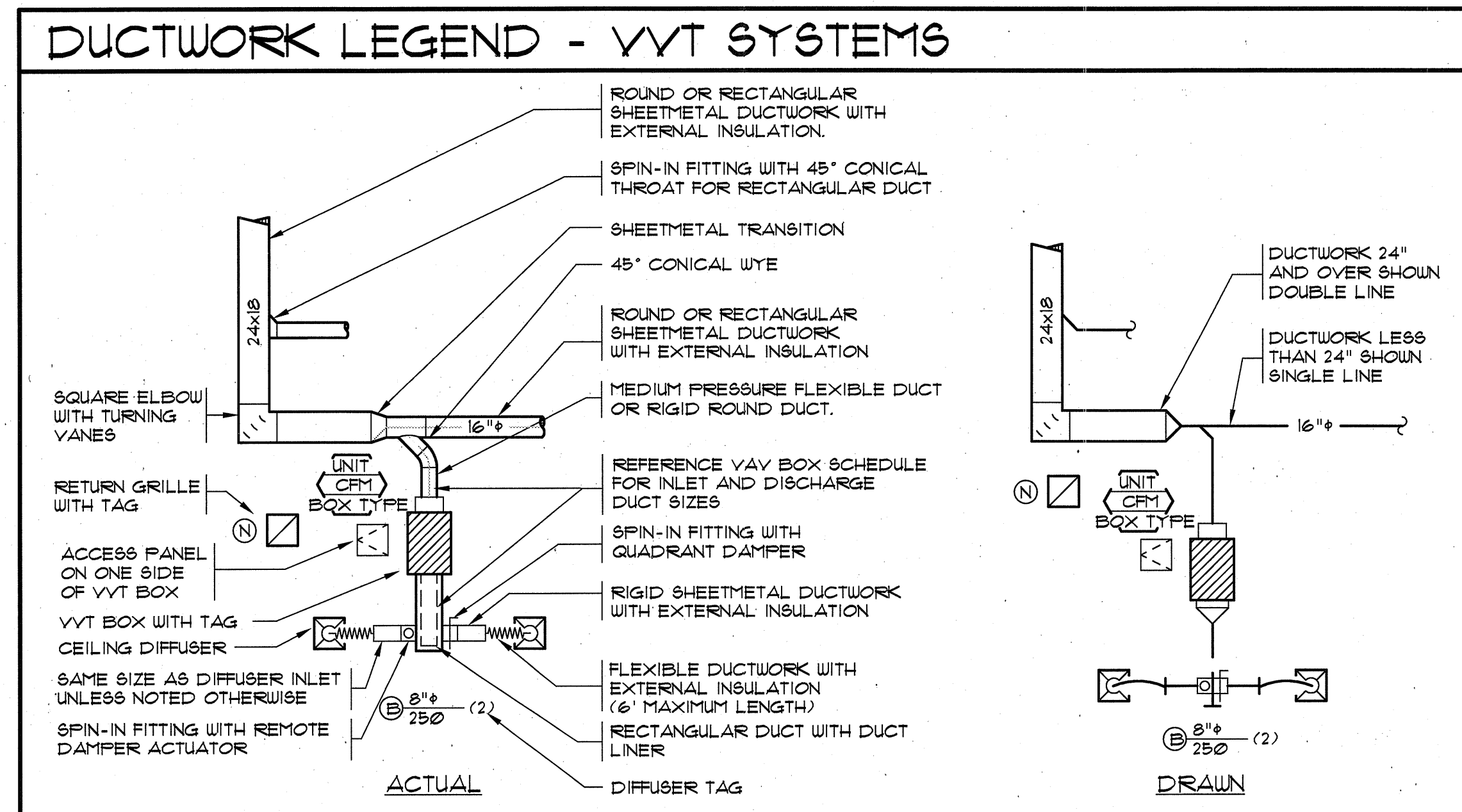
- 055100.A SPIRAL STAIR
- .B GUARDHANDRAIL
- .C LANDING
- 075419.A PVC ROOFING
- 079200.A SEALANT
- 081113.A STEEL FRAME
- .B STEEL DOOR
- 088000.A HEAT-STRENGTHENED FLOAT GLASS
- .B HEAT-TREATED TEMPERED FLOAT GLASS
- .C FIRE-PROTECTION-RATED GLAZING
- 092900.A STL STUDS
- .B STL STUD DEFLECTION TRACK
- .C 3/4" GYPSUM BOARD
- .D 1/2" SUSPENDED, NON-SAG CEILING GYP BD
- .E SOUND BATTS
- 095113.A ACOUSTICAL CLG PNL & SUSPENSION SYSTEM (GRID)
- 096513.A RUBBER BASE
- 096813.A CARPET TILES
- .B WALK-OFF MATT
- 096816.A CARPET BASE
- 104416.A BRACKET MOUNTED FIRE EXTINGUISHER
- 230000.A SUPPLY AIR DIFFUSER RE: MECH
- .B RETURN AIR GRILLE RE: MECH
- 260000.A ELEC. PANEL RE: ELEC
- 265000.A LIGHT FIXTURE RE: ELEC







LEGEND (NOT ALL ITEMS WILL BE USED)		DESCRIPTION
ABBR.	SYMBOL	
		SQUARE DUCT ELBOW WITH TURNING VANES
		DOWN AND BACK UP UNDER BEAM OR OBSTACLE
		SUPPLY AIR, RETURN/OUTSIDE AIR AND EXHAUST AIR
		DUCTWORK UNLINED AND DUCTWORK LINED
		FLEXIBLE AND RIGID ROUND DUCT
		TYPE I GREASE EXHAUST DUCT WITH 2 HOUR ENCLOSURE
		DUCTWORK UNDER FLOOR
		DUCTWORK TO BE REMOVED
		FIRE, SMOKE AND COMBINATION FIRE AND SMOKE DAMPERS
		BAROMETRIC, MOTORIZED AND MANUAL DAMPERS
T, H, SD, TT, AQ		THERMOSTAT, HUMIDISTAT, SMOKE DETECTOR, TEMPERATURE TRANSMITTER, AIR QUALITY SENSOR
AP		ACCESS PANEL, ACCESS PANEL IN DUCT
VFD		VARIABLE FREQUENCY DRIVE
SARAEAOACAMA		SUPPLY, RETURN, EXHAUST, OUTSIDE, COMBUSTION AIR AND MAKE-UP AIR
NC, NO		NORMALLY CLOSED, NORMALLY OPEN
S, Sp, Sv		SWITCH, SWITCH W/PILOT AND SWITCH, VARIABLE SPEED
RE:		REFERENCE
VTR		VENT THRU ROOF
IE:		INVERT ELEVATION
E, R, N		EXISTING, RELOCATED AND NEW
		SUPPLY AIR, RETURN AIR/EXHAUST AIR/OUTSIDE AIR FLOW ARROWS
		SECTION A ON SHEET M-1 DIAGRAM 1 ON SHEET M-1 RISER R-1 ON SHEET M-1
		EQUIPMENT TYPE EQUIPMENT NUMBER EQUIPMENT TAG
		AHU OR MAU DESIGNATION - BOX NUMBER CONNECTED FLOW (CFM) BOX DESIGNATION VAV BOX TAG



### GRILLES AND DIFFUSERS

NOTES: 1) FACTORY WHITE FINISH, 2) REFERENCE ARCHITECT'S CEILING PLAN FOR CEILING TYPE, 3) ODD.

TAG	MANUF/ MODEL	DESCRIPTION	NOTES
(A)	TITUS 320RL	SUPPLY REGISTER, DOUBLE DEFLECTION, 3/4" BLADE SPACING, STEEL CONSTRUCTION.	1, 2, 3
(B)	TITUS T-100L	DOOR RETURN GRILLE, STEEL CONSTRUCTION, SIGHT PROOF.	1
(C)	TITUS 350-RL	RETURN GRILLE, STEEL CONSTRUCTION, 3/4" BLADE SPACING, 35" FIXED DEFLECTION.	1, 2

### DRAWING INDEX

DRAWING NUMBER	DRAWING TITLE	60% REVIEW	90% CONSTRUCTION DOCS	100% CONSTRUCTION DOCS	REVISIONS
M01	DRAWING INDEX, LEGENDS, GENERAL NOTES AND SCHEDULES	●	●	●	
M11	MECHANICAL FLOOR PLANS	●	●	●	

NOTE:

- ### DUCT SYSTEM NOTES
- ALL DUCTWORK UNLESS SPECIFICALLY INDICATED SHALL BE GALVANIZED SHEET METAL INSTALLED IN ACCORDANCE WITH THE SMACNA DUCT CONSTRUCTION STANDARDS:  
UPSTREAM OF VAV BOXES - PRESSURE CLASS "3", SEAL CLASS A.  
DOWNSTREAM OF VAV BOXES - PRESSURE CLASS "2", SEAL CLASS B.  
ALL OTHER DUCTWORK - PRESSURE CLASS "2", SEAL CLASS B.  
DIMENSIONS SHOWN ARE NET CLEAR INSIDE DIMENSIONS. ALLOWANCES MUST BE MADE FOR DUCT LINER WHERE CALLED FOR.
  - ALL NEW SUPPLY DUCTWORK DOWNSTREAM OF REHEAT COILS SHALL HAVE 1/2" THICK FIBERGLASS DUCT INSULATION WRAP.
  - ALL NEW SUPPLY DUCTWORK DOWNSTREAM OF VVT TERMINALS SHALL HAVE 1" INTERNAL LINER.
  - COORDINATE AND VERIFY THAT ALL OPENINGS IN WALLS ABOVE CEILING / DOOR LOUVERS / DOOR UNDERCUTS ARE PROVIDED AS INDICATED ON THESE DRAWINGS.
  - ALL EXPOSED, ROUND DUCTWORK SHALL BE GALVANIZED SHEETMETAL SPIRAL WITH PAINT GRIP COATING.
  - ALL CONCEALED, ROUND SUPPLY AIR DUCTS 12" AND SMALLER SHALL BE GALVANIZED SHEETMETAL SNAP-LOCK. ROUND SUPPLY DUCT GREATER THAN 12" SHALL BE GALVANIZED SHEETMETAL SPIRAL. PROVIDE 1" FIBERGLASS INSULATION WRAP. INSULATED FLEXIBLE DUCT MAY BE USED FOR THE CONNECTION TO THE AIR OUTLET PROVIDED THE LENGTH OF THE FLEXIBLE DUCT DOES NOT EXCEED 6' LINEAR FEET.
  - ALL BRANCH DUCT CONNECTIONS TO AIR OUTLETS, AIR INLETS, VARIABLE VOLUME TERMINALS AND BOXES SHALL BE THE SAME SIZE AS THE DEVICE NECK UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

- ### HVAC GENERAL NOTES
- RESOLVE ALL QUESTIONS OR CONFLICTS WITH ENGINEER BEFORE ANY EQUIPMENT IS ORDERED, MATERIALS FABRICATED OR SYSTEMS INSTALLED.
  - COORDINATE THE INSTALLATION OF MECHANICAL SYSTEMS WITH OTHER TRADES.
  - COORDINATE ALL PENETRATIONS THROUGH STRUCTURAL MEMBERS WITH THE GENERAL CONTRACTOR AND STRUCTURAL ENGINEER.
  - COORDINATE AND VERIFY THAT ALL OPENINGS IN WALLS ABOVE CEILING / DOOR LOUVERS / DOOR UNDERCUTS ARE PROVIDED AS INDICATED ON THESE DRAWINGS.
  - COORDINATE EXACT SIZE OF EQUIPMENT HOUSEKEEPING PAD WITH EQUIPMENT OVERALL FOOTPRINT DIMENSIONS.
  - LEVEL ALL EQUIPMENT CURBS / BASES PRIOR TO INSTALLATION OF ANY EQUIPMENT.
  - INSTALL FULL SIZE CONDENSATE DRAIN WITH TRAP SEAL DEPTH EQUAL TO 1/2 X UNIT TOTAL STATIC PRESSURE FOR EACH COOLING COIL. DISCHARGE DRAIN TO ROOF DRAIN FOR ROOFTOP UNITS.
  - SEAL ALL WALL AND ROOF PENETRATIONS WATERTIGHT WITH SILICONE CAULKING AND BACKER ROD.
  - PROVIDE ACCESS PANELS (MIN. 30"x22") IN "HARD" CEILINGS PER CODE FOR ACCESS TO ALL MOTORS, CONTROLS, BALANCING DAMPERS, FIRE DAMPERS, COMBINATION FIRE / SMOKE DAMPERS AND OTHER MECHANICAL EQUIPMENT. ACCESS PANELS TO BE FACTORY PAINT-READY FOR CUSTOM PAINTING IN THE FIELD.
  - PROVIDE OFFSETS AS NECESSARY TO ACCOMMODATE STRUCTURE AND OTHER TRADES.
  - LOCATION OF ALL CEILING INLETS AND OUTLETS ARE APPROXIMATE. REFERENCE ARCHITECTURAL/INTERIOR REFLECTED CEILING PLANS FOR FINAL LOCATIONS.
  - ABOVE CEILINGS LOCATE ALL VVT TERMINALS AND OTHER MECHANICAL EQUIPMENT REQUIRING SERVICE WITHIN 2'-0" OF FINISHED CEILING. ALIGN ACCESS PANELS WITH CONTROL AND MOTOR SIDE OF TERMINALS.
  - PROVIDE SPRING HANGERS ON ALL NEW FAN POWERED EQUIPMENT IF NOT INTERNALLY ISOLATED.
  - REFERENCE ARCHITECTURAL / INTERIOR REFLECTED CEILING PLANS FOR LOCATIONS OF "LAY-IN" VERSUS "HARD" CEILINGS. MAKE ALLOWANCES IN HARD CEILING AREAS FOR SPIN-IN FITTING WITH REMOTE DAMPER ACTUATOR.
  - PROVIDE 1/2"x1/2" MESH SCREEN OVER OPEN END(S) OF ANY NON-DUCTED EQUIPMENT.

### CODE INFORMATION

2006 INTERNATIONAL BUILDING CODE
2006 INTERNATIONAL MECHANICAL CODE
2006 INTERNATIONAL PLUMBING CODE
2006 INTERNATIONAL FIRE CODE

### DESIGN CONDITIONS

CITY	SUMMER DESIGN DB (°F)	SUMMER COINCIDENT WB (°F)	WINTER DESIGN DB (°F)	ALTITUDE (FT)	DENSITY RATIO	WINTER INTERIOR TEMP (°F)	SUMMER INTERIOR TEMP (°F)
LOVELAND, COLORADO	95	58	-10	5000	0.832	70	75

### EQUIPMENT SCHEDULE

TAG	DESCRIPTION
RTU-100	ROOFTOP UNIT. TRANE MODEL T8C048E DX COOLING, ROOFTOP UNIT. MIN. 13.0 BEER@AHRI. COOLING CAPACITY = 38.1 TMBH, 36.7 SMBH AT 100°F AMBIENT. MCA = 35.2, MOCP = 50. 208 VOLTS/1P. 14" ROOF CURB, CONSTANT VOLUME SUPPLY FAN, DRY BULB ECONOMIZER WITH BAROMETRIC RELIEF, REMOTE DIGITAL PROGRAMMABLE THERMOSTAT, R-410A REFRIGERANT, 1600 CFM SA, 0 CFM OA, (NORMALLY UNOCCUPIED ROOM). 800 LBS OPERATING WEIGHT. CONDENSER COIL HAIL GUARD, BAKED ENAMEL HEAVY GAUGE GALVANIZED STEEL INSULATED CASING, 1" THROW-AWAY FILTERS, DIRECT-DRIVE HERMETIC SCROLL-TYPE COMPRESSORS WITH CRANKCASE HEATER, FACTORY REFRIGERANT LINE FILTER-DRIER, ANTI-SHORT CYCLE TIMER, PHASE MONITOR, CONDENSATE DRAIN SHALL BE PIPED TO NEAREST ROOF DRAIN. ACCEPTABLE ALTERNATE MANUFACTURERS: CARRIER, MQJAY, YORK.
EHC-100	ELECTRIC HEATING COIL (BID ALTERNATE #1). DUCT MOUNTED, 2KW, 208 VOLTS/1 PH. MARKEL CHM8, SINGLE STAGE, FIELD VERIFY EXISTING DUCT SIZE TO MATCH COIL FACE SIZE, AIRFLOW PROVING SWITCH, ALTERNATE MANUFACTURERS: QMARK, INDEECO.
EHC-101	ELECTRIC HEATING COIL (BID ALTERNATE #1). DUCT MOUNTED, 2 KW, 208 VOLTS/1 PH. MARKEL CHM8, SINGLE STAGE, FIELD VERIFY EXISTING DUCT SIZE TO MATCH COIL FACE SIZE, AIRFLOW PROVING SWITCH, ALTERNATE MANUFACTURERS: QMARK, INDEECO.

**Belford Watkins Group Architects LLC**

**Owner**  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

**Client**  
Loveland Traffic Operations Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

**Intelligent Transportation Systems**  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

**Architect**  
Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

**Mechanical & Plumbing**  
AE Associates, Inc.  
5887 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

**Electrical**  
Scanlon Szynskie Consulting Engineers  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.797.0079

**City of Loveland Traffic Operations Center Remodel**

105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FOR	12-16-2010
Final Bid Set	2-5-2011

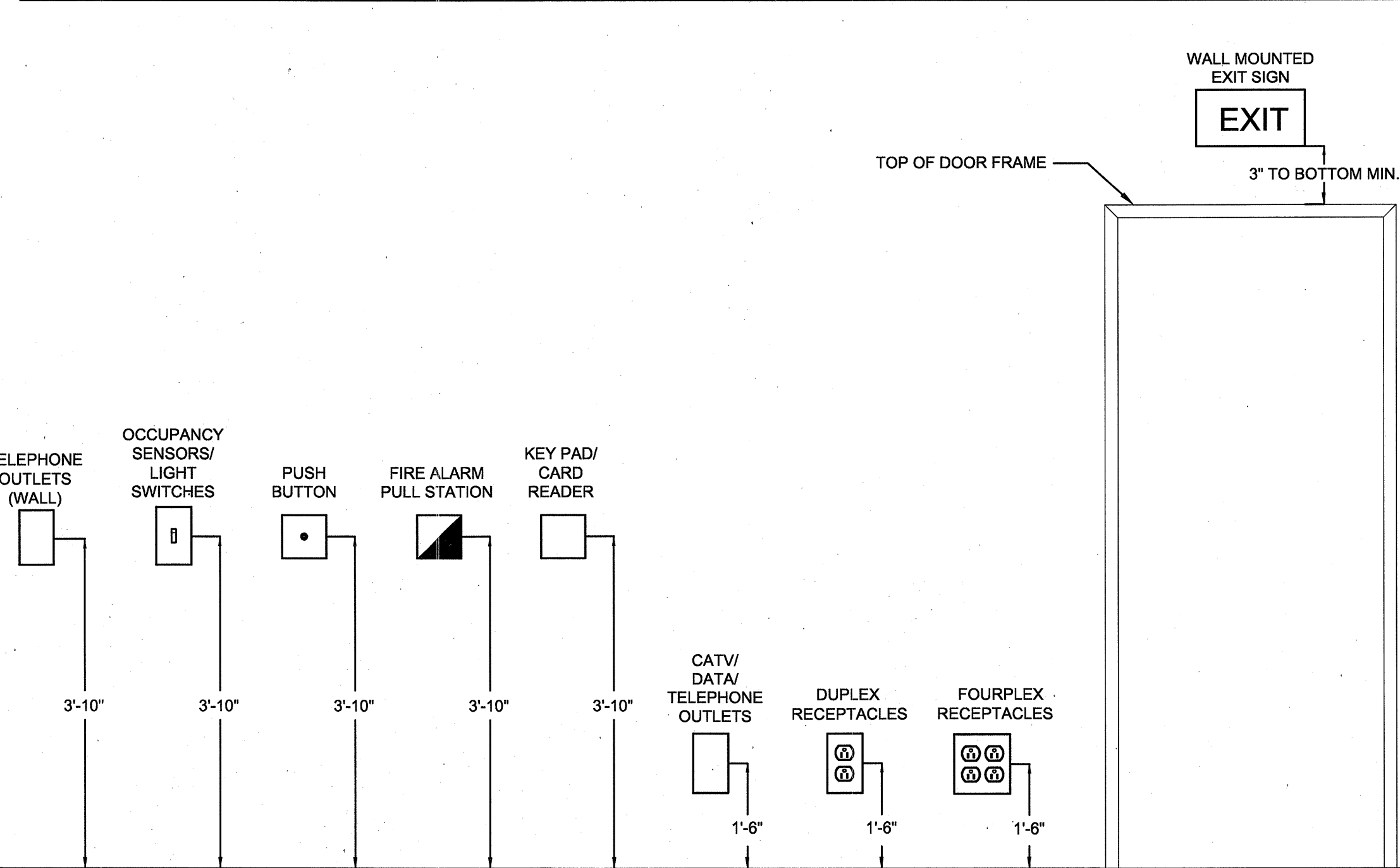
Copyright Belford Watkins Group Architects 2011.  
This drawing may not be photocopied, scanned, traced or copied in any manner without the written permission of Belford Watkins Group Architects.

City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: pdw  
Reviewed By: dw  
Approved By: dw

DRAWING LIMITS: 24x36  
DRAWING SIZE: 24x36  
DATE: 12-16-2010  
DRAWING NO: 012010120100098700 DRAWINGS\M0.DWG



POWER LEGEND		LIGHTING LEGEND		SWITCHING LEGEND		FIRE ALARM LEGEND		MISC. & ABBREVIATIONS LEGEND	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	DISTRIBUTION EQUIPMENT, SWITCHGEAR, PANELBOARDS		NL INDICATES NIGHT-LIGHT FULL SHADING INDICATES ENTIRE LUMINAIRE TO BE EMERGENCY HALF SHADING INDICATES HALF OF LUMINAIRE TO BE EMERGENCY		S <sup>1</sup> SINGLE POLE SWITCH; SUBSCRIPTS INDICATE SWITCHING LEG		IONIZATION SMOKE DETECTOR		INDICATES DETAIL OR DESIGN NOTE
	BRANCH CIRCUIT PANEL		LUMINAIRES SURFACE MOUNTED ON CEILING		S <sup>2</sup> DOUBLE POLE SWITCH		PHOTOELECTRIC SMOKE DETECTOR		A AMPERES
	FUSED DISCONNECT SWITCH (NON-FUSED WHEN FUSING NOT REQUIRED)		LUMINAIRES RECESSED IN CEILING		S <sup>3</sup> THREE WAY SWITCHING		SINGLE STATION, 120V SMOKE DETECTOR FIXED TEMPERATURE/RATE OF RISE		AC ABOVE COUNTER
	COMBINATION STARTER/DISCONNECT SW.		WALL MOUNTED LUMINAIRES		S <sup>4</sup> FOUR WAY SWITCHING		THERMAL DETECTOR		AFCI ARC FAULT CURRENT INTERRUPTER
	MAGNETIC STARTER OR CONTACTOR		SUSPENDED LUMINAIRES		S <sup>P</sup> SWITCH WITH PILOT LIGHT		FIXED TEMPERATURE THERMAL DETECTOR		AFB ABOVE FINISHED FLOOR
	METER		TRACK LIGHTING SYSTEM, LENGTH, BENDS, AND HEADS AS INDICATED		S <sup>K</sup> KEY OPERATED SWITCH		DUCT SMOKE DETECTOR		AFG ABOVE FINISHED GRADE
	MOTOR OUTLET AND CONNECTION		TRACK LIGHTING SYSTEM REMOTE TRANSFORMER		S <sup>LV</sup> LOW VOLTAGE SWITCH		MANUAL PULL STATION		AIC AMPERE INTERRUPTING CURRENT
	OVER-HEAD SERVICE ENTRANCE		EXIT LIGHTS; MOUNTING FACES AND ARROWS AS INDICATED		S <sup>TO</sup> THERMAL OVERLOAD SWITCH		ALARM HORN		ATS AUTOMATIC TRANSFER SWITCH
	INDICATES MECHANICAL EQUIPMENT		EMERGENCY LIGHTING UNIT		S <sup>G</sup> GANG MOUNTED SWITCHING		SPEAKER		AL ALUMINUM
	INDICATES KITCHEN EQUIPMENT, RISER, OR ROOM NUMBER		COMBINATION EXIT SIGN/EMERGENCY LIGHTING UNIT		S <sup>CD</sup> COMBINATION SWITCH AND DUPLEX RECEPTACLE		HORN WITH STROBE LIGHT		AWG AMERICAN WIRE GAGE
	AUTOMATIC TRANSFER SWITCH		TIME CLOCK		S <sup>XX</sup> DIMMER SWITCH		STROBE LIGHT		BC BELOW COUNTER
	RECESSED CLOCK RECEPTACLE		PHOTOCCELL		XX INDICATES SWITCH LEG SEE DRAWING NOTES FOR TYPE		CHIME		CB CIRCUIT BREAKER
	HOOD OUTLET AND CONNECTION				OCXX OCCUPANCY SENSOR (WALL MOUNTED) SUBSCRIPT INDICATES TYPE: IR - INFRARED TECHNOLOGY US - ULTRASONIC TECHNOLOGY DT - DUAL TECHNOLOGY 2 - DUAL LEVEL CONTROL		CHIME WITH STROBE LIGHT		C CONDUIT
	DISPOSER RECEPTACLE AND CONNECTION				OCXX OCCUPANCY SENSOR (CEILING MOUNTED) SUBSCRIPT INDICATES TYPE: IR - INFRARED TECHNOLOGY US - ULTRASONIC TECHNOLOGY DT - DUAL TECHNOLOGY 2 - DUAL LEVEL CONTROL		FIRE ALARM CONTROL PANEL		CU COPPER
	SURFACE RACEWAY				PPXX POWER PACK FOR OCCUPANCY SENSOR		FIRE ALARM CONTROL PANEL		E EXISTING
	PUSHBUTTON STATION						FIRE ALARM CONTROL PANEL		EC ELECTRICAL CONTRACTOR
	POWER POLE						FIRE ALARM CONTROL PANEL		EM EMERGENCY
	SURGE PROTECTION DEVICE						FIRE ALARM CONTROL PANEL		EMC ELECTRICAL METALLIC CONDUIT
	VARIABLE FREQUENCY DRIVE						FIRE ALARM CONTROL PANEL		EPO EMERGENCY POWER OFF
	CONNECTION TO FIRE/SMOKE DAMPER						FIRE ALARM CONTROL PANEL		ETR EMERGENCY TRANSFER RELAY
							FIRE ALARM CONTROL PANEL		EWC ELECTRIC WATER COOLER
							FIRE ALARM CONTROL PANEL		FAAP FIRE ALARM ANNUNCIATOR PANEL
							FIRE ALARM CONTROL PANEL		FACP FIRE ALARM CONTROL PANEL
							FIRE ALARM CONTROL PANEL		GC GENERAL CONTRACTOR
							FIRE ALARM CONTROL PANEL		GFI GROUND-FAULT CIRCUIT-INTERRUPTER
							FIRE ALARM CONTROL PANEL		GND GROUND
							FIRE ALARM CONTROL PANEL		GRC GALVANIZED RIGID CONDUIT
							FIRE ALARM CONTROL PANEL		HOA HAND-OFF-AUTO
							FIRE ALARM CONTROL PANEL		HP HORSEPOWER
							FIRE ALARM CONTROL PANEL		HZ HERTZ
							FIRE ALARM CONTROL PANEL		IDF INTERMEDIATE DISTRIBUTION FRAME
							FIRE ALARM CONTROL PANEL		IMC INTERMEDIATE METALLIC CONDUIT
							FIRE ALARM CONTROL PANEL		isc SHORT CIRCUIT CURRENT
							FIRE ALARM CONTROL PANEL		Kmccil 1000 CIRCULAR MILS
							FIRE ALARM CONTROL PANEL		KV KILOVOLTS
							FIRE ALARM CONTROL PANEL		KVA KILOVOLT AMPERES
							FIRE ALARM CONTROL PANEL		KW KILOWATTS
							FIRE ALARM CONTROL PANEL		KWH KILOWATT HOURS
							FIRE ALARM CONTROL PANEL		IG ISOLATED GROUND
							FIRE ALARM CONTROL PANEL		mA MILLIAMPS
							FIRE ALARM CONTROL PANEL		MAX MAXIMUM
							FIRE ALARM CONTROL PANEL		MIC MICROPHONE
							FIRE ALARM CONTROL PANEL		MIN MINIMUM
							FIRE ALARM CONTROL PANEL		MCB MAIN CIRCUIT BREAKER
							FIRE ALARM CONTROL PANEL		MCC MOTOR CONTROL CENTER
							FIRE ALARM CONTROL PANEL		MDC MAIN DISTRIBUTION CENTER
							FIRE ALARM CONTROL PANEL		MDF MAIN DISTRIBUTION FRAME
							FIRE ALARM CONTROL PANEL		MLO MAIN LUGS ONLY
							FIRE ALARM CONTROL PANEL		N NEW
							FIRE ALARM CONTROL PANEL		NEC NATIONAL ELECTRIC CODE
							FIRE ALARM CONTROL PANEL		NFPA NATIONAL FIRE PROTECTION ASSOCIATION
							FIRE ALARM CONTROL PANEL		NIC NOT IN CONTRACT
							FIRE ALARM CONTROL PANEL		NL NIGHT LIGHT
							FIRE ALARM CONTROL PANEL		NC NORMALLY CLOSED
							FIRE ALARM CONTROL PANEL		NO NORMALLY OPEN
							FIRE ALARM CONTROL PANEL		NTS NOT TO SCALE
							FIRE ALARM CONTROL PANEL		OC ON CENTER
							FIRE ALARM CONTROL PANEL		PF POWER FACTOR
							FIRE ALARM CONTROL PANEL		RL RELOCATE
							FIRE ALARM CONTROL PANEL		RMS ROOT MEAN SQUARE
							FIRE ALARM CONTROL PANEL		SPD SURGE PROTECTIVE DEVICE
							FIRE ALARM CONTROL PANEL		ST SHUNT TRIP
							FIRE ALARM CONTROL PANEL		SWBD SWITCHBOARD
							FIRE ALARM CONTROL PANEL		SWGR SWITCHGEAR
							FIRE ALARM CONTROL PANEL		TYP TYPICAL
							FIRE ALARM CONTROL PANEL		TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR
							FIRE ALARM CONTROL PANEL		UC UNDER CABINET
							FIRE ALARM CONTROL PANEL		UL UNDERWRITERS LABORATORY
							FIRE ALARM CONTROL PANEL		UNO UNLESS OTHERWISE NOTED
							FIRE ALARM CONTROL PANEL		UPS UNINTERRUPTIBLE POWER SUPPLY
							FIRE ALARM CONTROL PANEL		VFD VARIABLE FREQUENCY DRIVE
							FIRE ALARM CONTROL PANEL		V VOLT
							FIRE ALARM CONTROL PANEL		WP WEATHER PROTECTED
							FIRE ALARM CONTROL PANEL		W WITH
							FIRE ALARM CONTROL PANEL		WO WITHOUT
							FIRE ALARM CONTROL PANEL		XFMR TRANSFORMER



**1 ELECTRICAL DEVICE MOUNTING DETAIL**  
SCALE: NONE

**GENERAL NOTES**

- THE ELECTRICAL CONTRACTOR SHALL WORK WITH THE OWNER ON THE DEMOLITION WORK REQUIRED. THE CITY OF LOVELAND SHALL REMOVE / SALVAGE ALL EXISTING LIGHTING THAT IS TO BE REUSED DURING THE NEW CONSTRUCTION. THE CITY OF LOVELAND SHALL ALSO REMOVE ALL WALL BOXES, CONDUCTORS, AND CONDUITS AS THEY REMOVE THE WALLS AND THE CEILINGS ASSOCIATED WITH THIS WORK. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING ALL CIRCUITS WITHIN THE AREA OF WORK PRIOR TO ANY DEMOLITION WORK BEING COMPLETED BY THE CITY OF LOVELAND.

**ELECTRICAL DEVICE MOUNTING DETAIL NOTES:**

- DEVICE MOUNTING HEIGHTS ARE TYPICAL UNLESS OTHERWISE NOTED. ALL MOUNTING HEIGHTS SHALL CONFORM TO THE LATEST EDITION OF THE AMERICANS WITH DISABILITIES ACT (ADA).
- REFER TO FLOOR PLANS AND ARCHITECTURAL ELEVATIONS FOR DEVICES AT SPECIFIC MOUNTING HEIGHTS. ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE UNLESS OTHERWISE INDICATED.
- ALL RECEPTACLES SHALL BE MOUNTED VERTICALLY WITH GROUND PIN UP UNLESS OTHERWISE INDICATED.
- DEVICES DENOTED "AC" ON THE DRAWINGS SHALL BE MOUNTED ABOVE THE COUNTER WORK SURFACE. REFER TO ARCHITECTURAL DETAILS FOR SPECIFIC HEIGHTS. COORDINATE INSTALLATION OF ANY DEVICE MOUNTED ABOVE OR NEAR MILLWORK WITH MILLWORK FABRICATORS.
- ALL RECEPTACLES SHALL BE MOUNTED WITH THE GROUND PIN ORIENTATION MATCHING THE EXISTING RECEPTACLES.
- LABEL ALL DEVICES WITH CIRCUIT AND PANEL INFORMATION, PER THE SPECIFICATIONS.

**Belford Watkins Group Architects LLC**

**Owner**  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

**Client**  
Loveland Traffic Operations Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2638  
Fax: 970.962.2907

**Intelligent Transportation Systems**  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

**Architect**  
Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

**Mechanical & Plumbing**  
AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

**Electrical**  
Scanlon Szynskie Group Inc.  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0612

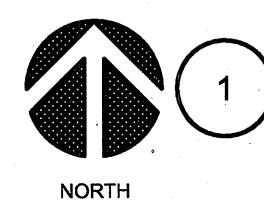
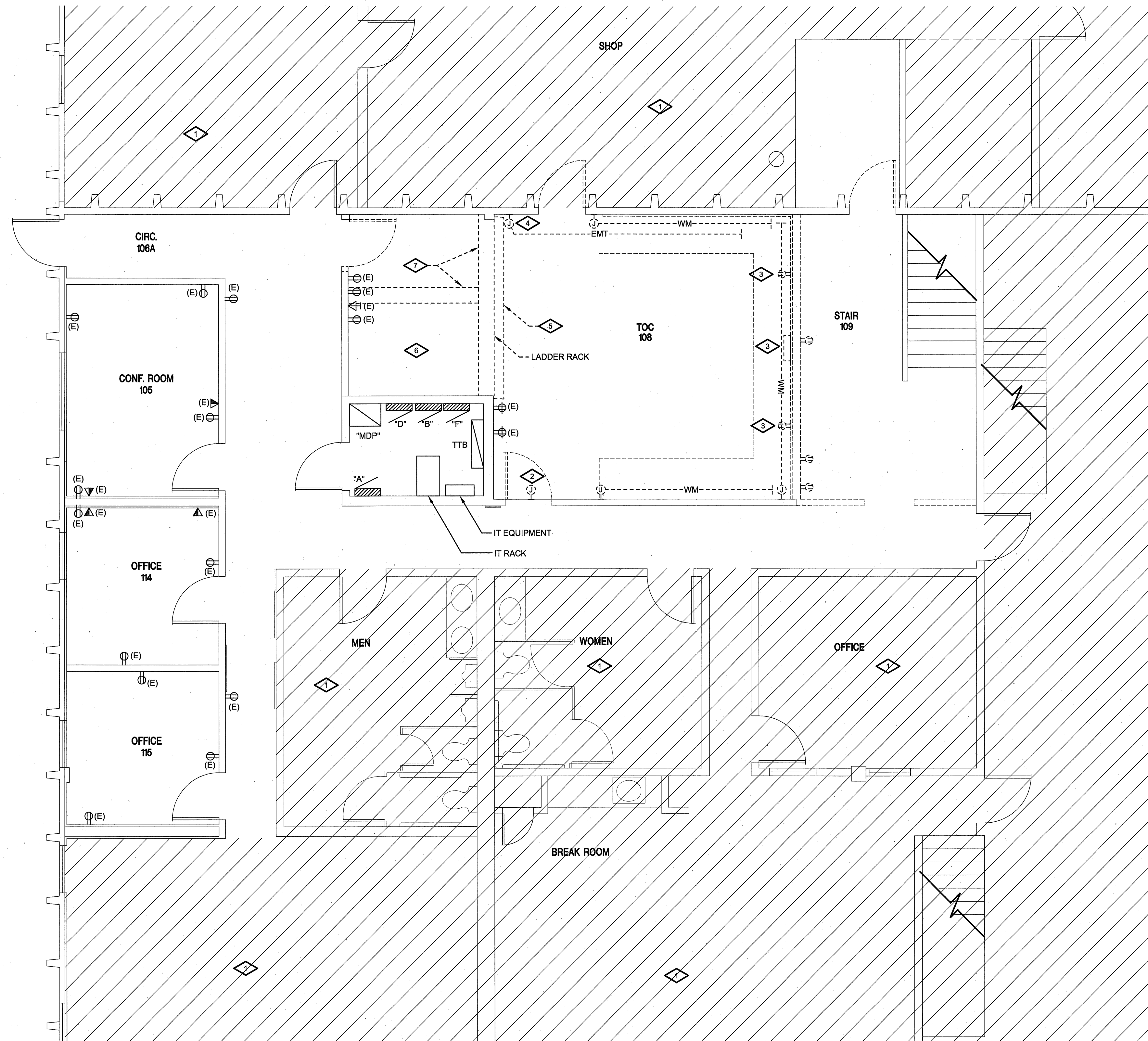
**Scanlon Szynskie**

**City of Loveland Traffic Operations Center**  
105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FOR	12-16-2010
Final Bid Set	2-4-2011

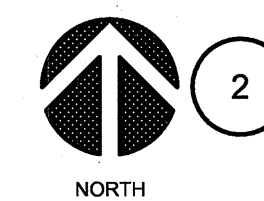
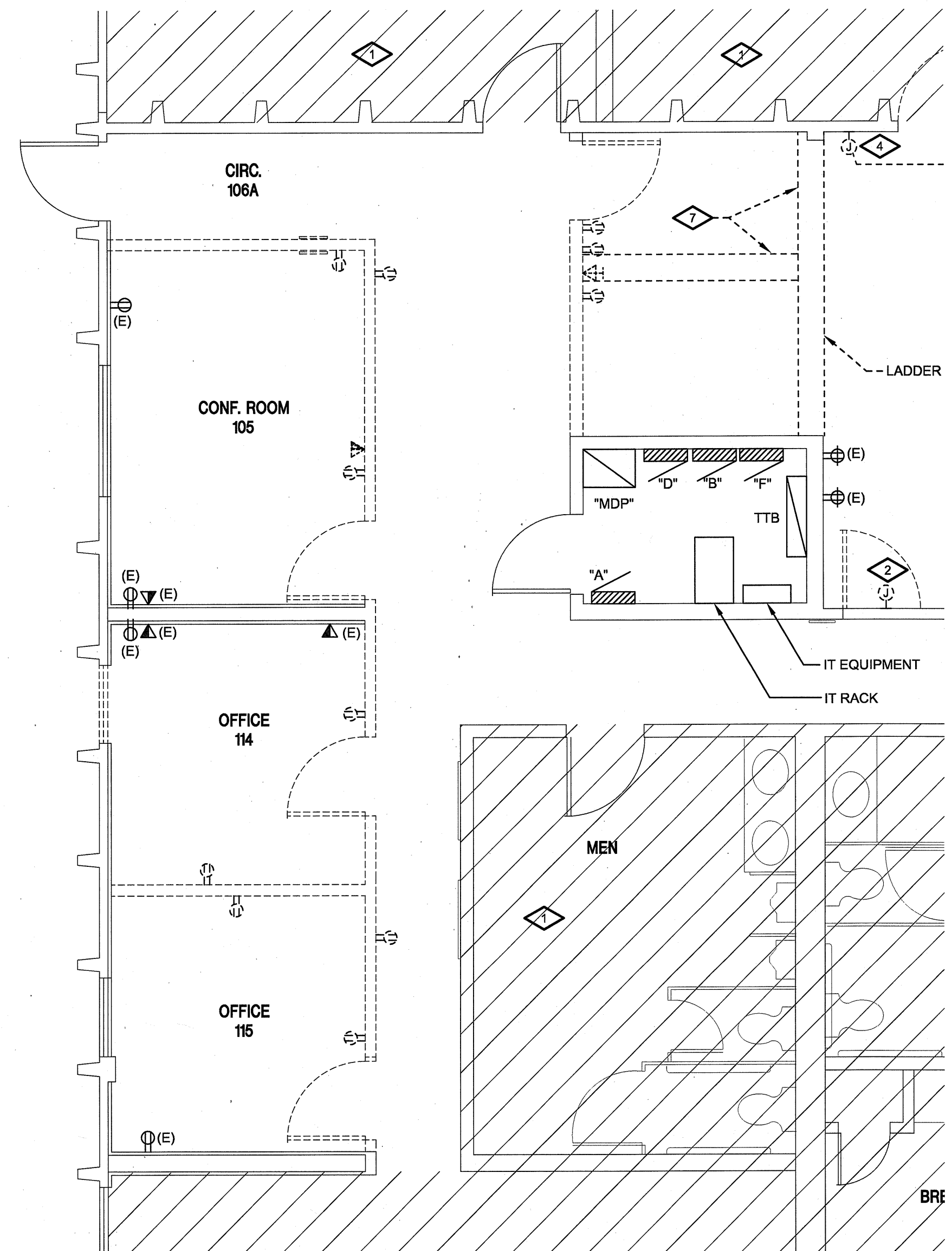
COPYRIGHT BELFORD WATKINS GROUP ARCHITECTS 2008. THIS DOCUMENT MAY NOT BE REPRODUCED, SCANNED, TRANSMITTED OR STORED IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF BELFORD WATKINS GROUP ARCHITECTS.  
City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: ADC  
Reviewed By: KAT  
Approved By: SCS

**E0.0**  
ELECTRICAL COVER SHEET



**1 DEMOLITION POWER PLAN - PHASE I**

SCALE: 1/4" = 1'-0"



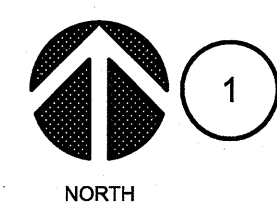
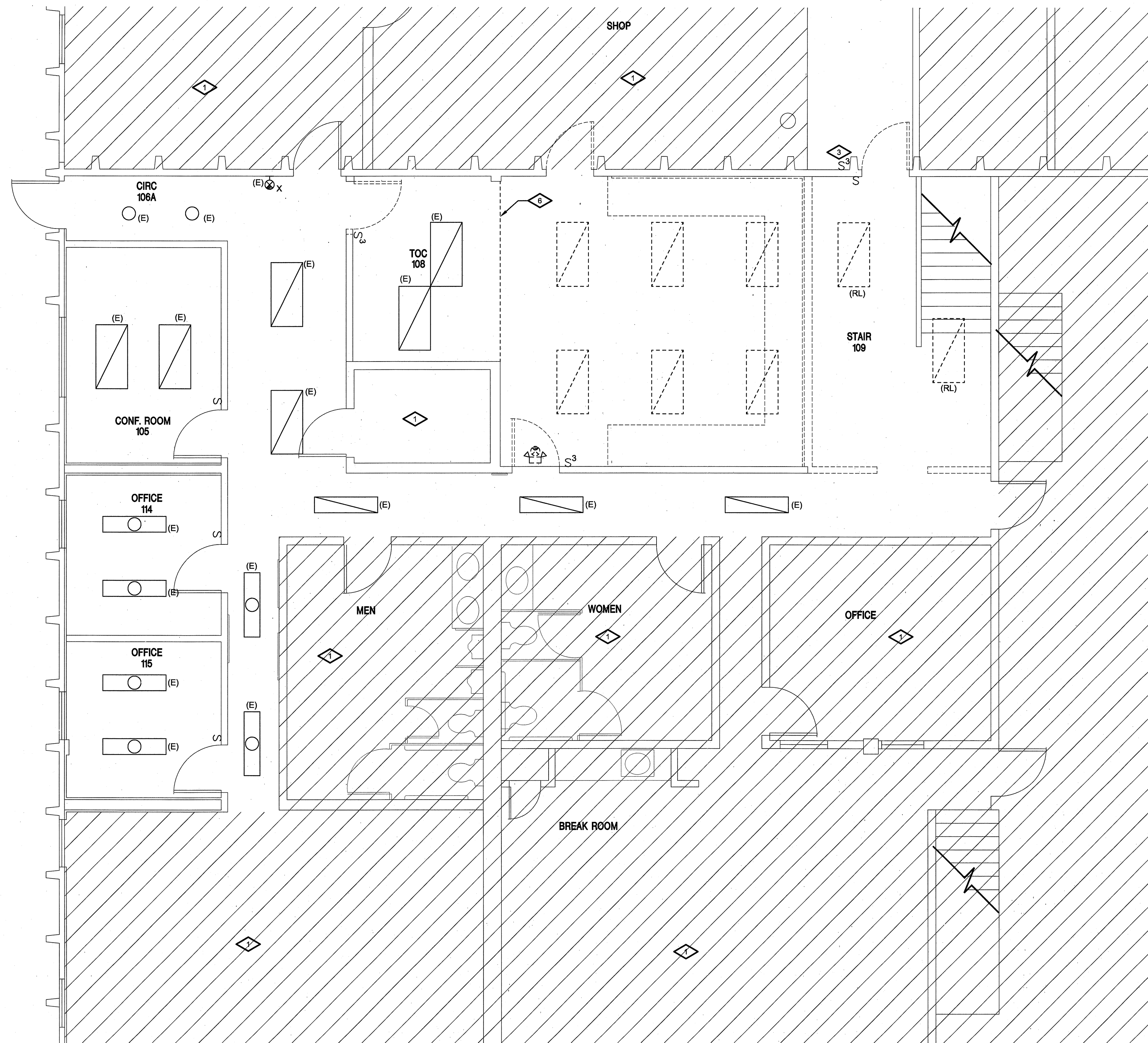
**2 DEMOLITION POWER PLAN - PHASE II**

SCALE: 1/4" = 1'-0"

**DETAIL NOTES**

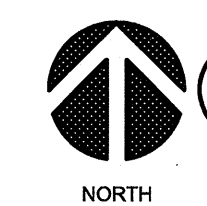
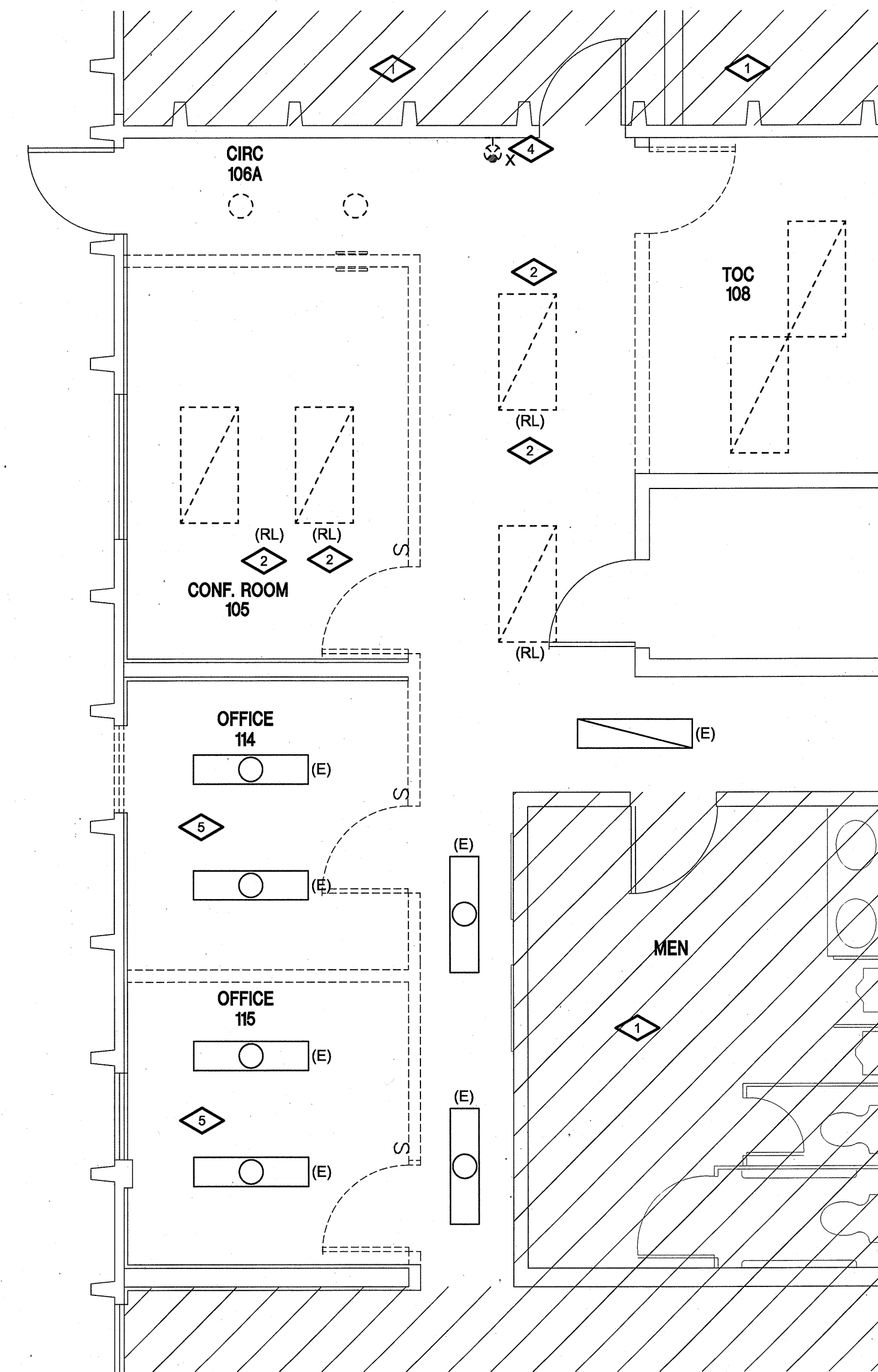
- 1 ALL ELECTRICAL IN THIS AREA IS EXISTING TO REMAIN.
- 2 REMOVE AND RELOCATE THE EXISTING JUNCTION BOX AND ITS CABLING THAT IS EXISTING TO REMAIN ABOVE CEILING, TO ABOVE 12'-0" AFF TO ACCOMMODATE NEW CEILING HEIGHT.
- 3 REMOVE EXISTING RECEPTACLES AND WIREWAY ABOVE CEILING ON EAST WALL OF THE TOC TO ACCOMMODATE NEW CEILING HEIGHT.
- 4 RELOCATE EXISTING JUNCTION BOX AND EMT RACEWAY LOCATED ABOVE THE CEILING TO ABOVE 12'-0" AFF TO ACCOMMODATE NEW CEILING HEIGHT.
- 5 TEMPORARY PHASING PARTITION. REFER TO ARCHITECTURAL PLANS.
- 6 INTELLIGENT TRAFFIC EQUIPMENT SHALL REMAIN OPERATIONAL IN THIS AREA UNTIL DATA CENTER REMODEL IS COMPLETE.
- 7 LADDER RACK SHALL BE DEMOLISHED IN PHASE II WORK.

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-21-2010
60% Construction Doc	12-26-2010
95% FOR	12-18-2010
Final Bid Set	2-6-2011



**1 DEMOLITION LIGHTING PLAN - PHASE I**

SCALE: 1/4" = 1'-0"



**2 DEMOLITION LIGHTING PLAN - PHASE II**

SCALE: 1/4" = 1'-0"

**DETAIL NOTES**

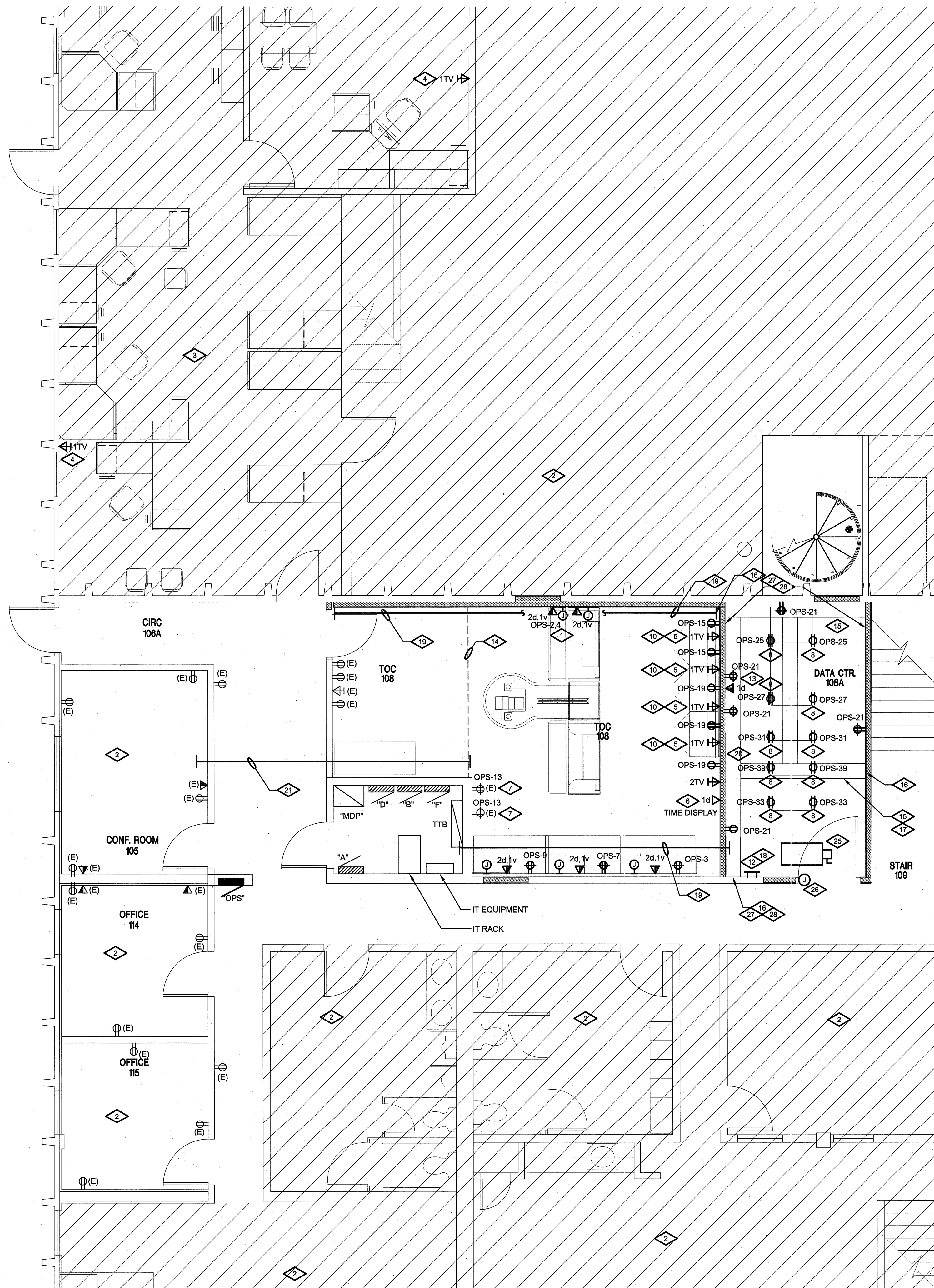
- 1 ALL ELECTRICAL IN THIS AREA IS EXISTING TO REMAIN.
- 2 THE CITY OF LOVELAND SHALL REMOVE EXISTING LUMINAIRES THAT SHALL BE REUSED. THE ELECTRICAL CONTRACTOR SHALL DE-ENERGIZE CIRCUIT PRIOR TO DEMOLITION.
- 3 RELOCATE EXISTING 3-WAY SWITCH TO THE TOP OF THE NEW SPIRAL STAIR. REFER TO THE ARCHITECTURAL PLANS FOR ADDITIONAL INFORMATION.
- 4 RELOCATE EXISTING EXIT SIGN AS PART OF PHASE II WORK.
- 5 CONNECT LUMINAIRES TO OPEN OFFICE/CORRIDOR LIGHTING CONTROLS AS PART OF PHASE II WORK.
- 6 TEMPORARY PHASING PARTITION REFER TO THE ARCHITECTURAL PLANS.



105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	8-30-2010
30% Construction Dec	12-01-2010
60% Construction Dec	12-05-2010
95% FCR	12-16-2010
Final Bid Set	2-5-2011

City Project Number: TS 071  
BWG Project Number: 09-0  
Drawn By: AF  
Reviewed By: K  
Approved By: E



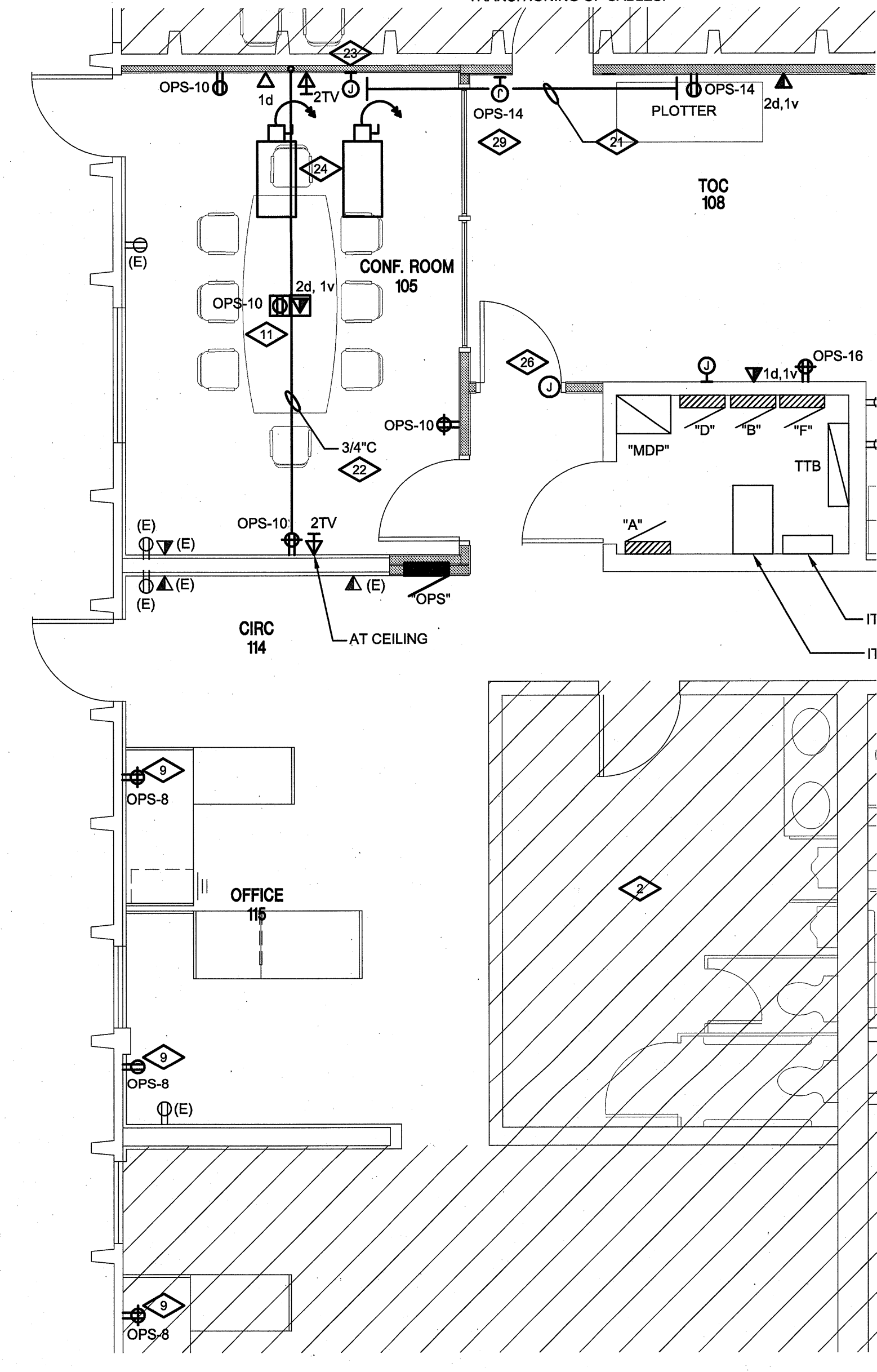
**1 POWER AND SYSTEMS PLAN - PHASE I**  
SCALE: 1/4" = 1' - 0"

**DETAIL NOTES**

- 1 ELECTRICAL CONNECTION TO SYSTEMS FURNITURE, AS REQUIRED PER FURNITURE MANUFACTURER.
- 2 ELECTRICAL IN THIS AREA IS EXISTING TO REMAIN.
- 3 EXISTING RECEPTACLES TO REMAIN.
- 4 HEIGHT AFF TO BE DETERMINED.
- 5 REFER TO DETAIL IN ARCHITECTURAL ELEVATIONS FOR LOCATION OF OUTLETS ASSOCIATED WITH VIDEO WALL.
- 6 LOCATE OUTLET JUST ABOVE CEILING FOR NEW TIME DISPLAY.
- 7 RE-CIRCUIT EXISTING RECEPTACLES TO NEW PANEL AS SHOWN.
- 8 PROVIDE AND INSTALL NEMA L5-20R TWISTLOCK RECEPTACLE MOUNTED TO CABLE LADDER.
- 9 INSTALL NEW POWER DEVICES AND RACEWAY IN EXISTING WALL FURRING AT THIS LOCATION.
- 10 COORDINATE OUTLET LOCATIONS WITH WALL BRACKETS FOR THE MONITORS.
- 11 PROVIDE AND INSTALL FLOOR BOX CENTERED UNDER CONFERENCE ROOM TABLE. PROVIDE HUBBELL SYSTEM ONE FLOOR BOX, S1PFB, WITH ALUMINUM COVER S1CFCL, ONE DUPLEX RECEPTACLE, ONE HD-15, ONE USB, AND ON RJ-45 JACK. PROVIDE S1DIVI DIVIDER, AND ALL COMPONENT PARTS FOR A COMPLETE AND OPERATIONAL SYSTEM. CUT AND PATCH FLOOR AS REQUIRED FOR CONDUIT INSTALLATION.
- 12 PROVIDE AND INSTALL GROUND BAR WITH (1#2/0 CU GND) BACK TO MAIN BUILDING GROUND IN THE ELECTRICAL ROOM. REFER TO DETAIL 2, SHEET E3.0 FOR ADDITIONAL INFORMATION.
- 13 COORDINATE LOCATION OF OUTLETS FOR DOOR SECURITY WITH THE OWNER.
- 14 TEMPORARY PARTITION. REFER TO ARCHITECTURAL PLANS.
- 15 CABLE LADDER SHALL BE SUPPORTED EVERY 5' ALONG THE WALL USING TRIANGULAR SUPPORT BRACKETS.
- 16 INSTALL WALL ANGLE SUPPORTS.
- 17 BUTT SPLICE KITS AND GROUND STRAPS SHALL BE USED TO JOIN CABLE LADDER SEGMENTS.
- 18 PROVIDE AND INSTALL 12" WIDE WIDTH CABLE LADDER. PROVIDE (1#6 CU GND) FROM CABLE LADDER TO GROUND BAR.
- 19 PROVIDE AND INSTALL (2) 1-1/4" NON-METALLIC RACEWAY ABOVE CEILING, WITH PULL ROPE SECURED TO THE WALL USING J-HOOKS AND CABLE TIES. SUPPORT EVERY 5'. ONE RACEWAY IS CONTINUOUS AND LABELED AS "SPARE" FOR USE BY THE CITY, THE OTHER RACEWAY SHALL BE NON-CONTINUOUS FOR ACCESSING DATA/VOICE CONDUIT STUB OUTS.
- 20 1-1/4" CONDUIT STUB OUT TO JUNCTION BOX LOCATED IN MIDDLE OF VIDEO WALL MOUNTING BRACKETS. LEAVE PULL ROPE IN PLACE FOR USE BY OTHERS.
- 21 PROVIDE AND INSTALL (1) 1-1/4" NON-METALLIC RACEWAY ABOVE CEILING, WITH PULL ROPE SECURED TO THE WALL USING J-HOOKS AND CABLE TIES. SUPPORT EVERY 5'. ONE RACEWAY IS CONTINUOUS AND LABELED AS "SPARE" FOR USE BY THE CITY, THE OTHER RACEWAY SHALL BE NON-CONTINUOUS FOR ACCESSING DATA/VOICE CONDUIT STUB OUTS.
- 22 PROVIDE AND INSTALL (1) VGA CABLE AND (1) USB CABLE IN (1) 3/4" C. FROM FLOOR BOX TO OUTLETS ON NORTH WALL FOR SMART BOARD.
- 23 PROVIDE AND INSTALL (1) HD-15 AND (1) USB OUTLET AT NORTH WALL FOR SMART BOARD.
- 24 ADD-ALTERNATE: PROVIDE AND INSTALL (3#12 CU THWN & 1#12 CU GND)1/2"C. TO EACH OF THE NEW ELECTRIC RE-HEAT COILS (TOTAL OF 2). ELECTRIC RE-HEAT COILS ARE RATED AT 208V, 10, 2KW EACH.
- 25 PROVIDE AND INSTALL 208V, 10 ELECTRICAL CONNECTION TO PACKAGED ROOF TOP UNIT LOCATED OVER THE SERVER ROOM. PROVIDE (3#6 CU THWN & 1#10 CU GND)3/4"C. TO UNIT FROM PANEL AS SHOWN. ROOF TOP UNIT IS RATED AT 208V, 10, 35.2MCA, 50 MOPC.
- 26 POWER TO DOOR PROXIMITY READER.
- 27 USE ELEVATION KITS ON CABINETS TO CONNECT TO CABLE LADDERS. CABLE LADDERS SHALL BE MOUNTED 4"-6" ABOVE CABINETS.
- 28 INSTALL VERTICAL CABLE LADDERS FOR TRANSITIONING OF CABLES.

**GENERAL NOTES**

1. CABLING AND TERMINATIONS TO BE COMPLETED BY COMMUNICATIONS/LOW VOLTAGE SUBCONTRACTOR.
2. ALL OUTLETS TO BE INSTALLED 18" AFF UNLESS NOTED OTHERWISE.
3. ALL OUTLETS SHALL UTILIZE APPROPRIATELY SIZED CONDUITS STUBBED INTO ACCESSIBLE CEILING SPACE. CONDUIT SIZES SHALL BE BASED ON FILL RATIOS STIPULATED IN TABLE 1, CHAPTER 9 OF THE 2008 NEC.
4. COMMUNICATIONS/LOW VOLTAGE SUBCONTRACTOR TO COORDINATE LOCATION AND SIZE OF NECESSARY CONDUITS FOR CABLING WITH ELECTRICAL CONTRACTOR.
5. ALL VOICE CAT6 CABLES TO BE HOMERUN TO EXISTING 110-TYPE PUNCHDOWN BLOCK IN ELECTRICAL ROOM (ROOM 107). COORDINATE WITH CITY IT FOR LOCATION OF EXISTING PUNCHDOWN BLOCK.
6. ALL DATA CAT6 CABLES TO BE HOMERUN TO NEW 24-PORT RACKMOUNT CAT6 PATCH PANEL IN PROPOSED DATA CENTER (ROOM 108A) UNLESS OTHERWISE SPECIFIED. COORDINATE WITH CITY TRAFFIC FOR MOUNTING OF PATCH PANEL IN CABINET.
7. ALL DATA CAT6 CABLES IN CONFERENCE ROOM SHALL BE HOMERUN TO EXISTING PATCH PANEL IN ELECTRICAL ROOM (107) COORDINATE WITH CITY IT FOR PATCH PANEL LOCATION.
8. ALL VIDEO RG-59 COAXIAL CABLES TO BE HOMERUN TO EXISTING VIDEO OUTPUT PATCH PANEL IN PROPOSED DATA CENTER (ROOM 108A). COORDINATE WITH CITY TRAFFIC FOR EXACT LOCATION OF CABINET CONTAINING THE PATCH PANEL.
9. ALL VOICE AND DATA CAT6 CABLES TO TERMINATE ON 8P8C MODULAR CAT6 JACKS (RJ-45) AND WIRED TO THE T568B PIN ASSIGNMENT PER THE TIA-568 COMMERCIAL BUILDING TELECOMMUNICATIONS CABLING STANDARD.
10. ALL VIDEO RG-59 CABLES TO TERMINATE WITH BNC CONNECTORS UNLESS OTHERWISE NOTED.
11. ALL VOICE CAT6 JACKS SHALL BE COLOR CODED WHITE AND ALL DATA CAT6 JACKS SHALL BE COLOR CODED ORANGE.
12. ALL CAT6 CABLES TO BE CONTINUITY TESTED FOR POLARITY AND CORRECT PIN CONFIGURATION.
13. ALL RG-59 CABLES TO BE TESTED FOR NTSC VIDEO TRANSMISSION AS WELL AS AUDIO TRANSPORT (WHERE APPLICABLE)
14. CABLES TO BE MACHINE LABELED WITH JACK NUMBER AND FUNCTION ON EACH END OF CABLE TERMINATION.
15. HOMERUN DATA AND VOICE CABLES FOR CONSOLE POSITIONS ON SOUTH WALL OF TOC TO EXISTING PATCH PANEL IN ELECTRICAL ROOM (107). COORDINATE WITH CITY IT FOR LOCATION OF PATCH PANEL.



**2 POWER AND SYSTEMS PLAN - PHASE II**  
SCALE: 1/4" = 1' - 0"

Owner  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

Client  
Loveland Traffic Operations Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2528  
Fax: 970.962.2907

Intelligent Transportation  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

Architect  
Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

Mechanical & Electrical  
AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

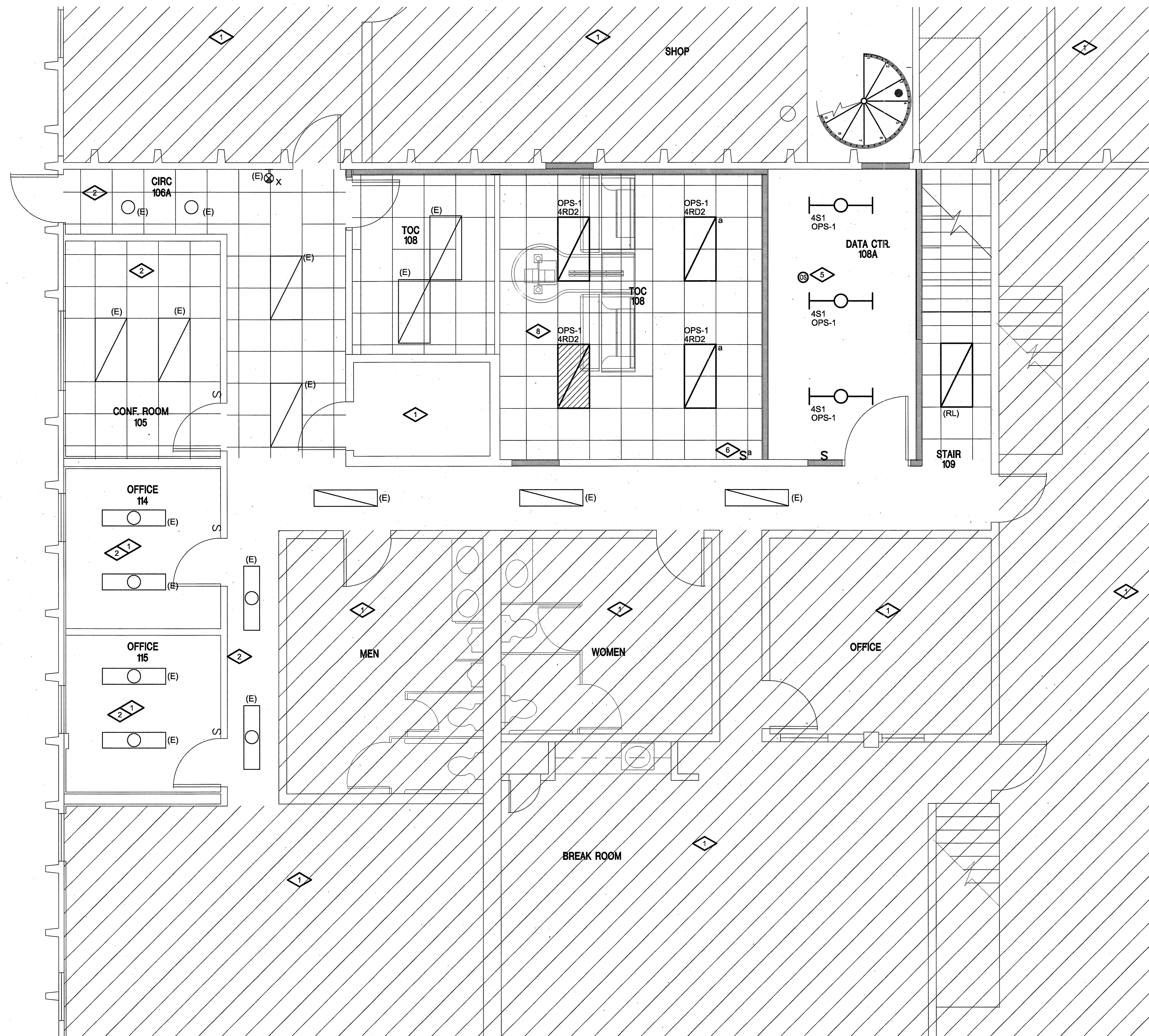
Electrical  
Scanlon Szynskie Group Inc.  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0612



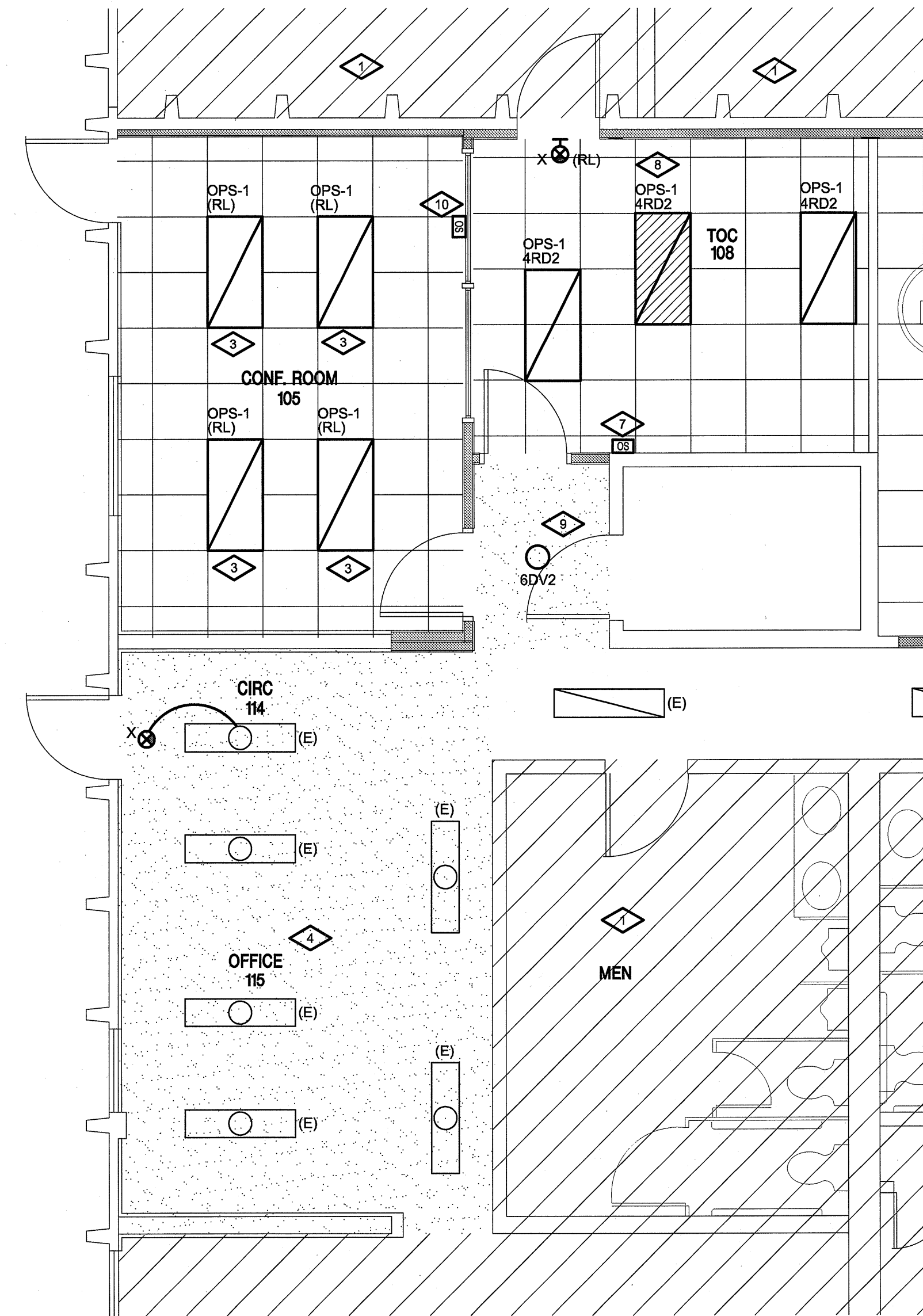
City of Loveland Traffic Operations  
Loveland, Colorado  
970.962.2528

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
85% FOR	12-16-2010
Final Bid Set	2-5-2011

City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: ADC  
Reviewed By: KAT  
Approved By: SCS



**1 LIGHTING PLAN - PHASE I**  
 SCALE: 1/4" = 1' - 0"  
 NORTH



**2 LIGHTING PLAN PHASE II**  
 SCALE: 1/4" = 1' - 0"  
 NORTH

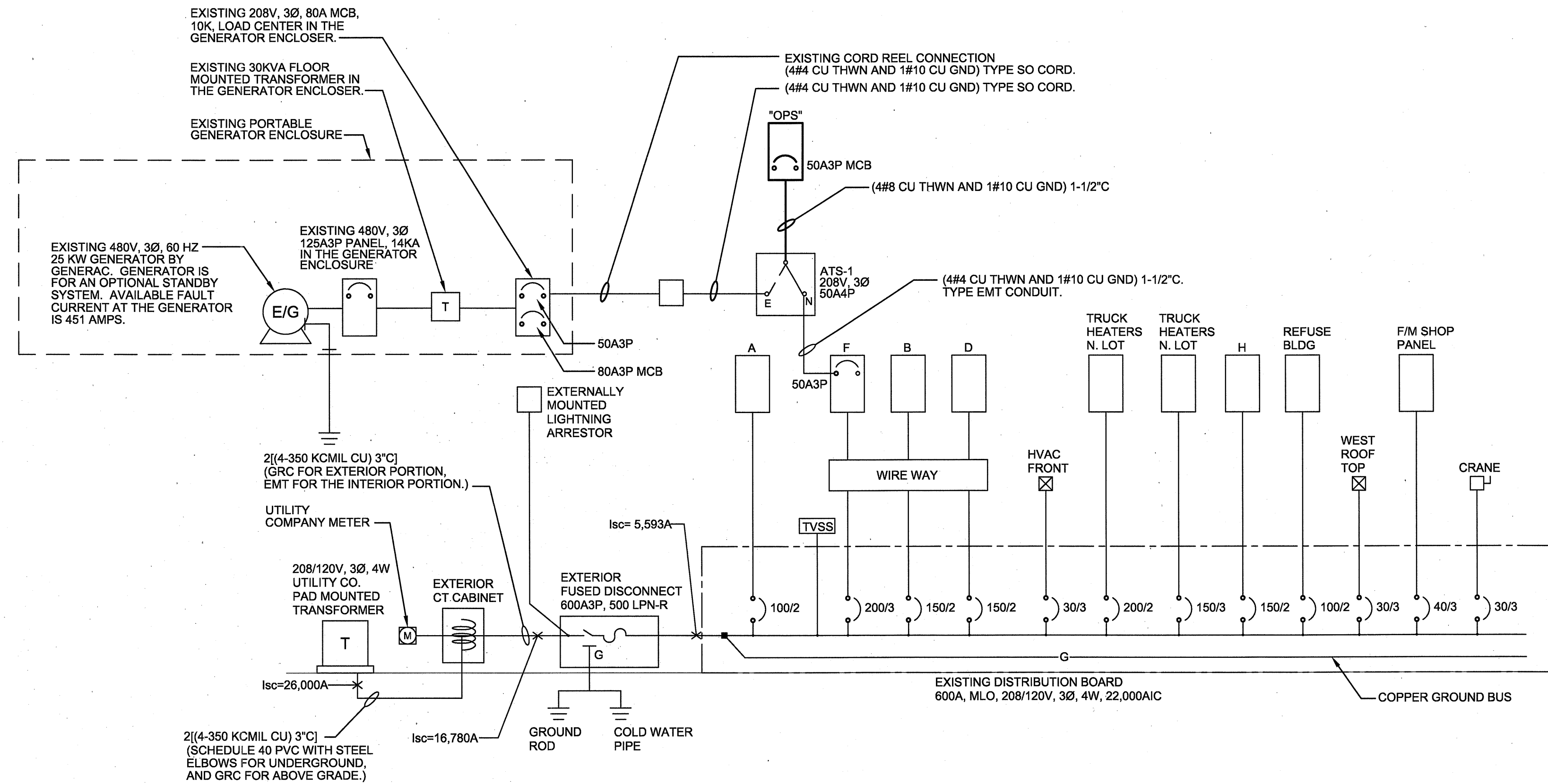
**DETAIL NOTES**

- 1 ELECTRICAL IN THIS AREA IS EXISTING TO REMAIN.
- 2 LIGHTING CONTROLS IN THIS AREA ARE EXISTING TO REMAIN.
- 3 THE ELECTRICAL CONTRACTOR SHALL OBTAIN LUMINAIRES FROM THE CITY OF LOVELAND FOR RE-INSTALLATION.
- 4 CONNECT EXISTING LUMINAIRES TO CIRCUITRY AND SWITCHING FOR CORRIDOR LIGHTING.
- 5 PROVIDE AND INSTALL CEILING MOUNTED OCCUPANCY SENSOR WITH WALL SWITCH OVERRIDE IN DATA ROOM BY WATT STOPPER MODEL #DT-200, LOCATE SENSOR FOR OPTIMAL VISIBILITY AROUND RACK MOUNTED EQUIPMENT.
- 6 PROVIDE AND INSTALL SWITCH FOR LOCAL OVERRIDE OF (2) "4RD2" LUMINAIRES AGAINST MONITOR WALL. OCCUPANTS WANT THE ABILITY TO TURN THESE LIGHTS OFF INDEPENDENT OF OCCUPANT LOAD.
- 7 PROVIDE AND INSTALL WALL MOUNTED OCCUPANCY SENSOR WITH DUAL TECHNOLOGY AND DUAL RELAY FOR MULTI-LEVEL SWITCHING OF LUMINAIRES IN TOC ROOM. ADJUST COVERAGE TO COVER DOOR AND WORK AREA. PROVIDE WATT STOPPER MODEL #DW-200.
- 8 PROVIDE AND INSTALL BODINE BATTERY BACK UP FOR LUMINAIRE AS SHOWN. CONNECT BATTERY AHEAD OF LOCAL SWITCHING SO THAT THE LUMINAIRE SHALL OPERATE WITH THE ROOM CONTROLS.
- 9 CONNECT "6DV2" TO CIRCUIT AND CONTROLS IN CIRC 114.
- 10 PROVIDE AND INSTALL DUAL TECHNOLOGY OCCUPANCY SENSOR BY WATT STOPPER MODEL #DW-100.

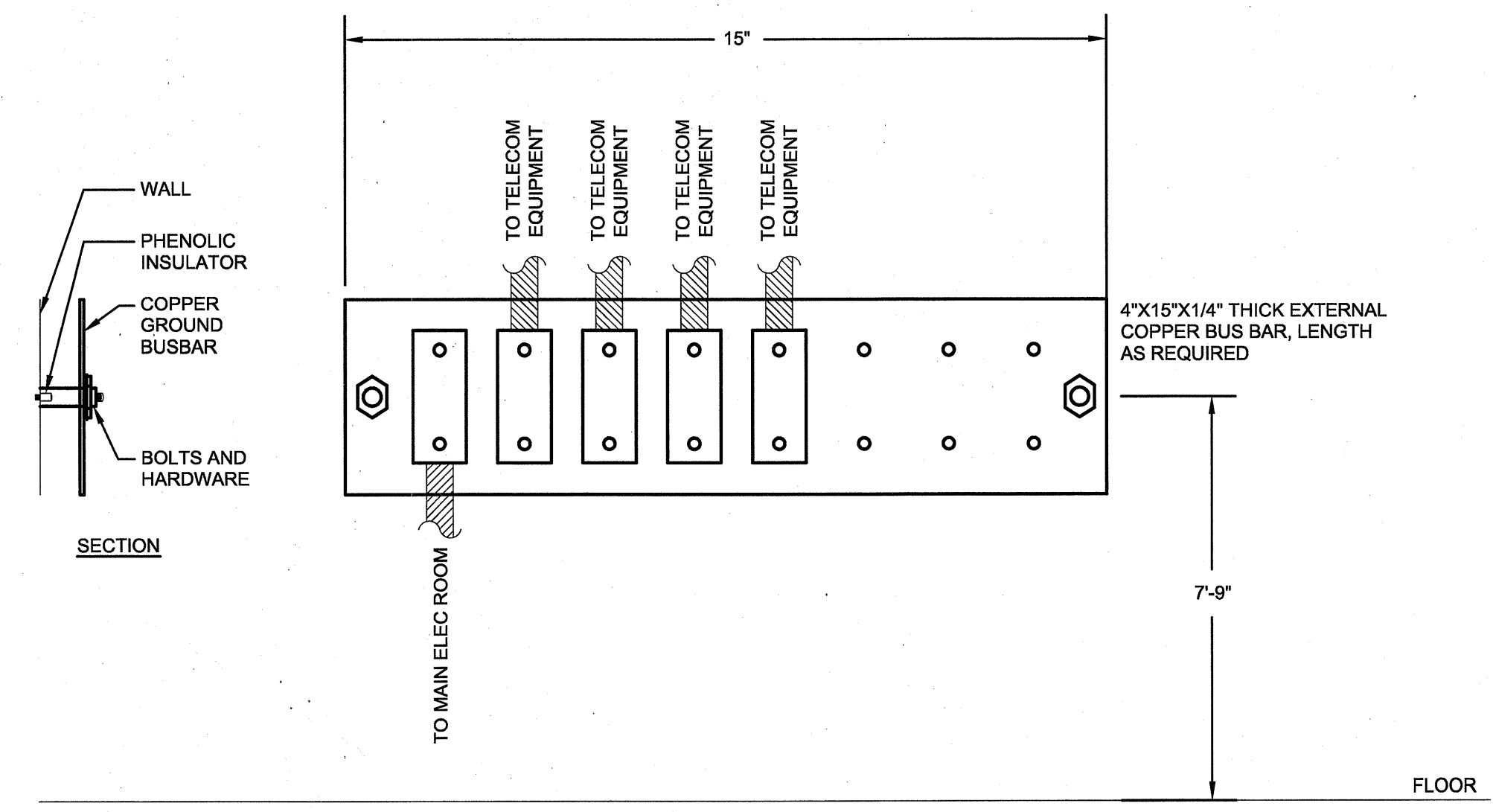
Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-21-2010
60% Construction Doc	12-25-2010
95% PDR	12-16-2010
Final Bid Set	2-8-2011

NEW PANEL "OPS"									
VOLTS: 208/120V, 3PH, 4W MAINS: 50A MAIN BREAKER A.I.C.: 10KA					MTG: FLUSH NEMA 1 MFGR: SEE SPECS TYPE: SEE SPECS				
DESCRIPTION	T	KVA	BKR	CKT#	BKR	KVA	T	DESCRIPTION	
TOC / DATA LTG	L	1.20	20A1P	1 +	2	20A1P	1.44	R	OPS FURNITURE
OPS WORKSTN RECEP	R	0.36	20A1P	3 +	4	20A1P	1.44	R	OPS FURNITURE
SPACE				5	+6				SPACE
OPS WORKSTN RECEP	R	0.36	20A1P	7 +	8	20A1P	0.90	R	OPEN OFFICE RECEP
OPS WORKSTN RECEP	R	0.36	20A1P	9 +	10	20A1P	1.08	R	CONFERENCE RM REC
SPACE				11	+12				SPACE
EXISTING RECEP	R	0.72	20A1P	13 +	14	20A1P	0.18	R	PLOTTER
OPS MONITOR	R	0.36	20A1P	15 +	16	20A1P	0.36	R	WORK STATIONS
SPACE				17	+18				SPACE
OPS MONITOR	R	0.36	20A1P	19 +	20				SPACE
DATA ROOM RECEP	R	1.08	20A1P	21 +	22				SPACE
SPACE				23	+24				SPACE
DATA RACK	R	0.36	20A1P	25 +	26				SPACE
DATA RACK	R	0.36	20A1P	27 +	28				SPACE
SPACE				29	+30				SPACE
DATA RACK	R	0.36	20A1P	31 +	32				SPACE
DATA RACK	R	0.36	20A1P	33 +	34				SPACE
SPACE				35	+36				SPACE
SPACE				37	+38				SPACE
DATA RACK	R	0.36	20A1P	39 +	40				SPACE
SPACE				41	+42				SPACE
LOAD KVA	LTG	REC	TOTAL						
CONNECTED	1.2	10.0	11.2						
NEC DEMAND	1.5	10.4	11.9						
AMPS			33						

\* PROVIDE COMMON HANDLE TIES FOR ALL CIRCUITS WITHIN THE FURNITURE SYSTEM.



1 EXISTING ELECTRICAL ONE-LINE DIAGRAM  
SCALE: NONE



2 GROUND BUS BAR DETAIL  
SCALE: NONE

LOVELAND TOC LUMINAIRE SCHEDULE											
IMAGE	KEY	LUMPS			DESCRIPTION	FINISH	MOUNTING	MANUFACTURER	CATALOG NUMBER	VOLTAGE	INPUT WATTS
		QTY	TYPE	TEMP							
	4RD2	2	F32W/T8	4100 K	2X4" RECESSED SQUARE CELL PARABOLIC WITH (2) BALLASTS FOR DUAL LEVEL SWITCHING	LOW IRRI DESCENT	RECESSED / GRID CEILING	COOPER LIGHTING - METALLIC	2P2GAX-332-5613H-LUM-EB82/PLUS	MVOLT	64
	6DZ2	1	CF 26W TIT	4100 K	6" DIA. RECESSED COMPACT FLUORESCENT DOWNLIGHT WITH STANDARD SWITCHING BALLAST	LOW IRRI DESCENT	RECESSED GRID CEILING	COOPER LIGHTING - PORTFOLIO	CG042-E-6001-U	MVOLT	26
	4SL	2	F32W/T8	4100 K	4'-0" PENDANT MOUNTED STRIP LIGHT WITH (2) LAMP CROSS SECTION	WHITE	PENDANT	COOPER LIGHTING - METALLIC	SS-232-LUM-EB81	MVOLT	64

**Belford Watkins Group Architects LLC**

**Owner**  
City of Loveland  
410 E. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2635  
Fax: 970.962.2922

**Client**  
Loveland Traffic Operations Center  
105 W. 5th Street  
Loveland, CO 80537  
Phone: 970.962.2638  
Fax: 970.962.2907

**Intelligent Transportation Systems**  
Apex Design PC  
910 16th Street Suite 1022  
Denver, CO 80202  
Phone: 303.339.0440

**Architect**  
Belford Watkins Group, LLC  
231 South Howes  
Fort Collins, CO 80521  
Phone: 970.407.0070

**Mechanical & Plumbing**  
AE Associates, Inc.  
5587 West 19th St.  
Greeley, CO 80634  
Phone: 970.330.5587  
Fax: 970.330.3040

**Electrical**  
Scanlon Szynskie Group Inc.  
3045 S. Parker Road  
Suite 225  
Aurora, CO 80014  
Phone: 303.696.2602  
Fax: 303.696.0812

**Scanlon Szynskie**

**City of Loveland Traffic Operations Center**  
105 West Fifth Street  
Loveland, Colorado

Issue	Date
100% Schematic Design	9-30-2010
30% Construction Doc	12-01-2010
60% Construction Doc	12-05-2010
95% FOR	12-16-2010
Final Bid Set	2-4-2011

Copyright © Belford Watkins Group Architects 2006  
This drawing may not be photocopied, scanned, traced or copied in any manner without the written permission of Belford Watkins Group Architects.

City Project Number: TS 0706  
BWG Project Number: 09-081  
Drawn By: ADC  
Reviewed By: KAT  
Approved By: SCS

**E3.0**  
ELECTRICAL ONE-LINE DIAGRAM AND SCHEDULES