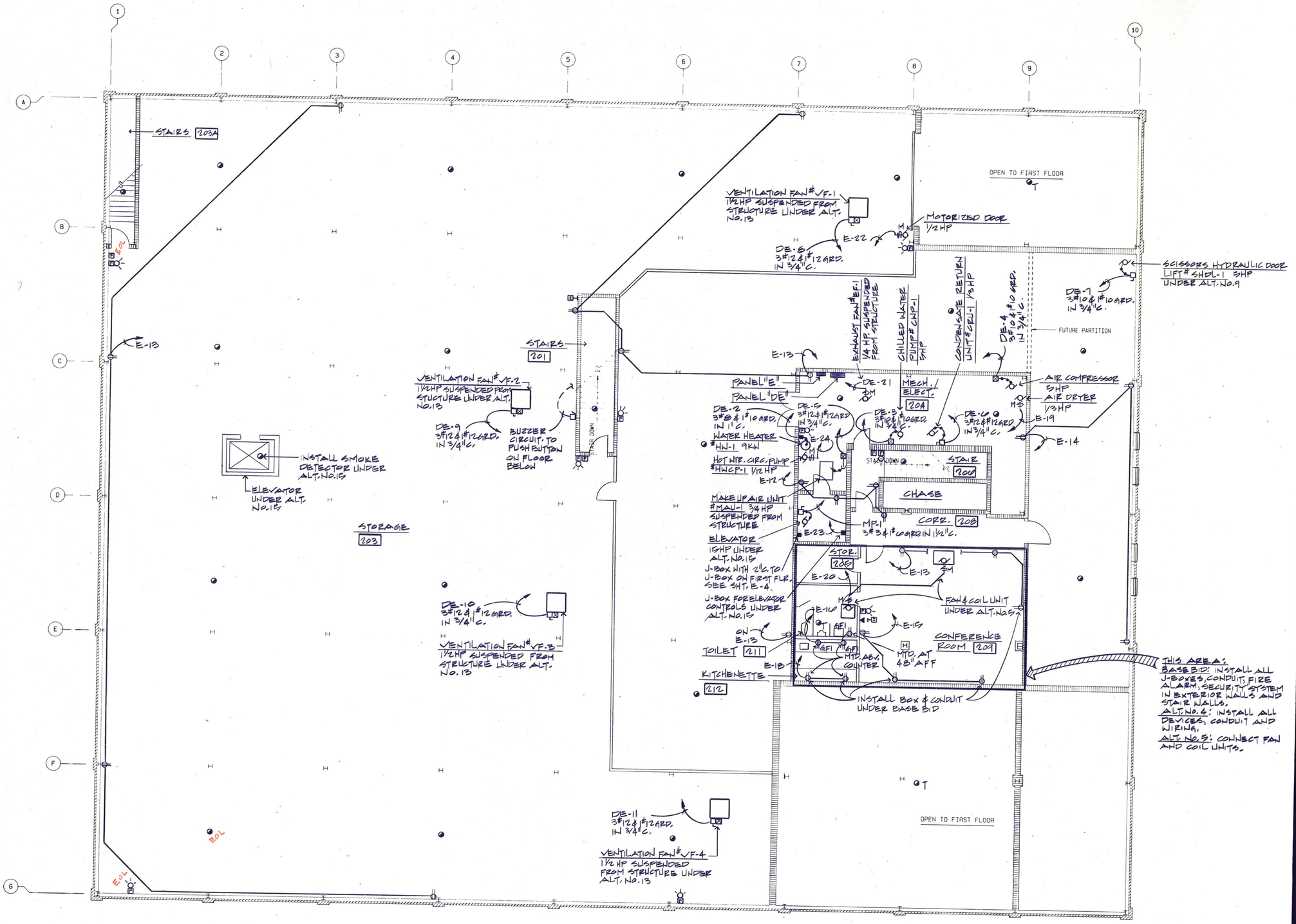


1 SECOND FLOOR PLAN

1/8" = 1'-0"

PLOTTED: MAY 3, 1989

Daugherty & Glover, Inc.
ARCHITECTS & ENGINEERS
1607 BROOK WICHITA FALLS, TEXAS 76301 (817) 322-3013

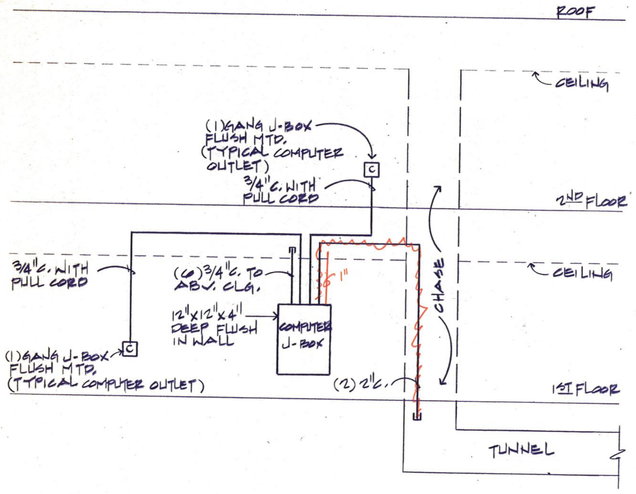
A New Maintenance Facility
DANIEL BUILDING
Midwestern State University
Wichita Falls, Texas

MSU MSU MSU

DRAWN	S.S.
CHECKED	J.C.
DATE	JULY 11, 1989
JOB NUMBER	8907

SHEET E-5 OF 9E VOLUME II

FRIBERG ASSOCIATES INC.
CONSULTING ENGINEERS
P.O. BOX 2080 • FORT WORTH, TEXAS 76113-2080
FAI PROJECT NO. 8904.00

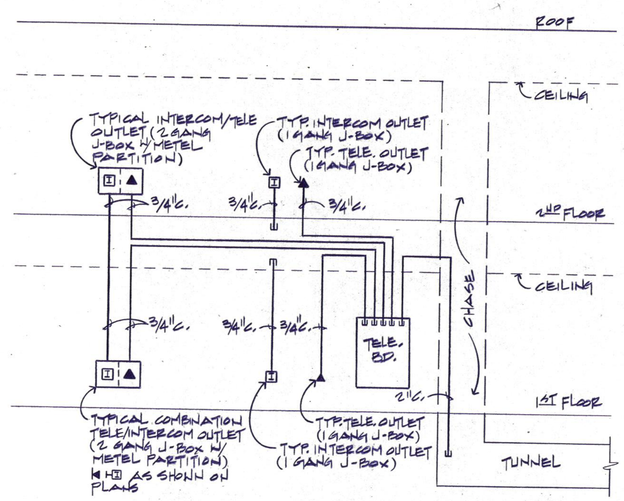


COMPUTER ROUGH-IN RISER

NOT TO SCALE

NOTES: 1. REFER TO FLOOR PLANS FOR QUANTITY OF OUTLETS

2. INSTALL BLANK COVER PLATE ON EACH OUTLET BOX



TELEPHONE / INTERCOM RISER DIAGRAM

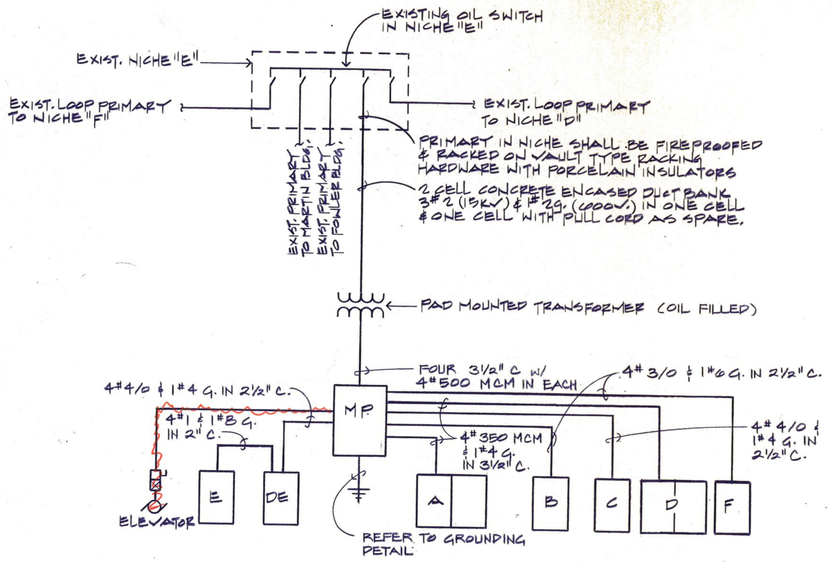
NOT TO SCALE

NOTES: 1. INTERCOM SYSTEM IS ROUGH-IN ONLY. DO NOT INSTALL COVER PLATE AT OUTLETS.

2. TELEPHONE - INSTALL OWNER FURNISHED TELEPHONE CABLE FROM EACH OUTLET TO TELE. BD. LEAVE 12" PIGTAIL @ EA. OUTLET. FINAL TERMINATIONS WILL BE BY OWNER. DO NOT INSTALL COVER PLATE AT OUTLETS. LEAVE LENGTH AS REQ'D BY OWNER AT TELEPHONE BOARD FOR TERMINATION.

3. INSTALL PULL CORD IN ALL ROUGH-IN RACEWAY'S.

4. REFER TO FLOOR PLANS FOR NUMBER OF OUTLETS.



ELECTRICAL SCHEMATIC DIAGRAM

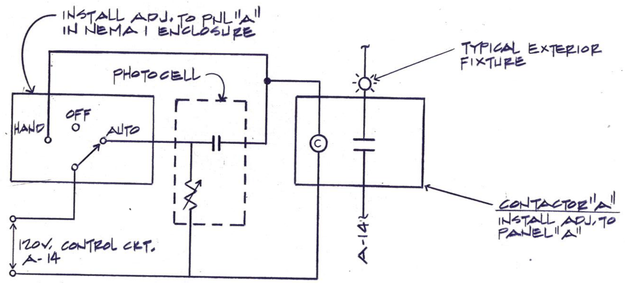
NOT TO SCALE

NOTE: FEEDERS SHALL BE ROUTED ABOVE CEILINGS, NOT BELOW FLOOR SLABS.

FAULT CONNECT

SHORT CIRCUIT ANALYSIS -- IBUS METHOD — 1000 MVA BASE
3 PHASE FAULT

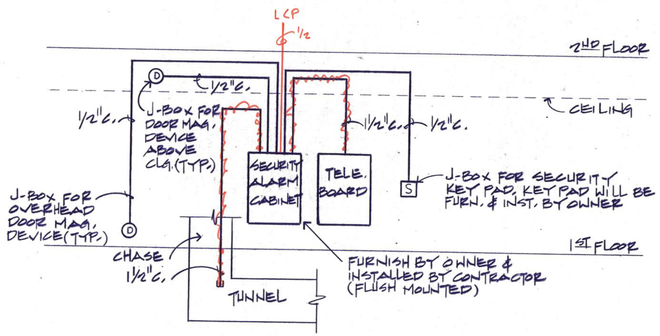
NODE	NAME	R-PU	X-PU	IASYM	ISYM
1	XFMR SEC	6.01991	36.79381	97678.46	74450.05
2	PANEL MP	20.53318	60.53962	48326.7	43420.21
3	PANEL A	29.27023	71.68855	38371.4	35760.86
4	PANEL B	39.13987	72.53574	34822.04	33677.02
5	PANEL C	168.4622	175.4157	11458.6	11412.95
6	PANEL D	79.94516	137.7123	17884.79	17431.57
7	PANEL F	245.6742	205.6926	8669.849	8662.919
8	PANEL DE	112.2492	131.7628	16100.13	16035.98
9	PANEL E	149.2314	144.9378	13369.51	13342.82



EXTERIOR LIGHTING CONTROL SCHEMATIC

NOT TO SCALE

NOTE: INSTALL PHOTOCELL ON ROOF (FACING NORTH).



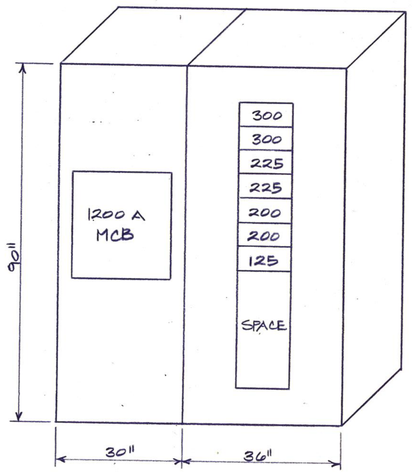
SECURITY ROUGH-IN RISER

NOT TO SCALE

NOTES: 1. MAGNETIC DEVICES AT DOORS & OVERHEAD DOORS WILL BE FURN. & INST. BY OWNER.

2. WIRING FOR SECURITY SYSTEM FURN & INSTALLED BY OWNER. CONTRACTOR TO INSTALL PULL CORD IN EACH CONDUIT.

3. REFER TO FLOOR PLANS FOR NUMBER OF DEVICES.



SWITCHBOARD ELEVATION

NOT TO SCALE

BRUNING 61182

FRIBERG ASSOCIATES INC.
CONSULTING ENGINEERS
P.O. BOX 2080 • FORT WORTH, TEXAS 76113-2080
FAI PROJECT NO. 89044.00

REGISTERED ARCHITECT STATE OF KANSAS

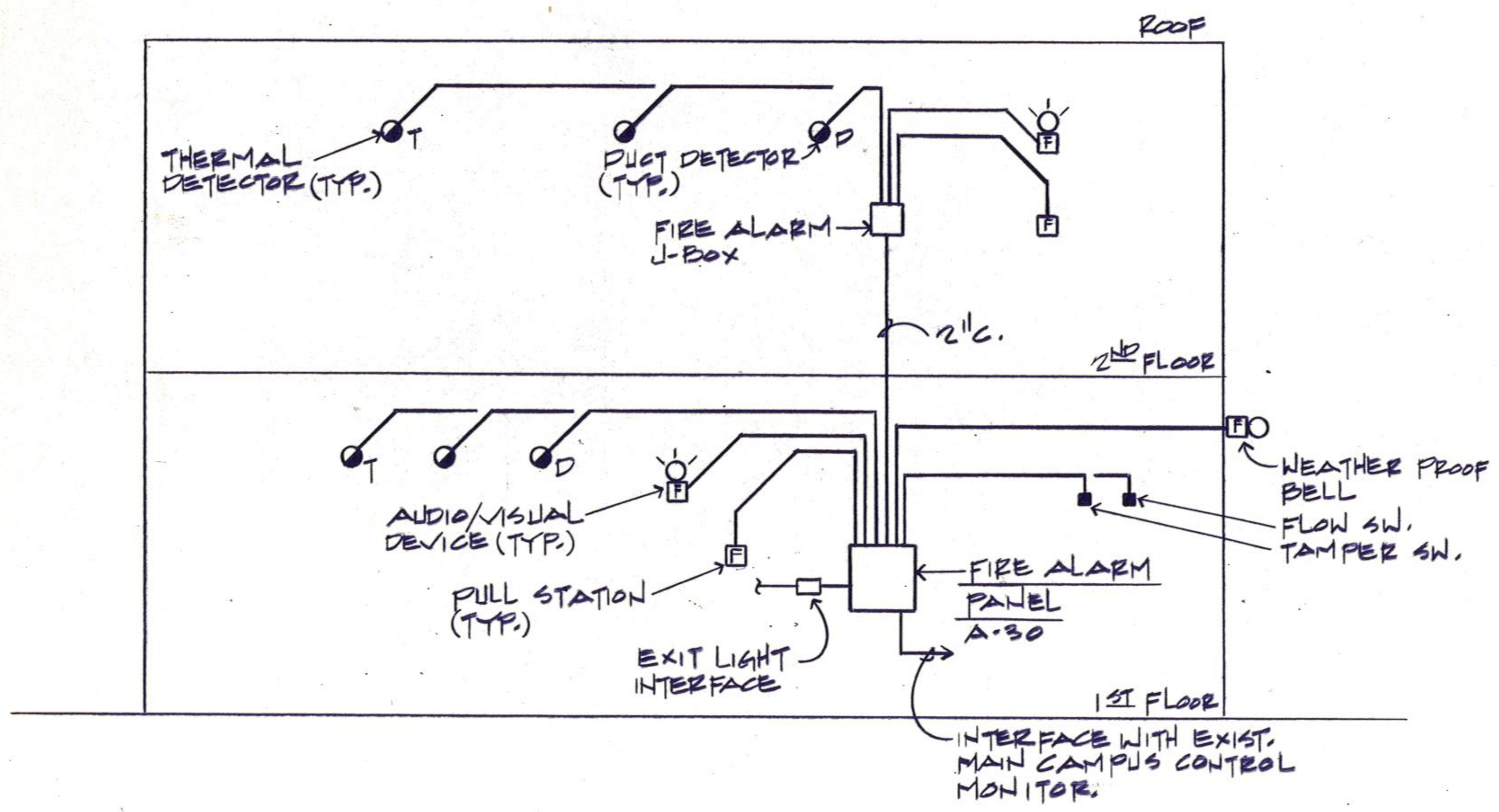
R. TIM YAGGI 5703 REGISTERED PROFESSIONAL ENGINEER 7-11-89

Daugherty & Glover, Inc. ARCHITECTS & ENGINEERS (817) 322-3013
1607 BROOK WICHITA FALLS, TEXAS 76301

A New Maintenance Facility
DANIEL BUILDING
Midwestern State University
Wichita Falls, Texas

DRAWN	S.A.
CHECKED	ERS
DATE	JULY 11, 1989
JOB NUMBER	8907

SHEET E-6 OF 9E VOLUME II



FIRE ALARM SCHEMATIC

NOT TO SCALE

NOTE: DEVICES ARE TYPICAL, REFER TO DWG'S. FOR QUANITY OF DEVICES.

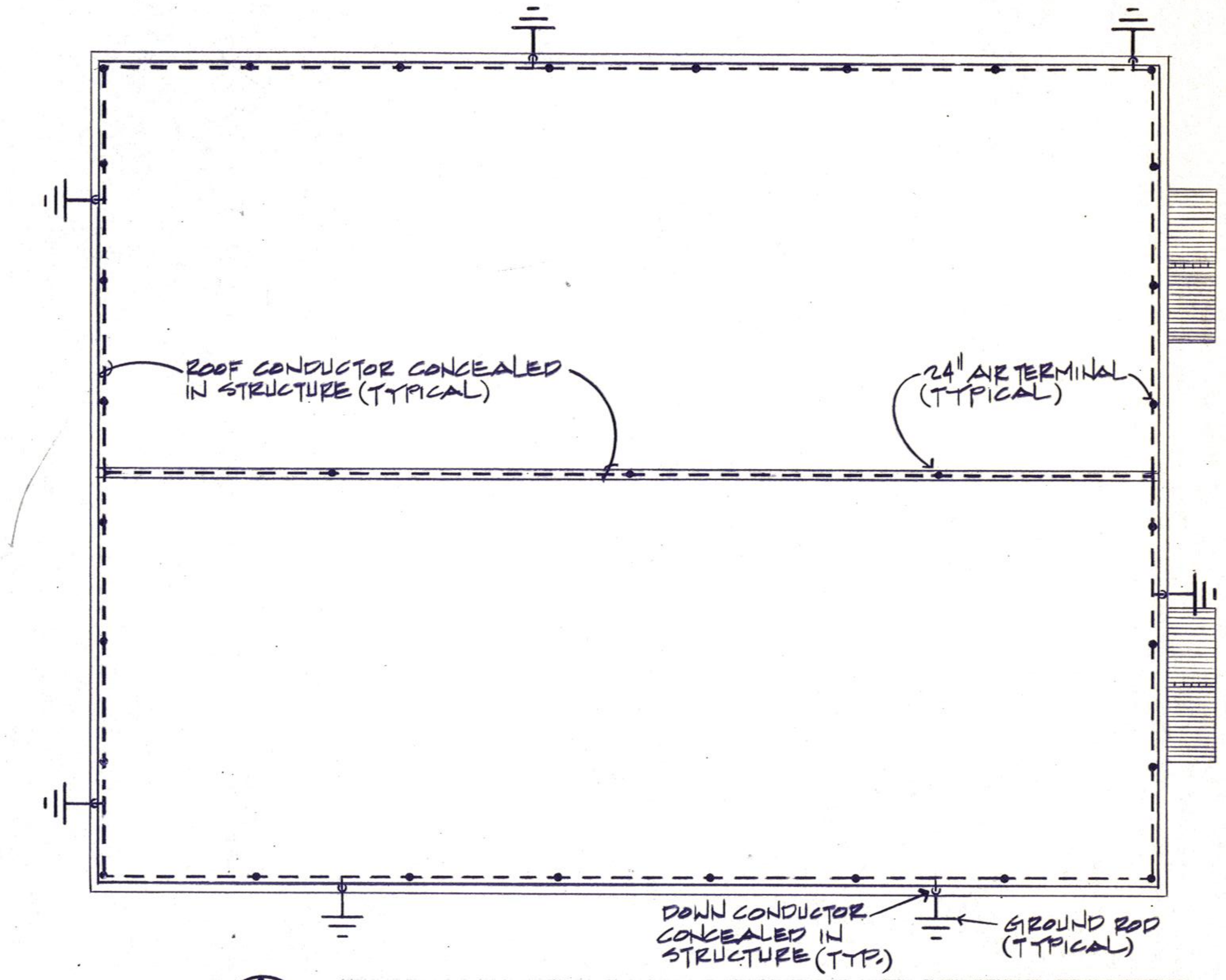
FIRE ALARM ZONE SCHEDULE

ZONE NUMBER	ZONE DESCRIPTION	DEVICE
1	FIRST FLOOR	MANUAL PULL STATIONS
2	FIRST FLOOR	AUTOMATIC DETECTORS
3	SECOND FLOOR	MANUAL PULL STATIONS
4	SECOND FLOOR	AUTOMATIC DETECTORS
5	SPRINKLER	FLOW SWITCH
6	SPRINKLER	TAMPER SWITCH
7	AIR HANDLING UNIT #AHU1	DUCT DETECTOR
8	AIR HANDLING UNIT #AHU2	DUCT DETECTOR
9	AIR HANDLING UNIT #AHU3	DUCT DETECTOR
10	VENTILATION FAN #VF-1	DUCT DETECTOR
11	VENTILATION FAN #VF-2	DUCT DETECTOR
12	VENTILATION FAN #VF-3	DUCT DETECTOR
13	VENTILATION FAN #VF-4	DUCT DETECTOR
14	MAKE-UP AIR UNIT #MAU-1	DUCT DETECTOR
15	SPARE	
16	SPARE	

NOTES:
1. INSTALL DUCT SMOKE DETECTORS FOR AIR HANDLING UNITS IN RETURN AIR PLENUM AT EACH UNIT
2. INSTALL DUCT SMOKE DETECTORS FOR VENT FANS IN DISCHARGE OUT OF BUILDING FOR EACH UNIT.
3. INSTALL DUCT SMOKE DETECTOR FOR MAKE-UP AIR UNIT IN RETURN TO UNIT.

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION
A	2 X 4 4-LAMP FLUORESCENT LAY-IN FIXTURE FURNISHED BY OWNER AND INSTALLED BY THIS CONTRACTOR.
B	RECESSED 2' X 4' FLUORESCENT TROFFER WITH FLUSH STEEL FRAME, A12.125 ACRYLIC LENS, 4-LAMP, 120 VOLT BALLAST, EMERGENCY LIGHTING SUITABLE FOR LAY-IN CEILINGS, WHITE FINISH; EQUAL TO LITHONIA 2GT440 SERIES.
C	RECESSED 2' X 4' FLUORESCENT TROFFER WITH FLUSH STEEL FRAME, A12.125 ACRYLIC LENS, 2-LAMP, 120 VOLT BALLAST, SUITABLE FOR LAY-IN CEILINGS, WHITE FINISH; EQUAL TO LITHONIA 2GT440 SERIES.
C1	SAME AS TYPE "B", EXCEPT WITH SELF-CONTAINED EMERGENCY LIGHTING.
D	SURFACE 4' FLUORESCENT LOW-BRIGHTNESS WRAPAROUND WITH FLAT BOTTOM ACRYLIC PRISMATIC DIFFUSER, CONTINUOUS INTERLOCKING DIFFUSER SUPPORT, 2-LAMP, 120 VOLT BALLAST, WHITE FINISH; EQUAL TO LITHONIA 2SC240 SERIES.
E	WALL MOUNTED 4' FLUORESCENT WITH A12.125 ACRYLIC DIFFUSER, 2-LAMP, 120 VOLT BALLAST, WHITE FINISH; EQUAL TO LITHONIA WS240 SERIES.
F	SURFACE 4' FLUORESCENT STRIP WITH 2-LAMP, 120 VOLT BALLAST, WIRE GUARD, WHITE FINISH; EQUAL TO LITHONIA C240 SERIES.
F1	SAME AS TYPE "G", EXCEPT WITH SELF-CONTAINED EMERGENCY LIGHTING.
G	SURFACE 8' FLUORESCENT GENERAL PURPOSE INDUSTRIAL WITH TWO (2) 96" H.O. LAMPS, NO UPLIGHT, HEAVY DUTY WIRE GUARD, 120 VOLT BALLAST; EQUAL TO LITHONIA EJ296HO SERIES.
G1	SAME AS TYPE "G", EXCEPT WITH SLIMLINE LAMPS.
H	WALL MOUNTED 150 WATT HIGH PRESSURE SODIUM Fixture FURNISHED BY OWNER INSTALLED BY THIS CONTRACTOR.
J	WALL OR STRUCTURE MOUNTED EMERGENCY FIXTURES, MAINTENANCE FREE LEAD-CALCIUM BATTERY, 6 VOLT OUTPUT, TWO (2) HEADS, 6 VOLT/12 WATT LAMPS EACH, 120/277 VOLT INPUT VOLTAGE, CHARGE INDICATION LIGHT, TEST BUTTON, ELAWG 4/8 WIRE GUARD; LITHONIA ELU-2C, OR APPROVED EQUAL.
K	SAME AS TYPE "D", EXCEPT FOUR (4) LAMP.
L	RECESSED ROUND LENSED HIGH PRESSURE SODIUM DOWNLIGHT WITH 9 INCH OPENING, CLEAR SEMI-SPECULAR ALZAK REFLECTOR, REGRESSED SATIN WHITE DOOR WITH WHITE TRIM AND FRESNEL LENS, ALUMINUM HOUSING WITH WHITE FINISH, ONE (1) 70 WATT LAMP, 120 VOLT BALLAST; EQUAL TO LITHONIA GOTHAM "L" SERIES
M	RECESSED FLUORESCENT DOWNLIGHT, CLEAR ALZAK REFLECTOR, 120 VOLT BALLAST, TWO (2) 13 WATT QUAD TUBE LAMPS; EQUAL TO LITHONIA LQ130T/R03A.
N	SURFACE MOUNTED 4-FOOT EXPLOSION PROOF FLUORESCENT FIXTURE WITH 2-LAMPS, 120 VOLT BALLAST; EQUAL TO RIG-A-LITE XP SERIES.
P	WALL MOUNTED HIGH PRESSURE SODIUM FIXTURE WITH ONE (1) 35 WATT LAMP, 120 VOLT BALLAST, DARK BRONZE FINISH, IMPACT RESISTANT REFRACTOR; EQUAL TO LITHONIA HI-TEK "TWL" SERIES.
Q	SURFACE MOUNTED 8'-0" WET LOCATION FLUORESCENT FIXTURE WITH LENS AND GASKET, 120 VOLT; EQUAL TO LITHONIA DD SERIES WITH TWO (2) H.O. LAMPS.
Q1	SAME AS TYPE "Q", EXCEPT WITH EMERGENCY LIGHTING.
EXIT	EQUAL TO LITHONIA SIGNATURE WITH INTEGRAL BATTERY OPERATED EMERGENCY POWER SUPPLY, INCLUDING POWER FAILURE RELAY, TEST SWITCH, AC ON PILOT LIGHT, BATTERY, AND FULL AUTOMATIC CHARGER, STENCIL FACE, 6 INCH HIGH RED LETTERS DIRECTIONAL ARROWS AS INDICATED, PROVIDE FLASHING EMERGENCY OPERATION TO OPERATE UPON ACTIVATION OF FIRE ALARM, 120 VOLT.



ROOF PLAN – LIGHTNING PROTECTION

SCALE: 1" – 20'-0"

NOTES:
1. INSTALL LIGHTNING PROTECTION SYSTEM IN ACCORDANCE WITH THE LIGHTNING PROTECTION INSTITUTE INSTALLATION CODE LPI-175.
2. THE CONTRACTOR SHALL PROCURE AND INSTALL U.L. MASTER LABELS A, B, AND C FOR MATERIALS AND INSTALLATION.
3. THE CONTRACTOR SHALL PROVIDE DETAIL SHOP DRAWINGS SHOWING THE LOCATION OF EACH ITEM OF LIGHTNING PROTECTION EQUIPMENT, CONDUCTORS AND FABRICATION METHODS AND MATERIALS. THE SUBMITTAL SHALL BE APPROVED BY UNDERWRITERS LABORATORIES.
4. SUBMIT COMPLETE INSTALLATION DWGS. TO ENGINEER FOR APPROVAL.

FRIBERG ASSOCIATES INC.
CONSULTING ENGINEERS
P.O. BOX 2080 • FORT WORTH, TEXAS 76113-2080
FAI PROJECT NO. 89044.00

Daugherity & Glover, Inc.
ARCHITECTS & ENGINEERS
1607 BROOK WICHITA FALLS, TEXAS 76301 (817) 322-3013

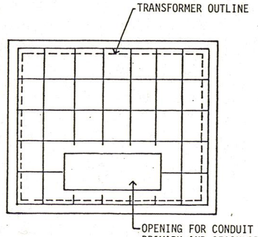
A New Maintenance Facility
DANIEL BUILDING
Midwestern State University
Wichita Falls, Texas

MSU MSU MSU

DRAWN S.S.
CHECKED J.C.
DATE JULY 11, 1989
JOB NUMBER 8907

SHEET E-7
OF 9E VOLUME II

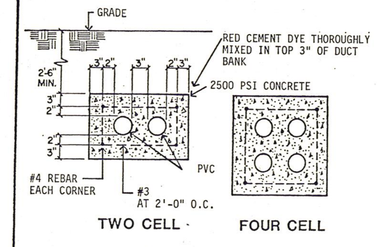
BRUNING 61182



NOTES:

1. CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI.
2. REBAR TO BE #3 DEFORMED PLACED ON 12" C-C EACH WAY.
3. PAD SHALL BE TROWEL FINISHED WITH CHAMFERED EDGES.
4. TOP OF FINISHED PAD SHALL BE 3" ABOVE GRADE. PAD SHALL BE 8" THICK.
5. ALLOW PAD TO CURE A MINIMUM 3 DAYS BEFORE SETTING TRANSFORMER.
6. FURNISH AND INSTALL A 3/4" x 10' DRIVEN COPPERWELD GROUND ROD LOCATED AS SHOWN.
7. TRANSFORMER PAD DETAILS ARE TYPICAL. PAD SHALL BE DIMENSIONED 6" LARGER THAN TRANSFORMER ALL AROUND.
8. PAD SHALL BE POURED ON 6" WET SAND CUSHION.

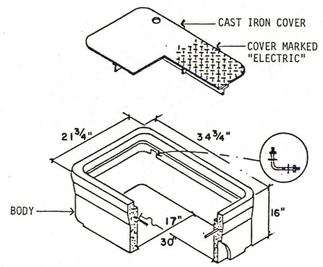
1 TRANSFORMER PAD



NOTES:

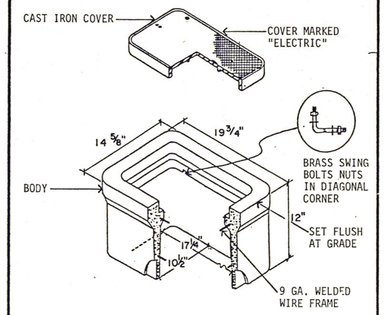
1. INSTALL PLASTIC BURIED LINE MARKER(S) FOR ENTIRE DUCT BANK.

2 DUCT BANK DETAIL



NOTE: SET ON 6" SAND CUSHION AT BASE.

3 OUTDOOR ELECTRICAL PULLBOX 17"X30"

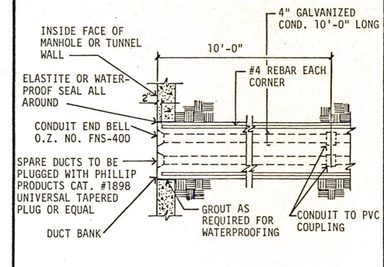


BROOKS PRODUCT #38T OR EQUAL

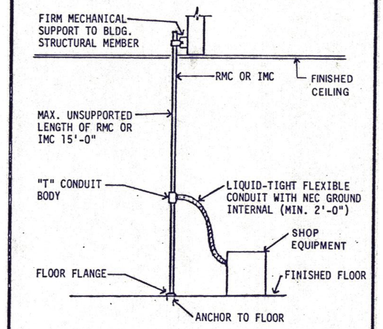
NOTES:

1. SET IN 6" SAND CUSHION AT BASE.
2. USE ONLY IN LANDSCAPED AREAS AND SIDEWALKS. NOT TO BE USED IN AREAS SUBJECT TO VEHICULAR TRAFFIC.

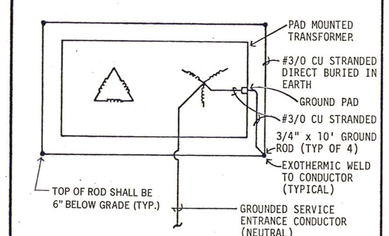
4 OUTDOOR ELECTRICAL PULLBOX 10"X17"



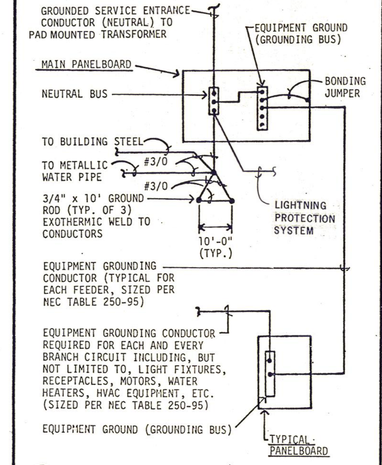
5 TYPICAL DUCT BANK ENTRANCE DETAIL



6 CONDUIT DROP FOR SHOP EQUIPMENT



7 PAD MOUNTED TRANSFORMER GROUND



8 GROUNDING SCHEMATIC

Daugherty & Glover, Inc.
ARCHITECTS & ENGINEERS
1607 BROOK WICHITA FALLS, TEXAS 76301 (817) 322-3013

A New Maintenance Facility
DANIEL BUILDING
Midwestern State University
Wichita Falls, Texas

MSU MSU

DRAWN JCC
CHECKED JMC
DATE JULY 11, 1989
JOB NUMBER 8907

SHEET E-8
OF 9E VOLUME II

FRIBERG ASSOCIATES INC.
CONSULTING ENGINEERS
P.O. BOX 2080 • FORT WORTH, TEXAS 76113-2080
FAI PROJECT NO. 89044.00

BRUNING 61182

SWITCHBOARD MP

CIRCUIT BREAKER TYPE
VOLTAGE: 208 / 120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
BUS: 1200 AMP
MAIN: 3P-1200A MCB
AIC: 65,000

CIRCUIT NUMBER	DESCRIPTION	LOAD (KVA)	DEVICE POLE	DEVICE AMPS
1	PANEL A	89	3	300
2	PANEL B	53	3	200
3	PANEL C	76	3	225
4	PANEL D	107	3	400
5	DISTR PANEL DE	68	3	225
6	PANEL F	56	3	200
7	ELEVATOR	17	3	125
8	SPACE		3	225
9	SPACE		3	225

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	47	59
Heating	11	14
Motor	121	125
Recept	34	22
Misc.	196	59
Spare	57	57
TOTAL	465	335

CONN. LOAD AMPS: 1291
DEMAND LOAD AMPS: 930
PERCENT SPARE: 12

DISTRIB. PANEL DE

CIRCUIT BREAKER TYPE
VOLTAGE: 208 / 120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
BUS: 225 AMP
MAIN: MLO
AIC: 22,000

CIRCUIT NUMBER	DESCRIPTION	LOAD (KVA)	DEVICE POLE	DEVICE AMPS
1	PANEL E	31	3	100
2	WTR HTR WH-1	9	3	40
3	CWP-1	6	3	30
4	AIR COMPRESSOR	6	3	30
5	MAU-1	1	3	15
6	CRU-1	1	3	15
7	SHDL-1	6	3	30
8	VF-1	2	3	15
9	VF-2	2	3	15
10	VF-3	2	3	15
11	VF-4	2	3	15
12	SPACE		3	30
13	SPACE		3	30
14	SPACE		3	30
15	SPACE		3	30

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	12	16
Heating	9	11
Motor	31	32
Recept	6	6
Misc.	1	1
Spare	9	9
TOTAL	68	75

CONN. LOAD AMPS: 189
DEMAND LOAD AMPS: 208
PERCENT SPARE: 13

PANEL A — SECTION 1 OF 2

VOLTAGE: 208 /120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 42,000
BUS: 400 AMP
MAIN: MLO

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
LIGHTING	1.5	1	20	1	2	1	20	1.4	LIGHTING
LIGHTING	1.4	1	20	3	4	1	20	1.6	LIGHTING
LIGHTING	1.2	1	20	5	6	1	20	1.0	LIGHTING
LIGHTING	1.2	1	20	7	8	1	20	1.6	LIGHTING
LIGHTING	1.2	1	20	9	10	1	20	1.6	LIGHTING
LIGHTING	1.6	1	20	11	12	1	20	1.6	LIGHTING
LIGHTING	1.6	1	20	13	14	1	20	1.8	OUTSIDE LTG
LIGHTING	1.5	1	20	15	16	1	20	1.0	LIGHTING
LIGHTING	1.3	1	20	17	18	1	20	1.4	LIGHTING
LIGHTING	0.9	1	20	19	20	1	20	1.2	LIGHTING
LIGHTING	1.3	1	20	21	22	1	20	1.2	LIGHTING
LIGHTING	1.3	1	20	23	24	1	20	1.4	LIGHTING
LIGHTING	1.1	1	20	25	26	1	20	0.8	LIGHTING
RECPTACLES	1.3	1	20	27	28	1	20	1.2	RECEPTACLE
RECPTACLES	0.9	1	20	29	30	1	20	1.0	F/A PANEL
RECPTACLES	0.7	1	20	31	32	1	20	1.0	SECURITY PNL
RECPTACLES	0.6	1	20	33	34	1	20	0.6	RECEPTACLES
RECPTACLES	0.4	1	20	35	36	1	20	0.4	RECEPTACLES
RECPTACLES	0.7	1	20	37	38	1	20	0.9	RECEPTACLES
F&C UNITS	0.2	1	20	39	40	1	20	0.4	RECEPTACLES
DOOR	1.2	1	20	41	42	1	20	1.0	TELEPHONE BD

PANEL A — SECTION 2 OF 2

VOLTAGE: 208 /120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 42,000
BUS: 400 AMP
MAIN: MLO

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
DOOR	1.2	1	20	43	44	3	30	8.6	ICE MACHINE
DOOR	0.9	1	20	45	46				
DOOR	0.9	1	20	47	48				
RECEPTCLES	0.7	1	20	49	50	1	20	0.7	RECEPTACLES
RECEPTCLES	0.7	1	20	51	52	1	20	0.7	RECEPTACLES
RECEPTCLES	0.7	1	20	53	54	1	20	0.6	RECEPTACLES
RECEPTCLES	0.6	1	20	55	56	1	20	0.7	RECEPTACLES
RECEPTCLES	0.4	1	20	57	58	1	20	0.9	RECEPTACLES
RECEPTCLES	0.6	1	20	59	60	1	20	0.7	RECEPTACLES
RECEPTCLES	0.4	1	20	61	62	1	20	0.6	RECEPTACLES
RECEPTCLES	0.6	1	20	63	64	1	20	1.0	RECEPTACLES
RECEPTCLES	0.4	1	20	65	66	1	20	1.2	EWC'S
RECEPTCLES	0.6	1	20	67	68	1	20	0.7	RECEPTACLES
F&C UNITS	1.4	1	20	69	70	1	20	0.9	RECEPTACLES
RECEPTCLES	1.4	1	20	71	72	1	20	0.7	RECEPTACLES
RECEPTCLES	0.6	1	20	73	74	1	20	0.6	RECEPTACLES
RECEPTCLES	0.6	1	20	75	76	1	20	0.6	RECEPTACLES
RECEPTCLES	0.6	1	20	77	78	1	20	0.4	RECEPTACLES
SPARE	1.5	1	20	79	80	1	20	1.5	SPARE
SPARE	1.5	1	20	81	82	1	20	1.5	SPARE
SPARE	1.5	1	20	83	84	1	20	1.5	SPARE

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	34.7	43.4
Heating	0.0	0.0
Motor	7.0	7.3
Recept	24.6	17.3
Misc.	13.8	13.8
Spare	9.0	9.0
TOTAL	89.1	90.8

CONN. LOAD AMPS: 247
DEMAND LOAD AMPS: 252
PERCENT SPARE: 10

PANEL B — SECTION 1 OF 1

VOLTAGE: 208 / 120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 42,000
BUS: 225 AMP
MAIN: MLO

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
DISCONNECT	8.6	3	30	1	2	3	15	1.1	AIR HANDLING
SWITCH				3	4				UNIT #AHU2
				5	6				
RECEPTACLE	4.9	2	30	7	8	3	15	1.2	AIR HANDLING
				9	10				UNIT #AHU3
EWC'S	1.2	1	20	11	12				
F&C UNITS	0.9	1	20	13	14	1	20	0.3	RECEPTACLES
EWC'S	1.2	1	20	15	16	1	20	0.7	RECEPTACLES
AIR HANDLING	3.9	3	20	17	18	1	20	0.9	RECEPTACLES
UNIT #AHU1				19	20	1	20	0.3	RECEPTACLES
				21	22	1	20	1.3	ELECT HTR
LIFT	17.3	3	70	23	24	1	20	0.5	HEAT TAPE
				25	26	1	20		SPACE
				27	28	1	20		SPACE
SPACE		1	20	29	30	1	20		SPACE
SPACE		1	20	31	32	1	20		SPACE
SPACE		1	20	33	34	1	20		SPACE
SPACE		1	20	35	36	1	20		SPACE
SPARE	1.5	1	20	37	38	1	20	1.5	SPARE
SPARE	1.5	1	20	39	40	1	20	1.5	SPARE
SPARE	1.5	1	20	41	42	1	20	1.5	SPARE

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	0.0	0.0
Heating	1.8	2.3
Motor	26.8	31.1
Recept	2.2	2.2
Misc.	13.5	13.5
Spare	9.0	9.0
TOTAL	53.3	58.1

CONN. LOAD AMPS: 148
DEMAND LOAD AMPS: 161
PERCENT SPARE: 17

PANEL C — SECTION 1 OF 1

VOLTAGE: 208 / 120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 22,000
BUS: 225 AMP
MAIN: 3P-225A MCB SHUNT TRIP

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
RECEPTACLES	0.4	1	20	1	2	1	20	0.6	THREADER
RECEPTACLES	0.4	1	20	3	4	2	100	12.4	MILLER
RECEPTACLES	0.4	1	20	5	6				WELDER
DOOR	0.9	1	20	7	8	2	100	12.4	MILLER
RECEPTACLE	0.5	1	20	9	10				WELDER
GRINDER	1.5	3	20	11	12	3	30	6.3	BALDOR
				13	14				GRINDER
				15	16				
DRILL PRESS	2.7	3	20	17	18	3	40	9.4	CUT OFF
				19	20				SAW
				21	22				
BAND SAW	1.5	3	20	23	24	2	150	15.0	SPOT WELDER
				25	26				
				27	28	3	20	1.4	HOIST
EF3	1.2	1	20	29	30				
SPACE		1	20	31	32				
SPACE		1	20	33	34	1	20		SPACE
SPACE		1	20	35	36	1	20		SPACE
SPARE	1.5	1	20	37	38	1	20	1.5	SPARE
SPARE	1.5	1	20	39	40	1	20	1.5	SPARE
SPARE	1.5	1	20	41	42	1	20	1.5	SPARE

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	0.5	0.6
Heating	0.0	0.0
Motor	3.5	3.9
Recept	1.2	1.2
Misc.	61.8	30.9
Spare	9.0	9.0
TOTAL	76.0	45.6

CONN. LOAD AMPS: 211
DEMAND LOAD AMPS: 127
PERCENT SPARE: 12

PANEL D — SECTION 1 OF 2

VOLTAGE: 208 /120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 22,000
BUS: 400 AMP
MAIN: 3P-300A MCB SHUNT TRIP

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
RADIAL ARM	2.3	2	20	1	2	3	20	4.5	TABLE SAW
SAW				3	4				
MITRE SAW	2.7	1	30	5	6				
DOOR	0.9	1	20	7	8	3	100	20.7	TIME SAVER
JOINTER	2.3	2	20	9	10				SANDER
				11	12				
PLANER	4.7	3	30	13	14	2	20	2.7	SHAPER
				15	16				
				17	18	3	15	2.2	BELT SANDER
BAND SAW	1.2	1	20	19	20				
BORING	4.5	3	20	21	22				
MACHINE				23	24	3	15	2.2	DISC SANDER
				25	26				
MOULDING	11.5	3	50	27	28				
MACHINE				29	30	1	20	1.2	FLOOR DRILL
				31	32	1	20	1.0	DRILL PRESS
BELT SANDER	1.2	1	20	33	34	3	15	1.0	GRINDER
TABLE SAW	2.3	2	20	35	36				
				37	38				
RECEPTACLE	1.0	1	20	39	40	1	20	1.2	RECEPTACLE
RECEPTACLES	1.2	1	20	41	42	1	20	1.2	RECEPTACLE

PANEL D — SECTION 2 OF 2

VOLTAGE: 208 /120
PHASE: 3 WIRE: 4
MOUNTED: SURFACE
AIC: 22,000
BUS: 400 AMP
MAIN: MLO

DESCRIPTION	LOAD (KVA)	BREAKER POLE	BREAKER AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	BREAKER POLE	BREAKER AMPS	LOAD (KVA)	DESCRIPTION
MILL EXHAUST	8.6	3	40	43	44	1	20	0.5	MILL EXHAUST
				45	46	1	20		SPACE
				47	48	1	20		SPACE
RECEPTACLE	1.2	1	20	49	50	1	20.	1.2	RECEPTACLE
RECEPTACLE	1.2	1	20	51	52	1	20	1.2	RECEPTACLE
RECEPTACLE	1.2	1	20	53	54	1	20	1.2	RECEPTACLE
RECEPTACLE	1.2	1	20	55	56	1	20	1.2	RECEPTACLE
RECEPTACLE	1.2	1	20	57	58	1	20	1.2	RECEPTACLE
SPACE		1	20	59	60	1	20		SPACE
SPACE		1	20	61	62	1	20		SPACE
SPACE		1	20	63	64	1	20		SPACE
SPACE		1	20	65	66	1	20		SPACE
SPACE		1	20	67	68	1	20		SPACE
SPACE		1	20	69	70	1	20		SPACE
SPACE		1	20	71	72	1	20		SPACE
SPACE		1	20	73	74	1	20		SPACE
SPACE		1	20	75	76	1	20		SPACE
SPARE	1.5	1	20	77	78	1	20	1.5	SPARE
SPARE	1.5	1	20	79	80	1	20	1.5	SPARE
SPARE	1.5	1	20	81	82	1	20	1.5	SPARE
SPARE	1.5	1	20	83	84	1	20	1.5	SPARE

	CONNECTED LOAD (KVA)	DEMAND LOAD (KVA)
Lights	0.0	0.0
Heating	0.0	0.0
Motor	10.0	12.2
Recept	0.0	0.0
Misc.	84.8	42.4
Spare	12.0	12.0
TOTAL	106.8	66.6

CONN. LOAD AMPS: 296
DEMAND LOAD AMPS: 185
PERCENT SPARE: 11

PANEL E — SECTION 1 OF 1

VOLTAGE: 208 / 120
MOUNTED: SURFACE
BUS: 225 AMP
MAIN: MLO

PANEL F — SECTION 1 OF 1

VOLTAGE: 208 / 120
MOUNTED: SURFACE
BUS: 225 AMP

Daugherity & Glover, inc.
ARCHITECTS & ENGINEERS
1607 BROOK WICHITA FALLS, TEXAS 76301 (817) 322-3013

...intenance Facility
...EL BUILDING
...n State University
...lls, Texas