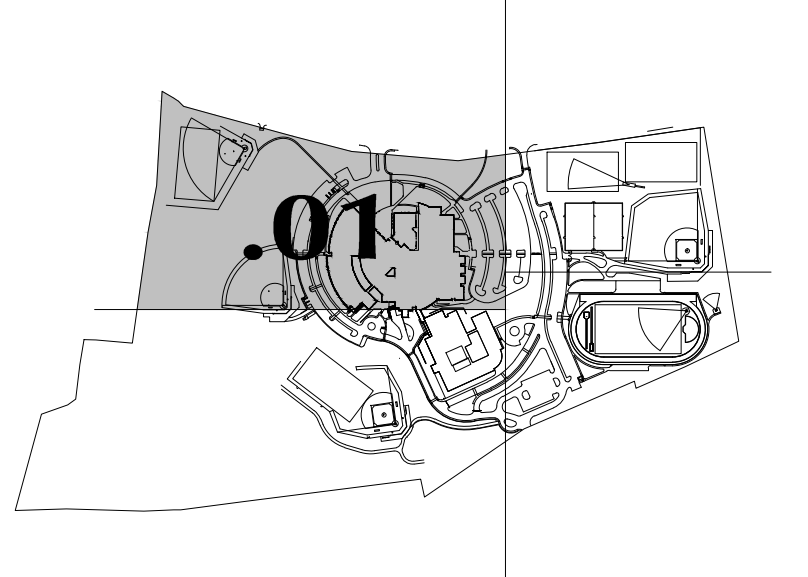


3. ALL SITE LIGHTING CONDUIT AND FIXTURE BASES SHALL BE PROVIDED AS PART OF PHASE 1 OF THIS PROJECT, EXCEPT AS NOTED.
4. ALL SITE LIGHTING CONDUITS SHALL BE 1 1/2" PVC, SEE GENERAL NOTE #8 FOR ADDITIONAL INFORMATION.
5. ROUTE PRIMARY ELECTRIC SERVICE DUCTBANK AND TEL./CATV CONDUITS IN COMMON TRENCH FROM UTILITY POLES TO BUILDING. MAINTAIN MINIMUM OF 12" SPACING BETWEEN PRIMARY ELECTRIC SERVICE DUCTBANK AND TEL./CATV CONDUITS.
6. REFER TO PRIMARY ELECTRIC SERVICE MANHOLE DETAIL ON DRAWING #SU1.06 FOR ADDITIONAL INFORMATION.
7. PROVIDE TWO 4" SCH 40 PVC CONDUITS BETWEEN TRANSFORMER PAD FOR NEW HIGH SCHOOL AND TRANSFORMER PAD FOR RENOVATED MIDDLE SCHOOL.
8. EXTEND ONE 4" PRIMARY ELECTRIC SERVICE CONDUIT EACH, TO EXISTING UTILITY POLE #567 AND NEW UTILITY POLE #567A.
9. EXTEND TWO 4" TELCOM SERVICE CONDUITS TO EXISTING UTILITY POLE #567 AND ONE 4" TELCOM SERVICE CONDUIT TO NEW UTILITY POLE #567A.

- GENERAL NOTES:**
1. PRIOR TO ANY EXCAVATION, CALL 1-800-922-4455 "CALL BEFORE YOU DIG" TO NOTIFY AFFECTED UTILITIES.
  2. EXCAVATION OF TRENCHES AND BACKFILLING ARE PROVIDED UNDER DIV. 2.
  3. ALL CONCRETE PADS ARE PROVIDED UNDER DIV. 3.
  4. MAINTAIN MINIMUM 30" BELOW GRADE TO TOP OF ALL DUCTBANKS OR CONDUIT RUNS.
  5. SEAL ALL CONDUITS AT WALL OR FLOOR PENETRATIONS.
  6. CONTACT CONNECTICUT LIGHT & POWER, 1-800-286-5000 FOR ADDITIONAL ELECTRIC SERVICE INFORMATION. PRIMARY CABLES FROM FACILITIES ON WALL STREET TO PAD MOUNT TRANSFORMER BY UTILITY CO.
  7. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ENGINEER. DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
  8. PROVIDE SITE ELECTRICAL CONDUITS AS FOLLOWS:  
GENERAL USE, SCH. 40 PVC, DIRECT BURIED.  
GENERAL USE, SCH. 80 PVC, DIRECT BURIED UNDER PAVED AREAS.  
TYPE "EB" IN DUCTBANK ENCASUREMENT.
  9. PROVIDE PULL WIRE FOR ALL CONDUIT RUNS.



REVISIONS		
DATE	MARK	DESCRIPTION
12/12/00		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE 1
02/28/01		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 821-4329 FAX (860) 821-5620  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

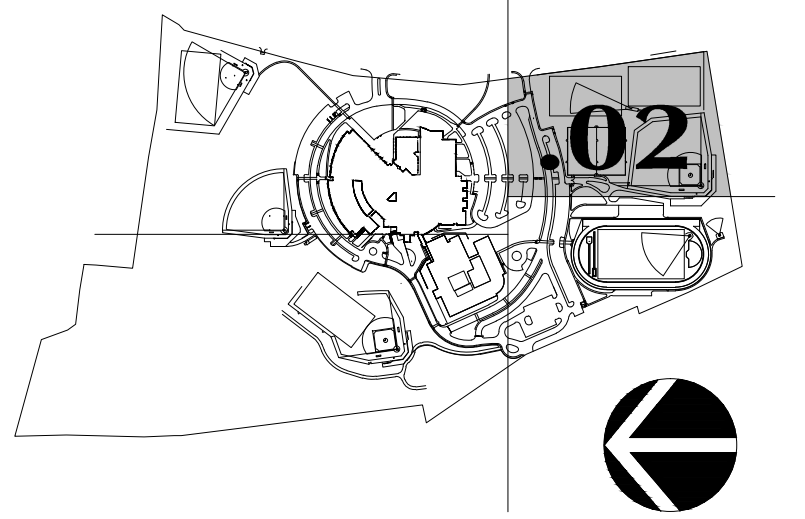
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: EMD/BPCW  
CHECKED BY: RLG/RGB

**MECHANICAL ELECTRICAL SITE UTILITIES PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.01**



REVISIONS		
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**NEW RHAM HIGH SCHOOL**  
**WALL STREET**  
**HEBRON, CONNECTICUT**  
**06248**

STATE PROJECT#: 208-018N  
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VANZELM HEYWOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
 23 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL (860) 521-4339 FAX (860) 521-8492  
 vZHS PROJECT NUMBER: 2000155.00



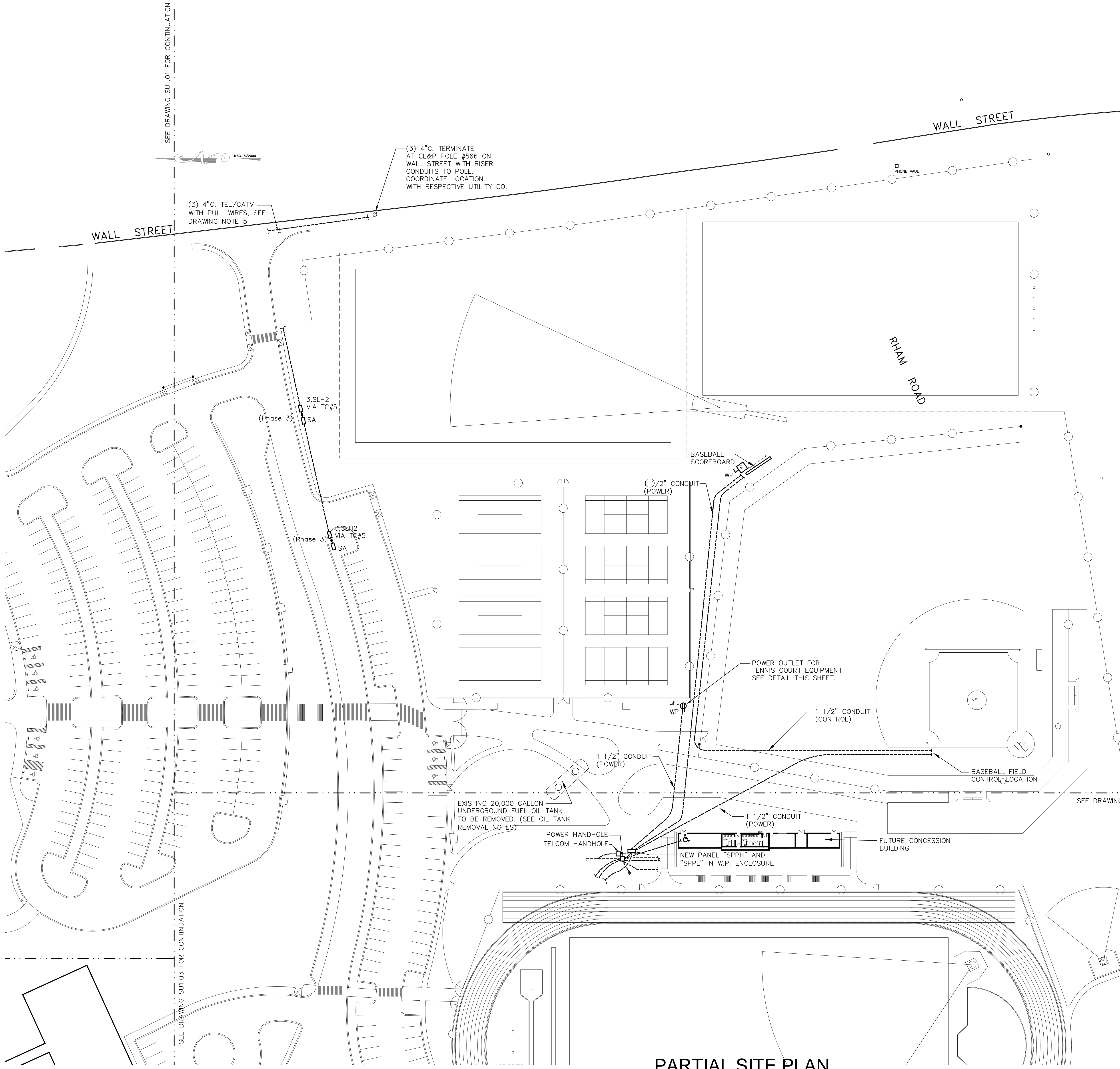
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
 DRAWN BY: EMD/BPCW SCALE: 1" = 40'-0"  
 CHECKED BY: RLG/RGB

**MECHANICAL ELECTRICAL SITE UTILITIES PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.02**



**OIL TANK REMOVAL NOTES:**

- RECOVER ALL FUEL OIL FROM EXISTING OIL TANKS BEING REMOVED. DISPOSE OF OIL IN ACCORDANCE WITH CURRENT DEP REGULATIONS.
- EXISTING OIL TANKS SHALL BE CLEANED PRIOR TO DISPOSAL. DISPOSE OF OIL TANKS IN ACCORDANCE WITH CURRENT DEP REGULATIONS.

**PROVIDE UNIT COSTS FOR THE FOLLOWING:**

- REMOVAL OF CONTAMINATED SOIL: COST PER CU.YD.
- PROPER DISPOSAL OF CONTAMINATED SOIL TO AN APPROVED DUMP SITE: COST PER CU.YD. PER MILE
- REPLACEMENT OF CONTAMINATED SOIL WITH NEW TOP SOIL: COST PER CU.YD.

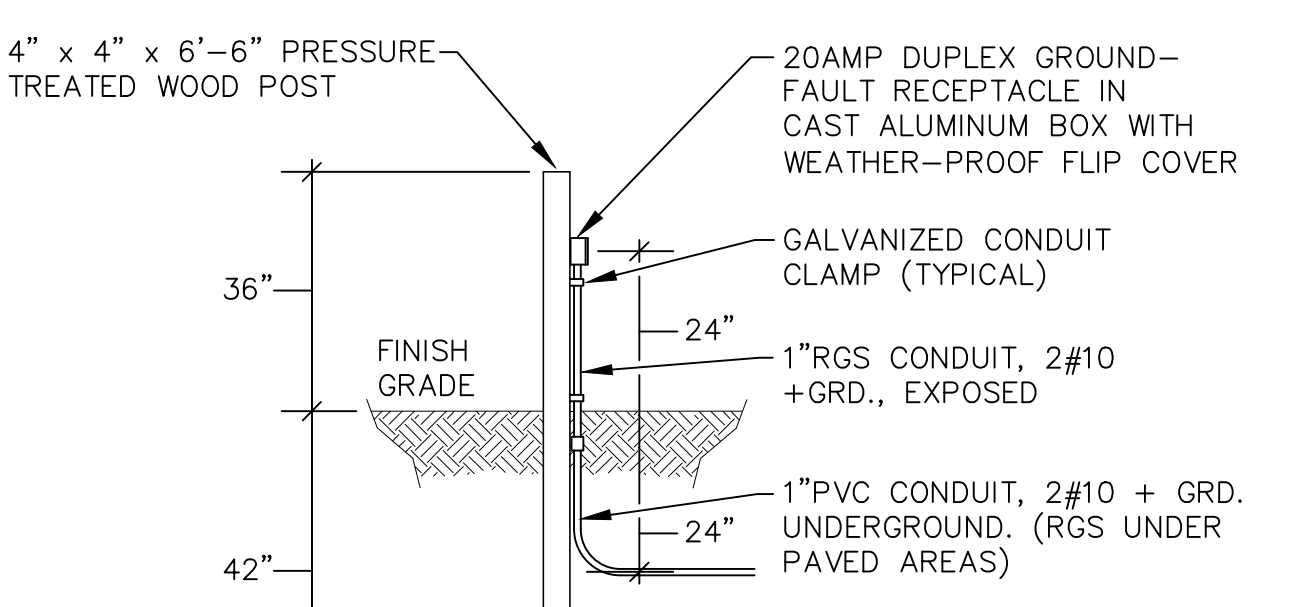
- REMOVE EXISTING 275 GALLON ABOVE GROUND FUEL OIL TANKS LOCATED IN EXISTING STRUCTURES THAT ARE TO BE REMOVED. TANKS SHALL BE COMPLETELY DRAINED AND REMOVED BY A LICENSED AND CERTIFIED OIL REMOVAL COMPANY. THOROUGHLY CLEAN INSIDE OF TANKS AND PROVIDE ADEQUATELY SIZED INSPECTION OPENING AT ONE END OF TANK. OIL AND TANK DISPOSAL SHALL BE IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND FEDERAL CODES AND LOCAL DEPARTMENT OF ENVIRONMENTAL PROTECTION AGENCY.

**DRAWING NOTES:**

- REFER TO DRAWING E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- REFER TO DRAWINGS SU1.05 AND SU1.06 FOR ELECTRICAL SITE DETAILS.
- ALL SITE LIGHTING CONDUIT AND FIXTURE BASES SHALL BE PROVIDED AS PART OF PHASE 1 OF THIS PROJECT, EXCEPT AS NOTED.
- ALL SITE LIGHTING CONDUITS SHALL BE 1 1/2" PVC, SEE GENERAL NOTE #8 FOR ADDITIONAL INFORMATION.
- ROUTE PRIMARY ELECTRIC SERVICE DUCTBANK AND TEL./CATV CONDUITS IN COMMON TRENCH FROM UTILITY POLES TO BUILDING. MAINTAIN MINIMUM OF 12" SPACING BETWEEN PRIMARY ELECTRIC SERVICE DUCTBANK AND TEL./CATV CONDUITS.

**GENERAL NOTES:**

- PRIOR TO ANY EXCAVATION, CALL 1-800-922-4455 "CALL BEFORE YOU DIG" TO NOTIFY AFFECTED UTILITIES.
- EXCAVATION OF TRENCHES AND BACKFILLING ARE PROVIDED UNDER DIV. 2.
- ALL CONCRETE PADS ARE PROVIDED UNDER DIV. 3.
- MAINTAIN MINIMUM 30" BELOW GRADE TO TOP OF ALL DUCTBANKS OR CONDUIT RUNS.
- SEAL ALL CONDUITS AT WALL OR FLOOR PENETRATIONS.
- CONTACT CONNECTICUT LIGHT & POWER, 1-800-286-5000 FOR ADDITIONAL ELECTRIC SERVICE INFORMATION. PRIMARY CABLES FROM FACILITIES ON WALL STREET TO PAD MOUNT TRANSFORMER BY UTILITY CO.
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- PROVIDE SITE ELECTRICAL CONDUITS AS FOLLOWS:  
 GENERAL USE, SCH. 40 PVC, DIRECT BURIED.  
 GENERAL USE, SCH. 80 PVC, DIRECT BURIED UNDER PAVED AREAS. TYPE "EB" IN DUCTBANK ENCASEMENT.
- PROVIDE PULL WIRE FOR ALL CONDUIT RUNS.



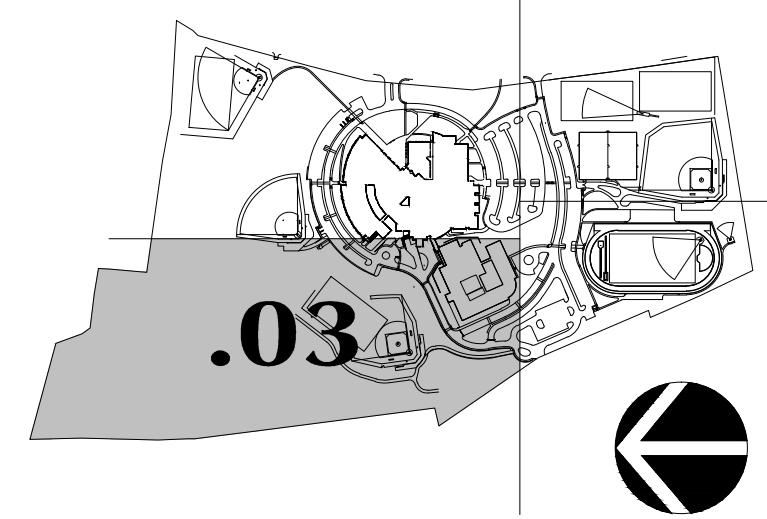
**FIELD POWER OUTLET**  
**DETAIL**  
 NO SCALE

**PARTIAL SITE PLAN**  
 SCALE: 1" = 40'-0"

SEE DRAWING SU1.01 FOR CONTINUATION

SEE DRAWING SU1.03 FOR CONTINUATION

SEE DRAWING SU1.04 FOR CONTINUATION



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**NEW RHAM  
HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VAN ZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4326 FAX (860) 521-2620  
VZHS PROJECT NUMBER: 2000155.00

**KAESTLE BOOS  
ASSOCIATES, INC.**  
ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2550 (860) 229-0361  
DRAWN BY: EMD/BPC/W  
CHECKED BY: RLG/RCB  
SCALE: 1" = 40'-0"

**MECHANICAL  
ELECTRICAL  
SITE UTILITIES  
PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.03**



SEE DRAWING SU1.01 FOR CONTINUATION

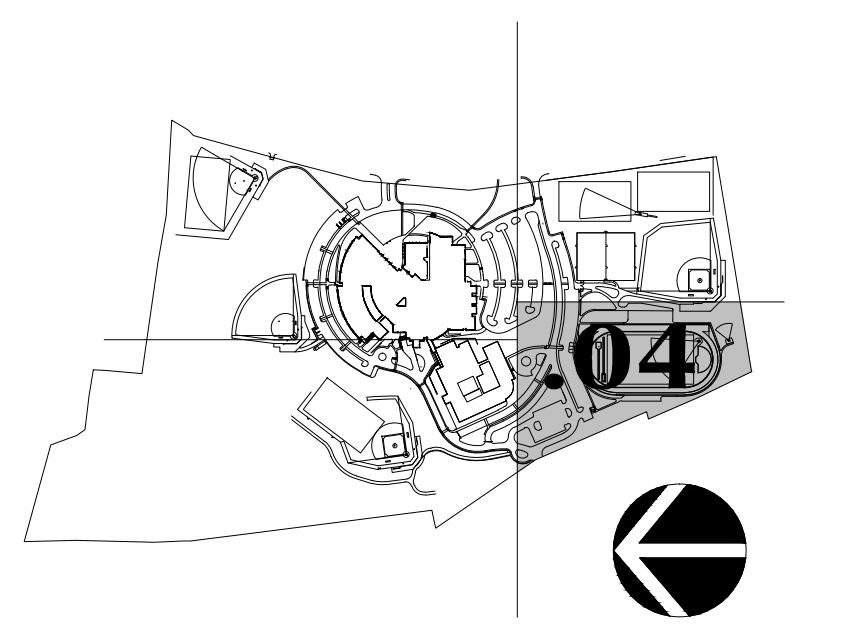
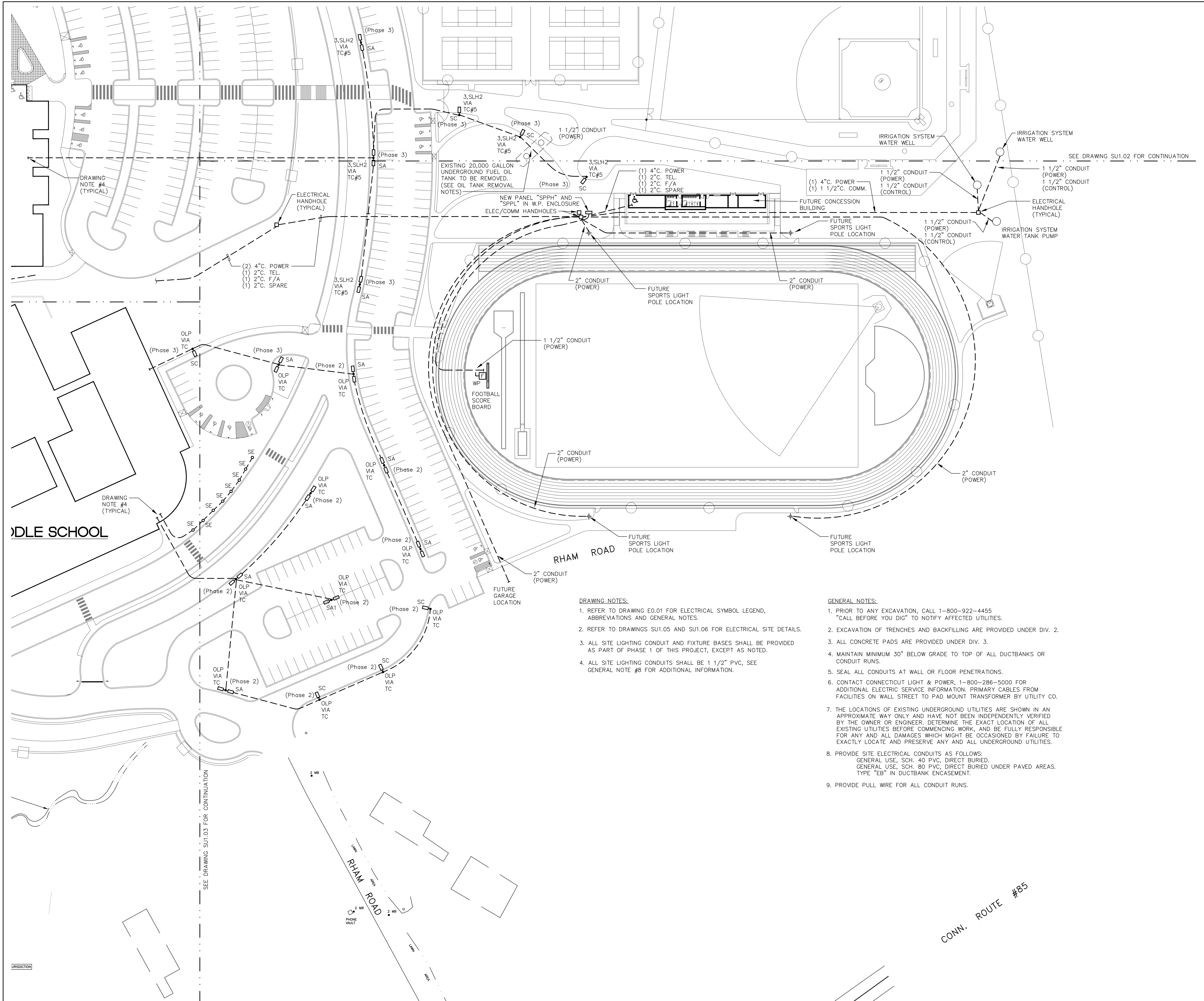
SEE DRAWING SU1.04 FOR CONTINUATION

THIS WATERCOURSE CLASSIFIED  
"INTERMITTENT WATERCOURSE"  
UNDER FEDERAL GUIDELINES

- GENERAL NOTES:**
1. PRIOR TO ANY EXCAVATION, CALL 1-800-922-4455 "CALL BEFORE YOU DIG" TO NOTIFY AFFECTED UTILITIES.
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GENERAL USE, SCH. 80 PVC, DIRECT BURIED UNDER PAVED AREAS.  
TYPE "EB" IN DUCTBANK ENCASEMENT.
  9. PROVIDE PULL WIRE FOR ALL CONDUIT RUNS.

- DRAWING NOTES:**
1. REFER TO DRAWING E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  2. REFER TO DRAWINGS SU1.05 AND SU1.06 FOR ELECTRICAL SITE DETAILS.
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  4. ALL SITE LIGHTING CONDUITS SHALL BE 1 1/2" PVC, SEE GENERAL NOTE #8 FOR ADDITIONAL INFORMATION.

**PARTIAL SITE PLAN**  
SCALE: 1" = 40'-0"



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STATE PROJECT#: 208-018N  
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29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-2529 FAX: (860) 521-2520  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS  
ASSOCIATES, INC.**  
ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: EMD/BPCW SCALE: 1" = 40'-0"  
CHECKED BY: RLG/RGB

**MECHANICAL  
ELECTRICAL  
SITE UTILITIES  
PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.04**

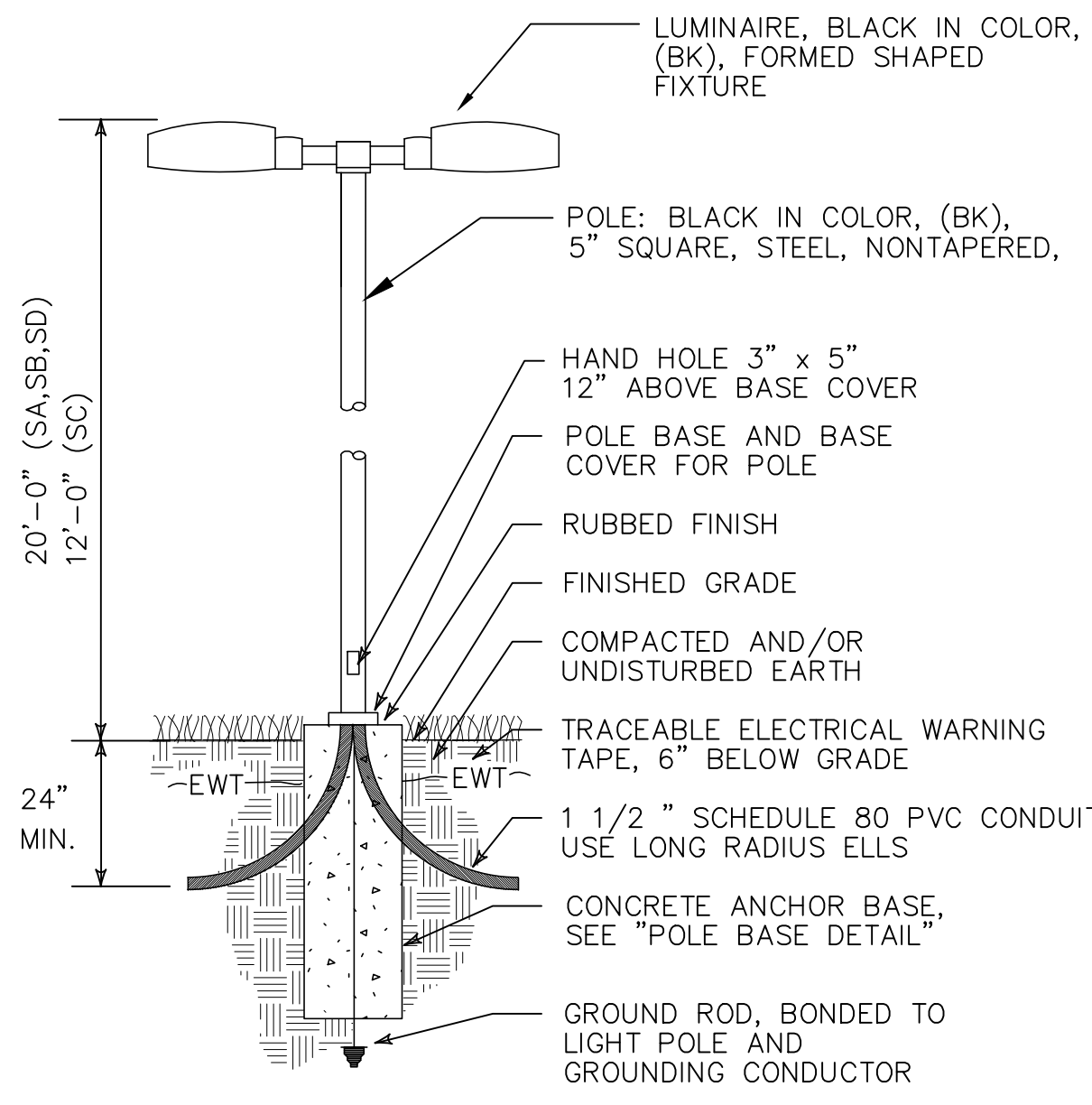
**DRAWING NOTES:**

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- REFER TO DRAWINGS SU1.05 AND SU1.06 FOR ELECTRICAL SITE DETAILS.
- ALL SITE LIGHTING CONDUIT AND FIXTURE BASES SHALL BE PROVIDED AS PART OF PHASE 1 OF THIS PROJECT, EXCEPT AS NOTED.
- ALL SITE LIGHTING CONDUITS SHALL BE 1 1/2" PVC, SEE GENERAL NOTE #9 FOR ADDITIONAL INFORMATION.

**GENERAL NOTES:**

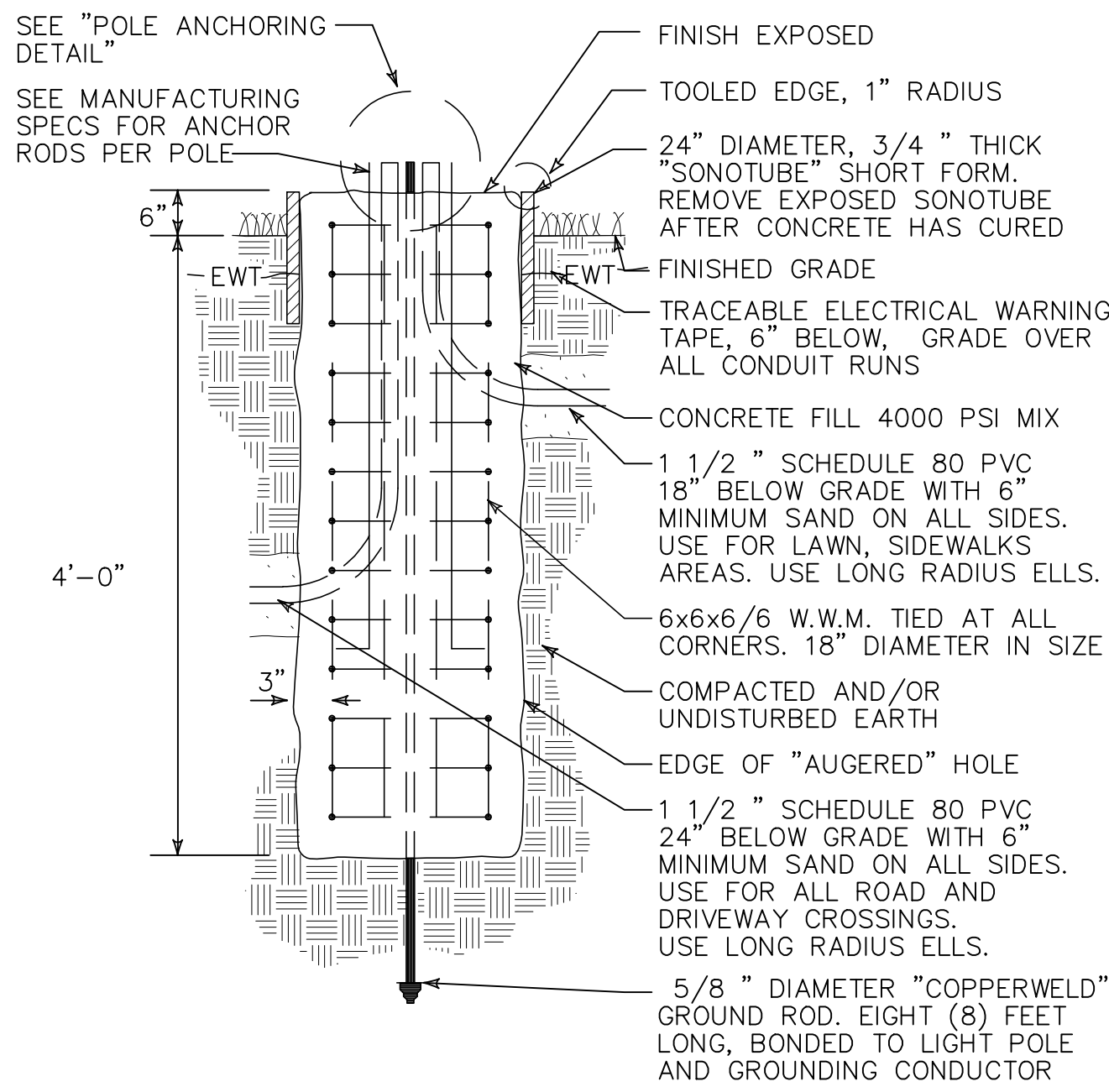
- PRIOR TO ANY EXCAVATION, CALL 1-800-922-4455 "CALL BEFORE YOU DIG" TO NOTIFY AFFECTED UTILITIES.
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- SEAL ALL CONDUITS AT WALL OR FLOOR PENETRATIONS.
- CONTACT CONNECTICUT LIGHT & POWER, 1-800-286-5000 FOR ADDITIONAL ELECTRIC SERVICE INFORMATION. PRIMARY CABLES FROM FACILITIES ON WALL STREET TO PAD MOUNT TRANSFORMER BY UTILITY CO.
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GENERAL USE, SCH. 80 PVC, DIRECT BURIED UNDER PAVED AREAS.  
TYPE "EB" IN DUCTBANK ENCASUREMENT.
- PROVIDE PULL WIRE FOR ALL CONDUIT RUNS.

**PARTIAL SITE PLAN**  
SCALE: 1" = 40'-0"



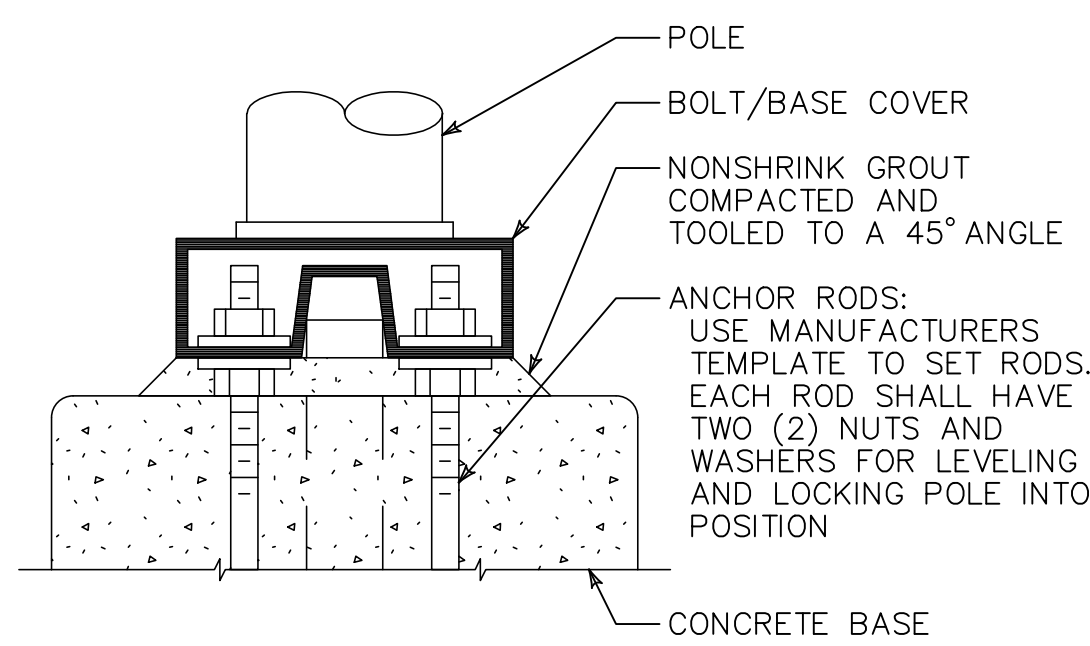
**SITE LIGHTING FIXTURES**  
**TYPE "SA", "SB", "SC", "SD" DETAIL**

N.T.S.



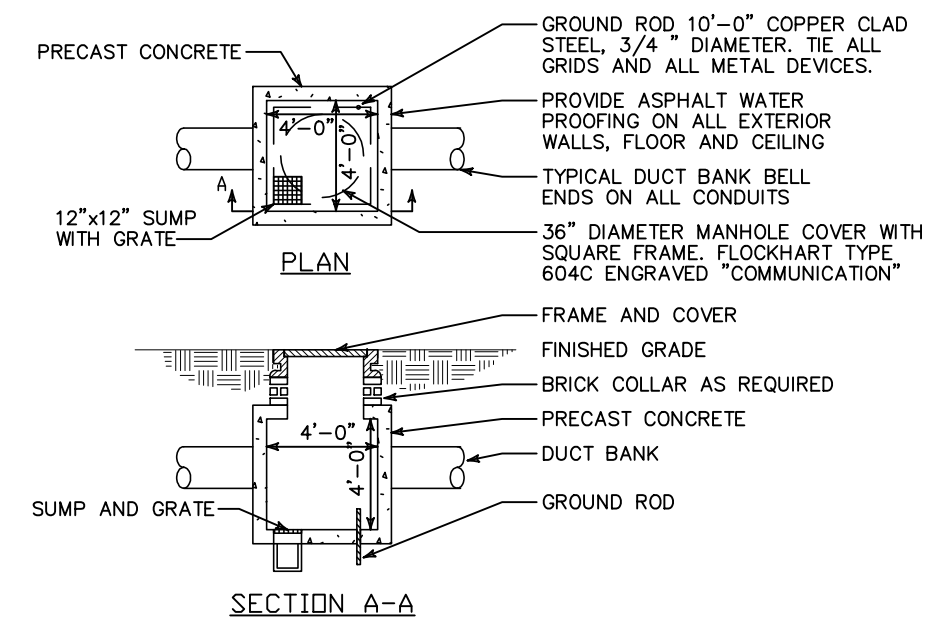
**SITE LIGHTING POLE BASE**  
**TYPE "SA", "SB", "SC", "SD" DETAIL**

N.T.S.



**SITE LIGHTING POLE ANCHORING**  
**TYPE "SA", "SB", "SC", "SD" DETAIL**

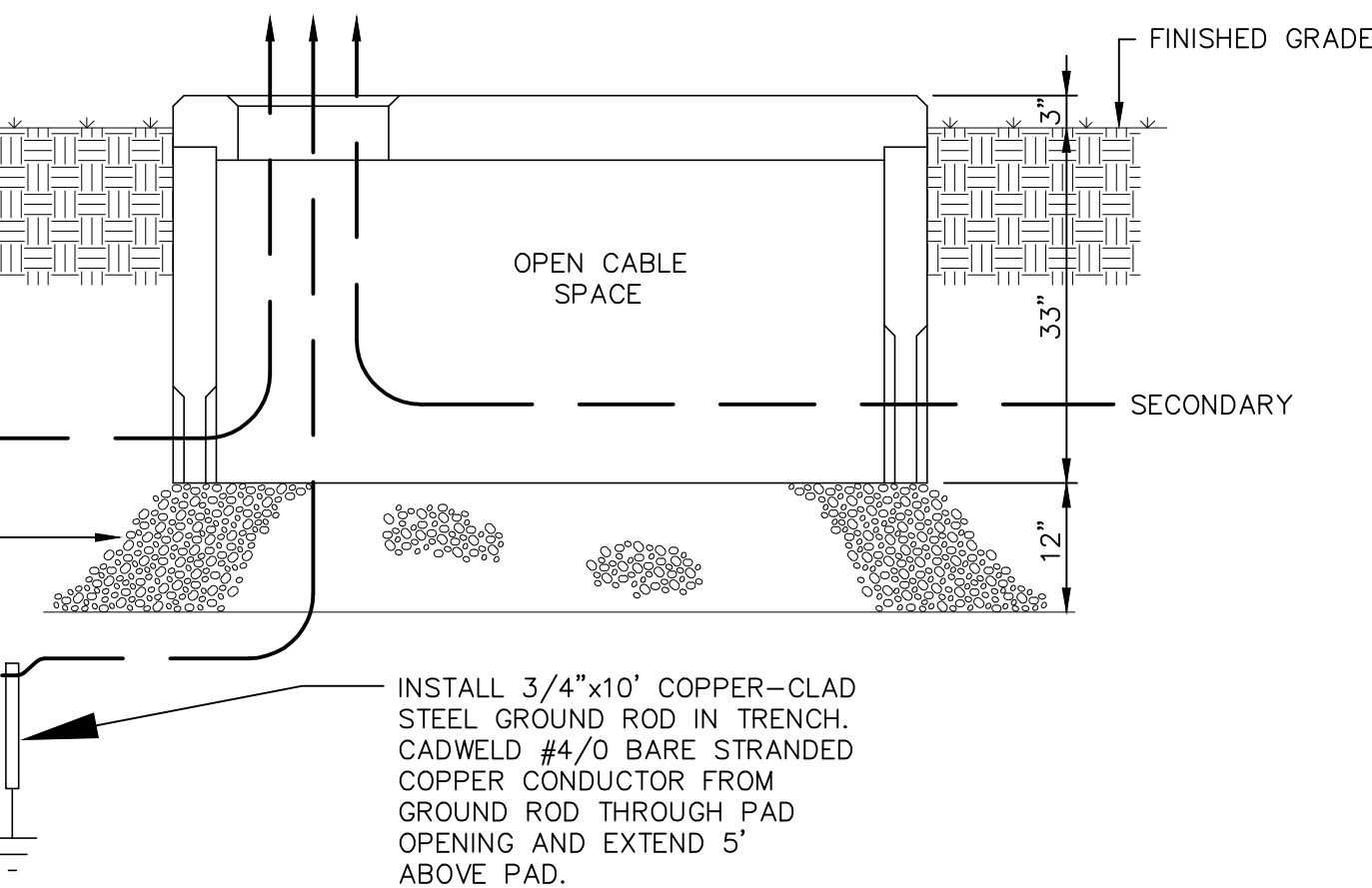
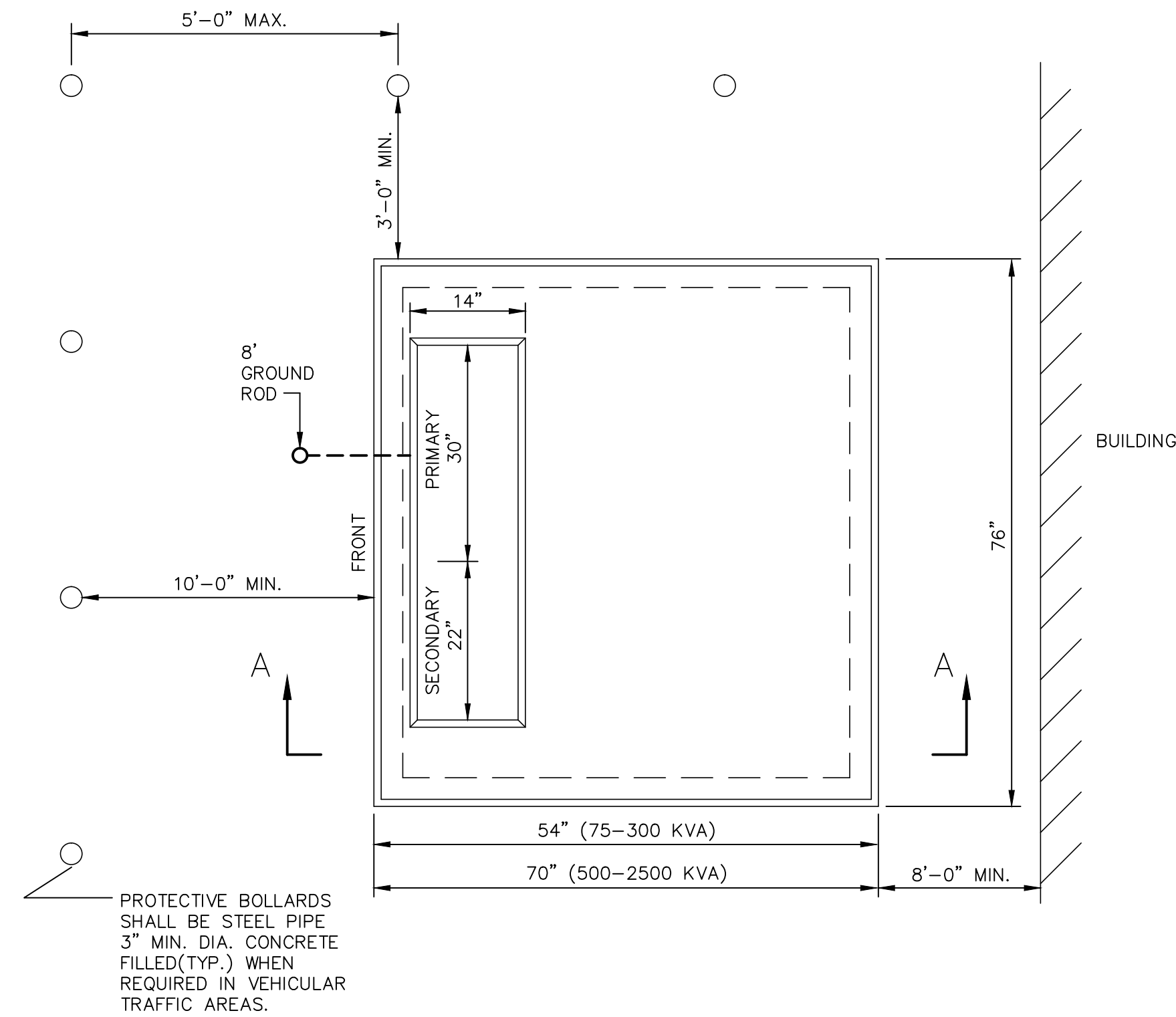
N.T.S.



**TRAFFIC RATED TELECOMMUNICATION PULLBOX DETAIL**

N.T.S.

- NOTES:
- REFER TO DETAIL, THIS SHEET, FOR TRAFFIC RATED MANHOLE COVER.
  - FURNISH FOR TEL/COMM PULLBOX LOCATED UNDER PAVED AREAS.

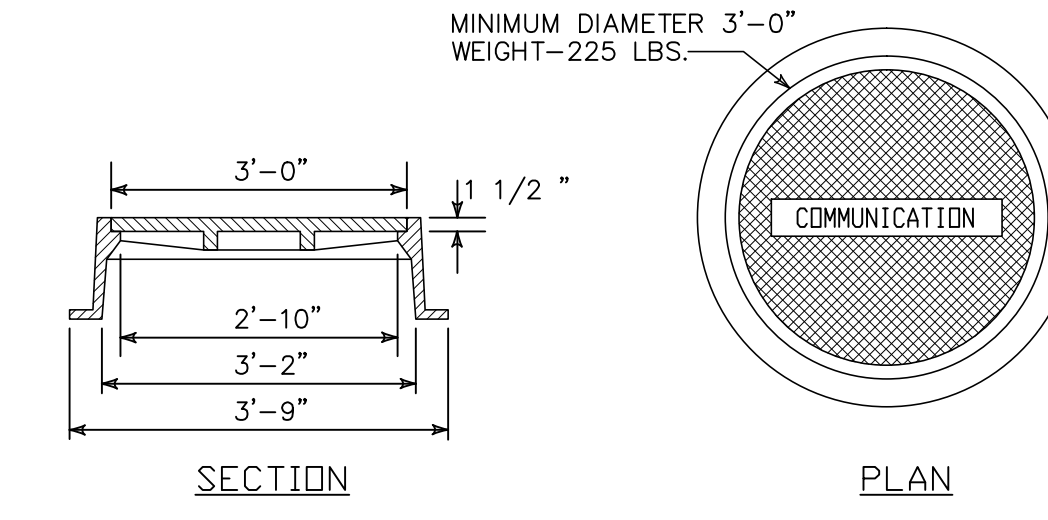


**TRANSFORMER PAD DETAIL**

N.T.S.

**TRANSFORMER PAD DETAIL NOTES:**

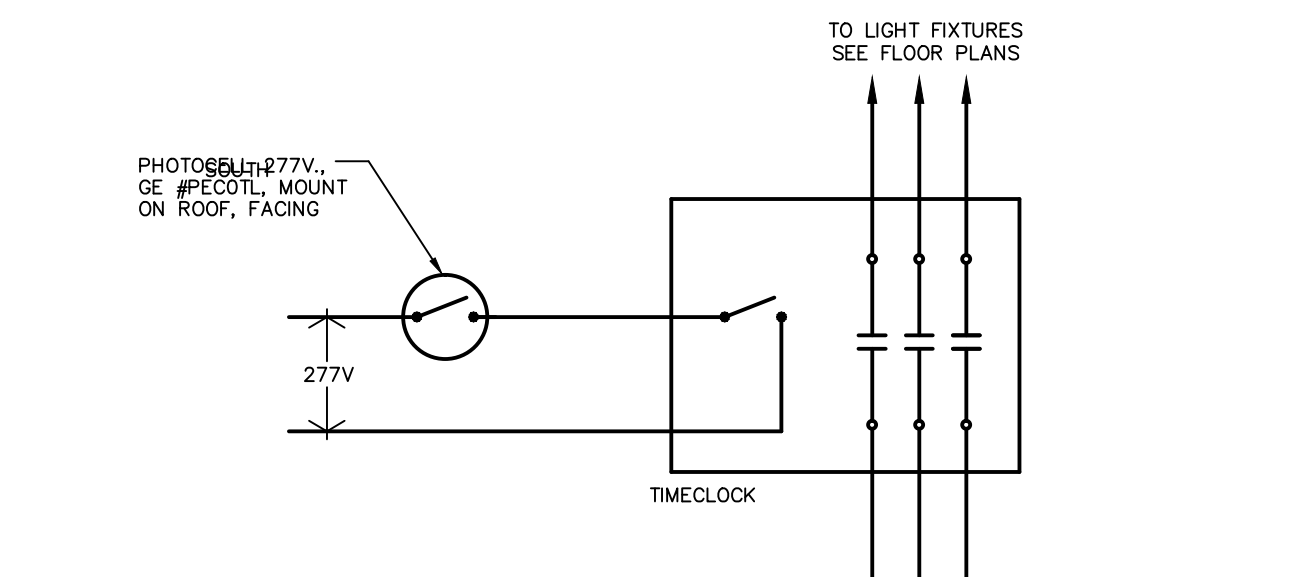
- PRIMARY ZONE
  - THE PRIMARY ZONE IS RESTRICTED TO THE AREA SHOWN AND SHALL CONTAIN TWO 4" G.S. CONDUITS.
  - THE CONDUIT SWEEPS INTO THE FOUNDATION SHALL BE GALVANIZED STEEL, 90 DEGREE BEND, 36" RADIUS.
  - EACH CONDUIT SHOULD EXTEND A MINIMUM OF 1" TO A MAXIMUM OF 3" ABOVE THE TOP OF THE FOUNDATION AND SHALL HAVE THREADED ENDS.
  - EACH CONDUIT SHALL BE PROVIDED WITH A GROUNDING TYPE CHAFE BUSHING AND SHALL BE PLUGGED UNTIL THE PRIMARY CABLES ARE INSTALLED.
- SECONDARY ZONE
  - THE SECONDARY ZONE IS RESTRICTED TO THE AREA SHOWN AND MAY CONTAIN A MAXIMUM OF TEN 4" CONDUITS.
  - EACH CONDUIT SHALL EXTEND A MINIMUM OF 1" TO A MAXIMUM OF 3" ABOVE THE TOP OF THE FOUNDATION AND SHALL HAVE THREADED ENDS.
  - EACH CONDUIT SHALL BE PROVIDED WITH A GROUNDING TYPE CHAFE BUSHING AND SHALL BE PLUGGED UNTIL THE SECONDARY CABLES ARE INSTALLED.
  - THE GROUND GRID "TAILS" SHALL BE BROUGHT, BELOW GRADE, INTO THE FOUNDATION WINDOW AS SHOWN.
  - THE GROUND RODS, GROUND GRID, PRIMARY NEUTRALS, SECONDARY NEUTRALS, TRANSFORMER TANK AND CONDUITS SHALL BE EFFECTIVELY BONDED TOGETHER.
  - ALL GROUNDING AND BONDING SHALL BE DONE WITH COPPER WIRE. THE MINIMUM CONDUCTOR SIZE FOR BONDING METAL CONDUITS IS #4 AWG BARE COPPER; ALUMINUM WIRE IS NOT ACCEPTABLE.
  - GROUNDING BUSHINGS SHALL BE USED FOR BONDING ALL METAL CONDUITS.
  - THE GROUND GRID AND ASSOCIATED CONNECTIONS REQUIRE CL&P INSPECTION PRIOR TO BACKFILLING THE AREA.
  - THE LOCATION AND ORIENTATION OF THE FOUNDATION MUST BE APPROVED PRIOR TO THE START OF CONSTRUCTION. SEE CL&P STANDARDS FOR LOCATION AND INSTALLATION REQUIREMENTS.
  - REFER TO CL&P DETAIL DRAWING FOR TRANSFORMER PAD CONSTRUCTION REQUIREMENTS. COORDINATE WITH CL&P PRIOR TO START OF WORK.



**TELECOMMUNICATION PULLBOX TRAFFIC RATED COVER DETAIL**

N.T.S.

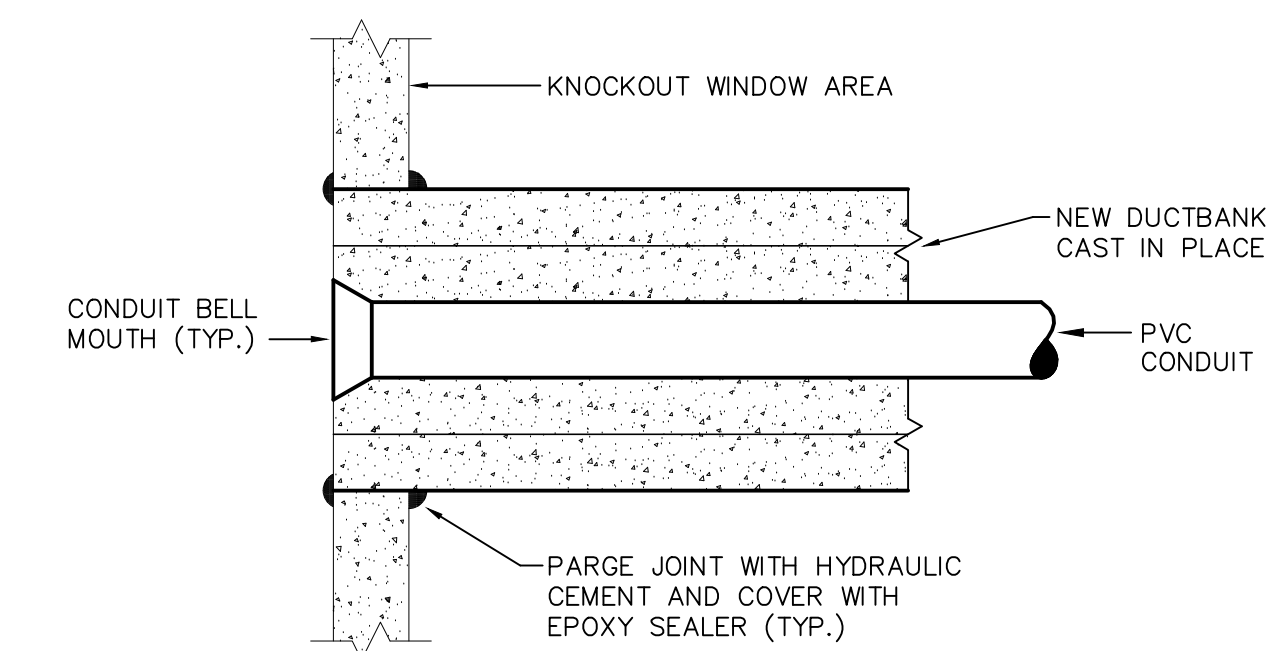
- NOTES:
- VERIFY ALL DIMENSIONS WITH MANHOLE MANUFACTURER.
  - FURNISH FOR TEL/COMM PULLBOX LOCATED UNDER PAVED AREAS.



**EXTERIOR LIGHTING CONTROL DIAGRAM**

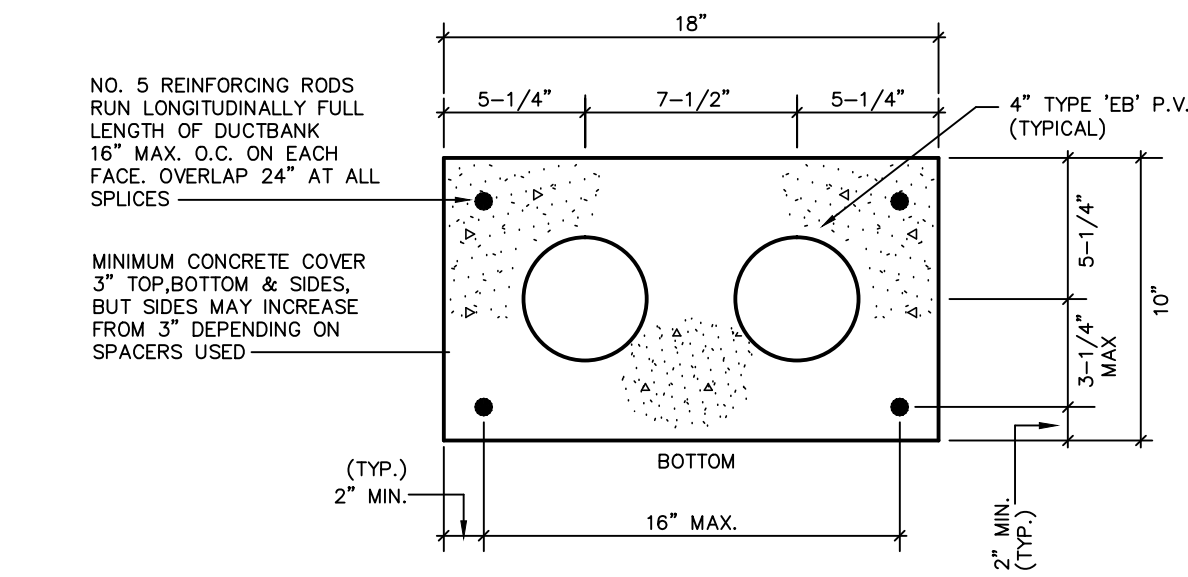
N.T.S.

- NOTES:
- LIGHTING CIRCUITS SHALL BE WIRED FOR PHOTOCELL "ON" AND TIMECLOCK "OFF" OPERATION.



**MANHOLE/PULLBOX ENTRANCE DETAIL**

N.T.S.



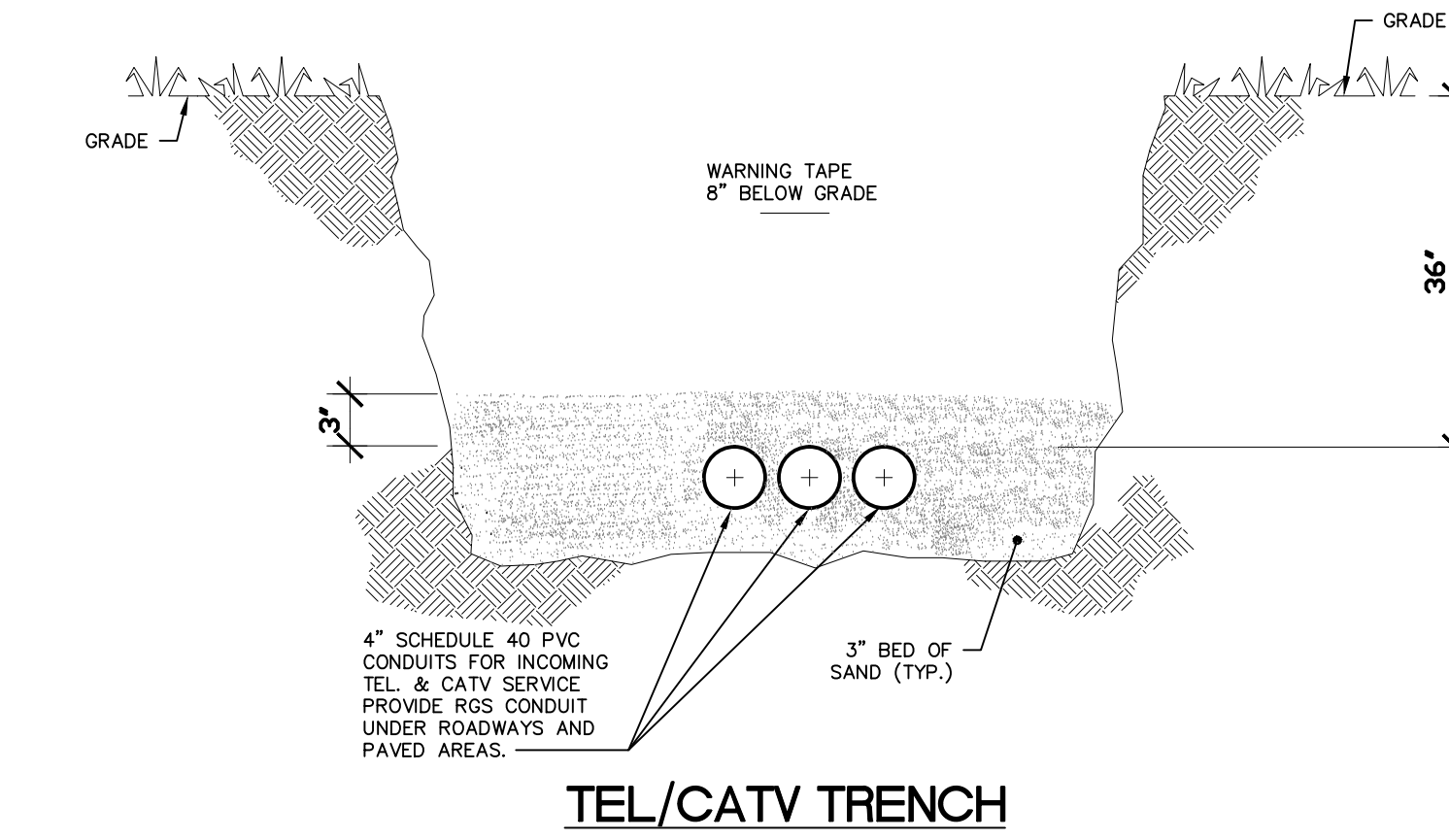
**DUCTBANK TYPE "A"**

N.T.S.

- DUCTBANK NOTES:
- PROVIDE NON-DECAYING, NON-METALLIC SEPARATORS FOR CONCRETE ENCASED DUCTBANKS. SPACE SEPARATORS AT 4"-0" O.C. MAXIMUM.
  - PROVIDE AND INSTALL RED WARNING TAPE 12" ABOVE ALL DUCTBANK RUNS.

**TYPICAL DUCTBANK DETAIL**

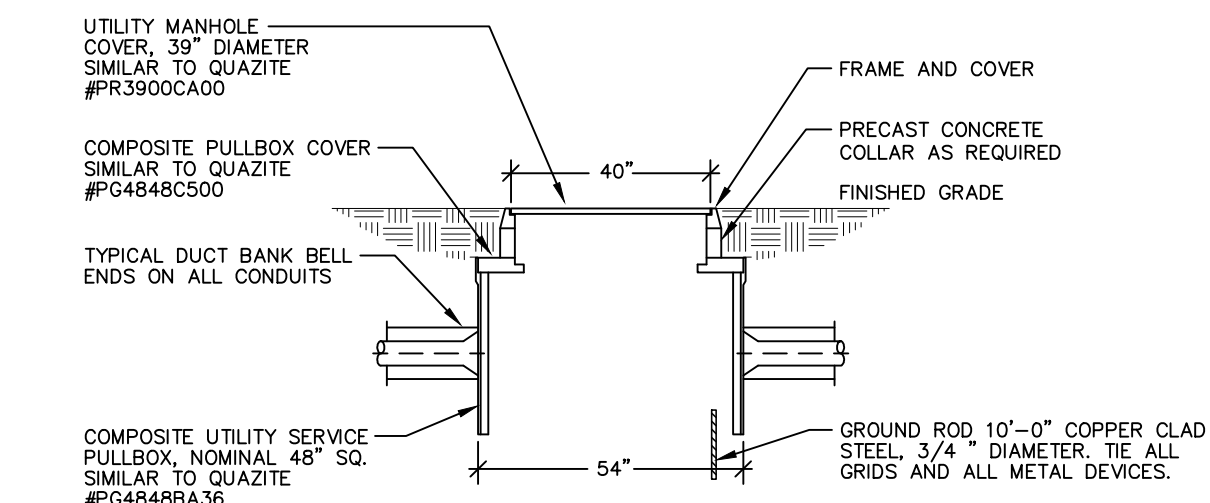
N.T.S.



**TYPICAL TRENCH SECTION**

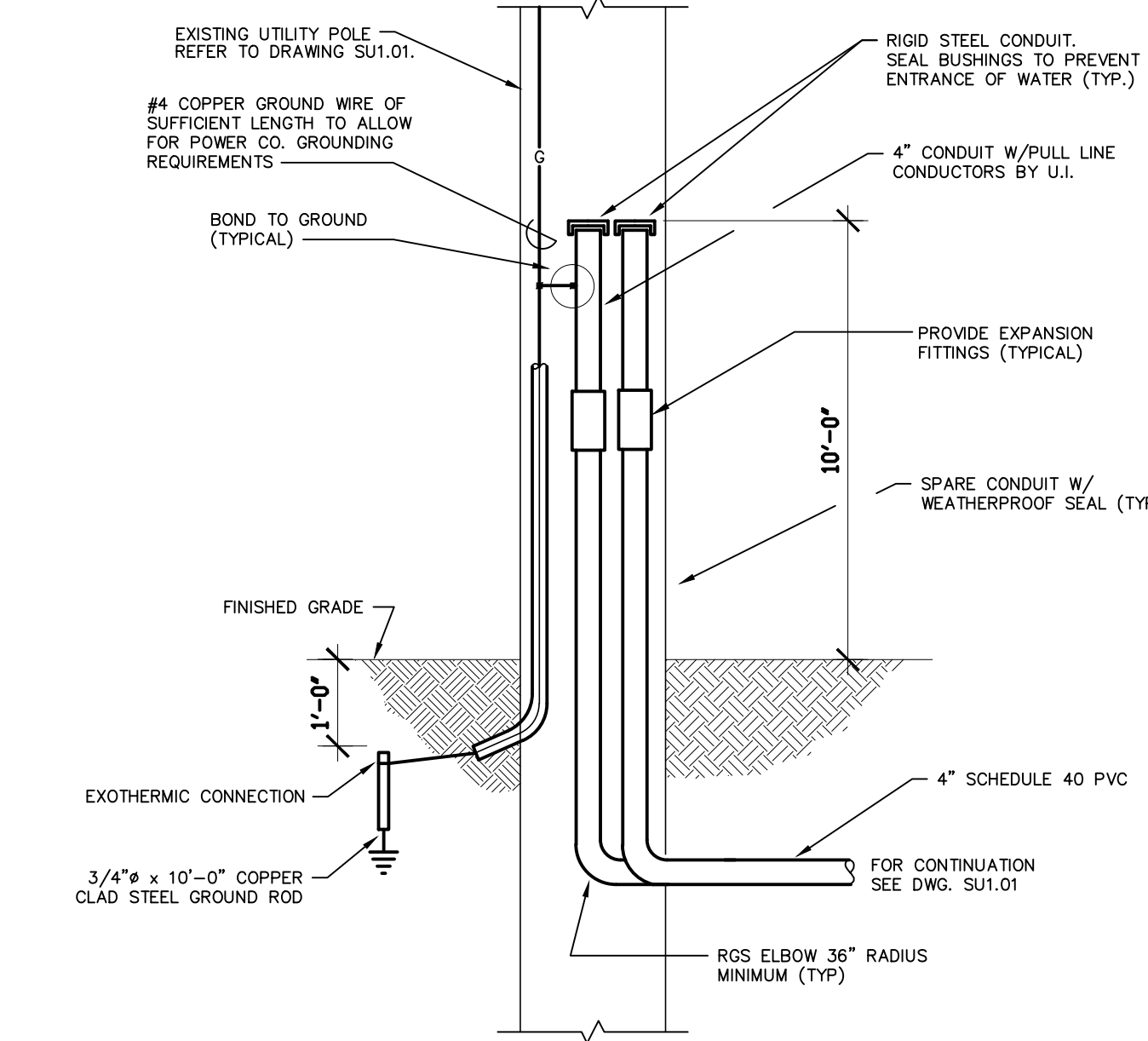
N.T.S.

- NOTE: TELEPHONE/CATV/AND FIRE ALARM CONDUITS SHALL BE INSTALLED WITH A MINIMUM OF 12" SEPARATION FROM POWER CONDUITS WHEN LOCATED IN COMMON TRENCH.



**DUCTBANK/PULLBOX DETAIL**

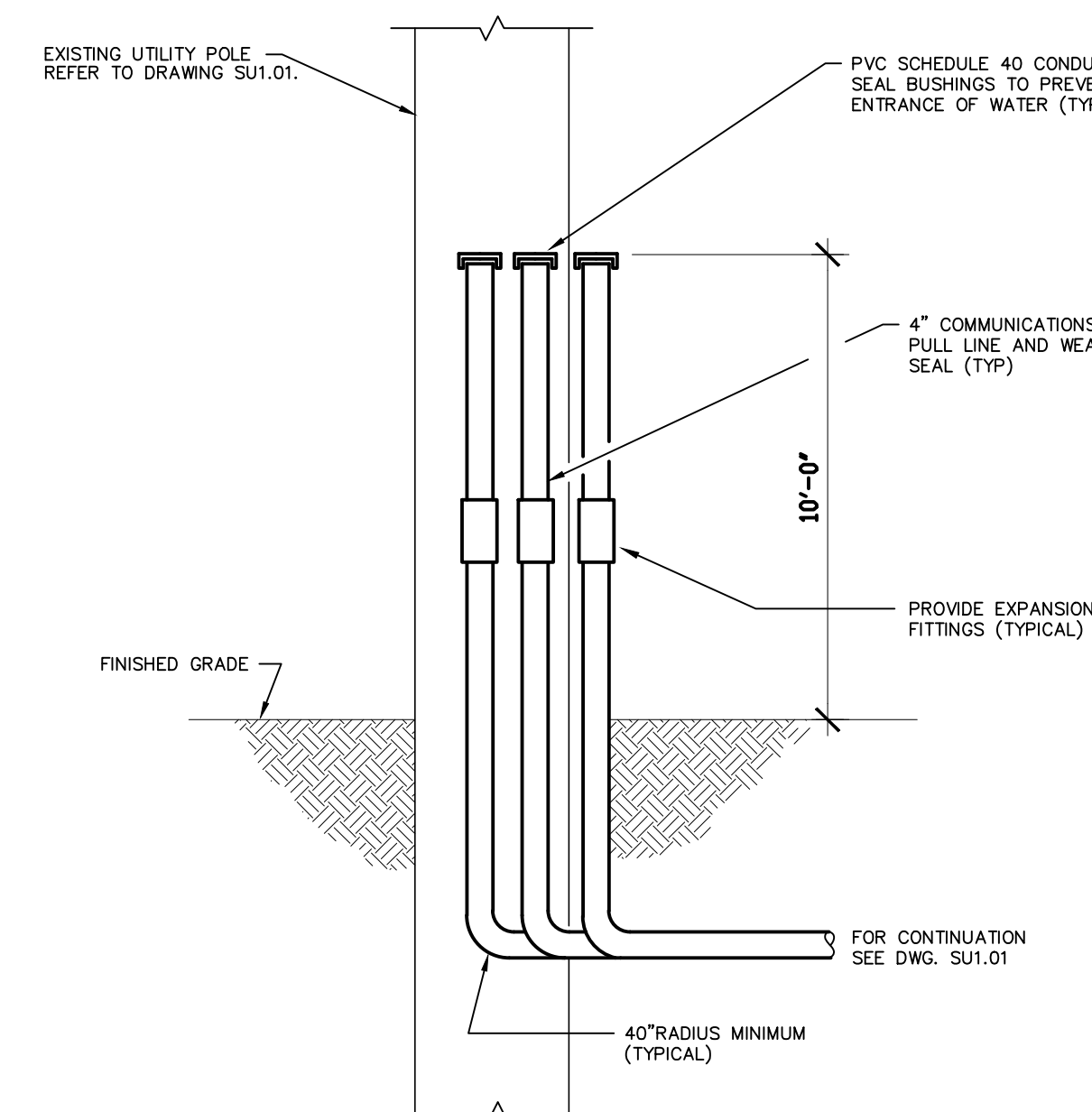
N.T.S.



**PRIMARY ELECTRIC UTILITY SERVICE DETAIL**

N.T.S.

- NOTES:
- REFER TO DRAWING SU1.01 AND DETAIL BELOW FOR MORE INFORMATION.
  - PROVIDE RGS TO PVC ADAPTERS WHERE NECESSARY.



**CATV/TEL UTILITY SERVICE DETAIL**

N.T.S.

- NOTES:
- REFER TO DRAWING SU1.01 AND DETAIL ABOVE FOR MORE INFORMATION.
  - PROVIDE RGS TO PVC ADAPTERS WHERE NECESSARY.

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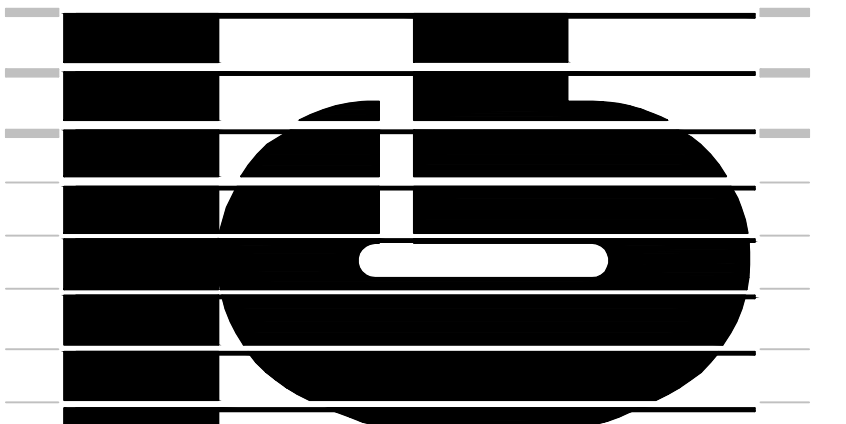


**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 321-3333 FAX: (860) 321-9828  
vzhs PROJECT NUMBER: 2000155.00



416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: CHECKED BY: SCALE: AS NOTED

**ELECTRICAL SITE DETAILS**

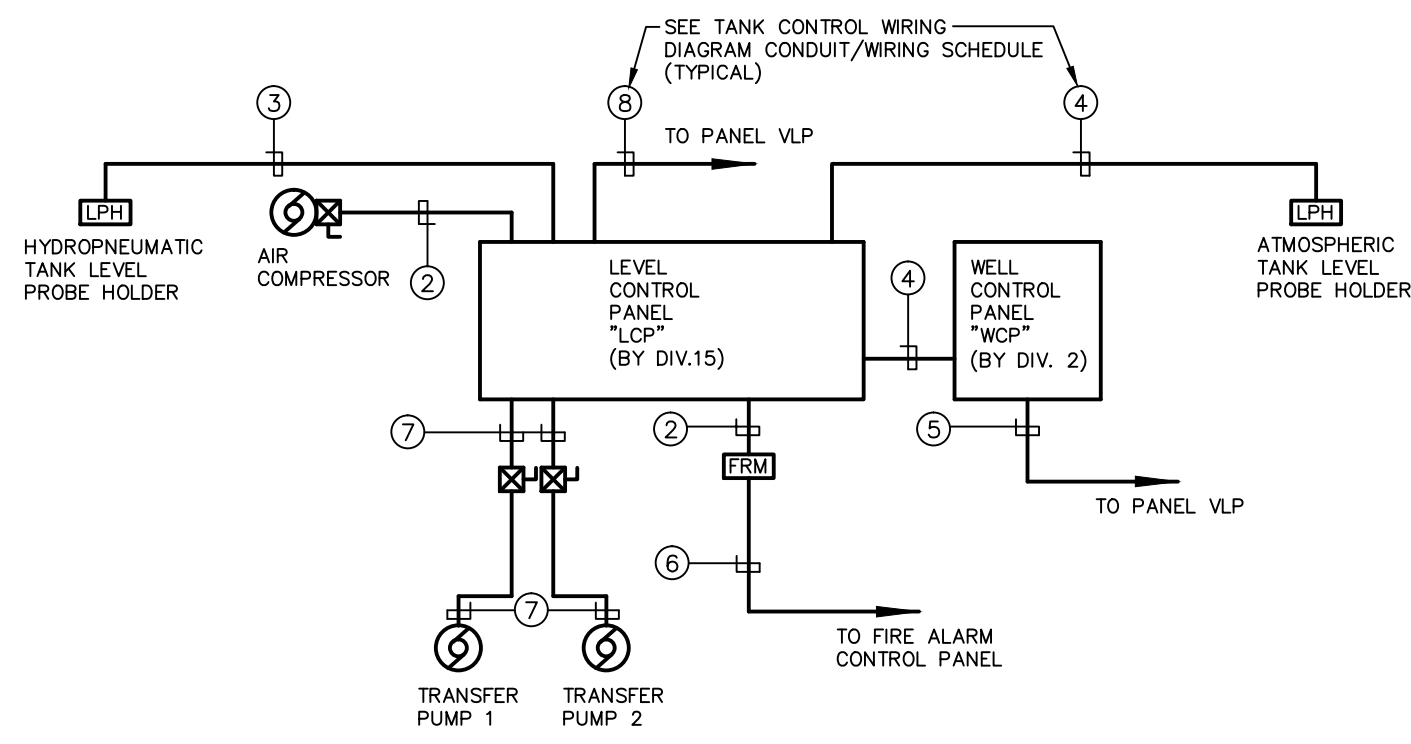
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.05**

DOMESTIC WATER SYSTEM VAULT PANELBOARD SCHEDULE									
PANEL	LOCATION	MAINS	PANEL DESCRIPTION			BRANCH CIRCUIT BREAKER		REMARKS	
			VOLTAGE	POLES	MT'G	A.I.C.	ACTIVE		SPARE
VLP	DOMESTIC WATER SYSTEM VAULT AREA	30A M.C.B.	120/208 3Ø, 4W	24	SURFACE	22K	7 - 20/1 5 - 20/1	PROVIDE (12) 1P SPACE AND BUS ONLY	
VHP	DOMESTIC WATER SYSTEM VAULT AREA	150A M.C.B.	277/480 3Ø, 4W	42	SURFACE	22K	4 - 20/3 3 - 20/3 1 - 75/3	PROVIDE (9) 1P SPACE AND BUS ONLY	

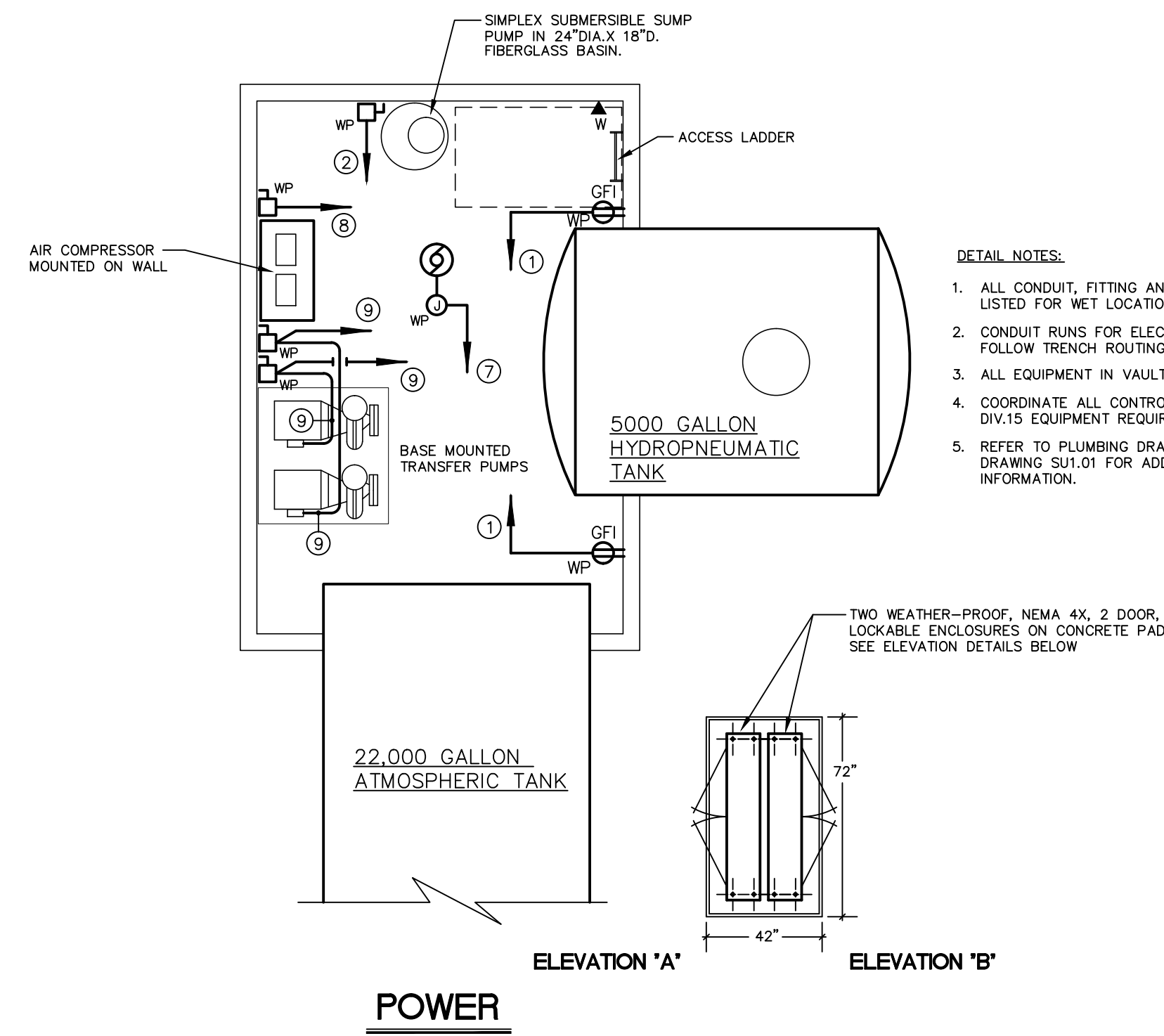
**PANEL NOTES:**

- CIRCUIT BREAKERS FOR (3) FUTURE WELL PUMPS, SIZE BASED ON PUMPS UP TO 5.0HP AT 480V, 3 PHASE, ADJUST CIRCUIT BREAKER SIZES TO ACCOMMODATE ACTUAL PUMP REQUIREMENTS.



**TANK CONTROL WIRING DIAGRAM**  
NO SCALE

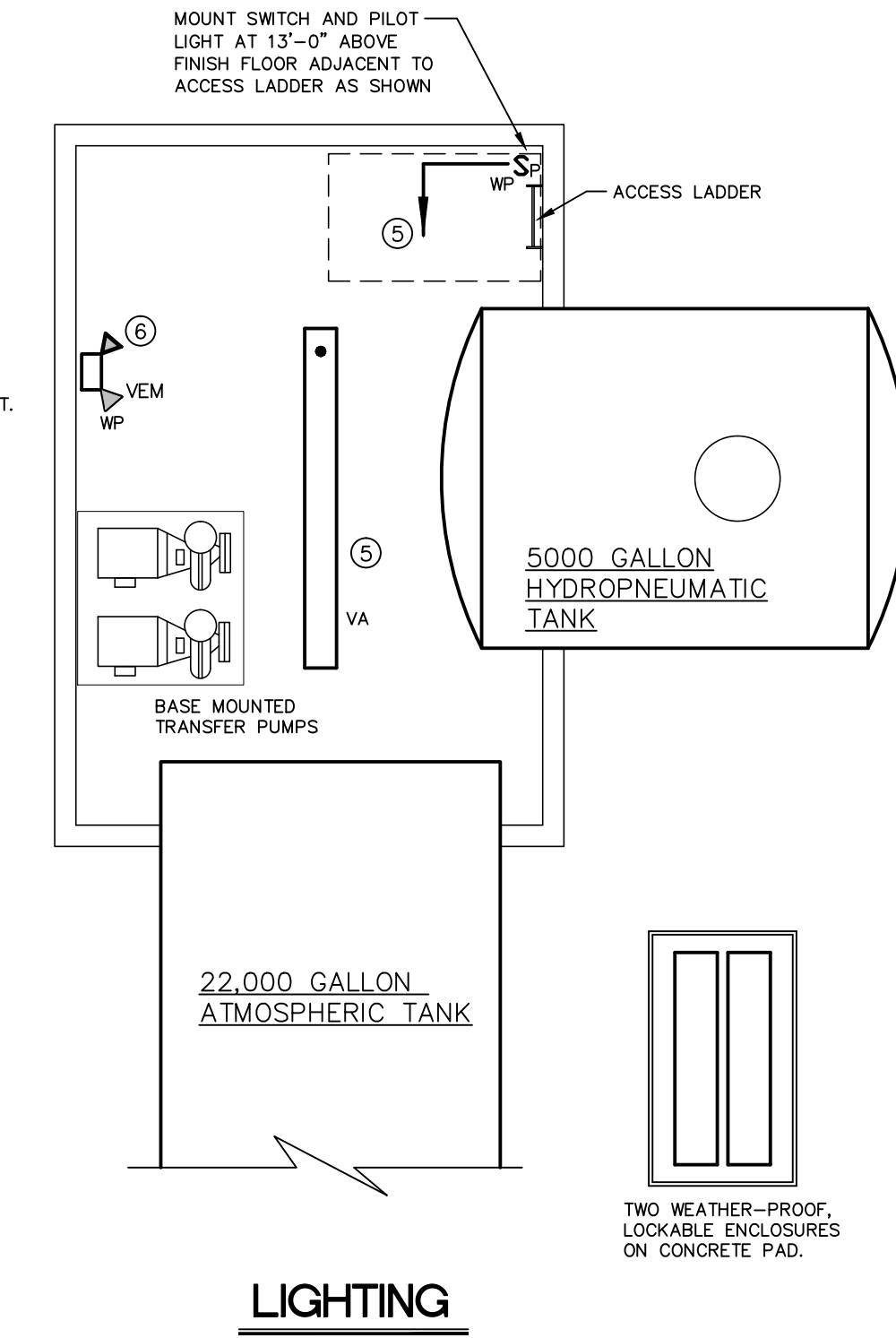
DESIGNATION	CONDUIT	WIRE
①		NOT USED
②	3/4"	4#14
③	3/4"	7#14
④	3/4"	8#14
⑤	3/4"	2#12, 1#12 GRD.
⑥	1"	#16 TP, 2#12
⑦	1"	3#10, 1#10 GRD.
⑧	1 1/4"	3#4, 1#8 GRD.



**POWER**

**DETAIL NOTES:**

- ALL CONDUIT, FITTING AND DEVICES SHALL BE RATED NEMA 4X, LISTED FOR WET LOCATION APPLICATION AND CORROSION RESISTANT.
- CONDUIT RUNS FOR ELECTRICAL UTILITIES INTO BUILDING SHALL FOLLOW TRENCH ROUTING FOR WATER SERVICE.
- ALL EQUIPMENT IN VAULT TO BE ON STANDBY POWER.
- COORDINATE ALL CONTROL AND POWER WIRING WITH DIV.15 EQUIPMENT REQUIREMENTS.
- REFER TO PLUMBING DRAWING P3.03 AND SITE UTILITY DRAWING SU1.01 FOR ADDITIONAL DOMESTIC WATER VAULT INFORMATION.



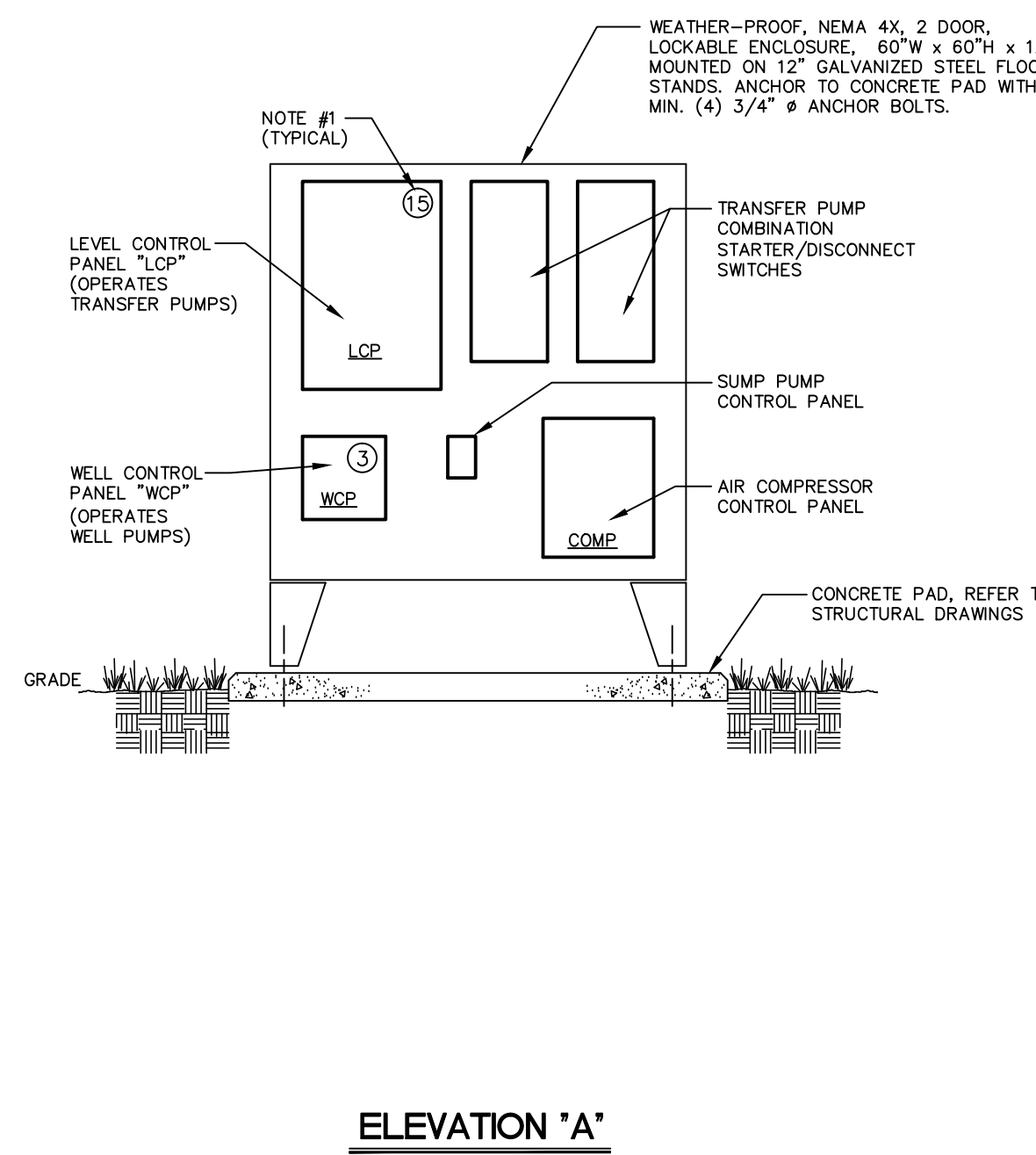
**LIGHTING**

**DOMESTIC WATER SYSTEM VAULT ELECTRICAL PLANS**

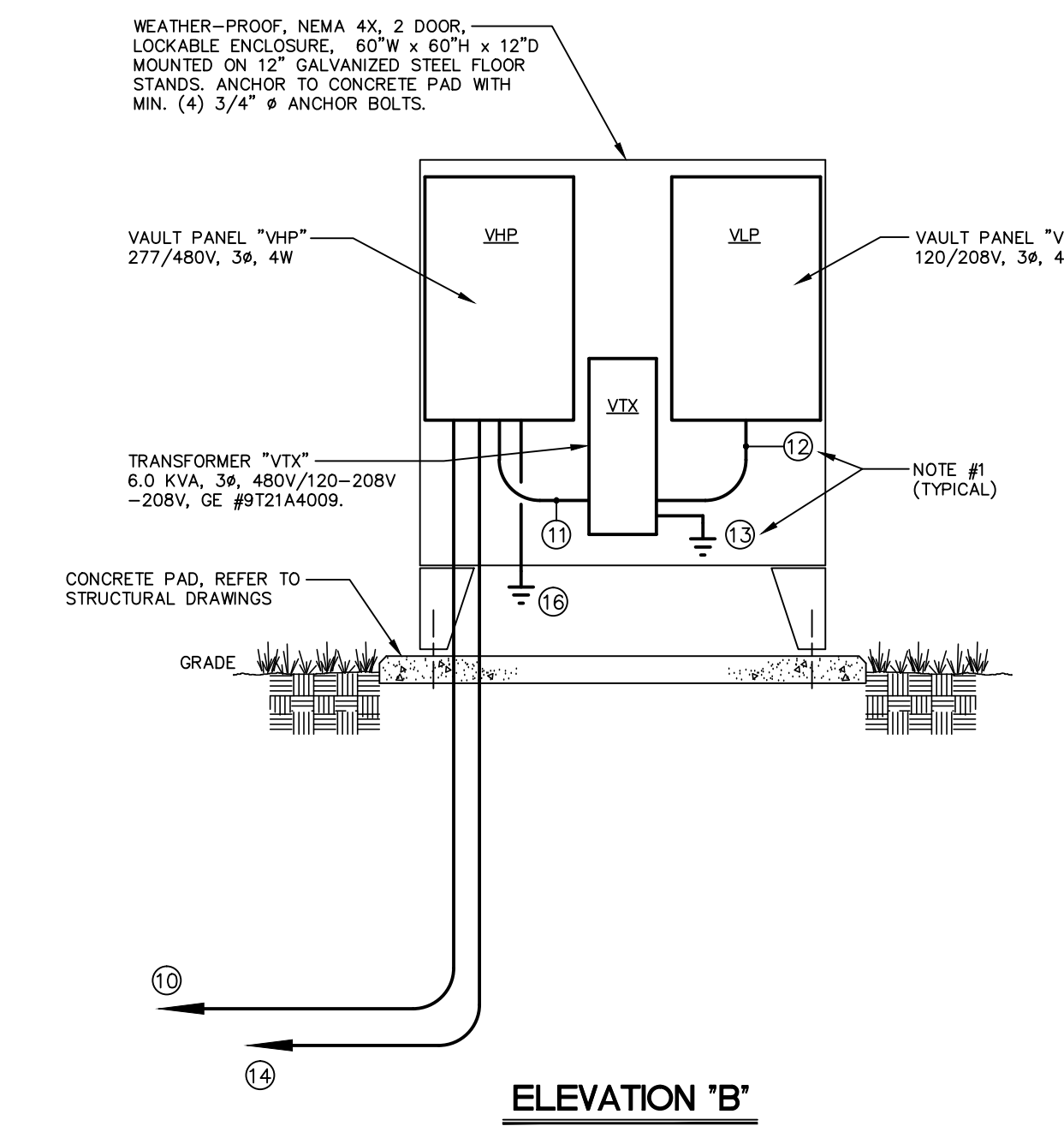
1/4" = 1'-0"

**KEYED DETAIL NOTES:**

- GENERAL USE POWER OUTLET, PROVIDE 2#12, 1#12 GND-3/4"C. TO 20A-1P C/B IN PANEL "VLP". PROVIDE DEDICATED WP GFI TYPE RECEPTACLE MOUNT OUTLET AT 48" AFF.
- SUMP PUMP, 1/2HP-120V-1HP, PROVIDE 2#12, 1#12 GND-3/4"C. TO 20A-1P C/B IN PANEL "VLP". PROVIDE DEDICATED HARD WIRE CONNECTION TO PUMP, PROVIDE A 30AMP-2P-208V NEMA TYPE 4X FUSED DISCONNECT SWITCH WITH (1) 5 AMP RK-5 T.D. FUSE.
- WELL CONTROL PANEL "WCP", PROVIDE 2#12, 1#12 GND-3/4"C. TO 20A-1P C/B IN PANEL "VLP".
- NOT USED
- FIXTURE TYPE "VA" SHALL BE HUBBELL #EML0848-SROR-E1-B1-EDUB-100H-EDC1, PROVIDE 2#12, 1#12 GND-3/4"C. TO 20A-1P C/B IN PANEL "VLP". MOUNT LIGHT FIXTURE AT 10'-0" ABOVE FINISH FLOOR, COORDINATE FIXTURE LOCATION WITH MECHANICAL EQUIPMENT AND PIPING, ADJUST LOCATION AS REQUIRED, PROVIDE "WATERPROOF LIGHT SWITCH" AS SHOWN.
- FIXTURE TYPE "VEM" SHALL BE HUBBELL #M4-12-S0-2, PROVIDE 2#12, 1#12 GND-3/4"C. TO 20A-1P C/B IN PANEL "VLP", NOTED IN ITEM #5, ABOVE.
- PROVIDE 0-MARK "WASH DOWN" TYPE ELECTRIC HEATER, MODEL #A8000481, 480V-3PH-3.0KW RATED, PROVIDE 3#12, 1#12 GND-3/4"C. FROM HEATER TO 20AMP-3P, 480V C/B IN PANEL "VHP". FURNISH HEATER WITH INTERNAL THERMOSTAT AND BUILT-IN DISCONNECT SWITCH, COORDINATE HEATER LOCATION WITH MECHANICAL EQUIPMENT AND PIPING, ADJUST HEATER LOCATION ACCORDINGLY.
- AIR COMPRESSOR, 3HP-480V-3PH, PROVIDE 3#12, 1#12 GND-3/4"C. TO 20A-3P C/B IN PANEL "VHP". PROVIDE 30A-3P-480V NEMA TYPE 4X FUSED DISCONNECT SWITCH WITH (3) 5 AMP RK-5 T.D. FUSES.
- TRANSFER WATER PUMP, 15HP-480V-3PH, PROVIDE 3#10, 1#10 GND-1"C. TO LEVEL CONTROL PANEL "LOP", PROVIDE 30A-3P-480V NEMA TYPE 4X FUSED DISCONNECT SWITCH WITH (3) 25 AMP RK-5 T.D. FUSES.
- PROVIDE 4#2/0, 1#6 GND-4"C. FROM A 150A-3P C/B IN MAIN BUILDING PANEL "EMGDP" TO PANEL "VHP". SEE DRAWING E2.01 FOR ADDITIONAL INFORMATION, FEEDER CONDUCTORS AND CONDUIT OVERSIZED FOR VOLTAGE DROP AND LONG CABLE PULL.
- PROVIDE 3#12, 1#12 GND-3/4"C. FROM A 20A-3P C/B IN PANEL "VHP" TO TRANSFORMER "VTX", FOR PRIMARY FEED.
- PROVIDE 4#10, 1#10 GND-3/4"C. FROM TRANSFORMER "VTX" PANEL "VLP", FOR SECONDARY FEED.
- PROVIDE 1/C, #10 GND-3/4"C. FROM TRANSFORMER TO 6" DUCTILE IRON DOMESTIC WATER SERVICE PIPE, SEE DRAWING #P3.03 FOR LOCATION.
- PROVIDE FEEDER FOR WELL WATER PUMP, 5HP-480V-3PH, PROVIDE 3#10, 1#10 GND-1"C. TO 20A-3P C/B IN PANEL "VHP", (TYPICAL FOR THREE PUMPS)
- LEVEL CONTROL PANEL "LOP", PROVIDE WIRE AND CONDUIT PER TANK CONTROL WIRING DIAGRAM, THIS SHEET, TO A 75A-3P C/B IN PANEL "VHP".
- PROVIDE 1/C, #4 GND-3/4"C. FROM PANEL "VHP" TO 6" DUCTILE IRON DOMESTIC WATER SERVICE PIPE, SEE DRAWING #P3.03 FOR LOCATION.



**ELEVATION 'A'**



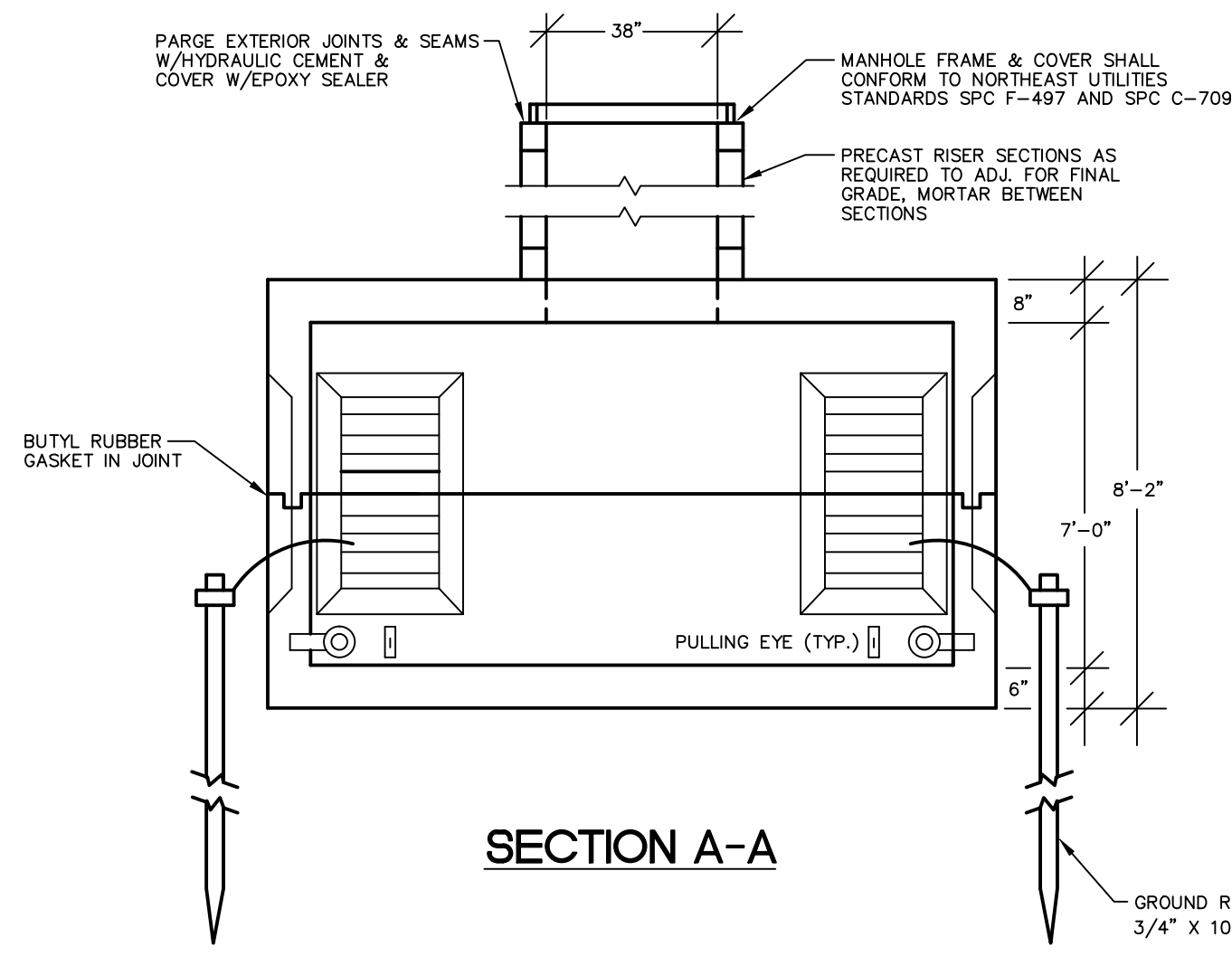
**ELEVATION 'B'**

**ELEVATIONS AT ELECTRICAL ENCLOSURES**

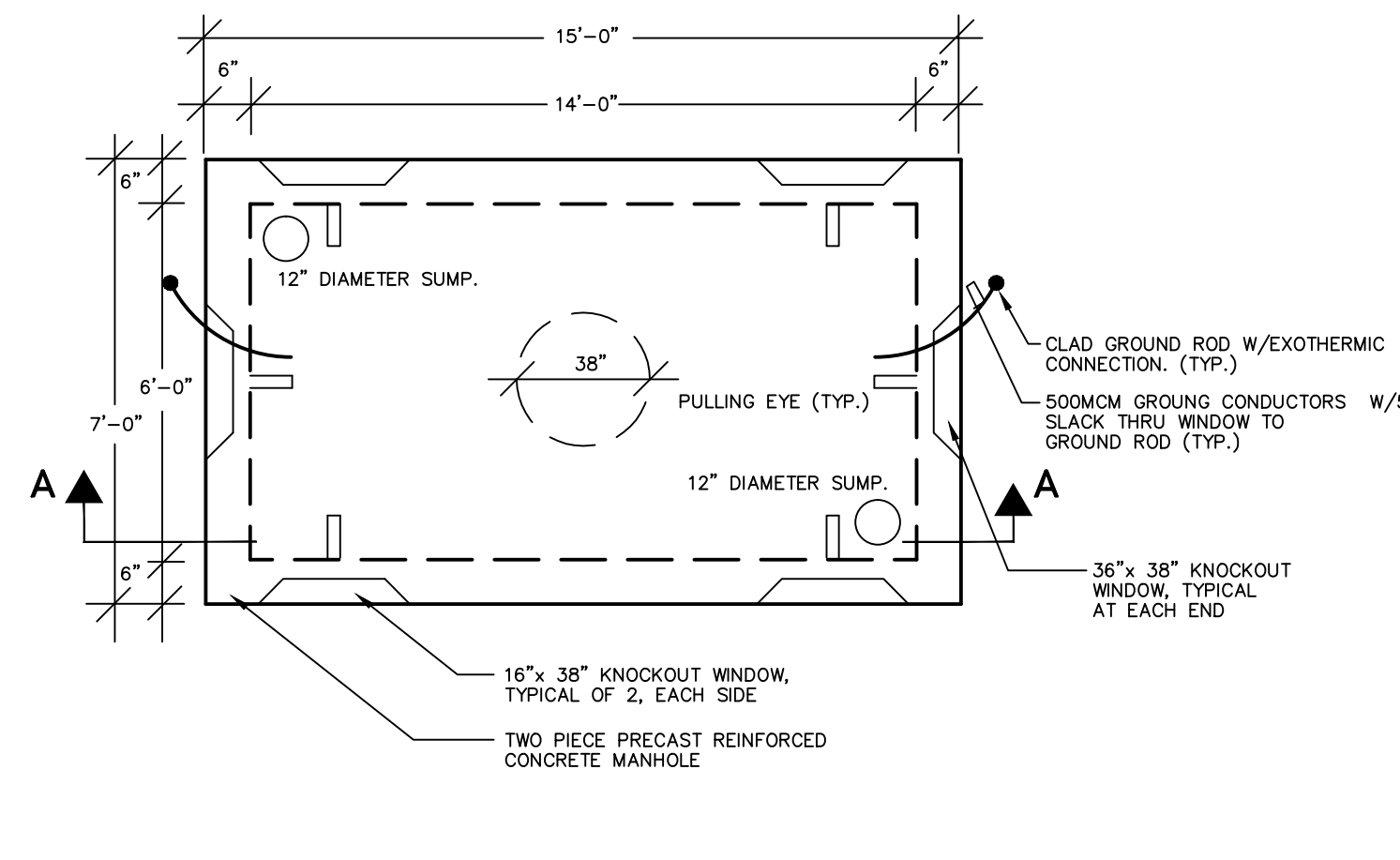
1/2" = 1'-0"

**DETAIL NOTES:**

- REFER TO KEYED DETAIL NOTES ABOVE.



**SECTION A-A**



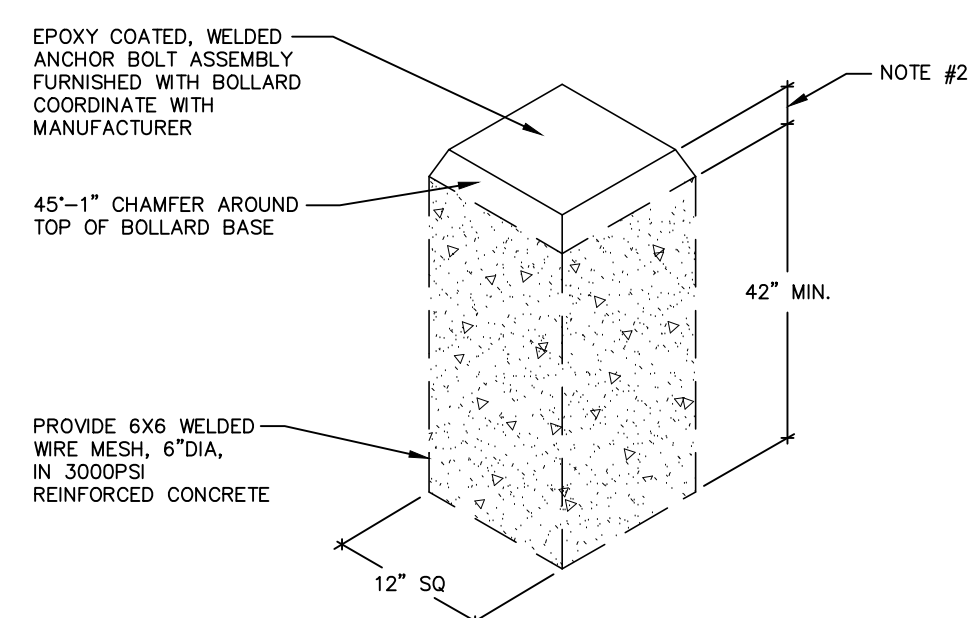
**PLAN**

**PRECAST MANHOLE DETAIL**

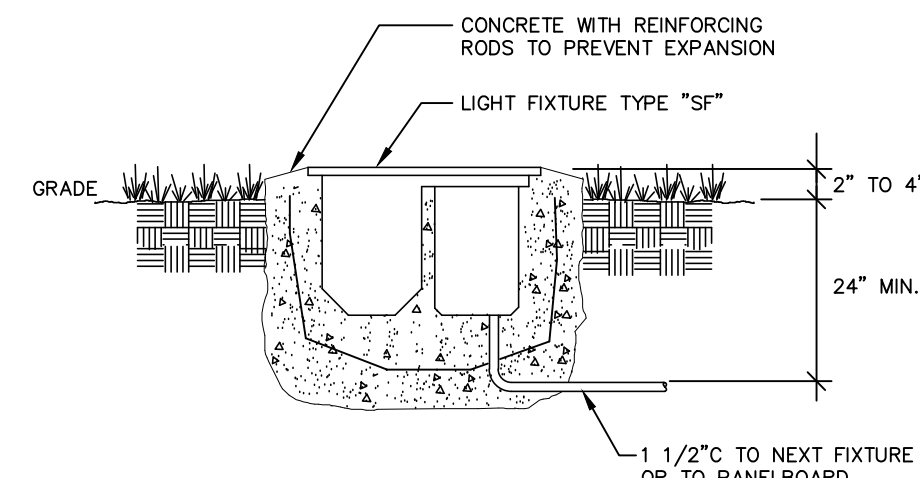
N.T.S.

**NOTES:**

- FOR PRIMARY ELECTRICAL POWER APPLICATIONS.
- MANHOLE SHALL CONFORM TO NORTHEAST UTILITY STANDARDS #SPC M-031, AND SPC M-032 FOR PRECAST 6'x14'x7" ELECTRIC MANHOLES.
- COORDINATE DUCTBANK ENTRANCE INTO MANHOLE TO ACCOMMODATE MANHOLE PRECAST KNOCKOUT LOCATIONS.
- PRIOR TO ANY CONSTRUCTION, CONTACT JOHN RUSSO AT NORTHEAST UTILITIES, (860) 638-2246.



**BOLLARD LIGHTING CONCRETE BASE DETAIL**  
N.T.S.



**FLAG POLE SITE LIGHTING MOUNTING DETAIL**  
N.T.S.

**NOTES:**

- DIMENSIONS SHOWN MAY VARY DEPENDING ON SUBMITTED LUMINAIRE. GENERAL CONTRACTOR TO VERIFY ACTUAL DIMENSIONS REQUIRED.
- TYPE "SE" BASE PROJECTION ABOVE GRADE: 1" MIN. / 2" MAX. TYPE "SE1" BASE PROJECTION ABOVE GRADE: 12"

REVISIONS		
DATE	MARK	DESCRIPTION
12/12/00		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE 1
02/28/01		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION
MARCH 4, 2002	1	REVISIONS TO DOMESTIC WATER SYSTEM VAULT.



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**

29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-8339 FAX: (860) 521-2620  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: AS NOTED

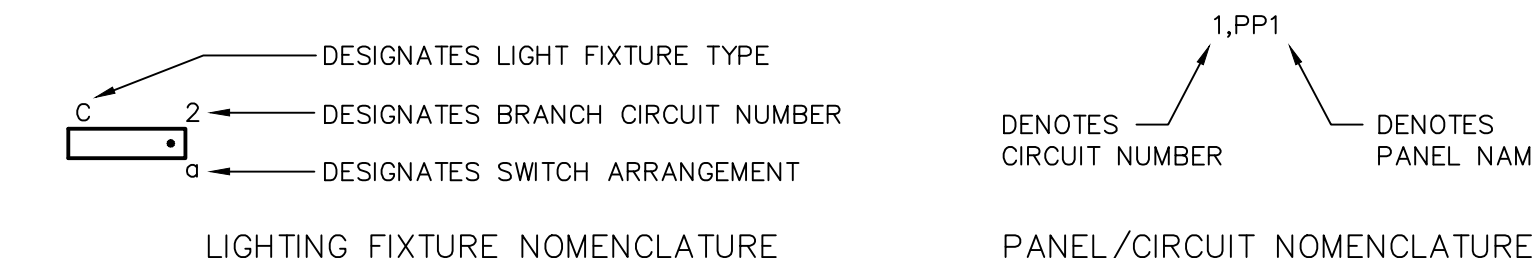
**ELECTRICAL SITE DETAILS**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **SU1.06**

LIGHTING		POWER		SPECIAL SYSTEMS		ONE-LINE		ABBREVIATIONS	
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
○ X	CEILING MOUNTED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖ o.b	DUPLEX RECEPTACLE; SUBLETTER "2" INDICATES RECEPTACLE TO BE MOUNTED 2" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK.	⊖ R.F.S	FLOOR MOUNTED TEL/DATA OUTLET; SUBLETTER "R" INDICATES RECESSED BACKBOX; SUBLETTER "F" INDICATES FLUSH BACKBOX; SUBLETTER "S" INDICATES SURFACE BACKBOX (MOUNTMENT)	—	POTHEAD	A	AMPERE
○ X	WALL MOUNTED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖ o.b	DOUBLE DUPLEX RECEPTACLE; SUBLETTER "2" INDICATES RECEPTACLE TO BE MOUNTED 2" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.	⊖	COMMUNICATIONS FLOOR MOUNTMENT WITH LFMC WHP CONNECTION	—	STRESSSCONE	C	CONDUIT
○ X	2'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖	SINGLE RECEPTACLE	⊖ W	WALL DATA/VOICE TO SYSTEMS FURNITURE	—	CURRENT TRANSFORMER	P	POLE
○ X	DUAL BALLAST 2'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖	RECESSED FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND FLUSH COVER	⊖ W	WALL POWER TO SYSTEMS FURNITURE	—	POWER TRANSFORMER	W	WIRE
○ X	1'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖ RM	RECESSED FLOOR BOX WITH THREE DUPLEX RECEPTACLE AND FLUSH COVER	⊖ D	RECESSED FLOOR BOX WITH FLUSH COVER, FOR DATA JACKS	—	FUSE	T	TELEPHONE SERVICE
○ X	2'x2' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖	FLUSH FLOOR BOX WITH SPECIAL PURPOSE RECEPTACLE AMPERAGE AND VOLTAGE AS INDICATED ON PLANS. VERIFY NEMA CONFIGURATION WITH EQUIPMENT MANUFACTURER.	⊖	COMBINATION DATA/TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE	—	FUSE CUT OUT	FA	FIRE ALARM
○ X	TYPICAL CEILING MOUNTED FLUORESCENT FIXTURE - NORMAL/EMERGENCY; SEE PLAN AND FIXTURE SCHEDULE FOR BATTERY OR INVERTER POWER	⊖	DUPLEX RECEPTACLE-ONE OUTLET SWITCHED	⊖ W	TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT, STUBBED UP TO ABOVE FINISHED CEILING INCLUDING DRAG LINE. SUBLETTER "W" INDICATES WALL-MOUNTED.	—	FUSE & SWITCH	NP	NON-FUSED
○ X	CONTINUOUS FLUORESCENT LIGHT FIXTURE	⊖	DUPLEX RECEPTACLE; SUBLETTER "C" INDICATES CEILING MOUNTED	⊖ HP	HANDICAP PAY TELEPHONE OUTLET WITH BACKBOX AND CONDUIT STUBBED UP TO ABOVE FINISHED CEILING	—	SWITCH	WF	WEATHER-PROOF
○ X	WALL WASHER LIGHT FIXTURE	⊖ H	DUPLEX RECEPTACLE FOR TELEVISION COORDINATE MOUNTING HEIGHT WITH ARCHITECT	⊖ SB	DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE	—	CIRCUIT BREAKER	C/B	CIRCUIT BREAKER
○ X	LIGHT ON EMERGENCY CIRCUIT	⊖	ELECTRICAL FLOOR MOUNTMENT WITH LFMC WHP CONNECTION	⊖	DATA OUTLET AT "SMART BOARD" WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE	—	DRAWOUT CIRCUIT BREAKER	AFB	ABOVE FINISHED FLOOR
○ X	FLUORESCENT STRIP LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖	SPECIAL-PURPOSE OUTLET, AMPERAGE AND VOLTAGE AS INDICATED ON PLANS. VERIFY NEMA CONFIGURATION WITH EQUIPMENT MANUFACTURER	⊖ TV	TELEVISION CABLE OUTLET; MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.	—	MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER	AFG	ABOVE FINISHED GRADE
○ X	POWER LIGHT TRACK WITH NUMBER OF FIXTURES AS INDICATED ON PLANS; SUBLETTER INDICATES FIXTURE TYPE	⊖ o.b	DUPLEX RECEPTACLE, EMERGENCY POWER; SUBLETTER "2" INDICATES RECEPTACLE TO BE MOUNTED 2" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.	⊖ S <sub>v</sub>	SOUND SYSTEM VOLUME CONTROLLER	—	BUSPLUG CIRCUIT BREAKER	CIR	CIRCUIT
○ X	2'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE	⊖	DOUBLE DUPLEX RECEPTACLE EMERG. POWER; SUBLETTER "2" INDICATES RECEPTACLE TO BE MOUNTED 2" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "N" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.	⊖ M <sub>F,W</sub>	SOUND SYSTEM MICROPHONE JACK; SUBLETTER "F" INDICATES FLOOR-MOUNTED; SUBLETTER "W" INDICATES WALL-MOUNTED.	—	BUSPLUG FUSE & SWITCH	TX	TRANSFORMER
○ X	SINGLE OR DUAL HEAD, WALL MOUNTED, BATTERY OPERATED REMOTE EMERGENCY LIGHT	⊖	SURFACE RACEWAY WITH OUTLETS AS INDICATED ON PLANS. MOUNTED AT 18" AFF. UNLESS OTHERWISE NOTED	⊖ S <sub>HA</sub>	SOUND SYSTEM SPEAKER, HIGH AMBIENT NOISE LEVEL TYPE	—	GROUND	MD	MOTORIZED DAMPER
○ X	DOUBLE FACED CEILING OR WALL-MOUNTED, EXT. SIGN WITH EMERGENCY POWER BACK UP AND DIRECTIONAL CHEVRONS AS INDICATED ON PLANS. SOLID AREA INDICATES DIRECTION OF EXIT FACE. CHEVRON VISIBLE FROM ANY DIRECTION UP TO 100 FEET.	⊖	ELECTRICAL PANEL 480/277 VOLT	⊖	SECURITY SYSTEM INFRARED MOTION SENSOR, CEILING MOUNTED	—	THERMAL OVERLOAD	PE	PRIMARY ELECTRIC SERVICE
○ X	SINGLE FACED CEILING OR WALL-MOUNTED EXT. SIGN WITH EMERGENCY POWER BACK UP AND DIRECTIONAL CHEVRONS AS INDICATED ON PLANS. SOLID AREA INDICATES DIRECTION OF EXIT FACE. CHEVRON VISIBLE FROM ANY DIRECTION UP TO 100 FEET.	⊖	ELECTRICAL PANEL 120/208 VOLT	⊖	SECURITY SYSTEM INFRARED MOTION SENSOR, WALL MOUNTED	—	RELAY/COOL	SE	SECONDARY ELECTRIC SERVICE
○ X	CEILING OR WALL-MOUNTED, EMERGENCY LIGHT UNIT WITH SELF CONTAINED BATTERY FIXTURE SHALL MONITOR LIGHTING CIRCUIT IN AREA.	⊖	SPECIAL-PURPOSE ELECTRICAL PANEL OR EQUIPMENT	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	N/O CONTACT	RTU	ROOFTOP UNIT
○ X	EMERGENCY LIGHTING BATTERY UNIT	⊖	ELECTRICAL POWER TRANSFORMER	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	N.C. CONTACT	TCP	TEMPERATURE CONTROL PANEL
○ X	AREA OF REFUGE INDICATOR LIGHT WITH BATTERY PACK	⊖	MAGNETIC STARTER	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	PROTECTIVE RELAY	SD	SMOKE DAMPER
<b>SWITCHES</b>		⊖	FUSED DISCONNECT SWITCH WITH SIZE/RATING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AMMETER	IG	ISOLATED GROUND
S	SINGLE-POLE SWITCH	⊖	NON-FUSED DISCONNECT SWITCH	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AMMETER SWITCH	RMC	RIGID METALLIC CONDUIT
S <sub>2</sub>	SQUASH COURT AREA LIGHT SWITCH	⊖	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	VOLTMETER	EMT	ELECTRIC METALLIC TUBING
S <sub>3</sub>	3-WAY SWITCH	⊖	ELECTRIC MOTOR	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	VOLTMETER SWITCH	FVC	FLEXIBLE METALLIC TUBING
S <sub>4</sub>	4-WAY SWITCH	⊖	VARIABLE FREQUENCY DRIVE	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	WATTMETER	TV	TELEVISION
S <sub>P</sub>	SINGLE-POLE SWITCH AND PILOT LIGHT	⊖	FLOOR OR CEILING MOUNTED JUNCTION BOX	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	WATTMETER DEMAND METER	PVC	POLYVINYL CHLORIDE CONDUIT
S <sub>be</sub>	BOILER EMERGENCY SWITCH	⊖	CEILING MOUNTED JUNCTION BOX AT PRESENTATION VIDEO DEVICE COORDINATE LOCATION WITH ARCHITECT AND TECHNOLOGY CONSULTANTS ("T" SERIES), DRAWINGS.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	TRANSFORMER	EF	EXHAUST FAN
S <sub>D</sub>	SINGLE-POLE DIMMER SWITCH	⊖	FLOOR OR CEILING MOUNTED JUNCTION BOX AT MOVEABLE PARTITION	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	SHIELDED TRANSFORMER	REF	ROOF EXHAUST FAN
S <sub>D3</sub>	3-WAY DIMMER SWITCH	⊖	WIRELESS DEVICE JUNCTION BOX	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AUTO TRANSFORMER	AHU	AIR HANDLING UNIT
S <sub>T</sub>	SINGLE-POLE SWITCH WITH THERMAL OVERLOAD PROTECTION	⊖	WALL MOUNTED JUNCTION BOX	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	LIGHTNING ARRESTER	CUH	CABINET UNIT HEATER
S <sub>TM</sub>	ROTARY TIMER SWITCH	⊖	WALL MOUNTED JUNCTION BOX AT ELECTRIC HAND DRYER, UNIT FURNISHED BY OTHERS, INSTALLED AND WREED BY DIVISION 16	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	GENERATOR	EWG	ELECTRIC WATER COOLER
S <sub>2PD</sub>	THREE POSITION AC SWITCH	⊖	WALL MOUNTED JUNCTION BOX AT BACKBOARD WINCH	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	DELTA	EWH	ELECTRIC WATER HEATER
S <sub>K</sub>	SINGLE-POLE KEYSWITCH	⊖	WALL MOUNTED JUNCTION BOX AT MAT MOVER	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	WYE	GFI	GROUND FAULT INTERRUPTER
S <sub>K3</sub>	KEYED, 3-WAY SWITCH	⊖	WALL MOUNTED JUNCTION BOX AT MOVEABLE BLEACHERS	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	KEY INTERLOCK	MAU	MAKE-UP AIR UNIT
S <sub>K4</sub>	KEYED, 4-WAY SWITCH	⊖	WALL MOUNTED JUNCTION BOX AT BOOK DETECTION SYSTEM	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AUTOMATIC TRANSFER SWITCH (A.T.S.)	WG	WIRE GUARD
S <sub>KBB</sub>	ELECTRIC BASKETBALL BACKBOARD RAISE/LOWER SWITCH FURNISHED WITH BACKBOARD BY OTHERS, INSTALLED AND WREED BY DIV. 16	⊖	JUNCTION BOX AT ELECTRONIC FAUCET SENSOR TRANSFORMER MOUNTED ABOVE GRID CEILING, UNIT FURNISHED AND INSTALLED BY OTHERS, WREED BY DIVISION 16.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	MAIN LUG ONLY PANELBOARD	S&P	SPACE AND PROVISION
S <sub>2P</sub>	MOTORIZED DOOR RAISE/LOWER SWITCH FURNISHED WITH DOOR UNIT BY OTHERS, INSTALLED AND WREED BY DIV. 16.	⊖	JUNCTION BOX AT ELECTRONIC "SMART BOARD", COORDINATE EXACT LOCATION WITH ARCHITECT AND TECHNOLOGY CONSULTANTS ("T" SERIES), DRAWINGS.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	MAIN CIRCUIT BREAKER PANELBOARD	E	EXISTING TO REMAIN
S <sub>O</sub>	OCCUPANCY SENSOR SWITCH	⊖	WEATHER PROOF JUNCTION BOX AT ELECTRIC HEAT TRACE CABLE FURNISHED, INSTALLED AND WREED BY DIVISION 16	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	EXTERIOR REMOTE FIRE ALARM FLASHING STROBE LIGHT	ER	EXISTING EQUIPMENT TO REMAIN
S <sub>O2</sub>	CEILING MOUNTED OCCUPANCY SENSOR WITH 2 SETS OF CONTACTORS	⊖	HARD-WIRED EQUIPMENT CONNECTION	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM CONTROL PANEL	RE	REMOVE EXISTING EQUIPMENT
⊖	CONTACTOR, COMPLETE WITH NEMA ENCLOSURE	⊖	RELAY	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	REMOTE ANNUNCIATOR PANEL	RL	RELOCATE EXISTING EQUIPMENT
⊖	TIME CLOCK, AS INDICATED ON PLANS	⊖	FUSOMATIC EMERGENCY BOILER SHUT-OFF SWITCH	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	MANUAL FIRE ALARM PULL STATION	NE	NEW LOCATION OF EXISTING EQUIPMENT
⊖	PHOTOCELL	⊖	BRANCH CIRCUIT POWER WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM VISUAL INDICATING UNIT	NIC	NOT IN CONTRACT
⊖	PUSHBUTTON SWITCH	⊖	BRANCH CIRCUIT SWITCHED WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM SPEAKER/VISUAL INDICATING UNIT	NL	LIGHT FIXTURE WIRED FOR "NIGHT LIGHT" OPERATION
⊖	EMERGENCY SHUT-OFF SWITCH, SUBLETTER "E" INDICATES ELECTRICAL, SUBLETTER "G" INDICATES GAS	⊖	BRANCH CIRCUIT AC OR DC CONTROL WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	VOICE EVACUATION CONTROL PANEL	LV	LOW VOLTAGE
⊖	MASTER EMERGENCY SHUT-OFF/KEYED RESET SWITCH, SUBLETTER "K" INDICATES ELECTRICAL, SUBLETTER "M" INDICATES GAS	⊖	CONDUIT DOWN	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM CEILING-MOUNTED SPEAKER	ST	SHUNT TRIP
⊖	AQUASTAT	⊖	CONDUIT UP	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM MINI SPEAKER/STROBE		
⊖	OCCUPANCY SENSOR POWER PACK	⊖	HOME RUN, 3/4" CONDUIT, 2#12 AND 1#12 GROUND, UNLESS OTHERWISE NOTED. NOTE: HOME RUN SHALL BE FROM FIRST ELECTRICAL DEVICE BACKBOX IN CIRCUIT TO ELECTRICAL PANEL.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM HEAT DETECTOR, SUBLETTER "B" INDICATES 200 DEGREE F. HEAT DETECTOR		
⊖	DOOR LEVELER CONTROL FURNISHED WITH UNIT, INSTALLED AND WREED BY DIV. 16	⊖	WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIREFIGHTERS TELEPHONE OUTLET		
⊖	MOTORIZED PARTITION SWITCH FURNISHED WITH PARTITION BY OTHERS, INSTALLED AND WREED BY DIV. 16	⊖	BRANCH CIRCUIT SWITCHED WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AREA OF REFUGE TELEPHONE OUTLET		
⊖	MOTORIZED BLEACHER SWITCH FURNISHED WITH BLEACHERS BY OTHERS, INSTALLED AND WREED BY DIV. 16	⊖	BRANCH CIRCUIT AC OR DC CONTROL WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	EMERGENCY TELEPHONE OUTLET		
⊖	MOTORIZED CURTAIN SWITCH FURNISHED WITH CURTAIN BY OTHERS, INSTALLED AND WREED BY DIV. 16	⊖	BRANCH CIRCUIT EMERGENCY AC OR DC WIRING, 3/4" CONDUIT, 2#10 AND #12 GROUND, UNLESS OTHERWISE NOTED	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AUTOMATIC FIRE ALARM SMOKE DETECTOR		
		⊖	CABLETRAY	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	BEAM TYP. SMOKE DETECTOR		
		⊖	CONDUIT DOWN	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	AUTOMATIC FIRE ALARM SMOKE DETECTOR WITH SOUNDER BASE		
		⊖	CONDUIT UP	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	DUCT SMOKE FIRE ALARM DETECTOR		
		⊖	HOME RUN, 3/4" CONDUIT, 2#12 AND 1#12 GROUND, UNLESS OTHERWISE NOTED. NOTE: HOME RUN SHALL BE FROM FIRST ELECTRICAL DEVICE BACKBOX IN CIRCUIT TO ELECTRICAL PANEL.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	DUCT HEAT FIRE ALARM DETECTOR		
		⊖	WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	SMOKE DETECTOR TEST SWITCH		
		⊖	BRANCH CIRCUIT POWER WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—	FIRE ALARM AUDIO AND VISUAL UNITS WITH HIGH OUTPUT AUDIO UNIT		
		⊖	BRANCH CIRCUIT SWITCHED WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	BRANCH CIRCUIT AC OR DC CONTROL WIRING	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	BRANCH CIRCUIT EMERGENCY AC OR DC WIRING, 3/4" CONDUIT, 2#10 AND #12 GROUND, UNLESS OTHERWISE NOTED	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	CABLETRAY	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	CONDUIT DOWN	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	CONDUIT UP	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			
		⊖	HOME RUN, 3/4" CONDUIT, 2#12 AND 1#12 GROUND, UNLESS OTHERWISE NOTED. NOTE: HOME RUN SHALL BE FROM FIRST ELECTRICAL DEVICE BACKBOX IN CIRCUIT TO ELECTRICAL PANEL.	⊖	SECURITY SYSTEM INTERIOR SIREN, WALL MOUNTED	—			

**LEGEND NOTES:**  
 A. THIS IS A GENERAL LEGEND OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT.



**TYPICAL CIRCUITING DETAIL**

**ELECTRICAL PROJECT ALTERNATE NOTES:**

- ALTERNATE NUMBER 3 REPLACE PENDANT MOUNTED LIGHT FIXTURES, TYPE "T", IN ALL TYPICAL CLASSROOMS AT AREAS "A" AND "B" ON MAIN AND UPPER LEVELS WITH LIGHT FIXTURE TYPE "A", 3 LAMP, PARABOLIC LENS 2'x4' RECESSED TROFFER AND WITH LIGHT FIXTURE TYPE "B", 3 LAMP, PARABOLIC LENS 2'x2' RECESSED TROFFER FIXTURES. PROVIDE (8) TYPE "A" AND (4) TYPE "B" LIGHT FIXTURES IN A TYPICAL "SMALL" CLASSROOM, SUCH AS ROOMS 1103, 1104, 1105, ETC. AND (10) TYPE "A" AND (5) TYPE "B" LIGHT FIXTURES IN A TYPICAL "LARGE" CLASSROOM, SUCH AS ROOMS 1111 AND 1115, ETC.. WIRE ALL FIXTURES FOR TWO-LEVEL SWITCHING IN EACH ROOM.  
 REFERENCE DRAWINGS: E1.02, E1.04, E1.20 AND E1.22.
- ALTERNATE NUMBER 6 PROVIDE POWER CIRCUITS AND FINAL CONNECTIONS TO (3) ADDITIONAL MOTORIZED BLEACHER UNITS IN AUXILIARY GYM 1802. EACH CIRCUIT SHALL BE 2#12, 1#12GRD., 3/4" CONDUIT TO A SPARE 20AMP, 1P CIRCUIT BREAKER IN PANEL "LPH1B". MAKE ALL CONNECTIONS TO NEW BLEACHER UNITS AND ASSOCIATED WALL CONTROL SWITCHES AS NOTED ON "TYPICAL ELECTRICAL OPERATOR WIRING DIAGRAM FOR BACKBOARD, PARTITION, CURTAIN, OR BLEACHER".  
 REFERENCE DRAWING: E1.17.
- ALTERNATE NUMBER 7 POWER CIRCUITS AND FINAL CONNECTIONS TO ALL MECHANICAL EQUIPMENT ASSOCIATED WITH THE PROVISION OF CHILLER UNIT #3, INCLUDING POWER FOR PUMPS P-12, P-15 AND CHILLER #3.  
 REFERENCE DRAWINGS: E1.01 AND E4.02.
- ALTERNATE NUMBER 8 REVISE POWER CIRCUIT(S) AND FINAL CONNECTIONS TO PROVIDE (2) MOTORIZED PARTITION UNITS IN LIEU OF A SINGLE MOTORIZED CURTAIN BETWEEN MAIN GYM 1801 AND AUXILIARY GYM 1802.  
 REFERENCE DRAWING: E1.17.

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
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**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT  
 06248

STATE PROJECT #: 208-018N  
 STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
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 VZHS PROJECT NUMBER: 2000155.00

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 DRAWN BY: MSA SCALE: NONE  
 CHECKED BY: RLG

**ELECTRICAL SYMBOL LIST**

WIRING NOTES:

- A. RACEWAYS AND WIRING ARE INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
- B. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
- C. ALTHOUGH ALL FEEDER AND BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE FEEDER AND BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
- D. WHEN THE COMBINING OF CIRCUITS OR HOMERUNS IS ALLOWED, RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE CIRCUIT, EXCEPT FOR LIGHTING CIRCUITS, UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED.
- E. WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL. TYPICALLY, ALL FEEDERS WILL REQUIRE A NEUTRAL, EXCEPT MOST MOTOR CIRCUITS.
- F. WIRE AND RACEWAY SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT THE CIRCUIT.
- G. RACEWAYS SHALL BE AS REQUIRED AND INDICATED IN THE SPECIFICATIONS.
- H. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.

MODULAR SYSTEMS FURNITURE CONNECTION NOTES:

AT WALL POWER JUNCTION BOX LOCATIONS FOR MODULAR SYSTEMS FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, AND BLANK PLATE WITH A 1" DIA. 90° FLEX CONDUIT FITTING FOR CONNECTION TO FURNITURE POWER WHIP FITTING. POWER WHIP FURNISHED WITH FURNITURE BY OTHERS, INSTALLED AND WIRED TO FURNITURE BY DIV. 16. PROVIDE 3/4" CONDUIT FROM JUNCTION BOX TO LOCAL POWER PANEL. PROVIDE TWO SEPARATE CIRCUITS IN EACH WORKSTATION, UP TO (4) WORKSTATIONS PER INDIVIDUAL CIRCUIT. PROVIDE DEDICATED CIRCUITS FOR PRINTERS AND A SEPARATE DEDICATED CIRCUIT FOR PHOTOCOPIERS. MODULAR FURNITURE FURNISHED BY OTHERS WITH BUILT-IN POWER OUTLETS PRE-WIRED WITH WIRING HARNESS.

AT WALL DATA/VOICE JUNCTION BOX LOCATIONS FOR MODULAR SYSTEMS FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, AND BLANK PLATE WITH A 1" DIA. BUSHED OPENING FOR CONNECTION TO FURNITURE LOW VOLTAGE RACEWAY. DATA/VOICE CABLING AND CONNECTIONS BY OWNER'S SYSTEMS VENDORS. PROVIDE (2) 1" CONDUITS FROM JUNCTION BOX TO CEILING PLENUM SPACE.

GENERAL LIGHTING PLAN NOTES:

- A. FOR LIGHTING FIXTURE DESCRIPTIONS, REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E4.01.
- B. FOR ACTUAL LOCATION OF CEILING MOUNTED LIGHTING FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING DRAWING(S).
- C. FOR ACTUAL LOCATION OF WALL MOUNTED LIGHTING FIXTURES AND TASK LIGHTING, REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS.
- D. ALL EXIT SIGNS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL LIFE SAFETY LIGHTING BRANCH CIRCUIT.
- E. EMERGENCY BATTERY UNITS AND BALLASTS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- F. A LIGHT SWITCH (OR OCCUPANCY SENSOR SWITCH), IN A SPACE SHALL CONTROL LIGHTING EXCLUSIVELY IN THAT SPACE UNLESS OTHERWISE INDICATED.
- G. REFER TO LIGHTING DETAILS ON DRAWING E3.01 FOR TYPICAL WIRING SCHEMATICS.
- H. INSTALL CONDUIT AND WIRING FOR EXTERIOR BUILDING MOUNTED LIGHT FIXTURES, CONCEALED WITHIN BUILDING, NOT EXPOSED ON BUILDING EXTERIOR.
- I. EXISTING LIGHT FIXTURES TO REMAIN, WITHIN CONTRACT AREAS, SHALL BE CLEANED AND RELAMPED WITH NEW LAMPS SIMILAR TO NEW FIXTURES.

GENERAL POWER AND SIGNAL PLAN NOTES:

- A. CONNECT ALL WIRING DEVICES TO THE PANELBOARD(S) NOTED, UNLESS OTHERWISE INDICATED ON THIS DRAWING.
- B. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- C. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND CASEWORK ELEVATION DRAWINGS FOR OUTLET REQUIREMENTS AND LOCATIONS.
- D. REFER TO POWER AND SIGNAL RISER AND DETAIL DRAWINGS FOR TYPICAL WIRING SCHEMATICS AND INSTALLATION DETAILS.
- E. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, FIRE ALARM DEVICES, ETC. WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS PRIOR TO START OF WORK, REQUEST CLARIFICATIONS FROM ARCHITECT PRIOR TO INSTALLATION.

GENERAL PROJECT SCOPE NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL STARTERS, DISCONNECT SWITCHES, BRANCH CIRCUIT WIRING AND ASSOCIATED DEVICES TO POWER MECHANICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, BOILERS, PUMPS, AND AIR HANDLING UNITS. REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.02 FOR EXACT REQUIREMENTS.
2. ALL CLASSROOMS, OFFICES, LOUNGES, CONFERENCE ROOMS AND AREAS OF ASSEMBLY WITH HIGH OCCUPANCY SHALL BE COMPLETE WITH LIGHTING SYSTEM OCCUPANCY SENSORS. THESE SHALL BE WIRED AS SHOWN IN DETAILS ON DRAWING #E3.01 WITH MANUAL OVERRIDE SWITCHES AND APPROPRIATE RELAYS FOR EMERGENCY POWER USE.

VIDEO MONITOR NOTES:

1. VERIFY VIDEO MONITOR AND POWER/CABLE OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.
2. VIDEO OUTLET AND ASSOCIATED CABLING/CONNECTIONS BY OWNER'S VIDEO SYSTEM INSTALLER.

LIGHTING FIXTURE NOTES:

- A. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET THE JOB REQUIREMENTS. VERIFY CEILING AND GRID TYPE PRIOR TO ORDERING FIXTURES. USE THE LATEST ARCHITECTURAL DRAWINGS.
- B. VERIFY FIXTURE MOUNTING, HEIGHTS AND LOCATION AGAINST PLANS, ELEVATIONS AND DETAIL DRAWINGS. EXACT LOCATION OF FIXTURES SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO ROUGHING IN.
- C. SERIES FIXTURES SHALL SATISFY LENGTHS AS INDICATED ON THE DRAWINGS. FIELD VERIFY EXACT LENGTHS AND PROVIDE COMPONENTS AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
- D. FIXTURE LETTERS SHOWN ONCE ON A CONTINUOUS ROW OF FIXTURES SHALL BE TYPICAL FOR THAT ROW UNLESS OTHERWISE INDICATED.
- E. FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILING, REFER TO SPECIFICATIONS.
- F. MANUFACTURERS' CATALOG NUMBERS ARE INDICATED FOR REFERENCE PURPOSES ONLY. THEY ARE MEANT TO PROVIDE A GENERAL DESCRIPTION OF THE DESIGN AND QUALITY OF FIXTURES REQUIRED. DESCRIPTIONS AND NOTES MAY INDICATE ITEMS THAT ARE NOT INDICATED IN THE CATALOG NUMBER. WHERE ONE MANUFACTURER'S CATALOG NUMBER IS LISTED FOLLOWED BY TWO OR MORE OTHER MANUFACTURERS NAMES ONLY, SUBSTITUTIONS SUBMITTED SHALL BE DOCUMENTED AS EQUAL IN PERFORMANCE AND APPEARANCE TO THE FULLY LISTED ITEM. PROVIDE POINT BY POINT LIGHTING CALCULATIONS WITH SHOP DRAWINGS WHEN REQUESTED.
- G. INCANDESCENT LAMPS SHALL BE RATED 130 VOLTS UNLESS OTHERWISE SPECIFIED.
- H. FLUORESCENT FIXTURES SHALL HAVE HIGH POWER FACTOR, CLASS P, ELECTRONIC BALLASTS UNLESS OTHERWISE INDICATED. APPROVED AS A COMBINATION WITH LAMPS SUPPLIED. FIXTURES, LAMPS AND BALLASTS SHALL MEET APPLICABLE REQUIREMENTS OF UTILITY INCENTIVE PROGRAMS.
- I. SINGLE LAMP OR THREE LAMP FIXTURES USED FOR GENERAL ILLUMINATION, AND MOUNTED WITHIN TEN FEET OF EACH OTHER AND WITHIN THE SAME ROOM SHALL BE TANDEM WIRED TO ELIMINATE UNNECESSARY USE OF SINGLE LAMP BALLASTS. MAXIMIZE USE OF THREE AND FOUR LAMP BALLASTS WHERE SWITCHING DOES NOT REQUIRE OTHERWISE.
- J. COMPACT FLUORESCENT FIXTURES SHALL HAVE HIGH POWER FACTOR, THERMALLY PROTECTED ELECTRONIC BALLASTS WITH END OF LAMP LIFE SENSING CAPABILITY WHICH WILL CORRECT ITSELF UPON RELAMPING.
- K. CUSTOM FINISH COLORS SHALL BE AS SELECTED BY THE ARCHITECT.
- L. FLUORESCENT AND COMPACT FLUORESCENT LAMPS SHALL HAVE KELVIN COLOR TEMPERATURE, AND MINIMUM COLOR RENDERING INDEX AS INDICATED IN SPECIFICATION. METAL HALIDE LAMPS SHALL HAVE SHROUDED ARC TUBE, COLOR CORRECTING COATING ON OUTER ENVELOPE, WITH KELVIN COLOR TEMPERATURE AND A COLOR RENDERING INDEX AS INDICATED IN SPECIFICATION.
- M. LINEAR ROWS OF RECESSED OR HUNG FLUORESCENT LUMINAIRES SHALL BE INSTALLED TO PROVIDE A LENGTH AS INDICATED ON THE DRAWINGS. PROVIDE ALL REQUIRED CONNECTORS AND END PIECES, SO THAT HOUSINGS ARE A COMPLETE ASSEMBLY WITH THE APPEARANCE OF A SINGLE UNIT. BALLASTS AND LAMP PINS SHALL BE FACTORY PRE-WIRED FOR SWITCHING AND CIRCUITING AS INDICATED ON THE DRAWINGS. HANGER STYLE SHALL BE AS SELECTED BY THE ARCHITECT (AIRCRAFT CABLE WITH COILED CORD, STEM MOUNT, ETC.) PROVIDE CANOPIES FOR LOCATIONS WHERE HANGER MOUNTS TO UNFINISHED CEILING STRUCTURE (WHERE VISIBLE) AND WHERE PASSING THROUGH SUSPENDED CEILING. MAXIMIZE USE OF THREE AND FOUR LAMP BALLASTS. ENTIRE ASSEMBLY SHALL BE SUPPLIED BY ONE VENDOR. COORDINATE WITH FIXTURE VENDOR.
- N. EXIT LIGHT FIXTURES SHALL CONFORM TO UL LISTING #924, 1570, 1571, NFPA 101 AND WITH ALL APPLICABLE CODES.

GENERAL NOTES:

- A. THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED, AND COORDINATION WITH ALL TRADES. SCOPE OF WORK IS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLEMENTARY. WORK INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS. WHERE DOCUMENTS CONFLICT WITH THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
- B. PROVIDE ALL WORK INDICATED OR DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.
- C. COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND MANUFACTURER'S EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
- D. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE LIFE SAFETY CODE, THE ELECTRIC CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE EVERY FACET OF WORK REQUIRED BY CODES AND AUTHORITIES.
- E. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, MANUFACTURER'S RECOMMENDATION, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
- F. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, ROUTING AND MOUNTING HEIGHTS OF EQUIPMENT AND RACEWAYS SHALL BE COORDINATED WITH THE ARCHITECT, OTHER TRADES, EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
- G. PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
- H. IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
- I. ELECTRICAL WORK SHALL BE RECESSED INTO WALLS OR INSTALLED ABOVE HUNG CEILINGS UNLESS OTHERWISE INDICATED.
- J. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE MINIMUM 24 INCH SPACING IN FIRE RATED WALLS. MOUNT LOW VOLTAGE AND POWER OUTLETS IN DIFFERENT STUD WALL CAVITIES.
- K. PROVIDE ELECTRICAL OUTLET PLATE GASKETS SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
- L. PROVIDE CODE REQUIRED STARTERS AND DISCONNECTS WHICH ARE NOT FURNISHED UNDER DIVISIONS 11, 13 OR 15. INSTALL STARTERS AND DISCONNECTS THAT ARE FURNISHED UNDER DIVISIONS 11, 13 OR 15.
- M. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
- N. INSTALLATION OF RACEWAYS BELOW THE FLOOR SLAB WILL NOT BE ACCEPTABLE UNLESS SPECIFICALLY INDICATED OTHERWISE.
- O. PROVIDE WATERTIGHT AND GASTIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING FROM BELOW GRADE. O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHERTIGHT SEAL AT PENETRATIONS ABOVE GRADE.
- P. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.

GENERAL WIRING NOTE:

1. BRANCH CIRCUIT CONDUCTORS THAT DO NOT EXCEED 100 FEET TO FURTHEST OUTLET OR DEVICE, SHALL NOT BE LESS THAN #12 AWG. FOR CIRCUIT HOMERUNS THAT DO NOT EXCEED 150 FEET, #10 AWG IS PERMITTED. FOR CIRCUIT HOMERUNS GREATER THAN 150 FEET, CONDUCTOR SHALL BE NOT LESS THAN #8 AWG.

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION.
FEBRUARY 21, 2001		REVIEW OF PHASE II DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION.
JUNE 22, 2001		RESUBMISSION OF PHASE II DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES.



**NEW RHAM  
HIGH SCHOOL  
WALL STREET  
HEBRON, CONNECTICUT  
06248**

**STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR**

**VANZELM HEYWOOD & SHADFORD INC.**  
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vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS  
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ARCHITECTS**

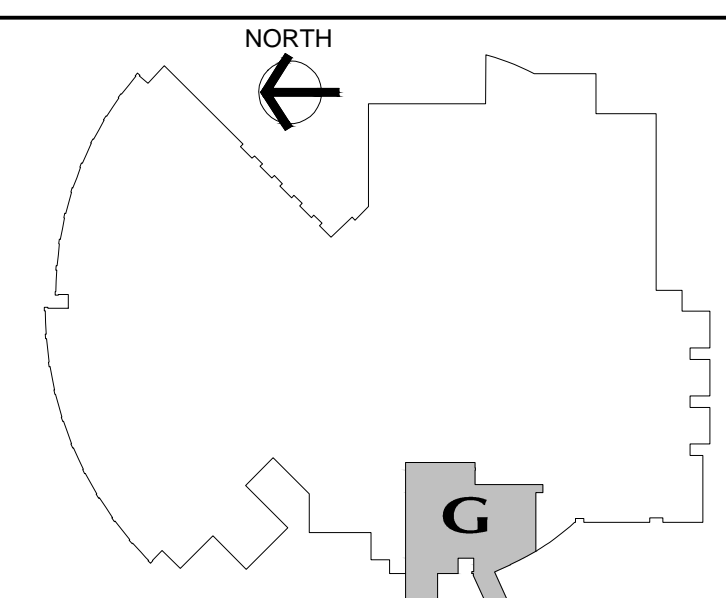
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: MSA SCALE: NONE  
CHECKED BY: RLG

**ELECTRICAL  
GENERAL  
NOTES**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E0.02**





**LOWER LEVEL KEY PLAN**

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
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**ARCHITECTS**

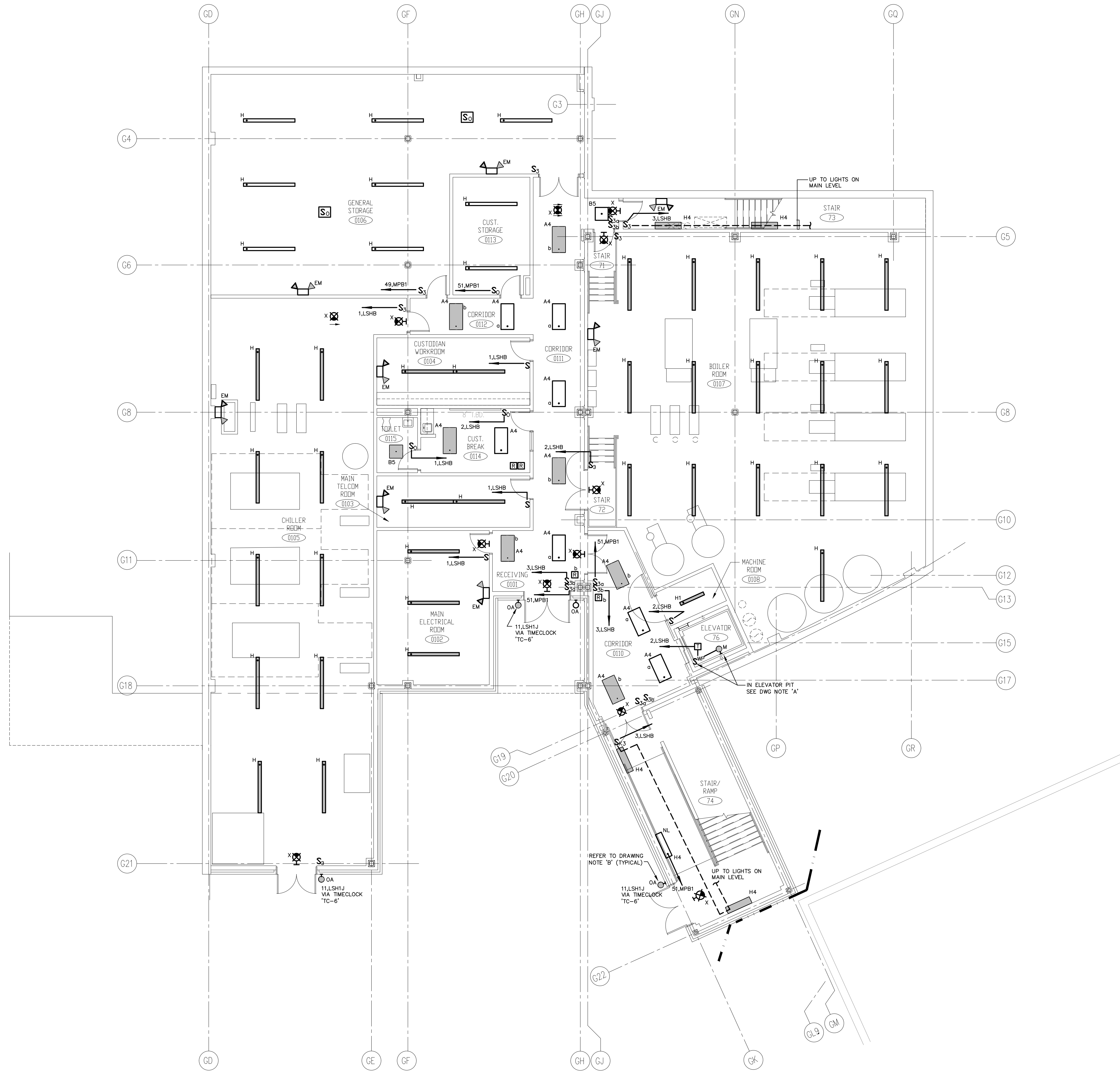
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: SCALE: 1/8" = 1'-0"  
CHECKED BY:

**LOWER LEVEL LIGHTING PLAN AREA G**

PROJECT NO.: 00048 DRAWING NO.:

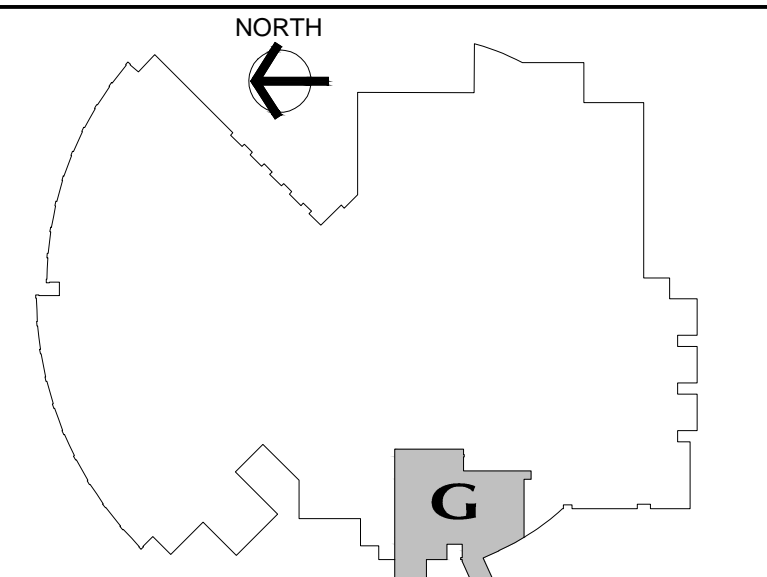
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**DRAWING NOTES:**

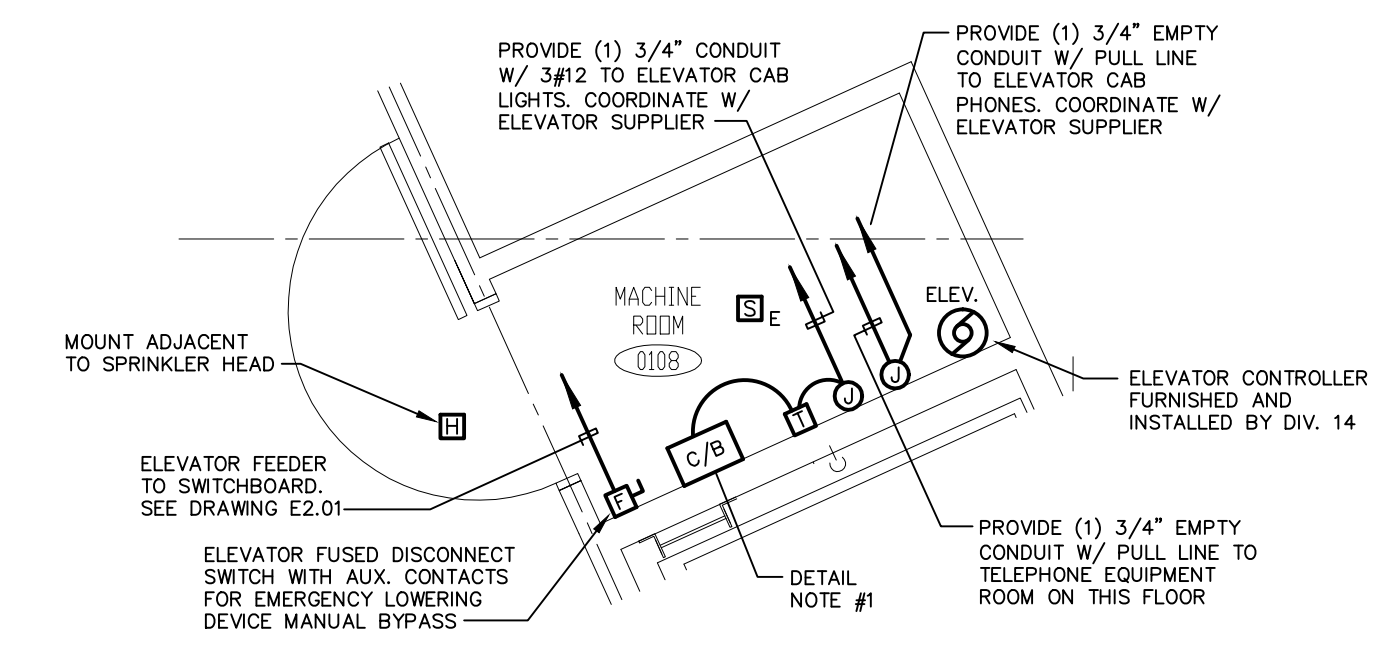
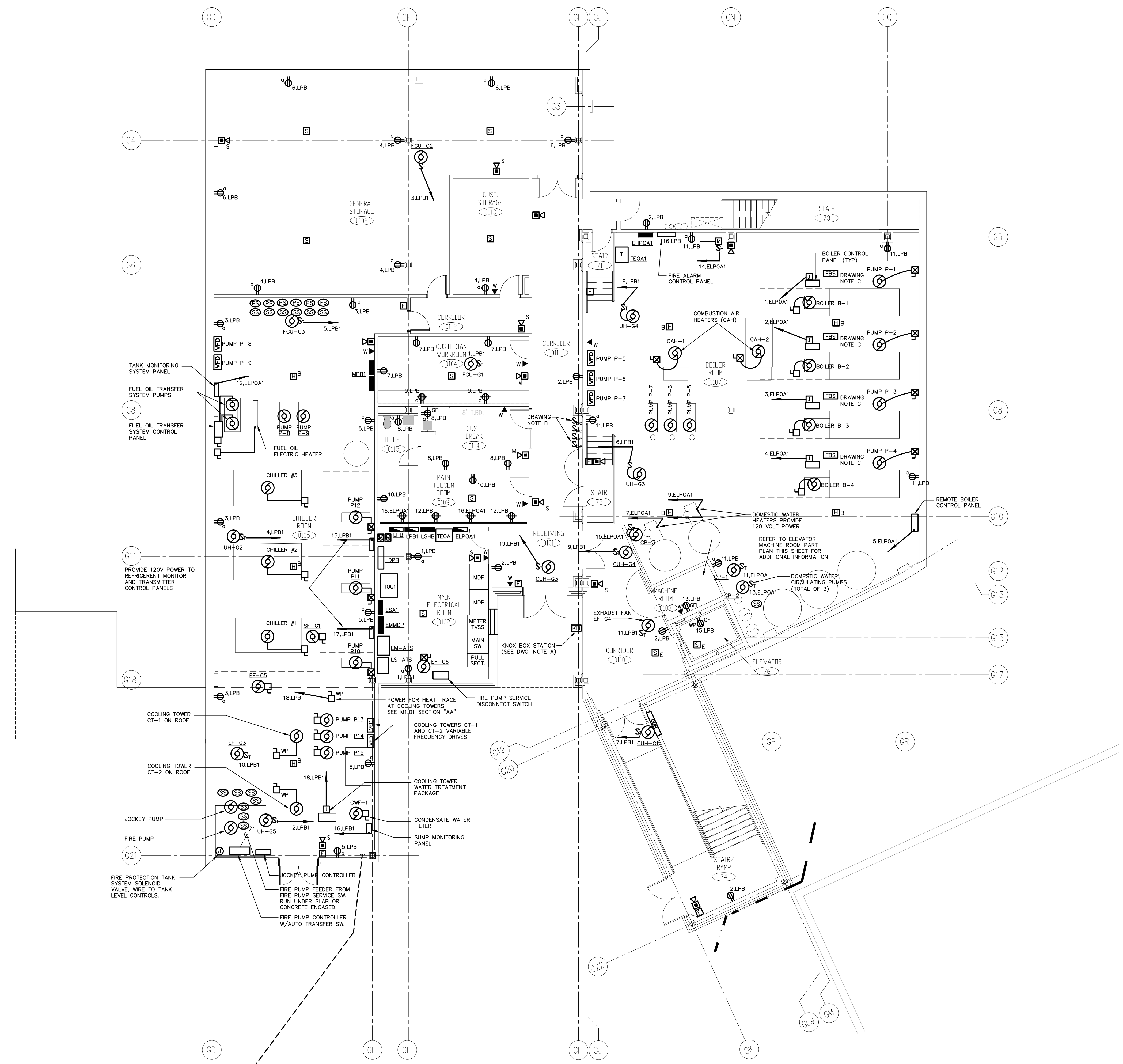
- PROVIDE A DRY-TYPE GENERAL PURPOSE TRANSFORMER, SINGLE PHASE, 480V PRIMARY-120/208V SECONDARY, 1.5kVA.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "SS,SS", "SS,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT, THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G., 3/4" C TO PANEL DESIGNATED.



**LOWER LEVEL KEY PLAN**

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**ELEVATOR MACHINE ROOM PART PLAN**

SCALE: 1/4"=1'-0"  
 DETAIL NOTES:  
 1. PROVIDE A 20AMP, 1POLE, 277VOLT CIRCUIT BREAKER IN NEMA-1 ENCLOSURE, AND A 3.0KVA DRY TRANSFORMER IN ELEVATOR MACHINE ROOM AS SHOWN FOR POWER TO ELEVATOR CAB LIGHTS.

- DRAWING NOTES:**
- KNOX BOX UNIT FURNISHED AND INSTALLED BY OTHERS, PROVIDE CONNECTION TO FIRE ALARM INITIATION LOOP WIRING FOR MONITORING OF BOX.
  - PROVIDE BOILER EMERGENCY SHUT-OFF SWITCHES, WIRE TO BOILER CONTROL PANELS PER MFR'S WIRING DIAGRAMS. BOILER CONTROL PANELS FURNISHED AND INSTALLED BY DIV. 15, WIRED BY DIV. 16.
  - PROVIDE (4) "FUSOMATIC" THERMALLY ACTIVATED BOILER SHUT-OFF SWITCHES IN BOILER ROOM 0107. WIRE EACH FUSOMATIC SWITCH TO RESPECTIVE BOILER CONTROLS. ON TEMPERATURE RISE ABOVE SET-POINT, FUSOMATIC SWITCH UNIT SHALL DE-ENERGIZE BOILER BURNER TO STOP BOILER FIRING.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4"CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT  
 06248

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEY WOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

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 DRAWN BY: \_\_\_\_\_ SCALE: 1/8" = 1'-0"  
 CHECKED BY: \_\_\_\_\_

**LOWER LEVEL POWER PLAN AREA G**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.01**

WIRING NOTES:

- A. RACEWAYS AND WIRING ARE INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
- B. WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
- C. ALTHOUGH ALL FEEDER AND BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE FEEDER AND BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
- D. WHEN THE COMBINING OF CIRCUITS OR HOMERUNS IS ALLOWED, RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE CIRCUIT, EXCEPT FOR LIGHTING CIRCUITS, UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED.
- E. WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL. TYPICALLY, ALL FEEDERS WILL REQUIRE A NEUTRAL, EXCEPT MOST MOTOR CIRCUITS.
- F. WIRE AND RACEWAY SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT THE CIRCUIT.
- G. RACEWAYS SHALL BE AS REQUIRED AND INDICATED IN THE SPECIFICATIONS.
- H. ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.

MODULAR SYSTEMS FURNITURE CONNECTION NOTES:

AT WALL POWER JUNCTION BOX LOCATIONS FOR MODULAR SYSTEMS FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, AND BLANK PLATE WITH A 1" DIA. 90° FLEX CONDUIT FITTING FOR CONNECTION TO FURNITURE POWER WHIP FITTING. POWER WHIP FURNISHED WITH FURNITURE BY OTHERS, INSTALLED AND WIRED TO FURNITURE BY DIV. 16. PROVIDE 3/4" CONDUIT FROM JUNCTION BOX TO LOCAL POWER PANEL. PROVIDE TWO SEPARATE CIRCUITS IN EACH WORKSTATION, UP TO (4) WORKSTATIONS PER INDIVIDUAL CIRCUIT. PROVIDE DEDICATED CIRCUITS FOR PRINTERS AND A SEPARATE DEDICATED CIRCUIT FOR PHOTOCOPIERS. MODULAR FURNITURE FURNISHED BY OTHERS WITH BUILT-IN POWER OUTLETS PRE-WIRED WITH WIRING HARNESS.

AT WALL DATA/VOICE JUNCTION BOX LOCATIONS FOR MODULAR SYSTEMS FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, AND BLANK PLATE WITH A 1" DIA. BUSHED OPENING FOR CONNECTION TO FURNITURE LOW VOLTAGE RACEWAY. DATA/VOICE CABLING AND CONNECTIONS BY OWNER'S SYSTEMS VENDORS. PROVIDE (2) 1" CONDUITS FROM JUNCTION BOX TO CEILING PLENUM SPACE.

GENERAL LIGHTING PLAN NOTES:

- A. FOR LIGHTING FIXTURE DESCRIPTIONS, REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E4.01.
- B. FOR ACTUAL LOCATION OF CEILING MOUNTED LIGHTING FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING DRAWING(S).
- C. FOR ACTUAL LOCATION OF WALL MOUNTED LIGHTING FIXTURES AND TASK LIGHTING, REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS.
- D. ALL EXIT SIGNS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL LIFE SAFETY LIGHTING BRANCH CIRCUIT.
- E. EMERGENCY BATTERY UNITS AND BALLASTS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- F. A LIGHT SWITCH, (OR OCCUPANCY SENSOR SWITCH), IN A SPACE SHALL CONTROL LIGHTING EXCLUSIVELY IN THAT SPACE UNLESS OTHERWISE INDICATED.
- G. REFER TO LIGHTING DETAILS ON DRAWING E3.01 FOR TYPICAL WIRING SCHEMATICS.
- H. INSTALL CONDUIT AND WIRING FOR EXTERIOR BUILDING MOUNTED LIGHT FIXTURES, CONCEALED WITHIN BUILDING, NOT EXPOSED ON BUILDING EXTERIOR.
- I. EXISTING LIGHT FIXTURES TO REMAIN, WITHIN CONTRACT AREAS, SHALL BE CLEANED AND RELAMPED WITH NEW LAMPS SIMILAR TO NEW FIXTURES.

GENERAL POWER AND SIGNAL PLAN NOTES:

- A. CONNECT ALL WIRING DEVICES TO THE PANELBOARD(S) NOTED, UNLESS OTHERWISE INDICATED ON THIS DRAWING.
- B. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- C. REFER TO ARCHITECTURAL EQUIPMENT PLANS AND CASEWORK ELEVATION DRAWINGS FOR OUTLET REQUIREMENTS AND LOCATIONS.
- D. REFER TO POWER AND SIGNAL RISER AND DETAIL DRAWINGS FOR TYPICAL WIRING SCHEMATICS AND INSTALLATION DETAILS.
- E. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, FIRE ALARM DEVICES, ETC. WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS PRIOR TO START OF WORK, REQUEST CLARIFICATIONS FROM ARCHITECT PRIOR TO INSTALLATION.

GENERAL PROJECT SCOPE NOTES:

1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL ELECTRICAL STARTERS, DISCONNECT SWITCHES, BRANCH CIRCUIT WIRING AND ASSOCIATED DEVICES TO POWER MECHANICAL EQUIPMENT, INCLUDING BUT NOT LIMITED TO, BOILERS, PUMPS, AND AIR HANDLING UNITS. REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.02 FOR EXACT REQUIREMENTS.
2. ALL CLASSROOMS, OFFICES, LOUNGES, CONFERENCE ROOMS AND AREAS OF ASSEMBLY WITH HIGH OCCUPANCY SHALL BE COMPLETE WITH LIGHTING SYSTEM OCCUPANCY SENSORS. THESE SHALL BE WIRED AS SHOWN IN DETAILS ON DRAWING #E3.01 WITH MANUAL OVERRIDE SWITCHES AND APPROPRIATE RELAYS FOR EMERGENCY POWER USE.

VIDEO MONITOR NOTES:

1. VERIFY VIDEO MONITOR AND POWER/CABLE OUTLET LOCATIONS AND MOUNTING HEIGHTS WITH ARCHITECT PRIOR TO INSTALLATION.
2. VIDEO OUTLET AND ASSOCIATED CABLING/CONNECTIONS BY OWNER'S VIDEO SYSTEM INSTALLER.

LIGHTING FIXTURE NOTES:

- A. FURNISH ALL LIGHTING FIXTURES COMPLETE WITH MOUNTING ACCESSORIES TO MEET THE JOB REQUIREMENTS. VERIFY CEILING AND GRID TYPE PRIOR TO ORDERING FIXTURES. USE THE LATEST ARCHITECTURAL DRAWINGS.
- B. VERIFY FIXTURE MOUNTING, HEIGHTS AND LOCATION AGAINST PLANS, ELEVATIONS AND DETAIL DRAWINGS. EXACT LOCATION OF FIXTURES SHALL BE CONFIRMED WITH THE ARCHITECT PRIOR TO ROUGHING IN.
- C. SERIES FIXTURES SHALL SATISFY LENGTHS AS INDICATED ON THE DRAWINGS. FIELD VERIFY EXACT LENGTHS AND PROVIDE COMPONENTS AND ACCESSORIES REQUIRED FOR COMPLETE INSTALLATION.
- D. FIXTURE LETTERS SHOWN ONCE ON A CONTINUOUS ROW OF FIXTURES SHALL BE TYPICAL FOR THAT ROW UNLESS OTHERWISE INDICATED.
- E. FIXTURES SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE, INDEPENDENT OF HUNG CEILING, REFER TO SPECIFICATIONS.
- F. MANUFACTURERS' CATALOG NUMBERS ARE INDICATED FOR REFERENCE PURPOSES ONLY. THEY ARE MEANT TO PROVIDE A GENERAL DESCRIPTION OF THE DESIGN AND QUALITY OF FIXTURES REQUIRED. DESCRIPTIONS AND NOTES MAY INDICATE ITEMS THAT ARE NOT INDICATED IN THE CATALOG NUMBER. WHERE ONE MANUFACTURER'S CATALOG NUMBER IS LISTED FOLLOWED BY TWO OR MORE OTHER MANUFACTURERS NAMES ONLY, SUBSTITUTIONS SUBMITTED SHALL BE DOCUMENTED AS EQUAL IN PERFORMANCE AND APPEARANCE TO THE FULLY LISTED ITEM. PROVIDE POINT BY POINT LIGHTING CALCULATIONS WITH SHOP DRAWINGS WHEN REQUESTED.
- G. INCANDESCENT LAMPS SHALL BE RATED 130 VOLTS UNLESS OTHERWISE SPECIFIED.
- H. FLUORESCENT FIXTURES SHALL HAVE HIGH POWER FACTOR, CLASS P, ELECTRONIC BALLASTS UNLESS OTHERWISE INDICATED. APPROVED AS A COMBINATION WITH LAMPS SUPPLIED. FIXTURES, LAMPS AND BALLASTS SHALL MEET APPLICABLE REQUIREMENTS OF UTILITY INCENTIVE PROGRAMS.
- I. SINGLE LAMP OR THREE LAMP FIXTURES USED FOR GENERAL ILLUMINATION, AND MOUNTED WITHIN TEN FEET OF EACH OTHER AND WITHIN THE SAME ROOM SHALL BE TANDEM WIRED TO ELIMINATE UNNECESSARY USE OF SINGLE LAMP BALLASTS. MAXIMIZE USE OF THREE AND FOUR LAMP BALLASTS WHERE SWITCHING DOES NOT REQUIRE OTHERWISE.
- J. COMPACT FLUORESCENT FIXTURES SHALL HAVE HIGH POWER FACTOR, THERMALLY PROTECTED ELECTRONIC BALLASTS WITH END OF LAMP LIFE SENSING CAPABILITY WHICH WILL CORRECT ITSELF UPON RELAMPING.
- K. CUSTOM FINISH COLORS SHALL BE AS SELECTED BY THE ARCHITECT.
- L. FLUORESCENT AND COMPACT FLUORESCENT LAMPS SHALL HAVE KELVIN COLOR TEMPERATURE, AND MINIMUM COLOR RENDERING INDEX AS INDICATED IN SPECIFICATION. METAL HALIDE LAMPS SHALL HAVE SHROUDED ARC TUBE, COLOR CORRECTING COATING ON OUTER ENVELOPE, WITH KELVIN COLOR TEMPERATURE AND A COLOR RENDERING INDEX AS INDICATED IN SPECIFICATION.
- M. LINEAR ROWS OF RECESSED OR HUNG FLUORESCENT LUMINAIRES SHALL BE INSTALLED TO PROVIDE A LENGTH AS INDICATED ON THE DRAWINGS. PROVIDE ALL REQUIRED CONNECTORS AND END PIECES, SO THAT HOUSINGS ARE A COMPLETE ASSEMBLY WITH THE APPEARANCE OF A SINGLE UNIT. BALLASTS AND LAMP PINS SHALL BE FACTORY PRE-WIRED FOR SWITCHING AND CIRCUITING AS INDICATED ON THE DRAWINGS. HANGER STYLE SHALL BE AS SELECTED BY THE ARCHITECT (AIRCRAFT CABLE WITH COILED CORD, STEM MOUNT, ETC.) PROVIDE CANOPIES FOR LOCATIONS WHERE HANGER MOUNTS TO UNFINISHED CEILING STRUCTURE (WHERE VISIBLE) AND WHERE PASSING THROUGH SUSPENDED CEILING. MAXIMIZE USE OF THREE AND FOUR LAMP BALLASTS. ENTIRE ASSEMBLY SHALL BE SUPPLIED BY ONE VENDOR. COORDINATE WITH FIXTURE VENDOR.
- N. EXIT LIGHT FIXTURES SHALL CONFORM TO UL LISTING #924, 1570, 1571, NFPA 101 AND WITH ALL APPLICABLE CODES.

GENERAL NOTES:

- A. THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED, AND COORDINATION WITH ALL TRADES. SCOPE OF WORK IS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLEMENTARY. WORK INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS. WHERE DOCUMENTS CONFLICT WITH THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
- B. PROVIDE ALL WORK INDICATED OR DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.
- C. COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND MANUFACTURER'S EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
- D. ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH OSHA, NFPA STANDARDS, THE LIFE SAFETY CODE, THE ELECTRIC CODE AND THE LOCAL GOVERNING AUTHORITIES. THE DRAWINGS AND SPECIFICATIONS DO NOT ATTEMPT TO INDICATE EVERY FACET OF WORK REQUIRED BY CODES AND AUTHORITIES.
- E. TEST ALL EQUIPMENT AND SYSTEMS INSTALLED TO CERTIFY COMPLIANCE WITH DRAWINGS, SPECIFICATIONS, MANUFACTURER'S RECOMMENDATION, CODES, LOCAL AUTHORITIES AND REGULATIONS. INCLUDE LABOR AND COSTS FOR TESTING, REVIEWS, APPROVALS AND CERTIFICATIONS.
- F. DRAWINGS ARE DIAGRAMMATIC ONLY. EXACT LOCATION, ROUTING AND MOUNTING HEIGHTS OF EQUIPMENT AND RACEWAYS SHALL BE COORDINATED WITH THE ARCHITECT, OTHER TRADES, EQUIPMENT REQUIREMENTS AND FIELD CONDITIONS.
- G. PROVIDE ALL INCIDENTAL ACCESSORIES NECESSARY TO MAKE THE ELECTRICAL WORK COMPLETE AND READY FOR OPERATION.
- H. IF EXACT MOUNTING OR RACEWAY ROUTINGS ARE NOT INDICATED (LOCATION OR HEIGHT) REQUEST CLARIFICATION PRIOR TO ROUGHING, OR INSTALLATION.
- I. ELECTRICAL WORK SHALL BE RECESSED INTO WALLS OR INSTALLED ABOVE HUNG CEILINGS UNLESS OTHERWISE INDICATED.
- J. DO NOT INSTALL OUTLETS BACK TO BACK. PROVIDE MINIMUM 24 INCH SPACING IN FIRE RATED WALLS. MOUNT LOW VOLTAGE AND POWER OUTLETS IN DIFFERENT STUD WALL CAVITIES.
- K. PROVIDE ELECTRICAL OUTLET PLATE GASKETS SEALS AT RECEPTACLES, SWITCHES AND OTHER ELECTRICAL BOXES ON EXTERIOR WALLS AND INTERIOR WALLS BETWEEN CONDITIONED AND NON-CONDITIONED SPACES.
- L. PROVIDE CODE REQUIRED STARTERS AND DISCONNECTS WHICH ARE NOT FURNISHED UNDER DIVISIONS 11, 13 OR 15. INSTALL STARTERS AND DISCONNECTS THAT ARE FURNISHED UNDER DIVISIONS 11, 13 OR 15.
- M. INSTALL A GREEN GROUNDING CONDUCTOR WITHIN EACH RACEWAY SIZED IN ACCORDANCE WITH THE ELECTRIC CODE.
- N. INSTALLATION OF RACEWAYS BELOW THE FLOOR SLAB WILL NOT BE ACCEPTABLE UNLESS SPECIFICALLY INDICATED OTHERWISE.
- O. PROVIDE WATERTIGHT AND GASTIGHT SEALS INSIDE AND OUTSIDE OF CONDUITS THAT PENETRATE THE BUILDING FROM BELOW GRADE. O.Z. GEDNEY OR APPROVED EQUAL. PROVIDE WEATHERTIGHT SEAL AT PENETRATIONS ABOVE GRADE.
- P. PROVIDE NRTL LISTED SMOKE AND FIRE SEALS AT ALL PENETRATIONS THROUGH FLOORS OR FULL HEIGHT (SLAB TO SLAB) WALLS.

GENERAL WIRING NOTE:

1. BRANCH CIRCUIT CONDUCTORS THAT DO NOT EXCEED 100 FEET TO FURTHEST OUTLET OR DEVICE, SHALL NOT BE LESS THAN #12 AWG. FOR CIRCUIT HOMERUNS THAT DO NOT EXCEED 150 FEET, #10 AWG IS PERMITTED. FOR CIRCUIT HOMERUNS GREATER THAN 150 FEET, CONDUCTOR SHALL BE NOT LESS THAN #8 AWG.

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION.
FEBRUARY 21, 2001		REVIEW OF PHASE II DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION.
JUNE 22, 2001		RESUBMISSION OF PHASE II DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES.



**NEW RHAM  
HIGH SCHOOL  
WALL STREET  
HEBRON, CONNECTICUT  
06248**

**STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR**

**VANZELM HEYWOOD & SHADFORD INC.**  
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**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
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vZHS PROJECT NUMBER: 2000155.00



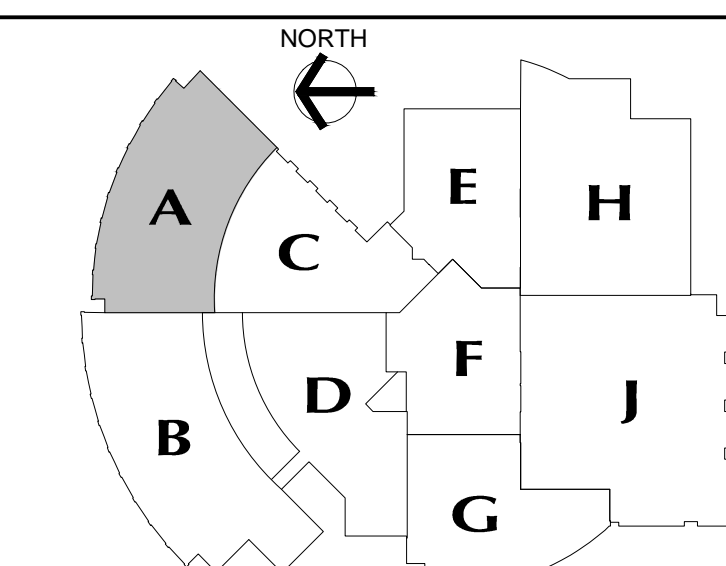
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DRAWN BY: MSA SCALE: NONE  
CHECKED BY: RLG

**ELECTRICAL  
GENERAL  
NOTES**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E0.02**



**MAIN LEVEL KEY PLAN**

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
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**NEW RHAM HIGH SCHOOL**  
**WALL STREET**  
**HEBRON, CONNECTICUT 06248**

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
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DRAWN BY: SCALE: 1/8" = 1'-0"  
 CHECKED BY:

**MAIN LEVEL POWER PLAN AREA A**

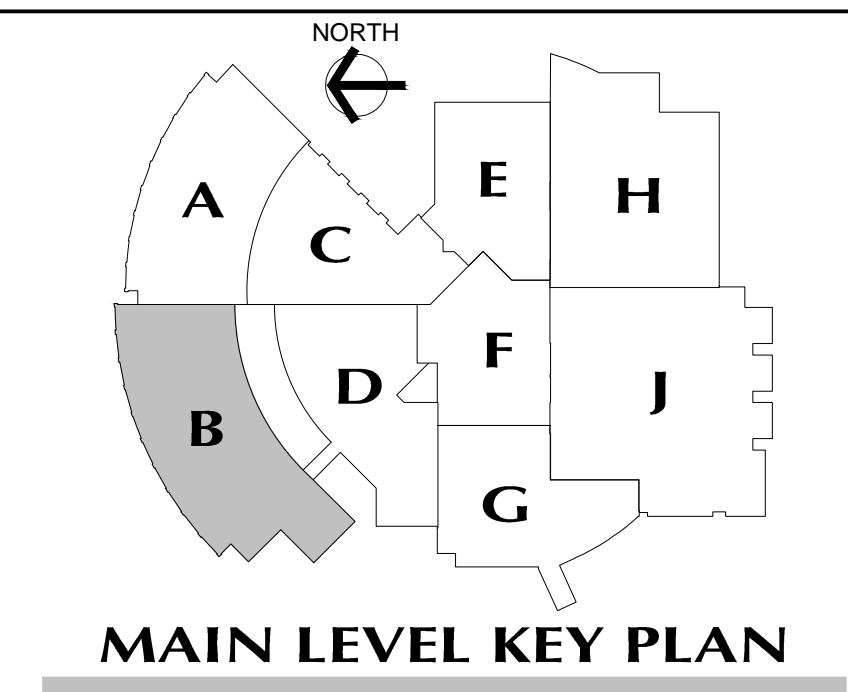
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.03**



- DRAWING NOTES:**
- KNOX BOX UNIT FURNISHED AND INSTALLED BY OTHERS. PROVIDE CONNECTION TO FIRE ALARM INITIATION LOOP WIRING FOR MONITORING OF BOX.
  - JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET. SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.
  - MOTORIZED PROJECTION SCREEN UNIT FURNISHED AND INSTALLED BY OTHERS. FINAL ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MOTORIZED PROJECTION SCREEN RAISE/LOWER SWITCH UNIT FURNISHED WITH SCREEN BY OTHERS. INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR PER MANUFACTURER'S SHOP DRAWINGS. VERIFY EXACT LOCATION OF SCREEN AND CONTROL SWITCH PRIOR TO INSTALLATION.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**REVISIONS**

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- DRAWING NOTES:**
- SWITCH 12'-0" OF TYPE "F" FIXTURE ON SWITCH "a" AND 8'-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "F" FIXTURE ON SWITCH "a" AND 8'-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
  - CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.
  - PROVIDE A DRY-TYPE GENERAL PURPOSE TRANSFORMER, SINGLE PHASE, 480V PRIMARY-120/208V SECONDARY, 1.5kVA.
  - LIGHTING FIXTURE TYPE "OA" SHALL HAVE EMERGENCY BATTERY BALLAST REMOTE MOUNTED ABOVE THE NEAREST ACCESSIBLE CEILING TO THE FIXTURE. COORDINATE FINAL LOCATION IN FIELD WITH ENGINEER/ARCHITECT.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E.4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E.3.01 AND #E.3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.

- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "SS.SS", "SO.SS"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT. THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.



**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT  
 06248

STATE PROJECT #: 208-018N  
 STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
 29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL (860) 521-4329 FAX (860) 521-5620  
 vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

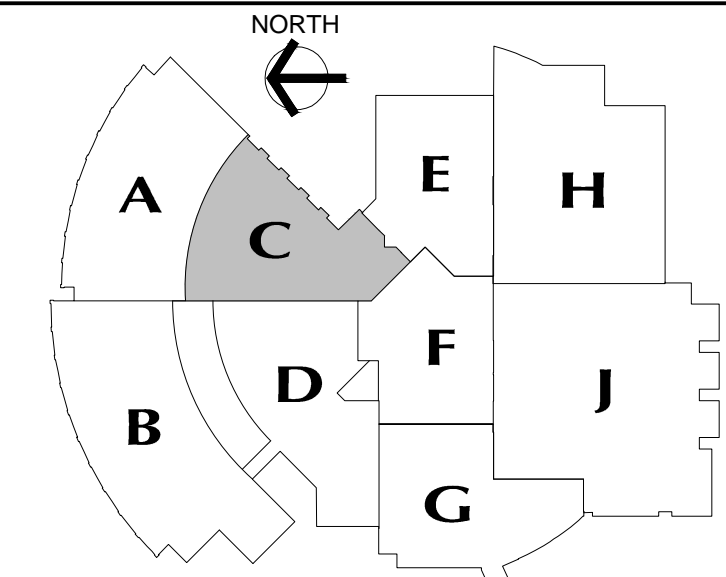
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
 DRAWN BY: SCALE: 1/8" = 1'-0"  
 CHECKED BY:

**MAIN LEVEL LIGHTING PLAN AREA B**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.04**





**MAIN LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE I
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT #: 208-018N  
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VANZELM HEYWOOD & SHADFORDING  
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vzhs PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
ARCHITECTS

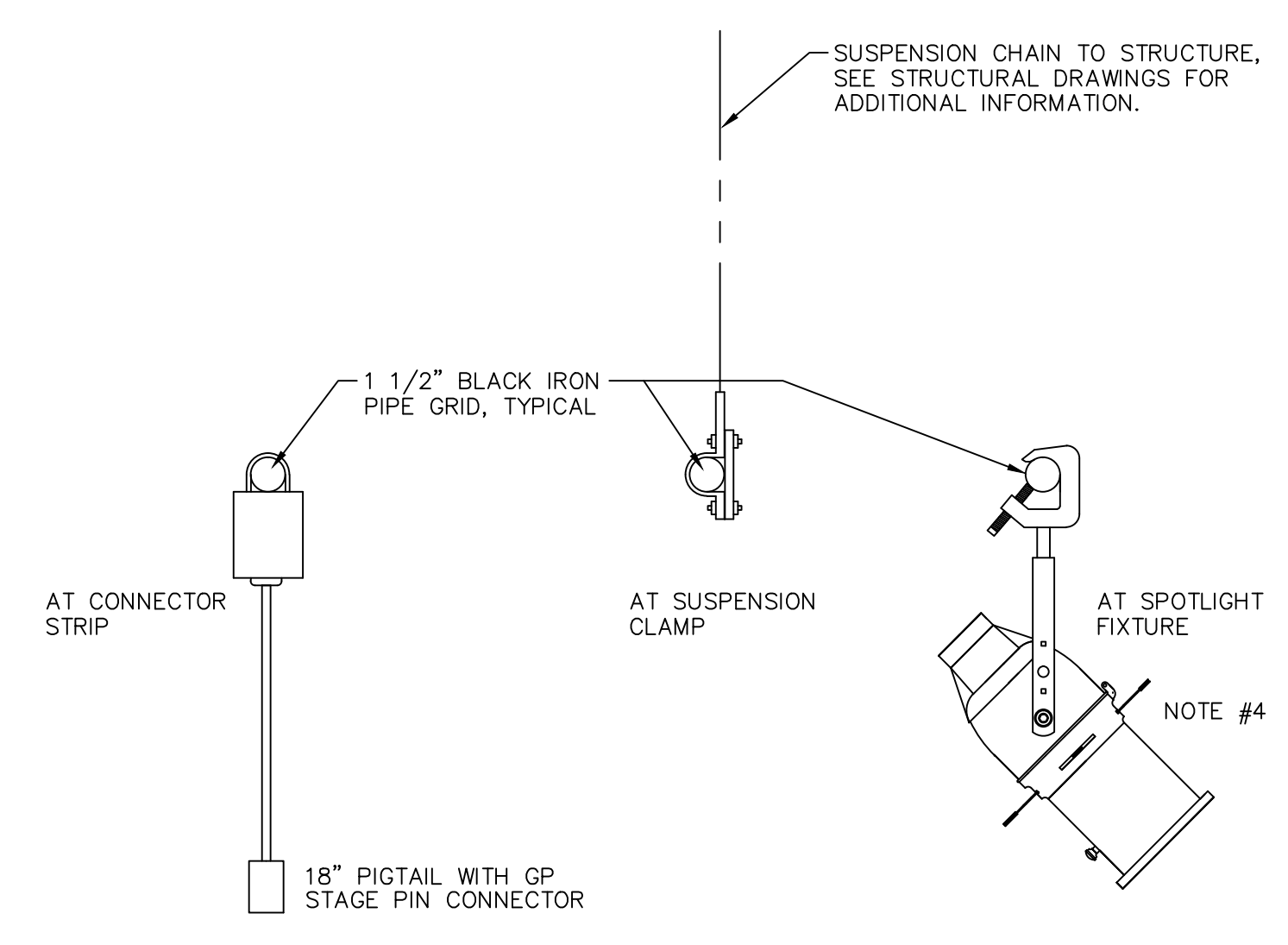
416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

**MAIN LEVEL LIGHTING PLAN AREA C**

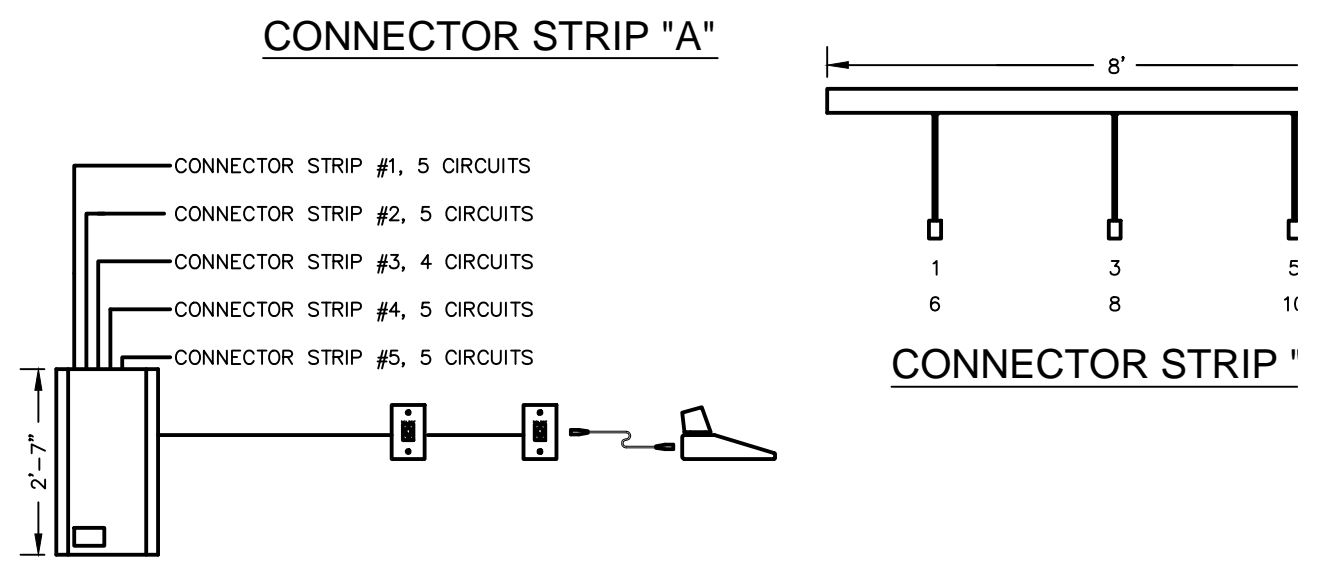
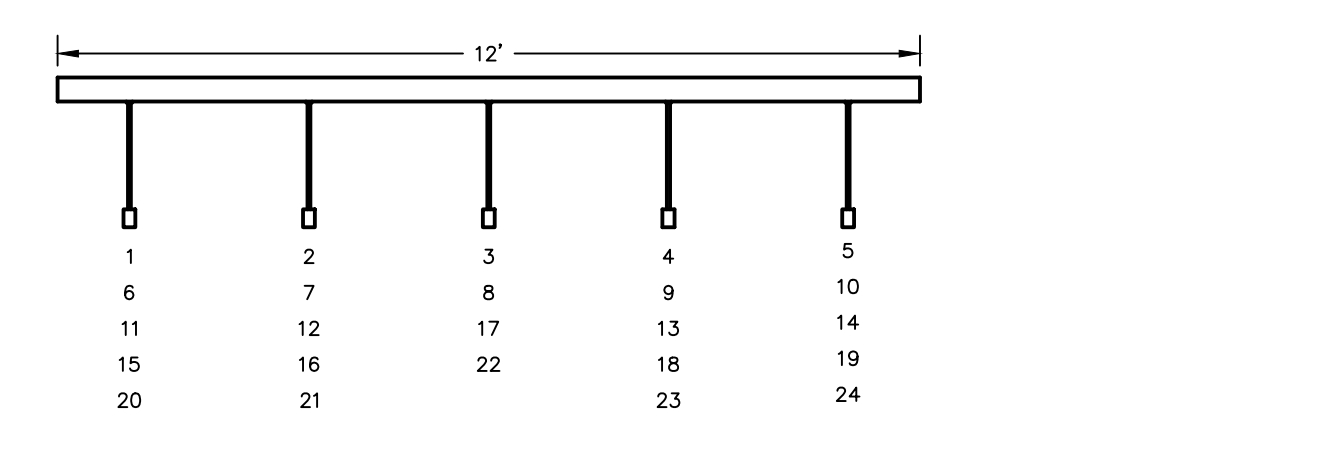
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.06**

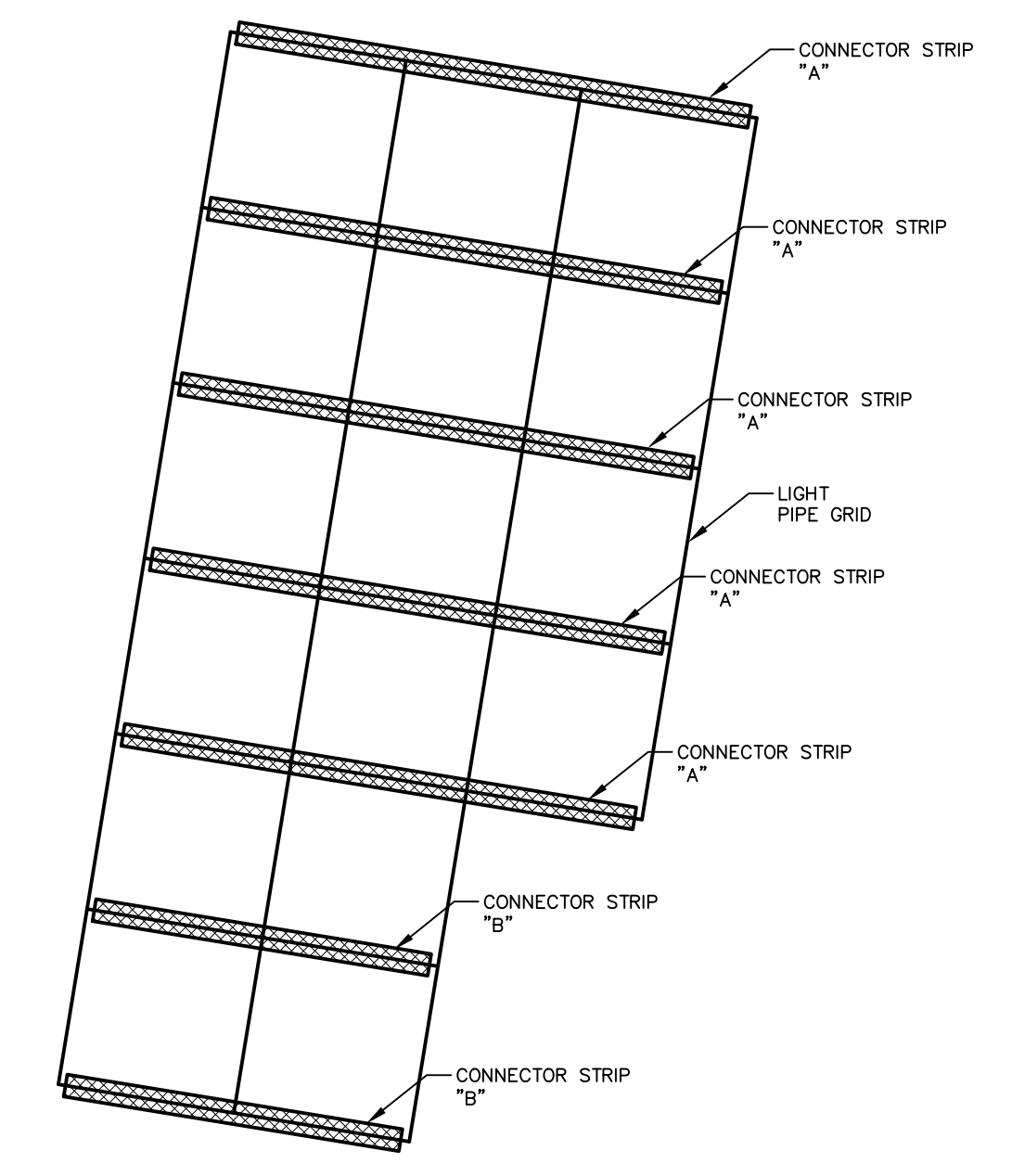


**TV STUDIO LIGHT PIPE GRID DETAILS**  
NO SCALE

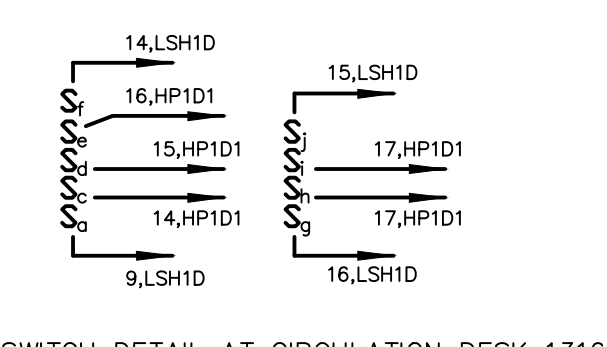
- DETAIL NOTES:
- BRACKETS AND CONNECTOR STRIPS SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.
  - 4' x 4' x 1 1/2" BLACK IRON PIPE GRID INSTALLED BY ELECTRICAL CONTRACTOR. MOUNT GRID AT 1'-0" BELOW CEILING.
  - SPECIALTY LIGHT FIXTURES SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND ATTACHED TO PIPE GRID BY ELECTRICAL CONTRACTOR.



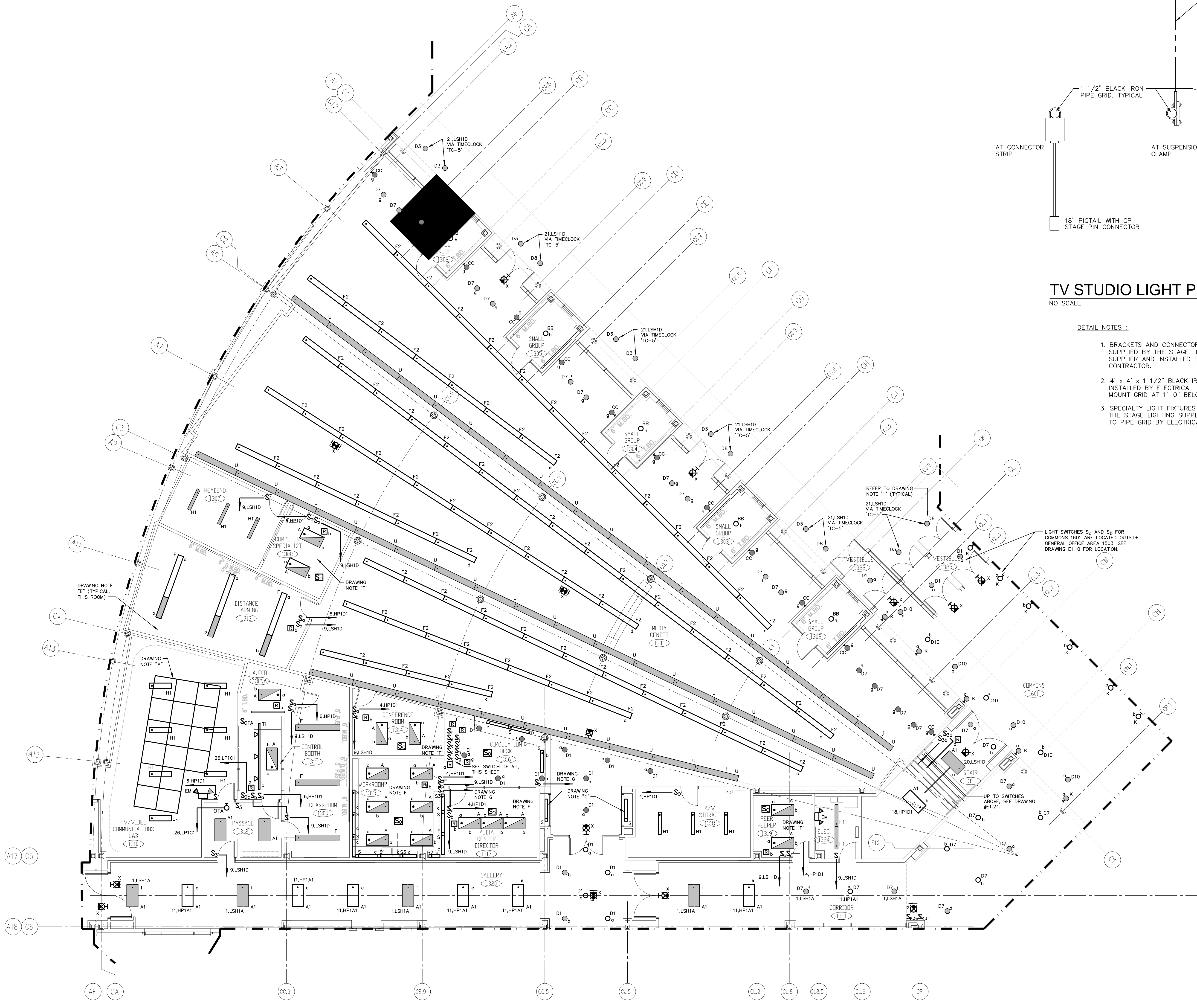
**TV STUDIO CONNECTOR STRIP DETAIL**  
NO SCALE



**TV STUDIO LIGHT PIPE/CONNECTOR STRIP DETAIL**  
SCALE: 1/4" = 1'-0"

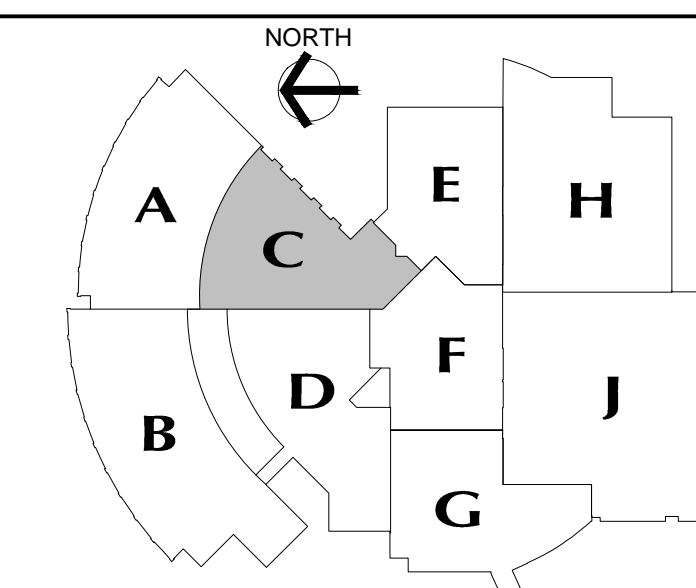


LIGHT\_SWITCH\_DETAIL\_AT\_CIRCULATION\_DESK\_1316



- DRAWING NOTES:
- TV/VIDEO COMMUNICATIONS LAB LIGHTING GRID. REFER TO DETAIL ON DRAWING #E1.07, AND SPECIFICATION SECTION 16782 FOR ADDITIONAL INFORMATION.
  - SWITCH LIGHT FIXTURE TYPE "BB" IN SMALL GROUP ROOMS 1302, 03, 04, 05 AND 06 FROM A SINGLE SWITCH, S<sub>H</sub>, AT LIBRARY CIRCULATION DESK.
  - SWITCH LIGHT FIXTURE TYPE "TS" AT DISPLAY CASES FROM A SINGLE SWITCH, S<sub>1</sub>, AT LIBRARY CIRCULATION DESK.
  - SWITCH S<sub>1</sub>-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND S<sub>1</sub>-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH S<sub>1</sub>-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 4'-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
  - CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.
  - CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.
  - LIGHTING FIXTURE TYPE "DB" SHALL HAVE EMERGENCY BATTERY BALLAST REMOTE MOUNTED ABOVE THE NEAREST ACCESSIBLE CEILING TO THE FIXTURE. COORDINATE FINAL LOCATION IN FIELD WITH ENGINEER/ARCHITECT.

- GENERAL LIGHTING NOTES:
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["S", "S3", "S3", "S3"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10C, 3/4"C TO PANEL DESIGNATED.



**MAIN LEVEL KEY PLAN**

**REVISIONS**

DATE	MARK	DESCRIPTION
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**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELMHEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**

29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-4325 FAX: (860) 521-6029  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

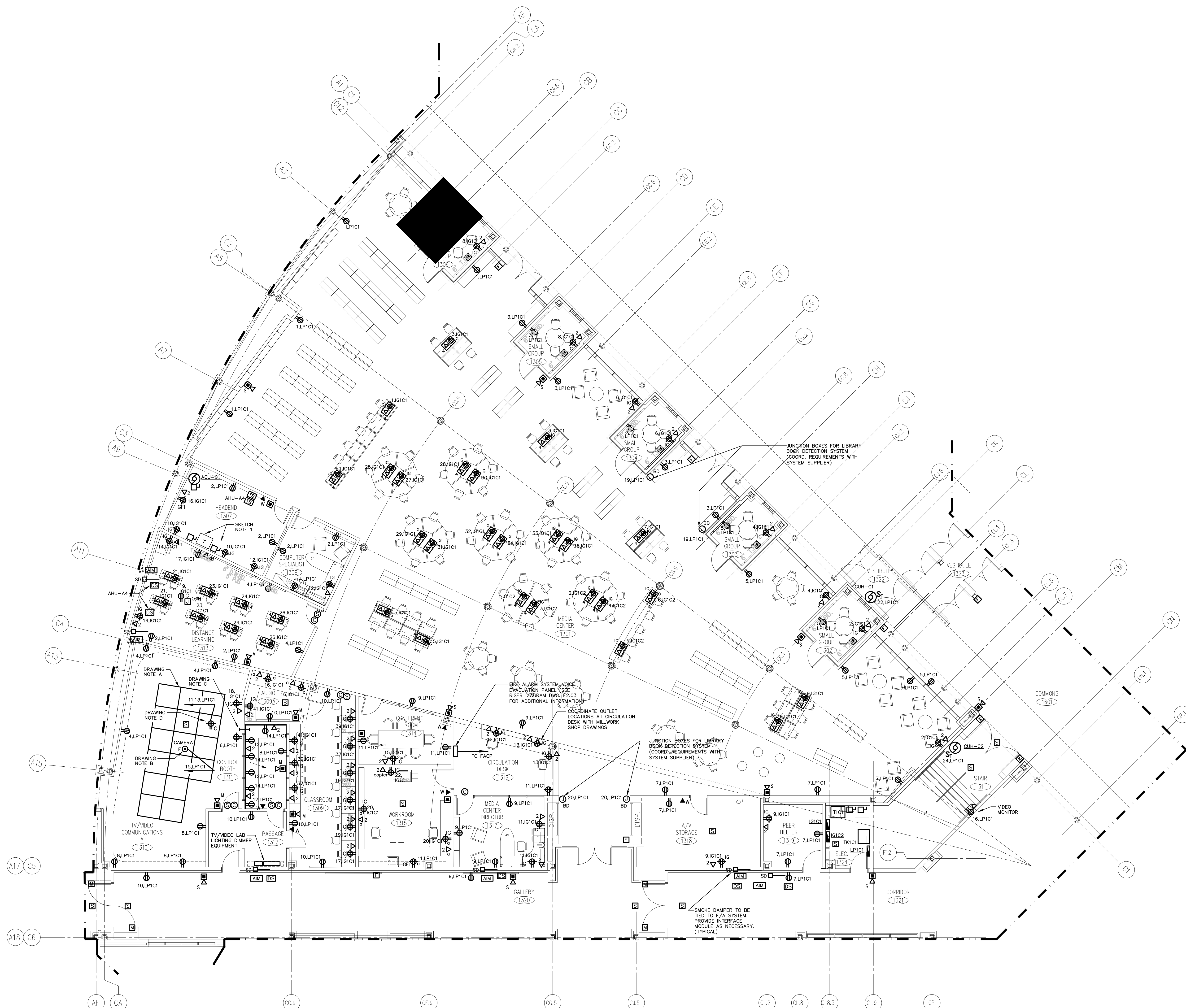
416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 228-0361

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CHECKED BY:

**MAIN LEVEL POWER PLAN AREA C**

PROJECT NO.: 00048 DRAWING NO.:

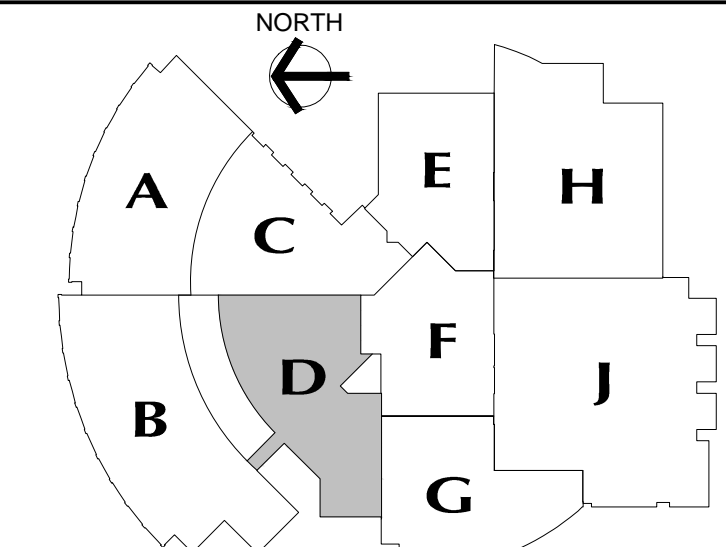
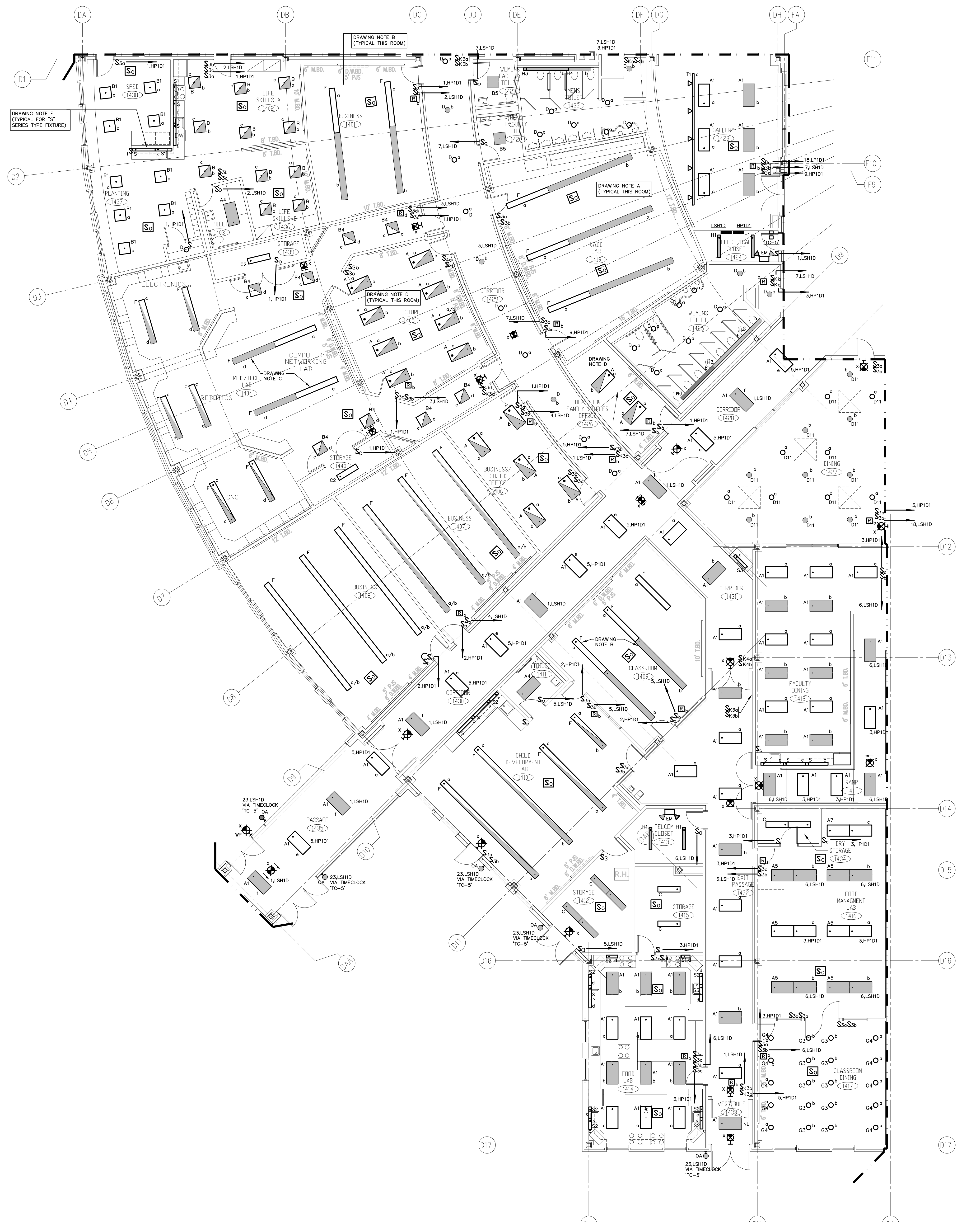
DATE: JANUARY 20, 2001 **E1.07**



- DRAWING NOTES:**
- FURNISH AND INSTALL TV/VIDEO COMMUNICATIONS LAB LIGHT PIPE GRID AS SHOWN. REFER TO DETAIL THIS SHEET, AND SPECIFICATION SECTION 16752 FOR ADDITIONAL INFORMATION.
  - PROVIDE A 20AMP DUPLEX FLUSH MOUNTED FLOOR OUTLET IN TV/VIDEO COMMUNICATIONS LAB #1310 FOR CAMERA AS SHOWN.
  - PROVIDE A 6" x 6" SLEEVE THROUGH WALL FROM CONTROL BOOTH #1311 TO TV/VIDEO COMMUNICATIONS LAB #1310 FOR CAMERA AS SHOWN.
  - DOUBLE DUPLEX RECEPTACLE INSTALLED IN CEILING FOR GRID MOUNTED LIGHTING. PROVIDE POWER AS INDICATED. REFER TO DRAWING NOTE A.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.





**MAIN LEVEL KEY PLAN**

REVISIONS

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JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-4222 FAX: (860) 521-4223  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

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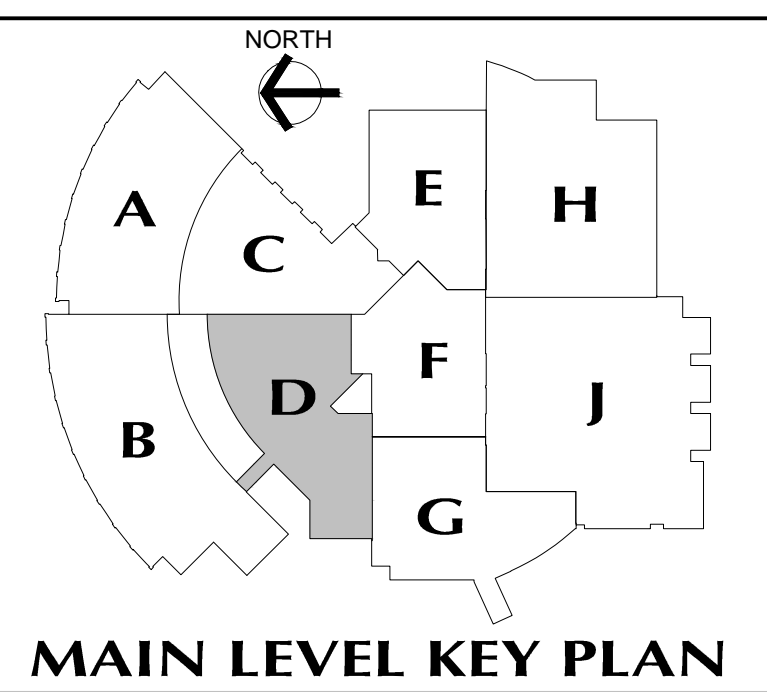
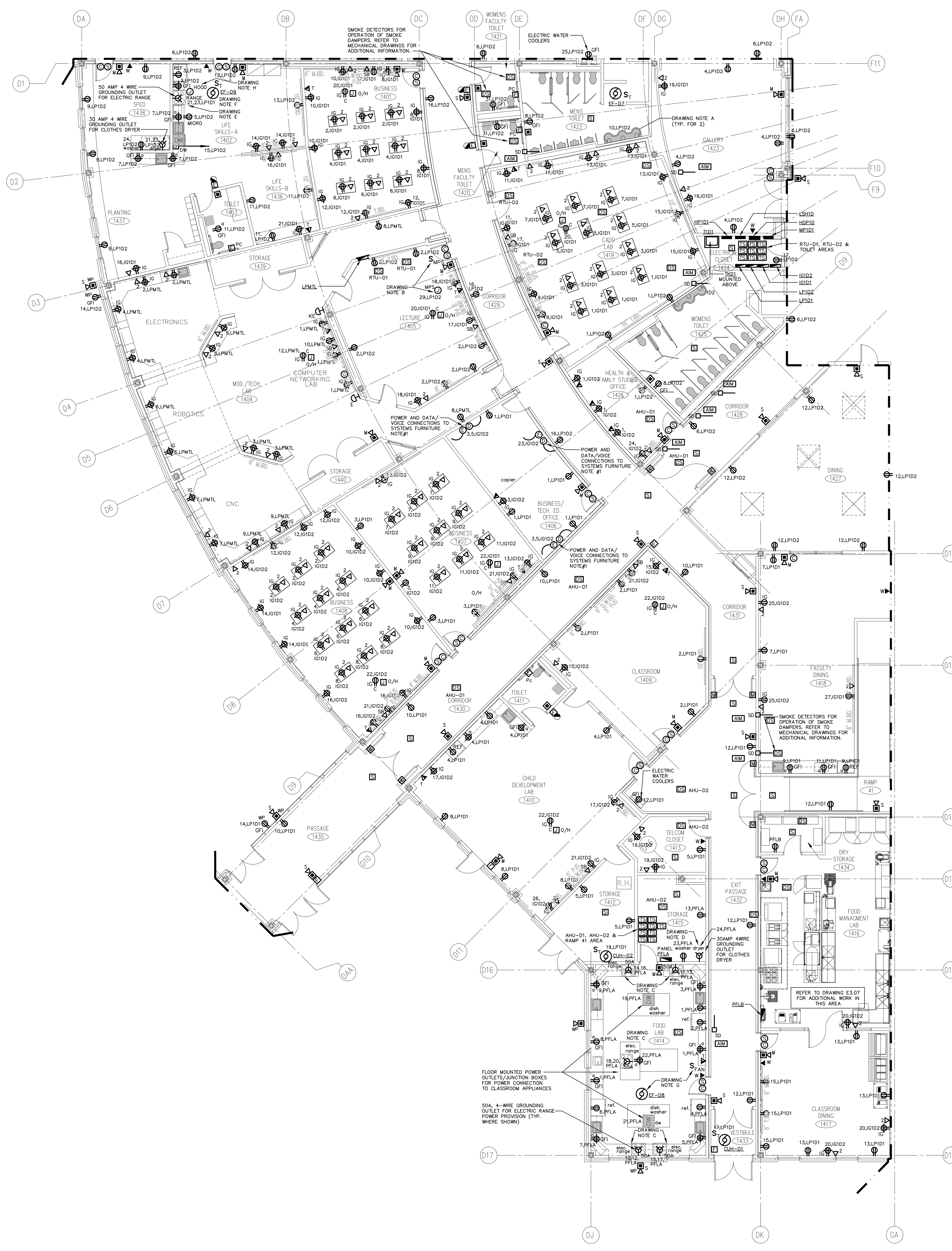
**MAIN LEVEL LIGHTING PLAN AREA D**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.08**

- DRAWING NOTES:**
- SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 16'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 12'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 8'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.
  - CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["S1", "S3,S3", "S0,S1" DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4"C TO PANEL DESIGNATED.



**MAIN LEVEL KEY PLAN**

REVISIONS

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HEBRON, CONNECTICUT  
06248

STATE PROJECT #: 208-018N  
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vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

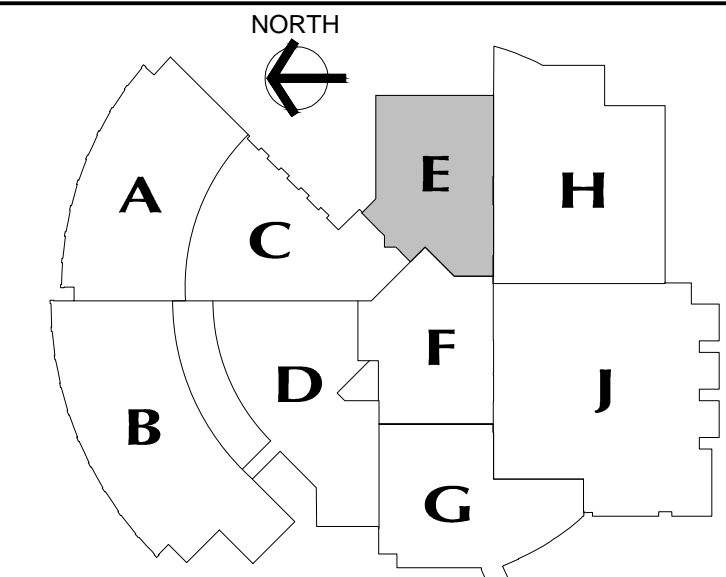
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
SCALE: 1/8" = 1'-0"  
CHECKED BY:

**MAIN LEVEL POWER PLAN AREA D**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.09**

- DRAWING NOTES:**
- JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET. SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.
  - MOTORIZED PROJECTION SCREEN UNIT FURNISHED AND INSTALLED BY OTHERS. FINAL ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MOTORIZED PROJECTION SCREEN RAISE/LOWER SWITCH UNIT FURNISHED WITH SCREEN BY OTHERS. INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR PER MANUFACTURER'S SHOP DRAWINGS. VERIFY EXACT LOCATION OF SCREEN AND CONTROL SWITCH PRIOR TO INSTALLATION.
  - PROVIDE POWER CIRCUIT, 3#6, 1#10GRD., 3/4" CONDUIT FROM ELECTRIC RANGE TO A 50AMP, 2P CIRCUIT BREAKER IN PANEL "PFLA".
- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**MAIN LEVEL KEY PLAN**

REVISIONS		
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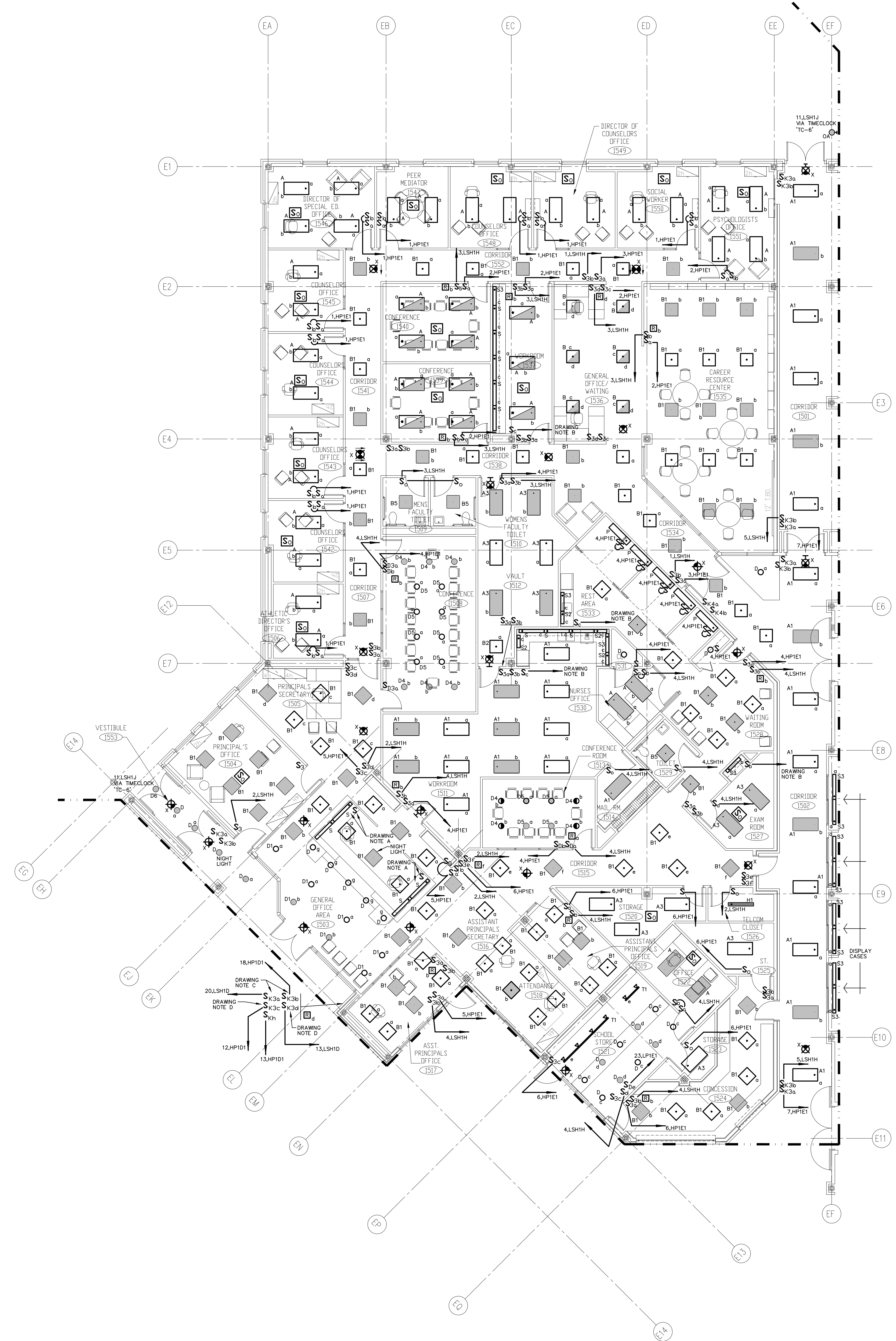


**KAESTLE BOOS  
ASSOCIATES, INC.  
ARCHITECTS**

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DRAWN BY: SCALE: 1/8" = 1'-0"  
CHECKED BY:

**MAIN LEVEL  
LIGHTING  
PLAN  
AREA E**

PROJECT NO.: 00048 DRAWING NO.:  
DATE: JANUARY 20, 2001

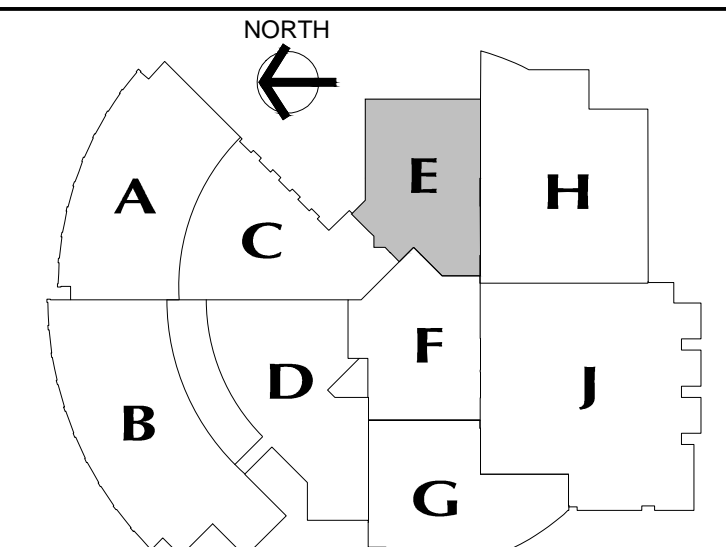


**DRAWING NOTES:**

- PROVIDE (8) TYPE "S" UNDERCABINET STYLE LIGHT FIXTURES AT GENERAL OFFICE AREA #1503 MILLWORK, (2) EACH AT EACH SIDE RETURN AND (4) FIXTURES AT FRONT OF DESK. (NOT SHOWN). COORDINATE LOCATION OF FIXTURES AND ASSOCIATED SWITCHES WITH ARCHITECT AND MILLWORK SHOP DRAWINGS. CONNECT ALL FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.
- CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.
- SWITCHES FOR CONTROL OF LIGHT FIXTURES IN COMMONS 1601 AREA, SEE DRAWING E1.06 FOR ADDITIONAL INFORMATION.
- SWITCHES FOR CONTROL OF LIGHT FIXTURES IN COMMONS 1601 AREA, SEE DRAWING E1.12 FOR ADDITIONAL INFORMATION.

**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
- ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
- REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["S", "S3", "S3", "S0, S1"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4"C TO PANEL DESIGNATED.



**MAIN LEVEL KEY PLAN**

REVISIONS		
DATE	MARK	DESCRIPTION
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FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT 06248

STATE PROJECT #: 208-018N  
 STATE PROJECT #: 208-019 EA/RR

VANZELM HEY WOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**VZHS**  
 29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL: (860) 521-4339 FAX: (860) 521-4332  
 VZHS PROJECT NUMBER: 2000155.00



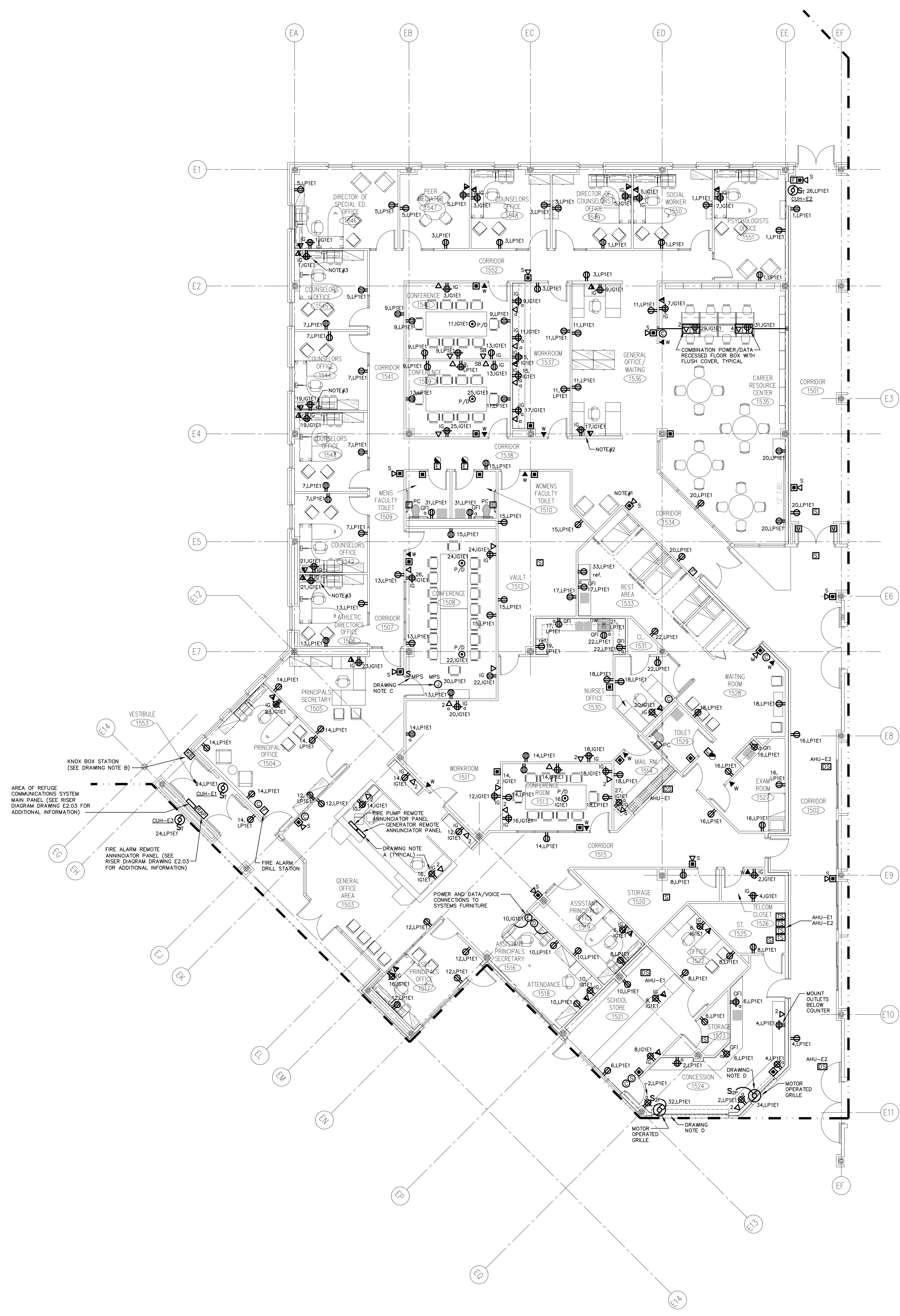
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 229-0361  
 DRAWN BY: SCALE: 1/8" = 1'-0"  
 CHECKED BY:

**MAIN LEVEL POWER PLAN AREA E**

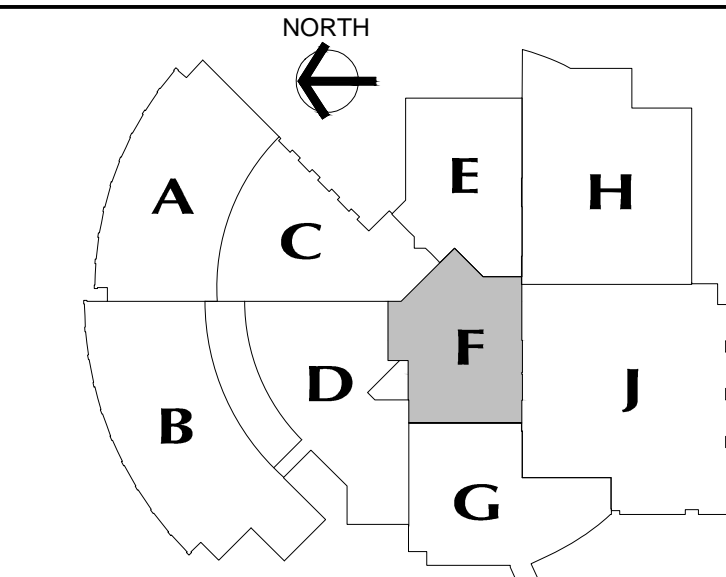
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.11**



- DRAWING NOTES:**
- COORDINATE LOCATIONS OF OUTLETS, GENERATOR AND FIRE PUMP REMOTE ANNUNCIATOR PANELS WITH ARCHITECT AND MILLWORK SHOP DRAWINGS PRIOR TO INSTALLATION.
  - KNOX BOX UNIT FURNISHED AND INSTALLED BY OTHERS, PROVIDE CONNECTION TO FIRE ALARM INITIATION LOOP WIRING FOR MONITORING OF BOX.
  - MOTORIZED PROJECTION SCREEN UNIT FURNISHED AND INSTALLED BY OTHERS, FINAL ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MOTORIZED PROJECTION SCREEN RAISE/LOWER SWITCH UNIT FURNISHED WITH SCREEN BY OTHERS, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR PER MANUFACTURER'S SHOP DRAWINGS. VERIFY EXACT LOCATION OF SCREEN AND CONTROL SWITCH PRIOR TO INSTALLATION.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARDS. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**MAIN LEVEL KEY PLAN**

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**NEW RHAM HIGH SCHOOL**  
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HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
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MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4330 FAX (860) 521-0620  
vZHS PROJECT NUMBER: 2000155.00



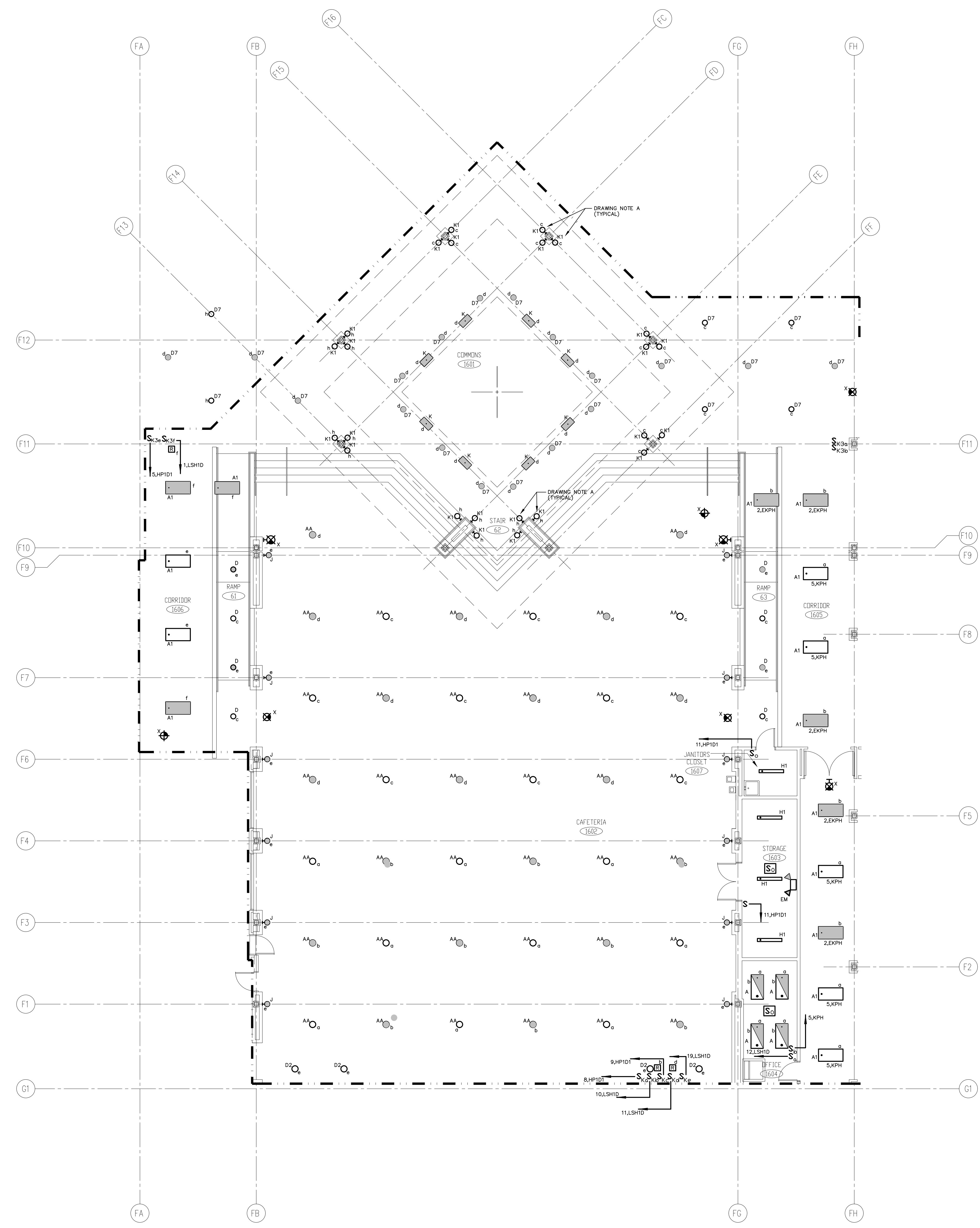
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

MAIN LEVEL LIGHTING PLAN  
AREA F

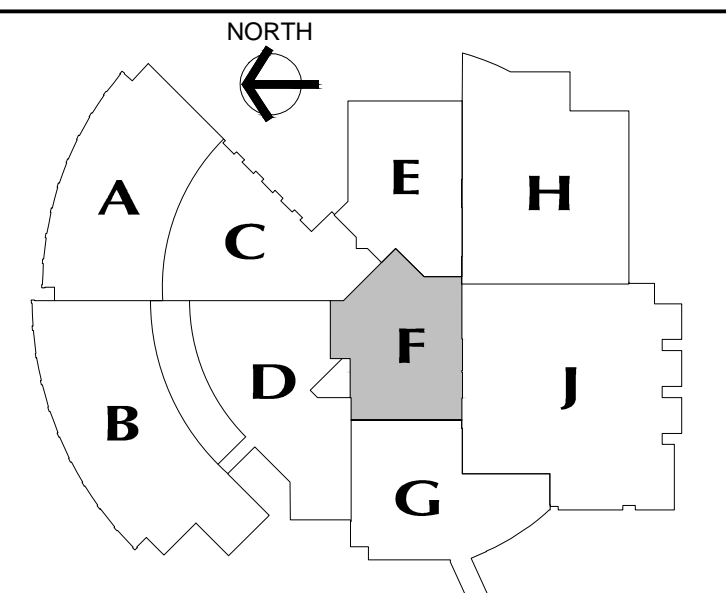
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 E1.12



**DRAWING NOTES:**  
A. REFER TO DRAWINGS E1.10 AND E1.18 FOR COMMONS 1601 AREA LIGHT SWITCH LOCATIONS.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "S0,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.



**MAIN LEVEL KEY PLAN**

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**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT 06248  
 STATE PROJECT #: 208-018N  
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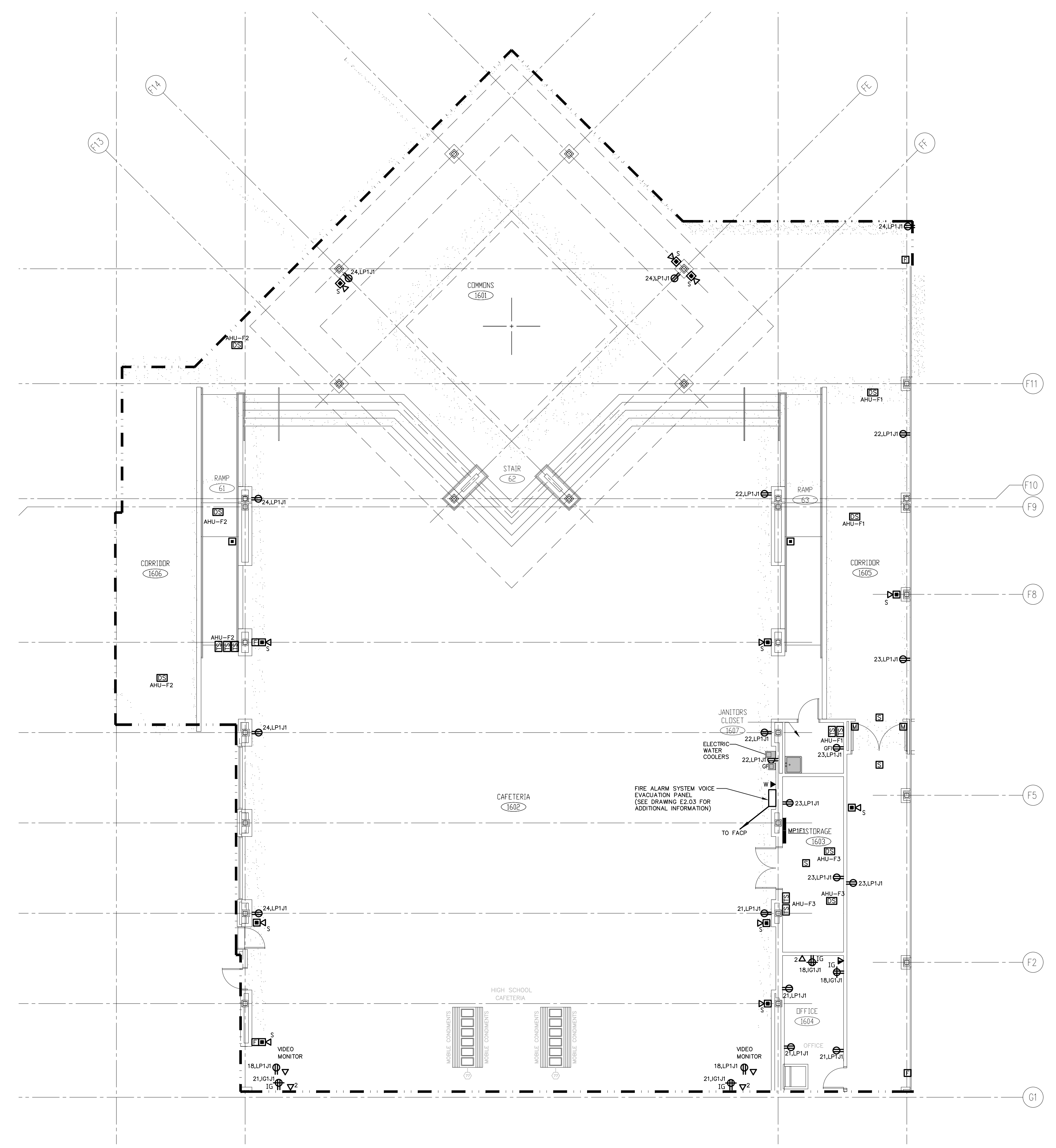
**VANZELM HEYWOOD & SHADFORD INC.**  
 MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
 29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL: (860) 521-4329 FAX: (860) 521-4324  
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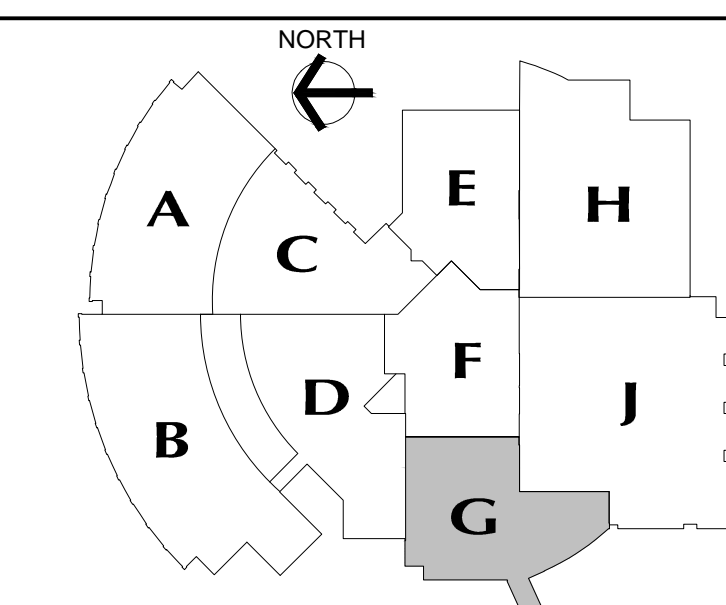
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**MAIN LEVEL POWER PLAN AREA F**

PROJECT NO.: 00048 DRAWING NO.:  
 DATE: JANUARY 20, 2001 **E1.13**



- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12RND, 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT TYPICAL DATA/VOICE OUTLET DETAIL ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**MAIN LEVEL KEY PLAN**

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**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEY WOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4339 FAX (860) 521-5626  
vZHS PROJECT NUMBER: 2000155.00

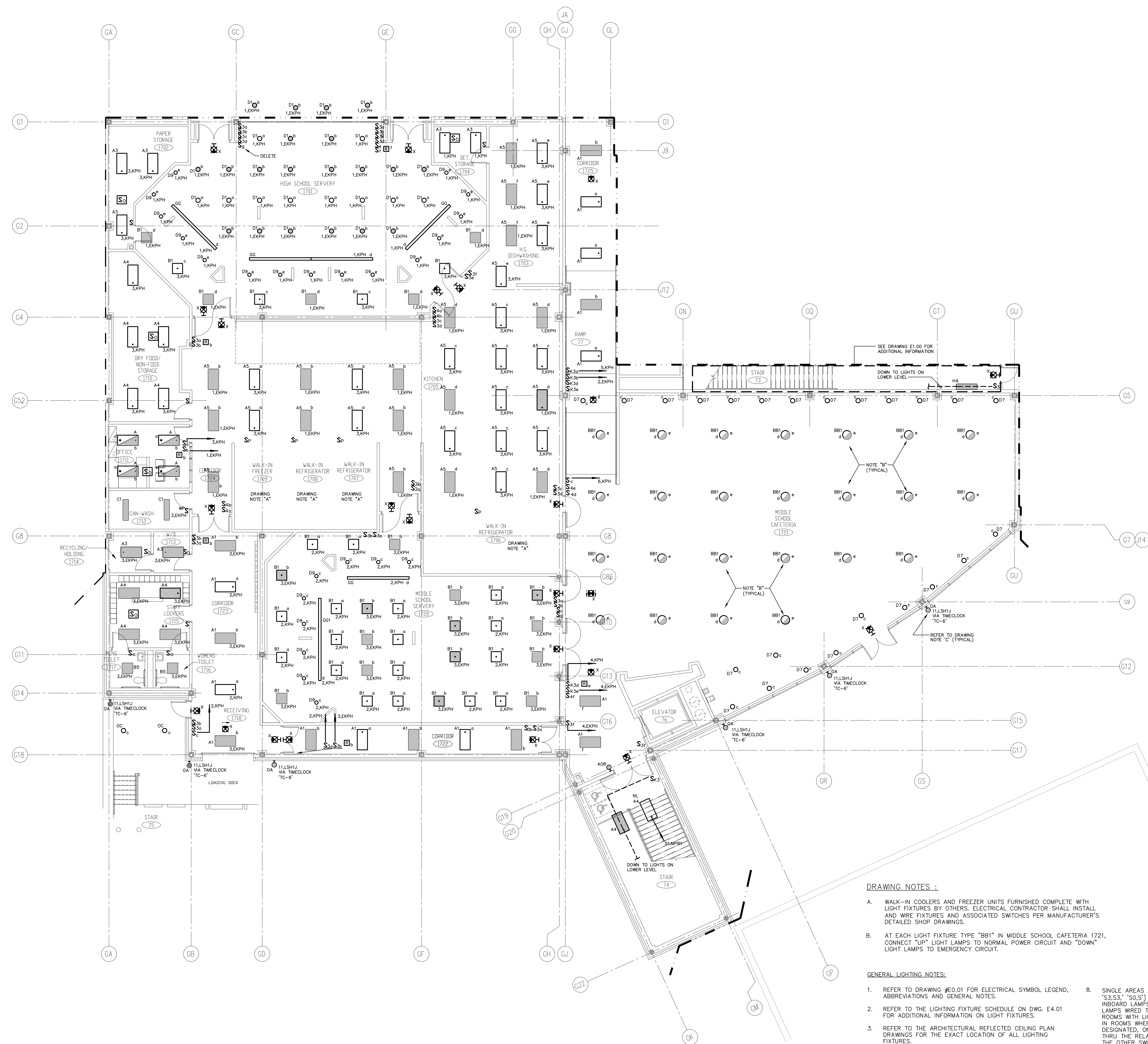


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**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.14**



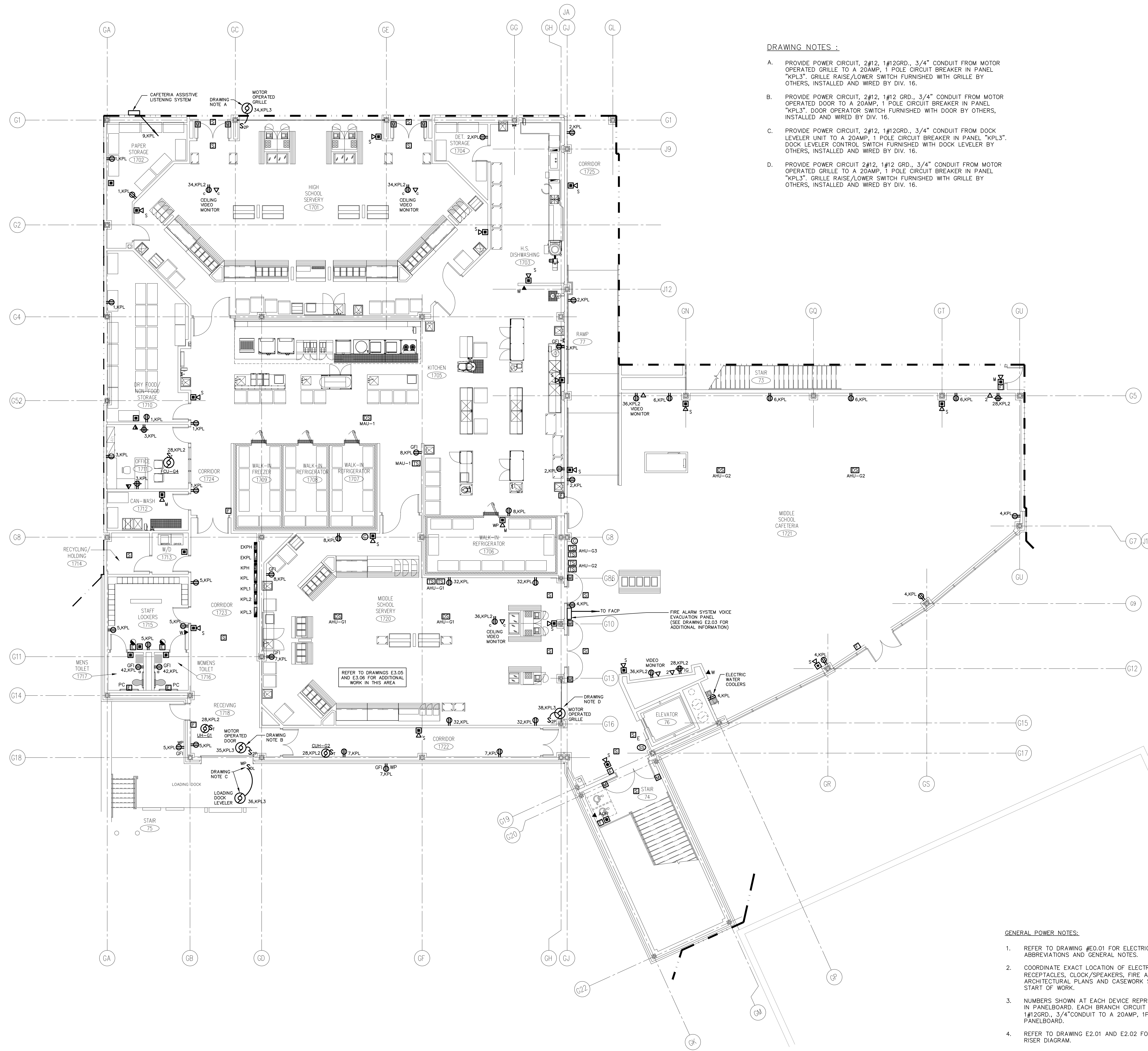
**DRAWING NOTES :**

- A. WALK-IN COOLERS AND FREEZER UNITS FURNISHED COMPLETE WITH LIGHT FIXTURES BY OTHERS. ELECTRICAL CONTRACTOR SHALL INSTALL AND WIRE FIXTURES AND ASSOCIATED SWITCHES PER MANUFACTURER'S DETAILED SHOP DRAWINGS.
- B. AT EACH LIGHT FIXTURE TYPE "BB1" IN MIDDLE SCHOOL CAFETERIA 1721, CONNECT "UP" LIGHT LAMPS TO NORMAL POWER CIRCUIT AND "DOWN" LIGHT LAMPS TO EMERGENCY CIRCUIT.

**GENERAL LIGHTING NOTES:**

1. REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
3. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
4. ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
5. EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
6. REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
7. LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.

8. SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "SS,S", "SS,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT. THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
9. CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
10. COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
11. ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.

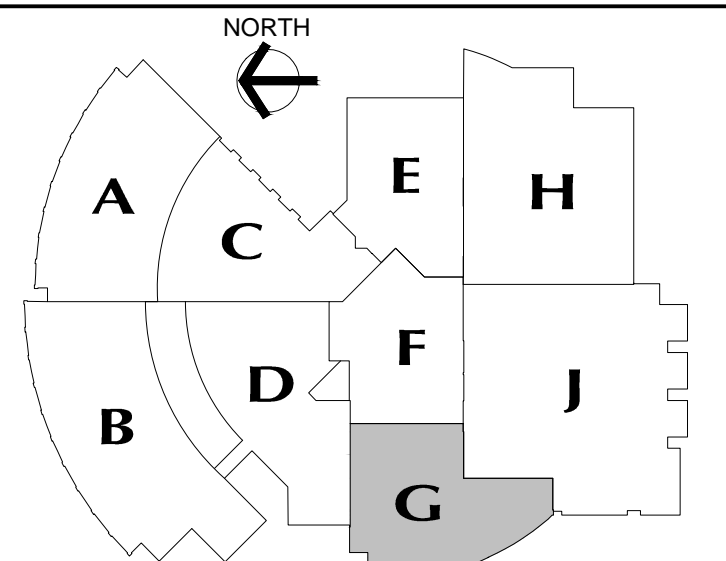


**DRAWING NOTES :**

- A. PROVIDE POWER CIRCUIT, 2#12, 1#12GRD., 3/4" CONDUIT FROM MOTOR OPERATED GRILLE TO A 20AMP, 1 POLE CIRCUIT BREAKER IN PANEL "KPL3". GRILLE RAISE/LOWER SWITCH FURNISHED WITH GRILLE BY OTHERS, INSTALLED AND WIRED BY DIV. 16.
- B. PROVIDE POWER CIRCUIT, 2#12, 1#12 GRD., 3/4" CONDUIT FROM MOTOR OPERATED DOOR TO A 20AMP, 1 POLE CIRCUIT BREAKER IN PANEL "KPL3". DOOR OPERATOR SWITCH FURNISHED WITH DOOR BY OTHERS, INSTALLED AND WIRED BY DIV. 16.
- C. PROVIDE POWER CIRCUIT, 2#12, 1#12GRD., 3/4" CONDUIT FROM DOCK LEVELER UNIT TO A 20AMP, 1 POLE CIRCUIT BREAKER IN PANEL "KPL3". DOCK LEVELER CONTROL SWITCH FURNISHED WITH DOCK LEVELER BY OTHERS, INSTALLED AND WIRED BY DIV. 16.
- D. PROVIDE POWER CIRCUIT 2#12, 1#12 GRD., 3/4" CONDUIT FROM MOTOR OPERATED GRILLE TO A 20AMP, 1 POLE CIRCUIT BREAKER IN PANEL "KPL3". GRILLE RAISE/LOWER SWITCH FURNISHED WITH GRILLE BY OTHERS, INSTALLED AND WIRED BY DIV. 16.

**GENERAL POWER NOTES:**

1. REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
4. REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
5. REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
6. REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**MAIN LEVEL KEY PLAN**

**REVISIONS**

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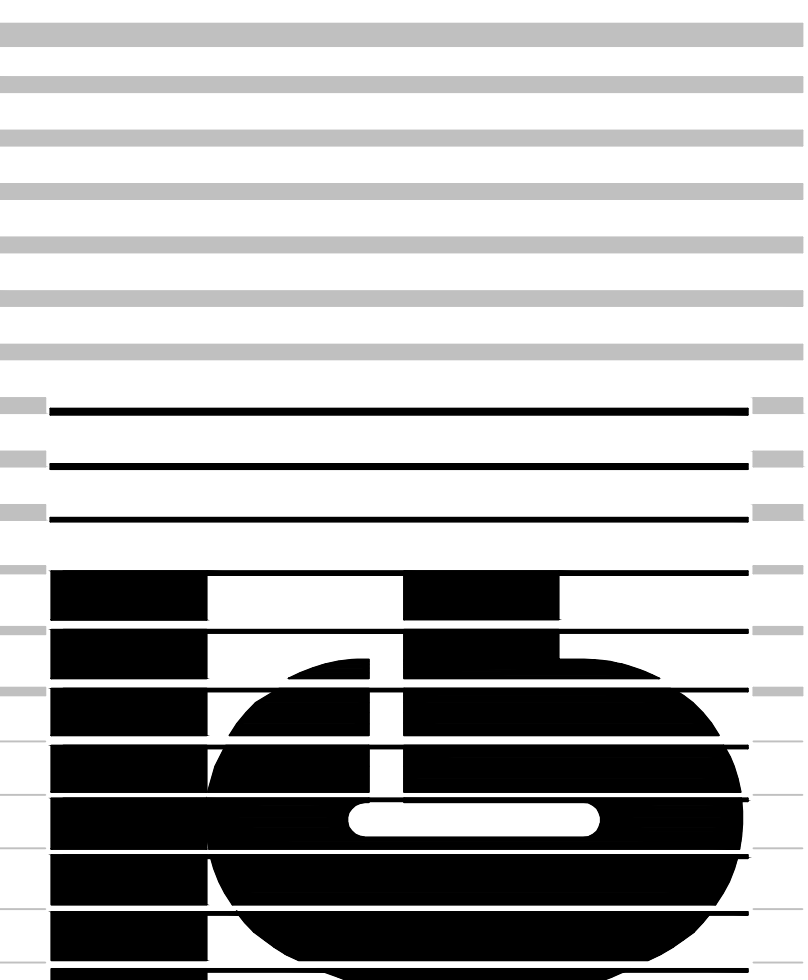


**NEW RHAM HIGH SCHOOL**  
WALL STREET  
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06248

STATE PROJECT#: 208-018N  
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VANZELM HEYWOOD & SHADFORD INC.  
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**vzhs**  
29 SOUTH MAIN STREET, WEST, HARTFORD, CT 06107-2420  
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vzhs PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

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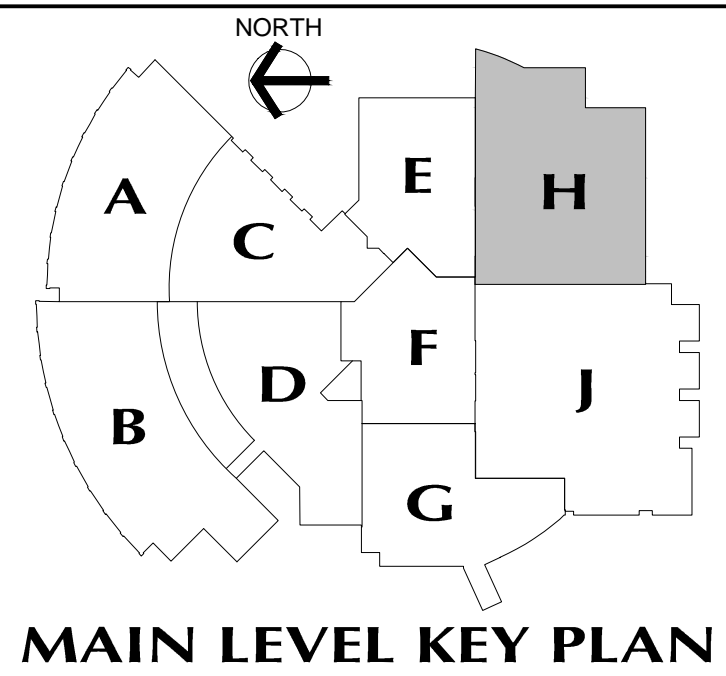
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CHECKED BY:

**MAIN LEVEL POWER PLAN AREA G**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.15**





**MAIN LEVEL KEY PLAN**

REVISIONS

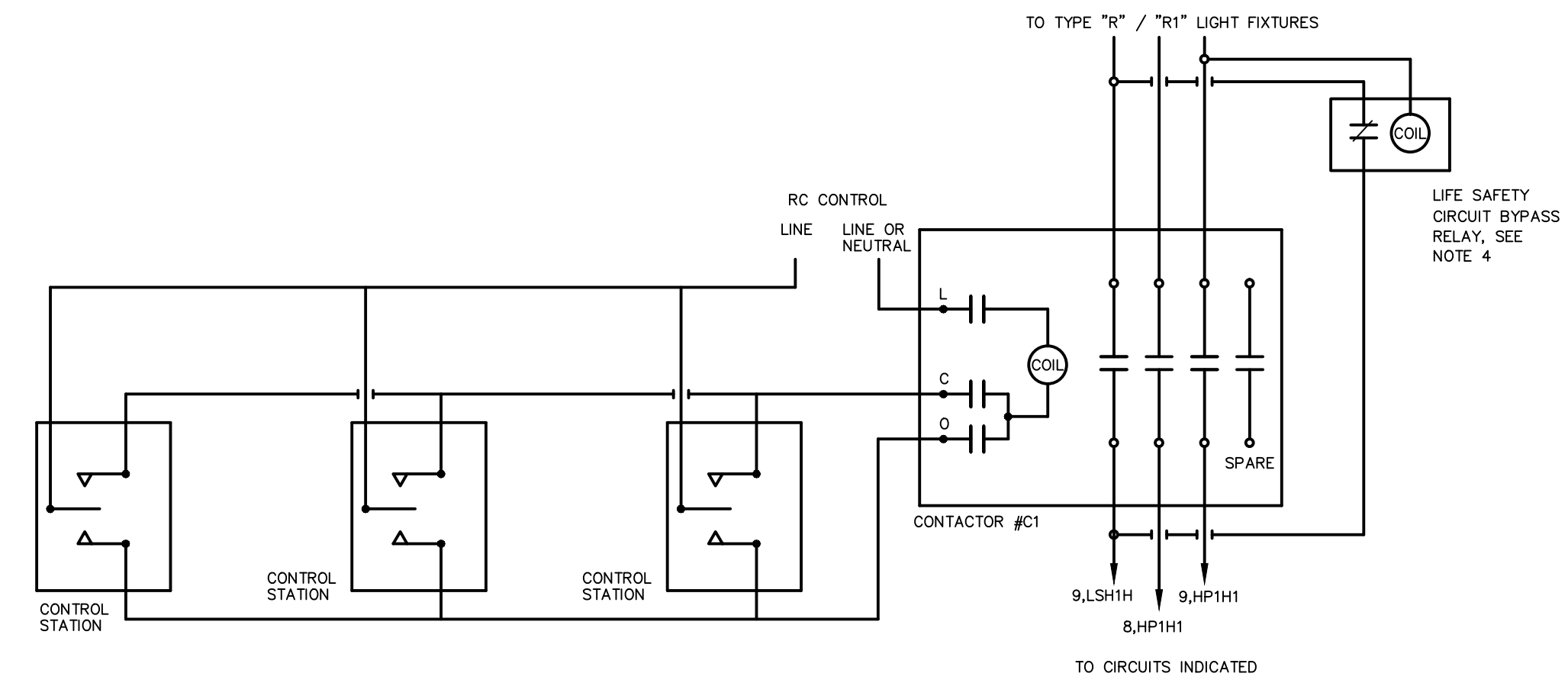
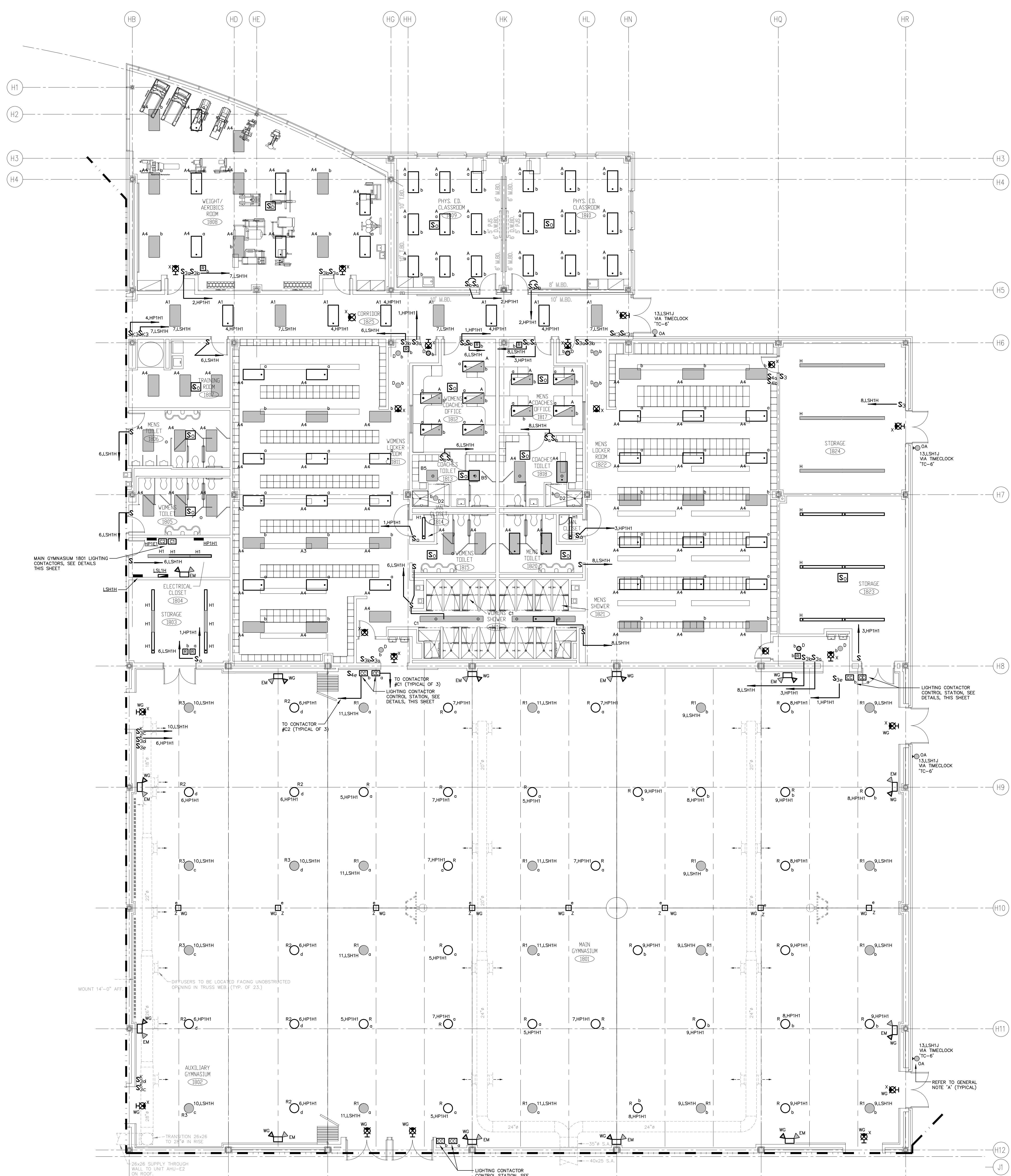
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**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
- ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
- REFER TO DRAWING #E.3.01 AND #E.3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3.S3," "S0.S1"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.

**GENERAL NOTES:**

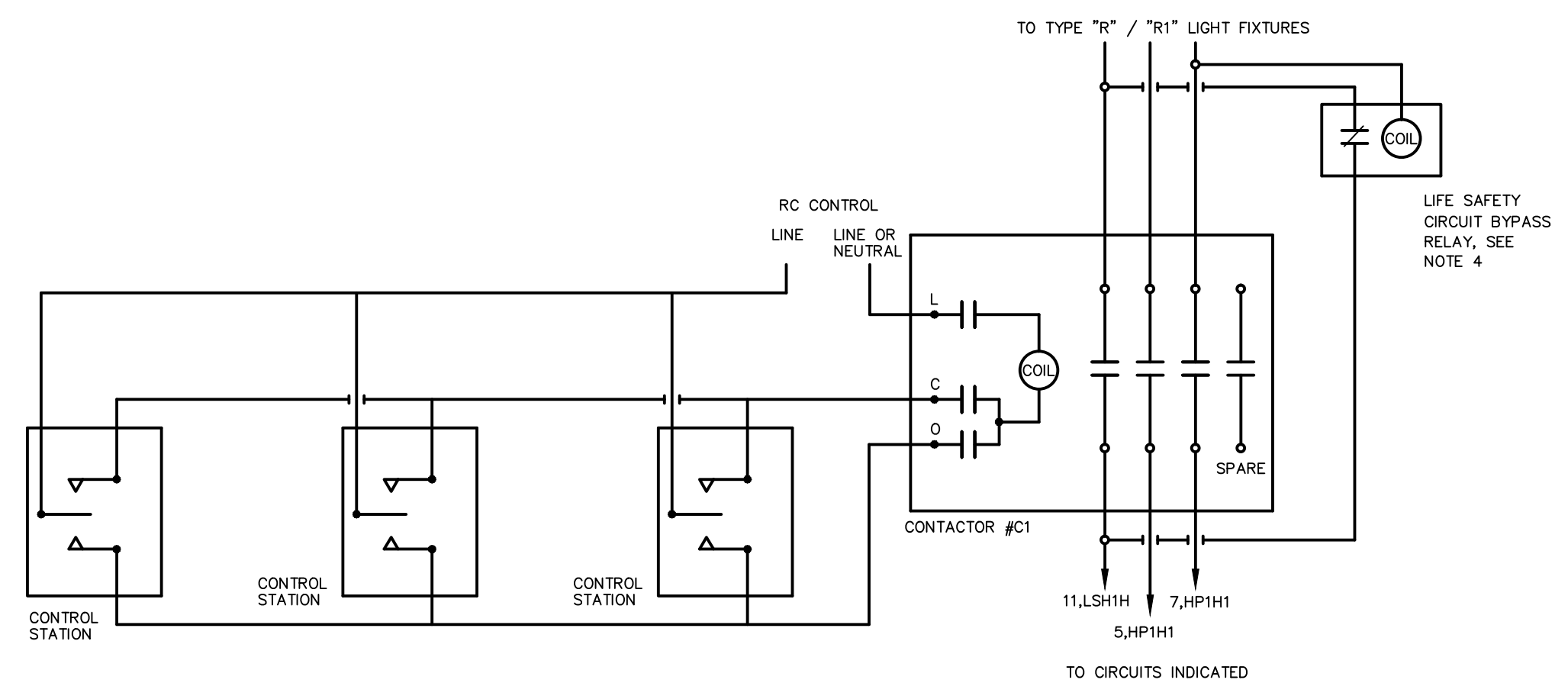
- LIGHTING FIXTURE TYPE "0A" SHALL HAVE EMERGENCY BATTERY BALLAST REMOTE MOUNTED ABOVE THE NEAREST ACCESSIBLE CEILING TO THE FIXTURE. COORDINATE FINAL LOCATION IN FIELD WITH ENGINEER/ARCHITECT.



**GYMNASIUM LIGHTING CONTACTOR #2 WIRING DETAIL**  
N.T.S.

**NOTES:**

- CONTACTOR SHALL BE AN ASCO 917 SERIES #917-4-20-3-1-C, WITH 4-20AMP 1P AT 120V, IN SURFACE NEMA-1 ENCLOSURE WITH STANDARD CONTROL BY ASCO #17342 FLUSH MOUNTED SWITCHES.
- LOCATE CONTACTOR #2 ADJACENT TO PANEL "HPH1" IN ELECTRIC CLOSET 1804.
- REFER TO FLOOR PLAN FOR LOCATION OF CONTACTOR CONTROL STATIONS.
- LIFE SAFETY BYPASS RELAY SHALL BE NORMALLY CLOSED, ELECTRICALLY HELD OPEN, UPON LOSS OF NORMAL POWER, CONTACT SHALL CLOSE AND BYPASS LIGHTING CONTACTOR FOR EMERGENCY LIGHT ILLUMINATION.



**GYMNASIUM LIGHTING CONTACTOR #1 WIRING DETAIL**  
N.T.S.

**NOTES:**

- CONTACTOR SHALL BE AN ASCO 917 SERIES #917-4-20-3-1-C, WITH 4-20AMP 1P AT 120V, IN SURFACE NEMA-1 ENCLOSURE WITH STANDARD CONTROL BY ASCO #17342 FLUSH MOUNTED SWITCHES.
- LOCATE CONTACTOR #1 ADJACENT TO PANEL "HPH1" IN ELECTRIC CLOSET 1804.
- REFER TO FLOOR PLAN FOR LOCATION OF CONTACTOR CONTROL STATIONS.
- LIFE SAFETY BYPASS RELAY SHALL BE NORMALLY CLOSED, ELECTRICALLY HELD OPEN, UPON LOSS OF NORMAL POWER, CONTACT SHALL CLOSE AND BYPASS LIGHTING CONTACTOR FOR EMERGENCY LIGHT ILLUMINATION.



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**

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TEL (860) 521-4329 FAX (860) 521-6450  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

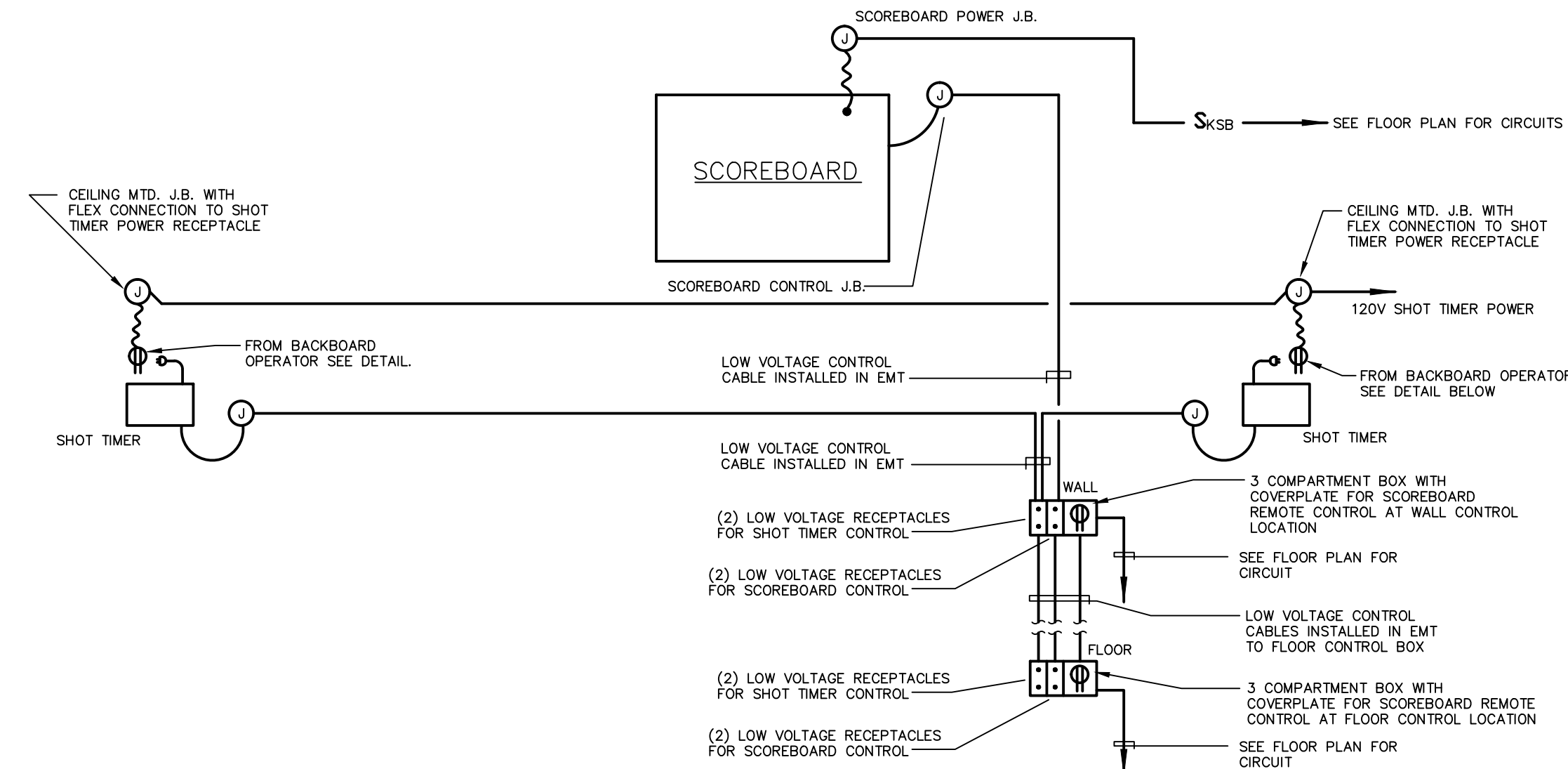
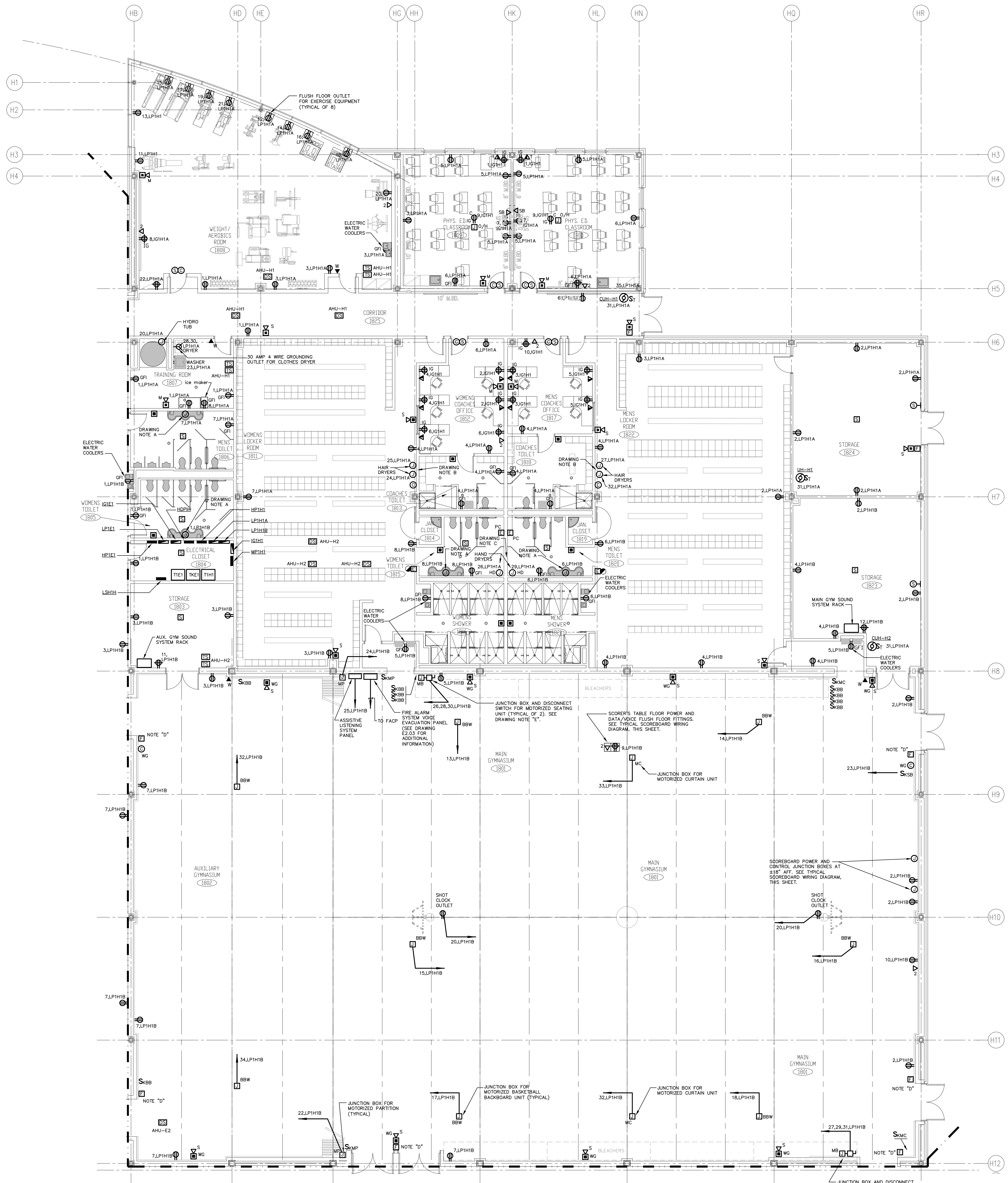
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361

DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

**MAIN LEVEL LIGHTING PLAN AREA H**

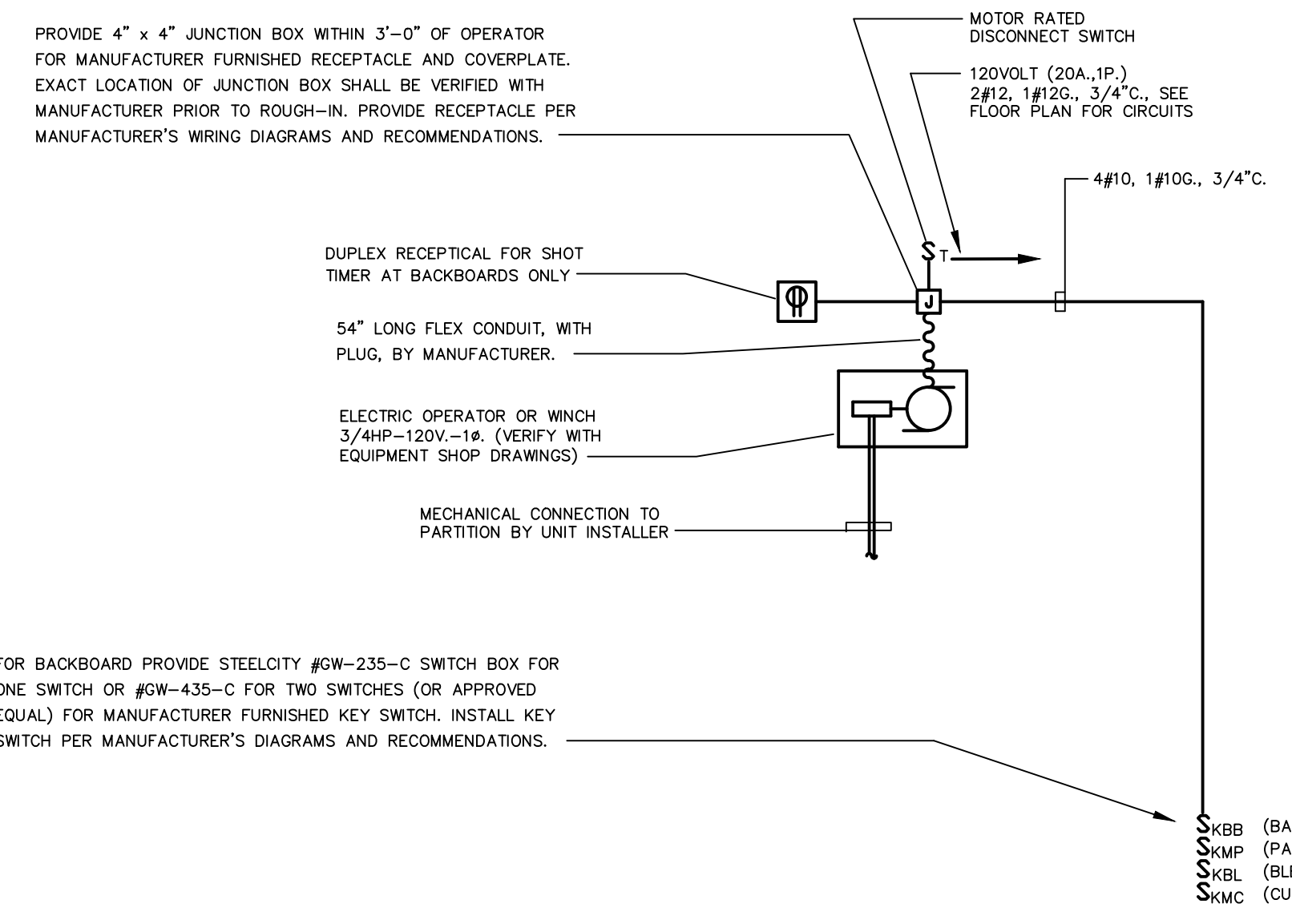
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.16**



**TYPICAL SCOREBOARD WIRING DIAGRAM**  
N.T.S.

- DETAIL NOTES:**
- POWER WIRING SHOULD BE ROUTED IN SEPARATE CONDUITS FROM CONTROL CABLES. ALL SCOREBOARD SYSTEM WIRING SHALL BE INSTALLED IN CONDUIT AND CONDUITS SHALL BE SIZED AS PER MANUFACTURER'S RECOMMENDATIONS FOR CABLE INSTALLED AND PER NEC.
  - SEE FLOOR PLAN FOR QUANTITIES OF EQUIPMENT SHOWN ABOVE.
  - VERIFY LOCATIONS OF ALL EQUIPMENT WITH ARCHITECT PRIOR TO INSTALLATION.



**TYPICAL ELECTRICAL OPERATOR WIRING DIAGRAM FOR BACKBOARD, PARTITION, CURTAIN, OR BLEACHER**  
N.T.S.

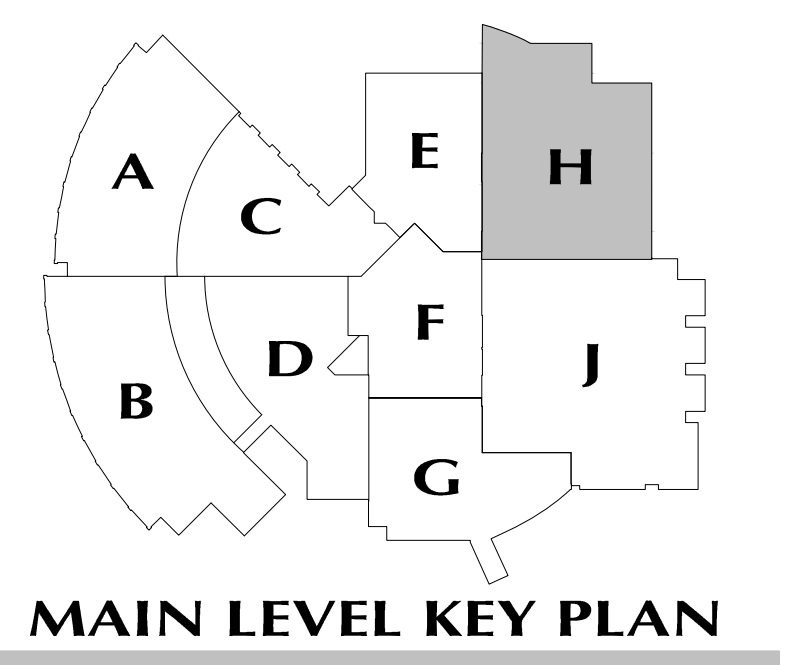
- DETAIL NOTES:**
- SEE FLOOR PLAN FOR QUANTITIES AND LOCATIONS OF MOTORIZED DEVICES AND SWITCHES.

**DRAWING NOTES:**

- JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.
- HAIR DRYER UNIT FURNISHED BY OTHERS, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
- HAND DRYER UNIT FURNISHED BY OTHERS, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR.
- PROVIDE CLEAR LEXAN FLIP-UP COVERS AT FIRE ALARM MANUAL PULL STATIONS IN MAIN GYMNASIUM 1801 AND AUXILIARY GYM 1802. FLIP COVERS SHALL BE CONNECTED TO FIRE ALARM SYSTEM AND INDICATE "TROUBLE" ALARM AT FIRE ALARM CONTROL PANEL WHEN RAISED.
- POWER CONNECTION POINT FOR MOTORIZED SEATING UNIT. PROVIDE A 30AMP, 3P, 208VOLT, NON-FUSED, LOCKABLE, DISCONNECT SWITCH AT 4'-0" AFF. EXTEND MOTOR FEEDER CONDUCTORS, 3#12, 1#12GRD., IN 3/4" CONDUIT FROM DISCONNECT SWITCH TO A NEW 20AMP, 3P CIRCUIT BREAKER IN PANEL "LPH1HB". EXTEND 3#12, 1#12GRD., IN 3/4" CONDUIT FROM DISCONNECT SWITCH TO A NEW 1/2" X 1/2" X 1/2" SCREW COVER JUNCTION BOX AT 1'-6" O.C. AFF. WIRING FROM SEATING UNIT MOTORS TO JUNCTION BOX AND FINAL CONNECTIONS BY SEATING UNIT SYSTEM INSTALLER. VERIFY EXACT LOCATION OF DISCONNECT SWITCH AND JUNCTION BOX WITH SEATING UNIT INSTALLER, ((860) 633-4655, JAY LEMBO, AT ROBERT LORD CO.), PRIOR TO INSTALLATION.

**GENERAL POWER NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**REVISIONS**

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
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vzhs PROJECT NUMBER: 2000155.00



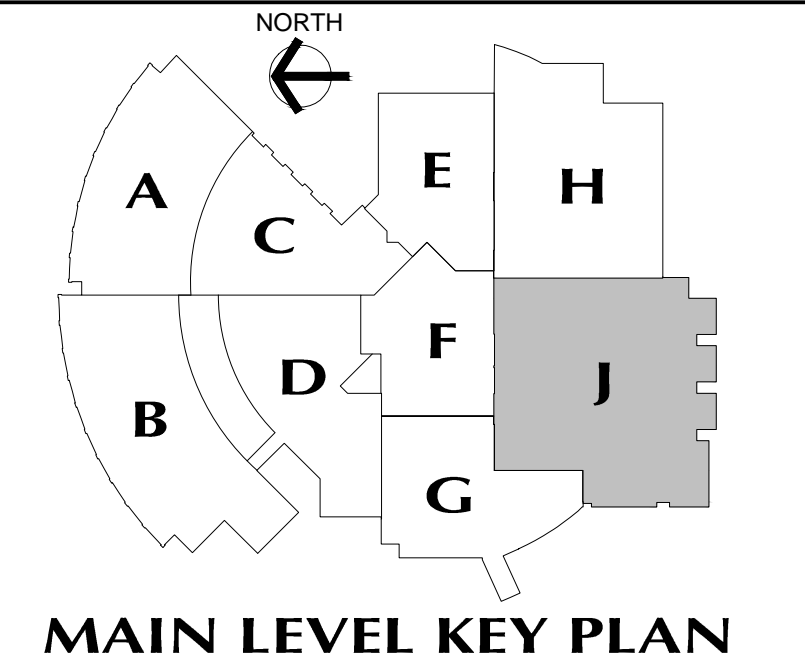
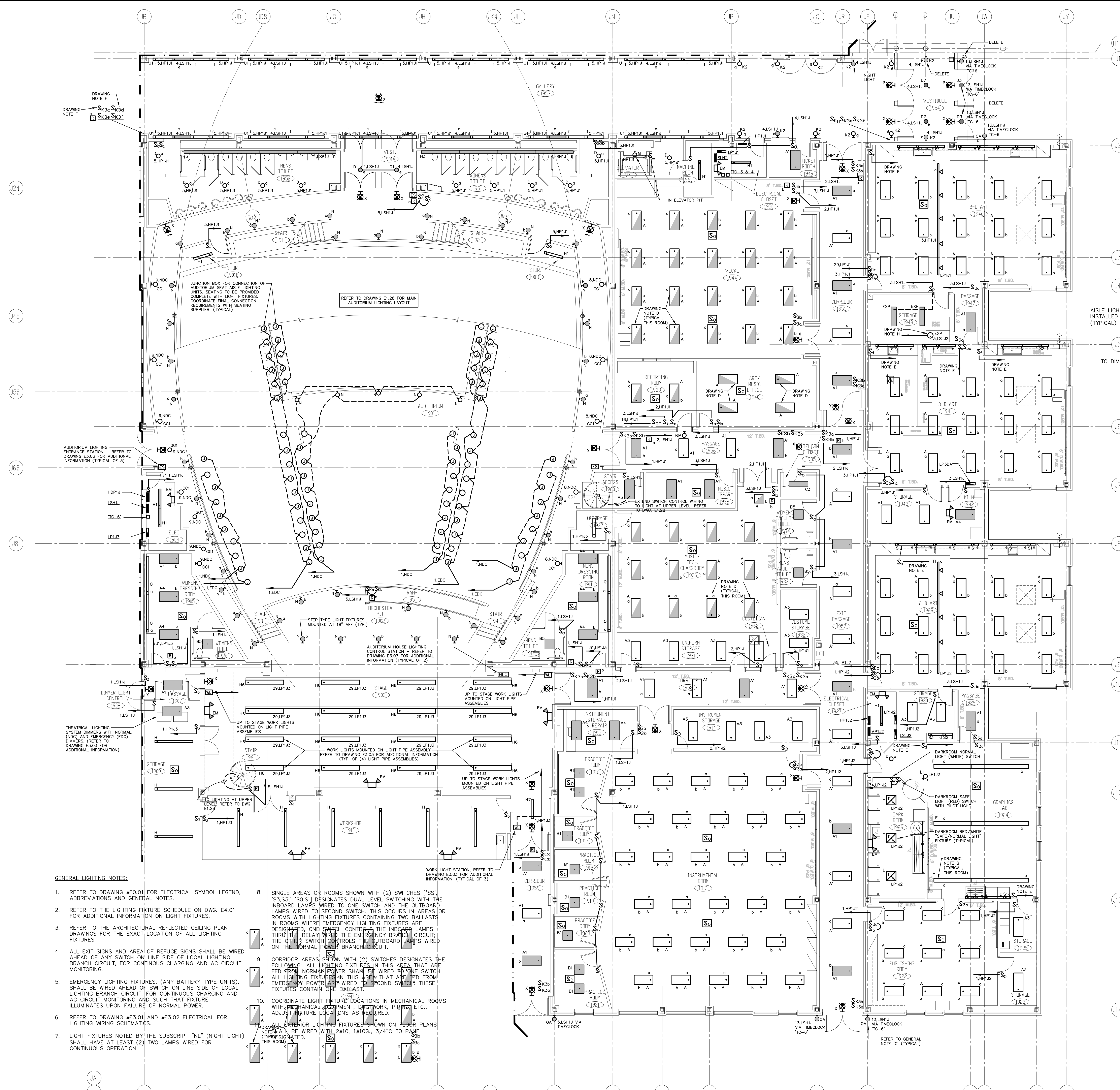
**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

**MAIN LEVEL POWER PLAN AREA H**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.17**



**MAIN LEVEL KEY PLAN**

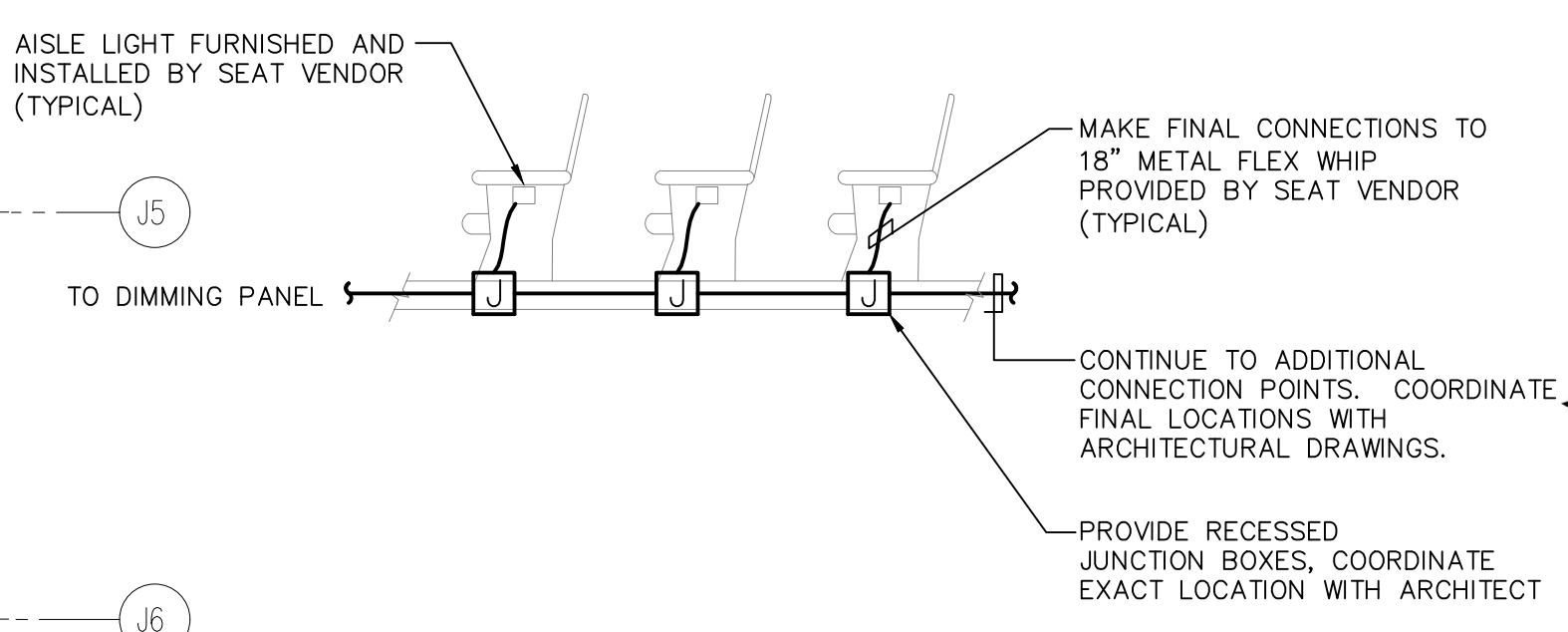
REVISIONS

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JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**THEATER SEAT LIGHTING DETAIL**

NO SCALE



- DRAWING NOTES:**
- SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 28'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 12'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 20'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.
  - CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.
  - SWITCHES FOR CONTROL OF LIGHT FIXTURES IN COMMONS 1601 AREA, SEE DRAWING E1.12 FOR ADDITIONAL INFORMATION.

**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E1.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
- ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
- REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["S", "S3", "S3", "S0", "S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED. ONE SWITCH CONTROLS THE INBOARD LAMPS THROUGH THE RELAY WIRE, THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPES, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" TO PANEL (TYPICAL).

**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

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29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-4222 FAX: (860) 521-4230  
vzhs PROJECT NUMBER: 2000155.00

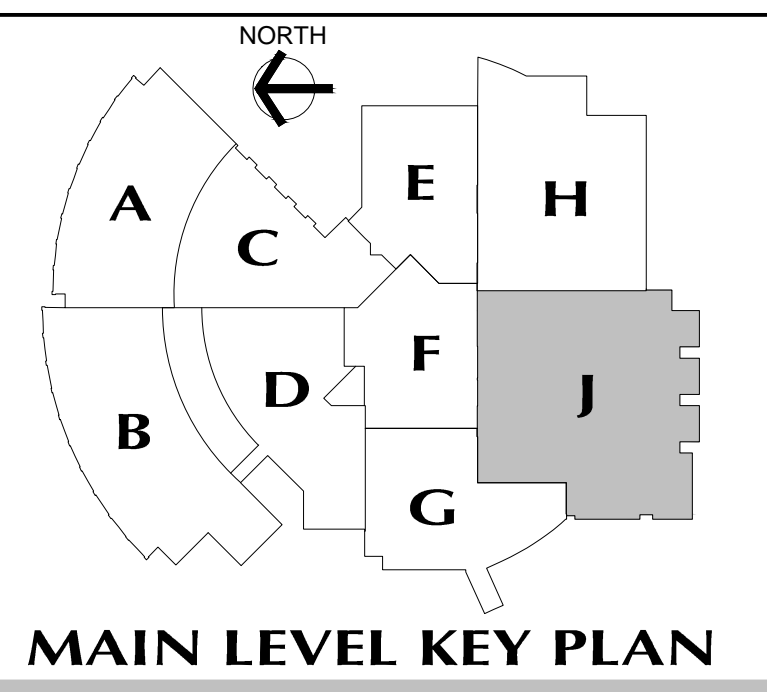
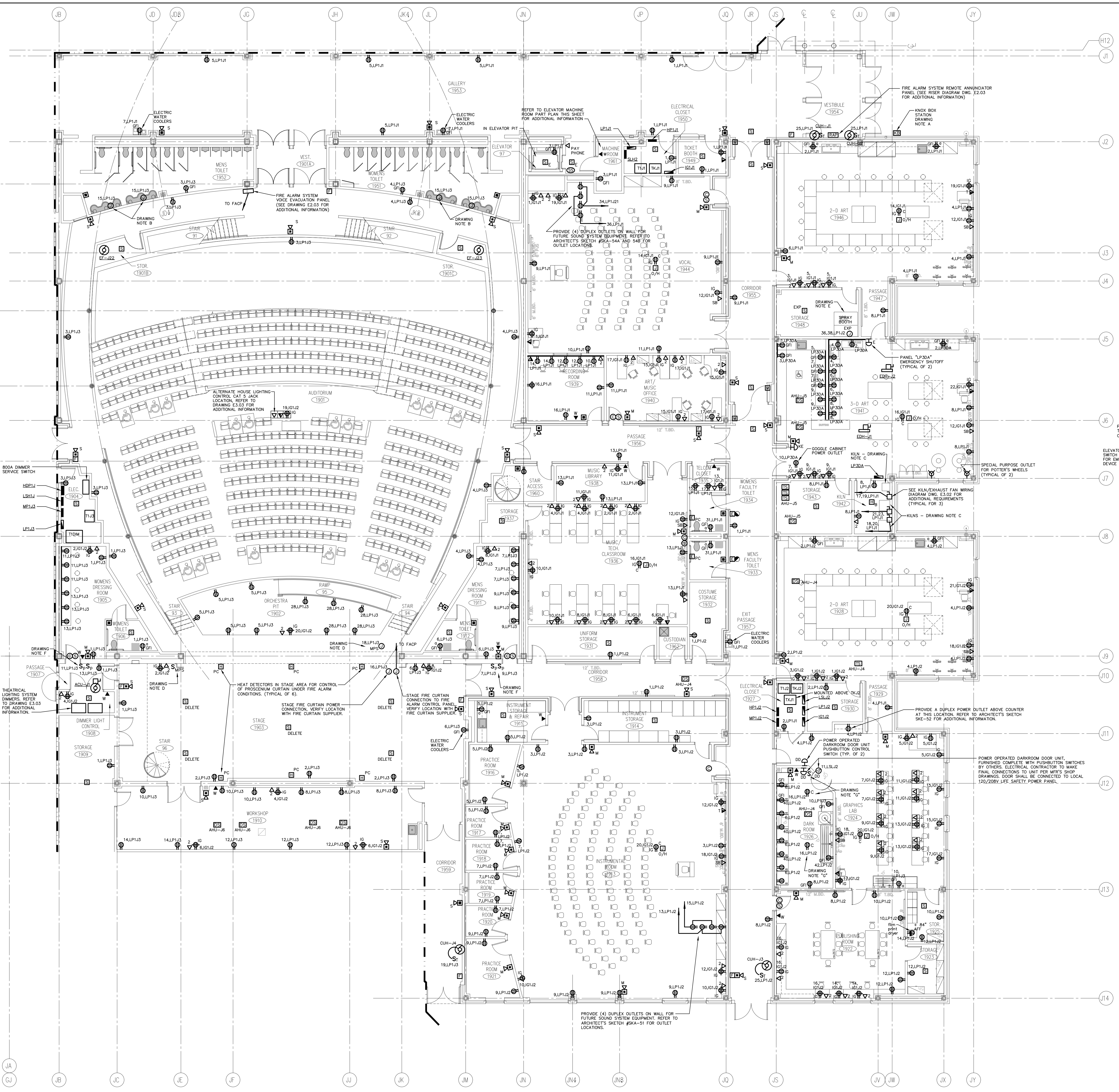
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06550-2590 (860) 229-0361  
DRAWN BY: SCALE: 1/8" = 1'-0"  
CHECKED BY:

**MAIN LEVEL LIGHTING PLAN AREA J**

PROJECT NO.: 0048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.18**



**MAIN LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
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**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

VAN ZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-5626  
vZHS PROJECT NUMBER: 2000155.00

**ELEVATOR MACHINE ROOM PART PLAN**  
SCALE: 1/4"=1'-0"

DETAIL NOTES:

1. PROVIDE A 20AMP, 1POLE, 277VOLT CIRCUIT BREAKER IN NEMA-1 ENCLOSURE, AND A 3.0KV DRY TRANSFORMER IN ELEVATOR MACHINE ROOM AS SHOWN FOR POWER TO ELEVATOR CAB LIGHTS.

DRAWING NOTES:

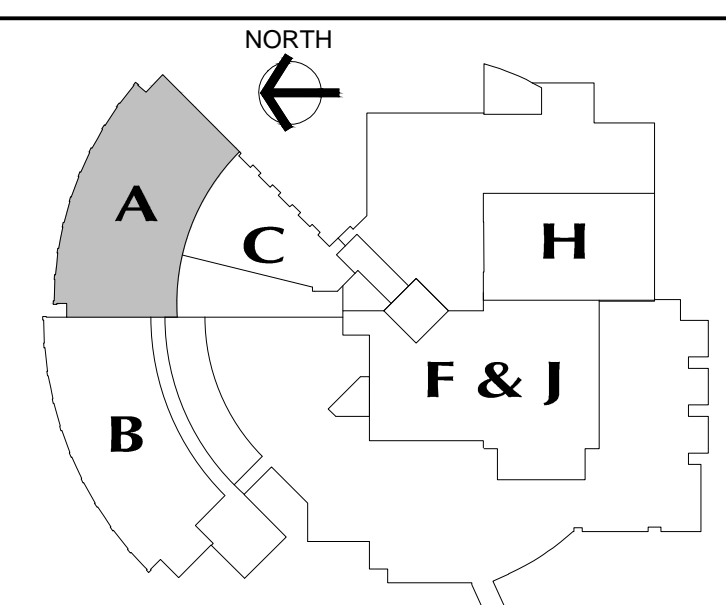
- A. KNOX BOX UNIT FURNISHED AND INSTALLED BY OTHERS, PROVIDE CONNECTION TO FIRE ALARM INITIATION LOOP WIRING FOR MONITORING OF BOX.
- B. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.
- C. POWER WIRING TO EACH KILN (3) SHALL BE 4#8, 1#10 GRND, 3/4" C. FROM 50A-2P C/B.
- D. MOTORIZED PROJECTION SCREEN UNIT FURNISHED AND INSTALLED BY OTHERS, FINAL ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MOTORIZED PROJECTION SCREEN RAISE/LOWER SWITCH UNIT FURNISHED WITH SCREEN BY OTHERS, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR PER MANUFACTURER'S SHOP DRAWINGS. VERIFY EXACT LOCATION OF SCREEN AND SWITCH PRIOR TO INSTALLATION.
- E. SPRAY BOOTH UNIT FURNISHED BY OTHERS, ELECTRICAL CONTRACTOR TO MAKE FINAL CONNECTIONS TO UNIT PER MANUFACTURER'S SHOP DRAWINGS.

GENERAL POWER NOTES:

1. REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
4. REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
5. REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
6. REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANTS' DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.

**MAIN LEVEL POWER PLAN AREA J**

PROJECT NO.: 00048 DRAWING NO.:  
DATE: JANUARY 20, 2001 **E1.19**



**UPPER LEVEL KEY PLAN**

REVISIONS		
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**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

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vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

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DRAWN BY: \_\_\_\_\_ SCALE: 1/8" = 1'-0"  
CHECKED BY: \_\_\_\_\_

**UPPER LEVEL LIGHTING PLAN AREA A**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.20**

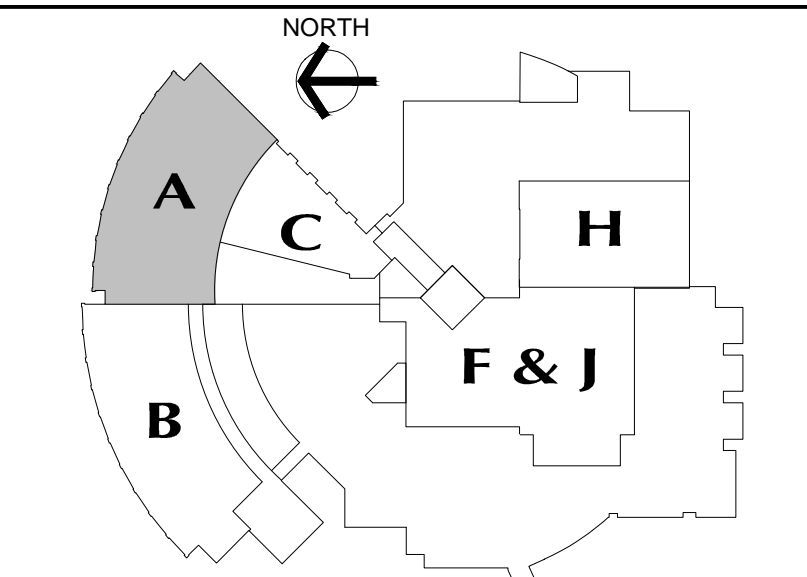


**DRAWING NOTES:**

- SWITCH 8'-0" OF TYPE "F" FIXTURE ON SWITCH "a" AND 12'-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
- SWITCH 8'-0" OF TYPE "F" FIXTURE ON SWITCH "a" AND 8'-0" OF TYPE "F" LIGHT FIXTURE ON SWITCH "b".
- CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.

**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
- REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
- ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
- EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
- REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3.S3", "S0.S0"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4"C TO PANEL DESIGNATED.



**UPPER LEVEL KEY PLAN**

REVISIONS

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TEL (860) 521-4339 FAX (860) 521-5620  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD. NEW BRITAIN, CT 06050-2550 (860) 229-0361  
DRAWN BY: SCALE: 1/8" = 1'-0"  
CHECKED BY:

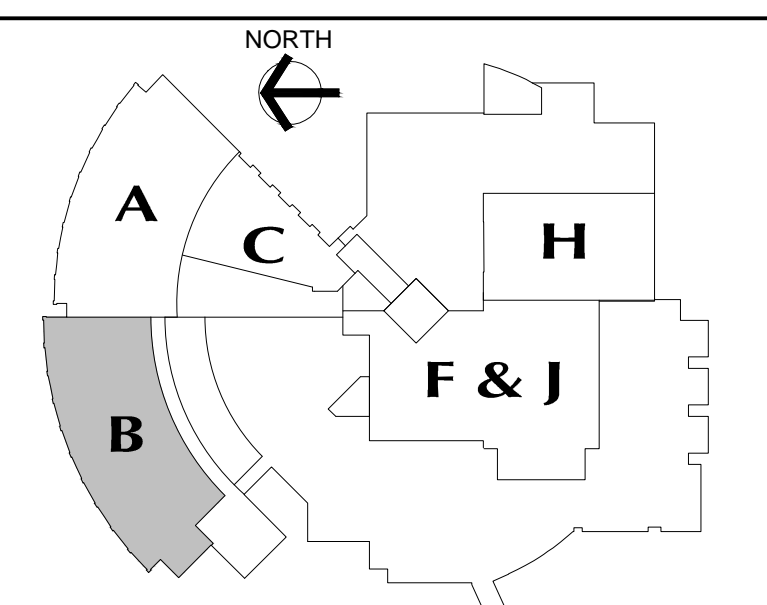
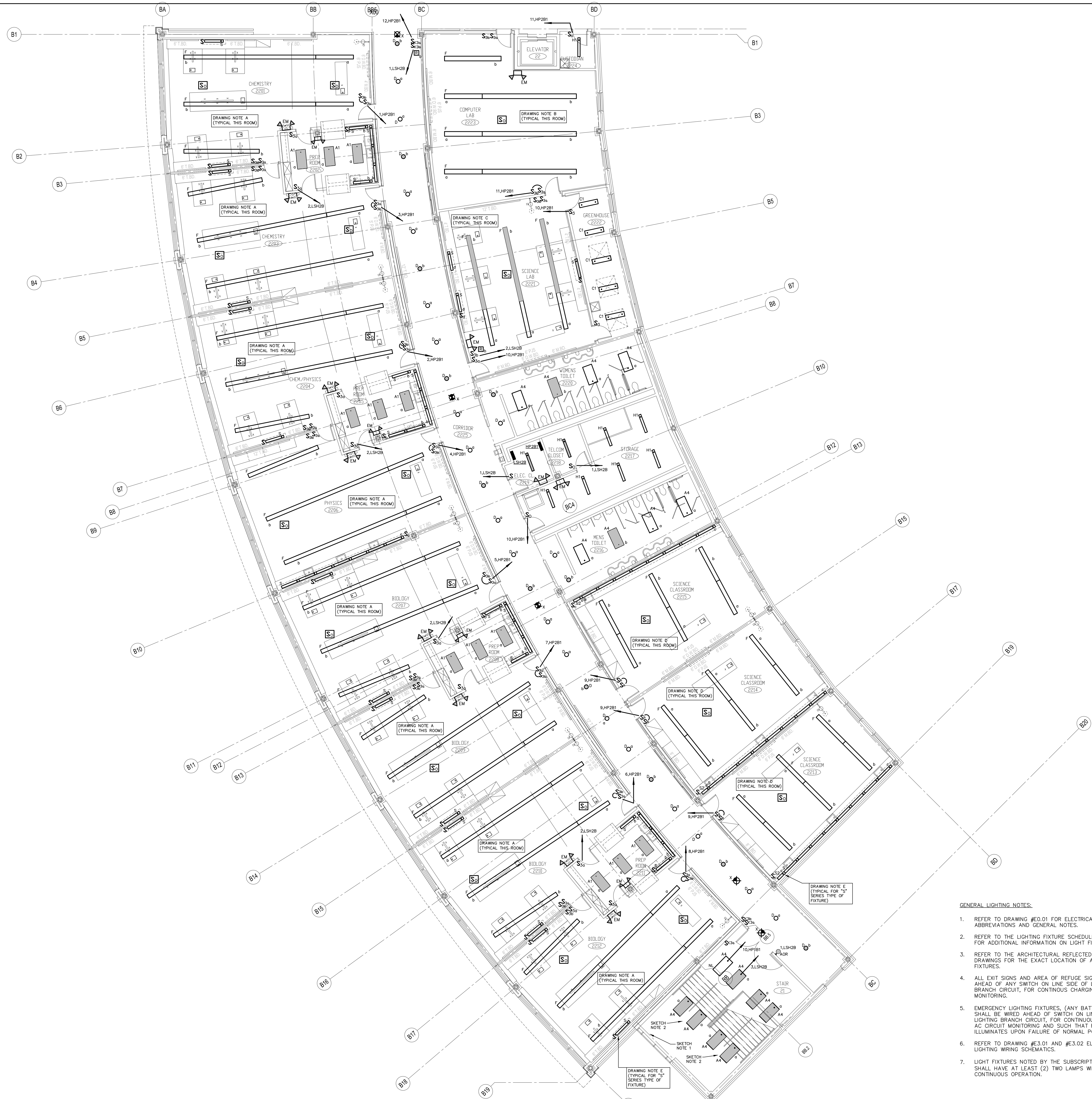
**UPPER LEVEL POWER PLAN AREA A**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.21**

**DRAWING NOTES:**  
A. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT, REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**UPPER LEVEL KEY PLAN**

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE I
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-0620  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

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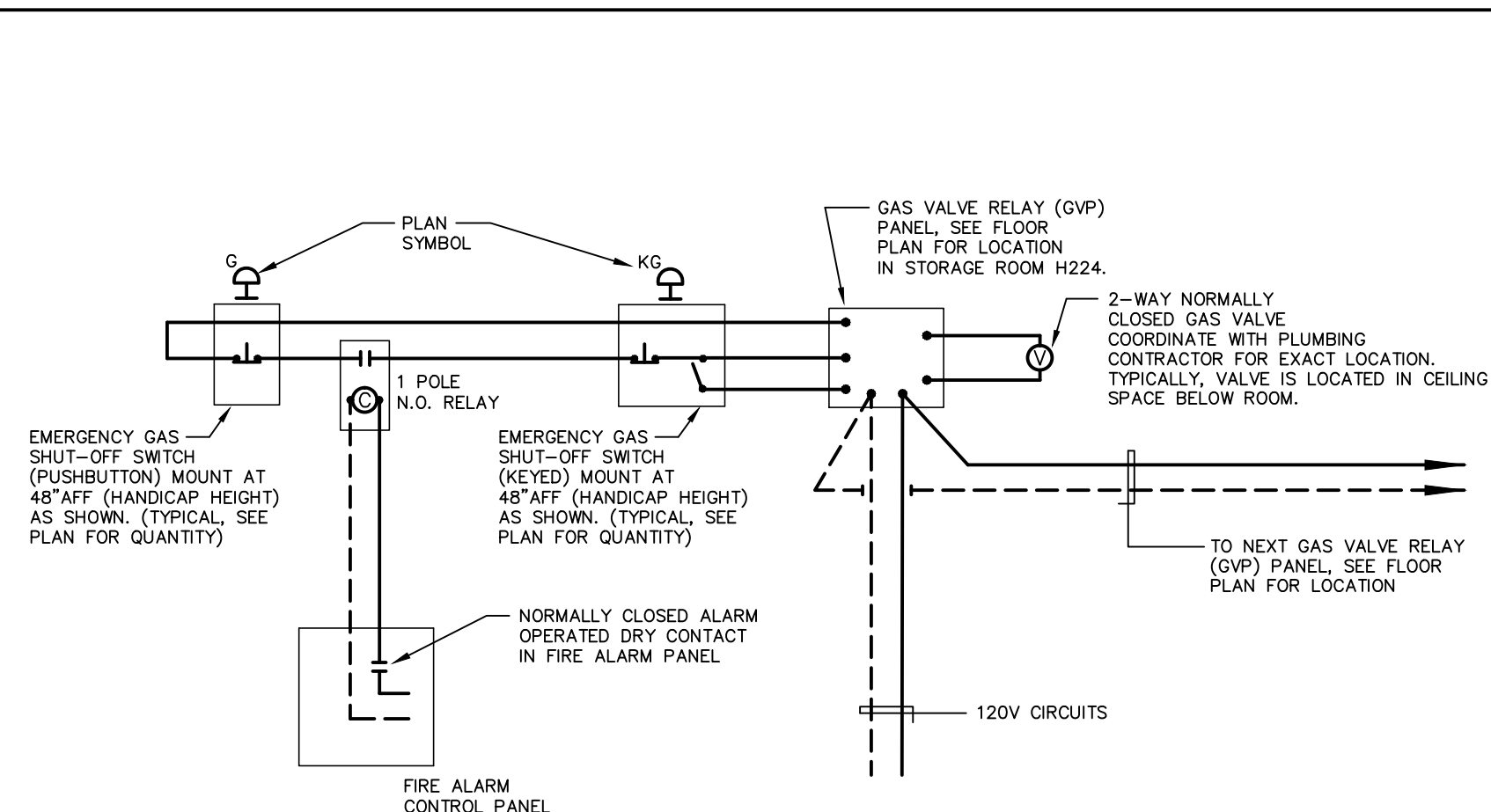
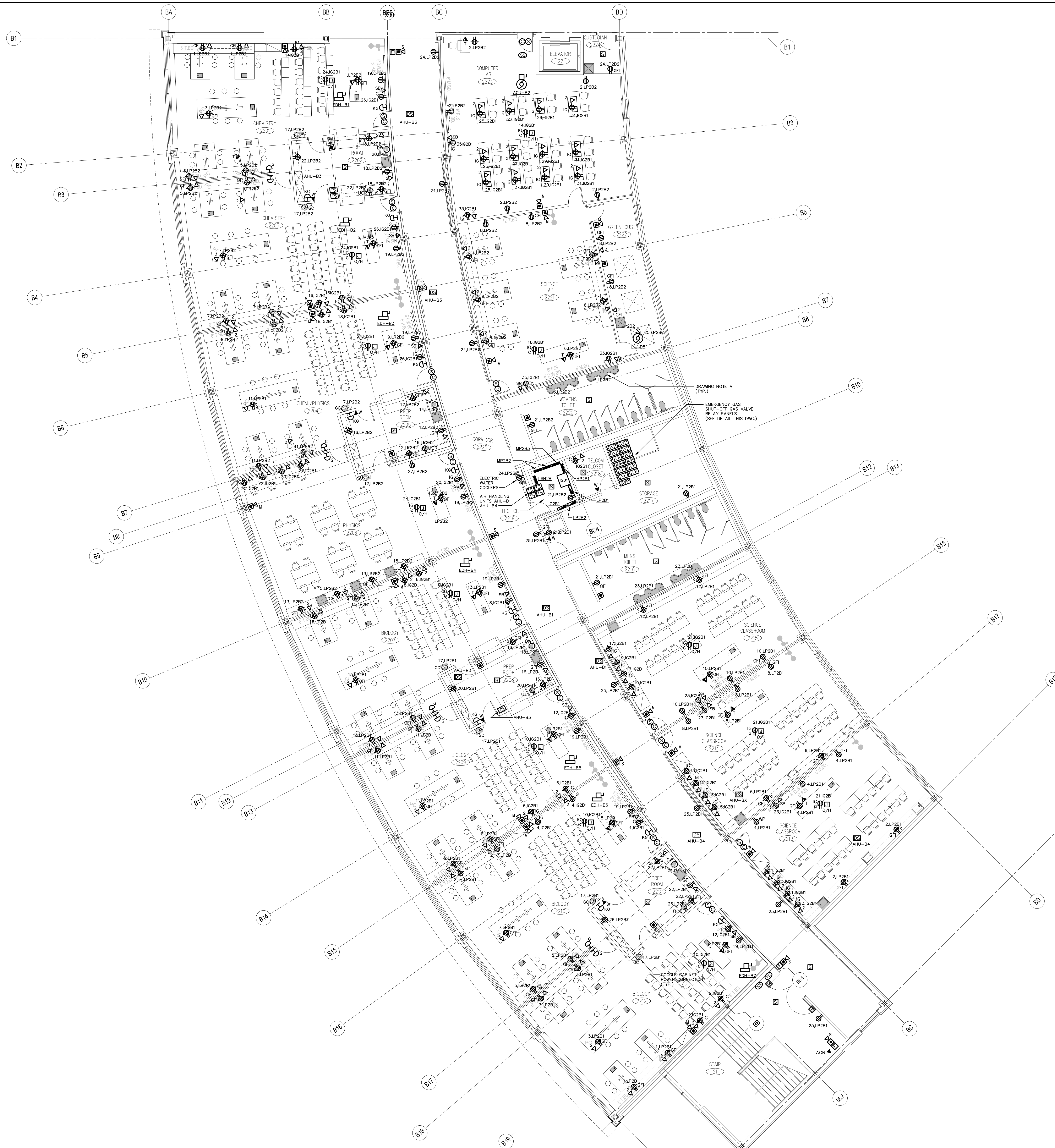
**UPPER LEVEL LIGHTING PLAN AREA B**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.22**

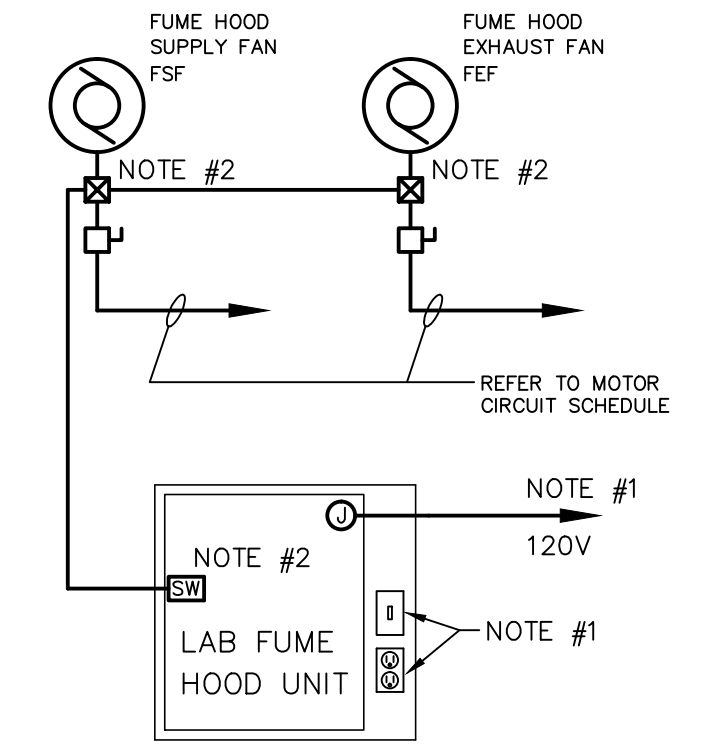
- DRAWING NOTES:**
- SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 28'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 20'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 16'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - SWITCH 8'-0" OF TYPE "T" FIXTURE ON SWITCH "a" AND 8'-0" OF TYPE "T" LIGHT FIXTURE ON SWITCH "b".
  - CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS LIGHTING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["S3", "S3.S3", "S0.S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4"C TO PANEL DESIGNATED.



**GAS VALVE EMERGENCY SHUT OFF SYSTEM**  
N.T.S. - TYPICAL FOR (8) ROOMS WITH PROVISIONS FOR GAS.

- DETAIL NOTES:**
1. INCLUDE GROUND WIRE WITH 120V CIRCUIT WIRING.
  2. 2-WAY NORMALLY CLOSED GAS VALVE FURNISHED AND INSTALLED BY DIV. 15, LOW VOLTAGE CONTROL WIRING BY DIV. 16.
  3. GAS VALVE RELAY PANEL, EMERGENCY GAS SHUT-OFF SWITCH AND KEYS EMERGENCY GAS SHUT-OFF SWITCH FURNISHED BY DIV. 15, INSTALLED AND ALL WIRING BY DIV. 16.
  4. CONNECT ALL GAS VALVE CONTROL PANELS TO (1) 120V POWER CIRCUIT IN PANEL "LP2B1".
  5. EMERGENCY GAS SHUT-OFF SWITCH AND KEYS EMERGENCY GAS SHUT-OFF SWITCH SHALL BE CONNECTED TO GAS VALVE RELAY PANEL AND ASSOCIATED GAS VALVE FOR EACH RESPECTIVE AREA. PROVIDE BLACK LAMACOID ENGRAVED LABEL FOR EACH GAS VALVE RELAY PANEL INDICATING ROOM SERVED.
  6. ON GENERAL ALARM SIGNAL FROM FIRE ALARM CONTROL PANEL THE 1 POLE RELAY SHALL DISRUPT CONTROL CIRCUIT SIMILAR TO PUSHBUTTON STATION, EACH GAS VALVE RELAY PANEL MUST BE RESET AT RESPECTIVE KEYS PUSHBUTTON STATION.

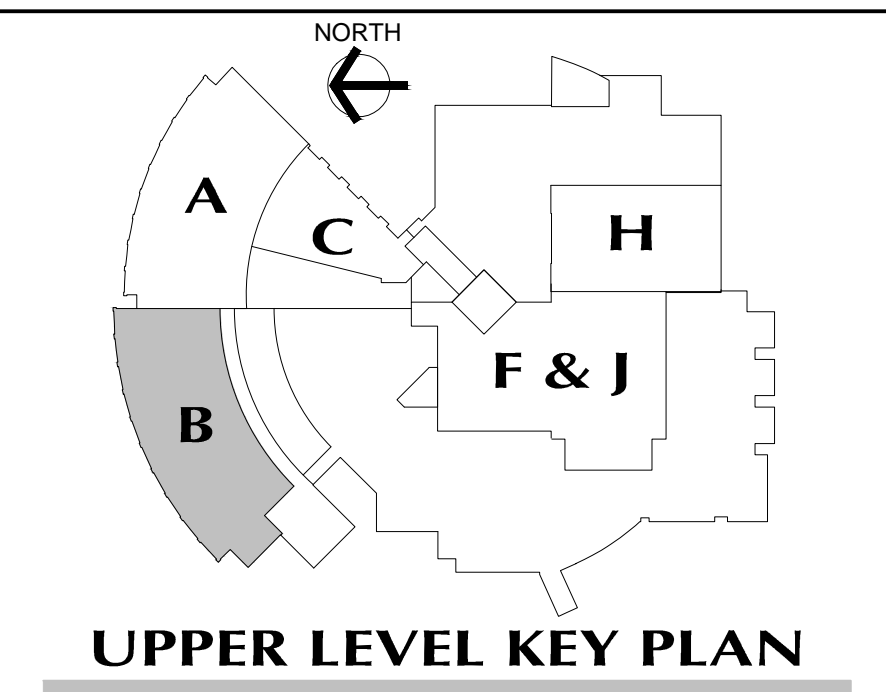


**TYPICAL LAB FUME HOOD WIRING DIAGRAM**  
N.T.S.

- DETAIL NOTES:**
1. PROVIDE 20A, 120V CIRCUIT AND FINAL CONNECTIONS TO JUNCTION BOX FURNISHED WITH HOOD, FOR HOOD LIGHT AND RECEPTACLE. (LIGHT FIXTURE AND RECEPTACLE FURNISHED, INSTALLED AND WIRED TO FACTORY JUNCTION BOX BY OTHERS).
  2. FUME HOOD FAN "SASH SWITCH", SWITCH FURNISHED MOUNTED ON HOOD. FINAL CONNECTIONS FROM SWITCH TO ASSOCIATED FUME HOOD SUPPLY AND EXHAUST FAN MOTOR STARTERS BY ELECTRICAL CONTRACTOR. FANS WILL ONLY OPERATE WHEN SASH SWITCH IS CLOSED.
  3. REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.02 FOR FUME HOOD SUPPLY AND EXHAUST FAN MOTOR POWER REQUIREMENTS.

- DRAWING NOTES:**
- A. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING E3.01 FOR ADDITIONAL REQUIREMENTS.

- GENERAL POWER NOTES:**
1. REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY #12, 1#12GND., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  4. REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  5. REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  6. REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**REVISIONS**

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JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
23 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2410  
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vZHS PROJECT NUMBER: 2000155.00



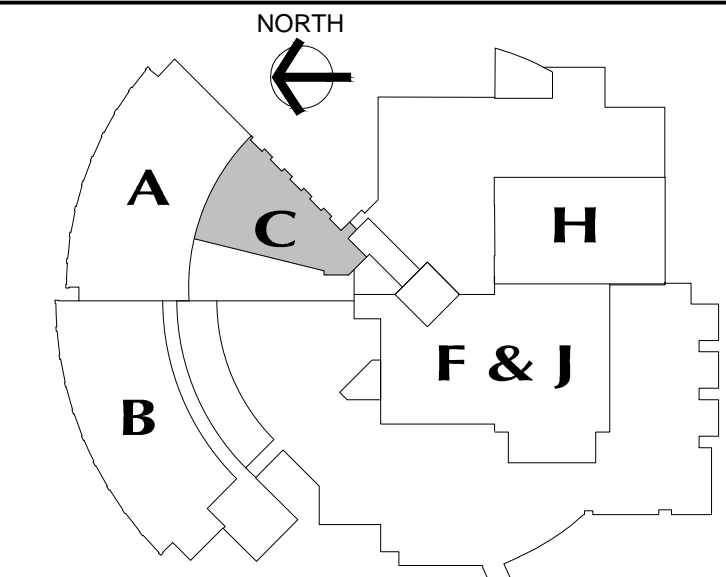
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

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CHECKED BY: \_\_\_\_\_  
**UPPER LEVEL POWER PLAN AREA B**

PROJECT NO.: 00048 DRAWING NO.: \_\_\_\_\_  
DATE: JANUARY 20, 2001 **E1.23**





**UPPER LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
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**NEW RHAM HIGH SCHOOL**  
WALL STREET  
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06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
20 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4320 FAX (860) 521-5620  
VZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

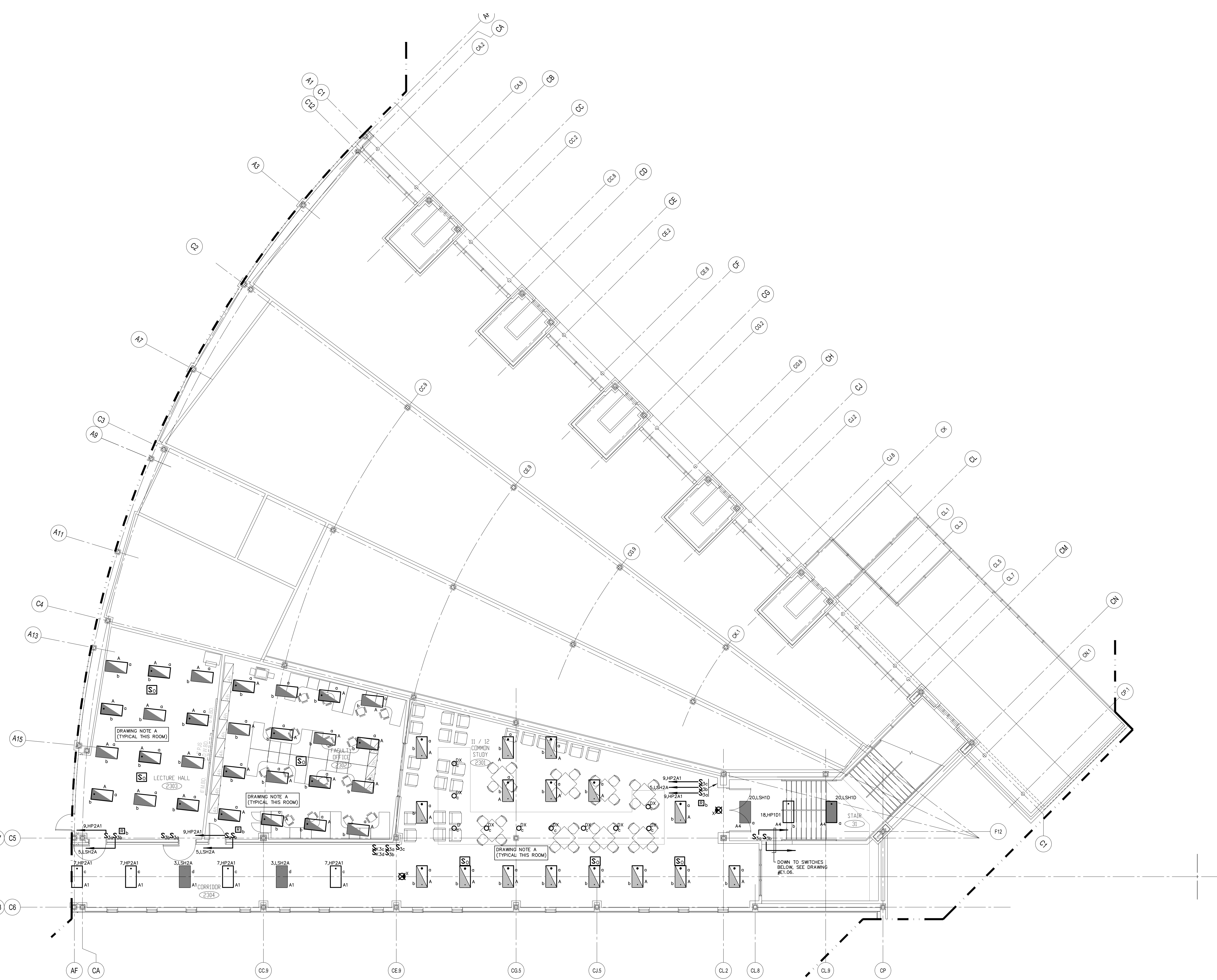
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

**UPPER LEVEL LIGHTING PLAN AREA C**

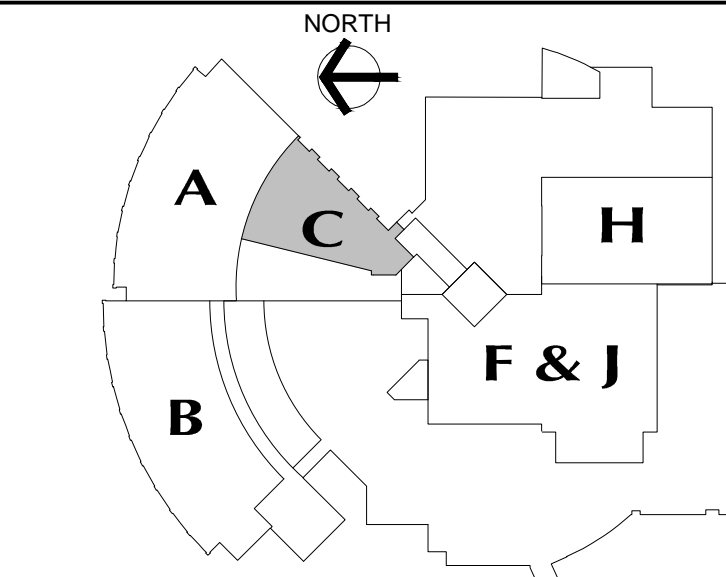
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.24**



- DRAWING NOTES:**
- CONNECT (1) LAMP OF EACH TYPE "A" FIXTURE TO SWITCH "b", LIFE SAFETY CIRCUIT.
  - CONNECT TYPE "S" SERIES UNDERCABINET LIGHT FIXTURES TO LOCAL 120 VOLT RECEPTACLE CIRCUIT.

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ("SS", "SS.S3", "SS.S1") DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH #2/0, #1/0G, 3/4" C TO PANEL DESIGNATED.



**UPPER LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
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WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
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VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**

29 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-1420  
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VZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

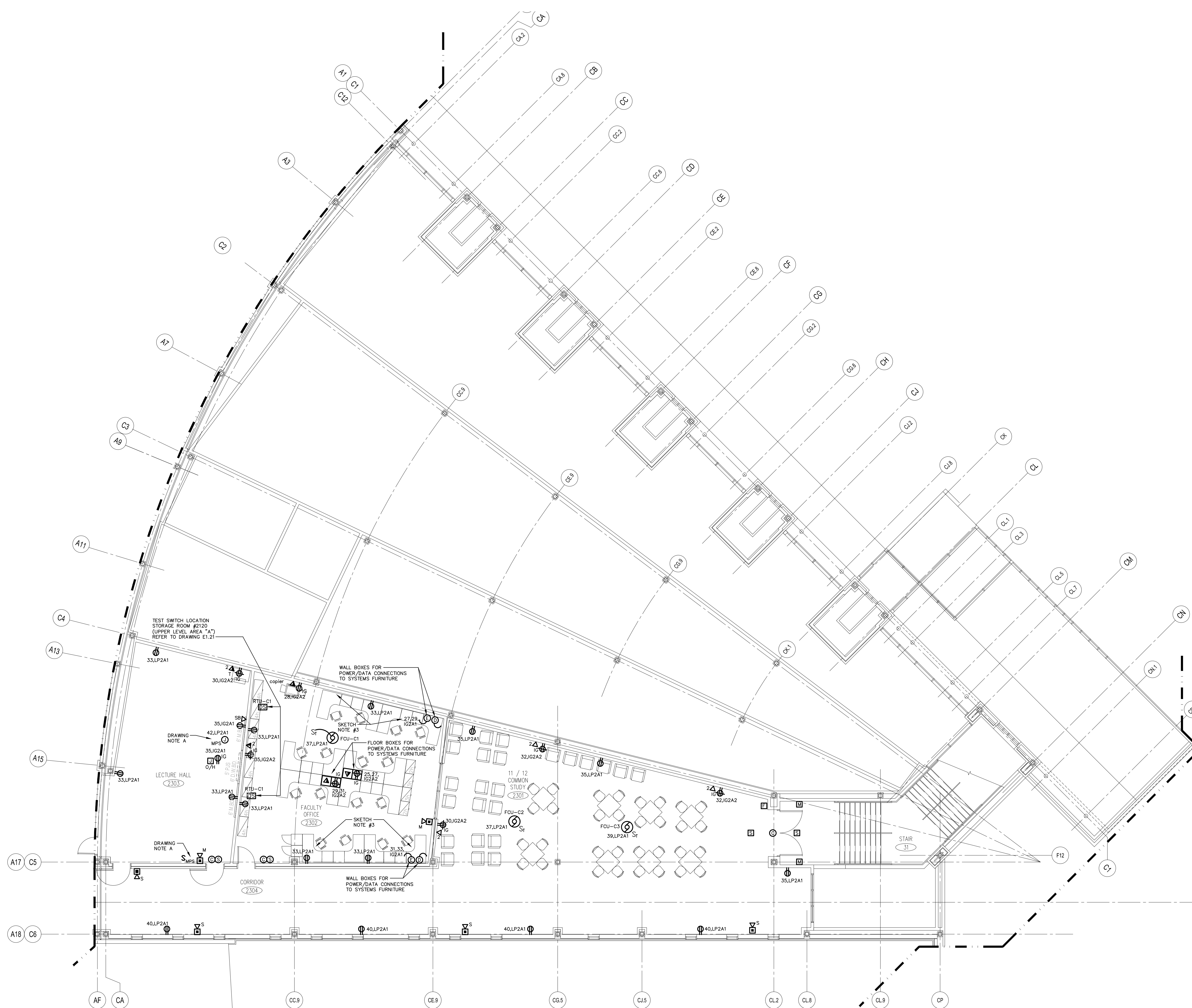
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CHECKED BY:

**UPPER LEVEL POWER PLAN AREA C**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.25**

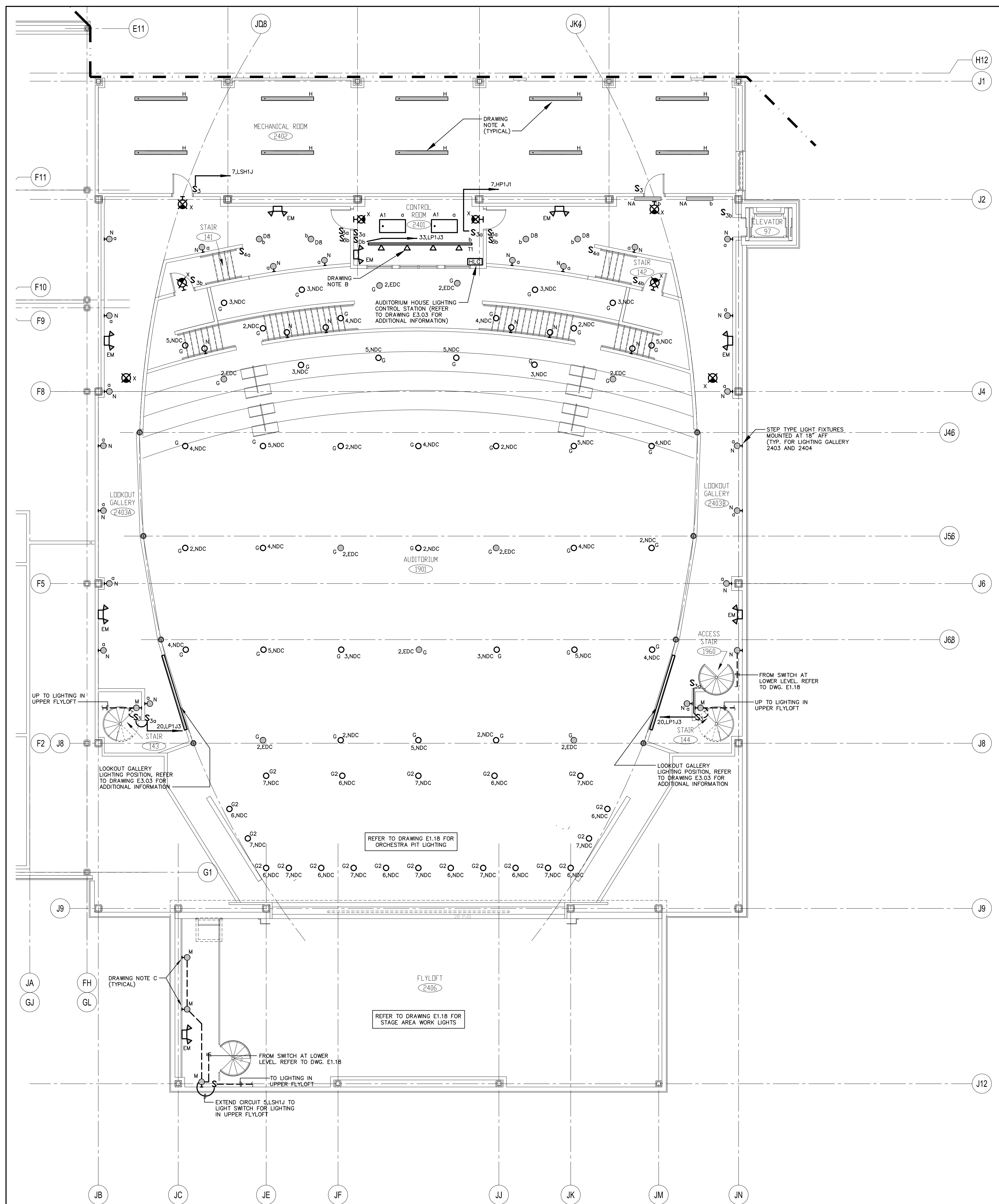


**DRAWING NOTES :**

A. MOTORIZED PROJECTION SCREEN UNIT FURNISHED AND INSTALLED BY OTHERS. FINAL ELECTRICAL CONNECTIONS BY ELECTRICAL CONTRACTOR. MOTORIZED PROJECTION SCREEN RAISE/LOWER SWITCH UNIT FURNISHED WITH SCREEN BY OTHERS, INSTALLED AND WIRED BY ELECTRICAL CONTRACTOR PER MANUFACTURER'S SHOP DRAWINGS. VERIFY EXACT LOCATION OF SCREEN AND CONTROL SWITCH PRIOR TO INSTALLATION.

**GENERAL POWER NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GND., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



## UPPER LEVEL AREA "J"

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

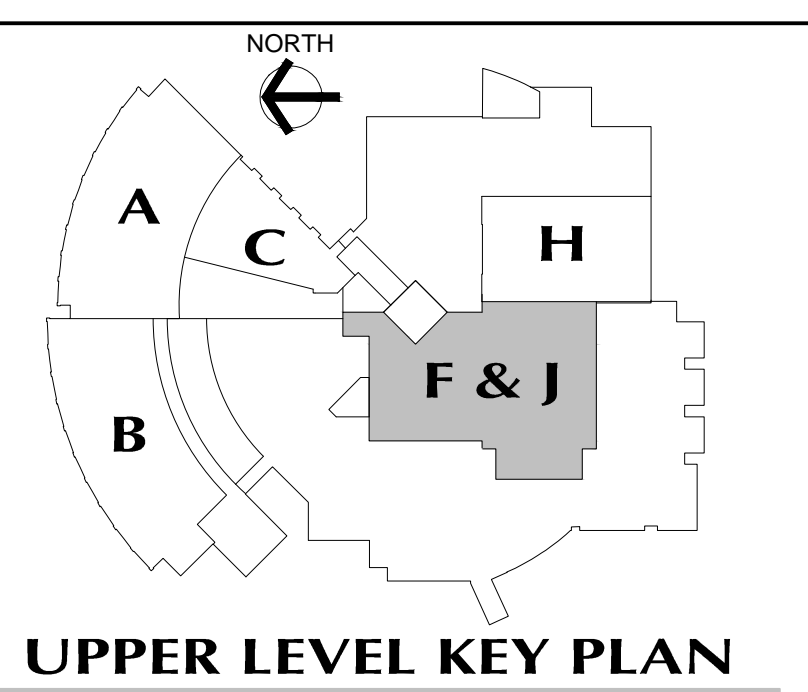
- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON LIGHT FIXTURES.
  - REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN DRAWINGS FOR THE EXACT LOCATION OF ALL LIGHTING FIXTURES.
  - ALL EXIT SIGNS AND AREA OF REFUGE SIGNS SHALL BE WIRED AHEAD OF ANY SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
  - EMERGENCY LIGHTING FIXTURES, (ANY BATTERY TYPE UNITS), SHALL BE WIRED AHEAD OF SWITCH ON LINE SIDE OF LOCAL LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF NORMAL POWER.
  - REFER TO DRAWING #E3.01 AND #E3.02 ELECTRICAL FOR LIGHTING WIRING SCHEMATICS.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST TWO LAMPS WIRED FOR CONTINUOUS OPERATION.

- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "S0,S0"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10C, 3/4"C TO PANEL DESIGNATED.

## UPPER FLYLOFT AREA "J"

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

- DRAWING NOTES:**
- LIGHT FIXTURE LAYOUT SHOWN FOR FIXTURE QUANTITY ONLY. COORDINATE FIXTURE LAYOUT WITH MECHANICAL DUCTWORK AND PIPING AND ADJUST ACCORDINGLY.
  - FURNISH CLEAR BLUE LENS COVERS FOR CONTROL ROOM #2401 TRACK LIGHT FIXTURE HEADS.
  - COORDINATE EXACT LOCATION OF TYPE "M" LIGHT FIXTURES AT CATWALKS WITH CATWALK SUPPLIER, ADJUST FIXTURE LOCATIONS AS REQUIRED.



**REVISIONS**

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JUNE 22, 2001		RESUBMISSION OF PHASE II DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



## NEW RHAM HIGH SCHOOL

WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT #: 208-018N  
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VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

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29 SOUTH MAIN STREET WEST HARTFORD, CT 06107-2420  
TEL: (860) 234-4526 FAX: (860) 234-4528  
vzhs PROJECT NUMBER: 2000155.00



## KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

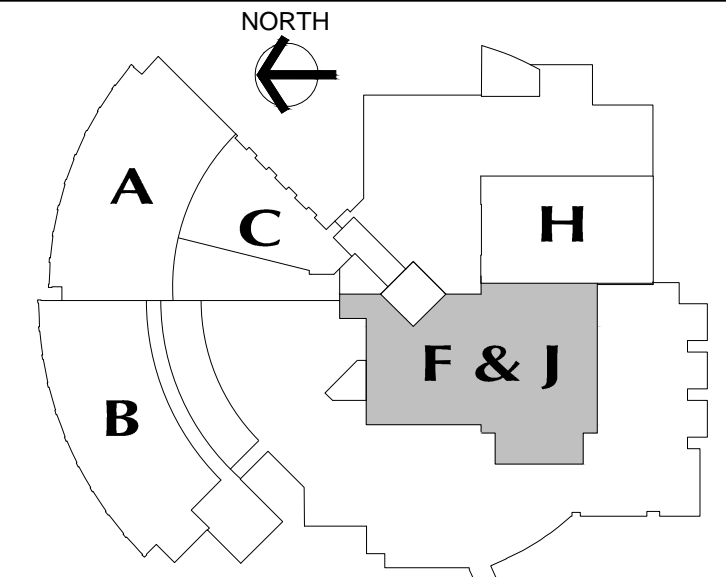
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DRAWN BY: SCALE: 1/8" = 1'-0"  
CHECKED BY:

## UPPER LEVEL LIGHTING PLAN AREA J

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.26**



**UPPER LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEY WOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 921-4329 FAX (860) 921-9620  
vZHS PROJECT NUMBER: 2000155.00



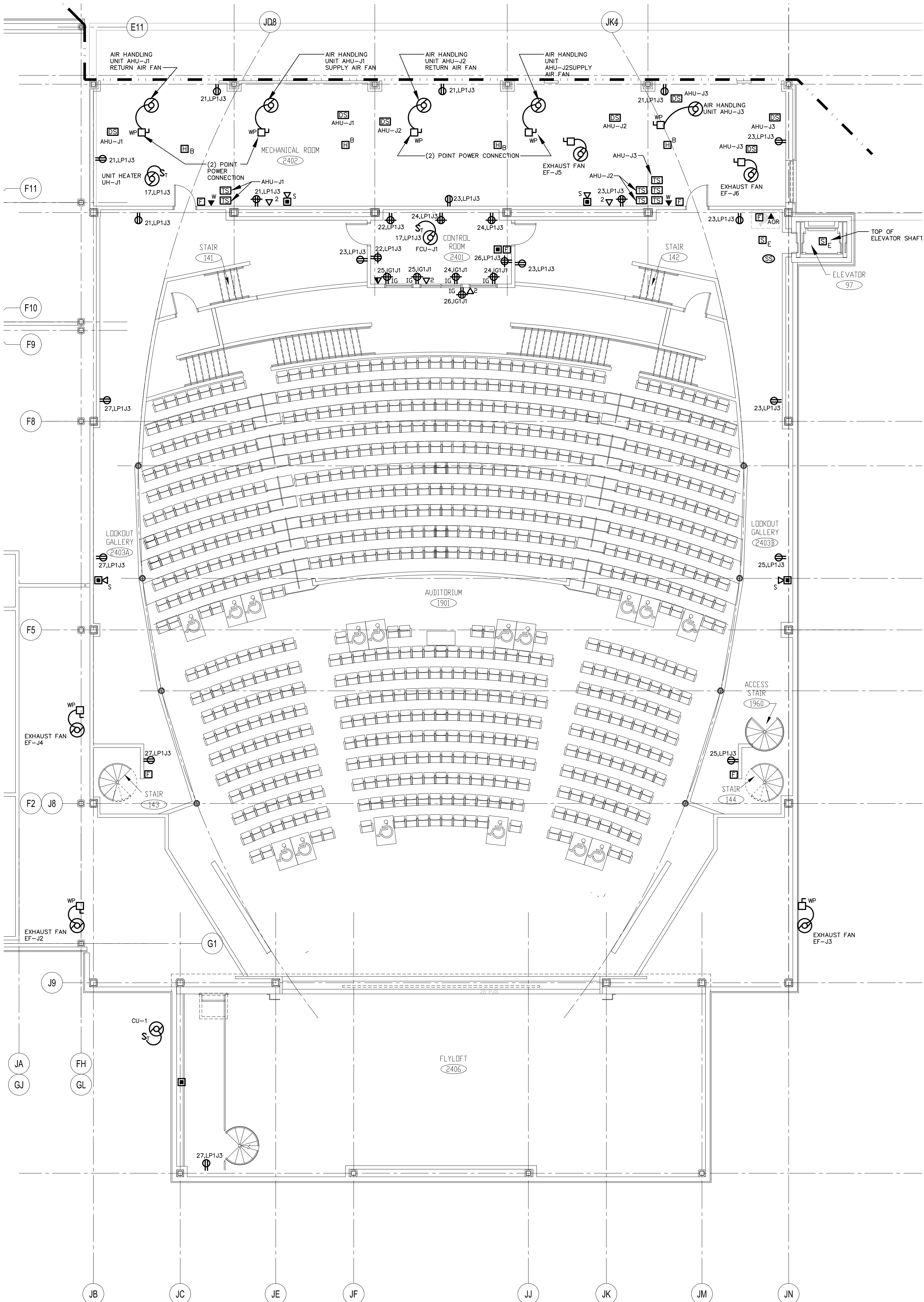
**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: CHECKED BY: SCALE: 1/8" = 1'-0"

**UPPER LEVEL POWER PLAN AREA J**

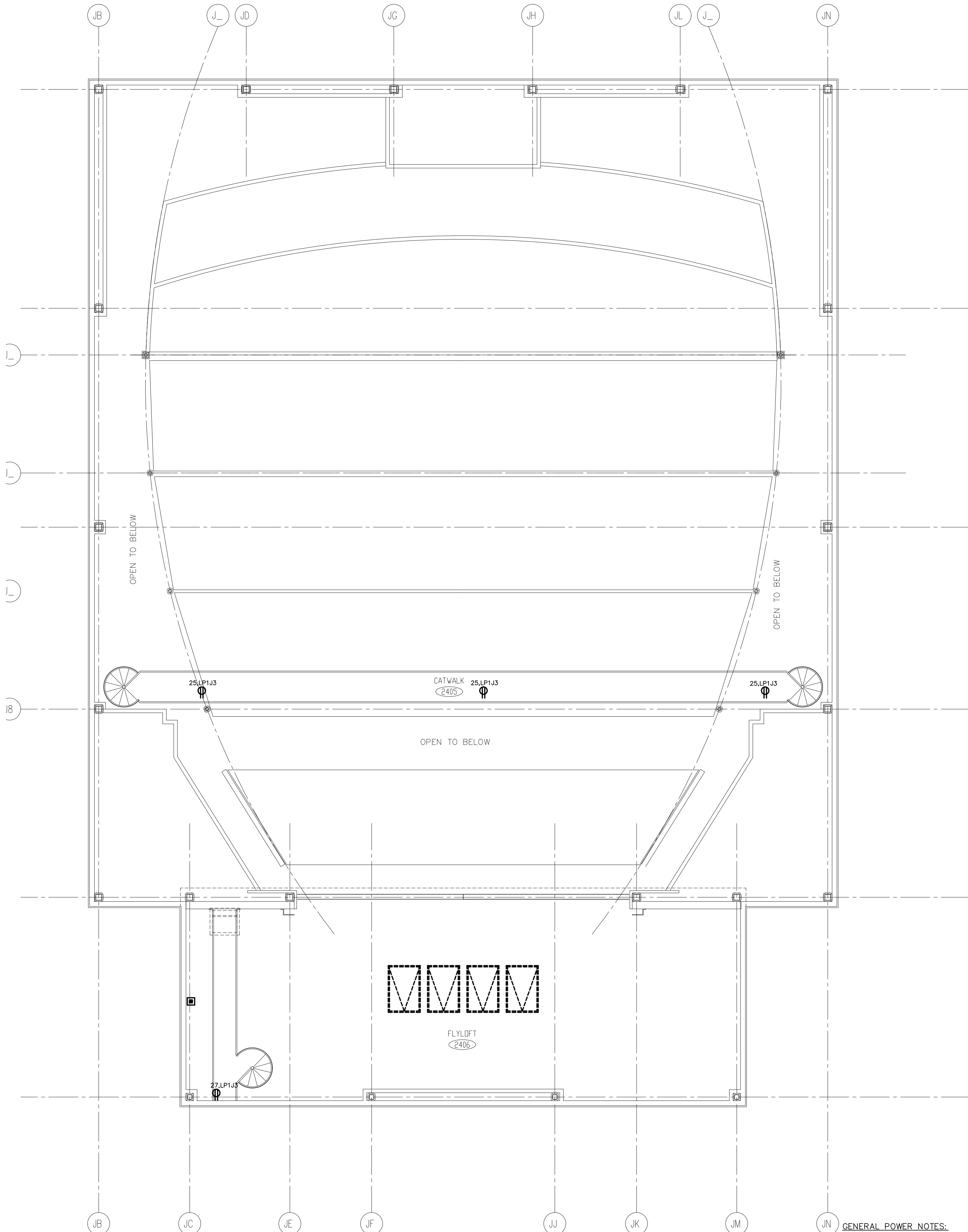
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E1.27**



**UPPER LEVEL AREA "J"**

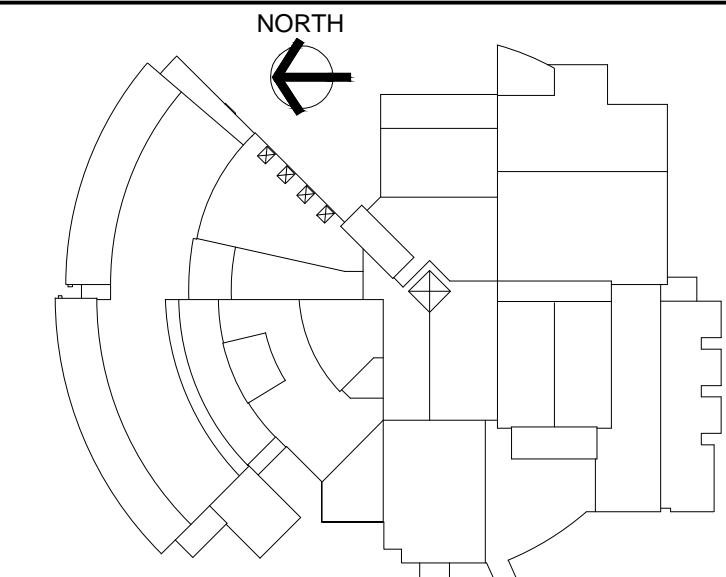
SCALE: 1/8" = 1'-0"



**UPPER FLYLOFT AREA "J"**

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

- GENERAL POWER NOTES:
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCKS/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**ROOF KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES
January 07, 2003	△	EF-B15 WITH VFD



**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT  
 06248

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
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 TEL (860) 521-4320 FAX (860) 521-5620  
 vzhs PROJECT NUMBER: 2000155.00

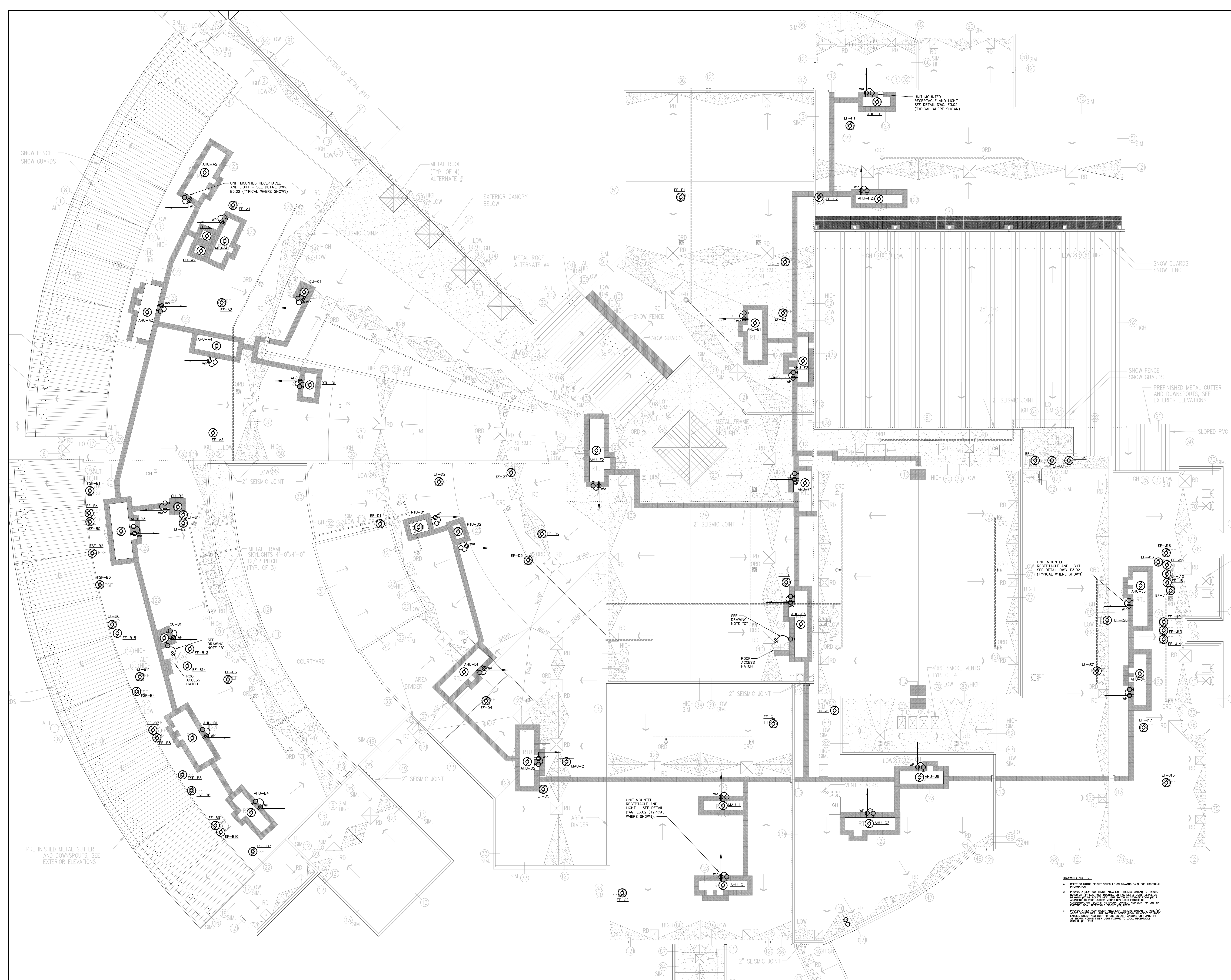


416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: 1/16" = 1'-0"

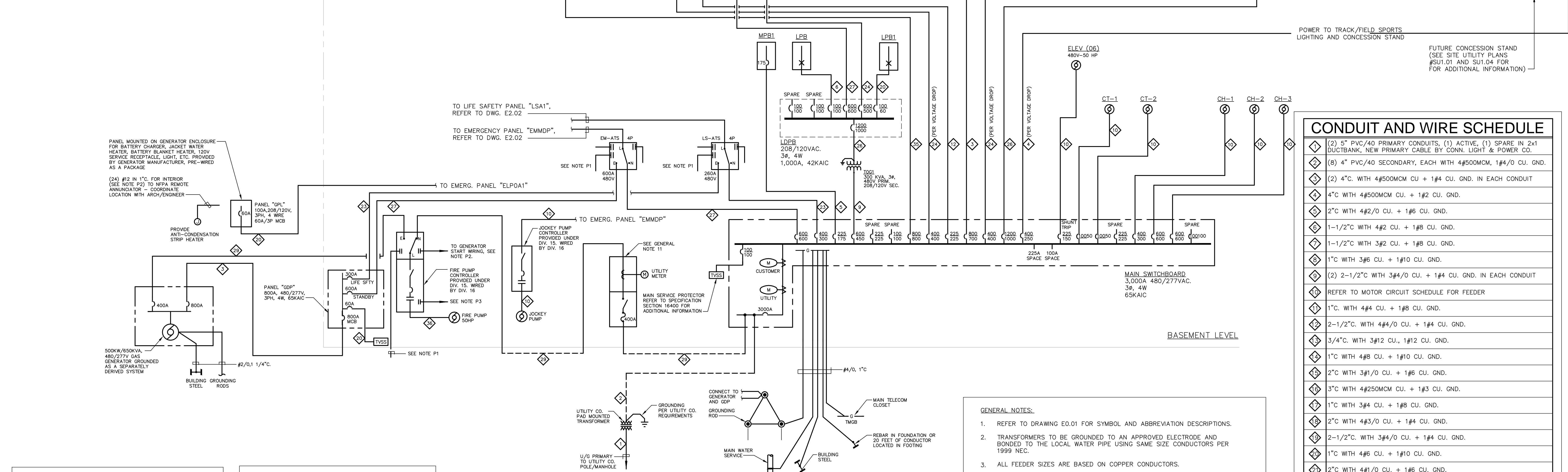
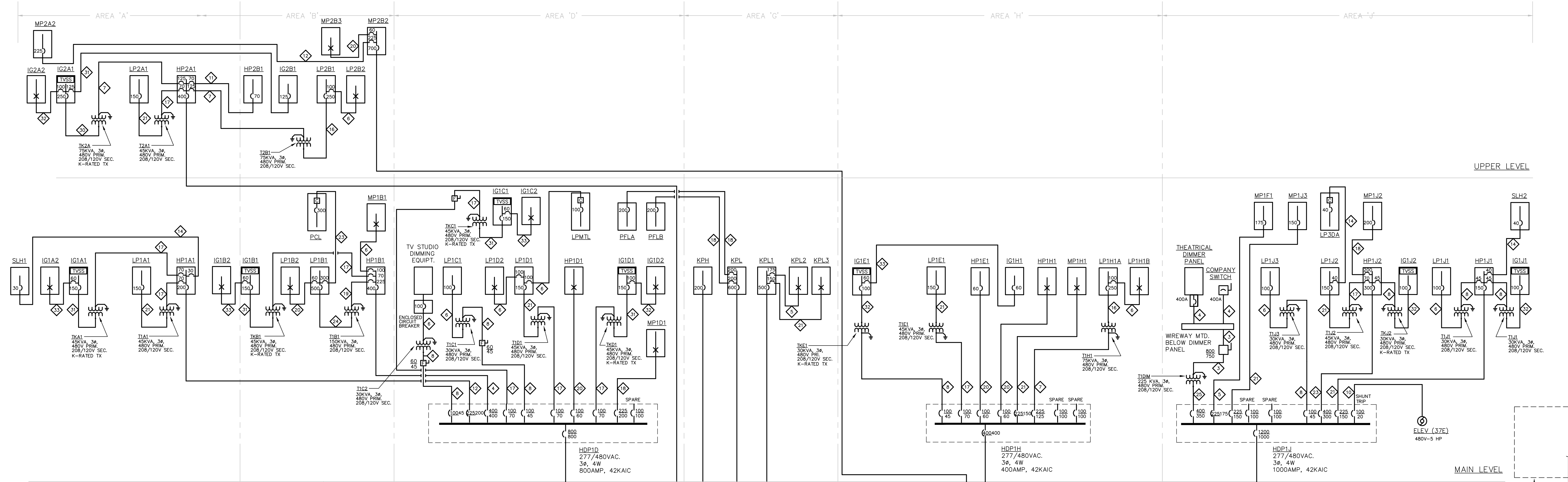
**ELECTRICAL ROOF PLAN**

PROJECT NO.: 00048 DRAWING NO.: **E1.28**  
 DATE: JANUARY 20, 2001



**DRAWING NOTES:**

- REFER TO MOTOR SCHEDULE ON DRAWING E402 FOR ADDITIONAL INFORMATION.
- PROVIDE A NEW ROOF HATCH AREA LIGHT FIXTURE (ABLE TO FIXTURE HATCH) IN EACH ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA.
- PROVIDE A NEW ROOF HATCH AREA LIGHT FIXTURE (ABLE TO FIXTURE HATCH) IN EACH ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA. THE LIGHT SHALL BE MOUNTED ON THE ROOF HATCH AREA.



**TRANSFORMER GROUNDING NOTES:**

PROVIDE TWO GROUNDING CONDUCTORS TO EACH TRANSFORMER AS FOLLOWS:

T1. PROVIDE ONE GROUNDING ELECTRODE CONDUCTOR CONNECTION AND CONNECT TO THE NEAREST GROUNDED STEEL COLUMN OR MAIN WATER SERVICE PIPE.

T2. PROVIDE ONE GROUNDING CONDUCTOR AND CONNECT TO NEAREST AVAILABLE POINT OF THE INTERIOR COLD WATER METAL PIPING SYSTEM IN THE AREA SERVED BY THE TRANSFORMER.

**POWER RISER NOTES:**

P1. PROVIDE INTERLOCK WIRING TO TRANSFER THE STANDBY AUTOMATIC TRANSFER SWITCH 'EM-ATS' TO THE NORMAL POWER POSITION PRIOR TO THE FIRE PUMP TRANSFER SWITCH GOING TO EMERGENCY.

P2. INSTALL WIRING FOR GENERATOR AUXILIARIES, ANNUNCIATOR AND START CONTROLS IN THE SAME DUCTBANK TO THE EMERGENCY GENERATOR AS THE FEEDER TO 'GDP'.

P3. PROVIDE CONNECTION TO FIRE ALARM SYSTEM TO MONITOR THE POSITION OF THE FIRE PUMP SWITCHES.

### ONE-LINE RISER DIAGRAM

N.T.S.

- GENERAL NOTES:**
- REFER TO DRAWING E0.01 FOR SYMBOL AND ABBREVIATION DESCRIPTIONS.
  - TRANSFORMERS TO BE GROUNDED TO AN APPROVED ELECTRODE AND BONDED TO THE LOCAL WATER PIPE USING SAME SIZE CONDUCTORS PER 1999 NEC.
  - ALL FEEDER SIZES ARE BASED ON COPPER CONDUCTORS.
  - PROVIDE (2) AUXILIARY CONTACTS IN THE ELEVATOR DISCONNECT SWITCHES.
  - PROVIDE 120V SHUNT TRIP AND CONNECT TO THE ELEVATOR CONTROL.
  - PANEL BOARDS DESIGNATED (AS SHOWN WITH TVSS UNIT) SHALL BE SPECIALTY ELECTRONIC GRADE TYPE PANEL WITH TVSS. PANEL BOARD FEEDER SHALL CONTAIN 200% RATED OR DOUBLE NEUTRAL FOR DESIGNATED PANELS.
  - ALL TRANSFORMERS SERVING ELECTRONIC GRADE TYPE PANEL BOARDS (SHOWN WITH TVSS UNIT) SHALL BE K-RATED TYPE TRANSFORMERS SIZED PER DRAWING.
  - REFER TO SCHEDULES FOR EQUIPMENT AND CIRCUIT SIZES.
  - ALL CIRCUITS, EQUIPMENT AND DEVICES ARE 3P UNLESS OTHERWISE INDICATED.
  - CIRCUIT SIZES SHALL MATCH OVER CURRENT DEVICE SIZE PER SCHEDULES UNLESS INDICATED AS LARGER.
  - THE FIRE PUMP DISCONNECT SWITCH SHALL BE SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT, UL LISTED, WITH THE FOLLOWING: 400A, 480V, 3PH, 3 WIRE, 65KAIC, 400A MCB, CT COMPARTMENT, NEMA-1 ENCLOSURE, HANDLE LOCK-OFF ATTACHMENT. ENCLOSURE SHALL BE FRONT ACCESSIBLE, TOTALLY ENCLOSED, GRAY BAKED ENAMEL FINISH. "SQ" D CAT# CTC364CU OR ACCEPTABLE EQUIVALENT.
  - FIRE PUMP FEEDERS SHALL BE MI CABLE OR UNDERSLAB OR IN 2 HOUR RATED ENCLOSURE, WHERE NOT MI CABLE, PROVIDE A NEC SIZED EQUIPMENT GROUND CONDUCTOR.

### CONDUIT AND WIRE SCHEDULE

◇	(2) 5" PVC/40 PRIMARY CONDUITS, (1) ACTIVE, (1) SPARE IN 2x1 DUCTBANK, NEW PRIMARY CABLE BY CONN. LIGHT & POWER CO.
◇	(8) 4" PVC/40 SECONDARY, EACH WITH 4#500MCM, 1#4/0 CU. GND. IN EACH CONDUIT
◇	4" C WITH 4#500MCM CU. + 1#2 CU. GND.
◇	2" C WITH 4#2/0 CU. + 1#6 CU. GND.
◇	1-1/2" C WITH 4#2 CU. + 1#8 CU. GND.
◇	1-1/2" C WITH 3#2 CU. + 1#8 CU. GND.
◇	1" C WITH 3#6 CU. + 1#10 CU. GND.
◇	(2) 2-1/2" C WITH 3#4/0 CU. + 1#4 CU. GND. IN EACH CONDUIT
◇	REFER TO MOTOR CIRCUIT SCHEDULE FOR FEEDER
◇	1" C WITH 4#4 CU. + 1#8 CU. GND.
◇	2-1/2" C WITH 4#4/0 CU. + 1#4 CU. GND.
◇	3/4" C WITH 3#12 CU., 1#12 CU. GND.
◇	1" C WITH 4#8 CU. + 1#10 CU. GND.
◇	2" C WITH 3#1/0 CU. + 1#6 CU. GND.
◇	3" C WITH 4#250MCM CU. + 1#3 CU. GND.
◇	1" C WITH 3#4 CU. + 1#8 CU. GND.
◇	2" C WITH 4#3/0 CU. + 1#4 CU. GND.
◇	2-1/2" C WITH 3#4/0 CU. + 1#4 CU. GND.
◇	1" C WITH 4#6 CU. + 1#10 CU. GND.
◇	2" C WITH 4#1/0 CU. + 1#6 CU. GND.
◇	3" C WITH 4#350MCM CU. + 1#2 CU. GND.
◇	(3) 4" C WITH 4#500MCM CU. + 1#1/0 CU. GND. IN EACH CONDUIT
◇	(2) 3" C WITH 4#350MCM CU. + 1#1 CU. GND. IN EACH CONDUIT
◇	1-1/2" C WITH 4#1 CU. + 1#6 CU. GND.
◇	1-1/2" C WITH 3#2 CU. + 1#6 CU. GND. SEE GENERAL NOTE 12.
◇	4" C WITH 3#250MCM CU., 2#250MCM NEUT. + 1#3 CU. GND.
◇	2-1/2" C WITH 3#1/0 CU., 1#350MCM NEUT. + 1#6 CU. GND.
◇	2" C WITH 3#2 CU., 1#4/0 NEUT. + 1#8 CU. GND.
◇	1-1/2" C WITH 3#6 CU., 1#1 NEUT. + 1#10 CU. GND.
◇	FEEDER INTEGRAL WITH GENERATOR SET AND PANEL 'GDP'
◇	(3) 3" C WITH 4#300MCM CU., + 1#1/0 CU. GND. IN EACH CONDUIT
◇	1 1/2" C WITH 3#2 CU + 1#6 CU GND.

**REVISIONS**

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JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



## NEW RHAM HIGH SCHOOL

WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-4339 FAX: (860) 521-4328  
vzhs PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

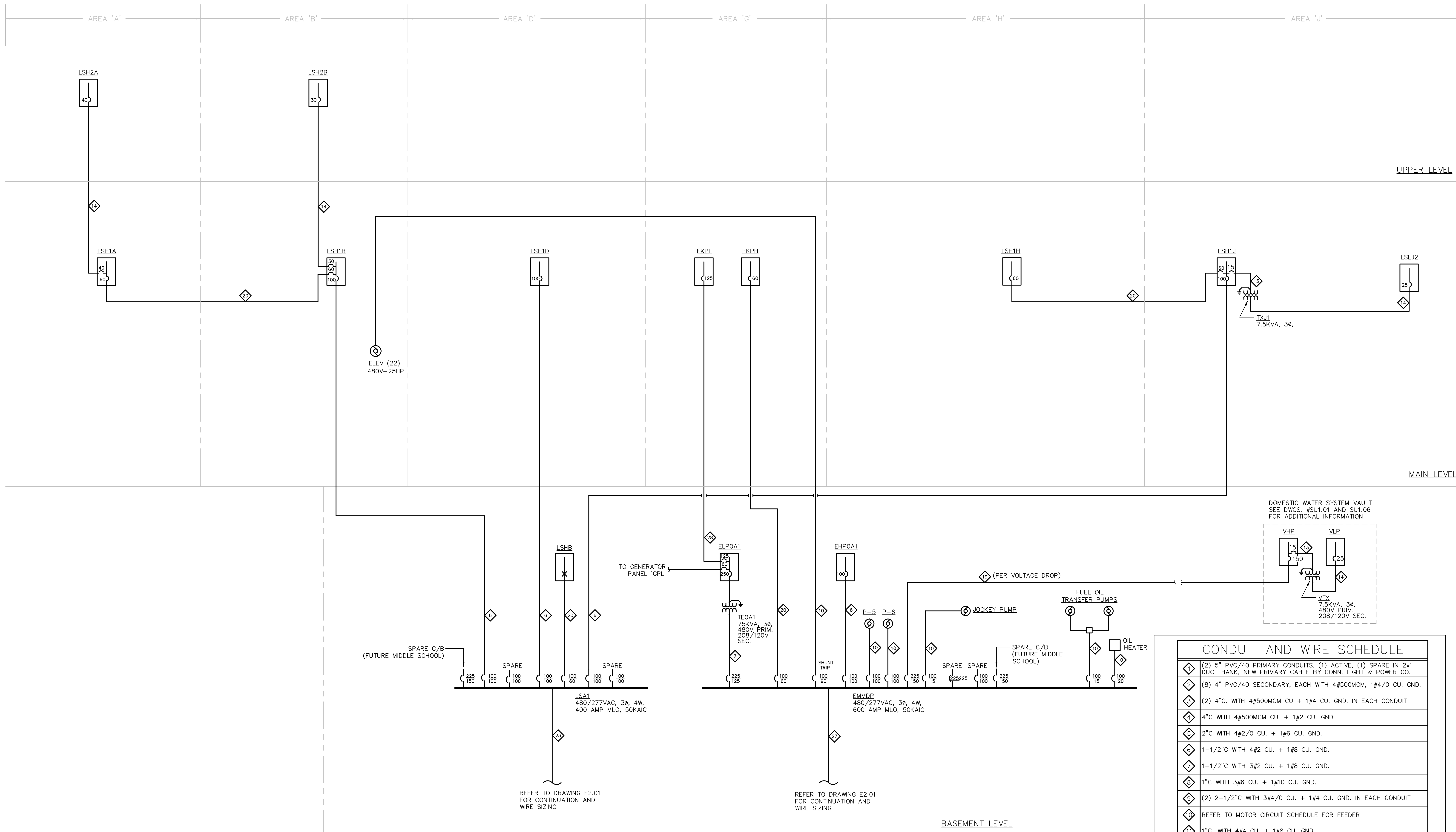
416 SLATER RD. NEW BRITAIN, CT 06050-2550 (860) 229-0361

DRAWN BY: SCALE: NONE  
CHECKED BY:

## ELECTRICAL POWER ONE-LINE RISER DIAGRAM

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E2.01**



REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
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VANZELM HEYWOOD & SHADFORD INC.  
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 vzhs PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
 ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
 DRAWN BY: SCALE: NONE  
 CHECKED BY:

**ELECT. EMER. POWER ONE-LINE RISER DIAGRAM**

PROJECT NO.: 00048 DRAWING NO.:

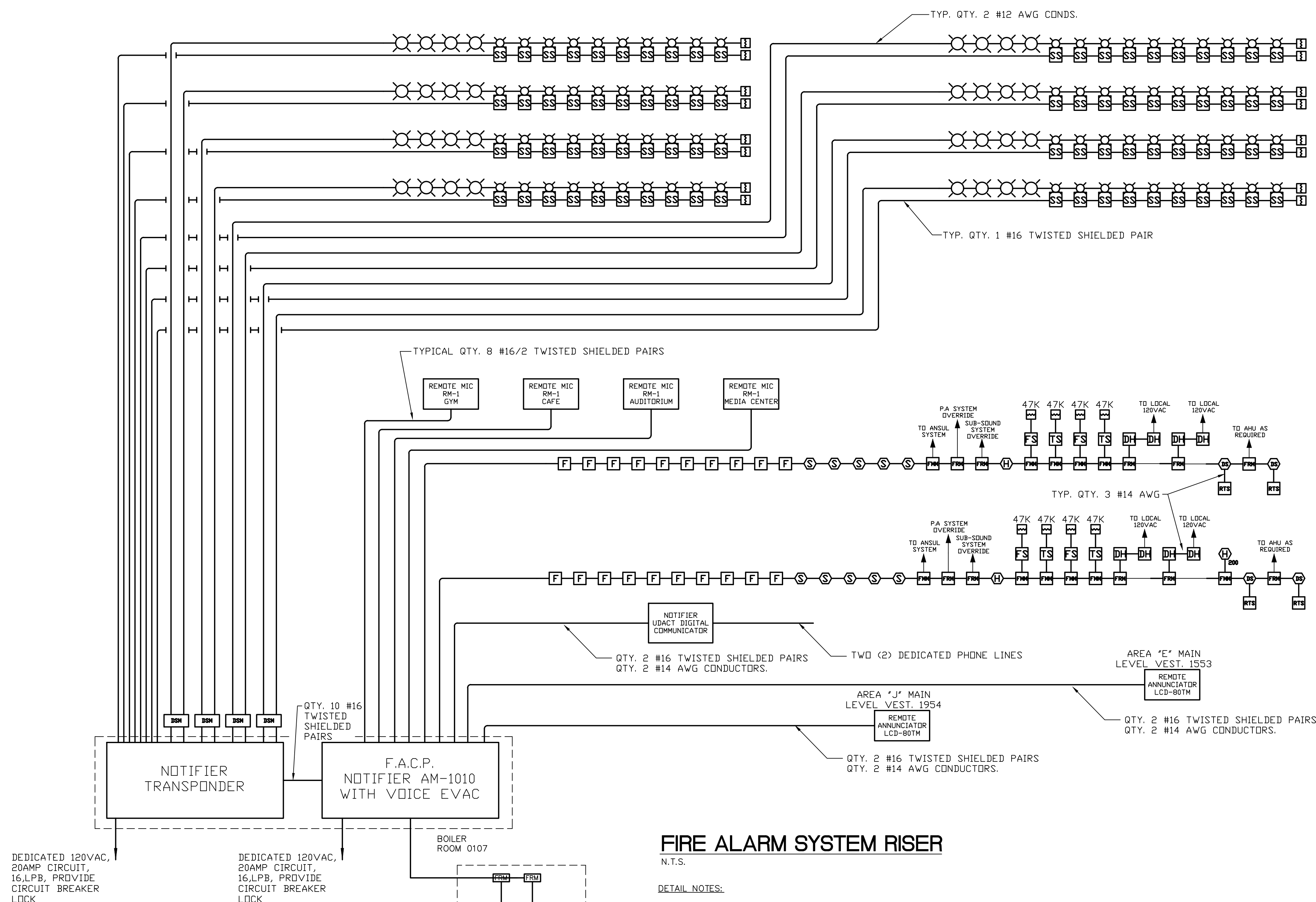
DATE: JANUARY 20, 2001 **E2.02**

CONDUIT AND WIRE SCHEDULE	
◇	(2) 5" PVC/40 PRIMARY CONDUITS, (1) ACTIVE, (1) SPARE IN 2x1 DUCT BANK, NEW PRIMARY CABLE BY CONN. LIGHT & POWER CO.
◇	(8) 4" PVC/40 SECONDARY, EACH WITH 4#500MCM, 1#4/0 CU. GND.
◇	(2) 4" WITH 4#500MCM CU. + 1#4 CU. GND. IN EACH CONDUIT
◇	4" WITH 4#500MCM CU. + 1#2 CU. GND.
◇	2" WITH 4#2/0 CU. + 1#6 CU. GND.
◇	1-1/2" WITH 4#2 CU. + 1#8 CU. GND.
◇	1-1/2" WITH 3#2 CU. + 1#8 CU. GND.
◇	1" WITH 3#6 CU. + 1#10 CU. GND.
◇	(2) 2-1/2" WITH 3#4/0 CU. + 1#4 CU. GND. IN EACH CONDUIT
◇	REFER TO MOTOR CIRCUIT SCHEDULE FOR FEEDER
◇	1" WITH 4#4 CU. + 1#8 CU. GND.
◇	2-1/2" WITH 4#4/0 CU. + 1#4 CU. GND.
◇	3/4" WITH 3#12 CU., 1#12 CU. GND.
◇	1" WITH 4#8 CU. + 1#10 CU. GND.
◇	2" WITH 3#1/0 CU. + 1#6 CU. GND.
◇	3" WITH 4#250MCM CU. + 1#3 CU. GND.
◇	1" WITH 3#4 CU. + 1#8 CU. GND.
◇	2" WITH 4#3/0 CU. + 1#4 CU. GND.
◇	2-1/2" WITH 3#4/0 CU. + 1#4 CU. GND.
◇	1" WITH 4#6 CU. + 1#10 CU. GND.
◇	2" WITH 4#1/0 CU. + 1#6 CU. GND.
◇	2" WITH 3#2/0 CU. + 1#6 CU. GND.
◇	3" WITH 4#350MCM CU. + 1#2 CU. GND.
◇	(2) 3" WITH 4#250MCM CU. + 1#2 CU. GND. IN EACH CONDUIT
◇	4" WITH 3#500MCM CU. + 1#2 CU. GND.
◇	(3) 4" WITH 4#500MCM CU. + 1#1/0 CU. GND. IN EACH CONDUIT
◇	(2) 3" WITH 4#350MCM CU. + 1#1 CU. GND. IN EACH CONDUIT
◇	1-1/2" WITH 4#1 CU. + 1#6 CU. GND.
◇	FEEDER INTEGRAL WITH GENERATOR SET AND PANEL 'GDP'
◇	4" WITH 3#250MCM CU., 2#250MCM NEUT. + 1#3 CU. GND.
◇	2-1/2" WITH 3#1/0 CU., 1#350MCM NEUT. + 1#6 CU. GND.
◇	2" WITH 3#2 CU., 1#4/0 NEUT. + 1#8 CU. GND.
◇	1-1/2" WITH 3#6 CU., 1#1 NEUT. + 1#10 CU. GND.

**EMERGENCY POWER ONE-LINE RISER DIAGRAM**

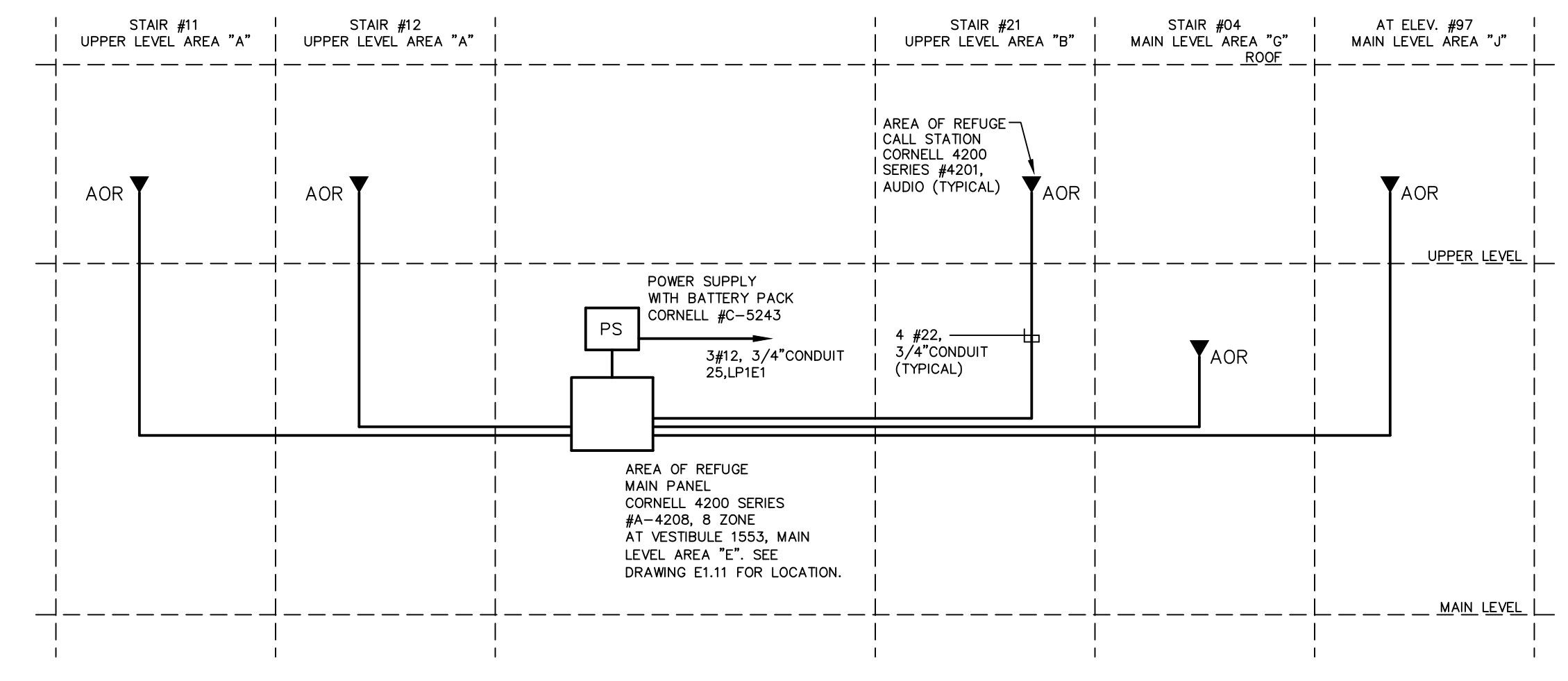
1 E2.02  
 N.T.S.

GENERAL NOTES:  
 1. REFER TO DRAWING E0.01 FOR SYMBOL AND ABBREVIATION DESCRIPTIONS.



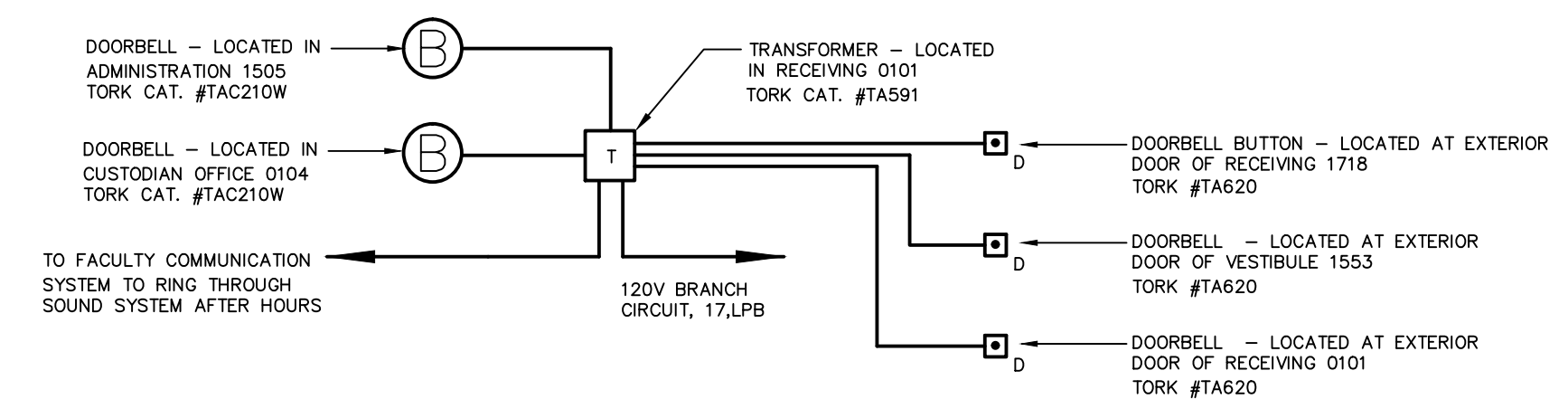
**FIRE ALARM SYSTEM RISER**  
N.T.S.

- DETAIL NOTES:
1. REFER TO FIRE PROTECTION DRAWINGS FOR QUANTITY OF SPRINKLER SYSTEM DEVICES, FLOW/TAMPER SWITCHES, ETC. TO BE CONNECTED TO THE FIRE ALARM SYSTEM.
  2. REFER TO SPECIFICATION 16720 FOR ADDITIONAL REQUIREMENTS.
  3. QUANTITY OF DEVICES SHALL BE AS INDICATED ON DRAWINGS.
  4. FIRE ALARM CONTROL PANEL MUST BE GROUNDED TO COLD WATER SERVICE PIPE OR DRIVEN GROUND ROD.



**AREA OF REFUGE TELEPHONE SYSTEM RISER**  
N.T.S.

- DETAIL NOTES:
1. ALL CATALOG NUMBERS ARE BASED ON CORNELL COMMUNICATIONS INC. EQUIPMENT.
  2. REFER TO SPECIFICATION SECTION 16600, "SPECIAL SYSTEMS", FOR ADDITIONAL INFORMATION.
  3. SYSTEM SHALL PROVIDE TWO-WAY VOICE AND VISUAL INDICATION COMMUNICATION IN OPERATIONAL MODE.



**DOORBELL WIRING SCHEMATIC DIAGRAM**  
N.T.S.

GENERAL NOTES:  
A. REFER TO DRAWING E0.01 FOR SYMBOLS, ABBREVIATIONS, AND NOTES.

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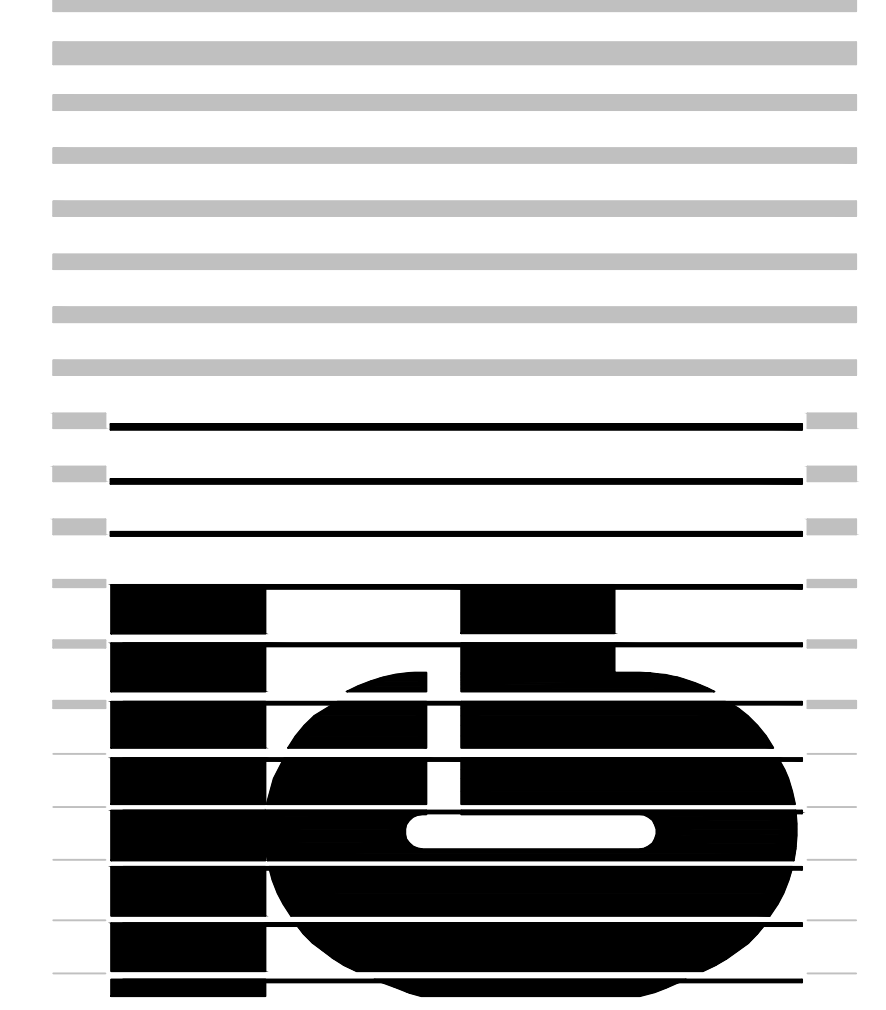


**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
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vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

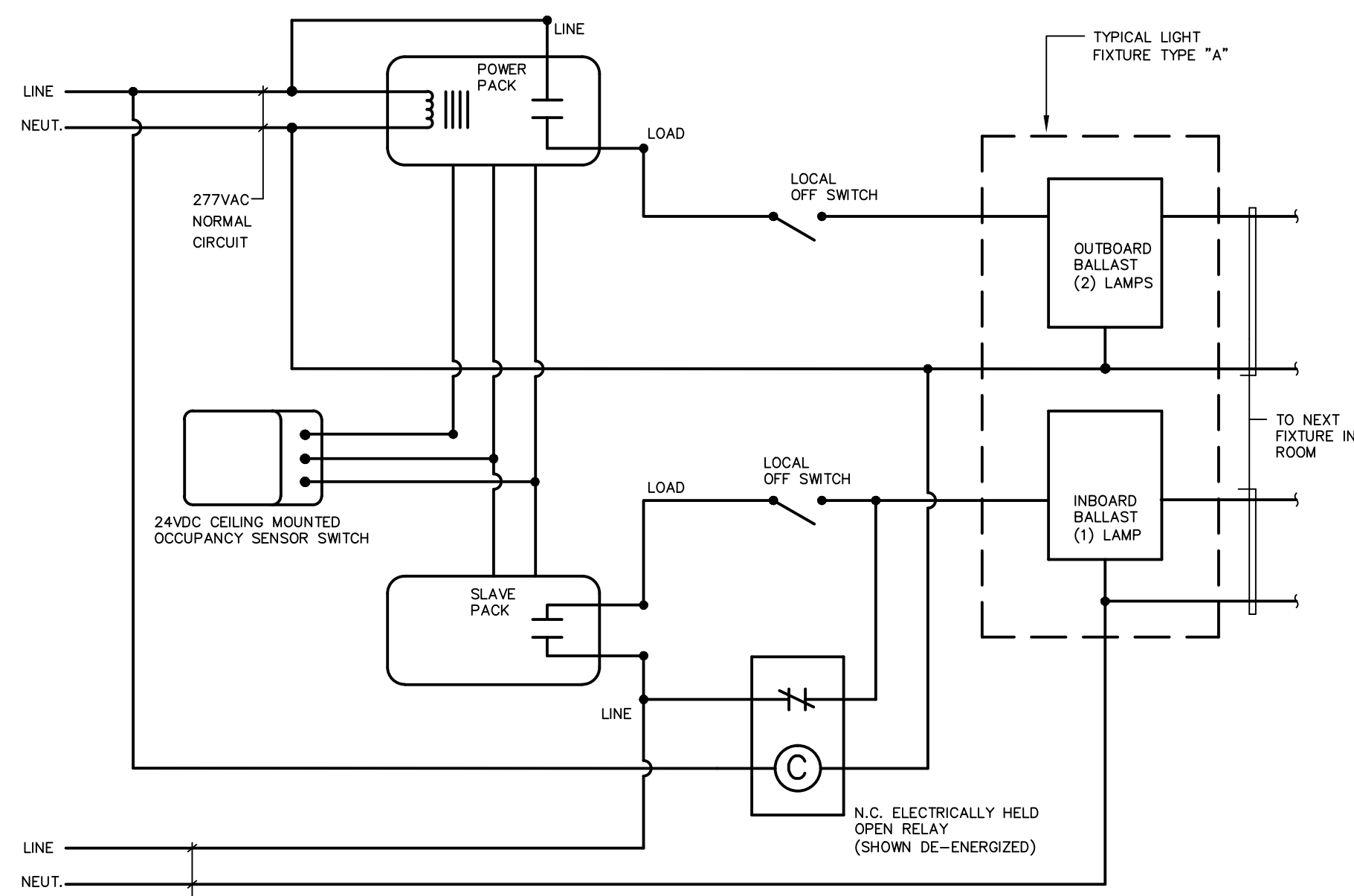
416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: SCALE: AS NOTED  
CHECKED BY:

**ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAMS**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E2.03**

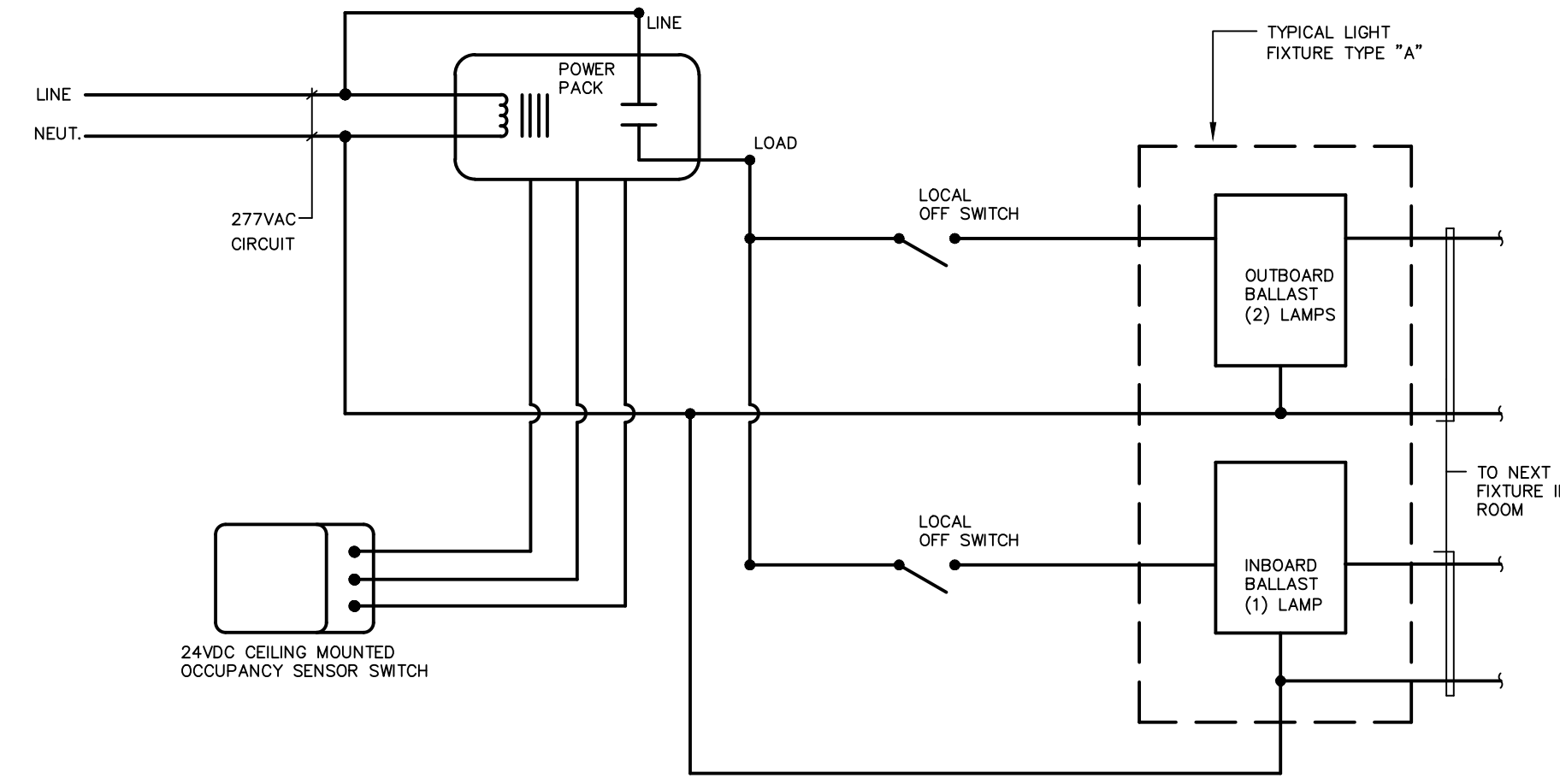




**TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR AREAS WITH DUAL LIGHT LEVELS AND EMERGENCY LIGHTING**  
N.T.S.

**DETAIL NOTES:**

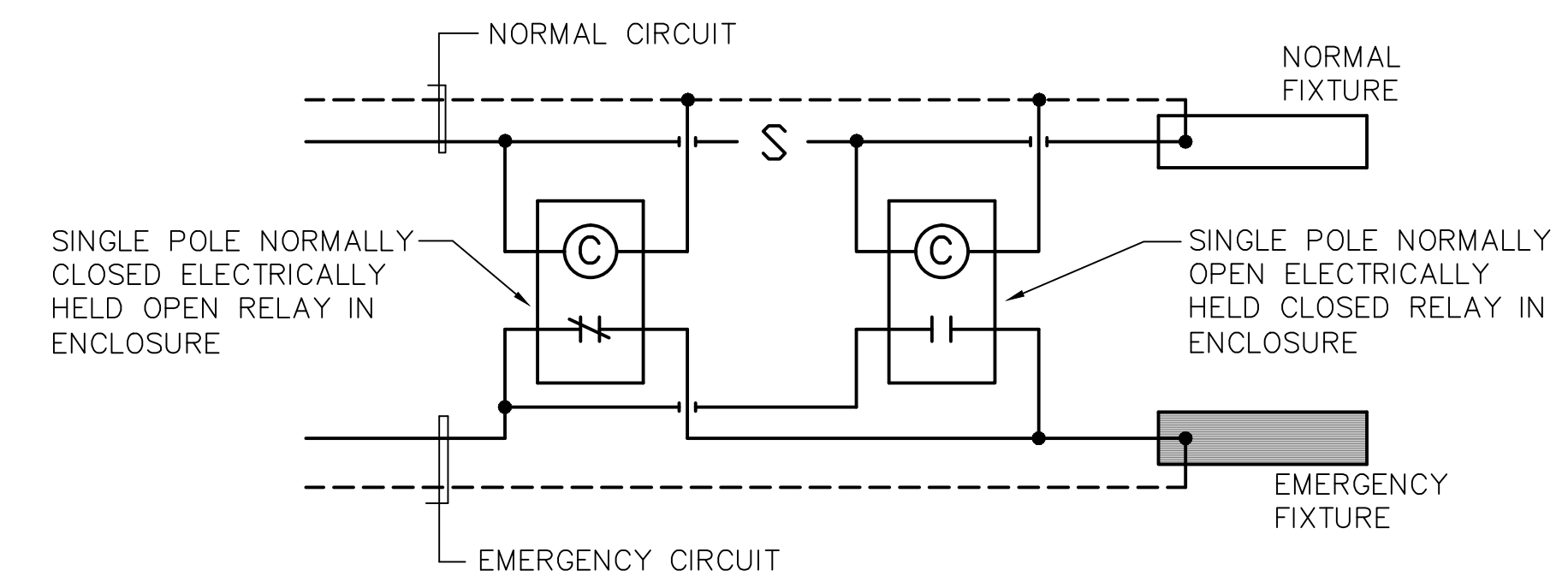
1. DETAIL IS TYPICAL AREAS WHERE LIGHTING CONSISTS OF RECESSED, GRID MOUNTED, 2' x 4' PARABOLIC TROFFER LIGHT FIXTURES EACH WITH (3) LAMPS. OPERATION OF LIGHTING SHALL BE AS FOLLOWS: FOLLOWS:
  - A. ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
  - B. THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE CENTER OR OUTBOARD LAMPS OF EACH FIXTURE. IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
  - C. IN ADDITION, PROVIDE A 20AMP SPDT RELAY AT EMERGENCY CIRCUIT TO BYPASS WALL SWITCH AND TURN ON EMERGENCY LAMPS REGARDLESS OF SWITCH POSITION ON LOSS OF NORMAL POWER TO ROOM.
  - D. AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
  - E. DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
  - F. DETAIL SIMILAR FOR ALL ROOMS WITH TWO LEVEL SWITCHING, OCCUPANCY SENSORS, AND EMERGENCY POWER WHERE INDICATED ON FLOOR PLANS.



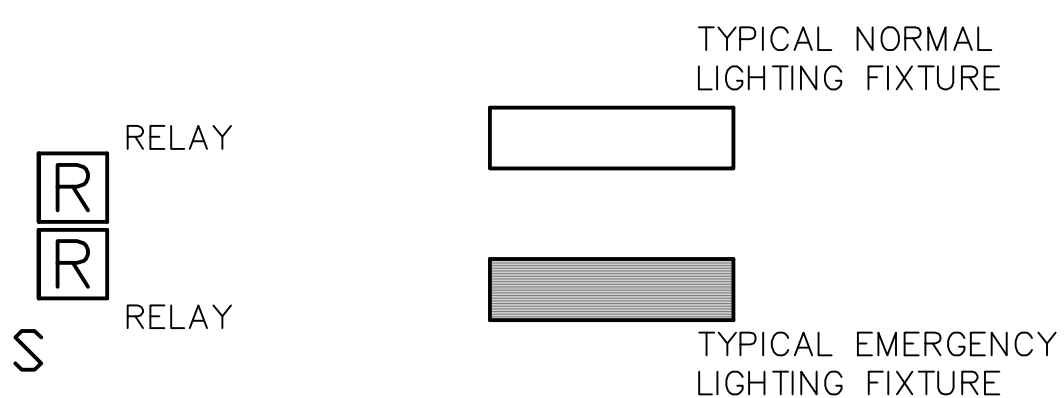
**TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR AREAS WITH DUAL LIGHT LEVELS**  
N.T.S.

**DETAIL NOTES:**

1. DETAIL IS TYPICAL AREAS WHERE LIGHTING CONSISTS OF RECESSED, GRID MOUNTED, 2' x 4' PARABOLIC TROFFER LIGHT FIXTURES EACH WITH (3) LAMPS. OPERATION OF LIGHTING SHALL BE AS FOLLOWS: FOLLOWS:
  - A. ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
  - B. THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE CENTER OR OUTBOARD LAMPS OF EACH FIXTURE. IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
  - C. AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
  - D. DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
  - E. DETAIL SIMILAR FOR ROOMS WITH TWO LEVEL SWITCHING AND OCCUPANCY SENSORS WHERE INDICATED ON FLOOR PLANS.

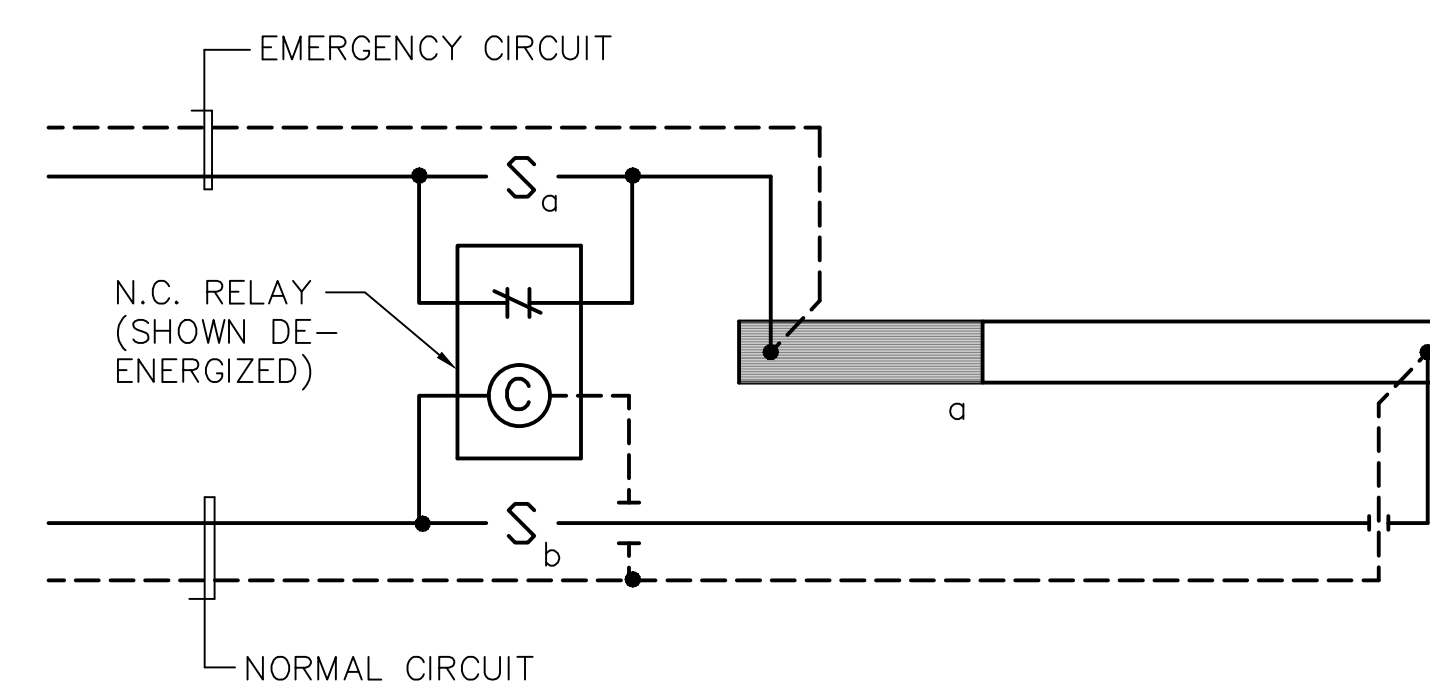


**SCHEMATIC WIRING**

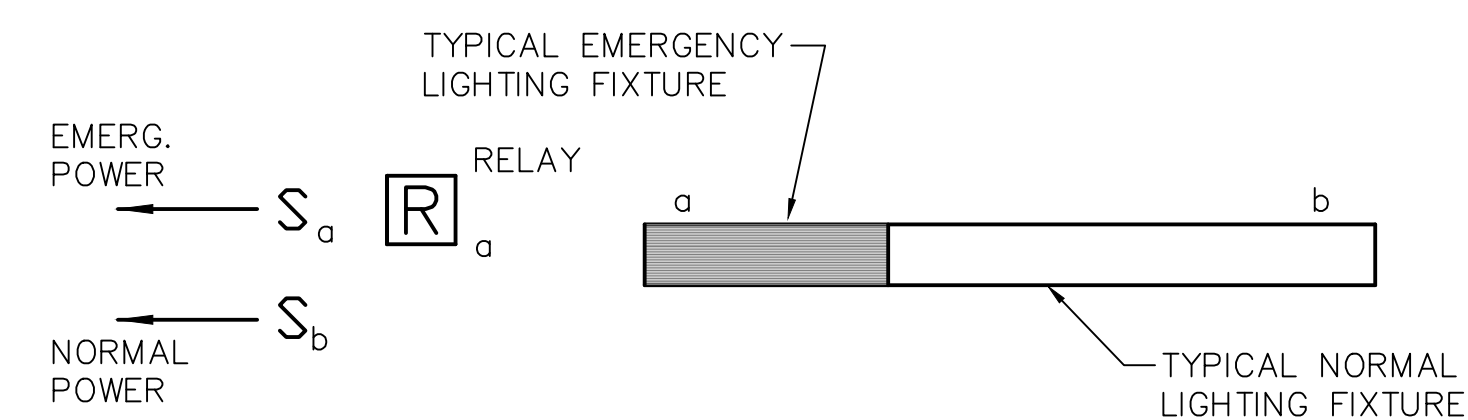


AS SHOWN ON LIGHTING DRAWINGS

**EMERGENCY LIGHTING SINGLE RELAY WIRING DIAGRAM**  
N.T.S.

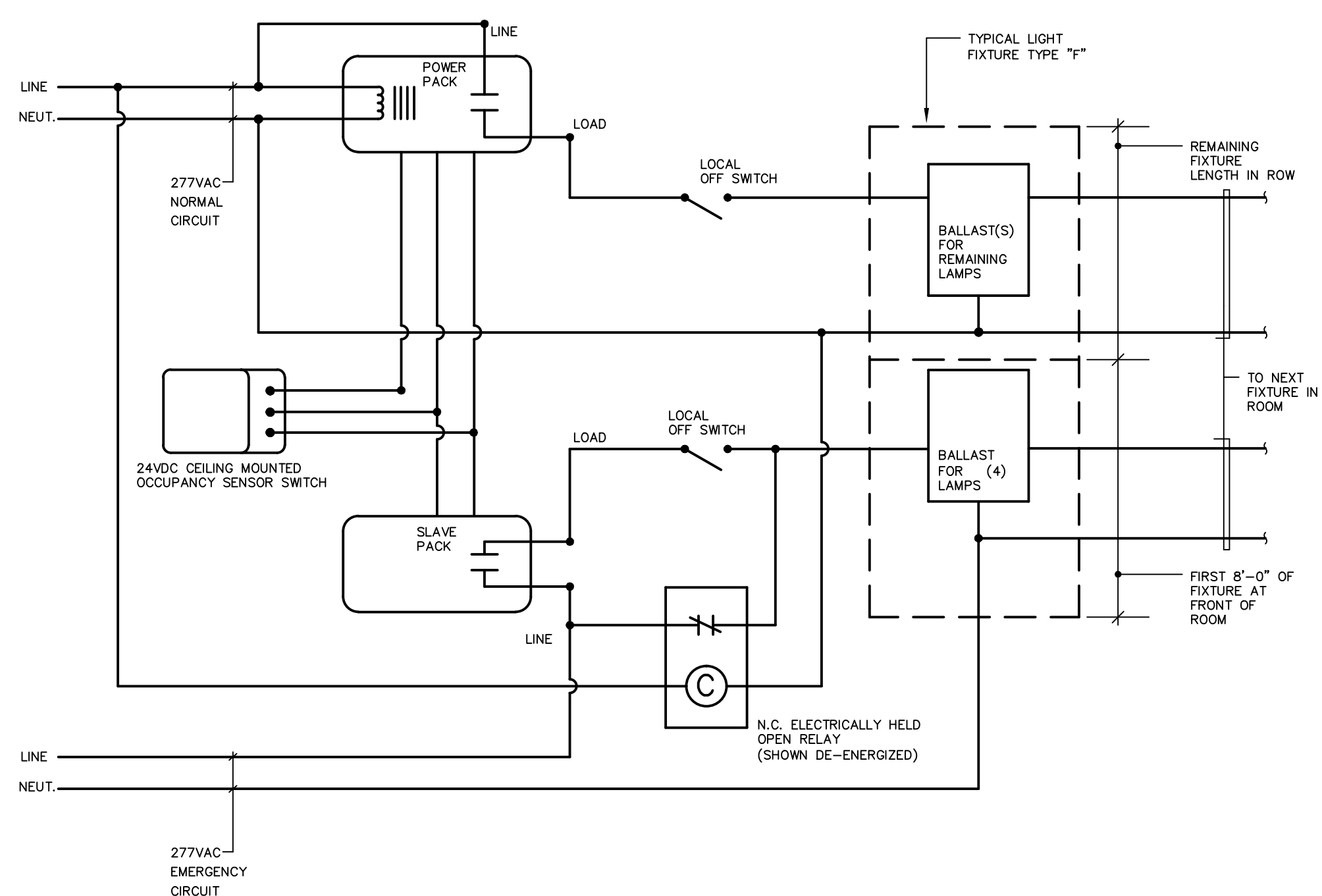


**SCHEMATIC WIRING**



AS SHOWN ON LIGHTING DRAWINGS

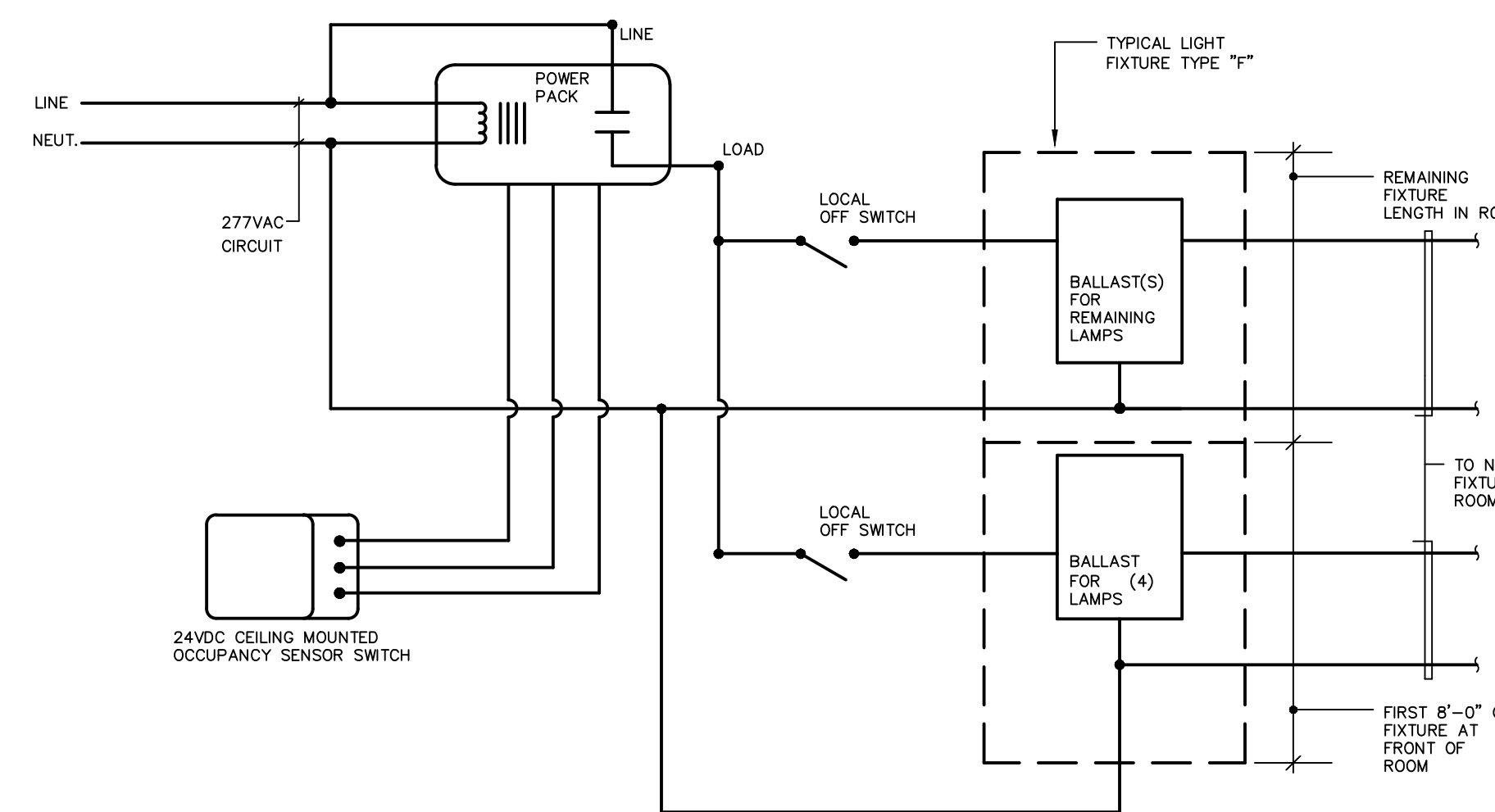
**EMERGENCY LIGHTING SINGLE RELAY WIRING DIAGRAM**  
N.T.S.



**TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR CLASSROOMS WITH EMERGENCY LIGHTING**  
N.T.S.

**DETAIL NOTES:**

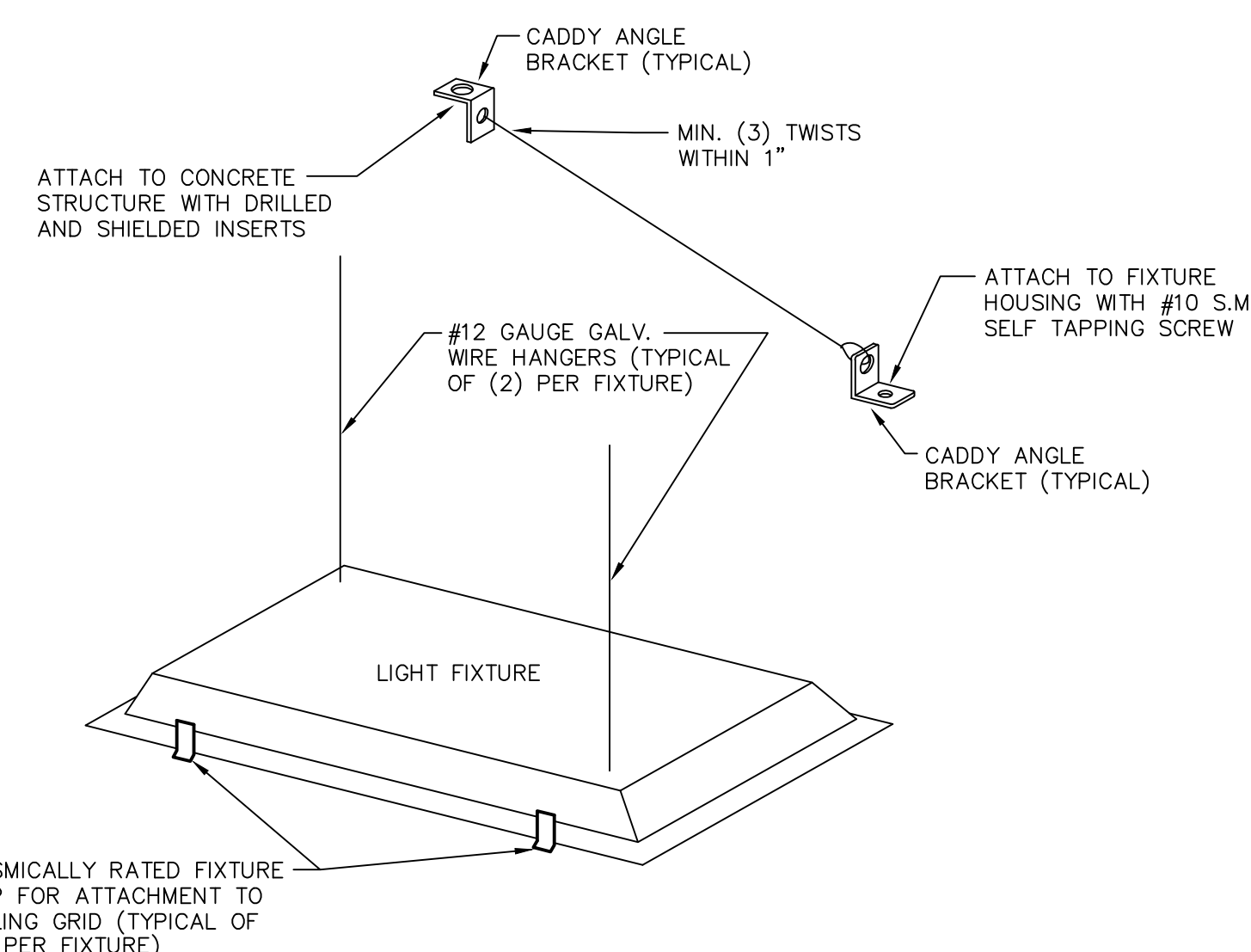
1. TYPICAL CLASSROOM LIGHTING CONSISTS OF (3) ROWS OF PENDANT MOUNTED, DIRECT/INDIRECT LIGHT FIXTURES EACH WITH (2) LAMPS PER 4'-0" SECTION. OPERATION OF CLASSROOM LIGHTING SHALL BE AS FOLLOWS:
  - A. ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
  - B. THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE LAMPS OF THE FIRST 8'-0" OF EACH FIXTURE LENGTH AT FRONT OF ROOM OR THE REMAINING LENGTH OF FIXTURE(S). IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
  - C. IN ADDITION, PROVIDE A 20AMP SPDT RELAY AT EMERGENCY CIRCUIT TO BYPASS WALL SWITCH AND OCCUPANCY SENSOR SLAVE PACK UNIT AND TURN ON EMERGENCY LAMPS REGARDLESS OF SWITCH POSITION ON LOSS OF NORMAL POWER TO ROOM.
  - D. AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
  - E. DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
  - F. DETAIL SIMILAR FOR ROOMS WITH TWO LEVEL SWITCHING, OCCUPANCY SENSORS, AND EMERGENCY POWER WHERE INDICATED ON FLOOR PLANS.
  - G. FRONT OF ROOM LIGHTS MAY NOT ALWAYS BE THE PORTION ON EMERGENCY POWER, REFER TO FLOOR PLANS FOR ROW CONFIGURATION AND EMERGENCY SECTION LENGTH.



**TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR CLASSROOMS**  
N.T.S.

**DETAIL NOTES:**

1. TYPICAL CLASSROOM LIGHTING CONSISTS OF (3) ROWS OF PENDANT MOUNTED, DIRECT/INDIRECT LIGHT FIXTURES EACH WITH (2) LAMPS PER 4'-0" SECTION. OPERATION OF CLASSROOM LIGHTING SHALL BE AS FOLLOWS:
  - A. ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
  - B. THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE LAMPS OF THE FIRST 8'-0" OF EACH FIXTURE LENGTH AT FRONT OF ROOM OR THE REMAINING LENGTH OF FIXTURE(S). IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
  - C. AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
  - D. DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
  - E. DETAIL SIMILAR FOR ROOMS WITH TWO LEVEL SWITCHING AND OCCUPANCY SENSORS WHERE INDICATED ON FLOOR PLANS.



**TYPICAL 2'x2' AND 2'x4' LIGHT FIXTURE MOUNTING DETAIL**  
N.T.S.

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE I
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL: (860) 521-4323 FAX: (860) 521-4323  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

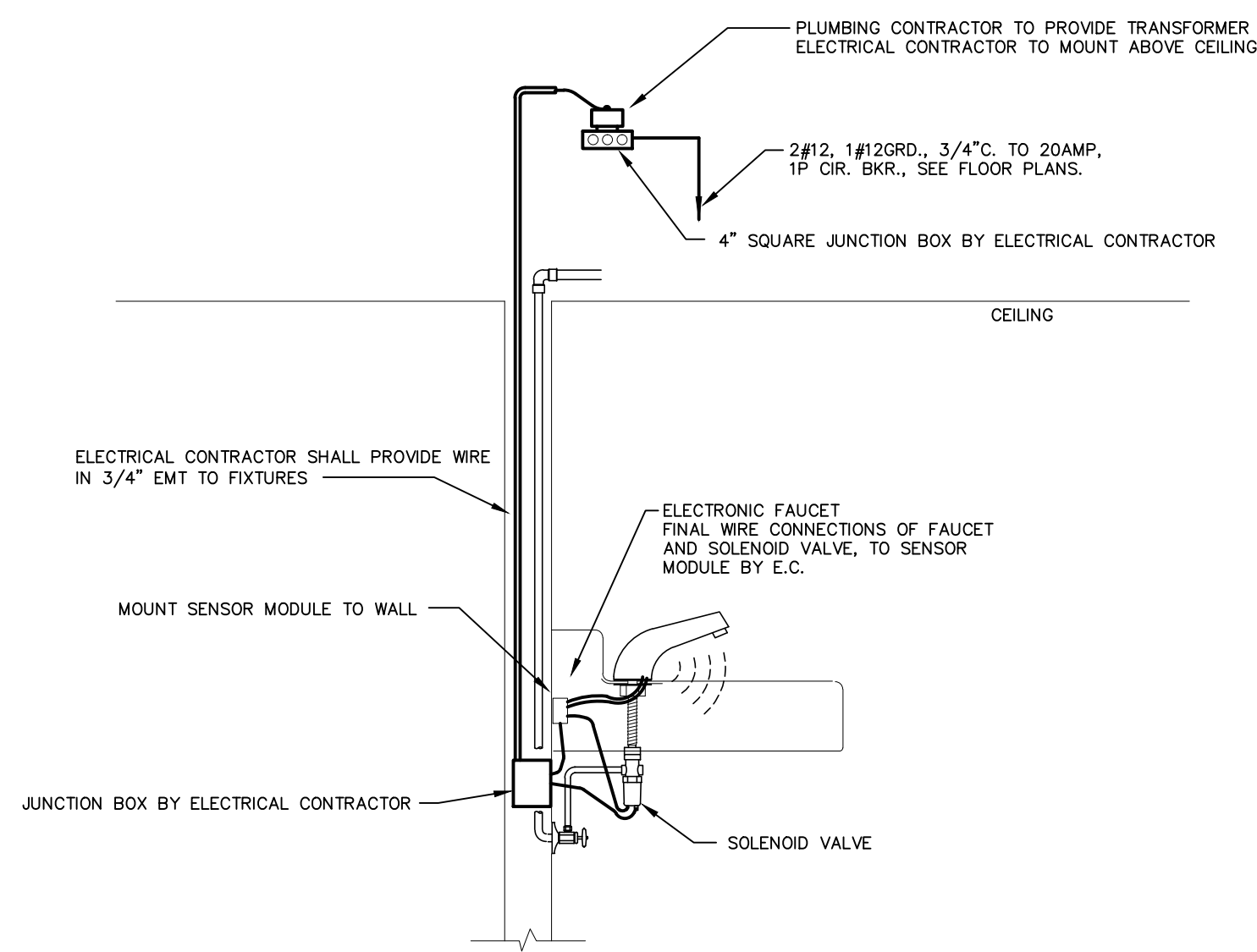
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: AS NOTED

**ELECTRICAL DETAILS**

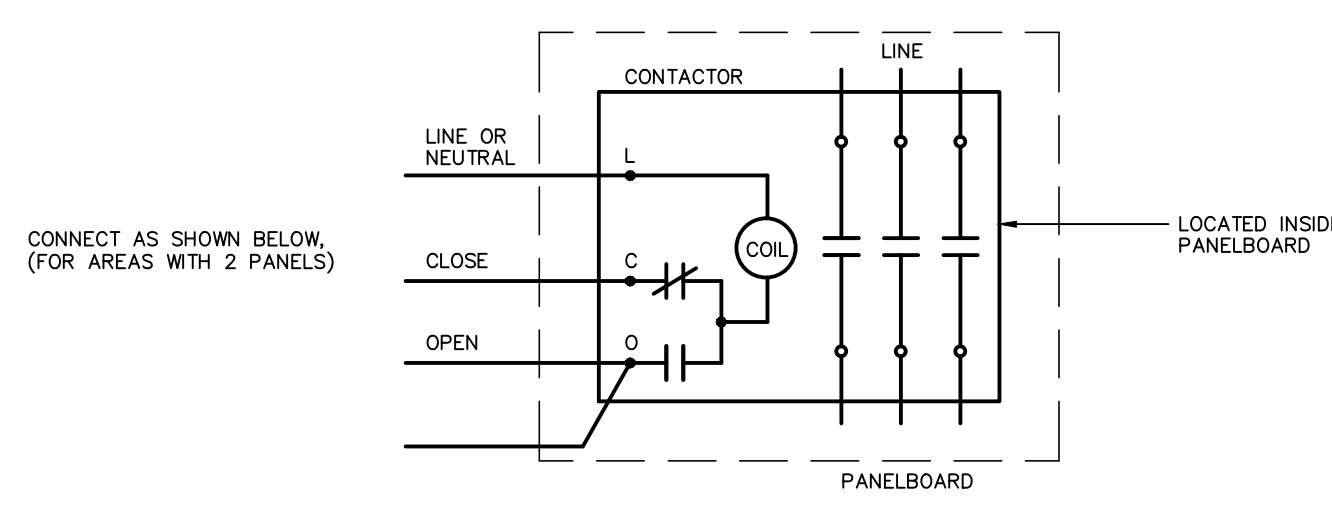
PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E3.01**



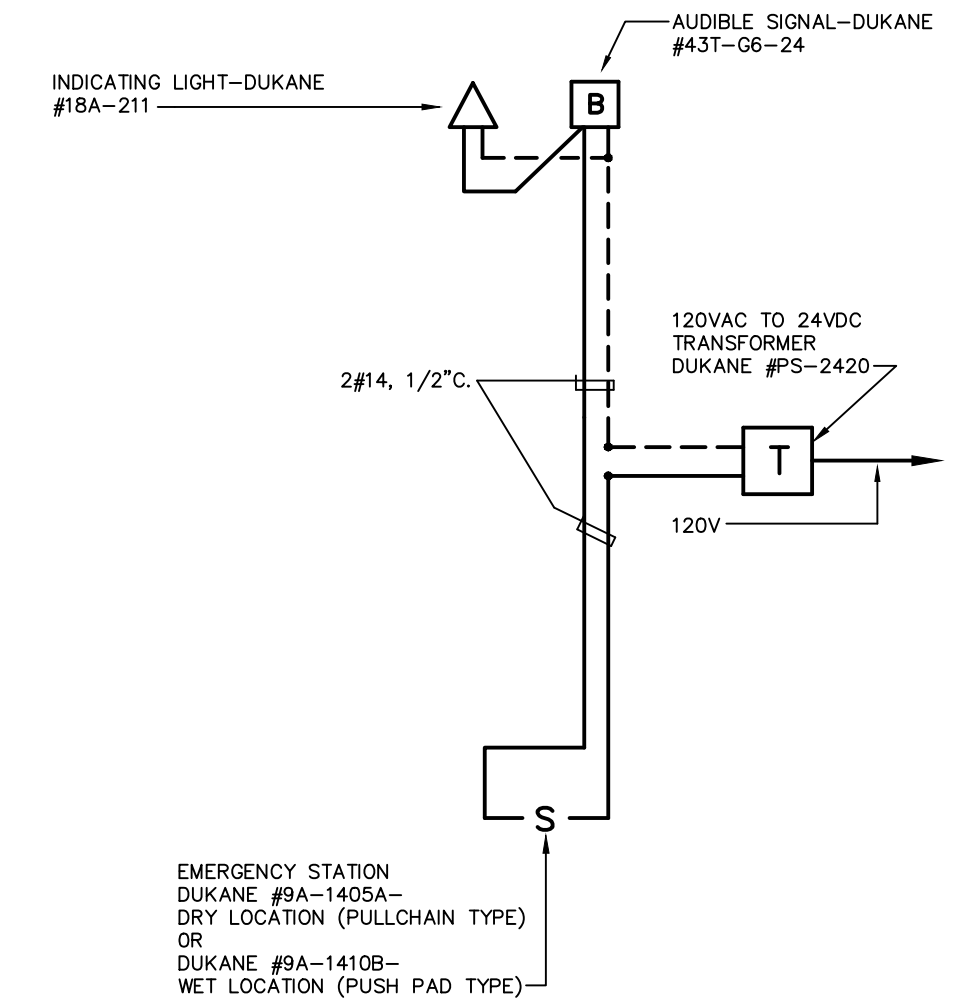
**TYPICAL ELECTRONIC FAUCET WIRING DETAIL**

N.T.S.  
 DETAIL NOTES:  
 1. FAUCET SHALL BE WIRED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS, COORDINATE REQUIREMENTS WITH PLUMBING CONTRACTOR.



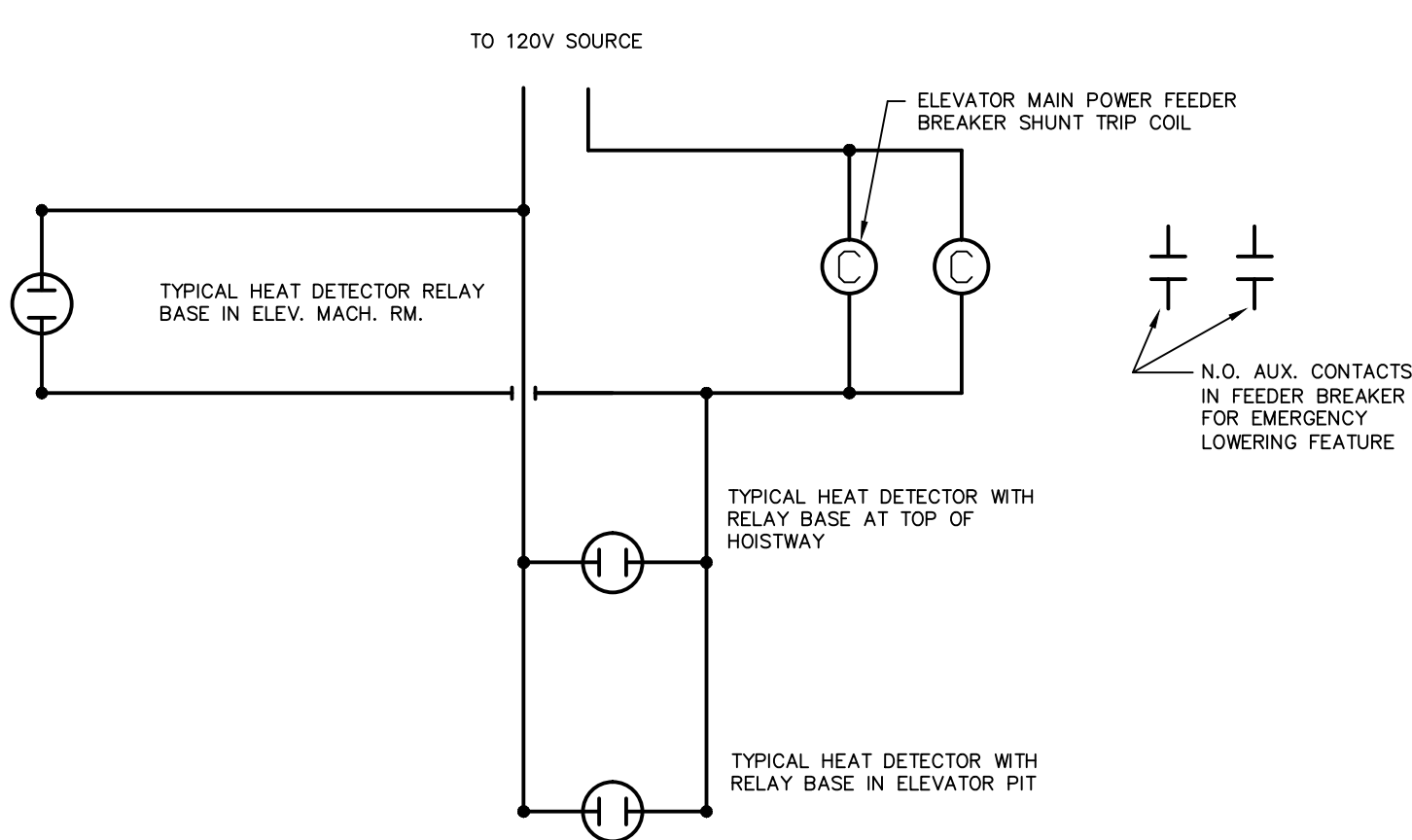
**TYPICAL CLASSROOM RACEWAY SYSTEM DETAIL AT SMARTBOARD/PROJECTOR**

N.T.S.  
 DETAIL NOTES:  
 (A) ISOLATED GROUND TYPE DUPLEX POWER OUTLET.  
 (B) ISOLATED GROUND TYPE DOUBLE DUPLEX POWER OUTLET.  
 (C) ISOLATED GROUND TYPE DUPLEX POWER OUTLET, MOUNTED FLUSH IN CEILING.  
 (D) TWO GANG ELECTRICAL BOX, WALL MOUNTED, WITH SINGLE GANG "MUD RING" COVER PLATE.  
 (E) TWO GANG ELECTRICAL BOX, WALL MOUNTED.  
 (F) TWO GANG ELECTRICAL BOX, MOUNTED FLUSH IN CEILING.  
 ALL POWER OUTLETS, CONDUIT RUNS, SINGLE AND TWO GANG BOXES TO BE FURNISHED AND INSTALLED BY ELEC CONTR. ALL COMM. DEVICES, COMM. DEVICE PLATES, COMM. CABLING AND CONNECTIONS AT SINGLE AND TWO GANG BOXES TO BE FURNISHED BY OTHERS.  
 REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.



**CALL FOR AID SYSTEM**

N.T.S.  
 TYPICAL FOR NON-PLENUM CEILING AREAS  
 TYPICAL FOR PLENUM AIR RETURN CEILING AREAS



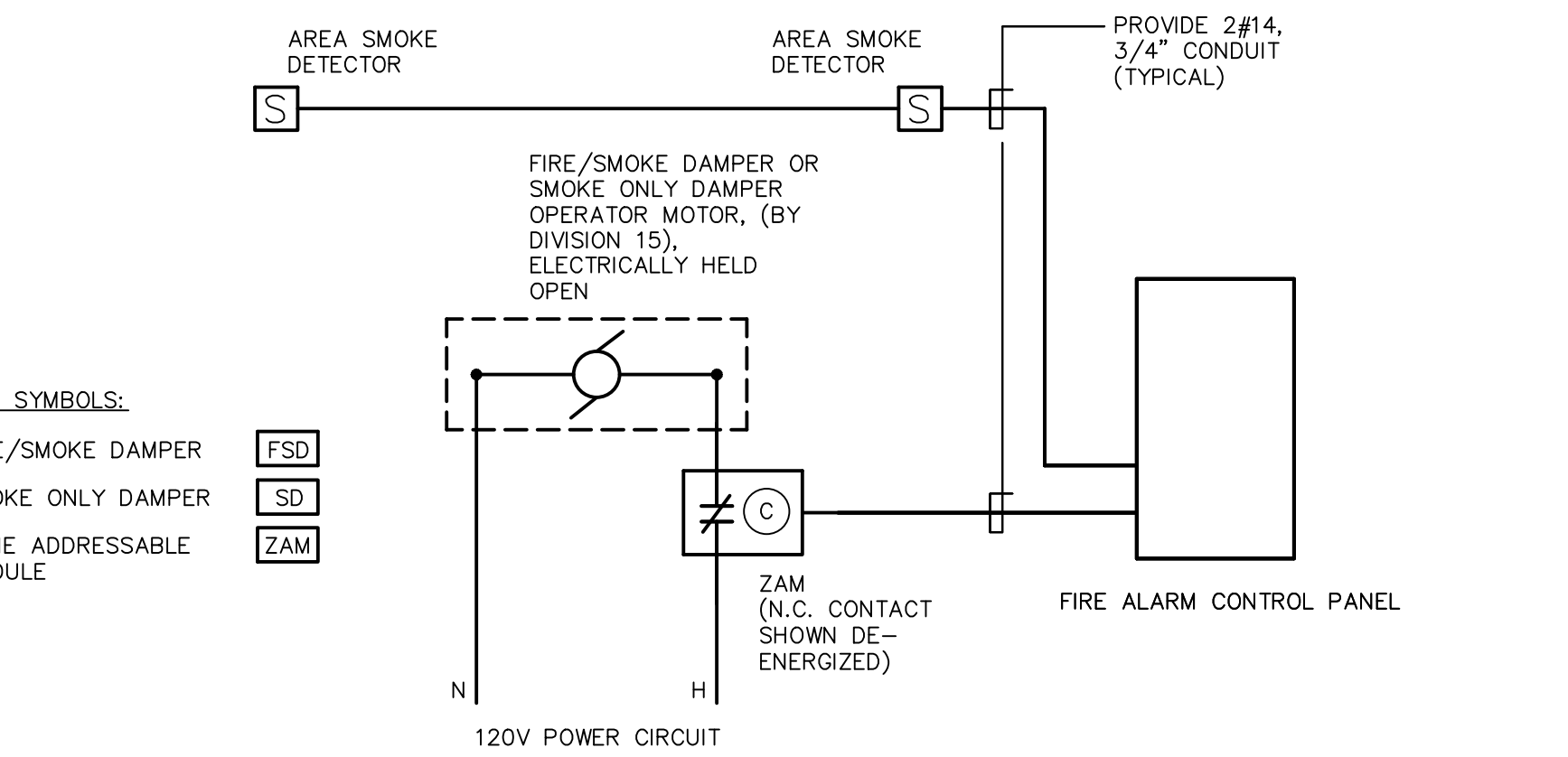
DETAIL NOTES:  
 1. RELAY BASE AUXILIARY CONTACTS ARE WIRED IN PARALLEL SO THAT ANY (1) INITIATING DEVICE WILL ACTIVATE SHUNT TRIP.  
 2. REFER TO SPECIFICATION SECTION 16600 FOR ADDITIONAL INFORMATION.

**ELEVATOR MAIN POWER FEEDER EMERGENCY DISCONNECT WIRING DIAGRAM**

N.T.S.

**TYPICAL EMERGENCY POWER SHUT-OFF DIAGRAM**

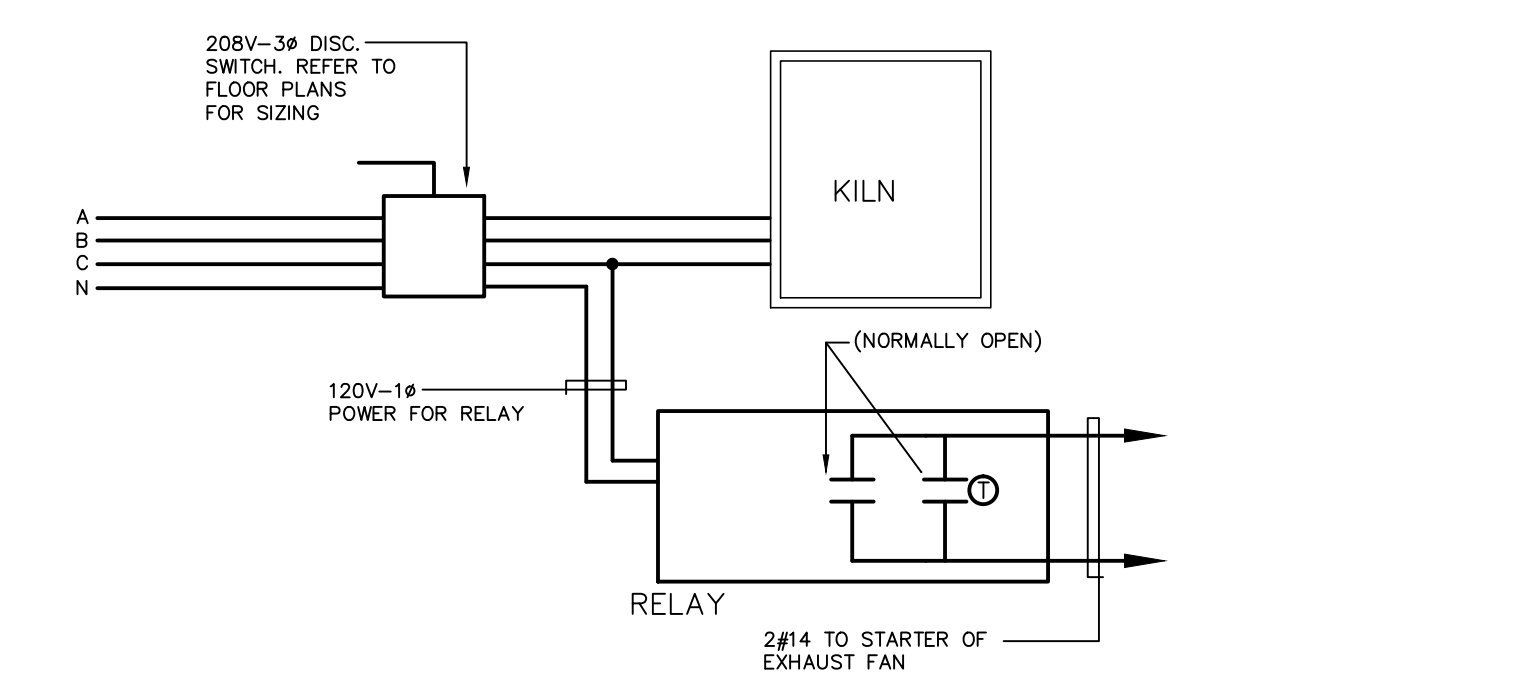
SCALE : NONE



DETAIL NOTES:  
 1. ACTIVATION OF AREA SMOKE DETECTOR(S) SHALL SIGNAL FIRE ALARM CONTROL PANEL WHICH WILL THEN SIGNAL RESPECTIVE SMOKE DAMPER ZONE ADDRESSABLE MODULE, (ZAM), OPENING ZAM N.C. CONTACT, INTERRUPTING POWER TO DAMPER MOTOR, CAUSING DAMPER TO CLOSE. DAMPER REOPENS ON RESET OF FIRE ALARM SYSTEM.

**TYPICAL FIRE ALARM/DAMPER INTERFACE DIAGRAM**

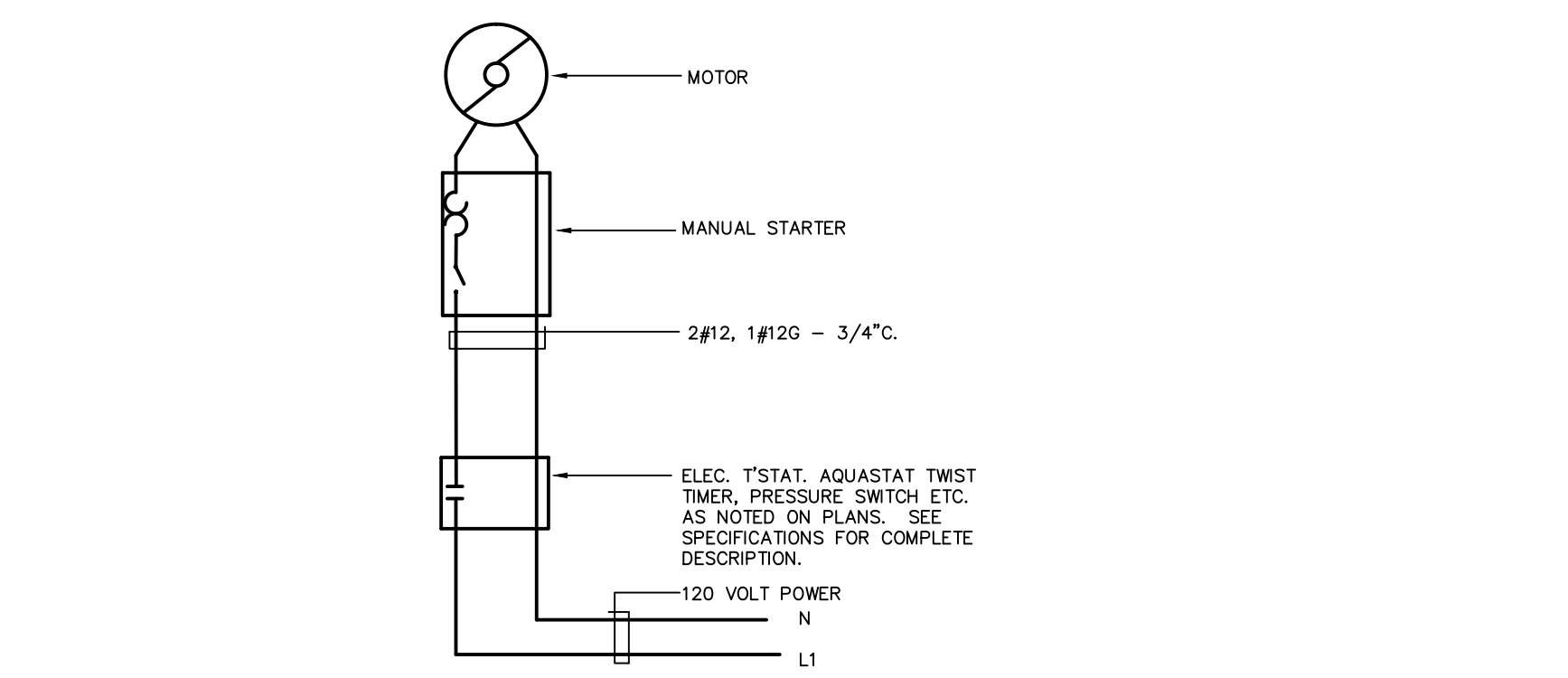
SCALE : NONE



DETAIL NOTE:  
 KILN EXHAUST SHALL BE WIRED AS FOLLOWS: WHEN DISCONNECT SWITCH IS PLACED IN "ON" POSITION, RELAY CLOSURES CONTACT AND SENDS SIGNAL TO ASSOCIATED EXHAUST FAN STARTER TO ACTIVATE FAN "HIGH SPEED" SETTING. AS THE TEMPERATURE RISES IN ROOM, THERMOSTAT CONTACT CLOSURES. WHEN THE KILN SWITCH IS DEACTIVATED, THE FAN REMAINS ON THROUGH THE THERMOSTAT CONTACT. WHEN THE ROOM COOLS DOWN, THERMOSTAT CONTACT OPENS; FAN SHUTS OFF.

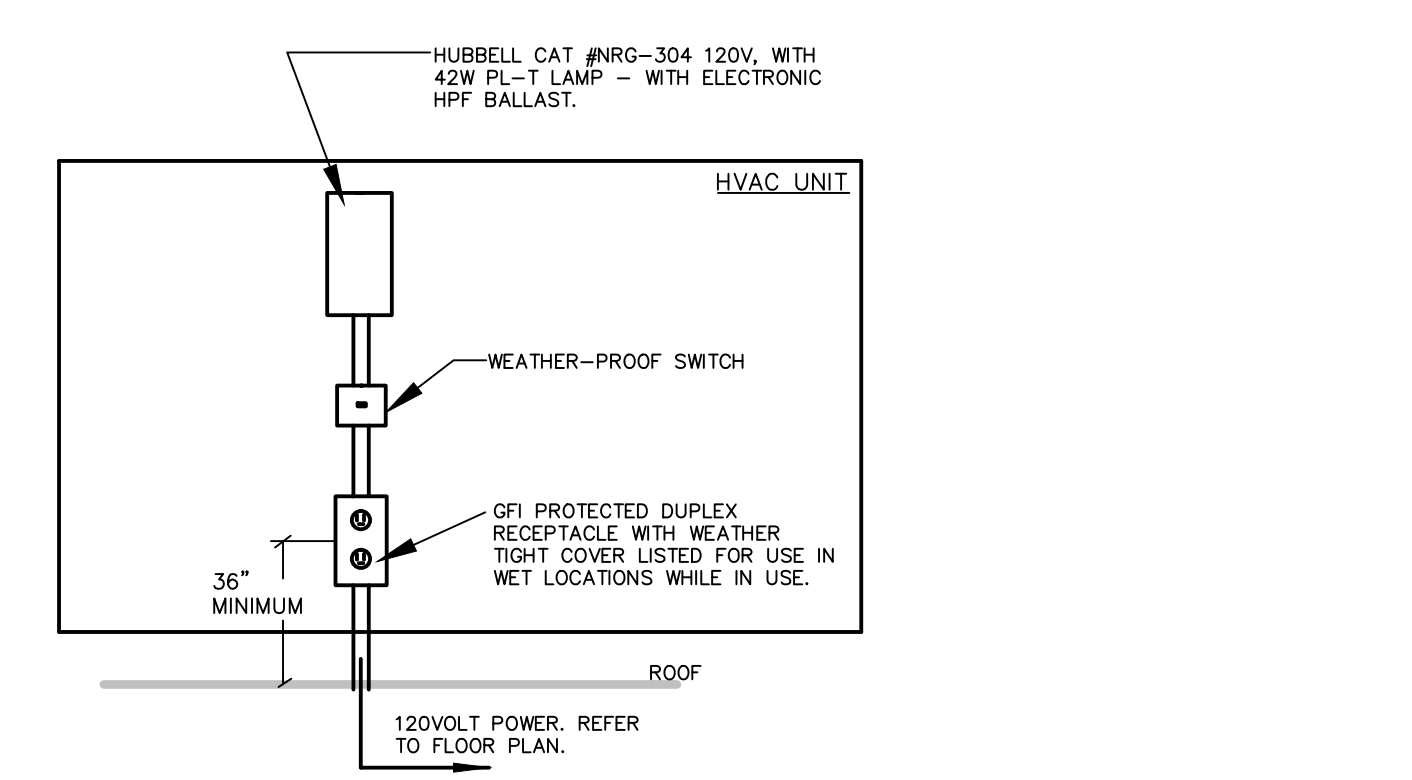
**KILN EXHAUST FAN WIRING DIAGRAM**

N.T.S.



**TYPICAL FRACTIONAL HP FCU, CUH, UH OR EF WIRING DIAGRAM**

N.T.S.



**TYPICAL CEILING MOUNTED PAGING SYSTEM SPEAKER DETAIL**

N.T.S.  
 DETAIL NOTES:  
 (A) SINGLE GANG ELECTRICAL BOX, FLUSH MOUNTED AT CEILING.  
 ALL SPEAKERS, ENCLOSURES, CABLING AND CONNECTIONS AT SINGLE GANG BOXES TO BE FURNISHED BY OTHERS.  
 REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.

**TYPICAL ROOF MOUNTED UNIT OUTLET + LIGHT**

N.T.S.

**TYPICAL CEILING MOUNTED TECHNOLOGY SYSTEM WIRELESS DEVICE DETAIL**

N.T.S.

DETAIL NOTES:  
 (A) SINGLE GANG ELECTRICAL BOX, SURFACE MOUNTED AT UNDERSIDE OF STRUCTURAL DECK ABOVE CEILING.  
 (B) SINGLE GANG WIREMOLD SURFACE MOUNTED ELECTRICAL BOX, MOUNTED HIGH ON WALL BELOW GRID CEILING. EXTEND WIREMOLD #700 SERIES SURFACE METAL RACEWAY FROM BOX TO SINGLE GANG ELECTRICAL BOX ABOVE GRID CEILING. SURFACE BOX AND RACEWAY RACEWAY SHALL HAVE FACTORY PAINTED IVORY FINISH.  
 (C) SINGLE GANG ELECTRICAL BOX, SURFACE MOUNTED AT UNDERSIDE OF STRUCTURAL DECK ABOVE CEILING.  
 ALL DEVICES, COVERPLATES AND CABLING AND CONNECTIONS AT SINGLE GANG BOXES TO BE FURNISHED BY OTHERS.  
 REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.

**TYPICAL DATA/VOICE OUTLET INSTALLATION DETAIL**

N.T.S.

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 28, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

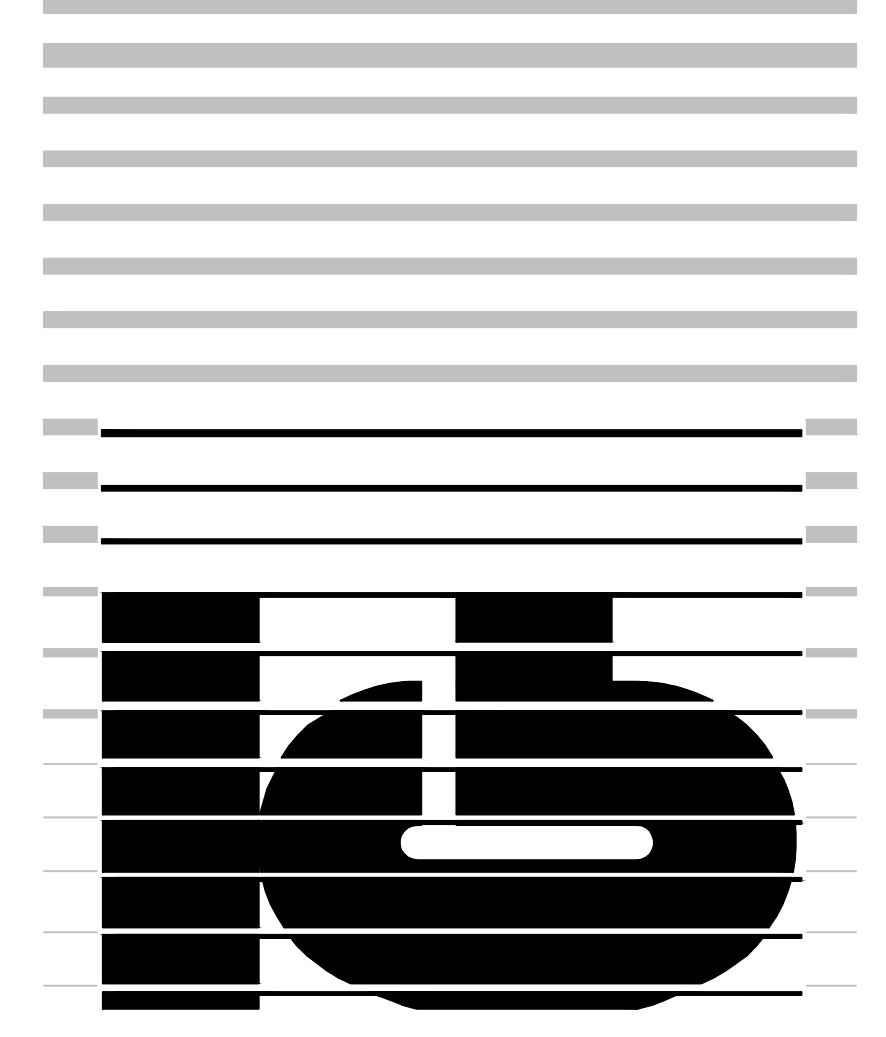


**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT 06248

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
 28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL (860) 521-4329 FAX (860) 521-5620  
 vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
 ARCHITECTS

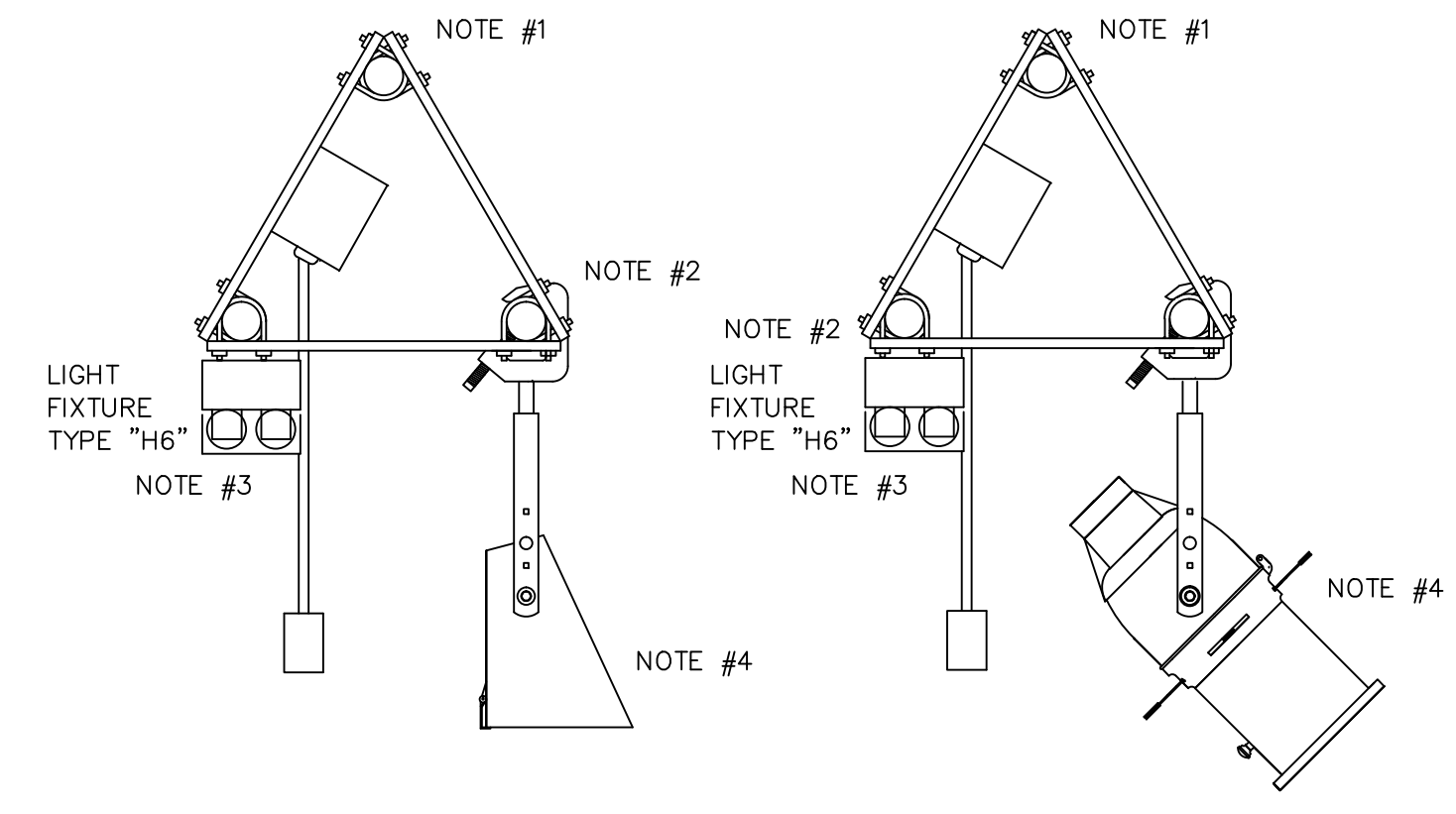
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
 DRAWN BY: CHECKED BY: SCALE: AS NOTED

**ELECTRICAL DETAILS**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001

**E3.02**



**STAGE LIGHT PIPE DETAILS**

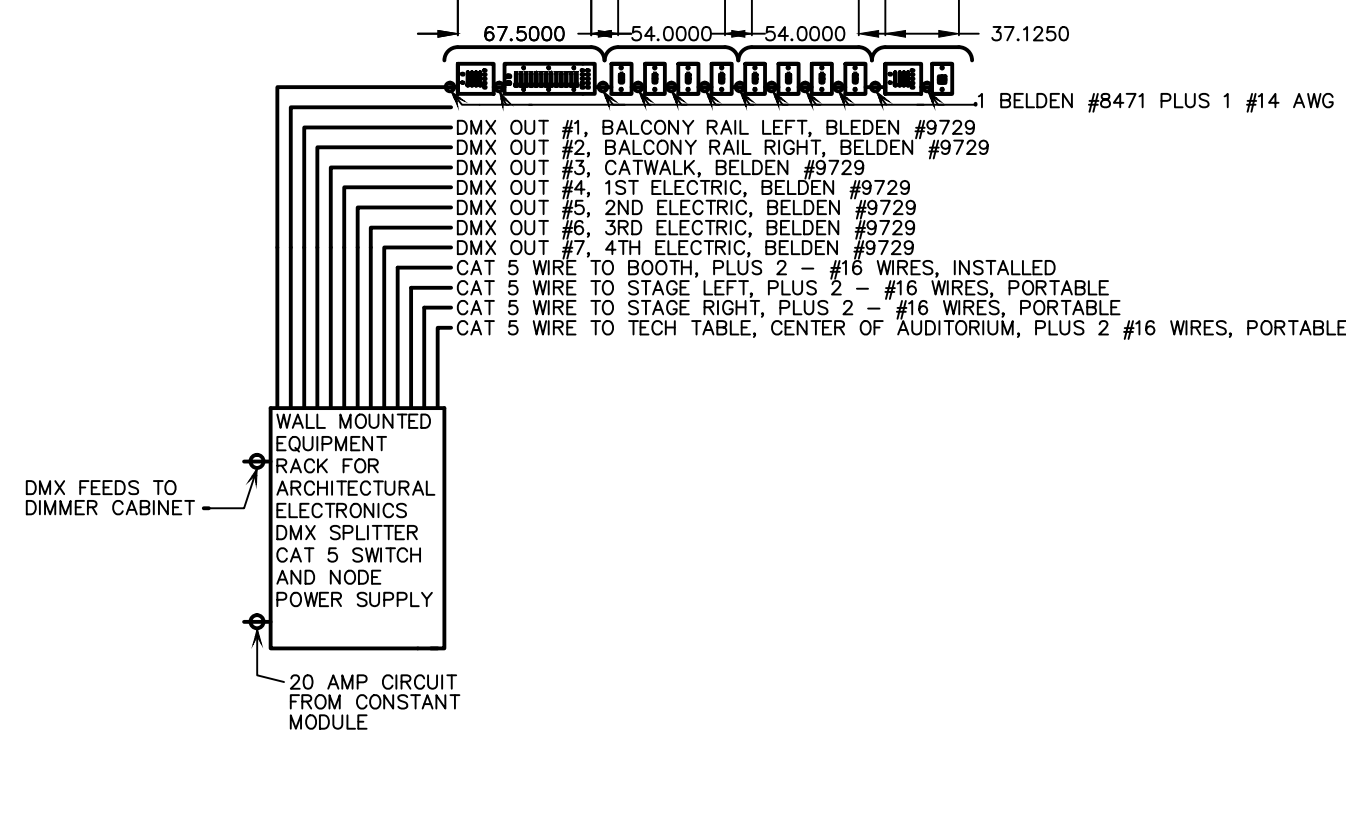
N.T.S. (TYPICAL FOR FOUR LIGHT PIPE POSITIONS)

**DETAIL NOTES:**

- UPPER PIPE INSTALLED BY THE RIGGING CONTRACTOR. BRACKETS AND CONNECTOR STRIPS SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- LOWER TWO PIPES INSTALLED BY THE ELECTRICAL CONTRACTOR.
- FLUORESCENT FIXTURE SUPPLIED BY AND INSTALLED BY THE ELECTRICAL CONTRACTOR.
- BORDER/SPOTLIGHT FIXTURES SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND ATTACHED TO PIPE BY THE ELECTRICAL CONTRACTOR.

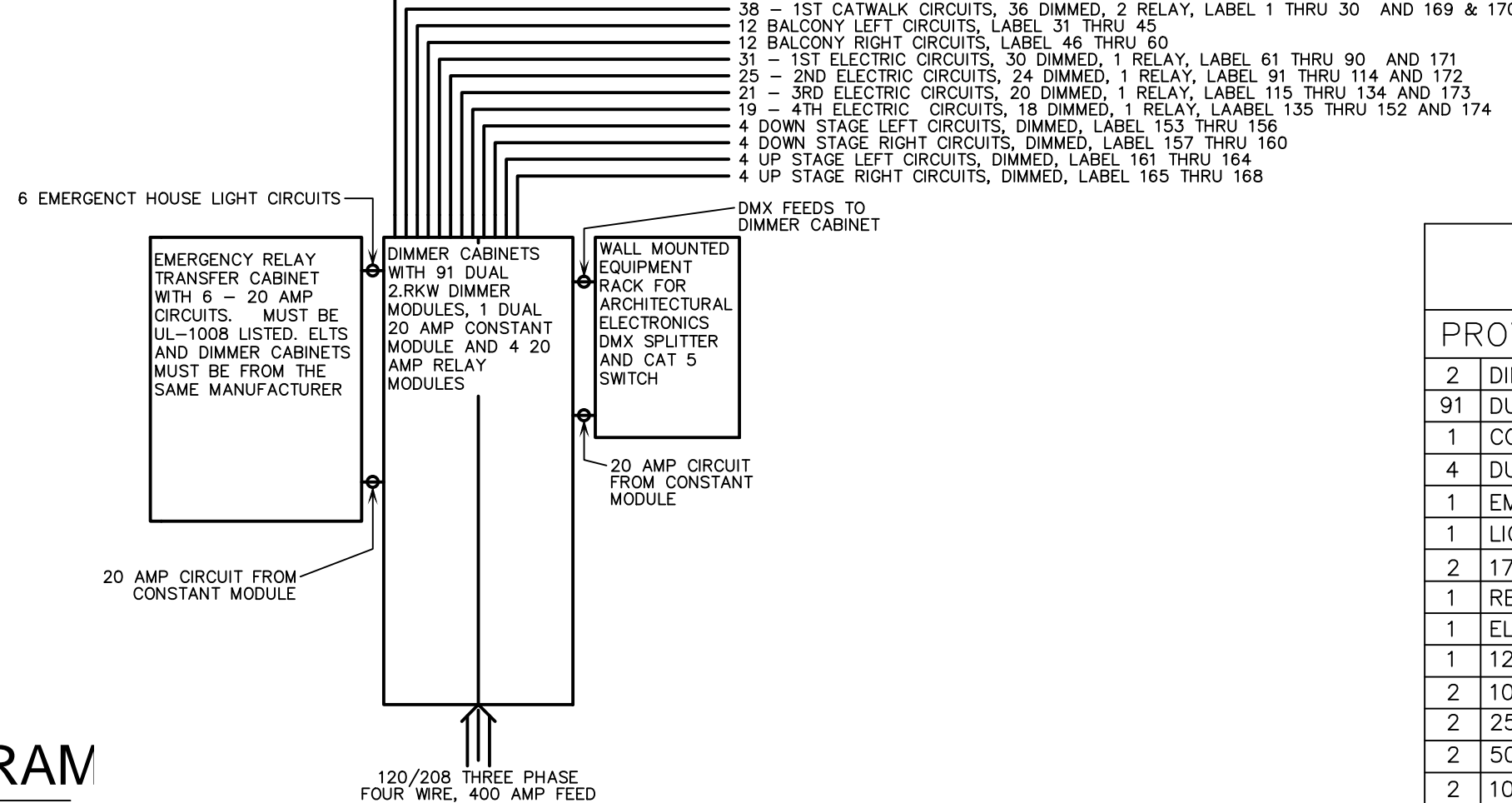
**GENERAL NOTES:**

- REFER TO THE LIGHTING FIXTURE SCHEDULE ON DWG. E4.01 FOR ADDITIONAL INFORMATION ON THE LIGHTING FIXTURES.
- REFER TO DWG. E1-18 MAIN LEVEL AREA "J" ELECTRICAL LIGHTING PLAN AND DWG. E1-28 UPPER LEVEL AREA "J" ELECTRICAL LIGHTING PLAN FOR ADDITIONAL LIGHT FIXTURE LOCATION INFORMATION.



**THEATER LIGHTING CONTROL RISER DIAGRAM**

N.T.S.

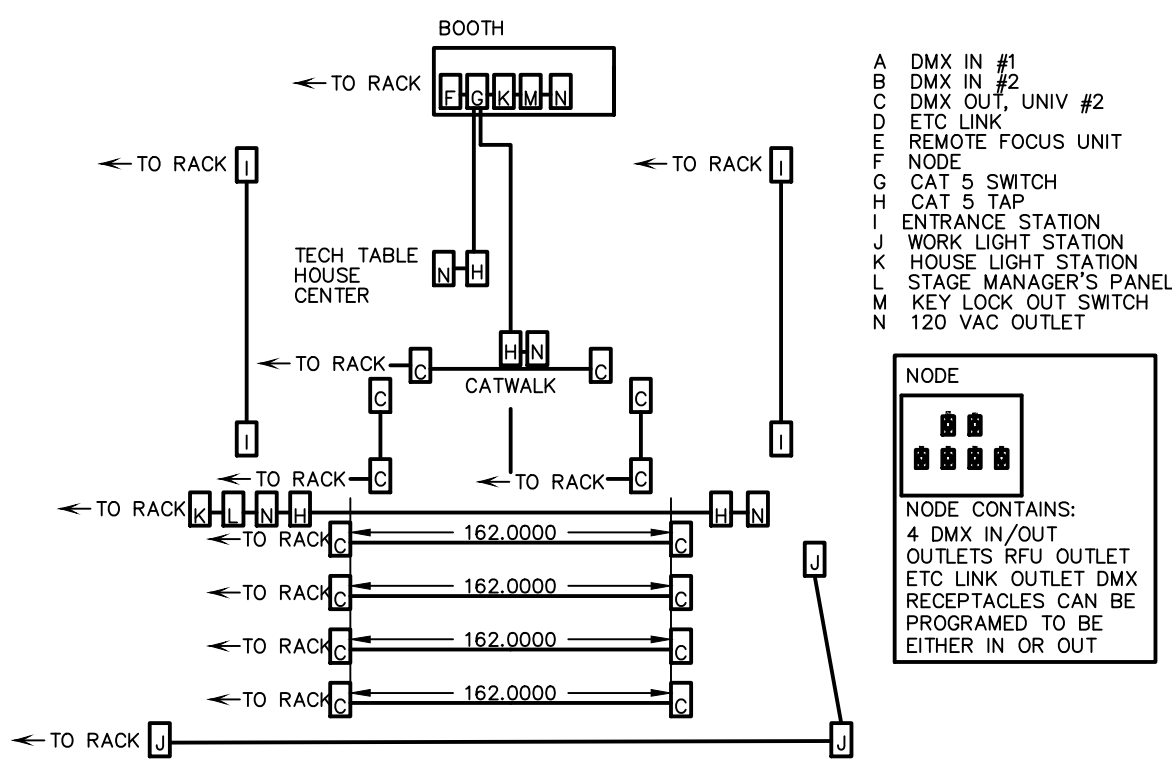


**THEATER LIGHTING DIMMER SYSTEM RISER**

N.T.S.

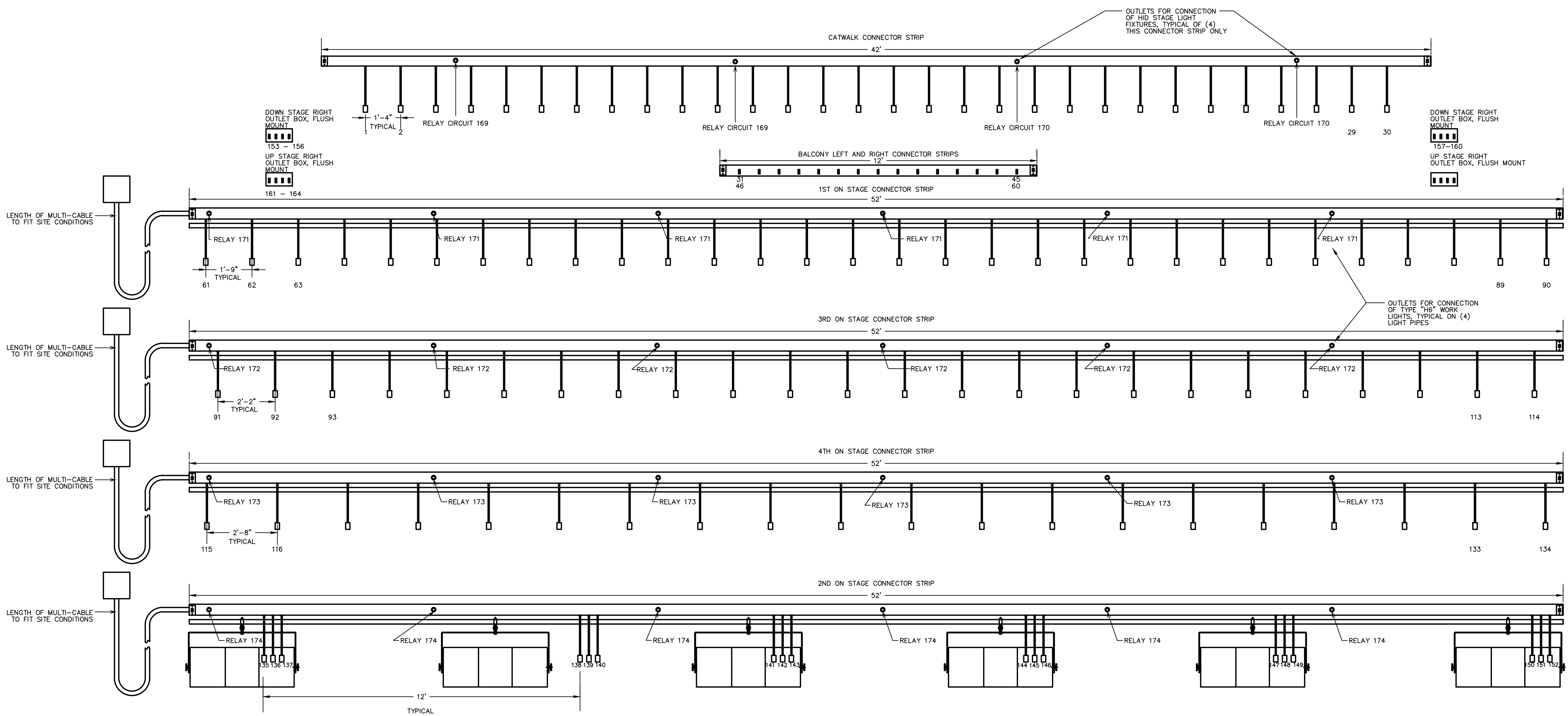
**NOTES:**

- REFER TO SPECIFICATION SECTION #16780 FOR ADDITIONAL INFORMATION.
- LOCATE BOTH DIMMER CABINETS IN DIMMER LIGHT CONTROL ROOM #1908, ADJACENT TO STAGE.



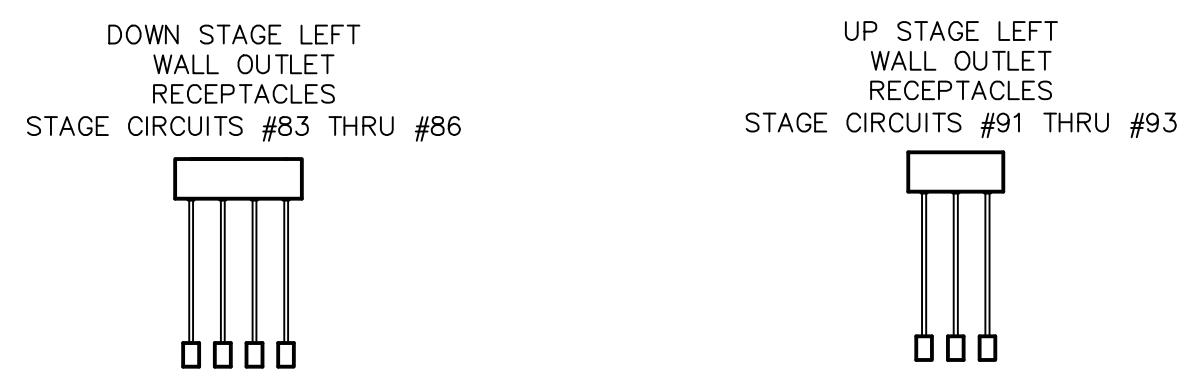
**THEATER CONTROL WIRING RISER DIAGRAM**

N.T.S.



**STAGE LIGHT PIPE ELEVATION DETAILS**

N.T.S. (TYPICAL FOR FOUR LIGHT PIPE POSITIONS)



**STAGE WALL OUTLET RECEPTACLE ELEVATION DETAILS**

N.T.S.



**LOOKOUT GALLERY LIGHTING POSITION MOUNTING DETAILS**

N.T.S.

**BILL OF MATERIALS**

PROVIDE THE FOLLOWING IN THE QUANTITIES NOTED:

- 2 DIMMER CABINETS, EACH TO HOLD A TOTAL OF 48 DUAL DIMMER MODULES
- 91 DUAL DIMMER MODULES, 350ms CHOKES
- 1 CONSTANT MODULE WITH 2 - 20 AMP BREAKERS
- 4 DUAL RELAY MODULES FOR HID FIXTURES AND STAGE FLOURESCENT WORK LIGHTS
- 1 EMERGENCY RELAY TRANSFER CABINET WITH 6 TRANSFER RELAYS, UL-1008 REQUIREMENTS
- 1 LIGHTING CONTROL CONSOLE, COMPLETE WITH MOVING LIGHT MODULE
- 1 17" SVGA MONITORS
- 1 REMOTE FOCUS UNIT
- 1 ELECTRONICS EQUIPMENT RACK WITH ARCHITECTURAL CONTROL UNIT
- 1 12 CHANNEL DMX OUT SPLITTER AND A CAT 5 SWITCH
- 2 10' DMX CONTROL CABLE
- 2 25' DMX CONTROL CABLE
- 2 50' DMX CONTROL CABLE
- 2 10' ETC LINK CONTROL CABLE
- 1 50' RFU EXTENSION CABLE
- 1 ETC NODE (SEE DRAWINGS FOR DETAILS), INSTALLED
- 1 ETC NODE (SEE DRAWINGS FOR DETAILS), PORTABLE
- 4 ENTRANCE STATIONS
- 2 HOUSE LIGHT CONTROL STATIONS
- 1 STAGE MANAGER'S STATION
- 1 KEY OPERATED LOCKOUT STATION
- 2 BALCONY CONNECTOR STRIPS
- 8 SETS OF BALCONY BOOM PIPES, SEE DRAWINGS FOR DETAILS
- 1 FRONT OF HOUSE CONNECTOR STRIP, SEE DRAWINGS FOR DETAILS, CATWALK
- 4 STAGE CONNECTOR STRIPS, SEE DRAWINGS FOR DETAILS
- 4 STAGE OUTLET BOX, SEE DRAWINGS FOR DETAILS
- 24 119 DEGREE ELLIPSOIDAL SPOTLIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 36 26 DEGREE ELLIPSOIDAL SPOTLIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 24 36 DEGREE ELLIPSOIDAL SPOTLIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 24 50 DEGREE ELLIPSOIDAL SPOTLIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 4 36 DEGREE ELLIPSOIDAL SPOTLIGHTS, HID LAMP, C-CLAMP, COLOR FRAME, GTL CONNECTOR, AND SAFETY CABLE
- 24 SOURCE 4 PAR LIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 4 SOURCE 4 PARNEL LIGHTS, COMPLETE WITH LAMP, C-CLAMP, COLOR FRAME, GP CONNECTOR, AND SAFETY CABLE
- 2 FOLLOW SPOTS, LYCIAN HP SERIES
- 6 CYC LIGHTS, SC-03 COMPLETE WITH FFT LAMPS, C-CLAMP, HANGING YOKE, COLOR FRAMES, GP CONNECTOR, AND SAFETY CABLES
- 1 LOT OF EXTENSION CABLES, SEE DRAWINGS FOR DETAILS
- 30 18" SIDE ARMS WITH SINGLE TEE
- 20 SPARE HPL LAMPS
- 6 SPARE FFT LAMPS

**REVISIONS**

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JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
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JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



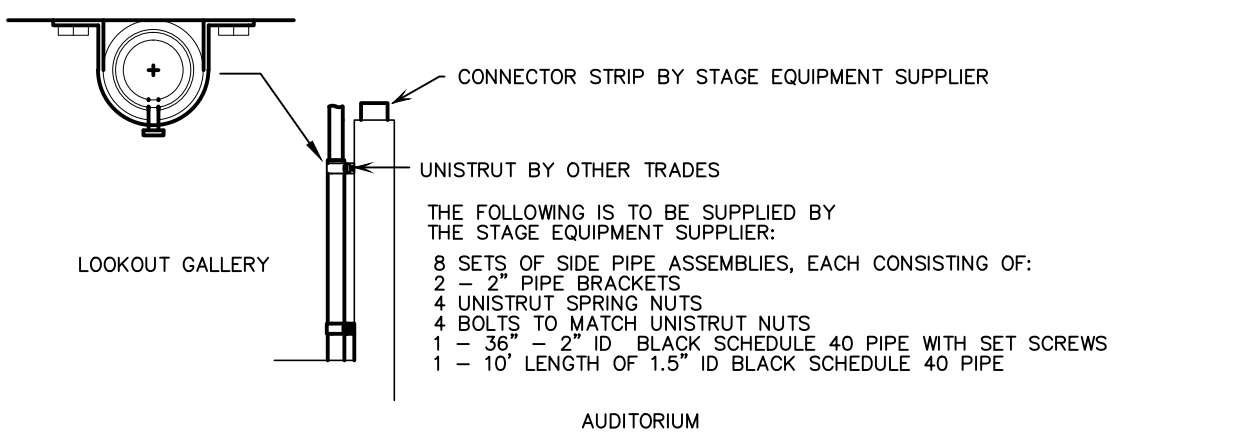
**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT 06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

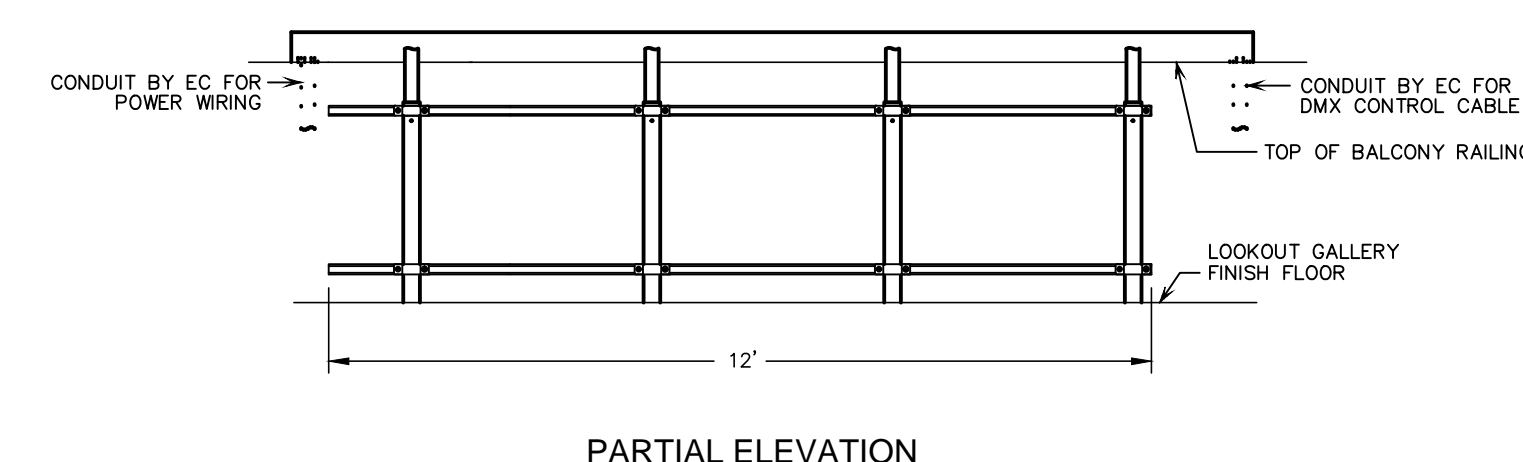
VAN ZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**

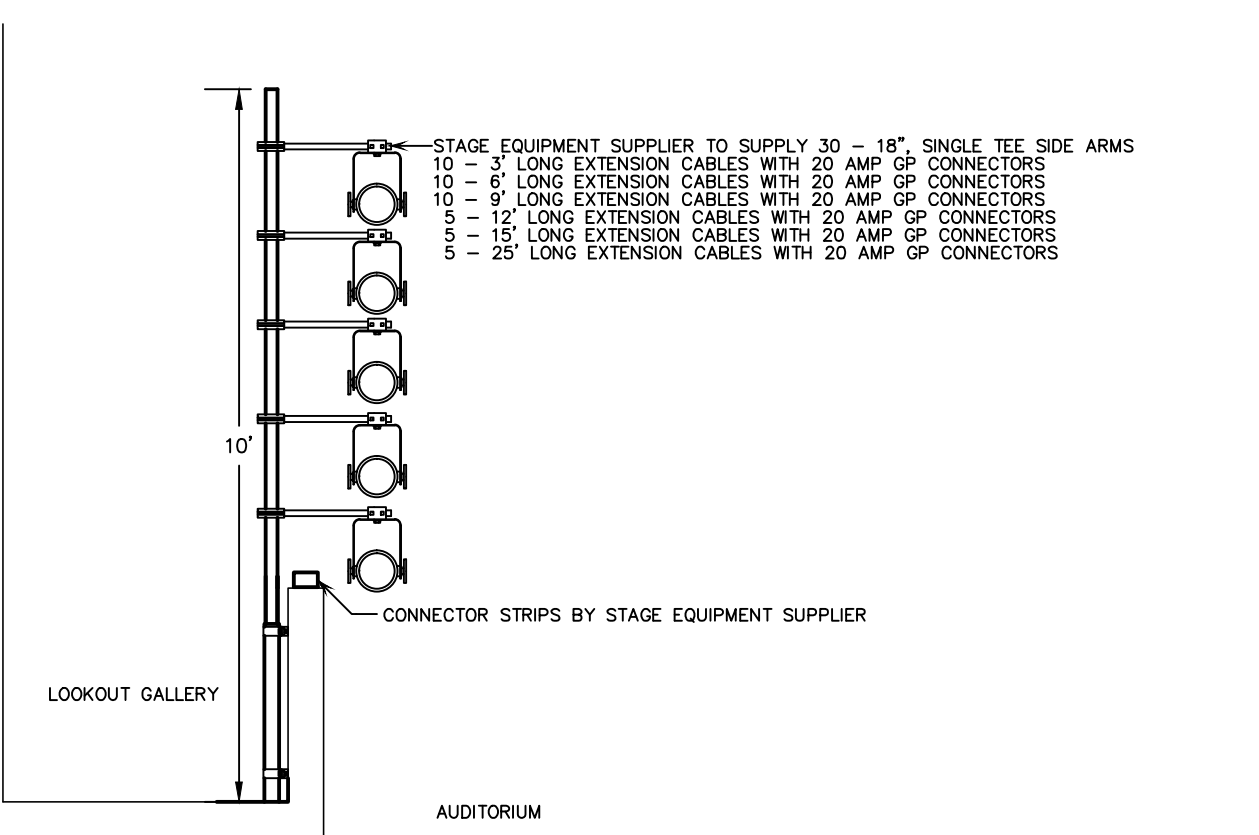
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4328 FAX (860) 521-5620  
vZHS PROJECT NUMBER: 2000155.00



**SECTION DETAIL**



**PARTIAL ELEVATION**



**PARTIAL SECTION**



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

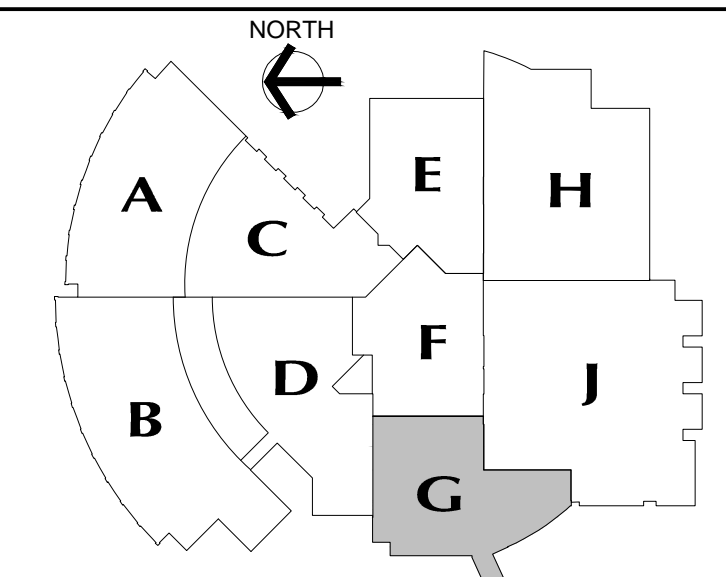
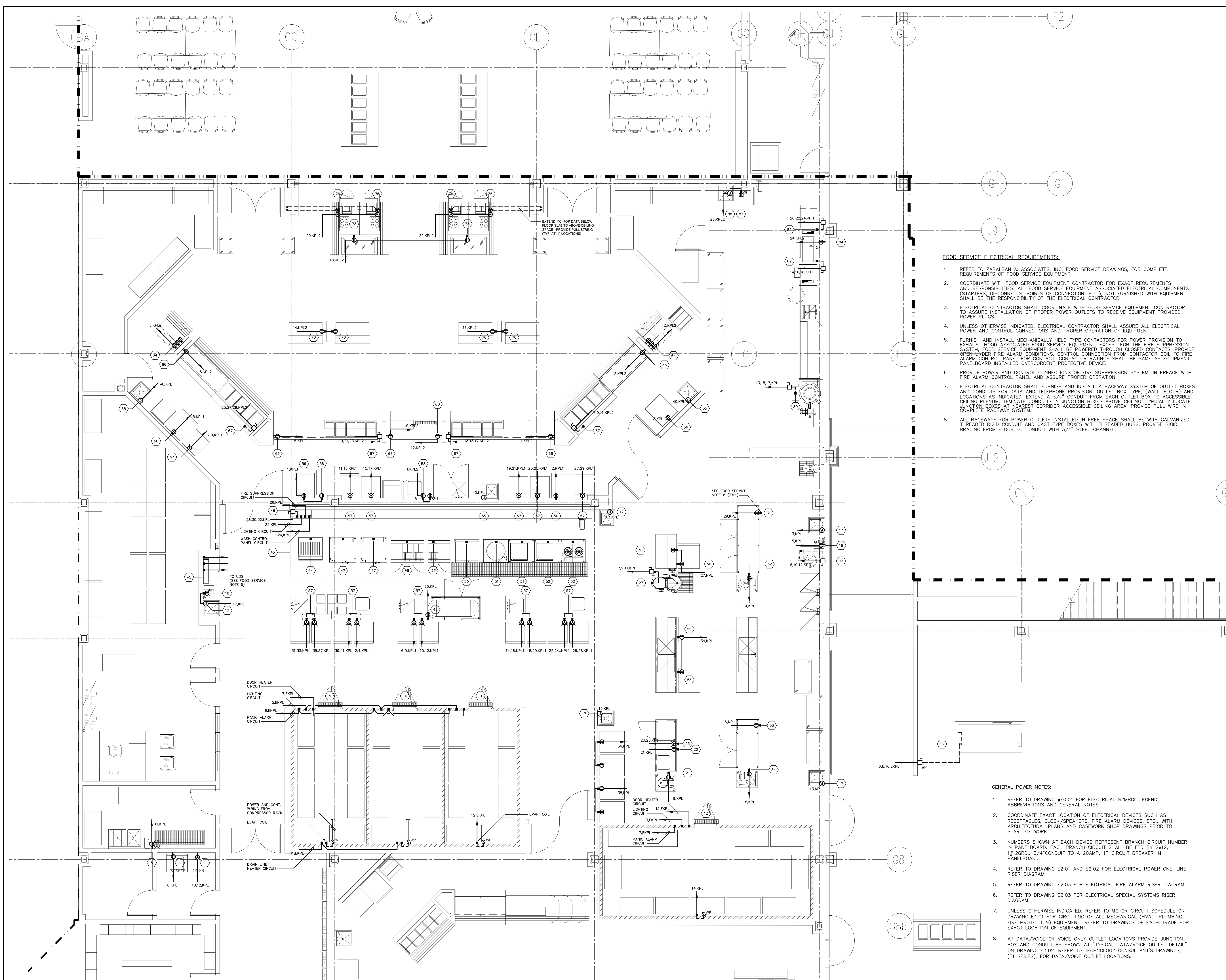
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: MSA CHECKED BY: RLG SCALE: AS NOTED

**THEATRICAL LIGHTING SYSTEM DETAILS**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E3.03**



**MAIN LEVEL KEY PLAN**

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
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**NEW RHAM HIGH SCHOOL**  
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VANZELM HEYWOOD & SHADFORD INC.  
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TEL: (860) 521-4329 FAX: (860) 521-4329  
vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361  
DRAWN BY: RLG  
CHECKED BY:

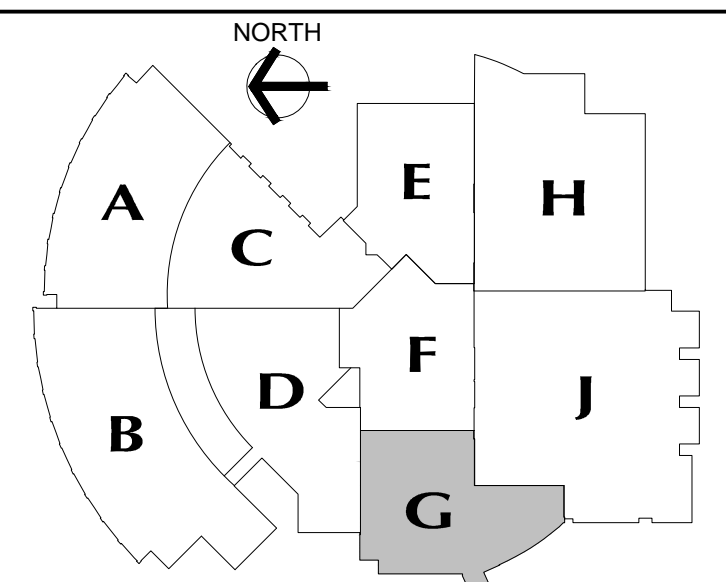
**KITCHEN/HIGH SCHOOL SERVERY**  
**1/4" SCALE**  
**POWER PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E3.04**

- FOOD SERVICE ELECTRICAL REQUIREMENTS:**
- REFER TO ZARALBAN & ASSOCIATES, INC. FOOD SERVICE DRAWINGS, FOR COMPLETE REQUIREMENTS OF FOOD SERVICE EQUIPMENT.
  - COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR EXACT REQUIREMENTS AND RESPONSIBILITIES. ALL FOOD SERVICE EQUIPMENT ASSOCIATED ELECTRICAL COMPONENTS (STARTERS, DISCONNECTS, POINTS OF CONNECTION, ETC.) NOT FURNISHED WITH EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
  - ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR TO ASSURE INSTALLATION OF PROPER POWER OUTLETS TO RECEIVE EQUIPMENT PROVIDED POWER PLUGS.
  - UNLESS OTHERWISE INDICATED, ELECTRICAL CONTRACTOR SHALL ASSURE ALL ELECTRICAL POWER AND CONTROL CONNECTIONS AND PROPER OPERATION OF EQUIPMENT.
  - FURNISH AND INSTALL MECHANICALLY HELD TYPE CONTACTORS FOR POWER PROVISION TO EXHAUST HOOD ASSOCIATED FOOD SERVICE EQUIPMENT, EXCEPT FOR THE FIRE SUPPRESSION SYSTEM. FOOD SERVICE EQUIPMENT SHALL BE POWERED THROUGH CLOSED CONTACTS. PROVIDE OPEN UNDER FIRE ALARM CONDITIONS. CONTROL CONNECTION FROM CONTACTOR COIL TO FIRE ALARM CONTROL PANEL FOR CONTACTOR RATINGS SHALL BE SAME AS EQUIPMENT PANELBOARD INSTALLED OVERCURRENT PROTECTIVE DEVICE.
  - PROVIDE POWER AND CONTROL CONNECTIONS OF FIRE SUPPRESSION SYSTEM. INTERFACE WITH FIRE ALARM CONTROL PANEL AND ASSURE PROPER OPERATION.
  - ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A RACEWAY SYSTEM OF OUTLET BOXES AND CONDUITS FOR DATA AND TELEPHONE PROVISION. OUTLET BOX TYPE, (WALL, FLOOR) AND LOCATIONS AS INDICATED. EXTEND A 3/4" CONDUIT FROM EACH OUTLET BOX TO ACCESSIBLE CEILING PLENUM. TERMINATE CONDUITS IN JUNCTION BOXES ABOVE CEILING. TYPICALLY LOCATE JUNCTION BOXES AT NEAREST CORRIDOR ACCESSIBLE CEILING AREA. PROVIDE PULL WIRE IN COMPLETE RACEWAY SYSTEM.
  - ALL RACEWAYS FOR POWER OUTLETS INSTALLED IN FREE SPACE SHALL BE WITH GALVANIZED THREADED RIGID CONDUIT AND CAST TYPE BOXES WITH THREADED HUBS. PROVIDE RIGID BRACING FROM FLOOR TO CONDUIT WITH 3/4" STEEL CHANNEL.

- GENERAL POWER NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
  - NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
  - REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
  - REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
  - UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
  - AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.



**MAIN LEVEL KEY PLAN**

REVISIONS		
DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

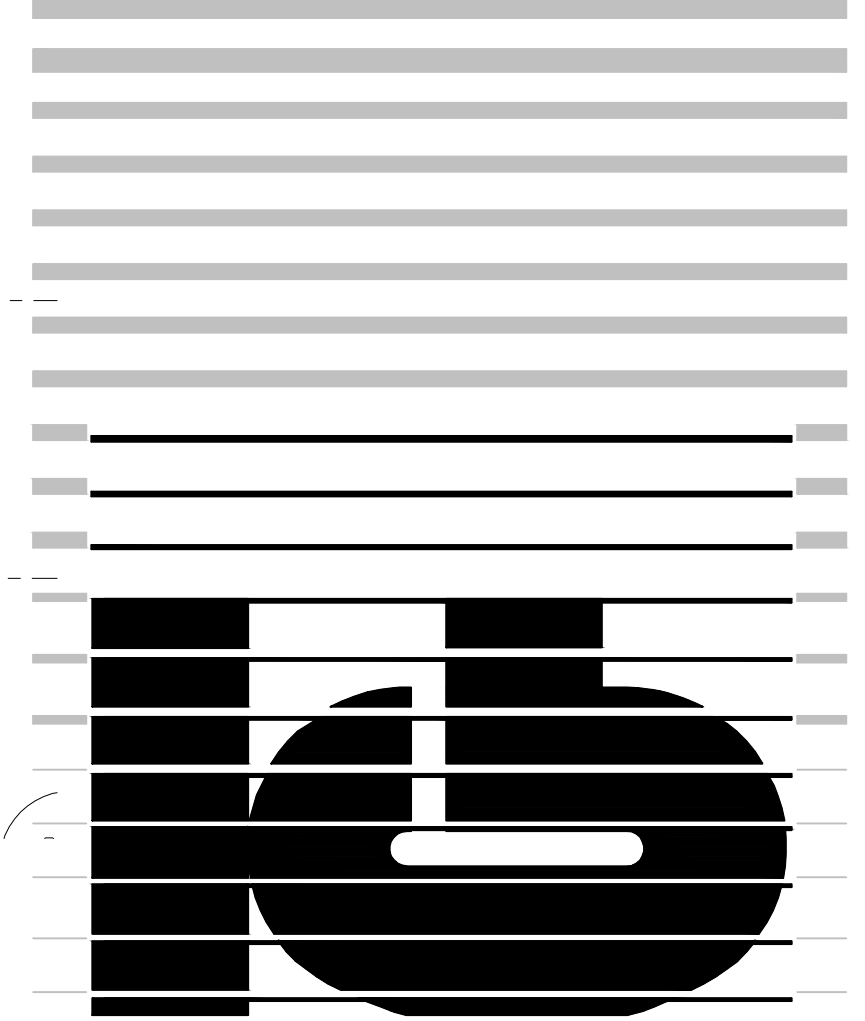


**NEW RHAM HIGH SCHOOL**  
**WALL STREET**  
**HEBRON, CONNECTICUT 06248**

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
 29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL: (860) 521-4329 FAX: (860) 521-6220  
 vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

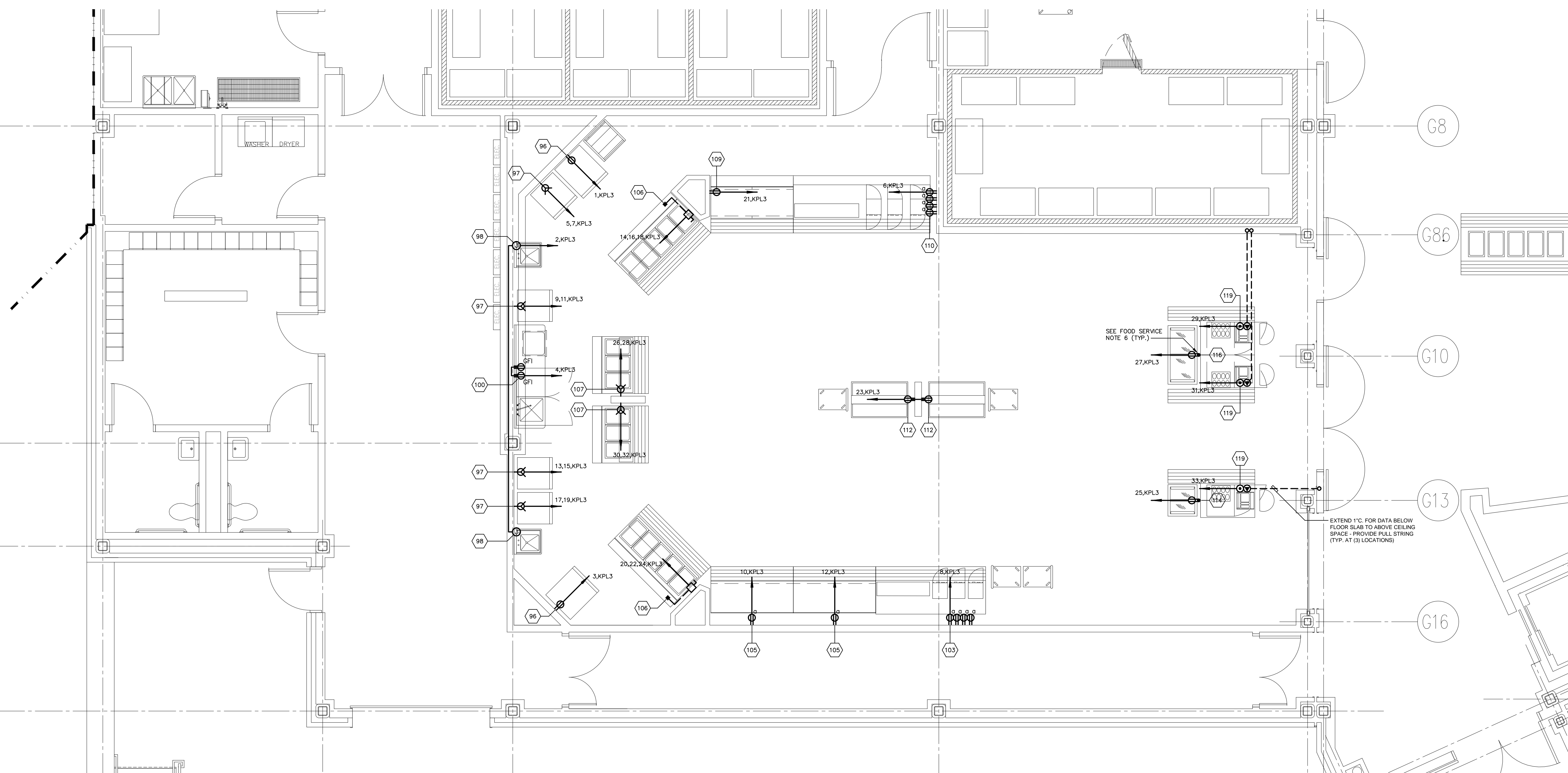
416 SLATER RD. NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: RLG CHECKED BY: SCALE: 1/4" = 1'-0"

**MIDDLE SCHOOL SERVERY 1/4" SCALE POWER PLAN**

PROJECT NO.: 00048 DRAWING NO.: DATE: JANUARY 20, 2001

**E3.05**



**FOOD SERVICE ELECTRICAL REQUIREMENTS:**

- REFER TO ZARALBAN & ASSOCIATES, INC. FOOD SERVICE DRAWINGS, FOR COMPLETE REQUIREMENTS OF FOOD SERVICE EQUIPMENT.
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- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A RACEWAY SYSTEM OF OUTLET BOXES AND CONDUITS FOR DATA AND TELEPHONE PROVISION. OUTLET BOX TYPE, (WALL, FLOOR), AND LOCATIONS AS INDICATED. EXTEND A 3/4" CONDUIT FROM EACH OUTLET BOX TO ACCESSIBLE CEILING PLENUM. TERMINATE CONDUITS IN JUNCTION BOXES ABOVE CEILING. TYPICALLY LOCATE JUNCTION BOXES AT NEAREST CORRIDOR ACCESSIBLE CEILING AREA. PROVIDE PULL WIRE IN COMPLETE RACEWAY SYSTEM.
- ALL RACEWAYS FOR POWER OUTLETS INSTALLED IN FREE SPACE SHALL BE WITH GALVANIZED THREADED RIGID CONDUIT AND CAST TYPE BOXES WITH THREADED HUBS. PROVIDE RIGID BRACING FROM FLOOR TO CONDUIT WITH 3/4" STEEL CHANNEL.

**GENERAL POWER NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.

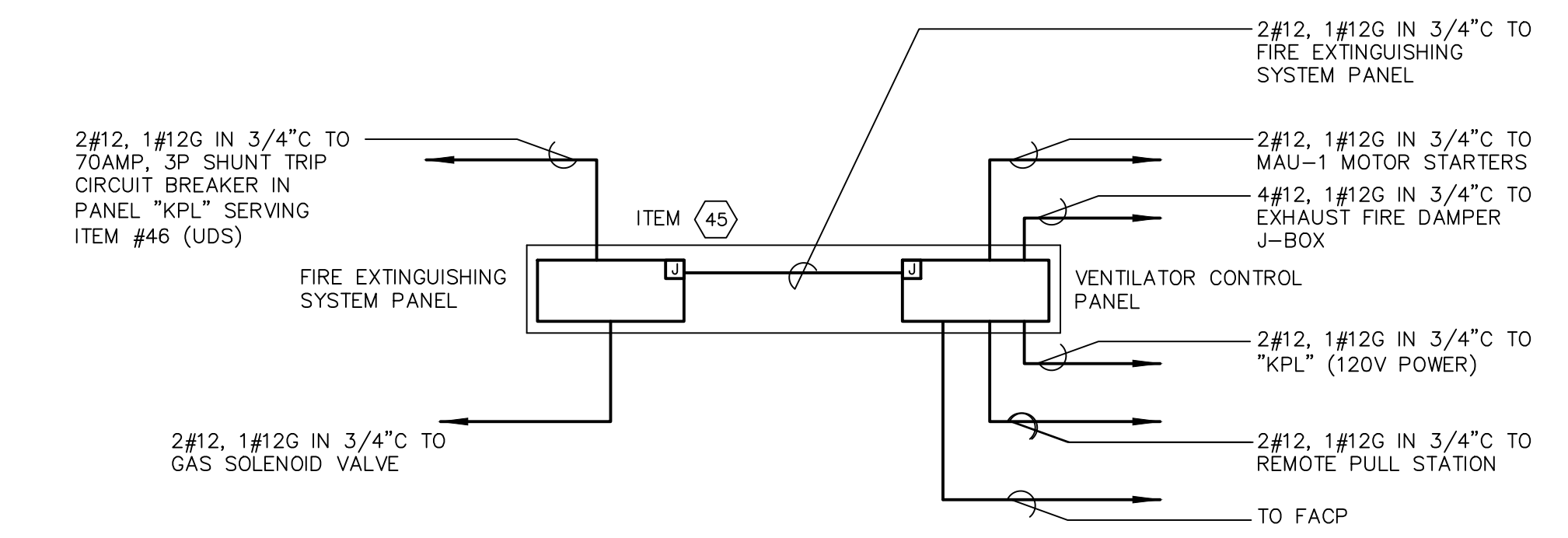
SCHEDULE OF FOOD SERVICE EQUIPMENT												
ITEM NUMBER	QUANTITY	DESCRIPTION	HORSEPOWER (HP)	KILOWATTS (KW)	AMPS (A)	VOLTS (V) PHASE (#)	TYPE OF CONNECTION		POWER FEEDERS	BRANCH BREAKER	SOURCE PANEL	REMARKS
							HARD WIRED	NEMA CONFIGURATION OR DISCONNECTING DEVICE				
1	1	CLOTHES WASHER	-	-	20.0	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	CLOTHES DRYER	-	-	30.0	208-1φ	-	14-30R	3#10,1#10ND,3/4"C.	30A-2P	SEE FLOOR PLANS	-
6	1	HOSE BIBB (N.I.K.E.C. BY P.C.)	-	-	20.0	120-1φ	-	5-20R/GFI	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	POWER REQUIRED FOR POWER WASHER
9	1	WALK-IN FREEZER	-	0.3 (LTS) 0.5	20.0	120-1φ	■	-	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	WALK-IN FREEZER EVAPORATOR COIL	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM COMPRESSOR RACK (ITEM NO. 13)
1	1	WALK-IN FREEZER DRAIN LINE HEATER	-	1.0	-	120-1φ	■	SEE REMARKS	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	PROVIDE ON/OFF CONTROL SWITCH
1	1	WALK-IN FREEZER	-	0.3 (LTS) 0.5	20.0	120-1φ	■	-	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	WALK-IN FREEZER EVAPORATOR COIL	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM COMPRESSOR RACK (ITEM NO. 13)
1	1	WALK-IN FREEZER DRAIN LINE HEATER	-	1.0	-	120-1φ	■	SEE REMARKS	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	PROVIDE ON/OFF CONTROL SWITCH
1	1	WALK-IN REFRIGERATOR	-	0.3 (LTS) 0.5	20.0	120-1φ	■	-	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	WALK-IN REFRIGERATOR EVAPORATOR COIL	-	-	4.2	120-1φ	■	F.H.M.S.	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	WALK-IN REFRIGERATOR	-	0.3 (LTS) 0.5	20.0	120-1φ	■	-	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	WALK-IN REFRIGERATOR EVAPORATOR COIL	-	-	4.2	120-1φ	■	F.H.M.S.	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
13	1	COMPRESSOR RACK	3, 3, 2 1/2 & 1/2	-	52.4	208-3φ	■	60A-3P 3F WP	4#1,1#10ND,1-1/2"C.	60A-3P	SEE FLOOR PLANS	EXTEND POWER AND CONTROL WIRING TO EVAPORATORS, ITEMS 9 & 10.
17	5	HAND SINKS (A.D.A.)	-	-	-	120-1φ	■	-	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	POWER FOR ELECTRONIC FAUCET
18	2	HOSE BIBBS (N.I.K.E.C. BY P.C.)	-	-	20.0	120-1φ	-	5-20R/GFI (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	POWER REQUIRED FOR POWER WASHER
21	1	20 QUART MIXING MACHINE	1/2	-	-	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
22	1	PREPARATION TABLE W/ DRAWER & OVERSHELF	-	-	20.0	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	CONVENIENCE OUTLET
23	1	UNDERCOUNTER BLAST CHILLER	1	-	7.5	208-1φ	-	F.H.M.S.	3#12,1#10ND,3/4"C.	15A-2P	SEE FLOOR PLANS	-
27	1	60 QUART MIXING MACHINE	2	-	-	480-3φ	■	30A-3P 3F	4#12,1#10ND,3/4"C.	15A-3P	SEE FLOOR PLANS	-
30	1	PREPARATION TABLE W/ OVERSHELF (A.D.A.)	-	-	20.0	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	CONVENIENCE OUTLET
31	1	UNDERCOUNTER REFRIGERATOR 3-SECTION	1/3	-	7.7	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
32	1	FOOD CUTTER	1/2	-	-	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
33	1	UNDERCOUNTER REFRIGERATOR 2-SECTION	1/3	-	7.6	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
34	1	SLICING MACHINE	1/2	-	-	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
37	1	WASTE DISPOSER	5.0	-	6.4	480-3φ	-	30A-3P 3F	4#12,1#10ND,3/4"C.	15A-3P	SEE FLOOR PLANS	-
42	1	UNDERCOUNTER REFRIGERATOR 2-SECTION	1/3	-	7.6	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
1	1	VENTILATOR W/WASH & FIRE SYSTEMS	-	0.48	-	120-1φ	■	SEE REMARKS	2#12,1#20ND,3/4"C.	20A-1P (VC) SEE REMARKS	SEE FLOOR PLANS	PROVIDE ON/OFF SWITCH FOR LIGHTING CONTROL. EXTEND ONLY LIGHTING AND PERIPHERAL POWER CIRCUITS THROUGH CONTACTOR
45	1	VENTILATOR WASH CONTROL PANEL	-	-	20.0	120-1φ	■	SEE REMARKS	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	INTERCONNECT WITH U.D.S. ITEM 46
1	1	FIRE SUPPRESSION SYSTEM	-	-	20.0	120-1φ	■	SEE REMARKS	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	INTERCONNECT WITH U.D.S. ITEM 46
46	1	UTILITY DISTRIBUTION SYSTEM	-	-	50.0	120/208-3φ	-	100A-3P 3F	4#1,1#10ND,1-1/4"C.	70A-3P	SEE FLOOR PLANS	-
47	2	DOUBLE DECK CONVECTION OVENS	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
48	2	DEEP FAT FRYERS W/FILTER SYSTEM	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
49	1	DEEP FAT FRYER W/FILTER SYSTEM	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
50	1	30 GALLON TILTING SKILLET	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
51	1	STEAMER 40 GALLON KETTLE BATTERY	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
52	1	STEAMER TWIN KETTLE BATTERY	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
54	1	34" CHAR-BROILER	-	-	-	-	■	-	SEE REMARKS	-	SEE FLOOR PLANS	POWER AND CONTROL WIRING SHALL BE DERIVED FROM UTILITY DISTRIBUTION SYSTEM (ITEM NO. 46). (VC) VIA CONTACTOR
55	3	HAND SINKS (A.D.A.)	-	-	-	120-1φ	■	-	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	POWER FOR ELECTRONIC FAUCET
56	5	COLD TRANSPORT CABINETS	1/4	-	7.5	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	-
57	6	HOT TRANSPORT CABINETS	-	2.6	12.5	208-1φ	-	SPECIAL PURPOSE SINGLE OUTLET (EACH)	3#12,1#10ND,3/4"C. (EACH)	20A-1P (EACH)	SEE FLOOR PLANS	-
58	1	BACKCOUNTER W/ WORK SINK & DRAWERS	-	-	20.0	120-1φ	-	(2) 5-20R GFI	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	(2) CONVENIENCE OUTLETS
64	2	DRY DISPLAY COUNTERS	-	-	15.0	120-1φ	-	(3) 5-20R	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	(3) CONVENIENCE OUTLETS
66	4	COUNTER-TOP MERCHANDISERS	3/4	-	16.0	120-1φ	-	5-20R(EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	-
67	4	HOT FOOD COUNTER W/ PROTECTOR CASE	-	5.9	16.92	208-3φ	■	30A-3P 3F	4#10,1#10ND,3/4"C.	30A-3P	SEE FLOOR PLANS	-
68	1	DRY DISPLAY/ BEVERAGE COUNTER	-	-	15.0	120-1φ	-	(2) 5-20R	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	(2) CONVENIENCE OUTLETS
70	4	MILK/JUICE DISPENSERS	1/2	-	8.2	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P(EACH)	SEE FLOOR PLANS	-
73	2	ICE CREAM MERCHANDISERS	-	-	4.4	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	-
76	4	CASH REGISTERS	-	-	20.0	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P(EACH)	SEE FLOOR PLANS	-
80	1	WASTE PULPER	-	-	25.0	480-3φ	■	60A-3P 3F	4#8,1#10ND,1"C.	40A-3P	SEE FLOOR PLANS	-
82	1	DISHWASHING MACHINE W/ BOOSTER	3.25	15.0	24.0	480-3φ	■	30A-3P 3F	4#10,1#10ND,3/4"C.	30A-3P	SEE FLOOR PLANS	-
1	1	DISHWASHING BOOSTER	-	57.0	69.0	480-3φ	■	100A-3P 3F	4#1,1#10ND,1-1/4"C.	90A-3P	SEE FLOOR PLANS	-
84	1	DETERGENT METER & RINSE INJECTOR	-	-	20.0	120-1φ	-	5-20R GFI	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
87	1	HOSE BIBB (N.I.K.E.C. BY P.C.)	-	-	20.0	120-1φ	-	5-20R GFI	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	POWER FOR POWER WASHER
88	1	HAND SINK (A.D.A.)	-	-	-	120-1φ	■	-	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	POWER FOR ELECTRONIC FAUCET
96	2	COLD TRANSPORT CABINETS	1/4	-	7.5	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	-
97	4	HOT TRANSPORT CABINETS	-	2.6	12.5	208-1φ	-	14-20R	3#12,1#10ND,3/4"C.	20A-2P	SEE FLOOR PLANS	-
98	2	HAND SINKS (A.D.A.)	-	-	-	120-1φ	■	-	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	POWER FOR ELECTRONIC FAUCET
100	1	BACKCOUNTER W/WORK SINK & DRAWERS	-	57.0	(2) 20.0	120-1φ	-	(2) 5-20R	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	(2) CONVENIENCE OUTLETS
105	2	HOT FOOD COUNTERS W/PROTECTOR CASE	-	-	16.92	208-3φ	■	30A-3P 3F	4#10,1#10ND,3/4"C.	30A-3P	SEE FLOOR PLANS	-
107	2	HOT FOOD COUNTERS W/PROTECTOR CASE	-	3.6	17.75	120/208-1φ	■	30A-3P 3F	3#10,1#10ND,3/4"C.	30A-2P	SEE FLOOR PLANS	-
109	1	COUNTER-TOP MERCHANDISER	3/4	-	16.0	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
110	1	DRY DISPLAY COUNTER	-	-	(4) 20.0	120-1φ	-	(4) 5-20R	2#12,1#20ND,3/4"C. (EACH)	20A-1P	SEE FLOOR PLANS	(4) CONVENIENCE OUTLETS
112	2	MILK/JUICE DISPENSERS	1/2	-	8.2	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P(EACH)	SEE FLOOR PLANS	-
114	1	ICE CREAM MERCHANDISER	-	-	3.6	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
116	1	ICE CREAM MERCHANDISER	-	-	4.4	120-1φ	-	5-20R	2#12,1#20ND,3/4"C.	20A-1P	SEE FLOOR PLANS	-
119	3	CASH REGISTERS	-	-	20.0	120-1φ	-	5-20R (EACH)	2#12,1#20ND,3/4"C. (EACH)	20A-1P(EACH)	SEE FLOOR PLANS	-

FOOD SERVICE ELECTRICAL REQUIREMENTS:

- REFER TO ZARALBAN & ASSOCIATES, INC. FOOD SERVICE DRAWINGS, FOR COMPLETE REQUIREMENTS OF FOOD SERVICE EQUIPMENT.
- COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR EXACT REQUIREMENTS AND RESPONSIBILITIES. ALL FOOD SERVICE EQUIPMENT ASSOCIATED ELECTRICAL COMPONENTS (STARTERS, DISCONNECTS, POINTS OF CONNECTION, ETC.), NOT FURNISHED WITH EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR TO ASSURE INSTALLATION OF PROPER POWER OUTLETS TO RECEIVE EQUIPMENT PROVIDED POWER PLUS.
- UNLESS OTHERWISE INDICATED, ELECTRICAL CONTRACTOR SHALL ASSURE ALL ELECTRICAL POWER AND CONTROL CONNECTIONS AND PROPER OPERATION OF EQUIPMENT.
- FURNISH AND INSTALL MECHANICALLY HELD TYPE CONTACTORS FOR POWER PROVISION TO EXHAUST HOOD ASSOCIATED FOOD SERVICE EQUIPMENT. EXCEPT FOR THE FIRE SUPPRESSION SYSTEM, FOOD SERVICE EQUIPMENT SHALL BE POWERED THROUGH CLOSED CONTACTS. PROVIDE CONTROL CONNECTION FROM CONTACTOR COIL TO FIRE ALARM CONTROL PANEL FOR CONTACT OPEN UNDER FIRE ALARM CONDITIONS. CONTACTOR RATINGS SHALL BE SAME AS EQUIPMENT PANELBOARD INSTALLED OVERCURRENT PROTECTIVE DEVICE.
- PROVIDE POWER AND CONTROL CONNECTIONS OF FIRE SUPPRESSION SYSTEM. INTERFACE WITH FIRE ALARM CONTROL PANEL AND ASSURE PROPER OPERATION.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A RACEWAY SYSTEM OF OUTLET BOXES AND CONDUITS FOR DATA AND TELEPHONE PROVISION. OUTLET BOX TYPE, (WALL, FLOOR) AND LOCATIONS AS INDICATED. EXTEND A 3/4" CONDUIT FROM EACH OUTLET BOX TO ACCESSIBLE CEILING PLENUM. TERMINATE CONDUITS IN JUNCTION BOXES ABOVE CEILING. TYPICALLY LOCATE JUNCTION BOXES AT NEAREST CORRIDOR ACCESSIBLE CEILING AREA. PROVIDE PULL WIRE IN COMPLETE RACEWAY SYSTEM.

ABBREVIATIONS & SYMBOLS:

- POWER CONNECTION TO EQUIPMENT TERMINAL AND/OR POINT OF CONNECTION.
- (VC) "VIA CONTACTOR" EXTEND POWER WIRING FROM PANEL CIRCUIT BREAKER, TO CONTACTOR, ON TO EQUIPMENT.
- F.H.M.S. FRACTIONAL HORSEPOWER MOTOR STARTER.
- 3P 3F 3 POLE 3 FUSE



VENTILATOR WITH EXTINGUISHING/CONTROL PANELS

NO SCALE

DETAIL NOTES:

- VERIFY HOOD EXTINGUISHING SYSTEM ELECTRICAL CONNECTIONS WITH KITCHEN CONSULTANT'S DRAWINGS PRIOR TO CONSTRUCTION.
- PROVIDE 120V-10-20 AMP SERVICES (2-WIRE) TO VENTILATOR CONTROL PANEL.
- PROVIDE 4-WIRES FROM VENTILATOR CONTROL PANEL TO EXHAUST FIRE DAMPER J-BOX LOCATED AT HOOD EXHAUST DUCT COLLAR. WIRING BETWEEN J-BOXES IN HOOD SHALL BE RECONNECTED. INSTALL 5-WIRES BETWEEN J-BOXES. 5TH WIRE A FIELD INSTALLED JUMPER WIRE.
- PROVIDE 2-WIRES FROM VENTILATOR CONTROL PANEL TO MAU-1 MAGNETIC STARTERS. FANS TO BE FURNISHED WITH 120V-10-60 HZ STARTER COILS.
- PROVIDE 2-WIRES FROM HOOD LIGHTS J-BOX TO LIGHT SWITCH. WIRING BETWEEN J-BOXES FOR LIGHTING IN HOOD SHALL BE RECONNECTED BY DIVISION 16.
- PROVIDE 2-WIRES (N.O. DRY CONTACTS) FROM TERMINAL FS1 AND FS2 IN VENTILATOR CONTROL PANEL TO N.O. DRY CONTACTS IN FIRE EXTINGUISHING SYSTEM CABINET.
- PROVIDE 120V-10-20 AMP SERVICE (2-WIRE) TO FIRE EXTINGUISHING SYSTEM CABINET.
- PROVIDE 2-WIRES FROM FIRE EXTINGUISHING SYSTEM CABINET TO GAS VALVE, SHUNT-TRIP CIRCUIT BREAKER AND/OR CONTACTORS.
- PROVIDE CONDUIT TO REMOTE PULL STATION BY FIRE PROTECTION CONTRACTOR. ALL WIRING TO CONTROLS.

REVISIONS			
DATE	MARK	DESCRIPTION	
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II	
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II	
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES	



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT #: 208-018N  
STATE PROJECT #: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-5620  
VZHS PROJECT NUMBER: 2000155.00

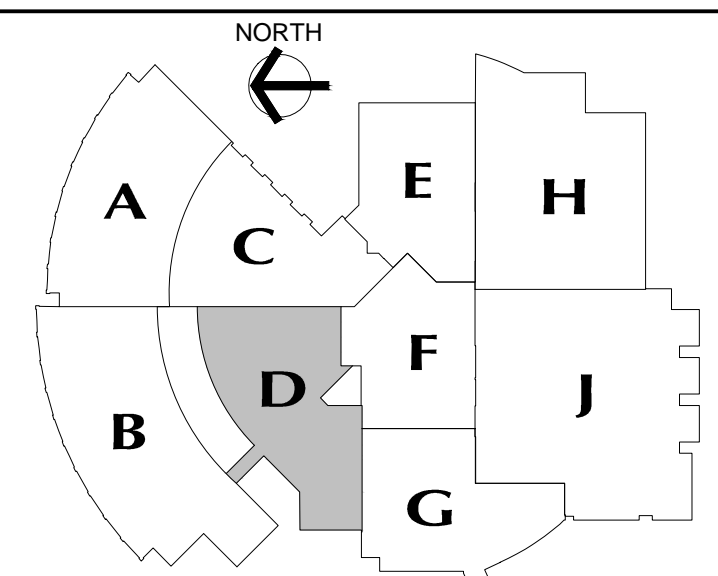


**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD. NEW BRITAIN, CT 06050-2500 (860) 229-0361  
DRAWN BY: RLG CHECKED BY: SCALE: AS NOTED

**MIDDLE AND HIGH SCHOOL KITCHEN SERVERY EQUIPMENT**

PROJECT NO.: 00048 DRAWING NO.:



**MAIN LEVEL KEY PLAN**

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE II
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II
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**NEW RHAM  
HIGH SCHOOL**  
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VANZELM HEYWOOD & SHADFORD INC.  
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vZHS PROJECT NUMBER: 2000155.00



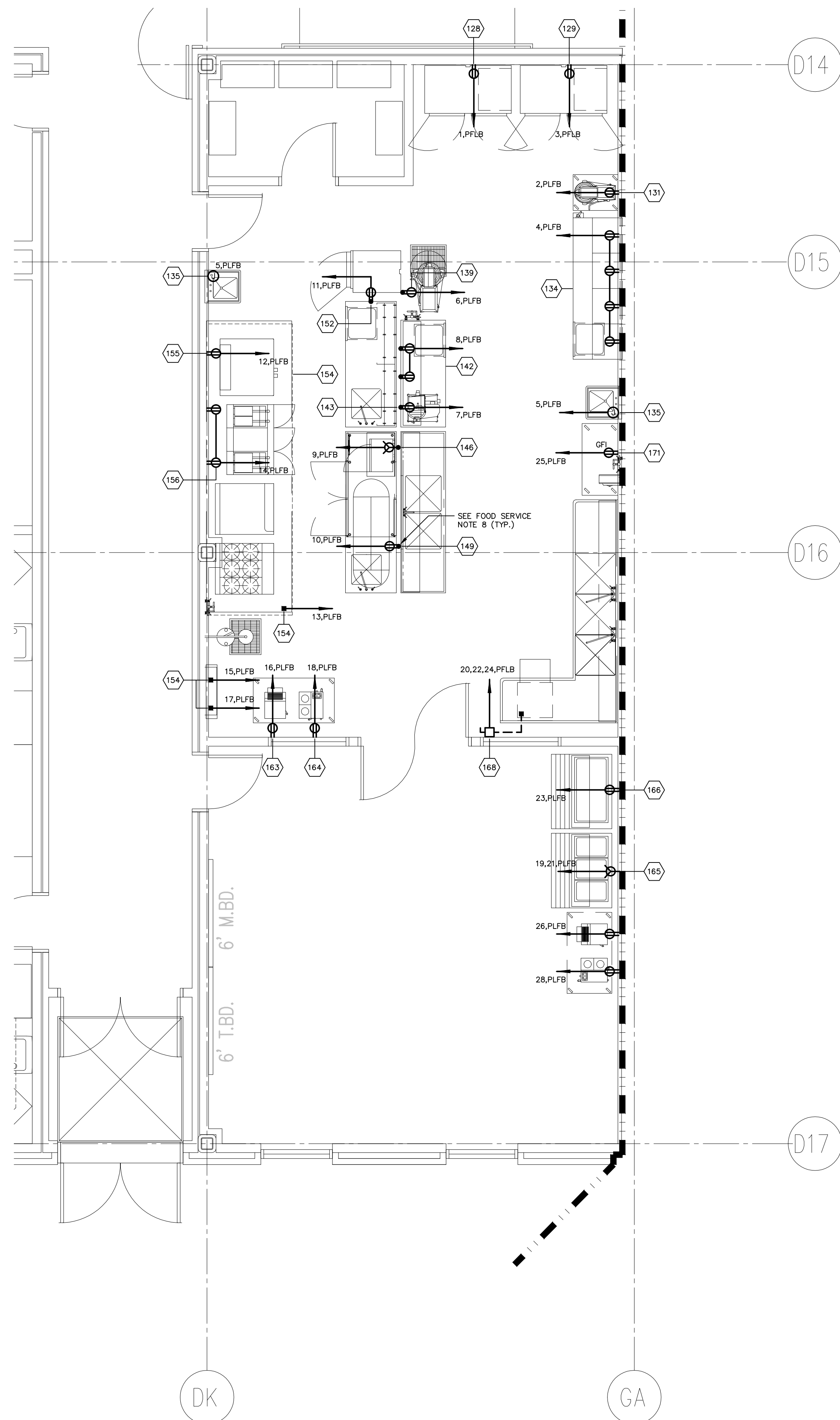
**KAESTLE BOOS  
ASSOCIATES, INC.**  
ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: MSA SCALE: 1/4" = 1'-0"  
CHECKED BY: BPCW

**FOOD  
MANAGEMENT  
LAB 1/4" SCALE  
POWER PLAN**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E3.07**



**SCHEDULE OF FOOD SERVICE EQUIPMENT**

ITEM NUMBER	QUANTITY	DESCRIPTION	HORSEPOWER (HP)	KILOWATTS (KW)	AMPS (A)	VOLTS (V) PHASE (Ø)	TYPE OF CONNECTION		POWER FEEDERS	BRANCH BREAKER	SOURCE PANEL	REMARKS
							HARD WIRED	NEMA CONFIGURATION OR DISCONNECTING DEVICE				
128	1	REACH-IN REFRIGERATOR	1/2	-	10.4	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	RECEPTACLE MOUNTED Ø 84" AFF
129	1	REACH-IN FREEZER	3/4	-	14.9	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	RECEPTACLE MOUNTED Ø 84" AFF
131	1	2Ø QUART MIXING MACHINE (EXISTING)	1/2	-	9.2	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	RECEPTACLE MOUNTED Ø 54" AFF
134	1	PREPARATION TABLE WITH DRAWERS	-	-	(4) 20.0	120V-1Ø	-	(4) 5-2ØR	2#12,1#12ØND,3/4"Ø (EACH)	20A-1P	SEE FLOOR PLANS	(4) CONVENIENCE OUTLETS MOUNTED Ø 54" AFF
135	2	HAND SINKS	-	-	-	120V-1Ø	■	-	2#12,1#12ØND,3/4"Ø (EACH)	20A-1P	SEE FLOOR PLANS	POWER FOR ELECTRONIC FAUCETS
139	1	3Ø QUART MIXING MACHINE (EXISTING)	1.0	-	12.0	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
142	1	PREPARATION TABLE W/ DRAWER & OVERSHELF	-	-	(2) 20.0	120V-1Ø	-	(2) 5-2ØR	2#12,1#12ØND,3/4"Ø (EACH)	20A-1P	SEE FLOOR PLANS	(2) CONVENIENCE OUTLETS.
143	1	SLICING MACHINE (EXISTING)	1/3	-	3.9	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
146	1	MICROWAVE OVEN	-	-	17.5	120V-1Ø	-	5-3ØR	2#1Ø,1#1ØØND,3/4"Ø	3ØA-1P	SEE FLOOR PLANS	-
149	1	UNDERCOUNTER REFRIGERATOR	1/3	-	7.6	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
152	1	MOBILE PROOFING CABINET	-	1.9	15.8	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
154	1	VENTILATOR W/WASH & FIRE SYSTEMS	-	0.32	-	120V-1Ø	■	SEE REMARKS	2#12,1#12ØND,3/4"Ø	20A-1P (VC) SEE REMARKS	SEE FLOOR PLANS	PROVIDE ON/OFF SWITCH FOR LIGHTING CONTROL. EXTEND ONLY LIGHTING AND NEUTRAL POWER CIRCUITS THROUGH CONTACTOR. REFER TO FOOD SERVICE DRAWINGS FOR ELECTRICAL INTERWIRING.
	1	VENTILATOR WASH CONTROL PANEL	-	-	20.0	120V-1Ø	■	SEE REMARKS	2#12,1#12ØND,3/4"Ø	20A-1P (VC)	SEE FLOOR PLANS	REFER TO FOOD SERVICE DRAWINGS FOR ELECTRICAL INTERWIRING.
	1	FIRE SUPPRESSION SYSTEM	-	-	20.0	120V-1Ø	■	SEE REMARKS	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	REFER TO FOOD SERVICE DRAWINGS FOR ELECTRICAL INTERWIRING.
155	1	SINGLE DECK CONVECTION OVEN	-	1.0	9.0	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P (VC)	SEE FLOOR PLANS	-
156	1	DEEP FAT FRYER ASSEMBLY	-	0.5	1.0	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P (VC)	SEE FLOOR PLANS	-
163	1	FILTERING SYSTEM	1/3	1.0	9.0	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P (VC)	SEE FLOOR PLANS	-
163	1	ROTARY TOASTER	-	1.7	14.8	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
164	1	12 CUP COFFEE BREWER W/ 3 WARMERS	-	1.7	14.1	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
165	1	3 WELL HOT FOOD COUNTER	-	3.6	17.75	12Ø/2ØØV-1Ø	-	L14-3ØR	3#1Ø,1#1ØØND,3/4"Ø	3ØA-3P	SEE FLOOR PLANS	-
166	1	3 WELL COLD FOOD COUNTER	1/4	-	8.0	120V-1Ø	-	5-2ØR	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	-
168	1	UNDERCOUNTER DISHWASHER W/ BOOSTER HEATER	3/4	10.2	40.3	2ØØV-3Ø	■	6ØA-3P 3F	4#Ø,1#1ØØND,1"Ø	5ØA-3P	SEE FLOOR PLANS	-
171	1	HOSE BIBB (N.I.K.E.C. BY P.C.)	-	-	20.0	120V-1Ø	-	5-2ØR GFI	2#12,1#12ØND,3/4"Ø	20A-1P	SEE FLOOR PLANS	POWER REQUIRED FOR POWER WASHER

ABBREVIATIONS & SYMBOLS:

- POWER CONNECTION TO EQUIPMENT TERMINAL AND/OR POINT OF CONNECTION.
- (VC) \*VIA CONTACTOR\* EXTEND POWER WIRING FROM PANEL CIRCUIT BREAKER, TO CONTACTOR, ONTO EQUIPMENT.
- F.H.M.S. FRACTIONAL HORSEPOWER MOTOR STARTER.
- 3P 3F 3 POLE 3 FUSE

FOOD SERVICE ELECTRICAL REQUIREMENTS:

1. REFER TO ZARALBAN & ASSOCIATES, INC. FOOD SERVICE DRAWINGS, FOR COMPLETE REQUIREMENTS OF FOOD SERVICE EQUIPMENT.
2. COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR FOR EXACT REQUIREMENTS AND RESPONSIBILITIES. ALL FOOD SERVICE EQUIPMENT ASSOCIATED ELECTRICAL COMPONENTS (STARTERS, DISCONNECTS, POINTS OF CONNECTION, ETC.), NOT FURNISHED WITH EQUIPMENT SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
3. ELECTRICAL CONTRACTOR SHALL COORDINATE WITH FOOD SERVICE EQUIPMENT CONTRACTOR TO ASSURE INSTALLATION OF PROPER POWER OUTLETS TO RECEIVE EQUIPMENT PROVIDED POWER PLUGS.
4. UNLESS OTHERWISE INDICATED, ELECTRICAL CONTRACTOR SHALL ASSURE ALL ELECTRICAL POWER AND CONTROL CONNECTIONS AND PROPER OPERATION OF EQUIPMENT.
5. FURNISH AND INSTALL MECHANICALLY HELD TYPE CONTACTORS FOR POWER PROVISION TO EXHAUST HOOD ASSOCIATED FOOD SERVICE EQUIPMENT. EXCEPT FOR THE FIRE SUPPRESSION SYSTEM, FOOD SERVICE EQUIPMENT SHALL BE POWERED THROUGH CLOSED CONTACTS. PROVIDE OPEN UNDER FIRE ALARM CONDITIONS. CONTROL CONNECTION FROM CONTACTOR COIL TO FIRE ALARM CONTROL PANEL. FOR CONTACT CONTACTOR RATINGS SHALL BE SAME AS EQUIPMENT PANELBOARD INSTALLED OVERCURRENT PROTECTIVE DEVICE.
6. PROVIDE POWER AND CONTROL CONNECTIONS OF FIRE SUPPRESSION SYSTEM. INTERFACE WITH FIRE ALARM CONTROL PANEL AND ASSURE PROPER OPERATION.
7. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL A RACEWAY SYSTEM OF OUTLET BOXES AND CONDUITS FOR DATA AND TELEPHONE PROVISION. OUTLET BOX TYPE, (WALL, FLOOR) AND LOCATIONS AS INDICATED. EXTEND A 3/4" CONDUIT FROM EACH OUTLET BOX TO ACCESSIBLE CEILING PLENUM. TERMINATE CONDUITS IN JUNCTION BOXES ABOVE CEILING. TYPICALLY LOCATE JUNCTION BOXES AT NEAREST CORRIDOR ACCESSIBLE CEILING AREA. PROVIDE PULL WIRE IN COMPLETE RACEWAY SYSTEM.
8. ALL RACEWAYS FOR POWER OUTLETS INSTALLED IN FREE SPACE SHALL BE WITH GALVANIZED THREADED RIGID CONDUIT AND CAST TYPE BOXES WITH THREADED HUBS. PROVIDE RIGID BRACING FROM FLOOR TO CONDUIT WITH 3/4" STEEL CHANNEL.

GENERAL POWER NOTES:


1. REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12ØRD., 3/4"Ø CONDUIT TO A 2ØAMP, 1P CIRCUIT BREAKER IN PANELBOARD.
4. REFER TO DRAWING E2.01 AND E2.02 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
5. REFER TO DRAWING E2.03 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
6. REFER TO DRAWING E2.03 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR DATA/VOICE OUTLET LOCATIONS.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CATALOG NO.	EQUAL MANUF.	LAMPS	VOLTS	MOUNTING	REMARKS	TYPE	MANUFACTURER	CATALOG NO.	EQUAL MANUF.	LAMPS	VOLTS	MOUNTING	REMARKS
A	DAYBRITE	2P305332-365L-277-1/21EB10I		(3) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH 18 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (2) ELECTRONIC BALLASTS - (GRID)	M	DAYBRITE	VFS-09C-DINWPW		(2) PL9W	120	WALL MOUNTED	ELEVATOR PIT UTILITY COMPACT FLUORESCENT LIGHT FIXTURE.
A1	DAYBRITE	2P305332-365L-277-1/3EB10I		(3) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH 18 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (1) ELECTRONIC BALLAST - (GRID)	N	MCPHILBEN	940-D-130-F-VLW-120-SC		(1)13W PLC	120	STEP RECESSED	RECESSED AUDITORIUM STEP LIGHT FOR EGRESS.
A2	DAYBRITE	2P305432-365L-277-1/22EB10I		(4) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH 18 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (2) ELECTRONIC BALLASTS - (GRID)	P	DAYBRITE	OH232B-120-1/2EB10I		(2) F032/78	120	WALL MOUNTED	FLUORESCENT WALL MOUNTED BED LIGHTING UNIT (1) ELECTRONIC BALLAST
A3	DAYBRITE	2DPG232F12-277-1/2EB10I		(2) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, AND (1) ELECTRONIC BALLAST - (GRID)	Q	TIVLOI	2X2-LB100-CPW MG/G1433		G25W	120	WALL MOUNTED	DECORATIVE MIRROR GLOBE LIGHT FIXTURE W/ WREGUARDS. VERIFY LENGTHS WITH ARCH. DWGS.
A4	DAYBRITE	2DPG332F12-277-1/3EB10I		(3) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, AND (1) ELECTRONIC BALLAST - (GRID)	R	DAYBRITE	H80-320P-MT-GL16/WG16-HP27/PB		(1) MP320/C/BU	277	CEILING PENDANT	GYMNASIUM HI-BAY W/WREGUARD & POWERHOOK
A5	DAYBRITE	2DPF332F12-277-1/3EB10I		(3) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, AND (1) ELECTRONIC BALLAST - (FLANGE)	R1	DAYBRITE	H80-320P-MT-0TD-GL16/WG16-HP27/PB		(1) MP320/C/BU (1) Q250/OL/DC	277	CEILING PENDANT	GYMNASIUM HI-BAY W/QUARTZ RE-STRIKE, WIREGUARD & POWERHOOK
A6	DAYBRITE	2DWL0432FA12-277-1/4EB10I		(4) F03278	277	CEILING RECESSED	2'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC GASKETED LENS, ALUMINUM DOOR, AND (1) ELECTRONIC BALLAST (GRID)-(KITCHEN)	R2	DAYBRITE	H80-400P-MT-GL16/WG16-HP27/PB		(1)MP400/C/BU	277	CEILING PENDANT	AUXILIARY GYMNASIUM HI-BAY W/WREGUARD & POWERHOOK
								R3	DAYBRITE	H80-400P-MT-0TD-GL16/WG16-HP27/PB		(1)MP400/C/BU (1)Q250CL/DC	277	CEILING PENDANT	AUXILIARY GYMNASIUM HI-BAY W/QUARTZ RE-STRIKE, WIREGUARD & POWERHOOK
								S	DAYBRITE	8UC125-120-1/1EB10I		(1) F03278	120	SURFACE	4' LENGTH FLUORESCENT UNDERCABINET LIGHT FIXTURE
B	DAYBRITE	2P305331U1-335L277-1/21EB10I		(3) F031/T-8 1-5/8"	277	CEILING RECESSED	2'x2' FLUORESCENT TROFFER WITH 9 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (2) ELECTRONIC BALLASTS - (GRID)	S1	DAYBRITE	8UC125-120-1/1EB10I		(1) F02578	120	SURFACE	3' LENGTH FLUORESCENT UNDERCABINET LIGHT FIXTURE
B1	DAYBRITE	2P305331U1-335L277-1/3EB10I		(3) F031/T-8 1-5/8"	277	CEILING RECESSED	2'x2' FLUORESCENT TROFFER WITH 9 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (1) ELECTRONIC BALLAST - (GRID)	S2	DAYBRITE	8UC117-S-120-1/1EB10I		(1) F01778	120	SURFACE	2' LENGTH FLUORESCENT UNDERCABINET LIGHT FIXTURE
B2	DAYBRITE	2DG31U1F512-277-1/3EB10I		(3) F031/T-8 1-5/8"	277	CEILING RECESSED	2'x2' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, AND (1) ELECTRONIC BALLAST - (GRID)	S3	DAYBRITE	8UC125-277-1/1EB10I		(1) F01778	277	SURFACE	4' LENGTH FLUORESCENT UNDERCABINET LIGHT FIXTURE
B3	DAYBRITE	2DWL0331U1FA12-277-1/3EB10I		(3) F031/T-8 1-5/8"	277	CEILING RECESSED	2'x2' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, GASKETED, ALUMINUM DOOR, W/ (1) ELECTRONIC BALLAST - (GRID)-(KITCHEN)	T1	CAPRI	5T4/KAO0/K14220		50W PAR20	120	CEILING SURFACE	INCANDESCENT TRACK LIGHTING SYSTEM. PROVIDE # OF HEADS & LENGTHS AS SHOWN IN PLANS.
B4	DAYBRITE	2DF31U1F512-277-1/3EB10I		(3) F031/T-8 1-5/8"	277	CEILING RECESSED	2'x2' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, W/ (1) ELECTRONIC BALLAST - (FLANGE)	U	LEDALITE	2818-T01-EN-08-1-1-E-W		(2) F032 PER 4' SECTION	277	COVE MOUNTED SURFACE	8' FLUORESCENT LINEAR COVE LIGHTING FIXTURE (1) ELECTRONIC BALLAST (MEDIA CENTER)
								U1	PMC	SCCS-1-P-2/OCT-XX-BLK-MOD		(2) F032/4 FT	277	PENDANT	LINEAR WALL WASHER. COORDINATE MOUNTING WITH ARCHITECTURAL DETAILS.
C	DAYBRITE	1P305232-265L-277-1/2EB10I		(2) F03278	277	CEILING RECESSED	1'x4' FLUORESCENT TROFFER WITH 12 CELL SEMI SPECULAR PARABOLIC LOUVER, AND (1) ELECTRONIC BALLAST - (GRID)	W	NOT USED						
C1	DAYBRITE	V2WA232-277-1/2EB10I		(2) F03278	277	CEILING SURFACE	1'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, GASKETED LENS AND DOOR, RATED FOR WET LOCATION AND (1) ELECTRONIC BALLAST	Y	WILLIAMS	20-4-232-A-EB2H		(2) F03278	277	WALL SURFACE	4' WALL MOUNTED WRAPAROUND.
C2	DAYBRITE	IDG232F12-277-1/2EB10I		(2) F03278	277	CEILING RECESSED	1'x4' FLUORESCENT TROFFER WITH .125" ACRYLIC LENS, AND (1) ELECTRONIC BALLAST - (GRID)	Z	ECLIPSE	330-TT1-(2)42-277-EB-2316-WHT		(2) 42WATT TT	277	CEILING SURFACE	12" SQUARE HIGH ABUSE LENS.
D	INFINITY	PH75-2180-EB-MWT 277-BH		(2) 13 WATT	277	CEILING RECESSED	7" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST	AA	KRAMER	KL12X42PL/250MH-LBB-P-SPX		(2)42W TT UP (1)MH250 DN	277	PENDANT	12" DIAMETER CYLINDER WITH REGRESSED FRENEL LENS & BLACK Baffle.
D1	INFINITY	PH75-2180-EB-MWT 277-BH		(2) 18 WATT	277	CEILING RECESSED	7" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST	BB	ALS	360-26-(6)F398X/(1)F212D-F-MWAD PER-FINISH		(6)F398IAx (1)F21 2D	277	PENDANT	26" DIAMETER DECORATIVE PENDANT WITH 45 DEGREE SWIVEL CANOPY, CURVED MOLDED LENS WITH PERFORATED BOTTOM. VERIFY FINISH & MOUNTING HEIGHT. (DUAL CIRCUITED. MEDIA CENTER)
D2	INFINITY	PVSL68-1180-EB-MWT 277-BH		(1) 18 WATT	277	CEILING RECESSED	7" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST	BB1	ALS	360-33-(6)F398X/(1)F282D-AC-MWAD PER-FINISH		(6)F398IAx (1)F28 2D	277	PENDANT	33" DIAMETER DECORATIVE PENDANT WITH AIRCRAFT CABLE & 45 DEGREE SWIVEL CANOPY, CURVED MOLDED LENS WITH PERFORATED BOTTOM. VERIFY FINISH & MOUNTING HEIGHT. (DUAL CIRCUITED. MIDDLE SCHOOL CAFE)
D3	INFINITY	PHRL10-232T-EB-277-BH		(2) 32 WATT TT	277	CEILING RECESSED	10" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST. 10" LENSED WET LOCATION. DOWNLIGHT - 7" MAXIMUM DEPTH.	CC	DAVIS MULLER	SS510-2-(2)026-SNP-2-BA		(2) 26W DTT	277	WALL SURFACE	12" SQUARE DECORATIVE CAST ALUMINUM WALL SCIENCE WITH PERFORATED SATIN ALUMINUM FINISH. (MEDIA CENTER)
D4	INFINITY	WPL75-2180-EB-MWT 277-BH		(2) 18 WATT QUAD	277	CEILING RECESSED	7" DIA. WALLWASH DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST	CC1	NEMO	COLUMBA MAJOR		(1) Q20073	120	WALL SURFACE	12" SQUARE DECORATIVE GLASS WALL SCIENCE. CHROME FINISH. (AUDITORIUM)
D5	INFINITY	PH75-2180-EB-MWT-277-BH-DM		(2) 18 WATT FL	277	CEILING RECESSED	8" NOMINAL APERTURE DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND LUTRON HI-LUME DIMMING BALLAST	DD	LEDALITE	8715-122-PF-XX-3-2-E-C/W		(4) F032/4 FT	277	WALL SURFACE	INDIRECT/DIRECT LINEAR FLUORESCENT WITH PARABOLIC LOUVER DOWN AND JUST COVER UP. PROVIDE LENGTHS AS SHOWN ON PLANS & # OF BALLASTS AS REQUIRED FOR 0A/NORMAL WIRING. FINISH BY ARCHITECT. (STAIRS)
D6	INFINITY	PHRL75-2180-EB-277-BH-ODEG		(2) 18 WATT FL	277	CEILING RECESSED	8" NOMINAL APERTURE LENSED DOWNLIGHT WITH WHITE TRIM RING AND COLD WEATHER BALLAST RATED FOR DAMP LOCATION	GG	PMC	ER6-D-F/ROT-1/OCT -12-AL-CA-277		(3) F032	277	PENDANT	12" ANGLED ROTATABLE DIRECT LINEAR TUBE LIGHT. VERIFY MOUNTING HEIGHT.
D7	INFINITY	PH75-2421-EB-MWT-277-BH		(2) 42 WATT TT	277	CEILING RECESSED	7" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST	GG1	PMC	ER6-D-F/ROT-1/OCT -16-AL-CA-277		(4) F032	277	PENDANT	16" ANGLED ROTATABLE DIRECT LINEAR TUBE LIGHT. VERIFY MOUNTING HEIGHT.
D8	INFINITY	PHRL10-232T-EB-277-BH W/ REMOTE MTD BATTERY BALLAST		(2) 32 WATT TT	277	CEILING RECESSED	10" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST. 10" LENSED WET LOCATION. DOWNLIGHT - 7" MAXIMUM DEPTH. PROVIDE FINISH, BATTERY BALLAST FOR REMOTE MOUNTING	HH	TUBE LIGHTING	SRF-2-168F-BK-CL/XX		INCLUDED	120	NICHE SURFACE	LINEAR LOW VOLTAGE LIGHT WITH CLEAR LENS. PROVIDE LENGTHS AS SHOWN AROUND PERISCOPE SCREEN. PROVIDE # OF TRANSFORMERS AND FEEDS AS REQUIRED. REMOTE MOUNT IN AN ACCESSIBLE LOCATION.
D9	INFINITY	PHRL75-2180-EB-277-BH		(2) 18 WATT PL	277	CEILING RECESSED	7" LENSED WET LOCATION DOWNLIGHT.	SA	GARCCO	G18-2-Q-250MH-277-BLP/SS5-20-4-11-D2-BLP		(2)MH250/HOR	277	20' POLE	-
D10	INFINITY	PHC1175-2180-EB-277-MWT-BH-SP		(2) 18 WATT PL	277	CEILING RECESSED	SURFACE CYLINDER MODIFIED TO MOUNT IN METAL PANEL HANGERS. PROVIDE BAY HANGERS AND OVERSIZED TRIM FINISH BY ARCHITECT. CONTRACTOR TO COORDINATE WIRING & MOUNTING WITH ARCHITECT.	SA1	GARCCO	G18-2-Q-250MH-277-BLP/SS5-20-4-11-D2-BLP		(2)MH250/HOR	277	20' POLE	-
D11	INFINITY	PH75-232T-EB-MWT-277-BH		(2) 32 WATT TT	277	CEILING RECESSED	7" DIA. DOWNLIGHT WITH CLEAR ALZAK REFLECTOR, WHITE TRIM RING AND ELECTRONIC BALLAST.	SB	GARCCO	G18-1-3XL-250MH-277-BLP/SS5-20-4-11-D1-BLP		(1)MH250/HOR	277	20' POLE	-
F	LEDALITE	8816-T02-WN-XX-2-2-E-W/A2		(2) F03278 PER 4' SECTION	277	SUSPENDED AIRCRAFT CABLE	INDIRECT/ DIRECT LINEAR FLUOR. FIXTURE WITH # OF BALLASTS REQUIRED FOR NORMAL/EMERG. DUAL LEVEL SWG. REFER TO FLOOR PLANS FOR LENGTHS.	SC	GARCCO	G15-1-3XL-175MH-277-BLP/SPA/SS5-12-4-11-D1-BLP		(1)MH175/HOR	277	12' POLE	-
F1	LEDALITE	8816-T03-WN-XX-2-2-E-W/A2		(3) F03278 PER 4' SECTION	277	SUSPENDED AIRCRAFT CABLE	INDIRECT/ DIRECT LINEAR FLUOR. FIXTURE WITH # OF BALLASTS REQ'D FOR NORMAL/EMERG. DUAL LEVEL SWG. REFER TO FLOOR PLANS FOR LENGTHS.	SD	GARCCO	G18-1-Q-250MH-277-BLP/SS5-20-4-11-D1-BLP		(1)MH250/HOR	277	20' POLE	-
F2	LEDALITE	9265-T02-LN-XX-3-2-E-W/A2		(2) F03278 PER 4' SECTION	277	SUSPENDED AIRCRAFT CABLE	INDIRECT/ DIRECT LINEAR FLUOR. FIXTURE WITH # OF BALLASTS REQ'D FOR NORMAL/EMERG. DUAL LEVEL SWG. REFER TO FLOOR PLANS FOR LENGTHS.	SE	EMCO	B58-70MH-277-BLP-L		(1)MH70	277	42" BOLLARD	-
F3	NOT USED							SE1	EMCO	B58-70MH-277-BLP-L		(1)MH70	277	42" BOLLARD	-
G	EDISON PRICE	DL-38/A0/11/COL/MOD 200EG		(1) 250 WATT PAR38	120	CEILING RECESSED	ADJUSTABLE AUDITORIUM HOUSE DOWN LIGHT. 20 DEGREE CUT REFLECTOR.	SF	HADCO	ISQ70HE-277		(1)MH70	277	IN GROUND	WITH ROCK GUARD
G1	EDISON PRICE	DL-38/A0/11/COL/MOD 200EG		(1) 150 WATT PAR38	120	CEILING RECESSED	ADJUSTABLE AUDITORIUM HOUSE DOWN LIGHT. 20 DEGREE CUT REFLECTOR.	OA	ECLIPSE	ZURCH-TT1-(2)32-277-EB-AL-OC W/ REMOTE MTD BATTERY BALLAST		(2) 32W TTT	277	WALL SURFACE	12" SQUARE DECORATIVE EXTERIOR WALL SCIENCE WITH GUARD. FINISH BY ARCHITECT. PROVIDE WITH EMERG. BATTERY BALLAST FOR REMOTE MOUNTING.
G2	-	-		-	-	-	DOWNLIGHT AT AUDITORIUM FRONT SCREEN	OB	DAYBRITE	OSH-320-277		(2) 32W TTT	277	WALL SURFACE	EXTERIOR WALL PACK.
H	DAYBRITE	TF232-PP-277-1/4-EB10I/ FL-123/(2)FL173		(2) F03278 PER 4' SECTION	277	SURFACE	8" INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH WREGUARD. (1) ELECTRONIC BALLAST	OC	MCPHILBEN	43A-9253P		(1) MH100	277	CEILING RECESSED	LOADING DOCK AREA CANOPY LIGHT.
H1	DAYBRITE	IF232-PP-277-1/2-EB10I/ FL-123/FL173		(2) F03278	277	SURFACE	4" INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH WREGUARD. (1) ELECTRONIC BALLAST								
H2	DAYBRITE	TN132-277-1/2-EB10I		(2) F03278	277	SURFACE	8" NARROW FLUORESCENT LIGHT FIXTURE. (1) ELECTRONIC BALLAST (DISPLAYS)	X	HIGHLITES	ZBPN-CLED-X-R-W		LED	277VAC	WALL/CEILING MOUNTED	EXIT LIGHT WITH DIE-CAST ALUMINUM HOUSING, RED LETTERS - LETTER HEIGHT AS PER AUTHORITY HAVING JURISDICTION - SHADED QUADRANTS INDICATE FACE SIDE - PROVIDE SIDE DIRECTIONAL ARROWS AS INDICATED ON FLOOR PLANS [X] - INDICATES SINGLE FACE WALL MOUNTED [Y] - INDICATES SINGLE FACE CEILING MOUNTED [Z] - INDICATES DOUBLE FACE CEILING MOUNTED
H3	DAYBRITE	NI32-277-1/1-EB10I		(1) F03278	277	SURFACE	4" NARROW FLUORESCENT LIGHT FIXTURE. (1) ELECTRONIC BALLAST (DISPLAYS)	X1	HIGHLITES	HL-90		(2) 8.0W 6VOLT HALOGEN HEADS	277VAC/ 6VDC	WALL SURFACE	DECORATIVE TWIN HEAD EMERGENCY WALL PACK LIGHT FIXTURE
H4	WILLIAMS	20-4-232-A-EB2		(2) F03278	277	SURFACE	4" WALL MOUNTED WRAPAROUND FLUORESCENT LIGHT FIXTURE. (1) ELECTRONIC BALLAST	X2	HIGHLITES	HSU-2-FR		(2)8.0W 6VOLT HALOGEN LAMPS	277VAC/ 6VDC	CEILING RECESSED	RECESSED EMERGENCY LIGHT SQUARE UNIT
H5	PMC	SPS-RPL-T-2/OCT-X-FB-MWT-277-EB		(2) F032/4 FT	277	CEILING RECESSED	DIRECT LINEAR FLUOR. WALL SLOT FIXTURE WITH # OF BALLASTS REQ'D FOR NORMAL/EMERG. DUAL LEVEL SWG. REFER TO FLOOR PLANS FOR LENGTHS. CONTINUOUS WALL SLOT. PROVIDE LENGTHS AS SHOWN ON DRAWINGS. COORDINATE WITH CEILING SYSTEM.	X3	HIGHLITES	XC-R-5		(2)4.0W 6VOLT HALOGEN LAMPS	277VAC/ 6VDC	CEILING RECESSED	RECESSED TWIN HEAD EMERGENCY LIGHT UNIT
H6	DAYBRITE	TF-232-PP-120-1/4-EB10I/(2)FL173		(4) F03278	120	SURFACE	8" INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH WREGUARD. (1) ELECTRONIC BALLAST	AOR	MCPHILBEN	30VL-1-P-1-12/27-W-RW-AOR		LED	277	WALL SURFACE	AREA OF REFUGE INDICATOR LIGHT WITH BATTERY PACK.
H7	DAYBRITE	IF-232-PP-120-1/2-EB10I/FL173		(2) F03278	120	SURFACE	4" INDUSTRIAL FLUORESCENT LIGHT FIXTURE WITH WREGUARD. (1) ELECTRONIC BALLAST	EXP	APPLETON	ARS240-277-CW		(2) F03278	277	SURFACE	EXPLOSION PROOF (2) LAMP 4"-Ø FLUORESCENT FIXTURE AT SPRAY BOOTH ROOM.
J	TRE GILICE (L. AMERICA)	SQUARE 42-E-277		(2) 24 WATT BIAx	277	WALL SURFACE	16" DECORATIVE WALL SCIENCE WHITE POLYCARB. FRONT & SIDE LENS MATTE ALUMINUM FINISH.								
K	GARCCO	101-FT-100MH-277-SC		(1) 100W MH	277	WALL SURFACE	INDIRECT DECORATIVE METAL HALIDE WALL BRACKET - CAST ALUMINUM								
K1	GARCCO	101-FT-175MH-277-SC		(1) 175W MH	277	WALL SURFACE	INDIRECT DECORATIVE METAL HALIDE WALL BRACKET - CAST ALUMINUM								
K2	GARCCO	141-FT-250MH-277-SC		(1) 250W MH	277	WALL SURFACE	INDIRECT DECORATIVE METAL HALIDE WALL BRACKET - CAST ALUMINUM								
L	LIGHTTECH	38102-T		200W A-23 15W A-15	120	CEILING RECESSED	DARKROOM LIGHT FIXTURE - DUAL SOURCE (WHITE LIGHT/SATE LIGHT)								
L1	MCPHILBEN	30VL-1-P-1-W-RW		LED	120	CEILING SURFACE	DARKROOM "IN-USE" SIGN UNIT								

REVISIONS

DATE	MARK	DESCRIPTION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE I
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE I
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**NEW RHAM HIGH SCHOOL**  
 WALL STREET  
 HEBRON, CONNECTICUT  
 06248

STATE PROJECT#: 208-018N  
 STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
 MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
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 vzhs PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT. 06550-2590 (860) 229-0361  
 DRAWN BY: SCALE:  
 CHECKED BY:

**ELECTRICAL LIGHT FIXTURE SCHEDULE**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E4.01**



MOTOR CIRCUIT SCHEDULE

EQUIPMENT	CIRCUIT/ SOURCE PANEL	O.C.P. DEVICE	FEEDER	LOCAL DISC. SWITCH	DISC. FUZE	MOTOR STARTER			LOAD			REMARKS		
						TYPE	SIZE	LOCATION	HP/KW	PH	VOLT			
NOTE: REFER TO FLOOR PLAN DRAWINGS FOR BRANCH CIRCUIT DESIGNATIONS TO ALL CUH'S, FCU'S, UH'S AND UV'S. COORDINATE LOCATIONS WITH MECHANICAL DRAWINGS														
CUH'S	REFER TO FLOOR PLANS	20/1	2#12, 1#12GND., 3/4"	FURNISHED WITH UNIT	FURNISHED WITH UNIT						1	120	NOTE #3	
FCU'S	REFER TO FLOOR PLANS	20/1	2#12, 1#12GND., 3/4"	FURNISHED WITH UNIT	FURNISHED WITH UNIT						1	120	NOTE #3	
UH'S	REFER TO FLOOR PLANS	20/1	2#12, 1#12GND., 3/4"	FURNISHED WITH UNIT	FURNISHED WITH UNIT						1	120	NOTE #3	
UV'S	REFER TO FLOOR PLANS	20/1	2#12, 1#12GND., 3/4"	FURNISHED WITH UNIT	FURNISHED WITH UNIT						1	120	NOTE #3	
FSF-B1	49,51,53,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B2	44,46,48,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B3	55,57,59,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B4	50,52,54,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B5	61,63,67,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B6	56,58,60,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
FSF-B7	67,69,71,MP2B2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
EF-A1	14,LP2A1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-A2	25,27,29,MP2A2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	3.0A	FVNR	0	ROOF			3/4	3	480	NOTE #4
EF-A3	16,LP2A1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/6	1	120	NOTE #4&13
EF-B1	28,LP2B1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-B2	30,LP2B1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-B3	1,3,5,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B4	2,4,6,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B5	7,9,11,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B6	8,10,12,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B7	13,15,17,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B8	14,16,18,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B9	19,21,23,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B10	20,22,24,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
EF-B11	25,27,29,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
EF-B12	13,15,19,MP1B1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
EF-B13	18,LP1B1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-B14	32,LP2B1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-B15	26,28,30,MP2B3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	00	ROOF			1	3	480	NOTE #4
SPRAY BOOTH	36,38,LP1J2	20/2	2#12, 1#12GND., 3/4"	30A-2P2F	12.0	FVNR	00	STOR. 1948			1	1	208	NOTE #14
EF-D1	26,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-D2	28,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-D3	27,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-D4	26,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-D5	20,LP1D1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-D6	30,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/15	1	120	NOTE #4&13
EF-D7	32,LP1D2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-E1	27,LP1E1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-E2	28,LP1E1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/6	1	120	NOTE #4&13
EF-E3	29,LP1E1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/6	1	120	NOTE #4&13
EF-F1	27,LP1J1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/60	1	120	NOTE #4&13
EF-G1	30,KPL2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-G2	32,KPL2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-G3	10,LPB1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-G4	11,LPB1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ELEV. MACH. 0108		1/4	1	120	NOTE #4&13
EF-G5	43,45,47,MPB1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	3.0A	FVNR	00	CHILLER RM 0105			3/4	3	480	NOTE #4
EF-G6	26,28,30,MPB1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ELEC. RM 0102			1/2	3	480	NOTE #4
EF-G7	44,46,48,MPB1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	3.0A	FVNR	00	CHILLER RM. 0105			3/4	3	480	NOTE #4
EF-H1	33,LP1H1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/6	1	120	NOTE #4&13
EF-H2	35,LP1H1A	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
FSF-J1	13,15,17,MP1J2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/4	3	480	NOTE #4
FSF-J2	14,16,18,MP1J2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A	FVNR	00	ROOF			1/2	3	480	NOTE #4
EF-J1	25,27,29,MP1J3	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	2.0A			ROOF			1/2	3	480	NOTE #4
EF-J2	30,LP1J3	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-J3	32,LP1J3	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-J4	34,LP1J3	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J5	36,LP1J3	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J6	19,21,23,MP1J3	15/3	3#12, 1#12GND., 3/4"			VFD		MECH RM 2402			3	3	480	NOTE #4
EF-J7	26,LP1J1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-J8	22,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/3	1	120	NOTE #4&13
EF-J9	24,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J10	26,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J11	28,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
E1-J12	30,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J13	27,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J14	29,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J15	31,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J16	32,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/4	1	120	NOTE #4&13
EF-J17	33,LP1J2	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-J18	25,27,29,MP1J2	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	0	ROOF			1	3	480	NOTE #4&13
EF-J19	28,LP1J1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/30	1	120	NOTE #4&13
EF-J20	30,LP1J1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/60	1	120	NOTE #4&13
EF-J21	32,LP1J1	20/1	2#12, 1#12GND., 3/4"	THERM.SWITCH				00	ROOF		1/60	1	120	NOTE #4&13
ACU-A1 (SUP)	13,15,17,LP1A1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	0				1/2	3	208	NOTE #4
CU-A1	19,21,23,LP1A1	30/3	3#10, 1#10GND., 3/4"	30A-3P3F	30.0A						22AMP	3	208	NOTE #2
ACU-A2 (SUP)	13,15,17,LP2A1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	0				1/2	3	208	NOTE #4
CU-A2	19,21,23,LP2A1	30/3	3#10, 1#10GND., 3/4"	30A-3P3F	30.0A						22AMP	3	208	NOTE #2
ACU-B1 (SUP)	19,21,23,LP1B1	15/3	3#12, 1#12GND., 3/4"	30A-3P3F	4.0A	FVNR	0				1/2	3	208	NOTE #4
CU-B1	25,27,29,LP1B1	30/3	3#10, 1#10GND., 3/4"	30A-3P3F	30.0A						22AMP	3	208	NOTE #2
ACU-B2 (SUP)	27,29,31,LP2B1	15/3	3#12, 1#12GND., 3/4"	30A										

PANELBOARD SCHEDULE										
PANEL	LOCATION	PANEL DESCRIPTION				BRANCH CIRCUIT BREAKER		REMARKS		
		MAINS	VOLTAGE	POLES	MT'G	A.I.C.	ACTIVE		SPARE	
EHP0A1	LOWER G BOILER ROOM 0107	100 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	6 - 15/3 4 - 20/3	1 - 20/3	-	
EKP	MAIN G CORRIDOR 1723	60 AMP M.C.B.	480/277 3ø 4W	24	SURFACE	42K	5 - 20/1	2 - 20/1	-	
EKPL	MAIN G CORRIDOR 1723	125 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	13 - 20/1 1 - 60/3	4 - 20/1	-	
ELPOA1	LOWER G ELECTRICAL ROOM 0102	250 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	16 - 20/1 1 - 60/3 1 - 125/3	5 - 20/1	-	
HP1A1	MAIN A ELECTRICAL CLOSET 1108	200 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	11 - 20/1 1 - 30/3 2 - 70/3	4 - 20/1	-	
HP1B1	MAIN B ELECTRICAL CLOSET 1207	400 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	12 - 20/1 1 - 70/3 1 - 100/3 1 - 225/3	4 - 20/1	-	
HP1D1	MAIN D ELECTRICAL CLOSET 1424	100 AMP M.L.O.	480/277 3ø 4W	24	SURFACE	42K	18 - 20/1	4 - 20/1	-	
HP1E1	MAIN H ELECTRICAL CLOSET 1804	60 AMP M.C.B.	480/277 3ø 4W	24	SURFACE	42K	7 - 20/1	3 - 20/1	-	
HP1H1	MAIN H ELECTRICAL CLOSET 1804	100 AMP M.L.O.	480/277 3ø 4W	30	SURFACE	42K	9 - 20/1	5 - 20/1	-	
HP1J1	MAIN J ELECTRICAL CLOSET 1950	150 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	6 - 20/1 1 - 40/3 2 - 45/3	5 - 20/1	-	
HP1J2	MAIN J ELECTRICAL CLOSET 1927	300 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	2 - 20/1 2 - 45/3 1 - 200/3	3 - 20/1 1 - 20/3	-	
HP2A1	UPPER A ELECTRICAL CLOSET 2108	400 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	9 - 20/1 2 - 70/3 2 - 125/3	8 - 20/1 1 - 20/3	-	
HP2B1	UPPER B ELECTRICAL CLOSET 2219	70 AMP M.C.B.	480/277 3ø 4W	30	SURFACE	42K	11 - 20/1	4 - 20/1	-	
MPB1	LOWER G CHILLER ROOM 0105	175 AMP M.C.B.	480/277 3ø 4W	84	SURFACE	42K	3 - 20/1 4 - 15/3 5 - 20/3 1 - 30/3 2 - 35/3	3 - 20/1 2 - 20/3	-	
MP1B1	MAIN B ELECTRICAL CLOSET 1207	100 AMP M.L.O.	480/277 3ø 4W	42	SURFACE	42K	1 - 100/3 1 - 15/3 3 - 20/3 1 - 35/3	3 - 20/1 1 - 20/3	-	
MP1D1	MAIN D ELECTRICAL CLOSET 1424	225 AMP M.L.O.	480/277 3ø 4W	42	SURFACE	42K	2 - 20/3 1 - 25/3 2 - 40/3 2 - 50/3	2 - 20/3	-	
MP1H1	MAIN H ELECTRICAL CLOSET 1804	225 AMP M.L.O.	480/277 3ø 4W	42	SURFACE	42K	3 - 15/3 1 - 20/3 3 - 30/3 1 - 50/3	2 - 20/3	-	
MP1F1	MAIN F STORAGE 1603	175 AMP M.C.B.	480/277 3ø 4W	84	SURFACE	42K	6 - 15/3 4 - 20/3 2 - 30/3 3 - 35/3	2 - 20/3	-	
MP1J2	MAIN J ELECTRICAL CLOSET 1927	200 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	3 - 15/3 2 - 20/3 1 - 30/3 1 - 45/3 1 - 50/3 1 - 70/3	2 - 20/3	-	
MP1J3	MAIN J ELECTRICAL CLOSET 1904	150 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	3 - 15/3 2 - 20/3 1 - 30/3 2 - 50/3 1 - 70/3 1 - 15/3	2 - 20/3	-	
MP2A2	UPPER A ELECTRICAL CLOSET 2108	225 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	1 - 20/3 1 - 30/3 1 - 35/3 3 - 50/3 1 - 70/3 1 - 100/3	2 - 20/3	-	
MP2B2	UPPER B STORAGE 2217	700 AMP M.C.B.	480/277 3ø 4W	84	SURFACE	42K	8 - 15/3 1 - 20/3 1 - 30/3 2 - 35/3 7 - 45/3 1 - 50/3 1 - 60/3 1 - 100/3 1 - 225/3	2 - 20/3	-	
MP2B3	UPPER B STORAGE 2217	100 AMP M.L.O.	480/277 3ø 4W	42	SURFACE	42K	9 - 15/3	2 - 15/3	-	
IG1A1	MAIN A ELECTRICAL CLOSET 1108	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	32 - 20/1 1 - 60/3	7 - 20/1	REFER NOTE #1	
IG1A2	MAIN A ELECTRICAL CLOSET 1108	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	24 - 20/1	5 - 20/1	REFER NOTE #1	

PANELBOARD SCHEDULE										
PANEL	LOCATION	PANEL DESCRIPTION				BRANCH CIRCUIT BREAKER		REMARKS		
		MAINS	VOLTAGE	POLES	MT'G	A.I.C.	ACTIVE		SPARE	
IG1B1	MAIN B ELECTRICAL CLOSET 1207	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	34 - 20/1 1 - 60/3	5 - 20/1	REFER NOTE #1	
IG1B2	MAIN B ELECTRICAL CLOSET 1207	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	27 - 20/1	5 - 20/1	REFER NOTE #1	
IG1C1	MAIN C ELECTRICAL CLOSET 1324	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	36 - 20/1 1 - 60/3	3 - 20/1	REFER NOTE #1	
IG1C2	MAIN C ELECTRICAL CLOSET 1324	100 AMP M.L.O.	208/120 3ø 4W	30	SURFACE	22K	6 - 20/1	4 - 20/1	REFER NOTE #1	
IG1D1	MAIN D ELECTRICAL CLOSET 1424	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	21 - 20/1 1 - 100/3	5 - 20/1	REFER NOTE #1	
IG1D2	MAIN D ELECTRICAL CLOSET 1424	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	27 - 20/1	5 - 20/1	REFER NOTE #1	
IG1E1	MAIN H ELECTRICAL CLOSET 1804	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	27 - 20/1 1 - 60/3	4 - 20/1	REFER NOTE #1	
IG1H1	MAIN H ELECTRICAL CLOSET 1804	60 AMP M.C.B.	208/120 3ø 4W	30	SURFACE	22K	10 - 20/1	4 - 20/1	REFER NOTE #1	
IG1J1	MAIN J ELECTRICAL CLOSET 1950	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	22 - 20/1	6 - 20/1	REFER NOTE #1	
IG1J2	MAIN J ELECTRICAL CLOSET 1927	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	24 - 20/1	7 - 20/1	REFER NOTE #1	
IG2A1	UPPER A ELECTRICAL CLOSET 2108	250 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	34 - 20/1 1 - 100/3 1 - 125/3	2 - 20/1	REFER NOTE #1	
IG2A2	UPPER A ELECTRICAL CLOSET 2108	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	33 - 20/1	5 - 20/1	REFER NOTE #1	
IG2B1	UPPER B ELECTRICAL CLOSET 2219	125 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	31 - 20/1	6 - 20/1	REFER NOTE #1	
KPH	MAIN G CORRIDOR 1723	200 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	6 - 20/1 2 - 15/3 1 - 20/3 1 - 30/3 1 - 40/3 1 - 90/3	5 - 20/1 1 - 20/3	KITCHEN EQUIPMENT POWER PANEL	
KPL	MAIN G CORRIDOR 1723	600 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	31 - 20/1 1 - 15/2 1 - 30/2 1 - 70/3 2 - 200/3		KITCHEN EQUIPMENT POWER PANEL	
KPL1	MAIN G CORRIDOR 1723	500 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	3 - 20/1 16 - 20/2 1 - 150/3 1 - 175/3	2 - 20/1	KITCHEN EQUIPMENT POWER PANEL	
KPL2	MAIN G CORRIDOR 1723	225 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	21 - 20/1 4 - 30/3	3 - 20/1 1 - 20/3	KITCHEN EQUIPMENT POWER PANEL	
KPL3	MAIN G CORRIDOR 1723	225 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	21 - 20/1 4 - 20/2 2 - 30/2 2 - 30/3	5 - 20/1 1 - 20/3	KITCHEN EQUIPMENT POWER PANEL	
LP30A	MAIN J 3-D ART ROOM 1941	40 AMP M.C.B.	208/120 3ø 4W	30	SURFACE	22K	9 - 20/1	4 - 20/1	PROVIDE WITH INTERGRAL 3P MAIN CONTACTOR	
LPB	LOWER G MAIN ELECTRICAL ROOM 0102	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	18 - 20/1	5 - 20/1	-	
LPB1	LOWER G MAIN ELECTRICAL ROOM 0102	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	17 - 20/1	8 - 20/1	-	
LP1A1	MAIN A ELECTRICAL CLOSET 1108	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	22 - 20/1 1 - 15/3 1 - 35/3	5 - 20/1	-	
LP1B1	MAIN B ELECTRICAL CLOSET 1207	500 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	18 - 20/1 1 - 15/3 1 - 35/3 1 - 60/3 1 - 300/3	4 - 20/1	-	
LP1B2	MAIN B ELECTRICAL CLOSET 1207	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	12 - 20/1	4 - 20/1	-	
LP1C1	MAIN C ELECTRICAL CLOSET 1324	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	20 - 20/1 1 - 20/3 1 - 40/3	7 - 20/1	-	
LP1D1	MAIN D ELECTRICAL CLOSET 1424	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	20 - 20/1 2 - 100/3	5 - 20/1	-	
LP1D2	MAIN D ELECTRICAL CLOSET 1424	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	26 - 20/1 1 - 30/2	4 - 20/1	-	
LP1E1	MAIN H ELECTRICAL CLOSET 1804	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	31 - 20/1	5 - 20/1	-	
LP1H1A	MAIN H ELECTRICAL CLOSET 1804	250 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	29 - 20/1 1 - 20/2 1 - 30/2 1 - 100/3	6 - 20/1	-	
LP1H1B	MAIN H ELECTRICAL CLOSET 1804	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	33 - 20/1	4 - 20/1	-	

PANELBOARD SCHEDULE										
PANEL	LOCATION	PANEL DESCRIPTION				BRANCH CIRCUIT BREAKER		REMARKS		
		MAINS	VOLTAGE	POLES	MT'G	A.I.C.	ACTIVE		SPARE	
LP1J1	MAIN J ELECTRICAL CLOSET 1950	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	27 - 20/1	7 - 20/1	-	
LP1J2	MAIN J ELECTRICAL CLOSET 1927	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	25 - 20/1 1 - 20/2 3 - 50/2 1 - 40/3	4 - 20/1	-	
LP1J3	MAIN J ELECTRICAL CLOSET 1904	100 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	34 - 20/1 1 - 30/3 1 - 20/3	4 - 20/1	-	
LP2A1	UPPER A ELECTRICAL CLOSET 2108	150 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	29 - 20/1 1 - 15/3 1 - 35/3	7 - 20/1	-	
LP2B1	UPPER B ELECTRICAL CLOSET 2219	250 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	28 - 20/1 1 - 15/3 1 - 35/3 1 - 100/3	5 - 20/1	-	
LP2B2	UPPER B ELECTRICAL CLOSET 2219	100 AMP M.L.O.	208/120 3ø 4W	42	SURFACE	22K	24 - 20/1	6 - 20/1	-	
LPMTL	MAIN D MOD. TECH LAB 1404	100 AMP M.C.B.	208/120 3ø 4W	30	SURFACE	22K	11 - 20/1	4 - 20/1	PROVIDE WITH INTERGRAL 3P MAIN CONTACTOR	
LSHB	LOWER G MAIN ELECTRICAL ROOM 0102	100 AMP M.L.O.	480/277 3ø 4W	24	SURFACE	42K	3 - 20/1	4 - 20/1	-	
LSHA	MAIN A ELECTRICAL CLOSET 1108	60 AMP M.C.B.	480/277 3ø 4W	24	SURFACE	42K	7 - 20/1 1 - 40/3	3 - 20/1	-	
LSHB1	MAIN B ELECTRICAL CLOSET 1207	100 AMP M.C.B.	480/277 3ø 4W	30	SURFACE	42K	5 - 20/1 1 - 30/3 1 - 60/3	3 - 20/1	-	
LSHD	MAIN D ELECTRICAL CLOSET 1424	100 AMP M.C.B.	480/277 3ø 4W	42	SURFACE	42K	21 - 20/1	4 - 20/1	-	
LSH1H	MAIN H ELECTRICAL CLOSET 1804	60 AMP M.C.B.	480/277 3ø 4W	30	SURFACE	42K	12 - 20/1	4 - 20/1	-	
LSH1J	MAIN J ELECTRICAL CLOSET 1904	100 AMP M.C.B.	480/277 3ø 4W	24	SURFACE	42K	8 - 20/1 1 - 60/3	3 - 20/1	-	
LSH2A	UPPER A ELECTRICAL CLOSET 2108	40 AMP M.C.B.	480/277 3ø 4W	30	SURFACE	42K	5 - 20/1	3 - 20/1	-	
LSH2B	UPPER B ELECTRICAL CLOSET 2219	30 AMP M.C.B.	480/277 3ø 4W	12	SURFACE	42K	2 - 20/1	2 - 20/1	-	
LSLJ2	MAIN J ELECTRICAL CLOSET 1927	30 AMP M.C.B.	120/208 3ø 4W	12	SURFACE	42K	4 - 20/1	2 - 20/1	PROVIDE (6) 1P SPACE AND BUS	
PCL	MAIN B CONSTRUCTION LAB 1219	300 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	10 - 20/1 10 - 30/2 2 - 125/3	6 - 20/1	PROVIDE WITH INTERGRAL 3P MAIN CONTACTOR	
PFLA	MAIN D STORAGE ROOM 1415	200 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	12 - 20/1 5 - 50/2	6 - 20/1	-	
PFLB	MAIN D FOOD MANAGEMENT LAB 1416	200 AMP M.C.B.	208/120 3ø 4W	42	SURFACE	22K	22 - 20/1 1 - 30/2 1 - 50/3	5 - 20/1	-	
SLH1	MAIN A ELECTRICAL CLOSET 1108	30 AMP M.C.B.	480/277 3ø 4W	12	SURFACE	42K	3 - 20/1	3 - 20/1	-	
SLH2	MAIN J ELECTRICAL CLOSET 1950	40 AMP M.C.B.	480/277 3ø 4W	12	SURFACE	42K	4 - 20/1	2 - 20/1	-	

REVISIONS			
DATE	MARK	DESCRIPTION	REVISION
JANUARY 29, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION REVIEW OF PHASE I	
FEBRUARY 21, 2001		DRAWINGS ISSUED FOR STATE DEPARTMENT OF EDUCATION RESUBMISSION OF PHASE II	
JUNE 22, 2001		DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES	



**NEW RHAM HIGH SCHOOL**  
WALL STREET  
HEBRON, CONNECTICUT  
06248

STATE PROJECT#: 208-018N  
STATE PROJECT#: 208-019 EA/RR

VANZELM HEYWOOD & SHADFORD INC  
MECHANICAL AND ELECTRICAL ENGINEERS

**vzhs**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06103-2420  
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vZHS PROJECT NUMBER: 2000155.00



**KAESTLE BOOS ASSOCIATES, INC.**  
**ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 229-0361

DRAWN BY: CHECKED BY: SCALE: AS NOTED

**ELECTRICAL PANELBOARD SCHEDULES**

PROJECT NO.: 00048 DRAWING NO.:

DATE: JANUARY 20, 2001 **E4.03**

LIGHTING	
SYMBOL	DESCRIPTION
○ X	CEILING MOUNTED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	WALL MOUNTED LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	2'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	DUAL BALLAST 2'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	1'x4' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	2'x2' CEILING MOUNTED FLUORESCENT LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	TYPICAL CEILING MOUNTED FLUORESCENT FIXTURE - NORMAL/EMERGENCY. SEE PLAN AND FIXTURE SCHEDULE FOR BATTERY OR INVERTER POWER CONTINUOUS FLUORESCENT LIGHT FIXTURE
○ X	WALL WASHER LIGHT FIXTURE
○ X	LIGHT ON EMERGENCY CIRCUIT
○ X	FLUORESCENT STRIP LIGHT FIXTURE; SUBLETTER INDICATES FIXTURE TYPE
○ X	POWER LIGHT TRACK WITH NUMBER OF FIXTURES AS INDICATED ON PLANS; SUBLETTER INDICATES FIXTURE TYPE
○ X	SINGLE OR DUAL HEAD, WALL MOUNTED, BATTERY OPERATED REMOTE EMERGENCY LIGHT
○ X	DOUBLE FACED CEILING OR WALL-MOUNTED, EXT. SIGN WITH EMERGENCY POWER BACK UP AND DIRECTIONAL CHEVRONS AS INDICATED ON PLANS
○ X	SINGLE FACED CEILING OR WALL-MOUNTED EXT. SIGN WITH EMERGENCY POWER BACK UP AND DIRECTIONAL CHEVRONS AS INDICATED ON PLANS
○ X	CEILING OR WALL-MOUNTED, EMERGENCY LIGHT UNIT WITH SELF CONTAINED BATTERY FIXTURE SHALL MONITOR LIGHTING CIRCUIT IN AREA.
○ X	EMERGENCY LIGHTING BATTERY UNIT
○ X	AREA OF REFUGE INDICATOR LIGHT WITH BATTERY PACK
○ X	EMERGENCY LIGHTING REMOTE TEST SWITCH, REFER TO DETAIL #4 ON DRAWING #E.01
○ X	EMERGENCY LIGHTING REMOTE BATTERY UNIT.

POWER	
SYMBOL	DESCRIPTION
○ a,b	DUPLEX RECEPTACLE; SUBLETTER "a" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "b" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.
○ a,b	DOUBLE DUPLEX RECEPTACLE; SUBLETTER "a" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "b" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.
○	SINGLE RECEPTACLE
○ P	FLOOR MOUNTED POWER OUTLET, POKE THROUGH UNIT WITH (2) 20AMP DUPLEX POWER OUTLETS.
○ RM	RECESSED FLOOR BOX WITH THREE DUPLEX RECEPTACLE AND FLUSH COVER
○	FLUSH FLOOR BOX WITH SPECIAL PURPOSE RECEPTACLE AMPERAGE AND VOLTAGE AS INDICATED ON PLANS. VERIFY NEMA CONFIGURATION WITH EQUIPMENT MANUFACTURER.
○	DUPLEX RECEPTACLE-ONE OUTLET SWITCHED
○ c	DUPLEX RECEPTACLE, SUBLETTER "c" INDICATES CEILING MOUNTED
○ H	DUPLEX RECEPTACLE FOR TELEVISION. COORDINATE MOUNTING HEIGHT WITH ARCHITECT.
○ W	WASHING MACHINE RECEPTACLE, PROVIDE DEDICATED CIRCUIT.
○	ELECTRICAL FLOOR MONUMENT WITH LFCM WHIP CONNECTION
○	SPECIAL-PURPOSE OUTLET, AMPERAGE AND VOLTAGE AS INDICATED ON PLANS. VERIFY NEMA CONFIGURATION WITH EQUIPMENT MANUFACTURER.
○	DRYER RECEPTACLE, NEMA #6-3R, PROVIDE FEEDER, 2#10-1#10GND., 1" C. TO A 50AMP, 2P OR. BRR. IN PANEL INDICATED.
○	ELECTRIC RANGE OUTLET, NEMA #6-5DR, PROVIDE FEEDER, 2#6-1#10GND., 1" C. TO A 50AMP, 2P OR. BRR. IN PANEL INDICATED.
○	DUPLEX RECEPTACLE EMERGENCY POWER, SUBLETTER "a" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "b" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.
○ a,b	DOUBLE DUPLEX RECEPTACLE, EMERG. POWER, SUBLETTER "a" INDICATES RECEPTACLE TO BE MOUNTED 6" ABOVE COUNTER TOP OR 48" AFF. SUBLETTER "b" INDICATES MOUNTED IN ARCHITECTURAL MILLWORK. COORDINATE INSTALLATION WITH ARCHITECT.
○ a,b	SURFACE RACEWAY WITH OUTLETS AS INDICATED ON PLANS, MOUNTED AT 18" AFF, UNLESS OTHERWISE NOTED
○	ELECTRICAL PANEL 480/277 VOLT
○	ELECTRICAL PANEL 120/208 VOLT
○	SPECIAL-PURPOSE ELECTRICAL PANEL OR EQUIPMENT
○	ELECTRICAL POWER TRANSFORMER
○	MAGNETIC STARTER
○	FUSE DISCONNECT SWITCH WITH SIZE/RATING
○	COMBINATION MAGNETIC STARTER AND DISCONNECT SWITCH
○	ELECTRIC MOTOR
○	VARIABLE FREQUENCY DRIVE
○	FLOOR OR CEILING MOUNTED JUNCTION BOX
○	WALL MOUNTED JUNCTION BOX
○ HD	WALL MOUNTED JUNCTION BOX AT ELECTRIC HAND DRYER, UNIT FURNISHED BY OTHERS, INSTALLED AND WIRED BY DIVISION 16
○ SEN	JUNCTION BOX AT ELECTRONIC FAUCET SENSOR TRANSFORMER MOUNTED ABOVE SINK, CEILING UNIT FURNISHED AND INSTALLED BY OTHERS, WIRED BY DIVISION 16, REFER TO DETAIL #8 ON DRAWING #E.03
○ HT	WEATHER PROOF JUNCTION BOX AT ELECTRIC HEAT TRACE CABLE FURNISHED, INSTALLED AND WIRED BY DIVISION 16
○	WALL POWER OUTLET LOCATIONS FOR MODULAR SYSTEM FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, BLANK PLATE WITH A 1" BUSHED OPENING FOR CONNECTION TO MODULAR SYSTEM FURNITURE POWER WHIP FITTING, EXTEND 3/4" CONDUIT UP TO CEILING FLENUM BUSH END, PROVIDE CIRCUIT CONDUCTORS AS SHOWN ON PLAN.
○	WALL DATA/TELEPHONE OUTLET LOCATIONS FOR MODULAR SYSTEM FURNITURE, PROVIDE A 4"x4"x2" OUTLET BOX WITH PLASTER RING, BLANK PLATE WITH A 1" BUSHED OPENING FOR CABLE TO MODULAR SYSTEM FURNITURE, EXTEND 3/4" CONDUIT UP INTO CEILING FLENUM BUSH END, DATA/TELEPHONE CABLE AND CONNECTIONS FURNISHED AND INSTALLED BY OWNER'S DATA/TELEPHONE SYSTEM VENDORS (TYPICAL).
○	WALL MOUNTED JUNCTION BOX AT DISHWASHER UNIT, PROVIDE CODE-APPROVED DISCONNECT AT EACH DISHWASHER UNIT.
○ FH	WALL MOUNTED JUNCTION BOX AT FUME HOOD UNIT, REFER TO DETAIL #9 ON DRAWING #E.02
○ PROJ	MOTORIZED PROJECTION SCREEN CEILING MOUNTED JUNCTION BOX, E.C. TO MAKE FINAL CONNECTIONS TO SCREEN UNIT.
○	RELAY
○	COMBINATION TELEPHONE/DATA-POWER POLE, PROVIDE DUPLEX POWER OUTLETS OR CONNECTION TO SYSTEMS FURNITURE OR SURFACE RACEWAYS AS NOTED ON PLANS.

SPECIAL SYSTEMS	
SYMBOL	DESCRIPTION
○ D	FLOOR MOUNTED DATA/TELEPHONE OUTLET POKE-THRU UNIT WITH (4) DATA/TELEPHONE BLANK PLATES.
○	COMMUNICATIONS FLOOR MONUMENT WITH LFCM WHIP CONNECTION
○	COMBINATION DATA/TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE.
○	TEACHERS DATA/VOICE OUTLET. SEE DETAIL #10 ON DWG #E.02
○	TELEPHONE OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE. SUBLETTER "M" INDICATES WALL-MOUNTED.
○ HP	HANDICAP PAY TELEPHONE OUTLET WITH BACKBOX AND CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE
○	DATA OUTLET WITH BACKBOX AND EMPTY CONDUIT STUBBED UP TO ABOVE FINISHED CEILING, INCLUDING DRAG LINE.
○	SIMILAR TO DATA OUTLET ABOVE EXCEPT, DOUBLE DATA OUTLET.
○	TELEVISION CABLE OUTLET, MOUNT AT 18" AFF UNLESS OTHERWISE NOTED.
○ TVH	TELEVISION CABLE OUTLET; COORDINATE MOUNTING HEIGHT WITH ARCHITECT
○	WALL-MOUNTED, SOUND SYSTEM SPEAKER
○ S <sub>v</sub>	SOUND SYSTEM VOLUME CONTROLLER
○ S <sub>f,w</sub>	SOUND SYSTEM MICROPHONE JACK; SUBLETTER "f" INDICATES FLOOR-MOUNTED, SUBLETTER "w" INDICATES WALL-MOUNTED
○ S <sub>HA</sub>	SOUND SYSTEM SPEAKER, HIGH AMBIENT NOISE LEVEL TYPE
○ KP	SECURITY SYSTEM KEYPAD
○	SECURITY SYSTEM INFRARED MOTION SENSOR, CEILING MOUNTED
○	SECURITY SYSTEM INFRARED MOTION SENSOR, WALL MOUNTED
○	SECURITY SYSTEM CARD READER LOCATION
○	SECURITY SYSTEM DOOR CONTACT SWITCH
○	WALL CLOCK WITH HANGER TYPE OUTLET
○ EPC	EMERGENCY CALL-FOR-AID SWITCH
○ EPB	EMERGENCY CALL-FOR-AID PUSHBUTTON
○	EMERGENCY CALL-FOR-AID VISUAL INDICATING UNIT
○ E	EMERGENCY CALL-FOR-AID VISUAL/AUDIO INDICATING UNIT
○ M	INTERCOM STATION, SUBLETTER "M" INDICATES MASTER
○	VIDEO OUTLET, INSTALLATION SHALL BE SIMILAR TO DETAIL #2, "TYPICAL INSTALLATION DETAIL, TELEPHONE/DATA OUTLET", ON DRAWING #E.02
○	GAS VALVE PANEL, PANEL FURNISHED AND INSTALLED BY DIV. 15, WIRED BY ELEC. CONTRACTOR. REFER TO DETAIL #1 ON DRAWING #E.02
○	DATA OUTLET FOR SMART BOARD, INSTALLATION SHALL BE SIMILAR TO DETAIL #2, "TYPICAL INSTALLATION DETAIL, TELEPHONE/DATA OUTLET", ON DRAWING #E.02. VERIFY LOCATION WITH ARCHITECT.
○	FIRE ALARM MAGNETIC DOOR HOLD DEVICE
○	SPRINKLER FIRE ALARM FLOW SWITCH
○	SPRINKLER FIRE ALARM SUPERVISORY SWITCH
○	SPRINKLER FIRE ALARM PRESSURE SWITCH
○	MASTER FIRE ALARM PULL BOX
○	SMOKE DETECTOR FOR ELEVATOR RECALL CONTROLS
○	EXTERIOR REMOTE FIRE ALARM FLASHING STROBE LIGHT
○	FIRE ALARM CONTROL PANEL
○	REMOTE ANNUNCIATOR PANEL
○	MANUAL FIRE ALARM PULL STATION
○	FIRE ALARM VISUAL INDICATING UNIT
○	FIRE ALARM SPEAKER/VISUAL INDICATING UNIT
○	FIRE ALARM "MINI" SPEAKER/STROBE, TAPPED AT 75 CANDELA
○	FIRE ALARM AUDIO AND VISUAL UNITS WITH HIGH OUTPUT AUDIO UNIT
○	VOICE EVACUATION CONTROL PANEL
○	FIRE ALARM CEILING-MOUNTED SPEAKER
○	AUTOMATIC FIRE ALARM HEAT DETECTOR, SUBLETTER "B" INDICATES 200 DEGREES F. HEAT DETECTOR
○	FIREFIGHTERS TELEPHONE OUTLET
○	AREA OF REFUGE TELEPHONE OUTLET FOR TWO WAY A/V COMMUNICATION
○	EMERGENCY TELEPHONE OUTLET
○	AUTOMATIC FIRE ALARM SMOKE DETECTOR
○	BEAM TYPE SMOKE DETECTOR
○	AUTOMATIC FIRE ALARM SMOKE DETECTOR WITH SOUNDER BASE
○	DUCT SMOKE FIRE ALARM DETECTOR
○	DUCT HEAT FIRE ALARM DETECTOR
○	SMOKE DETECTOR TEST SWITCH
○	SMOKE DAMPER
○	END OF LINE RESISTOR
○	STROBE SYNC. MODULE
○	TAMPER SWITCH
○	MONITOR MODULE
○	RELAY MODULE
○	DUAL SYNC. MODULE
○	FIRE/SMOKE DAMPER
○	ADDRESSABLE INTERFACE MODULE
○	ZONE ADDRESSABLE MODULE

ONE-LINE	
SYMBOL	DESCRIPTION
○	POTHEAD
○	STRESSSCONE
○	CURRENT TRANSFORMER
○	POWER TRANSFORMER
○	FUSE
○	FUSE CUT OUT
○	FUSE & SWITCH
○	SWITCH
○	CIRCUIT BREAKER
○	DRAWOUT CIRCUIT BREAKER
○	MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
○	BUSPLUG CIRCUIT BREAKER
○	BUSPLUG FUSE & SWITCH
○	GROUND
○	THERMAL OVERLOAD
○	RELAY/COIL
○	N/O CONTACT
○	N.C. CONTACT
○	PROTECTIVE RELAY
○	AMMETER
○	AMMETER SWITCH
○	VOLTMETER
○	VOLTMETER SWITCH
○	WATTHOUR METER
○	WATTMETER
○	WATTHOUR DEMAND METER
○	TRANSFORMER
○	SHIELDED TRANSFORMER
○	AUTO TRANSFORMER
○	LIGHTNING ARRESTER
○	GENERATOR
○	DELTA
○	WYE
○	KEY INTERLOCK
○	AUTOMATIC TRANSFER SWITCH (A.T.S.)
○	MAIN LUG ONLY PANELBOARD
○	MAIN CIRCUIT BREAKER PANELBOARD
○	CIRCUIT BREAKER WITH AMP FRAME OVER AMP TRIP
○	FUSED DISCONNECT SWITCH, WITH SWITCH SIZE OVER FUSE SIZE

ABBREVIATIONS	
SYMBOL	DESCRIPTION
A	AMPERE
C	CONDUIT
P	POLE
W	WIRE
T	TELEPHONE SERVICE
FA	FIRE ALARM
NF	NON-FUSED
WP	WEATHERPROOF
C/B	CIRCUIT BREAKER
AFB	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
CR	CIRCUIT
TX	TRANSFORMER
MD	MOTORIZED DAMPER
PE	PRIMARY ELECTRIC SERVICE
SE	SECONDARY ELECTRIC SERVICE
RTU	ROOFTOP UNIT
TCF	TEMPERATURE CONTROL PANEL
SD	SMOKE DAMPER
IG	ISOLATED GROUND
RMC	RIGID METALLIC CONDUIT
EMT	ELECTRIC METALLIC TUBING
FMC	FLEXIBLE METALLIC TUBING
TV	TELEVISION
PVC	POLYVINYL CHLORIDE CONDUIT
EF	EXHAUST FAN
REF	ROOF EXHAUST FAN
AHU	AIR HANDLING UNIT
CUH	CABINET UNIT HEATER
EW	ELECTRIC WATER COOLER
EW	ELECTRIC WATER HEATER
GF	GROUND FAULT INTERRUPTER
MAU	MAKE-UP AIR UNIT
WG	WIRE GUARD
S&P	SPACE AND PROVISION
E	EXISTING TO REMAIN
ER	EXISTING EQUIPMENT TO REMAIN
RE	REMOVE EXISTING EQUIPMENT
RL	RELOCATE EXISTING EQUIPMENT
NE	NEW LOCATION OF EXISTING EQUIPMENT
NIC	NOT IN CONTRACT
NL	LIGHT FIXTURE WIRED FOR "NIGHT LIGHT" OPERATION
LV	LOW VOLTAGE
ST	SHUNT TRIP
MDD	MOTOR OPERATED DOOR
ATS	AUTOMATIC TRANSFER SWITCH
O/H	OVERHEAD, CEILING MOUNTED
EXP	EXPLOSION PROOF

FIRE	
SYMBOL	DESCRIPTION
○	FIRE ALARM MAGNETIC DOOR HOLD DEVICE
○	SPRINKLER FIRE ALARM FLOW SWITCH
○	SPRINKLER FIRE ALARM SUPERVISORY SWITCH
○	SPRINKLER FIRE ALARM PRESSURE SWITCH
○	MASTER FIRE ALARM PULL BOX
○	SMOKE DETECTOR FOR ELEVATOR RECALL CONTROLS
○	EXTERIOR REMOTE FIRE ALARM FLASHING STROBE LIGHT
○	FIRE ALARM CONTROL PANEL
○	REMOTE ANNUNCIATOR PANEL
○	MANUAL FIRE ALARM PULL STATION
○	FIRE ALARM VISUAL INDICATING UNIT
○	FIRE ALARM SPEAKER/VISUAL INDICATING UNIT
○	FIRE ALARM "MINI" SPEAKER/STROBE, TAPPED AT 75 CANDELA
○	FIRE ALARM AUDIO AND VISUAL UNITS WITH HIGH OUTPUT AUDIO UNIT
○	VOICE EVACUATION CONTROL PANEL
○	FIRE ALARM CEILING-MOUNTED SPEAKER
○	AUTOMATIC FIRE ALARM HEAT DETECTOR, SUBLETTER "B" INDICATES 200 DEGREES F. HEAT DETECTOR
○	FIREFIGHTERS TELEPHONE OUTLET
○	AREA OF REFUGE TELEPHONE OUTLET FOR TWO WAY A/V COMMUNICATION
○	EMERGENCY TELEPHONE OUTLET
○	AUTOMATIC FIRE ALARM SMOKE DETECTOR
○	BEAM TYPE SMOKE DETECTOR
○	AUTOMATIC FIRE ALARM SMOKE DETECTOR WITH SOUNDER BASE
○	DUCT SMOKE FIRE ALARM DETECTOR
○	DUCT HEAT FIRE ALARM DETECTOR
○	SMOKE DETECTOR TEST SWITCH
○	SMOKE DAMPER
○	END OF LINE RESISTOR
○	STROBE SYNC. MODULE
○	TAMPER SWITCH
○	MONITOR MODULE
○	RELAY MODULE
○	DUAL SYNC. MODULE
○	FIRE/SMOKE DAMPER
○	ADDRESSABLE INTERFACE MODULE
○	ZONE ADDRESSABLE MODULE

LEGEND NOTES:	
A.	THIS IS A GENERAL LEGEND OF SYMBOLS AND ABBREVIATIONS AND SHALL BE USED AS A DICTIONARY TO DEFINE ITEMS INDICATED ON DRAWINGS. NOT ALL SYMBOLS OR ABBREVIATIONS ARE NECESSARILY USED ON THIS PROJECT.

GENERAL LIGHTING PLAN NOTES:	
A.	FOR LIGHTING FIXTURE DESCRIPTIONS, REFER TO LIGHTING FIXTURE SCHEDULE ON DRAWING E4.01.
B.	FOR ACTUAL LOCATION OF CEILING MOUNTED LIGHTING FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING DRAWING(S).
C.	FOR ACTUAL LOCATION OF WALL MOUNTED LIGHTING FIXTURES AND TASK LIGHTING, REFER TO ARCHITECTURAL ELEVATIONS AND DETAILS.
D.	ALL EXIT SIGNS AND AREA OF REFUGE INDICATOR LIGHTS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL LIFE SAFETY, (EMERGENCY), LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING.
E.	EMERGENCY BATTERY UNITS AND BALLASTS SHALL BE WIRED AHEAD OF ANY SWITCHED LEGS ON LOCAL EMERGENCY LIGHTING BRANCH CIRCUIT, FOR CONTINUOUS CHARGING AND AC CIRCUIT MONITORING, AND SUCH THAT FIXTURE ILLUMINATES UPON FAILURE OF LOCAL POWER.
F.	A LIGHT SWITCH (OR OCCUPANCY SENSOR SWITCH) IN A SPACE SHALL CONTROL ALL LIGHTING IN SPACE UNLESS OTHERWISE INDICATED.
G.	REFER TO LIGHTING DETAILS ON DRAWING E3.01 FOR TYPICAL WIRING SCHEMATICS.
H.	INSTALL CONDUIT AND WIRING FOR EXTERIOR BUILDING MOUNTED LIGHT FIXTURES, CONCEALED WITHIN BUILDING, NOT EXPOSED ON BUILDING EXTERIOR.

GENERAL POWER AND SIGNAL PLAN NOTES:	
A.	CONNECT ALL WIRING DEVICES TO THE PANELBOARD(S) NOTED, UNLESS OTHERWISE INDICATED ON THIS DRAWING.
B.	UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
C.	REFER TO ARCHITECTURAL EQUIPMENT PLANS AND CASEWORK ELEVATION DRAWINGS FOR OUTLET REQUIREMENTS AND LOCATIONS.
D.	REFER TO POWER AND SIGNAL RISER AND DETAIL DRAWINGS FOR TYPICAL WIRING SCHEMATICS AND INSTALLATION DETAILS.
E.	COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, SWITCHES, FIRE ALARM DEVICES, ETC. WITH ARCHITECTURAL PLANS, ELEVATIONS AND DETAILS PRIOR TO START OF WORK, REQUEST CLARIFICATIONS FROM ARCHITECT PRIOR TO INSTALLATION.
F.	COORDINATE EXACT LOCATION OF MODULAR SYSTEMS FURNITURE POWER AND DATA/TELEPHONE ENTRANCE LOCATIONS WITH FURNITURE SUPPLIER PRIOR TO CONSTRUCTION.

SWITCHES	
S	DESCRIPTION
S	SINGLE-POLE SWITCH
S <sub>3</sub>	3-WAY SWITCH
S <sub>4</sub>	4-WAY SWITCH
S <sub>P</sub>	SINGLE-POLE SWITCH AND PILOT LIGHT
S <sub>be</sub>	BOILER EMERGENCY SWITCH
S <sub>D</sub>	SINGLE-POLE DIMMER SWITCH
S <sub>D3</sub>	3-WAY DIMMER SWITCH
S <sub>T</sub>	SINGLE-POLE SWITCH WITH THERMAL OVERLOAD PROTECTION
S <sub>TM</sub>	ROTARY TIMER SWITCH
S <sub>2SPD</sub>	THREE POSITION AD SWITCH
S <sub>K</sub>	SINGLE-POLE KEYPAD SWITCH
S <sub>K3</sub>	KEYED, 3-WAY SWITCH
S <sub>K4</sub>	KEYED, 4-WAY SWITCH
S <sub>FAN</sub>	VARIABLE SPEED FAN SWITCH FURNISHED WITH FAN BY DIV. 15, INSTALLED AND WIRED BY DIV. 16
S <sub>MD</sub>	MOTORIZED OVERHEAD DOOR WALL SWITCH, SWITCH FURNISHED WITH DOOR BY OTHERS, SWITCH INSTALLED AND WIRED TO DOOR UNIT BY ELEC. CONTRACTOR.
S <sub>O</sub>	WALL MOUNTED OCCUPANCY SENSOR SWITCH
S <sub>PROJ</sub>	MOTORIZED PROJECTION SCREEN WALL SWITCH, SWITCH FURNISHED WITH SCREEN BY OTHERS, SWITCH INSTALLED AND WIRED TO SCREEN UNIT BY ELEC. CONTRACTOR.
S <sub>BS</sub>	"BUSHING" BOILER EMERGENCY THERMAL SHUT-OFF SWITCH INSTALLED AND WIRED BY DIV. 16
S <sub>D</sub>	CEILING MOUNTED OCCUPANCY SENSOR
S <sub>2</sub>	CEILING MOUNTED OCCUPANCY SENSOR WITH 2 SETS OF CONTACTORS
S <sub>C</sub>	CONTACTOR, COMPLETE WITH NEMA ENCLOSURE
S <sub>TC</sub>	TIME CLOCK, AS INDICATED ON PLANS
S <sub>PC</sub>	PHOTOCELL
S <sub>P</sub>	PUSHBUTTON SWITCH
S <sub>EG</sub>	EMERGENCY SHUT-OFF SWITCH, SUBLETTER "E" INDICATES ELECTRICAL, SUBLETTER "G" INDICATES GAS
S <sub>KEG</sub>	MASTER EMERGENCY SHUT-OFF/RESET SWITCH, SUBLETTER "E" INDICATES ELECTRICAL, SUBLETTER "G" INDICATES GAS
S <sub>A</sub>	AQUIASTAT
S <sub>PP</sub>	OCCUPANCY SENSOR POWER PACK

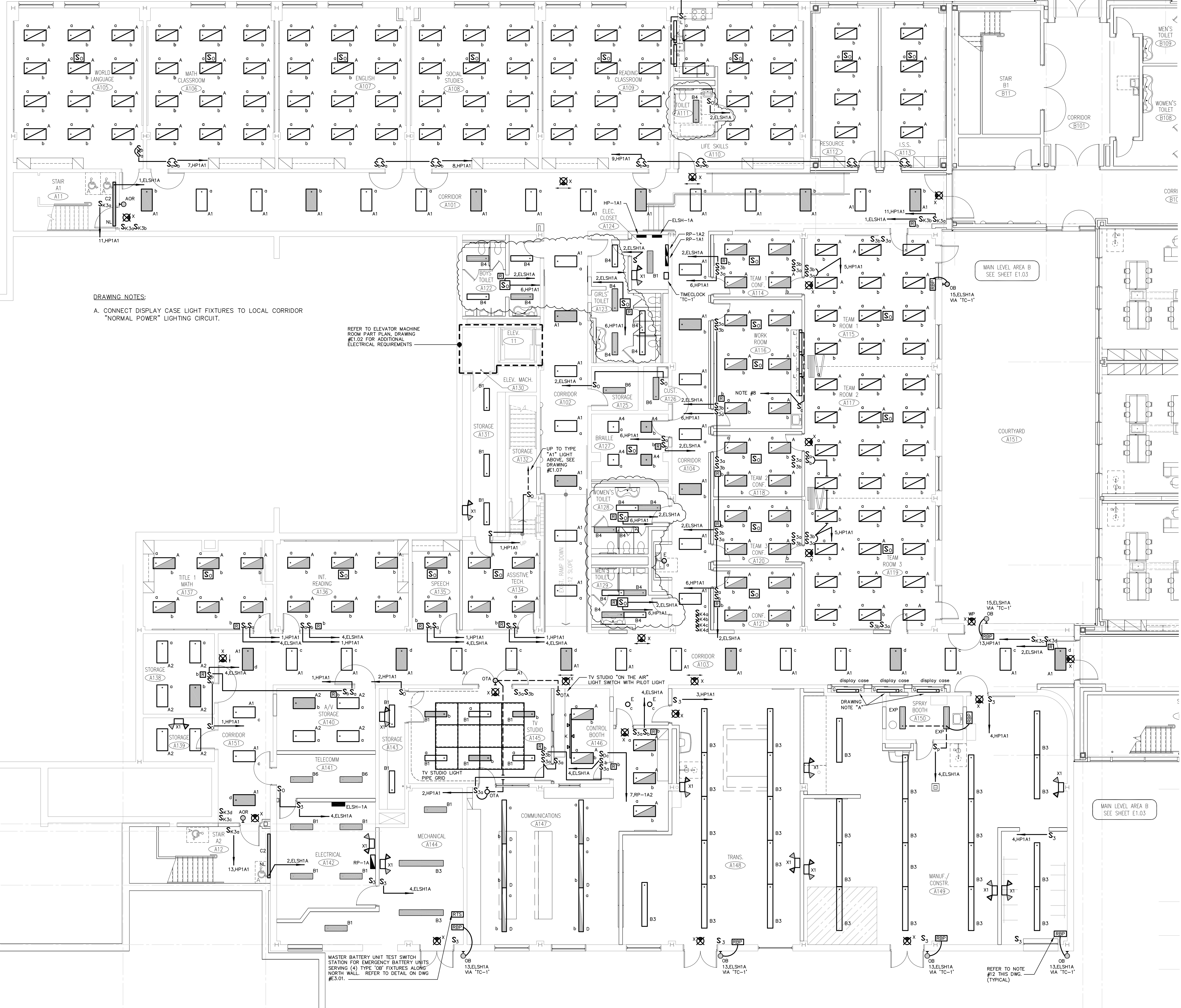
WIRING	
SYMBOL	DESCRIPTION
---	BRANCH CIRCUIT POWER WIRING
---	BRANCH CIRCUIT SWITCHED WIRING
---	BRANCH CIRCUIT AC OR DC CONTROL WIRING
---	BRANCH CIRCUIT EMERGENCY AC OR DC WIRING, 3/4" CONDUIT, 2#10 AND 1#10 GROUND, UNLESS OTHERWISE NOTED.
---	CABLETRAY
○	CONDUIT DOWN
○	CONDUIT UP
---	HOME RUN, 3/4" CONDUIT, 2#12 AND 1#12 GROUND, UNLESS OTHERWISE NOTED. NOTE: HOME RUN SHALL BE FROM FIRST ELECTRICAL DEVICE BACKBOX IN CIRCUIT TO ELECTRICAL PANEL.

WIRING NOTES:	
A.	RACEWAYS AND WIRING ARE INDICATED ON DRAWINGS ONLY FOR SPECIFIC ROUTES OR SPECIAL CONDITIONS.
B.	WIRING AND CONDUIT SHALL BE REQUIRED BETWEEN ALL OUTLETS INDICATED WITH CIRCUIT NUMBERS AND PANEL DESIGNATIONS.
C.	ALTHOUGH ALL FEEDER AND BRANCH CIRCUIT WIRE AND CONDUIT IS NOT SHOWN, IT IS THE INTENT OF THESE DOCUMENTS THAT A COMPLETE FEEDER AND BRANCH CIRCUIT WIRING SYSTEM BE INSTALLED.
D.	WHEN THE COMBINING OF CIRCUITS OR HOMERUNS IS ALLOWED, RACEWAYS SHALL BE LIMITED TO SIX CURRENT CARRYING CONDUCTORS (THREE PHASE AND THREE NEUTRALS) AND GROUNDING CONDUCTOR UNLESS OTHERWISE INDICATED. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR EACH SINGLE PHASE CIRCUIT, EXCEPT FOR LIGHTING CIRCUITS, UNLESS AN OVERSIZED NEUTRAL IS SPECIFICALLY INDICATED.
E.	WIRING INDICATED BY CIRCUIT NUMBER SYMBOL SHALL INCLUDE A NEUTRAL WHEN THE LOAD SERVED HAS PROVISIONS FOR, OR REQUIRES A NEUTRAL, TYPICALLY, ALL FEEDERS AND BRANCH CIRCUITS WILL REQUIRE A NEUTRAL, EXCEPT MOST MOTOR CIRCUITS.
F.	WIRE AND RACEWAY SIZES INDICATED ON HOMERUNS SHALL BE CONTINUOUS THROUGHOUT THE CIRCUIT.
G.	RACEWAYS SHALL BE AS REQUIRED AND INDICATED IN THE SPECIFICATIONS.
H.	ALL SWITCH CONTROLS SHALL BE PROVIDED WITH WIRING AND CONDUIT AS REQUIRED.
I.	A SWITCH IN A SPACE SHALL CONTROL LIGHTING IN THAT SPACE UNLESS OTHERWISE INDICATED.

GENERAL NOTES:	
A.	THE SCOPE OF WORK SHALL INCLUDE PROVIDING ALL WORK INDICATED, AND COORDINATION WITH ALL TRADES. SCOPE OF WORK IS INDICATED ON THE CONTRACT DOCUMENTS INCLUDING THE DRAWINGS AND THE SPECIFICATIONS, WHICH ARE COMPLEMENTARY. WORK INDICATED IN ANY CONTRACT DOCUMENT SHALL BE CONSIDERED PART OF THE SCOPE OF WORK. IN GENERAL, WORK REQUIREMENTS ARE NOT INDICATED IN BOTH DOCUMENTS, WHERE DOCUMENTS CONFLICT WITH THEMSELVES OR WITH CODES AND REGULATIONS, PROVIDE THE HIGHER QUANTITY AND QUALITY AND FOLLOW THE STRICTER REQUIREMENTS.
B.	PROVIDE ALL WORK SPECIFIED OR DESCRIBED ON THE DRAWINGS AND IN THE SPECIFICATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE.
C.	COORDINATE WITH THE GENERAL CONTRACTOR, OTHER TRADES AND MANUFACTURER'S EQUIPMENT AND MAKE ALL FINAL CONNECTIONS AS REQUIRED, I.E., POWER, CONTROL, INTERLOCK, ETC.
D.	ELECTRICAL WORK SHALL BE IN ACCORD

GENERAL LIGHTING NOTES:

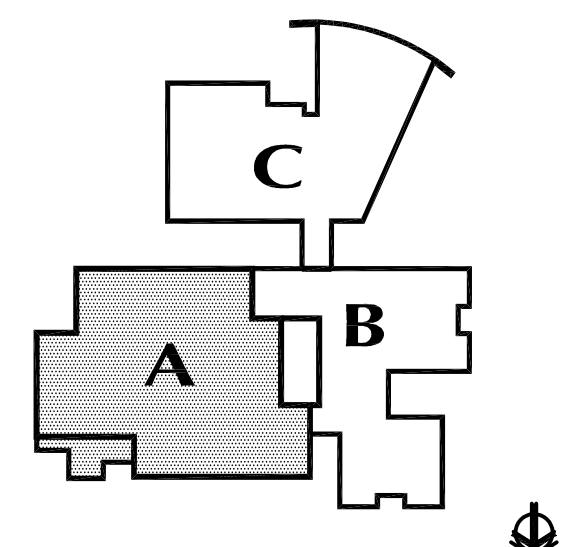
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "S0,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED TO THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, #10G, 3/4" C TO PANEL DESIGNATED.
- TEST SWITCHES FOR REMOTE BATTERY UNITS LOCATED IN UNFINISHED AREAS SHALL BE LOCATED AT BATTERY UNIT. TEST SWITCHES FOR BATTERY UNITS LOCATED ABOVE ACCESSIBLE CEILINGS OR IN FINISHED AREAS SHALL BE LOCATED AT THE BATTERY UNIT OR PART OF MASTER TEST SWITCH CONTROL UNIT. REFER TO FLOOR PLAN AND DETAIL ON DWG. #E3.01 FOR NOTATION.
- TYPICAL FOR UNDERCABINET LIGHTING WHERE SHOWN, CONNECT TO LOCAL NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.
- TOILET ROOM LIGHTING SHALL BE WIRED THROUGH CEILING MOUNTED OCCUPANCY SENSOR AS SHOWN. POWER PACK SHALL CONTAIN (2) CONTACTS. (1) TO SERVE THE EMERGENCY BRANCH CIRCUIT AND (1) TO SERVE THE NORMAL BRANCH CIRCUIT. ALL LIGHTS IN ROOM SHALL ENERGIZE UPON ACTIVATION OF OCCUPANCY SENSOR. REFER TO WIRING DIAGRAM, DWG #E3.01.



DRAWING NOTES:  
A. CONNECT DISPLAY CASE LIGHT FIXTURES TO LOCAL CORRIDOR "NORMAL POWER" LIGHTING CIRCUIT.

REFER TO ELEVATOR MACHINE ROOM PART PLAN, DRAWING #E1.02 FOR ADDITIONAL ELECTRICAL REQUIREMENTS

MASTER BATTERY UNIT TEST SWITCH STATION FOR EMERGENCY BATTERY UNITS SERVING (4) TYPE 'OB' FIXTURES ALONG NORTH WALL. REFER TO DETAIL ON DWG. #E3.01.



KEY PLAN  
FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SITE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

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# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

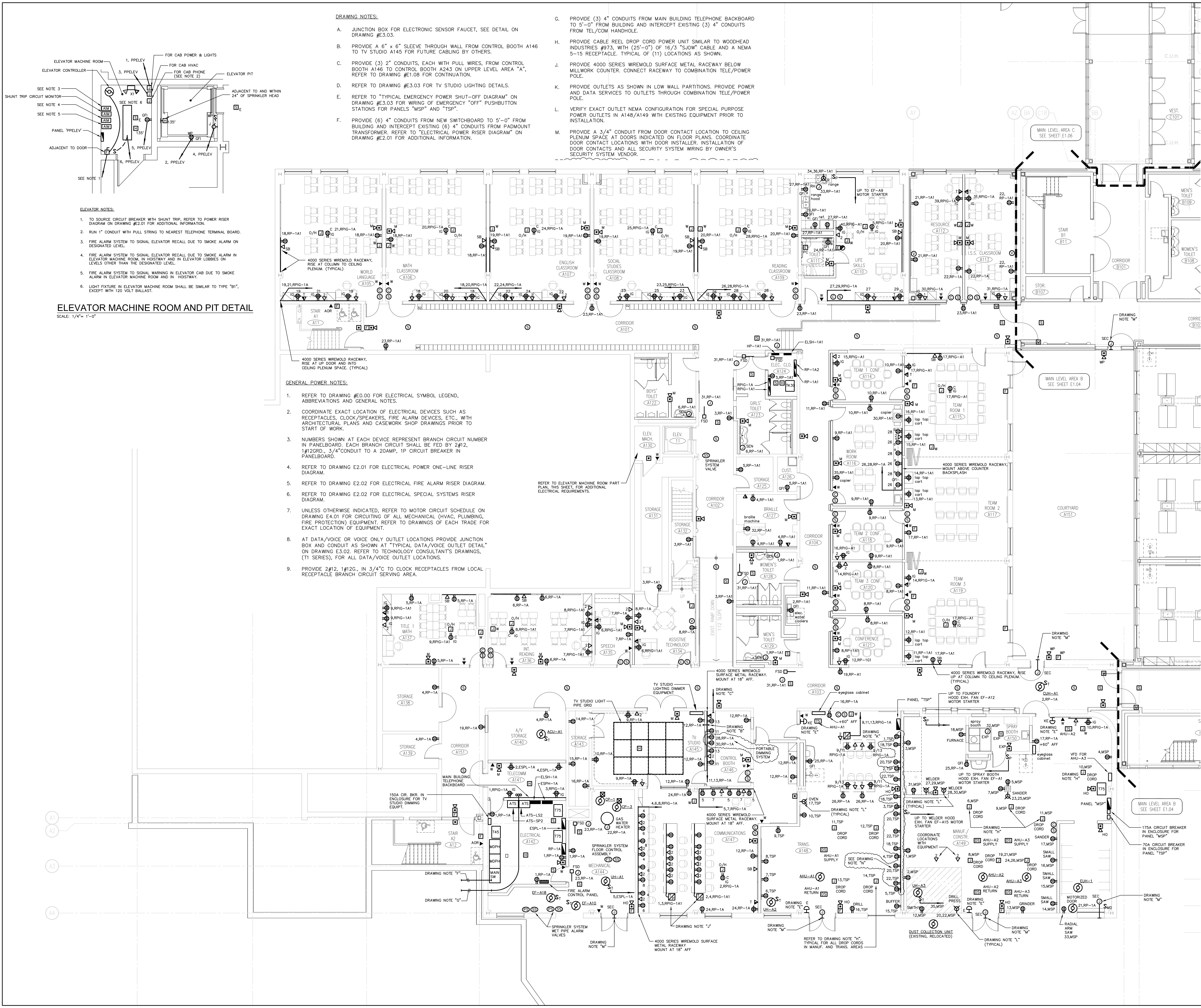
HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



DRAWN BY: BPCW/RLG  
CHECKED BY: MWF  
SCALE: 1/8"=1'-0"  
**MAIN LEVEL LIGHTING PLAN AREA-A**

PROJECT NO.: 00049  
DRAWING NO.:  
DATE: SEPTEMBER 9, 2002  
**E1.01**



**DRAWING NOTES:**

- A. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING #E3.03.
- B. PROVIDE A 6" x 6" SLEEVE THROUGH WALL FROM CONTROL BOOTH A146 TO TV STUDIO A145 FOR FUTURE CABLING BY OTHERS.
- C. PROVIDE (3) 2" CONDUITS, EACH WITH PULL WIRES, FROM CONTROL BOOTH A146 TO CONTROL BOOTH A243 ON UPPER LEVEL AREA "A", REFER TO DRAWING #E1.08 FOR CONTINUATION.
- D. REFER TO DRAWING #E3.03 FOR TV STUDIO LIGHTING DETAILS.
- E. REFER TO "TYPICAL EMERGENCY POWER SHUT-OFF DIAGRAM" ON DRAWING #E3.03 FOR WIRING OF EMERGENCY "OFF" PUSHBUTTON STATIONS FOR PANELS "MSP" AND "TSP".
- F. PROVIDE (6) 4" CONDUITS FROM NEW SWITCHBOARD TO 5'-0" FROM BUILDING AND INTERCEPT EXISTING (6) 4" CONDUITS FROM PADMOUNT TRANSFORMER, REFER TO "ELECTRICAL POWER RISER DIAGRAM" ON DRAWING #E2.01 FOR ADDITIONAL INFORMATION.
- G. PROVIDE (3) 4" CONDUITS FROM MAIN BUILDING TELEPHONE BACKBOARD TO 5'-0" FROM BUILDING AND INTERCEPT EXISTING (3) 4" CONDUITS FROM TEL/COM HANDOFF.
- H. PROVIDE CABLE REEL DROP CORD POWER UNIT SIMILAR TO WOODHEAD INDUSTRIES #973, WITH (25'-0") OF 16/3 "SLOW" CABLE AND A NEMA 5-15 RECEPTACLE, TYPICAL OF (11) LOCATIONS AS SHOWN.
- J. PROVIDE 4000 SERIES WIREMOLD SURFACE METAL RACEWAY BELOW MILLWORK COUNTER, CONNECT RACEWAY TO COMBINATION TELE/POWER POLE.
- K. PROVIDE OUTLETS AS SHOWN IN LOW WALL PARTITIONS, PROVIDE POWER AND DATA SERVICES TO OUTLETS THROUGH COMBINATION TELE/POWER POLE.
- L. VERIFY EXACT OUTLET NEMA CONFIGURATION FOR SPECIAL PURPOSE POWER OUTLETS IN A148/A149 WITH EXISTING EQUIPMENT PRIOR TO INSTALLATION.
- M. PROVIDE A 3/4" CONDUIT FROM DOOR CONTACT LOCATION TO CEILING PLENUM SPACE AT DOORS INDICATED ON FLOOR PLANS, COORDINATE DOOR CONTACT LOCATIONS WITH DOOR INSTALLER, INSTALLATION OF DOOR CONTACTS AND ALL SECURITY SYSTEM WIRING BY OWNER'S SECURITY SYSTEM VENDOR.

**ELEVATOR NOTES:**

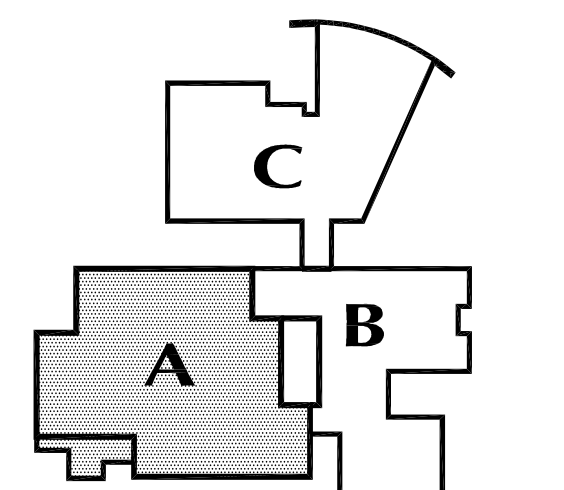
- 1. TO SOURCE CIRCUIT BREAKER WITH SHUNT TRIP, REFER TO POWER RISER DIAGRAM ON DRAWING #E2.01 FOR ADDITIONAL INFORMATION.
- 2. RUN 1" CONDUIT WITH PULL STRING TO NEAREST TELEPHONE TERMINAL BOARD.
- 3. FIRE ALARM SYSTEM TO SIGNAL ELEVATOR RECALL DUE TO SMOKE ALARM ON DESIGNATED LEVEL.
- 4. FIRE ALARM SYSTEM TO SIGNAL ELEVATOR RECALL DUE TO SMOKE ALARM IN ELEVATOR MACHINE ROOM, IN HOISTWAY AND IN ELEVATOR LOBBIES ON LEVELS OTHER THAN THE DESIGNATED LEVEL.
- 5. FIRE ALARM SYSTEM TO SIGNAL WARNING IN ELEVATOR CAB DUE TO SMOKE ALARM IN ELEVATOR MACHINE ROOM AND IN HOISTWAY.
- 6. LIGHT FIXTURE IN ELEVATOR MACHINE ROOM SHALL BE SIMILAR TO TYPE "B1", EXCEPT WITH 120 VOLT BALLAST.

**ELEVATOR MACHINE ROOM AND PIT DETAIL**  
SCALE: 1/4" = 1'-0"

**GENERAL POWER NOTES:**

- 1. REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- 2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- 3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD, EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD, 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- 4. REFER TO DRAWING E2.01 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- 5. REFER TO DRAWING E2.02 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- 6. REFER TO DRAWING E2.02 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- 7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT, REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- 8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02, REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR ALL DATA/VOICE OUTLET LOCATIONS.
- 9. PROVIDE 2#12, 1#12G, IN 3/4" C TO CLOCK RECEPTACLES FROM LOCAL RECEPTACLE BRANCH CIRCUIT SERVING AREA.

**KEY PLAN**



FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: RO.01 & RO.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**ADDITIONS AND RENOVATIONS**  
**RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT  
06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2890 (860) 228-0361

DRAWN BY: BPCW CHECKED BY: MWF SCALE: 1/8" = 1'-0"

**MAIN LEVEL POWER PLAN AREA-A**

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E1.02**

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**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "S0,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.
- TEST SWITCHES FOR REMOTE BATTERY UNITS LOCATED IN UNFINISHED AREAS SHALL BE LOCATED AT BATTERY UNIT. TEST SWITCHES FOR BATTERY UNITS LOCATED ABOVE ACCESSIBLE CEILINGS OR IN FINISHED AREAS SHALL BE LOCATED AT THE BATTERY UNIT OR PART OF MASTER TEST SWITCH CONTROL UNIT. REFER TO FLOOR PLAN AND DETAIL ON DWG. #E.3.01 FOR NOTATION.
- TYPICAL FOR UNDERCABINET LIGHTING WHERE SHOWN, CONNECT TO LOCAL NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.
- TOILET ROOM LIGHTING SHALL BE WIRED THROUGH CEILING MOUNTED OCCUPANCY SENSOR AS SHOWN. POWER PACK SHALL CONTAIN (2) CONTACTS, (1) TO SERVE THE EMERGENCY BRANCH CIRCUIT AND (1) TO SERVE THE NORMAL BRANCH CIRCUIT. ALL LIGHTS IN ROOM SHALL ENERGIZE UPON ACTIVATION OF OCCUPANCY SENSOR. REFER TO WIRING DIAGRAM, DWG #E.3.01.

**DRAWING NOTES:**  
 A. AS PART OF PROJECT ALTERNATE #1, THE STUD PARTITION INDICATED WILL BE REPLACED WITH A MOVEABLE PARTITION. IF ALTERNATE #1 IS IMPLEMENTED THE ELECTRICAL CONTRACTOR SHALL PROVIDE EXIT LIGHTS AT DOORS AS SHOWN.

**KEY PLAN**  
 FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

**REVISIONS**

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT  
 06248  
 STATE PROJECT NO. 208-0018 N/EA/RR

**VANZELM HEYWOOD & SHADFORD INC.**  
 MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
 28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
 TEL (860) 521-4329 FAX (860) 521-9620  
 vZHS PROJECT NUMBER: 2000155.01



416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
 DRAWN BY: BPCW  
 CHECKED BY: RLG  
 SCALE: 1/8"=1'-0"

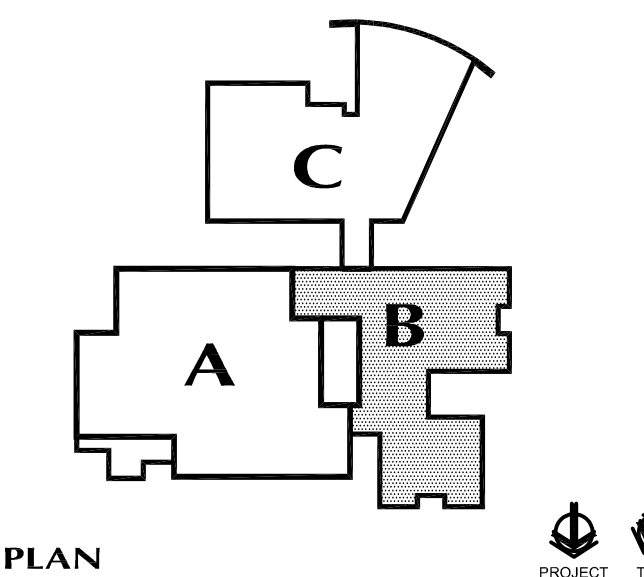
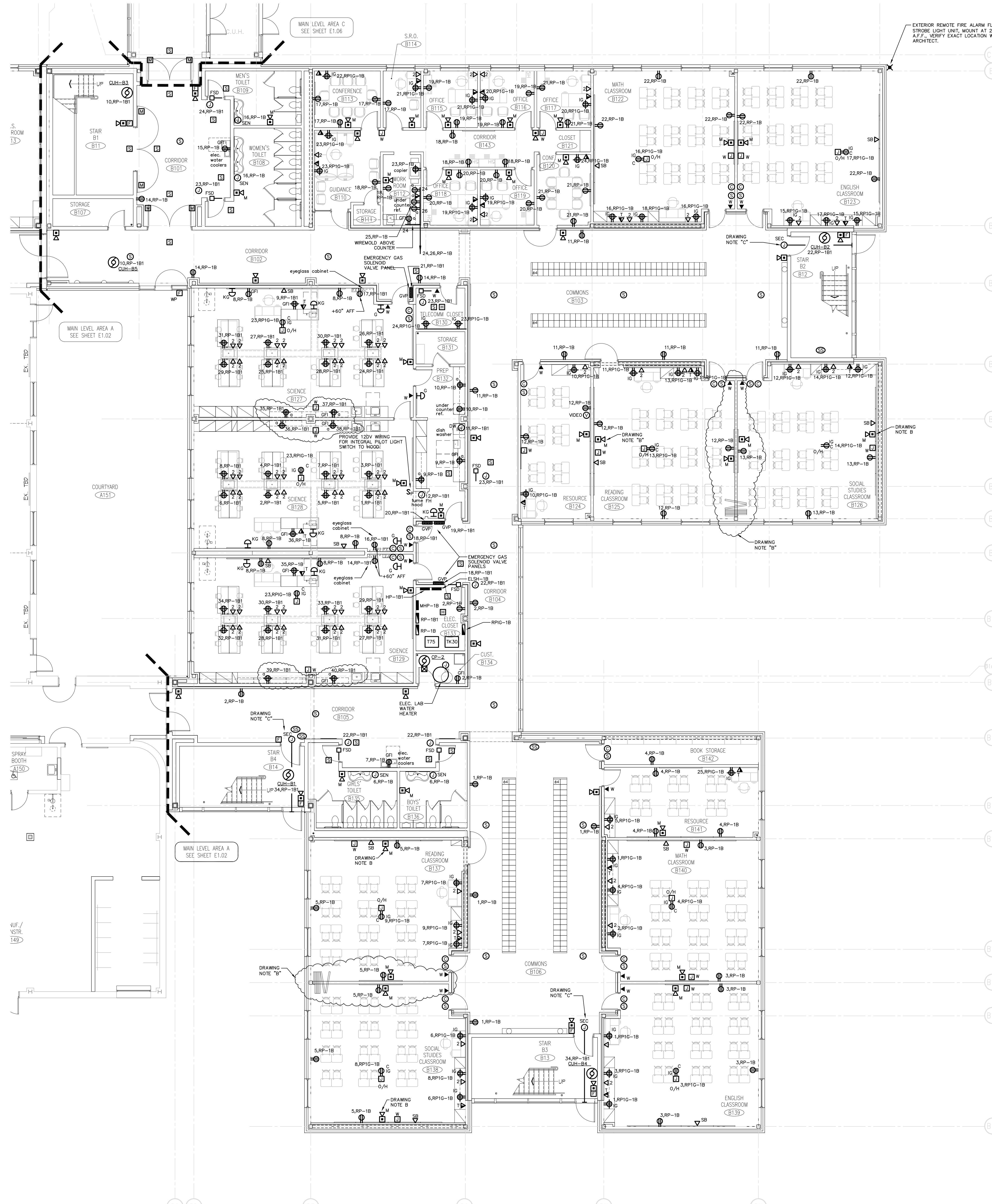
## MAIN LEVEL LIGHTING PLAN AREA-B

GENERAL POWER NOTES:

- REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- REFER TO DRAWING E2.01 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- REFER TO DRAWING E2.02 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- REFER TO DRAWING E2.02 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR ALL DATA/VOICE OUTLET LOCATIONS.
- PROVIDE 2#12, 1#12G., IN 3/4" CONDUIT TO CLOCK RECEPTACLES FROM LOCAL RECEPTACLE BRANCH CIRCUIT SERVING AREA.

DRAWING NOTES:

- JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING #E3.03.
- AS PART OF PROJECT ALTERNATE #1, THE STUD PARTITION INDICATED WILL BE REPLACED WITH A MOVABLE PARTITION. IF ALTERNATE #1 IS IMPLEMENTED THE ELECTRICAL CONTRACTOR SHALL DELETE DULPEX POWER OUTLETS ON WALL TO BE REPLACED AND RELOCATE FIRE ALARM AUDIO/VISUAL INDICATING UNIT TO OPPOSITE WALL OF ROOM AS SHOWN.
- PROVIDE A 3/4" CONDUIT FROM DOOR CONTACT LOCATION TO CEILING PLENUM SPACE AT DOORS INDICATED ON FLOOR PLANS. COORDINATE DOOR CONTACT LOCATIONS WITH DOOR INSTALLER. INSTALLATION OF DOOR CONTACTS AND ALL SECURITY WIRING BY OWNER'S SECURITY SYSTEM VENDOR.



FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS R0.01 & R0.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1B
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



## KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: RLG SCALE: 1/8"=1'-0"  
CHECKED BY: MWF

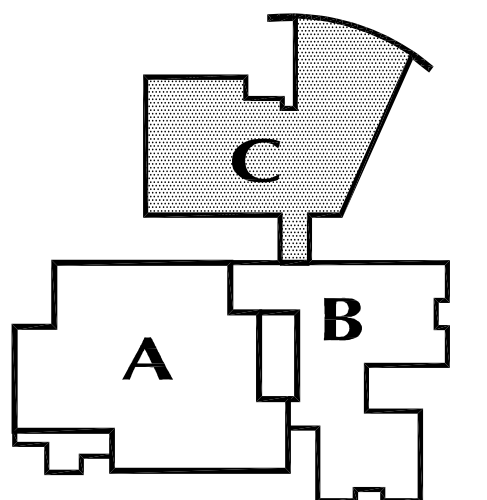
# MAIN LEVEL POWER PLAN AREA-B

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E1.04**

**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "SO,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4" C TO PANEL DESIGNATED.
- TEST SWITCHES FOR REMOTE BATTERY UNITS LOCATED IN UNFINISHED AREAS SHALL BE LOCATED AT BATTERY UNIT. TEST SWITCHES FOR BATTERY UNITS LOCATED ABOVE ACCESSIBLE CEILINGS OR IN FINISHED AREAS SHALL BE LOCATED AT THE BATTERY UNIT OR PART OF MASTER TEST SWITCH CONTROL UNIT. REFER TO FLOOR PLAN AND DETAIL ON DWG. #E3.01 FOR NOTATION.
- TYPICAL FOR UNDERCABINET LIGHTING WHERE SHOWN, CONNECT TO LOCAL NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.
- TOILET ROOM LIGHTING SHALL BE WIRED THROUGH CEILING MOUNTED OCCUPANCY SENSOR AS SHOWN. POWER PACK SHALL CONTAIN (2) CONTACTS: (1) TO SERVE THE EMERGENCY BRANCH CIRCUIT AND (1) TO SERVE THE NORMAL BRANCH CIRCUIT. ALL LIGHTS IN ROOM SHALL ENERGIZE UPON ACTIVATION OF OCCUPANCY SENSOR. REFER TO WIRING DIAGRAM, DWG. #E3.01.



**KEY PLAN**

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

DATE	MARK	DESCRIPTION
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SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT  
06248

STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**

28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

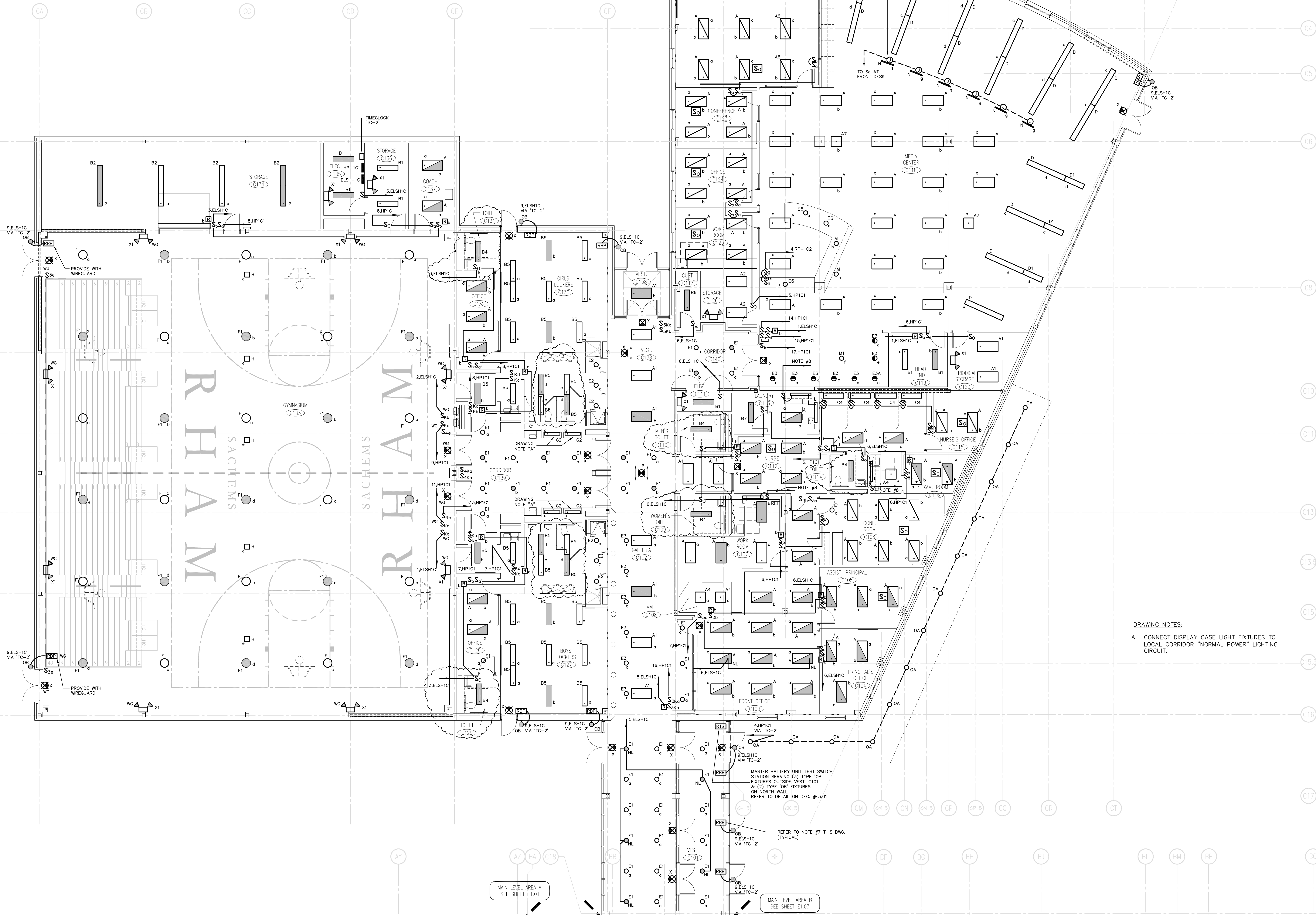
416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361

DRAWN BY: BPCW CHECKED BY: MWF SCALE: 1/8"=1'-0"

## MAIN LEVEL LIGHTING PLAN AREA-C

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E1.05**



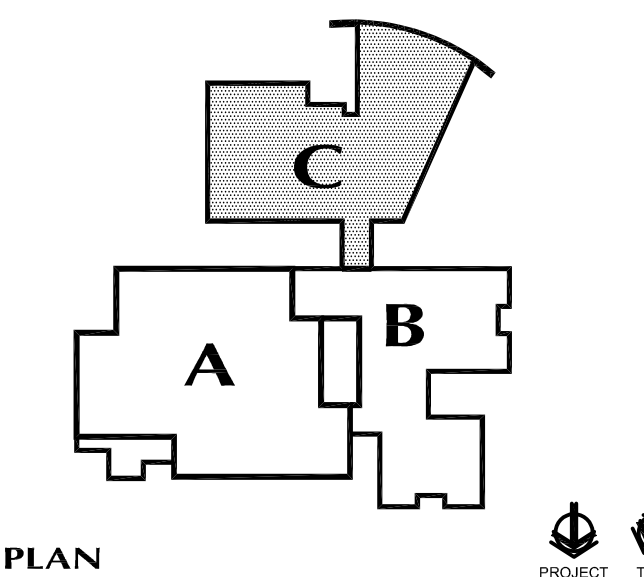


**DRAWING NOTES:**

- A. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING #E3.03.
- B. REFER TO "TYPICAL ELECTRICAL OPERATOR WIRING DIAGRAM FOR GYM BACKBOARD, PARTITION CURTAIN OR BLEACHER" ON DRAWING #E3.03 FOR ADDITIONAL WIRING REQUIREMENTS.
- C. REFER TO "SCOREBOARD SERVICE DETAIL" ON DRAWING #E3.04 FOR ADDITIONAL SCOREBOARD WIRING INFORMATION.
- D. PROVIDE CLEAR LEXAN FLIP-UP COVERS AT FIRE ALARM MANUAL PULL STATIONS IN GYMNASIUM #C133. FLIP COVERS SHALL BE CONNECTED TO THE FIRE ALARM SYSTEM AND INDICATE "TROUBLE" ALARM AT FIRE ALARM CONTROL PANEL WHEN RAISED.
- E. AS PART OF PROJECT ALTERNATE #2, PROVIDE POWER TO (4) ADDITIONAL MOTORIZED BACKBOARD UNITS AND ASSOCIATED CONTROL SWITCHES.
- F. JUNCTION BOX AND WALL SWITCH FOR MOTORIZED PROJECTION SCREEN, SWITCH FURNISHED WITH SCREEN BY OTHERS, INSTALLED AND WIRED BY ELEC. CONTRACTOR.
- G. PROVIDE A SINGLE-GANG WALL BOX WITH BLANK STAINLESS STEEL PLATE AT FUTURE INTERCOM LOCATIONS INDICATED ON FLOOR PLAN. PROVIDE A 3/4" CONDUIT FROM BOX TO CEILING PLENUM SPACE IN FRONT OFFICE #C103. INSTALLATION OF INTERCOM AND ALL ASSOCIATED WIRING BY OWNER'S INTERCOM SYSTEM VENDOR.
- H. PROVIDE A 3/4" CONDUIT FROM DOOR CONTACT LOCATION TO CEILING PLENUM SPACE AT DOORS INDICATED ON FLOOR PLAN. COORDINATE DOOR CONTACT LOCATIONS WITH DOOR INSTALLER. INSTALLATION OF DOOR CONTACTS AND ALL ASSOCIATED SECURITY WIRING BY OWNER'S SYSTEM VENDOR.
- J. PROVIDE A 3/4" CONDUIT FROM ELECTRIC DOOR STRIKE LOCATION AT DOORS INDICATED TO CEILING PLENUM SPACE IN FRONT OFFICE #C103. COORDINATE ELECTRIC DOOR STRIKE LOCATIONS WITH DOOR INSTALLER. INSTALLATION OF ELECTRIC DOOR STRIKES AND ALL ASSOCIATED WIRING BY OWNER'S SECURITY SYSTEM VENDOR.
- K. PROVIDE (2) WEATHERPROOF JUNCTION BOXES AS SHOWN FOR SECURITY CAMERA. PROVIDE 120 VOLT POWER CIRCUIT TO ONE JUNCTION BOX. PROVIDE A 3/4" CONDUIT WITH PULL WIRE FROM SECOND JUNCTION BOX TO CEILING PLENUM SPACE. SECURITY CAMERA AND ALL ASSOCIATED CABLING AND CONNECTIONS SHALL BE PROVIDED BY SECURITY SYSTEM VENDOR. MOUNT BOXES AT +/- .18"-0" A.F.F., VERIFY EXACT LOCATION WITH ARCHITECT.

**GENERAL POWER NOTES:**

- 1. REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- 2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- 3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12GRD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- 4. REFER TO DRAWING E2.01 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- 5. REFER TO DRAWING E2.02 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- 6. REFER TO DRAWING E2.02 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- 7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
- 8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR ALL DATA/VOICE OUTLET LOCATIONS.
- 9. PROVIDE 2#12, 1#12GRD., IN 3/4" TO CLOCK RECEPTACLES FROM LOCAL RECEPTACLE BRANCH CIRCUIT SERVING AREA.



FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS R0.01 & R0.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BID
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

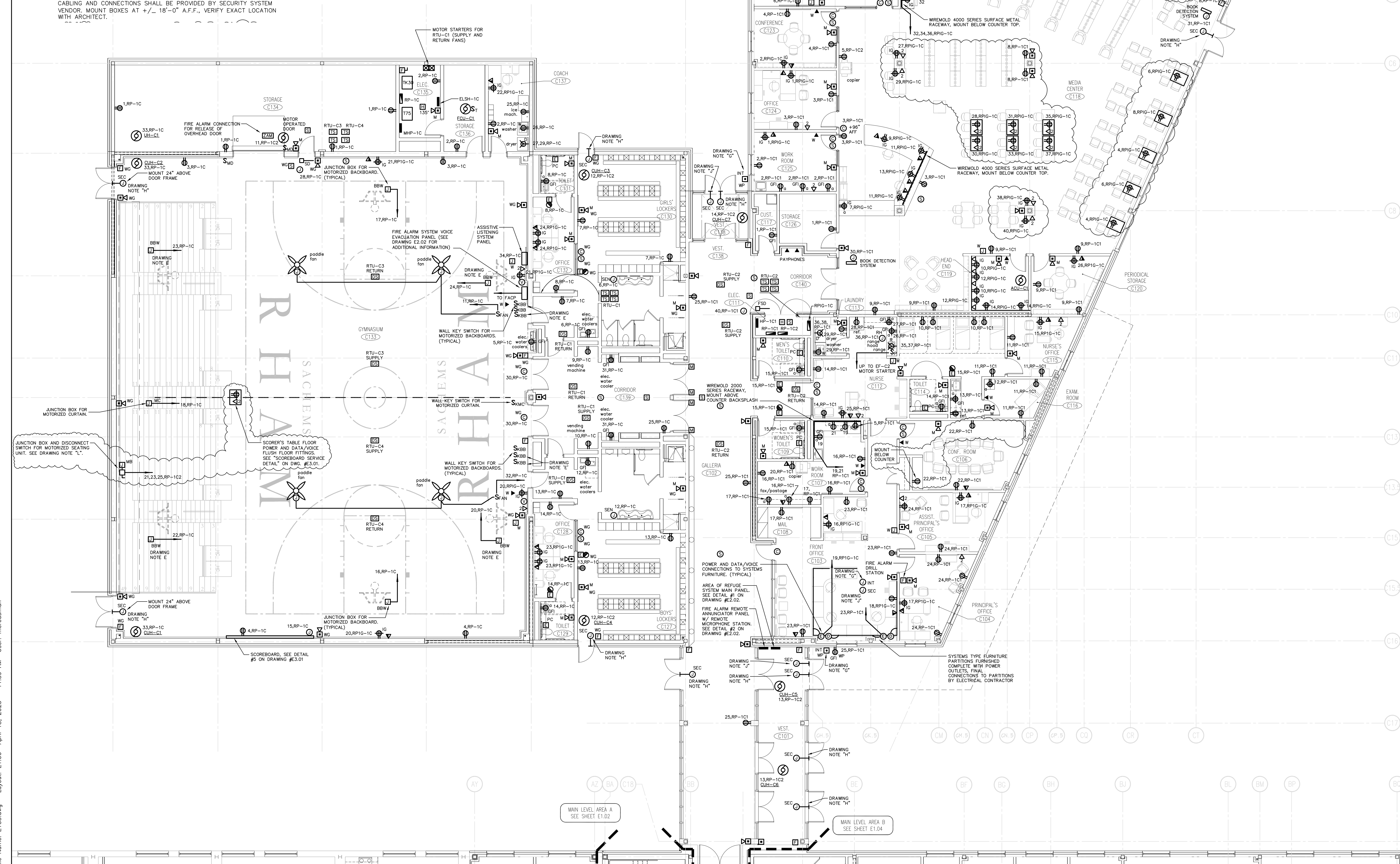
**VANZELM HEYWOOD & SHADFORD INC.**  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01

**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: BPCW/RLG SCALE: 1/8"=1'-0"  
CHECKED BY: MWF

## MAIN LEVEL POWER PLAN AREA-C

PROJECT NO.: 00049 DRAWING NO.:  
DATE: SEPTEMBER 9, 2002 **E1.06**



**DRAWING NOTES:**

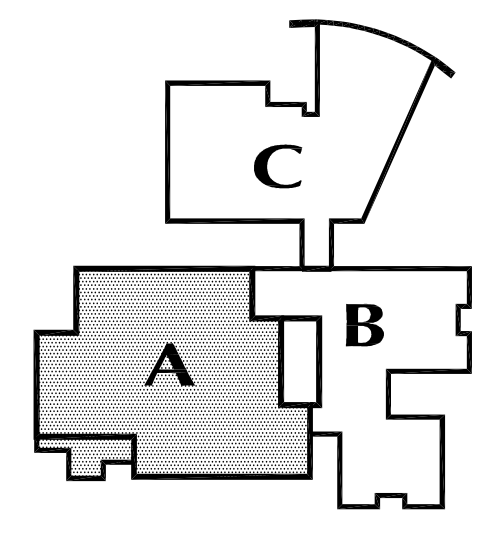
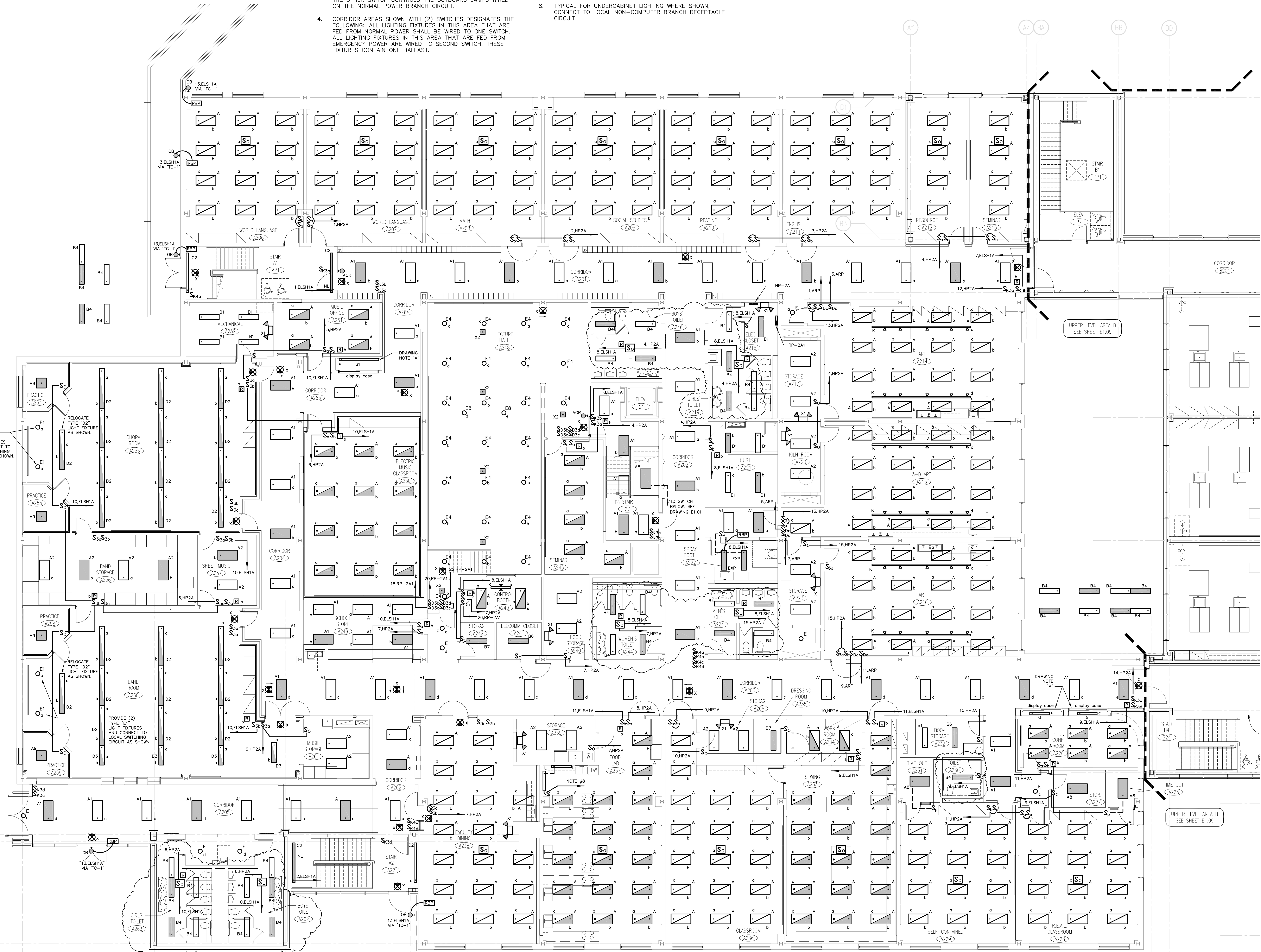
A. CONNECT DISPLAY CASE LIGHT FIXTURES TO LOCAL CORRIDOR "NORMAL POWER" LIGHTING CIRCUIT.

**GENERAL LIGHTING NOTES:**

- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
- SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "SO,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
- CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH; ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.

- COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
- ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, #100C, 3/4"C TO PANEL DESIGNATED.
- TEST SWITCHES FOR REMOTE BATTERY UNITS LOCATED IN UNFINISHED AREAS SHALL BE LOCATED AT BATTERY UNIT. TEST SWITCHES FOR BATTERY UNITS LOCATED ABOVE ACCESSIBLE CEILINGS OR IN FINISHED AREAS SHALL BE LOCATED AT THE BATTERY UNIT OR PART OF MASTER TEST SWITCH CONTROL UNIT. REFER TO FLOOR PLAN AND DETAIL ON DWG. #E3.01 FOR NOTATION.
- TYPICAL FOR UNDERCABINET LIGHTING WHERE SHOWN, CONNECT TO LOCAL NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.

- TOILET ROOM LIGHTING SHALL BE WIRED THROUGH CEILING MOUNTED OCCUPANCY SENSOR AS SHOWN. POWER PACK SHALL CONTAIN (2) CONTACTS. (1) TO SERVE THE EMERGENCY BRANCH CIRCUIT AND (1) TO SERVE THE NORMAL BRANCH CIRCUIT. ALL LIGHTS IN ROOM SHALL ENERGIZE UPON ACTIVATION OF OCCUPANCY SENSOR. REFER TO WIRING DIAGRAM, DWG. #E3.01.



**KEY PLAN**

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS #E0.01 & #E0.02

**REVISIONS**

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

**VANZELM HEYWOOD & SHADFORD INC.**  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01

# KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361

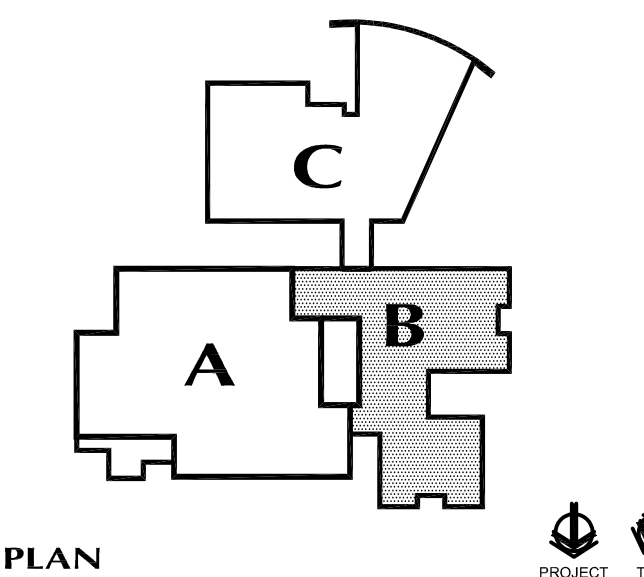
# UPPER LEVEL LIGHTING PLAN AREA-A

PROJECT NO.: 00049 DRAWING NO.:  
DATE: SEPTEMBER 9, 2002 **E1.07**

File Path: O:\2000\3000\155.01\Draws\Electric\ Layout: E1.07 April 18, 2003 - 12:01 PM User: mcreasman  
File Name: E242.dwg

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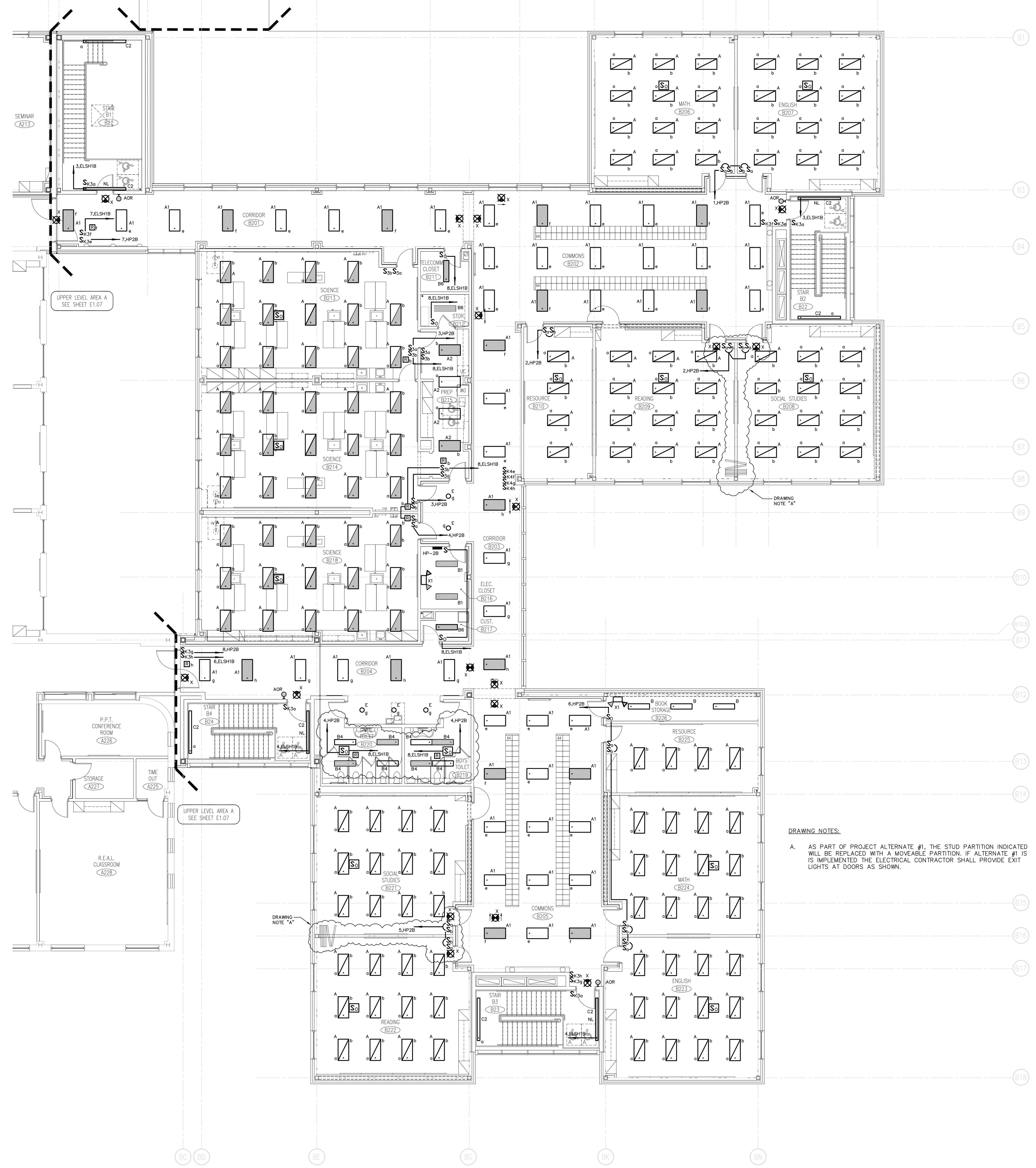
**KEY PLAN**

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

REVISIONS

DATE	MARK	DESCRIPTION
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SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

- GENERAL LIGHTING NOTES:**
- REFER TO DRAWING #E0.01 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
  - LIGHT FIXTURES NOTED BY THE SUBSCRIPT "NL" (NIGHT LIGHT) SHALL HAVE AT LEAST (2) TWO LAMPS WIRED FOR CONTINUOUS OPERATION.
  - SINGLE AREAS OR ROOMS SHOWN WITH (2) SWITCHES ["SS", "S3,S3", "SO,S"] DESIGNATES DUAL LEVEL SWITCHING WITH THE INBOARD LAMPS WIRED TO ONE SWITCH AND THE OUTBOARD LAMPS WIRED TO SECOND SWITCH. THIS OCCURS IN AREAS OR ROOMS WITH LIGHTING FIXTURES CONTAINING TWO BALLASTS. IN ROOMS WHERE EMERGENCY LIGHTING FIXTURES ARE DESIGNATED, ONE SWITCH CONTROLS THE INBOARD LAMPS THRU THE RELAY WIRED THE EMERGENCY BRANCH CIRCUIT; THE OTHER SWITCH CONTROLS THE OUTBOARD LAMPS WIRED ON THE NORMAL POWER BRANCH CIRCUIT.
  - CORRIDOR AREAS SHOWN WITH (2) SWITCHES DESIGNATES THE FOLLOWING: ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM NORMAL POWER SHALL BE WIRED TO ONE SWITCH. ALL LIGHTING FIXTURES IN THIS AREA THAT ARE FED FROM EMERGENCY POWER ARE WIRED TO SECOND SWITCH. THESE FIXTURES CONTAIN ONE BALLAST.
  - COORDINATE LIGHT FIXTURE LOCATIONS IN MECHANICAL ROOMS WITH MECHANICAL EQUIPMENT, DUCTWORK, PIPING, ETC., ADJUST FIXTURE LOCATIONS AS REQUIRED.
  - ALL EXTERIOR LIGHTING FIXTURES SHOWN ON FLOOR PLANS SHALL BE WIRED WITH 2#10, 1#10G, 3/4"C TO PANEL DESIGNATED.
  - TEST SWITCHES FOR REMOTE BATTERY UNITS LOCATED IN UNFINISHED AREAS SHALL BE LOCATED AT BATTERY UNIT. TEST SWITCHES FOR BATTERY UNITS LOCATED ABOVE ACCESSIBLE CEILINGS OR IN FINISHED AREAS SHALL BE LOCATED AT THE BATTERY UNIT OR PART OF MASTER TEST SWITCH CONTROL UNIT. REFER TO FLOOR PLAN AND DETAIL ON DWG. #E3.01 FOR NOTATION.
  - TYPICAL FOR UNDERCABINET LIGHTING WHERE SHOWN, CONNECT TO LOCAL NON-COMPUTER BRANCH RECEPTACLE CIRCUIT.
  - TOILET ROOM LIGHTING SHALL BE WIRED THROUGH CEILING MOUNTED OCCUPANCY SENSOR AS SHOWN. POWER PACK SHALL CONTAIN (2) CONTACTS: (1) TO SERVE THE EMERGENCY BRANCH CIRCUIT AND (1) TO SERVE THE NORMAL BRANCH CIRCUIT. ALL LIGHTS IN ROOM SHALL ENERGIZE UPON ACTIVATION OF OCCUPANCY SENSOR. REFER TO WIRING DIAGRAM, DWG. #E3.01.



**DRAWING NOTES:**

A. AS PART OF PROJECT ALTERNATE #1, THE STUD PARTITION INDICATED WILL BE REPLACED WITH A MOVEABLE PARTITION. IF ALTERNATE #1 IS IMPLEMENTED THE ELECTRICAL CONTRACTOR SHALL PROVIDE EXIT LIGHTS AT DOORS AS SHOWN.

# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT  
06248

STATE PROJECT NO. 208-0018 N/EA/RR

**VANZELM HEYWOOD & SHADFORD INC.**  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



DRAWN BY: BPCW  
CHECKED BY: MWF

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

## UPPER LEVEL LIGHTING PLAN AREA-B

PROJECT NO.: 00049 DRAWING NO.:

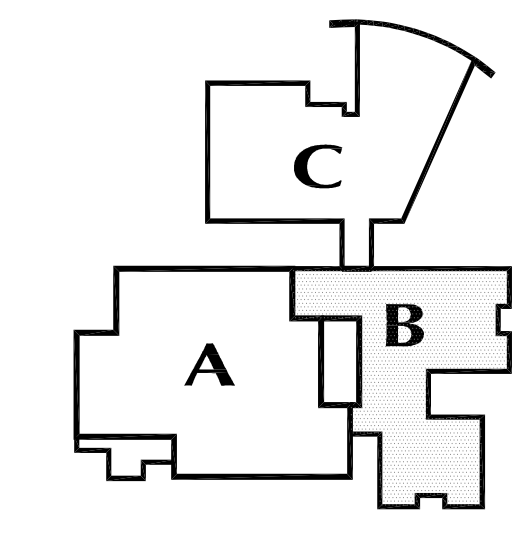
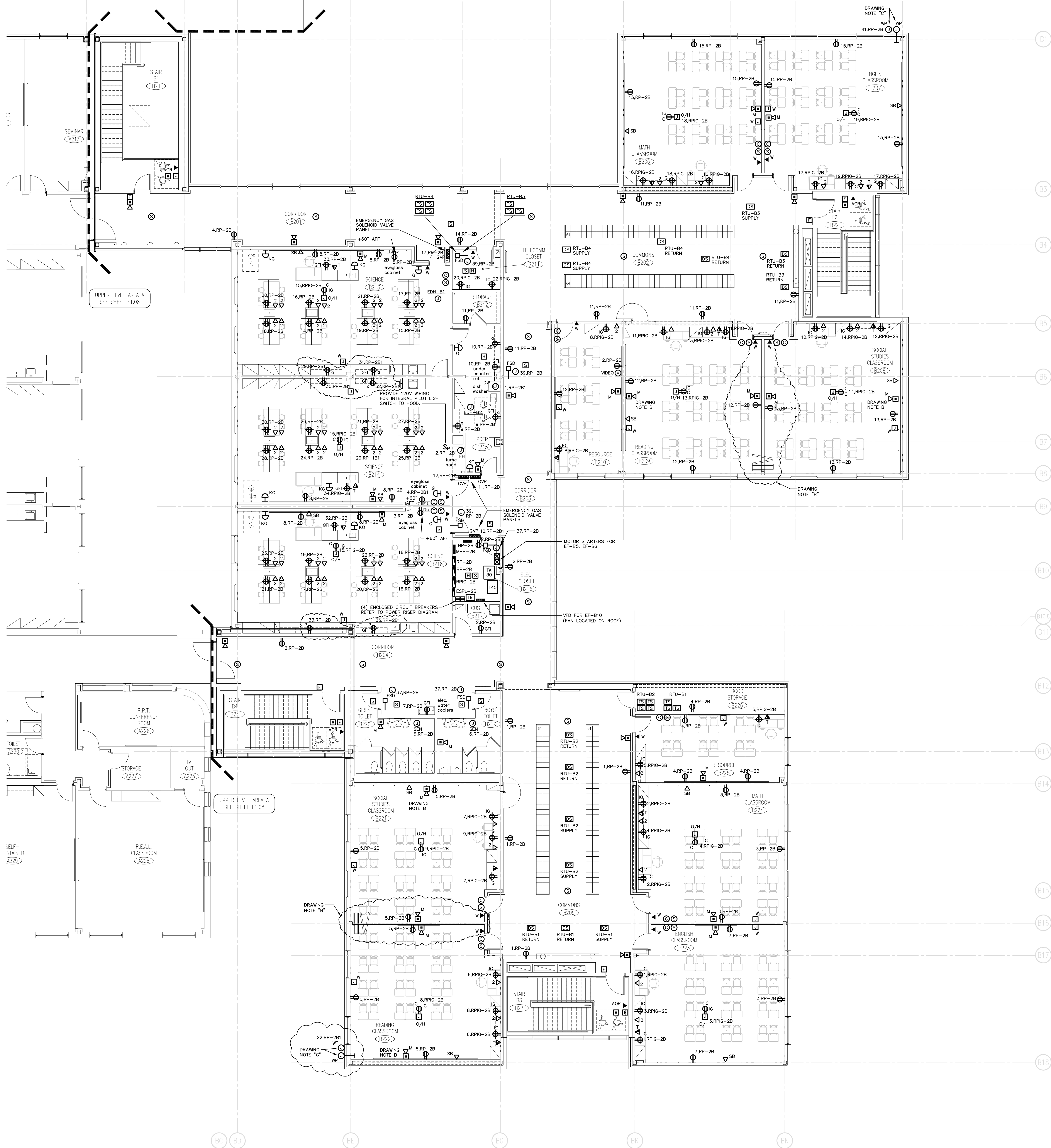
DATE: SEPTEMBER 9, 2002 **E1.09**

**DRAWING NOTES:**

- A. JUNCTION BOX FOR ELECTRONIC SENSOR FAUCET, SEE DETAIL ON DRAWING #E3.03.
- B. AS PART OF PROJECT ALTERNATE #1, THE STUD PARTITION INDICATED WILL BE REPLACED WITH A MOVEABLE PARTITION. IF ALTERNATE #1 IS IMPLEMENTED THE ELECTRICAL CONTRACTOR SHALL DELETE DUPLEX POWER OUTLETS ON WALL TO BE REPLACED AND RELOCATE FIRE ALARM AUDIO/VISUAL INDICATING UNIT TO OPPOSITE WALL OF ROOM AS SHOWN.
- C. PROVIDE (2) WEATHERPROOF JUNCTION BOXES AS SHOWN FOR SECURITY CAMERA. PROVIDE 120 VOLT POWER CIRCUIT TO ONE JUNCTION BOX. PROVIDE A 3/4" CONDUIT WITH PULL WIRE FROM SECOND JUNCTION BOX TO CEILING PLENUM SPACE. SECURITY CAMERA AND ALL ASSOCIATED CABLING AND CONNECTIONS SHALL BE PROVIDED BY SECURITY SYSTEM VENDOR. MOUNT BOXES AT +/- 24"-0" A.F.F., VERIFY EXACT LOCATION WITH ARCHITECT.

**GENERAL POWER NOTES:**

1. REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
3. NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#20RD, 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
4. REFER TO DRAWING E2.01 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
5. REFER TO DRAWING E2.02 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
6. REFER TO DRAWING E2.02 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
7. UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.
8. AT DATA/VOICE OR VOICE ONLY OUTLET LOCATIONS PROVIDE JUNCTION BOX AND CONDUIT AS SHOWN AT "TYPICAL DATA/VOICE OUTLET DETAIL" ON DRAWING E3.02. REFER TO TECHNOLOGY CONSULTANT'S DRAWINGS, (T1 SERIES), FOR ALL DATA/VOICE OUTLET LOCATIONS.
9. PROVIDE 2#12, 1#120, IN 3/4" C TO CLOCK RECEPTACLES FROM LOCAL RECEPTACLE BRANCH CIRCUIT SERVING AREA.



**KEY PLAN**

FOR ALL ABBREVIATIONS, SYMBOL, LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

**REVISIONS**

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

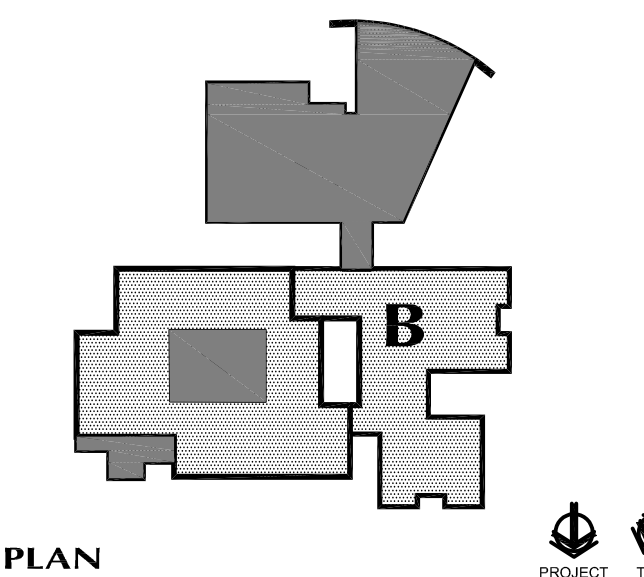
HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

**VANZELM HEYWOOD & SHADFORD INC.**  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: RLG  
CHECKED BY: MWF  
**UPPER LEVEL POWER PLAN AREA-B**

PROJECT NO.: 00049 DRAWING NO.:  
DATE: SEPTEMBER 9, 2002 **E1.10**



KEY PLAN

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BID
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



GENERAL POWER NOTES:

- REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- COORDINATE EXACT LOCATION OF ELECTRICAL DEVICES SUCH AS RECEPTACLES, CLOCK/SPEAKERS, FIRE ALARM DEVICES, ETC., WITH ARCHITECTURAL PLANS AND CASEWORK SHOP DRAWINGS PRIOR TO START OF WORK.
- NUMBERS SHOWN AT EACH DEVICE REPRESENT BRANCH CIRCUIT NUMBER IN PANELBOARD. EACH BRANCH CIRCUIT SHALL BE FED BY 2#12, 1#12RD., 3/4" CONDUIT TO A 20AMP, 1P CIRCUIT BREAKER IN PANELBOARD.
- REFER TO DRAWING E2.01 FOR ELECTRICAL POWER ONE-LINE RISER DIAGRAM.
- REFER TO DRAWING E2.02 FOR ELECTRICAL FIRE ALARM RISER DIAGRAM.
- REFER TO DRAWING E2.02 FOR ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAM.
- UNLESS OTHERWISE INDICATED, REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR CIRCUITING OF ALL MECHANICAL (HVAC, PLUMBING, FIRE PROTECTION) EQUIPMENT. REFER TO DRAWINGS OF EACH TRADE FOR EXACT LOCATION OF EQUIPMENT.

DRAWING NOTES:

- PROVIDE 20AMP 1P GROUND-FAULT CIRCUIT BREAKERS FOR ALL HEAT TRACE CIRCUITS INDICATED.

# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01

**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

DRAWN BY: BPCB CHECKED BY: HMF SCALE: 1/16"=1'-0"

## ELECTRICAL OVERALL ROOF PLAN

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E1.11**

**K - RATED, THREE PHASE TRANSFORMERS**

XFMR NUMBER	480V. PRIMARY (Δ) 3PH, 3W. O.C.P.D.	PRIMARY FEEDER	120/208V. SECONDARY (Y) 3PH, 4W. O.C.P.D.	SECONDARY FEEDER	GROUND & CONDUIT	KVA RATING
TK15	30A	3#10, 1#10 G., 3/4" C.	50A	3#6, 1#1 N., 1#6 G., 1#6 I.G., 1-1/4" C.	1#6, 3/4" C.	15
TK30	60A	3#6, 1#6 G., 1" C.	100A	3#2, 1#3/0 N., 1#6 G., 1#6 I.G., 2" C.	3/4" C.	30
TK45	100A	3#4, 1#6 G., 1-1/4" C.	150A	3#1/0, 2#1/0 N., 1#6 G., 1#6 I.G., 2" C.	1#6, 3/4" C.	45
TK75	150A	3#1, 1#6 G., 1-1/2" C.	225A	3#250KCMIL, 2#250KCMIL N., 1#2 G., 1#4 I.G., 3" C.	1#2, 3/4" C.	75
TK12.5	200A	3#2/0, 1#6 G., 2" C.	400A	3#500KCMIL, 2#500KCMIL N., 1#1/0 G., 1#3 I.G., 4" C.	1#1/0, 1" C.	112.5
TK150	250A	3#4/0, 1#4 G., 2" C.	500A	2 SETS OF 3#250KCMIL, 2#250KCMIL N., 1#1/0 G., 1#2 I.G., 3" C.	1#1/0, 1" C.	150
TK225	400A	3#500KCMIL, 1#3 G., 3" C.	800A	2 SETS OF 3#500KCMIL, 2#500KCMIL N., 1#2/0 G., 1#1/0 I.G., 4" C.	1#2/0, 1" C.	225
TK300	600A	2 SETS OF 3#4/0, 1#1 G., 2" C.	1000A	3 SETS OF 3#400KCMIL, 2#400KCMIL N., 1#3/0 G., 1#2/0 I.G., 3-1/2" C.	1#3/0, 1" C.	300

**K-RATED TRANSFORMER NOTES:**

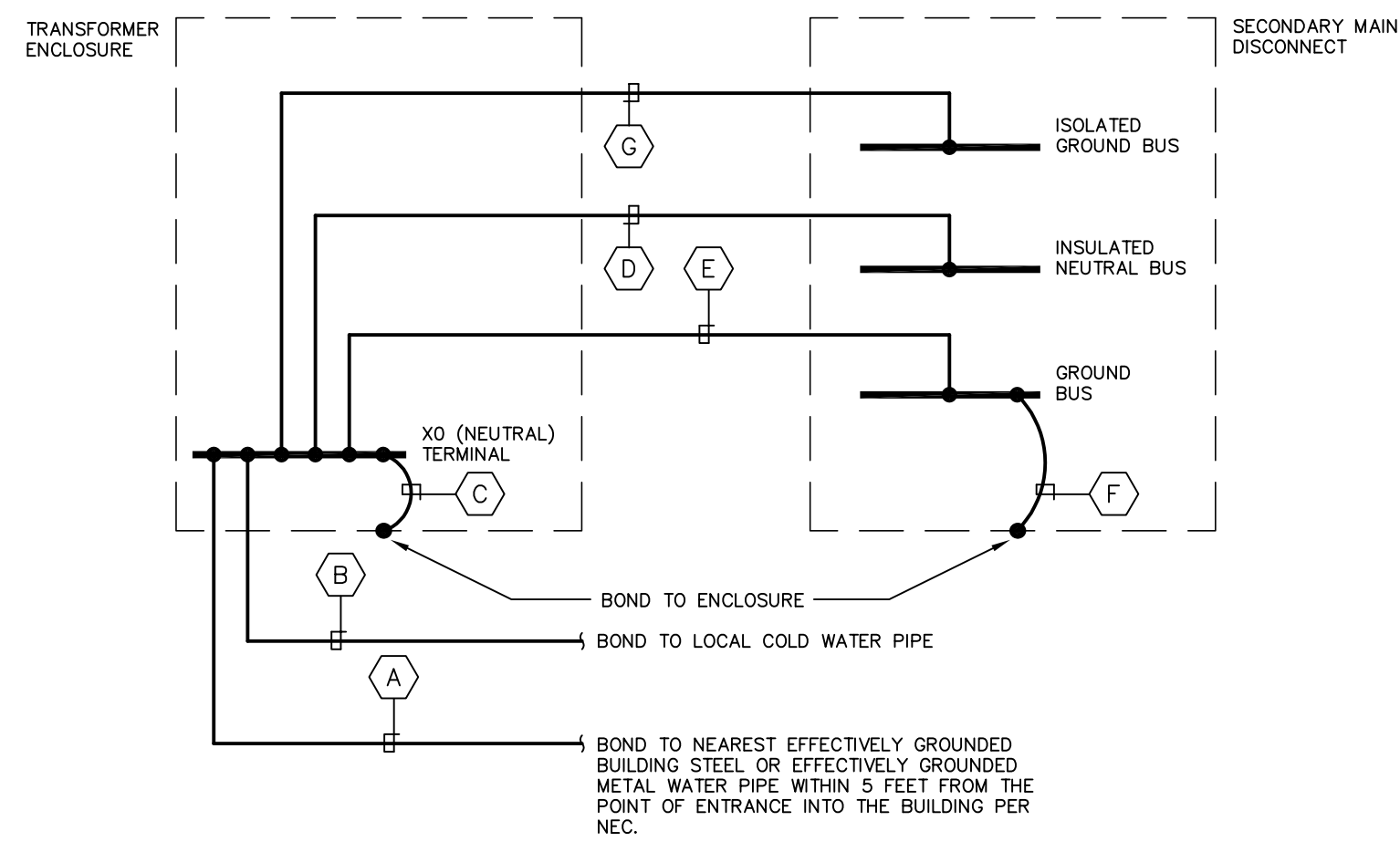
- TK1. UNLESS OTHERWISE INDICATED ALL TRANSFORMERS HAVE A "K" RATING OF 13, REFER TO SPECIFICATIONS.
- TK2. CONNECT GROUNDING ELECTRODE CONDUCTOR TO THE NEAREST OF THE FOLLOWING:
  - AN EFFECTIVELY GROUNDING STRUCTURAL METAL MEMBER OF THE STRUCTURE.
  - AN EFFECTIVELY GROUNDING METAL WATER PIPE WITHIN 5 FEET FROM THE POINT OF ENTRANCE INTO THE BUILDING.
- TK3. NEUTRAL CONDUCTOR IS RATED 200 PERCENT FOR HARMONIC CURRENTS.
- TK4. REFER TO DISTRIBUTION TRANSFORMER GROUNDING DETAIL.

**THREE PHASE TRANSFORMERS**

XFMR NUMBER	480V. PRIMARY (Δ) 3PH, 3W. O.C.P.D.	PRIMARY FEEDER	120/208V. SECONDARY (Y) 3PH, 4W. O.C.P.D.	SECONDARY FEEDER	GROUND & CONDUIT	KVA RATING
T15	30A	3#10, 1#10 G., 3/4" C.	50A	3#6, 1#6 N., 1#6 G., 1-1/4" C.	1#6, 3/4" C.	15
T30	60A	3#6, 1#6 G., 1" C.	100A	3#1, 1#1 N., 1#6 G., 1-1/2" C.	1#6, 3/4" C.	30
T45	100A	3#4, 1#6 G., 1-1/4" C.	150A	3#1/0, 1#1/0 N., 1#6 G., 2" C.	1#6, 3/4" C.	45
T75	150A	3#1, 1#6 G., 1-1/2" C.	225A	3#250KCMIL, 1#250KCMIL N., 1#2 G., 2-1/2" C.	1#6, 3/4" C.	75
T112.5	200A	3#2/0, 1#6 G., 2" C.	400A	3#500KCMIL, 1#500KCMIL N., 1#1/0 G., 3-1/2" C.	1#6, 3/4" C.	112.5
T150	250A	3#4/0, 1#4 G., 2" C.	500A	2 SETS OF 3#250KCMIL, 1#250KCMIL N., 1#1/0 G., 3-1/2" C.	1#6, 3/4" C.	150
T225	400A	3#500KCMIL, 1#3 G., 3" C.	800A	2 SETS OF 3#500KCMIL, 1#500KCMIL N., 1#2/0 G., 3-1/2" C.	1#2/0, 1" C.	225
T300	600A	2 SETS OF 3#4/0, 1#1 G., 2" C.	1000A	3 SETS OF 3#400KCMIL, 1#400KCMIL N., 1#3/0 G., 3" C.	1#2/0, 1" C.	300
T500	800A	2 SETS OF 3#500KCMIL, 1#1/0 G., 3" C.	1600A	5 SETS OF 3#400KCMIL, 1#400KCMIL N., 1#3/0 I.G., 3-1/2" C.	1#3/0, 1" C.	500

**TRANSFORMER NOTES:**

- T1. CONNECT GROUNDING ELECTRODE CONDUCTOR TO THE NEAREST OF THE FOLLOWING:
  - AN EFFECTIVELY GROUNDING STRUCTURAL METAL MEMBER OF THE STRUCTURE.
  - AN EFFECTIVELY GROUNDING METAL WATER PIPE WITHIN 5 FT. FROM THE POINT OF ENTRANCE INTO THE BUILDING.
- T2. REFER TO DISTRIBUTION TRANSFORMER GROUNDING DETAIL.

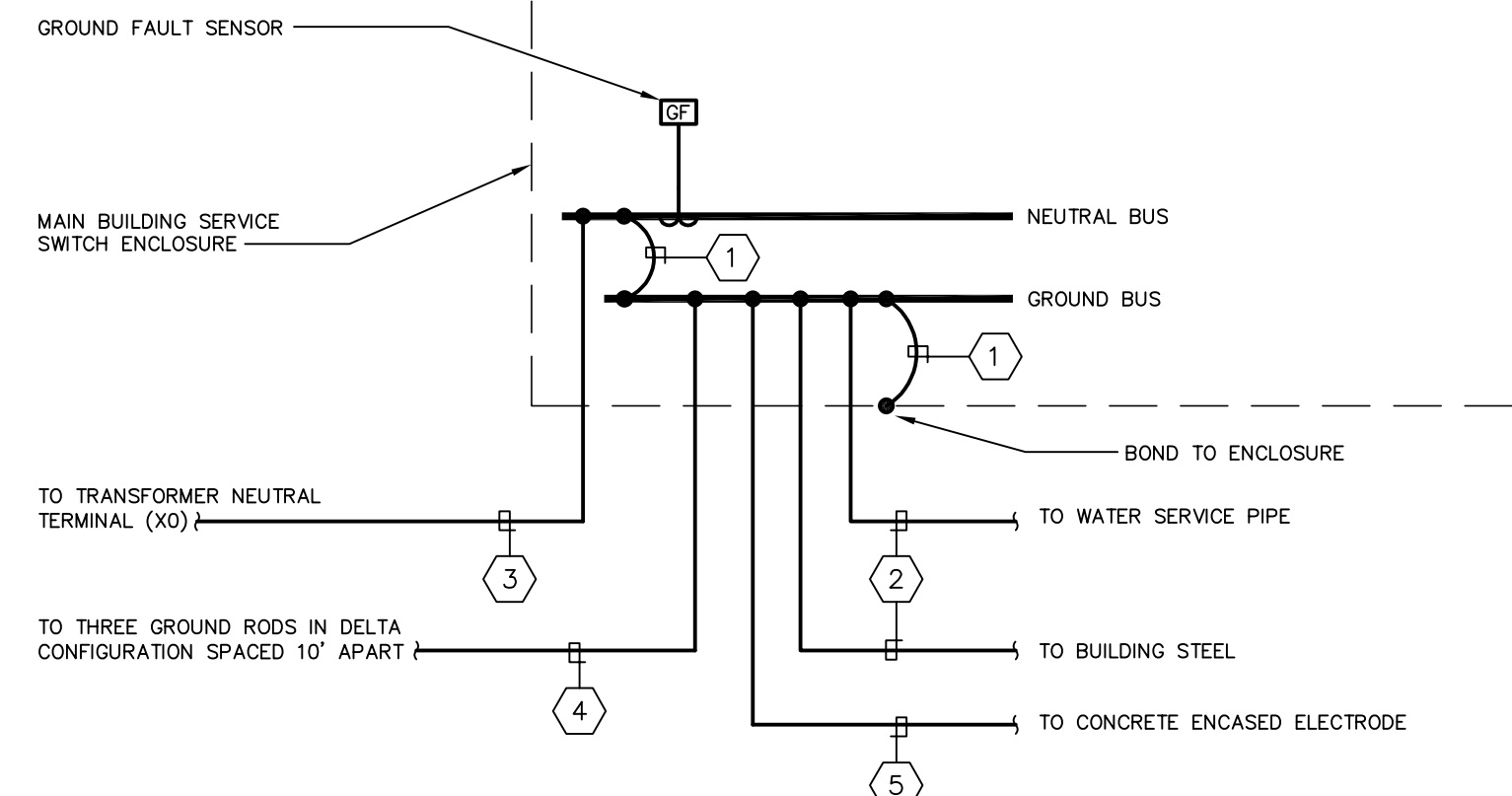


- A** GROUNDING ELECTRODE CONDUCTOR (REFER TO 'GROUND & CONDUIT' COLUMN IN TRANSFORMER SCHEDULES FOR CONDUCTOR AND CONDUIT SIZE).
- B** BONDING JUMPER (REFER TO 'GROUND & CONDUIT' COLUMN IN TRANSFORMER SCHEDULES FOR CONDUCTOR AND CONDUIT SIZE).
- C** BONDING JUMPER (REFER TO 'GROUND & CONDUIT' COLUMN IN TRANSFORMER SCHEDULES FOR CONDUCTOR SIZE).
- D** GROUNDED (NEUTRAL) CONDUCTOR (REFER TO 'SECONDARY FEEDER' COLUMN FOR CONDUCTOR SIZE).
- E** MAIN BONDING JUMPER CONDUCTOR (REFER TO 'GROUND & CONDUIT' COLUMN IN TRANSFORMER SCHEDULES FOR CONDUCTOR SIZE). MAIN BONDING JUMPER CONDUCTOR TO BE RUN IN EACH CONDUIT CONTAINING PHASE CONDUCTORS BETWEEN TRANSFORMER AND MAIN SECONDARY DISCONNECT.
- F** BONDING JUMPER (REFER TO 'GROUND & CONDUIT' COLUMN IN TRANSFORMER SCHEDULES FOR CONDUCTOR SIZE).
- G** ISOLATED EQUIPMENT GROUND CONDUCTOR (REFER TO 'SECONDARY FEEDER' COLUMN IN TRANSFORMER SCHEDULES FOR ISOLATED GROUND CONDUCTOR SIZE).

**DISTRIBUTION TRANSFORMER GROUNDING DETAIL**

N. T. S.

ISOLATED GROUND BUS AND ASSOCIATED ISOLATED EQUIPMENT GROUND CONDUCTOR SHALL BE PROVIDED BETWEEN K-RATED TRANSFORMERS AND SECONDARY MAIN DISCONNECT SERVING ELECTRONIC GRADE PANELBOARDS WITH INTEGRAL TVSS.



- 1** MAIN BONDING JUMPER: 300Kcmil
- 2** GROUNDING ELECTRODE SYSTEM BONDING JUMPER CONDUCTOR: #3/0 AWG
- 3** GROUNDED (NEUTRAL) CONDUCTOR (REFER TO DISTRIBUTION ONE-LINE FOR SIZE)
- 4** SUPPLEMENTAL GROUNDING ELECTRODE BONDING JUMPER CONDUCTOR: #3/0 AWG
- 5** GROUNDING ELECTRODE SYSTEM BONDING JUMPER CONDUCTOR: #4 AWG

**MAIN SERVICE GROUNDING DETAIL**

N. T. S.

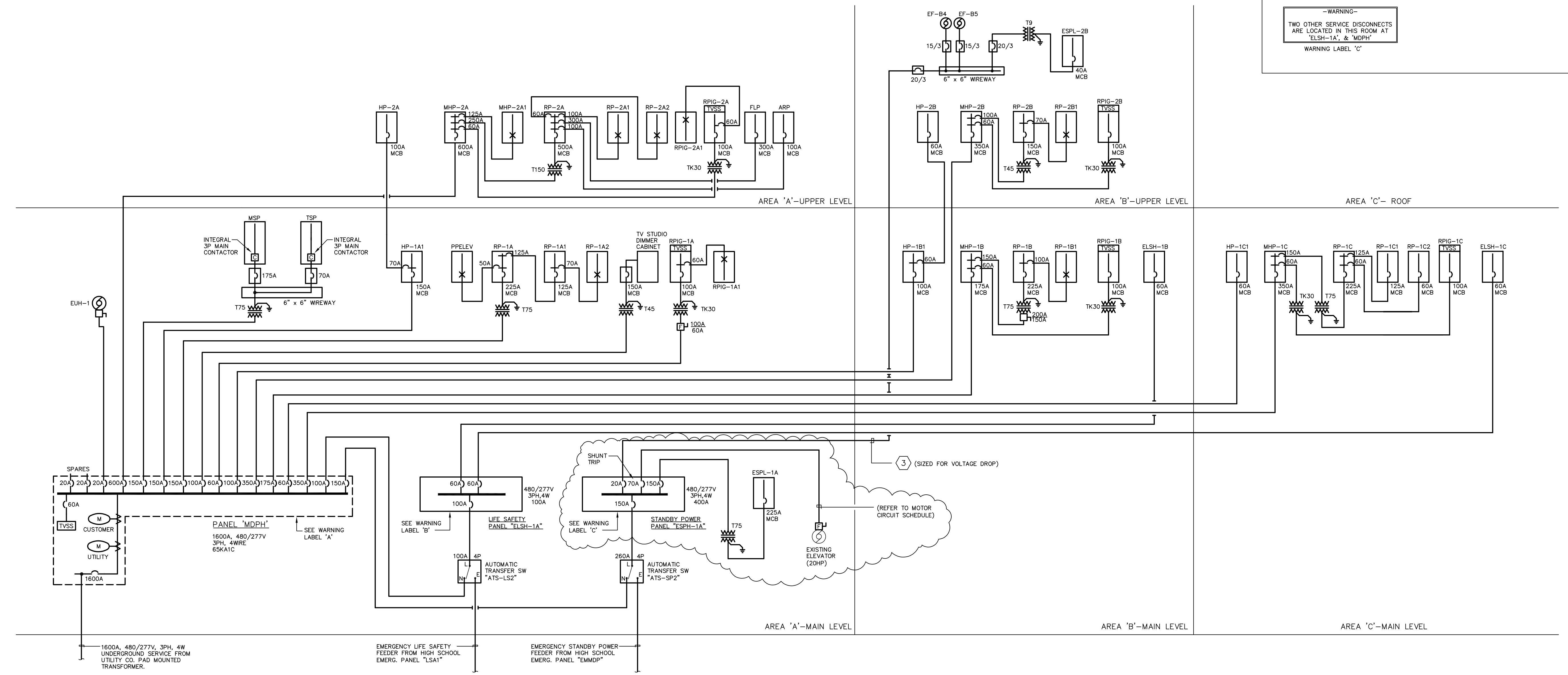
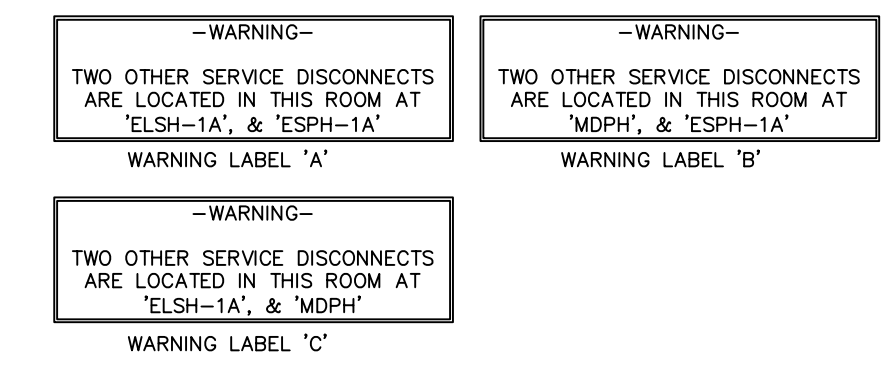
**3 PHASE CIRCUIT SIZE SCHEDULE**

CIRCUIT SYMBOL	(COPPER CONDUCTORS)		CIRCUIT OR OVERCURRENT RATING SPOLE
	CONDUCTORS (3 PHASE, 3 WIRE) WITH GROUND	CONDUCTORS (3 PHASE, 4 WIRE) WITH GROUND	
(1)	3#12#1#20G.	3/4"	4#12#1#20G.
(2)	3#12#1#25G.	3/4"	4#12#1#25G.
(3)	3#10#1#16G.	3/4"	4#10#1#16G.
(4)	3#10#1#20G.	3/4"	4#10#1#20G.
(5)	3#8#1#16G.	3/4"	4#8#1#16G.
(6)	3#8#1#20G.	3/4"	4#8#1#20G.
(7)	3#6#1#16G.	3/4"	4#6#1#16G.
(8)	3#6#1#20G.	3/4"	4#6#1#20G.
(9)	3#4#1#16G.	3/4"	4#4#1#16G.
(10)	3#4#1#20G.	3/4"	4#4#1#20G.
(11)	3#3#1#16G.	3/4"	4#3#1#16G.
(12)	3#3#1#20G.	3/4"	4#3#1#20G.
(13)	3#1/0#1#16G.	1 1/2"	4#1/0#1#16G.
(14)	3#1/0#1#20G.	1 1/2"	4#1/0#1#20G.
(15)	3#2/0#1#16G.	2"	4#2/0#1#16G.
(16)	3#2/0#1#20G.	2"	4#2/0#1#20G.
(17)	3#2/0#1#25G.	2"	4#2/0#1#25G.
(18)	3#2/0#1#30G.	2"	4#2/0#1#30G.
(19)	3#2/0#1#35G.	2"	4#2/0#1#35G.
(20)	3#2/0#1#40G.	2 1/2"	4#2/0#1#40G.
(21)	3#2/0#1#45G.	2 1/2"	4#2/0#1#45G.
(22)	3#2/0#1#50G.	2 1/2"	4#2/0#1#50G.
(23)	3#2/0#1#55G.	2 1/2"	4#2/0#1#55G.
(24)	3#2/0#1#60G.	2 1/2"	4#2/0#1#60G.
(25)	3#2/0#1#65G.	2 1/2"	4#2/0#1#65G.
(26)	3#2/0#1#70G.	2 1/2"	4#2/0#1#70G.
(27)	3#2/0#1#75G.	2 1/2"	4#2/0#1#75G.
(28)	3#2/0#1#80G.	2 1/2"	4#2/0#1#80G.
(29)	3#2/0#1#85G.	2 1/2"	4#2/0#1#85G.
(30)	3#2/0#1#90G.	2 1/2"	4#2/0#1#90G.
(31)	3#2/0#1#95G.	2 1/2"	4#2/0#1#95G.
(32)	3#2/0#1#100G.	2 1/2"	4#2/0#1#100G.
(33)	3#2/0#1#105G.	2 1/2"	4#2/0#1#105G.
(34)	3#2/0#1#110G.	2 1/2"	4#2/0#1#110G.
(35)	3#2/0#1#115G.	2 1/2"	4#2/0#1#115G.
(36)	3#2/0#1#120G.	2 1/2"	4#2/0#1#120G.
(37)	3#2/0#1#125G.	2 1/2"	4#2/0#1#125G.
(38)	3#2/0#1#130G.	2 1/2"	4#2/0#1#130G.
(39)	3#2/0#1#135G.	2 1/2"	4#2/0#1#135G.
(40)	3#2/0#1#140G.	2 1/2"	4#2/0#1#140G.
(41)	3#2/0#1#145G.	2 1/2"	4#2/0#1#145G.
(42)	3#2/0#1#150G.	2 1/2"	4#2/0#1#150G.
(43)	3#2/0#1#155G.	2 1/2"	4#2/0#1#155G.
(44)	3#2/0#1#160G.	2 1/2"	4#2/0#1#160G.
(45)	3#2/0#1#165G.	2 1/2"	4#2/0#1#165G.
(46)	3#2/0#1#170G.	2 1/2"	4#2/0#1#170G.
(47)	3#2/0#1#175G.	2 1/2"	4#2/0#1#175G.
(48)	3#2/0#1#180G.	2 1/2"	4#2/0#1#180G.
(49)	3#2/0#1#185G.	2 1/2"	4#2/0#1#185G.
(50)	3#2/0#1#190G.	2 1/2"	4#2/0#1#190G.
(51)	3#2/0#1#195G.	2 1/2"	4#2/0#1#195G.
(52)	3#2/0#1#200G.	2 1/2"	4#2/0#1#200G.
(53)	3#2/0#1#205G.	2 1/2"	4#2/0#1#205G.
(54)	3#2/0#1#210G.	2 1/2"	4#2/0#1#210G.
(55)	3#2/0#1#215G.	2 1/2"	4#2/0#1#215G.
(56)	3#2/0#1#220G.	2 1/2"	4#2/0#1#220G.
(57)	3#2/0#1#225G.	2 1/2"	4#2/0#1#225G.
(58)	3#2/0#1#230G.	2 1/2"	4#2/0#1#230G.
(59)	3#2/0#1#235G.	2 1/2"	4#2/0#1#235G.
(60)	3#2/0#1#240G.	2 1/2"	4#2/0#1#240G.
(61)	3#2/0#1#245G.	2 1/2"	4#2/0#1#245G.
(62)	3#2/0#1#250G.	2 1/2"	4#2/0#1#250G.
(63)	3#2/0#1#255G.	2 1/2"	4#2/0#1#255G.
(64)	3#2/0#1#260G.	2 1/2"	4#2/0#1#260G.
(65)	3#2/0#1#265G.	2 1/2"	4#2/0#1#265G.
(66)	3#2/0#1#270G.	2 1/2"	4#2/0#1#270G.
(67)	3#2/0#1#275G.	2 1/2"	4#2/0#1#275G.
(68)	3#2/0#1#280G.	2 1/2"	4#2/0#1#280G.
(69)	3#2/0#1#285G.	2 1/2"	4#2/0#1#285G.
(70)	3#2/0#1#290G.	2 1/2"	4#2/0#1#290G.
(71)	3#2/0#1#295G.	2 1/2"	4#2/0#1#295G.
(72)	3#2/0#1#300G.	2 1/2"	4#2/0#1#300G.

- CONDUIT SIZE SCHEDULE NOTES:**
- CS1. UNLESS OTHERWISE INDICATED, CONDUCTOR SIZES SHALL MATCH THE SIZE INDICATED ABOVE FOR THE APPLICABLE OVERCURRENT DEVICE. PROVIDE LARGER CIRCUIT WHERE INDICATED.
  - CS2. PROVIDE MINIMUM SIZE CONDUIT INDICATED IN THE SPECIFICATIONS OR ON THE DRAWINGS.
  - CS3. PROVIDE A WIRE CIRCUIT UNLESS DEVICE SERVED DOES NOT HAVE PROVISIONS FOR A NEUTRAL CONNECTION.
  - CS4. MINIMUM SIZE CONDUIT UNDERGROUND IS 4 INCH EXCEPT 1 INCH FOR SITE BRANCH CIRCUITS FOR LIGHTING AND MISCELLANEOUS POWER AND SYSTEMS, UNLESS SPECIFICALLY INDICATED OTHERWISE.
  - CS5. PROVIDE TYPE OF RACEWAY OR CABLE AS INDICATED IN SPECIFICATIONS OR ON THE DRAWINGS.

**IDENTIFICATION OF SERVICE DISCONNECTS:**

- A. PROVIDE A PERMANENT PLAQUE OR DIRECTORY ON EACH SERVICE DISCONNECT TO INDICATE WHERE THE OTHER DISCONNECTS THAT FEED THE BUILDING ARE LOCATED TO COMPLY WITH NEC ARTICLE 230-2 (E).
- B. PROVIDE RED LAMICOID LABEL ATTACH TO COVER OF SERVICE SWITCHES WITH SCREWS OR RIVETS, TO READ AS INDICATED ON WARNING LABELS SHOWN BELOW. REFER TO SPECIFICATIONS SECTION 16050 FOR FURTHER INFORMATION.



**POWER RISER DIAGRAM**

N. T. S.

- POWER RISER NOTES:**
- 1. REFER TO PANEL SCHEDULES ON DRAWING #E4.02 FOR ADDITIONAL CIRCUIT BREAKER REQUIREMENTS FOR PANELS.
  - 2. ALL CIRCUIT BREAKERS INDICATED ARE 3 POLE UNLESS NOTED OTHERWISE.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: RO.01 & RO.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SIZE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
OCTOBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**ADDITIONS AND RENOVATIONS**  
**RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

**VANZELM HEYWOOD & SHADFORD INC.**  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: JMJ/RL6  
CHECKED BY: HMF

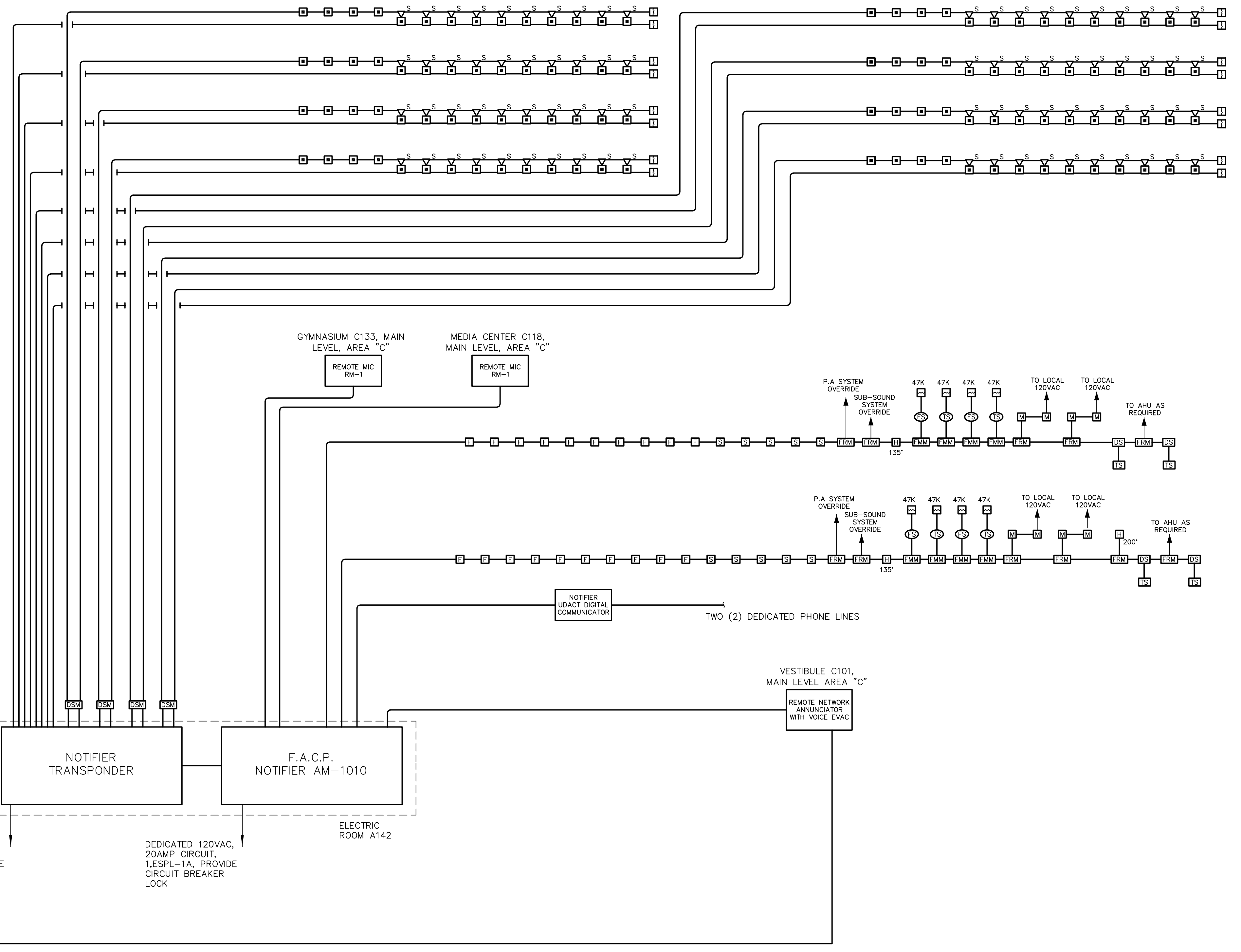
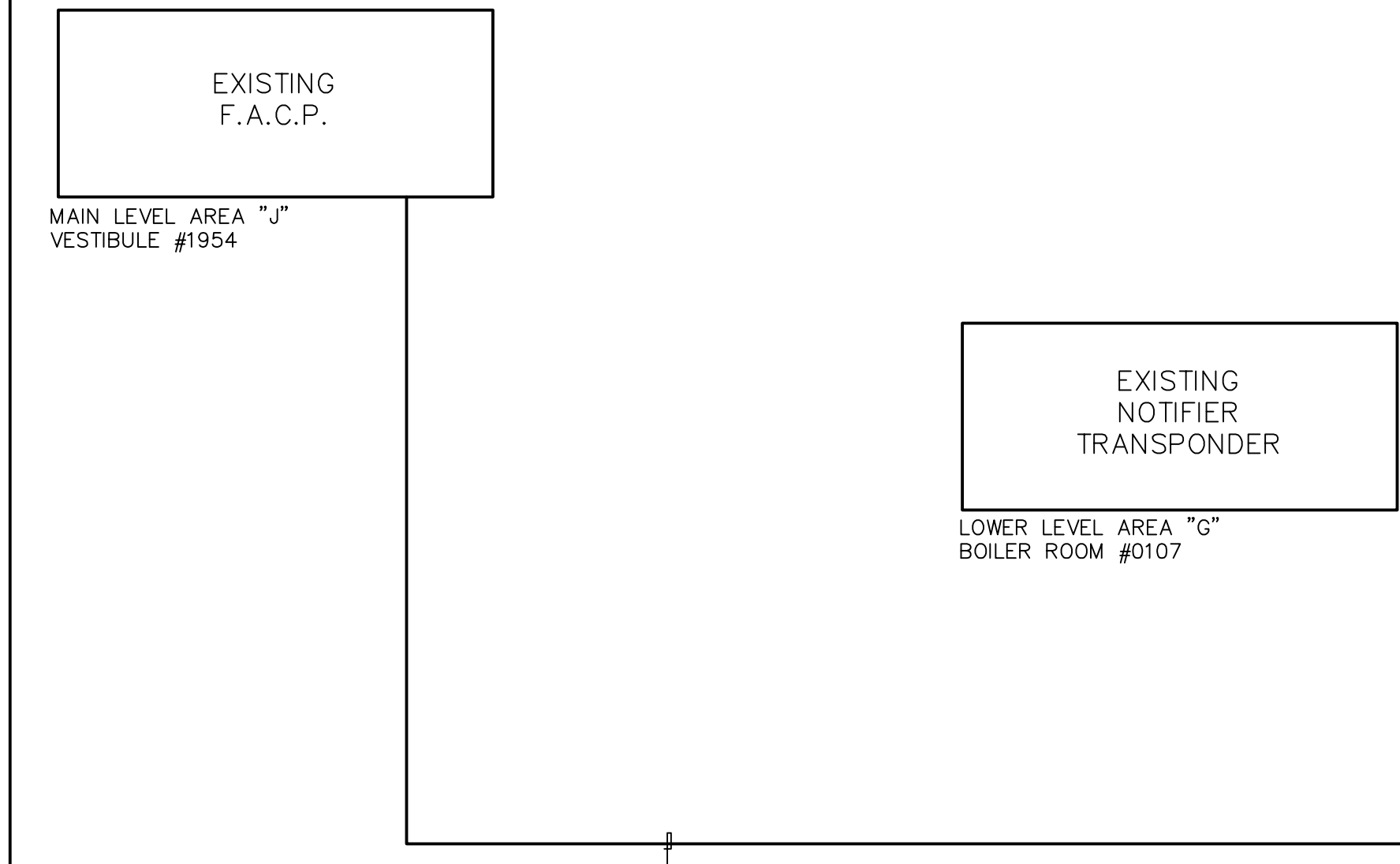
**ELECTRICAL POWER RISER DIAGRAM & SCHEDULES**

PROJECT NO.: 00049  
DRAWING NO.:  
DATE: SEPTEMBER 9, 2002  
SCALE: AS NOTED  
**E2.01**

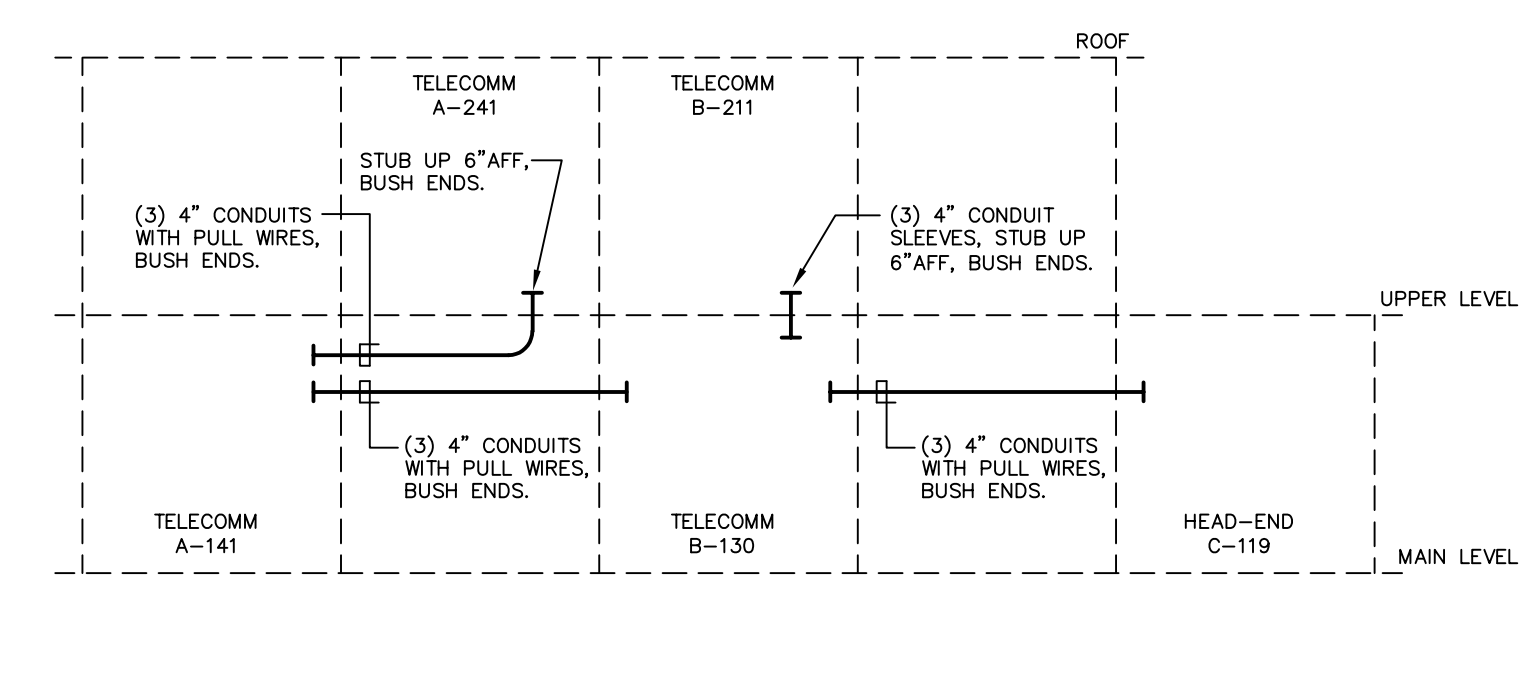
RHAM HIGH SCHOOL ← RHAM MIDDLE SCHOOL

**FIRE ALARM NOTES:**

- REFER TO FIRE PROTECTION DRAWINGS FOR QUANTITY OF SPRINKLER SYSTEM DEVICES, FLOW/TAMPER SWITCHES, ETC. TO BE CONNECTED TO THE FIRE ALARM SYSTEM.
- REFER TO SPECIFICATION SECTION 16720, FIRE ALARM SYSTEMS, FOR ADDITIONAL REQUIREMENTS.
- QUANTITY OF DEVICES SHALL BE AS INDICATED ON POWER FLOOR PLAN DRAWINGS.
- FIRE ALARM CONTROL PANEL MUST BE GROUNDED TO COLD WATER SERVICE PIPE OR DRIVEN GROUND ROD.
- RELOCATE EXISTING FIRE ALARM CPU MODULE FROM HIGH SCHOOL F.A.C.P. TO HIGH SCHOOL TRANSPONDER. PROVIDE A NEW NETWORK ANNUNCIATOR MODULE AT HIGH SCHOOL F.A.C.P.
- PROVIDE ANY REPROGRAMMING AT EXISTING HIGH SCHOOL F.A.C.P. TO ACCOMMODATE FIRE ALARM NETWORK CONNECTION FROM MIDDLE SCHOOL.
- REFER TO FIRE ALARM SYSTEM MFR'S SHOP DRAWINGS FOR ALL WIRING REQUIREMENTS.
- PROVIDE REMOTE TEST SWITCHES FOR ALL DUCT SMOKE DETECTORS.



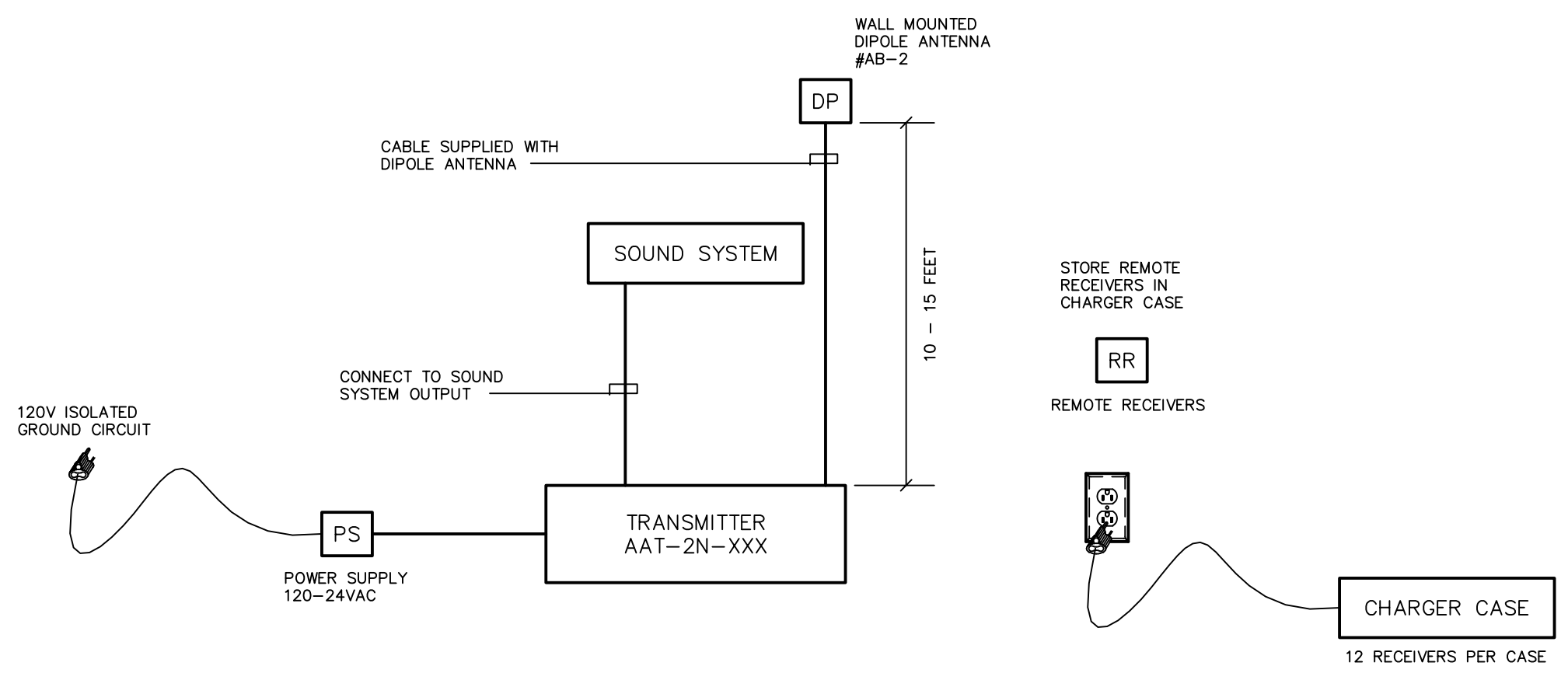
**2 FIRE ALARM SYSTEM RISER DIAGRAM**  
N.T.S.



**4 TELECOMM CONDUIT RISER DIAGRAM**  
N.T.S.

**DETAIL NOTES:**

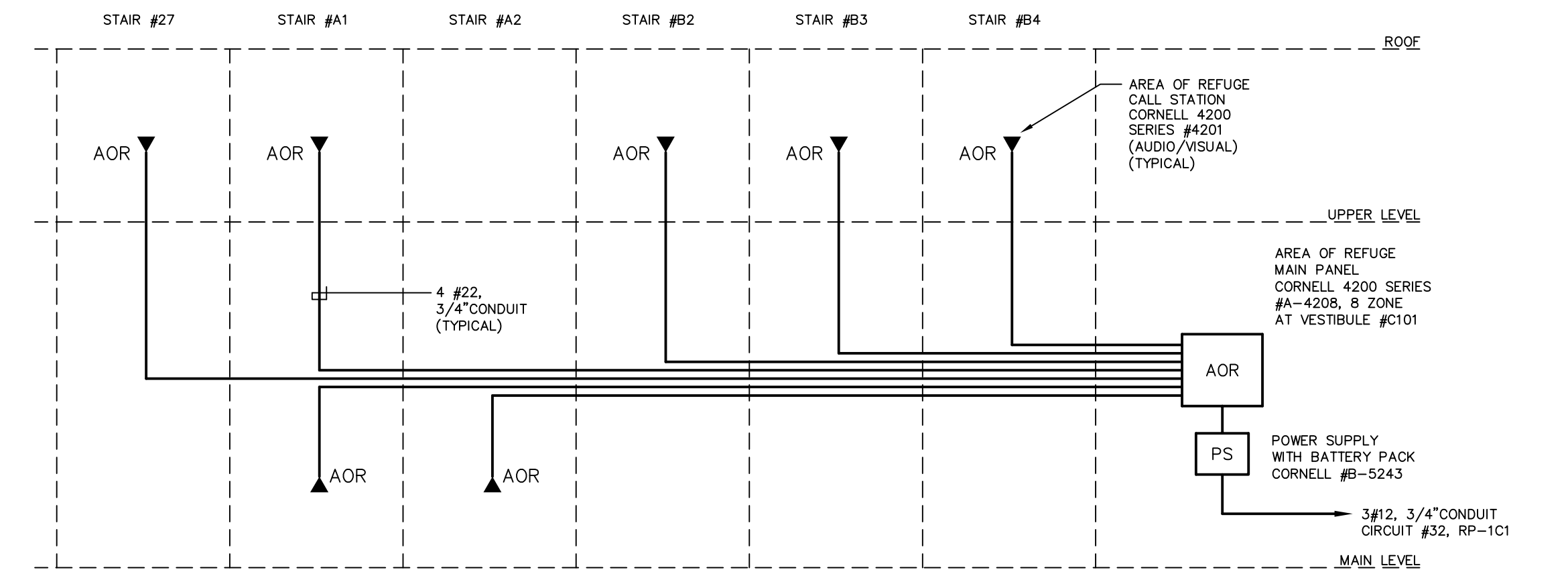
- ROUTE HORIZONTAL CONDUIT RUNS ABOVE MAIN LEVEL CORRIDOR CEILINGS.
- PROVIDE PULLBOX FOR ALL CONDUIT RUNS AFTER MAXIMUM OF (2) 90° ELBOWS OR ON ANY CONDUIT RUN LENGTHS THAT EXCEED 200 LINEAR FEET.
- VERIFY CONDUIT TERMINATION POINTS AND SLEEVE LOCATIONS WITH TELCOM DRAWINGS PRIOR TO INSTALLATION.



**3 ASSISTIVE LISTENING SYSTEM WIRING DIAGRAM**  
N.T.S.

**DETAIL NOTES:**

- EQUIPMENT AS MANUFACTURED BY TELEX EQUIPMENT OR EQUAL.
- PROVIDE SYSTEM IN GYMNASIUM.
- MOUNT GYMNASIUM TRANSMITTER AND RECEIVER IN FREE STANDING CABINET IN GYMNASIUM.
- COORDINATE LOCATION OF DIPOLE ANTENNA WITH ARCHITECT. LOCATE IN CENTER OF GYMNASIUM.
- REFER TO SPECIFICATION 16600, "SPECIAL SYSTEMS" FOR ADDITIONAL INFORMATION.



**1 AREA OF REFUGE TELEPHONE RISER DIAGRAM**  
N.T.S.

**NOTES:**

- ALL CATALOG NUMBERS ARE BASED ON CORNELL COMMUNICATIONS INC. EQUIPMENT.
- REFER TO SPECIFICATION SECTION 16600, "SPECIAL SYSTEMS", FOR ADDITIONAL INFORMATION.
- SYSTEM SPECIFIED PROVIDES "TWO-WAY" COMMUNICATION WITH FULL AUDIO AND VISUAL CAPABILITY FROM EACH CALL STATION TO MAIN PANEL.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SITE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BID
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

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416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361

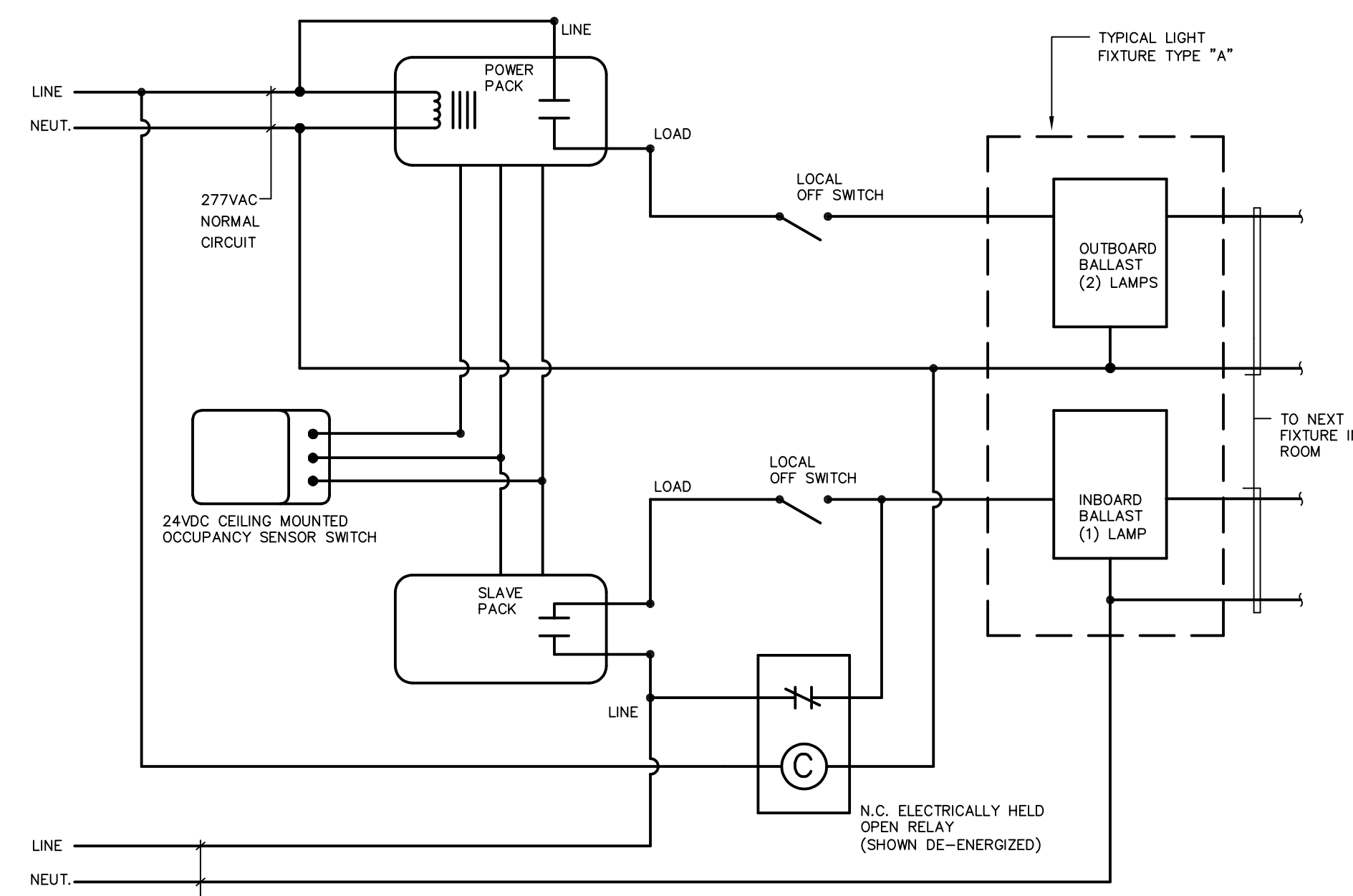
DRAWN BY: JKL/RL6 CHECKED BY: HMF SCALE: AS NOTED

**ELECTRICAL SPECIAL SYSTEMS RISER DIAGRAMS**

PROJECT NO.: 00049 DRAWING NO.:

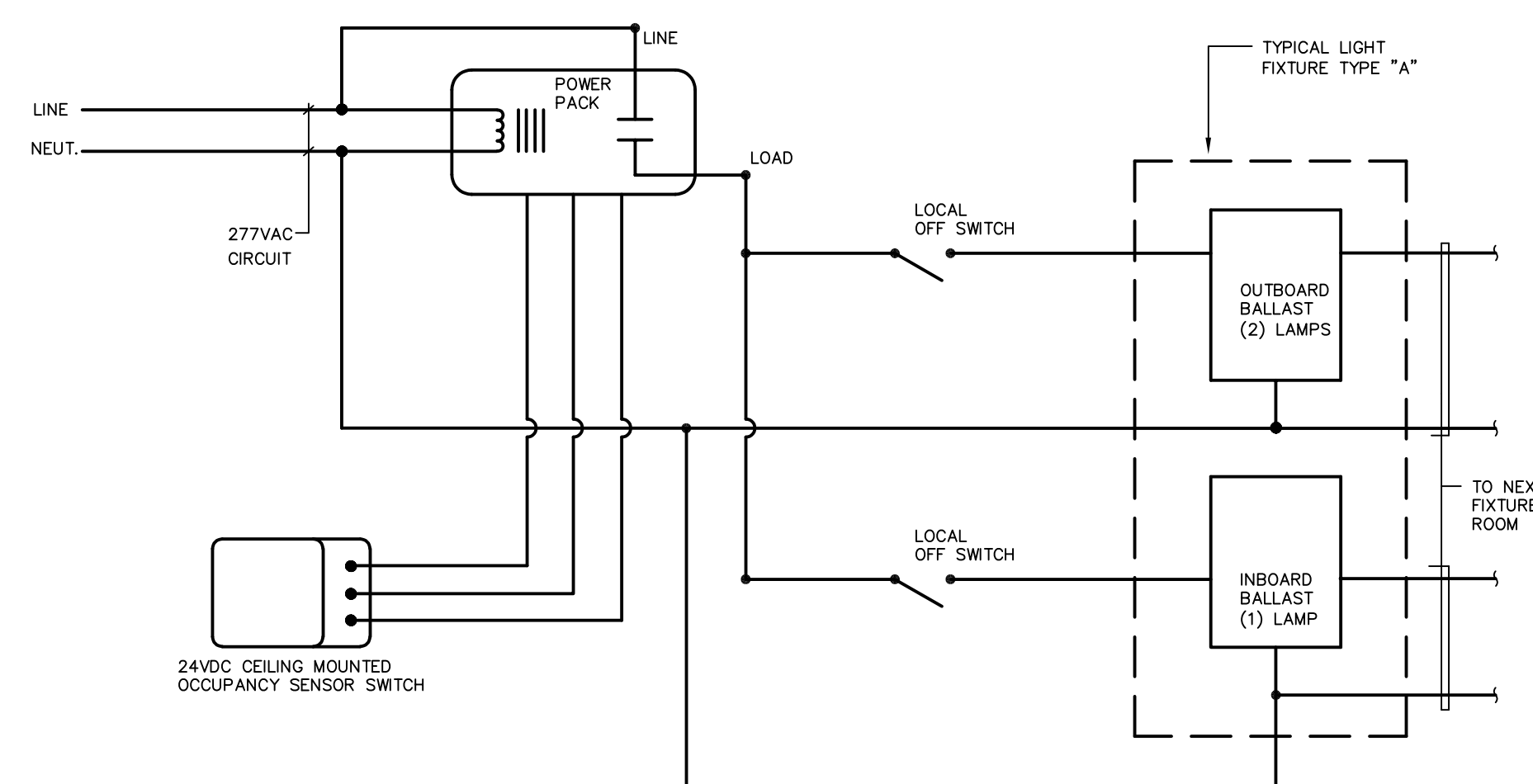
DATE: SEPTEMBER 9, 2002 **E2.02**





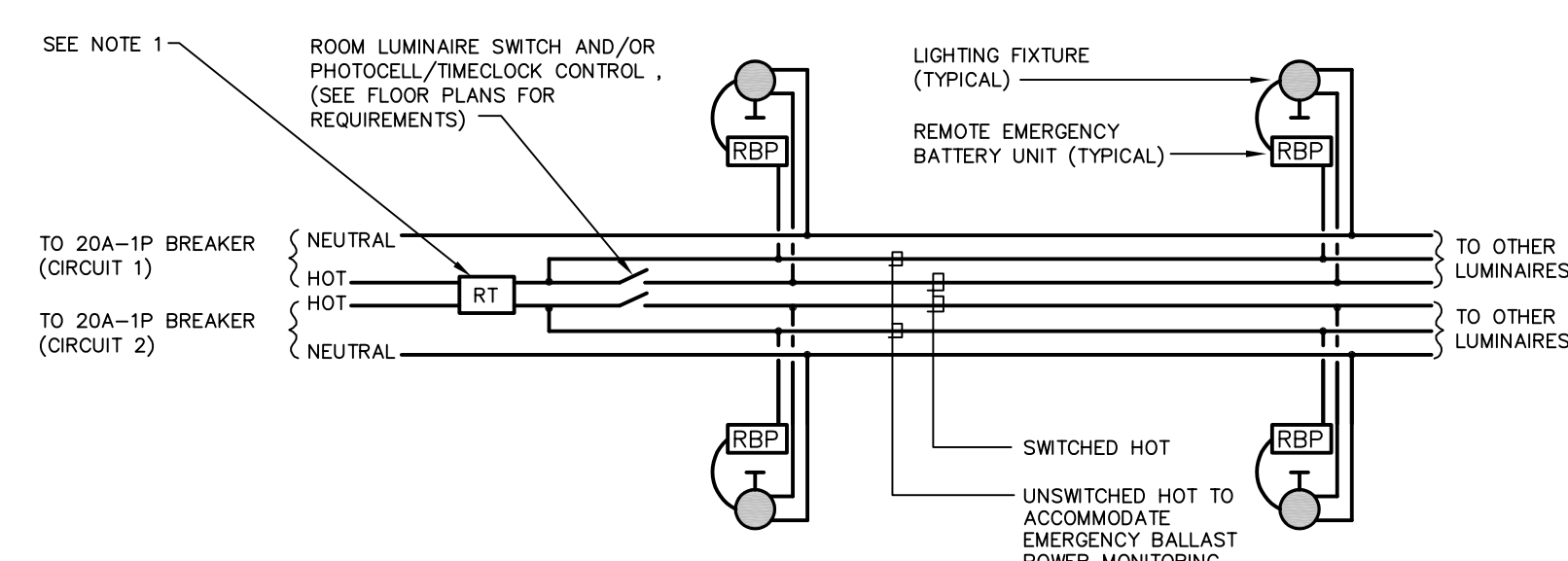
**9 TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR AREAS WITH DUAL LIGHT LEVELS AND EMERGENCY LIGHTING**  
N.T.S.

- DETAIL NOTES:**
- DETAIL IS TYPICAL AREAS WHERE LIGHTING CONSISTS OF RECESSED, GRID MOUNTED, 2' x 4' PARABOLIC TROFFER LIGHT FIXTURES EACH WITH (3) LAMPS AND (2) BALLASTS. OPERATION OF LIGHTING SHALL BE AS FOLLOWS:
    - ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
    - THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE CENTER OR OUTBOARD LAMPS OF EACH FIXTURE. IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
    - IN ADDITION, PROVIDE A 20AMP SPDT RELAY AT EMERGENCY CIRCUIT TO BYPASS WALL SWITCH AND TURN ON EMERGENCY LAMPS REGARDLESS OF SWITCH POSITION ON LOSS OF NORMAL POWER TO ROOM.
    - AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
    - DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
    - DETAIL SIMILAR FOR ALL ROOMS WITH TWO LEVEL SWITCHING, OCCUPANCY SENSORS, AND EMERGENCY POWER WHERE INDICATED ON FLOOR PLANS.



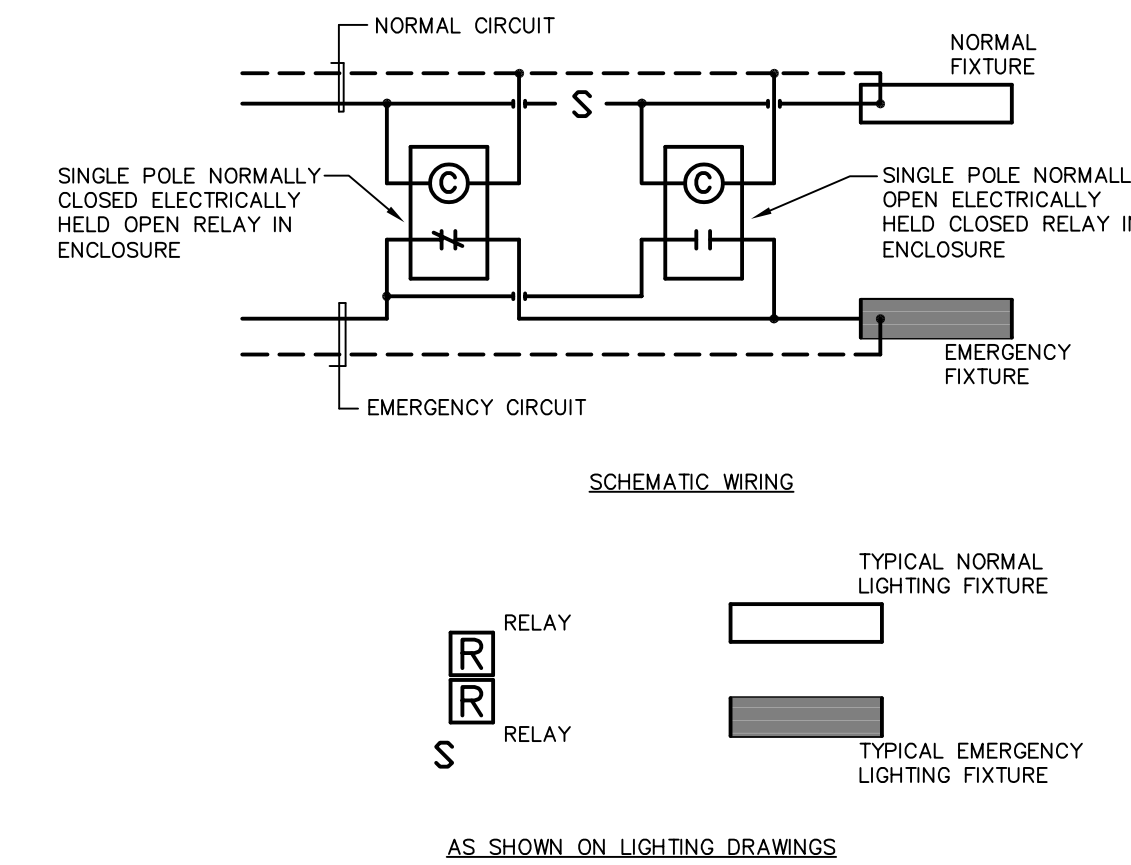
**7 TYPICAL LIGHTING CONTROL WIRING DIAGRAM FOR AREAS WITH DUAL LIGHT LEVELS**  
N.T.S.

- DETAIL NOTES:**
- DETAIL IS TYPICAL AREAS WHERE LIGHTING CONSISTS OF RECESSED, GRID MOUNTED, 2' x 4' PARABOLIC TROFFER LIGHT FIXTURES EACH WITH (3) LAMPS AND (2) BALLASTS. OPERATION OF LIGHTING SHALL BE AS FOLLOWS:
    - ALL FIXTURES WITHIN ROOM ARE CONTROLLED BY THE ROOM OCCUPANCY SENSOR SWITCH. ON ENTERING THE ROOM ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN ON.
    - THE LIGHT LEVEL CAN BE MANUALLY ADJUSTED BY USING EITHER OF (2) WALL SWITCHES TO TURN OFF THE CENTER OR OUTBOARD LAMPS OF EACH FIXTURE. IF THE WALL SWITCHES ARE LEFT IN THE OFF POSITION THE LIGHTS WILL NOT AUTOMATICALLY TURN ON FROM THE SENSOR SWITCH UPON RE-ENTRY TO ROOM, BUT CAN BE MANUALLY OPERATED.
    - AFTER THE SENSOR SWITCH HAS DETECTED NO ACTIVITY WITHIN THE ROOM FOR AN APPROPRIATE TIME PERIOD, ALL THE LAMPS IN ALL THE FIXTURES SHALL TURN OFF.
    - DIAGRAM IS BASED ON WATTSTOPPER EQUIPMENT, COORDINATE FINAL WIRING REQUIREMENTS WITH APPROVED SUBMITTALS.
    - DETAIL SIMILAR FOR ROOMS WITH TWO LEVEL SWITCHING AND OCCUPANCY SENSORS WHERE INDICATED ON FLOOR PLANS.

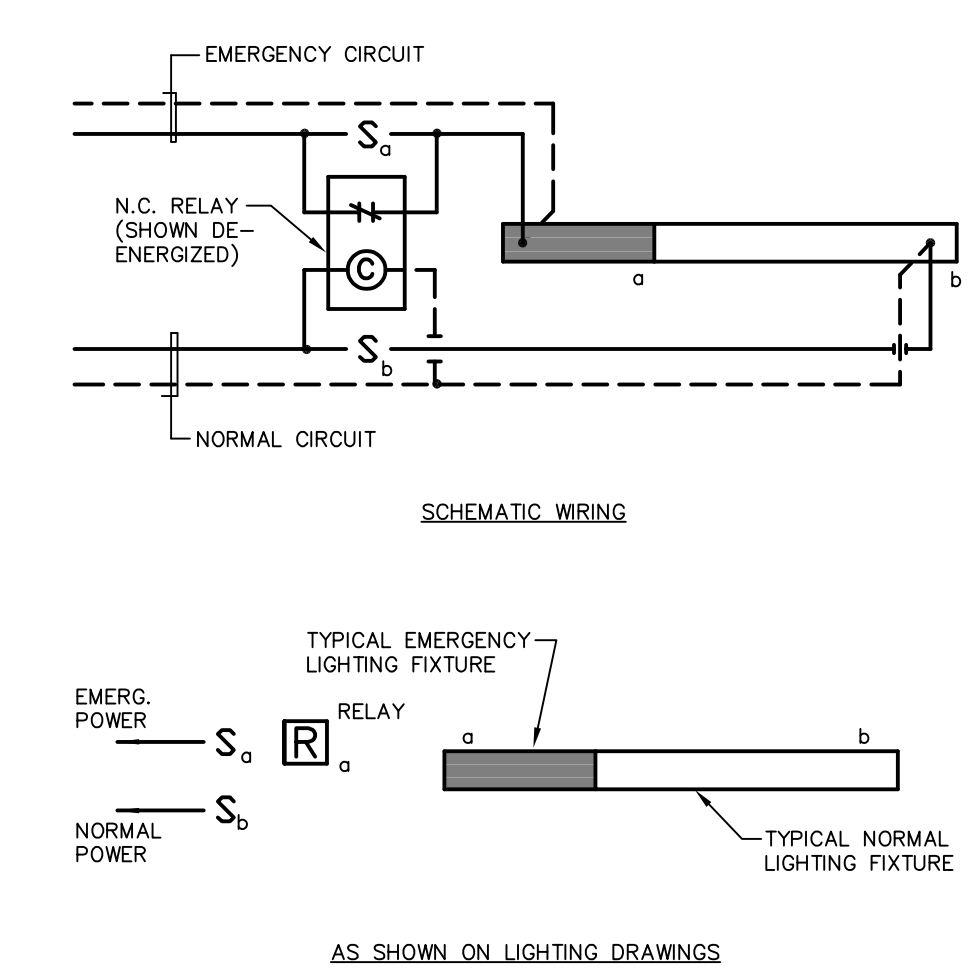


**4 CENTRAL KEYED REMOTE TEST SWITCH AND EMERGENCY BALLAST WIRING DIAGRAM**  
N.T.S.

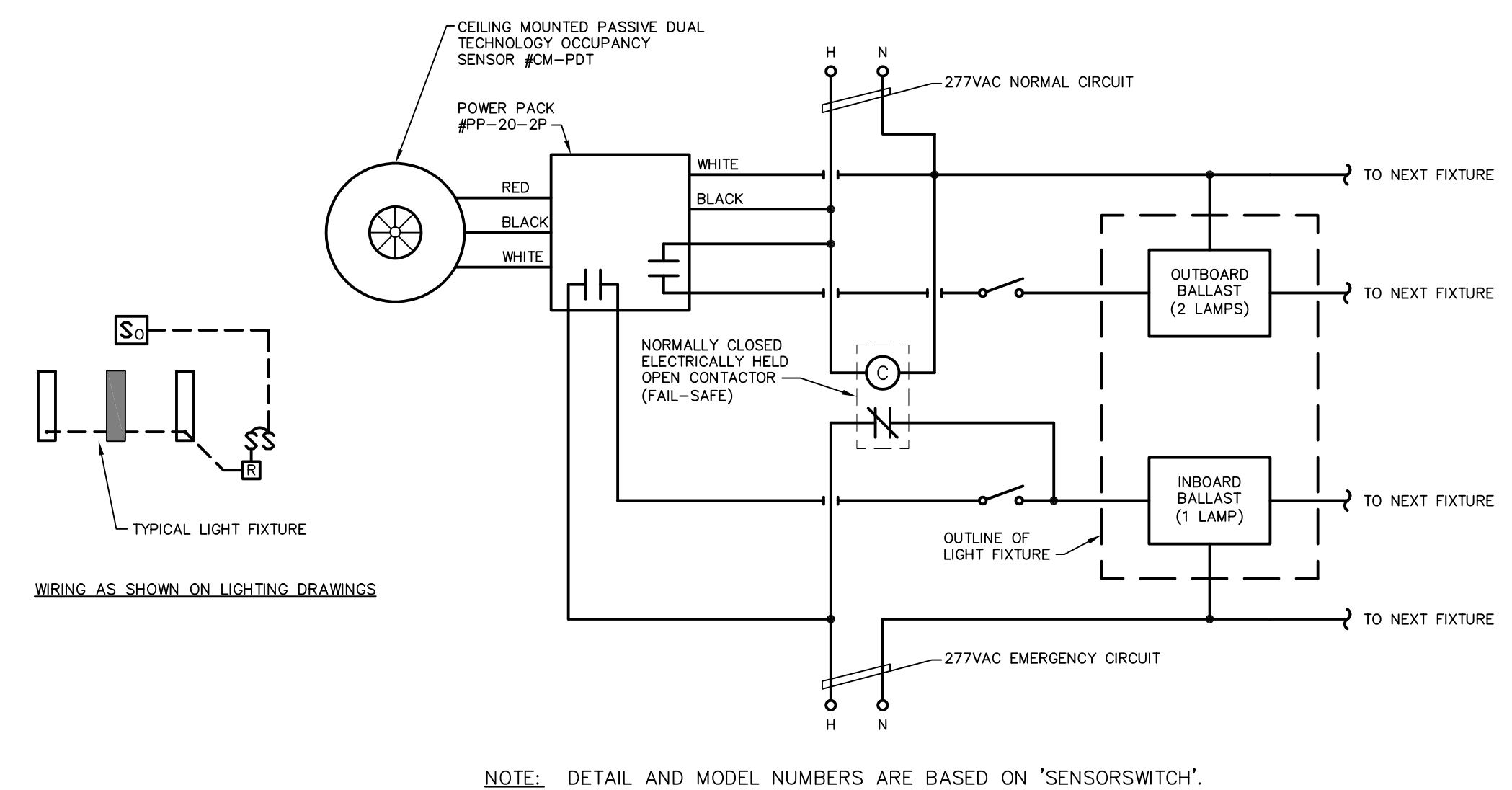
- NOTES:**
- TWO CIRCUIT CENTRALLY KEYED REMOTE TEST SWITCH, MOUNT AT 12" BELOW FINISHED CEILING TO CENTERLINE OR 7'-0" TO CENTERLINE AFF IF CEILING IS OVER 8'-0". COORDINATE EXACT LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN. BODINE MODEL 'KTS-PL' OR APPROVED EQUAL.



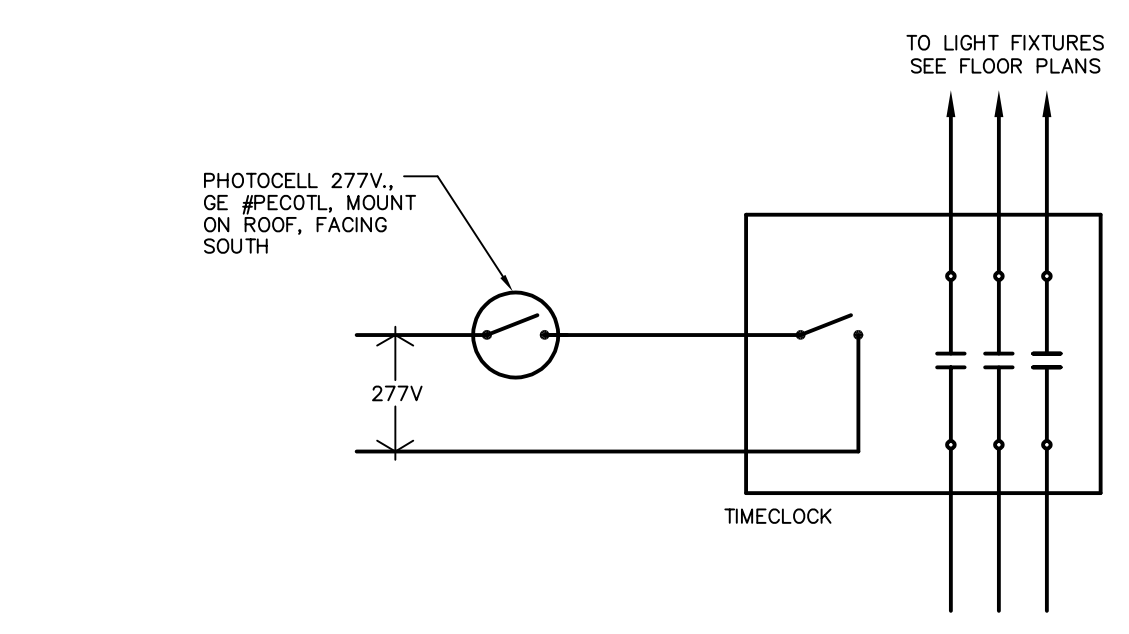
**3 EMERGENCY LIGHTING SINGLE RELAY WIRING DIAGRAM**  
N.T.S.



**2 EMERGENCY LIGHTING SINGLE RELAY WIRING DIAGRAM**  
N.T.S.

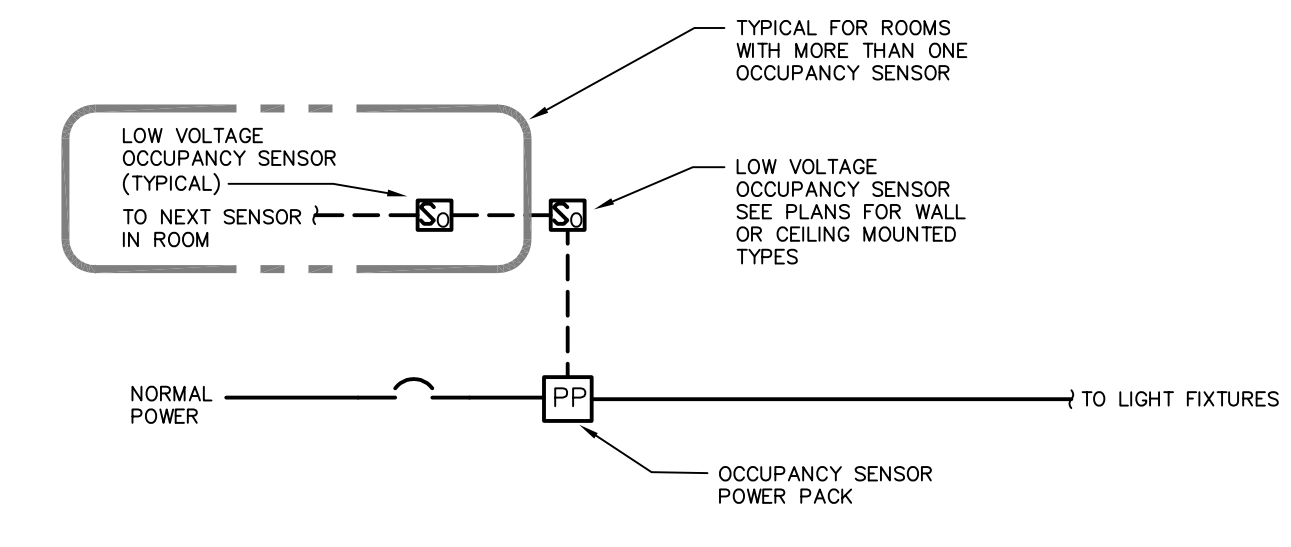


**1 SENSOR CONTROLLED NORMAL/EMERG. DUAL SWITCHING WIRING DIAGRAM**  
N.T.S.



**8 EXTERIOR LIGHTING CONTROL DIAGRAM**  
N.T.S.

- DETAIL NOTES:**
- EXTERIOR LIGHTING CIRCUITS SHALL BE WIRED FOR PHOTOCELL "ON" AND TIMECLOCK "OFF" OPERATION.

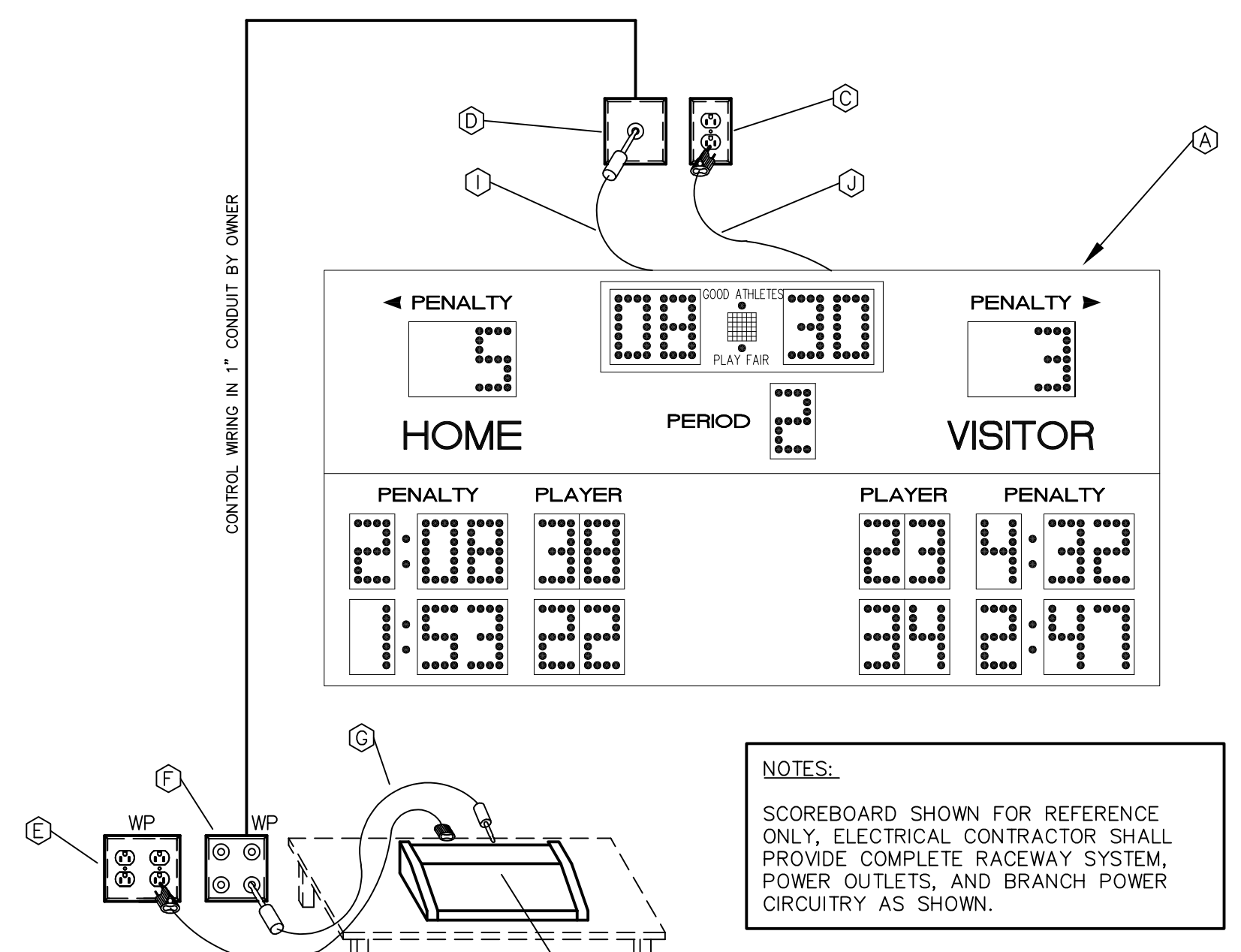


**6 OCCUPANCY SENSOR DETAIL**  
N.T.S.

- NOTES:**
- REFER TO SPECIFICATION SECTION 16050, FOR ADDITIONAL INFORMATION.

**5 SCOREBOARD SERVICE DETAIL**  
N.T.S.

- SCOREBOARD DETAIL NOTES:**
- SCOREBOARD, FURNISHED AND INSTALLED BY OWNER.
  - CONTROL CONSOLE, PORTABLE, BY OWNER.
  - SCOREBOARD POWER OUTLET WITH 120 VOLT POWER PROVISION, WP OUTLET W/ FLIP COVERS.
  - SCOREBOARD CONTROL PLUG-IN JACK, JUNCTION BOX IN 4"x4"x2-1/8" OUTLET BOX, PLUG-IN JACK AND PLATE BY OWNER.
  - CONTROL CONSOLE POWER OUTLET WITH 120 VOLT POWER PROVISION, WP OUTLET W/ FLIP COVERS.
  - CONTROL CONSOLE PLUG-IN JACK, WITH (4) PLUG-IN MODULES. INSTALL IN 4"x4"x2-1/8" OUTLET BOX.
  - CONTROL CONSOLE CONTROL CABLE, BY OWNER.
  - CONTROL CONSOLE POWER CABLE, BY OWNER.
  - SCOREBOARD CONTROL CABLE, BY OWNER.
  - SCOREBOARD POWER CABLE, BY OWNER.



**NOTES:**  
SCOREBOARD SHOWN FOR REFERENCE ONLY. ELECTRICAL CONTRACTOR SHALL PROVIDE COMPLETE RACEWAY SYSTEM, POWER OUTLETS, AND BRANCH POWER CIRCUITRY AS SHOWN.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: RO.01 & RO.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BID
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



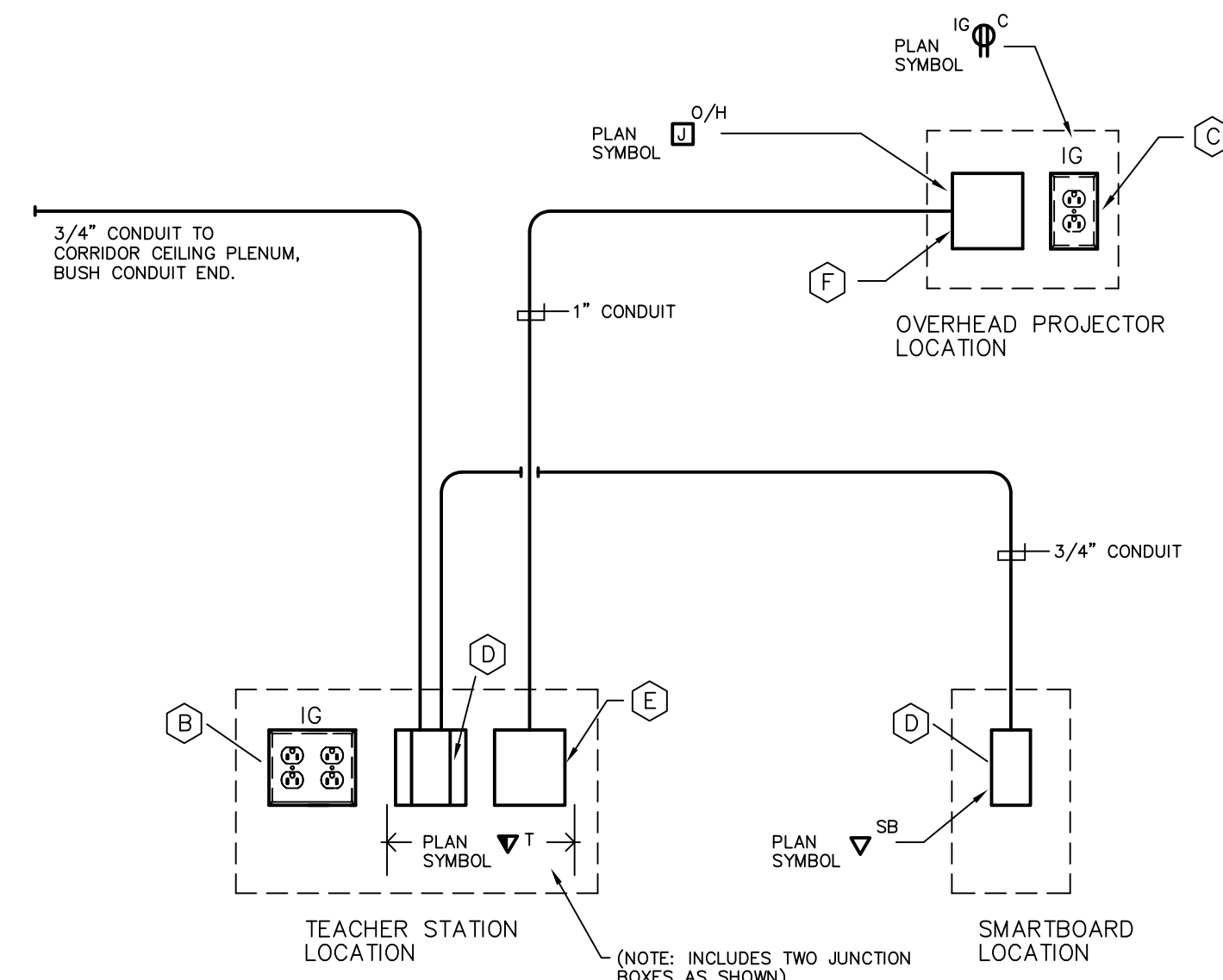
# KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361  
DRAWN BY: RL6 CHECKED BY: HMF SCALE: AS NOTED

# ELECTRICAL DETAILS

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E3.01**



**TYPICAL CLASSROOM RACEWAY SYSTEM**

**10 DETAIL AT SMARTBOARD/PROJECTOR**

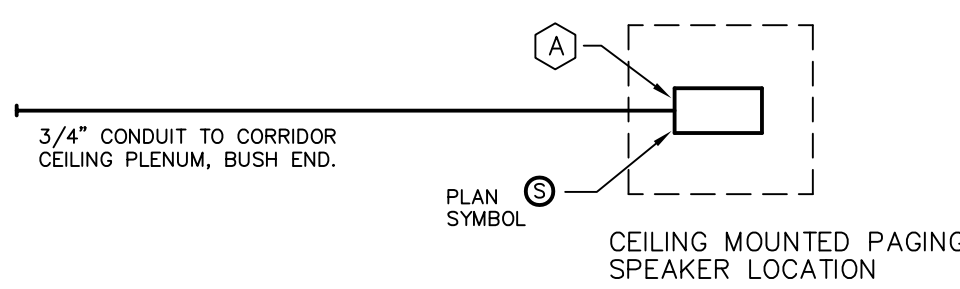
N.T.S.

**DETAIL NOTES:**

- (A) NOT USED
- (B) ISOLATED GROUND TYPE DOUBLE DUPLEX POWER OUTLET.
- (C) ISOLATED GROUND TYPE DUPLEX POWER OUTLET, MOUNTED FLUSH IN CEILING.
- (D) TWO GANG ELECTRICAL BOX, WALL MOUNTED, WITH SINGLE GANG "MUD RING" COVER PLATE.
- (E) TWO GANG ELECTRICAL BOX, WALL MOUNTED.
- (F) TWO GANG ELECTRICAL BOX, MOUNTED FLUSH IN CEILING.

ALL POWER OUTLETS, CONDUIT RUNS, SINGLE AND TWO GANG BOXES TO BE FURNISHED AND INSTALLED BY ELEC CONTR. ALL COMM. DEVICES, COMM. DEVICE PLATES, COMM. CABLING AND CONNECTIONS AT SINGLE AND TWO GANG BOXES TO BE FURNISHED BY OTHERS.

REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.



**TYPICAL CEILING MOUNTED PAGING**

**9 SYSTEM SPEAKER DETAIL**

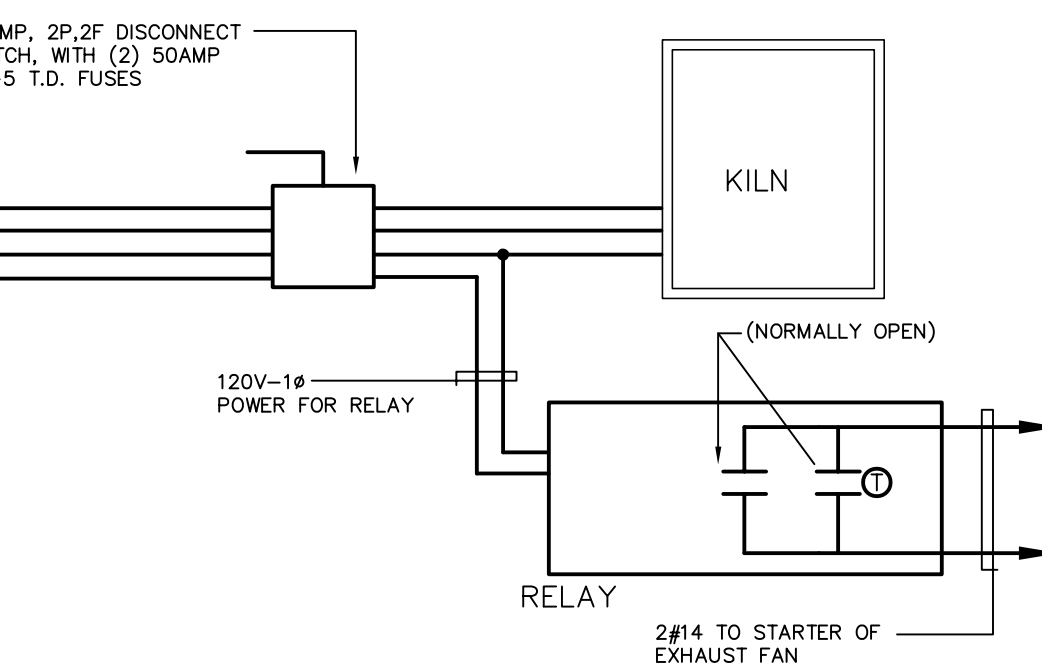
N.T.S.

**DETAIL NOTES:**

- (A) SINGLE GANG ELECTRICAL BOX, FLUSH MOUNTED AT CEILING.

ALL SPEAKERS, ENCLOSURES, CABLING AND CONNECTIONS AT SINGLE GANG BOXES TO BE FURNISHED BY OTHERS.

REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.

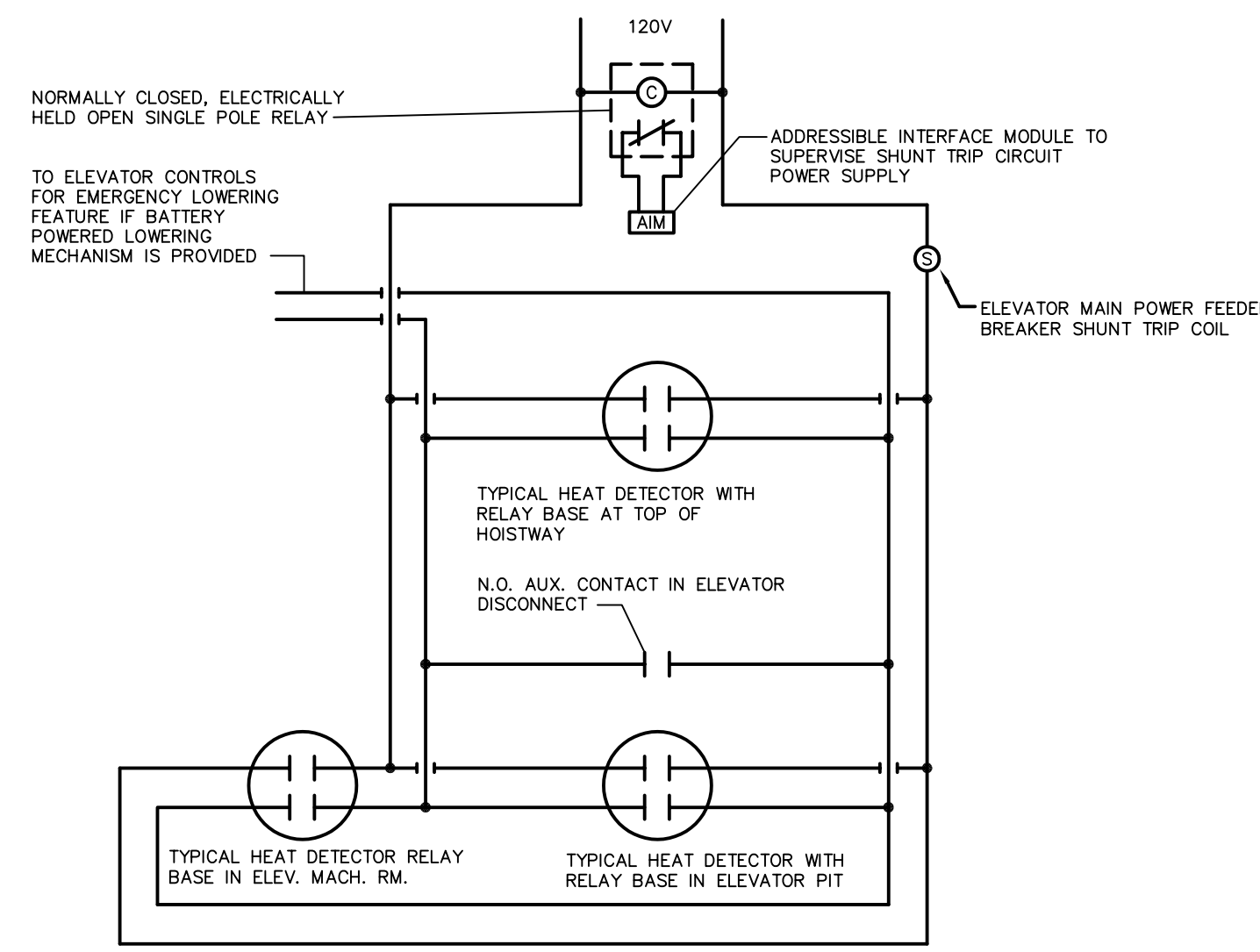


**8 KILN EXHAUST FAN WIRING DIAGRAM**

N.T.S.

**DETAIL NOTE:**

THE KILN EXHAUST FAN SHALL BE WIRED AS FOLLOWS: WHEN THE EXTERNAL KILN DISCONNECT SWITCH IS PLACED IN THE "ON" POSITION, RELAY CLOSING CONTACT ENABLING ASSOCIATED EXHAUST FAN STARTER TO ACTIVATE FAN ON SIGNAL FROM REVERSE-ACTING THERMOSTAT IN ROOM. AS THE TEMPERATURE RISES IN ROOM, THE THERMOSTAT CONTACT CLOSING AND STARTS THE FAN. WHEN THE INTEGRAL KILN CONTROL SWITCH IS DEACTIVATED, THE FAN REMAINS ON THROUGH THE THERMOSTAT CONTACT. AS THE ROOM TEMPERATURE DROPS BELOW THE THERMOSTAT SET POINT, THERMOSTAT CONTACT OPENS AND THE EXHAUST FAN SHUTS OFF.



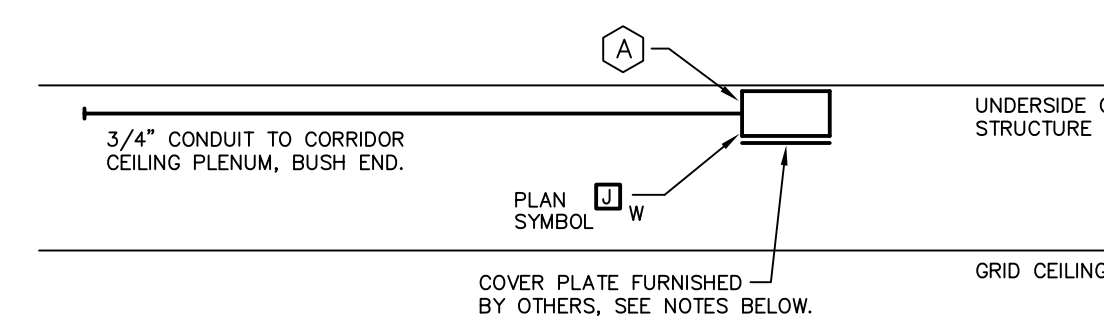
**ELEVATOR MAIN POWER FEEDER**

**7 EMERGENCY DISCONNECT WIRING DIAGRAM**

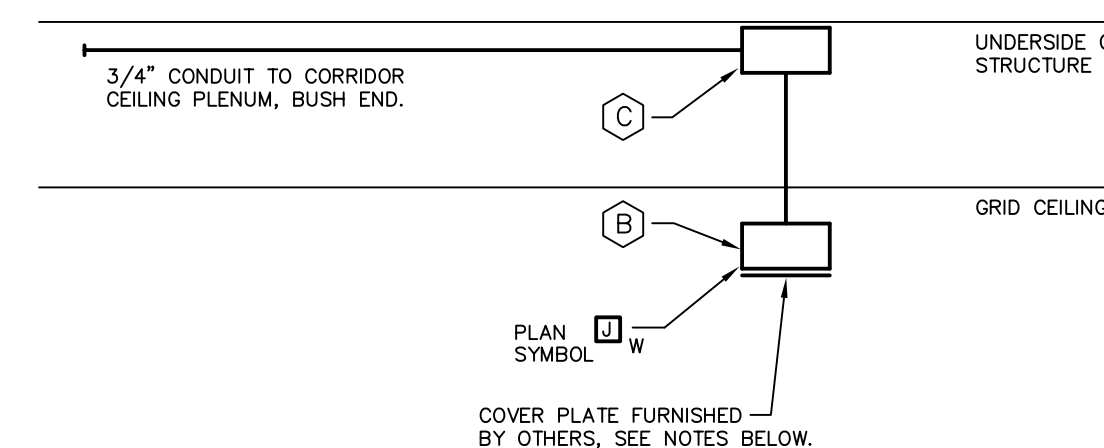
N.T.S.

**NOTES:**

1. RELAY BASE AUXILIARY CONTACTS ARE WIRED IN PARALLEL SO THAT ANY (1) INITIATING DEVICE WILL ACTIVATE SHUNT TRIP.
2. REFER TO SPECIFICATION SECTION 16600 FOR ADDITIONAL INFORMATION.



**TYPICAL FOR NON-PLENUM CEILING AREAS**



**TYPICAL FOR PLENUM AIR RETURN CEILING AREAS**

**TYPICAL CEILING MOUNTED TECHNOLOGY**

**6 SYSTEM WIRELESS DEVICE DETAIL**

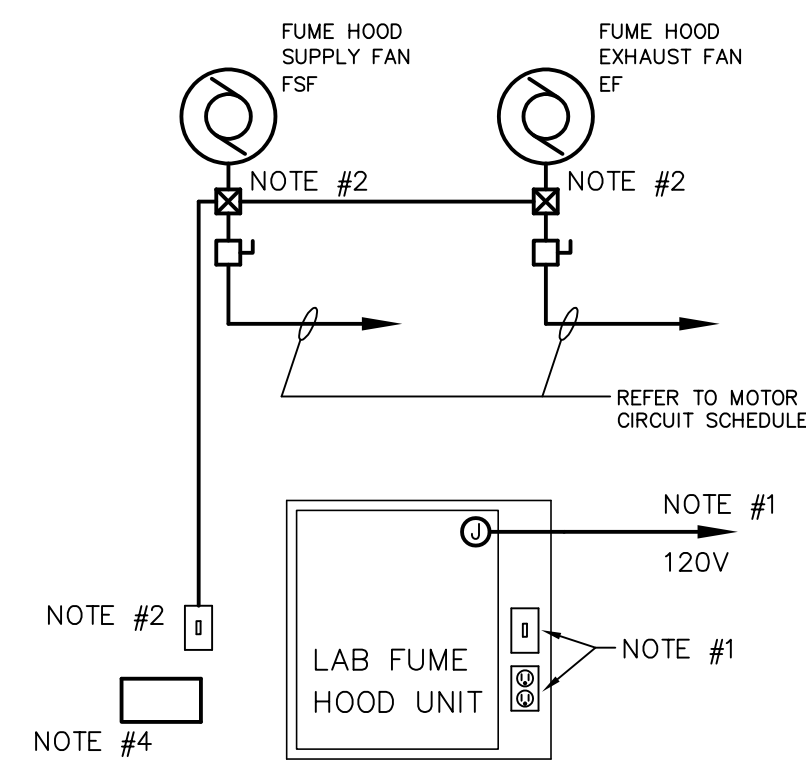
N.T.S.

**DETAIL NOTES:**

- (A) SINGLE GANG ELECTRICAL BOX, SURFACE MOUNTED AT UNDERSIDE OF STRUCTURAL DECK ABOVE CEILING.
- (B) SINGLE GANG WIREMOLD SURFACE MOUNTED ELECTRICAL BOX, MOUNTED HIGH ON WALL BELOW GRID CEILING. EXTEND WIREMOLD #700 SERIES SURFACE METAL RACEWAY FROM BOX TO SINGLE GANG ELECTRICAL BOX ABOVE GRID CEILING. SURFACE BOX AND RACEWAY SHALL HAVE FACTORY PAINTED IVORY FINISH.
- (C) SINGLE GANG ELECTRICAL BOX, SURFACE MOUNTED AT UNDERSIDE OF STRUCTURAL DECK ABOVE CEILING.

ALL DEVICES, COVERPLATES AND CABLING AND CONNECTIONS AT SINGLE GANG BOXES TO BE FURNISHED BY OTHERS.

REFER TO ARCHITECTURAL AND TECHNOLOGY DRAWINGS FOR LOCATION REQUIREMENTS AND ADDITIONAL INFORMATION.

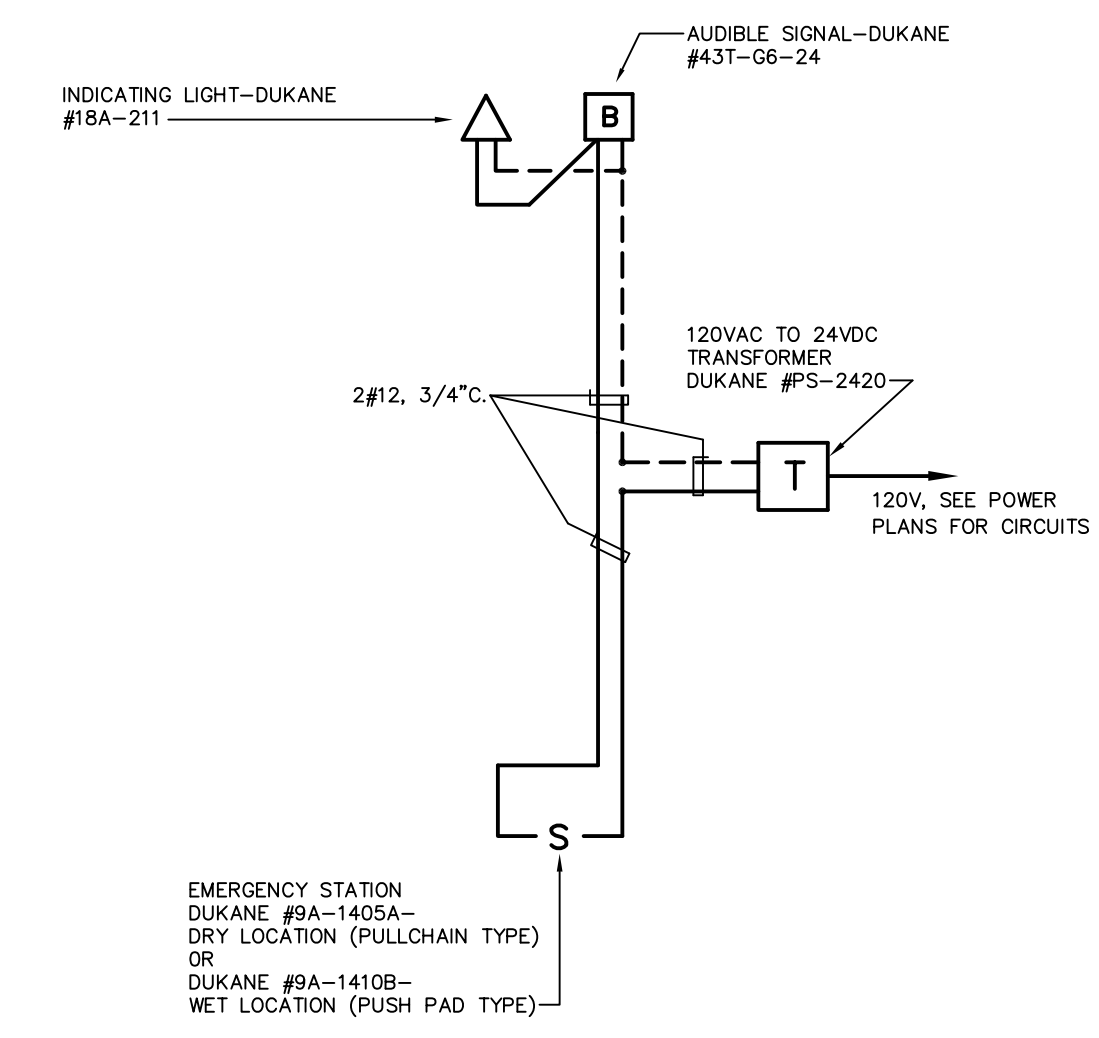


**5 TYPICAL LAB FUME HOOD WIRING DIAGRAM**

N.T.S.

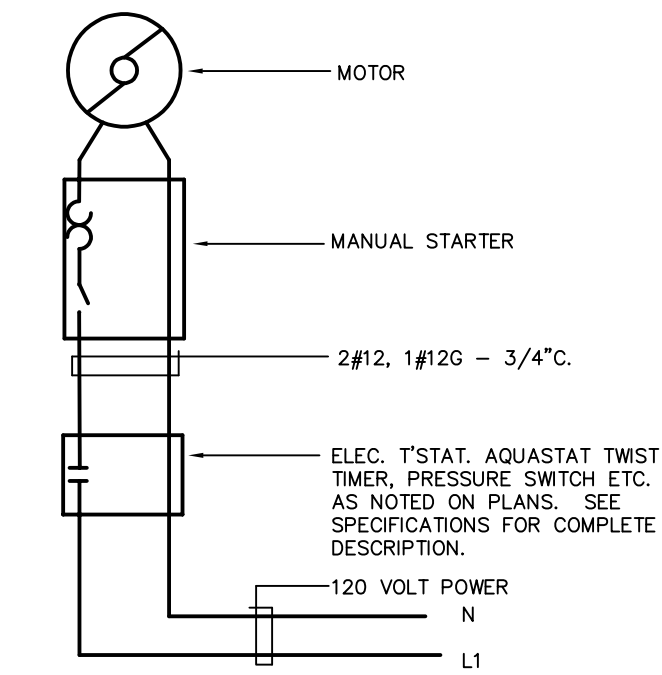
**DETAIL NOTES:**

1. PROVIDE 20A, 120V CIRCUIT AND FINAL CONNECTIONS TO JUNCTION BOX FURNISHED WITH HOOD, FOR HOOD LIGHT AND RECEPTACLE. (LIGHT FIXTURE AND RECEPTACLE FURNISHED, INSTALLED AND WIRED TO FACTORY JUNCTION BOX BY OTHERS).
2. FUME HOOD FAN 3-WAY SWITCH AND PILOT LIGHT, SWITCH FURNISHED AND INSTALLED BY ELECTRICAL CONTRACTOR. FINAL CONNECTIONS FROM SWITCH TO ASSOCIATED FUME HOOD SUPPLY AND EXHAUST FAN MOTOR STARTERS BY ELECTRICAL CONTRACTOR.
3. REFER TO MOTOR CIRCUIT SCHEDULE ON DRAWING E4.01 FOR FUME HOOD SUPPLY AND EXHAUST FAN MOTOR POWER REQUIREMENTS.
4. PROVIDE AN ENGRAVED LAMACOID PLATE SIGN THAT READS "FUME HOOD EXHAUST."



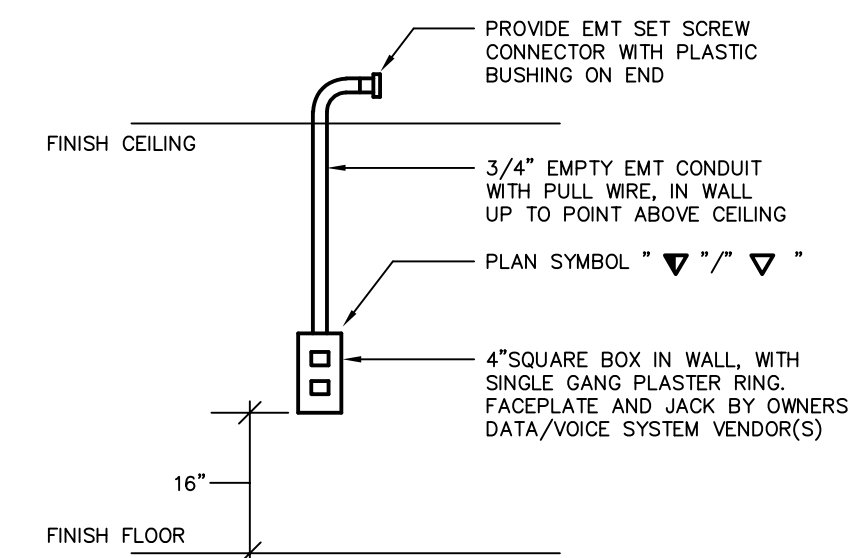
**4 CALL FOR AID WIRING DIAGRAM**

N.T.S.



**3 TYPICAL FRACTIONAL HP FCU, UH OR EF WIRING DIAGRAM**

N.T.S.



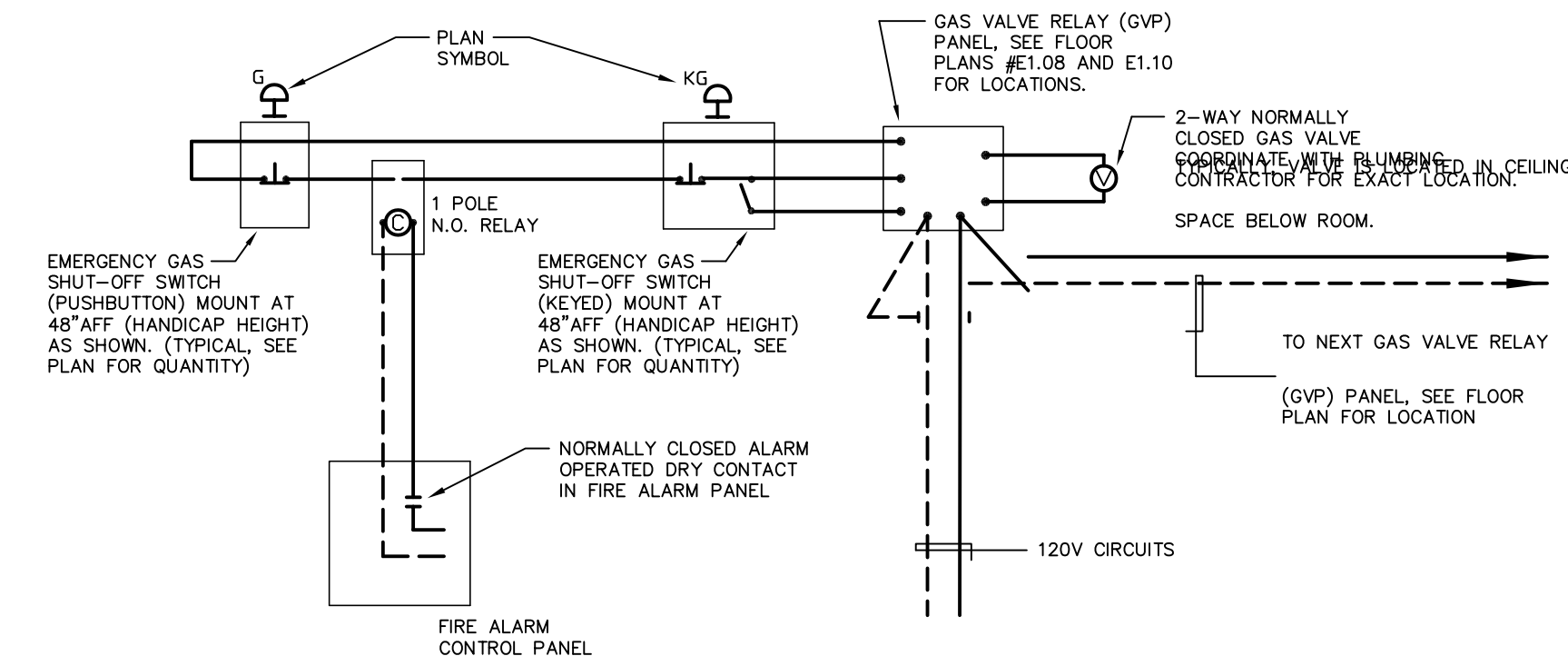
**2 TYPICAL INSTALLATION DETAIL**

**TELEPHONE/DATA OUTLET**

N.T.S.

**DETAIL NOTES:**

1. DETAIL SIMILAR FOR VIDEO OUTLETS, (V), AND SMART BOARD OUTLETS (VSB).



**1 GAS VALVE EMERGENCY SHUT OFF SYSTEM**

N.T.S.

**DETAIL NOTES:**

1. TYPICAL FOR ROOMS WITH PROVISIONS FOR GAS CONNECTIONS, REFER TO POWER FLOOR PLANS FOR LOCATIONS.
2. INCLUDE GROUND WIRE WITH 120V CIRCUIT WIRING.
3. 2-WAY NORMALLY CLOSED GAS VALVE FURNISHED AND INSTALLED BY DIV. 15, LOW VOLTAGE CONTROL WIRING BY DIV. 16.
4. GAS VALVE RELAY PANEL, EMERGENCY GAS SHUT-OFF SWITCH AND KEYPED EMERGENCY GAS SHUT-OFF SWITCH FURNISHED BY DIV. 15, INSTALLED AND ALL WIRING BY DIV. 16.
5. CONNECT ALL GAS VALVE CONTROL PANELS TO 120V POWER CIRCUIT IN PANELS INDICATED ON POWER FLOOR PLANS.
6. EMERGENCY GAS SHUT-OFF SWITCH AND KEYPED EMERGENCY GAS SHUT-OFF SWITCH SHALL BE CONNECTED TO GAS VALVE RELAY PANEL AND ASSOCIATED GAS VALVE FOR EACH RESPECTIVE AREA. PROVIDE BLACK LAMACOID ENGRAVED LABEL FOR EACH GAS VALVE RELAY PANEL INDICATING ROOM SERVED.
7. ON GENERAL ALARM SIGNAL FROM FIRE ALARM CONTROL PANEL THE 1-POLE RELAY SHALL DISRUPT CONTROL CIRCUIT SIMILAR TO PUSHBUTTON STATION, EACH GAS VALVE RELAY PANEL MUST BE RESET AT RESPECTIVE KEYPED PUSHBUTTON STATION.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS RO.01 & RO.02		
REVISIONS		
DATE	MARK	DESCRIPTION
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**ADDITIONS AND RENOVATIONS**

**RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT 06248

STATE PROJECT NO. 208-0018 N/EA/RR

**VZHS**

28 SOUTH MAIN STREET, WEST HARTFORD CT 06107-2430  
TEL (860) 521-4329 FAX (860) 521-2620  
VZHS PROJECT NUMBER: 2000155.01

**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

DRAWN BY: RL6  
CHECKED BY: HPF

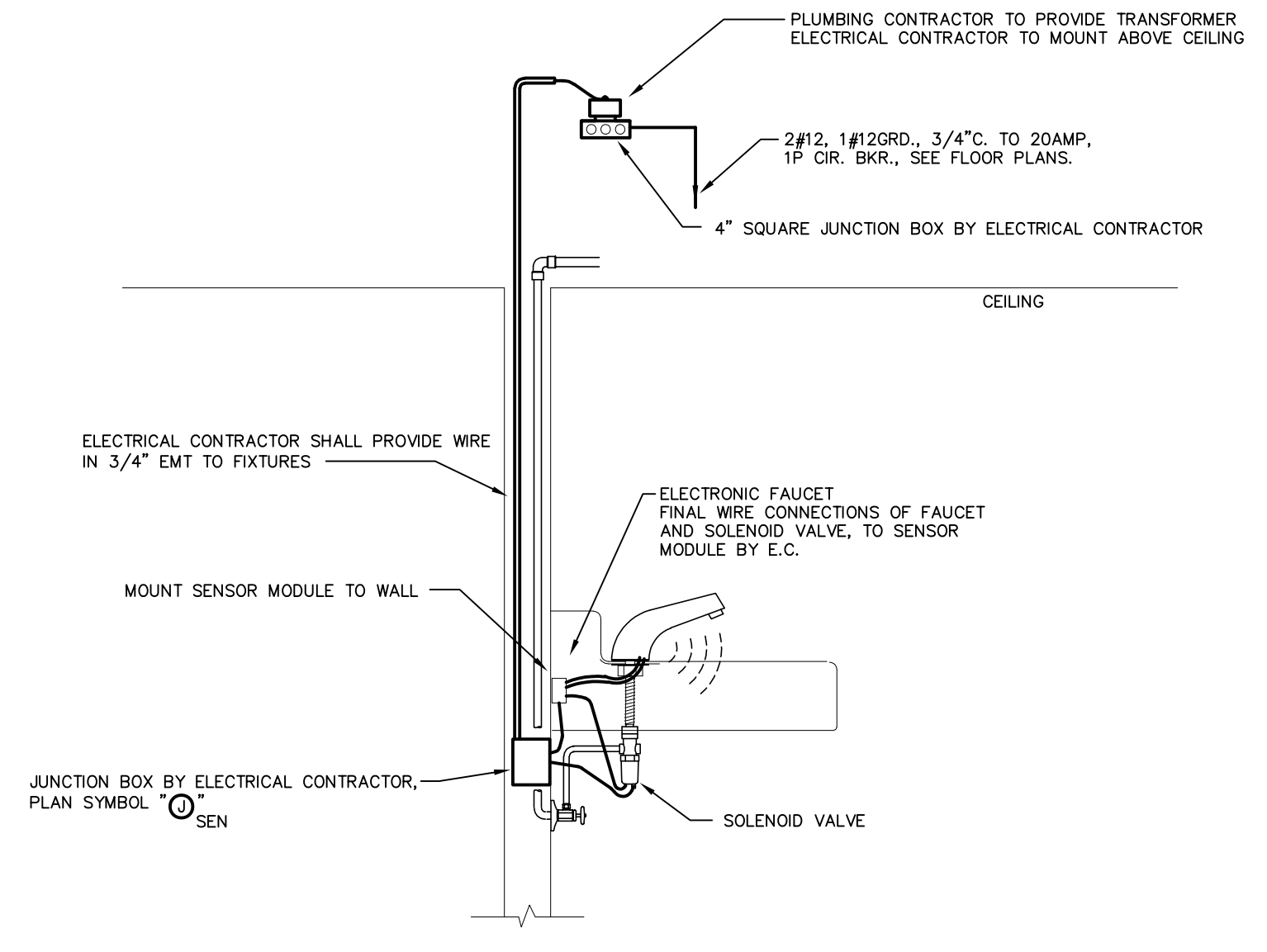
SCALE: AS NOTED

**ELECTRICAL DETAILS**

PROJECT NO.: 00049 DRAWING NO.:

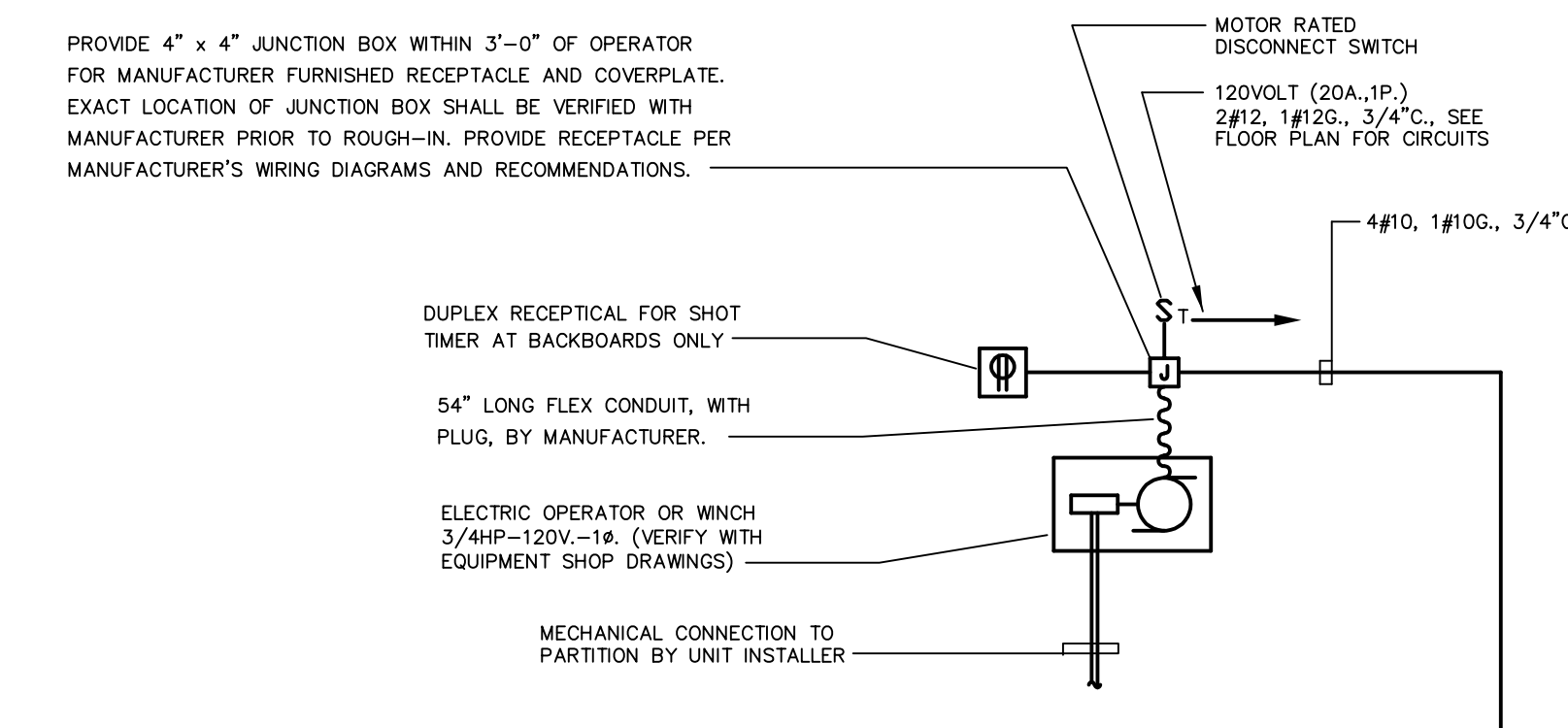
DATE: SEPTEMBER 9, 2002

**E3.02**



**9 TYPICAL ELECTRONIC FAUCET WIRING DETAIL**  
N.T.S.

DETAIL NOTES:  
1. FAUCET SHALL BE WIRED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS, COORDINATE REQUIREMENTS WITH PLUMBING CONTRACTOR.



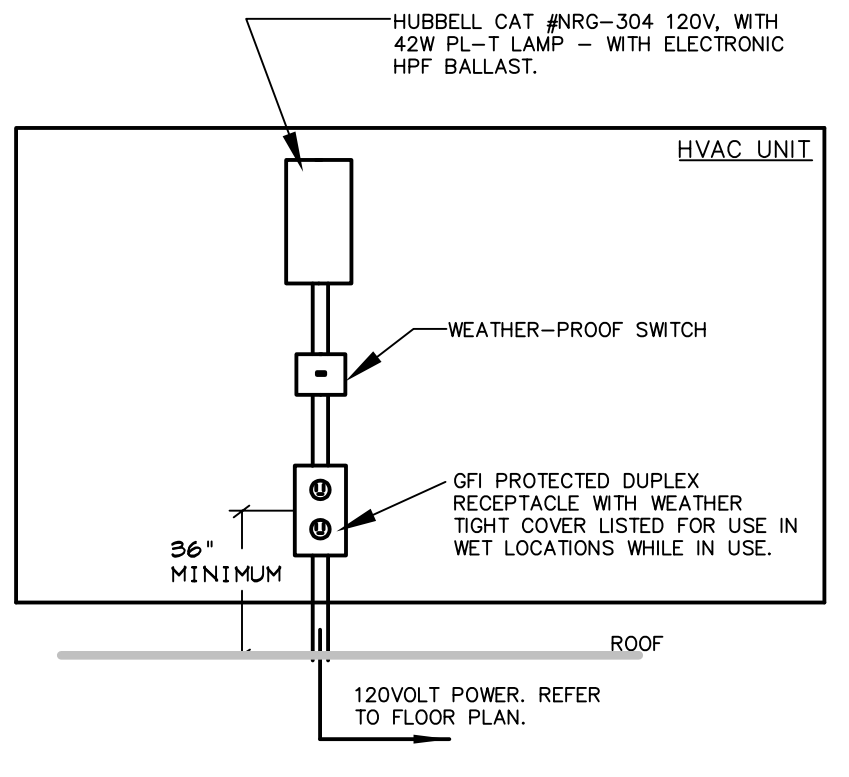
**5 HEAT TRACE DETAIL FOR ROOF TOP UNITS**  
N.T.S.

HEAT TRACING NOTES:  
1. PROVIDE SELF-REGULATING HEAT TRACE CABLE RATED AT 8.0 WATTS PER FOOT AT 120 VOLTS. WRAP PIPING AT A RATE OF 1.5 FEET OF CABLE PER LINEAR FOOT OF PIPE. PROVIDE COMPLETE INSTALLATION IN ACCORDANCE WITH SPECIFICATIONS INCLUDING POWER CONNECTIONS, SPLICES AND END SEALS, LABELS, ALUMINUM TAPE, ETC. INSTALL HEAT TRACE CABLE PER MFR'S REQUIREMENTS. PIPING MUST BE INSULATED AFTER INSTALLATION OF CABLE.

120V FROM PANEL REFER TO DRAWING E1.11 FOR CIRCUIT REQUIREMENTS

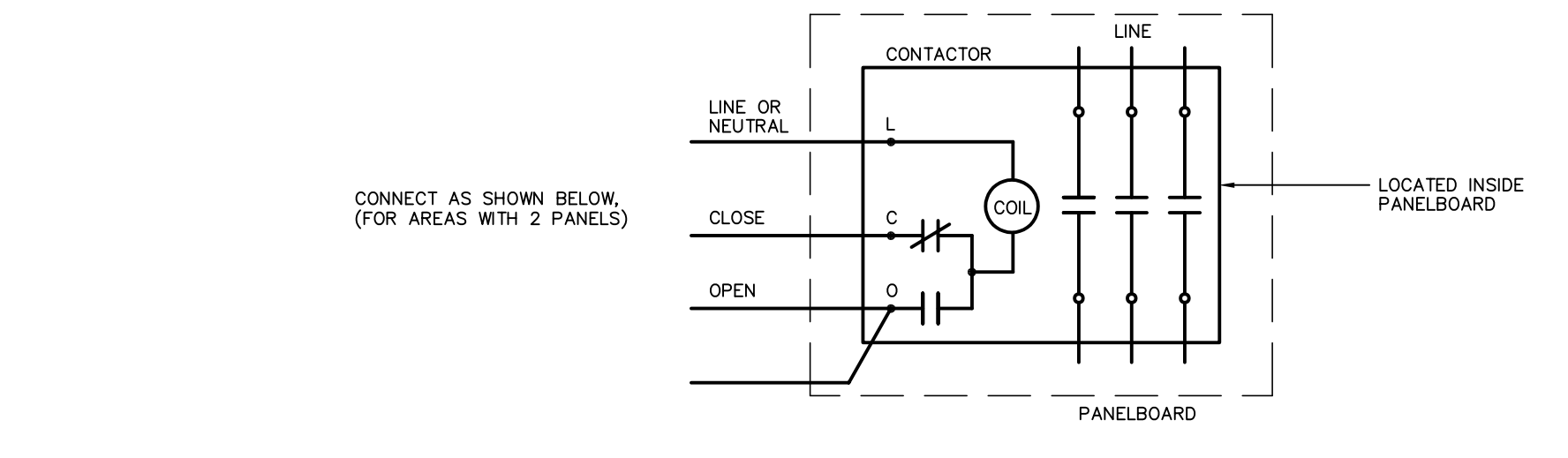
ALL EXPOSED PIPING SHALL BE HEAT TRACED BY DIV. 16, COORDINATE REQUIREMENTS WITH DIV. 15.

DETAIL NOTES:  
1. FOR UNITS MOUNTED ON ROOF, SEE ROOF POWER PLAN, DRAWING E1.11, FOR LOCATIONS.



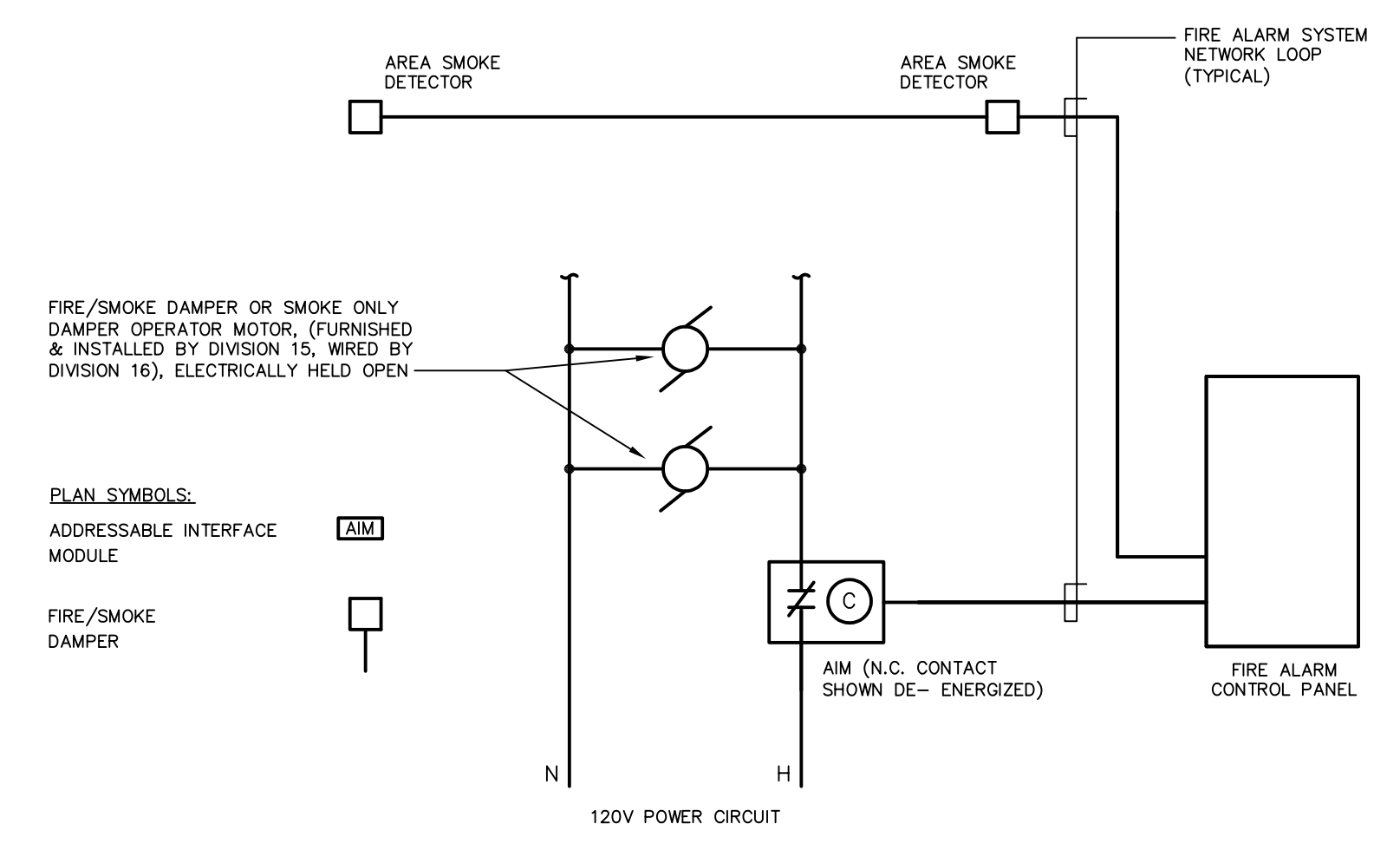
**6 TYPICAL ROOF MOUNTED UNIT OUTLET AND LIGHT DETAIL**  
N.T.S.

DETAIL NOTES:  
1. PROVIDE AT EACH HEATING, AIR CONDITIONING, OR REFRIGERATION UNIT ON ROOFTOPS IN ATTICS OR CRAWL SPACES PER NEC 210-6.3. SEE ROOF PLAN DRAWING #E1.11 FOR LOCATIONS.  
2. MOUNT DEVICES TO HVAC UNIT. COORDINATE ROOF PENETRATION WITH ROOF INSTALLER AND G.C.



**3 TYPICAL EMERGENCY POWER SHUT-OFF DIAGRAM**  
N.T.S.

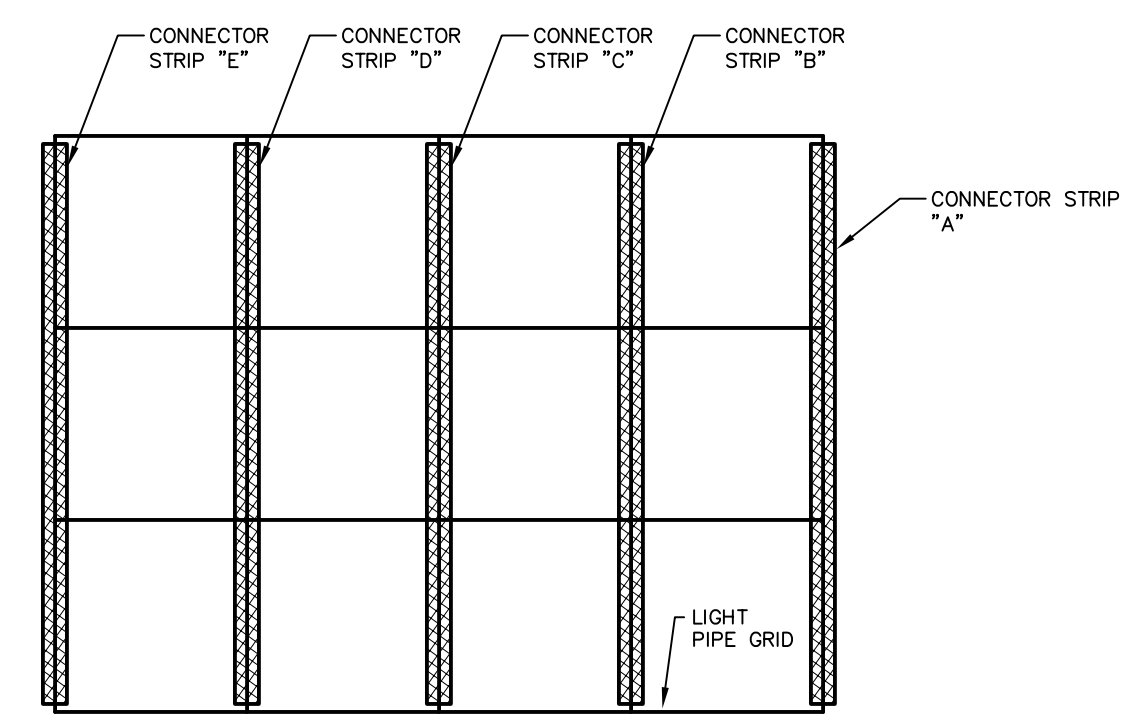
DETAIL NOTES:  
1. INCLUDE GROUND WIRE WITH 120V CIRCUITS.  
2. EMERGENCY POWER SHUT-OFF DETAIL TYPICAL FOR PANELS "MSP" AND "TSP"  
3. DETAIL SIMILAR FOR SEWING ROOM #A233, EXCEPT WITH CONTACTOR MOUNTED ADJACENT TO PANEL. REFER TO DRAWING #E1.08 FOR ADDITIONAL INFORMATION.



**2 TYPICAL FIRE ALARM/DAMPER INTERFACE WIRING DIAGRAM**  
N.T.S.

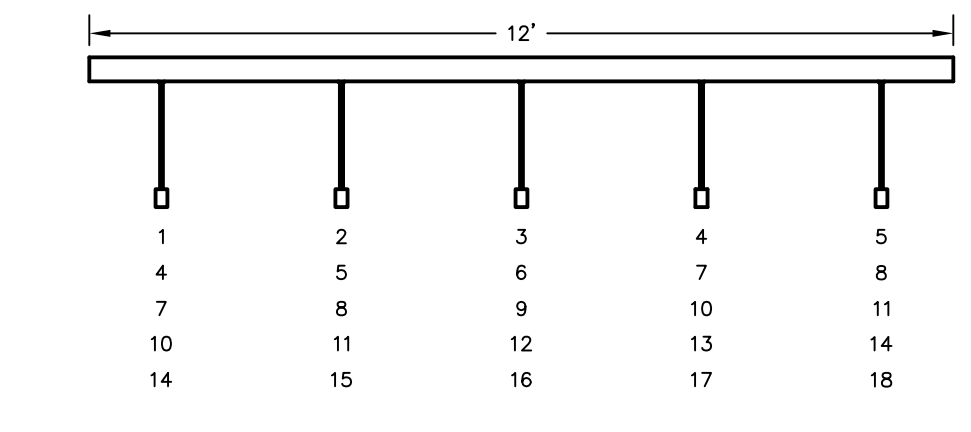
**8 TYPICAL ELECTRICAL OPERATOR WIRING DIAGRAM FOR GYM BACKBOARD, PARTITION, CURTAIN OR BLEACHER**  
N.T.S.

DETAIL NOTES:  
1. SEE GYMNASIUM POWER PLAN, DRAWING #E1.06 FOR QUANTITIES AND LOCATIONS OF MOTORIZED DEVICES AND SWITCHES.



**4 TV STUDIO LIGHT PIPE GRID DETAILS**  
N.T.S.

DETAIL NOTES:  
1. BRACKETS AND CONNECTOR STRIPS SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND INSTALLED BY ELECTRICAL CONTRACTOR.  
2. 4' x 4' x 1 1/2" BLACK IRON PIPE GRID INSTALLED BY ELECTRICAL CONTRACTOR. MOUNT GRID AT 1'-0" BELOW CEILING.  
3. SPECIALTY LIGHT FIXTURES SUPPLIED BY THE STAGE LIGHTING SUPPLIER AND ATTACHED TO PIPE GRID BY ELECTRICAL CONTRACTOR.  
4. REFER TO SPECIFICATION SECTION #16782 FOR ADDITIONAL INFORMATION.



**1 TV STUDIO CONNECTOR STRIP DETAIL**  
N.T.S.

DETAIL NOTES:  
1. SEE TV STUDIO AREA POWER FLOOR PLAN, DRAWING #E1.02 FOR LOCATION OF CONNECTOR STRIPS.  
2. REFER TO SPECIFICATION SECTION #16782 FOR ADDITIONAL INFORMATION.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: RO.01 & RO.02

REVISIONS

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**ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT 06248  
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**KB**

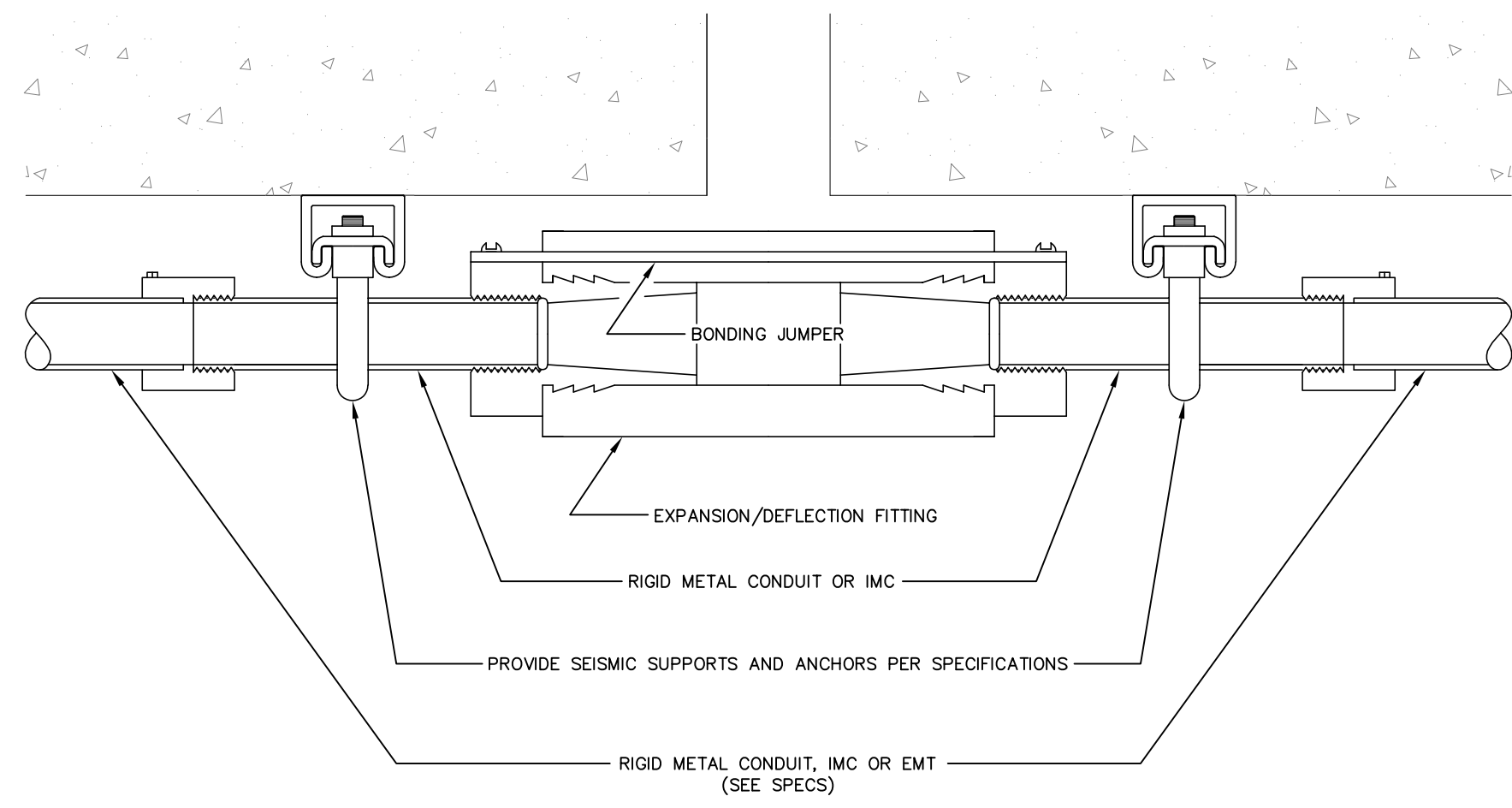
**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

DRAWN BY: RL6 SCALE: AS NOTED  
CHECKED BY: HMF

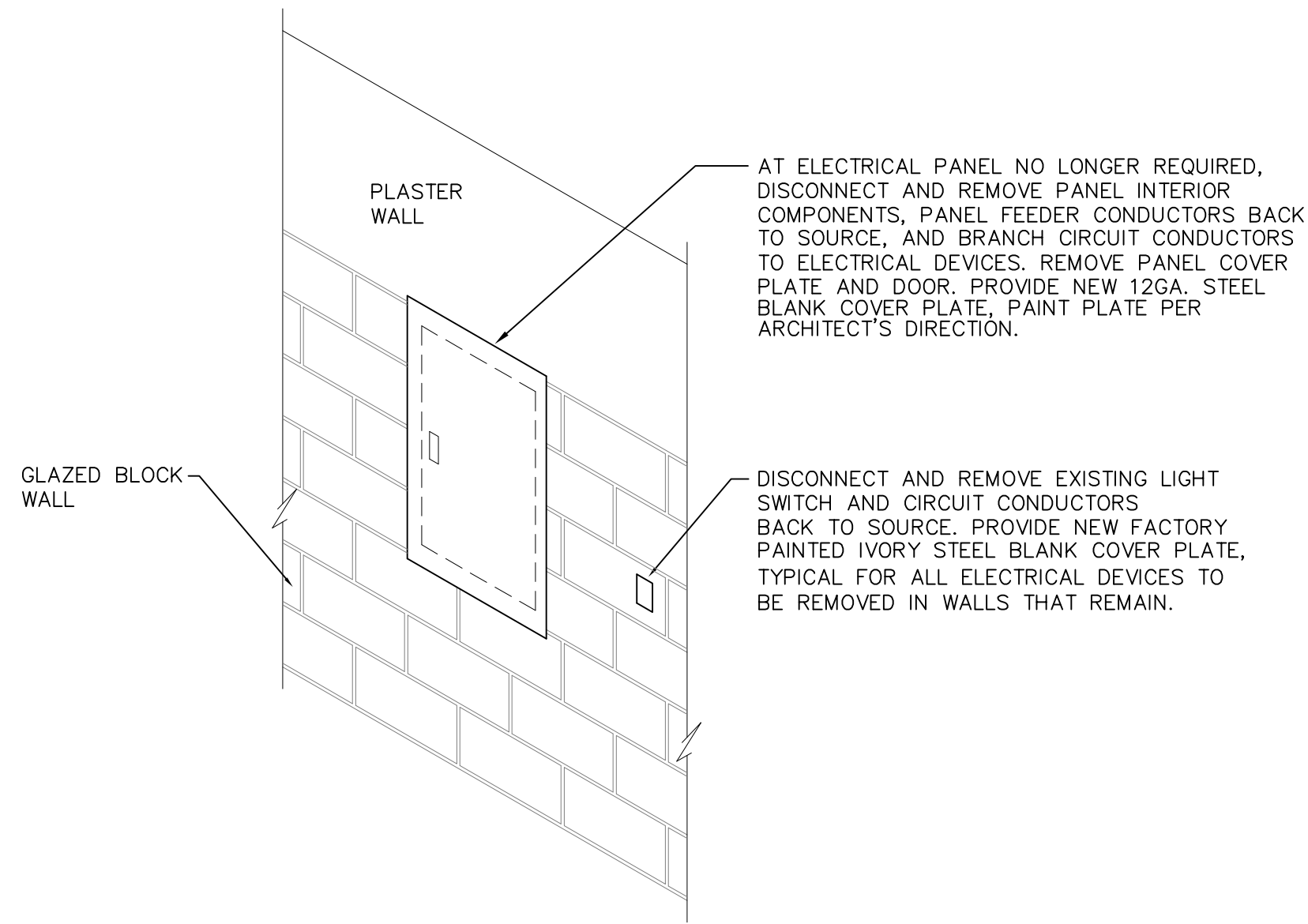
**ELECTRICAL DETAILS**

PROJECT NO.: 00049 DRAWING NO.:

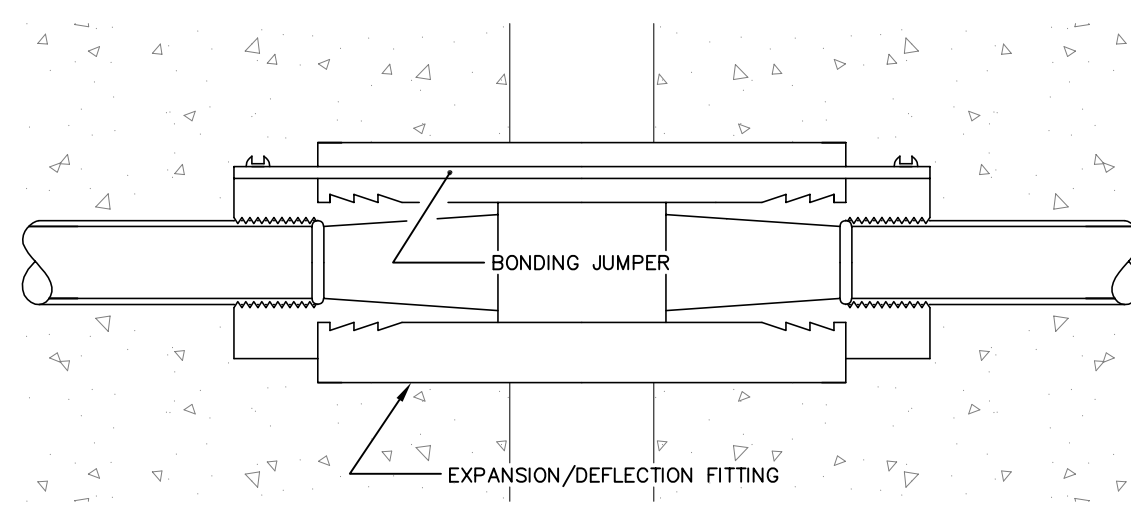
DATE: SEPTEMBER 9, 2002 **E3.03**



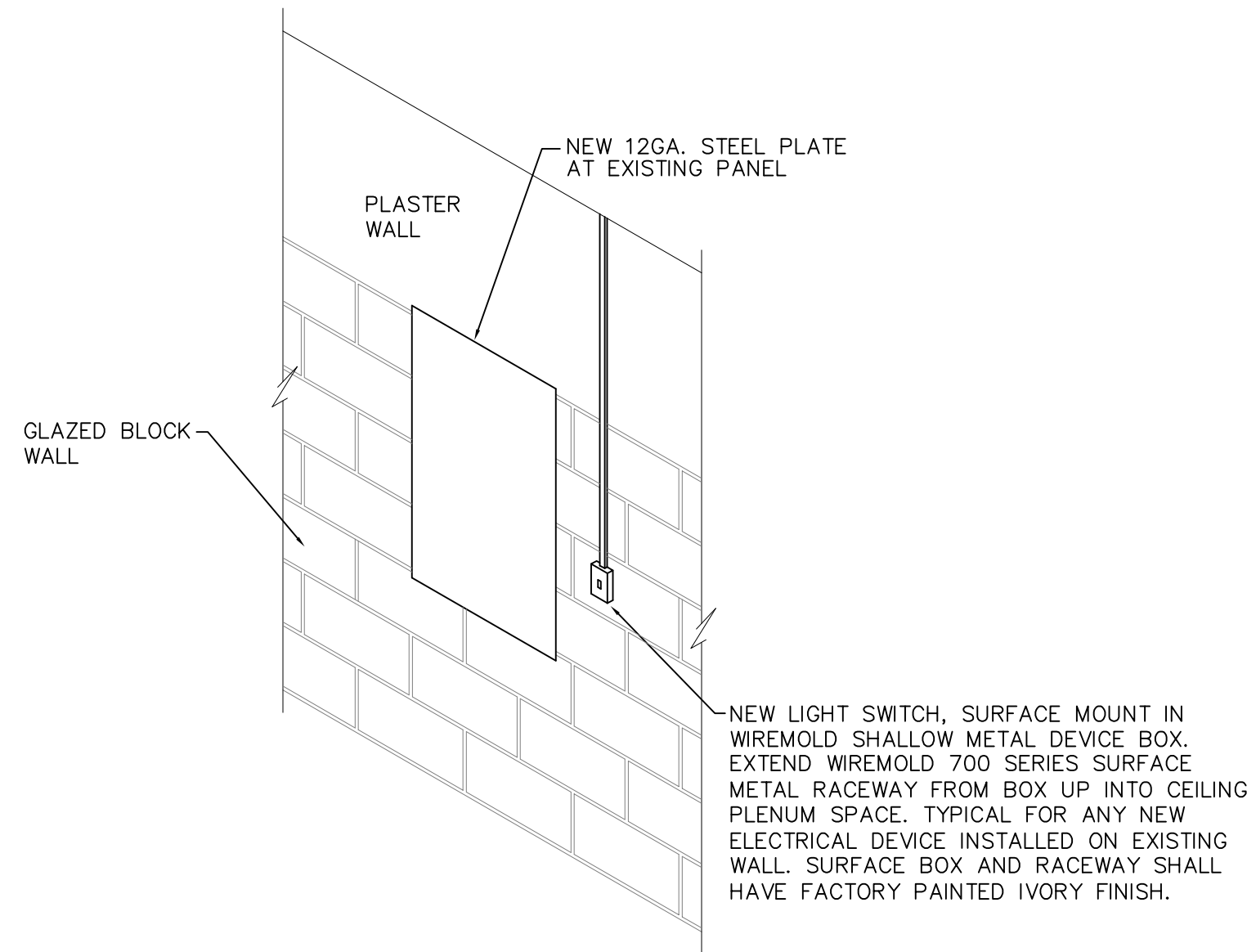
**8 EXPOSED METAL CONDUIT AT SEISMIC JOINT**  
NOT TO SCALE



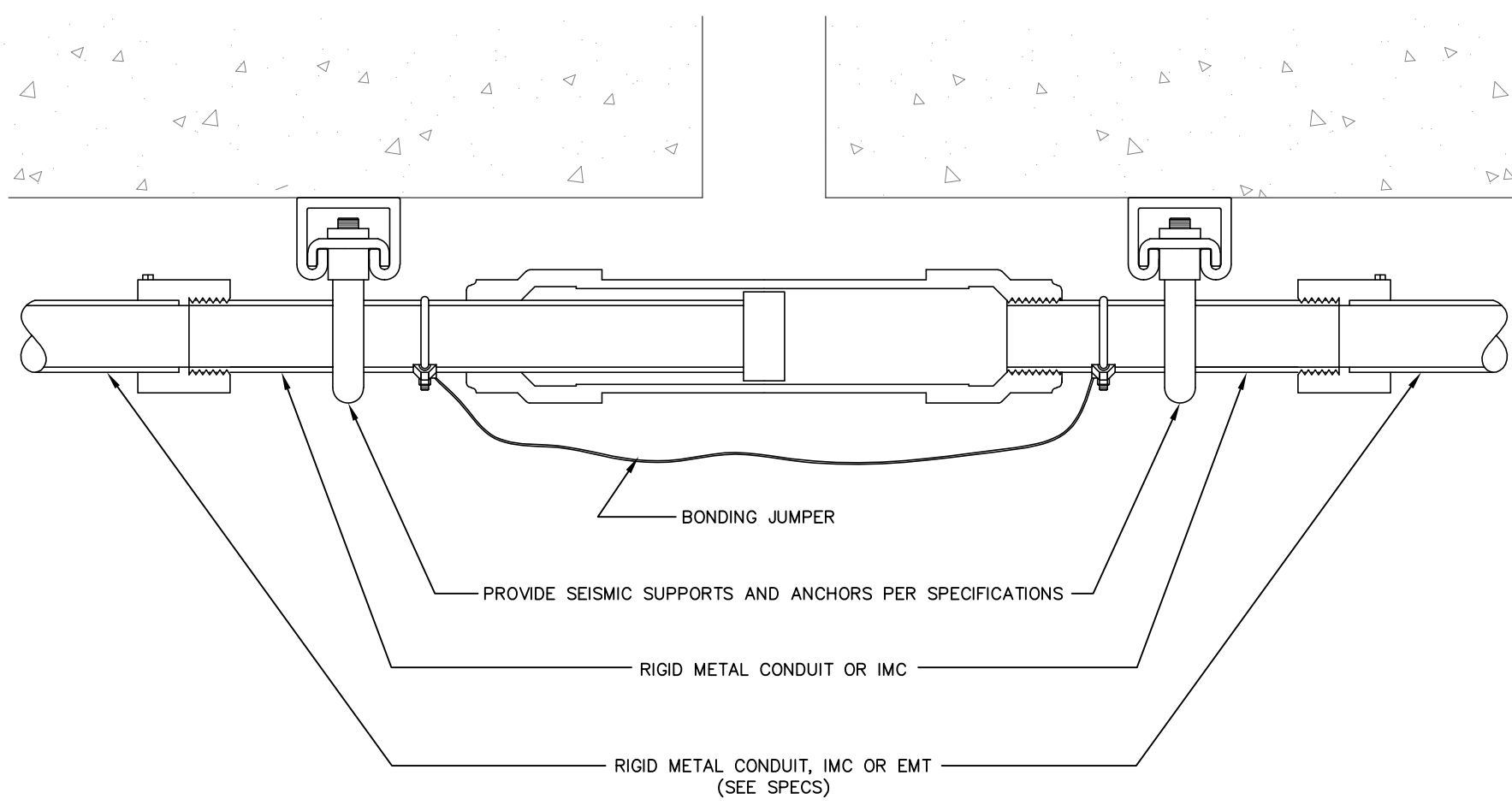
**5 TYPICAL ELECTRICAL DEMOLITION DETAIL AT EXISTING CORRIDOR WALL**  
N.T.S.



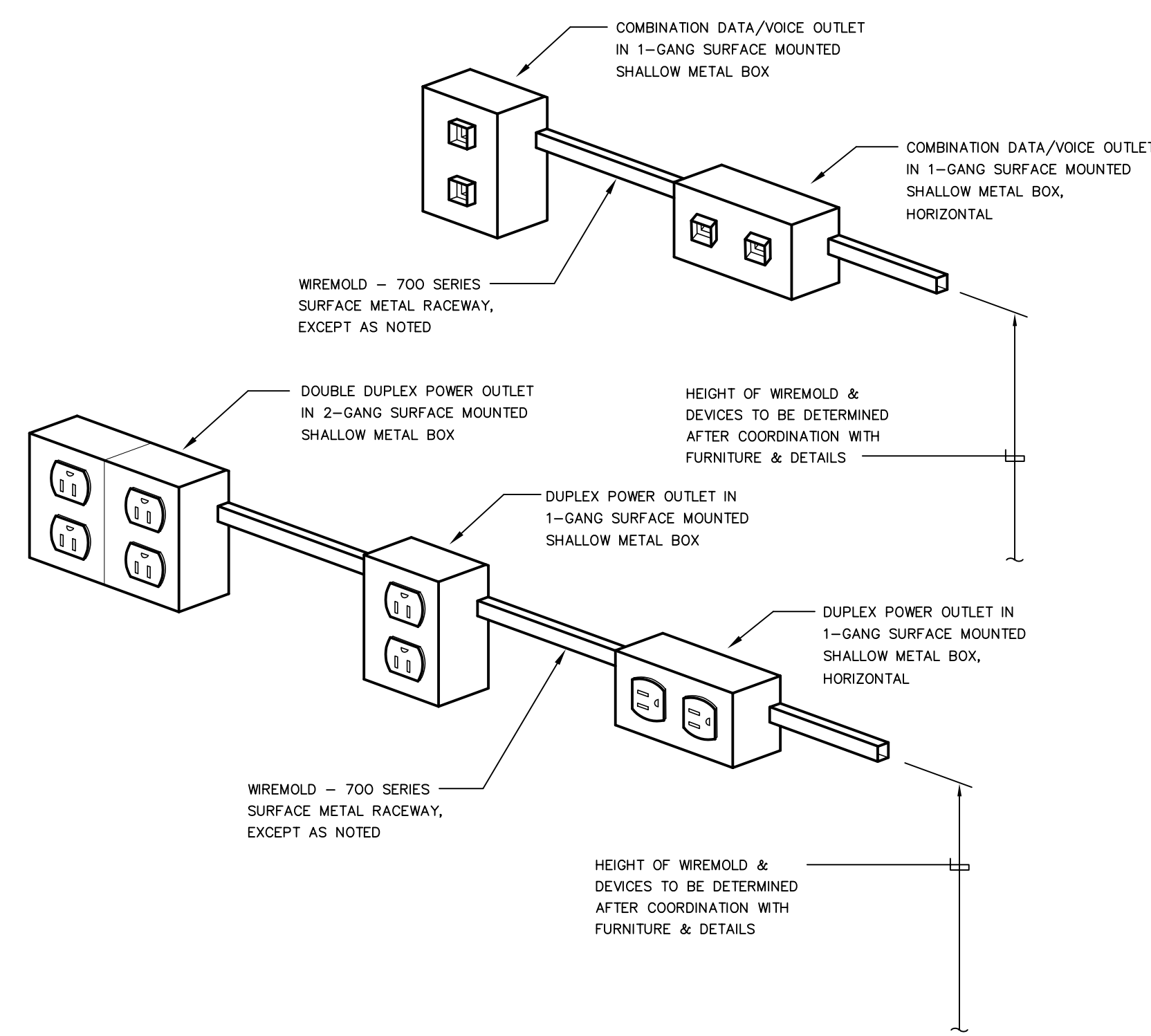
**7 EMBEDDED CONDUIT AT SEISMIC AND EXPANSION JOINTS**  
NOT TO SCALE



**4 TYPICAL NEW ELECTRICAL DEVICES AT EXISTING CORRIDOR WALL**  
N.T.S.

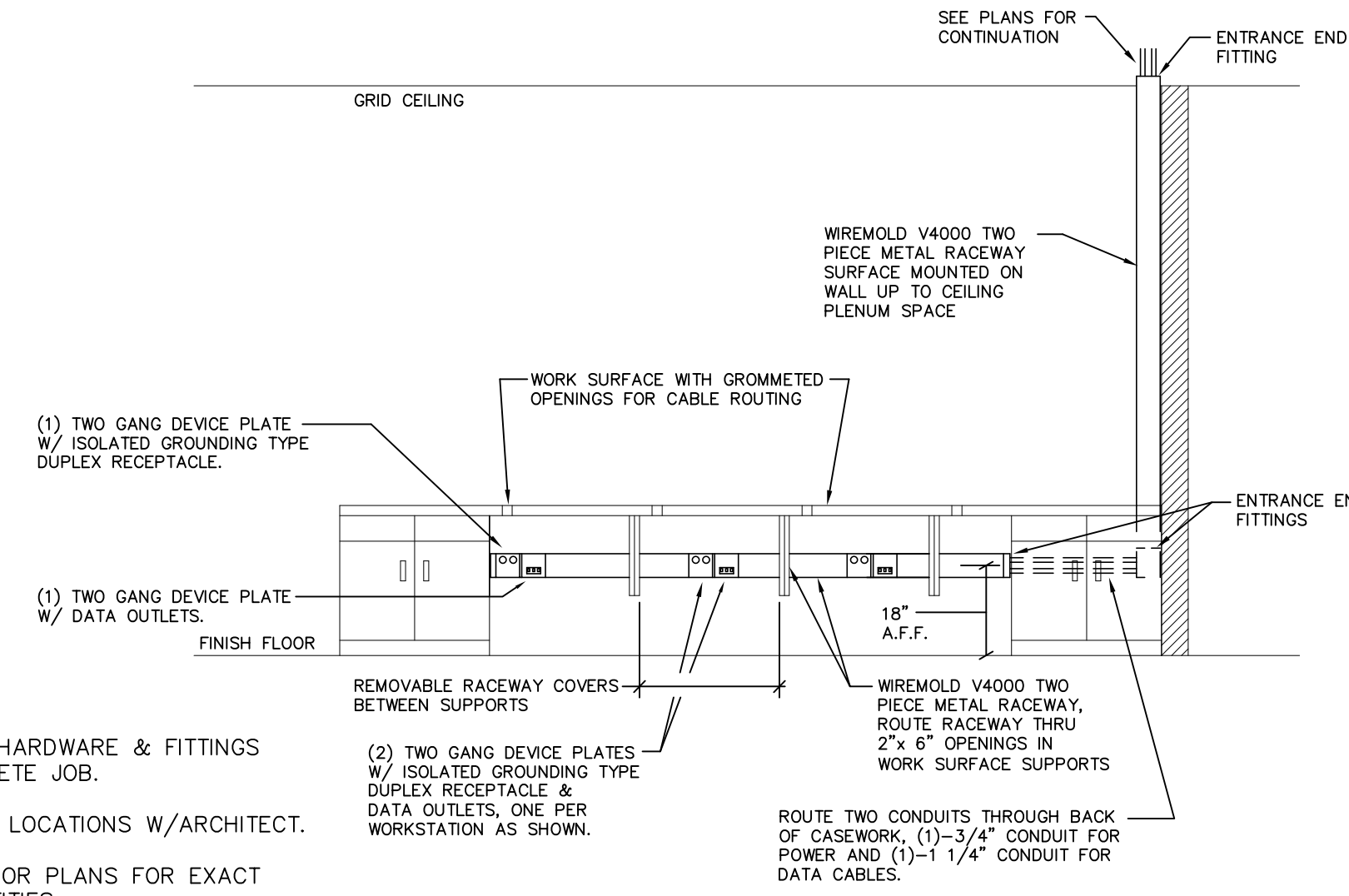


**6 EXPOSED CONDUIT AT EXPANSION JOINT**  
NOT TO SCALE



**3 TYPICAL DETAIL FOR SERVICE DEVICES FED FROM SURFACE METAL RACEWAY**  
N.T.S.

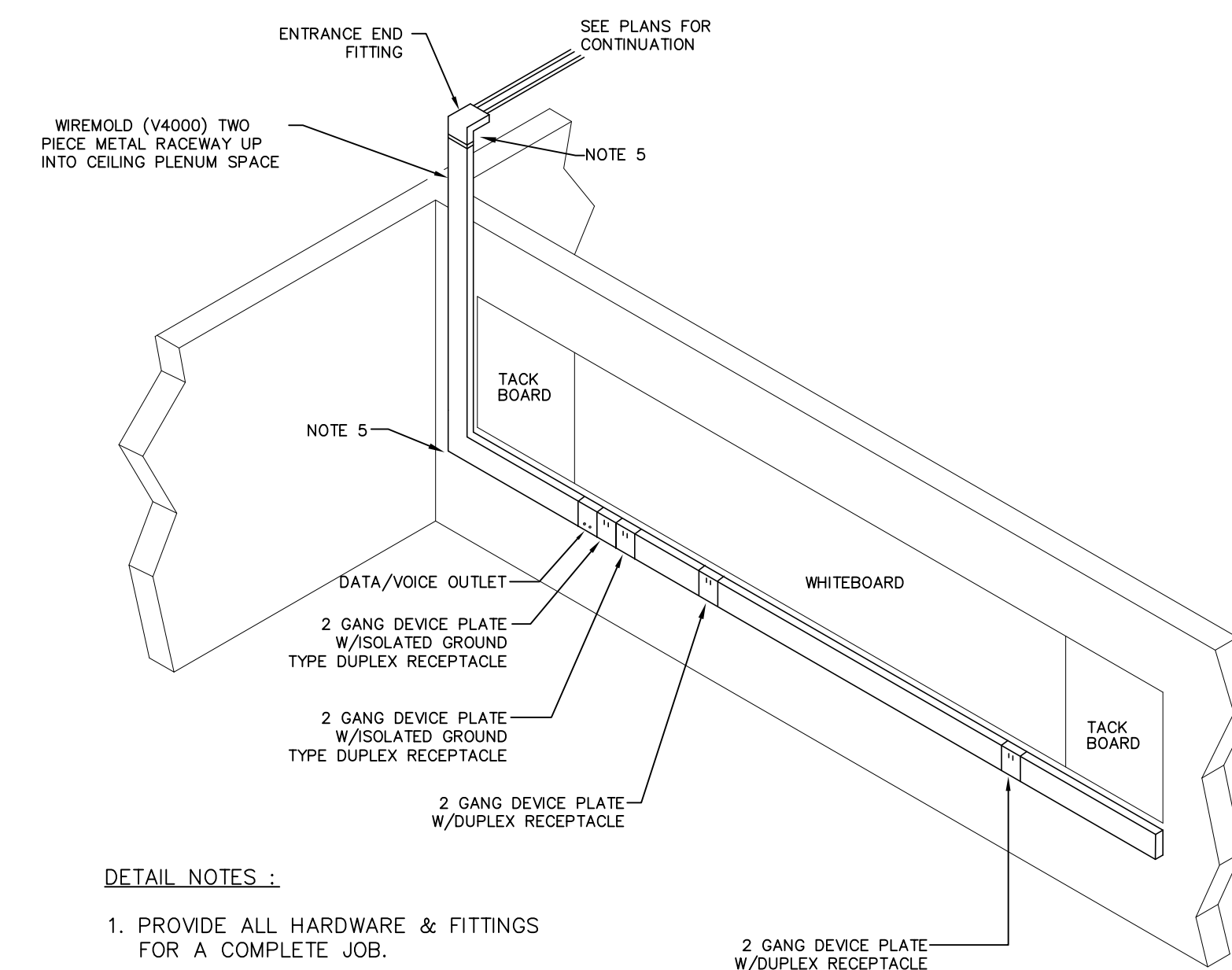
- DETAIL NOTES:**
1. DETAIL SIMILAR FOR ANY NEW / RELOCATED DEVICE AT EXISTING WALL, EXCEPT WHERE NOTED OTHERWISE.
  2. SURFACE RACEWAY MAY ALSO EXTEND VERTICALLY INTO CEILING PLENUM SPACE.
  3. ALL SURFACE RACEWAY AND BOXES SHALL BE FURNISHED WITH FACTORY PAINTED IVORY FINISH.



- DETAIL NOTES:**
1. PROVIDE ALL HARDWARE & FITTINGS FOR A COMPLETE JOB.
  2. VERIFY EXACT LOCATIONS W/ARCHITECT.
  3. REFER TO FLOOR PLANS FOR EXACT DEVICE QUANTITIES.
  4. PROVIDE WIREMOLD V4050 SERIES "OVERLAPPING" STYLE FACE PLATES AT ALL DEVICE LOCATIONS.

**2 TYPICAL CLASSROOM POWER/TELECOM RACEWAY SYSTEM DETAIL AT COMPUTER WORKSTATIONS**  
N.T.S.

1. TYPICAL FOR THE COMPUTER WORKSTATION LOCATION IN ALL CLASSROOMS, NEW AND EXISTING.
2. BOND RACEWAY TO CIRCUIT EQUIPMENT GROUND.
3. RACEWAY DIVIDER SHALL BE METAL AND BONDED TO ELECTRICAL CIRCUIT EQUIPMENT GROUND.
4. FURNISH ALL RACEWAY, BOXES, CONNECTORS, ETC., WITH FACTORY IVORY FINISH.



- DETAIL NOTES:**
1. PROVIDE ALL HARDWARE & FITTINGS FOR A COMPLETE JOB.
  2. VERIFY EXACT LOCATIONS W/ARCHITECT.
  3. REFER TO FLOOR PLANS FOR EXACT DEVICE QUANTITIES.
  4. PROVIDE WIREMOLD V4050 SERIES "OVERLAPPING" STYLE FACE PLATES AT ALL DEVICE LOCATIONS.
  5. PROVIDE "FULL CAPACITY" TYPE FITTINGS FOR ALL ELBOWS.

**1 TYPICAL CLASSROOM POWER/TELECOM RACEWAY SYSTEM DETAIL AT WHITEBOARD**  
N.T.S.

1. TYPICAL FOR THE "BOARD" WALLS OF ALL CLASSROOMS, NEW AND EXISTING.
2. BOND RACEWAY TO CIRCUIT EQUIPMENT GROUND.
3. RACEWAY DIVIDER SHALL BE METAL AND BONDED TO ELECTRICAL CIRCUIT EQUIPMENT GROUND.
4. FURNISH ALL RACEWAY, BOXES, CONNECTORS, ETC., WITH FACTORY IVORY FINISH.

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: RO.01 & RO.02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BIDDING
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES



**ADDITIONS AND RENOVATIONS**  
**RHAM MIDDLE SCHOOL**

HEBRON, CONNECTICUT 06248

STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS

**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD, CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

416 SLATER RD., NEW BRITAIN, CT 06050-2590 (860) 228-0361

DRAWN BY: RL6 CHECKED BY: HMF SCALE: AS NOTED

**ELECTRICAL DETAILS**

PROJECT NO.: 00049 DRAWING NO.:

DATE: SEPTEMBER 9, 2002 **E3.04**

MOTOR CIRCUIT SCHEDULE												
EQUIPMENT	CIRCUIT/SOURCE PANEL	O.C.P. DEVICE	FEEDER	LOCAL DISC. SWITCH	DISC. FUSE	MOTOR STARTER TYPE	LOAD HP/KW	VOLTS	REMARKS			
NOTE: REFER TO FLOOR PLAN DWGS FOR BRANCH CIRCUIT DESIGNATIONS TO ALL CUH'S, FOU'S, AND UH'S. COORDINATE FINAL LOCATIONS WITH MECH DWGS.												
UH-A1	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FURNISHED WITH UNIT	1/6HP	1 120	NOTE #2			
UH-A2	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FURNISHED WITH UNIT	1/6HP	1 120	NOTE #2			
UH-A3	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FURNISHED WITH UNIT	1/6HP	1 120	NOTE #2			
UH-C1	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FURNISHED WITH UNIT	1/6HP	1 120	NOTE #2			
CUH-A1-A5	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	-	-	FURNISHED WITH UNIT	1/10HP	1 120	NOTE #3			
CUH-B1-B5	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	-	-	FURNISHED WITH UNIT	1/10HP	1 120	NOTE #3			
CUH-C1-C7	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	-	-	FURNISHED WITH UNIT	1/10HP	1 120	NOTE #3			
CP-1	1,RP-1A2	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FVNR 00	MECH. RM.	1/20HP	1 120	NOTE #4		
CP-2	3,RP-1B1	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FVNR 00	CUST. B134	1/20HP	1 120	NOTE #4		
CP-3	3,RP-1A2	20/1	2#12, 1#12G., 3/4"	THERM.SWITCH	-	FVNR 00	MECH. RM.	1/12HP	1 120	NOTE #4		
EF-A1	1,3,5,MHP-2A	20/3	3#12,1#12G., 3/4"	30A-3P3F	15.0	FVNR 00	CUST. A221	3,0HP	3 480	NOTE #4, #9 & #11		
EF-A2	1,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A3	3,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A4	2,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A5	4,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A6	6,ESPL-1A	20/1	2#10,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4, #8 & #10		
EF-A7	6,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/60HP	1 120	NOTE #4 & #8		
EF-A8	2,RP-1A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/60HP	1 120	NOTE #4 & #8		
EF-A9	4,RP-1A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/60HP	1 120	NOTE #4, #8 & #12		
EF-A10	2,RP-1A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A11	14,16,18,MHP-2A1	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	CUST. A221	2,0HP	3 480	NOTE #4, #9 & #11		
EF-A12	7,9,11,MHP-2A	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	CUST. A221	3,0HP	3 480	NOTE #4 & #11		
EF-A13	5,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/3HP	1 120	NOTE #4, #8 & #12		
EF-A14	7,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A15	13,15,17,MHP-2A1	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	CUST. A221	1,5HP	3 480	NOTE #4 & #11		
EF-A16	8,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4, #8 & #12		
EF-A17	9,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/20HP	1 120	NOTE #4 & #8		
EF-A18	11,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-A19	9,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
EF-A20	12,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/3HP	1 120	NOTE #4 & #8		
EF-A21	14,RP-2A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-B1	23,RP-2B1	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-B2	25,RP-2B1	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
EF-B3	27,RP-2B1	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
EF-B4	SEE POWER RISER DIAG	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	ELECT. B216	3/4HP	3 480	NOTE #4 & #11		
EF-B5	SEE POWER RISER DIAG	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	ELECT. B216	3/4HP	3 480	NOTE #4 & #11		
EF-B6	SEE POWER RISER DIAG	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 - 24HR OPERATION		
EF-B7	SEE POWER RISER DIAG	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 - 24HR OPERATION		
EF-B8	26,RP-2B1	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-B9	28,RP-2B1	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-B10	31,33,35,MHP-2B	20/3	3#12,1#12G., 3/4"	-	-	VFD	ELECT. B216	2HP	3 480	NOTE #4		
EF-C1	1,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-C2	2,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
EF-C3	3,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EF-C4	2,RP-1C	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
EF-C5	7,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/6HP	1 120	NOTE #4 & #8		
AHU-A1	14,16,18,HP-1A1	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	AT UNIT	1,0HP	3 480	NOTE #2		
AHU-A2	17,19,21,HP-1A1	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 00	AT UNIT	3,0HP	3 480	NOTE #2		
AHU-A3	20,22,24,HP-1A1	20/3	3#12,1#12G., 3/4"	-	-	VFD	MANUF. A149	3,0HP	3 480	NOTE #5		
DUST COLL.	29,31,33,RP-1A	60/3	3#8,1#10G., 3/4"	60A-3P3F	40A	EXISTING	EXISTING	7,5HP	3 208	NOTE #4		
EXIST. ELEV.	SEE POWER RISER DIAG	150/3	3#3,1#8G., 1-1/4"	100A-3P3F	100A	FURNISHED WITH UNIT		20HP	3 208	NOTE #6 & #7		
RTU-A1 SUP	13,15,17,MHP-2A	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-A1 RET	19,21,23,MHP-2A	25/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	7,5HP	3 480	NOTE #5		
RTU-A2 SUP	14,16,18,MHP-2A	35/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	10,0HP	3 480	NOTE #5		
RTU-A2 RET	20,22,24,MHP-2A	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	3,0HP	3 480	NOTE #5		
RTU-A3 SUP	25,27,29,MHP-2A	35/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	10,0HP	3 480	NOTE #5		
RTU-A3 RET	31,33,35,MHP-2A	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	3,0HP	3 480	NOTE #5		
RTU-A4 SUP	26,28,30,MHP-2A	25/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	7,5HP	3 480	NOTE #5		
RTU-A4 RET	32,34,36,MHP-2A	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	5,0HP	3 480	NOTE #5		
RTU-A5 SUP	1,3,5,MHP-2A1	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-A5 RET	7,9,11,MHP-2A1	20/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	5,0HP	3 480	NOTE #5		
RTU-A6 SUP	2,4,6,MHP-2A1	50/3	3#10,1#10G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	15,0HP	3 480	NOTE #5		
RTU-A6 RET	8,10,12,MHP-2A1	25/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	7,5HP	3 480	NOTE #5		
RTU-B1 SUP	7,9,11,MHP-2B	50/3	3#10,1#10G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	15,0HP	3 480	NOTE #5		
RTU-B1 RET	13,15,17,MHP-2B	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	5,0HP	3 480	NOTE #5		
RTU-B2 SUP	8,10,12,MHP-2B	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-B2 RET	14,16,18,MHP-2B	35/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	10,0HP	3 480	NOTE #5		
RTU-B3 SUP	25,27,29,MHP-2B	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-B3 RET	31,33,35,MHP-2B	25/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	7,5HP	3 480	NOTE #5		
RTU-B4 SUP	20,22,24,MHP-2B	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-B4 RET	26,28,30,MHP-2B	35/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	10,0HP	3 480	NOTE #5		
RTU-C1 SUP	1,3,5,MHP-1C	35/3	3#10,1#12G., 3/4"	30A-3P3F	25A	FVNR 2	ELECT. C135	10,0HP	3 480	NOTE #4		
RTU-C1 RET	7,9,11,MHP-1C	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	FVNR 1	ELECT. C135	5,0HP	3 480	NOTE #4		
RTU-C2 SUP	2,4,6,MHP-1C	70/3	3#8,1#8G., 1"	BY DIV. 15	-	VFD	ROOF AT UNIT	20,0HP	3 480	NOTE #5		
RTU-C2 RET	8,10,12,MHP-1C	25/3	3#10,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	7,5HP	3 480	NOTE #5		
RTU-C3 SUP	13,15,17,MHP-1C	50/3	3#10,1#10G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	15,0HP	3 480	NOTE #5		
RTU-C3 RET	19,21,23,MHP-1C	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	5,0HP	3 480	NOTE #5		
RTU-C4 SUP	14,16,18,MHP-1C	50/3	3#10,1#10G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	15,0HP	3 480	NOTE #5		
RTU-C4 RET	20,22,24,MHP-1C	20/3	3#12,1#12G., 3/4"	BY DIV. 15	-	VFD	ROOF AT UNIT	5,0HP	3 480	NOTE #5		
ACU-A1	5,RP-1A2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	0,4KW	1 120	NOTE #4 & #8		
CU-A1	6,8,10,RP-1A2	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	-	-	3,0KW	3 208	NOTE #3		
ACU-C1	5,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	0,4KW	1 120	NOTE #4 & #8		
CU-C1	6,8,10,RP-1C2	20/3	3#12,1#12G., 3/4"	30A-3P3F	15A	-	-	3,0KW	3 208	NOTE #3		
EUH-1	MDPH (SEE RISER)	20/3	3#12,1#12G., 3/4"	30A-3P3F	20A	-	-	12KW	3 480	NOTE #2		
FCU-C1	9,RP-1C2	20/1	2#12,1#12G., 3/4"	THERM.SWITCH	-	-	-	1/4HP	1 120	NOTE #4 & #8		
EL. WTR HTR	1,3,5,MHP-1B	20/3	3#12,1#12G., 3/4"	30A-3P3F	20A	-	-	12KW	3 480	NOTE #2		
MOD RM. A149	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM SWITCH	-	FURNISHED WITH UNIT	1/2HP	1 120	NOTE #2			
MOD RM. C134	REFER TO FLR. PLANS	20/1	2#12, 1#12G., 3/4"	THERM SWITCH	-	FURNISHED WITH UNIT	1/2HP	1 120	NOTE #2			

LIGHTING FIXTURE SCHEDULE												
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PANELBOARD SCHEDULE										
PANEL	LOCATION	PANEL DESCRIPTION					BRANCH CIRCUIT BREAKER		REMARKS	
		MAINS	VOLTAGE	POLES	MTG	A.I.C.	ACTIVE	SPARE		
HP-1A1	ELECTRIC ROOM #A124	150A M.C.B.	277/480	42	SURFACE	42K	11 - 20/1 3 - 20/3 1 - 70/3	7 - 20/1	+ (12) 1P SPACE AND BUS ONLY	
HP-2A	ELECTRIC ROOM #A218	100A M.C.B.	277/480	30	SURFACE	22K	15 - 20/1	7 - 20/1	+ (8) 1P SPACE AND BUS ONLY	
MHP-2A	CUSTODIAN'S ROOM #A221	600A M.C.B.	277/480	42	SURFACE	42K	5 - 20/3 2 - 25/3 2 - 35/3 1 - 60/3 1 - 70/3 1 - 125/3 1 - 250/3	1 - 20/3		
MHP-2A1	CUSTODIAN'S ROOM #A221	125A M.L.O.	277/480	42	SURFACE	42K	4 - 20/3 1 - 25/3 1 - 50/3 1 - 70/3	3 - 20/3	+ (12) 1P SPACE AND BUS ONLY	
HP-1B1	ELECTRIC ROOM #B133	100A M.C.B.	277/480	42	SURFACE	22K	16 - 20/1 1 - 60/3	6 - 20/1	+ (17) 1P SPACE AND BUS ONLY	
MHP-1B	ELECTRIC ROOM #B133	175A M.C.B.	277/480	42	SURFACE	22K	1 - 20/3 1 - 60/3 1 - 150/3	3 - 20/3	+ (24) 1P SPACE AND BUS ONLY	
HP-2B	ELECTRIC ROOM #B216	60A M.C.B.	277/480	30	SURFACE	22K	8 - 20/1	8 - 20/1	+ (14) 1P SPACE AND BUS ONLY	
MHP-2B	ELECTRIC ROOM #B216	350A M.C.B.	277/480	42	SURFACE	22K	3 - 20/3 1 - 25/3 2 - 35/3 1 - 50/3 1 - 60/3 3 - 70/3 1 - 100/3	2 - 20/3		
MHP-1C	ELECTRIC ROOM #C135	350A M.C.B.	277/480	42	SURFACE	22K	3 - 20/3 1 - 25/3 1 - 35/3 2 - 50/3 1 - 60/3 1 - 70/3 1 - 150/3	2 - 20/3	+ (6) 1P SPACE AND BUS ONLY	
HP-1C1	ELECTRIC ROOM #C111	60A M.C.B.	277/480	30	SURFACE	22K	14 - 20/1	6 - 20/1	+ (10) 1P SPACE AND BUS ONLY	
ELSH-1A	ELECTRIC ROOM #A142	100A M.C.B.	277/480	30	SURFACE	42K	12 - 20/1 2 - 60/3	7 - 20/1	+ (5) 1P SPACE AND BUS ONLY	
ELSH-1B	ELECTRIC ROOM #B133	60A M.C.B.	277/480	30	SURFACE	22K	8 - 20/1	6 - 20/1	+ (16) 1P SPACE AND BUS ONLY	
ELSH-1C	ELECTRIC ROOM #C135	60A M.C.B.	277/480	30	SURFACE	22K	7 - 20/1	7 - 20/1	+ (16) 1P SPACE AND BUS ONLY	
ESPH-1A	ELECTRIC ROOM #A142	150A M.C.B.	277/480	30	SURFACE	42K	1 - 20/3 1 - 150/3	6 - 20/1	+ (18) 1P SPACE AND BUS ONLY	

PANELBOARD SCHEDULE										
PANEL	LOCATION	PANEL DESCRIPTION					BRANCH CIRCUIT BREAKER		REMARKS	
		MAINS	VOLTAGE	POLES	MTG	A.I.C.	ACTIVE	SPARE		
RP-1A	ELECTRIC ROOM #A142	225A M.C.B.	120/208	42	SURFACE	22K	26 - 20/1 1 - 50/3 1 - 60/3 1 - 125/3	7 - 20/1		
RP-1A1	ELECTRIC ROOM #A124	125A M.C.B.	120/208	42	SURFACE	22K	34 - 20/1 1 - 50/2 1 - 70/3	3 - 20/1		
RP-1A2	ELECTRIC ROOM #A124	125A M.L.O.	120/208	42	SURFACE	22K	6 - 20/1 1 - 20/3	9 - 20/1	+ (24) 1P SPACE AND BUS ONLY	
RP1G-1A	ELECTRIC ROOM #A124	100A M.C.B.	120/208	42	SURFACE	22K	31 - 20/1 1 - 60/3	8 - 20/1		
RP1G-1A1	ELECTRIC ROOM #A124	100A M.L.O.	120/208	42	SURFACE	22K	9 - 20/1	9 - 20/1	+ (24) 1P SPACE AND BUS ONLY	
RP-2A	ELECTRIC ROOM #A218	500A M.C.B.	120/208	42	SURFACE	42K	30 - 20/1 1 - 60/3 2 - 100/3 1 - 300/3			
RP-2A1	ELECTRIC ROOM #A218	100A M.L.O.	120/208	42	SURFACE	42K	32 - 20/1 1 - 60/3	4 - 20/1	+ (6) 1P SPACE AND BUS ONLY	
RP-2A2	ELECTRIC ROOM #A218	100A M.L.O.	120/208	30	SURFACE	42K	15 - 20/1	6 - 20/1	+ (9) 1P SPACE AND BUS ONLY	
RP1G-2A	ELECTRIC ROOM #A218	100A M.C.B.	120/208	42	SURFACE	42K	32 - 20/1 1 - 60/3	7 - 20/1		
RP1G-2A1	ELECTRIC ROOM #A218	100A M.L.O.	120/208	42	SURFACE	22K	6 - 20/1	6 - 20/1	+ (30) 1P SPACE AND BUS ONLY	
RP-1B	ELECTRIC ROOM #B133	225A M.C.B.	120/208	42	SURFACE	22K	36 - 20/1 1 - 100/3	3 - 20/1		
RP-1B1	ELECTRIC ROOM #B133	100A M.L.O.	120/208	42	SURFACE	22K	34 - 20/1	8 - 20/1		
RP1G-1B	ELECTRIC ROOM #B133	100A M.C.B.	120/208	42	SURFACE	22K	25 - 20/1	6 - 20/1	+ (11) 1P SPACE AND BUS ONLY	
RP-2B	ELECTRIC ROOM #B216	150A M.C.B.	120/208	42	SURFACE	22K	37 - 20/1 1 - 70/3	2 - 20/1		
RP-2B1	ELECTRIC ROOM #B216	100A M.L.O.	120/208	42	SURFACE	22K	26 - 20/1	6 - 20/1	+ (10) 1P SPACE AND BUS ONLY	
RP1G-2B	ELECTRIC ROOM #B216	100A M.C.B.	120/208	42	SURFACE	22K	21 - 20/1	6 - 20/1	+ (15) 1P SPACE AND BUS ONLY	
RP-1C	ELECTRIC ROOM #C135	225A M.C.B.	120/208	42	SURFACE	22K	32 - 20/1 1 - 30/2 1 - 60/3 1 - 125/3	2 - 20/1		
RP-1C1	ELECTRIC ROOM #C111	125A M.C.B.	120/208	42	SURFACE	22K	37 - 20/1 1 - 30/2 1 - 50/2	1 - 20/1		
RP-1C2	ELECTRIC ROOM #C111	60A M.C.B.	120/208	30	SURFACE	22K	11 - 20/1 1 - 20/3	6 - 20/1	+ (10) 1P SPACE AND BUS ONLY	
RP1G-1C	ELECTRIC ROOM #C111	100A M.C.B.	120/208	42	SURFACE	22K	35 - 20/1	7 - 20/1		
PPELEV	ELEV. MACHINE RM. #A130	100A M.L.O.	120/208	18	SURFACE	22K	6 - 20/1	2 - 20/1	+ (10) 1P SPACE AND BUS ONLY	
FLP	STORAGE ROOM #A239	300A M.C.B.	120/208	42	SURFACE	22K	12 - 20/1 1 - 30/2 5 - 50/2	6 - 20/1	+ (12) 1P SPACE AND BUS ONLY	
ARP	STORAGE ROOM #A217	100A M.C.B.	120/208	30	SURFACE	22K	19 - 20/1 1 - 50/2	9 - 20/1		
MSP	MFG./CONSTR. #A149	175A M.C.B. 200A MAIN CONTACTOR	120/208	42	SURFACE	22K	22 - 20/1 2 - 20/2 2 - 30/2 2 - 50/2	8 - 20/1		
TSP	TRANS. #A148	70A M.C.B. 100A MAIN CONTACTOR	120/208	30	SURFACE	22K	16 - 20/1 1 - 20/2	6 - 20/1	+ (6) 1P SPACE AND BUS ONLY	
ESPL-1A	ELECTRIC ROOM #A142	225A M.C.B.	120/208	30	SURFACE	22K	6 - 20/1 1 - 150/3	7 - 20/1	+ (14) 1P SPACE AND BUS ONLY	
ESPL-2B	ELECTRIC ROOM #B216	40A M.C.B.	120/208	12	SURFACE	22K	2 - 20/1	4 - 20/1	+ (6) 1P SPACE AND BUS ONLY	

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS GENERAL NOTES AND WALL TYPES SEE SHEETS: R0.01 & R0.02

REVISIONS		
DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
SEPTEMBER 9, 2002	PHASE 2	DRAWINGS ISSUED FOR SEE REVIEW AND REFERENCE FOR PHASE 1 BIDDING
SEPTEMBER 25, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1 BID
DECEMBER 16, 2002	PHASE 2	DRAWINGS ISSUED FOR BIDDING AND CONSTRUCTION PURPOSES

# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
28 SOUTH MAIN STREET, WEST HARTFORD CT 06107-2420  
TEL (860) 521-4329 FAX (860) 521-9620  
vZHS PROJECT NUMBER: 2000155.01

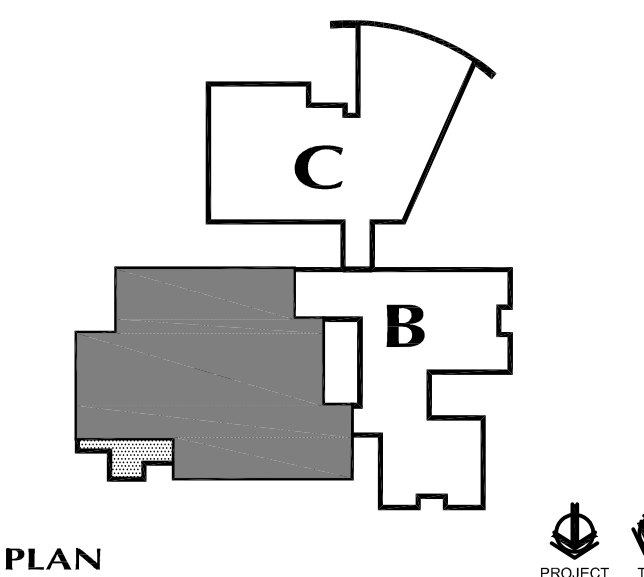
**KB**  
**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

DRAWN BY: RL6 SCALE: AS NOTED  
CHECKED BY: HMF

## ELECTRICAL PANELBOARD SCHEDULES

PROJECT NO.: 00049 DRAWING NO.:

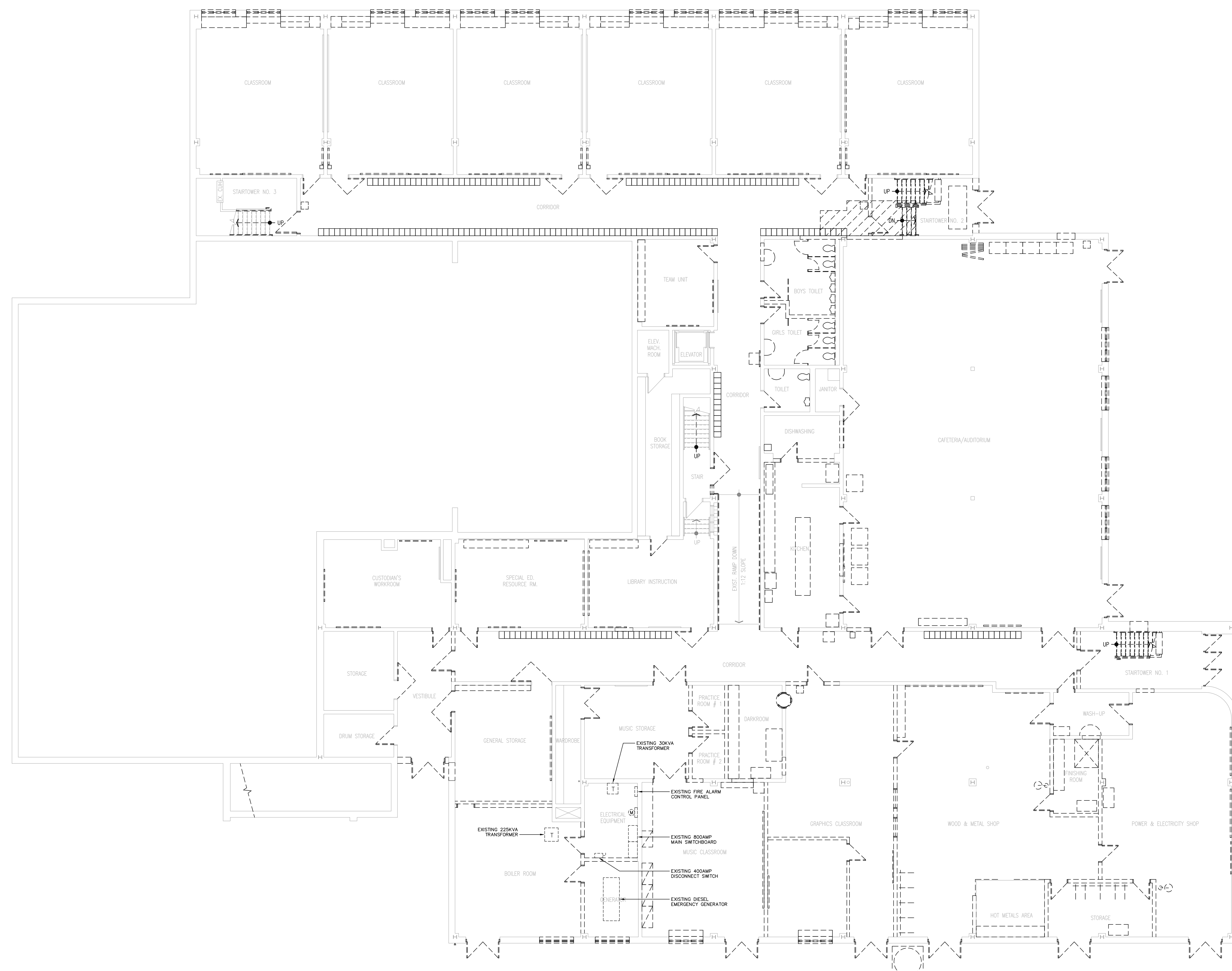
DATE: SEPTEMBER 9, 2002 **E4.02**



KEY PLAN

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS  
GENERAL NOTES AND WALL TYPES  
SEE SHEETS: R0.01 & R0.02

DATE	MARK	DESCRIPTION
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# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT  
06248  
STATE PROJECT NO. 208-0018 N/EA/RR

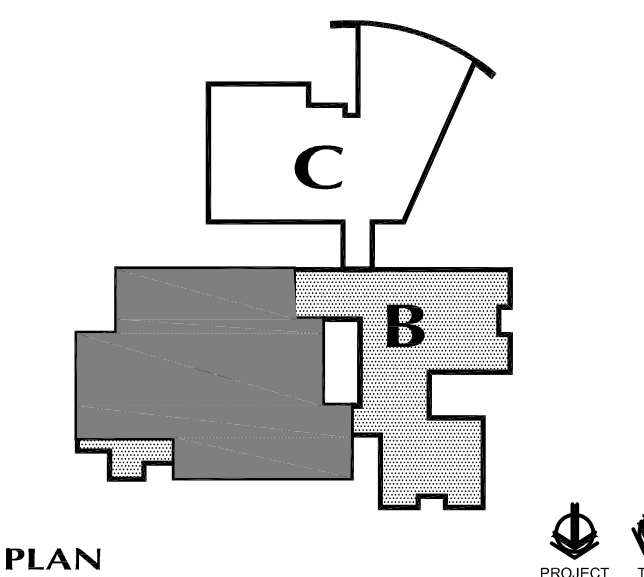
VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
**vZHS**  
29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4336 FAX (860) 521-9626  
vZHS PROJECT NUMBER: 2000155.01



DRAWN BY: RLG  
CHECKED BY: MMF  
SCALE: 1/8"=1'-0"  
**ELECTRICAL  
DEMOLITION  
MAIN LEVEL**

PROJECT NO.: 00049  
DRAWING NO.:  
DATE: SEPTEMBER 9, 2002  
**ED1.01**

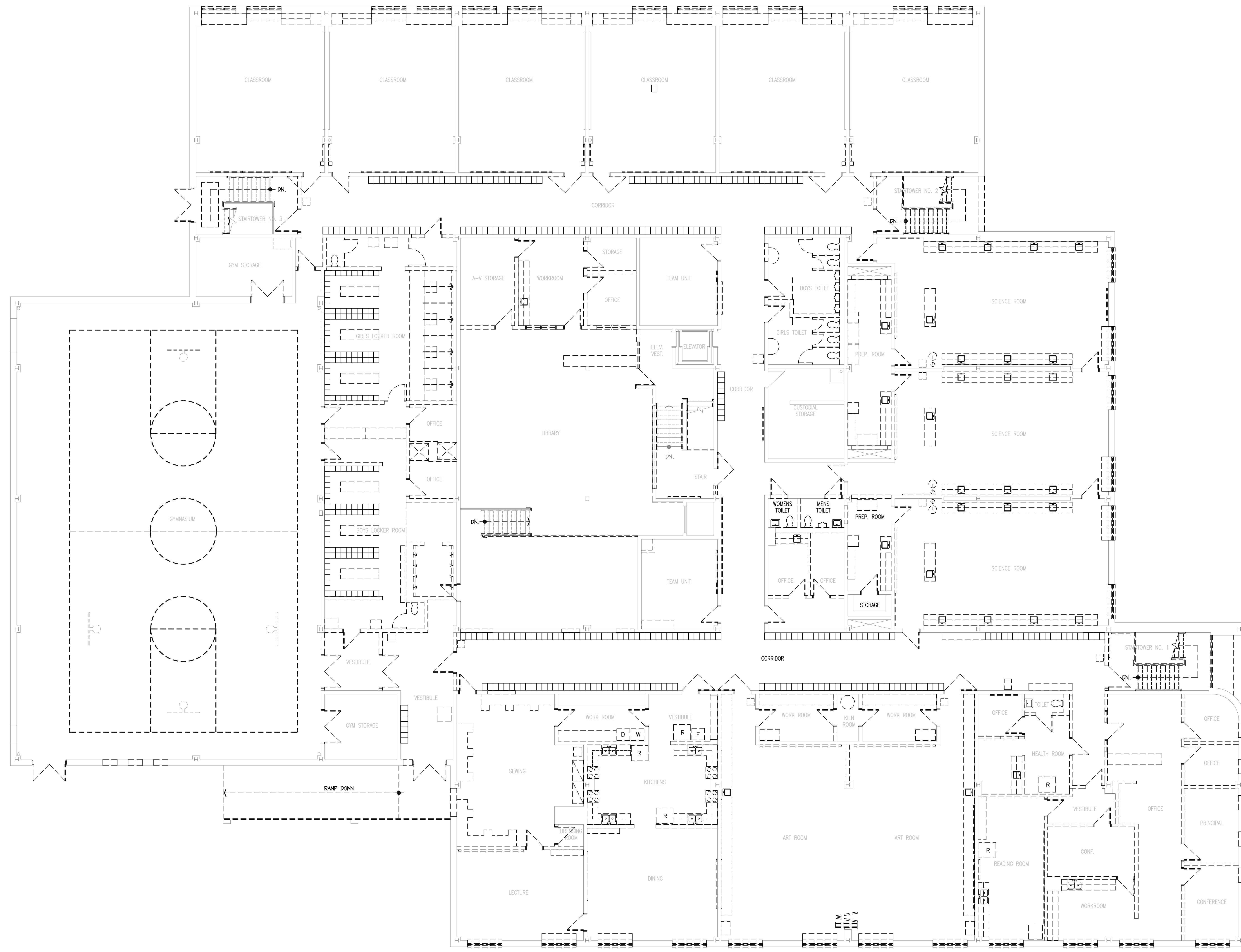
- GENERAL DEMOLITION NOTES:**
- DISCONNECT AND REMOVE ALL ELECTRICAL PANELBOARDS AND DISTRIBUTION EQUIPMENT WITHIN PROJECT DEFINED SCOPE UNLESS OTHERWISE NOTED ON FLOOR PLANS. ALL FEEDERS, BRANCH CIRCUITS AND ASSOCIATED WIRING AND CONDUIT SHALL BE REMOVED.
  - DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES INCLUDING ASSOCIATED BOXES, CONDUIT AND FIXTURE HANGERS WITHIN PROJECT DEFINED SCOPE ON FLOOR PLANS, UNLESS OTHERWISE NOTED ON NEW WORK PLANS. ALL EXISTING BRANCH CIRCUIT WIRING SHALL BE REMOVED BACK TO SOURCE, UNLESS OTHERWISE NOTED. COORDINATE ALL WORK WITH NEW WORK LIGHTING PLANS AND OWNER PRIOR TO DEMOLITION. ALL EXISTING LIGHTING FIXTURES HAVE NOT BEEN SHOWN. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
  - ALL EXISTING LIGHTING FIXTURES SHALL BE OFFERED TO OWNER PRIOR TO DEMOLITION. ANY LIGHTING FIXTURES BEING RETAINED SHALL BE STORED AS DIRECTED BY OWNER. ALL LIGHTING FIXTURES INDICATED BY OWNER FOR DISPOSAL SHALL BE DISPOSED OF OFF SITE.
  - DISCONNECT AND REMOVE ALL RECEPTACLES, DATA/TEL OUTLETS AND ADDITIONAL SPECIAL SYSTEMS DEVICES ON ANY WALLS SHOWN AS DASHED, (WALLS TO BE REMOVED), OR ON WALLS AS DEFINED BY THE PROJECT SCOPE ON FLOOR PLANS UNLESS DESIGNATED OTHERWISE. ALL BRANCH CIRCUIT WIRING FOR SUCH DEVICES BEING REMOVED SHALL BE REMOVED BACK TO SOURCE. REFER TO NEW WORK POWER PLANS FOR ANY DEVICES THAT ARE TO REMAIN AND BE REUSED AND/OR REWIRED. ALL DEVICES HAVE NOT BEEN SHOWN. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
  - DISCONNECT AND REMOVE ALL EXISTING FIRE ALARM SYSTEM DEVICES INCLUDING MANUAL PULL STATIONS, HORN/STROBE UNITS, SMOKE AND HEAT DETECTORS. ALL EXISTING FIRE ALARM WIRING SHALL BE REMOVED BACK TO SOURCE. NEW FIRE ALARM DEVICES MAY BE RE-INSTALLED AT EXISTING LOCATIONS THAT REMAIN PROVIDED THE NEW INSTALLATION COMPLIES WITH CODE REQUIREMENTS. COORDINATE EXISTING SYSTEM DEVICE LOCATIONS WITH NEW WORK POWER FLOOR PLANS. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
  - DISCONNECT AND REMOVE ALL ELECTRICAL DEVICES, CONDUIT AND BRANCH CIRCUIT WIRING BACK TO SOURCE FOR ALL MECHANICAL EQUIPMENT. COORDINATE WITH MECHANICAL DRAWINGS AND DIVISION 15 PRIOR TO BID AND START OF WORK.
  - REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.



KEY PLAN

FOR ALL ABBREVIATIONS, SYMBOL LEGENDS, GENERAL NOTES AND WALL TYPES SEE SHEETS RD-01 & RD-02

DATE	MARK	DESCRIPTION
JUNE 10, 2002	PHASE 2	DRAWINGS ISSUED AS REFERENCE ONLY FOR PHASE 1
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# ADDITIONS AND RENOVATIONS RHAM MIDDLE SCHOOL

HEBRON, CONNECTICUT 06248  
STATE PROJECT NO. 208-0018 N/EA/RR

VANZELM HEYWOOD & SHADFORD INC.  
MECHANICAL AND ELECTRICAL ENGINEERS  
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29 SOUTH MAIN STREET WEST HARTFORD CT 06107-2420  
TEL (860) 521-4326 FAX (860) 521-9626  
vZHS PROJECT NUMBER: 2000155.01



**KAESTLE BOOS ASSOCIATES, INC. ARCHITECTS**

DRAWN BY: RLG  
CHECKED BY: MWF  
SCALE: 1/8"=1'-0"  
**ELECTRICAL DEMOLITION UPPER LEVEL**

PROJECT NO.: 00049 DRAWING NO.:  
DATE: SEPTEMBER 9, 2002 **ED1.02**

- GENERAL DEMOLITION NOTES:**
- DISCONNECT AND REMOVE ALL ELECTRICAL PANELBOARDS AND DISTRIBUTION EQUIPMENT WITHIN PROJECT DEFINED SCOPE UNLESS OTHERWISE NOTED ON FLOOR PLANS. ALL FEEDERS, BRANCH CIRCUITS AND ASSOCIATED WIRING AND CONDUIT SHALL BE REMOVED.
  - DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES INCLUDING ASSOCIATED BOXES, CONDUIT AND FIXTURE HANGERS WITHIN PROJECT DEFINED SCOPE ON FLOOR PLANS, UNLESS OTHERWISE NOTED ON NEW WORK PLANS. ALL EXISTING BRANCH CIRCUIT WIRING SHALL BE REMOVED BACK TO SOURCE, UNLESS OTHERWISE NOTED. COORDINATE ALL WORK WITH NEW WORK LIGHTING PLANS AND OWNER PRIOR TO DEMOLITION. ALL EXISTING LIGHTING FIXTURES HAVE NOT BEEN SHOWN. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
  - ALL EXISTING LIGHTING FIXTURES SHALL BE OFFERED TO OWNER PRIOR TO DEMOLITION. ANY LIGHTING FIXTURES BEING RETAINED SHALL BE STORED AS DIRECTED BY OWNER. ALL LIGHTING FIXTURES INDICATED BY OWNER FOR DISPOSAL SHALL BE DISPOSED OF OFF SITE.
  - DISCONNECT AND REMOVE ALL RECEPTACLES, DATA/TEL OUTLETS AND ADDITIONAL SPECIAL SYSTEMS DEVICES ON ANY WALLS SHOWN AS DASHED, (WALLS TO BE REMOVED), OR ON WALLS AS DEFINED BY THE PROJECT SCOPE ON FLOOR PLANS, UNLESS DESIGNATED OTHERWISE. ALL BRANCH CIRCUIT WIRING FOR SUCH DEVICES BEING REMOVED SHALL BE REMOVED BACK TO SOURCE. REFER TO NEW WORK POWER PLANS FOR ANY DEVICES THAT ARE TO REMAIN AND BE REUSED AND/OR REWIRED. ALL DEVICES HAVE NOT BEEN SHOWN. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
  - DISCONNECT AND REMOVE ALL EXISTING FIRE ALARM SYSTEM DEVICES INCLUDING MANUAL PULL STATIONS, HORN/STROBE UNITS, SMOKE AND HEAT DETECTORS. ALL EXISTING FIRE ALARM WIRING SHALL BE REMOVED BACK TO SOURCE. NEW FIRE ALARM DEVICES MAY BE RE-INSTALLED AT EXISTING LOCATIONS THAT REMAIN PROVIDED THE NEW INSTALLATION COMPLIES WITH CODE REQUIREMENTS. COORDINATE EXISTING SYSTEM DEVICE LOCATIONS WITH NEW WORK POWER FLOOR PLANS. VERIFY ALL FIELD CONDITIONS PRIOR TO BID.
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  - REFER TO DRAWING #E0.00 FOR ELECTRICAL SYMBOL LEGEND, ABBREVIATIONS AND GENERAL NOTES.