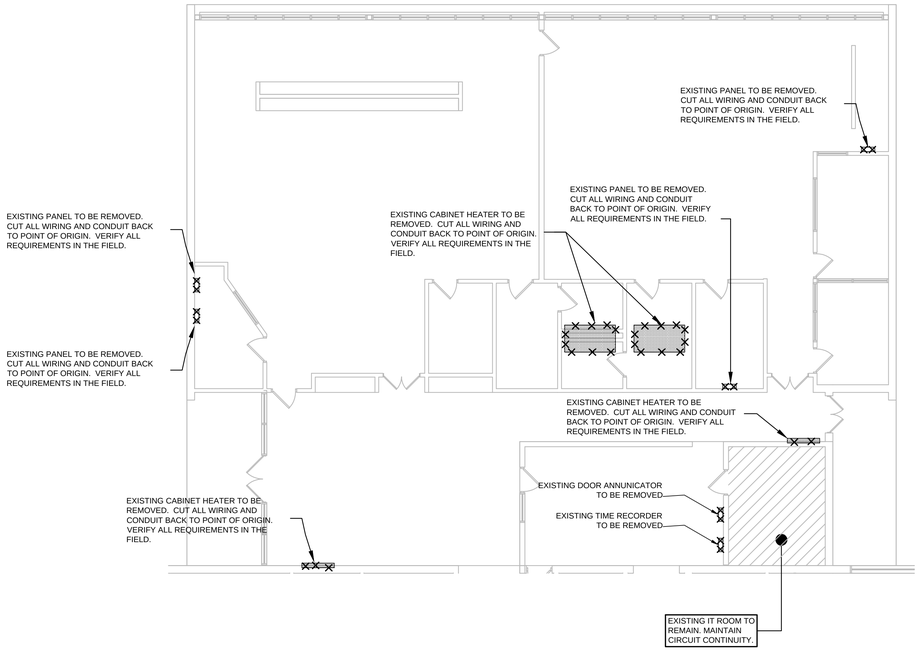
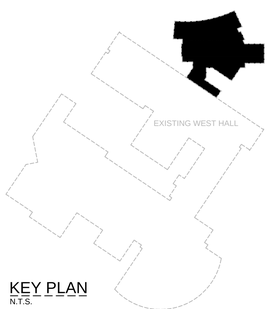
DEMOLITION NOTES

1. ELECTRICAL CONTRACTOR TO DISCONNECT ALL EXISTING LIGHT FIXTURES TO BE REMOVED OR RELOCATED, AND CUT ALL WIRING AND CONDUIT BACK TO NEAREST LOCATION. SEE ARCHITECTURAL PLANS FOR EXACT LOCATION AND QUANTITIES. VERIFY ALL REQUIREMENTS IN THE FIELD.
2. ELECTRICAL CONTRACTOR SHALL REMOVE ALL ELECTRICAL DEVICES, JUNCTION BOXES, CONTROL PANELS, CONDUIT AND WIRING FROM WALLS TO BE DEMOLISHED. ALL WIRING TO BE CUT BACK TO PANEL OF ORIGIN. SEE ARCHITECTURAL DEMOLITION PLAN FOR WALLS TO BE REMOVED.
3. ALL ELECTRICAL DEVICES INDICATED TO BE REMOVED SHALL HAVE WIRING AND CONDUIT REMOVED BACK TO PANEL OF ORIGIN. VERIFY ALL REQUIREMENTS IN THE FIELD.
4. ALL WIRING AND CONDUIT IN WALLS TO BE DEMOLISHED THAT MUST REMAIN TO MAINTAIN CIRCUIT CONTINUITY SHALL BE REROUTED AROUND WALL. VERIFY ALL REQUIREMENTS IN THE FIELD.
5. FEEDERS FOR PANELS TO BE REMOVED SHALL BE REMOVED BACK TO THE ELECTRIC SERVICE ROOM AND REMOVED FROM DISTRIBUTION BOARD CIRCUIT BREAKER OR SWITCH. CIRCUIT BREAKER OR SWITCH TO BE LABELED SPARE. VERIFY ALL REQUIREMENTS IN THE FIELD.



FIRST FLOOR DEMOLITION PLAN - ELECTRICAL

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



KEY PLAN
N.T.S.

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE04602
SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

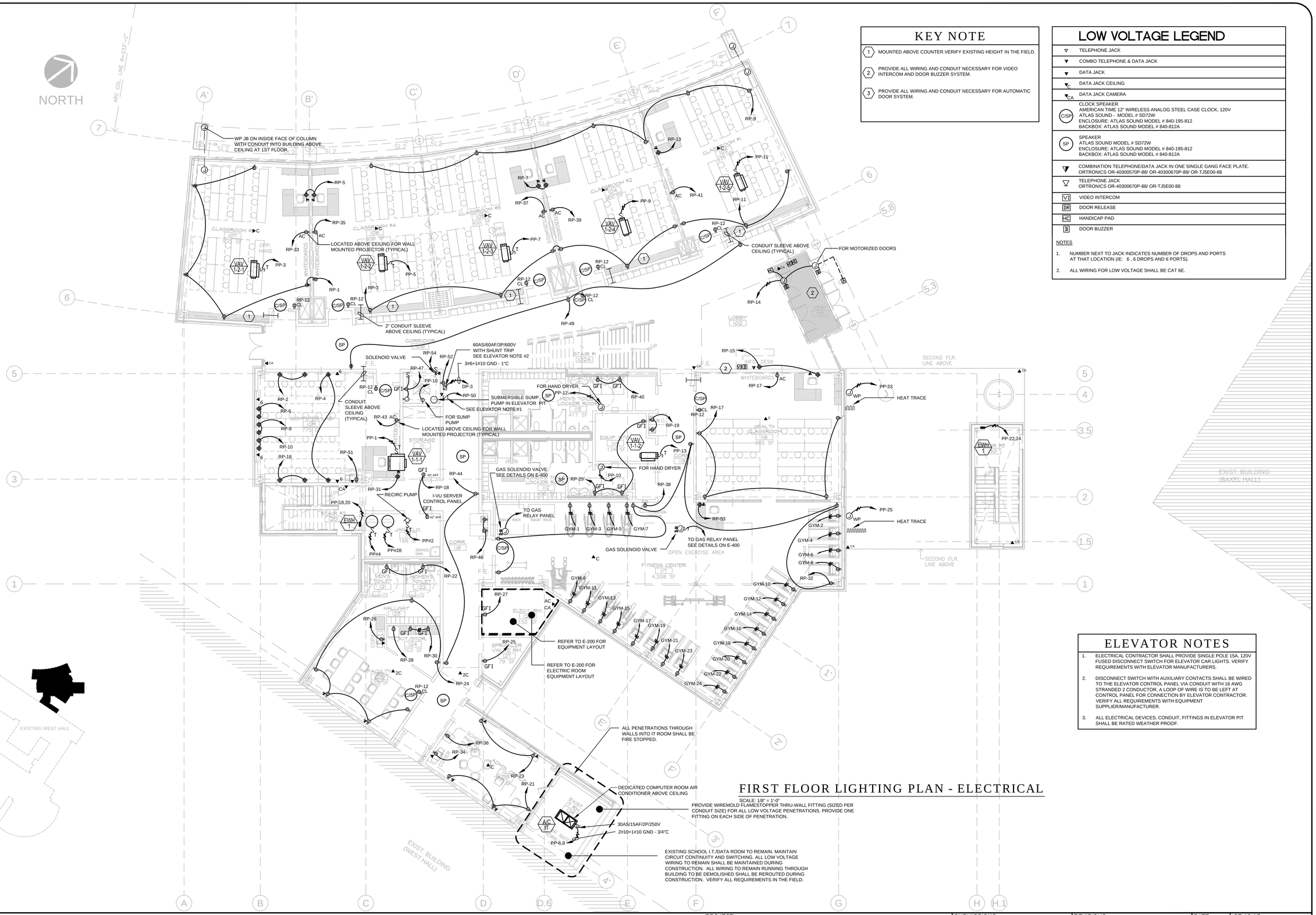
UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

SHEET CONTENTS:

FIRST FLOOR ELECTRICAL DEMOLITION PLAN

SUBMISSIONS				REVISIONS			
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD
10.01.13	ISSUED FOR BID						

DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	1 OF: 12
DRWG NO	E.010



KEY NOTE

1. MOUNTED ABOVE COUNTER.VERIFY EXISTING HEIGHT IN THE FIELD.
2. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR VIDEO INTERCOM AND DOOR BUZZER SYSTEM.
3. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR AUTOMATIC DOOR SYSTEM.

LOW VOLTAGE LEGEND

	TELEPHONE JACK
	COMBO TELEPHONE & DATA JACK
	DATA JACK
C	DATA JACK CEILING
CA	DATA JACK CAMERA
C/SP	CLOCK SPEAKER AMERICAN TIME 12" WIRELESS ANALOG STEEL CASE CLOCK, 120V ATLAS SOUND - MODEL # SD72W ENCLOSURE: ATLAS SOUND MODEL # 840-195-812 BACKBOX: ATLAS SOUND MODEL # 840-812A
SP	SPEAKER ATLAS SOUND MODEL # SD72W ENCLOSURE: ATLAS SOUND MODEL # 840-195-812 BACKBOX: ATLAS SOUND MODEL # 840-812A
	COMBINATION TELEPHONE/DATA JACK IN ONE SINGLE GANG FACE PLATE. ORTRONICS OR-40300570P-88/ OR-40300670P-88/ OR-TJ5E00-88
	TELEPHONE JACK ORTRONICS OR-40300670P-88/ OR-TJ5E00-88
VI	VIDEO INTERCOM
DR	DOOR RELEASE
HC	HANDICAP PAD
B	DOOR BUZZER

NOTES

1. NUMBER NEXT TO JACK INDICATES NUMBER OF DROPS AND PORTS AT THAT LOCATION (IE: 6 , 6 DROPS AND 6 PORTS).
2. ALL WIRING FOR LOW VOLTAGE SHALL BE CAT 6E.

ELEVATOR NOTES

1. ELECTRICAL CONTRACTOR SHALL PROVIDE SINGLE POLE 15A, 120V FUSED DISCONNECT SWITCH FOR ELEVATOR CAR LIGHTS. VERIFY REQUIREMENTS WITH ELEVATOR MANUFACTURERS.
2. DISCONNECT SWITCH WITH AUXILIARY CONTACTS SHALL BE WIRED TO THE ELEVATOR CONTROL PANEL VIA CONDUIT WITH 16 AWG STRANDED 2 CONDUCTOR. A LOOP OF WIRE IS TO BE LEFT AT CONTROL PANEL FOR CONNECTION BY ELEVATOR CONTRACTOR. VERIFY ALL REQUIREMENTS WITH EQUIPMENT SUPPLIER/MANUFACTURER.
3. ALL ELECTRICAL DEVICES, CONDUIT, FITTINGS IN ELEVATOR PIT SHALL BE RATED WEATHER PROOF.

FIRST FLOOR LIGHTING PLAN - ELECTRICAL

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

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE040028

SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NICHOLAS J. NETTA, AIA, NCARB
NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

SHEET CONTENTS:

FIRST FLOOR ELECTRICAL PLAN

SUBMISSIONS				REVISIONS					
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD		
10.01.13	ISSUED FOR BID							DATE	07.12.13
								SCALE	AS SHOWN
								DRWN BY	WH
								CHKD BY	CMS/FTK
								JOB NO	2131056/13-0529
								SHEET:	2 OF: 12
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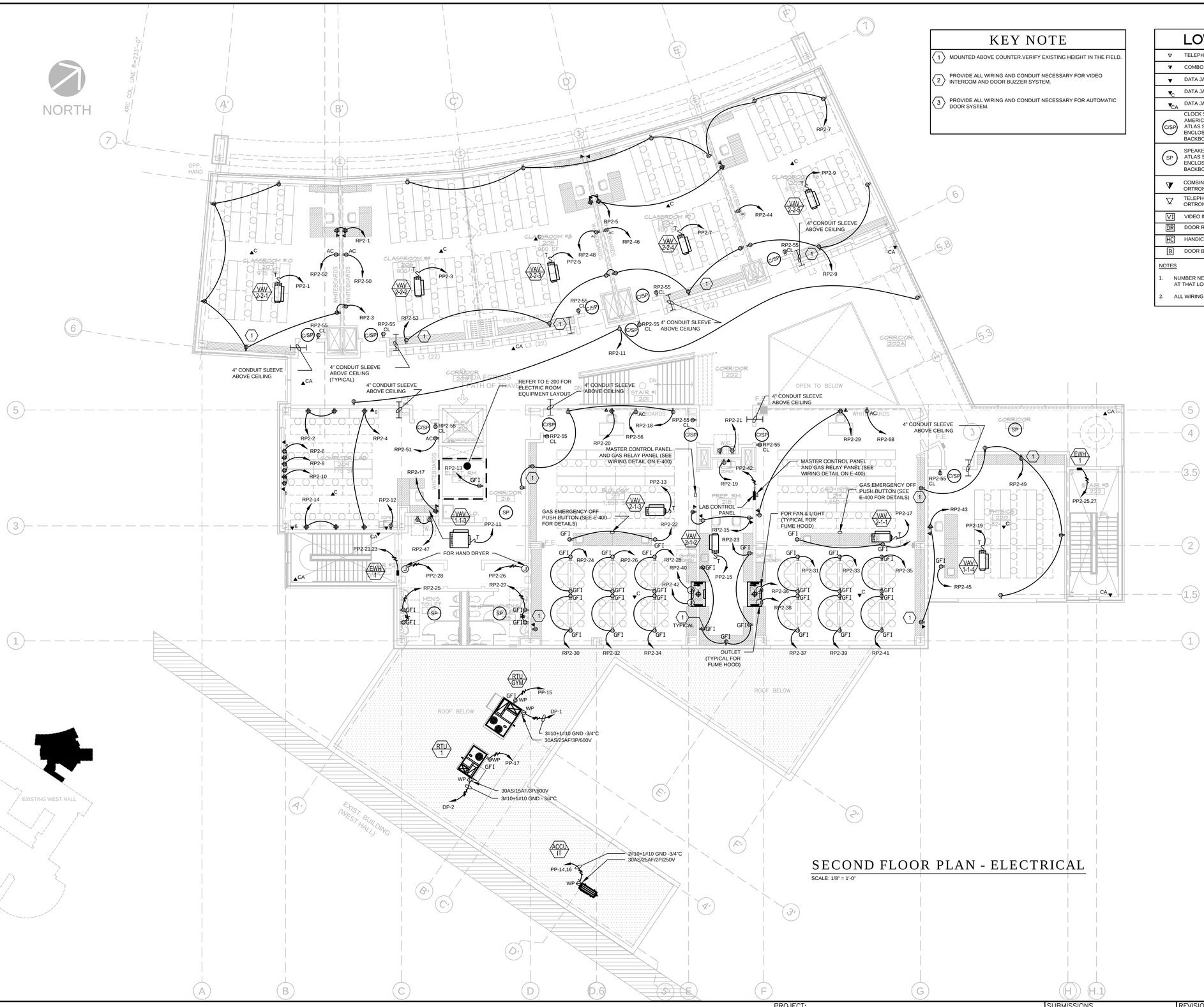

SECOND FLOOR PLAN - ELECTRICAL

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

KEY NOTE

1. MOUNTED ABOVE COUNTER.VERIFY EXISTING HEIGHT IN THE FIELD.
2. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR VIDEO INTERCOM AND DOOR BUZZER SYSTEM.
3. PROVIDE ALL WIRING AND CONDUIT NECESSARY FOR AUTOMATIC DOOR SYSTEM.

LOW VOLTAGE LEGEND

▽	TELEPHONE JACK
▼	COMBO TELEPHONE & DATA JACK
▼	DATA JACK
▼C	DATA JACK CEILING
▼CA	DATA JACK CAMERA
C/SP	CLOCK SPEAKER AMERICAN TIME 12" WIRELESS ANALOG STEEL CASE CLOCK, 120V ATLAS SOUND - MODEL # SD72W ENCLOSURE: ATLAS SOUND MODEL # 840-195-812 BACKBOX: ATLAS SOUND MODEL # 840-812A
SP	SPEAKER ATLAS SOUND MODEL # SD72W ENCLOSURE: ATLAS SOUND MODEL # 840-195-812 BACKBOX: ATLAS SOUND MODEL # 840-812A
▼▽	COMBINATION TELEPHONE/DATA JACK IN ONE SINGLE GANG FACE PLATE. ORTRONICS OR-40300570P-88/ OR-40300670P-88/ OR-TJ5E00-88
▽	TELEPHONE JACK ORTRONICS OR-40300670P-88/ OR-TJ5E00-88
VI	VIDEO INTERCOM
DR	DOOR RELEASE
HC	HANDICAP PAD
B	DOOR BUZZER

NOTES

1. NUMBER NEXT TO JACK INDICATES NUMBER OF DROPS AND PORTS AT THAT LOCATION (IE: 6 , 6 DROPS AND 6 PORTS).
2. ALL WIRING FOR LOW VOLTAGE SHALL BE CAT 6E.

KEY PLAN
N.T.S.

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028
SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

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UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
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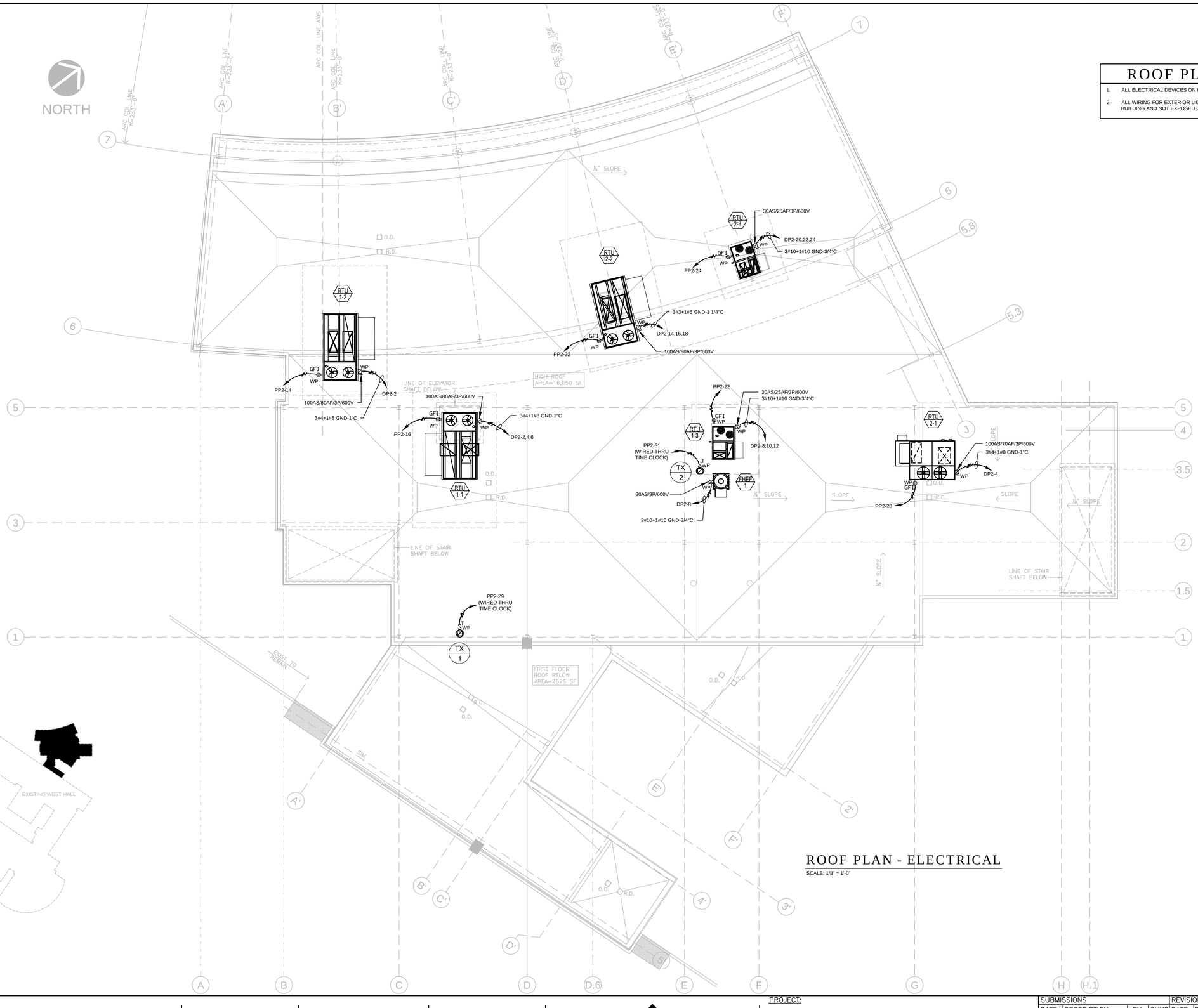
SHEET CONTENTS:

SECOND FLOOR ELECTRICAL PLAN

SUBMISSIONS				REVISIONS					
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	DATE	07.12.13
10.01.13	ISSUED FOR BID							SCALE	AS SHOWN
								DRWN BY	WH
								CHKD BY	CMS/FTK
								JOB NO	2131056/13-0529
								SHEET:	3 OF: 12
								DRWG NO	E.101

ROOF PLAN NOTES

1. ALL ELECTRICAL DEVICES ON ROOF SHALL BE RATED WEATHERPROOF.
2. ALL WIRING FOR EXTERIOR LIGHTING SHALL BE RUN ON THE INSIDE OF BUILDING AND NOT EXPOSED ON THE EXTERIOR OF BUILDING.



ROOF PLAN - ELECTRICAL

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

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028

SIDERIS KEFALAS ENGINEERS P.C.

Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm

217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NJ License No. AI 12541

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NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

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ROOF ELECTRICAL PLAN

SUBMISSIONS				REVISIONS			
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DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	4 OF: 12
DRWG NO	E.102

LIGHTING NOTES

1. FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES, SWITCHES AND JUNCTION BOXES SEE ARCHITECTURAL DRAWINGS.
2. ALL BRANCH CIRCUIT WIRING SHALL BE RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO LIGHTING FIXTURES SHALL BE MADE WITH WIRING HAVING 90°C RATED INSULATION.
3. LIGHTING FIXTURES USED AS "EMERGENCY LIGHT", EXIT LIGHTS AND EXTERIOR EMERGENCY LIGHTS SHALL BE PROVIDED WITH AN UN-SWITCHED HOT.
4. ALL LIGHTING CIRCUITS EXCEPT EXIT SIGNS SHALL BE ENERGIZED VIA THE LIGHTING RELAY PANEL WITH OVERRIDE SWITCHES. FOR RESPECTIVE WIRING DIAGRAMS SEE DRAWING E-301. VERIFY ALL REQUIREMENTS IN THE FIELD.
5. ONLY PANELS USED FOR LIGHTING FIXTURES CIRCUITING ARE SHOWN ON THIS DRAWING.
6. COORDINATE LIGHTING FIXTURE TYPES AND SPECIFICATION WITH ARCHITECT. REFER TO LIGHTING FIXTURE SCHEDULE ON ARCHITECTURAL DRAWINGS.
7. FOR ADDITIONAL LIGHTING NOTES SEE ARCHITECTURAL DRAWINGS
8. EXTERIOR LIGHTING SHALL BE ENERGIZED VIA THE LIGHTING RELAY PANEL WITH OVERRIDE SWITCHES. FOR RESPECTIVE WIRING DIAGRAMS, SEE DRAWING E-401. VERIFY ALL REQUIREMENTS IN THE FIELD.
9. ALL WIRING FOR EXTERIOR LIGHTING SHALL BE RUN ON THE INSIDE OF BUILDING AND NOT EXPOSED ON THE EXTERIOR OF BUILDING.

FIRST FLOOR LIGHTING PLAN - ELECTRICAL

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

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028

SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NICHOLAS J. NETTA, AIA, NCARB
NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

SHEET CONTENTS:

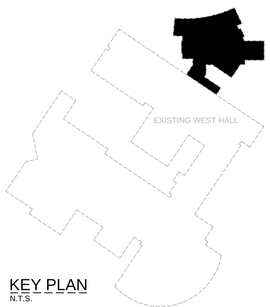
FIRST FLOOR LIGHTING PLAN

SUBMISSIONS				REVISIONS			
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD
10.01.13	ISSUED FOR BID						

DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	5 OF: 12
DRWG NO	E.103

LIGHTING NOTES

1. FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES, SWITCHES AND JUNCTION BOXES SEE ARCHITECTURAL DRAWINGS.
2. ALL BRANCH CIRCUIT WIRING SHALL BE RUN CONCEALED IN WALLS AND ABOVE HUNG CEILING, UNLESS OTHERWISE NOTED. FINAL CONNECTIONS TO LIGHTING FIXTURES SHALL BE MADE WITH WIRING HAVING 90°C RATED INSULATION.
3. LIGHTING FIXTURES USED AS "EMERGENCY LIGHT" AND EXIT LIGHTS SHALL BE PROVIDE WITH AN HOT.
4. ALL LIGHTING CIRCUITS EXCEPT EXIT SIGNS SHALL BE ENERGIZED VIA THE LIGHTING RELAY PANEL WITH OVERRIDE SWITCHES. FOR RESPECTIVE WIRING DIAGRAMS SEE DRAWING E-301. VERIFY ALL REQUIREMENTS IN THE FIELD.
5. ONLY PANELS USED FOR LIGHTING FIXTURES CIRCUITING ARE SHOWN ON THIS DRAWING.
6. COORDINATE LIGHTING FIXTURE TYPES AND SPECIFICATION WITH ARCHITECT. REFER TO LIGHTING FIXTURE SCHEDULE ON ARCHITECTURAL DRAWINGS.
7. FOR ADDITIONAL LIGHTING NOTES SEE ARCHITECTURAL DRAWINGS
8. EXTERIOR LIGHTING SHALL BE ENERGIZED VIA THE LIGHTING RELAY PANEL WITH OVERRIDE SWITCHES. FOR RESPECTIVE WIRING DIAGRAMS, SEE DRAWING E-401. VERIFY ALL REQUIREMENTS IN THE FIELD.
9. ALL WIRING FOR EXTERIOR LIGHTING SHALL BE RUN ON THE INSIDE OF BUILDING AND NOT EXPOSED ON THE EXTERIOR OF BUILDING.



KEY PLAN
N.T.S.

SECOND FLOOR LIGHTING PLAN - ELECTRICAL

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

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE04602B

SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
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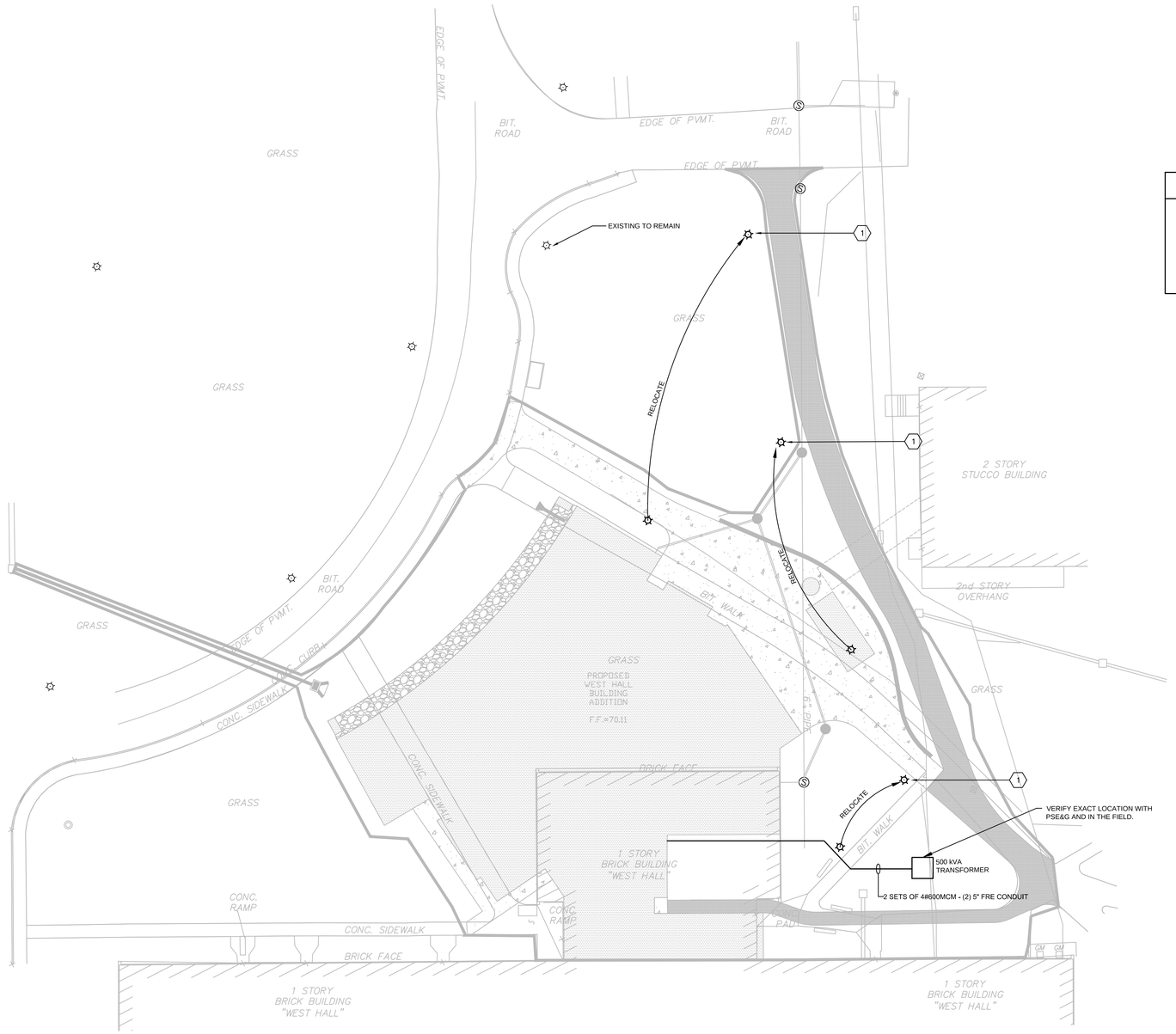
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	6 OF: 12
DRWG NO	E.104



KEY NOTES

1. EXISTING LIGHT FIXTURE TO BE RELOCATED. EXTEND ALL WIRING AND CONDUIT TO NEW LOCATION, PROVIDE HAND HOLE/PULLBOXES AS REQUIRED. ALL POLES AND CONDUITS SHALL BE GROUNDED AND BONDED AS PER CODE. VERIFY EXACT LOCATION AND ROUTING IN THE FIELD. PROVIDE BASE TO MATCH EXISTING.

SITE PLAN - ELECTRICAL

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

Filolaos T. Kefalas, P.E.

NJ Professional Engineer No. GE046028

SIDERIS KEFALAS ENGINEERS P.C.

Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
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217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
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MARK E. BESS, AIA
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NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
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SITE LIGHTING PLAN

SUBMISSIONS				REVISIONS					
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD	DATE	07.12.13
10.01.13	ISSUED FOR BID							SCALE	AS SHOWN
								DRWN BY	WH
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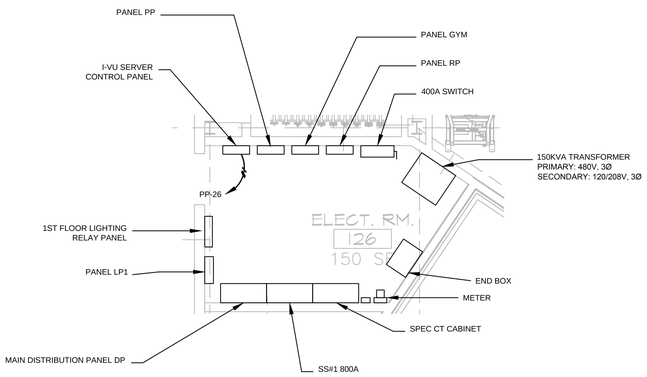
								JOB NO	2131056/13-0529
								SHEET:	7 OF: 12
								DRWG NO	E.105



1ST FLOOR ELECTRIC ROOM - ELECTRICAL

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

ELECTRIC SWITCHBOARD NOTES

1. SERVICE 277/480 V A.C. 3 PHASE 4 WIRE 60 Hz.
2. FABRICATE SWITCHBOARD STRUCTURE FROM UNIVERSAL STEEL CHANNEL FRAME WITH CODE GAUGE SHEET STEEL COVERS.
3. BOXES & TRIMS CODE GAUGE SHEET STEEL.
4. SERVICE OR DISTRIBUTION SWITCHES 800A & ABOVE BOLTED PRESSURE CONTACT TYPE AS MANUFACTURED BY BOLTSWITCH COMPANY OR APPROVED EQUAL. BELOW 800 A PRESSURE CONTACT TYPE VACU-BREAK AS MANUFACTURED BY ITE.
5. NO DOOR OVER VACU-BREAK PANEL. EACH SWITCH HAS ITS OWN INDIVIDUAL INTERLOCKED DOOR.
6. ALL FUSES SHALL BE COORDINATED FOR PROPER SHORT CIRCUIT & OVERLOAD PROTECTION.
7. FUSES ARE GOULD/SHAWMUT TYPE OR APPROVED EQUAL.
8. BUSWORK COPPER RATED AT 1000 AMPS PER SQ. INCH DENSITY.
9. LUGS T & B (OR EQUAL) MECHANICAL TYPE SUITABLE FOR COPPER CABLES. 10. ALL LIVE PARTS MIN. 12" OFF THE FINISHED FLOOR.
11. ALL SERVICE & DISTRIBUTION EQUIPMENT FRONT ACCESSIBLE. NO BUS CONNECTION MORE THAN 30" FROM FRONT OF EQUIPMENT WITH COVERS REMOVED.
12. C.T. TRIM SHALL HAVE A SPLIT DOOR & 3 POINT CATCH WITH VAULT TYPE HANDLE WITH PROVISION FOR A SEAL.
13. FINISH ONE (1) PRIME COAT OF GREY PRIMER & ONE (1) FINISH COAT OF ASA-49 GREY ENAMEL.

RISER NOTES

1. ALL CONDUIT, JUNCTION BOXES, DISCONNECT SWITCH AND DEVICES FOR FIRE ALARM SYSTEM TO BE PAINTED FIRE DEPARTMENT RED AND LABELED FOR FIRE DEPARTMENT USE.
2. ELECTRIC SERVICE PENDING PSE&G APPROVAL. VERIFY ALL REQUIREMENTS WITH UTILITY.

MAIN DISTRIBUTION PANEL "DP"

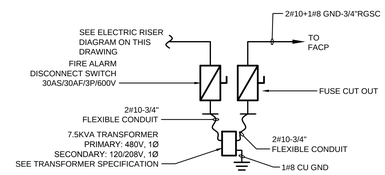
LOCATION: ELECTRIC ROOM
MOUNTING: SURFACE
SERVICE: 277/480 VOLTS, 3 PHASE, 4 WIRES
MAIN: 800A, MLO

NO.	SERVES	KW.HP. OR KVA	AMPS	SW/FUSE/POLE	REMARKS: ALL CONDUCTORS TO BE TYPE THHN
1	RTU-GYM	18.3KW	22	30/25/3P	3#10+1#10 GND - 3/4"C
2	RTU-1	10.8KW	13	30/15/3P	3#10+1#10 GND - 3/4"C
3	ELEVATOR	25HP	34	60/60/3P	3#6+1#10 GND - 1"C
4	PANEL LP	12KW	14.4	60/60/3P	4#6+1#10 GND - 1"C
5	PANEL RP VIA 150KVA XFMR	84.2KW	233.9	200/200/3P	3#3/0-2 1/2"C
6	PANEL DP2	317KW	381.4	600/600/3P	(2)SETS OF 4#350MCM+1#1 GND-(2)2 1/2"C
7	SPARE	--	--	200/--/3P	--
8	SPARE	--	--	100/--/3P	--
9	SPARE--	--	--	100/--/3P	--

MAIN DISTRIBUTION PANEL "DP2"

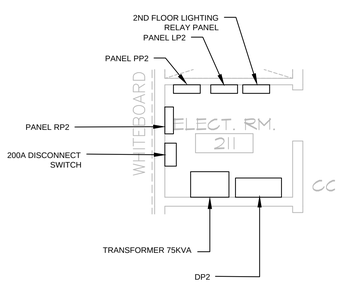
LOCATION: ELECTRIC ROOM
MOUNTING: SURFACE
SERVICE: 277/480 VOLTS, 3 PHASE, 4 WIRES
MAIN: 600A, MLO

NO.	SERVES	KW.HP. OR KVA	AMPS	SW/FUSE/POLE	REMARKS: ALL CONDUCTORS TO BE TYPE THHN
1	RTU-1-1	64.8KW	78	100/90/3P	3#4+1#8 GND-1"C
2	RTU-1-2	59.8KW	72	100/80/3P	3#4+1#8 GND-1"C
3	RTU-1-3	17.4KW	21	30/25/3P	3#10+1#10 GND-3/4"C
4	RTU-2-1	44.8KW	54	100/70/3P	3#4+1#8 GND-1"C
5	RTU-2-2	65.6KW	79	100/90/3P	3#3+1#6 GND-1 1/4"C
6	RTU-2-3	17.4KW	21	30/25/3P	3#10+1#10 GND-3/4"C
7	FHEF	6.3KW	7.6	30/15/3P	3#10+1#10 GND - 1"C
8	PANEL LP2	9.3KW	13.5	60/60/3P	4#6+1#10 GND -1"C
9	PANEL RP2 VIA 75KVA XFMR	49.8KW	138.3	100/100/3P	4#3/0+1#6 GND -3"C
10	SPARE	--	--	100/--/3P	--
11	SPARE	--	--	100/--/3P	--
12	SPARE--	--	--	100/--/3P	--



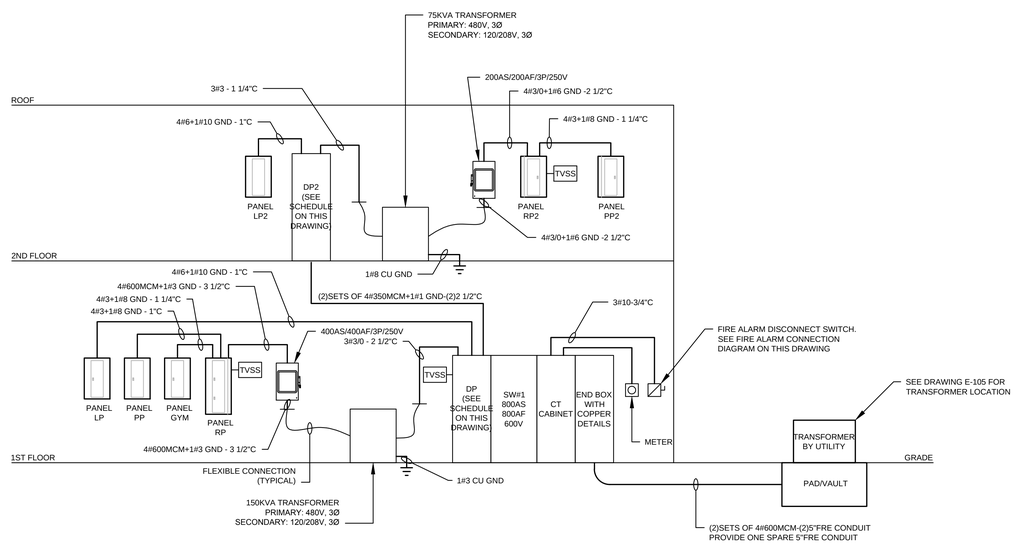
FIRE ALARM CONNECTION DIAGRAM

SCHEMATIC ONLY



2ND FLOOR ELECTRIC ROOM - ELECTRICAL

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



ELECTRICAL RISER DIAGRAM

SCHEMATIC ONLY

CODE LOAD ANALYSIS PER N.E.C.			
CODE LOAD ANALYSIS			
LOAD DESCRIPTION	CONNECTED KVA	DEMAND FACTOR	KVA DEMAND
LIGHTING - EXTERIOR	400	125%	500
LIGHTING - INTERIOR	27500	125%	34375
RECEPTACLES	10000	FIRST 10 KW 100%	10000
	30900	REMAINDER @ 50%	15450
KITCHEN EQUIPMENT	0	65%	0
WATER HEATING	2000	125%	2500
HVAC EQUIPMENT	305200	100%	305200
		LGT MOTOR @25%	750
MISC	74900	100%	74900
TOTALS	450900		441815
CALCULATED SERVICE DEMAND AMPERES		532 amps	

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028
SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

SHEET CONTENTS:

ELECTRIC RISER DIAGRAM

SUBMISSIONS				REVISIONS			
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD
10.01.13	ISSUED FOR BID						

DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	7 OF: 12
DRWG NO	E.200

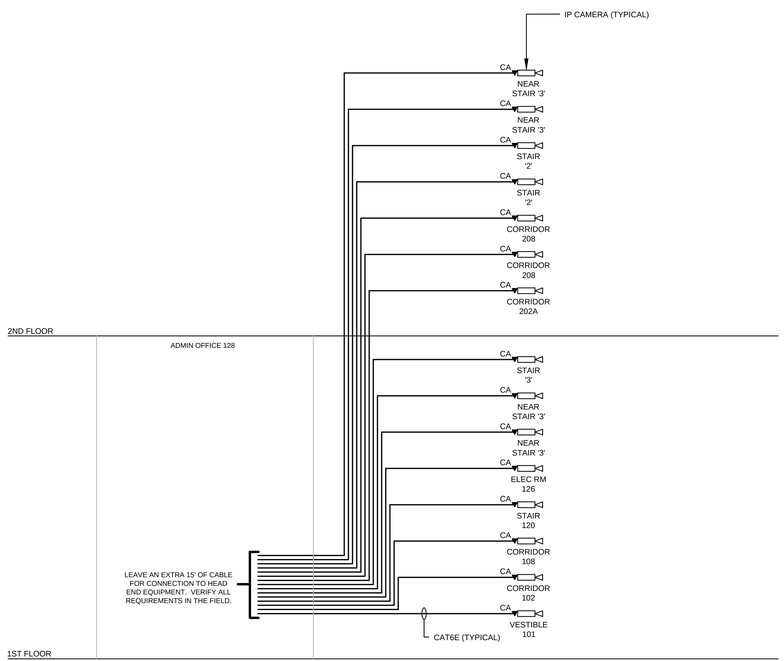
RISER NOTES

1. CONTRACTOR SHALL PROVIDE AND INSTALL CABLE FROM DEVICE TO HEAD END LOCATION. VERIFY EXACT ROUTING AND ALL REQUIREMENTS IN THE FIELD.

SYMBOL LEGEND

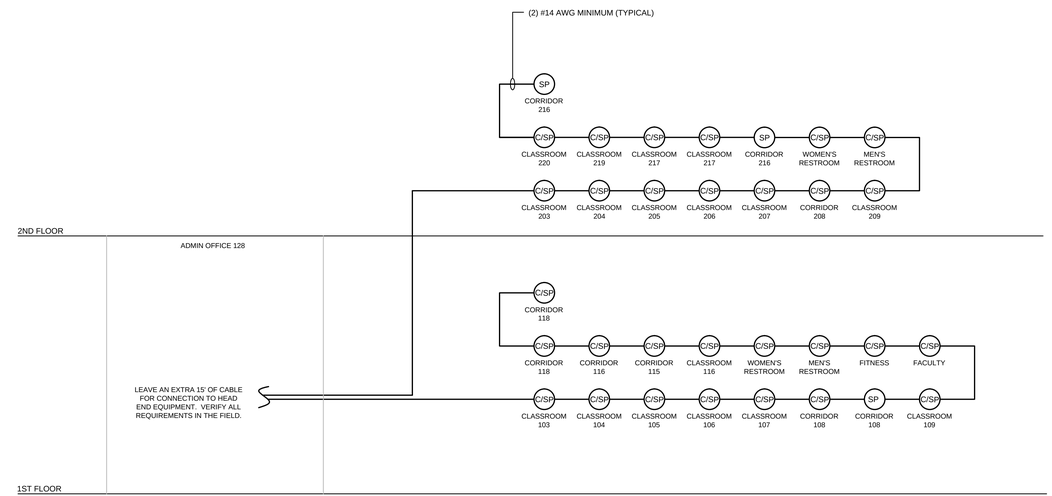
C/SP — INTERCOM SYSTEM CLOCK SPEAKER
AMERICAN TIME 12" WIRELESS ANALOG STEEL CASE CLOCK, 120V
SPEAKER: ATLAS SOUND SD72W
ENCLOSURE: ATLAS SOUND 840-195-812
BACKBOX: 840-812A

CA — CAMERA



VIDEO RISER DIAGRAM

SCHEMATIC ONLY



CLOCK/SPEAKERS RISER DIAGRAM

SCHEMATIC ONLY

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028

SIDERIS KEFALAS ENGINEERS P.C.

Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm

217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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WEST HALL ADDITION
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SHEET CONTENTS:

LOW VOLTAGE RISER DIAGRAMS

SUBMISSIONS				REVISIONS			
DATE	DESCRIPTION	BY	CHKD	DATE	DESCRIPTION	BY	CHKD
10.01.13	ISSUED FOR BID						

DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	8 OF: 11
DRWG NO	E.201

Panel Wiring Schedule (3-Phase)

Panelboard RP | Voltage 120/208 | Phase 3 | Wire 4 | AIC Rating 10,000
Panel Type NQDOD | Mains MLO | Mains Rating 400A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

PROVIDE WITH ISOLATE GROUND

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
CLASSRM 107 RCPTS		1P20	1080			1		2	540			1P20		COMPUTER LAB
CLASS 104-106 RCPTS		1P20		1080		3		4		540		1P20		COMPUTER LAB
CLASS 106-107 QUADS		1P20			720	5		6			720	1P20		COMPUTER LAB
CLASS 103-104 QUADS		1P20	720			7		8	720			1P20		COMPUTER LAB
CLASSRM 103-106 RCPT		1P20		1080		9		10		720		1P20		COMPUTER LAB
CLASSRM 103 RCPTS		1P20			540	11		12			200	1P20		CLOCKS
CLASS 103 QUAD		1P20	360			13		14	1000			1P20		MOTORIZED DOORS
CLASSRM 116 QUADS		1P20		720		15		16		--		1P20		SPARE
CLASSRM 116 RCPTS		1P20			900	17		18			540	1P20		COMPUTER LAB
W.C. RCPTS		1P20	360			19		20	--			1P20		SPARE
ADMIN OFFICE RCPTS		1P20		540		21		22		360		1P20		RESTROOM RCPTS
ADMIN OFFICE RCPTS		1P20			720	23		24			1080	1P20		FACULTY RM RCPTS
SPRINKLER VALVE RM		1P20	180			25		26	1500			1P20		COPIER
ELEC CLOSET		1P20		180		27		28		1500		1P20		REFRIGERATOR
WOMEN TOILET RCPTS		1P20			720	29		30			360	1P20		KITCHEN RCPTS
COMP LAB QUAD		1P20	360			31		32	900			1P20		EXERCISE RM RCPTS
RM 107 PROJ. RCPT		1P20		500		33		34		1500		1P20		ADMIN RM 128 COPIER
RM 106 PROJ. RCPT		1P20			500	35		36			200	1P20		ADMIN RM INTERCOM
RM 105 PROJ. RCPT		1P20	500			37		38	100			1P20		HYDRATION RCPT
RM 104 PROJ. RCPT		1P20		300		39		40		360		1P20		MEN TOILET
RM 103 PROJ. RCPT		1P20			500	41		42			360	1P20		STORJAN RCPT
RM 109 PROJ. RCPT		1P20	500			43		44	360			1P20		CORRIDOR RCPT
RM 116 PROJ. RCPT		1P20		500		45		46		300		1P20		CORR. 116 W. FOUN.
ELEV GFI & LTG		1P20			300	47		48			300	1P20		VEST DOOR RELEASE
CORR. RCPTS		1P20	540			49		50	200			1P20		ELEVATOR CAB LTG
CPU LAB COPIER		1P20		1500		51		52		180		1P20		ELEVATOR DED. RCPT
FITNESS 117 QUAD		1P20			360	53		54			100	1P20		SOLENOID VALVE
SPARE		1P20				55		56	--			1P20		SPARE
SPARE		1P20	--			57		58		--		1P20		SPARE
SPARE		1P20		--		59		60			--	1P20		SPARE
SPARE		1P20			--	61		62	--			1P20		SPARE
SPARE		1P20	--			63		64		--		1P20		SPARE
SPARE		1P20		--		65		66			--	1P20		SPARE
SPARE		1P20			--	67		68	--			1P20		SPARE
SPARE		1P20	--			69		70		--		1P20		SPARE
SPARE		1P20		--		71		72			--	1P20		SPARE
SPARE		1P20			--	73		74	7200			3P100		PANEL PP
SPARE		1P20	--			75		76		5400				
SPARE		1P20		--		77		78			6800			
SPARE		1P20	--			79		80	12000			3P100		PANEL GYM
SPARE		1P20		--		81		82		12000				
SPARE		1P20			--	83		84			12000			

Connected Totals:
ØA 29.1 kw 242.7 Amperes
ØB 28.9 kw 241 Amperes
ØC 27.9 kw 232.7 Amperes
Total 86 kw 238.8 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard PP | Voltage 120/208 | Phase 3 | Wire 4 | AIC Rating 10,000
Panel Type NQDOD | Mains MLO | Mains Rating 225A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

PROVIDE WITH ISOLATE GROUND

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
VAV 1-1-1		1P20	100			1		2	528			1P20		RECIRC PUMP
VAV 1-2-1		1P20		100		3		4		100		1P20		HOT WATER HEATER
VAV 1-2-2		1P20			100	5		6			450	2P15		A/C IT
VAV 1-2-3		1P20	100			7		8	450					
VAV 1-2-4		1P20		100		9		10		1500		1P20		WOMEN HAND DRYER
VAV 1-2-5		1P20			180	11		12			1500	1P20		MEN HAND DRYER
VAV 1-1-2		1P20	100			13		14	1780			2P25		ACCU - IT
RTU-GYM RCPT		1P20		180		15		16		1780				
RTU-1 RCPT		1P20			180	17		18			1500	2P20		STAIR#2 EWH
--		1P20	--			19		20	1500					
--		1P20		--		21		22		1500		2P20		STAIR#3 EWH
HEAT TRACERS		1P20			1500	23		24			1500			
HEAT TRACERS		1P20	1500			25		26	1500			1P20		I-VU CONTROL PANEL
--		1P20			--	27		28		100		1P20		HOT WATER HEATER
--		1P20			--	29		30			--	1P20		SPARE
SPARE		1P20				31		32				1P20		SPARE
SPARE		1P20			--	33		34			--	1P20		SPARE
SPARE		1P20				35		36				1P20		SPARE
SPARE		1P20	--			37		38	--			1P20		SPARE
SPARE		1P20		--		39		40			--	1P20		SPARE
SPARE		1P20			--	41		42			--	1P20		SPARE

Connected Totals:
ØA 7.2 kw 60 Amperes
ØB 5.4 kw 45 Amperes
ØC 6.8 kw 56.7 Amperes
Total 19.4 kw 53.9 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard LP | Voltage 277/480V | Phase 3 | Wire 4 | AIC Rating 22,000
Panel Type NQDOD | Mains MLO | Mains Rating 125A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
FITNESS LTG	**	1P20	768			1		2	3000			1P20	**	CLASSRM 1&2 LTG
LOCKER RMS LTG	**	1P20		960		3		4		1500		1P20	**	COM/FAC. AREA LTG
LOBBY/VEST LTG	**	1P20			544	5		6			100	1P20	**	EXIT SIGNS
HEALTH LTG	**	1P20	1152			7		8	300			1P20	**	EXTERIOR LIGHTING
CORRIDOR LTG	**	1P20		1200		9		10		200		1P20	**	STAIR#3
EXTERIOR LTG	**	1P20			100	11		12			1000	1P20	**	ADMIN OFFICE
EXT EMERGENCY LTG		1P20	250			13		14	150			1P20	**	STAIR 2 LTG
SPARE		1P20				15		16				1P20		SPARE
SPARE		1P20			--	17		18		--		1P20		SPARE
SPARE		1P20				19		20				1P20		SPARE
SPARE		1P20		--		21		22		--		1P20		SPARE
LR PANEL	**	1P20			100	23		24			--	1P20		SPARE

** WIRED THRU RELAY PANEL

Connected Totals:
ØA 6.4 kw 23.1 Amperes
ØB 4 kw 14.4 Amperes
ØC 2 kw 7 Amperes
Total 12.4 kw 14.9 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard LP2 | Voltage 277/480V | Phase 3 | Wire 4 | AIC Rating 22,000
Panel Type NQDOD | Mains MLO | Mains Rating 125A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
CHEMISTRY 218 LTG	**	1P20	768			1		2	3200			1P20	**	CLASSRMS LTG
PHYSIC 219 LTG	**	1P20		704		3		4		100		1P20	**	EXIT LTG
CORRIDOR	**	1P20			480	5		6			1000	1P20	**	BIOLOGY 215 LTG
CORRIDOR	**	1P20	1088			7		8	1000			1P20	**	RESTROOM LTG
CPU LAB LTG	**	1P20		920		9		10		--		1P20		SPARE
SPARE		1P20				11		12				1P20		SPARE
SPARE		1P20			--	13		14			--	1P20		SPARE
SPARE		1P20				15		16				1P20		SPARE
SPARE		1P20			--	17		18			--	1P20		SPARE
SPARE		1P20				19		20				1P20		SPARE
SPARE		1P20				21		22				1P20		SPARE
LR PANEL		1P20			100	23		24			--	1P20		SPARE

** WIRED THRU RELAY PANEL

Connected Totals:
ØA 6.1 kw 22 Amperes
ØB 1.7 kw 6.2 Amperes
ØC 1.5 kw 5.4 Amperes
Total 9.3 kw 13.5 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard GYM | Voltage 120/208 | Phase 3 | Wire 4 | AIC Rating 10,000
Panel Type NQDOD | Mains MLO | Mains Rating 225A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
ELLIPTICAL		1P20	1500			1		2	1500			1P20		TREADMILL
ELLIPTICAL		1P20		1500		3		4		1500		1P20		TREADMILL
ELLIPTICAL		1P20			1500	5		6			1500	1P20		TREADMILL
ELLIPTICAL		1P20	1500			7		8	1500			1P20		TREADMILL
ELLIPTICAL		1P20		1500		9		10		1500		1P20		TREADMILL
ELLIPTICAL		1P20			1500	11		12			1500	1P20		TREADMILL
ELLIPTICAL		1P20	1500			13		14	1500			1P20		TREADMILL
ELLIPTICAL		1P20		1500		15		16		1500		1P20		TREADMILL
TREADMILL		1P20			1500	17		18			1500	1P20		TREADMILL
TREADMILL		1P20	1500			19		20	1500			1P20		TREADMILL
TREADMILL		1P20		1500		21		22		1500		1P20		TREADMILL
TREADMILL		1P20			1500	23		24			1500	1P20		TREADMILL
SPARE		1P20	--			25		26	--			1P20		SPARE
SPARE		1P20		--		27		28		--		1P20		SPARE
SPARE		1P20	--			29		30			--	1P20		SPARE
SPARE		1P20			--	31		32				1P20		SPARE
SPARE		1P20				33		34		--		1P20		SPARE
SPARE		1P20			--	35		36			--	1P20		SPARE
SPARE		1P20				37		38	--			1P20		SPARE
SPARE		1P20			--	39		40			--	1P20		SPARE
SPARE		1P20			--	41		42			--	1P20		SPARE

Connected Totals:
ØA 12.0 kw 33.3 Amperes
ØB 12.0 kw 33.3 Amperes
ØC 12.0 kw 33.3 Amperes
Total 36.0 kw 99.7 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard RP2 | Voltage 120/208 | Phase 3 | Wire 4 | AIC Rating 10,000
Panel Type NQDOD | Mains MLO | Mains Rating 225A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
RM 206 & 207 QUADS		1P20	720			1		2	720			1P20		COMPUTER LAB 209
RM 207 RCPT		1P20		1080		3		4		360		1P20		COMPUTER LAB 209
RM 203-205 QUADS		1P20			1080	5		6			720	1P20		COMPUTER LAB 209
RM 203-206 RCPT		1P20	1080			7		8	720			1P20		COMPUTER LAB 209
RM 203 RCPT		1P20		540		9		10		720		1P20		COMPUTER LAB 209
CORRIDOR 208		1P20			540	11		12			1500	1P20		COMPUTER LAB COPIER
ELEC 211 RCPT		1P20	900			13		14	720			1P20		COMPUTER LAB 209
PREP 218 RCPT		1P20		360		15		16		--		1P20		-
COM. LAB QUAD		1P20			360	17		18			720	1P20		BIOLOGY 217 RCPTS
PREP 218 COPIER		1P20	1500			19		20	360			1P20		BIOLOGY 217 QUAD
PREP 218 RCPT		1P20		360		21		22		360		1P20		BIOLOGY 217 GFI
PREP 218 GFI		1P20			720	23		24			360	1P20		BIO 217 LAB TABLE
MEN TOILETS		1P20	360			25		26	360			1P20		BIO 217 LAB TABLE
WOMEN TOILETS		1P20		360		27		28		360		1P20		BIO 217 LAB TABLE
CHEM 219 RCPTS		1P20			360	29		30			360	1P20		BIO 217 LAB TABLE
CHEM 219 LAB TABLE		1P20	360			31		32	360			1P20		BIO 217 LAB TABLE
CHEM 219 LAB TABLE		1P20		360		33		34		360		1P20		BIO 217 LAB TABLE
CHEM 219 LAB TABLE		1P20			360	35		36			500	1P20		FUME HOOD JUNCTION
CHEM 219 LAB TABLE		1P20	360			37		38	500			1P20		FUME HOOD JUNCTION
CHEM 219 LAB TABLE		1P20		360		39		40		500		1P20		FUME HOOD JUNCTION
CHEM 219 LAB TABLE		1P20			360	41		42			500	1P20		FUME HOOD JUNCTION
PHYSICS 219 QUAD		1P20	720			43		44	500			1P20		CLASS 203 PROJ. RCPT
PHYSICS 219 GFI		1P20		180		45		46		500		1P20		CLASS 204 PROJ. RCPT
W.C. RCPTS		1P20			360	47		48			500	1P20		CLASS 205 PROJ. RCPT
PHYSICS 219 RCPTS		1P20	720			49		50	500			1P20		CLASS 206 PROJ. RCPT
CLASS 209 PROJ. RCPT		1P20		500		51		52		500		1P20		CLASS 207 PROJ. RCPT
CLASS 23-205 RCPTS		1P20			1080	53		54				1P20		--
CLOCKS		1P20	200			55		56	500			1P20		CLASS 217 PROJ. RCPT
SPARE		1P20		--		57		58		500		1P20		CHEM 219 PROJ RCPT
SPARE		1P20				59		60				1P20		SPARE
SPARE		1P20	--			61		62		--		1P20		SPARE
SPARE		1P20		--		63		64			--	1P20		SPARE
SPARE		1P20			--	65		66			--	1P20		SPARE
SPARE		1P20				67		68				1P20		SPARE
SPARE		1P20			--	69		70		--		1P20		SPARE
SPARE		1P20			--	71		72			--	1P20		SPARE
SPARE		1P20				73		74				1P20		SPARE
SPARE		1P20	--			75		76		--		1P20		SPARE
SPARE		1P20				77		78				1P20		SPARE
SPARE		1P20	--			79		80	5400			3P100		PANEL PP2
SPARE		1P20		--		81		82		1200				
SPARE		1P20			--	83		84			6600			

Connected Totals:
ØA 17.6 kw 146.3 Amperes
ØB 15.8 kw 131.8 Amperes
ØC 17 kw 141.5 Amperes
Total 50.4 kw 140 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Panel Wiring Schedule (3-Phase)

Panelboard PP2 | Voltage 120/208 | Phase 3 | Wire 4 | AIC Rating 10,000
Panel Type NQDOD | Mains MLO | Mains Rating 225A
NEMA Type Enclosure 1 | Mounting SURFACE | Options --- | Note ---

PROVIDE WITH ISOLATE GROUND

LOAD DESCRIPTION	BREAKER OPTION	POLES & TRIP AMPS	CONNECTED LOAD WATTS ØA	ØB	ØC	CIRC. NO.	A B C	CIRC. NO.	CONNECTED LOAD WATTS ØA	ØB	ØC	POLES & TRIP AMPS	BREAKER OPTION	LOAD DESCRIPTION
VAV 2-2-1		1P20	100			1		2	528			1P20		RECIRC PUMP
VAV 2-2-2		1P20		100		3		4		220		1P20		CIRC PUMP
VAV 2-2-3		1P20			100	5		6			450	2P15		A/C IT
VAV 2-2-4		1P20	100			7		8	450					
VAV 2-2-5		1P20		100		9		10		1780		2P25		A/C ACCU IT
VAV 1-1-3		1P20			100	11		12			1780			
VAV 2-1-3		1P20	100			13		14	180			1P20		RTU 1-1 RCPT
VAV 2-1-2		1P20		100		15		16		180		1P20		RTU 1-2 RCPT
VAV 2-1-1		1P20			100	17		18			180	1P20		RTU 1-3 RCPT
VAV 1-1-4		1P20	100			19		20	180			1P20		RTU 2-1 RCPT
STAIR#2 EWH		2P20		1500		21		22		180		1P20		RTU 2-2 RCPT
					1500	23		24			180	1P20		RTU 2-3 RCPT
STAIR#3 EWH		2P20	1500			25		26	1500			1P20		WOMEN HAND DRYER
				1500		27		28		1500		1P20		MEN HAND DRYER
TX-1		1P20			696	29		30			--	1P20		SPARE
TX-2		1P20	696			31		32				1P20		SPARE
SPARE		1P20				33		34				1P20		SPARE
SPARE		1P20				35		36			--	1P20		SPARE
SPARE		1P20	--			37		38	--			1P20		SPARE
SPARE		1P20		--		39		40				1P20		SPARE
SPARE		1P20			--	41		42			1500	1P20		LAB CONTROL PANEL

Connected Totals:
ØA 5.4 kw 45 Amperes
ØB 7.2 kw 60 Amperes
ØC 6.6 kw 55 Amperes
Total 19.2 kw 53.3 Amperes

(All Phases to be balanced to within 7% using Actual Load Totals.)

Breaker Options:
AS - Powerlink AS Breaker
LO - Handle lock-off device
ST - Shunt Trip Type
AUX - Auxiliary Contacts
PA - Handle Padlock Attachment
GFCI - Ground Fault Circuit Interrupter
HACR - Heating, A/C & Refrigeration
SF - Subfeed
TC - Time Clock Control

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028
SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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NICHOLAS J. NETTA, AIA, NCARB
NJ License No. AI 12541

FRANCISCO J. MELENDEZ, SR., AIA
NJ License No. AI 12118

MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

SHEET CONTENTS:

PANEL SCHEDULES

SUBMISSIONS DATE	DESCRIPTION	BY	CHKD	REVISIONS DATE	DESCRIPTION	BY	CHKD
10.01.13	ISSUED FOR BID						

DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	9 OF: 12
DRWG NO	E.300

GENERAL ELECTRICAL NOTES

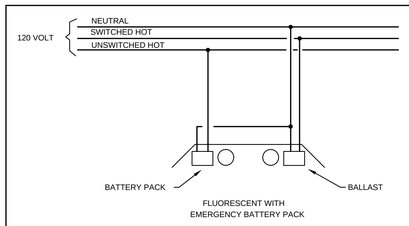
1. ALL WIRING SHALL BE IN COMPLIANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRIC CODE AND SPECIFICATIONS ROMEX (TYPE NM) IS PROHIBITED.
2. ELECTRICAL CONTRACTOR SHALL FILE WITH ALL AGENCIES AND OBTAIN ALL APPROVALS FOR THE WORK UNDER THIS CONTRACT. THE ELECTRICAL CONTRACTOR SHALL PAY ALL FEES ASSOCIATED WITH THE FILINGS.
3. ALL EQUIPMENT FEED TERMINATIONS AND MOUNTING HEIGHTS SHALL BE VERIFIED WITH EQUIPMENT MANUFACTURER.
4. ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER DISCIPLINES AND GENERAL CONTRACTOR.
5. LOCATION OF MECHANICAL EQUIPMENT SHALL BE FIELD COORDINATED WITH MECHANICAL CONTRACTOR PRIOR TO ROUGHING-IN.
6. ALL CONDUCTORS SHALL BE COPPER, THHN/THWN, RATED 90°, 600 VOLT (AS PER TABLE 310.16 NEC 2005). MINIMUM SIZE NO. 12 AWG. ALUMINUM CABLE IS PROHIBITED.
7. ALL 15 AND 20 AMPERE BRANCH CIRCUIT OVER 100 FEET SHALL BE WIRED WITH NUMBER 10 AWG WIRING. ALL 15 AND 20 AMPERE BRANCH CIRCUIT OVER 200 FEET SHALL BE WIRED WITH NUMBER 8 AWG WIRING.
8. ARMORED CABLE (BX) PERMITTED TO BE RUN CONCEALED INDOORS (ABOVE CEILING, BEHIND WALLS) AS PER CODE.
9. ALL CONDUIT INDOORS (WHERE REQUIRED BY CODE) SHALL BE EMT (ELECTRIC METAL TUBING). ALL CONDUIT OUTDOORS SHALL BE RIGID GALVANIZED STEEL.
10. EXACT LOCATION OF LIGHTING FIXTURES AND INSTALLATION DETAILS SHALL BE AS SHOWN ON THE LATEST ARCHITECTURAL REFLECTED CEILING PLAN. REVIEW PRIOR TO ROUGHING-IN.
11. GENERAL CONTRACTOR SHALL COORDINATE THE LOCATION OF ALL NEW CEILING MTD EQUIPMENT WITH ALL OF THE VARIOUS TRADES.
12. VERIFY ALL CEILING TYPES AND MATERIALS PRIOR TO ORDERING LIGHT FIXTURES.
13. SUPPORT EACH LIGHTING FIXTURE (WITH CHAINS WHEN REQUIRED BY CODE) INDEPENDENTLY FROM THE SUSPENDED CEILING AND COORDINATE ITS LOCATION WITH THAT OF OTHER EQUIPMENT TO AVOID CONFLICTS.
14. EMERGENCY LIGHT FIXTURES SHALL HAVE AN UNSWITCHED HOT FEED TO THEIR BATTERY PACK.SEE DETAIL.
15. SEE ARCHITECTURAL PLANS FOR LIGHT FIXTURE SPECIFICATIONS.
16. ALL ELECTRICAL DEVICES (SWITCHES, RECEPTACLES, PLUGS, COVER PLATES) TO BE DECORA PLUS BY LEVITON. COLORS TO BE SELECTED BY ARCHITECT.
17. ELECTRICAL CONTRACTOR TO FURNISH & INSTALL CONDUIT WITH DRAG LINE FOR PULLING OF TELEPHONE CO. WIRES. VERIFY REQUIREMENTS IN THE FIELD.
18. ELECTRICAL CONTRACTOR TO FURNISH & INSTALL CONDUIT WITH DRAG LINE FOR PULLING OF DATA WIRES. VERIFY ALL REQUIREMENTS IN THE FIELD.
19. ELECTRICAL CONTRACTOR TO FURNISH + INSTALL ALL CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT. (NOT SHOWN ON THESE PLANS). VERIFY EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR TO COORDINATE WORK WITH THEM.
20. THE CONTRACTOR SHALL VISIT THE PREMISES TO DETERMINE EXISTING CONDITIONS AND COMPARE SAME WITH DRAWINGS AND SATISFY HIMSELF OF ALL CONDITIONS PRIOR TO THE SUBMISSION OF A BID PROPOSAL. NO ALLOWANCE WILL BE MADE FOR FAILURE TO COMPLY WITH THESE REQUIREMENTS AND BID PROPOSAL SHALL BE CONSTRUED AS EVIDENCE HE HAS DONE SO.

ELECTRICAL LEGEND

- CONDUIT AND WIRING CONCEALED IN CLG OR WALLS. BRANCH CIRCUIT WIRING. THE NUMBER OF TICS INDICATES THE NUMBER OF CONDUCTORS EXCLUDING GROUNDS.
- CONDUIT AND WIRING EXPOSED ON CLG OR WALLS. BRANCH CIRCUIT WIRING. THE NUMBER OF TICS INDICATES THE NUMBER OF CONDUCTORS EXCLUDING GROUNDS.
- HP-35 — HOME RUN TO POWER PANEL. THE NUMBER OF TICS INDICATES THE NUMBER OF CONDUCTORS EXCLUDING GROUNDS. NOMENCLATURE INDICATES THE POWER PANEL AND CIRCUIT BREAKER NUMBER (POWER PANEL HP, CIRCUIT BREAKER NUMBER 35).
- INDICATES INDIVIDUAL HOT, NEUTRAL AND GROUND CONDUCTORS.
- LMRS LOW VOLTAGE CABLE
- GFI — DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE OUTLET, 20 AMP 2P 3W 125 VOLT GROUNDING, WALL MTD. PASS & SEYMOUR 2095TR
- DUPLEX RECEPTACLE OUTLET 20 AMP 2P 3W 125 VOLT. PASS & SEYMOUR 26362TR
- DOUBLE DUPLEX RECEPTACLE OUTLET 20 AMP 2P 3W 125 VOLT. (2) PASS & SEYMOUR 26362TR
- OC — OCCUPANCY SENSOR, CEILING MOUNTED WATTSTOPPER LMPC-100
- PP — POWER PACK FOR LIGHTING CONTROL. WATTSTOPPER LMRC-101
- J — ELECTRICAL JUNCTION BOX.
- WP — WEATHER PROOF ENCLOSURE.
- S — SINGLE POLE SWITCH, LOWER CASE LETTER INDICATES LIGHTING CIRCUIT THAT IS BEING CONTROLLED. PASS & SEYMOUR 2601LA
- S_3 — THREE WAY TOGGLE SWITCH 15A. PASS & SEYMOUR 2603LA
- S_T — MANUAL SWITCH WITH STANDARD TRIP THERMAL UNIT. EQUAL TO SQ D CLASS 2510 TYPE KG1A (NEMA 1 ENCLOSURE).
- J — UNFUSED DISCONNECT SWITCH (NEMA 1 FOR INDOOR AND NEMA 3R FOR OUTDOOR).
- J — FUSED DISCONNECT SWITCH (NEMA 1 FOR INDOOR AND NEMA 3R FOR OUTDOOR).
- J — COMBINATION STARTER AND DISCONNECT (NEMA 1 FOR INDOOR AND NEMA 3R FOR OUTDOOR).
- COMBINATION TELEPHONE/DATA JACK IN ONE SINGLE GANG FACE PLATE. ORTRONICS OR-40300570P-88/ OR-40300670P-88/ OR-TJ5E00-88
- TELEPHONE JACK ORTRONICS OR-40300670P-88/ OR-TJ5E00-88
- DATA JACK
- TV — TELEVISION OUTLET FLUSH WALL MOUNTED 2-1/8"x4 INCH JUNCTION BOX.
- PP — FLUSH WALL MOUNTED APARTMENT PANELBOARD WITH BRANCH CIRCUIT BREAKERS, REFER TO PANEL SCHEDULES
- S_{OC} — WALL MOUNTED OCCUPANCY SENSOR SINGLE POLE SWITCH, LOWER CASE LETTER INDICATES LIGHTING CIRCUIT THAT IS BEING CONTROLLED. WATTSTOPPER PW-100
- S_{LV} — LOW VOLTAGE SWITCH, ONE BUTTON. LOWER CASE LETTER INDICATES LIGHTING CIRCUIT THAT IS BEING CONTROLLED. WATTSTOPPER LMSW-101
- S_{LV2} — LOW VOLTAGE SWITCH, TWO BUTTON. LOWER CASE LETTER INDICATES LIGHTING CIRCUIT THAT IS BEING CONTROLLED. WATTSTOPPER LMSW-102

FOR FURTHER INFORMATION IN REGARDING TO RECEPTACLES CONTACT:
RAPHAEL ALMEIDA OF LEGRAND
TEL. 561-271-5491
FAX: 201-222-7527

FOR FURTHER INFORMATION IN REGARDING TO LOW VOLTAGE CONTACT:
CALL ORTRONICS (TECH SERVICES)
TEL. 877-599-5393



WIRING DIAGRAM FOR EMERGENCY LIGHTING

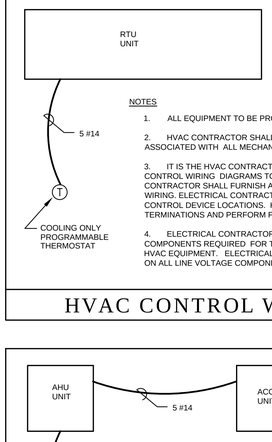
NOT TO SCALE

LIGHTING LEGEND

A	FIXTURE TYPE "A" MD-24-G9-3T8-EVPR-277-SWR-EMPK 2' x 4' LAY-IN RECESSED LIGHT FIXTURE
B	FIXTURE TYPE "B" MD-22-G9-3T8-EBPR-277-SWR-EMPK 2' x 2' LAY-IN RECESSED LIGHT FIXTURE
C	FIXTURE TYPE "C" EVO-35/18-GAR-MD-LV-277 6" RECESSED DOWNLIGHT
D8	FIXTURE TYPE "D8" P-S/D-18-4-8-T8-PBACRG-TCBC-ELB10-EW-2CWQ-LP/EF-277 8' LONG PENDANT MOUNTED SEMI-DIRECT LIGHT FIXTURE
D12	FIXTURE TYPE "D12" P-S/D-18-6-12-T18-PBACRG-TCBC-ELB10-TW-2CWA-LP/EV-277 12' LONG PENDANT MOUNTED SEMI-DIRECT LIGHT FIXTURE
EM	FIXTURE TYPE "EM" MIGN-25-LC-UN-SD-TLRT SURFACE CEILING-MOUNTED EXIT SIGN
EX1 EX2	FIXTURE TYPE "EX1 OR EX2" ELT-EM-R-1M/2M-BA-RC-UC-SD SURFACE WALL-MOUNTED EXIT SIGN
F8	FIXTURE TYPE "F8" PRM4-2-32-WHR-WPB-8-R8-277-GEB1-EL-SCT-LP835-F1-24-C518-ACG 8' LONG SUSPENDED IN-DIRECT LIGHT FIXTURE
F12	FIXTURE TYPE "F12" PRM4-2-32-WHR-WPB-12-R12-277-GEB10-EL-SCT-LP835-F1-24-C518-ACG 12' LONG SUSPENDED IN-DIRECT LIGHT FIXTURE
G	FIXTURE TYPE "G" HP4R-8-HO-3500K-277-SC-CSF 4" APERTURE-RECESSED LIGHT FIXTURE
H	FIXTURE TYPE "H" HP-12-2T8S-EBPR-277-EBB RECESSED PERIMETER WALL WASH LIGHT FIXTURE
J	FIXTURE TYPE "J" 2GTL4LP835 2' x 4' RECESSED LIGHT FIXTURE
K	FIXTURE TYPE "K" HP-2-EM-D-2'-HO-4000K-277-SC-MB 2' x 2' RECESSED LIGHT FIXTURE
M	FIXTURE TYPE "M" WL4-41L-277-D4343W-LP835-NX 4' WALL-MOUNTED LIGHT FIXTURE
SL1	FIXTURE TYPE "SL1" MR13CL-PP-MB-20L40K-DV-9500-J9
SL2	FIXTURE TYPE "SL2" M9720-SS-18LED-41K-MVOLT-MFL-FLC10-34S-STR-LD1M-LP
SL3	FIXTURE TYPE "SL3" M9720-SS-18LED-41K-MVOLT-MFL-FLC5-34S-STR-LD1M-LP
SL4	LED CHALLENGER WALL SCONCE XCHWM3-FT-LED-48-277-BLK-CWBB

MECHANICAL AND PLUMBING EQUIPMENT WIRING NOTES

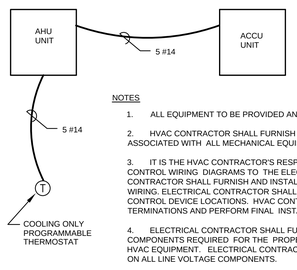
1. ALL EQUIPMENT TO BE PROVIDED AND INSTALLED BY CONTRACTOR.
2. CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES ASSOCIATED WITH ALL MECHANICAL AND PLUMBING EQUIPMENT.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE POINT-TO-POINT CONTROL WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL BACK BOXES, CONDUIT AND CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL LEAVE 3 FT CONTROL WIRE WHIPS AT ALL CONTROL DEVICE LOCATIONS. CONTRACTOR SHALL MAKE ALL FINAL TERMINATION AND PERFORM FINAL INSTALLATION OF ALL CONTROL DEVICES.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE VOLTAGE COMPONENTS REQUIRED FOR THE ROPER CONNECTION AND OPERATION OF THE EQUIPMENT. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL TERMINATION ON ALL LINE VOLTAGE COMPONENTS.



NOTES

1. ALL EQUIPMENT TO BE PROVIDED AND INSTALLED BY HVAC CONTRACTOR.
2. HVAC CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES ASSOCIATED WITH ALL MECHANICAL EQUIPMENT.
3. IT IS THE HVAC CONTRACTOR'S RESPONSIBILITY TO PROVIDE POINT-TO-POINT CONTROL WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL BACK BOXES, CONDUIT AND CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL LEAVE 3 FT CONTROL WIRE WHIPS AT ALL CONTROL DEVICE LOCATIONS. HVAC CONTRACTOR SHALL MAKE ALL FINAL TERMINATIONS AND PERFORM FINAL INSTALLATION OF ALL CONTROL DEVICES.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE VOLTAGE COMPONENTS REQUIRED FOR THE PROPER CONNECTION AND OPERATION OF THE HVAC EQUIPMENT. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL TERMINATIONS ON ALL LINE VOLTAGE COMPONENTS.

HVAC CONTROL WIRING DETAIL

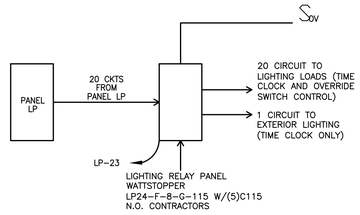


NOTES

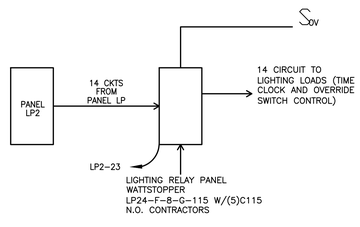
1. ALL EQUIPMENT TO BE PROVIDED AND INSTALLED BY HVAC CONTRACTOR.
2. HVAC CONTRACTOR SHALL FURNISH AND INSTALL ALL CONTROL DEVICES ASSOCIATED WITH ALL MECHANICAL EQUIPMENT.
3. IT IS THE HVAC CONTRACTOR'S RESPONSIBILITY TO PROVIDE POINT-TO-POINT CONTROL WIRING DIAGRAMS TO THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL BACK BOXES, CONDUIT AND CONTROL WIRING. ELECTRICAL CONTRACTOR SHALL LEAVE 3 FT CONTROL WIRE WHIPS AT ALL CONTROL DEVICE LOCATIONS. HVAC CONTRACTOR SHALL MAKE ALL FINAL TERMINATIONS AND PERFORM FINAL INSTALLATION OF ALL CONTROL DEVICES.
4. ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL LINE VOLTAGE COMPONENTS REQUIRED FOR THE PROPER CONNECTION AND OPERATION OF THE HVAC EQUIPMENT. ELECTRICAL CONTRACTOR SHALL MAKE ALL FINAL TERMINATIONS ON ALL LINE VOLTAGE COMPONENTS.

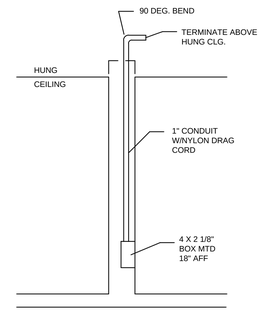
SPLIT SYSTEM CONTROL WIRING DETAIL

LIGHTING CONTROL DIAGRAM



LIGHTING CONTROL DIAGRAM





COMPUTER/TELEPHONE JUNCTION BOX DETAIL

NOT TO SCALE

Filolaos T. Kefalas, P.E.
NJ Professional Engineer No. GE046028
SIDERIS KEFALAS ENGINEERS P.C.
Consulting Engineers For:
• Mechanical • Fire Protection
• Plumbing • Electrical
• Fire Alarm
217-22 Northern Boulevard
Bayside, New York 11361
Tel: 718-224-9091
Fax: 718-224-9143

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MARK E. BESS, AIA
NJ License No. AI 16160

LAURENCE K. UHER, AIA, LEED, AP
NJ License No. AI 14394

NettaArchitects
ARCHITECTURE - PLANNING - INTERIOR DESIGN
1084 ROUTE 22 WEST, MOUNTAINSIDE, NEW JERSEY 07092
TEL: 973.379.0006 FAX: 973-379-1061
CERTIFICATE OF AUTHORIZATION AC-438

PROJECT:

UNION COUNTY VOCATIONAL-TECHNICAL SCHOOLS
WEST HALL ADDITION
1776 Raritan Road, Scotch Plains, New Jersey 07076

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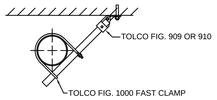
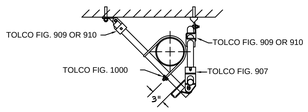
DATE	07.12.13
SCALE	AS SHOWN
DRWN BY	WH
CHKD BY	CMS/FTK
JOB NO	2131056/13-0529
SHEET:	11 OF: 12
DRWG NO	E.400

TOLCO FIG. 1000 FAST CLAMPS UNDERWRITERS LABORATORIES LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



LATERAL (TRANSVERSE) BRACE

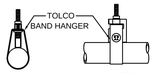
TOLCO FIG. 1000 FAST CLAMPS UNDERWRITERS LABORATORIES LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



LONGITUDINAL/4 WAY BRACE
(OPTIONAL METHOD)

SEISMIC/SURGE RESTRAINT

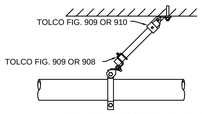
TOLCO FIG. 25 SURGE RESTRAINER TYPE 1- FOR USE WITH 1" AND 1 1/4" PIPE AND HANGER. TYPE 2- FOR USE WITH 1 1/2" AND 2" PIPE AND HANGER



TOLCO FIG. 25 IS DESIGNED TO BE USED ONLY WITH TOLCO BAND HANGERS FIG. 200, 2NFPA, TO RESTRICT UPWARD MOVEMENT OF PIPE WITHIN THE HANGER AS IT OCCURS DURING SPRINKLER HEAD ACTIVATION OR EQRTHQUAKE TYPE ACTIVITY

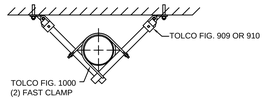
NOTE: CAN BE USED TO RESTRICT EITHER STEEL PIPE OR CPVC PLASTIC PIPE.

TOLCO FIG. 1000 FAST CLAMPS UNDERWRITERS LABORATORIES LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



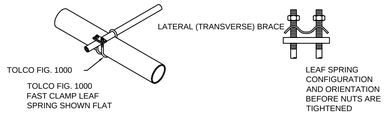
PIPE CLAMP (TOLCO FIG. 4A) USED IN LONGITUDINAL BRACE (OPTIONAL METHOD)

TOLCO FIG. 1000 FAST CLAMPS UNDERWRITERS LABORATORIES LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



TOLCO FIG. 1000
FASTCLAMP RISER BRACE

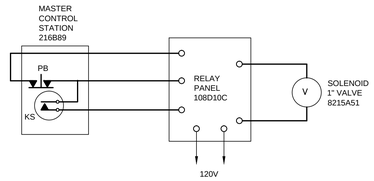
TOLCO FIG. 1000 FAST CLAMPS UNDERWRITERS LABORATORIES LISTED, MUST BE USED WITH TOLCO U.L. LISTED ATTACHMENTS FIG. 909 OR FIG. 910 SWIVEL FITTINGS OR FIG. 975 OR FIG. 908 STRAIGHT FITTINGS



NOTE: TO ASSURE MINIMUM REQUIRED TORQUE-TIGHTEN HEX NUTS UNTIL LEAF SPRING IS FLAT

SEISMIC HANGING DETAIL

NOT TO SCALE



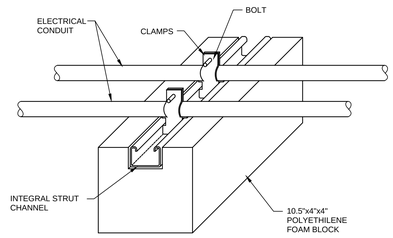
PB - ASCO PUSHBUTTON SWITCH
KS - ASCO KEY-OPERATED SWITCH
V - ASCO VALVE COILS

GAS CONTROL PANEL DETAIL
BIOLOGY AND CHEMISTRY ROOMS

CONTRACTOR SHALL PROVIDE MASTER MASTER CONTROL STATION - ASCO MODEL 216889 WITH KEY ACTUATOR AND EMERGENCY SHUT BUTTON.

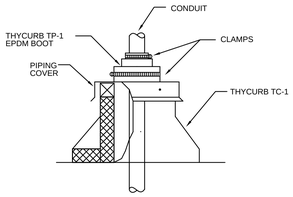
RELAY PANEL - ASCO MODEL 108010C

CONTRACTOR SHALL PROVIDE ALL WIRING TO MAKE THIS A FULLY OPERATIONAL SYSTEM.



SHOWN DETAIL IS AS PER FASTENING PRODUCTS PIPE PIER BLOCK DETAIL (CATALOG No. 6470404OPG)
PHONE No. (800)333-0852

FLAT ROOF CONDUIT SUPPORT DETAIL



NOTE: 3-1/2" DIAMETER COLLARS ACCOMMODATE CONDUITS 1/2" TO 2-1/2" NORM.
6-1/2" DIAMETER COLLARS ACCOMMODATE CONDUITS 3" TO 5" NORM.

CONDUIT FLASHING THRU ROOF DETAIL

Filolaos T. Kefalas, P.E.
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