SYMBOL	DESCRIPTION	NOTES
LIGHTING FIXTURES		
F1 a, F2 c, F3 b, F4 d	CEILING MOUNTED LIGHTING FIXTURES	UPPER CASE LETTERS INSCRIBED IN SYMBOL INDICATE FIXTURE TYPE REFERENCES TO FIXTURE LIST SUBSCRIPT LOWER CASE LETTERS INDICATE SWITCH CONTROL ASSOCIATIONS INIDCATES EMERGENCY LIGHTING: F1 a, F3 b, F1 a CIRCUITRY FOR EMERGENCY LIGHTING AND EXIT SIGNS ARE DESIGNATED WITH "E" BEFORE THE CIRCUIT NUMBER.
F1 a, F4 d	WALL MOUNTED LIGHTING FIXTURES	
	FLOOR MOUNTED LIGHTING FIXTURE	
EXIT SIGNS		
	WALL MOUNTED EXIT SIGN	APPLICATION OF SHADED QUADRANTS AND ARROWS THUS: INDICATE LETTERED FACE AND DIRECTIONAL ARROWS AT SYMBOLS FOR SIGNS FOR WHICH SELECTION OF SUCH FEATURES IS REQUIRED. SUBSCRIPT DESIGNATIONS XA, XB, XC, ETC. INDICATE EXIT SIGN TYPE REFERENCES TO LIGHTING FIXTURE LIST.
	CEILING MOUNTED EXIT SIGN	
JUNCTION AND PULL BOXES – SECONDARY LIGHT AND POWER WIRING		
	PULL BOX OR JUNCTION BOX–OUTLET BOX TYPE WALL MOUNTED	
	PULL BOX OR JUNCTION BOX–OUTLET BOX TYPE MOUNTED AT CEILING	
JB	JUNCTION BOX	
SECONDARY FEEDERS		
	FEEDER RUN CONCEALED ABOVE AS PER BASIC REQUIREMENTS FOR THE INSTALLATION OF CIRCUITRY.	
	FEEDER RUN CONCEALED BELOW AS PER BASIC REQUIREMENTS FOR THE INSTALLATION OF CIRCUITRY.	
	FEEDER RUN EXPOSED AS PER BASIC REQUIREMENTS FOR THE INSTALLATION OF	
FIRE PROTECTIVE ALARM SYSTEMS SOUNDING AND VISUAL DEVICES		
S	SPEAKER	SUBSCRIPT -P- DENOTES PRESIGNAL SUBSCRIPT -T- DENOTES TROUBLE SIGNAL SYMBOLS AS SHOWN REPRESENT CLG MOUNTED DEVICES–CIRCUMSCRIBED CIRCLES THUS:- SV DENOTE WALL MOUNTING SYMBOLS WITH LOWER PORTION LEFT UNSHADED DENOTE THAT THE ITEMS ARE PART OF AN OVERALL FIRE PROTECTIVE ALARM SYSTEM INSCRIBED SHADING IN LOWER PORTION DENOTES THAT THE ITEMS ARE PART OF A SEPARATE SYSTEM WHICH INCORPORATES ACTUATING DEVICES REPRESENTED BY SIMILARLY SHADED SYMBOLS SUBSCRIPT LOWER CASE LETTERS IN QUOTES DENOTE EXCEPTIONS TO SPECIFIED MOUNTING AS FOLLOWS: "f" - flush "s" - surface
SV	SPEAKER w/ VISUAL ALARM DEVICE	
V	VISUAL ALARM DEVICE	
FIRE PROTECTIVE ALARM SYSTEMS BASIC ITEMS		
FCP	CENTRAL EQUIPMENT OF SYSTEM	
FAA	OUTLYING ANNUNCIATOR	

SYMBOL	DESCRIPTION	NOTES	
FIRE PROTECTIVE ALARM SYSTEM ACTUATING DEVICES			
S	MANUAL FIRE ALARM ACTUATING DEVICE OR STATION	SUBSCRIPT -K- DENOTES STRAP KEY STATION	SUBSCRIPT NUMBERS INDICATE ZONE OR CIRCUIT
WF	SPRINKLER ALARM ACTUATING DEVICE	SUBSCRIPT UPPER CASE LETTERS DENOTE THE FOLLOWING:- a–main alarm valve waterflow detector W–WATERFLOW DETECTOR T–TAMPER SWITCH F–FLOAT SWITCH FR-FIRE PUMP RUNNING ALARM RELAY CONTACTS fp-fire pump power available alarm relay contacts P–AIR PRESSURE SWITCH DF-DRY PIPE AIR COMP. power failure DP-DRY PIPE air comp. low air comp	SUBSCRIPT LOWER CASE LETTERS IN QUOTES DENOTE EXCEPTIONS TO SPECIFIED STANDARD MOUNTING AS FOLLOWS:- "f" - flush "sf" -semiflush "s" - surface "d" - in duct SUBSCRIPT ROMAN NUMERALS DENOTE SYSTEM WHERE THERE IS MORE THAN ONE. SYMBOLS AS SHOWN REPRESENT WALL MOUNTED DEVICES –CIRCUMSCRIBED CIRCLES THUS:- DENOTE CEILING MOUNTING EXCEPT THAT FOR AUTOMATIC FIRE DETECTION ACTUATING DEVICES AS SHOWN DENOTE CEILING MOUNTED DEVICES AND CIRCUMSCRIBED CIRCLES DENOTE MOUNTING IN RAISED FLOOR. SUBSCRIPT UPPER CASE LETTERS IN PARENTHESIS DENOTE DEVICE FUNCTION THUS:- (TE)-TOCCC EVACUATION (FE)-FLOOR EVACUATION
VSS	VALVE SUPERVISOR SWITCH		
SD	AUTOMATIC FIRE DETECTION ALARM ACTUATING DEVICES SMOKE DETECTOR	SUBSCRIPT UPPER CASE LETTERS DENOTE THE FOLLOWING:-	
DD	DUCT SMOKE DETECTOR	-RT-FIRESTAT–RATE OF RISE PLUS FIXED TEMPERATURE TYPE	
D	HEAT DETECTOR	-FT-FIRESTAT–FIXED TEMPERATURE TYPE	
SD T	BEAM TYPE SMOKE DETECTOR SUBSCRIPT "T" INDICATES TRANSMITTER	-PM–PNEUMATIC TUBE DIAPHRAGM SWITCH	
SD R	SUBSCRIPT "R" INDICATES RECEIVER		
	ELECTRIC DOOR LOCK	SUBSCRIPT NUMBERS IN PARENTHESIS AT SYMBOLS REPRESENTING FIRESTATS DENOTE EXCEPTIONS TO SPECIFIED STANDARD TEMPERATURE SETTINGS SUBSCRIPT NUMBERS IN PARENTHESIS AT SYMBOLS REPRESENTING PNEUMATIC TUBE DIAPHRAGM SWITCHES DENOTE LENGTH OF ASSOCIATED TUBING	
DTU	DATA TRANSMISSION UNIT		
SYMBOL	**DESCRIPTION**	**NOTES**	
WIRING DEVICES			
	WIRING DEVICE TYPE SWITCH	WITHOUT SUBSCRIPT NUMBER SYMBOL DENOTES "SINGLE POLE" SUBSCRIPT NUMBERS DENOTE -2 POLE-, -3 WAY-, -4 WAY-, ETC. SUBSCRIPT LETTERS IN PARENTHESIS THUS:- (PL) INDICATE SEPARATE PILOT LIGHT.	WITHOUT SUBSCRIPT UPPER CASE LETTERS SYMBOLS DENOTE WIRING DEVICE STANDARD AS SPECIFIED. SUBSCRIPT UPPER CASE LETTERS DENOTE NON STANDARD TYPE REFERENCE TO SCHEDULE OF NON STANDARD WIRING DEVICES. SUBSCRIPT LOWER CASE LETTERS INDICATE SWITCH CONTROL ASSOCIATIONS.
	SWITCH WITH THERMAL OVERLOAD PROTECTION FOR 120V FRACTIONAL HP MOTORS		
	KEY OPERATED SWITCH		
IR	AREA OF RESCUE ASSISTANCE INTERCOM STATION		

SYMBOL	DESCRIPTION	NOTES	
WIRING DEVICES (CONT)			
	WALL DUPLEX CONVENIENCE RECEPTACLE	SHADING OF SYMBOL THUS:- INDICATES RECEPTACLE WITH EACH HALF SEPARATELY WIRED (HALF CONSTANT, HALF SWITCH CONTROLLED)	"D" INDICATES DEDICATED RECEPTACLE
	WALL DOUBLE DUPLEX (QUAD) CONV. RECEPT.		
	GFI (GROUND FAULT INTERRUPTING) WALL DUPLEX CONVENIENCE RECEPTACLE		
	WALL SINGLE CONVENIENCE RECEPTACLE		
PS	POWER SUPPLY FOR ACCESS CONTROL		
	QUAD RECEPTACLE IN FLUSH FLOOR BOX	SEE TELECOM PLANS ("ET" SERIES) FOR INDICATION WHETHER BOX CONTAINS DATA	
	DUPLEX RECEPTACLE IN FLUSH FLOOR BOX		
P	QUAD RECEPTACLE PENDANT MOUNTED FROM CEILING		
	CEILING DUPLEX RECEPTACLE 1		
	WALL SPECIAL PURPOSE POWER SUPPLY RECEPTACLE		
	FLOOR SPECIAL PURPOSE POWER SUPPLY RECEPTACLE		
	CEILING SPECIAL PURPOSE POWER SUPPLY RECEPTACLE	GANGING SYMBOL SHOWN IN CIRCUITRY RUN IN COMBINATION WITH ANY WIRING DEVICE SYMBOLS THUS:- DENOTES WIRING DEVICES WHICH ARE	
FB	FLOOR BOX FOR ILLUMINATED SIGNS - COORDINATE WITH MANUFACTURER REQUIREMENTS FOR COMPONENTS.		
	WIRING DEVICE GANGING SYMBOL	TO BE GANGED IN A SINGLE COMMON PLATE OUTLET.	
MOTORS, PANELS, AND INDIVIDUALLY MOUNTED DEVICES AND EQUIPMENT - SECONDARY LIGHT AND POWER WIRING			
	MOTORS IN MECHANICAL SYSTEM EQUIPMENT.	COMPLETE INFORMATION FOR MOTORS IS INDICATED BY APPLICATION OF TAG SYMBOL REFERENCE TO MOTOR LIST	
	INDIVIDUALLY MOUNTED SECONDARY OVERCURRENT AND SWITCHING DEVICES (CIRCUIT BREAKERS, FUSIBLE SWITCHES, UNFUSED SWITCHES, ETC.) APPLIED AS SPECIFIED.	PROVIDE VOLTAGE TO MATCH EQUIPMENT VOLTAGE. AMPERAGE AND POLES ARE INDICATED ON PLANS - SOME SIZES SHOULD BE VERIFIED WITH EQUIPMENT MANUFACTURER (WHERE NOTED).	
	MOTOR STARTER FOR MOTORS IN MECHANICAL SYSTEM EQUIPMENT.	SUBSCRIPT NUMBERS INDICATE FUSING WHERE REQUIRED (3 POLE FUSING UNLESS NOTED).	COMPLETE INFORMATION FOR MOTOR CONTROL ITEMS IS INDICATED BY THE TAG SYMBOL REFERENCE APPLIED TO ASSOCIATED MOTORS–WHERE RELATION OF MOTORS TO CONTROL ITEMS IS NOT EVIDENT, MOTOR TAG SYMBOLS ARE REPEATED AT SYMBOLS REPRESENTING THESE ITEMS TO CLARIFY THESE ASSOCIATIONS.
	POWER OR DISTRIBUTION PANEL.	ARROW OF NOTE INDICATING PANEL DESIGNATION ALSO DENOTES FRONT FACE OF PANEL.	
	LIGHTING OR APPLIANCE PANEL.		
	INDIVIDUALLY MOUNTED DRY TYPE TRANSFORMER PRIMARY VOLTAGE TO SECONDARY VOLTAGE	SUBSCRIPT NUMBERS INDICATE KVA RATING.	

SYMBOL	DESCRIPTION	NOTES
LIGHTING CONTROL - ALL LIGHTING CONTROL TO ACCOMODATE 277V U.N.O.		
	DESCRIPTION	MANUFACTURER/CAT. #
Sos	LINE VOLTAGE, DUAL TECHNOLOGY WALL SWITCH SENSOR WALL–MOUNTED AT STANDARD SWITCH HEIGHT NEAR DOORS. SET FOR MANUAL–ON, AUTOMATIC–OFF OPERATION. PROVIDE THREE–WAY VERSION WHERE REQUIRED. 180° COVERAGE PATTERN REQUIRED.	WATTSTOPPER DT-200 LEVITON OSSMT HUBBELL H-MOSS AD1277W1
Sos2	LINE VOLTAGE, DUAL RELAY WALL SWITCH SENSOR WALL–MOUNTED AT STANDARD SWITCH HEIGHT NEAR DOORS. SET FOR MANUAL–ON, AUTOMATIC–OFF OPERATION. 180° COVERAGE PATTERN REQUIRED.	WATTSTOPPER DW-200 LEVITON OSSMD HUBBELL WS1277W2
$D	DIMMING SWITCH	
DL	INDOOR DAYLIGHTING SENSOR. CEILING MOUNTED.	SQUARE D C-BUS LIGHT LEVEL SENSOR
OS	LINE VOLTAGE, DUAL TECHNOLOGY MOTION SENSOR. MINIMUM 1,000 SQUARE FOOT COVERAGE. RECEIVES LOW VOLTAGE POWER FROM SWITCHPACK, AND RETURNS A LOW–VOLTAGE SIGNAL TO SWITCHPACK WHEN MOTION IS DETECTED. CEILING MOUNTED.	WATTSTOPPER DT-300 LEVITON OSC10-MDW HUBBELL OMNI-DT-2000

SYMBOL	DESCRIPTION	NOTES
TAG SYMBOLS		
	SECONDARY FEEDER TAG SYMBOL	INFORMATION IS LISTED IN THE TAG SYMBOL THUS:- FEEDER DESIGNATION NUMBER AND SIZE OF CONDUITS NUMBER AND SIZE OF CONDUCTORS REFERENCE TO AN APPLICABLE NOTE CONDUIT SIZE INDICATED ALONE DENOTES A SINGLE CONDUIT.
	SECONDARY INDIVIDUALLY MOUNTED OVERCURRENT AND/OR SWITCHING DEVICE TAG SYMBOL	INFORMATION IS LISTED IN THE TAG SYMBOL THUS:- "600" OR "250" INDICATES VOLTAGE RANGE AT WHICH DEVICE IS TO OPERATE. "2", "3", "3-N", ETC, INDICATES "2" POLE "3 POLE "3 POLE PLUS NEUTRAL, "ETC. DEVICE SIZE IN AMPERES. "U" INDICATES THAT NO OVERCURRENT PROTECTION IS REQUIRED–NUMBER INDICATES SIZE OF OVERCURRENT PROTECTION REQUIRED. INDIVIDUALLY MOUNTED OVERCURRENT AND SWITCHING DEVICES ARE FOR SURFACE MOUNTING UNLESS THE TAG SYMBOL CARRIES AN EXTERNAL SUBSCRIPT "I" INDICATING FLUSH MOUNTING.

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ENGINEER CERTIFICATION
I hereby certify that the engineeringh plans, specifications or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Douglas C. Mass

Signature:

Date: 08/16/10 Reg. No.: 21067

REVISIONS

NO.	DESCRIPTION	DATE
1	ADDENDUM 1	6.11.10
	CONFORMANCE SET	7.12.10
3	PERMIT REVISIONS	7.23.10
	BUILDING PERMIT	8.16.10
	100% REVIEW	12.17.10
	BID PACKAGE 2A	1.24.11
1	BP2A ADDENDUM 2	2.25.11

DATE ISSUED: 02-25-11
REVIEWED BY: XXX
DRAWN BY: JK
DESIGNED BY: JK

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SHEET TITLE
ELECTRICAL SYMBOLS

SHEET NUMBER
E001

BID PACKAGE 2A
ADDENDUM 2