LEGEND OF ELECTRICAL SYMBOLS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	CONDUIT RUN CONCEALED IN WALLS OR ABOVE CEILING. ARROW INDICATES HOMERUN TO PANEL. CONDUCTOR DESIGNATIONS ARE AS FOLLOWS: LONG HATCH INDICATES NEUTRAL, SHORT HATCH INDICATES PHASE, "Z" INDICATES INSULATED OR ISOLATED GROUND, "J" INDICATES SWITCHLEG, AND NO HATCHES INDICATES TWO CONDUCTORS.		SURFACE METAL OR NON-METALLIC RACEWAY SYSTEM.
	PARTIAL HOME RUN. SAME AS ABOVE.	GAP	GENERATOR REMOTE ANNUNCIATOR PANEL .
	CONDUIT RUN CONCEALED IN FLOOR SLAB, BELOW FLOOR SLAB OR BELOW GRADE. WIRING SAME AS ABOVE.	VSD	VARIABLE SPEED DRIVE (SUPPLIED BY DIVISION 15)
	HATCHED LINES INDICATES FIXTURE WITH 90 MINUTE BATTERY PACK CONNECTED TO UNSWITCHED HOT CONDUCTOR.		CABLE TRAY SYSTEM
	2'x4' FLUORESCENT FIXTURE. TYPE 'A' UNLESS NOTED OTHERWISE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	GFI	GROUND FAULT PROTECTION SYSTEM.
A	2'x2' FLUORESCENT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	ST	SHUNT TRIP SYSTEM.
A	1'x4' FLUORESCENT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.		CIRCUIT BREAKER
A	FLUORESCENT STRIP. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.		FUSED SWITCH
A	UNDERCABINET FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.		GROUND
A	DOWNLIGHT FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	A.A.P.	AREA ALARM PANEL
A	WALL MOUNTED FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	G.C.	GENERAL CONTRACTOR
A	WALL SCONCE FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	KW	KILOWATTS
A	WALL WASHER FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	PH	PHASE
	PARKING LOT POLE TOP FIXTURE. LETTER INDICATES FIXTURE TYPE. REFER TO LIGHTING FIXTURE SCHEDULE FOR SPECIFICATIONS.	V	VOLTAGE
	EXIT LIGHT. TYPE 'X' UNLESS NOTED OTHERWISE. PROVIDE ARROWS AS INDICATED ON DRAWINGS.	AMP	AMPERAGE
	SIMPLEX RECEPTACLE OUTLET; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE.	M.A.P	MASTER ALARM PANEL
	DUPLEX RECEPTACLE OUTLET; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE.	N.I.C.	NOT IN CONTRACT
	QUADRUPLEX RECEPTACLE OUTLET GANGED WITH A COMMON WALL PLATE; (2)-20 AMP, 125V, 3 WIRE, GROUNDED TYPE.	(E)	EXISTING TO REMAIN
	DUPLEX RECEPTACLE OUTLET LOCATED ABOVE SPLASH ABOVE COUNTER; 20 AMP, 125V, 3 WIRE GROUNDED TYPE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT HEIGHT.	(N)	NEW
GFI	DUPLEX RECEPTACLE OUTLET WITH GROUND FAULT INTERRUPTER; 20 AMP, 125V., 3 WIRE GROUNDED TYPE.	(R)	ITEM NOTED TO BE RELOCATED
	DUPLEX RECEPTACLE OUTLET W/ SUPPRESSION ON A COMPUTER CIRCUIT; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE.	(D)	ITEM NOTED TO BE DEMOLISHED
WP	DUPLEX RECEPTACLE OUTLET W/ WEATHERPROOF WHILE IN USE COVER; 20 AMP, 125V., 3 WIRE, GROUNDED TYPE.	(A)	ITEM NOTED TO BE ABANDONED
	SPECIAL RECEPTACLE OUTLET: FOR NEMA CONFIGURATION AND VOLTAGE.	WP	WEATHER PROOF
TV	T.V. OUTLET; 2-GANG BOX WITH INSULATED BARRIER; 20 AMP, 125V., 3 WIRE RECEPTACLE ON ONE SIDE AND DIVISION 17 CABLE OUTLET ON THE OTHER.		MOTOR STARTER / DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, FUSE SIZE (IF REQUIRED), AND SIZE.
	CLOCK OUTLET - REFER TO DIVISION 17 FOR REQUIREMENTS.		CONNECTION TO PREWIRED EQUIPMENT. COORDINATE CONNECTION WITH APPROPRIATE CONTRACTOR.
	FLUSH MOUNTED FLOOR OUTLET W/ RECEPTACLE (S) AND OR DATA AND, OR TELEPHONE.		DISCONNECT IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE, PHASES, & FUSE SIZE. (IF REQUIRED)
	FLUSH MOUNTED FLOOR OUTLET USED AS JUNCTION BOX.		SINGLE PHASE MOTOR .
	TELEPHONE OUTLET.		THREE PHASE MOTOR .
W	WALL TELEPHONE OUTLET.		MOTOR STARTER IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE ,PHASES,AND SIZE.
FA	FIRE ALARM TELEPHONE OUTLET.	C	CONTACTOR IN A NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE AND NUMBER OF POLES.
S	SECURITY TELEPHONE OUTLET.	PC	PHOTOELECTRIC CELL.
P	PAY TELEPHONE OUTLET.	TC	TIMECLOCK IN NEMA 1 ENCLOSURE, OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE AND NUMBER OF POLES.
F	FAX MACHINE TELEPHONE OUTLET.		TRANSFORMER - REFER TO DRAWINGS FOR VOLTAGE AND AMPERAGE.
	COMBINATION TELEPHONE / DATA OUTLET.		TRANSFER SWITCH - REFER TO DRAWINGS FOR VOLTAGE AND AMPERAGE.
	DATA OUTLET	CB	CIRCUIT BREAKER IN NEMA 1 ENCLOSURE, UNLESS OTHERWISE SPECIFIED. REFER TO DRAWINGS FOR AMPERAGE AND PHASES.
TTB	TELEPHONE TERMINAL BOARD, 4'x8'x3/4" PLYWOOD.		SURFACE PANELBOARD W/ NEC CLEARANCES; 120/208 VOLT.
$	SINGLE POLE, SINGLE-THROW SWITCH; 20 AMP, 120/277V.		SURFACE PANELBOARD W/ NEC CLEARANCES; 277/480 VOLT.
3$	3-WAY SWITCH: 20 AMP, 120/277V.	J	JUNCTION BOX MOUNTED ABOVE ACCESSIBLE CEILING.
4$	4-WAY SWITCH: 20 AMP, 120/277V.	J	JUNCTION BOX
K$	KEY SWITCH	J	JUNCTION BOX MOUNTED FLUSH WITH FINISHED WALL.
OS$	OCCUPANCY SENSOR SWITCH. LEVITON ODS15-ID U.N.O.		
$	DIMMER SWITCH. LUTRON NOVA-T SERIES, 1500W U.N.O.		
M$	MANUAL MOTOR DISCONNECT SWITCH WITH OVERLOAD PROTECTION.		
	EMERGENCY POWER OFF SWITCH (E.P.O.)		
	PUSH BUTTON		
	BUZZER		
	BELL		

NOTES:
1. ALL SYMBOLS MAY NOT BE USED ON THIS DRAWINGS.
2. REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS

LEGEND OF FIRE ALARM SYMBOLS

	DESCRIPTION		DESCRIPTION
M	MANUAL PULL STATION	S	SMOKE DETECTOR.
AV	AUDIO / VISUAL ALARM DEVICE. A.D.A. COMPLIANT.	RI	REMOTE INDICATOR
V	STROBE LIGHT. A.D.A. COMPLIANT.	SP	FIRE ALARM SPEAKER/HORN.
I	IONIZATION SMOKE DETECTOR.	F	FIREMAN'S PHONE JACK.
P	PHOTOELECTRIC SMOKE DETECTOR.	FT	FIREMAN'S PHONE HANDSET
H	RATE-OF-RISE HEAT DETECTOR.	FACP	FIRE ALARM CONTROL PANEL.
D	DUCT DETECTOR WITH SAMPLING TUBE.	RA	REMOTE ANNUNCIATOR
SV	SUPERVISORY VALVE SWITCH.	N.I.C.	NOT IN CONTRACT
WF	WATER FLOW SWITCH.	WP	WEATHER PROOF
DH	MAGNETIC DOOR HOLD OPEN.		
DL	MAGNETIC DOOR LOCK.		

NOTES:
1. ALL SYMBOLS MAY NOT BE USED ON THIS DRAWINGS.
2. REFER TO SPECIFICATIONS FOR MOUNTING HEIGHTS

FIRE ALARM SEQUENCE OF OPERATION:

WHEN A FIRE ALARM CONDITION IS DETECTED BY THE FIRE ALARM CONTROL PANEL, THE FOLLOWING FUNCTIONS SHALL OCCUR:

THE FIRE ALARM CONTROL PANEL COMMON ALARM INDICATOR SHALL FLASH AND THE AUDIBLE DEVICE SHALL SOUND. ACKNOWLEDGING THE ALARM CONDITION SHALL SILENCE THE AUDIBLE DEVICE AND CAUSE THE COMMON ALARM INDICATOR TO ILLUMINATE STEADY.

AN 80 CHARACTER LIQUID CRYSTAL DISPLAY SHALL INDICATE ALL APPLICABLE INFORMATION ASSOCIATED WITH THE ALARM CONDITION INCLUDING ZONE, DEVICE TYPE, DEVICE LOCATION, AND TIME OF ALARM. LOCATION AND ZONING MESSAGES SHALL BE CUSTOM FIELD PROGRAMMED TO RESPECTIVE PREMISES.

DISPLAY SYSTEM STATUS CHANGES ON THE REMOTE ANNUNCIATORS.

ACTIVATE AN ALARM CONTACT CLOSURE TO INTERFACE WITH THE OWNER PROVIDED CENTRAL STATION MONITORING SERVICE.

ACTIVATE ALL AUDIBLE INDICATING DEVICES.

ACTIVATE ALL VISUAL INDICATING DEVICES.

DEACTIVATE HVAC SYSTEMS OVER 2,000 CFM.

CLOSE ALL FIRE/SMOKE DAMPERS.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER & CATALOG NUMBER	MOUNTING	LAMPS NO./TYPE	VOLTS	REMARKS
A	LITHONIA 2PM3N-G-A-3-32-18-LD-277-1/3 GEB101S	RECESSED	(3) F32T8	277	RECESSED FLUORESCENT 2'X4' FIXTURE. 3" DEEP PARABOLIC LOUVER. 18 CELL. ELECTRONIC BALLAST. PROVIDE 90 MINUTE EMERGENCY BATTERY BACKUP FOR CENTER LAMP OF DESIGNATED FIXTURES.
B	GOTHAM AFV-32TRT-8-AR-LD-277-GEB10-WLP	RECESSED	(1) 32W TRT	277	RECESSED 8" APERTURE COMPACT FLUORESCENT DOWNLIGHT. SEMI-DIFFUSE CLEAR REFLECTOR. ELECTRONIC BALLAST. PROVIDE 90 MINUTE BATTERY BACKUP FOR DESIGNATED FIXTURES.
B1	GOTHAM AFVW-32TRT-8-AR-LD-277-GEB10-WLP	RECESSED	(1) 32W TRT	277	RECESSED 8" APERTURE COMPACT FLUORESCENT WALLWASHER. SEMI-DIFFUSE CLEAR REFLECTOR. ELECTRONIC BALLAST.
C	LITHONIA LA-2-32-277-GEB101S	SUSPENDED	(2) F32T8	277	SUSPENDED FLUORESCENT STRIP FIXTURE. ELECTRONIC BALLAST.
E	PEERLESS LSR9-G-1-54T5HO-LDL-U4-277-GEB10 LP835	RECESSED	(1) F54T5HO	277	RECESSED PARABOLIC FLUORESCENT WALL LIGHT. ELECTRONIC BALLAST.
F	LITHONIA CA-2-32-277-GEB10IS	SURFACE	(2) F32T8	277	WALL MOUNTED FLUORESCENT WRAPAROUND STRIP FIXTURE. ELECTRONIC BALLAST.
G	LITHONIA CL-2224-U31-MVOLT-GEB10IS	SURFACE	(2) 32W T8U	277	DESIGNER ACRYLIC SKYLIGHT
G2	LITHONIA CL-4464-32-MVOLT-GEB10IS	SURFACE	(6) 32W T8	277	DESIGNER ACRYLIC SKYLIGHT
H	LITHONIA TX-400M-PA22C-277-SCWA-FWG	SURFACE	(1) 400W MH	277	METAL HALIDE HIGH-BAY FIXTURE. 22" CONICAL ARCYLIC LENS. WIRE GUARD. PULSE START BALLAST. PROVIDE QRS-QUARTZ RESTRIKE ON DESIGNATED FIXTURES.
J	LITHONIA VGR4-2/26DTT-277-DBLB-TRS-LPI	SURFACE	(2) 26W DTT	277	COMPACT FLUORESCENT WALL SCONCE. WET LOCATION LISTED. ELECTRONIC BALLAST.
K	GOTHAM AF-2-26TRT-8-AR-LD-277-GEB10-WLP	RECESSED	(2) 26W TRT	277	RECESSED 8" APERTURE COMPACT FLUORESCENT DOWNLIGHT. SEMI-DIFFUSE CLEAR REFLECTOR. ELECTRONIC BALLAST.
L	GOTHAM TWAC-100M-277-LPI-DMB	SURFACE	(1) 100W MH	277	WALL MOUNTED METAL HALIDE SECURITY LIGHT. FINISH TO BE VERIFIED WITH ARCHITECT.
M	LITHONIA 2UC-17-277-1/3 GEB10IS	SURFACE	(1) F17T8	277	UNDERCABINET LIGHT.
X	LITHONIA LRP BZ 2 RW 120/277 TM	SURFACE	LED	277	EDGE-LIT EXIT SIGN. PROVIDE FACES AND ARROWS AS SHOWN. 90 MINUTE BATTERY PACK. FINISH TO BE VERIFIED WITH ARCHITECT.
X1	LITHONIA AFN	SURFACE	(2) 6W XENON	277	DECORATIVE EMERGENCY LIGHTING UNIT. 90 MINUTE BATTERY PACK. FINISH TO BE VERIFIED WITH ARCHITECT.

NOTE: THIS FIXTURE SCHEDULE IS INTENDED TO PROVIDE GENERAL LIGHTING FIXTURE QUALITY AND PERFORMANCE REQUIREMENTS ONLY. CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN THE EXACT MODEL/CATALOG NUMBER OF THE LIGHTING FIXTURES LISTED ABOVE. ANY DIFFERENCES BETWEEN THIS LIGHTING FIXTURE SCHEDULE AND ARCHITECTURAL DRAWINGS OR MANUFACTURERS PRODUCT LISTINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER. FLUORESCENT LIGHTS THAT ARE SHOWN WITH DIMMER CONTROL SHALL BE PROVIDED WITH AN ELECTRONIC DIMMING BALLAST. FLUORESCENT LIGHTS NOT SHOWN DIMMED SHALL HAVE A NON-DIMMING ELECTRONIC BALLAST. VERIFY LAMP COLOR WITH ARCHITECT.

ELECTRICAL GENERAL NOTES:

1. BEFORE SUBMITTING A BID, IT WILL BE NECESSARY FOR EACH CONTRACTOR WHOSE WORK IS INVOLVED TO VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET IN INSTALLING THE WORK AND MAKE PROVISIONS FOR THE CONDITIONS IN HIS FINAL PRICE. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR THE OMISSION OR FAULTY INSTALLATION OF ANY WORK COVERED BY THE CONTRACT DOCUMENTS.
2. THIS CONTRACTOR SHALL SECURE ALL PERMITS, LICENSES AND INSPECTIONS REQUIRED FOR HIS WORK, AND SHALL PAY ALL FEES IN CONNECTION WITH SUCH PERMITS, LICENSES AND INSPECTIONS. DELIVER ALL DOCUMENTATION TO THE OWNER AT PROJECT COMPLETION.
3. WORK SHALL COMPLY WITH THE MOST RECENT VERSION OF ALL APPLICABLE LAWS, RULES, REGULATIONS AND ORDINANCES OF ALL FEDERAL, STATE AND LOCAL AUTHORITIES. IN THE EVENT OF CONFLICT BETWEEN THE CONTRACT DOCUMENTS AND THE LOCAL ENFORCING AUTHORITY, THE LATTER SHALL RULE. ANY MODIFICATION RESULTING THEREFROM SHALL BE MADE WITHOUT ADDITIONAL COST TO THE OWNER OR ARCHITECT/ENGINEER. THE CONTRACTOR SHALL REPORT ANY SUCH MODIFICATIONS TO THE ARCHITECT/ENGINEER AND SECURE HIS APPROVAL BEFORE PROCEEDING. SHOULD THE REQUIREMENTS OF THE CONTRACT DOCUMENTS EXCEED THE REQUIREMENTS OF THE CODES, THE CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE PROVIDED THEY ARE NOT IN CONFLICT WITH THOSE CODES.
4. ALL ITEMS OF EQUIPMENT AND ALL MATERIALS FOR WHICH, APPROVAL STANDARDS HAVE BEEN ESTABLISHED BY UNDERWRITERS' LABORATORIES, INC. (UL), FACTORY MUTUAL (FM), AMERICAN STANDARD CODES, ASME, AGA, AMCA, ASA, ANSI, ASHRAE, AND ARI SHALL BE SO APPROVED AND SHALL BEAR APPROVAL LABELS.
5. PENETRATIONS THROUGH FLOORS OR FIRE-RATED CONSTRUCTION SHALL BE FIRESAFED TO COMPLY WITH ASTM E-814 (UL 1479), AND THE AUTHORITIES HAVING JURISDICTION.
6. IN THE EVENT OF A CONFLICT BETWEEN DRAWINGS AND SPECIFICATIONS, THE GREATER AMOUNT OF WORK SHALL BE PRICED. BRING THE CONFLICT TO THE ATTENTION OF THE ENGINEER AND REQUEST DIRECTION.
7. DRAWINGS ARE DIAGRAMMATIC; CONFIRM DIMENSIONS AND LOCATIONS IN THE FIELD, ADVISE OF MAJOR DISCREPANCIES BETWEEN DRAWINGS AND CONDITIONS EXISTING IN THE FIELD. DRAWINGS DO NOT INDICATE ALL FITTINGS, COMPONENTS, AND OFFSETS REQUIRED FOR THE COMPLETION OF THIS WORK. THE CONTRACTOR SHALL PROVIDE ALL FITTINGS, COMPONENTS, OFFSETS OR OTHER FEATURES REQUIRED FOR THE FULL OPERATIONAL CONDITION OF THIS PROJECT.
8. PROVIDE ACCESS FOR ALL EQUIPMENT WORKING CLEARANCES REQUIRED BY THE AUTHORITIES HAVING JURISDICTION OR AS RECOMMENDED BY THE MANUFACTURER. RELOCATE EXISTING COMPONENTS AS REQUIRED TO PROVIDE THE REQUIRED ACCESS.
9. REFER TO THE SPECIFICATIONS FOR ALL WORK ON THESE DRAWINGS.
10. REFER TO SPECIFICATION SECTION 16250 FOR THE GROUNDING AND BONDING REQUIREMENTS. BONDING JUMPERS ARE REQUIRED ACROSS ALL ELECTRICAL AND MECHANICAL FLEX CONNECTIONS.

APPROVED
ELECTRICAL PLAN
PLANS AND SPECIFICATIONS TO BE IN ACCORDANCE WITH CURRENT NATIONAL ELECT. CODE & CITY BUILDING CODE.
THIS PLAN SHALL BE KEPT ON JOB FOR INSPECTORS. SEPARATE PERMIT FOR ELECTRICAL REQUIRED.
NO. 385

FIRE ALARM

STATE OF TEXAS
CRAIG KOEHN
61132
REGISTERED PROFESSIONAL ENGINEER
06/01/06

E/B/E, Inc.
ELECTRICAL/MECHANICAL CONSULTING ENGINEERS
Firm Registration No: 5638
Tel.: (713) 840-0177
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ELECTRICAL INFORMATION (01)

Community Family Centers
Centros Familiares de la Comunidad

John P. McGovern, M.D. Community Sports & Recreation Building
7318 AVENUE F
HOUSTON, TEXAS 77011

THAT'S ARCHITECTURE
2102 COMMONWEALTH #100, HOUSTON, TX 77006
TELEPHONE 713/222-1406 FAX 713/222-1506

ISSUES & REVISIONS
08/07/06 BID AND PERMIT

SHEET TITLE
ELECTRICAL INFORMATION

PROJECT NO. 06120.00
SCALE AS NOTED

SHEET NUMBER
E01.01