

GENERAL INSTRUCTIONS

CONDITIONS OF CONTRACT

1. THE OWNERS INSTRUCTIONS TO BIDDERS AND THE GENERAL CONDITIONS OF THE DESIGNERS SPECIFICATIONS ARE AN INTEGRAL PART OF THIS CONTRACT AND SHALL BE READ IN CONJUNCTION HERewith. THESE INSTRUCTIONS TO BIDDERS AND GENERAL CONDITIONS SHALL BE FULLY BINDING ON THE GENERAL CONTRACTOR AND HIS SUB-CONTRACTORS TO THE FULL SATISFACTION OF THE DESIGNER, ENGINEER AND OWNER.
2. THE RESPONSIBILITY AND SCOPE OF EACH SUB-TRADE RESTS SOLELY WITH THE CONTRACTOR. EXTRAS WILL NOT BE CONSIDERED BASED ON THE GROUNDS OF DIFFERENCE IN THE INTERPRETATION OF SPECIFICATIONS AND DRAWINGS AS TO WHICH TRADE INVOLVED SHALL PROVIDE CERTAIN SPECIALTIES OR MATERIALS.
3. IT IS A CONDITION OF THIS CONTRACT, THAT THE CONTRACTOR WILL, IN THE PERFORMANCE OF THE SERVICES FOR THE OWNER AS DESCRIBED IN THIS CONTRACT, PERFORM WORK IN ACCORDANCE WITH ONTARIO BUILDING CODE LATEST EDITION, THE ONTARIO HYDRO ELECTRICAL SAFETY CODE, THE SEWAGE SYSTEMS ENVIRONMENTAL PROTECTION ACT ONTARIO INCLUDING DISPOSAL OF WASTE, WORKPLACE HAZARDOUS MATERIAL INFORMATION SYSTEM (WHMIS), O.REG 644/88, THE ONTARIO GAS UTILIZATION CONDE, AND ANY OTHER CODE OF PROVINCIAL OR LOCAL APPLICATION, INCLUDING HOURS OF WORK, RATES OF PAY, JOB SAFETY AND ALL OTHER MATTERS IN WHICH THE MUNICIPAL OR FEDERAL AUTHORITIES HAVE JURISDICTION; PROVIDED THAT IN ANY CASE OF CONFLICT OR DISCREPANCY, THE MORE STRINGENT REQUIREMENTS SHALL APPLY.
4. COMPLY WITH STANDARD FOR BUILDING CONSTRUCTION OPERATIONS, ISSUED BY THE ONTARIO FIRE MARSHAL'S OFFICE AND ALL APPLIANCE FIRE SAFETY CODES, LAWS, AND REGULATIONS.
5. IT IS INCUMBENT UPON THE CONTRACTOR TO INFORM ITSELF OF ANY SUCH LEGISLATION AND THE CONTRACTOR AGREES THAT IN THE EVENT OF NON-COMPLIANCE WITH THIS LEGISLATION, IT WILL INDEMNIFY AND HOLD HARMLESS THE OWNER FROM ANY COSTS AND DAMAGES RESULTING FROM SUCH NON-COMPLIANCE.
6. YEAR 2000 COMPLIANCE (Y2K): ALL MICRO-PROCESSOR BASED SYSTEMS SHALL BE YEAR 2000 COMPLIANT.
7. ALL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH STANDARDS OF GOOD PRACTICE SUCH AS, BUT NOT LIMITED TO, SMACNA AND ASHRAE, MEET OR EXCEED REQUIREMENTS OF CONTRACT DOCUMENTS, SPECIFIED STANDARDS, CODES AND REFERENCED DOCUMENTS DESCRIBED IN THESE INSTRUCTIONS.

EXAMINATION OF WORK

1. THIS PROJECT INVOLVES CONSTRUCTION OF A NEW BUILDING, THEREFORE EXAMINE THE SITE AND LOCAL CONDITIONS TO DETERMINE THE DIFFICULTIES IN CARRYING OUT THE WORK INDICATED AND SPECIFIED PRIOR TO SUBMITTING FINAL PRICE.

INTENT

1. IT IS THE INTENT OF THIS SPECIFICATION AND DRAWINGS TO PROVIDE FOR A COMPLETE AND FULLY OPERATING SYSTEM IN COMPLETE ACCORD WITH ALL APPLICABLE CODES. THESE DOCUMENTS MAY NOT SHOW OR DESCRIBE EACH AND EVERY ITEM REQUIRED FOR THE COMPLETE INSTALLATION; THEREFORE, THE CONTRACTOR SHALL MAKE PROVISIONS FOR ALL LABOUR, MATERIAL AND EQUIPMENT DEEMED NECESSARY TO COMPLETE THE WORK INDICATED OR REASONABLY IMPLIED ON ALL DRAWINGS.

LIABILITY

1. THIS CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR LAYING OUT HIS WORK AND FOR ANY DAMAGE OR EXTRA COSTS CAUSED TO THE OWNER OR OTHER CONTRACTORS BY IMPROPER LOCATION OR CARRYING OUT OF HIS WORK. CARRY ALL NECESSARY INSURANCE COVERAGE.

PERMITS, CERTIFICATES, FEES, ETC.

1. GIVE ALL NOTICES, OBTAIN ALL PERMITS AND PAY ALL FEES SO THAT THE WORK SPECIFIED HEREIN MAY BE CARRIED OUT, EXCEPT FOR BUILDING OCCUPANCY PERMITS WHICH WILL BE OBTAINED BY THE OWNER. AT THE ENGINEER'S REQUEST, FURNISH ANY CERTIFICATES AS EVIDENCE THAT THE WORK INSTALLED CONFORMS WITH THE LAWS AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION.

GUARANTEE

1. THE CONTRACTOR, AS A CONDITION PRECEDENT TO FINAL PAYMENT AFTER COMPLETION OF THIS WORK, SHALL GIVE THE OWNER A WRITTEN GUARANTEE WARRANTING ALL APPARATUS FURNISHED UNDER THE CONTRACT TO REMAIN IN PERFECT SERVICABLE CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL PERFORMANCE OF HIS WORK AS ESTABLISHED BY THE PROJECT MANAGER AND ENGINEER.

DOCUMENTS REQUIRED

1. MAINTAIN AT JOB SITE COPY OF EACH OF THE FOLLOWING DOCUMENTS:
 - .1 DRAWINGS.
 - .2 SPECIFICATIONS.
 - .3 ADDENDA.
 - .4 CHANGE ORDERS.
 - .5 OTHER MODIFICATIONS TO CONTRACT.
 - .6 FIELD TEST REPORTS.
 - .7 MANUFACTURER'S INSTALLATION AND APPLICATION INSTRUCTIONS.

EXTRA WORK

1. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THIS PROJECT SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. WHEN ADDITIONAL WORK IS REQUESTED, A QUOTE WILL BE REQUESTED IN THE FORM OF A CONTEMPLATED CHANGE NOTICE (CCN) FROM THE CONTRACTOR. THIS QUOTE WILL BE SUBMITTED TO THE PROJECT MANAGER WITHIN THREE (3) DAYS OF THE REQUEST, TO AVOID DELAYS IN THE PERFORMANCE OF THE WORK REQUIRED.
2. NO WORK IS TO BE PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER. ANY REQUEST FROM OTHERS MUST BE DIRECTED TO THE PROJECT MANAGER FOR APPROVAL.

AS-BUILT AND RECORD DRAWINGS

1. KEEP IN THE JOB OFFICE AN EXTRA TWO (2) SETS OF WHITE PRINTS AND SPECIFICATIONS ON WHICH ALL CHANGES AND DEVIATIONS SHALL BE RECORDED, AS THEY OCCUR, ONTO ONE (1) SET. AT COMPLETION OF THE PROJECT, TRANSFER ALL CHANGES TO THE SECOND, CLEAN SET OF "AS-BUILT" DRAWINGS AND TURN THESE OVER TO THE ENGINEER WHO WILL PROVIDE THE OWNER A CAD SET OF "RECORD" DRAWINGS.

SHOP DRAWINGS

1. BEFORE FABRICATION OR DELIVERY OF ANY MATERIALS OR EQUIPMENT, SUBMIT A MINIMUM OF FOUR (4) COMPLETE SET OF SHOP DRAWINGS AND DATA SHEETS COVERING ALL ITEMS OF EQUIPMENT FURNISHED AND INTENDED FOR INSTALLATION UNDER THIS CONTRACT FOR APPROVAL BY THE ENGINEER.

TEMPORARY AND TRIAL USAGE

1. TEMPORARY OR TRIAL USAGE BY THE OWNER OF ANY MACHINERY, APPARATUS, EQUIPMENT OR ANY OTHER WORK OR MATERIALS SUPPLIED UNDER THE CONTRACT BEFORE FINAL WRITTEN ACCEPTANCE BY THE ENGINEER IS NOT TO BE CONSTRUED AS EVIDENCE OF THE ACCEPTANCE OF SAME BY THE OWNER. THE OWNER SHALL HAVE THE PRIVILEGE OF SUCH TEMPORARY AND TRIAL USAGE AS SOON AS THIS CONTRACTOR CLAIMS THAT SAID WORK IS COMPLETED. ANY DAMAGE CAUSED BY DEFECTIVE MATERIAL OR WORKMANSHIP THROUGH TEMPORARY OR TRIAL USAGE BY THE OWNER SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR.
2. ANY PERMANENT EQUIPMENT USED TEMPORARILY FOR TEMPORARY HEAT OR OTHERWISE WILL BE COMPLETELY REPAIRED, REPLACED, AND CLEANED TO THE FULL SATISFACTION OF THE OWNER.

EXPLOSIVES ACTUATED FASTENING DEVICES

1. DO NOT EMPLOY POWER GUNS USING EXPLOSIVES, UNLESS EXPRESSLY PERMITTED BY THE PROJECT MANAGER, COMPLY WITH REQUIREMENTS OF CSA Z-166 (SAFETY CODE FOR EXPLOSIVE ACTUATED TOOLS).

STORAGE

1. THE SECURITY OF THE CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE HIS RESPONSIBILITY. CONTRACTOR SHALL LIAISE WITH THE BUILDING OPERATOR AS NECESSARY.

PARKING, ELEVATORS AND REFUSE BINS

1. ALL TO BE CO-ORDINATED THROUGH ON-SITE BUILDING SUPERINTENDENT.

SIGNS

1. PROVIDE WARNING SIGNS IN LOCATIONS WHERE RENOVATIONS AND ALTERATION WORK IS ADJACENT TO AREAS AFFECTING THE PUBLIC.

EQUIPMENT AND SITE CLEANLINESS

1. DUCTS AND EQUIPMENT SHALL BE THOROUGHLY CLEANED OF DIRT, CUTTINGS AND OTHER FOREIGN SUBSTANCES. DISCONNECT, CLEAN AND RECONNECT WHENEVER NECESSARY FOR THE PURPOSE OF LOCATING AND REMOVING OBSTRUCTIONS. REPAIR WORK DAMAGED IN THE COURSE OF REMOVING OBSTRUCTIONS.
2. THE CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE FROM THE ACCUMULATION OF WASTE MATERIAL TO THE SATISFACTION OF THE PROJECT MANAGER. PLACE DUST PROTECTION IN THE FORM OF COVER SHEETS OVER EQUIPMENT AND FURNITURE TO ENSURE NO DUST INFILTRATION. CLEANING TO BE COMPLETED AT THE END OF EACH SHIFT TO THE SATISFACTION OF THE PROJECT MANAGER.

OPERATING AND MAINTENANCE DATA

1. FURNISH THREE (3) SETS OF OPERATING AND MAINTENANCE DATA FOR ALL NEW EQUIPMENT AND SYSTEMS. DATA SHALL BE ASSEMBLED IN BOOKLET FORM WITH HARD COVER AND INDEX. IDENTIFY FRONT COVER WITH NAME AND LOCATION OF THE PROJECT, CONSULTING ENGINEER AND CONTRACTOR. SUBMIT ONE COPY TO THE ENGINEER FOR APPROVAL.

MATERIALS

1. MATERIALS AND EQUIPMENT INSTALLED SHALL BE NEW, FULL WEIGHT AND OF BEST QUALITY SPECIFIED. USE SAME BRAND OF MANUFACTURER FOR EACH SPECIFIC APPLICATION. STATICALLY AND DYNAMICALLY BALANCE ROTATING EQUIPMENT FOR MINIMUM VIBRATION AND LOW OPERATING NOISE LEVEL. REPLACE MATERIAL OR WORKMANSHIP BELOW SPECIFIED QUALITY AND RELOCATE WORK WRONGLY PLACED TO THE SATISFACTION OF THE ENGINEER.

APPROVALS

1. THE PRICE SUBMITTED FOR THIS CONTRACT SHALL BE BASED ON THE USE OF MATERIALS AND EQUIPMENT AS SPECIFIED. IF THIS CONTRACTOR WISHES TO QUOTE ON EQUIVALENT MATERIALS AND EQUIPMENT, HE MUST QUOTE ON PRODUCTS APPROVED BY THE ENGINEER, IN WRITING, AS AN EQUIVALENT TO THE PRODUCT SPECIFIED. THIS CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY ADDITIONAL WORK OR MATERIALS REQUIRED BY ALL OTHER CONTRACTORS TO ACCOMMODATE APPROVED EQUIVALENT MATERIALS OR EQUIPMENT. EXTRAS WILL NOT BE APPROVED TO COVER SUCH WORK.

CUTTING AND PATCHING

1. THE CONTRACTOR IS RESPONSIBLE FOR THIS WORK AND SHALL COORDINATE LOCATIONS FOR ALL HOLES FOR PIPES, DUCTS THROUGH FLOORS AND ROOF ETC. AND PROVIDE SLEEVES REQUIRED TO EXECUTE THE INSTALLATION.

ELECTRICAL SPECIFICATIONS

MINIMUM STANDARDS

1. ELECTRICAL INSTALLATION: TO CSA C22.1-1994
- .2 LIGHTING FIXTURES: TO CSA C22.2 No. 9-1989
- .3 FIXTURE BALLAST: TO CSA C22.2 No. 74-1992
- .4 ONTARIO BUILDING CODE-1998.
- .5 ONTARIO ELECTRICAL SAFETY CODE-1998

MOUNTING HEIGHTS

1. INSTALL ELECTRICAL EQUIPMENT AT FOLLOWING HEIGHTS UNLESS INDICATED OTHER WISE:
 - .1 LOCAL SWITCHES: 1100mm (43")
 - .2 WALL RECEPTACLES:
 - .1 GENERAL: 400mm (16")
 - .2 ABOVE COUNTERS: 175mm (7")
 - .3 PANEL BOARDS: 1800mm FROM TOP
 - .4 TELE-COMMUNICATION OUTLETS: 400mm (16")
 - .5 OUTDOOR LIGHTING: AS SHOWN ON THE DRAWINGS.

IDENTIFICATION

1. IDENTIFY WITH LAMACOID NAMEPLATES ALL ELECTRICAL EQUIPMENT SHOWN ON THE DRAWINGS AND/OR MENTIONED IN THE SPECIFICATION SUCH AS MOTORS, SWITCHES, STARTERS, PANELBOARDS, TRANSFORMERS, CONTROLS, AND SPECIAL RECEPTACLES, REGARDLESS OF WHETHER OR NOT THE ELECTRICAL EQUIPMENT WAS FURNISHED UNDER THIS SECTION OF THE SPECIFICATION. IDENTIFICATION REVIEWED BY ENGINEER.

UNLESS OTHERWISE SPECIFIED, NAMEPLATES SHALL BE RIGID LAMACOID, MINIMUM 1.5mm THICK WITH BLACK LETTERS ENGRAVED ON A WHITE BACKGROUND. NAMEPLATES TO BE NEATLY PLACED, AND SQUARE TO SURROUNDING BUILDING OR EQUIPMENT LINES, AND FASTENED IN PLACE WITH MECHANICAL FASTENERS (SCREWS OR POP RIVETS) AS REVIEWED BY ENGINEER.

PROVIDE NEATLY TYPED UPDATED CIRCUIT DIRECTORIES IN A PLASTIC HOLDER ON THE INSIDE DOOR OF NEW PANELBOARDS, WITH COPY IN MANUAL.

IDENTIFY ALL PULL AND JUNCTION BOXES, WITH PERMANENT DYMO MARKER IDENTIFICATION INDICATING SQUARE PANEL AND CIRCUIT NUMBERS.

LOCATION OF OUTLETS

1. LOCATE OUTLETS AS SHOWN ON DRAWINGS.

DO NOT INSTALL OUTLETS BACK-TO-BACK IN WALL; ALLOW MINIMUM 150mm (6") HORIZONTAL CLEARANCE BETWEEN BOXES, AND LOCATE IN SEPERATE STUD CAVITIES WHENEVER POSSIBLE.

CHANGE LOCATION OF OUTLETS AT NO EXTRA COST OR CREDIT, PROVIDING DISTANCE DOES NOT EXCEED 3 METERS AND INFORMATION IS GIVEN BEFORE INSTALLATION.

GROUNDING

1. BOND TO SERVICE MAIN WATER PIPE WITH CONNECTION AS REQUIRED. GROUND ALL EQUIPMENT WITH APPROVED FITTINGS AND GROUND CONDUCTORS OF AMPLE AMPACITY AS REQUIRED BY THE O.H.E.S. CODE. ALL GROUND CONDUCTORS SHALL HAVE GREEN INSULATION.

WIRING

1. 600V RW90 RATING, COPPER CONDUCTORS, MINIMUM #12 AWG, EXCEPT AS OTHERWISE NOTED. 15A, 120V RECEPTACLE BRANCH CIRCUIT HOME RUNS SHALL BE MINIMUM #12 AWG.
2. ENSURE VOLTAGE DROP DOES NOT EXCEED 3% MEGGER ALL BRANCH CIRCUIT WIRING TO MEET CODE REQUIREMENTS.
3. WIRE CONNECTORS: TWIST-ON PRESSURE TYPE FOR #10 AND SMALLER. SPLIT-BOLT TYPE FOR #6 AND LARGER. 2 BOLT, PRESSURE TYPE SPADE LUGS FOR CONNECTIONS TO BUS.
4. PROVIDE ALL CONDUIT, WRING, BOXES, SWITCHES, OUTLETS, DEVICES, ETC., AND ALL NECESSARY HANGERS, INSERTS AND SUPPORTS OF APPROVED TYPES AS REQUIRED TO SUIT INSTALLATION AND ARCHITECTURAL CONSTRUCTION.

BOXES

1. GALVANIZED SHEET STEEL BOXES WITH CONDUIT K.O.'s TO SUIT INSTALLATION. MASONARY FOR BLOCK WALLS, CONCRETE TIGHT FOR CONCRETE ENCASEMENT; TYPE FS FOR SURFACE MOUNTING. JUNCTION AND PULL BOXES C/W SCREW-ON FLAT COVERS. PROVIDE PERMANENT MARKING OF SYSTEM OR CIRCUIT NUMBERS TO THE COVER PLATE OF ALL JUNCTION AND PULL BOXES.
2. TYPE D BOXES: SURFACE MOUNTING, 16 GAUGE, ELECTRO-GALVANIZED STEEL. UTILITY BOXES WITH SCREW-ON COVER. FINISH: ASA-61 GREY ENAMEL SIZE AS INDICATED.

WIRING DEVICES

1. SWITCHES: COMMERCIAL GRADE, 15A OR 20A, SUITABLE FOR SIDE WIRING, IVORY IN COLOUR, MOUNTING HEIGHT 1150 (46") AFF UNLESS STATED OTHERWISE. ACCEPTABLE MATERIALS: HUBBELL.
2. RECEPTACLES: COMMERCIAL GRADE, 15A 120V (5-15R) UNLESS OTHERWISE NOTED OTHER CONFIGURATIONS NOTED. MOUNTING HEIGHT 350 (14") AFF UNLESS STATED OTHERWISE OR AS SHOWN ON INTERIOR DESIGN DRAWINGS. GREY IN COLOUR. ACCEPTABLE MATERIALS: - HUBBELL #CBR151.
- GF: HUBBELL #GF52521A.
- IG: HUBBELL #52621G.

3. COVER PLATES: IVORY

DISCONNECT SWITCHES

1. FUSIBLE AND NON-FUSIBLE HEAVY DUTY DISCONNECT SWITCHES IN CSA ENCLOSURE, SIZE AS INDICATED.
2. PROVISION FOR PADLOCKING IN ON-OFF SWITCH POSITION BY THREE LOCKS.
3. MECHANICALLY INTERLOCKED DOOR TO PREVENT OPENING WHEN HANDLE IN ON POSITION.
4. FUSES: SIZE AS INDICATED.
5. QUICK-MAKE, QUICK-BREAK ACTION.
6. INDICATE NAME OF LOAD CONTROLLED ON SIZE 4 NAMEPLATE.

PANEL BOARDS AND BREAKERS

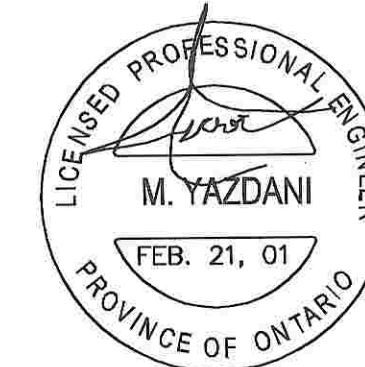
1. PRODUCT OF ONE MANUFACTURER.
2. COPPER BUS AND BREAKERS RATED FOR 10,000A (SYMMETRICAL) INTERRUPTING CAPACITY.
3. MAINS, NUMBER OF CIRCUITS AND NUMBER & SIZE OF BRANCH CIRCUITS AS INDICATED ON DRAWINGS.
4. BOLT-ON MOULDED CASE CIRCUIT BREAKERS QUICK MAKE, QICK BREAK TYPE FOR MANUAL AND AUTOMATIC OPERATION WITH TEMPERATURE COMPENSATION FOR 40°C AMBIENT.
5. TYPE-WRITTEN PANEL DIRECTORY

Provide written verification of fire alarm
modifications as per call/410-5-5241537H

CITY OF KANATA
REVIEWED
FOR THE PURPOSE OF
ISSUING A PERMIT

MAY 02 2001

BUILDING SERVICES DEPT.
PERMIT



NO.	DATE	REVISION	NAME
1	FEB. 21, 01	FOR BLDG PERMIT	MY

M & E ENGINEERING
DIVISION OF 1436868 ONTARIO LTD
5 RENSHAW AVENUE
STITTVILLE, ON. K2S 1G9
Tel: (613) 836-3420
Fax: (613) 836-5957

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PROJECT
**ADDITION TO THE
RON MASIN
PLAYHOUSE**

DRAWING
**ELECTRICAL
SPECIFICATIONS**

PROJECT NUMBER
00-37

CHECKED BY
MY

DRAWN BY
SY

DATE
DEC. 2000

REVISION

E2