

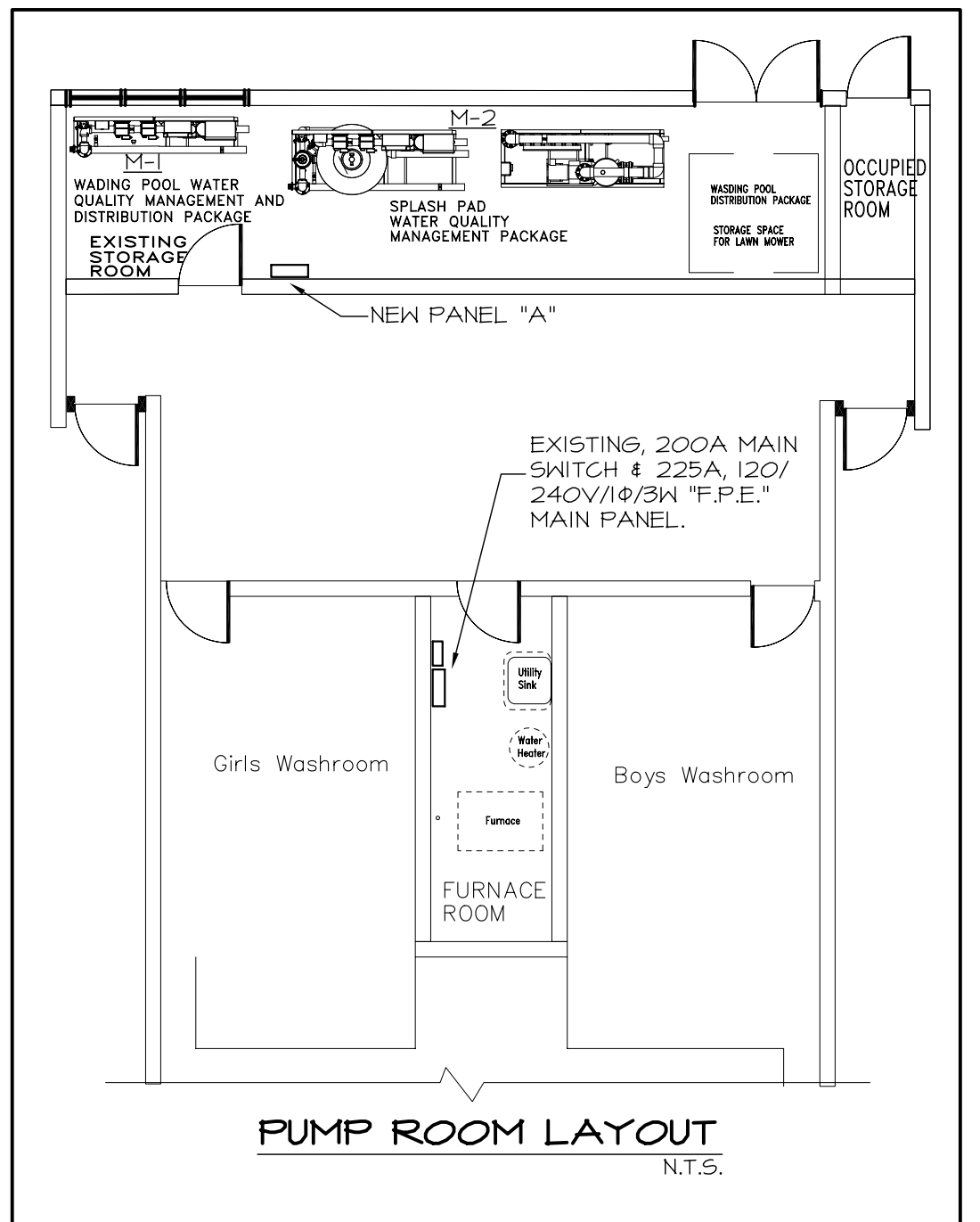
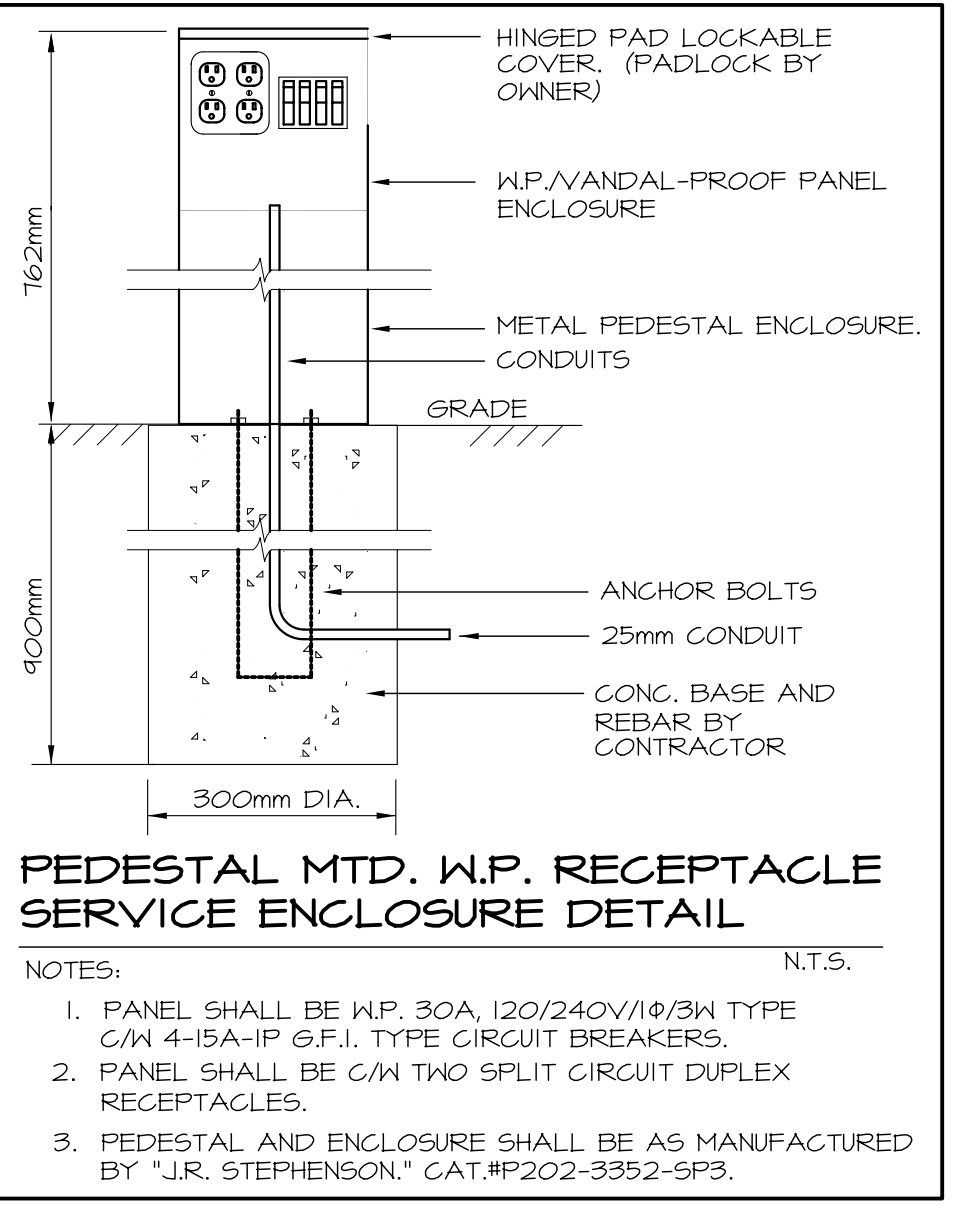
- ### ELECTRICAL SPECIFICATIONS
- SUPPLY AND INSTALL ALL LABOUR, MATERIAL, ETC., AS SPECIFIED AND AS MAY BE REQUIRED FOR A COMPLETE, FULLY OPERATIVE AND APPROVED ELECTRICAL INSTALLATION.
 - ALL MATERIALS SHALL BE NEW, C.S.A. APPROVED AND THE ENTIRE ELECTRICAL INSTALLATION SHALL COMPLY WITH THE CANADIAN ELECTRICAL CODE AND WITH ALL LOCAL LAWS, RULES AND ORDINANCES. OBTAIN ALL NECESSARY PERMITS AND PAY ALL FEES REQUIRED FOR THE ELECTRICAL INSTALLATION.
 - OBTAIN A CERTIFICATE OF INSPECTION AND APPROVAL FROM THE ELECTRICAL INSPECTION DEPARTMENT HAVING JURISDICTION ON COMPLETION OF THE WORK AND SUBMIT TO THE CONTRACT ADMINISTRATOR PRIOR TO FINAL INSPECTION OF THE WORK.
 - CONTRACTOR SHALL VISIT THE SITE AND EXAMINE ALL RELATED DRAWINGS AND LOCAL CONDITIONS, ETC., AFFECTING THE WORK UNDER THIS CONTRACT AND ASCERTAIN THAT ALL WORK SHOWN CAN BE SATISFACTORILY CARRIED OUT WITHOUT ADDITIONAL EXPENSE TO THE CITY. REPORT AT ONCE ANY DISCREPANCY. FAILURE TO REQUEST CLARIFICATION AND SITE VISIT SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING THE WORK AS INTENDED.
 - CONTRACTOR SHALL GUARANTEE ALL WORK AND EQUIPMENT INSTALLED UNDER THIS CONTRACT FOR A PERIOD OF TWELVE CALENDAR MONTHS AFTER ACCEPTANCE OF THE INSTALLATION BY THE CITY.
 - CO-ORDINATE ELECTRICAL WORK WITH OTHER TRADES TO AVOID DELAYS.
 - SURFACE MOUNTED CONDUITS SHALL BE ELECTRIC METALLIC TUBING WITH WATER-TIGHT CONNECTION OR UNLESS PROHIBITED BY REGULATIONS. SURFACE MOUNTED CONDUIT SHALL BE WELL SUPPORTED FROM COUPLINGS AND CONNECTORS WITH C.S.A. APPROVED MOUNTING DEVICES AND BRACKETS. JUNCTION BOX OR PULL BOX SHALL NOT BE MORE THAN 10.0M APART ON ALL CONDUIT RUNS. PROVIDE SEAL-TITE FLEXIBLE CABLE AT LOCATIONS WHERE CONDUIT GOES UNDERGROUND. PROVIDE EXTRA LENGTH OF FLEXIBLE CABLE TO ALLOW MOVEMENT OF ABOVE GROUND WIRING.
 - WIRING SHALL BE COPPER OF STANDARD "AWG" SIZE WITH 600V (90 DEG. C) INSULATION TYPE RW90, UNLESS PROHIBITED BY REGULATIONS. MINIMUM WIRE SIZE SHALL BE #12 AWG.
 - SUPPLY, INSTALL, WIRE AND CONNECT RECEPTACLE PEDESTAL POWER BOX AS MANUFACTURED BY J.R. STEPHENSON. RECEPTACLES SHALL BE SPECIFICATION GRADE, 120V, 15A IVORY.
 - CONTRACTOR SHALL SUPPLY AND INSTALL CIRCUIT BREAKERS IN EXISTING PANEL FOR NEW LIGHTING AND RECEPTACLE AS INDICATED ON DRAWING. BREAKERS SHALL MATCH EXISTING I.C. RATING. CONFIRM ON SITE.
 - CONTRACTOR SHALL SUPPLY, INSTALL, WIRE, CONNECT AND GROUND NEW PANEL "A" AS NOTED.
 - PROVIDE ENGRAVED LAMAGOID NAMEPLATE FOR PANEL IDENTIFICATION AND TYPE-WRITTEN DIRECTORY FOR CIRCUIT IDENTIFICATION. UPDATE EXISTING PANELBOARD SCHEDULES.
 - ALL TRENCHING AND BACKFILL FOR POWER INSTALLATION SHALL BE BY CONTRACTOR CO-ORDINATE ALL WORK WITH CONTRACT ADMINISTRATOR. MIN. OF 400mm BELOW GRADE.
 - SCHEDULING OF WORK ON SITE SHALL BE ARRANGED WITH CONTRACT ADMINISTRATOR TO MINIMIZE DISRUPTIONS TO THE CITY OPERATION DURING NORMAL WORKING HOURS. ANY SHUTDOWN OR INTERRUPTIONS TO SYSTEM SHALL BE AT TIMES ACCEPTABLE AND APPROVED BY THE CITY.
 - SUPPLY, INSTALL, WIRE, CONNECT AND GROUND ALL LIGHT FIXTURES AS INDICATED ON LIGHT FIXTURE SCHEDULE.
 - SUBMIT ALL SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR OFFICE FOR REVIEW.
 - WHEN THE WORK IS COMPLETED, CONTRACTOR SHALL TRANSFER THE "AS-BUILT" CONDITION TO 3.5" DISK (GARD DRAWINGS) WITH FULL SIZE PLOTTED DRAWINGS, SIGN EACH DRAWING AS CERTIFICATION OF ACCURACY, STAMP EACH DRAWING AS BEING "AS-BUILT" AND DELIVER WITH ALL APPROVED SHOP DRAWINGS TO THE CONTRACT ADMINISTRATOR OFFICE IN GOOD CONDITION. ORIGINAL DRAWINGS IN DISK FORMAT CAN BE OBTAINED FROM CONTRACT ADMINISTRATOR OFFICE.

LIGHTING FIXTURE SCHEDULE

TYPE	MANUFACTURER	CAT. NO.	LAMPS	REMARKS
A	KIM	1A/R/12/150HPS120/A-30/DB-P/L/5/AS-TM1/4MRO-16-BZF POLE	1-150W/HPS	NOTE #1

NOTE: 1. LIGHT STANDARDS SHALL BE MOUNTED ON 100mm ROUND AND 4800mm HIGH STEEL POLE. POLE SHALL BE C/W ALL NECESSARY MOUNTING HARDWARE (ANCHOR BOLTS & BASE COVER). FIXTURE AND POLE SHALL BE POWDER COATED.

- ### GENERAL NOTES:
- ALL ELECTRICAL ITEMS SHOWN DOTTED ARE EXISTING AND SHALL REMAIN. ITEMS MARKED WITH AN ASTERISK (*) SHALL BE DISCONNECTED AND REMOVED.
 - EXISTING WIRING & CONDUIT ON SITE REQUIRED TO REMAIN IN USE FOR ANY REASON SHALL BE RE-ROUTED, ALTERED AND/OR DIVERTED BY CONTRACTOR IN AN APPROVED MANNER. ANY BRANCH CIRCUIT WIRING, CONDUIT, REG'S, ETC. NO LONGER REQUIRED TO REMAIN IN USE SHALL BE REMOVED, OR IF THIS IS NOT POSSIBLE, RENDERED PERMANENTLY INACCESSIBLE & INACCESSIBLE & COMPLETELY DISCONNECTED FROM PANELS.
 - CONTRACTOR SHALL CONFIRM EXISTING U/G UTILITY CABLE ROUTES WITH UTILITIES PRIOR TO TRENCHING FOR NEW U/G PANEL FEEDER AND BRANCH CIRCUIT WIRING INSTALLATION.
 - RETURN ALL SALVAGED ELECTRICAL, PANELS, REG'S, ETC. TO THE CITY.
 - WIRE AND CONNECT NEW RECEPTACLE SERVICE PEDESTAL TO EXISTING PARK PANEL "P" WITH 3/4" R40 PVC CU. CORFLEX AND PROVIDE 1-30A-2P C.B. IN PANEL TO SUIT.
 - WIRE AND CONNECT NEW LIGHT STANDARDS AS INDICATED TO EXISTING PARK PANEL "P" PROVIDE 4-15A-1P C.B. IN PANEL TO SUIT. CIRCUIT NUMBERS SHOWN ARE FOR CLARIFICATION PURPOSES ONLY.
 - CONTRACTOR SHALL PROVIDE GROUNDING FOR ANY POOL METAL PART OR REINFORCING STEEL. SEE MECHANICAL DWS. M-2 FOR GROUNDING EQUIPMENTS. PROVIDE CONNECTION OF EQUIPMENT GROUND TO BUILDING MAIN GROUND AS PER C.E.C. SECTION 68-058.
 - CONTRACTOR SHALL REFER TO MECHANICAL DRAWING M-3 FOR ALL REQUIRED ELECTRICAL WORK IN EXISTING AND EXPANDED PUMP ROOM TO ACCOMMODATE MECHANICAL EQUIPMENT AND PIPING INSTALLATION. RELOCATE EXISTING ELECTRICAL PANEL, SWITCHES, AND ETC. AS REQUIRED. DISCONNECT AND REMOVE ANY ITEMS WHICH ARE NO LONGER REQUIRED TO REMAIN IN USE.
 - CONTRACTOR SHALL RE-USE EXISTING CONCRETE BASE FOR NEW LIGHT STANDARD INSTALLATION INCLUDE ALL COST IN CONTRACT TO MODIFY EXISTING BASE TO ACCOMMODATE NEW LIGHT STANDARDS INSTALLATION.
 - CONTRACTOR SHALL SUPPLY AND INSTALL NEW PANEL "A" TO PUMP ROOM FOR NEW PUMPS (M-2). WIRE AND CONNECT NEW PANEL TO EXISTING MAIN PANEL IN FURNACE ROOM AS NOTED.
 - CONTRACTOR SHALL WIRE AND CONNECT NEW PUMP (M-1) TO EXISTING MAIN PANEL IN "FURNACE ROOM" AS NOTED.



MOTOR SCHEDULE

NO.	DESCRIPTION	H.P.	AMP	VOLT/Ø	CCT. #	C.B.	WIRE	CONTROL
M-1	WADING POOL WATER QUALITY MANAGEMENT AND DISTN. PACKAGE	5.0	2Ø	240/1	EXIST. MAIN PANEL	10A-2P	#4	BY MECH. SUBCONTRACTOR
M-2	SPLASH PAD WATER QUALITY MANAGEMENT PACKAGE	3.0 2.0	17.0 12.0	240/1	A1, 2 A3, 4	40A-2P 30A-2P	#Ø #10	BY MECH. SUBCONTRACTOR

NOTES:

- CONTRACTOR SHALL REFER TO MECHANICAL DRAWINGS FOR EXACT MOTOR LOCATIONS. CO-ORDINATE WIRING AND CONNECTION WITH EQUIPMENT SUPPLIER.
- CONTROL WORK AND WIRING SHALL BE BY MECHANICAL SUBCONTRACTOR.
- PROVIDE DISCONNECT SWITCHES FOR EQUIPMENT AS REQUIRED BY CODE.
- CONTRACTOR SHALL WIRE AND CONNECT "M-1" MOTOR TO EXISTING MAIN PANEL IN "FURNACE ROOM". PROVIDE C.B. AND WIRING AS INDICATED.

PANELBOARD "A" SCHEDULE

MAINS : 100A

WIRE	DESCRIPTION	LS	VS	VS	LS	DESCRIPTION	WIRE
#Ø	SPLASH PAD WATER PUMP	1	40	-	15	SPARE	#-
#Ø	(M-2)	2	2P	-	15	SPARE	#-
#10	SPLASH PAD WATER PUMP	3	30	-	10	SPACE	#-
#10	(M-2)	4	2P	-	10	SPACE	#-
SPARE		5	15	-	11	SPACE	#-
SPARE		6	15	-	12	SPACE	#-

NOTES:

- NEW PANEL "A" SHALL BE 120/240V/1Ø/3W SURFACE MTD. TYPE C/W DOOR COVER & KEY LOCK. PANEL SHALL BE AS MANUFACTURED BY "F.P.E." TO MATCH EXISTING. LOADCENTER TYPE PANEL IS NOT ACCEPTABLE.
- WIRE AND CONNECT NEW PANEL TO EXISTING 225A PANEL IN FURNACE ROOM WITH 3Ø RW40 COPPER WIRE IN 2" AND PROVIDE 1-100A-2P C.B. TO EXISTING PANEL. FOR NEW PANEL "A".

Issue for Tender	MARCH/06
Revision	Date

THIS DRAWING MUST NOT BE SCALED.
 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, DATINGS AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS TO BE REPORTED IMMEDIATELY TO THE CONTRACT ADMINISTRATOR.
 VARIATIONS & MODIFICATIONS TO WORK SHOWN ON THESE DRAWINGS SHALL NOT BE CARRIED OUT WITHOUT WRITTEN PERMISSION FROM THE CONTRACT ADMINISTRATOR.
 THIS DRAWING IS THE EXCLUSIVE PROPERTY OF THE CONTRACT ADMINISTRATOR AND CAN BE REPRODUCED ONLY WITH THE PERMISSION OF THE CONTRACT ADMINISTRATOR. IN NO CASE THE REPRODUCTION MUST BEAR THEIR NAME AS CONTRACT ADMINISTRATOR.

VIMY RIDGE MEMORIAL PARK PLAYGROUND AREA

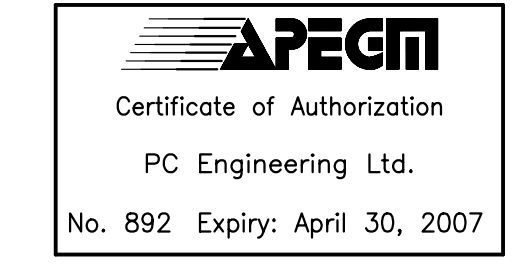
Project Title

LIGHTING AND POWER LAYOUT

Design Title



PC ENGINEERING LTD.
 103F SCURFIELD BLVD. WPG. MANTOBA
 CANADA R3Y 1M6
 TEL: (204) 487-1951 FAX: (204) 489-9527
 EMAIL: pchung@mb.sympatico.ca



Hilderman
 Thomas
 Frank
 Crum

Landscape Architecture • Planning
 511-113 Beatty Avenue East, Winnipeg, Manitoba R2B 1B3
 Telephone 204-941-9977 Facsimile 204-941-9497

Signature: P. KIEMENEY Approved: P. CHUNG

Scale: 1:400 Date: MARCH 03, 2006

Sheet: Drawing E-1