ABBREVIATIONS

P	ABBREVIATIONS
AFF AC A AF AT C B C C C C C C C C C C C C C C C C C C	ABOVE FINISHED FLOOR ALTERNATING CURRENT AMPERE AMP FRAME AMP TRIP AUTOMATIC TEMPERATURE CONTROI AUTOMATIC TRANSFER SWITCH BREAKER CONDUIT CIRCUIT CIRCUIT BREAKER ELECTRICAL CONTRACTOR ELECTRIC METALLIC TUBING ELECTRIC WATER COOLER ELECTRIC WATER HEATER EXHAUST FAN FLOOR FULL LOAD AMPERE GENERAL CONTRACTOR GROUND FAULT INTERRUPTER GROUND HAND OFF AUTOMATIC HORSEPOWER ISOLATED GROUND JUNCTION BOX KILOVOLT AMPERES KILOWATT MAIN CIRCUIT BREAKER MAIN LUGS ONLY MECHANICAL CONTRACTOR MOUNTED MOUNTING NON-METALLIC CONDUIT NORMALLY CLOSED NORMALLY OPEN NOT APPLICABLE NOT IN CONTRACT NOT TO SCALE
PVC RSC	POLYVINYL CHLORIDE CONDUIT RIGID GALVANIZED STEEL CONDUIT SUPPLY FAN
SF SS TEL TRF	SUPPLY FAN SAFETY SWITCH TELEPHONE TRANSFORMER
XM	EXISTING TO REMAIN

VOLTS

4WSN

WATTS OR WIRE

WEATHERPROOF

4-WIRE SOLID NEUTRAL

RECEPTACLE ABBREVIATIONS

PERSONAL PROTECTION

GROUND FAULT CIRCUIT INTERUPTER,

WEATHERPROOF RECEPTACLE WITH

COVERPLATE LISTED FOR WET LOCATION WITH AN ATTACHMENT PLUG INSERTED.

ELECTRICAL LEGEND

RACEWAY AND WIRING

HOMERUN TO PANELBOARD, NUMBER OF TICKS INDICATES NUMBER OF #12
AWG CONDUCTORS CONTAINED IN RACEWAY. TWO (2) #12 AWG SHALL NOT
BE INDICATED BY TICKS, NUMERALS 1 AND 3 INDICATE CIRCUITS IN
PANELBOARD. RACEWAYS LARGER THAN 1/2" AND CONDUCTORS LARGER
THAN #12 AWG SHALL BE INDICATED ON THE DRAWINGS. PROVIDE AN
INSULATED GREEN GROUND WIRE IN ALL RACEWAYS MINIMUM SIZE TO BE
#12AWG.

- — UNDERGROUND RACEWAY

LIGHTING FIXTURES

SPORTS LIGHT POLE - 'S1' INDICATES POLE NUMBER

PEDESTRIAN LIGHT FIXTURE

RECEPTACLES (MOUNT 18" AFF TO CENTER

(MOUNT 18" AFF TO CENTER LINE UNLESS NOTED OTHERWISE)

DUPLEX CONVENIENCE OUTLET RATED 20A, 125V, U-SLOT GROUNDED TYPE MOUNTED 18" ABOVE FINISHED FLOOR TO CENTER LINE. ALL OTHER MOUNTING HEIGHTS SHALL BE AS NOTED ADJACENT TO THE SYMBOL. REFER TO RECEPTACLE ABBREVIATIONS FOR SPECIAL PURPOSE RECEPTACLES.

POWER DISTRIBUTION EQUIPMENT

HAND HOLE
PHH = POWER HANDHOLE
CHH = COMMUNICATIONS HANDHOLE

GROUND - SYSTEM AND/OR EQUIPMENT

GENERAL NOTES

- DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHTS, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
- WORK SHALL CONFORM TO THE MASSACHUSETTS ELECTRICAL CODE AND MASSACHUSETTS BUILDING CODE AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
- 3. THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
- CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE ELECTRICAL WORK SHOWN.
- 5. CONTRACTOR SHALL PAY ELECTRIC UTILITY COMPANY BACKCHARGES AND PROVIDE COORDINATION WITH SAME.
- 6. EXCEPT AS OTHERWISE NOTED, THE ELECTRICAL WORK SHALL INCLUDE PANELBOARDS, CIRCUIT BREAKERS, FEEDERS, WIRING, RACEWAYS, LIGHTING FIXTURES, DEVICES, SAFETY SWITCHES, MOUNTING AND WIRING, TRANSFORMERS AND CONNECTIONS NECESSARY TO OPERATE ALL EQUIPMENT.
- 7. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND PAY ALL ENERGY CHARGES.
- 8. DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
- 9. ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
- 10. ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
- 11. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED, ELECTRICAL EQUIPMENT IS SUBSTITUTED. THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM ORIGINALLY SPECIFIED.
- 12. MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.
- 13. WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
- 14. WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
- 15. ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF WHICH SYSTEM IS PUT INTO SERVICE UNLESS OTHERWISE SPECIFIED.
- 16. WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.
- 17. WIRE SHALL BE TYPE "XLP" INSULATED FOR 600 VOLTS, MINIMUM SIZE #12 AWG COPPER
- UNLESS SPECIFICALLY NOTED OTHERWISE.
- 18. WIRING METHODS:
 - A. BELOW GRADE WIRING SHALL BE SCHEDULE 80 PVC.
- 19. PANELBOARDS SHALL BE DEAD FRONT, THERMAL MAGNETIC BOLT-ON CIRCUIT BREAKER TYPE, DESIGNED FOR SURFACE MOUNTING AS INDICATED ON PLAN, AND HAVING CONNECTIONS TO 480/277 VOLT, 3-PHASE, 4-WIRE AND 120/208 VOLT, 3 PHASE, 4 WIRE SERVICE. ALL BUS BARS SHALL BE COPPER. CABINETS SHALL BE MADE OF CODE GAUGE GALVANIZED SHEET STEEL, WITH A MINIMUM OF 4 INCH GUTTERS, DOOR IN DOOR CONSTRUCTION, LOCKED DOOR, AND FLUSH HINGES. TYPEWRITTEN INDEX SHALL BE MOUNTED ON DOOR INSIDE TRANSPARENT COVER INDICATING LOAD SERVED. PANELS SHALL INCLUDE SEPARATE EQUIPMENT GROUND BUS.
- 20. CONDUIT RUNS AS SHOWN ON THE PLANS ARE DIAGRAMMATIC ONLY; EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD.
- 21. CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
- 22. PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.



CITY OF WORCESTER
Dept. of Public Works & Parks

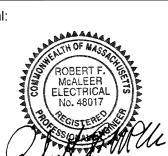


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	Rev	isions:	
	No.	Date	Description

Seal:



Issued For:

CONSTRUCTION DOCUMENTS

Scale:	AS SHOWN
Date:	06-30-2025
Drawn By:	JW
Reviewed By:	MAS
Approved By:	RFM
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Drawing Title:

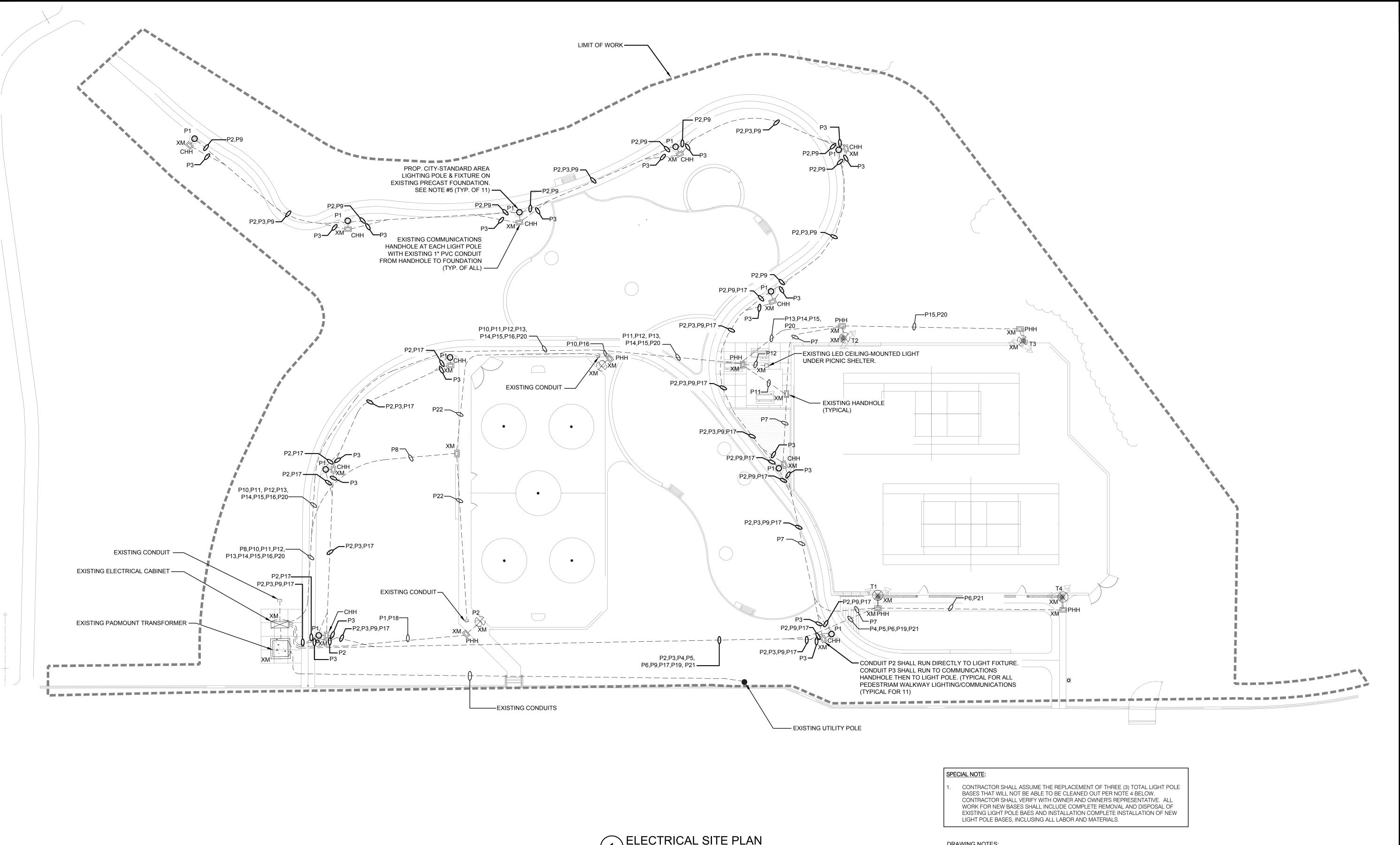
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ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES

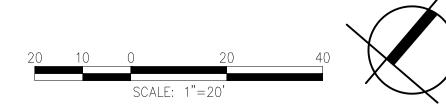
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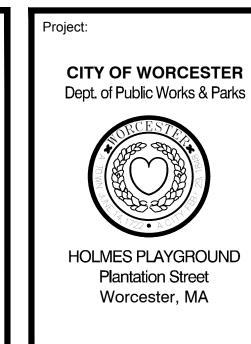
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DRAWING NOTES:

- 1. REFER TO DRAWING E1.00 FOR LEGEND, ABBREVIATIONS AND GENERAL
- 2. REFER TO DRAWINGS E1.02 FOR CONDUIT AND WIRE SCHEDULE AND PANELBOARD SCHEDULES.
- 3. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING ALL WASHERS AND BOLTS FOR ANCHORING OF LIGHT POLES TOT HE EXISTING LIGHT POLE FOUNDATION.
- 4. ELECTRICAL CONTRACTOR SHALL CLEAN OUT ANY DEBRIS WITHIN EXISTING CONDUIT STUB-UPS SO THEY ARE UNOBSTRUCTED AND READY FOR INSTALLATION OF WIRING TO LIGHT FIXTURES.
- 5. NEW WALKWAY LIGHT FIXTURE P1 SHALL BE GRANVILLE II LED, MANUFACTURED BY HOLOPHANE, CAT#GPD2-PS20AS-40K-M-BK-5-S-BK-DE. LIGHT POLE SHALL BE, CAT#18-L5J-17-P07-ABG-BK.



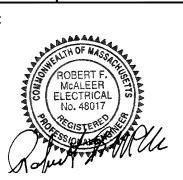


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EXISTING PANELBOARD SCHEDULE

DESIGNATION: PPH1 S.C. RATING: 35,000A RMS SYM. REMARKS: SERVICE ENTRANCE RATED LOCATION: ELECTRICAL CABINET SERVICE: 277/480V, 3Ø, 4W

RATING: 400 AMPS MOUNTING: SURFACE

MAIN: 400 MCB

CKT.	LOAD	BREA	KER	PHASE	BR	REAKER	LOAD	CKT
NO.	DESIGNATION	TRIP	POLE	АВС	POLE	TRIP	DESIGNATION	NO.
1	-	-	- �	 	₽	-	-	2
3	FIXTURE POLE A1/CONTACTOR C1 (FUTURE)	30	─	\square	₽	30	FIXTURE POLE A2/CONTACTOR C2 (FUTURE)	4
5	-	-	─		8	-	-	6
7	-	-	<u></u>	 	₽	-	-	8
9	FIXTURE POLE B1/CONTACTOR C3 (FUTURE)	30	- ₱-		₽	30	FIXTURE POLE B2/CONTACTOR C4 (FUTURE)	10
11	-	-	├	$\overline{\cdots}$	₩	-	-	12
13	-	-	<u></u>	 	₽	-	-	14
15	FIXTURE POLE C1/CONTACTOR C5 (FUTURE)	30	─	\Box	₽	30	FIXTURE POLE C2/CONTACTOR C6 (FUTURE)	16
17	-	-	├	$\overline{\Box}$	₩	-	-	18
19	-	-	<u></u>	 	₽	-	-	20
21	FIXTURE POLE D1/CONTACTOR C7 (FUTURE)	30	<u></u>	\square	₩-	30	FIXTURE POLE D2/CONTACTOR C8 (FUTURE)	22
23	-	-	─		₩	-	-	24
25	-	-	<u></u>	 	P	-	-	26
27	FIXTURE POLE P1/CONTACTOR C9	30	├ �	\square	₩	30	FIXTURE POLE P2/CONTACTOR C10	28
29	-	-	₽		8	-	-	30
31	-	-	<u></u>	 	-	-	-	32
33	FIXTURE POLE T1/CONTACTOR C11	30	├ �	\square	- ₱-	30	FIXTURE POLE T2/CONTACTOR C12	34
35	-	-	₽		₩	-	-	36
37	-	_	- %-	 	₽	-	-	38
39	PANEL PPH2	150	- ₱-		₽	50	PANEL PPL1	40
41	-	-	→	\Box	₩	-	-	42

EXISTING PANELBOARD SCHEDULE

DESIGNATION: PPH2 S.C. RATING: 35,000A RMS SYM. REMARKS: LOCATION: ELECTRICAL CABINET SERVICE: 277/480V, 3Ø, 4W

RATING: 400 AMPS MOUNTING: SURFACE

MAIN	N: 400 MLO								
CKT.	LOAD	BREA	KER	PH	IASE	BR	EAKER	LOAD	CKT.
NO.	DESIGNATION	TRIP	POLE	Α	в с	POLE	TRIP	DESIGNATION	NO.
1	-	-	-	+	\Box	₽	-	-	2
3	FIXTURE POLE T31/CONTACTOR C13	30	─	$oldsymbol{oldsymbol{oldsymbol{H}}}$	\blacksquare	₽	30	FIXTURE POLE T4/CONTACTOR C14	4
5	-	-	─		\vdash	8	-	-	6
7	-	-	─ �	+	Н	P	-	-	8
9	FIXTURE POLE A1/CONTACTOR C15 (FUTURE)	30	├ �	Ĭ		}	30	FIXTURE POLE A2/CONTACTOR C16 (FUTURE)	10
11	-	-	- 60-			م	-	-	12
13	-	-	-	H	oxed	}	-	-	14
15	FIXTURE POLE B2/CONTACTOR C17 (FUTURE)	30	├ �	Ť		₽	30	FIXTURE POLE C1/CONTACTOR C18 (FUTURE)	16
17	-	-	├			8	-	-	18
19	-	-	├ �			⊸િ	ı	-	20
21	FIXTURE POLE C2/CONTACTOR C19 (FUTURE)	30	├ �	$rac{1}{2}$		₽	30	FIXTURE POLE D1/CONTACTOR C20 (FUTURE)	22
23	-	-	<u></u> -6-			8	ı	-	24
25	-	1	├ �	\downarrow		♣	-	-	26
27	FIXTURE POLE D2/CONTACTOR C21 (FUTURE)	30	├ �	Ŧ		9	30	FIXTURE POLE P1/CONTACTOR C22	28
29	-	1	├			þ	-	-	30
31	-	-	├ �	\downarrow	oxdot	₽	-	-	32
33	FIXTURE POLE T1/CONTACTOR C23	30	├ �	Ť		₽	30	FIXTURE POLE T2/CONTACTOR C24	34
35	-	-	├			S	-	-	36
37	SPARE	20	- 6-			Ş	20	SPARE	38
39	SPARE	20	~	oxdot		کم	20	SPARE	40
41	SPARE	20	~			گ	20	SPARE	42

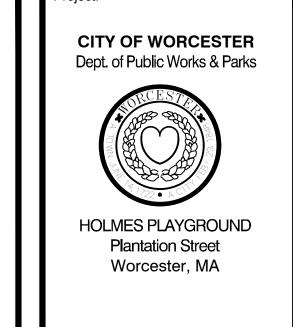
EXISTING PANELBOARD SCHEDULE

DESIGNATION: PPL1 S.C. RATING: 10,000A RMS SYM. REMARKS:

LOCATION: ELECTRICAL CABINET SERVICE: 120/240V, 1Ø, 3W RATING: 100 AMPS MOUNTING: SURFACE

CKT.	LOAD	BREA	KER	PHA	ASE	BR	EAKER	LOAD	СКТ.
NO.	DESIGNATION	TRIP	POLE	A E	3 C	POLE	TRIP	DESIGNATION	NO.
1	LIGHTING IN ELECTRICAL CABINET	20	8	+	\dashv	₽	20	PATHWAY LIGHTING	2
3	RECEPTACLE IN ELECTRICAL CABINET	20	8	\dashv	\dashv	~	-	-	4
5	ROLLER HOCKEY PA CABINET	20	8	\blacksquare	\dashv	~	20	PATHWAY POLE MOUNTED OUTLETS	6
7	TENNIS COURTS PA CABINET	20	8	+	7	8	20	CANOPY LIGHTING	8
9	MUSCO LIGHTING CONTROL CABINET #1	20	8	\dashv	干	~	20	MUSCO LIGHTING CONTROL CABINET #2	10
11	MUSCO LIGHTING CONTROL CABINET #3	20	8	\blacksquare	\dashv	~	20	PATHWAY POLE MOUNTED OUTLETS	12
13	SPARE	20	8	$\overline{+}$	7	~	20	SPARE	14
15	SPARE	20	8	\dashv	\dashv	8	20	SPARE	16
17	SPARE	20	8	\blacksquare	\dashv	~	20	SPARE	18
19	SPARE	20	8	$\overline{+}$	7	~	20	SPARE	20
21	SPARE	20	8	$\overline{}$	干	~	20	SPARE	22
23	SPARE	20	8	\blacksquare	\dashv	8	20	SPARE	24
25	SPARE	20	8	$\overline{+}$	7	8	20	SPARE	26
27	SPARE	20	8	\dashv	干	8	20	SPARE	28
29	SPARE	20	8	\blacksquare	\Rightarrow	~	20	SPARE	30

CONDUIT	FEEDER	FROM	CONTACTOR NUMBER	ТО	FIXTURES	LOAD	CONTACTOR SIZE	REMARKS	
P1	EXISTING	-	-	-	-	-	-	-	
P2	EXISTING 2"C., WITH NEW 2#6 & 1#10G	PANEL PPL1-2,4 VIA TIME CLOCK AND PHOTOCELL	-	WALKWAY PEDESTRIAN LIGHTING (P1)	11 @ 39W	20A	-	DIRECT BURIED	
P3	EXISTING 2"C., EMPTY WITH NYLON PULLSTRING	-	-	-	-	-	-	-	
P4	EXISTING	-	-	-	-	-	-	-	
P5	EXISTING	-	-	-	-	-	-	-	
P6	EXISTING	-	-	-	-	-	-	-	
P7	EXISTING	-	-	-	-	-	-	-	
P8	EXISTING	-	-	-	-	-	-	-	
P9	EXISTING 1"C.,WITH NEW 2#8 & 1#10G	PANEL PLL1-6	-	WALKWAY POLE MOUNTED OUTLET	6 @ 180W	15A	-	DIRECT BURIED	
P10	EXISTING	-	-	-	-	-	-	-	
P11	EXISTING	-	-	-	-	-	-	-	
P12	EXISTING	-	-	-	-	-	-	-	
P13	EXISTING	-	-	-	-	-	-	-	
P14	EXISTING	-	-	-	-	-	-	-	
P15	EXISTING	-	-	-	-	-	-	-	
P16	EXISTING	-	-	-	-	-	-	-	
P17	EXISTING 1"C., WITH NEW 2#8 & 1#10G	PANEL PLL1-12	-	WALKWAY POLE MOUNTED OUTLET	6 @ 180W	15A	-	DIRECT BURIED	
P18	EXISTING	-	-	-	-	-	-	-	
P19	EXISTING	-	-	-	-	-	-	-	
P20	EXISTING	-	-	-	-	-	-	-	
P21	EXISTING	<u>-</u>	-	-	-	-	-	-	
P22	EXISTING	-	-	-	-	-	-	-	

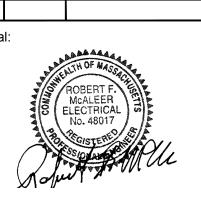




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No. Date Description



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AS SHOWN 06-30-2025 Approved By:

W&S Project No:

Drawing Title:

ELECTRICAL SCHEDULES