

**REQUEST FOR PROPOSALS
CROSS CREEK METROPOLITAN DISTRICT**

REQUEST FOR PROPOSALS TO PERFORM CERTAIN CONSTRUCTION WORK FOR CROSS CREEK METROPOLITAN DISTRICT (the “District”):

SCOPE OF WORK: Lighting project in the Cross Creek Regional Park, 8115 Parkglen Drive, Fountain, Colorado described as follows:

15 outdoor lighting fixtures with high and low poles, control panels, power receptacles and related equipment.

ESTIMATED TIME FOR COMPLETION: November 2020

PLANS AND SPECIFICATIONS: Approved plans and specifications as prepared by Plant Engineering Consultants are available from the District at: www.crosscreekpark.com, under “News”.

CONTACT INFORMATION:

Plant Engineering Consultants
Mitchell Plant
320 W Fillmore
Colorado Springs, CO 80907
(719) 351-1087

DISTRICT CONTACT INFORMATION:

Cross Creek Metropolitan District
Att: Elise Bergsten
P.O. Box 1834
Colorado Springs, CO 80901
(719) 963-1809

DUE DATE FOR BIDS: August 3, 2020

PERFORMANCE BOND: Prior to entering upon any work the Contractor will be required to execute, deliver to, and file with the District a good and sufficient bond, or other acceptable surety, approved by the District in a penal sum not less than one-half of the total amount payable by the terms of the contract. Said bond shall be executed by a qualified corporate surety, conditioned upon the faithful performance of the contract, and, in addition, shall provide that if the Contractor fails to pay for any labor, materials, supplies, equipment, or subcontractors the surety will pay the same.

Contract(s) will be awarded to the lowest responsible bidder.

DATE: July 21, 2020

CROSS CREEK METROPOLITAN DISTRICT

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ELECTRICAL SYMBOL LEGEND

ALL SYMBOLS SHOWN IN THIS LEGEND ARE NOT NECESSARILY USED ON PLANS

NOTE:
 ALL SYMBOLS REPRESENTED BELOW BUT SHOWN ON PLANS IN A LIGHT LINE WEIGHT DENOTE EXISTING DEVICE

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
DIAGRAMS		POWER RECEPTACLES		INTERCOM AND SOUND SYSTEM	
	FUSED SWITCH, AMPERE SWITCH (AS) AND AMPERE FUSE (AF) RATING AS INDICATED		FLUSH MOUNTED DUPLEX RECEPTACLE		INTERCOM MASTER
	CIRCUIT BREAKER, 3 POLE (U.N.O.), AMPERE FRAME (AF) AND AMPERE TRIP (AT) RATING AS INDICATED		FLUSH MOUNTED DOUBLE DUPLEX RECEPTACLE		RACK SYSTEM FOR PUBLIC ADDRESS
	GROUNDING ELECTRODE		CONNECTED TO DEDICATED CIRCUIT		CALL-IN SWITCH
	GROUNDING TO WATER ENTRANCE		FLUSH MOUNTED, WEATHERPROOF, GROUND FAULT CIRCUIT INTERRUPTER DUPLEX RECEPTACLE		MICROPHONE JACK
	MEDIUM VOLTAGE DRAW-OUT CIRCUIT BREAKER		FLUSH DUPLEX RECEPTACLE HORIZONTALLY MOUNTED ABOVE COUNTER BACKSPASH		AUXILIARY JACK
	LOW VOLTAGE DRAW-OUT CIRCUIT BREAKER	TELECOMMUNICATIONS			VOLUME CONTROL
	MEDIUM VOLTAGE SWITCH		VOICE ONLY OUTLET, PROVIDE 3/4" EMPTY CONDUIT FROM OUTLET BOX INTO CEILING CAVITY. SUBSCRIPT "H" DENOTES OUTLET SHALL BE HORIZONTALLY MOUNTED ABOVE COUNTER. NUMBER INDICATES NUMBER OF PORTS.		FLUSH CEILING MOUNTED MONITOR SPEAKER
	LOW VOLTAGE SWITCH		WIRELESS INTERNET ACCESS POINT		PUBLIC ADDRESS SYSTEM SPEAKER
	MEDIUM VOLTAGE FUSE	ANNOTATION			HORN SPEAKER
	LOW VOLTAGE FUSE		POINT OF CONNECTION (POC)		
	REACTOR		EQUIPMENT TAG (SEE SCHEDULE)		
	TRANSFORMER		ELEVATION BUBBLE		
	CURRENT TRANSFORMER		DETAIL CALLOUT		
	POTENTIAL TRANSFORMER		SECTION BUBBLE		
	INVERTER		COLUMN GRID BUBBLE		
	BATTERY STRING	CIRCUITING FOR POWER & LIGHTING			
	AUTOMATIC TRANSFER SWITCH		PANELBOARD(S) AND CIRCUIT NUMBER(S) FOR ROOM/SPACE. UNLESS NOTED OTHERWISE, PROVIDE CONDUCTORS & CONDUIT FOR LIGHT FIXTURES OR RECEPTACLES OR POWER CONNECTIONS (JUNCTION BOXES) SHOWN IN THE ROOM/SPACE FROM THE CIRCUIT(S) LISTED. U.N.O., THERE SHALL BE NO MORE THAN SIX (6) RECEPTACLES ON A SINGLE CIRCUIT.		
	LIGHTNING ARRESTOR		PANELBOARD(S)		
	CAPACITOR		PANELBOARD(S)		
	METER		PANELBOARD(S)		
	SURGE PROTECTION DEVICE		PANELBOARD(S)		
	GROUND FAULT PROTECTOR		PANELBOARD(S)		
	DIGITAL POWER METER		PANELBOARD(S)		
ELECTRICAL DISTRIBUTION EQUIPMENT		WIRING AND CONDUIT			
	EXISTING BRANCH CIRCUIT PANELBOARD		CONCEALED BRANCH CIRCUIT WIRING. SHORT HATCHES DENOTE HOT OR SWITCH LEG CONDUCTORS. LONG HATCH INDICATES NEUTRAL CONDUCTOR. LONG HATCH WITH SINGLE BARB INDICATES EQUIPMENT GROUNDING CONDUCTOR. NO HATCHES INDICATES ONE HOT, ONE NEUTRAL AND ONE GROUNDING CONDUCTOR		
	NEW BRANCH CIRCUIT PANELBOARD		UNDERGROUND RACEWAY		
	MOTOR CONTROL CENTER		CONDUIT DOWN		
	MAIN DISTRIBUTION PANEL		CONDUIT UP		
	TRANSFORMER		CONTINUATION		
	CONTACTOR		END CAP		
	SERVICE ENTRANCE METER, PLAN VIEW		CONNECTION (DOT)		
INTERIOR AND EXTERIOR LIGHTING			FLUSH MOUNTED JUNCTION BOX		
	LIGHTING FIXTURES. UPPER CASE LETTER INDICATES TYPE. LOWER CASE LETTER INDICATES SWITCH LEG. NUMBER DENOTES CIRCUIT AND NL INDICATES NIGHT LIGHT. REFER TO LIGHTING FIXTURE SCHEDULE FOR DETAILS.		FLUSH CEILING MOUNTED JUNCTION BOX		
	EGRESS LIGHT FIXTURE 1 LAMP CONNECTED TO EMERGENCY POWER SOURCE. EMERGENCY LAMPS WIRED AHEAD OF LOCAL SWITCHING.		FLUSH FLOOR OR COUNTER MOUNTED JUNCTION BOX		
	EGRESS LIGHT FIXTURE CONNECTED TO EMERGENCY POWER SOURCE. WIRED AHEAD OF LOCAL SWITCHING.		GROUND BAR, SUBSCRIPT "T" DENOTES TELECOMM GROUND BAR		
	POLE MOUNTED LUMINAIRE, SINGLE HEAD. ARROW INDICATES DIRECTIONAL FIXTURE	LIGHTNING PROTECTION SYSTEM			
	POLE MOUNTED LUMINAIRE, DOUBLE HEAD		AIR TERMINAL		
	GROUND OR WALL MOUNTED FLOOD LIGHT		GROUND ROD		
	SELF-CONTAINED EMERGENCY LIGHTING UNIT WITH TWO HEADS.		GROUND ROD IN INSPECTION WELL		
	EXIT SIGN, FACES AND DIRECTIONAL ARROWS AS INDICATED ON PLANS		ROOF AND DOWN CONDUCTOR		
	EXIT SIGN WITH TWO EMERGENCY EGRESS HEADS, DIRECTIONAL ARROWS AS INDICATED ON PLANS		COUNTERPOISE CONDUCTOR		
LIGHTING CONTROLS		HOSPITAL AND SIGNAL SYSTEM			
	FLUSH MOUNTED SINGLE POLE SWITCH		PATIENT STATION		
	FLUSH MOUNTED SWITCH, LOWER CASE LETTER INDICATES SWITCH LEG, UPPER CASE LETTER INDICATES SWITCH TYPE		PATIENT STATION WITH PUSHBUTTON IN STATION FOR NURSE USE		
SWITCH TYPE DESIGNATIONS:			STAFF STATION		
D = ADJUSTABLE DIMMER	P = PILOT LIGHT		DUTY STATION		
LV = LOW VOLTAGE	T = TIME OPERATED		EMERGENCY PULL-CORD STATION		
3 = THREE WAY SWITCH	WP = WEATHER PROOF		CARDIAC ARREST PUSHBUTTON STATION		
4 = FOUR WAY SWITCH	M = MOMENTARY CONTACT		EMERGENCY PUSHBUTTON STATION		
K = KEY PROTECTED			DOME LIGHT, 1-SECTION		
	LIGHTING TOUCH PANEL STATION		DOME LIGHT, 2-SECTION		
	SWITCH BANK, NUMBER INDICATES SWITCH BANK CONFIGURATION		DOME LIGHT ON CEILING FOR ZONING		
	LIGHTING CONTROL PANEL		NURSE CALL STATION		
	LIGHTING INVERTER, UL924		NURSE CALL MASTER PANEL		
	OCCUPANCY SENSOR - WALL AND CEILING MOUNTED		NURSE CALL TELEMETRY UNIT		
	VACANCY SENSOR - WALL AND CEILING MOUNTED		TERMINAL CABINET FOR CENTRAL PHYSIOLOGICAL MONITORS		
	DAYLIGHT SENSOR		OUTLET FOR REMOTE PHYSIOLOGICAL MONITOR		
	DIGITAL LIGHTING CONTROLLER WITH SEVEN DAY TIME CLOCK AND LITHIUM BATTERY BACK UP POWER SUPPLY. TORK DGLC SERIES. VOLTAGE TO MATCH LIGHTING BEING CONTROLLED.				
	LIGHTING CONTACTOR, VOLTAGE TO MATCH LIGHTING BEING CONTROLLED.				
	PHOTO CELL				
	PUSH BUTTON OVERRIDE LIGHTING CONTROL STATION.				
	GENERATOR TRANSFER DEVICE				
	POWER SUPPLY / REMOTE DRIVER				

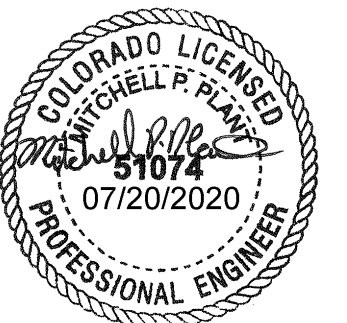
ELECTRICAL ABBREVIATIONS

SYMBOL	DESCRIPTION
A/AMP	AMPERES
AC	ALTERNATING CURRENT
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
BFC	BELOW FINISHED CEILING
BWE	BAKED WHITE ENAMEL
C	CONDUIT
CCT	CIRCUIT
CL	CEILING MOUNTED
COFF	COFFEE / ESPRESSO MACHINE
D, DED	DEDICATED
DC	DIRECT CURRENT
(E), (EX), EX	EXISTING
EC	EMPTY CONDUIT
EMT	ELECTRICAL METALLIC TUBING
EPO	EMERGENCY POWER OFF
EVCS	ELECTRIC VEHICLE CHARGING STATION
EXT.	EXTERIOR
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE METALLIC CONDUIT
FPN	FUSED PER NAMEPLATE
(F)	FUTURE
G, GND	GROUND
GRC	GALVANIZED RIGID CONDUIT
HACR	HEATING, AIR CONDITIONING, REFRIGERATION RATED DEVICE
HP	HORSEPOWER
HPRS	HORSEPOWER RATED SWITCH
IMC	INTERMEDIATE METALLIC CONDUIT
INT.	INTERIOR
J-BOX	JUNCTION BOX
KAIC	KILOAMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
K.E.C.	KITCHEN EQUIPMENT CONTRACTOR
KV	KILOVOLTS
KVA	KILOVOLT-AMPS
KW	KILOWATT
LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS AND GROUND FAULT ELECTRONIC TRIP UNIT
MA	MILLIAMPERE
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MM	MILLIMETER
MTD	MOUNTED
MW	MICROWAVE
(N)	NEW
N	NEUTRAL CONDUCTOR (GROUNDED CIRCUIT CONDUCTOR)
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
P	PHASE OR POLE
PNL	PANELBOARD
P.O.S.	POINT OF SALE SYSTEM
PVC	POLYVINYL CHLORIDE CONDUIT (SCHEDULE 40)
(R)	RELOCATED / RELOCATED
REF	REFRIGERATOR
SCA	SHORT CIRCUIT AVAILABLE
SCCR	SHORT CIRCUIT CURRENT RATING
SEC	SECTION
T, XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BOARD
UC	UNDER COUNTER
U.N.O.	UNLESS NOTED OTHERWISE
V	VOLTAGE OR VOLTS
W	WATTS
W/P	WEATHERPROOF
WT	WIRING TROUGH

ELECTRICAL SHEET INDEX

SHEET	TITLE
E001	ELECTRICAL LEGEND
E002	ELECTRICAL NOTES AND SPECIFICATIONS
E100	ELECTRICAL SITE PLAN
E101	PHOTOMETRIC PARKING SITE PLAN
E102	PHOTOMETRIC BMX TRACK SITE PLAN
E600	ELECTRICAL ONE-LINE DIAGRAM

PLANT
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CROSS CREEK REGIONAL PARK
CCMD REGIONAL PARK SIGHT LIGHTING
 8115 PARKGLEN DR. FOUNTAIN, CO 80817
 ADDITIONAL PROJECT INFORMATION IF NECESSARY

REVISIONS	DATE	COMMENT
MARK	07/20/20	ISSUE FOR BID/ISSUE FOR PERMIT

ELECTRICAL LEGEND

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PROJECT	20051
DATE	07/20/2020
DRAWN	BVC/JF
CHECKED	MPP

SHEET

E001

DOCUMENTATION PER C408.2.5, 2015 IECC, WILL BE PROVIDED

DIVISION 26 - ELECTRICAL

A. GENERAL:

- A.1. ALL ELECTRICAL PRODUCTS AND THEIR INSTALLATION SHALL BE UL LISTED AND COMPLY WITH THE 2017 NATIONAL ELECTRICAL CODE (NEC) AND 2015 INTERNATIONAL CODES, PERTINENT STATE AND LOCAL CODES AND ALL INSPECTION AUTHORITIES HAVING JURISDICTION.
- A.2. PROCURE ALL LICENSES AND CERTIFICATES AND PAY ALL FEES ASSOCIATED REQUIRED TO PERFORM THE DIVISION 26 WORK. COORDINATE THE ELECTRICAL WORK WITH THE WORK OF ALL OTHER TRADES. CLEAN AND REPLACE ANY DAMAGED PRODUCTS AT CONCLUSION OF WORK.
- A.3. SUBMIT PRODUCT DATA FOR APPROVAL ON DISTRIBUTION EQUIPMENT, LIGHT FIXTURES, AND LIGHTING CONTROLS.

B. BASIC METHOD AND MATERIALS:

- B.1. MATERIALS AND EQUIPMENT FURNISHED BY THE CONTRACTOR SHALL BE NEW.
- B.2. ALL WIRING SHALL BE INSTALLED IN A CONTINUOUS RACEWAY. WIRING SHALL BE RUN CONCEALED IN FINISHED ROOMS. IN UNFINISHED SPACES, EXPOSED CONDUIT SHALL BE ROUTED AT RIGHT ANGLES TO BUILDING CONSTRUCTION.

C. RACEWAYS AND FITTINGS:

- C.1. EXPOSED EXTERIOR, INTERIOR WHERE SUBJECT TO DAMAGE: RIGID CONDUIT, HOT DIPPED GALVANIZED CONDUIT, MINIMUM 3/4", UNLESS OTHERWISE NOTED.
 - C.2. INTERIOR, THIN WALL CONDUIT (EMT) WITH COMPRESSION TYPE CONNECTORS AND FITTINGS.
 - C.3. BELOW GRADE: PVC, SCHEDULE 40. ALL RISERS FROM BELOW GRADE /AND 90 DEG BENDS SHALL BE COATED RIGID STEEL. INCLUDE YELLOW DETECTABLE WARNING TAPE ALONG THE LENGTH OF BELOW GRADE CONDUIT.
 - C.4. BOXES: CODE-GAUGE, GALVANIZED STEEL BOXES, 4-INCH OR LARGER AS REQUIRED. INCLUDE PLASTER-RINGS FOR RECESSED BOXES. PROVIDE CAST METAL BOXES WITH NEOPRENE GASKETS IN WET AND OUTSIDE LOCATIONS.
- D. CONDUCTORS:**
- D.1. ALL CONDUCTORS SHALL BE 600V, COPPER, THHN/THWN IN DRY LOCATIONS AND THWN-2 IN DAMP/WET LOCATIONS.
 - D.2. CONDUCTORS SHALL BE SOLID IN SIZES UP TO #10 AND STRANDED FOR SIZES #8 AND LARGER.
 - D.3. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED.
 - D.4. WHERE 120vac BRANCH CIRCUIT LENGTH IS IN EXCESS OF 75 LINEAR FEET, CONDUCTORS SHALL BE #10 AWG. WHERE 120vac BRANCH CIRCUIT LENGTH IS IN EXCESS OF 150 LINEAR FEET, CONDUCTORS SHALL BE #8 AWG. WHERE 277vac BRANCH CIRCUIT LENGTH IS IN EXCESS OF 150 LINEAR FEET, CONDUCTORS SHALL BE #10 AWG.
 - D.5. PROVIDE SEPARATE NEUTRAL CONDUCTOR FOR EACH MULTIWIRED BRANCH CIRCUIT OR PROVIDE IDENTIFIED HANDLE TIE TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS OF THE MULTIWIRED BRANCH CIRCUIT PER NEC 210.4.

I. WIRING DEVICES:

- I.1. SWITCHES AND RECEPTACLES BE OF THE SPECIFICATION GRADE, 20A. COLOR SHALL BE GRAY.
- I.2. PROVIDE MATCHING COVER PLATES IN FINISHED AREAS AND GALVANIZED STEEL COVERPLATES IN UNFINISHED AREAS.
- I.3. LABEL COVERPLATE WITH BROTHER 'P-TOUCH' LABELING TAPE

J. DISTRIBUTION EQUIPMENT:

- J.1. PROVIDE EQUIPMENT FROM ONE OF THE FOLLOWING MANUFACTURERS; GE, SIEMENS, SQUARE D OR CUTLER HAMMER. ENCLOSURES SHALL BE NEMA RATED AS REQUIRED BY THE NEC FOR THE LOCATION INSTALLED. ALL ELECTRICAL EQUIPMENT SHALL BE PROVIDED WITH DISCONNECTS AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY THE NEC.
- J.2. PANELBOARDS: COPPER BUS, BOLT-ON CIRCUIT BREAKERS, GROUND BUS, TYPED DIRECTORY, RATINGS AS SCHEDULED. PROVIDE HACR BREAKERS FOR HVAC AND LIGHTING. LOAD CENTERS AND SERIES RATED BREAKERS ARE UNACCEPTABLE.
- J.3. DISCONNECTS: HEAVY-DUTY TYPE, RATINGS AS INDICATED.

K. FUSES:

- K.1. FUSES: DUAL-ELEMENT, TIME-DELAY, TYPE RK1 UP TO 600A AND TYPE L FOR 600A AND LARGER, AS MANUFACTURER BY BUSSMAN, LITTEL FUSE OR SHAWMUT GOULD.

L. GROUNDING:

- L.1. PROVIDE A GREEN GROUNDING CONDUCTOR IN ALL RACEWAYS.
- L.2. GROUND ROD; 10FT X 3/4" COPPER-CLAD STEEL.

M. LIGHTING FIXTURES AND LIGHTING CONTROLS:

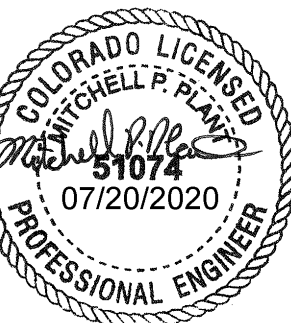
- M.1. PROVIDE LIGHT FIXTURES AND LAMPS AS SHOWN IN THE LIGHTING FIXTURE SCHEDULE UNLESS NOTED OTHERWISE.
- M.2. LED FIXTURES SHALL BE 3000K, 80 CRI MIN., L90 = 60,000 HRS. UNLESS NOTED OTHERWISE IN LIGHTING FIXTURE SCHEDULE.

N. DEMOLITION:

- N.1. DEMOLITION PLAN IS BASED ON CASUAL FIELD OBSERVATIONS. VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON DRAWINGS. REPORT DISCREPANCIES TO OWNER BEFORE DISTURBING EXISTING INSTALLATION. BEGINNING OF DEMOLITION MEANS INSTALLER ACCEPTS EXISTING CONDITIONS.
- N.2. REMOVE CIRCUITS SERVING DEMOLISHED DEVICES BACK TO SOURCE OR NEAREST DEVICE TO REMAIN. EXTEND CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO DOWNSTREAM DEVICES TO REMAIN.
- N.3. ELECTRICAL EQUIPMENT SHOWN BOLD IN DASHED LINE SHALL BE REMOVED. REMOVE EQUIPMENT AND ASSOCIATED CONDUCTORS BACK TO SOURCE OR TO NEAREST DEVICE ON THE SAME CIRCUIT TO REMAIN. EQUIPMENT SHOWN LIGHT IS EXISTING TO REMAIN. MAINTAIN CONTINUITY OF CONDUCTORS SERVING DEVICES TO REMAIN. IF NECESSARY DUE TO BUILDING DEMOLITION, REROUTE AND REINSTALL CONDUCTORS AND RACEWAYS SERVING DEVICES TO REMAIN.
- N.4. VERIFY WITH THE OWNER IF ANY DEMOLISHED ELECTRICAL EQUIPMENT IS TO BE KEPT BY THE OWNER. THE OWNER MAINTAINS THE RIGHT TO RETAIN ANY ELECTRICAL EQUIPMENT AND CONDUCTORS REMOVED. THIS EQUIPMENT SHALL BE CAREFULLY REMOVED BY THE CONTRACTOR AND STORED ON THE PROPERTY AT A LOCATION DESIGNATED BY THE OWNER. ALL DEMOLISHED EQUIPMENT NOT KEPT BY THE OWNER SHALL BE LEGALLY DISPOSED OF OFF SITE BY THE CONTRACTOR.
- N.5. ALL UNUSED RACEWAYS, JUNCTION BOXES, PULL BOXES, ETC. SHALL BE DEMOLISHED OR ABANDONED IN PLACE ONLY IF THEY ARE CONCEALED IN EXISTING INACCESSIBLE TRENCHES, WALLS, ETC.
- N.6. TRENCH OPENINGS MADE DUE TO DEMOLITION OF ELECTRICAL EQUIPMENT SHALL BE PROPERLY PATCHED AND FINISHED TO MATCH THE ADJACENT SURFACE.
- N.7. NOT ALL EXISTING CONDITIONS ARE SHOWN FOR CLARITY.
- N.8. PROVIDE APPROPRIATE PROTECTION FOR ALL EXISTING LIGHTING FIXTURES, EQUIPMENT/DEVICES TO REMAIN DURING DEMOLITION.

PROJECT GENERAL NOTES

- A. NOTICE TO CONTRACTOR: ALL COSTS AND FEES (REDESIGN COSTS) FOR MAKING MODIFICATIONS, e.g. ARCHITECTURAL, CIVIL, STRUCTURAL, ELECTRICAL, ETC., TO THE CONTRACT DOCUMENTS, AS WELL AS ALL COSTS PERTAINING TO CONSTRUCTION OF THE WORK, MADE NECESSARY BY SELECTION/PROVISION PRODUCTS OTHER THAN THE BASIS-OF-DESIGN PRODUCTS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO INCREASE IN THE CONSTRUCTION CONTRACT AMOUNT WILL BE MADE ON ACCOUNT THEREOF. CONTRACTOR SHALL REIMBURSE OWNER FOR SAID REDESIGN COSTS VIA DEDUCTIVE CHANGE ORDER.
- B. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH THE MECHANICAL, PLUMBING, STRUCTURAL, AND ARCHITECTURAL PLANS AND/OR CONTRACTORS PRIOR TO AND DURING CONSTRUCTION. COORDINATE WITH THE ARCHITECT, OWNER, AND GC ON ALL CONSTRUCTION PHASING REQUIREMENTS PRIOR TO STARTING DEMOLITION AND/OR NEW WORK.
- C. ALL WORK SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NFPA-70, 2017 EDITION, AND THE 2015 INTERNATIONAL CODES.
- D. ALL NEW WORK SHALL BE CONCEALED AS MUCH AS POSSIBLE.
- E. PROVIDE ACCURATE TYPEWRITTEN PANEL DIRECTORIES FOR ALL PANELS IN THE PROJECT.
- F. PROVIDE PANEL AND CIRCUIT/VACANCY IDENTIFICATION LABELS ON ALL SWITCHES, WALL MOUNTED OCCUPANCY SENSORS, RECEPTACLES, AND JUNCTION BOXES.



**CROSS CREEK REGIONAL PARK
CCMD REGIONAL PARK SIGHT LIGHTING**
8115 PARKGLEN DR. FOUNTAIN, CO 80817
ADDITIONAL PROJECT INFORMATION IF NECESSARY

LUMINAIRE SCHEDULE									
MARK	MANUFACTURER	CATALOG NO.	LAMPS TYPE	FINISH	MOUNTING	WATTAGE	VOLTAGE	REMARKS	
A	MCGRAW	DLNA-AF-04-LED-E1-SWQ-8030 5WQ - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 20567 LUMENS	DARK BRONZE	SITE POLE	225	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	
B	MCGRAW	DLNA-AF-03-LED-E1-T3-8030 T3 - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 14782 LUMENS	DARK BRONZE	SITE POLE	166	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	
F	MCGRAW	DLNA-AF-03-LED-E1-SWQ-8030 T4FT - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 14869 LUMENS	DARK BRONZE	SITE POLE	166	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	
G	MCGRAW	DLNA-AF-03-LED-E1-SWQ-8030 T2 - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 14503 LUMENS	DARK BRONZE	SITE POLE	166	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	
FHSS	MCGRAW	DLNA-AF-04-LED-E1-SWQ-8030 SL4 - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 14450 LUMENS	DARK BRONZE	SITE POLE	225	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	
GHSS	MCGRAW	DLNA-AF-03-LED-E1-SWQ-8030 SL3 - 8030 - PER7 - AHD - QM - MSX-L20 SSSA20S-F-1-E-G	LED 30K 11508 LUMENS	DARK BRONZE	SITE POLE	166	240	LED POLE MOUNTED SITE LIGHT (21-3/4" L x15 1/2" W x3 15/16" H) 20' H STRAIGHT SQUARE STEEL POLE MOUNTED ON CAST-IN- PLACE CONCRETE BASE, PROVIDE FULL METAL BASE COVER AFTER HOURS DIM	

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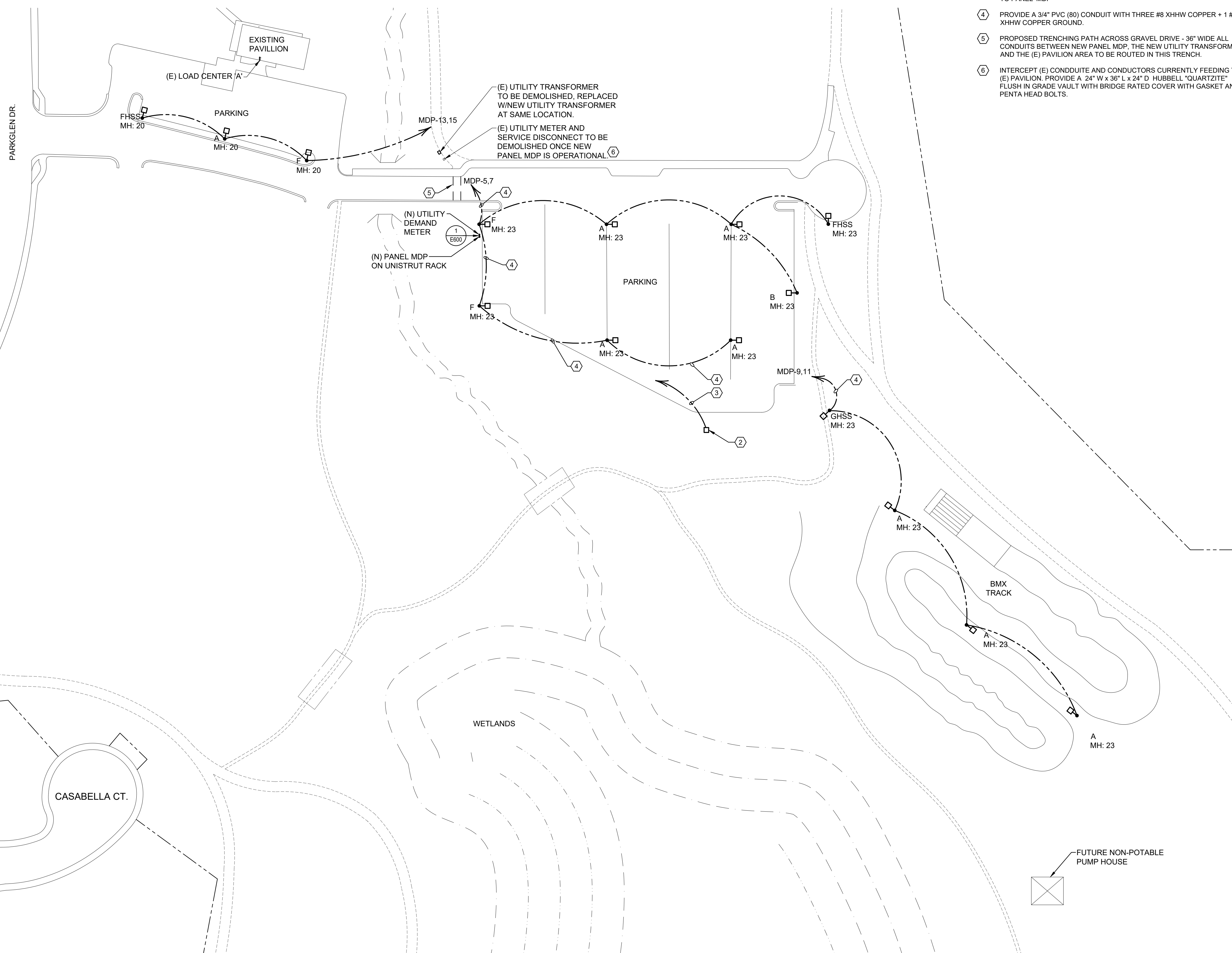
**ELECTRICAL
NOTES AND
SPECIFICATIONS**

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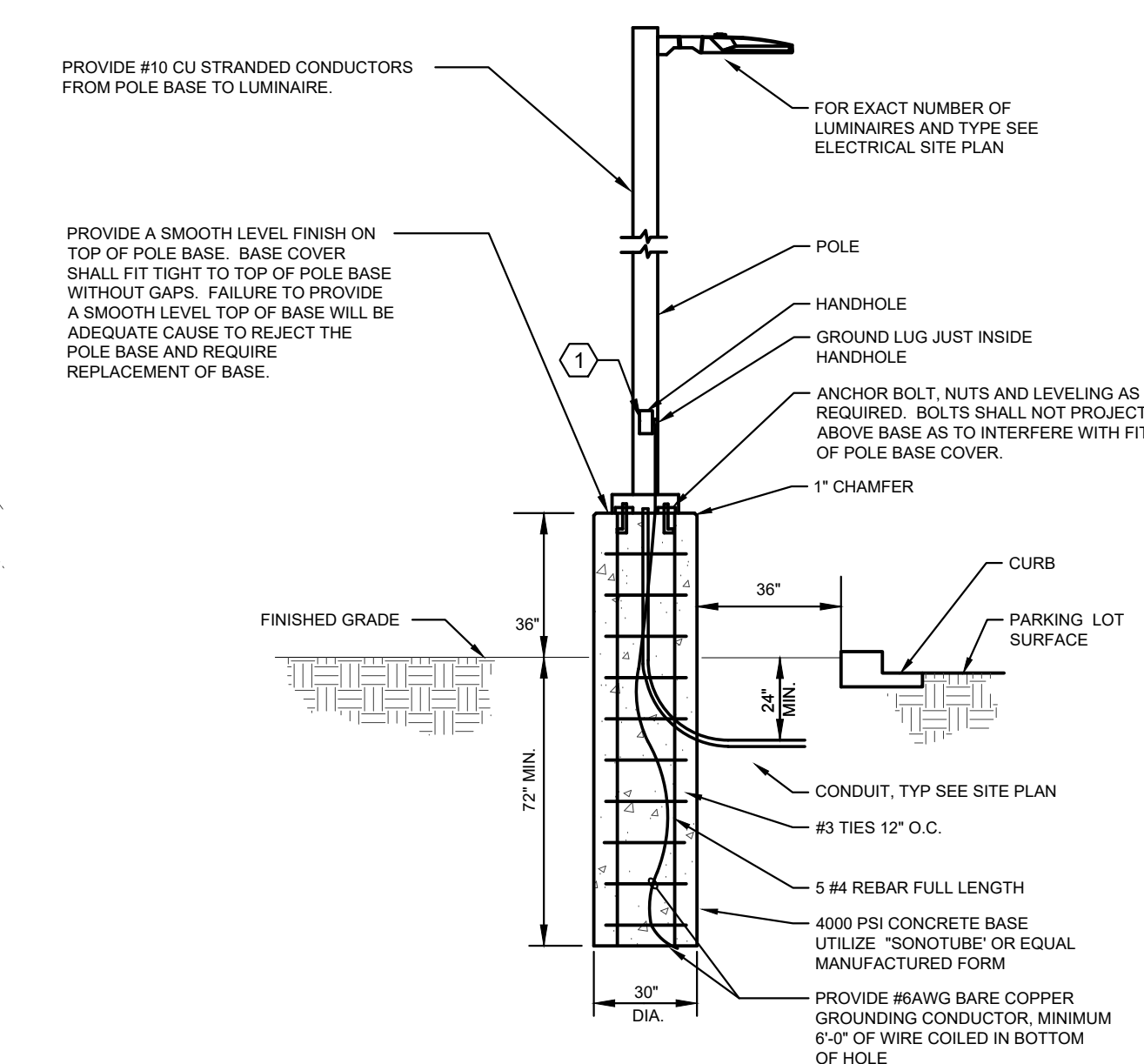
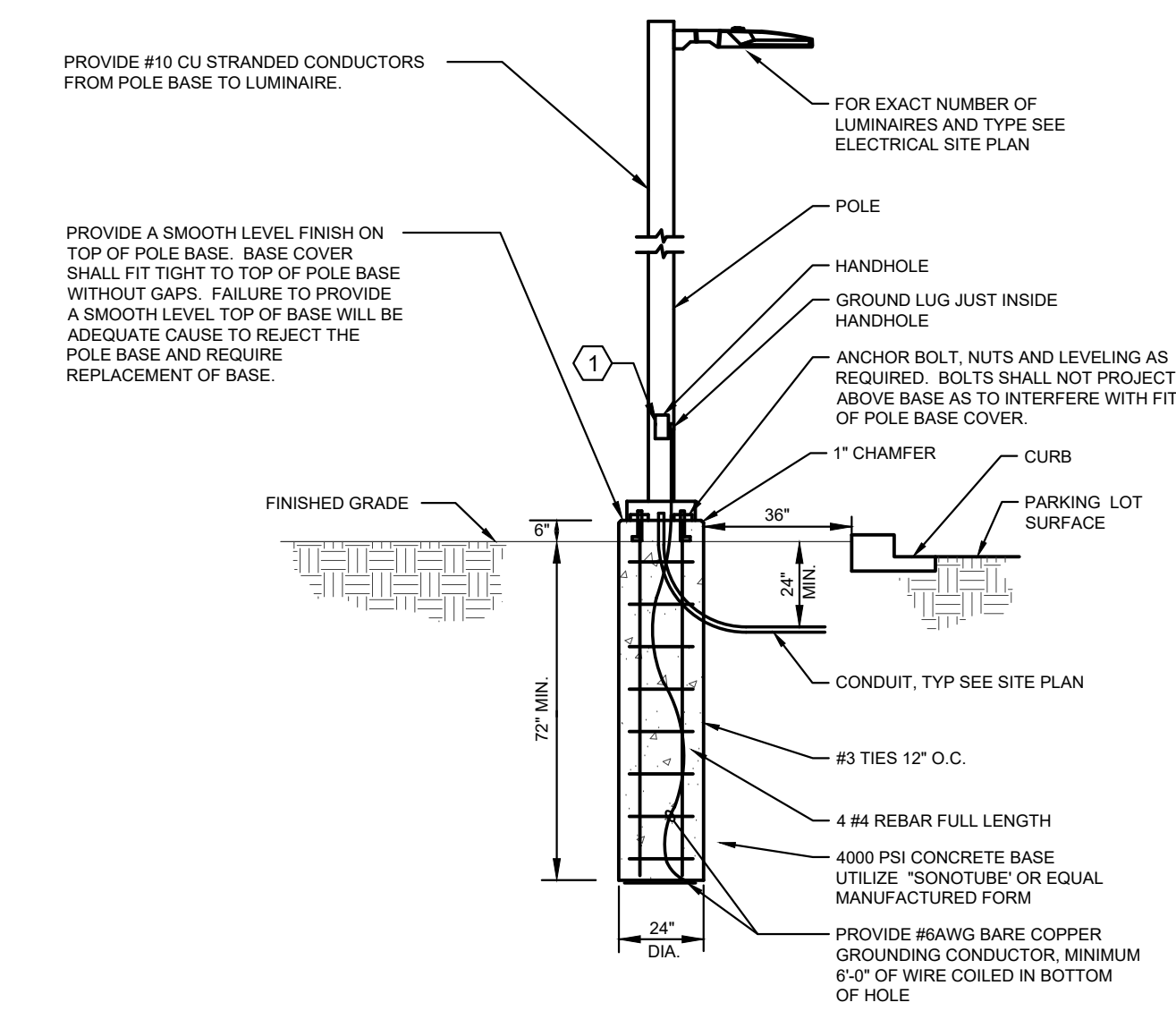


KEYED NOTES

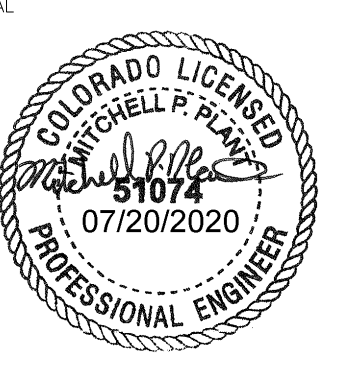
- 1 PROVIDE BUSSMANN TYPE 'HEY' DUAL INLINE BREAK-AWAY FUSE HOLDERS INSIDE POLE ANT HAND HOLE. SIZE FUSE AT 125% OF BALLAST NAME PLATE AMPERAGE WITH TYPE 'CC' FUSES.
- 2 PROVIDE A 24" W x 36" L x 24" D HUBBELL "QUARTZITE" FLUSH IN GRADE VAULT WITH BRIDGE RATED COVER WITH GASKET AND PENTA HEAD BOLTS.
- 3 PROVIDE ONE (1) 3 1/2" PVC (80) CONDUIT WITH MEASURING MULE TAPE TO PANEL 'MDP'
- 4 PROVIDE A 3/4" PVC (80) CONDUIT WITH THREE #8 XHHW COPPER + 1 #8 XHHW COPPER GROUND.
- 5 PROPOSED TRENCHING PATH ACROSS GRAVEL DRIVE - 36" WIDE ALL CONDUITS BETWEEN NEW PANEL MDP, THE NEW UTILITY TRANSFORMER, AND THE (E) PAVILION AREA TO BE ROUTED IN THIS TRENCH.
- 6 INTERCEPT (E) CONDUITS AND CONDUCTORS CURRENTLY FEEDING THE (E) PAVILION. PROVIDE A 24" W x 36" L x 24" D HUBBELL "QUARTZITE" FLUSH IN GRADE VAULT WITH BRIDGE RATED COVER WITH GASKET AND PENTA HEAD BOLTS.

GENERAL NOTES

- A. MINIMUM EXTERIOR CONDUIT SIZE IS 3/4" PVC (80). MINIMUM WIRE SIZE IN UNDERGROUND CONDUITS IS #10 XHHW COPPER STRANDED.
- B. PROVIDE A FULL SIZED NEUTRAL IN ALL CONDUITS.



ELECTRICAL SITE PLAN
SCALE: 1" = 50'-0"



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ELECTRICAL SITE PLAN

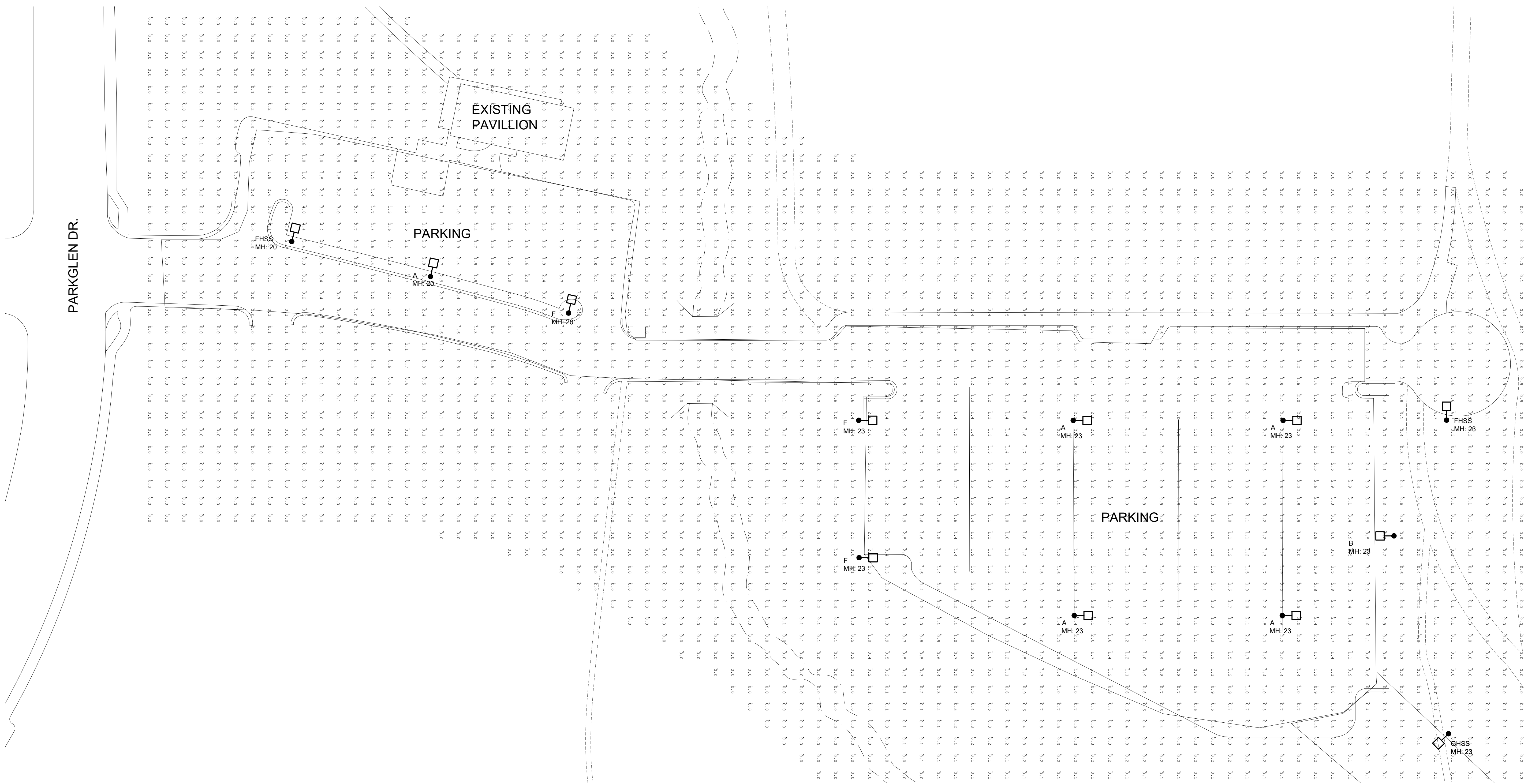
PROJECT	20051
DATE	07/20/2020
DRAWN	BVC/JF
CHECKED	MPP

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PARKGLEN DR.

Calculation summary	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE 1	Illuminance	Fc	0.54	4.5	0.0	N.A.	N.A.
BMX	Illuminance	Fc	0.82	2.4	0.0	N.A.	N.A.
Drive Lane	Illuminance	Fc	1.53	4.6	0.2	7.65	23.00
Parking and Drive	Illuminance	Fc	1.50	4.9	0.0	N.A.	N.A.



PHOTOMETRIC PARKING SITE PLAN
 SCALE: 1" = 30'-0"

- GENERAL NOTES**
- A. THESE PHOTOMETRIC CALCULATIONS ARE BASED ON MANUFACTURER'S IES FILES AND 0.90 LIGHT DEPRECIATION FACTOR.
 - B. ACTUAL ILLUMINANCE LEVELS MAY DIFFER FROM THE FOOTCANDLE LEVELS SHOWN DUE TO VARIABLE FIELD CONDITIONS, SUCH AS NEARBY EXISTING LUMINAIRES, LUMINAIRE DIRT DEPRECIATION, LANDSCAPING, AND FUTURE DEVELOPMENTS.
 - C. THIS PLAN IS BASED ON THE INFORMATION AVAILABLE. THE LUMINAIRE LOCATIONS SHOWN MUST BE COORDINATED WITH EXISTING OR FUTURE FIELD CONDITIONS.

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CROSS CREEK REGIONAL PARK
CCMD REGIONAL PARK SIGHT LIGHTING
 8115 PARKGLEN DR. FOUNTAIN, CO 80817
 ADDITIONAL PROJECT INFORMATION IF NECESSARY

REVISIONS	MARK	DATE	COMMENT
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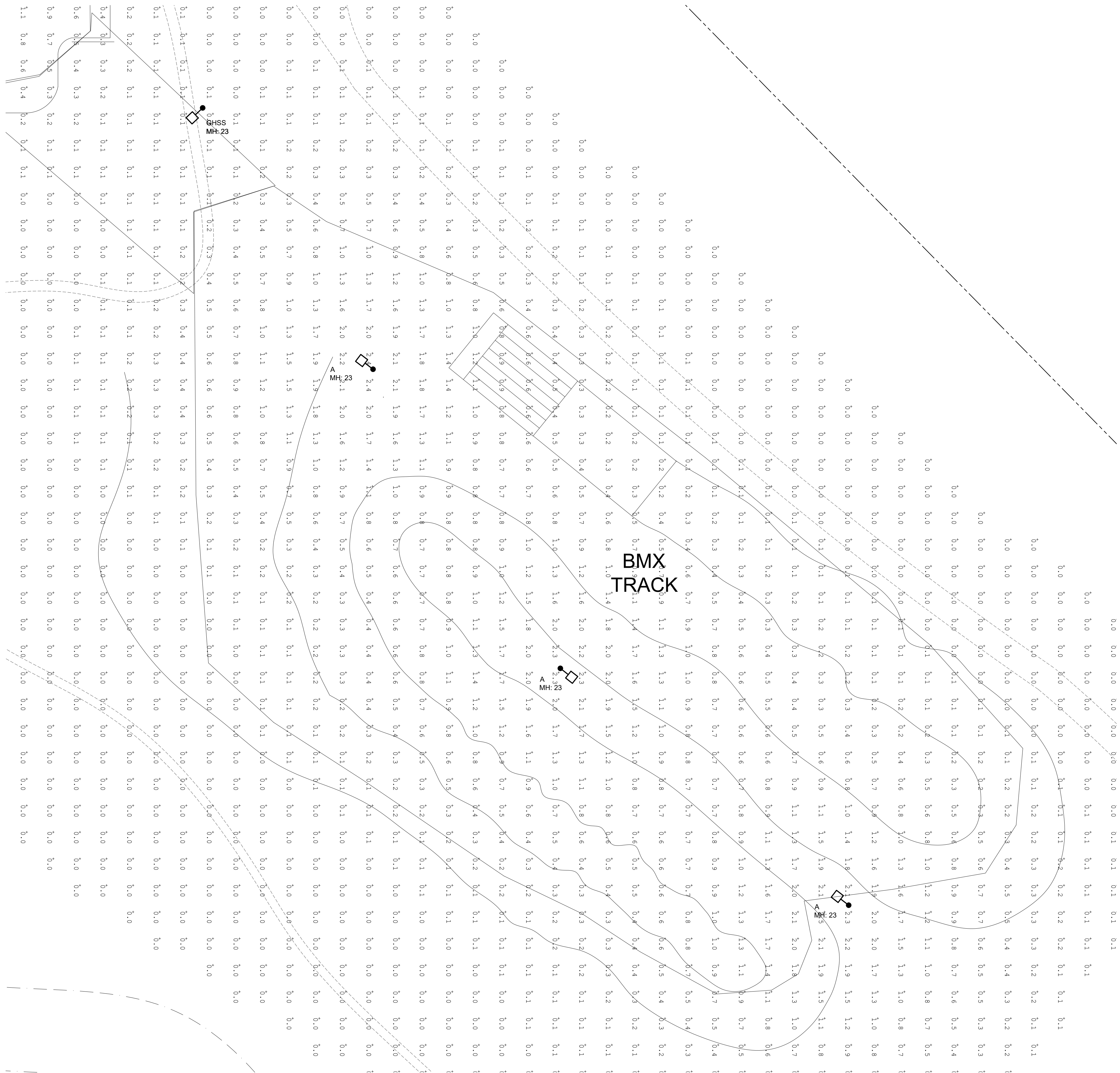
PHOTOMETRIC PARKING SITE PLAN

PROJECT	20051
DATE	07/20/2020
DRAWN	BVC/JVF
CHECKED	MRP

E101

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- GENERAL NOTES**
- A. THESE PHOTOMETRIC CALCULATIONS ARE BASED ON MANUFACTURER'S IES FILES AND 0.90 LIGHT DEPRECIATION FACTOR.
 - B. ACTUAL ILLUMINANCE LEVELS MAY DIFFER FROM THE FOOTCANDLE LEVELS SHOWN DUE TO VARIABLE FIELD CONDITIONS, SUCH AS NEARBY EXISTING LUMINAIRES, LUMINAIRE DIRT DEPRECIATION, LANDSCAPING, AND FUTURE DEVELOPMENTS.
 - C. THIS PLAN IS BASED ON THE INFORMATION AVAILABLE. THE LUMINAIRE LOCATIONS SHOWN MUST BE COORDINATED WITH EXISTING OR FUTURE FIELD CONDITIONS.



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PHOTOMETRIC
BMX TRACK SITE
PLAN

PROJECT	20051
DATE	07/20/2020
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PHOTOMETRIC BMX TRACK SITE PLAN
 SCALE: 1" = 20'-0"

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EXISTING LOAD CENTER A																
PROJECT: CCMD Park Site Lighting 120/ 240 V, 1 PHASE, 3 WIRE				GENERAL NOTES:												
PROJECT NO: 20051 125 A BUS				A. LOAD CENTER IS SQUARE D HOMELINE® HOMC21UC												
BY: MPP 100 A MCB				B.												
FILE NAME: 10000 AIC RATING				C.												
SURFACE MOUNTING																
CCT.	BRKR.	DESCRIPTION	LIGHTING	RECEPT.	MOTOR	OTHER	APPLIANCE	PH	APPLIANCE	OTHER	MOTOR	RECEPT.	LIGHTING	DESCRIPTION	BRKR.	CCT.
1	201	KITCHEN PLUGS					1100	A	1100					KITCHEN PLUGS	201	2
3	201	KITCHEN PLUGS					1100	B				360		AUTO FLUSH AND SINKS	201	4
5	201	LIGHTING	1200					A			1127			EXHAUST FAN	201	6
7	201	DOOR CONTROLLER			600			B						STORAGE PLUGS, LTS	201	8
9	201	HAND DRYER				1200	A		2250					WATER HEATER	30	10
11	201	HAND DRYER				1200	B		2250						2	12
13	201	OUTSIDE LIGHTS	900				A		2500					EXISTING LOAD	301	14
15	201	SECURITY CAMERAS					360	B			1127			CIRC. PUMPS	201	16
17		SPACE						A						SPACE		18
19		SPACE						B						SPACE		20

LOAD SUMMARY							
LOAD TYPE:	PH A	PH B	TOTALS	DEMAND FACTOR	DEMAND KVA	DEMAND KVA	DEMAND KVA
LIGHTING	2.10	0.38	2.46	ALL	2.46	1.25	3.08
RECEPTACLES	0.00	1.26	1.26	KVA	1ST 10KVA	1.26	1.26
					REMAINING	0.00	0.00
MOTORS	1.13	1.13	2.25	KVA	LARGEST	2.25	2.82
					REMAINING	0.00	0.00
OTHER	2.25	2.85	5.10	KVA	ALL	5.10	5.10
APPLIANCE	5.90	2.66	8.56	KVA	ALL	8.56	8.56
TOTALS	11.38	8.26	19.63	KVA			20.81

MINIMUM PANELBOARD AMPACITY: 86.72

FUTURE PANELBOARD A																
PROJECT: CCMD Park Site Lighting 120/ 240 V, 1 PHASE, 3 WIRE				GENERAL NOTES:												
PROJECT NO: 20051 200 A BUS				A. PANEL IS FOR FUTURE NON-POTABLE PUMP HOUSE.												
BY: MPP 200 A MCB				B.												
FILE NAME: 10000 AIC RATING				C.												
SURFACE MOUNTING																
CCT.	BRKR.	DESCRIPTION	LIGHTING	RECEPT.	MOTOR	OTHER	APPLIANCE	PH	APPLIANCE	OTHER	MOTOR	RECEPT.	LIGHTING	DESCRIPTION	BRKR.	CCT.
1	175	WELL PUMP			14881			A				540		PIT LIGHTS & RECEPS	201	2
3	2							B			250		EXHAUST FAN	201	4	
5	201	COMPRESSOR			1127		A		2500					ELECTRIC HEAT	30	6
7	201	COMPRESSOR			1127		B		2500						2	8
9		SPACE						A						SPACE		10
11		SPACE						B						SPACE		12

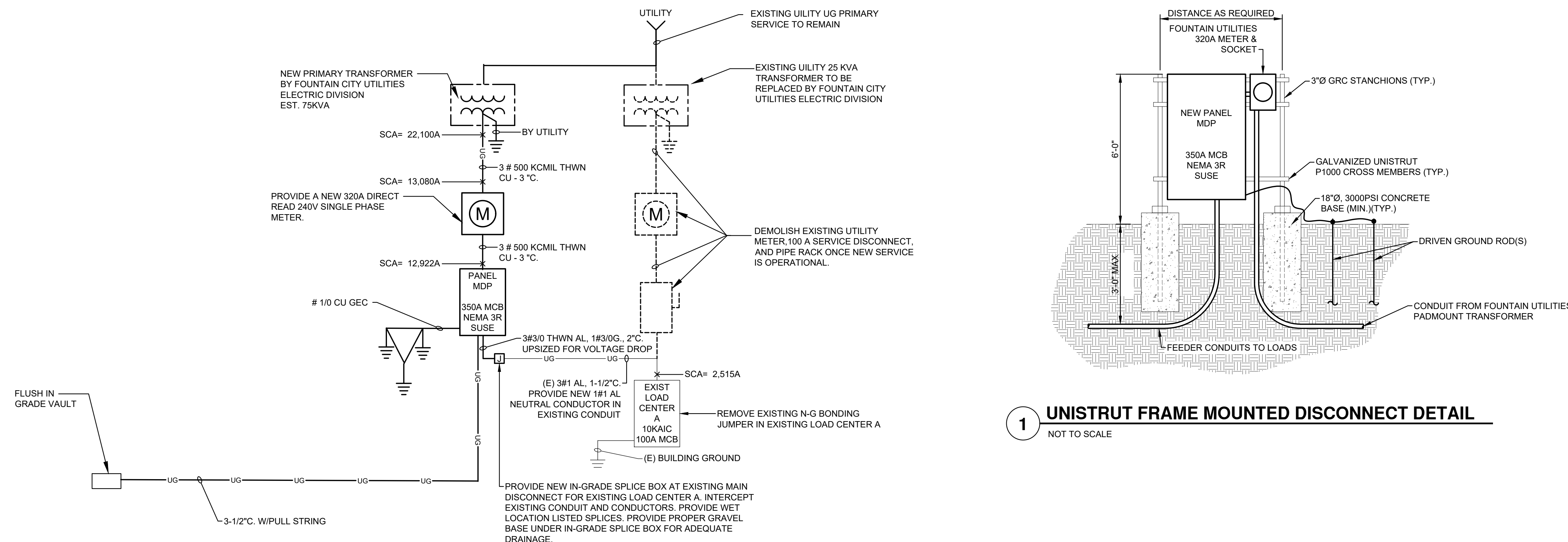
LOAD SUMMARY							
LOAD TYPE:	PH A	PH B	TOTALS	DEMAND FACTOR	DEMAND KVA	DEMAND KVA	DEMAND KVA
LIGHTING	0.08	0.00	0.08	KVA	ALL	0.08	1.25
RECEPTACLES	0.54	0.00	0.54	KVA	1ST 10KVA	0.54	0.54
					REMAINING	0.00	0.00
MOTORS	16.01	16.26	32.27	KVA	LARGEST	29.76	37.20
					REMAINING	2.50	1.00
OTHER	2.50	2.50	5.00	KVA	ALL	5.00	5.00
APPLIANCE	0.00	0.00	0.00	KVA	ALL	0.00	1.00
TOTALS	19.12	18.76	37.88	KVA			45.34

MINIMUM PANELBOARD AMPACITY: 188.92

NEW PANELBOARD MDP																
PROJECT: CCMD Park Site Lighting 120/ 240 V, 1 PHASE, 3 WIRE				GENERAL NOTES:												
PROJECT NO: 20051 400 A BUS				A. PANELBOARD IS NEMA 3R AND SUSE RATED.												
BY: MPP 350 A MCB				B.												
FILE NAME: 22000 AIC RATING				C.												
SURFACE MOUNTING																
CCT.	BRKR.	DESCRIPTION	LIGHTING	RECEPT.	MOTOR	OTHER	APPLIANCE	PH	APPLIANCE	OTHER	MOTOR	RECEPT.	LIGHTING	DESCRIPTION	BRKR.	CCT.
1	100/ 2	EXISTING LOAD CENTER A	2100	0	1127	2250	5900	A	0	2500	16008	540	75	FUTURE PUMP HOUSE	200/ 2	2
3	201		360	1260	1127	2850	2660	B	0	2500	16258	0	0		2	4
5	201	PARKING LOT SITE LIGHTING	782					A						SPARE	201	6
7	201		782					B						SPARE	201	8
9	201	BMX TRACK SITE LIGHTING	421					A						SPARE	201	10
11	2		421					B						SPARE	2	12
13	201	PAVILION SITE LIGHTING	391					A						SPARE	201	14
15	2		391					B						SPARE	2	16
17	201	SPACE						A						SPACE	201	18
19	201	SPACE						B						SPACE	201	20
21		SPACE						A						SPACE		22
23		SPACE						B						SPACE		24
25		SPACE						A						SPACE		26
27		SPACE						B						SPACE		28
29		SPACE						A						SPACE		30
31		SPACE						B						SPACE		32
33		SPACE						A						SPACE		34
35		SPACE						B						SPACE		36
37		SPACE						A						SPACE		38
39		SPACE						B						SPACE		40
41		SPACE						A						SPACE		42

LOAD SUMMARY							
LOAD TYPE:	PH A	PH B	TOTALS	DEMAND FACTOR	DEMAND KVA	DEMAND KVA	DEMAND KVA
LIGHTING	3.77	1.95	5.72	KVA	ALL	5.72	7.15
RECEPTACLES	0.54	1.26	1.80	KVA	1ST 10KVA	1.80	1.80
					REMAINING	0.00	0.00
MOTORS	17.14	17.39	34.52	KVA	LARGEST	29.76	37.20
					REMAINING	4.76	1.00
OTHER	4.75	5.35	10.10	KVA	ALL	10.10	10.10
APPLIANCE	5.90	2.66	8.56	KVA	ALL	8.56	8.56
TOTALS	32.09	28.61	60.70	KVA			69.57

MINIMUM PANELBOARD AMPACITY: 289.89



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ELECTRICAL ONE-LINE DIAGRAM

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PROJECT	20051
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E600