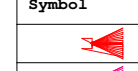
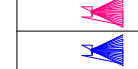
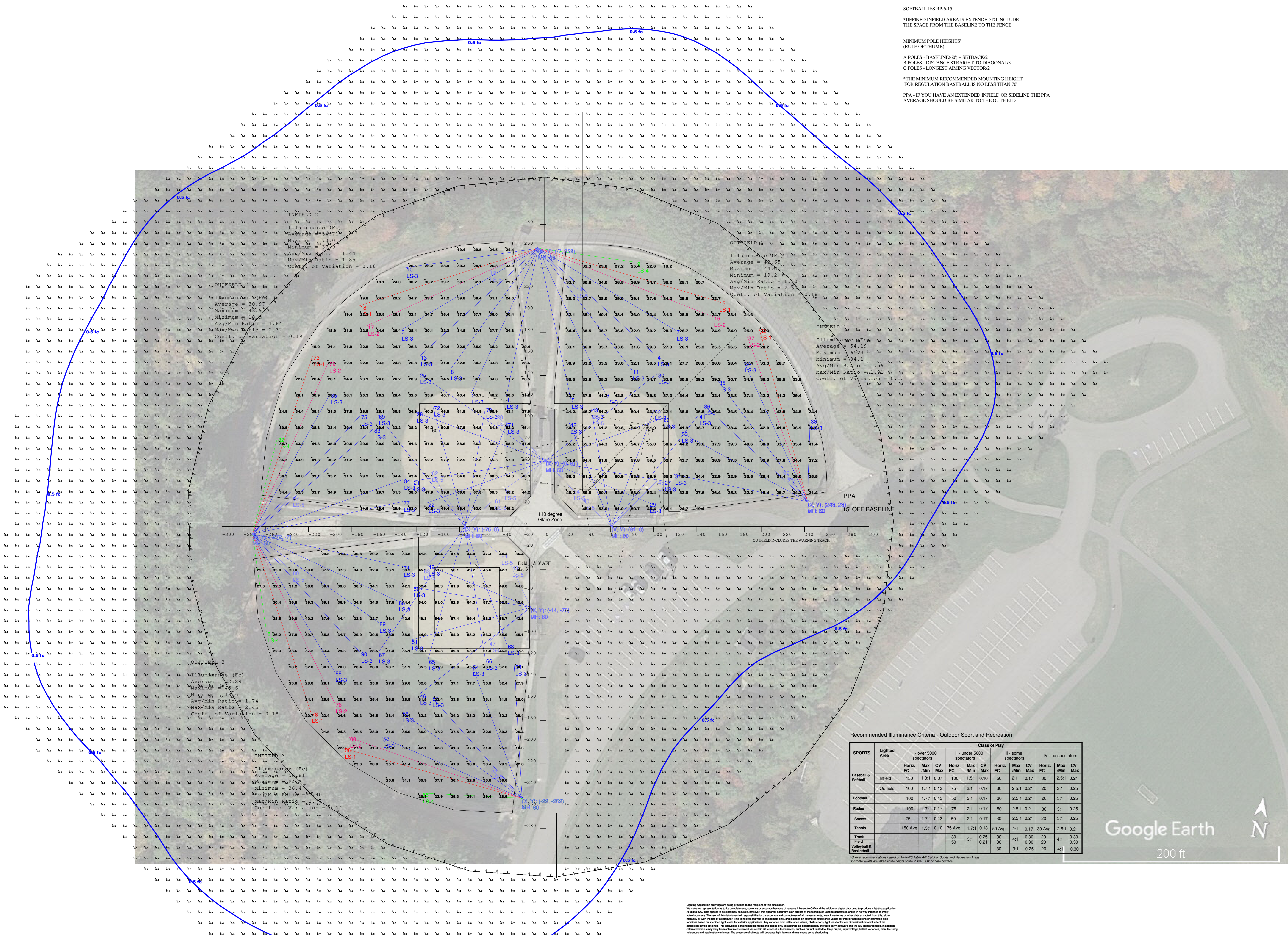
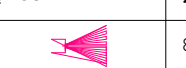
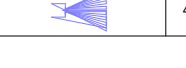


Illuminance Schedule							
Symbol	Qty	Label	Accessories	Sum. Lumens	LF	Description	Total Watts
	6	LS-1	210W	8400	0.950	8400-16-0440-57-70-10-000	604
	6	LS-2	210W	8400	0.950	8400-16-0440-57-70-10-000	604
	16	LS-3	210W	8400	0.950	8400-16-0440-57-70-10-000	1600
	4	LS-4	210W	8400	0.950	8400-16-0440-57-70-10-000	2704
	19	LS-5	210W	8400	0.950	8400-16-0440-57-70-10-000	12256

Calculation Summary									
Label	Qty	Category	Notes	Avg	Max	Min	Avg/Min	Max/Min	Gold #
Field 1 8 3' AFF	1	Illuminance	FC	37.00	70.2	19.2	3.49	3	
Field 2 8 3' AFF	1	Illuminance	FC	36.00	70.0	19.0	1.90	3.70	3
Field 3 8 3' AFF	1	Illuminance	FC	36.43	64.3	18.6	1.96	3.46	3
Field 4 8 3' AFF	1	Illuminance	FC	37.00	70.2	19.2	3.49	3	
Field 5 8 3' AFF	1	Illuminance	FC	36.17	63.2	18.1	1.99	3.71	
OUTFIELD 1	1	Illuminance	FC	34.75	74.0	17.9	1.94	1.85	
OUTFIELD 2	1	Illuminance	FC	35.81	64.3	18.0	1.90	1.71	
OUTFIELD 3	1	Illuminance	FC	35.00	64.3	18.0	1.90	1.71	
OUTFIELD 4	1	Illuminance	FC	35.00	64.3	18.0	1.90	1.71	
OUTFIELD 5	1	Illuminance	FC	35.00	64.3	18.0	1.90	1.71	



Recommended Illuminance Criteria - Outdoor Sport and Recreation					
SPORTS	Lighted Area	Class of Play			
		I - over 5000 spectators	II - under 5000 spectators	III - some spectators	IV - no spectators

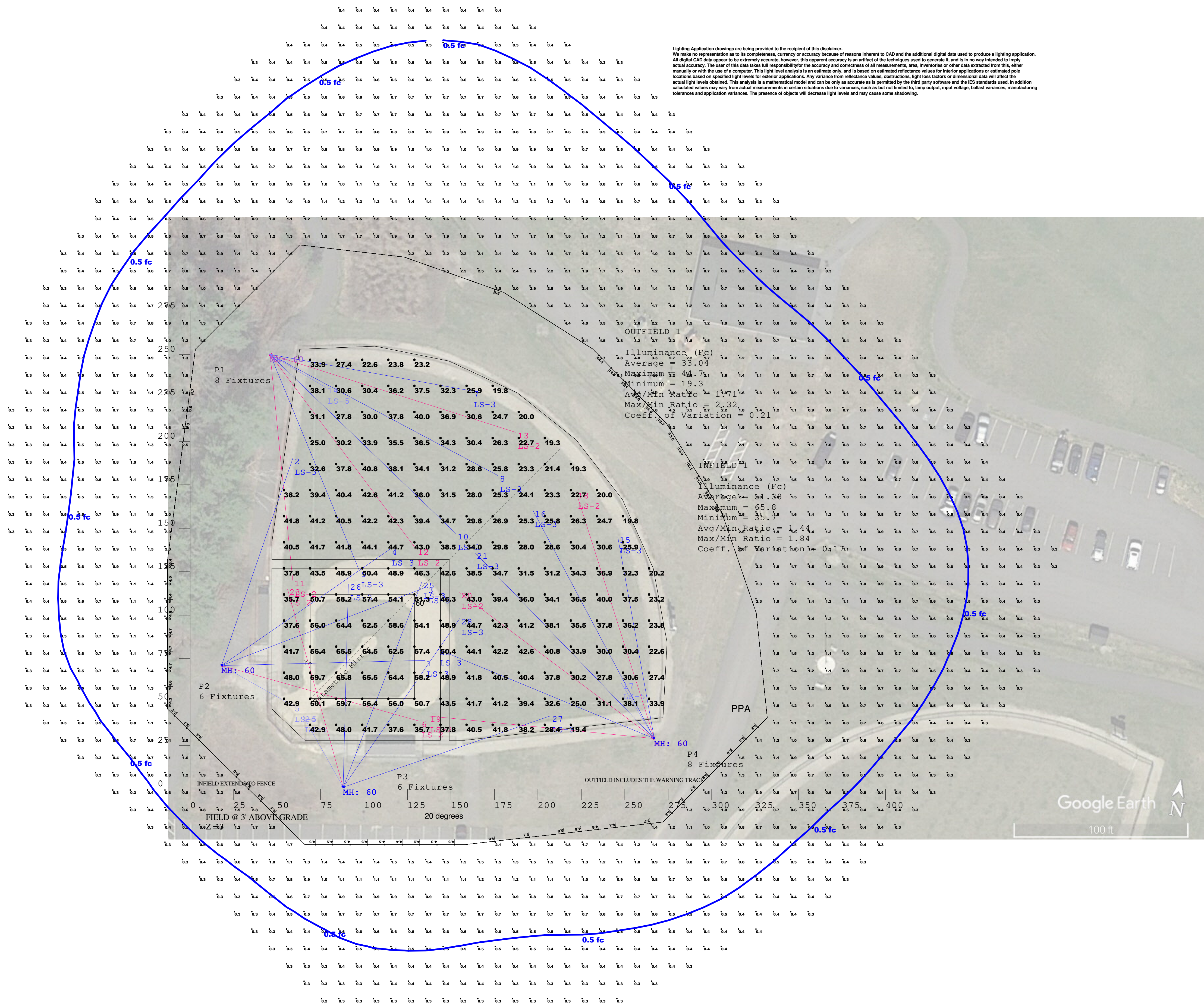
Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Lot. Lumens	ILP	Description	Lot. Watts	Total Watts
	8	LS-2	SINGLE	90985	0,950	EPH-08-06402-S1-70-22-RED	687	5496
	16	LS-3	SINGLE	89640	0,950	EPH-08-06402-S1-70-38-RED	681	10896
	4	LS-5	SINGLE	90904	0,950	EPH-08-06402-S1-70-53-RED	681	2724

Calculation Summary								
Project: Project_1								
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min	Grid #
FIELD @ 3' ABOVE GRADE	ILLUMINANCE	Fc	37.80	65.8	19.3	1.96	3.41	3
Spill Light @ Grade	ILLUMINANCE	Fc	0.89	6.1	0.2	4.45	30.50	0
INFIELD 1	ILLUMINANCE	Fc	51.38	65.8	35.7	1.44	1.84	
OUTFIELD 1	ILLUMINANCE	Fc	33.04	44.7	19.3	1.71	2.32	

SOFTBALL IES RP-6-15
*DEFINED INFIELD AREA IS EXTENDED TO INCLUDE THE SPACE FROM THE BASELINE TO THE FENCE

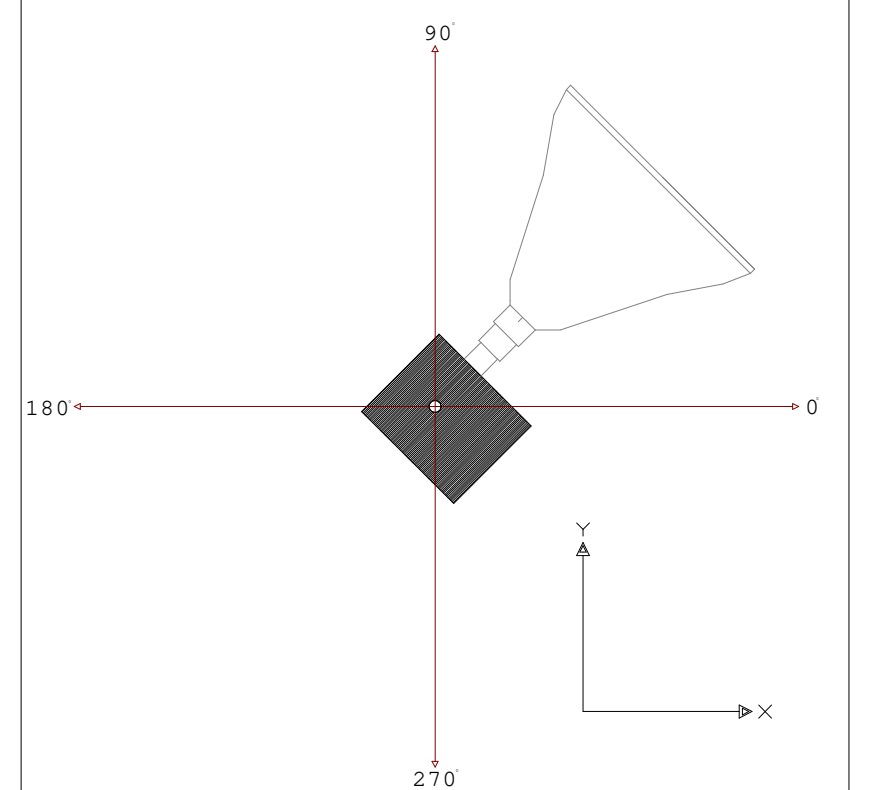
MINIMUM POLE HEIGHTS' (RULE OF THUMB)
A POLES - BASELINE(60') + SETBACK/2
B POLES - DISTANCE STRAIGHT TO DIAGONAL/3
C POLES - LONGEST AIMING VECTOR/2

*THE MINIMUM RECOMMENDED MOUNTING HEIGHT FOR REGULATION BASEBALL IS NO LESS THAN 70'
PPA - IF YOU HAVE AN EXTENDED INFIELD OR SIDELINE THE PPA AVERAGE SHOULD BE SIMILAR TO THE OUTFIELD

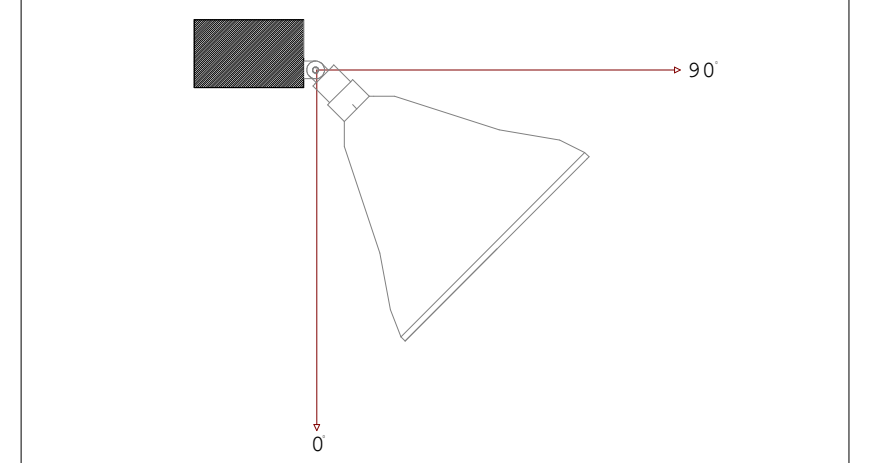


Expanded Luminaire Location Summary									
LumNo	Label	X	Y	Z	Orient	Tilt	X-Aimpt	Y-Aimpt	
1	LS-3	18	71	60	1.469	62.858	135	74	
2	LS-3	18	71	60	70.989	64.552	59.073	190.21	
3	LS-3	18	71	60	20.973	64.571	135.834	116.169	
4	LS-3	18	71	60	34.634	63.026	115	138	
5	LS-5	18	71	60	330.709	38.079	59	48	
6	LS-2	18	71	60	344.32	63.127	132	39	
7	LS-3	46	250	60	349.739	63.025	162	229	
8	LS-3	46	250	60	331.998	68	177.12	180.276	
9	LS-3	46	250	60	292.426	66.001	97.413	125.424	
10	LS-3	46	250	60	316.042	68	152.901	146.918	
11	LS-2	46	250	60	275.711	65.333	59	120	
12	LS-2	46	250	60	306.87	66.8	129.995	138.008	
13	LS-2	46	250	60	342.399	68	187.553	205.094	
14	LS-5	46	250	60	329.3	31.81	78	231	
15	LS-3	267	29	60	100.261	63.025	246	145	
16	LS-3	267	29	60	118.002	68	197.276	160.12	
17	LS-5	267	29	60	120.7	31.81	248	61	
18	LS-2	267	29	60	107.401	68	222.094	170.553	
19	LS-2	267	29	60	174.289	65.333	137	42	
20	LS-2	267	29	60	143.13	66.8	155.008	112.995	
21	LS-3	267	29	60	133.958	68	163.918	135.901	
22	LS-3	267	29	60	157.574	66.001	142.424	80.413	
23	LS-2	88	1	60	105.68	63.127	56	115	
24	LS-5	88	1	60	119.291	38.079	65	42	
25	LS-3	88	1	60	69.027	64.571	133.169	118.834	
26	LS-3	88	1	60	88.531	62.858	91	118	
27	LS-3	88	1	60	19.011	64.552	207.21	42.073	
28	LS-3	88	1	60	55.366	63.026	155	98	

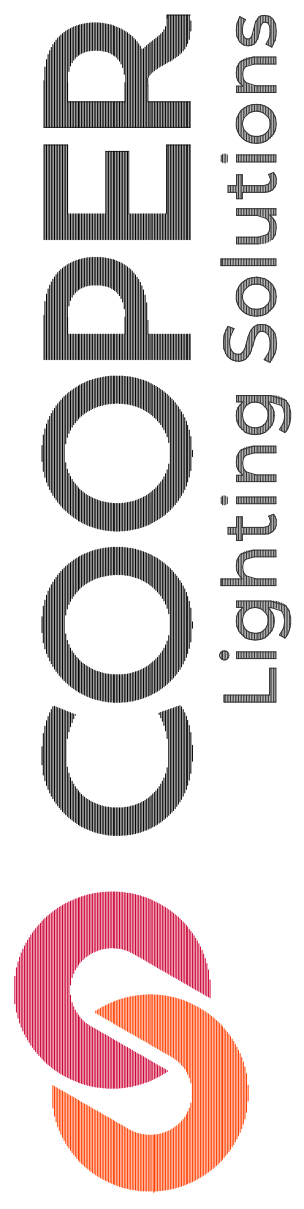
Total Quantity: 28



ORIENTATION OF FLOOD



TILT OF FLOOD



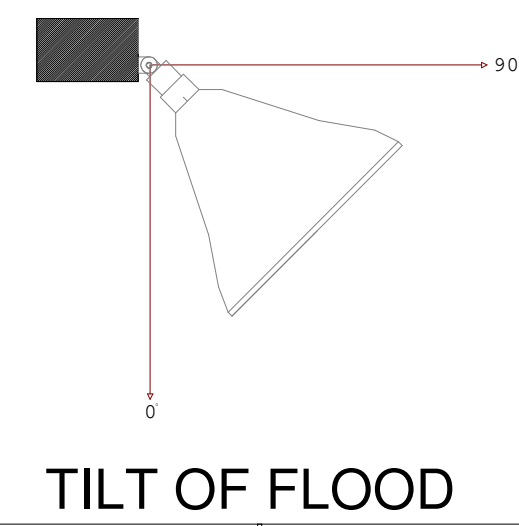
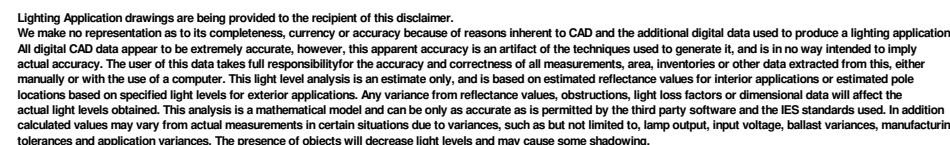
SPORTS LIGHTING

Client:
**Ed Columbo
Reflex Lighting Group**

Project Name:
**EPH Forge
Park Fields**

Project #:
2101485r3 2.AGI
Date:
1/24/2023
Scale:
1" = 30'

Drawing by:
JR



COOPER
Lighting Solutions

SPORTS LIGHTING

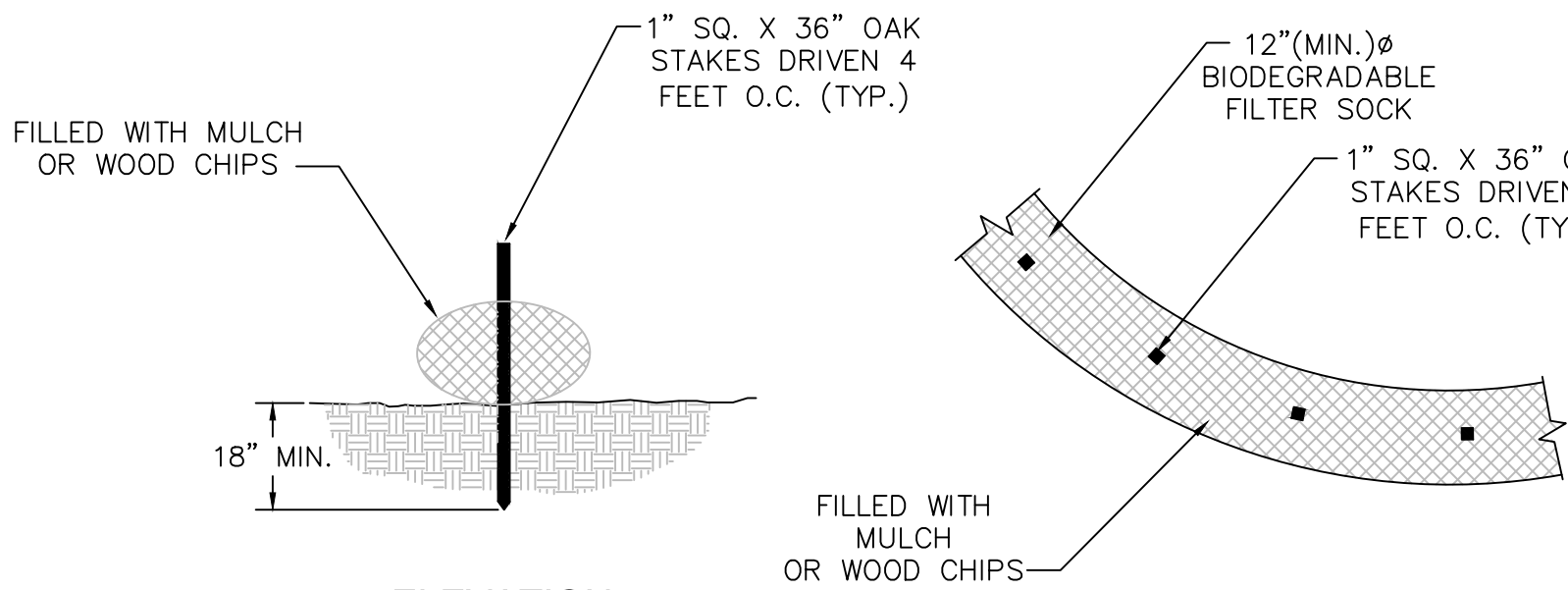
Client:

Ed Columbo
Reflex Lighting Group

Project Name:

EPH Forge
Park Fields

Project #: 2101485r3 1.AGI	Drawing by: JR
Date: 1/24/2023	
Scale: 1" = 30'	



NOTES:

1. FILTER SOCK SHALL BE PLACED PRIOR TO START OF WORK.
2. OAK STAKES SHALL BE DRIVEN AT LEAST 18" MIN. INTO NATIVE SOIL.
3. FILTER SOCK SHALL BE PLACED AT THE LOCATIONS SHOWN BEFORE ANY EXCAVATION OR EARTH MOVING OPERATIONS.

FILTER SOCK DETAIL
NOT TO SCALE

PLAN

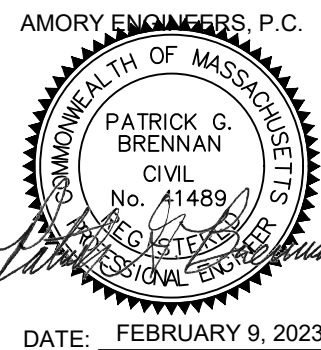
SCALE: 1" = 80'-0"

NOTES:

1. BASE MAP FROM MassGIS 2021 DIGITAL ORTHOPHOTOS.
2. PROPERTY LINES FROM MassGIS ASSESSORS PARCELS DATALAYER SHAPEFILE.
3. WETLAND FLAGGED BY JOHN ZIMMER OF SOUTH RIVER ENVIRONMENTAL ON FEBRUARY 2, 2023.
4. WETLAND FLAGS LOCATED BY PGB ENGINEERING, LLC ON FEBRUARY 8, 2023.
5. LIGHT POLE LOCATIONS AND LIMIT OF 0.5 FOOT-CANDLE LIGHT SPREAD TAKEN FROM PLANS BY COOPER LIGHTING SOLUTIONS, DATED JANUARY 24, 2023 AND SUBMITTED HERewith.
6. PHOTOMETRIC MODELING DOES NOT TAKE VEGETATION INTO ACCOUNT SO THE LIGHT SPREAD WOULD BE LESS IN WOODED AREAS.
7. THREE PROPOSED LIGHT POLES ARE LOCATED WITHIN THE WETLAND BUFFERS. ONE IS BETWEEN THE 35-FT. AND 50-FT. BUFFER TO WETLAND 'D'; ONE IS AT ABOUT THE 35-FT. BUFFER TO WETLAND 'C' AND ONE IS BETWEEN THE 50-FT. AND 100-FT. BUFFER TO WETLAND 'A'. ALL OF THESE AREAS ARE PREVIOUSLY DISTURBED.

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REVISIONS		
NO.	ITEM	DATE
1.	ISSUED FOR PERMITS	2/9/23



PGB ENGINEERING, LLC
MARSHFIELD, MASSACHUSETTS

DRAWN BY:	PGB	FILE NAME:	AS SHOWN	SCALE:	AS SHOWN
DESIGNED BY:	PGB	JOB NO.:	23-127	DWG. NO.:	**
CHECKED BY:	PGB	DATE:	2/9/23	CONTRACT:	**

DEPARTMENT OF PUBLIC WORKS
HANOVER, MASSACHUSETTS

PROPOSED SPORTS FIELD LIGHTING
AT FORGE POND PARK

SITE PLAN

CIVIL

SHEET

1 OF 1