



A GUARANTEE[®] ELECTRICAL COMPANY

3450 N. Nevada Ave. #100 • Colorado Springs, CO 80907
P.O. Box 7286 • Colorado Springs, CO 80933-7286
Phone: (719) 632-7683 • www.berwickelectric.com

CANYON VIEW PARK GRAND JUNCTION, CO

OPERATIONS & MAINTENANCE MANUAL

**SERVICE • CONTRACT • DESIGN/BUILD • RESIDENTIAL
POWER QUALITY • DATACOMM • INDUSTRIAL**



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- MUSCO O&M

SERVICE • CONTRACT • DESIGN/BUILD • RESIDENTIAL
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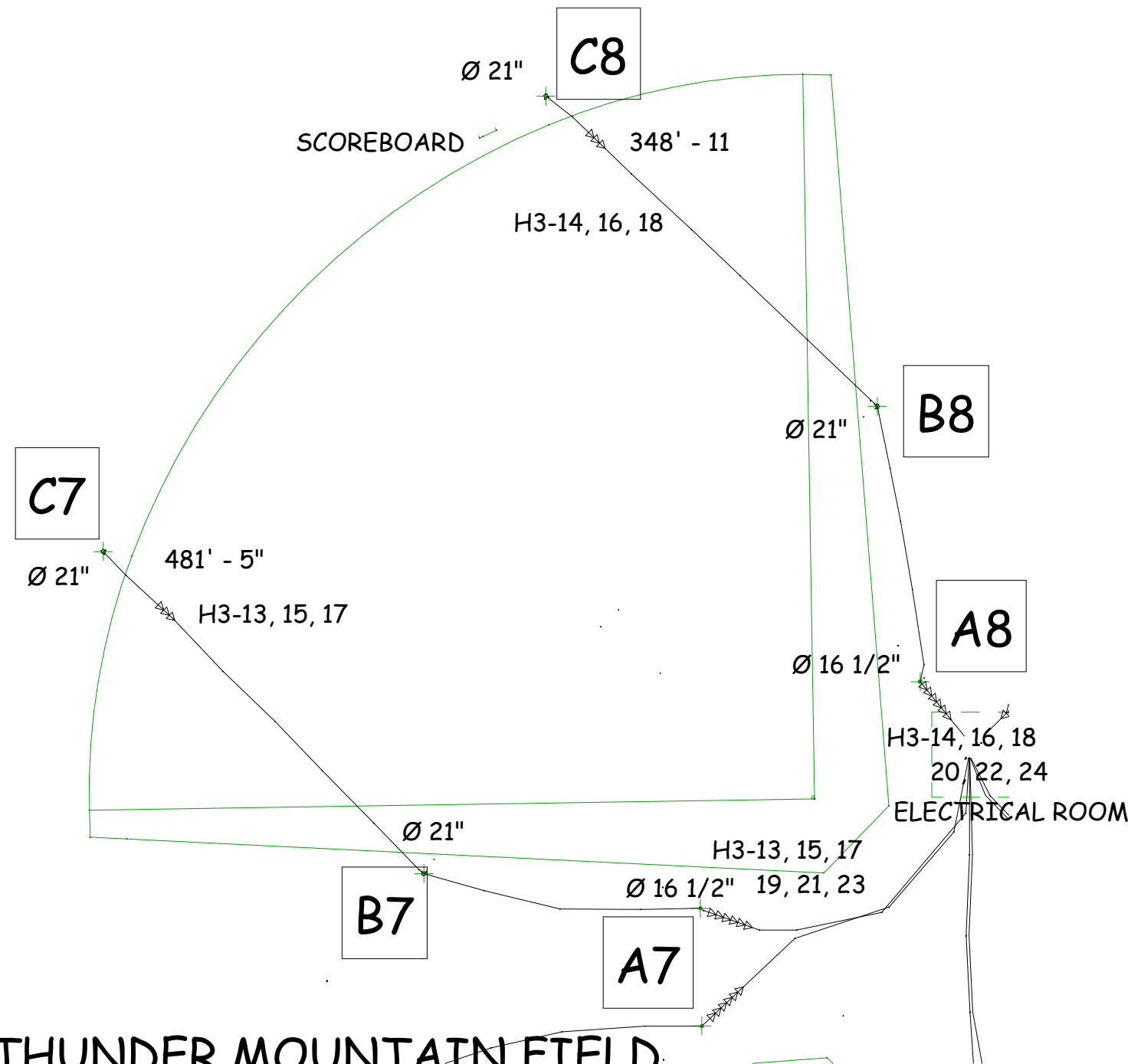
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FIELD ACTUAL UNDERGROUND ROUTING & CIRCUIT

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10/25/2021 8:42:38 AM 11X17 SHEET



1 THUNDER MOUNTAIN FIELD
 1/64" = 1'-0"

Berwick
 A GUARANTEE ELECTRICAL COMPANY
 3450 N. NEVADA AVE. #100
 COLORADO SPRINGS, CO 80907
 PH: 719-632-7683 FX: 719-4719660

| REVISIONS | | |
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| No. | DESCRIPTION | DATE |
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ACTUAL UNDERGROUND ROUTING

DRAWN: JMH CHECKED: MN

PROJECT: CANYON VIEW PARK

SCALE: 1/64" = 1'-0"

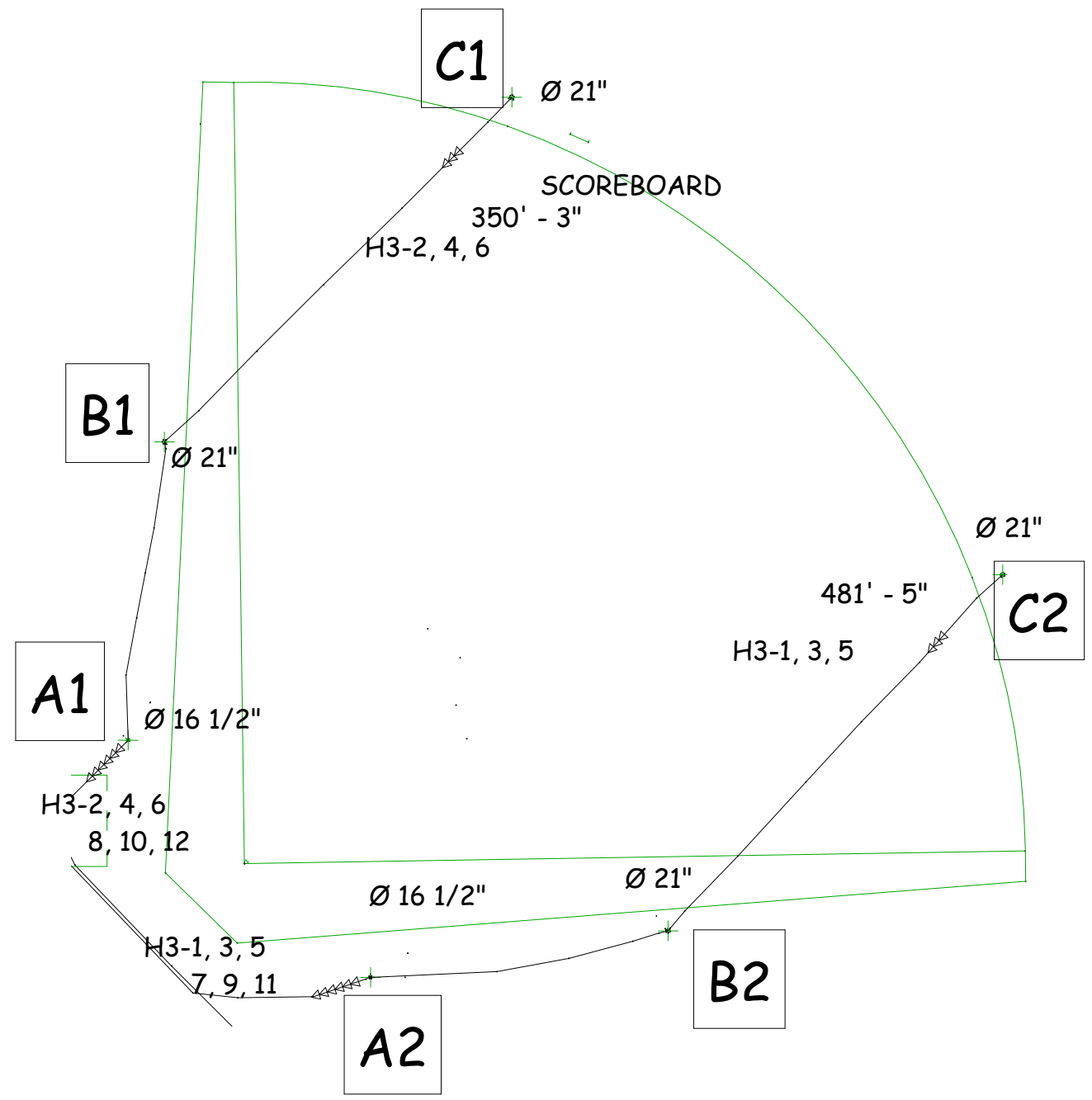
PROJECT No: PROJECT NUMBER

SHEET TITLE: THUNDER MOUNTAIN FIELD

10/25/2021 8:42:38 AM

SHEET NO.

BE-1



1

LIBERTY CAP FIELD

1/64" = 1'-0"



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ACTUAL UNDERGROUND ROUTING

DRAWN: JMH CHECKED: MN

PROJECT: CANYON VIEW PARK

SCALE: 1/64" = 1'-0"

PROJECT No: PROJECT NUMBER

SHEET TITLE: LIBERTY CAP FIELD

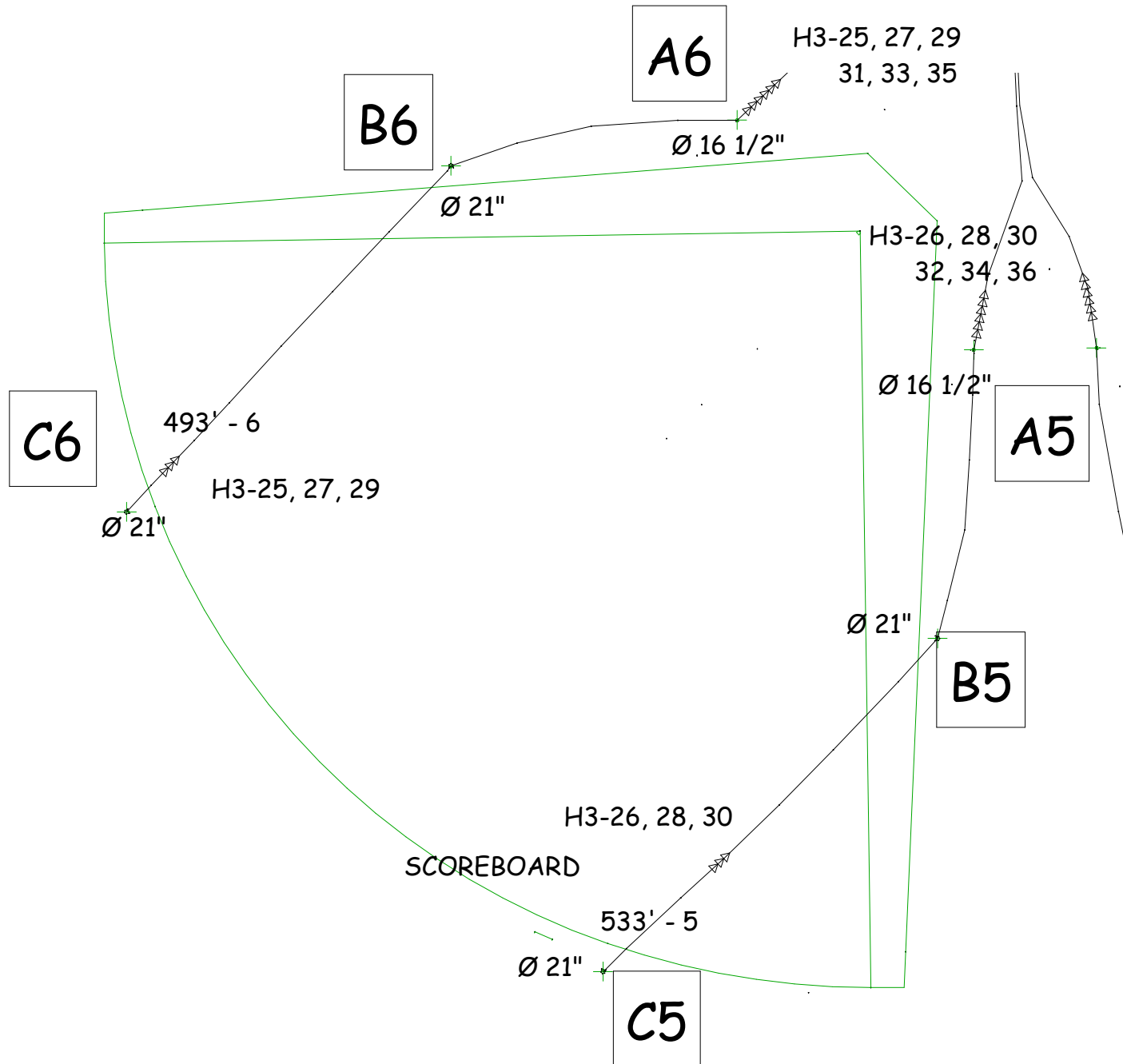
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SHEET NO.

BE-2

10/25/2021 8:42:38 AM 11X17 SHEET

10/25/2021 8:42:39 AM 11X17 SHEET



1

MOUNT GARFIELD FIELD

1/64" = 1'-0"

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ACTUAL UNDERGROUND ROUTING

DRAWN: JMH CHECKED: MN

PROJECT: CANYON VIEW PARK

SCALE: 1/64" = 1'-0"

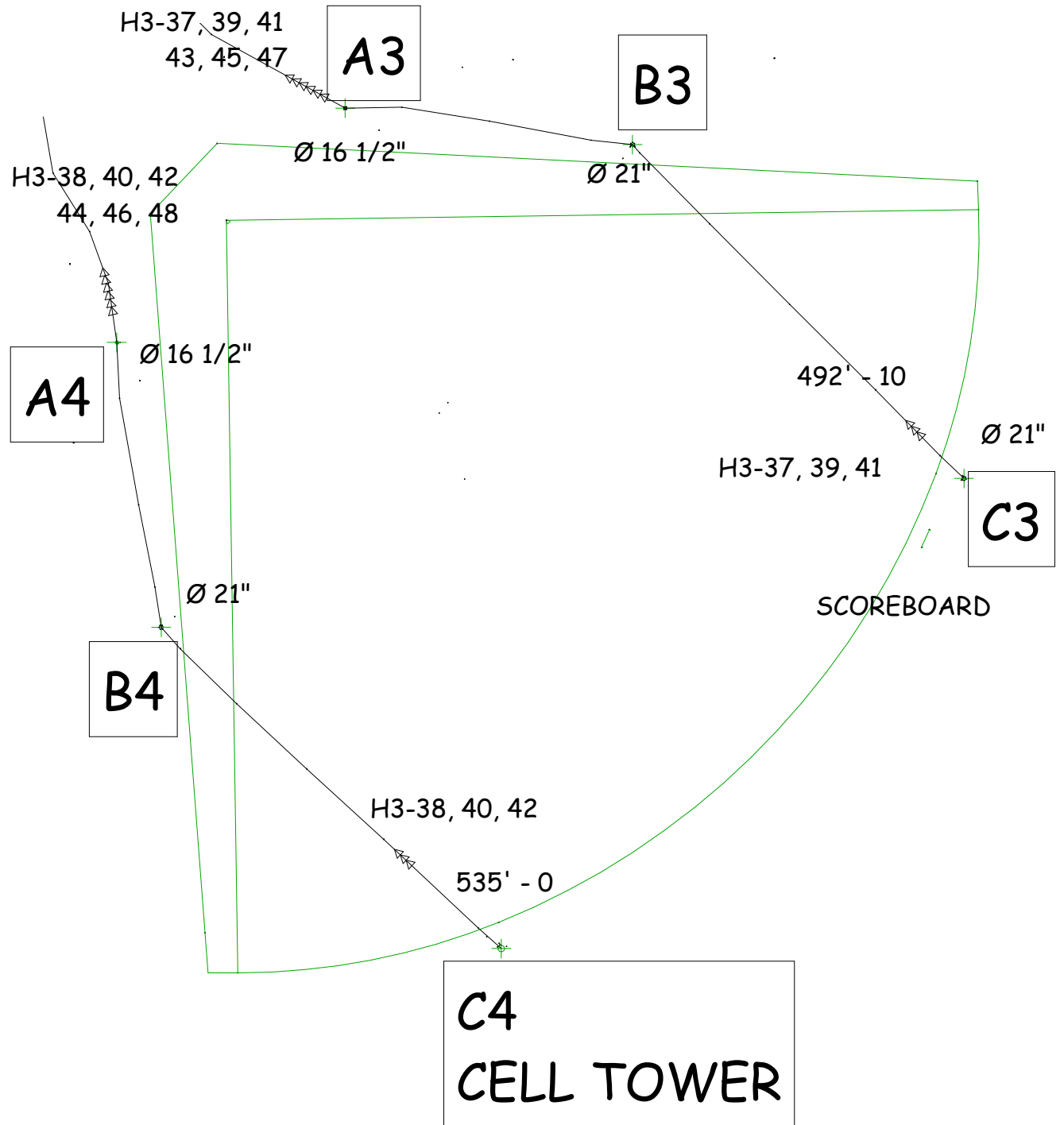
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10/25/2021 8:42:39 AM

SHEET NO.

BE-3



1 BOOKCLIFF FIELD
 1/64" = 1'-0"

10/25/2021 8:42:39 AM 11X17 SHEET

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ACTUAL UNDERGROUND ROUTING

DRAWN: JMH CHECKED: MN

PROJECT: CANYON VIEW PARK

SCALE: 1/64" = 1'-0"

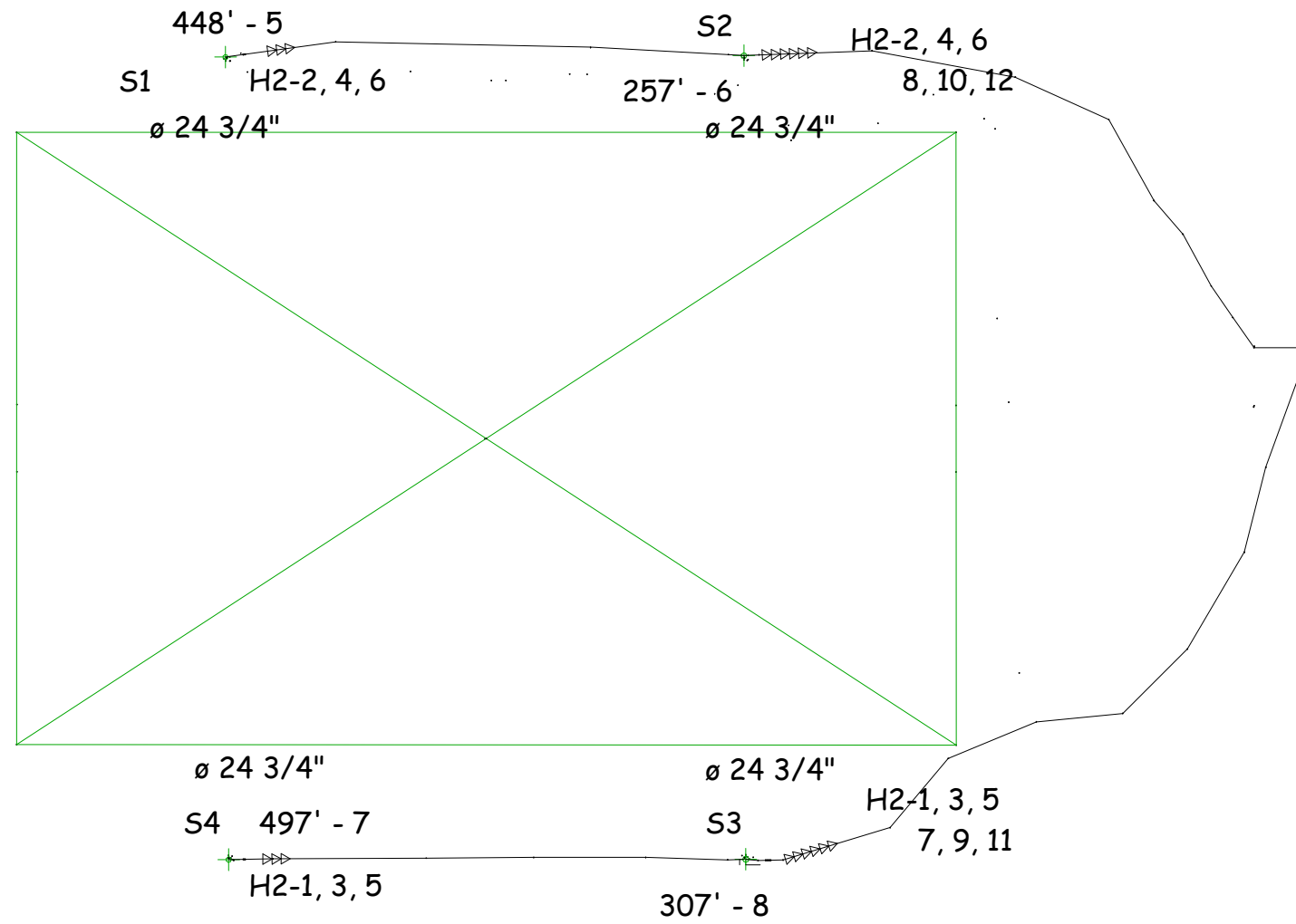
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SHEET TITLE: BOOKCLIFF FIELD

10/25/2021 8:42:39 AM

SHEET NO.

BE-4



1

SOCCER
1/64" = 1'-0"



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| No. | DESCRIPTION | DATE |
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| ACTUAL UNDERGROUND ROUTING | |
| | |
| | |
| DRAWN: JMH | CHECKED: MN |

| |
|---------------------------|
| PROJECT: CANYON VIEW PARK |
| SCALE: 1/64" = 1'-0" |
| PROJECT No:PROJECT NUMBER |

| |
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| SHEET TITLE: SOCCER |
| |
| 10/25/2021 8:42:39 AM |

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| SHEET NO. |
| BE-5 |

10/25/2021 8:42:39 AM 11X17 SHEET

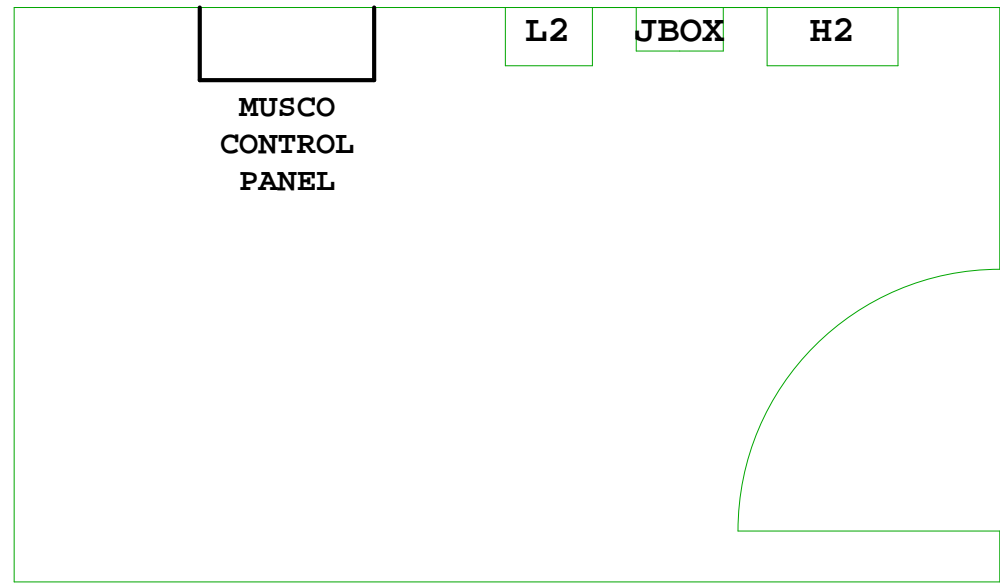


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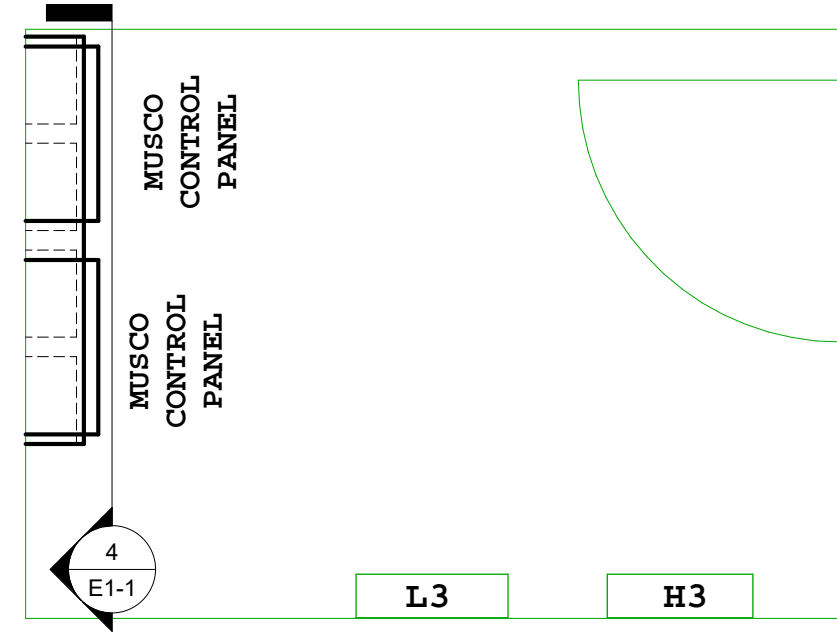
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ELECTRICAL ROOMS

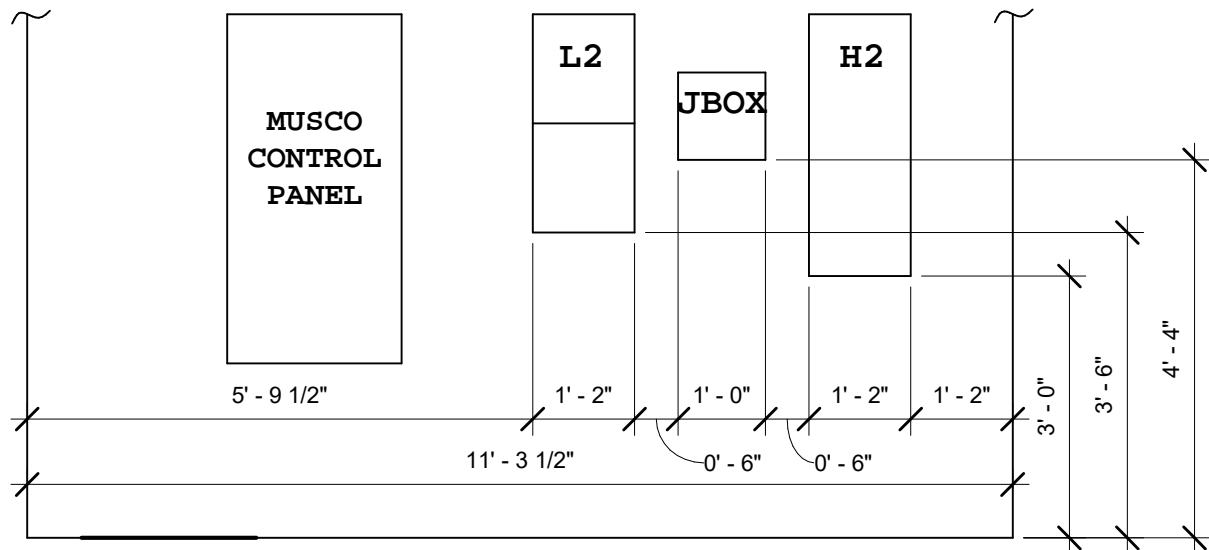
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1 Soccer Electrical Rooms
1/2" = 1'-0"

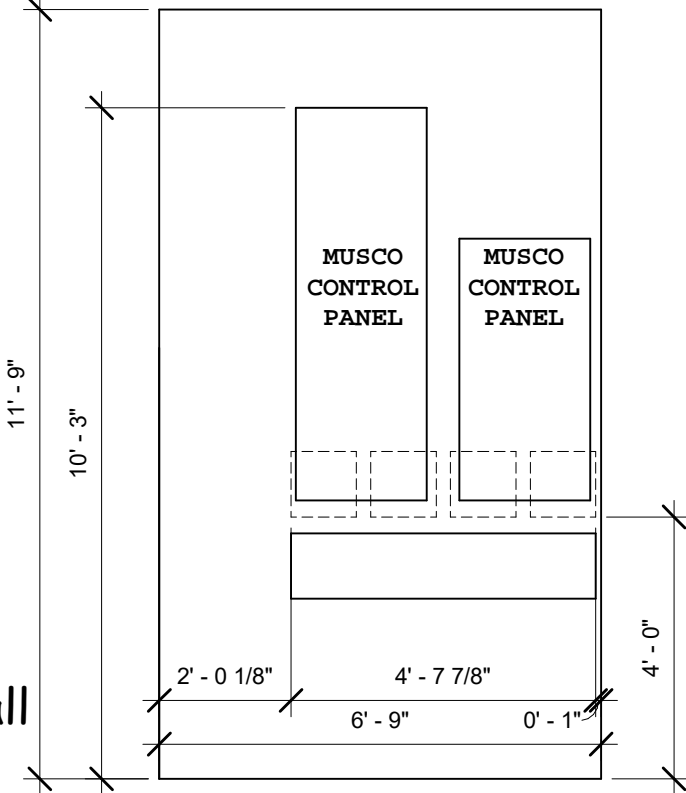


2 Baseball Electrical Room
1/2" = 1'-0"



3 Soccer East Wall
1/2" = 1'-0"

NOTES: DASHED LINES TO BE DEMO'D.



4 Baseball North Wall
3/8" = 1'-0"

8/23/2021 10:38:22 AM 11X17 SHEET

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| REVISIONS | | |
|-----------|-------------|------|
| No. | DESCRIPTION | DATE |
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DRAWN BY: JMH
CHECKED BY: MN

PROJECT: Canyon View Park
SCALE: AS INDICATED
PROJECT No: N/A

SHEET TITLE: Elec. Rm.
8/23/2021 10:38:22 AM

SHEET NO.
E1-1



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Panel H2 - Soccer

277/480V 3 Ø 4 Wire

| CKT | DESCRIPTION | CKT | DESCRIPTION |
|-----|-------------|-----|----------------|
| 1 | POLE S4 LTS | 2 | POLE S1 LTS |
| 3 | POLE S4 LTS | 4 | POLE S1 LTS |
| 5 | POLE S4 LTS | 6 | POLE S1 LTS |
| 7 | POLE S3 LTS | 8 | POLE S2 LTS |
| 9 | POLE S3 LTS | 10 | POLE S2 LTS |
| 11 | POLE S3 LTS | 12 | POLE S2 LTS |
| 13 | SPARE | 14 | PEDESTRIAN LTS |
| 15 | SPARE | 16 | SPACE |
| 17 | SPARE | 18 | SPACE |
| 19 | MHW | 20 | SPACE |
| 21 | MHW | 22 | SPACE |
| 23 | MHW | 24 | PANEL L2 |
| 25 | SPARE | 26 | PANEL L2 |
| 27 | SPARE | 28 | SPACE |
| 29 | SPARE | 30 | SPACE |



Control System Summary

Canyon View Park / 192421 - 192421Prod
Soccer Fields - Page 4 of 8

| PANEL SUMMARY | | | | | | |
|---------------|-------------------------|--------------|---------------------|----------------|-----------------------------------|--------------------------------------|
| CABINET # | CONTROL MODULE LOCATION | CONTACTOR ID | CIRCUIT DESCRIPTION | FULL LOAD AMPS | DISTRIBUTION PANEL ID (BY OTHERS) | CIRCUIT BREAKER POSITION (BY OTHERS) |
| 1 | 1 | C1 | Pole S1 | 12.82 | Panel H2 | 2, 4, 6 |
| 1 | 1 | C2 | Pole S2 | 12.82 | Panel H2 | 8, 10, 12 |
| 1 | 1 | C3 | Pole S3 | 12.82 | Panel H2 | 7, 9, 11 |
| 1 | 1 | C4 | Pole S4 | 12.82 | Panel H2 | 1, 3, 5 |

| ZONE SCHEDULE | | | | |
|---------------|-----------------|------------------|---------------------|--------------|
| ZONE | SELECTOR SWITCH | ZONE DESCRIPTION | CIRCUIT DESCRIPTION | |
| | | | POLE ID | CONTACTOR ID |
| Zone 1 | 1 | Soccer | S1 | C1 |
| | | | S2 | C2 |
| | | | S3 | C3 |
| | | | S4 | C4 |



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Panel H3 - Softball

277/480V 3 Ø 4 Wire

| CKT | DESCRIPTION | CKT | DESCRIPTION |
|-----|-------------------------------------|-----|-------------------------------------|
| 1 | POLE C2 LTS - LIBERTY CAP | 2 | POLE C1 LTS - LIBERTY CAP |
| 3 | POLE C2 LTS - LIBERTY CAP | 4 | POLE C1 LTS - LIBERTY CAP |
| 5 | POLE C2 LTS - LIBERTY CAP | 6 | POLE C1 LTS - LIBERTY CAP |
| 7 | POLE A2 & B2 LTS - LIBERTY CAP | 8 | POLE A1 & B1 LTS - LIBERTY CAP |
| 9 | POLE A2 & B2 LTS - LIBERTY CAP | 10 | POLE A1 & B1 LTS - LIBERTY CAP |
| 11 | POLE A2 & B2 LTS - LIBERTY CAP | 12 | POLE A1 & B1 LTS - LIBERTY CAP |
| 13 | POLE C7 LTS - THUNDER MOUNTAIN | 14 | POLE C8 LTS - THUNDER MOUNTAIN |
| 15 | POLE C7 LTS - THUNDER MOUNTAIN | 16 | POLE C8 LTS - THUNDER MOUNTAIN |
| 17 | POLE C7 LTS - THUNDER MOUNTAIN | 18 | POLE C8 LTS - THUNDER MOUNTAIN |
| 19 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 20 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 21 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 22 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 23 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 24 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 25 | POLE C6 LTS - MOUNT GARFIELD | 26 | POLE C5 LTS - MOUNT GARFIELD |
| 27 | POLE C6 LTS - MOUNT GARFIELD | 28 | POLE C5 LTS - MOUNT GARFIELD |
| 29 | POLE C6 LTS - MOUNT GARFIELD | 30 | POLE C5 LTS - MOUNT GARFIELD |
| 31 | POLE A6 & B6 LTS - MOUNT GARFIELD | 32 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 33 | POLE A6 & B6 LTS - MOUNT GARFIELD | 34 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 35 | POLE A6 & B6 LTS - MOUNT GARFIELD | 36 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 37 | POLE C3 LTS - BOOKCLIFF | 38 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 39 | POLE C3 LTS - BOOKCLIFF | 40 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 41 | POLE C3 LTS - BOOKCLIFF | 42 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 43 | POLE A3 & B3 LTS - BOOKCLIFF | 44 | POLE A4 & B4 LTS - BOOKCLIFF |
| 45 | POLE A3 & B3 LTS - BOOKCLIFF | 46 | POLE A4 & B4 LTS - BOOKCLIFF |
| 47 | POLE A3 & B3 LTS - BOOKCLIFF | 48 | POLE A4 & B4 LTS - BOOKCLIFF |
| 49 | HWH | 50 | HWH |
| 51 | HWH | 52 | HWH |
| 53 | HWH | 54 | HWH |
| 55 | SPARE | 56 | PANEL L3 |
| 57 | SPARE | 58 | PANEL L3 |
| 59 | SPARE | 60 | PANEL L3 |
| 61 | SPACE | 62 | SPACE |
| 63 | SPACE | 64 | SPACE |
| 65 | SPACE | 66 | SPACE |
| 67 | SPACE | 68 | SPACE |
| 69 | SPACE | 70 | SPACE |
| 71 | SPACE | 72 | SPACE |
| 73 | SPACE | 74 | SPACE |
| 75 | SPACE | 76 | SPACE |
| 77 | SPACE | 78 | SPACE |
| 79 | SPACE | 80 | SPACE |
| 81 | SPACE | 82 | SPACE |
| 83 | SPACE | 84 | SPACE |

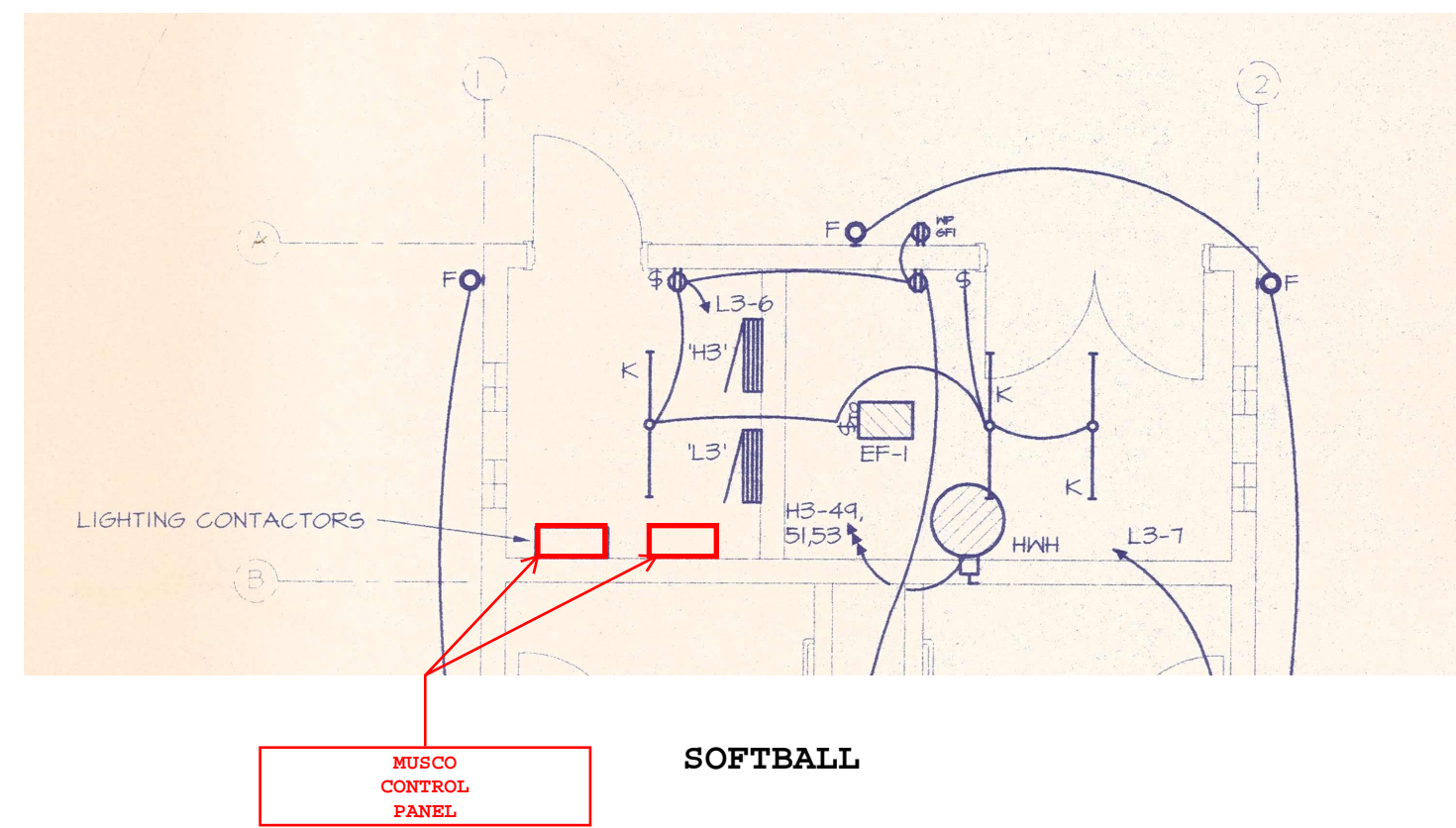
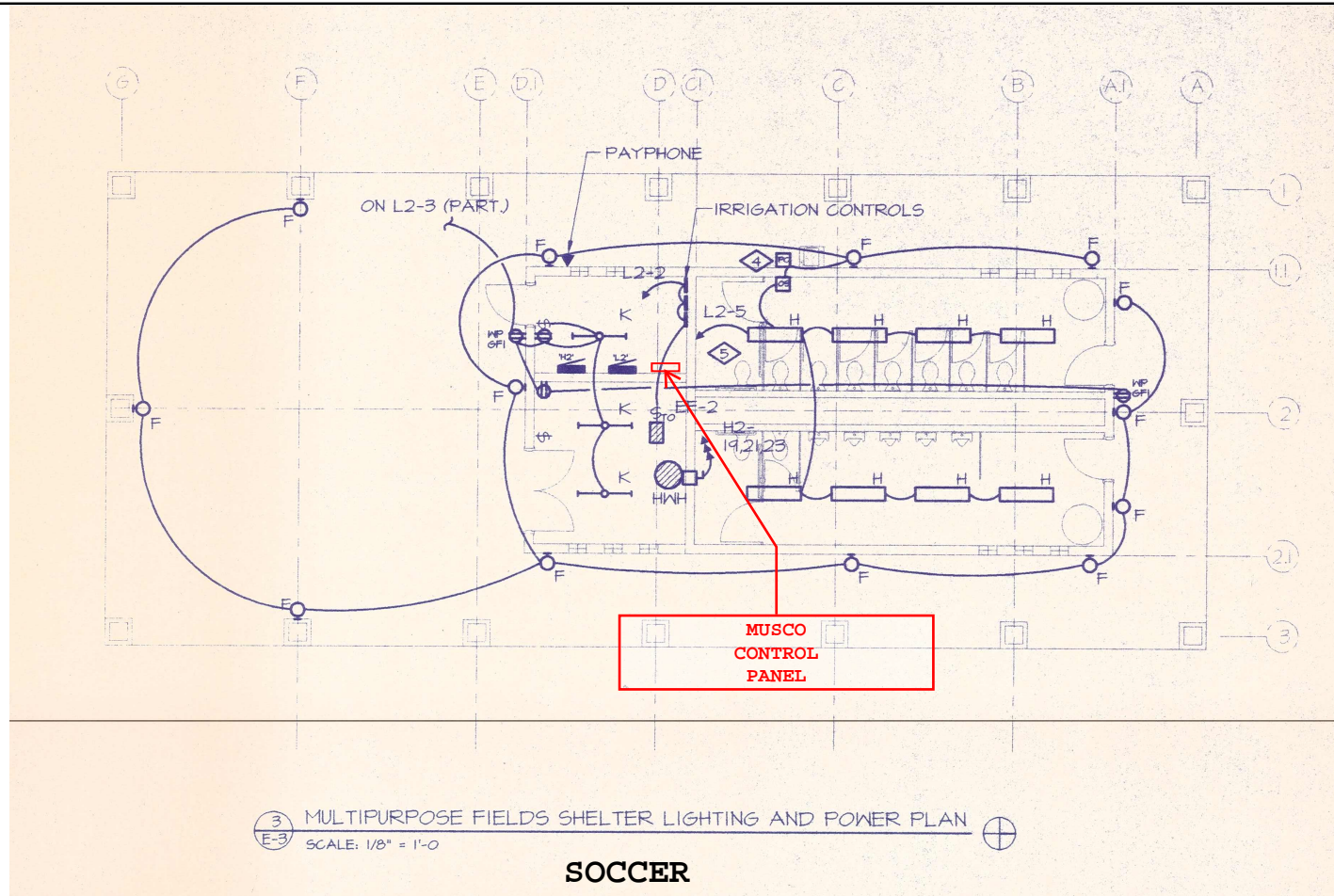


Control System Summary

Canyon View Park / 192421 -
Softball Fields - Page 8 of 8

| PANEL SUMMARY | | | | | | |
|---------------|-------------------------|--------------|---------------------|----------------|-----------------------------------|--------------------------------------|
| CABINET # | CONTROL MODULE LOCATION | CONTACTOR ID | CIRCUIT DESCRIPTION | FULL LOAD AMPS | DISTRIBUTION PANEL ID (BY OTHERS) | CIRCUIT BREAKER POSITION (BY OTHERS) |
| 2 | 2 | C1 | Pole A1,B1 | 21.85 | Panel H3 | 8, 10, 12 |
| 2 | 2 | C2 | Pole A2,B2 | 23.11 | Panel H3 | 7, 9, 11 |
| 2 | 2 | C3 | Pole C1 | 8.92 | Panel H3 | 2, 4, 6 |
| 2 | 2 | C4 | Pole C2 | 8.92 | Panel H3 | 1, 3, 5 |
| 2 | 2 | C5 | Pole A3,B3 | 23.69 | Panel H3 | 43, 45, 47 |
| 2 | 2 | C6 | Pole A4,B4 | 21.16 | Panel H3 | 44, 46, 48 |
| 2 | 2 | C7 | Pole C3 | 8.92 | Panel H3 | 37, 39, 41 |
| 2 | 2 | C8 | Pole C4 | 8.92 | Panel H3 | 38, 40, 42 |
| 2 | 2 | C9 | Pole A5,B5 | 23.69 | Panel H3 | 32, 34, 36 |
| 2 | 2 | C10 | Pole A6,B6 | 21.16 | Panel H3 | 31, 33, 35 |
| 2 | 2 | C11 | Pole C5 | 8.92 | Panel H3 | 26, 28, 30 |
| 2 | 2 | C12 | Pole C6 | 8.92 | Panel H3 | 25, 27, 29 |
| 3 | 2 | C13 | Pole A7,B7 | 23.69 | Panel H3 | 19, 21, 23 |
| 3 | 2 | C14 | Pole A8,B8 | 21.16 | Panel H3 | 20, 22, 24 |
| 3 | 2 | C15 | Pole C7 | 8.92 | Panel H3 | 13, 15, 17 |
| 3 | 2 | C16 | Pole C8 | 8.92 | Panel H3 | 14, 16, 18 |

| ZONE SCHEDULE | | | | |
|---------------|-----------------|------------------------|---------------------|--------------|
| ZONE | SELECTOR SWITCH | ZONE DESCRIPTION | CIRCUIT DESCRIPTION | |
| | | | POLE ID | CONTACTOR ID |
| Zone 1 | 1 | Liberty Cap Field | A1 | C1 |
| | | | B1 | C1 |
| | | | A2 | C2 |
| | | | B2 | C2 |
| | | | C1 | C3 |
| | | | C2 | C4 |
| Zone 2 | 2 | Bookcliff Field | A3 | C5 |
| | | | B3 | C5 |
| | | | A4 | C6 |
| | | | B4 | C6 |
| | | | C3 | C7 |
| | | | C4 | C8 |
| Zone 3 | 3 | Mt Garfield Field | A5 | C9 |
| | | | B5 | C9 |
| | | | A6 | C10 |
| | | | B6 | C10 |
| | | | C5 | C11 |
| | | | C6 | C12 |
| Zone 4 | 4 | Thunder Mountain Field | A7 | C13 |
| | | | B7 | C13 |
| | | | A8 | C14 |
| | | | B8 | C14 |
| | | | C7 | C15 |
| | | | C8 | C16 |



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 COLORADO SPRINGS, CO 80907
 PH: 719-632-7683 FX: 719-471-9660

| No. | Description | Date |
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DRAWN BY: _____ CHECKED BY: _____

PROJECT: _____
 PROJECT No: _____
 SCALE: _____

SHEET TITLE: _____
 ISSUED: _____

SHEET NO.

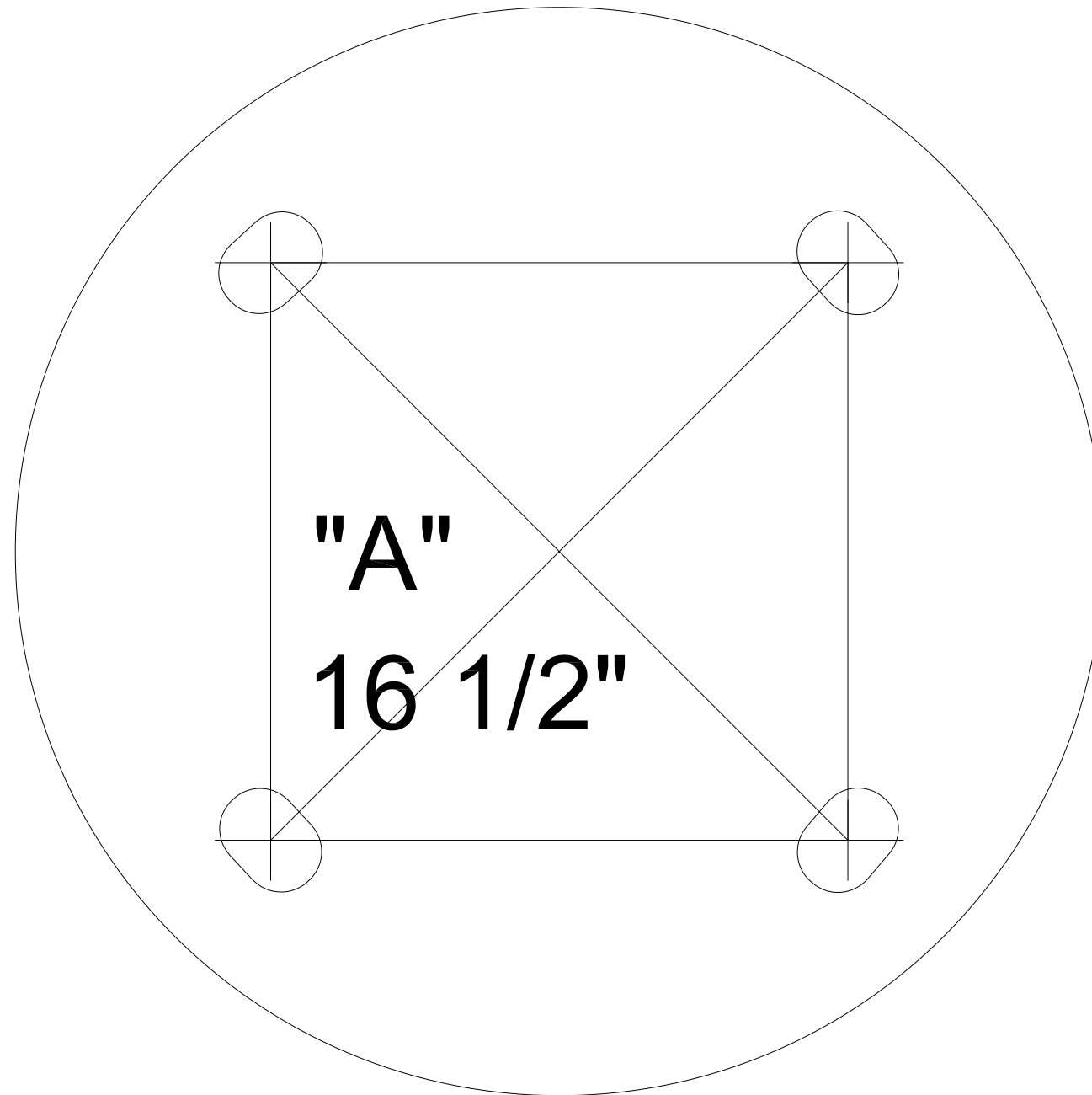


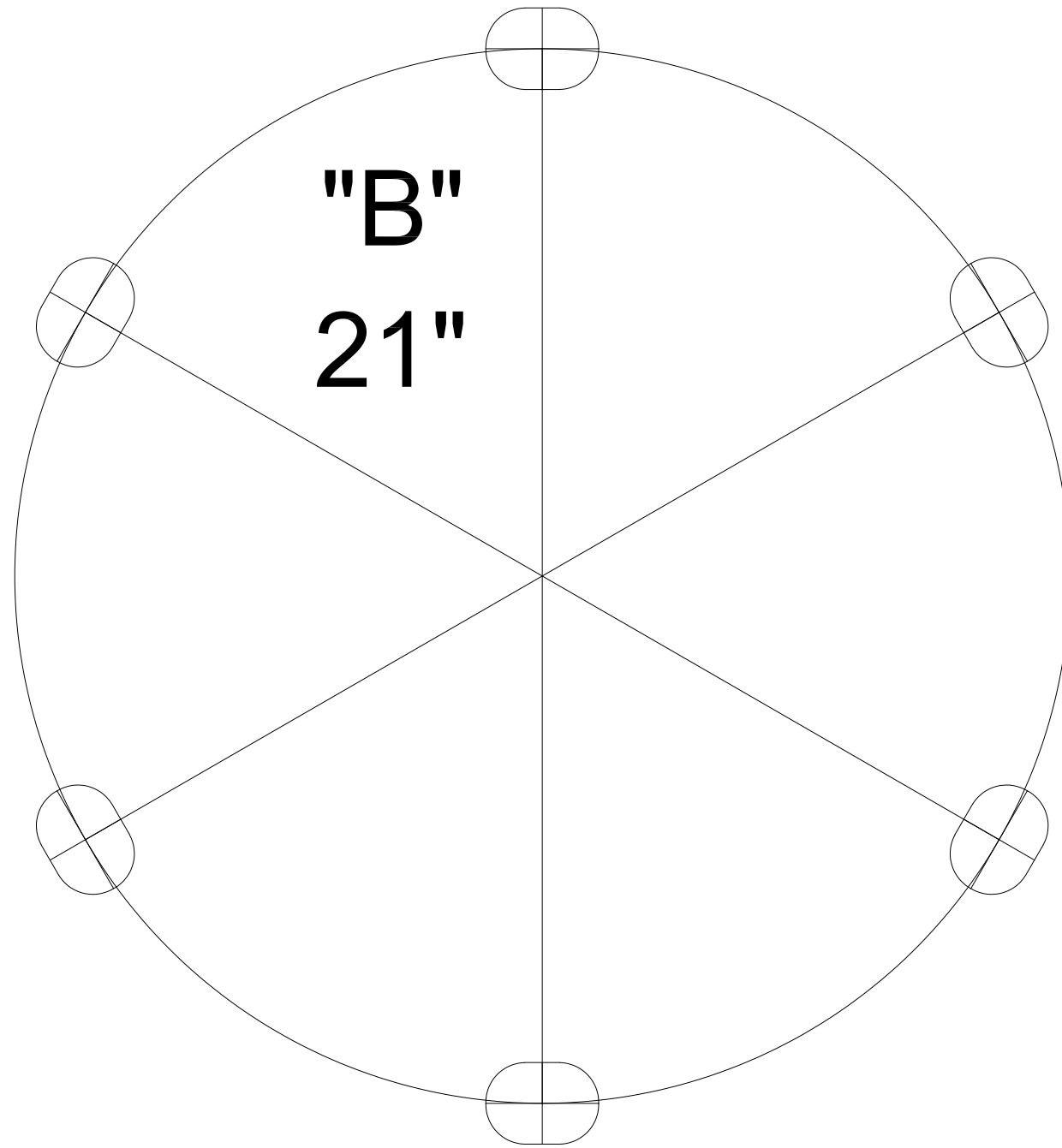
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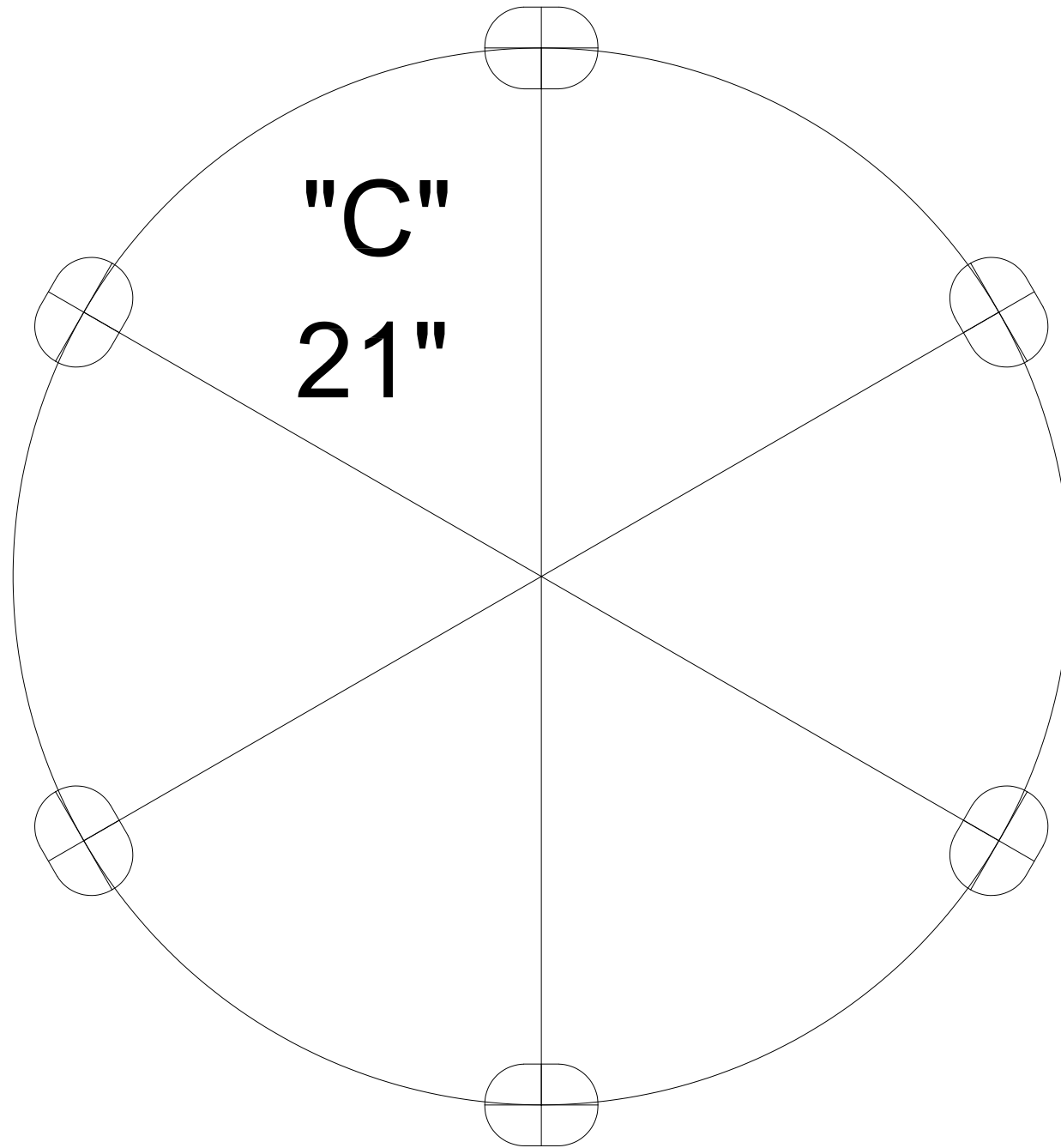
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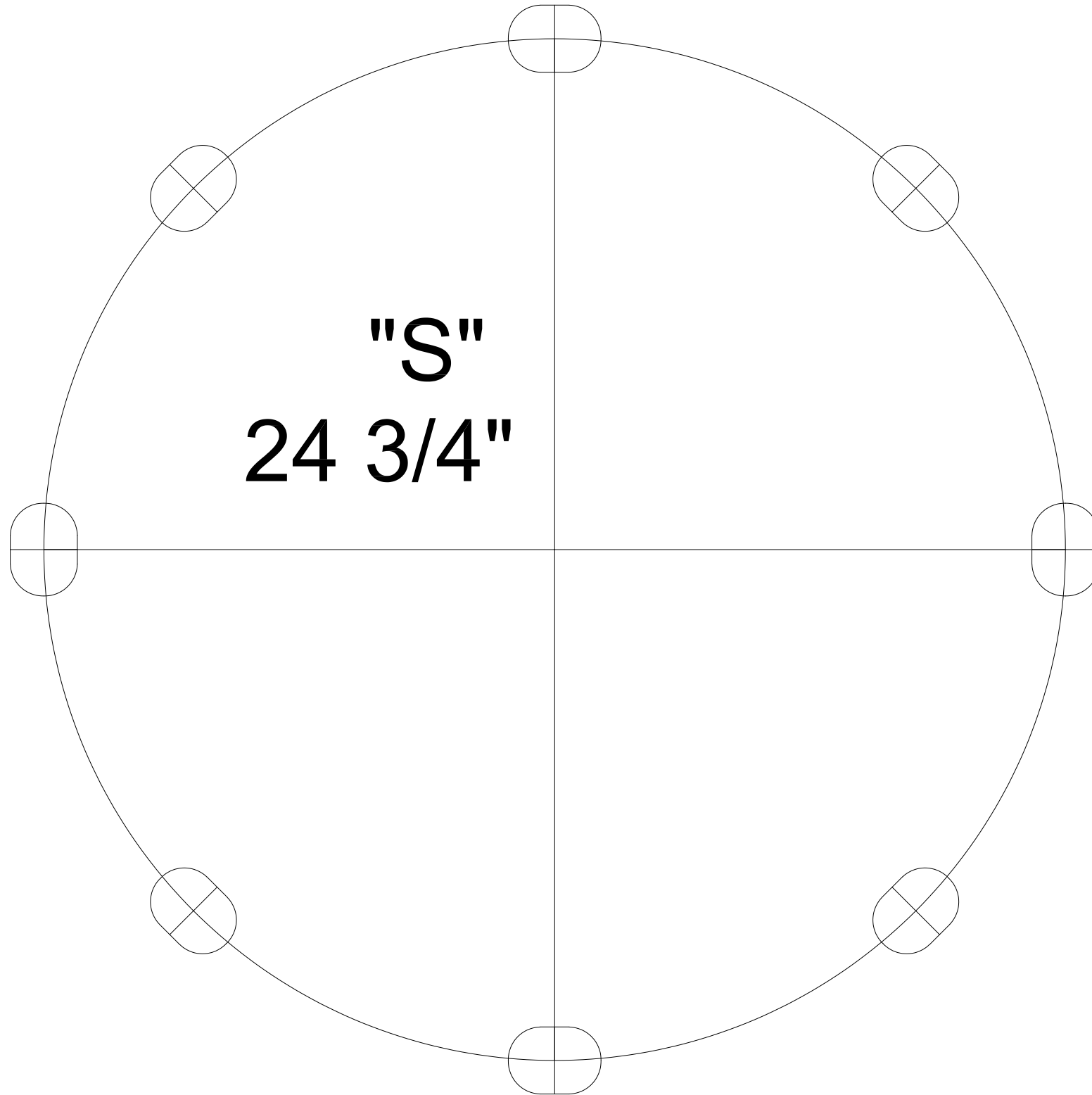
BASE TEMPLATES

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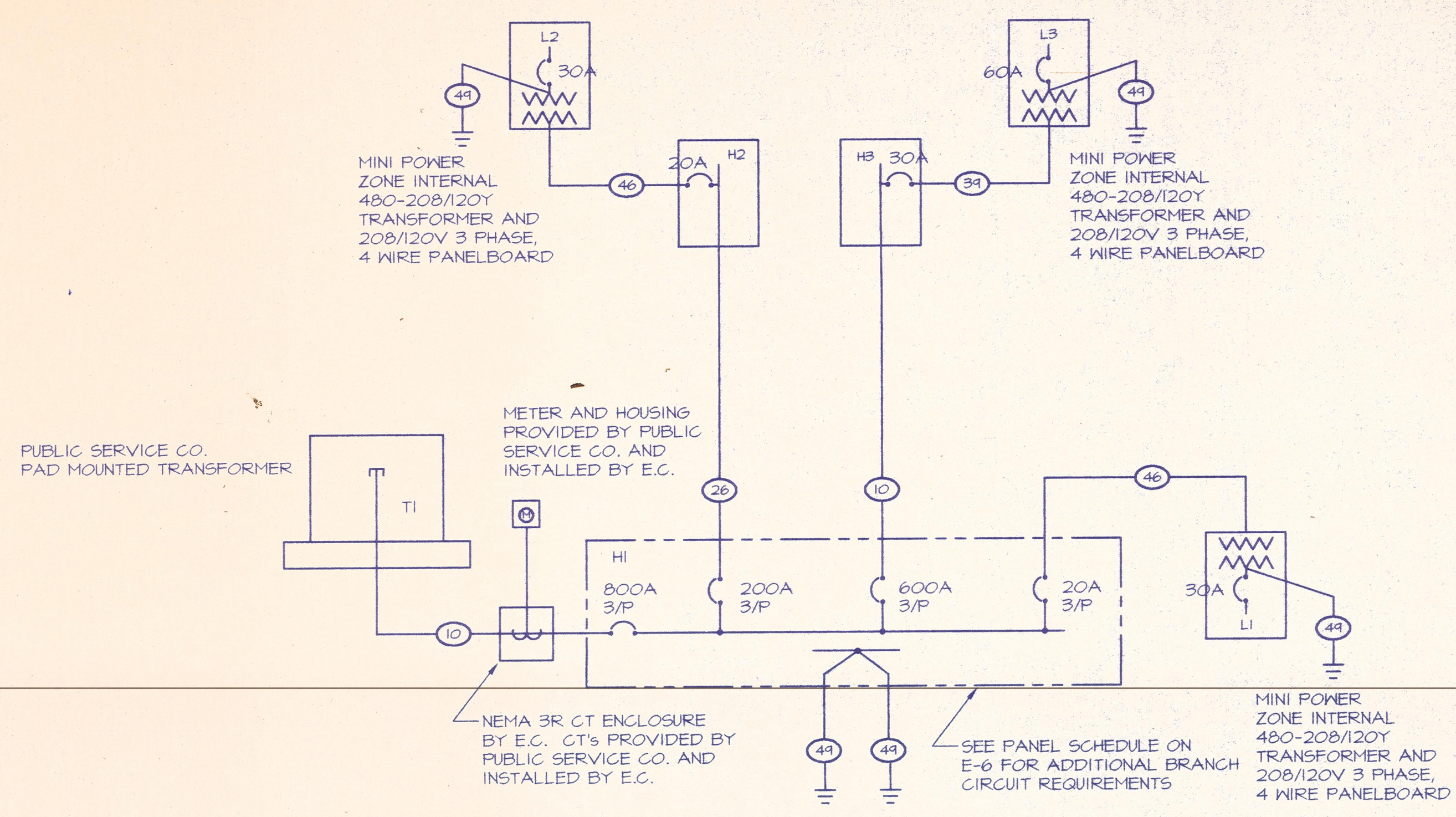
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ORIGINAL CANYON VIEW PARK DRAWINGS

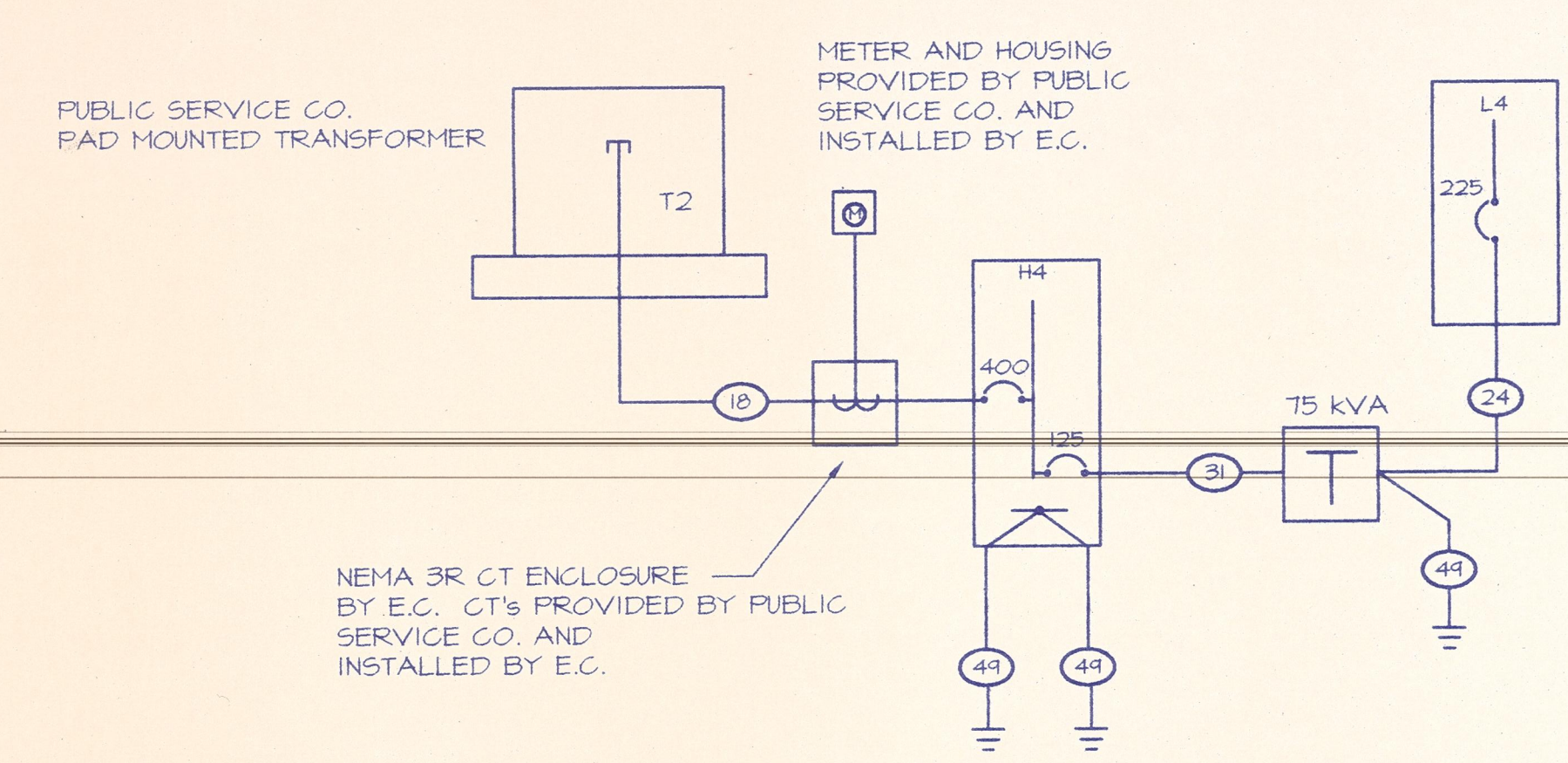
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POWER QUALITY • DATACOMM • INDUSTRIAL

Issue Record/Revision

| Purpose | Date |
|---------|------|
| | |
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PARK AREA ELECTRICAL ONE-LINE DIAGRAM
 NO SCALE



MAINTENANCE AREA ELECTRICAL ONE-LINE DIAGRAM
 NO SCALE

FEEDER SCHEDULE

| FEEDER NO. | FEEDER CONDUCTORS | PHASE | AMPERERS |
|------------|----------------------------------|-------|----------|
| 1 | UNASSIGNED | | |
| 2 | UNASSIGNED | | |
| 3 | 3(4-800MCM, 3-1/2" C) | 3-4N | 3000 |
| 4 | 3(4-400MCM, 1-250MCM-3" C) | 3-4N6 | 2000 |
| 5 | 3(3-350MCM, 1-3/16-3" C) | 3-3N6 | 1200 |
| 6 | 3(4-350MCM, 1-3/16-3" C) | 3-4N6 | 1200 |
| 7 | 3(3-400MCM, 1-2/16-3" C) | 3-3N6 | 1000 |
| 8 | 3(4-400MCM, 1-2/16-3" C) | 3-4N6 | 1000 |
| 9 | 3(3-300MCM, 1-1/16-2 1/2" C) | 3-3N6 | 800 |
| 10 | 3(4-300MCM, 1-1/16-3" C) | 3-4N6 | 800 |
| 11 | 3(3-250MCM, 1-1/16-3" C) | 3-3N6 | 750 |
| 12 | 3(4-250MCM, 1-1/16-3" C) | 3-4N6 | 750 |
| 13 | 2(3-350MCM, 1#6-3" C) | 3-3N6 | 600 |
| 14 | 2(4-350MCM, 1#6-3" C) | 3-4N6 | 600 |
| 15 | 2(3-250MCM, 1#26-3" C) | 3-3N6 | 500 |
| 16 | 2(4-250MCM, 1#26-3" C) | 3-4N6 | 500 |
| 17 | 2(3-3/0, 1#36-2" C) | 3-3N6 | 400 |
| 18 | 2(4-3/0, 1#36-2" C) | 3-4N6 | 400 |
| 19 | 2(3-2/0, 1#36-2" C) | 3-3N6 | 350 |
| 20 | 2(4-2/0, 1#36-2" C) | 3-4N6 | 350 |
| 21 | 3-350MCM, 1#46-3" C | 3-3N6 | 300 |
| 22 | 4-350MCM, 1#46-3" C | 3-4N6 | 300 |
| 23 | 3-250MCM, 1#46-3" C | 3-3N6 | 250 |
| 24 | 4-250MCM, 1#46-3" C | 3-4N6 | 250 |
| 25 | 3-4/0, 1#46-2" C | 3-3N6 | 225 |
| 26 | 4-4/0, 1#46-2 1/2" C | 3-4N6 | 225 |
| 27 | 3-3/0, 1#66-2" C | 3-3N6 | 200 |
| 28 | 4-3/0, 1#66-2" C | 3-4N6 | 200 |
| 29 | 3-2/0, 1#66-2" C | 3-3N6 | 175 |
| 30 | 4-2/0, 1#66-2" C | 3-4N6 | 175 |
| 31 | 3-1/0, 1#66-2" C | 3-3N6 | 125-150 |
| 32 | 4-1/0, 1#66-2" C | 3-4N6 | 125-150 |
| 33 | 3#1, 1#66-1 1/2" C | 3-3N6 | 100-110 |
| 34 | 4#1, 1#66-1 1/2" C | 3-4N6 | 100-110 |
| 35 | 3#2, 1#66-1 1/4" C | 3-3N6 | 90 |
| 36 | 4#2, 1#66-1 1/4" C | 3-4N6 | 90 |
| 37 | 3#3, 1#66-1 1/4" C | 3-3N6 | 80 |
| 38 | 4#3, 1#66-1 1/4" C | 3-4N6 | 80 |
| 39 | 3#4, 1#66-1 1/4" C | 3-3N6 | 60-70 |
| 40 | 4#4, 1#66-1 1/4" C | 3-4N6 | 60-70 |
| 41 | 3#6, 1#106-1" C | 3-3N6 | 50 |
| 42 | 4#6, 1#106-1" C | 3-4N6 | 50 |
| 43 | 3#8, 1#106-1" C | 3-3N6 | 40 |
| 44 | 4#8, 1#106-1" C | 3-4N6 | 40 |
| 45 | 3#10, 1#106-3/4" C | 3-3N6 | 30 |
| 46 | 4#10, 1#106-3/4" C | 3-4N6 | 30 |
| 47 | 3#12, 1#126-3/4" C | 3-3N6 | 20 |
| 48 | 4#12, 1#126-3/4" C | 3-4N6 | 20 |
| 49 | 1-#26-1/2" C | 6 | |
| 50 | 3#2/0, 2#2/0 N, 1#66-2" C | 3-4N6 | 150 |
| 51 | 3-250MCM, 2-250MCM N, 1#46-3" C | 3-4N6 | 250 |
| 52 | 2(3-3/0, 2-3/0 N, 1#36-2 1/2" C) | 3-4N6 | 400 |

NOTE: ALL CONDUCTORS ARE 1/8" THIN COPPER UNLESS NOTED OTHERWISE.

ELECTRICAL LEGEND

NOTE: ALL ITEMS MAY NOT APPEAR ON DRAWINGS

| | | | |
|---|---|---|------------------------------------|
| ⊖ | GROUNDING SWITCHED DUPLEX RECEPTACLE | ☐ | FIRE HORN OR SPEAKER WITH STROBE |
| ⊖ | GROUNDING SPLIT-WIRED RECEPTACLE | ⊙ | PORCELAIN LAMP HOLDER |
| ⊖ | GROUNDING DUPLEX RECEPTACLE | ◻ | RECESSED LIGHT FIXTURE |
| ⊖ | GROUNDING QUADRAPLEX RECEPTACLE | ◻ | EMERGENCY FIXTURE - SHADED |
| ⊖ | SPECIAL PURPOSE RECEPTACLE | ◻ | SURFACE MOUNTED LIGHT FLUORESCENT |
| ⊖ | FLOOR MOUNTED RECEPTACLE | ⊙ | CEILING FIXTURE |
| ⊖ | FLOOR MOUNTED DATA OUTLET | ⊙ | HALLMASHER |
| ⊖ | FLOOR MOUNTED TELEPHONE OUTLET | ⊖ | STRIPLIGHT |
| ⊖ | DATA OUTLET | ⊖ | POLE MOUNTED AREA LIGHT |
| ⊖ | TELEPHONE/DATA OUTLET | ⊖ | POLE MOUNTED SPORTS LIGHT |
| ⊖ | TELEPHONE OUTLET | ⊖ | LARGE MOUNTED SPORTS LIGHT |
| ⊖ | JUNCTION BOX | ⊖ | HALL MOUNTED FIXTURE |
| ⊖ | HALL MOUNTED JUNCTION BOX | ⊖ | BATTERY PACK EMERGENCY LIGHT |
| ⊖ | EQUIPMENT DISCONNECT SWITCH | ⊖ | SINGLE POLE SWITCH |
| ⊖ | EQUIPMENT FUSED DISCONNECT SWITCH | ⊖ | DIMMER SWITCH |
| ⊖ | THERMAL OVERLOAD SWITCH | ⊖ | SPEAKER-PAGING AND OR SOUND SYSTEM |
| ⊖ | ELECTRICAL PANEL BOARD | ⊖ | PLUG-HOLD |
| ⊖ | TELEPHONE TERMINAL BOARD | ⊖ | ELECTRIC WATER COOLER |
| ⊖ | TRANSFORMER | ⊖ | EXHAUST FAN |
| → | HOME RUN TO PANEL - ARROWS INDICATES NUMBER OF CIRCUITS | ⊖ | GROUND FAULT INTERRUPTING |
| ⊖ | FIRE ALARM PANEL | ⊖ | CIRCUIT |
| ⊖ | FIRE ALARM REMOTE ANNUNCIATOR PANEL | ⊖ | ELECTRICAL CONTRACTOR |
| ⊖ | MANUAL PULL STATION | ⊖ | WEATHER PROOF |
| ⊖ | SMOKE DETECTOR | ⊖ | TELEPHONE TERMINAL BOARD |
| ⊖ | FIRE ALARM HORN & LIGHT | ⊖ | ABOVE FINISH FLOOR |
| ⊖ | DUCT FIRE DETECTOR | ⊖ | UNLESS OTHERWISE NOTED |
| ⊖ | REMOTE INDICATING LIGHT | ⊖ | EXISTING TO REMAIN |
| ⊖ | EXIT SIGN - SHADED INDICATES FACE | ⊖ | EXISTING TO BE RELOCATED |
| ⊖ | FIRE STROBE | ⊖ | EXISTING TO BE REMOVED |

LUMINAIRE SCHEDULE

| KEY | DESCRIPTION | LAMP | MOUNTING | MFR. & CAT. NO. | VOLTS | NOTE | MAX WATT |
|-----|--|--------------|-----------------------|--|-------|------|----------|
| A-1 | SPORT LIGHTING FIXTURE | 1500MH | 70' POLE | LITHONIA TV-1500M-NEMA4 | 480 | 2 | 1575 |
| A-2 | SPORT LIGHTING FIXTURE | 1500MH | 60' DR 70' POLE | LITHONIA TV-1500M-NEMA5 | 480 | 2 | 1575 |
| A-3 | SPORT LIGHTING FIXTURE | 1500MH | 60' POLE | LITHONIA TV-1500M-NEMA6 | 480 | 2 | 1575 |
| B | SPORT LIGHTING FIXTURE | 1000MH | 30' POLE | LITHONIA KSF3-1000M-R4 | 480 | | 1070 |
| B-2 | DOUBLE HEAD SPORTS LIGHTING FIXTURE | (2) 1000MH | 30' POLE | LITHONIA KSF3-1000M-R4 | 480 | | 2140 |
| C | WALKWAY LIGHT ON 12' POLE | 150MH | 12' POLE | STERNER FT A 10 3D P | 480 | 5 | 215 |
| E | STORAGE UPLIGHT | MH150 | GROUND | HYDEL 4530A-MH150/DUL | 277 | | 215 |
| F | BUILDING FLOOD LIGHT | F26DBX/SPX35 | SURFACE 9'-6" ON WALL | HUBBELL EURDLUXE BR-02 WITH BR-02 | 120 | 3 | 30 |
| H | VANDAL RESISTANT FLUORESCENT STRIP LIGHT | F32 | SURFACE CEILING | LITHONIA VR1 2 32 AR 120 | 120 | 1 | 64 |
| K | INDUSTRIAL STRIP LIGHT WITH WIREGUARD | (2) F32T8 | SURFACE CEILING | LITHONIA S132 HRS 120 WITH REFLECTORS SM40 & W68 WIREGUARD | 208 | 1 | 64 |
| L | INDUSTRIAL BUILDING FLOOD LIGHT | 100MH | SURFACE 9'-6" ON WALL | HUBBELL EURDLUXE BR-02 WITH BR-02 | 277 | | |
| M | SECURITY FLOODLIGHT | 400MH | AT POLE | LITHONIA TF400MTA120 | 120 | 4 | 460 |

- NOTES:
- COLD WEATHER BALLAST.
 - SPORTS FIELD LIGHTING DESIGN IS BASED ON LITHONIA FIXTURES. SEE ELECTRICAL SPECIFICATIONS FOR REQUIREMENTS FOR OTHER MANUFACTURERS.
 - MOUNT FIXTURE 8'-6" AT COLUMN LOCATIONS.
 - TO BE MOUNTED ON SOCCER FIELD LIGHTING POLE. COORDINATE MOUNTING WITH POLE MANUFACTURER.
 - FIXTURES TO HAVE INDIVIDUAL PHOTOCCELL CONTROL. SUPPLIED BY CONTRACTOR. POLE AND FIXTURE FINISH TO MATCH PARKING LOT FIXTURES.

PHASE 1
CANYON VIEW PARK
 CITY OF GRAND JUNCTION, COLORADO



Sheet Title
ELECTRICAL LEGEND, ONE-LINE SCHEDULES, AND DETAILS

CONSTRUCTION DOCUMENT SET

Date: **12-22-95**

Drawn By: **CLF**

Checked By: **LEY**

Project Number
72401

Sheet Number
E-1

INTERSTATE

Mt. Garfield Field

Thunder Mountain Field

Bookcliff Field

Liberty Cap Field

- GENERAL NOTES**
1. REFER TO SPECIFICATIONS FOR WIRE SIZES, CONDUIT FOR BRANCH CIRCUIT RUNS.
 2. ALL SPORTS LIGHTING FIXTURES TO BE FUSED NEAR THE LOWER PORTION OF POLES.
 3. SPORTS LIGHTING POLE LOCATIONS ARE APPROXIMATE. COORDINATE EXACT POLE LOCATIONS WITH OWNER'S REPRESENTATIVE DURING INSTALLATION.
 4. PROVIDE GROUNDING FOR LIGHTNING PROTECTION ON ALL SPORTS LIGHTING POLES AND SCOREBOARDS. CONNECT #6 CU WIRE FROM POLE GROUND LUGS TO 3/4" X 10' COPPER CLAD STEEL ROD DRIVEN INTO THE GROUND.
 5. FOR ALL FOUNDATION DETAILS REFER TO STRUCTURAL DRAWINGS.

- DETAIL NOTES: THIS SHEET ONLY**
- ⬠ SPORTS LIGHTING CONFIGURATION CONSISTS OF (2) TYPE 'A-3' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 80'-0" POLE. SEE (A).
 - ⬠ SPORTS LIGHTING CONFIGURATION CONSISTS OF (6) TYPE 'A-1' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 10'-0" POLE. SEE (A).
 - ⬠ SPORTS LIGHTING CONFIGURATION CONSISTS OF (6) TYPE 'A-1' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 10'-0" POLE. SEE (A).
 - ⬠ PROVIDE J-BOX AND 1" CONDUIT FROM SCORERS BOX TO SCOREBOARD AND LOCATION BEHIND HOME PLATE (SEE (C)) FOR SCOREBOARD CONTROLS. PROVIDE CONDUIT AND WIRING AS REQUIRED FOR SCOREBOARD POWER.
 - ⬠ SEE SHEET E3 FOR PANEL LOCATIONS.
 - ⬠ SEE SHEET E3 FOR ENLARGED PLANS.
 - ⬠ SEE SHEET E4 FOR PANEL LOCATIONS.
 - ⬠ SEE SHEET E4 FOR ENLARGED PLANS.
 - ⬠ CONNECTION FOR SCOREBOARD CONTROLS. INSTALL CONDUIT AND CONNECTIONS TO SCORERS BOX AND SCOREBOARD AS NECESSARY. FOR RECEPTACLE MOUNTING INFORMATION SEE (B).
 - ⬠ FOR RECEPTACLE MOUNTING INFORMATION SEE (B).
 - ⬠ PROVIDE LOCKABLE 277 V, 3 POLE, 30A, NEMA 3R SAFETY SWITCH NEAR BOTTOM OF POLE.

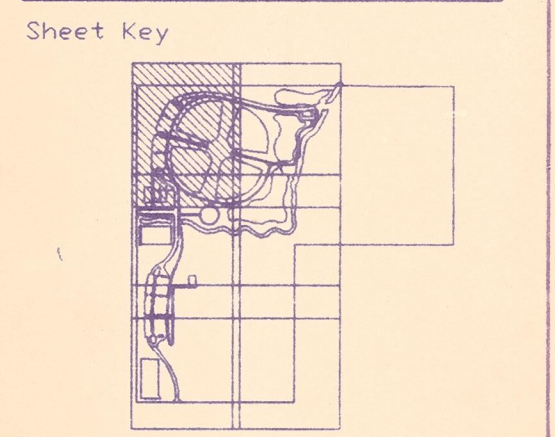
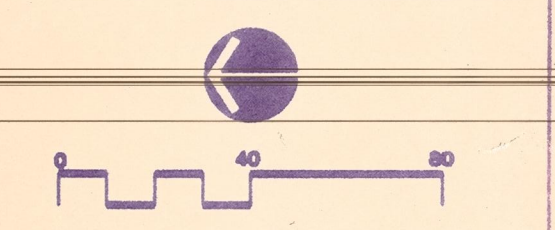
NOTE: INSTALL POLES MINIMUM 5' FROM OUTFIELD FENCE AS SHOWN. COORDINATE POLE LOCATIONS WITH CIVIL, UTILITY AND IRRIGATION DRAWINGS. TYPICAL FOR ALL OUTFIELD POLES.

WINSTON ASSOCIATES
 PLANNING AND LANDSCAPE ARCHITECTURE
 WINSTON ASSOCIATES, INC.
 1320 PEARL STREET MALL
 BOULDER, COLORADO 80302
 PHONE: (303) 440-9200 FAX: (303) 449-6911

Issue Record/Revision

| Purpose | Date |
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PHASE 1
CANYON VIEW PARK
 CITY OF GRAND JUNCTION, COLORADO



Sheet Title
LIGHTING AND POWER PLAN
 CONSTRUCTION DOCUMENT SET

Date: 12-22-95
 Drawn By: CLF
 Checked By: LEY
 Project Number: 72401
 Sheet Number: **E2-1**

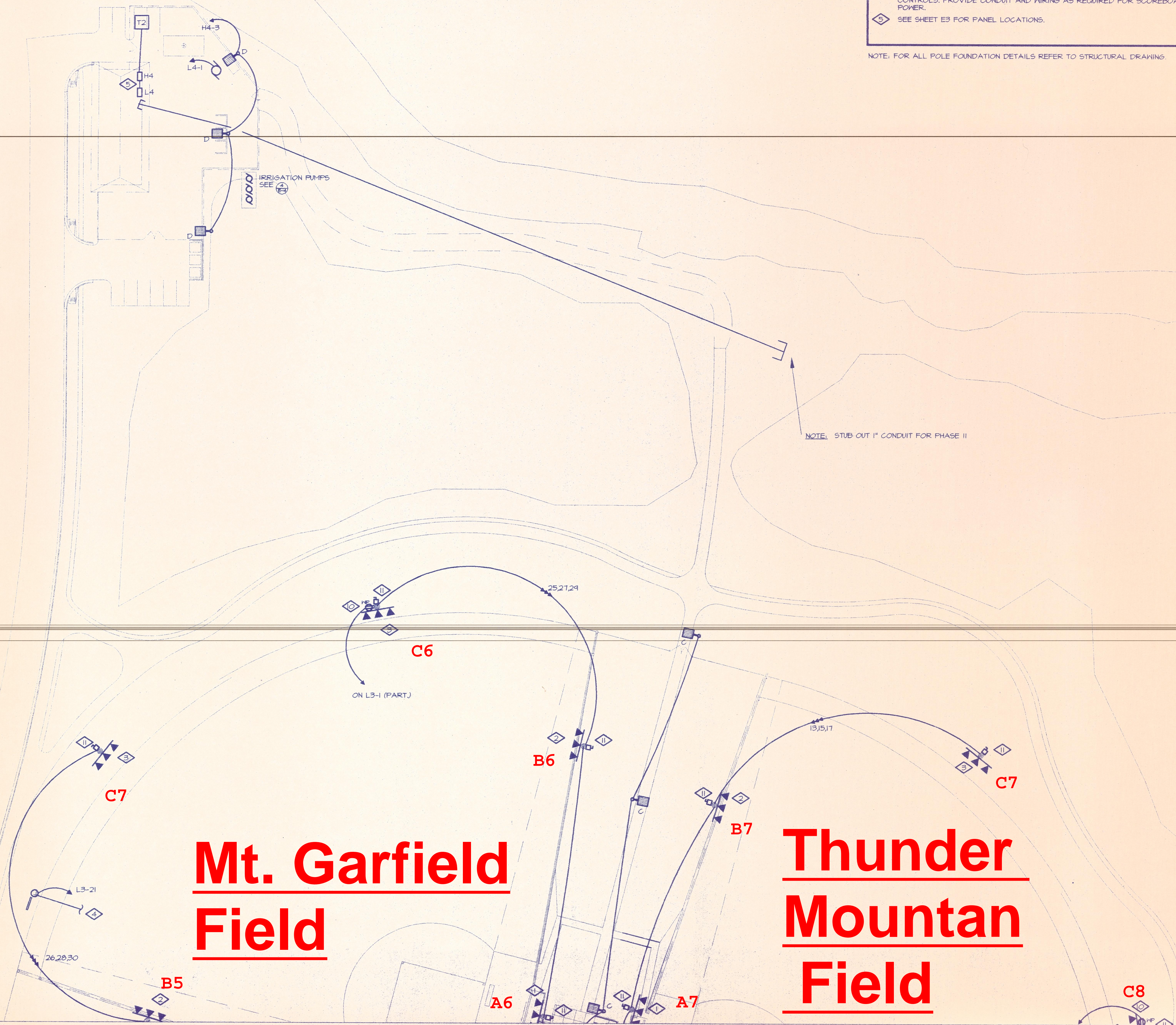
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DETAIL NOTES

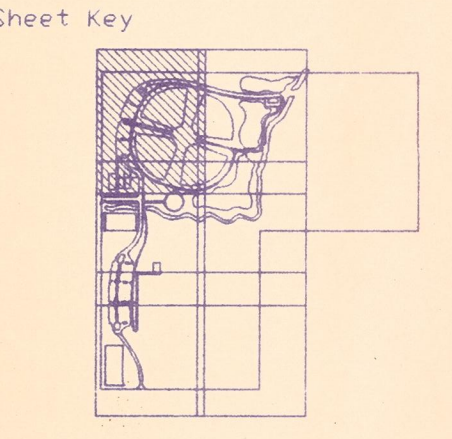
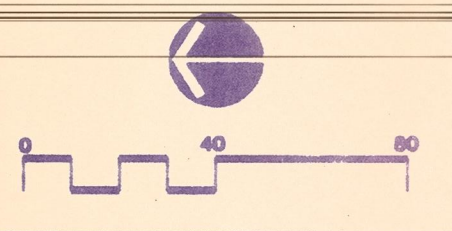
- 1 SPORTS LIGHTING CONFIGURATION CONSISTS OF (2) TYPE 'A-3' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 6'-0" POLE.
- 2 SPORTS LIGHTING CONFIGURATION CONSISTS OF (6) TYPE 'A-1' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 10'-0" POLE.
- 3 SPORTS LIGHTING CONFIGURATION CONSISTS OF (2) TYPE 'A-1' FIXTURES AND (1) TYPE 'A-2' FIXTURE MOUNTED ON 10'-0" POLE.
- 4 PROVIDE J-BOX AND 1" CONDUIT FROM SCORER'S BOX TO SCOREBOARD AND LOCATION BEHIND HOME PLATE (SEE \diamond ON E2-1) FOR SCOREBOARD CONTROLS. PROVIDE CONDUIT AND WIRING AS REQUIRED FOR SCOREBOARD POWER.
- 5 SEE SHEET E3 FOR PANEL LOCATIONS.

NOTE: FOR ALL POLE FOUNDATION DETAILS REFER TO STRUCTURAL DRAWING

NOTE: STUB OUT 1" CONDUIT FOR PHASE II

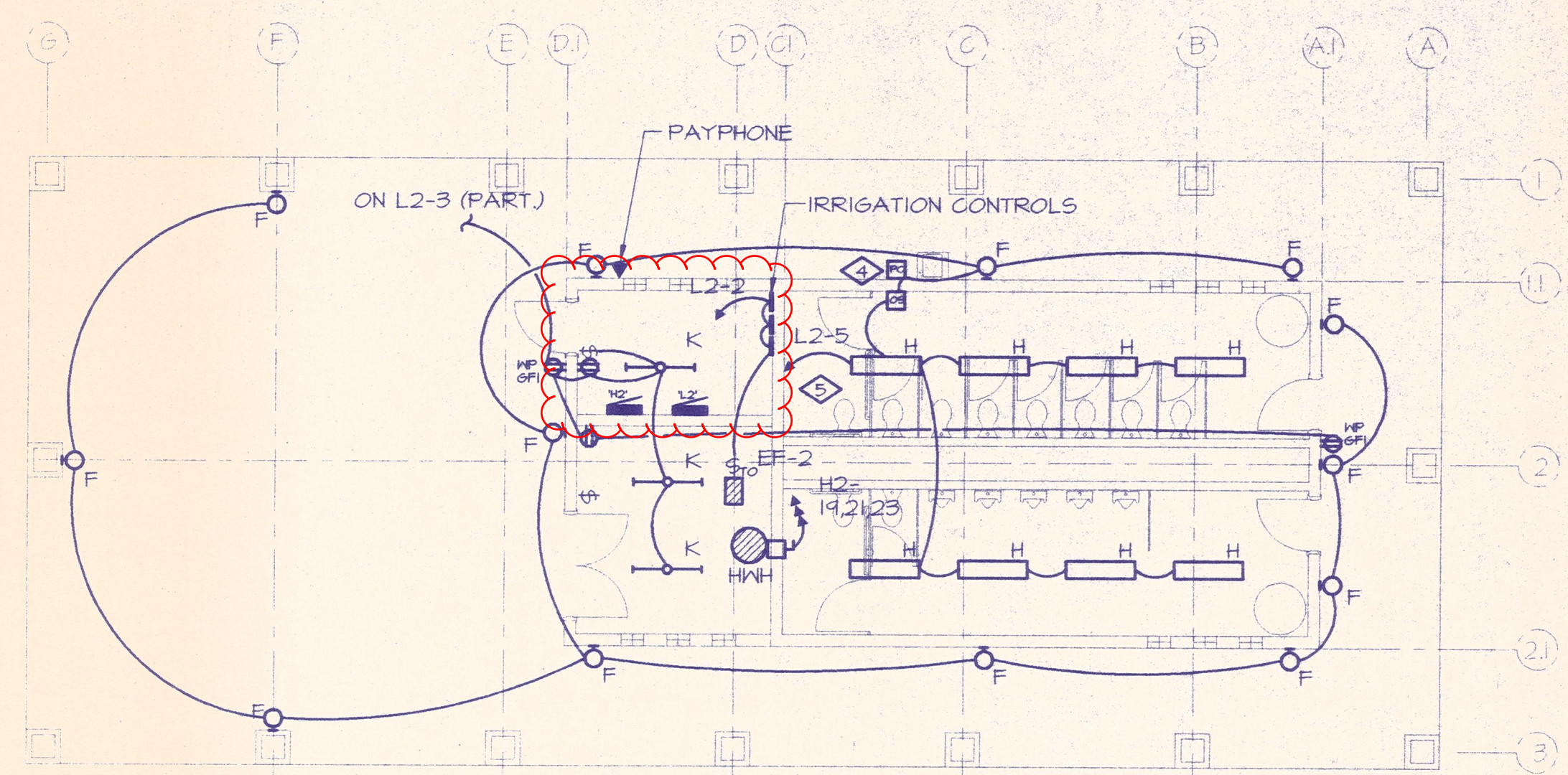


PHASE 1
CANYON VIEW PARK
 CITY OF GRAND JUNCTION, COLORADO

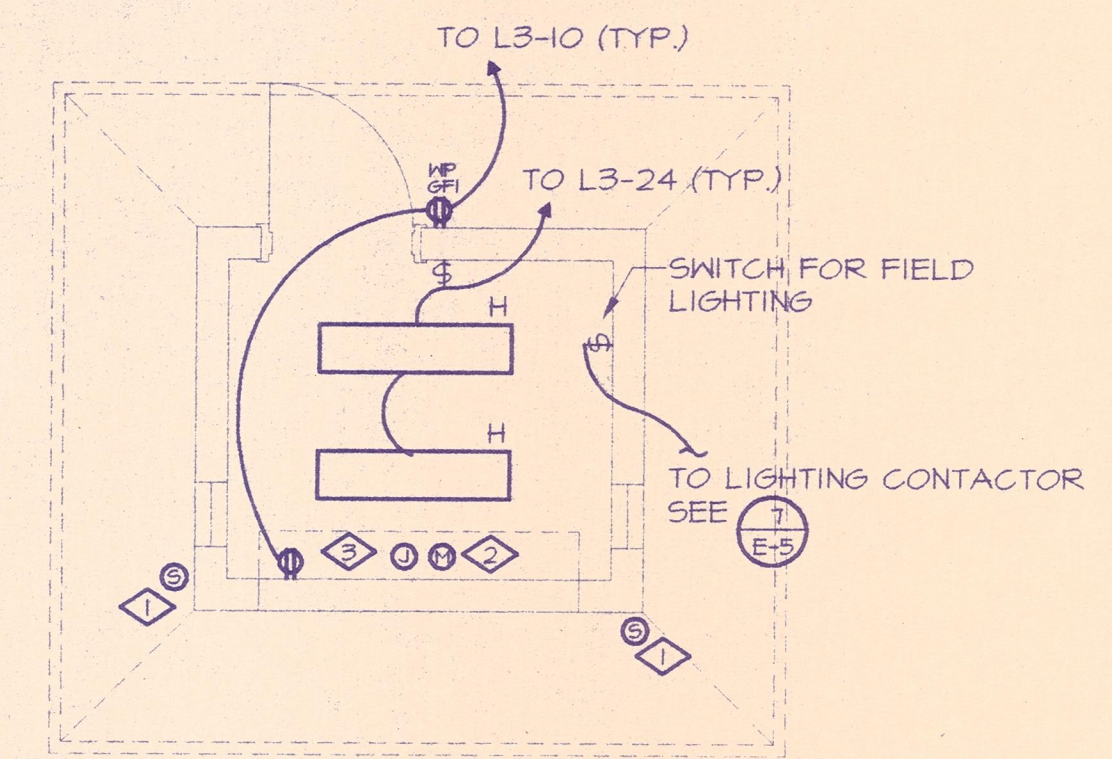


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| Sheet Title | LIGHTING AND POWER PLAN | |
| | CONSTRUCTION DOCUMENT SET | |
| Date: | 12-22-95 | |
| Drawn By: | CLF | |
| Checked By: | LEY | |
| Project Number | 72401 | |
| Sheet Number | E2-2 | |

| Purpose | Date |
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3 MULTIPURPOSE FIELDS SHELTER LIGHTING AND POWER PLAN
SCALE: 1/8" = 1'-0"



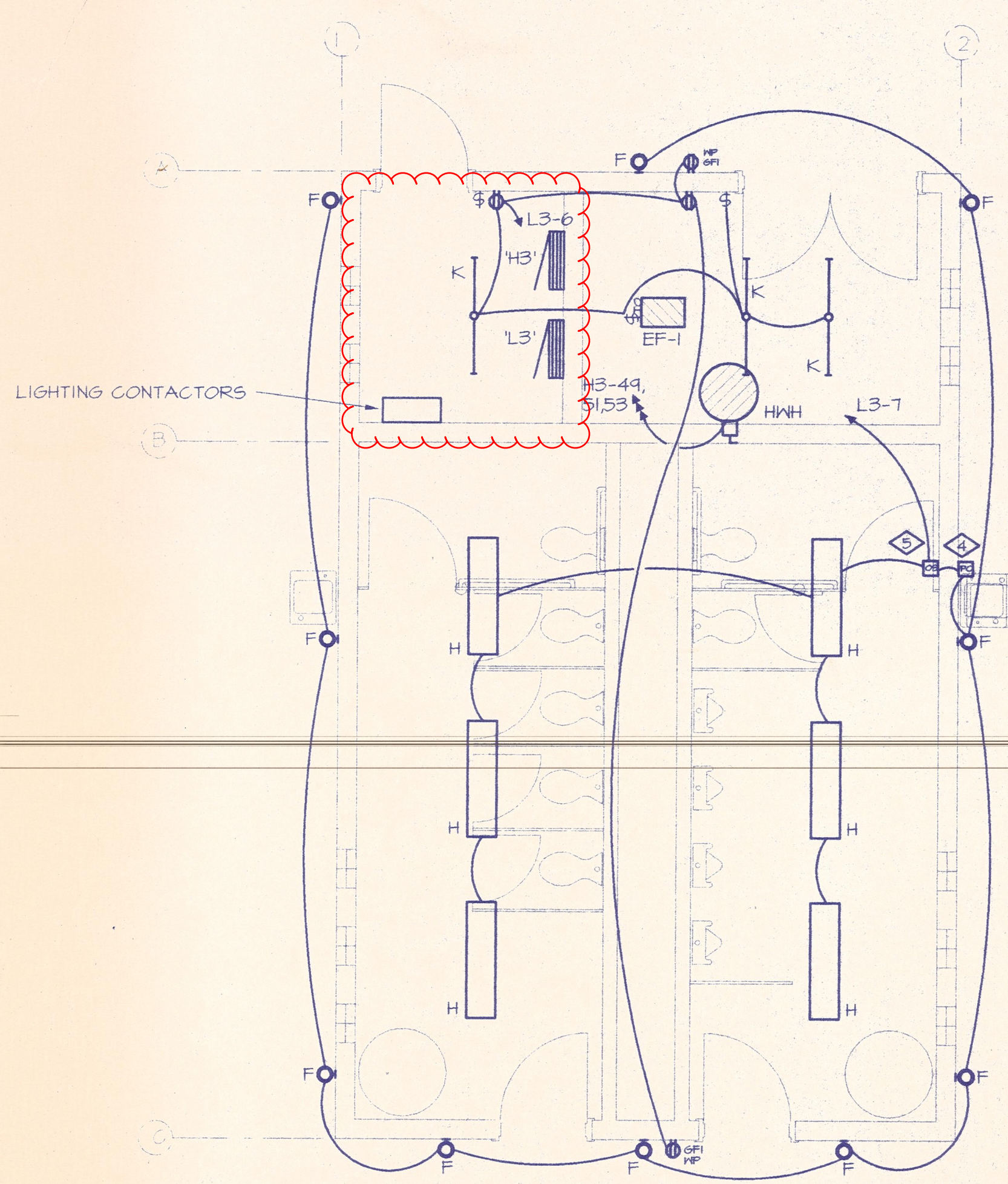
4 TYPICAL SCORERS BOX LIGHTING AND POWER PLAN
SCALE: 1/4" = 1'-0"

GENERAL NOTES

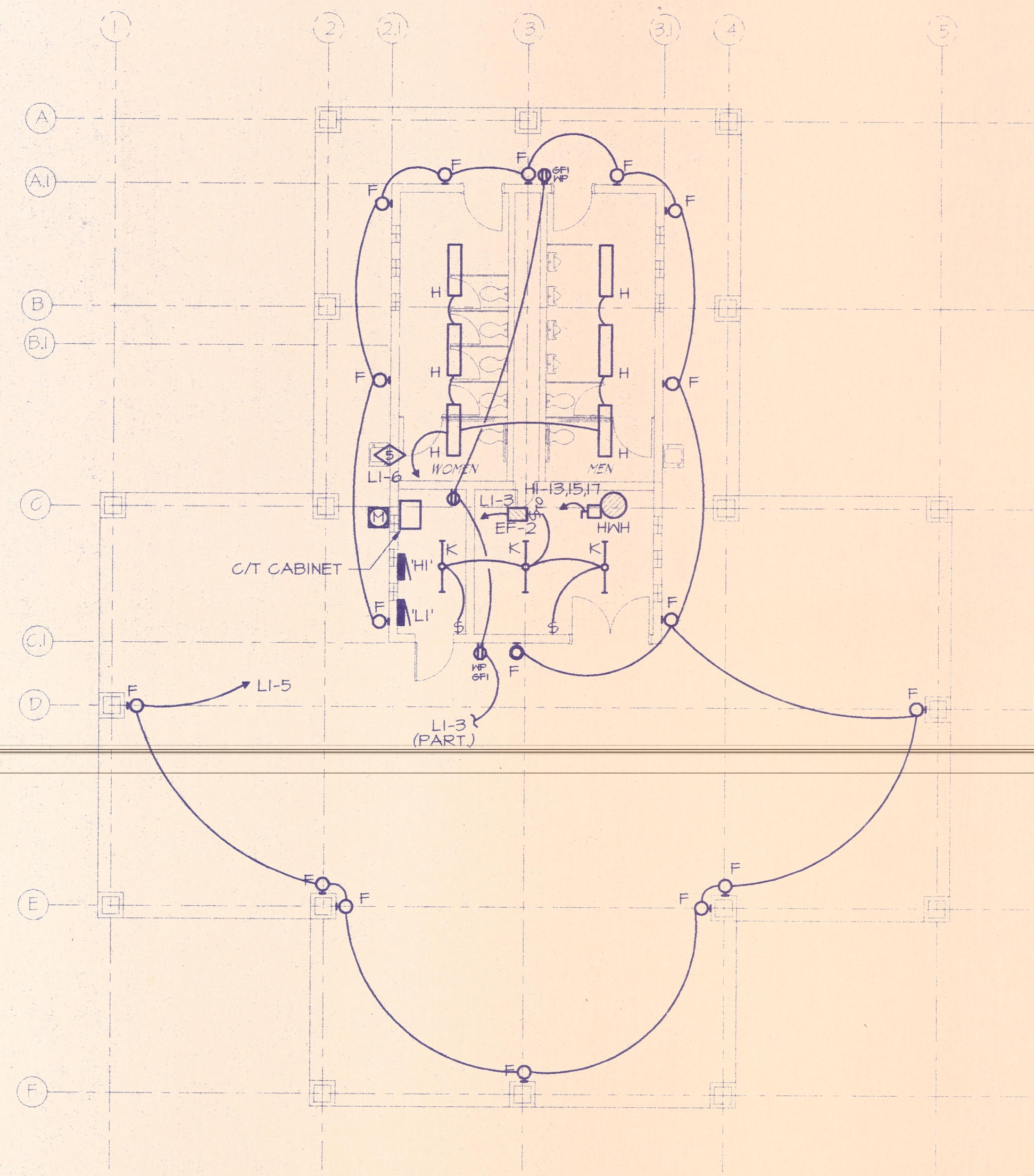
- COORDINATE ELECTRICAL EQUIPMENT LOCATIONS WITH MECHANICAL DRAWINGS PRIOR TO INSTALLATION
- REFER TO MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT LOCATIONS.

DETAIL NOTES

- SPEAKER FOR PUBLIC ADDRESS SYSTEM FOR INFORMATION ON PUBLIC ADDRESS SYSTEM REFER TO DETAIL (1) E-5
- MICROPHONE FOR PUBLIC ADDRESS SYSTEM FOR INFORMATION ON PUBLIC ADDRESS SYSTEM REFER TO DETAIL (1) E-5
- J-BOX FOR SCOREBOARD CONTROLS, FOR INFORMATION ON SCOREBOARD CONTACT SCOREBOARD MANUFACTURER.
- TYPE 'F' FIXTURES TO BE CONTROLLED BY PHOTOCELL.
- TYPE 'H' FIXTURES TO BE CONTROLLED BY OCCUPANCY SENSOR.



2 RESTROOM LIGHTING AND POWER PLAN
SCALE: 1/4" = 1'-0"

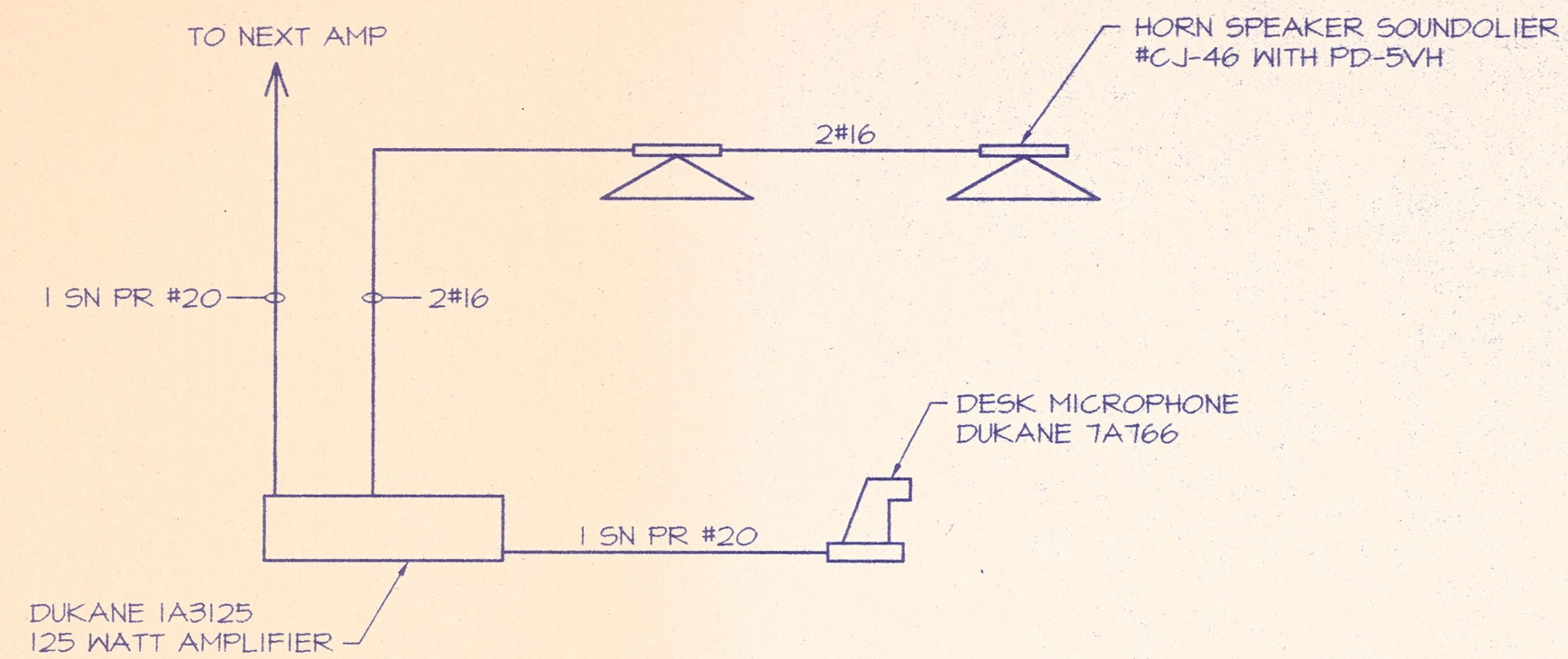


1 GROUP SHELTER LIGHTING AND POWER PLAN
SCALE: 1/8" = 1'-0"

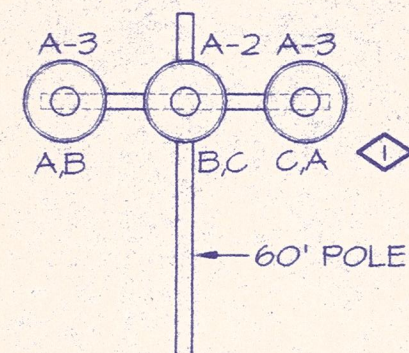
PHASE 1
CANYON VIEW PARK
CITY OF GRAND JUNCTION, COLORADO



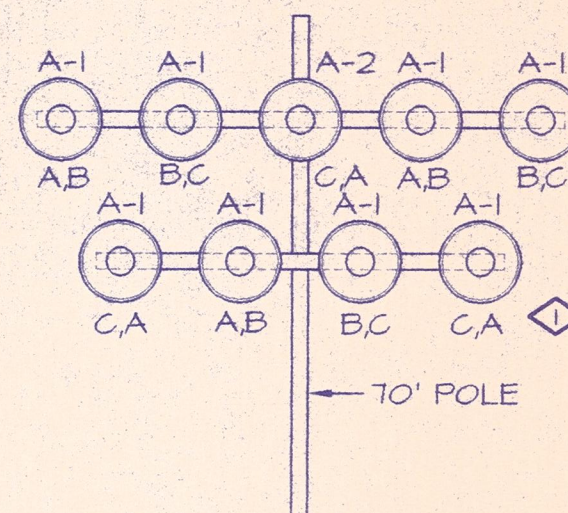
Sheet Title
ENLARGED ELECTRICAL PLANS
CONSTRUCTION DOCUMENT SET
Date: **12-22-95**
Drawn By: **CLF**
Checked By: **LEY**
Project Number **72401**
Sheet Number **E-3**



1 PUBLIC ADDRESS SYSTEM ONE-LINE
SCALE: NONE



2 THREE FIXTURE POLE CONFIGURATION
SCALE: NONE



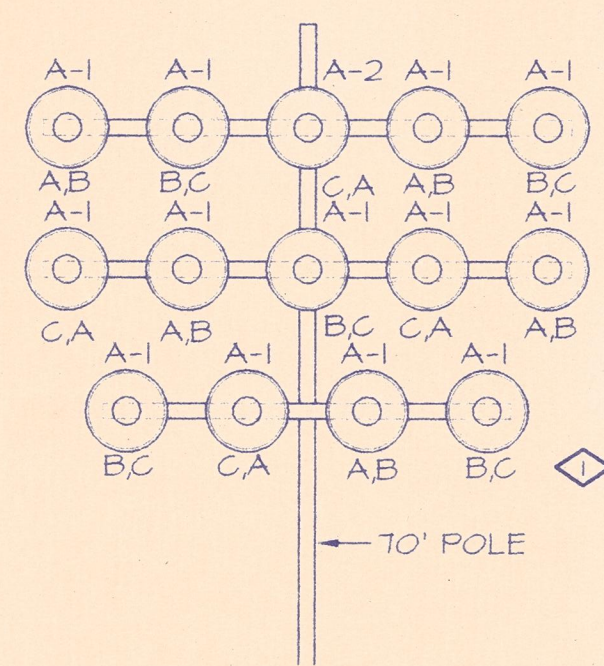
3 NINE FIXTURE POLE CONFIGURATION
SCALE: NONE

DETAIL NOTES

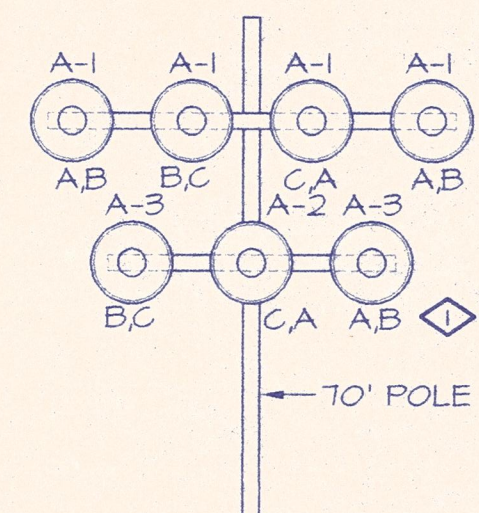
◇ LETTERS CORRESPOND TO PHASE CONNECTIONS FOR EACH FIXTURE. EG TO CONNECT TO CIRCUIT CORRESPONDENCE TO PHASES AS SHOWN.

◇ LITHONIA SPORTSFIELD LIGHTING SYSTEM WAS USED FOR ELECTRICAL DESIGN PURPOSES. OTHER SYSTEMS MAY BE ACCEPTABLE. SEE SPECIFICATION 16501.

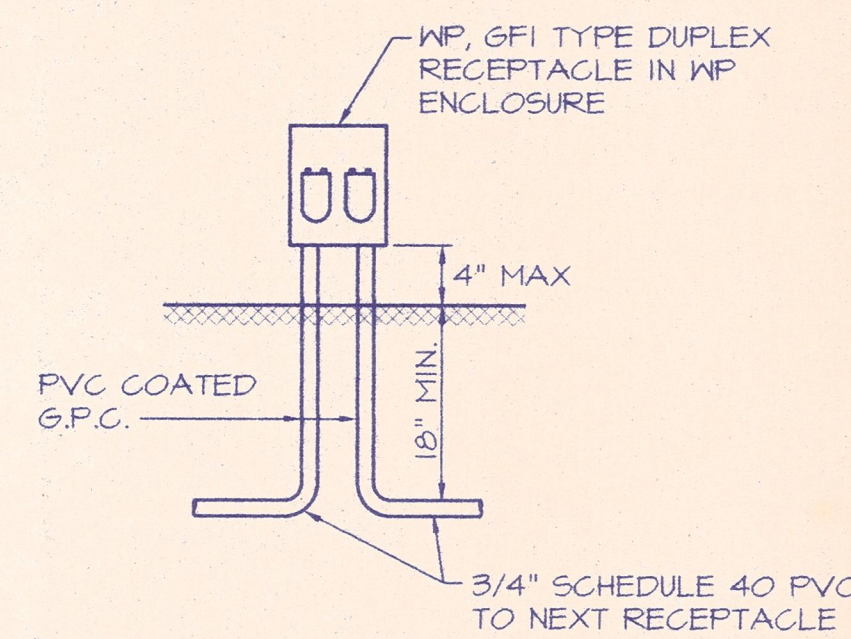
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| Purpose | Date |
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5 FOURTEEN FIXTURE POLE CONFIGURATION
SCALE: NONE

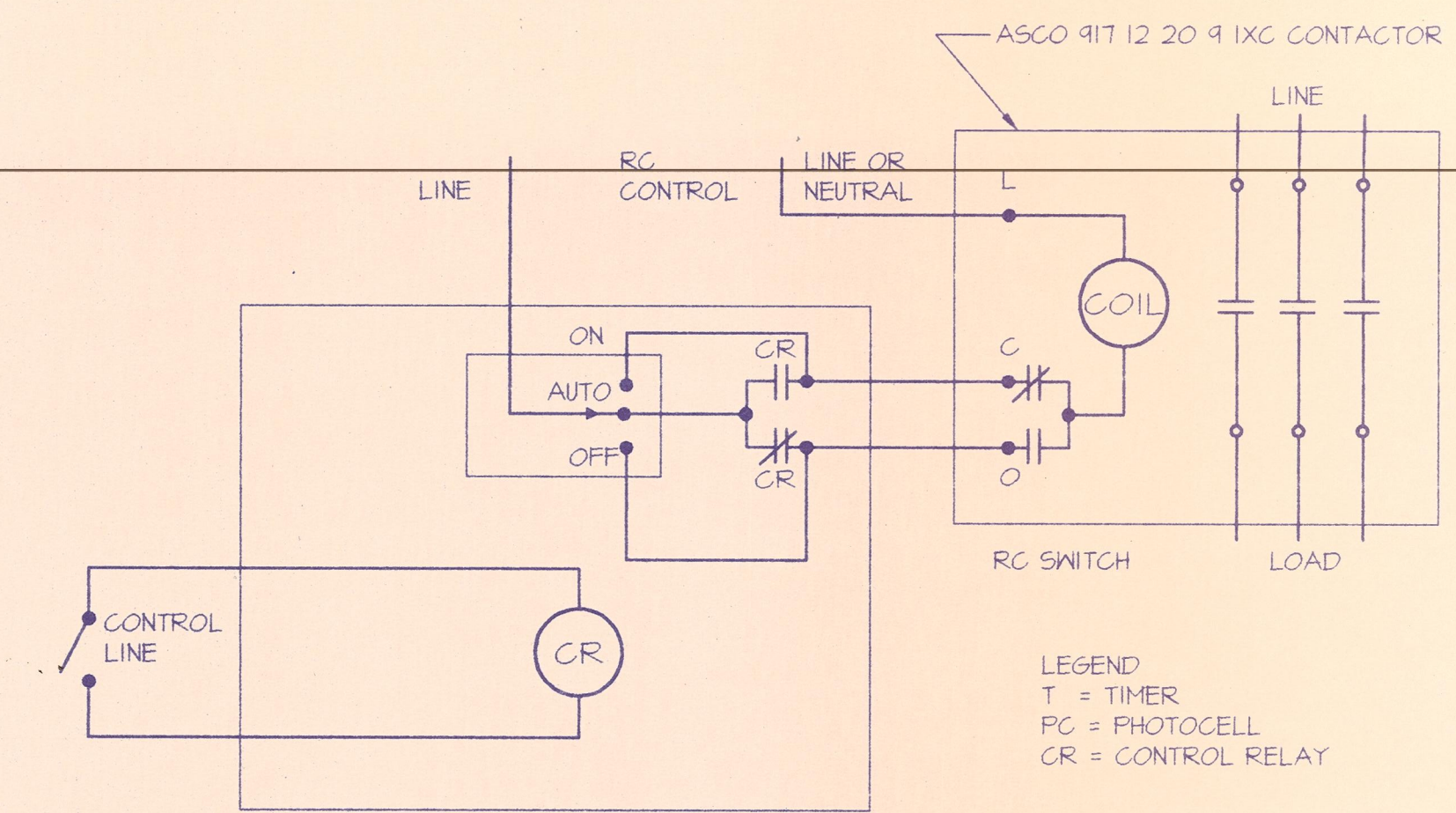


4 SEVEN FIXTURE POLE CONFIGURATION
SCALE: NONE



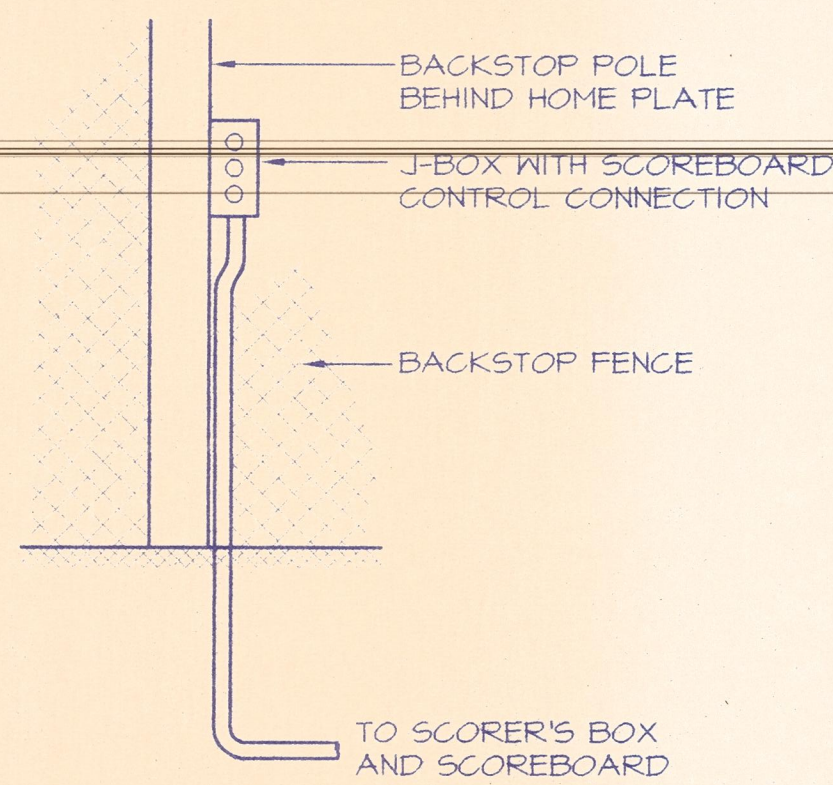
6 RECEPTACLE MTG. DETAIL
SCALE: NONE

- NOTES:**
1. PROVIDE TRANSITION FROM PVC BELOW GRADE TO PVC COATED GRC ABOVE GRADE.
 2. ALL RECEPTACLE ENCLOSURES SHALL BE SUPPORTED AS A MINIMUM IN ACCORDANCE WITH 1993 N.E.C. ARTICLE 370-23(a) UNLESS OTHERWISE REQUIRED BY LOCAL CODES AND REGULATIONS.



7 LIGHTING CONTROL DIAGRAM
SCALE: NONE

- NOTE:**
1. THIS CONTROL DIAGRAM IS FOR LIGHTING CIRCUITS H3-1 THRU H3-12
 2. THIS CONTROL DIAGRAM IS FOR LIGHTING CIRCUITS H3-13 THRU H3-24
 3. THIS CONTROL DIAGRAM IS FOR LIGHTING CIRCUITS H3-25 THRU H3-36
 4. THIS CONTROL DIAGRAM IS FOR LIGHTING CIRCUITS H3-37 THRU H3-44



8 UMPIRE'S SCOREBOARD CONTROL CONNECTION DETAIL
SCALE: NONE



Sheet Title

DETAILS, ENLARGED PLANS

CONSTRUCTION DOCUMENT SET

Date: **12-22-95**

Drawn By: **CLF**

Checked By: **LEY**

Project Number

72401

Sheet Number

E-5



3450 N. Nevada Ave., #100
Colorado Springs, CO 80907
(719) 632-7683

A GUARANTEE ELECTRICAL COMPANY

Panel H2 - Soccer

277/480V 3 Ø 4 Wire

| CKT | DESCRIPTION | CKT | DESCRIPTION |
|-----|-------------|-----|----------------|
| 1 | POLE S4 LTS | 2 | POLE S1 LTS |
| 3 | POLE S4 LTS | 4 | POLE S1 LTS |
| 5 | POLE S4 LTS | 6 | POLE S1 LTS |
| 7 | POLE S3 LTS | 8 | POLE S2 LTS |
| 9 | POLE S3 LTS | 10 | POLE S2 LTS |
| 11 | POLE S3 LTS | 12 | POLE S2 LTS |
| 13 | SPARE | 14 | PEDESTRIAN LTS |
| 15 | SPARE | 16 | SPACE |
| 17 | SPARE | 18 | SPACE |
| 19 | MHW | 20 | SPACE |
| 21 | MHW | 22 | SPACE |
| 23 | MHW | 24 | PANEL L2 |
| 25 | SPARE | 26 | PANEL L2 |
| 27 | SPARE | 28 | SPACE |
| 29 | SPARE | 30 | SPACE |



3450 N. Nevada Ave., #100
 Colorado Springs, CO 80907
 (719) 632-7683

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Panel H3 - Softball

277/480V 3 Ø 4 Wire

| CKT | DESCRIPTION | CKT | DESCRIPTION |
|-----|-------------------------------------|-----|-------------------------------------|
| 1 | POLE C2 LTS - LIBERTY CAP | 2 | POLE C1 LTS - LIBERTY CAP |
| 3 | POLE C2 LTS - LIBERTY CAP | 4 | POLE C1 LTS - LIBERTY CAP |
| 5 | POLE C2 LTS - LIBERTY CAP | 6 | POLE C1 LTS - LIBERTY CAP |
| 7 | POLE A2 & B2 LTS - LIBERTY CAP | 8 | POLE A1 & B1 LTS - LIBERTY CAP |
| 9 | POLE A2 & B2 LTS - LIBERTY CAP | 10 | POLE A1 & B1 LTS - LIBERTY CAP |
| 11 | POLE A2 & B2 LTS - LIBERTY CAP | 12 | POLE A1 & B1 LTS - LIBERTY CAP |
| 13 | POLE C7 LTS - THUNDER MOUNTAIN | 14 | POLE C8 LTS - THUNDER MOUNTAIN |
| 15 | POLE C7 LTS - THUNDER MOUNTAIN | 16 | POLE C8 LTS - THUNDER MOUNTAIN |
| 17 | POLE C7 LTS - THUNDER MOUNTAIN | 18 | POLE C8 LTS - THUNDER MOUNTAIN |
| 19 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 20 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 21 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 22 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 23 | POLE A7 & B7 LTS - THUNDER MOUNTAIN | 24 | POLE A8 & B8 LTS - THUNDER MOUNTAIN |
| 25 | POLE C6 LTS - MOUNT GARFIELD | 26 | POLE C5 LTS - MOUNT GARFIELD |
| 27 | POLE C6 LTS - MOUNT GARFIELD | 28 | POLE C5 LTS - MOUNT GARFIELD |
| 29 | POLE C6 LTS - MOUNT GARFIELD | 30 | POLE C5 LTS - MOUNT GARFIELD |
| 31 | POLE A6 & B6 LTS - MOUNT GARFIELD | 32 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 33 | POLE A6 & B6 LTS - MOUNT GARFIELD | 34 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 35 | POLE A6 & B6 LTS - MOUNT GARFIELD | 36 | POLE A5 & B5 LTS - MOUNT GARFIELD |
| 37 | POLE C3 LTS - BOOKCLIFF | 38 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 39 | POLE C3 LTS - BOOKCLIFF | 40 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 41 | POLE C3 LTS - BOOKCLIFF | 42 | POLE C4 LTS - BOOKCLIFF/CELL TOWER |
| 43 | POLE A3 & B3 LTS - BOOKCLIFF | 44 | POLE A4 & B4 LTS - BOOKCLIFF |
| 45 | POLE A3 & B3 LTS - BOOKCLIFF | 46 | POLE A4 & B4 LTS - BOOKCLIFF |
| 47 | POLE A3 & B3 LTS - BOOKCLIFF | 48 | POLE A4 & B4 LTS - BOOKCLIFF |
| 49 | HWH | 50 | HWH |
| 51 | HWH | 52 | HWH |
| 53 | HWH | 54 | HWH |
| 55 | SPARE | 56 | PANEL L3 |
| 57 | SPARE | 58 | PANEL L3 |
| 59 | SPARE | 60 | PANEL L3 |
| 61 | SPACE | 62 | SPACE |
| 63 | SPACE | 64 | SPACE |
| 65 | SPACE | 66 | SPACE |
| 67 | SPACE | 68 | SPACE |
| 69 | SPACE | 70 | SPACE |
| 71 | SPACE | 72 | SPACE |
| 73 | SPACE | 74 | SPACE |
| 75 | SPACE | 76 | SPACE |
| 77 | SPACE | 78 | SPACE |
| 79 | SPACE | 80 | SPACE |
| 81 | SPACE | 82 | SPACE |
| 83 | SPACE | 84 | SPACE |



A GUARANTEE[®] ELECTRICAL COMPANY

3450 N. Nevada Ave. #100 • Colorado Springs, CO 80907
P.O. Box 7286 • Colorado Springs, CO 80933-7286
Phone: (719) 632-7683 • www.berwickelectric.com

MUSCO LIGHTING OPERATIONS & MAINTENANCE MANUAL

PREPARED FOR:

Canyon View Park

Lighting Project
Grand Junction, CO
October 5, 2021

Project #192421

- A. SERVICE CONTACTS**
- B. LIGHTING DESIGN**
- C. CONTROLS AND MONITORING**
- D. WARRANTY**
- E. AIMING INFORMATION/DRAWINGS**



A. SERVICE CONTACTS



Warranty Department or Service and Parts Sales

Musco Sports Lighting, LLC

100 1st Avenue West

PO Box 808

Oskaloosa, IA 52577

Phone: 877-347-3319

Fax: 800-853-8847

www.musco.com

Control-Link Central™

www.control-link.com

Phone: 877-347-3319

Fax: 800-853-8847

Email: schedule@musco.com



B. LIGHTING DESIGN



Canyon View Park Softball

Grand Junction, CO

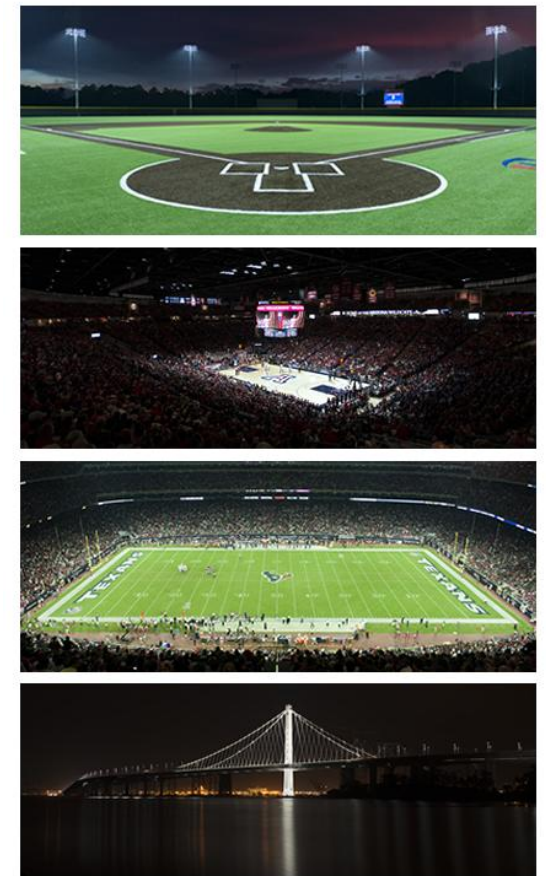
Lighting System

| Pole / Fixture Summary | | | | | | |
|------------------------|-------------|------------|-------------|----------------|------------------|---------|
| Pole ID | Pole Height | Mtg Height | Fixture Qty | Luminaire Type | Load | Circuit |
| A1-A2 | 60' | 60' | 2 | TLC-LED-1500 | 2.86 kW | A |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | A |
| A3-A4 | 60' | 60' | 2 | TLC-LED-1500 | 2.86 kW | B |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | B |
| A5-A6 | 60' | 60' | 2 | TLC-LED-1500 | 2.86 kW | C |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | C |
| A7-A8 | 60' | 60' | 2 | TLC-LED-1500 | 2.86 kW | D |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | D |
| B1-B2 | 70' | 70' | 1 | TLC-LED-1200 | 1.17 kW | A |
| | | 70' | 6 | TLC-LED-1500 | 8.58 kW | A |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | A |
| B3-B4 | 70' | 70' | 1 | TLC-LED-1200 | 1.17 kW | B |
| | | 70' | 6 | TLC-LED-1500 | 8.58 kW | B |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | B |
| B5-B6 | 70' | 70' | 1 | TLC-LED-1200 | 1.17 kW | C |
| | | 70' | 6 | TLC-LED-1500 | 8.58 kW | C |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | C |
| B7-B8 | 70' | 70' | 1 | TLC-LED-1200 | 1.17 kW | D |
| | | 70' | 6 | TLC-LED-1500 | 8.58 kW | D |
| | | 16' | 1 | TLC-BT-575 | 0.58 kW | D |
| C1-C2 | 70' | 70' | 2 | TLC-LED-1500 | 2.86 kW | A |
| | | 70' | 2 | TLC-LED-900 | 1.78 kW | A |
| | | 16' | 2 | TLC-BT-575 | 1.15 kW | A |
| C3-C4 | 70' | 70' | 2 | TLC-LED-1500 | 2.86 kW | B |
| | | 70' | 2 | TLC-LED-900 | 1.78 kW | B |
| | | 16' | 2 | TLC-BT-575 | 1.15 kW | B |
| C5-C6 | 70' | 70' | 2 | TLC-LED-1500 | 2.86 kW | C |
| | | 70' | 2 | TLC-LED-900 | 1.78 kW | C |
| | | 16' | 2 | TLC-BT-575 | 1.15 kW | C |
| C7-C8 | 70' | 70' | 2 | TLC-LED-1500 | 2.86 kW | D |
| | | 70' | 2 | TLC-LED-900 | 1.78 kW | D |
| | | 16' | 2 | TLC-BT-575 | 1.15 kW | D |
| S1-S4 | 70' | 70' | 5 | TLC-LED-1500 | 7.15 kW | E |
| | | 70' | 1 | TLC-LED-900 | 0.89 kW | E |
| 28 | | | 160 | | 188.56 kW | |

| Circuit Summary | | | |
|-----------------|------------------------|----------|-------------|
| Circuit | Description | Load | Fixture Qty |
| A | Liberty Cap Field | 39.1 kW | 34 |
| B | Bookcliff Field | 39.1 kW | 34 |
| C | Mt. Garfield Field | 39.1 kW | 34 |
| D | Thunder Mountain Field | 39.1 kW | 34 |
| E | Soccer | 32.16 kW | 24 |

| Fixture Type Summary | | | | | | | |
|----------------------|--------------------|---------|---------|----------|----------|----------|----------|
| Type | Source | Wattage | Lumens | L90 | L80 | L70 | Quantity |
| TLC-LED-900 | LED 5700K - 75 CRI | 890W | 89,600 | >120,000 | >120,000 | >120,000 | 20 |
| TLC-LED-1500 | LED 5700K - 75 CRI | 1430W | 160,000 | >120,000 | >120,000 | >120,000 | 100 |
| TLC-LED-1200 | LED 5700K - 75 CRI | 1170W | 136,000 | >120,000 | >120,000 | >120,000 | 8 |
| TLC-BT-575 | LED 5700K - 75 CRI | 575W | 52,000 | >120,000 | >120,000 | >120,000 | 32 |

From Hometown to Professional



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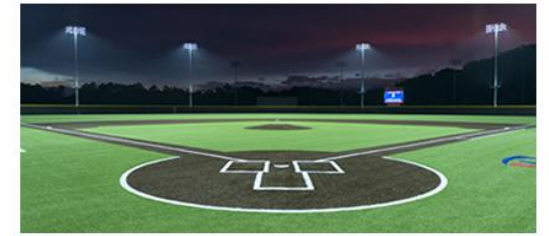
Canyon View Park Softball

Grand Junction, CO

Light Level Summary

| Calculation Grid Summary | | | | | | | | |
|-----------------------------------|---------------------------------|--------------|------|------|---------|---------|----------|-------------|
| Grid Name | Calculation Metric | Illumination | | | | | Circuits | Fixture Qty |
| | | Ave | Min | Max | Max/Min | Ave/Min | | |
| Bookcliff Field (Infield) | Horizontal Illuminance | 51.7 | 37 | 63 | 1.70 | 1.40 | B | 34 |
| Bookcliff Field (Outfield) | Horizontal Illuminance | 30.4 | 20 | 50 | 2.47 | 1.52 | B | 34 |
| Complex Spill | Horizontal | 0 | 0 | 0.01 | 0.00 | | A,B,C,D | 136 |
| Complex Spill | Max Candela (by Fixture) | 236 | 25.9 | 883 | 34.13 | 9.13 | A,B,C,D | 136 |
| Complex Spill | Max Vertical Illuminance Metric | 0.01 | 0 | 0.02 | 72.72 | | A,B,C,D | 136 |
| Liberty Cap Field (Infield) | Horizontal Illuminance | 52.9 | 41 | 69 | 1.68 | 1.29 | A | 34 |
| Liberty Cap Field (Outfield) | Horizontal Illuminance | 30.8 | 19 | 46 | 2.48 | 1.62 | A | 34 |
| Mt Garfield Field (Infield) | Horizontal Illuminance | 51.7 | 41 | 67 | 1.64 | 1.26 | C | 34 |
| Mt Garfield Field (Outfield) | Horizontal Illuminance | 30.7 | 19 | 45 | 2.34 | 1.62 | C | 34 |
| Soccer Spill | Horizontal Illuminance | 0 | 0 | 0.01 | 0.00 | | E | 24 |
| Soccer Spill | Max Candela Metric | 421 | 1.47 | 990 | 671.53 | 286.10 | E | 24 |
| Soccer Spill | Max Vertical Illuminance Metric | 0.01 | 0 | 0.03 | 0.00 | | E | 24 |
| Soccer | Horizontal Illuminance | 32.5 | 17 | 41 | 2.46 | 1.91 | E | 24 |
| Thunder Mountain Field (Infield) | Horizontal Illuminance | 51.1 | 41 | 65 | 1.59 | 1.25 | D | 34 |
| Thunder Mountain Field (Outfield) | Horizontal Illuminance | 30.4 | 21 | 51 | 2.48 | 1.45 | D | 34 |

From Hometown to Professional



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| EQUIPMENT LIST FOR AREAS SHOWN | | | | | | | | | |
|--------------------------------|----------|------|-----------------|-----------------|----------------|------------|-----------|-------------|--|
| Pole | | | | Luminaires | | | | | |
| QTY | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | QTY / POLE | THIS GRID | OTHER GRIDS | |
| 1 | A1 | 60' | 5.54' | 21' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 65.54' | TLC-LED-1500 | 2 | 2 | 0 | |
| 1 | A2 | 60' | 4' | 19.54' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 64' | TLC-LED-1500 | 2 | 2 | 0 | |
| 2 | B1-B2 | 70' | 0' | 70' | TLC-LED-1500 | 6 | 6 | 0 | |
| | | | | 15.54' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 70' | TLC-LED-1200 | 1 | 1 | 0 | |
| | | | | 70' | TLC-LED-1500 | 2 | 2 | 0 | |
| 2 | C1-C2 | 70' | 0' | 70' | TLC-LED-1500 | 2 | 2 | 0 | |
| | | | | 15.54' | TLC-BT-575 | 2 | 2 | 0 | |
| | | | | 70' | TLC-LED-900 | 2 | 2 | 0 | |
| | | | | TOTALS | | 34 | 34 | 0 | |

Canyon View Park Softball

Grand Junction, CO

| GRID SUMMARY | |
|--------------|-------------------------------|
| Name: | Liberty Cap Field |
| Size: | 315'/315'/315' - basepath 70' |
| Spacing: | 20.0' x 20.0' |
| Height: | 3.0' above grade |

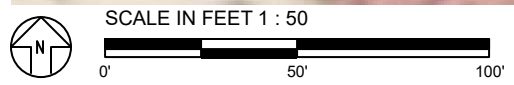
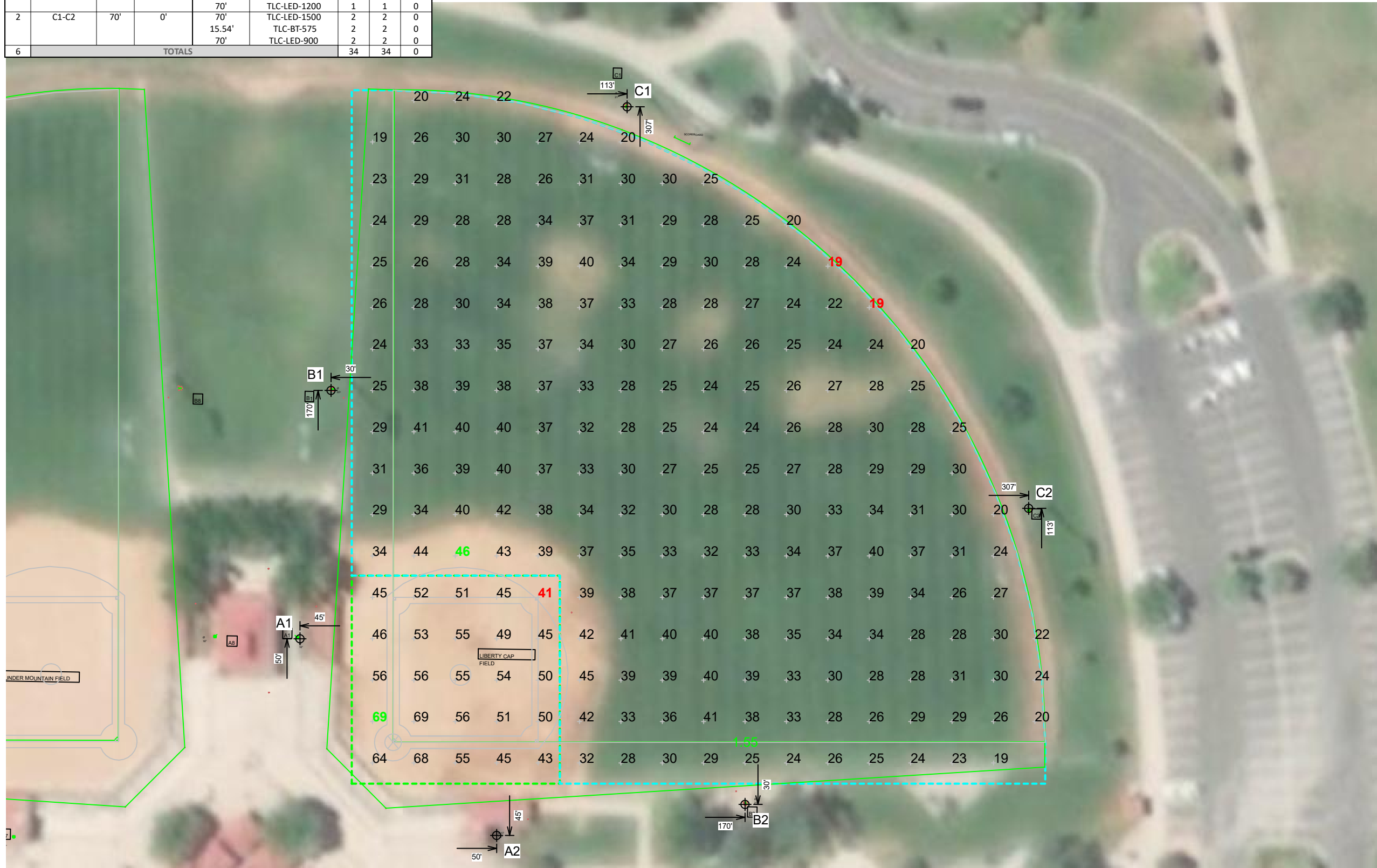
| ILLUMINATION SUMMARY | | |
|-----------------------------------|-----------|------------|
| MAINTAINED HORIZONTAL FOOTCANDLES | | |
| | Infield | Outfield |
| Guaranteed Average: | 50 | 30 |
| Scan Average: | 52.85 | 30.76 |
| Maximum: | 69 | 46 |
| Minimum: | 41 | 19 |
| Avg / Min: | 1.28 | 1.65 |
| Guaranteed Max / Min: | 2 | 2.5 |
| Max / Min: | 1.68 | 2.48 |
| UG (adjacent pts): | 1.24 | 1.55 |
| No. of Points: | 25 | 203 |
| LUMINAIRE INFORMATION | | |
| Applied Circuits: | A | |
| No. of Luminaires: | 34 | |
| Total Load: | 39.1 kW | |

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



| EQUIPMENT LIST FOR AREAS SHOWN | | | | | | | | | |
|--------------------------------|----------|------|-----------------|-----------------|----------------|------------|-----------|-------------|---|
| Pole | | | | Luminaires | | | | | |
| QTY | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | QTY / POLE | THIS GRID | OTHER GRIDS | |
| 1 | A3 | 60' | 4.06' | 19.56' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 64.06' | TLC-LED-1500 | 2 | 2 | 0 | |
| 1 | A4 | 60' | 5.56' | 21.06' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 65.56' | TLC-LED-1500 | 2 | 2 | 0 | |
| 2 | B3-B4 | 70' | .06' | 70.06' | TLC-LED-1500 | 6 | 6 | 0 | |
| | | | | 15.56' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 70.06' | TLC-LED-1200 | 1 | 1 | 0 | |
| | | | | 70.06' | TLC-LED-900 | 2 | 2 | 0 | |
| 1 | C3 | 70' | .06' | 70.06' | TLC-LED-900 | 2 | 2 | 0 | |
| | | | | 15.56' | TLC-BT-575 | 2 | 2 | 0 | |
| | | | | 70.06' | TLC-LED-1500 | 2 | 2 | 0 | |
| | | | | 70.06' | TLC-LED-900 | 2 | 2 | 0 | |
| 1 | C4 | 70' | .06' | 70.06' | TLC-LED-900 | 2 | 2 | 0 | |
| | | | | 15.56' | TLC-BT-575 | 2 | 2 | 0 | |
| | | | | 70.06' | TLC-LED-1500 | 2 | 2 | 0 | |
| | | | | 70.06' | TLC-LED-1500 | 2 | 2 | 0 | |
| 6 | TOTALS | | | | | | 34 | 34 | 0 |

Canyon View Park Softball

Grand Junction, CO

| GRID SUMMARY | |
|--------------|-------------------------------|
| Name: | Bookcliff Field |
| Size: | 315'/315'/315' - basepath 70' |
| Spacing: | 20.0' x 20.0' |
| Height: | 3.0' above grade |

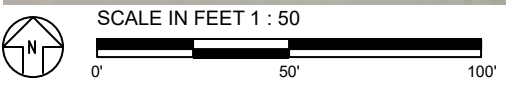
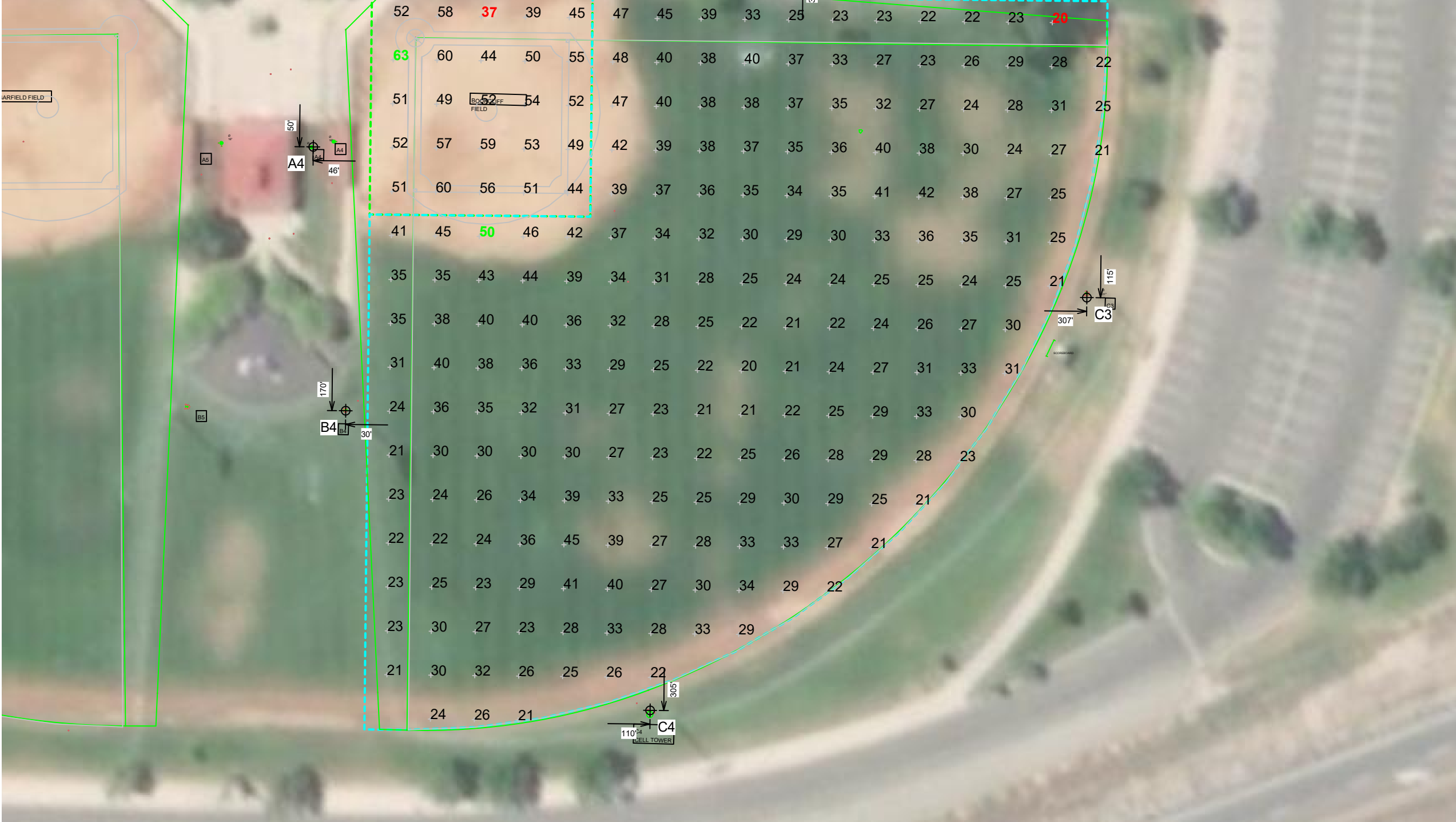
| ILLUMINATION SUMMARY | | |
|-----------------------------------|---------|----------|
| MAINTAINED HORIZONTAL FOOTCANDLES | | |
| | Infield | Outfield |
| Guaranteed Average: | 50 | 30 |
| Scan Average: | 51.68 | 30.40 |
| Maximum: | 63 | 50 |
| Minimum: | 37 | 20 |
| Avg / Min: | 1.39 | 1.49 |
| Guaranteed Max / Min: | 2 | 2.5 |
| Max / Min: | 1.70 | 2.47 |
| UG (adjacent pts): | 1.57 | 1.50 |
| No. of Points: | 25 | 203 |
| LUMINAIRE INFORMATION | | |
| Applied Circuits: | B | |
| No. of Luminaires: | 34 | |
| Total Load: | 39.1 kW | |

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) ⊗



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ILLUMINATION SUMMARY

| EQUIPMENT LIST FOR AREAS SHOWN | | | | | | | | |
|--------------------------------|----------|------|-----------------|-----------------|----------------|------------|-----------|-------------|
| Pole | | | | Luminaires | | | | |
| QTY | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | QTY / POLE | THIS GRID | OTHER GRIDS |
| 1 | A5 | 60' | 5.5' | 21' | TLC-BT-575 | 1 | 1 | 0 |
| | | | | 65.5' | TLC-LED-1500 | 2 | 2 | 0 |
| 1 | A6 | 60' | 5' | 20.5' | TLC-BT-575 | 1 | 1 | 0 |
| | | | | 65' | TLC-LED-1500 | 2 | 2 | 0 |
| 2 | B5-B6 | 70' | - | 70' | TLC-LED-1500 | 6 | 6 | 0 |
| | | | | 15.5' | TLC-BT-575 | 1 | 1 | 0 |
| | | | | 70' | TLC-LED-1200 | 1 | 1 | 0 |
| 2 | C5-C6 | 70' | - | 70' | TLC-LED-900 | 2 | 2 | 0 |
| | | | | 15.5' | TLC-BT-575 | 2 | 2 | 0 |
| | | | | 70' | TLC-LED-1500 | 2 | 2 | 0 |
| 6 | TOTALS | | | | | 34 | 34 | 0 |

Canyon View Park Softball

Grand Junction, CO

| GRID SUMMARY | |
|--------------|-------------------------------|
| Name: | Mt Garfield Field |
| Size: | 315'/315'/315' - basepath 70' |
| Spacing: | 20.0' x 20.0' |
| Height: | 3.0' above grade |

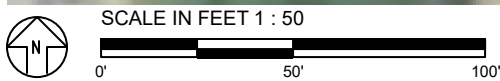
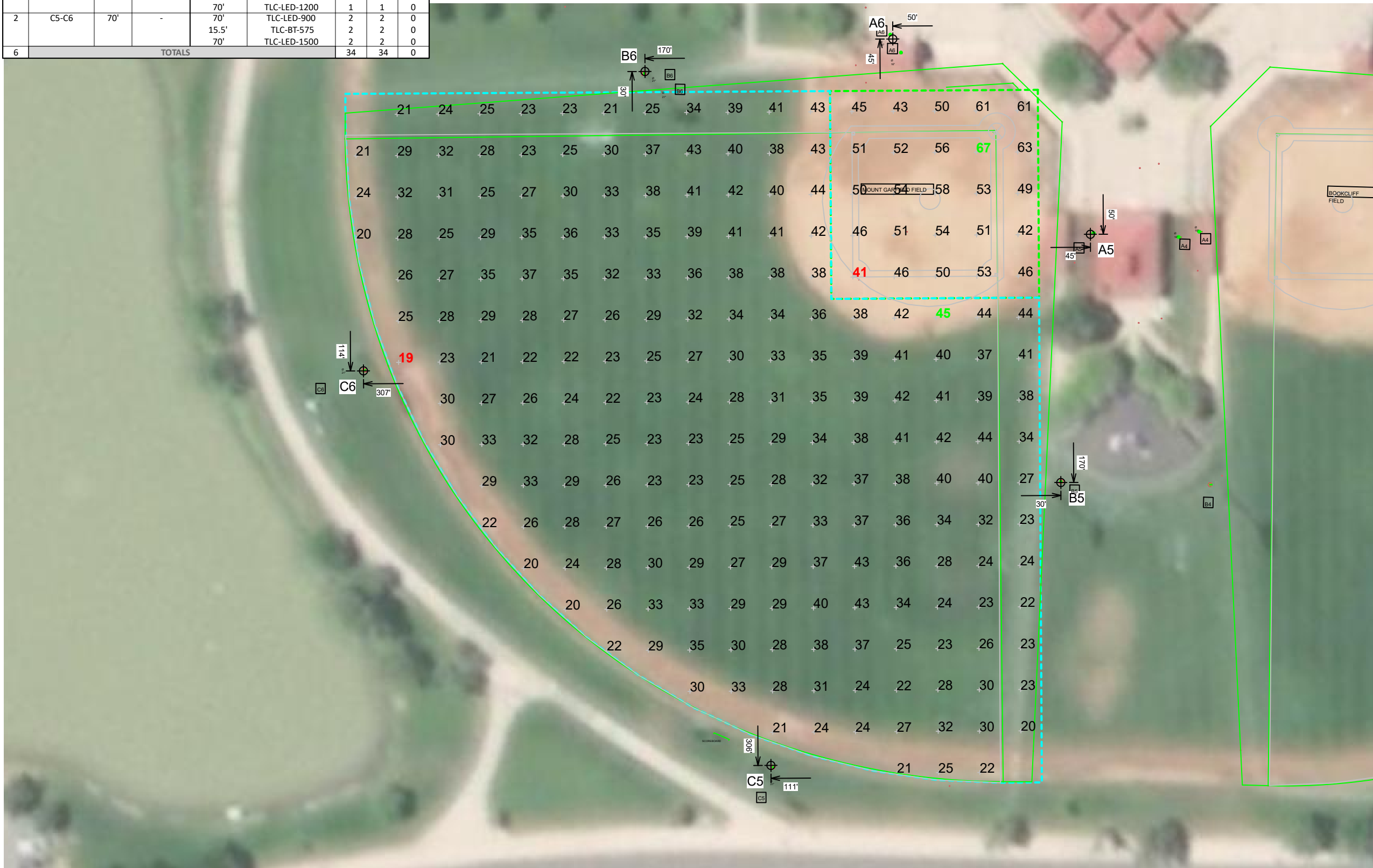
| ILLUMINATION SUMMARY | | |
|-----------------------------------|-----------|------------|
| MAINTAINED HORIZONTAL FOOTCANDLES | | |
| | Infield | Outfield |
| Guaranteed Average: | 50 | 30 |
| Scan Average: | 51.73 | 30.73 |
| Maximum: | 67 | 45 |
| Minimum: | 41 | 19 |
| Avg / Min: | 1.26 | 1.59 |
| Guaranteed Max / Min: | 2 | 2.5 |
| Max / Min: | 1.64 | 2.34 |
| UG (adjacent pts): | 1.28 | 1.51 |
| No. of Points: | 25 | 203 |
| LUMINAIRE INFORMATION | | |
| Applied Circuits: | C | |
| No. of Luminaires: | 34 | |
| Total Load: | 39.1 kW | |

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) ⊗



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| EQUIPMENT LIST FOR AREAS SHOWN | | | | | | | | | |
|--------------------------------|----------|------|-----------------|-----------------|----------------|------------|-----------|-------------|--|
| Pole | | | | Luminaires | | | | | |
| QTY | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | QTY / POLE | THIS GRID | OTHER GRIDS | |
| 1 | A7 | 60' | 5.52' | 21' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 65.52' | TLC-LED-1500 | 2 | 2 | 0 | |
| 1 | A8 | 60' | 5' | 20.52' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 65' | TLC-LED-1500 | 2 | 2 | 0 | |
| 2 | B7-B8 | 70' | 0' | 70' | TLC-LED-1500 | 6 | 6 | 0 | |
| | | | | 15.52' | TLC-BT-575 | 1 | 1 | 0 | |
| | | | | 70' | TLC-LED-1200 | 1 | 1 | 0 | |
| 2 | C7-C8 | 70' | 0' | 70' | TLC-LED-900 | 2 | 2 | 0 | |
| | | | | 15.52' | TLC-BT-575 | 2 | 2 | 0 | |
| | | | | 70' | TLC-LED-1500 | 2 | 2 | 0 | |
| 6 | TOTALS | | | | | 34 | 34 | 0 | |

Canyon View Park Softball

Grand Junction, CO

| GRID SUMMARY | |
|--------------|-------------------------------|
| Name: | Thunder Mountain Field |
| Size: | 315'/315'/315' - basepath 70' |
| Spacing: | 20.0' x 20.0' |
| Height: | 3.0' above grade |

| ILLUMINATION SUMMARY | | |
|-----------------------------------|-----------|------------|
| MAINTAINED HORIZONTAL FOOTCANDLES | | |
| | Infield | Outfield |
| Guaranteed Average: | 50 | 30 |
| Scan Average: | 51.14 | 30.39 |
| Maximum: | 65 | 51 |
| Minimum: | 41 | 21 |
| Avg / Min: | 1.26 | 1.48 |
| Guaranteed Max / Min: | 2 | 2.5 |
| Max / Min: | 1.59 | 2.48 |
| UG (adjacent pts): | 1.31 | 1.47 |
| No. of Points: | 25 | 203 |
| LUMINAIRE INFORMATION | | |
| Applied Circuits: | D | |
| No. of Luminaires: | 34 | |
| Total Load: | 39.1 kW | |



Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

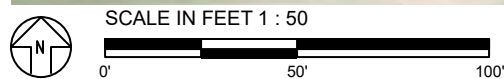
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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ILLUMINATION SUMMARY



Pole location(s) Ⓢ dimensions are relative to 0,0 reference point(s) ⊗

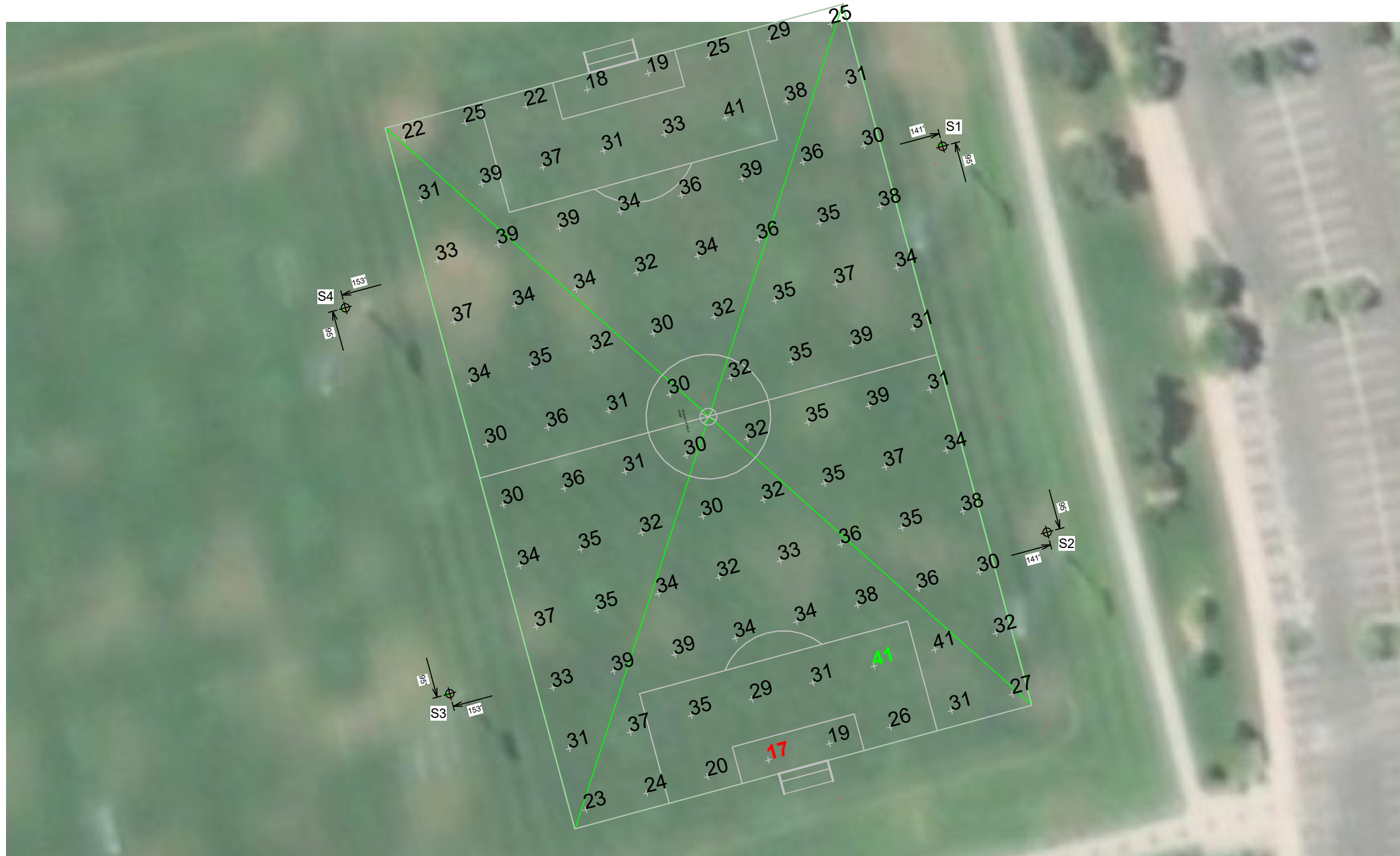
| EQUIPMENT LIST FOR AREAS SHOWN | | | | | | | | |
|--------------------------------|----------|------|-----------------|-----------------|----------------|------------|-----------|-------------|
| Pole | | | | Luminaires | | | | |
| QTY | LOCATION | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | QTY / POLE | THIS GRID | OTHER GRIDS |
| 4 | S1-S4 | 70' | - | 70' | TLC-LED-1500 | 5 | 5 | 0 |
| | | | | 70' | TLC-LED-900 | 1 | 1 | 0 |
| 4 | TOTALS | | | | | 24 | 24 | 0 |

Canyon View Park Softball

Grand Junction, CO

| GRID SUMMARY | |
|--------------|------------------|
| Name: | Soccer |
| Size: | 345' x 225' |
| Spacing: | 30.0' x 30.0' |
| Height: | 3.0' above grade |

| ILLUMINATION SUMMARY | |
|-----------------------------------|----------|
| MAINTAINED HORIZONTAL FOOTCANDLES | |
| Entire Grid | |
| Guaranteed Average: | 30 |
| Scan Average: | 32.51 |
| Maximum: | 41 |
| Minimum: | 17 |
| Avg / Min: | 1.96 |
| Guaranteed Max / Min: | 3 |
| Max / Min: | 2.46 |
| UG (adjacent pts): | 1.77 |
| No. of Points: | 96 |
| LUMINAIRE INFORMATION | |
| Applied Circuits: | E |
| No. of Luminaires: | 24 |
| Total Load: | 32.16 kW |

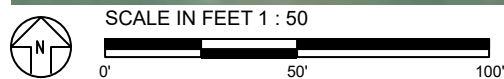


Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



Pole location(s) ⊕ dimensions are relative to 0,0 reference point(s) ⊗



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Canyon View Park Softball

Grand Junction, CO

EQUIPMENT LAYOUT

INCLUDES:

- Bookcliff Field
- Liberty Cap Field
- Mt Garfield Field
- Soccer
- Thunder Mountain Field

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

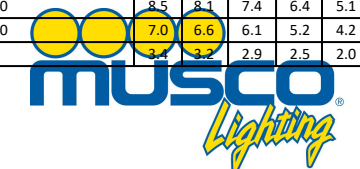
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN

| QTY | LOCATION | Pole | | Luminaires | | QTY / POLE |
|-----|----------|------|-----------------|------------------|-----------------------------|------------|
| | | SIZE | GRADE ELEVATION | MOUNTING HEIGHT | LUMINAIRE TYPE | |
| 1 | A1 | 60' | 5.54' | 21' 65.54' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A2 | 60' | 4' | 19.54' 64' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A3 | 60' | 4.06' | 19.56' 64.06' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A4 | 60' | 5.56' | 21.06' 65.56' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A5 | 60' | 5.5' | 21' 65.5' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A6 | 60' | 5' | 20.5' 65' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A7 | 60' | 5.52' | 21' 65.52' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 1 | A8 | 60' | 5' | 20.52' 65' | TLC-BT-575 TLC-LED-1500 | 1 2 |
| 2 | B1-B2 | 70' | 0' | 70' 15.54' | TLC-LED-1500 TLC-BT-575 | 6 1 |
| 2 | B3-B4 | 70' | .06' | 70.06' 15.56' | TLC-LED-1500 TLC-BT-575 | 6 1 |
| 2 | B5-B6 | 70' | - | 70' 15.5' | TLC-LED-1500 TLC-BT-575 | 6 1 |
| 2 | B7-B8 | 70' | 0' | 70' 15.52' | TLC-LED-1500 TLC-BT-575 | 6 1 |
| 2 | C1-C2 | 70' | 0' | 70' 15.54' | TLC-LED-1500 TLC-BT-575 | 2 2 |
| 1 | C3 | 70' | .06' | 70.06' 15.56' | TLC-LED-900 TLC-BT-575 | 2 2 |
| 1 | C4 | 70' | .06' | 70.06' 15.56' | TLC-LED-900 TLC-BT-575 | 2 2 |
| 2 | C5-C6 | 70' | - | 70' 15.5' | TLC-LED-900 TLC-BT-575 | 2 2 |
| 2 | C7-C8 | 70' | 0' | 70' 15.52' | TLC-LED-900 TLC-BT-575 | 2 2 |
| 4 | S1-S4 | 70' | - | 70' | TLC-LED-1500 TLC-LED-900 | 5 1 |
| 28 | TOTALS | | | | | 160 |

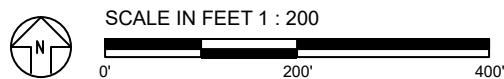
SINGLE LUMINAIRE AMPERAGE DRAW CHART

| Ballast Specifications (.90 min power factor) | Line Amperage Per Luminaire (max draw) | | | | | |
|--|---|-------------|-------------|-------------|-------------|-------------|
| | 208 (60) | 220 (60) | 240 (60) | 277 (60) | 347 (60) | 480 (60) |
| Single Phase Voltage | 208 (60) | 220 (60) | 240 (60) | 277 (60) | 347 (60) | 480 (60) |
| TLC-LED-900 | 5.3 | 5.0 | 4.6 | 4.0 | 3.2 | 2.9 |
| TLC-LED-1500 | 8.5 | 8.1 | 7.4 | 6.4 | 5.1 | 4.7 |
| TLC-LED-1200 | 7.0 | 6.6 | 6.1 | 5.2 | 4.2 | 4.0 |
| TLC-BT-575 | 3.4 | 3.2 | 2.9 | 2.5 | 2.0 | 1.8 |



We Make It Happen.

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Pole location(s) ⚡ dimensions are relative to 0,0 reference point(s) ⊗



C. CONTROLS AND MONITORING



Control System Summary

Project Specific Notes:

Project Information

Project #: 192421
 Project Name: Canyon View Park
 Date: 07/02/21
 Project Engineer: Nate Brown
 Sales Representative: Stephen Baker
 Control System Type: Control-Link™ Control and Monitoring System
 Communication Type: PowerLine-ST
 Scan: 192421Prod
 Document ID: 192421P1V5-0702162447
 Distribution Panel Location or ID: Soccer Fields
 Total # of Distribution Panel Locations for Project: 2
 Design Voltage/Hertz/Phase: 480/60/3
 Control Voltage: 120

Equipment Listing

| DESCRIPTION | APPROXIMATE SIZE | |
|-----------------------------------|------------------|-------------|
| 1. Control and Monitoring Cabinet | 24 X 48 | |
| | QTY | SIZE (AMPS) |
| Total Contactors | 4 | 30 AMP |
| Total Off/On/Auto Switches: | 1 | |

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
 - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
 - See chart on page 2 for wiring requirements
 - Equipment grounding conductor and splices must be insulated (per circuit)
 - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
 - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

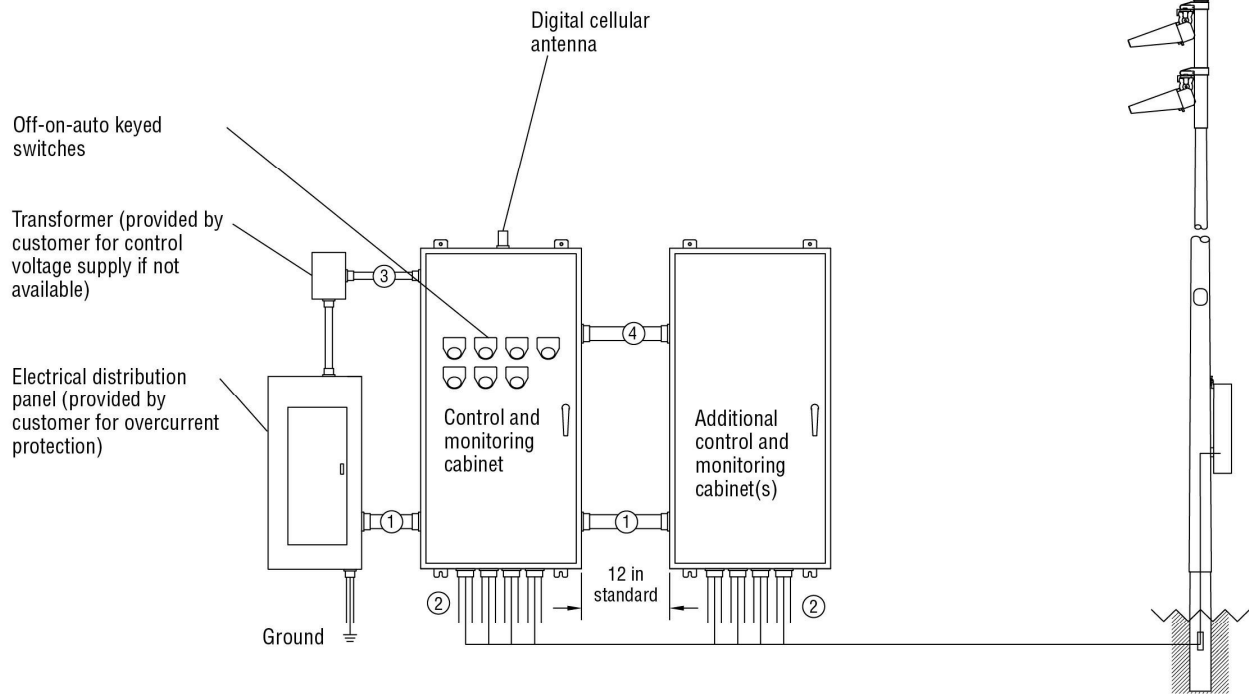
Note: Activation may take up to 1 1/2 hours.

IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

Control•Link® Control and Monitoring System



| Conduit ID | Description | # of Wires | Wire (AWG) | Conduit (in) | Max. Wire Length (ft) | MUSCO Supplied | Notes |
|------------|--|------------|------------|--------------|-----------------------|----------------|-------|
| 1 | Line power to contactors, and equipment grounding conductor | *A | *B | *C | N/A | No | A-E |
| 2 | Load power to lighting circuits, and equipment grounding conductor | *A | *B | *C | N/A | No | A-E |
| 3 | Control power (dedicated, 20A) | 3 | 12 | *C | N/A | No | C,E |
| 4 | Control harnesses | *F | 12 | 2 | *F | Yes | C,E,F |

* Notes:

- A. See voltage and phasing per the notes on cover page.
- B. Calculate per load and voltage drop.
- C. All conduit diameters should be per code unless otherwise specified to allow for connector size.
- D. Equipment grounding conductor and any splices must be insulated.
- E. Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.
- F. Harness is provided in 8-ft length.

R60-101-00_B

IMPORTANT: Control wires (3,4) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Canyon View Park / 192421 - 192421Prod
Soccer Fields - Page 3 of 8

SWITCHING SCHEDULE

| <u>Field/Zone Description</u> | <u>Zones</u> |
|-------------------------------|--------------|
| Soccer | 1 |

| CONTROL POWER CONSUMPTION | |
|--|---------------------------------|
| 120V Single Phase | |
| VA loading of Musco Supplied Equipment | INRUSH: 1553.0 SEALED: 179.8 |

CIRCUIT SUMMARY BY ZONE

| POLE | CIRCUIT DESCRIPTION | # OF FIXTURES | # OF DRIVERS | *FULL LOAD AMPS | CONTACTOR SIZE (AMPS) | CONTACTOR ID | ZONE |
|------|---------------------|---------------|--------------|-----------------|-----------------------|--------------|------|
| S1 | Soccer | 6 | 6 | 12.8 | 30 | C1 | 1 |
| S2 | Soccer | 6 | 6 | 12.8 | 30 | C2 | 1 |
| S3 | Soccer | 6 | 6 | 12.8 | 30 | C3 | 1 |
| S4 | Soccer | 6 | 6 | 12.8 | 30 | C4 | 1 |

*Full Load Amps based on amps per driver.



Control System Summary

Canyon View Park / 192421 - 192421Prod
Soccer Fields - Page 4 of 8

| PANEL SUMMARY | | | | | | |
|---------------|-------------------------|--------------|---------------------|----------------|-----------------------------------|--------------------------------------|
| CABINET # | CONTROL MODULE LOCATION | CONTACTOR ID | CIRCUIT DESCRIPTION | FULL LOAD AMPS | DISTRIBUTION PANEL ID (BY OTHERS) | CIRCUIT BREAKER POSITION (BY OTHERS) |
| 1 | 1 | C1 | Pole S1 | 12.82 | Panel H2 | 2, 4, 6 |
| 1 | 1 | C2 | Pole S2 | 12.82 | Panel H2 | 8, 10, 12 |
| 1 | 1 | C3 | Pole S3 | 12.82 | Panel H2 | 7, 9, 11 |
| 1 | 1 | C4 | Pole S4 | 12.82 | Panel H2 | 1, 3, 5 |

| ZONE SCHEDULE | | | | |
|---------------|-----------------|------------------|---------------------|--------------|
| ZONE | SELECTOR SWITCH | ZONE DESCRIPTION | CIRCUIT DESCRIPTION | |
| | | | POLE ID | CONTACTOR ID |
| Zone 1 | 1 | Soccer | S1 | C1 |
| | | | S2 | C2 |
| | | | S3 | C3 |
| | | | S4 | C4 |



Control System Summary

Project Specific Notes:

Project Information

Project #: 192421
 Project Name: Canyon View Park
 Date: 07/02/21
 Project Engineer: Nate Brown
 Sales Representative: Stephen Baker
 Control System Type: Control-Link™ Control and Monitoring System
 Communication Type: PowerLine-ST
 Scan: 192421Prod
 Document ID: 192421P1V5-0702162447
 Distribution Panel Location or ID: Softball Fields
 Total # of Distribution Panel Locations for Project: 2
 Design Voltage/Hertz/Phase: 480/60/3
 Control Voltage: 120

Equipment Listing

| DESCRIPTION | APPROXIMATE SIZE |
|-----------------------------------|------------------|
| 1. Control and Monitoring Cabinet | 24 X 72 |
| 2. Control and Monitoring Cabinet | 24 X 48 |

Materials Checklist

Contractor/Customer Supplied:

- A dedicated control circuit must be supplied per distribution panel location
 - If the control voltage is NOT available, a control transformer is required
- Electrical distribution panel to provide overcurrent protection for circuits
 - HID rated or D-curve circuit breaker sized per full load amps on Circuit Summary by Zone Chart
- Wiring
 - See chart on page 2 for wiring requirements
 - Equipment grounding conductor and splices must be insulated (per circuit)
 - Lightning ground protection (per pole), if not Musco supplied
- Electrical conduit wireway system
 - Entrance hubs rated NEMA 4, must be die-cast zinc, PVC, or copper-free die-cast aluminum
- Mounting hardware for cabinets
- Breaker lock-on device to prevent unauthorized power interruption to control power and powerline connection (if present)
- Anti-corrosion compound to apply to ends of wire, if necessary

Call Control-Link Central™ operations center at 877/347-3319 to schedule activation of the control system upon completion of the installation.

Note: Activation may take up to 1 1/2 hours.

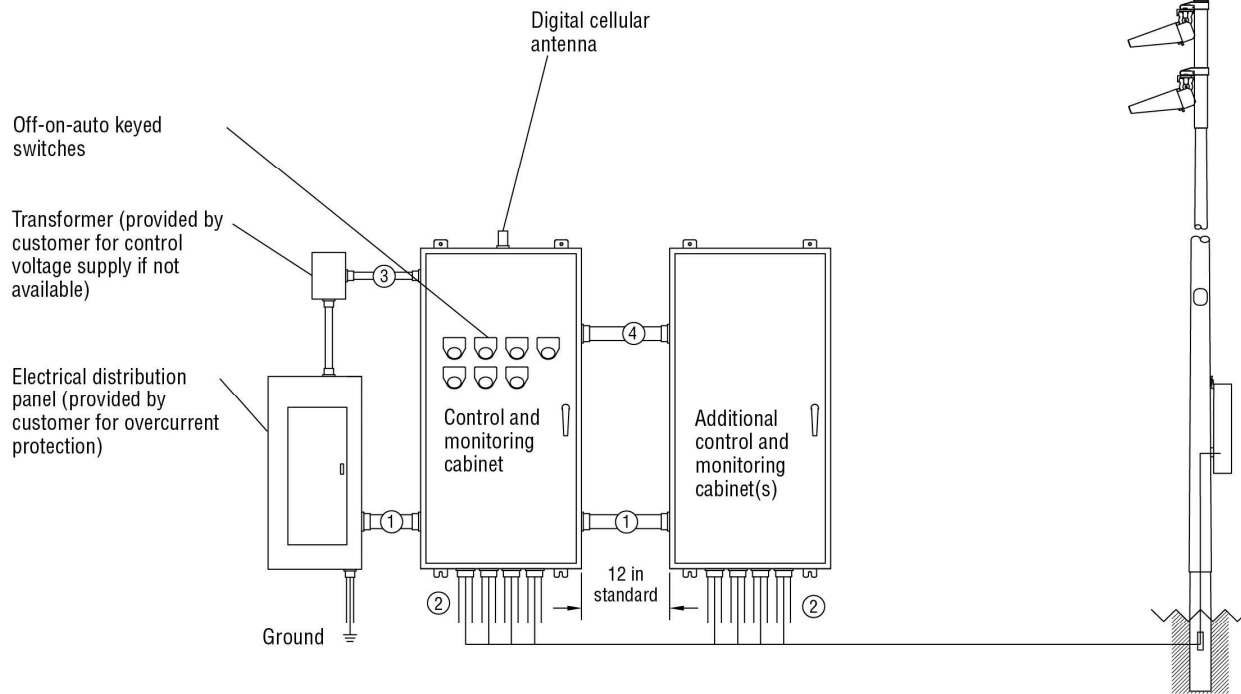
| | QTY | SIZE (AMPS) |
|-----------------------------|-----|-------------|
| Total Contactors | 16 | 30 AMP |
| Total Off/On/Auto Switches: | 4 | |

IMPORTANT NOTES

1. Please confirm that the design voltage listed above is accurate for this facility. Design voltage/phase is defined as the voltage/phase being connected and utilized at each lighting pole's electrical components enclosure disconnect. Inaccurate design voltage/phase can result in additional costs and delays. Contact your Musco sales representative to confirm this item.
2. In a 3 phase design, all 3 phases are to be run to each pole. When a 3 phase design is used Musco's single phase luminaires come pre-wired to utilize all 3 phases across the entire facility.
3. One contactor is required for each pole. When a pole has multiple circuits, one contactor is required for each circuit. All contactors are 100% rated for the published continuous load. All contactors are 3 pole.
4. If the lighting system will be fed from more than one distribution location, additional equipment may be required. Contact your Musco sales representative.
5. A single control circuit must be supplied per control system.
6. Size overcurrent devices using the full load amps column of the Circuit Summary By Zone chart- Minimum power factor is 0.9.

NOTE: Refer to Installation Instructions for more details on equipment information and the installation requirements.

Control-Link® Control and Monitoring System



| Conduit ID | Description | # of Wires | Wire (AWG) | Conduit (in) | Max. Wire Length (ft) | MUSCO Supplied | Notes |
|------------|--|------------|------------|--------------|-----------------------|----------------|-------|
| 1 | Line power to contactors, and equipment grounding conductor | *A | *B | *C | N/A | No | A-E |
| 2 | Load power to lighting circuits, and equipment grounding conductor | *A | *B | *C | N/A | No | A-E |
| 3 | Control power (dedicated, 20A) | 3 | 12 | *C | N/A | No | C,E |
| 4 | Control harnesses | *F | 12 | 2 | *F | Yes | C,E,F |

* Notes:

- See voltage and phasing per the notes on cover page.
- Calculate per load and voltage drop.
- All conduit diameters should be per code unless otherwise specified to allow for connector size.
- Equipment grounding conductor and any splices must be insulated.
- Refer to control and monitoring system installation instructions for more details on equipment information and the installation requirements.
- Harness is provided in 8-ft length.

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IMPORTANT: Control wires (3,4) must be in separate conduit from line and load power wires (1, 2).



Control System Summary

Canyon View Park / 192421 -
Softball Fields - Page 7 of 8

SWITCHING SCHEDULE

| Field/Zone Description | Zones |
|------------------------|-------|
| Liberty Cap Field | 1 |
| Bookcliff Field | 2 |
| Mt Garfield Field | 3 |
| Thunder Mountain Field | 4 |

| CONTROL POWER CONSUMPTION | |
|--|---------------------------------|
| 120V Single Phase | |
| VA loading of Musco Supplied Equipment | INRUSH: 4493.0 SEALED: 491.8 |

CIRCUIT SUMMARY BY ZONE

| POLE | CIRCUIT DESCRIPTION | # OF FIXTURES | # OF DRIVERS | *FULL LOAD AMPS | CONTACTOR SIZE (AMPS) | CONTACTOR ID | ZONE |
|-------|------------------------|---------------|--------------|-----------------|-----------------------|--------------|------|
| A1,B1 | Liberty Cap Field | 11 | 11 | 21.9 | 30 | C1 | 1 |
| A2,B2 | Liberty Cap Field | 11 | 11 | 23.1 | 30 | C2 | 1 |
| C1 | Liberty Cap Field | 6 | 6 | 8.9 | 30 | C3 | 1 |
| C2 | Liberty Cap Field | 6 | 6 | 8.9 | 30 | C4 | 1 |
| A3,B3 | Bookcliff Field | 11 | 11 | 23.7 | 30 | C5 | 2 |
| A4,B4 | Bookcliff Field | 11 | 11 | 21.2 | 30 | C6 | 2 |
| C3 | Bookcliff Field | 6 | 6 | 8.9 | 30 | C7 | 2 |
| C4 | Bookcliff Field | 6 | 6 | 8.9 | 30 | C8 | 2 |
| A5,B5 | Mt Garfield Field | 11 | 11 | 23.7 | 30 | C9 | 3 |
| A6,B6 | Mt Garfield Field | 11 | 11 | 21.2 | 30 | C10 | 3 |
| C5 | Mt Garfield Field | 6 | 6 | 8.9 | 30 | C11 | 3 |
| C6 | Mt Garfield Field | 6 | 6 | 8.9 | 30 | C12 | 3 |
| A7,B7 | Thunder Mountain Field | 11 | 11 | 23.7 | 30 | C13 | 4 |
| A8,B8 | Thunder Mountain Field | 11 | 11 | 21.2 | 30 | C14 | 4 |
| C7 | Thunder Mountain Field | 6 | 6 | 8.9 | 30 | C15 | 4 |
| C8 | Thunder Mountain Field | 6 | 6 | 8.9 | 30 | C16 | 4 |

*Full Load Amps based on amps per driver.



Control System Summary

Canyon View Park / 192421 -
Softball Fields - Page 8 of 8

| PANEL SUMMARY | | | | | | |
|---------------|-------------------------|--------------|---------------------|----------------|-----------------------------------|--------------------------------------|
| CABINET # | CONTROL MODULE LOCATION | CONTACTOR ID | CIRCUIT DESCRIPTION | FULL LOAD AMPS | DISTRIBUTION PANEL ID (BY OTHERS) | CIRCUIT BREAKER POSITION (BY OTHERS) |
| 2 | 2 | C1 | Pole A1,B1 | 21.85 | Panel H3 | 8, 10, 12 |
| 2 | 2 | C2 | Pole A2,B2 | 23.11 | Panel H3 | 7, 9, 11 |
| 2 | 2 | C3 | Pole C1 | 8.92 | Panel H3 | 2, 4, 6 |
| 2 | 2 | C4 | Pole C2 | 8.92 | Panel H3 | 1, 3, 5 |
| 2 | 2 | C5 | Pole A3,B3 | 23.69 | Panel H3 | 43, 45, 47 |
| 2 | 2 | C6 | Pole A4,B4 | 21.16 | Panel H3 | 44, 46, 48 |
| 2 | 2 | C7 | Pole C3 | 8.92 | Panel H3 | 37, 39, 41 |
| 2 | 2 | C8 | Pole C4 | 8.92 | Panel H3 | 38, 40, 42 |
| 2 | 2 | C9 | Pole A5,B5 | 23.69 | Panel H3 | 32, 34, 36 |
| 2 | 2 | C10 | Pole A6,B6 | 21.16 | Panel H3 | 31, 33, 35 |
| 2 | 2 | C11 | Pole C5 | 8.92 | Panel H3 | 26, 28, 30 |
| 2 | 2 | C12 | Pole C6 | 8.92 | Panel H3 | 25, 27, 29 |
| 3 | 2 | C13 | Pole A7,B7 | 23.69 | Panel H3 | 19, 21, 23 |
| 3 | 2 | C14 | Pole A8,B8 | 21.16 | Panel H3 | 20, 22, 24 |
| 3 | 2 | C15 | Pole C7 | 8.92 | Panel H3 | 13, 15, 17 |
| 3 | 2 | C16 | Pole C8 | 8.92 | Panel H3 | 14, 16, 18 |

| ZONE SCHEDULE | | | | |
|---------------|-----------------|------------------------|---------------------|--------------|
| ZONE | SELECTOR SWITCH | ZONE DESCRIPTION | CIRCUIT DESCRIPTION | |
| | | | POLE ID | CONTACTOR ID |
| Zone 1 | 1 | Liberty Cap Field | A1 | C1 |
| | | | B1 | C1 |
| | | | A2 | C2 |
| | | | B2 | C2 |
| | | | C1 | C3 |
| | | | C2 | C4 |
| Zone 2 | 2 | Bookcliff Field | A3 | C5 |
| | | | B3 | C5 |
| | | | A4 | C6 |
| | | | B4 | C6 |
| | | | C3 | C7 |
| | | | C4 | C8 |
| Zone 3 | 3 | Mt Garfield Field | A5 | C9 |
| | | | B5 | C9 |
| | | | A6 | C10 |
| | | | B6 | C10 |
| | | | C5 | C11 |
| | | | C6 | C12 |
| Zone 4 | 4 | Thunder Mountain Field | A7 | C13 |
| | | | B7 | C13 |
| | | | A8 | C14 |
| | | | B8 | C14 |
| | | | C7 | C15 |
| | | | C8 | C16 |



D. WARRANTY





Musco Constant 25™

25-Year Product Assurance & Warranty Program

Project name: Canyon View Park Project number: 192421
Owner: City of Grand Junction City: Grand Junction State: CO
Covered product(s): Light-Structure System™ with TLC for LED™ technology ; SportsCluster™ System with TLC for LED™ technology
Date issued: August 27, 2021 Expiration: August 27, 2046

Musco Sports Lighting, LLC will provide all materials and labor to maintain operation of your lighting system to original design criteria for 25 years. Musco products and services are guaranteed to perform on your project as detailed in this document.

Light Performance

Specified illumination levels will be maintained and are marked as guaranteed in the Musco Illumination Summary. Individual luminaire outages that occur during the warranty and maintenance period are repaired when the usage of any field is materially impacted.

Spill Light Control

If specified, spill light levels at identified locations are guaranteed to be controlled to the maximum values provided in the Musco Illumination Summary.

Energy Consumption

Total average kW consumption for your lighting system is guaranteed to be not more than the total load shown in the Musco Illumination Summary.

Monitoring, Maintenance, and Control Services

Musco shall monitor the performance of your lighting system, including on/off status, hours of usage, and luminaire outages. If outages that affect playability are detected, Musco will contact you and proactively dispatch technicians.

On-off control of your lighting system is provided via an easy-to-use web site scheduling system, smartphone app, phone, email, or fax. Our trained Control-Link Central™ service center staff is available toll-free 24/7. Regular usage reports are always available on Control-Link Central's web site.

Structural Integrity

Your project has been designed to IBC, 2018, 115 MPH, Exposure C.
Structural integrity of equipment manufactured by Musco is guaranteed.

Musco has a team of people to ensure fulfillment of our product and services warranty and maintains financial reserves dedicated to support our fulfillment of this warranty. Please keep this document as your signed contract guaranteeing comprehensive service for the 25 year period.



Musco Constant 25™

25-Year Product Assurance & Warranty Program

Terms and Conditions

Service under this Contract is provided by Musco Sports Lighting, LLC ("Musco") or an authorized servicer approved by Musco. Services performed under this Contract shall consist of furnishing labor and parts necessary to restore the operation of the Covered Product(s) to original design criteria provided such service is necessitated by failure of the Covered Product(s) during normal usage. This Contract covers Product(s) consisting of Musco's Total Light Control – TLC for LED® with Control-Link® and any additional Musco manufactured product as listed on page 1.

"We", "us," and "our" mean Musco. "You" and "your" mean the purchaser of the Covered Product(s). No one has the authority to change this Contract without the prior written approval of Musco. Musco shall not assume responsibility for their agents or assignees other than as described below. If there is a conflict between the terms of this Contract and information communicated either orally or in writing by one or more of our employees or agents, this Contract shall control.

Additional Provisions

- 1. Availability of Service:** Control-Link Central™ operators shall be available 24/7 via web site, phone, fax, or email. Maintenance service specialists shall be available 8AM to 5PM Central Time, and services shall be rendered during these same hours in your local time zone, Monday through Friday (with the exception of national holidays). Hours of operation are subject to change without notice to you. Musco will exercise all reasonable efforts to perform service under this Contract, but will not be responsible for delays or failure in performing such services caused by adverse weather conditions, acts of any government, failure of transportation, accidents, riots, war, labor actions or strikes or other causes beyond its control.
- 2. Determination of Repairs:** Musco will utilize the field monitoring system and any information provided by the customer to determine when the usage of the field is materially impacted. From this information, Musco will determine needed repair and/or replacement of Covered Product(s) and parts. Repair will be with Product(s) of like kind and quality.
- 3. Your Requirements Under this Contract:** You must meet all electrical and installation requirements as specified by the manufacturer. In addition, you promise and assure: full cooperation with Musco, Musco's technicians and authorized servicers during telephone diagnosis and repair of the Covered Product(s); reasonable accessibility of the Covered Product(s); a nonthreatening and safe environment for service.

You agree to check fuses and to replace fuses as needed. Musco provides spare fuses in the lowest alpha-numeric numbered enclosure. Musco will replenish spare fuses used.

You agree to keep your control system online. This means keeping the required control voltage to the control system at all times. Any deviation from this practice must be discussed with Musco's Warranty Department.
- 4. Service Limitations — This Contract does not cover:** Maintenance, repair, or replacement necessitated by loss or damage resulting from any external causes such as, but not limited to, theft, environmental conditions, negligence, misuse, abuse, improper electrical/power supply, unauthorized repairs by third parties, attachments, damage to cabinetry, equipment modifications, vandalism, animal or insect infestation, physical damage to Covered Product(s) parts or components, failure of existing structures, supporting electrical systems or any non-Musco equipment, or acts of God/nature (including, but not limited to: earthquake, flood, tornadoes, typhoons, hurricanes, or lightning).

5. Contract Limitations:

- EXCLUSIONS FROM COVERAGE:** IN NO EVENT WILL MUSCO BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHICH INCLUDE, BUT ARE NOT LIMITED TO, ANY DELAY IN RENDERING SERVICE OR LOSS OF USE DURING THE REPAIR PERIOD OF THE COVERED PRODUCT(S) OR WHILE OTHERWISE AWAITING PARTS.
 - Limitation of Liability:** To the extent permitted by applicable law, the liability of Musco, if any, for any allegedly defective Covered Product(s) or components shall be limited to repair or replacement of the Covered Product(s) or components at Musco's option. THIS CONTRACT IS YOUR SOLE EXPRESS WARRANTY WITH RESPECT TO THE COVERED PRODUCT(S). ALL IMPLIED WARRANTIES WITH RESPECT TO THE COVERED PRODUCT(S) INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY EXPRESSLY EXCLUDED.
 - For the purposes of and by your acceptance of this Contract you acknowledge and agree that if a surety bond ("Bond") is provided the warranty and/or maintenance guarantee provided for in this Contract and any corresponding liability on behalf of the issuing surety under the Bond is limited to the first twelve (12) months of said warranty and/or maintenance guarantee coverage period. Any warranty and/or guarantee coverage period in excess of said initial 12 month period does not fall within the scope of the Bond and shall be the sole responsibility of Musco.
 - Musco requires reasonable access for a crane or man lift equipment to service the lighting system. Musco will not be responsible for damage from operating the vehicle on the property when the equipment is operated in the prescribed manner over the designated access route.
 - Obsolescence or Environmental Restrictions:** If during any maintenance or other work performed under this Warranty, any of the parts of the Covered Product(s) are found to be either obsolete, no longer available, or prohibited by any state or federal agency, Musco shall replace said parts with comparable parts and materials with equal operating characteristics solely at Musco's discretion. The cost of replacement of any obsolete cellular related technology shall be borne by you. Prior to completing any such work, Musco shall notify you of the cost (if any) you will incur in the replacement of such parts under this section.
- 6. Transfer and Assignment:** Except to owners, you shall not have the right to assign or otherwise transfer your rights and obligations under this Contract except with the prior written consent of Musco; however, a successor in interest by merger, operation of law, assignment or purchase or otherwise of your entire business shall acquire all of your interests under this Contract.
 - 7. Governing Law:** Unless otherwise governed by applicable state law, the Contract shall be interpreted and enforced according to the laws of the State of Iowa.
 - 8. Subrogation:** In the event Musco repairs or replaces any Covered Product(s), parts or components due to any defect for which the manufacturer or its agents or suppliers may be legally responsible, you agree to assign your rights of recovery to Musco. You will be reimbursed for any reasonable costs and expenses you may incur in connection with the assignment of your rights. You will be made whole before Musco retains any amounts it may recover.

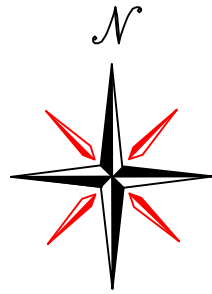
Signature: _____

Vice President of Sales



E. AIMING INFORMATION/DRAWINGS





Overcurrent devices and conductors MUST be sized using the Manufacturer's rated amperage draw per luminaire (kVA). Using the kW rating can result in undersized calculations. Refer to Musco's Control System Summary or Specification Chart (located below) for manufacturer's amperage draw.

| DRIVER SPECIFICATIONS | VOLTAGE: 480v 3 PHASE | | | | | | | | | |
|---|-----------------------|------|------|------|------|------|------|------|------|------|
| TLC-LED-575 MAX WATT <i>(Also applicable to each single phase of a 3 phase system)</i> | 208 | 220 | 230 | 240 | 277 | 347 | 380 | 400 | 415 | 480 |
| Per LED Luminaire | 3.17 | 3.00 | 2.87 | 2.75 | 2.38 | 1.90 | 1.74 | 1.65 | 1.59 | 1.38 |

| DRIVER SPECIFICATIONS | VOLTAGE: 480v 3 PHASE | | | | | | | | | |
|--|-----------------------|------|------|------|------|------|------|------|------|------|
| TLC-LED-1230 MAX WATT <i>(Also applicable to each single phase of a 3 phase system)</i> | 208 | 220 | 230 | 240 | 277 | 347 | 380 | 400 | 415 | 480 |
| Per LED Luminaire | 7.30 | 6.91 | 6.61 | 6.33 | 5.49 | 4.38 | 4.00 | 3.80 | 3.66 | 3.17 |

| DRIVER SPECIFICATIONS | VOLTAGE: 480v 3 PHASE | | | | | | | | | |
|--|-----------------------|------|------|------|------|------|------|------|------|------|
| TLC-LED-1500 MAX WATT <i>(Also applicable to each single phase of a 3 phase system)</i> | 208 | 220 | 230 | 240 | 277 | 347 | 380 | 400 | 415 | 480 |
| Per LED Luminaire | 8.95 | 8.46 | 8.09 | 7.75 | 6.72 | 5.36 | 4.90 | 4.65 | 4.49 | 3.88 |

| DRIVER SPECIFICATIONS | VOLTAGE: 480v 3 PHASE | | | | | | | | | |
|---|-----------------------|------|------|------|------|------|------|------|------|------|
| TLC-LED-900 MAX WATT <i>(Also applicable to each single phase of a 3 phase system)</i> | 208 | 220 | 230 | 240 | 277 | 347 | 380 | 400 | 415 | 480 |
| Per LED Luminaire | 5.29 | 5.00 | 4.78 | 4.58 | 3.97 | 3.17 | 2.90 | 2.75 | 2.65 | 2.29 |

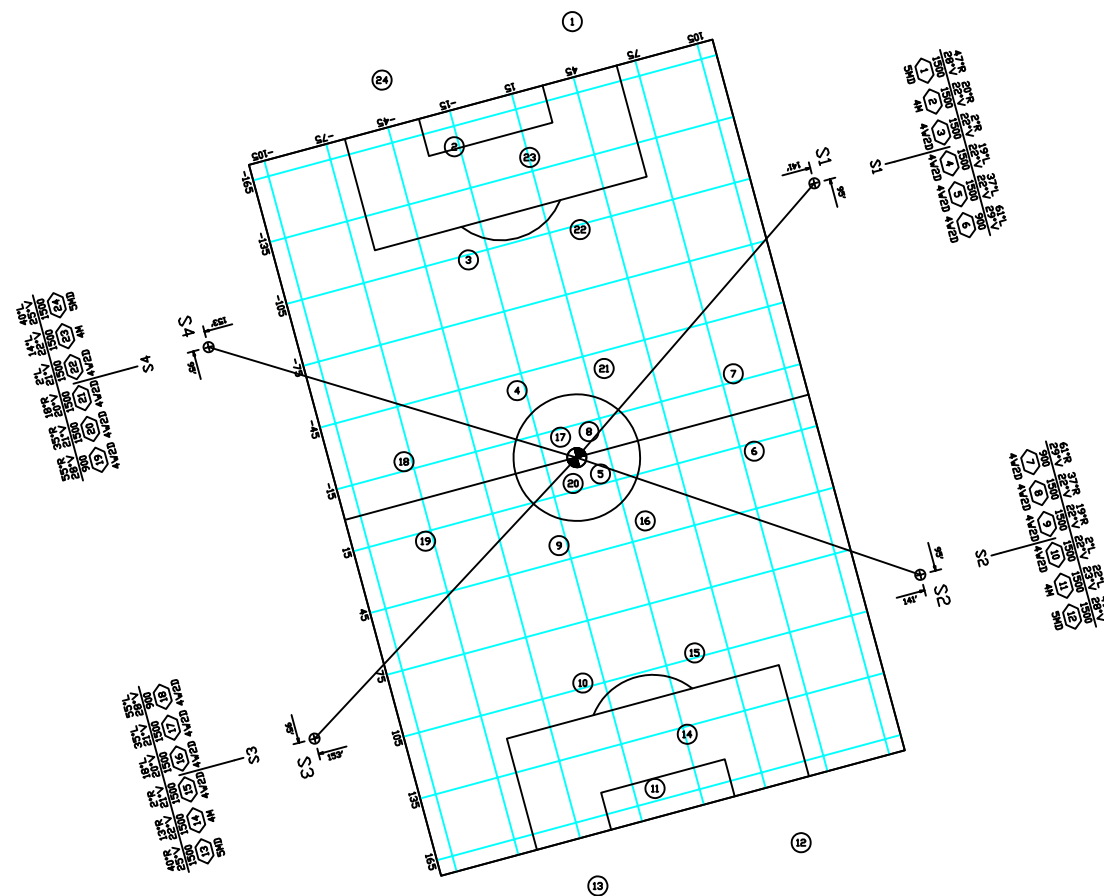
| | Soccer | S1 Pole | 0 | 0 |
|--|---------|---------|---|---|
| | S2 Pole | 0 | 0 | |
| | S3 Pole | 0 | 0 | |
| | S4 Pole | 0 | 0 | |

If you have questions pertaining to this document, please contact NATE BROWN, your project engineer. Phone: 800-825-6025 ext: 2969# DATE: 07/02/21

The following poles ECE's will have spare fuses: A1, A3, A5, A6, S1

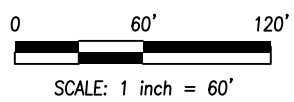
The following poles will be equipped with bolt-on crossarm mounting plates; B1-B8
Spreader bars will require attachment between crossarms as shown in this aiming diagram.

The CIRCLE shape on the bars represents the Liberty Cap circuit.
The SQUARE shape on the bars represents the Bookcliff Field circuit.
The DIAMOND shape on the bars represents the Mt. Garfield Field circuit.
The PENTAGON shape on the bars represents the Thunder Mountain Field circuit.
The HEXAGON shape on the bars represents the Soccer P circuit.

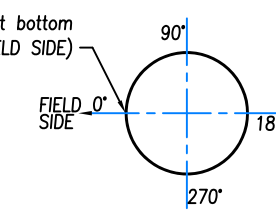


Wind Design Criteria: IBC STD 2018 115MPH Exposure C

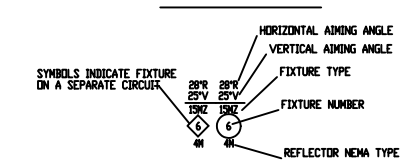
| Lighting Equipment | | | | | | | | | | | | |
|----------------------------|---------------|-----------------|------------|----------------------|----------------|--------------------|----------------|-----------------|----------|------------------|-------|--|
| APPROXIMATE LOAD: 50/30 fc | | | | ORDER NO: 192421Prod | | | | DATE: 02/JUL/21 | | | | |
| RATIO TO IBC: 2:1/2.5:1 | | | | ORDER NUMBER: 506625 | | | | | | | | |
| POLE | | | LUMINAIRES | | | ELECTRICAL LOAD | | | | | | |
| POLE QUANTITY | POLE LOCATION | MOUNTING HEIGHT | POLE SIZE | ELEV. | LUMINAIRE TYPE | LUMINAIRE PER POLE | PER POLE TOTAL | KW/UNIT | KVA/UNIT | CONSUMPTION UNIT | TOTAL | |
| 1 | A1 | 65.5' | 60AA | 5.54' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A2 | 64.0' | 60AA | 4.04' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A3 | 64.1' | 60AA | 4.06' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A4 | 65.6' | 60AA | 5.56' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A5 | 65.5' | 60AA | 5.5' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A6 | 65.0' | 60AA | 5' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A7 | 65.5' | 60AA | 5.52' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | A8 | 65.0' | 60AA | 5.02' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B1 | 70.0' | 70C | .04' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B3 | 70.1' | 70C | .06' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B4 | 70.1' | 70C | .06' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B5 | 70.0' | 70C | 0' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B6 | 70.0' | 70C | 0' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B7 | 70.0' | 70C | .02' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | B8 | 70.0' | 70C | .02' | TLC-LED-1200 | 1 | 1 | 1.17 | 1.17 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-1500 | 6 | 6 | 8.58 | 8.58 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 1 | 1 | 0.58 | 0.58 | | | |
| 1 | C1 | 70.0' | 70C | .04' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C2 | 70.0' | 70C | .04' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C3 | 70.1' | 70C | .06' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C4 | 70.1' | --- | .06' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C5 | 70.0' | 70C | 0' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C6 | 70.0' | 70C | 0' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C7 | 70.0' | 70C | .02' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | C8 | 70.0' | 70C | .02' | TLC-LED-1500 | 2 | 2 | 2.86 | 2.86 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 2 | 2 | 1.78 | 1.78 | | | |
| --- | --- | 15.5' | --- | --- | TLC-BT-575 | 2 | 2 | 1.15 | 1.15 | | | |
| 1 | S1 | 70.0' | 700 | 0' | TLC-LED-1500 | 5 | 5 | 7.15 | 7.15 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 1 | 1 | 0.89 | 0.89 | | | |
| 1 | S2 | 70.0' | 700 | 0' | TLC-LED-1500 | 5 | 5 | 7.15 | 7.15 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 1 | 1 | 0.89 | 0.89 | | | |
| 1 | S3 | 70.0' | 700 | 0' | TLC-LED-1500 | 5 | 5 | 7.15 | 7.15 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 1 | 1 | 0.89 | 0.89 | | | |
| 1 | S4 | 70.0' | 700 | 0' | TLC-LED-1500 | 5 | 5 | 7.15 | 7.15 | | | |
| --- | --- | 15.5' | --- | --- | TLC-LED-900 | 1 | 1 | 0.89 | 0.89 | | | |
| 28 | TOTALS | | | | | | 160 | 188.56 | | | | |



Align weld marks located at bottom of pole sections @ 0°(FIELD SIDE)



AIMING LEGEND



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Canyon View Park
Grand Junction, CO
Field Aiming Diagram

CORPORATE OFFICE:
P.O. Box 808
100 1st Avenue West
Oskaloosa, Iowa 52577
800/825-6020



REVISIONS:

DATE: 07/02/21

JOB NUMBER: 192421
DRAWN BY: NaBrown
PROJECT ENGINEER: NABROWN
REPRESENTATIVE: SBaker
SCALE: 1 = 60
DATE: 07/02/21
DRAWING NUMBER: 192421A1
1 OF 2 SHEETS