



SEAGATE

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TECHNOLOGY -  
NORMANDALE  
WAFER SOUTH  
ADDITION

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Saint Paul, MN 55102  
651.222.3701  
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Consultant



# DUNHAM

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50 South Sixth Street / Suite 1100  
Minneapolis, Minnesota 55402-1540

PHONE 612.465.7550

FAX 612.465.7551

WEB [dunhameng.com](http://dunhameng.com)

mechanical + electrical

**consulting engineering**  
Dunham Project #: 0421037-000-00

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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Name Todd R. Grube, P.E.

Date \_\_\_\_\_ Reg. No. 40518

Issued For

| Item             | Date       |
|------------------|------------|
| BP-03 GMP ISSUE  | 03/08/2017 |
| BP-02 PERMIT SET | 05/24/2017 |
| BP-03 CD ISSUE   | 06/10/2017 |
| PR-05            | TBD        |

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### Keyplan

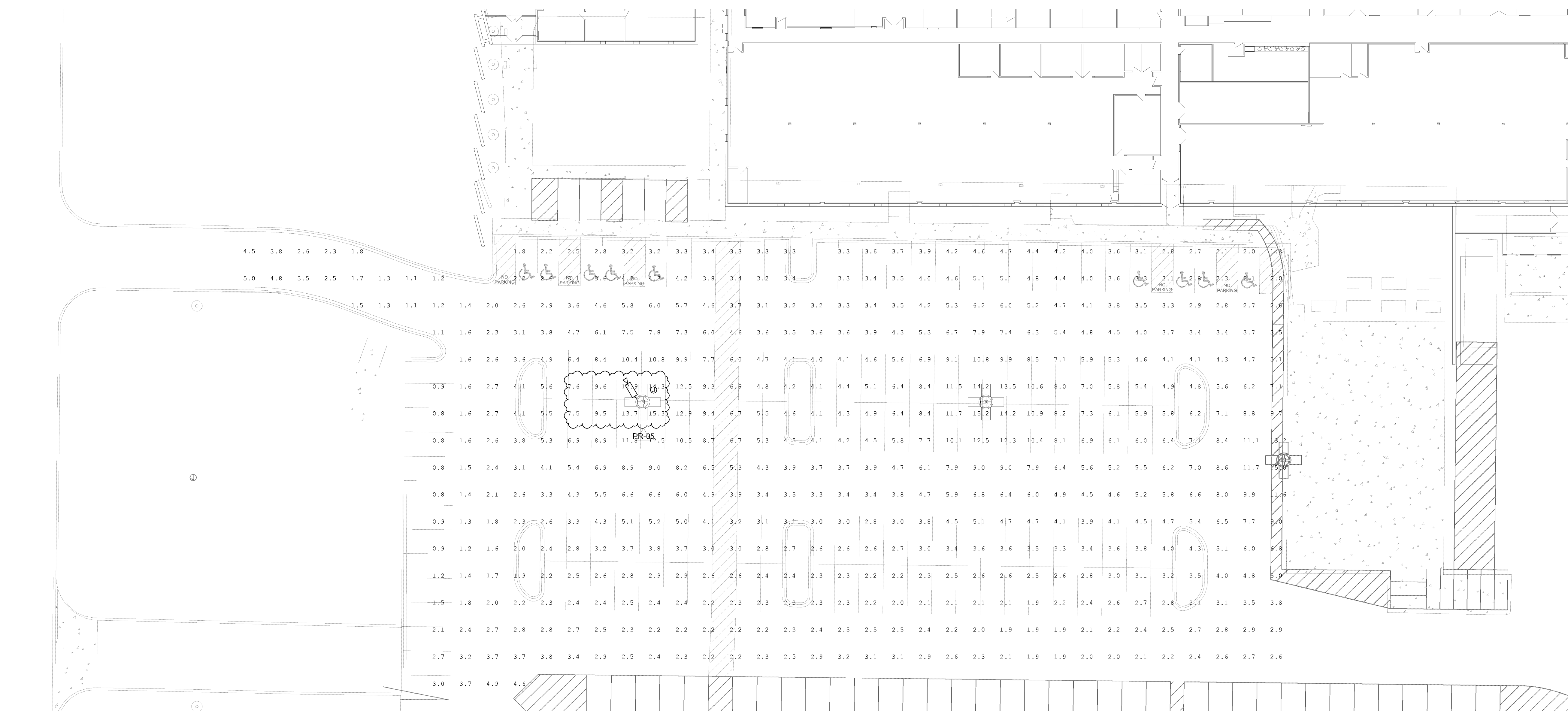
|              |       |
|--------------|-------|
| Comm. No.    | Drawn |
| 3.2021141.00 | JW    |

Sheet Title

**ELECTRICAL SITE PLAN  
WEST - INITIAL  
LIGHTING CALCS**

Sheet No.

# 900.L4

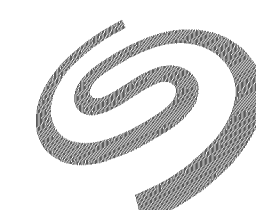


1 ELECTRICAL SITE PLAN - PHOTOMETRICS (MAINTAINED)  
3/64" = 1'-0"

**LIGHTING PLAN APPROVED**

 CITY OF  
**BLOOMINGTON**  
MINNESOTA

 NMJ  
08/17/2022



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Name Todd R. Grube, P.E.

Date \_\_\_\_\_ Reg. No. 40518

Issued For

| Item             | Date       |
|------------------|------------|
| BP-03 GMP ISSUE  | 03/08/2022 |
| BP-02 PERMIT SET | 05/24/2022 |
| BP-03 CD ISSUE   | 06/10/2022 |
| PR-05            | TBD        |

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Keyplan

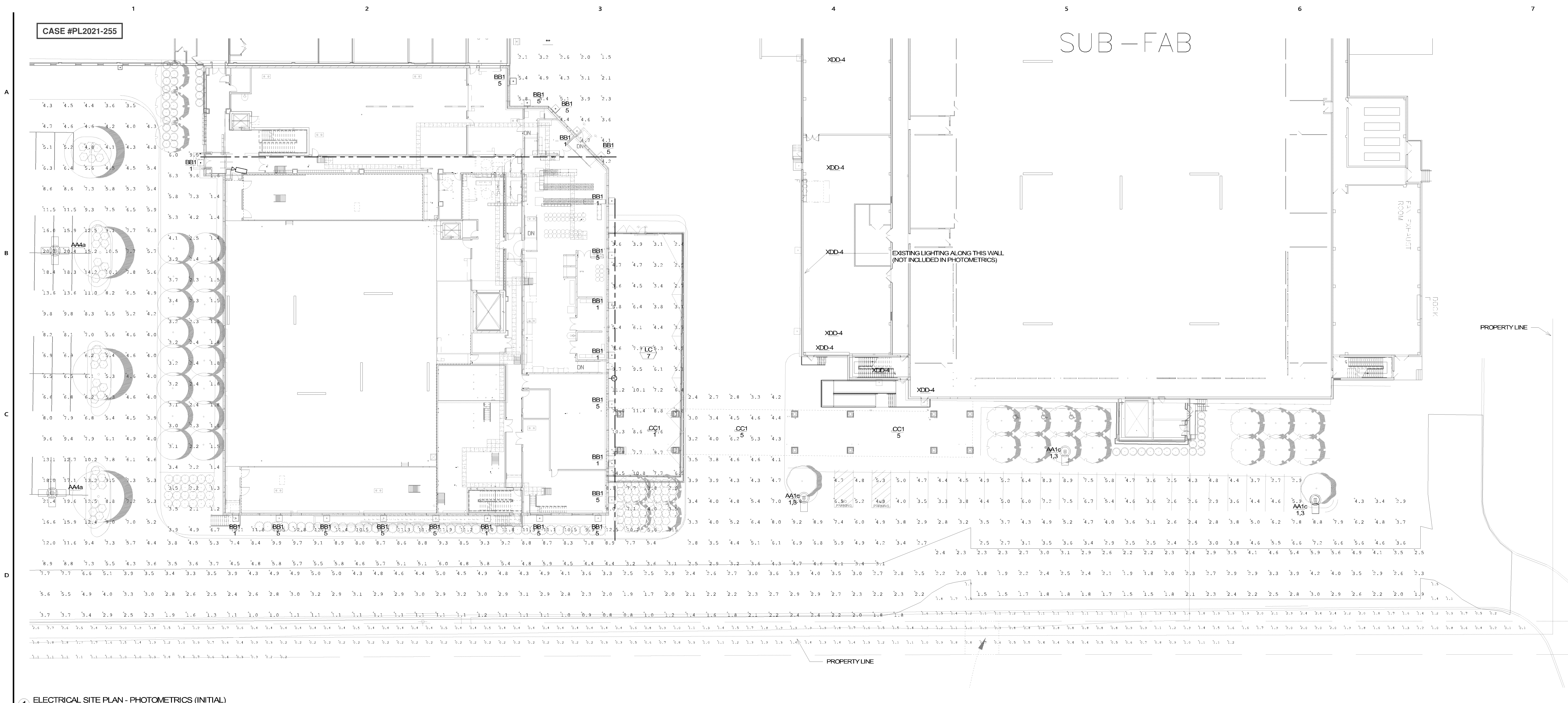
|              |       |
|--------------|-------|
| Comm. No.    | Drawn |
| 3.2021141.00 | JW    |

Sheet Title  
**ELECTRICAL SITE PLAN  
WEST - MAINTAINED  
LIGHTING CALCS**

Sheet No. \_\_\_\_\_

**900.L5**

5/23/2022 9:58:03 AM



1 ELECTRICAL SITE PLAN - PHOTOMETRICS (INITIAL)  
3/64" = 1'-0"

LIGHTING PLAN APPROVED  
NMJ  
06/13/2022



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Saint Paul, MN 55102  
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bwbr.com

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DUNHAM  
50 South Sixth Street / Suite 1100  
Minneapolis, Minnesota 55402-1540  
phone: 612.465.7550  
fax: 612.465.7551  
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Name: Todd R. Grube, P.E.  
Date: 03/08/2022 Reg. No.: 40518

Issued For:  
Item: Date:  
CITY RESUBMITTAL: 01/10/2022  
BP-03 GRIP ISSUE: 03/08/2022  
BP-02 PERMIT SET: 05/24/2022

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Keyplan

Comm. No.: 3.2021141.00 Drawn: JW

Sheet Title:  
ELECTRICAL SITE PLAN -  
INITIAL LIGHTING  
CALCS

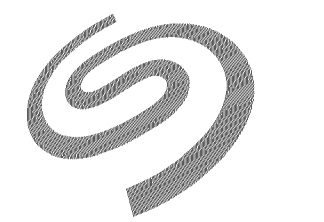
Sheet No.:

900.L2

Copyright BMBR

CASE #PL2021-255

SUB - FAB



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651.222.3701  
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Minneapolis, Minnesota 55402-1540  
phone: 612.465.7550  
fax: 612.465.7551  
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Name: Todd R. Grube, P.E.

Date: 03/08/2022 Reg. No. 40518

Issued For

Item Date  
CITY RESUBMITTAL 01/10/2022  
BP-03 GMP ISSUE 03/08/2022  
BP-02 PERMIT SET 05/24/2022

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CONSTRUCTION

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Keyplan

Comm. No. 3.2021141.00 Drawn JW

Sheet Title  
ELECTRICAL SITE PLAN -  
MAINTAINED LIGHTING  
CALC

Sheet No.

900.L3

CONSTRUCTION

1 ELECTRICAL SITE PLAN - PHOTOMETRICS (MAINTAINED)  
3/64" = 1'-0"

LIGHTING PLAN APPROVED  
BLOOMINGTON MINNESOTA  
NMJ  
06/13/2022

#### GENERAL NOTES:

A. FIXTURES UTILIZED IN THIS CALCULATION HAVE A 0.8 LIGHT LOSS FACTOR.

| Calculation Summary    |             |       |      |      |     |         |         |
|------------------------|-------------|-------|------|------|-----|---------|---------|
| Label                  | CalcType    | Units | Avg  | Max  | Min | Avg/Min | Max/Min |
| Dock                   | Illuminance | Fc    | 3.21 | 4.9  | 1.3 | 2.47    | 3.77    |
| Electrical Yard        | Illuminance | Fc    | 5.92 | 12.9 | 2.1 | 2.82    | 6.14    |
| Exit of Wafer East_Top | Illuminance | Fc    | 6.51 | 14.4 | 1.7 | 3.83    | 8.47    |
| Landscaping            | Illuminance | Fc    | 4.54 | 11.5 | 1.0 | 4.54    | 11.50   |
| Landscaping_1          | Illuminance | Fc    | 0.90 | 2.3  | 0.1 | 9.00    | 23.00   |
| Parking Lot            | Illuminance | Fc    | 5.34 | 18.2 | 2.0 | 2.67    | 9.10    |
| Perimeter Calculation  | Illuminance | Fc    | 2.39 | 6.6  | 0.7 | 3.41    | 9.43    |
| Ramp_Top               | Illuminance | Fc    | 8.43 | 10.1 | 5.5 | 1.53    | 1.84    |
| Stair Landing_Top_1    | Illuminance | Fc    | 9.54 | 11.1 | 7.6 | 1.26    | 1.46    |

5/23/2022 9:58:09 AM

**B | W | B | R**

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[illegible]

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Keyplan

|                                          |       |
|------------------------------------------|-------|
| Comm. No.                                | Drawn |
| 3.2021141.00                             | JW    |
| Sheet Title                              |       |
| <b>ELECTRICAL LIGHTING<br/>SCHEDULES</b> |       |

Sheet No. \_\_\_\_\_

950

**Johnson, Nick M**

---

**From:** John Wuollet <John.Wuollet@dunhameng.com>  
**Sent:** Monday, June 13, 2022 6:30 AM  
**To:** 'Nagel, Peter'; Johnson, Nick M  
**Subject:** RE: Seagate Full Permit - #PRBD202205931 - 7801 Computer Ave S and 7850 Nord Ave S

Nick,

Yes, both maintained sheets have a LLF of 0.8.

Thanks,

**John Wuollet**  
Associate | Electrical  
D: 612-465-7651

50 South Sixth Street \ Suite 1100  
Minneapolis Minnesota 55402

## DUNHAM

**From:** Nagel, Peter [mailto:PNagel@bwbr.com]  
**Sent:** Friday, June 10, 2022 2:25 PM  
**To:** Johnson, Nick M <nmjohnson@BloomingtonMN.gov>  
**Cc:** John Wuollet <John.Wuollet@dunhameng.com>  
**Subject:** RE: Seagate Full Permit - #PRBD202205931 - 7801 Computer Ave S and 7850 Nord Ave S

Nick,

We do have that information but it wasn't included in the package I sent you. I only sent you the photometric calcs – all of the lighting details and schedules will be in Bid Package #3 with all of the other electrical stuff. I've attached the relevant sheets with the information you need that will be in said bid package. Sheet 950 has a site lighting schedule and Sheet 980 has a light pole base detail.

John – can you please address Nick's other question that I highlighted below regarding the light loss factor?

Thanks,

**Peter Nagel** AIA, ALA  
Pronouns: He/Him/His  
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**From:** Johnson, Nick M <nmjohnson@BloomingtonMN.gov>  
**Sent:** Friday, June 10, 2022 2:03 PM  
**To:** Nagel, Peter <PNagel@bwbr.com>  
**Subject:** RE: Seagate Full Permit - #PRBD202205931 - 7801 Computer Ave S and 7850 Nord Ave S

Peter,

**CASE #PL2021-255**

Regarding the lighting plan, I do not see specs or details on the type of light fixtures and proposed height? Am I missing that detail? If it is not included, can you provide me that information? Also, the maintained sheets should be calculated at 0.81 Light Loss Factor (LLF). I see one sheet says a LLF of 0.9 and one states LLF of 0.8. Can you confirm with the designer that both maintained sheets are calculated at this level?

Otherwise the lighting plan looks good. The light levels do meet the minimum requirements.

The screening and trash requirements appear to meet City Code requirements. Thanks for that information.

Let me know if you have any questions.



**NICK M. JOHNSON** (he/him)

Planner, Planning Division

**PH:** 952-563-8925 **EMAIL:** [nmjohnson@bloomingtonmn.gov](mailto:nmjohnson@bloomingtonmn.gov)

1800 West Old Shakopee Road, Bloomington, MN 55431

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**From:** Nagel, Peter <[PNagel@bwbr.com](mailto:PNagel@bwbr.com)>

**Sent:** Thursday, June 9, 2022 2:53 PM

**To:** Johnson, Nick M <[nmjohnson@BloomingtonMN.gov](mailto:nmjohnson@BloomingtonMN.gov)>; [kari.davis@mcgough.com](mailto:kari.davis@mcgough.com); Roisen, Nathan <[NRoisen@bwbr.com](mailto:NRoisen@bwbr.com)>

**Subject:** RE: Seagate Full Permit - #PRBD202205931 - 7801 Computer Ave S and 7850 Nord Ave S

Nick,

1. Yes, we did prepare updated photometric plans. They were a part of the building plans uploaded but I have reattached for your convenience.
2. The view you're seeing is kind of misleading...from a straight on elevation, it looks like the equipment is not that tall, but we actually raised the parapet there 15' above the roof deck (to the maximum allowable building height of 55'-0") solely to screen that equipment – see snip below which is looking southeast from the roof. Even with that 15' parapet, it does still pop up a little bit in a straight-on view, because as the design has evolved we have found that some of the equipment requires platforms, but we are confident that nothing (other than the stacks) would be visible from ground level. Below are views from the right-of-way from the southeast, and from W 78<sup>th</sup> St to the south.
3. The trash/recycling is calculated on sheet 101.CO in the "CODE SUMMARY" under the "MISCELLANEOUS" box...kind of hard to find sorry. It is indicated graphically on sheet 101.RF.

Let me know if you need anything else, happy to help.