



SEAGATE

SEAGATE
TECHNOLOGY -
NORMANDALE
WAFER SOUTH
ADDITION

B	B	W	B	R
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380 St. Peter Street, Ste. 600
Saint Paul, MN 55102
651.222.3701
bwbr.com

Consultants



DUNHAM

DUNHAM

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

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**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
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Issued For

Item	Date
BP-03 GMP ISSUE	03/08/2010
BP-02 PERMIT SET	05/24/2010
BP-03 CD ISSUE	06/10/2010
PR-05	TBD

F  This Sheet may be a Reduced Copy.
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Keyplan

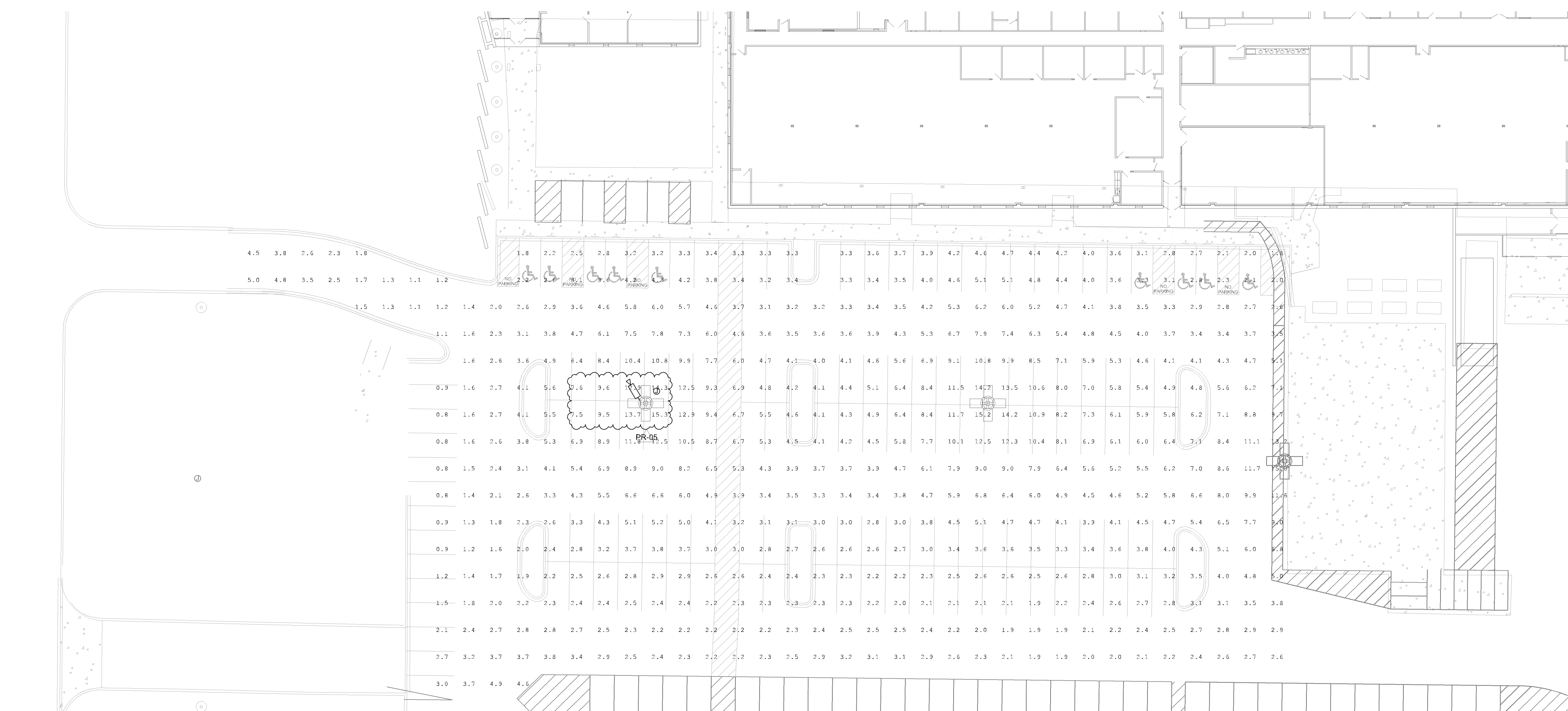
Comm. No.	Drawn
3.2021141.00	JW

Sheet Title

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

Sheet No. _____

900.L4

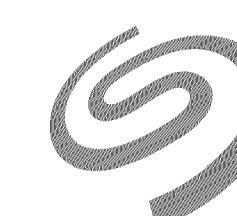


1 ELECTRICAL SITE PLAN - PHOTOMETRICS (MAINTAINED)
3/64" = 1'-0"

LIGHTING PLAN APPROVED

 CITY OF
BLOOMINGTON
MINNESOTA

 NMJ
08/17/2022



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Name Todd R. Grube, P.E.

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Keyplan

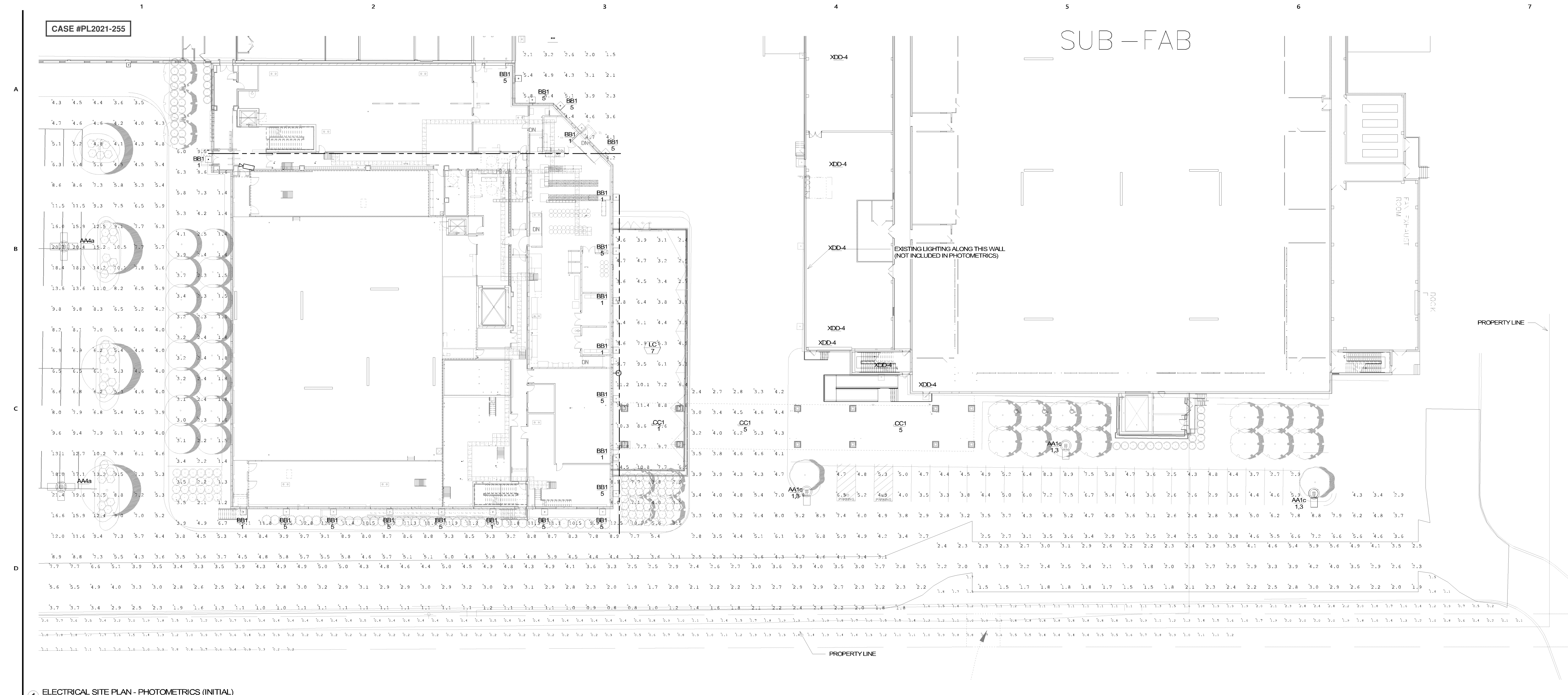
Comm. No.	Drawn
3.2021141.00	JW

Sheet Title

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

Sheet No. _____

900.L5



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

LIGHTING PLAN APPROVED
NMIJ
06/13/2022

GENERAL NOTES:

A. FIXTURES UTILIZED IN THIS CALCULATION HAVE A 0.9 LIGHT LOSS FACTOR.

KEY NOTES:

NOTE NOT USED.

Calculation Summary							
Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
Dock	Illuminance	Fc	3.78	5.8	1.5	2.52	3.87
Electrical Yard	Illuminance	Fc	6.67	14.5	2.4	2.78	6.04
Exit of Wafer East_Top	Illuminance	Fc	6.72	14.4	1.9	3.54	7.58
Landscaping	Illuminance	Fc	5.33	13.5	1.2	4.44	11.25
Landscaping_1	Illuminance	Fc	1.04	2.7	0.1	10.40	27.00
Parking Lot	Illuminance	Fc	6.18	21.4	2.4	2.58	8.92
Perimeter Calculation	Illuminance	Fc	2.80	7.7	0.8	3.50	9.63
Ramp_Top	Illuminance	Fc	9.89	11.9	6.4	1.55	1.86
Stair Landing_Top_1	Illuminance	Fc	11.20	13.1	8.9	1.26	1.47



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I hereby verify 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: 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

NOT FOR
CONSTRUCTION

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Keyplan

Comm. No. 3.2021141.00 Drawn: JW

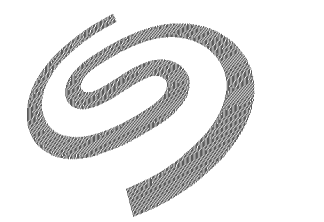
Sheet Title:
**ELECTRICAL SITE PLAN -
INITIAL LIGHTING
CALCS**

Sheet No.

900.L2

CASE #PL2021-255

SUB - FAB



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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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Keyplan

Comm. No. 3.2021141.00 Drawn JW

Sheet Title
ELECTRICAL SITE PLAN -
MAINTAINED LIGHTING
CALC

Sheet No.

900.L3

CONCEPT BAYER

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

LIGHTING PLAN APPROVED
BLOOMINGTON 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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Saint Paul, MN 55102
651.222.3701
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[illegible]

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

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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
P 608.829.3290 M 414.517.5064 bwbr.com
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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
1800 West Old Shakopee Road, Bloomington, MN 55431

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From: Nagel, Peter <PNagel@bwbr.com>

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

To: Johnson, Nick M <nmjohnson@BloomingtonMN.gov>; kari.davis@mcgough.com; Roisen, Nathan <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 78th 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.