

M:\NJ\2023\NJ\20230605\UNCLD\DRAWINGS\PLAN\BETS\CIVIL SITE PLANS\PC-2\JH-LIGHT\NJ\20230605\04-1-24\LAYOUT-L-201 LOTE 4.B



NAD83



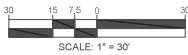
LIGHTING GENERAL NOTES

1. A FIRST ROUND OF LIGHT LEVEL OBSERVATIONS WAS CONDUCTED BY BOHLER ENGINEERING NJ, LLC ON WEDNESDAY, NOVEMBER 6, 2024. SUNSET OCCURRED AT 4:42PM. LIGHT LEVEL OBSERVATIONS WERE CONDUCTED AT 6:15 PM, WHICH IN ACCORDANCE WITH IESNA CRITERIA (1 HOUR PAST SUNSET), CONDITIONS WERE DRY AND CLEAR.
2. A SECOND ROUND OF LIGHT LEVEL OBSERVATIONS WAS CONDUCTED BY BOHLER ENGINEERING NJ, LLC ON TUESDAY, DECEMBER 3, 2024. SUNSET OCCURRED AT 4:20PM. LIGHT LEVEL OBSERVATIONS WERE CONDUCTED AT 5:50 PM, WHICH IN ACCORDANCE WITH IESNA CRITERIA (1 HOUR PAST SUNSET), CONDITIONS WERE DRY AND CLEAR.
3. THE LIGHT METER USED WAS VERIFIED FOR ACCURACY ON THE DAY OF FIELD OBSERVATIONS.
4. THE EXISTING LIGHT FIXTURES PHOTOMETRIC STUDY WAS CONDUCTED AT 3' ABOVE FINISHED GRADE.
5. ALL LIGHTING WAS OPERATING AS EXPECTED DURING THE LIGHT STUDY, UNLESS OTHERWISE NOTED ON THIS PLAN.

TOWNSHIP REQUIREMENTS

PER SECTION: 25-14.1 GENERAL STANDARDS & SECTION 25-14.3 MINIMUM LEVELS OF ILLUMINATION		
LOCATION	REQUIRED	EXISTING
MAXIMUM HEIGHT OF LIGHT FIXTURES	18'	25.5' (EXISTING NON-CONFORMITY)
ALL WIRING FOR LIGHT FIXTURES	SHALL BE Laid UNDERGROUND AND NOT STRUNG BETWEEN POLES OR BUILDINGS	EXISTING OVERHEAD WIRING FOR LIGHT FIXTURES (EXISTING NON-CONFORMITY)
MINIMUM ILLUMINATION IN PEDESTRIAN WALKWAYS	0.9 FC	0.1 FC (EXISTING NON-CONFORMITY)
MINIMUM ILLUMINATION IN PARKING AREAS	2.0 FC	0.1 FC (EXISTING NON-CONFORMITY)

THIS PLAN TO BE UTILIZED FOR EXHIBIT PURPOSES ONLY



BOHLER
SITE CIVIL AND CONSULTING ENGINEERING
LAND SURVEYING
PROGRAM MANAGEMENT
LANDSCAPE ARCHITECTURE
SUSTAINABLE DESIGN
PERMITTING SERVICES
TRANSPORTATION SERVICES

REVISIONS

REV	DATE	COMMENT	ISSUED BY
1	08/12/2024	REV. PER CLIENT COMMENTS	JH/BC
2	08/28/2024	REV. PER CLIENT COMMENTS	JH/BC
3	11/04/2024	REV. PER TOWNSHIP COMMENTS	JH/BC
4	12/06/2024	REV. PER TOWNSHIP COMMENTS	ACB



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PROJECT No.: NJD230088,00-4A
DRAWN BY: JK
CHECKED BY: JH/BC
DATE: 01/03/2024
CAD LD: PC/JV/LGHT

PROJECT:

PRELIMINARY & FINAL MAJOR SITE PLAN

FOR

WONDER GROUP, INC.

PROPOSED SITE IMPROVEMENTS

MAP: 79 | BLK: 152.01 | LOT: 1445.01
481 EAGLE ROCK AVENUE
TOWNSHIP OF WEST ORANGE
ESSEX COUNTY, NEW JERSEY

BOHLER
BOHLER ENGINEERING NJ, LLC

30 GARBER SQUARE
RIDGEWOOD, NJ 07450
Phone: (551) 307-1400

www.BohlerEngineering.com

NJ CERT. OF AUTHORIZATION NO. 245A28181700 & MH000102

B.S. CROWDER

PROFESSIONAL ENGINEER

NEW JERSEY LICENSE No. 52263
PENNSYLVANIA LICENSE No. 086764
NEW YORK LICENSE No. 100602

SHEET TITLE:

EXISTING LIGHTING CONDITIONS

SHEET NUMBER:

L-201

REVISION 4 - 12/06/2024



140201

LUMINAIRE SCHEDULE

LABEL	QTY	MOUNTING HEIGHT	ARRANGEMENT	LUM. LUMENS	LLF	DESCRIPTION	POLE
EX	—	—	—	—	—	EXISTING LUMINAIRE MODELED FOR ILLUSTRATIVE PURPOSES ONLY	—
C1	6	9'-0" AFF	SINGLE	800	0.900	COOPER LIGHTING SOLUTIONS: HALO LED RECESSED LUMINAIRE, ZERO UP/LIGHT (RL580WH8940)	—
P2	2	24'-0" AFF	SINGLE	21953	0.900	LITHONIA LIGHTING: D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 2, ZERO UP/LIGHT (DSX14-LED-P2-40K-70CRL12M4-RPA)	MOUNTED TO EXISTING UTILITY POLE
PF	2	12'-6" AFF	SINGLE	18383	0.900	LITHONIA LIGHTING: D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 1FTM, ZERO UP/LIGHT (DSX14-LED-P4-40K-70CRL12M4-VSA)	—
PFH	2	24'-0" AFF	SINGLE	22656	0.900	LITHONIA LIGHTING: D-SERIES SIZE 1 LED AREA LUMINAIRE, TYPE 1FTM, ZERO UP/LIGHT (DSX14-LED-P4-40K-70CRL12M4-RPA)	MOUNTED TO EXISTING UTILITY POLE

CALCULATION SUMMARY

LABEL	CALC TYPE	UNITS	AVG	MAX	MIN	AVG/MIN	MAX/MIN
FRONT PARKING	ILLUMINANCE	Fc	3.13	4.8	2.0	1.57	2.30
REAR PARKING	ILLUMINANCE	Fc	4.54	11.5	2.2	2.11	5.23
EMPLOYEE PATH OF TRAVEL	ILLUMINANCE	Fc	2.87	4.4	0.9	3.30	4.89

TOWNSHIP REQUIREMENTS

PER SECTION: 25-14.1 GENERAL STANDARDS & SECTION 25-14.3 MINIMUM LEVELS OF ILLUMINATION

LOCATION	REQUIRED	EXISTING	PROPOSED
MAXIMUM HEIGHT OF LIGHT FIXTURES	18'	25.5' (EXISTING NON-CONFORMITY)	25.5' (EXISTING NON-CONFORMITY)
ALL WIRING FOR LIGHT FIXTURES	SHALL BE LAID UNDERGROUND AND NOT STRUNG BETWEEN POLES OR BUILDINGS	EXISTING OVERHEAD WIRING FOR LIGHT FIXTURES (EXISTING NON-CONFORMITY)	EXISTING OVERHEAD WIRING FOR LIGHT FIXTURES (EXISTING NON-CONFORMITY)
MINIMUM ILLUMINATION IN PEDESTRIAN WALKWAYS	0.9 FC	0.1 FC (EXISTING NON-CONFORMITY)	0.9 FC (COMPLIES)
MINIMUM ILLUMINATION IN PARKING AREAS	2.0 FC	0.1 FC (EXISTING NON-CONFORMITY)	2.0 FC (COMPLIES)

GENERAL LIGHTING NOTES

- THE GENERAL NOTES MUST BE INCLUDED AS PART OF THIS ENTIRE DOCUMENT PACKAGE AND ARE PART OF THE CONTRACT DOCUMENTS. THE GENERAL NOTES ARE REFERENCED HEREIN, AND THE ELECTRICAL CONTRACTOR MUST REFER TO THEM AND FULLY COMPLY WITH THESE NOTES. IN THEIR ENTIRETY, THE ELECTRICAL CONTRACTOR MUST BE FAMILIAR WITH AND ACKNOWLEDGE FAMILIARITY WITH ALL OF THE GENERAL NOTES AND ALL OF THE PLANS' SPECIFIC NOTES.
- THE ELECTRICAL CONTRACTOR MUST COMPLY WITH ALL APPLICABLE CONTRACTOR REQUIREMENTS INDICATED IN THE PLANS, INCLUDING BUT NOT LIMITED TO GENERAL NOTES, GRADING AND UTILITY NOTES, SITE SAFETY, AND ALL AGENCY AND GOVERNMENTAL REGULATIONS.
- THE LIGHTING PLAN DEPICTS PROPOSED, SUSTAINED ILLUMINATION LEVELS CALCULATED USING DATA PROVIDED BY THE NOTED MANUFACTURER. ACTUAL, SUSTAINED SITE ILLUMINATION LEVELS AND PERFORMANCE OF LUMINAIRES MAY VARY DUE TO VARIATIONS IN WEATHER, ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, THE SERVICE LIFE OF EQUIPMENT AND LUMINAIRES AND OTHER RELATED VARIABLE FIELD CONDITIONS.
- THE LIGHTING VALUES AND CALCULATION POINTS DEPICTED ON THIS PLAN ARE ANALYZED ON A HORIZONTAL GEOMETRIC PLANE AT GROUND LEVEL UNLESS OTHERWISE NOTED. ILLUMINATION LEVELS ARE SHOWN IN FOOT-CANDLES (FC).
- THE LUMINAIRES, LAMPS AND LENSES MUST BE REGULARLY INSPECTED/MAINTAINED TO ENSURE THAT THEY FUNCTION PROPERLY. THIS WORK SHOULD INCLUDE, BUT IS NOT LIMITED TO, VISUAL OBSERVATION, CLEANING OF LENSES, AND REPLACING ACCORDING TO MANUFACTURER RECOMMENDATIONS. FAILURE TO FOLLOW THE ABOVE STEPS COULD RESULT IN IMPROPER LIGHT DISTRIBUTION AND FAILURE TO COMPLY WITH THE APPROVED DESIGN. UPON COMPLETION AND OWNER'S ACCEPTANCE OF THE WORK, THE ABOVE RESPONSIBILITIES BECOMES SOLELY THE OWNER'S.
- THE LIGHTING PLAN IS INTENDED TO SHOW THE LOCATIONS AND TYPE OF LUMINAIRES, POWER SYSTEM, CONDUITS, WIRING AND OTHER ELECTRICAL COMPONENTS ARE SOLELY THE ARCHITECTS, MECHANICAL ENGINEER'S AND/OR ELECTRICAL CONTRACTOR'S RESPONSIBILITY. AS INDICATED IN THE CONSTRUCTION CONTRACT DOCUMENTS, THE CONTRACTOR MUST COORDINATE WITH THE PROJECT ARCHITECT AND/OR ELECTRICAL ENGINEER REGARDING ANY AND ALL POWER SOURCES AND WIRING DEVICES NECESSARY TO MEET THE DESIGN INTENT. THESE ITEMS MUST BE INSTALLED AS REQUIRED BY STATE AND LOCAL REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF LIGHTING FIXTURES AND APPURTENANCES IN ACCORDANCE WITH ALL APPLICABLE BUILDING AND ELECTRICAL CODES.
- THE ELECTRICAL CONTRACTOR MUST BRING IMMEDIATELY, IN WRITING, ANY LIGHT LOCATIONS THAT CONFLICT WITH DRAINAGE, UTILITIES, OR OTHER STRUCTURE(S) TO THE PROFESSIONAL OF RECORD'S ATTENTION, PRIOR TO THE START OF CONSTRUCTION.
- THE ELECTRICAL CONTRACTOR IS RESPONSIBLE TO ENSURE THAT SHIELDING AND OR ROTATED OPTICS ARE INSTALLED AS INDICATED ON THE PLAN IN ORDER TO ACHIEVE THE LIGHTING LEVELS THE REVIEWING AGENCY APPROVED.
- UPON OWNER'S ACCEPTANCE OF THE COMPLETED PROJECT, THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE, SERVICING, REPAIR AND INSPECTION OF THE LIGHTING SYSTEM AND ALL OF ITS COMPONENTS AND RELATED SYSTEMS, TO ENSURE ADEQUATE LIGHTING LEVELS ARE PRESENT AND FUNCTIONING AT ALL TIMES.
- THE LIGHT LOSS FACTORS (LLF) DEPICTED IN THE LUMINAIRE SCHEDULE ON THIS PLAN ARE BASED ON DATA PROVIDED BY THE MANUFACTURER FOLLOWING IES LM-80-08 TESTING. THE LIGHT LEVELS DEPICTED ON THIS PLAN WERE CALCULATED BASED ON THE LLF LISTED IN THE LUMINAIRE SCHEDULE.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE SUBMITTALS TO BOHLER FOR REVIEW AND APPROVAL. SUBSTITUTION REQUESTS MUST BE ACCOMPANIED BY A HORIZONTAL PHOTOMETRIC STUDY DEMONSTRATING THAT THE LUMINAIRE(S) IN QUESTION WILL MEET THE DESIGN INTENT OF THIS PLAN. SUBSTITUTION REQUESTS WITHOUT A PHOTOMETRIC STUDY WILL BE REJECTED.
- LIGHT POLE FOUNDATIONS ARE SHOWN ON THE PLAN IN THE INTENDED LOCATION BASED ON THE LIGHTING CALCULATIONS, UNLESS OTHERWISE NOTED. LIGHT SYMBOLS ARE SHOWN LARGER THAN ACTUAL SIZE, HOWEVER FOUNDATION SIZE IS SHOWN AT ACTUAL SIZE.

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DRAWN BY: JK
CHECKED BY: JH/BC
DATE: 01/03/2024
CAD ID: P-CIVIL-LIGHT

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NEW YORK LICENSE No. 100802

SHEET TITLE:

PROPOSED LIGHTING PLAN

SHEET NUMBER:

L-202

REVISION 4 - 12/06/2024