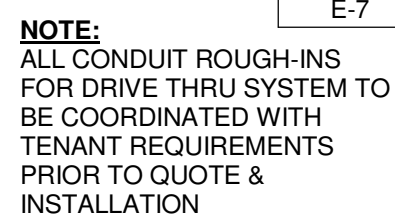


Project Date: Mar. 04/21 Arch-D (24" x 36")



- PROPOSED BURGER KING

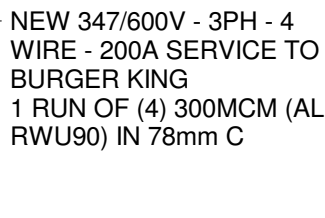
(16421) PROJECT DRAWING REGISTER	
Sheet #	Sheet Name
M-1	Mechanical - Specification
M-2	Mechanical - Specification
M-3	Mechanical Site Plan
M-4	HVAC - Base Bldg.
P-1	Plumbing - Specification
P-2	Plumbing - Specification
P-3	Plumbing - Base Bldg.
E-1	Elec. - Specification
E-2	Elec. - Specification
E-3	Electrical Site Power
E-4	Elec. Site Lighting
E-5	Photometric Site Plan
E-6	Elec. Power/Comm. - Base Bldg.
E-7	Elec. Lighting - Base Bldg.



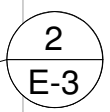
92 Caplan Ave. Suite #517
Barrie, Ontario L4N 9J2
Tel. (705) 719-1003 Fax (705) 719-0490
dlong@nset.ca www.nset.ca

GENERAL DRAWING / DESIGNER NOTES:

- [1] ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO THE
 LATEST EDITION OF THE PROVINCE OF ONTARIO'S BUILDING
 [2] CODE, LOCAL REGULATIONS AND ALL APPLICABLE JURISDICTION
 [3] THE CONSULTANT RESERVES THE RIGHT TO MAKE REASONABLE
 CHANGES IN ORDER TO ACCOMMODATE CONDITIONS ARISING
 IN CONSTRUCTION FOR ADDITIONAL FEES. ADDITIONAL
 CONSTRUCTION COSTS ARISING FROM SUCH CHANGES MAY
 [4] ALSO BE ADE TO BE NEGOTIATED BETWEEN THE OWNER AND
 CONTRACTOR.
 [5] DRAWINGS ONLY SHOW GENERAL INTENT AND SCOPE OF WORK
 EXACT DETAILS OF INSTALLATIONS ARE TO BE PROVIDED BY
 [6] CONTRACTORS. DO NOT RELY ON THESE DRAWINGS.
 [7] CONTRACTOR/AGENT OWNER TO REPORT ALL DISCOVERIES OF
 ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER.
 [8] PROCEED WITH CONSTRUCTION ONLY USING THE LATEST
 REVISED DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
 [9] THIS DRAWING IS SPECIFIC TO THIS PROJECT AND CANNOT BE
 USED FOR ANY OTHER "SIMILAR" PROJECTS.
 [10] THIS DRAWING IS THE PROPERTY OF NORTHBAST ENGINEERING
 TECHNOLOGIES LTD. UNAUTHORIZED RE-PRODUCTION OR USE
 IS PROHIBITED.
 [11] SHOP DRAWINGS:
 [12] BEFORE CONTRACT WITH OWNER, THE ENGINEER WILL
 REVIEW SHOP SUBMISSION DOWNS FROM THE CONTRACTOR TO
 [13] VERIFY THE TENDERS FOR GENERAL CONFORMITY TO THE DESIGN
 DWGS. THE SHOP DWGS MUST BE SUBMITTED TO THE DESIGN
 [14] ENGINEER FROM RESPONSIBILITY TO MAKE A FEASIBLE
 AND SAFE SYSTEM. THE SHOP DWGS MUST BE SUBMITTED TO THE
 [15] PLUMBING FIXTURES, HVAC EQUIPMENT, HVAC DEFUSERS,
 MECHANICAL AND ELECTRICAL FOR COMPLETION BASED ON PROJECT
 [16] REQUIREMENTS.
 [17] THE DESIGNER DOES NOT ACCEPT RESPONSIBILITY FOR
 [18] OTHER DESIGNER'S WORK IN ASSOCIATION WITH THIS PROJECT.
 [19] RESPONSIBILITY FOR ANY FINAL ASSEMBLY THAT VIOLATE
 APPLICABLE BUILDING CODES IS NOT ACCEPTED BY THE
 [20] DESIGNER.
 [21] REQUESTS FOR CHANGES, SUBSTITUTIONS TO EQUIPMENT,
 MATERIALS AND/OR SPECIFICATIONS MUST BE SUBJECT TO
 [22] ADDITIONAL FEES CHARGED BY THE CONSULTANT.
 [23] SITE VISITS TO REVIEW IMPLEMENTED DESIGNS WITHIN THE
 SCOPE OF THIS PROJECT TO BE ARRANGED WITH THE OWNER.
 [24] MINIMUM FORTY EIGHT (48) HOURS PRIOR NOTICE TO BE
 PROVIDED FOR SITE VISITS TO REVIEW DESIGNS.
 [25] REQUESTS FOR THE RELEASE OF THIS DRAWING SET FROM
 NORTHBAST ENGINEERING & TECHNOLOGIES LTD. FOR THE
 [26] PURPOSE OF TENDERING OR CONTRACTING BY CONTRACTOR TO
 BE MADE BY THE OWNER OR CONTRACTOR IN DRAWINGS.
 [27] TENDER PRICING BY ARCHITECTS OF DRAWINGS TO BE BASED
 ON DWGS MARKED "ISSUED FOR TENDER" OR "ISSUED FOR
 [28] CONSTRUCTION" ONLY.
 [29] ALL REQUESTS FOR DESIGN CHANGES / SUBSTITUTIONS TO
 BE MADE IN WRITING. ADDITIONAL FEES MAY APPLY. ALLOW
 [30] MINIMUM (1) ONE WEEK TO REVIEW AND RESPONSE TO CHANGE
 REQUESTS.

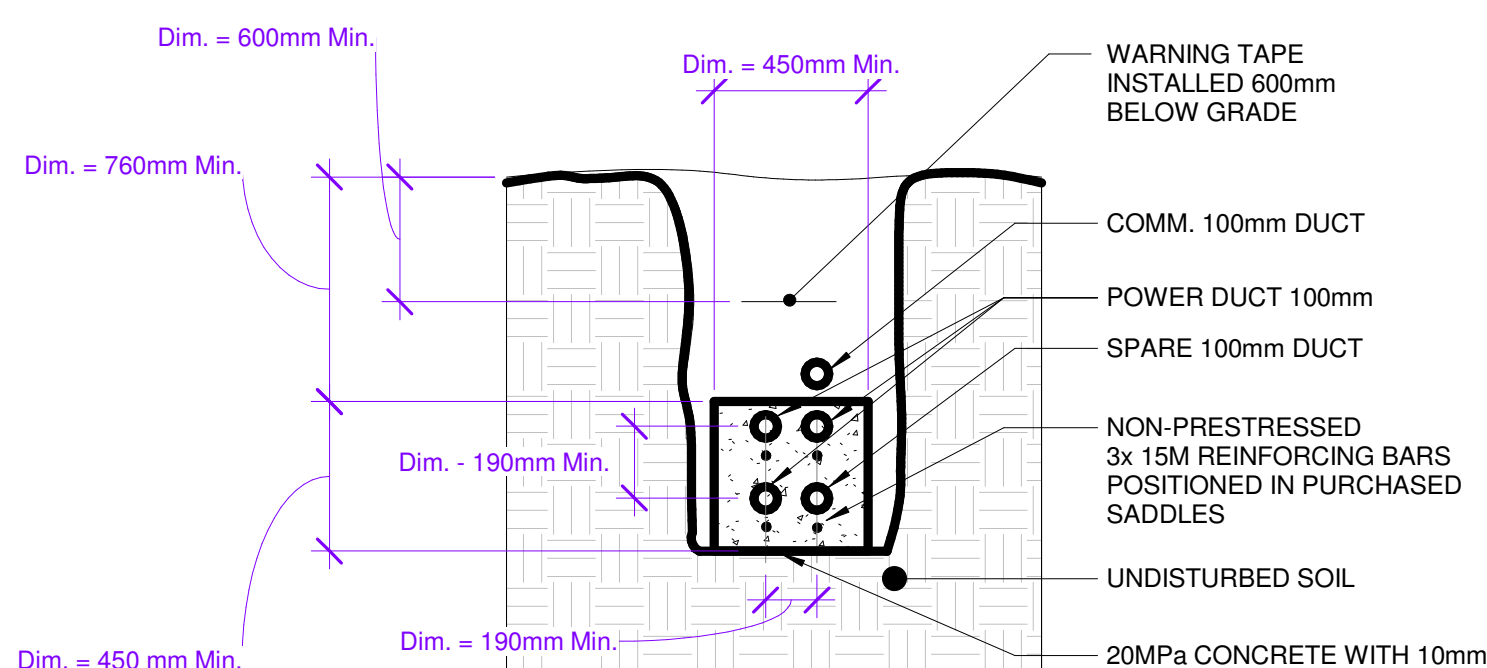


EX. 800A SWITCHBOARD



CONTRACTOR TO PROVIDE A SEPARATE QUOTE FOR 4"Ø (100mm) U/G POWER & COMM. CONDUIT UTILIZING DIRECTIONAL BORE METHOD (CONTRACTOR TO COORDINATE WITH ALL EX. U/G SERVICES)

**PROPOSED BUILDING:
BURGER KING**



- [1] ALL POWER DUCTS SHALL BE 100mm TYPE II DB PVC.
- [2] UNDERGROUND CABLE SHALL BE RWU-90 X-LINK.
- [3] METHODS OF MATERIAL AND CONSTRUCTION SHALL MEET ESA STANDARDS.
- [4] BACKFILL TRENCH MATERIAL TO BE IN KIND.
- [5] COMPACTED FOR VEHICULAR TRAFFIC AREAS

Electrical Service Detail/ 4 Duct
N.T.S.

1 (16421) Site - Electrical Site Plan - Proposed
E-3 1" = 30'-0"

Client: **McCowan & Associates**

Address:
279 Yonge St. Barrie ON

Project Name: Allandale Marketplace -
Burger King

Dwg. Name:

Electrical Site Power

NSET Project #:

16421

Drawn by: Northstar Eng

Scale:	As indicated
--------	--------------

Drawing #:

E-3

Project Date: Mar. 04/21

Arch-D (24" x 36")

CONTRACTOR DEMOLITION
INSTRUCTION LEGEND
(ELECTRICAL)

	DIV. 26 KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST
	FIRE PROTECTION KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST
	COMM. SYSTEMS KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST
	DATA SYSTEMS KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST
	VOICE SYSTEMS KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST
	VOICE/DATA SYSTEMS KEYNOTE "X" DENOTES INSTRUCTION. REFER TO CONTRACTOR INSTRUCTION LIST

ELECTRICAL (DIV. 26)

CONTRACTOR INSTRUCTION LIST:

- EX. DEVICE TO REMAIN. PROTECT DURING CONST. CONTRACTOR TO CLEAN, INSPECT & TEST FOR CORRECT PERFORMANCE AT JOB COMPLETION.
- EX. DEVICE TO BE REMOVED DURING DEMOLITION & PRESERVED FOR RE-INSTALL DURING CONST. TO SAME EX. SERVICES. TEST AFTER RE-INSTALL.
- REMOVE EX. DEVICE. PRESERVE ELEC. SERVICE FOR NEW. APPROVED DEVICE IN SAME LOCATION (MAKE SAFE TEMPORARILY).
- DEMOLISH EX. DEVICE. PRESERVE ELEC. SERVICE FOR NEW. APPROVED DEVICE IN SAME LOCATION (MAKE SAFE TEMPORARILY).
- DEMOLISH EX. DEVICE. PRESERVE & EXTEND ELEC. SERVICE FOR A NEW, APPROVED DEVICE - SEE PROPOSED PLANS (MAKE SAFE TEMPORARILY).
- DEMOLISH EX. DEVICE / ELEC. SERVICE TO DEVICE (MAKE SAFE PERMANENTLY).

(MASTER-E) Lighting Fixture Schedule - Outdoor - (New)																
Level	Type	Qty.	Description	Fixture Finish	Color Temperature	Lumens	Voltage	VA	Manufacturer	Part #	Lamping	Elevation of Light Source	Mounting Comments	Accessory 1	Supplied By	Approved Alternate, NSET
1 - Floor		4	(EX.) / LIGHT / OUTDOOR / POLE LIGHT				120 V	2 VA	EXISTING	EXISTING	EXISTING				EXISTING	
1 - Floor	P1	3	LUMINAIRE / OUTDOOR / POLE LIGHT / SINGLE / RECT. HEAD / LED DIRECT	BLACK	3000 K	12614 lm	120 V	114 VA	GARDCO	P26-64L-600-WW-G2-AR-3-UNV-TLRPC-BK	LED 114W	336"	POLE	POLE	DIV. 26	NOT PERMITTED
1 - Floor	P2	1	LUMINAIRE / OUTDOOR / POLE LIGHT / DOUBLE / RECT. HEAD / LED DIRECT	BLACK	3000 K	12614 lm	120 V	228 VA	GARDCO	P26-64L-600-WW-G2-AR-3-UNV-TLRPC-BK	LED 228W	336"	POLE	POLE	DIV. 26	NOT PERMITTED
1 - Floor	W	8	LUMINAIRE / OUTDOOR / WALL PACK / WALL / LED DIRECT	BLACK	3000 K	2425 lm	120 V	30 VA	SIGNIFY	PWS-48L-400-AM-G2-3-UNV-PCB-F1-BK	LED 30W	144"	WALL		DIV. 26	NOT PERMITTED
16																

(MASTER-E) Contractor Demolition Instruction List - Div. 26 - Lighting

Level	Ref. #	Project Numbered Notes - Lighting	Qty.
1 - Floor	1	EX. DEVICE TO REMAIN. PROTECT DURING CONST., CONTRACTOR TO CLEAN, INSPECT & TEST FOR CORRECT PERFORMANCE AT JOB COMPLETION.	4
			4
Grand total			4

EXTERIOR
LIGHTING LEGEND



LUMINAIRE, EXTERIOR
WALL PACK / WALL / LED



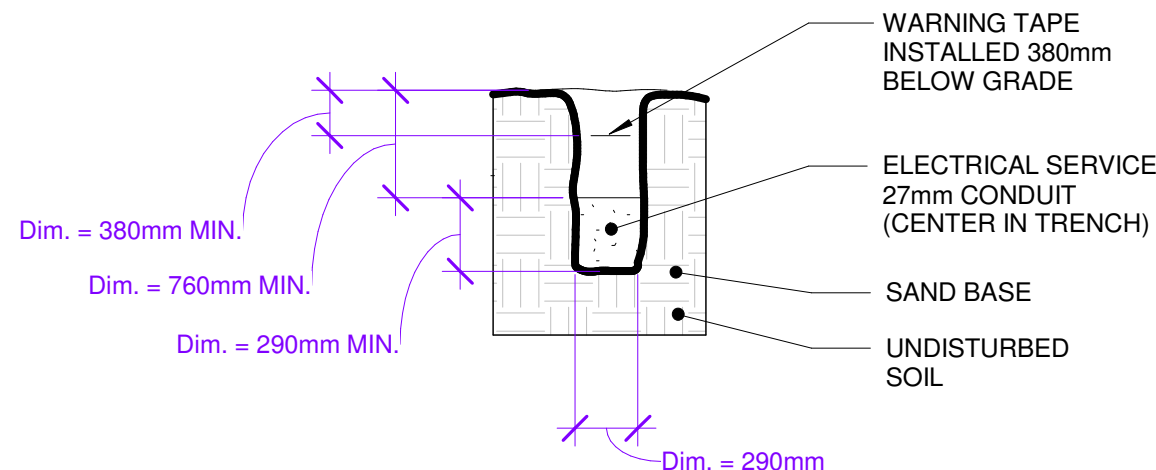
LUMINAIRE, EXTERIOR
POLE LIGHT / SINGLE / RECT. HEAD / LED



LUMINAIRE, EXTERIOR
POLE LIGHT / DOUBLE / RECT. HEAD / LED



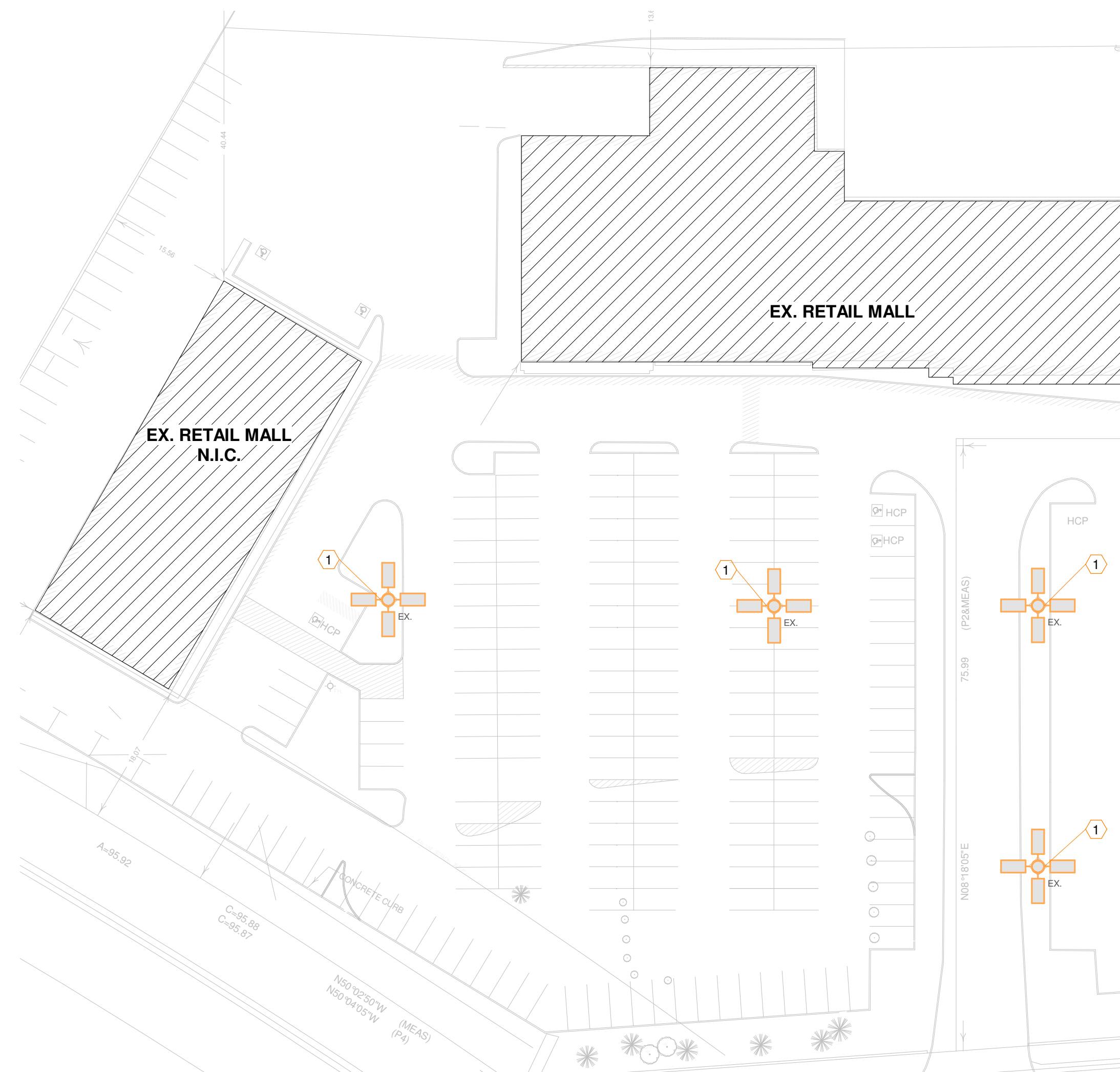
LUMINAIRE, EXTERIOR
POLE LIGHT / QUADRUPLE / RECT. HEAD / LED



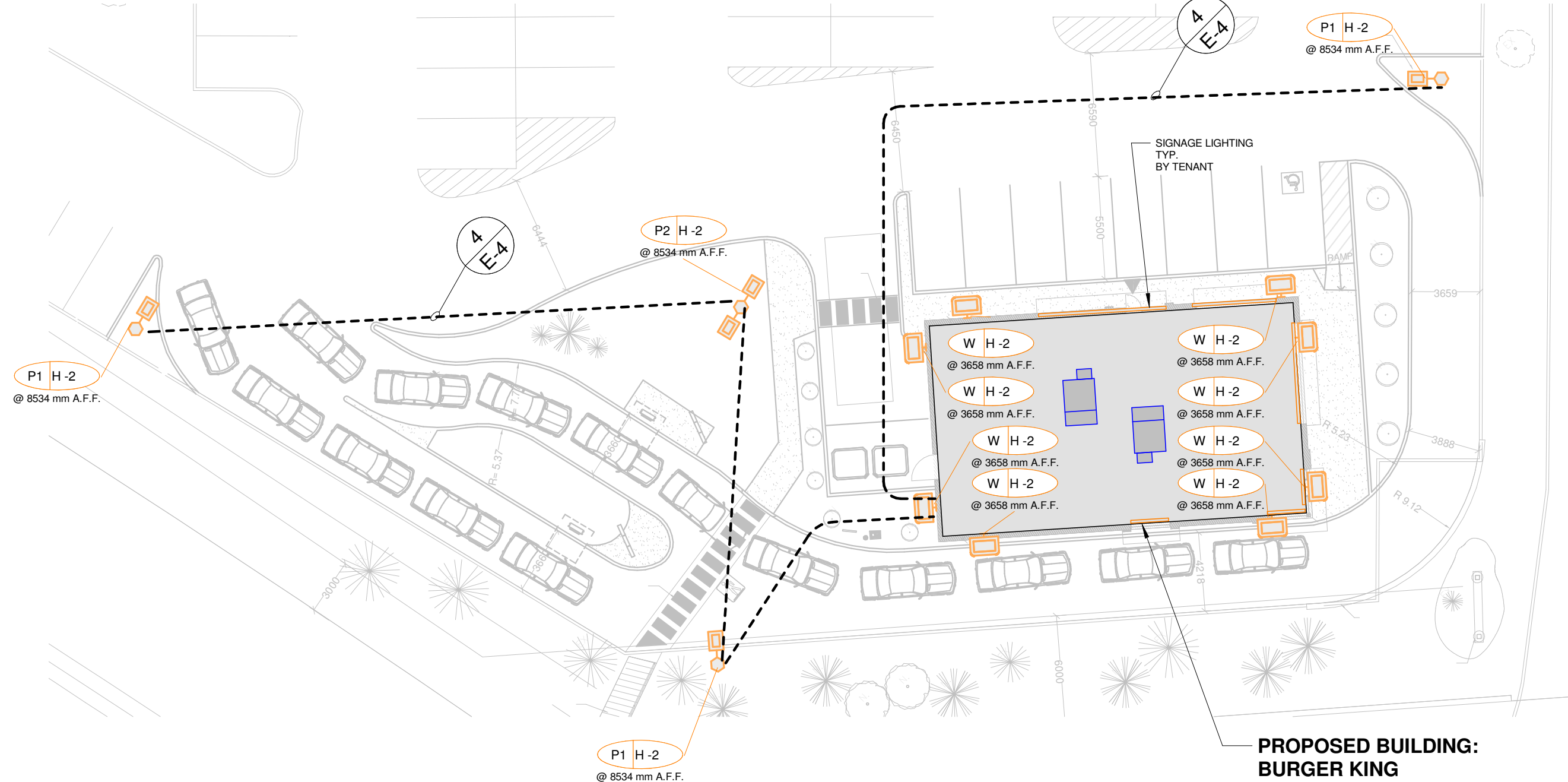
NOTES:

- TRENCH WIDTH SHALL BE 500mm.
- DUCTS SHALL BE 27mm TYPE II DB PVC.
- UNDERGROUND WIRE SHALL BE 2#BRWU-90 + GRD
- METHODS OF MATERIAL AND CONSTRUCTION SHALL MEET ESA STANDARDS.
- BACKFIL TRENCH MATERIAL TO BE 'IN-KIND'.
- COMPACTED FOR VEHICULAR TRAFFIC AREAS.

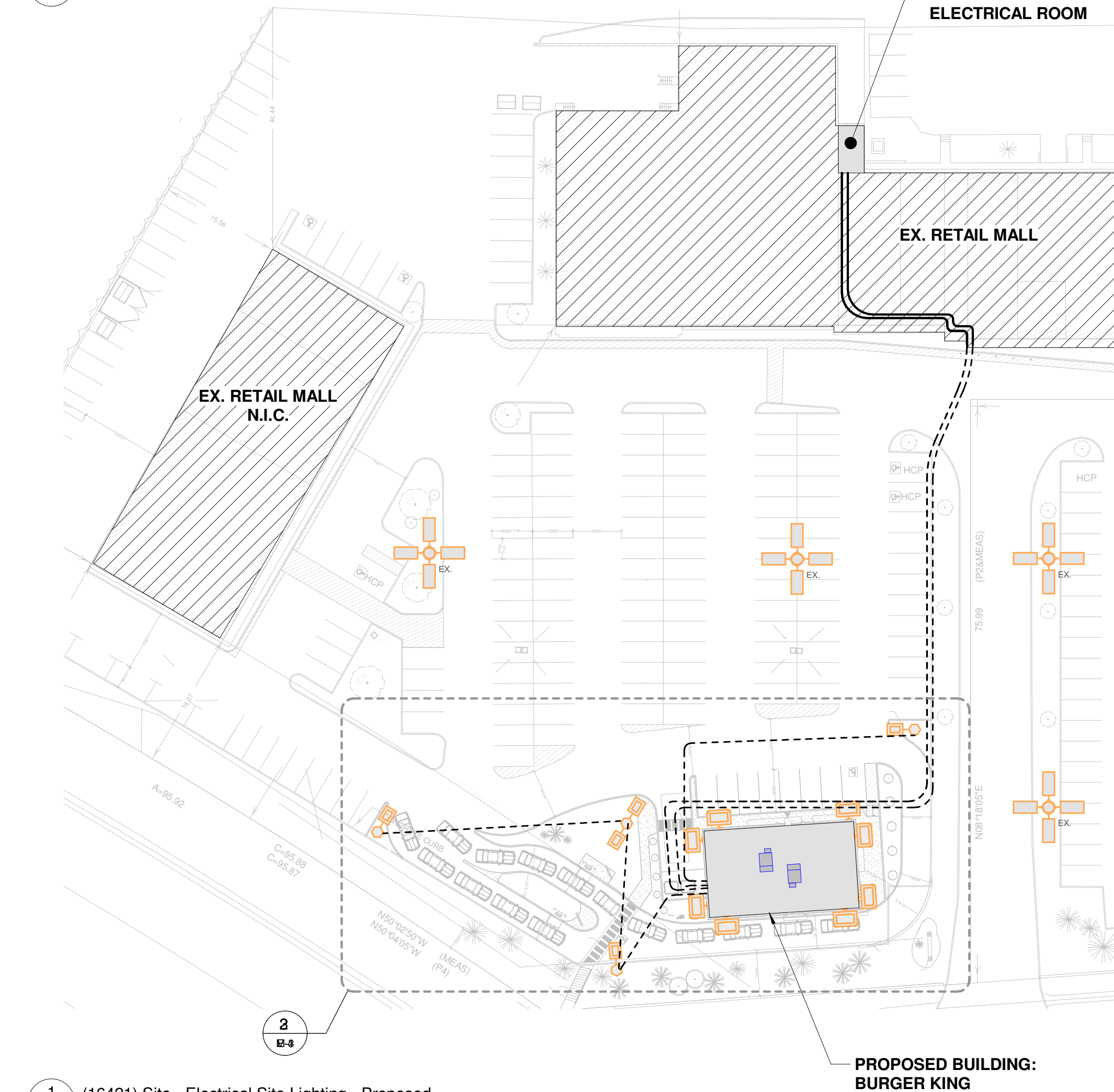
4 Light Pole Trench Detail
E-4 N.T.S.



2 (16421) Elec. Site Plan - Existing Condition
E-4 1" = 40'-0"



3 (16421) Site - Electrical Site Lighting - Proposed - Burger King
E-4 1" = 20'-0"



1 (16421) Site - Electrical Site Lighting - Proposed
E-4 1" = 40'-0"

(16421) PROJECT DRAWING REGISTER

Sheet #	Sheet Name
M-1	Mechanical - Specification
M-2	Mechanical - Specification
M-3	Mechanical Site Plan
M-4	HVAC - Base Bldg.
P-1	Plumbing - Specification
P-2	Plumbing - Specification
P-3	Plumbing - Base Bldg.
E-1	Elec. - Specification
E-2	Elec. - Specification
E-3	Electrical Site Power
E-4	Elec. Site Lighting
E-5	Photometric Site Plan
E-6	Elec. Power/Comm. - Base Bldg.
E-7	Elec. Lighting - Base Bldg.

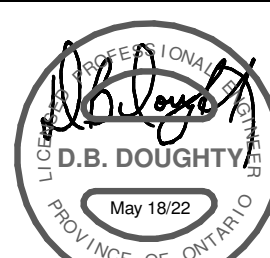
GENERAL DRAWING / DESIGNER NOTES:

- ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO THE LATEST EDITION OF THE PROVINCE OF ONTARIO'S BUILDING CODE, LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
- THE CONSULTANT RESERVES THE RIGHT TO MAKE REASONABLE CHANGES IN ORDER TO ACCOMMODATE CONDITIONS ARISING DURING CONSTRUCTION FOR ADDITIONAL FEES. ADDITIONAL CONSTRUCTION COSTS ARISING FROM SUCH CHANGES MAY APPLY AND ARE TO BE NEGOTIATED BETWEEN THE OWNER AND CONTRACTOR.
- DRAWINGS ONLY SHOW GENERAL INTENT AND SCOPE OF WORK. EXACT DETAILS OF INSTALLATIONS ARE TO BE PROVIDED BY CONTRACTOR(S). DO NOT SCALE DRAWINGS.
- CONTRACTOR/AGENT/OWNER TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER.
- PROCEED WITH CONSTRUCTION ONLY USING THE LATEST REVISED DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
- THIS DRAWING IS SPECIFIC TO THIS PROJECT AND CANNOT BE USED FOR OTHER "SIMILAR" PROJECTS.
- THIS DRAWING IS THE PROPERTY OF NORTHSTAR ENGINEERING & TECHNOLOGIES LTD. UN-AUTHORIZED RE-PRODUCTION OR USE IS PROHIBITED.
- SHOP DRAWINGS: BASED ON CONTRACT WITH OWNER, THE ENGINEER WILL REVIEW SHOP SUBMISSION DWGS FROM THE CONTRACTOR TO REVIEW THE ITEMS FOR GENERAL CONFORMANCE TO THE DESIGN DWGS. THE SHOP DWG REVIEW WILL NOT RELEASE THE CONTRACTOR FROM RESPONSIBILITY TO MAKE A FEASIBLE WORKING SYSTEM. THESE SHOP DRAWINGS SHALL CONSIST OF PLUMBING FIXTURES, HVAC EQUIPMENT, HVAC DIFFUSERS. MINIMUM 1-2 WEEKS FOR COMPLETION BASED ON COMPLEXITY.
- THE DESIGNER DOES NOT ACCEPT RESPONSIBILITY FOR OTHER DESIGNER'S WORK IN ASSOCIATION WITH THIS PROJECT.
- RESPONSIBILITY FOR ANY FINAL ASSEMBLY(S) THAT VIOLATE APPLICABLE BUILDING CODES IS NOT ACCEPTED BY THE DESIGNER.
- REQUESTS FOR CHANGES OR SUBSTITUTIONS TO EQUIPMENT, PLANS AND / OR SPECIFICATIONS WILL BE SUBJECT TO ADDITIONAL FEES CHARGED BY THE CONSULTANT.
- SITE VISITS TO REVIEW IMPLEMENTED DESIGNS WITHIN THE SCOPE OF THIS PROJECT TO BE ARRANGED WITH THE OWNER.
- MINIMUM FORTY EIGHT (48) HOURS PRIOR NOTICE TO BE PROVIDED FOR SITE VISITS - ONCE ARRANGED.
- REQUESTS FOR THE RELEASE OF THIS DRAWING SET FROM NORTHSTAR ENGINEERING & TECHNOLOGIES LTD. FOR THE PURPOSE OF TENDERING PURPOSES BY ANY CONTRACTOR TO BE MADE BY THE OWNER OR ARCHITECT IN WRITING.
- TENDER PRICING BY CONTRACTORS OF DRAWINGS TO BE BASED ON DWGS MARKED "ISSUED FOR TENDER" OR "ISSUED FOR CONSTRUCTION" ONLY.
- ALL REQUESTS FOR DESIGN CHANGES / SUBSTITUTIONS TO BE MADE IN WRITING. ADDITIONAL FEES MAY APPLY. ALLOW MINIMUM (1) ONE WEEK TO REVIEW AND RESPOND TO CHANGE REQUESTS.

DRAWING REVISIONS

No.	Description	Date
1	Issued for SPA	Dec. 23/21
2	Preliminary	Mar. 18/22
3	Issued for SPA comments	May 18/22

Engineer's Seal:



Client:

McCowan & Associates

Address:

279 Yonge St. Barrie ON

Project Name:

Allandale Marketplace -
Burger King

Dwg. Name:

Elec. Site Lighting

NSET Project #:

16421

Drawn by: Northstar Eng.

Checked by: D.B.D.

Scale: As indicated

Revision #: 3.0

Drawing #:

E-4

Project Date: Mar. 04/21

Arch-D (24" x 36")

EXTERIOR LIGHTING LEGEND	
	LUMINAIRE / EXTERIOR WALL PACK / WALL / LED
	LUMINAIRE / EXTERIOR POLE LIGHT / SINGLE / RECT. HEAD / LED
	LUMINAIRE / EXTERIOR POLE LIGHT / DOUBLE / RECT. HEAD / LED
	LUMINAIRE / EXTERIOR POLE LIGHT / QUADRUPLE / RECT. HEAD / LED

(MASTER-E) Lighting Fixture Schedule - Outdoor - (New)																
Level	Type	Qty.	Description	Fixture Finish	Color Temperature	Lumens	Voltage	VA	Manufacturer	Part #	Lamping	Elevation of Light Source	Mounting Comments	Accessory 1	Supplied By	Approved Alternate _NSET
1 - Floor		4	(EX.) / LIGHT / OUTDOOR / POLE LIGHT				120 V	2 VA	EXISTING	EXISTING	EXISTING				EXISTING	
1 - Floor	P1	3	LUMINAIRE / OUTDOOR / POLE LIGHT / SINGLE / RECT. HEAD / LED DIRECT	BLACK	3000 K	12614 lm	120 V	114 VA	GARDCO	P26-64L-600-WW-G2-AR-3-UNV-TLRPC-BK	LED 114W	336"	POLE	POLE	DIV. 26	NOT PERMITTED
1 - Floor	P2	1	LUMINAIRE / OUTDOOR / POLE LIGHT / DOUBLE / RECT. HEAD / LED DIRECT	BLACK	3000 K	12614 lm	120 V	228 VA	GARDCO	P26-64L-600-WW-G2-AR-3-UNV-TLRPC-BK	LED 228W	336"	POLE	POLE	DIV. 26	NOT PERMITTED
1 - Floor	W	8	LUMINAIRE / OUTDOOR / WALL PACK / WALL / LED DIRECT	BLACK	3000 K	2425 lm	120 V	30 VA	SIGNIFY	PWS-48L-400-AM-G2-3-UNV-PCB-F1-BK	LED 30W	144"	WALL		DIV. 26	NOT PERMITTED
		16														
		16														



TYPE P1 & P2



TYPE W

NOTE: ALL EXTERIOR LIGHTING ARE DARK SKY COMPLIANCE



PROPOSED BUILDING:
BURGER KING

(16421) PROJECT DRAWING REGISTER	
Sheet #	Sheet Name
M-1	Mechanical - Specification
M-2	Mechanical - Specification
M-3	Mechanical Site Plan
M-4	HVAC - Base Bldg.
P-1	Plumbing - Specification
P-2	Plumbing - Specification
P-3	Plumbing - Base Bldg.
E-1	Elec. - Specification
E-2	Elec. - Specification
E-3	Electrical Site Power
E-4	Elec. Site Lighting
E-5	Photometric Site Plan
E-6	Elec. Power/Comm. - Base Bldg.
E-7	Elec. Lighting - Base Bldg.



NORTHSTAR
ENGINEERING & TECHNOLOGIES LTD.

92 Caplan Ave. Suite #517
Barrie, Ontario L4N 5J2
Tel. (705) 719-1003 Fax (705) 719-0490
dlong@nset.ca www.nset.ca



GENERAL DRAWING / DESIGNER NOTES:

- [1] ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO THE LATEST EDITION OF THE PROVINCE OF ONTARIO'S "BUILDING CODE", LOCAL REGULATIONS AND AUTHORITIES HAVING JURISDICTION.
- [2] THE CONSULTANT RESERVES THE RIGHT TO MAKE REASONABLE CHANGES IN ORDER TO ACCOMMODATE CONDITIONS ARISING DURING CONSTRUCTION FOR ADDITIONAL FEES. ADDITIONAL CONSTRUCTION COSTS ARISING FROM SUCH CHANGES MAY APPLY AND ARE TO BE NEGOTIATED BETWEEN THE OWNER AND CONTRACTOR.
- [3] DRAWINGS ONLY SHOW GENERAL INTENT AND SCOPE OF WORK. EXACT DETAILS OF INSTALLATIONS ARE TO BE PROVIDED BY CONTRACTOR(S). DO NOT SCALE DRAWINGS.
- [4] CONTRACTOR/AGENT/OWNER TO REPORT ALL DISCOVERIES OF ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER.
- [5] PROCEED WITH CONSTRUCTION ONLY USING THE LATEST REVISED DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
- [6] THIS DRAWING IS SPECIFIC TO THIS PROJECT AND CANNOT BE USED FOR OTHER "SIMILAR" PROJECTS.
- [7] THIS DRAWING IS THE PROPERTY OF NORTHSTAR ENGINEERING & TECHNOLOGIES LTD. UN-AUTHORIZED RE-PRODUCTION OR USE IS PROHIBITED.
- [8] **SHOP DRAWINGS:** BASED ON CONTRACT WITH OWNER, THE ENGINEER WILL REVIEW SHOP SUBMISSION DWGS FROM THE CONTRACTOR TO REVIEW THE ITEMS FOR GENERAL CONFORMANCE TO THE DESIGN DWGS. THE SHOP DWG REVIEW WILL NOT RELEASE THE CONTRACTOR FROM RESPONSIBILITY TO MAKE A FEASIBLE WORKING SYSTEM. THESE SHOP DRAWINGS SHALL CONSIST OF PLUMBING FIXTURES, HVAC EQUIPMENT, HVAC DIFFUSERS, MINIMUM 1-2 WEEKS FOR COMPLETION BASED ON COMPLEXITY.
- [9] ALLOW THE DESIGNER DOES NOT ACCEPT RESPONSIBILITY FOR OTHER DESIGNER'S WORK IN ASSOCIATION WITH THIS PROJECT.
- [10] RESPONSIBILITY FOR ANY FINAL ASSEMBLY(S) THAT VIOLATE APPLICABLE BUILDING CODES IS NOT ACCEPTED BY THE DESIGNER.
- [11] REQUESTS FOR CHANGES OR SUBSTITUTIONS TO EQUIPMENT, PLANS AND / OR SPECIFICATIONS WILL BE SUBJECT TO ADDITIONAL FEES CHARGED BY THE CONSULTANT.
- [12] SITE VISITS TO REVIEW IMPLEMENTED DESIGNS WITHIN THE SCOPE OF THIS PROJECT TO BE ARRANGED WITH THE OWNER.
- [13] MINIMUM FORTY EIGHT (48) HOURS PRIOR NOTICE TO BE PROVIDED FOR SITE VISITS - ONCE ARRANGED.
- [14] REQUESTS FOR THE RELEASE OF THIS DRAWING SET FROM NORTHSTAR ENGINEERING & TECHNOLOGIES LTD. FOR THE PURPOSE OF TENDERING PURPOSES BY ANY CONTRACTOR TO BE MADE BY THE OWNER OR ARCHITECT IN WRITING.
- [15] TENDER PRICING BY CONTRACTORS OF DRAWINGS TO BE BASED ON DWGS MARKED "ISSUED FOR TENDER" OR "ISSUED FOR CONSTRUCTION" ONLY.
- [16] ALL REQUESTS FOR DESIGN CHANGES / SUBSTITUTIONS TO BE MADE IN WRITING. ADDITIONAL FEES MAY APPLY. ALLOW MINIMUM (1) ONE WEEK TO REVIEW AND RESPOND TO CHANGE REQUESTS.

DRAWING REVISIONS

No.	Description	Date
1	Issued for SPA	Dec. 23/21
2	Preliminary	Mar. 18/22
3	Issued for SPA comments	May 18/22

Engineer's Seal:



Client: **McCowan & Associates**

Address: **279 Yonge St. Barrie ON**

Project Name: **Allandale Marketplace - Burger King**

Dwg. Name: **Photometric Site Plan**

NSET Project #: **16421**

Drawn by: Northstar Eng. Checked by: D.B.D.

Scale: As indicated Revision #: 3.0

Drawing #: **E-5**

Project Date: Mar. 04/21 Arch-D (24" x 36")

ENTIRE NATURAL GAS
INSTALLATION SHALL CONFIRM TO
NATIONAL STANDARD OF CANADA
CAN/CSA-B149.10 NATURAL GAS
INSTALLATION CODE AS PREPARED
BY CANADIAN GAS ASSOCIATION
AND IN ACCORDANCE WITH THE
LATEST LOCAL ORDINANCES.
PIPING SHALL BE SCHEDULE 40
BLACK CARBON STEEL PIPE
COMPLYING WITH ASTM-A53/
FITTINGS SHALL BE OF EITHER
MALLEABLE IRON OR STEEL
SCREWED FITTINGS COMPLYING
WITH ANSI-B16.3.
ALL GAS PIPING SHALL BE PAINTED
YELLOW BY CONTRACTOR.

A READILY ACCESSIBLE MANUAL SHUT-OFF VALVE SHALL BE INSTALLED FOR EACH APPLIANCE AND SHALL BE OF EITHER LUBRICATED PLUG, OR ECCENTRIC TYPE.



NEW ELECTRICAL SERVICE
FROM ROOF TO U/G

— NEW GAS LINE FROM
ROOF TO U/G



EX. GAS SERVICE LOCATION



EX. GAS SERVICE

(16421) PROJECT DRAWING REGISTER	
Sheet #	Sheet Name
M-1	Mechanical - Specification
M-2	Mechanical - Specification
M-3	Mechanical Site Plan
M-4	HVAC - Base Bldg.
P-1	Plumbing - Specification
P-2	Plumbing - Specification
P-3	Plumbing - Base Bldg.
E-1	Elec. - Specification
E-2	Elec. - Specification
E-3	Electrical Site Power
E-4	Elec. Site Lighting
E-5	Photometric Site Plan
E-6	Elec. Power/Comm. - Base Bldg.
E-7	Elec. Lighting - Base Bldg.



GENERAL DRAWING / DESIGNER NOTES:

- 11 ALL CONSTRUCTION METHODS AND MATERIALS TO CONFORM TO THE
12 LATEST EDITION OF THE PROVINCE OF ONTARIO'S BUILDING CODE AND
13 LOCAL REGULATIONS AND ORDINANCES, AND TO HAVE THE SAME JURISDICTION.
- 14 THE CONSULTANT RESERVES THE RIGHT TO MAKE REASONABLE
15 CHANGES IN ORDER TO ACCOMMODATE CONDITIONS ARISING
16 FROM CONSTRUCTION FOR ADDITIONAL FEES. ADDITIONAL
17 CONSTRUCTION COSTS ARISING FROM SUCH CHANGES MAY
18 ARISE AND ARE TO BE NEGOTIATED BETWEEN THE OWNER AND
19 CONTRACTOR.
- 20 DRAWINGS ONLY SHOW GENERAL INTENT AND SCOPE OF WORK.
21 EXACT DETAILS OF INSTALLATIONS ARE TO BE PROVIDED BY
22 CONTRACTOR. DO NOT SCALE DRAWINGS.
- 23 CONTRACTOR/AGENT/OWNER TO REPORT ALL DISCOVERIES OF
24 ERRORS, OMISSIONS OR DISCREPANCIES TO THE DESIGNER.
- 25 PROCEED WITH CONSTRUCTION ONLY USING THE LATEST
26 REVISED DRAWINGS MARKED "ISSUED FOR CONSTRUCTION".
- 27 THIS DRAWING IS SPECIFIC TO THIS PROJECT AND CANNOT BE
28 USED FOR OTHER SMALLER PROJECTS.
- 29 THIS DRAWING IS THE PROPERTY OF NORTHSTAR ENGINEERING &
30 TECHNOLOGIES LTD. UNAUTHORIZED RE-PRODUCTION OR USE
31 IS PROHIBITED.
- 32 SUBMITTALS:
33 SHOP DRAWINGS:
34 BEFORE CONTRACT WITH OWNER, THE ENGINEER WILL
35 REVIEW SHOP SUBMISSION DOWNS FROM THE CONTRACTOR TO
36 REVIEW THE SYSTEMS FOR GENERAL CONFORMITY TO THE DESIGN
37 REQUIREMENTS. THE SHOP DOWNS WILL BE THE RESPONSIBILITY OF
38 THE CONTRACTOR FROM RESPONSIBILITY TO MAKE A FEASIBLE
39 DESIGN. THE SYSTEMS FOR COMPLEXITY BASED ON THE COMPLEXITY
40 OF PLUMBING FIXTURES, HVAC EQUIPMENT, HVAC DIFFUSERS,
41 MINOR ELECTRICAL WIRING FOR COMPLEXITY BASED ON THE COMPLEXITY.
- 42 THE DESIGNER DOES NOT ACCEPT RESPONSIBILITY FOR
43 OTHER DESIGNERS WORK IN ASSOCIATION WITH THIS PROJECT.
- 44 RESPONSIBILITY FOR ANY FINAL ASSEMBLIES THAT VIOLATE
45 APPLICABLE BUILDING CODES IS NOT ACCEPTED BY THE
46 DESIGNER.
- 47 REQUESTS FOR CHANGES OR SUBSTITUTIONS OF EQUIPMENT,
48 PLUMBING, AND/OR SPECIFICATIONS WILL BE SUBJECT TO
49 ADDITIONAL FEES CHARGED BY THE CONSULTANT.
- 50 SITE VISITS TO REVIEW IMPLEMENTED DESIGNS WITHIN THE
51 SCOPE OF THIS PROJECT TO BE ARRANGED WITH THE OWNER.
- 52 MINIMUM FORTY EIGHT (48) HOURS PRIOR NOTICE TO BE
53 GIVEN FOR SITE VISITS TO REVIEW IMPLEMENTED DESIGNS.
- 54 REQUESTS FOR THE RELEASE OF THIS DRAWING SET FROM
55 NORTHSTAR ENGINEERING & TECHNOLOGIES LTD. FOR THE
56 PURPOSE OF TENDERING AND BIDDING TO BE MADE BY THE CONTRACTOR TO BE
57 MADE BY THE OWNER OR ARCHITECTS IN WRITING.
- 58 TENDER PRICING BY CONTRACTORS OF DRAWINGS TO BE BASED
59 ON DQS MARKED "ISSUED FOR TENDER" OR "ISSUED FOR
60 CONSTRUCTION" ONLY.
- 61 ALL REQUESTS FOR DESIGN CHANGES / SUBSTITUTIONS TO BE
62 MADE IN WRITING. ADDITIONAL FEES MAY APPLY. ALLOW
63 MINIMUM (1) WEEK BEFORE REVIEW AND RESPONSE TO CHANGE
64 REQUESTS.

DRAWING REVISIONS

No.	Description	Date
1	Issued for SPA	Dec. 23/21
2	Preliminary	Mar. 18/22
3	Issued for SPA comments	May 18/22

Engineer's Seal:



Client:

McCowan & Associates

Address:

279 Yonge St. Barrie ON

Project Name:

Allandale Marketplace - Burger King

Dwg. Name:	
------------	--

Mechanical Site Plan

NSET Project #:

16421

Drawn by: Northstar Eng

Checked by:	J.D.L.
-------------	--------

Scale:	As indicated
--------	--------------

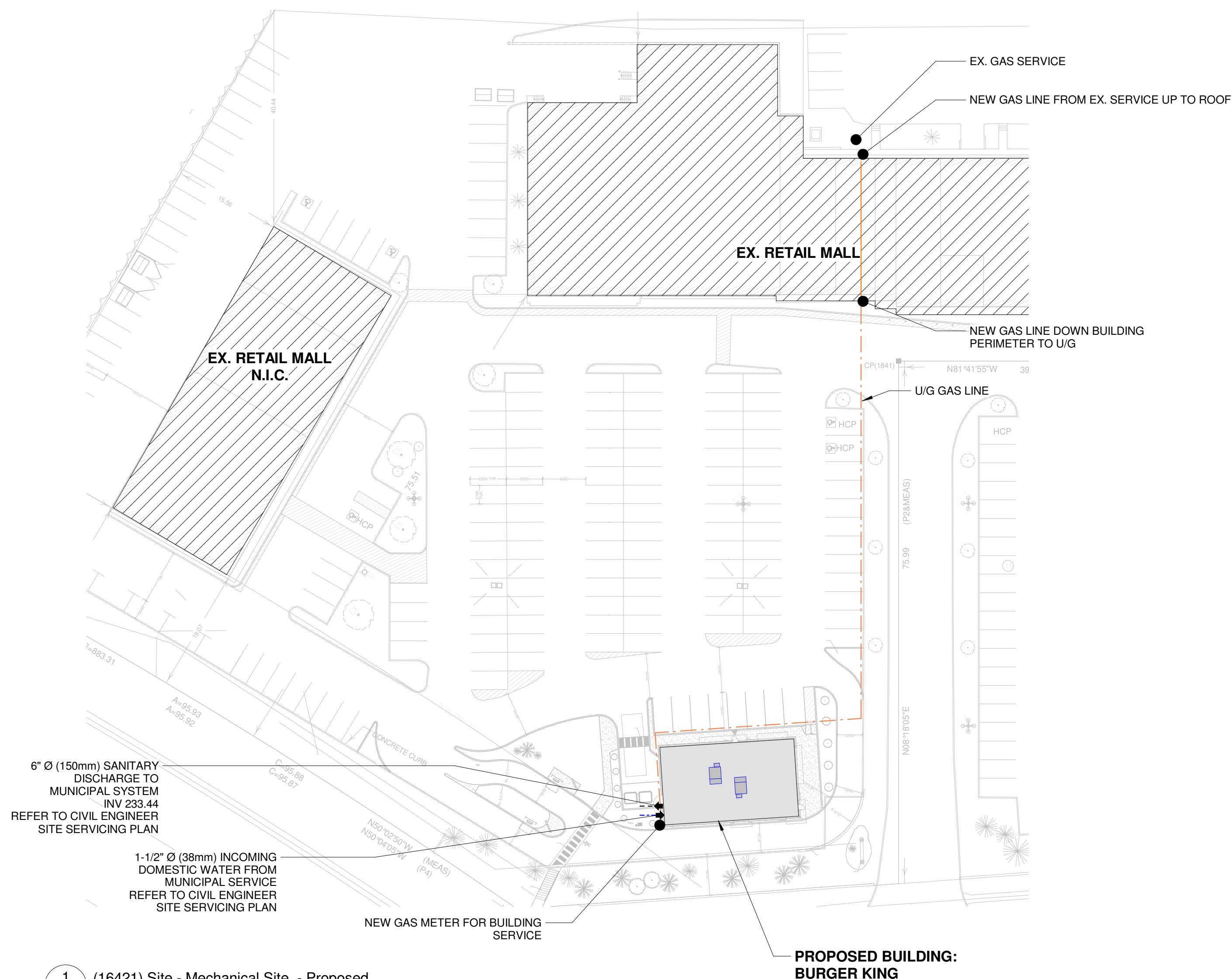
Revision #:	3.0
-------------	-----

Drawing #:

M-3

Project Date: Mar. 04/21

Arch-D (24" x 36")

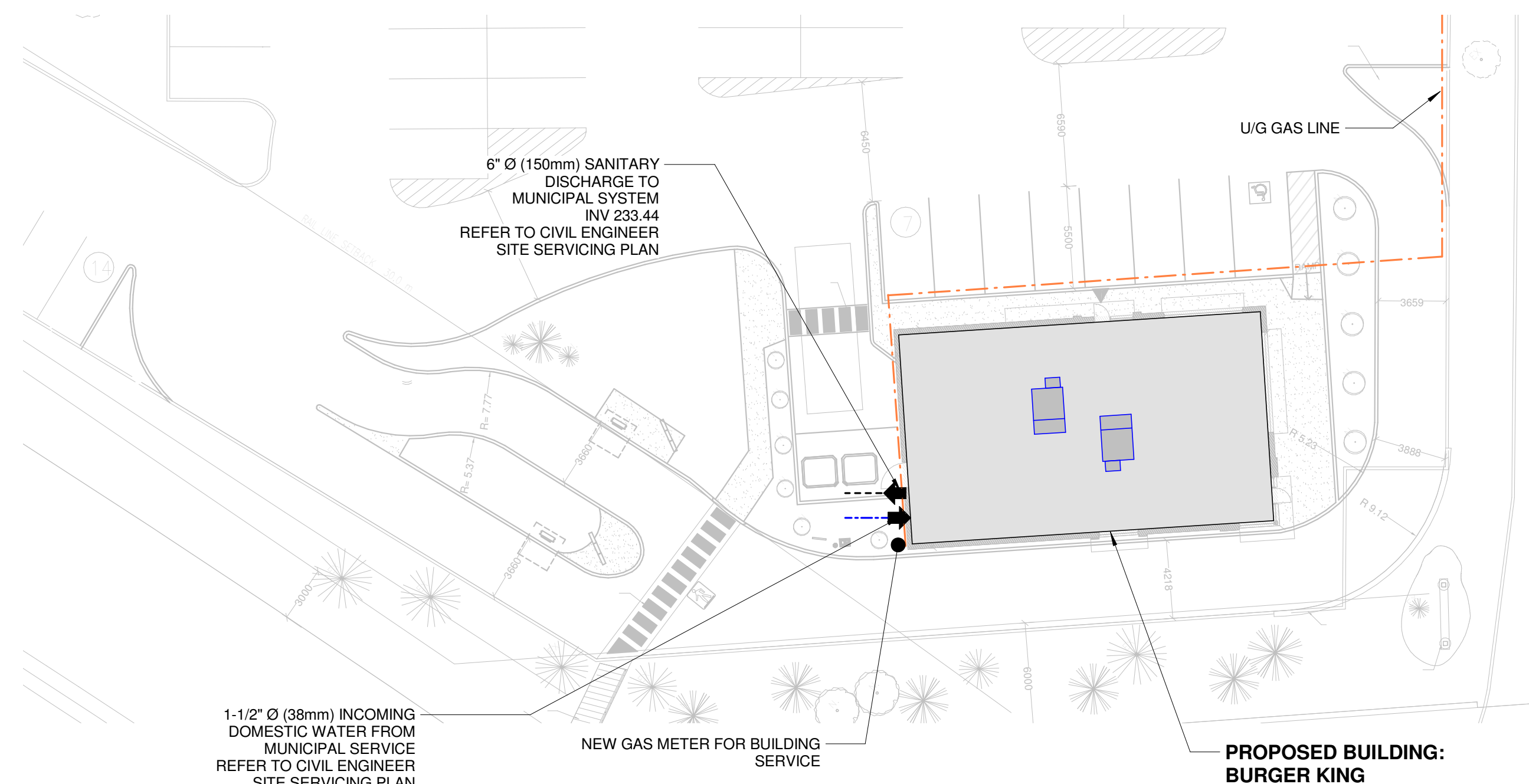


6" Ø (150mm) SANITARY
DISCHARGE TO
MUNICIPAL SYSTEM
INV 233.44
REFER TO CIVIL ENGINEER
SITE SERVICING PLAN

1-1/2" Ø (38mm) INCOMING
DOMESTIC WATER FROM
MUNICIPAL SERVICE
REFER TO CIVIL ENGINEER
SITE SERVICING PLAN

NEW GAS METER FOR BUILDING SERVICE

**PROPOSED BUILDING:
BURGER KING**



6" Ø (150mm) SANITARY
DISCHARGE TO
MUNICIPAL SYSTEM
INV 233.44
REFER TO CIVIL ENGINEER
SITE SERVICING PLAN

1-1/2" Ø (38mm) INCOMING
DOMESTIC WATER FROM
MUNICIPAL SERVICE
REFER TO CIVIL ENGINEER
SITE SERVICING PLAN

NEW GAS METER FOR BUILDING SERVICE

— **PROPOSED BUILDING:**
BURGER KING

1 (16421) Site - Mechanical Site - Proposed
M-3 N.T.S.

(16421) Site - Mechanical Site - Proposed - Burger King
1" = 20'-0"



Gardco PureForm LED area medium P26 features a sleek, low profile design and optimal performance. PureForm area medium is designed to achieve maximum pole spacing, with lumen output up to 28,900 lumens. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

TYPE P1 & P2:
P26-64L-600-WW-G2-AR-3-UNV-TLRPC-BK

Project:	
Location:	
Cat.No:	
Type:	
Lumens:	Qty:
Notes:	

Ordering guide

example: **P26-64L-800-NW-G2-AR-3-120-HIS-MGY**

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Mounting	Distribution	Voltage		
P26								
P26 PureForm area medium, 26"	48L 48 LEDs (3 modules)	400 400mA	WW-G2 Warm White 3000K, 70CRI Generation 2	AR Arm Mount (standard) ² The following mounting kits must be ordered separately (See accessories)	Type 2 2 Type 2 2-90 Rotated at 90° 2-270 Rotated at 270° Type 3 3 Type 3 3-90 Rotated at 90° 3-270 Rotated at 270° Type 4 4 Type 4 4-90 Rotated at 90° 4-270 Rotated at 270°	Type 5 5 Type 5 5W Type 5W AFR Auto Front Row AFR-90 Auto Front Row, rotated at 90° AFR-270 Auto Front Row, rotated at 270° BLC Back Light Control BLC-90 Back Light Control rotated at 90° BLC-270 Back Light Control rotated at 270°	120 120V	
		500 500mA	NW-G2 Neutral White 4000K, 70CRI Generation 2				208 208V	
		600 600mA					240 240V	
	64L 64 LEDs (4 modules)	700 700mA	CW-G2 Cool White 5000K, 70CRI Generation 2	SF Slip Fitter Mount ³ (fits to 2 3⁄8" O.D. tenon)	AFR-270 Auto Front Row, rotated at 270° BLC Back Light Control BLC-90 Back Light Control rotated at 90° BLC-270 Back Light Control rotated at 270°	277 277V		
		700 700mA				347 347V		
		800 800mA	480 480V					
	80L 80 LEDs (5 modules)	700 700mA	WY-G2 Warm Yellow 2700K, 80 CRI Generation 2 ¹	WS Wall mount with surface conduit rear entry permitted			UNV 120-277V (50/60Hz)	
		800 800mA					HVU 347-480V (50/60Hz)	
		900 900mA	BW-G2 Balanced White 3500K 80CRI Generation 2 ¹				RAM Retrofit arm mount kit ²	
	AM-G2 Direct Amber (590nm) Generation 2 ^{1,14}							
	Options							
	Dimming controls		Motion sensing lens		Photo-sensing		Electrical	Luminaire
DD 0-10V External dimming (by others) ⁴	IMRI3 Integral with #3 lens ¹⁵	PCB Photocontrol Button ^{7,8}	Fusing	Square Pole Adapter included as standard		Textured		
DCC Dual Circuit Control ^{4,5,6}	IMRI7 Integral with #7 lens ¹⁵	TLRD5 Twist Lock Receptacle 5 Pin ⁹	F1 Single (120, 277, 347VAC) ⁸	TB Terminal Block ¹¹				
FAWS Field Adjustable Wattage Selector ^{4,5}		TLRD7 Twist Lock Receptacle 7 Pin ⁹	F2 Double (208, 240, 480VAC) ⁸	RPA Round Pole Adapter (fits to 3"- 3.9" O.D. pole) ¹²				
LLC Integral wireless module ^{4,6,7,17}		TLRPC Twist Lock Receptacle w/Photocell ^{8,10}	F3 Canadian Double Pull (208, 240, 480VAC) ^{8,12}	HIS Internal Housing Side Shield ¹³				
BL Bi-level functionality ^{4,17}			Pole Mount Fusing					
DynaDimmer: Automatic Profile Dimming			FP1 Single (120, 277, 347VAC) ⁸					
CS50 Security 50% Dimming, 7 hours ^{4,7}			FP2 Double (208, 240, 480VAC) ⁸					
CM50 Median 50% Dimming, 8 hours ^{4,7}			FP3 Canadian Double Pull (208, 240, 480VAC) ⁸					
CS30 Security 30% Dimming, 7 hours ^{4,7}			Surge Protection (10kA standard)					
CM30 Median 30% Dimming, 8 hours ^{4,7}			SP2 Increased 20kA					

- Extended lead times apply. Contact factory for details.
- Mounts to a 4-5" round pole with adapter included for square poles.
- Limited to a maximum of 45 degrees aiming above horizontal.
- Not available with other dimming control options.
- Not available with motion sensor.
- Not available with photocell.
- Not available in 347 or 480V.

- Must specify input voltage.
- Dimming will not be connected to NEMA receptacle if ordering with other control options.
- Not available in 480V. Order photocell separately with TLRD5/7.
- Not available with DCC.
- Not available with SF and WS. RPAs provided with black finish standard.

- HIS not available with Type 5, 5W, and BLC optics.
- Limited to max. 600mA configurations.
- Not available with DD, DCC, and FAWS dimming control options.
- Not available with DD, DCC, FAWS and LLC dimming control options.
- Must specify a motion sensor lens.

P26 PureForm LED medium

Area light

PureForm P26² Accessories (ordered separately, field installed)

Shielding Accessories	Mounting Accessories
House Side shield	PureForm PTF2 (pole top fitter fits 2 3/8-2 1/2" OD x 4" depth tenon)
Standard optic orientation:	PTF2-P26/34-1-90-(F) 1 luminaire at 90°
HIS-48-H ¹ Internal House Side Shield for 48 LEDs (3 modules)	PTF2-P26/34-2-90-(F) 2 luminaires at 90°
HIS-64-H ¹ Internal House Side Shield for 64 LEDs (4 modules)	PTF2-P26/34-2-180-(F) 2 luminaires at 180°
HIS-80-H ¹ Internal House Side Shield for 80 LEDs (5 modules)	PTF2-P26/34-3-90-(F) 3 luminaires at 90°
	PTF2-P26/34-4-90-(F) 4 luminaires at 90°
	PTF2-P26/34-3-120-(F) 3 luminaires at 120°
	PureForm PTF3 (pole top fitter fits 3-3 1/2" OD x 6" depth tenon)
Optic at 90 or 270 orientation:	PTF3-P26/34-1-90-(F) 1 luminaire at 90°
HIS-48-V ¹ Internal House Side Shield for 48 LEDs (3 modules)	PTF3-P26/34-2-90-(F) 2 luminaires at 90°
HIS-64-V ¹ Internal House Side Shield for 64 LEDs (4 modules)	PTF3-P26/34-2-180-(F) 2 luminaires at 180°
HIS-80-V ¹ Internal House Side Shield for 80 LEDs (5 modules)	PTF3-P26/34-3-90-(F) 3 luminaires at 90°
	PTF3-P26/34-4-90-(F) 4 luminaires at 90°
	PTF3-P26/34-3-120-(F) 3 luminaires at 120°
	PureForm PTF4 (pole top fitter fits 3 1/2-4" OD x 6" depth tenon)
	PTF4-P26/34-1-90-(F) 1 luminaire at 90°
	PTF4-P26/34-2-90-(F) 2 luminaires at 90°
	PTF4-P26/34-2-180-(F) 2 luminaires at 180°
	PTF4-P26/34-3-90-(F) 3 luminaires at 90°
	PTF4-P26/34-4-90-(F) 4 luminaires at 90°
	PTF4-P26/34-3-120-(F) 3 luminaires at 120°
	P26-SF-G2-(F) Slip Fitter Mount (fits to 2 3/8" O.D. tenon)
	P26-RAM-G2-(F) Retrofit Arm mount kit
	P26-WS-G2-(F) Wall mount with surface conduit rear entry permitted
	P26-BD-G2 Bird deterrent
	(F) = Specify finish

1. HIS not available with Type 5, 5W, and BLC optics.
2. Consult Signify to confirm whether specific accessories are BAA-compliant.

P26 PureForm LED medium

Area light

LED Wattage and Lumen Values – 3000K

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-WW-G2-x	48	400	3000	60	7,673	B2-U0-G2	128	7,420	B1-U0-G2	124	7,698	B1-U0-G2	128
P26-48L-500-WW-G2-x	48	500	3000	74	9,380	B2-U0-G2	126	9,070	B2-U0-G2	122	9,409	B2-U0-G2	127
P26-48L-600-WW-G2-x	48	600	3000	89	10,967	B3-U0-G2	123	10,604	B2-U0-G2	119	10,999	B2-U0-G2	124
P26-48L-700-WW-G2-x	48	700	3000	101	12,477	B3-U0-G2	123	12,064	B2-U0-G2	119	12,514	B2-U0-G2	124
P26-64L-600-WW-G2-x	64	600	3000	114	14,493	B3-U0-G3	127	14,013	B2-U0-G3	123	14,536	B2-U0-G3	127
P26-64L-700-WW-G2-x	64	700	3000	133	16,402	B3-U0-G3	124	15,859	B2-U0-G3	119	16,451	B3-U0-G3	124
P26-64L-800-WW-G2-x	64	800	3000	153	18,384	B3-U0-G3	121	17,775	B3-U0-G3	117	18,438	B3-U0-G3	121
P26-80L-700-WW-G2-x	80	700	3000	169	20,727	B3-U0-G3	123	20,041	B3-U0-G4	119	20,788	B3-U0-G4	123
P26-80L-800-WW-G2-x	80	800	3000	192	22,735	B3-U0-G3	119	21,983	B3-U0-G4	115	22,803	B3-U0-G4	119
P26-80L-900-WW-G2-x	80	900	3000	219	24,409	B3-U0-G3	111	23,602	B3-U0-G4	108	24,482	B3-U0-G4	112

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 5			Type 5W			Type AFR			Type BLC		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-WW-G2-x	48	400	3000	60	7,916	B3-U0-G2	132	7,948	B3-U0-G2	132	7,854	B2-U0-G1	131	5,872	B0-U0-G2	98
P26-48L-500-WW-G2-x	48	500	3000	74	9,674	B3-U0-G2	130	9,716	B4-U0-G2	131	9,599	B2-U0-G2	129	7,178	B0-U0-G2	97
P26-48L-600-WW-G2-x	48	600	3000	89	11,308	B4-U0-G2	127	11,359	B4-U0-G2	128	11,223	B3-U0-G2	126	8,392	B1-U0-G2	94
P26-48L-700-WW-G2-x	48	700	3000	101	12,863	B4-U0-G2	127	12,923	B4-U0-G2	128	12,769	B3-U0-G2	126	9,548	B1-U0-G2	94
P26-64L-600-WW-G2-x	64	600	3000	114	14,940	B4-U0-G2	131	15,011	B4-U0-G2	131	14,832	B3-U0-G2	130	11,091	B1-U0-G2	97
P26-64L-700-WW-G2-x	64	700	3000	133	16,907	B4-U0-G2	127	16,988	B5-U0-G3	128	16,786	B3-U0-G2	126	12,552	B1-U0-G2	95
P26-64L-800-WW-G2-x	64	800	3000	153	18,949	B4-U0-G2	124	19,041	B5-U0-G3	125	18,814	B3-U0-G2	123	14,068	B1-U0-G3	92
P26-80L-700-WW-G2-x	80	700	3000	169	21,363	B5-U0-G3	127	21,468	B5-U0-G3	127	21,212	B3-U0-G2	126	15,861	B1-U0-G3	94
P26-80L-800-WW-G2-x	80	800	3000	192	23,463	B5-U0-G3	122	23,548	B5-U0-G3	123	23,267	B3-U0-G2	121	17,398	B1-U0-G3	91
P26-80L-900-WW-G2-x	80	900	3000	219	25,202	B5-U0-G3	115	25,282	B5-U0-G4	115	24,981	B3-U0-G2	114	18,679	B1-U0-G3	85

LED Wattage and Lumen Values – 4000K

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-NW-G2-x	48	400	4000	60	8798	B2-U0-G2	146	8509	B2-U0-G2	142	8827	B2-U0-G2	147
P26-48L-500-NW-G2-x	48	500	4000	74	10755	B2-U0-G2	145	10401	B2-U0-G2	140	10789	B2-U0-G2	145
P26-48L-600-NW-G2-x	48	600	4000	89	12574	B3-U0-G2	141	12160	B2-U0-G2	137	12614	B2-U0-G3	142
P26-48L-700-NW-G2-x	48	700	4000	101	14305	B3-U0-G3	142	13834	B2-U0-G3	137	14351	B2-U0-G3	142
P26-64L-600-NW-G2-x	64	600	4000	114	16617	B3-U0-G3	145	16069	B2-U0-G3	141	16670	B3-U0-G3	146
P26-64L-700-NW-G2-x	64	700	4000	133	18806	B3-U0-G3	142	18186	B3-U0-G3	137	18866	B3-U0-G4	142
P26-64L-800-NW-G2-x	64	800	4000	153	21078	B3-U0-G3	138	20383	B3-U0-G4	134	21145	B3-U0-G4	139
P26-80L-700-NW-G2-x	80	700	4000	169	23764	B3-U0-G3	141	22981	B3-U0-G4	136	23840	B3-U0-G4	141
P26-80L-800-NW-G2-x	80	800	4000	192	26067	B3-U0-G3	136	25208	B3-U0-G4	132	26150	B3-U0-G4	137
P26-80L-900-NW-G2-x	80	900	4000	219	27986	B3-U0-G3	128	27064	B3-U0-G4	123	28076	B3-U0-G4	128

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P26 PureForm LED medium

Area light

LED Wattage and Lumen Values – 4000K (continued)

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 5			Type 5W			Type AFR			Type BLC		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-NW-G2-x	48	400	4000	60	9068	B3-U0-G2	151	9114	B4-U0-G2	152	9006	B2-U0-G1	150	6735	B0-U0-G2	112
P26-48L-500-NW-G2-x	48	500	4000	74	11083	B4-U0-G2	149	11141	B4-U0-G2	150	11009	B3-U0-G2	148	8233	B1-U0-G2	111
P26-48L-600-NW-G2-x	48	600	4000	89	12954	B4-U0-G2	146	13025	B4-U0-G2	146	12871	B3-U0-G2	145	9626	B1-U0-G2	108
P26-48L-700-NW-G2-x	48	700	4000	101	14736	B4-U0-G2	146	14819	B4-U0-G2	147	14643	B3-U0-G2	145	10951	B1-U0-G2	108
P26-64L-600-NW-G2-x	64	600	4000	114	17116	B4-U0-G2	150	17214	B5-U0-G3	151	17009	B3-U0-G2	149	12721	B1-U0-G2	111
P26-64L-700-NW-G2-x	64	700	4000	133	19369	B5-U0-G3	146	19481	B5-U0-G3	147	19249	B3-U0-G2	145	14396	B1-U0-G3	108
P26-64L-800-NW-G2-x	64	800	4000	153	21708	B5-U0-G3	142	21834	B5-U0-G3	143	21575	B3-U0-G2	141	16136	B1-U0-G3	106
P26-80L-700-NW-G2-x	80	700	4000	169	24474	B5-U0-G3	145	24617	B5-U0-G4	146	24325	B3-U0-G2	144	18192	B1-U0-G3	108
P26-80L-800-NW-G2-x	80	800	4000	192	26880	B5-U0-G3	140	27003	B5-U0-G4	141	26682	B3-U0-G3	139	19955	B1-U0-G3	104
P26-80L-900-NW-G2-x	80	900	4000	219	28872	B5-U0-G3	132	28991	B5-U0-G4	132	28647	B4-U0-G3	131	21425	B1-U0-G4	98

LED Wattage and Lumen Values – 5000K

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 2			Type 3			Type 4		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-CW-G2-x	48	400	5000	60	8,237	B2-U0-G2	137	7,965	B1-U0-G2	133	8,262	B2-U0-G2	138
P26-48L-500-CW-G2-x	48	500	5000	74	10,069	B2-U0-G2	135	9,736	B2-U0-G2	131	10,100	B2-U0-G2	136
P26-48L-600-CW-G2-x	48	600	5000	89	11,772	B3-U0-G2	132	11,383	B2-U0-G2	128	11,807	B2-U0-G2	133
P26-48L-700-CW-G2-x	48	700	5000	101	13,393	B3-U0-G2	133	12,950	B2-U0-G2	128	13,433	B2-U0-G3	133
P26-64L-600-CW-G2-x	64	600	5000	114	15,557	B3-U0-G3	136	15,042	B2-U0-G3	132	15,603	B2-U0-G3	137
P26-64L-700-CW-G2-x	64	700	5000	133	17,607	B3-U0-G3	133	17,024	B3-U0-G3	128	17,659	B3-U0-G3	133
P26-64L-800-CW-G2-x	64	800	5000	153	19,734	B3-U0-G3	129	19,080	B3-U0-G3	125	19,792	B3-U0-G4	130
P26-80L-700-CW-G2-x	80	700	5000	169	22,248	B3-U0-G3	132	21,512	B3-U0-G4	128	22,315	B3-U0-G4	132
P26-80L-800-CW-G2-x	80	800	5000	192	24,404	B3-U0-G3	127	23,597	B3-U0-G4	123	24,477	B3-U0-G4	128
P26-80L-900-CW-G2-x	80	900	5000	219	26,201	B3-U0-G3	119	25,335	B3-U0-G4	115	26,280	B3-U0-G4	120

Ordering Code	Total LEDs	LED Current (mA)	Color Temp.	Average System Watts	Type 5			Type 5W			Type AFR			Type BLC		
					Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)	Lumen Output	BUG Rating	Efficacy (LPW)
P26-48L-400-CW-G2-x	48	400	5000	60	8,497	B3-U0-G2	141	8,532	B4-U0-G2	142	8,430	B2-U0-G1	140	6,304	B0-U0-G2	105
P26-48L-500-CW-G2-x	48	500	5000	74	10,384	B4-U0-G2	140	10,429	B4-U0-G2	140	10,305	B2-U0-G2	139	7,705	B1-U0-G2	104
P26-48L-600-CW-G2-x	48	600	5000	89	12,138	B4-U0-G2	136	12,193	B4-U0-G2	137	12,047	B3-U0-G2	135	9,008	B1-U0-G2	101
P26-48L-700-CW-G2-x	48	700	5000	101	13,808	B4-U0-G2	137	13,872	B4-U0-G2	137	13,706	B3-U0-G2	136	10,249	B1-U0-G2	101
P26-64L-600-CW-G2-x	64	600	5000	114	16,037	B4-U0-G2	140	16,113	B5-U0-G3	141	15,921	B3-U0-G2	139	11,905	B1-U0-G2	104
P26-64L-700-CW-G2-x	64	700	5000	133	18,149	B4-U0-G2	137	18,236	B5-U0-G3	137	18,018	B3-U0-G2	136	13,473	B1-U0-G3	101
P26-64L-800-CW-G2-x	64	800	5000	153	20,340	B5-U0-G3	133	20,439	B5-U0-G3	134	20,195	B3-U0-G2	132	15,101	B1-U0-G3	99
P26-80L-700-CW-G2-x	80	700	5000	169	22,932	B5-U0-G3	136	23,044	B5-U0-G3	137	22,769	B3-U0-G2	135	17,026	B1-U0-G3	101
P26-80L-800-CW-G2-x	80	800	5000	192	25,186	B5-U0-G3	131	25,277	B5-U0-G4	132	24,975	B3-U0-G2	130	18,675	B1-U0-G3	97
P26-80L-900-CW-G2-x	80	900	5000	219	27,053	B5-U0-G3	123	27,138	B5-U0-G4	124	26,815	B3-U0-G3	122	20,051	B1-U0-G3	91

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

P26 PureForm LED medium

Area light

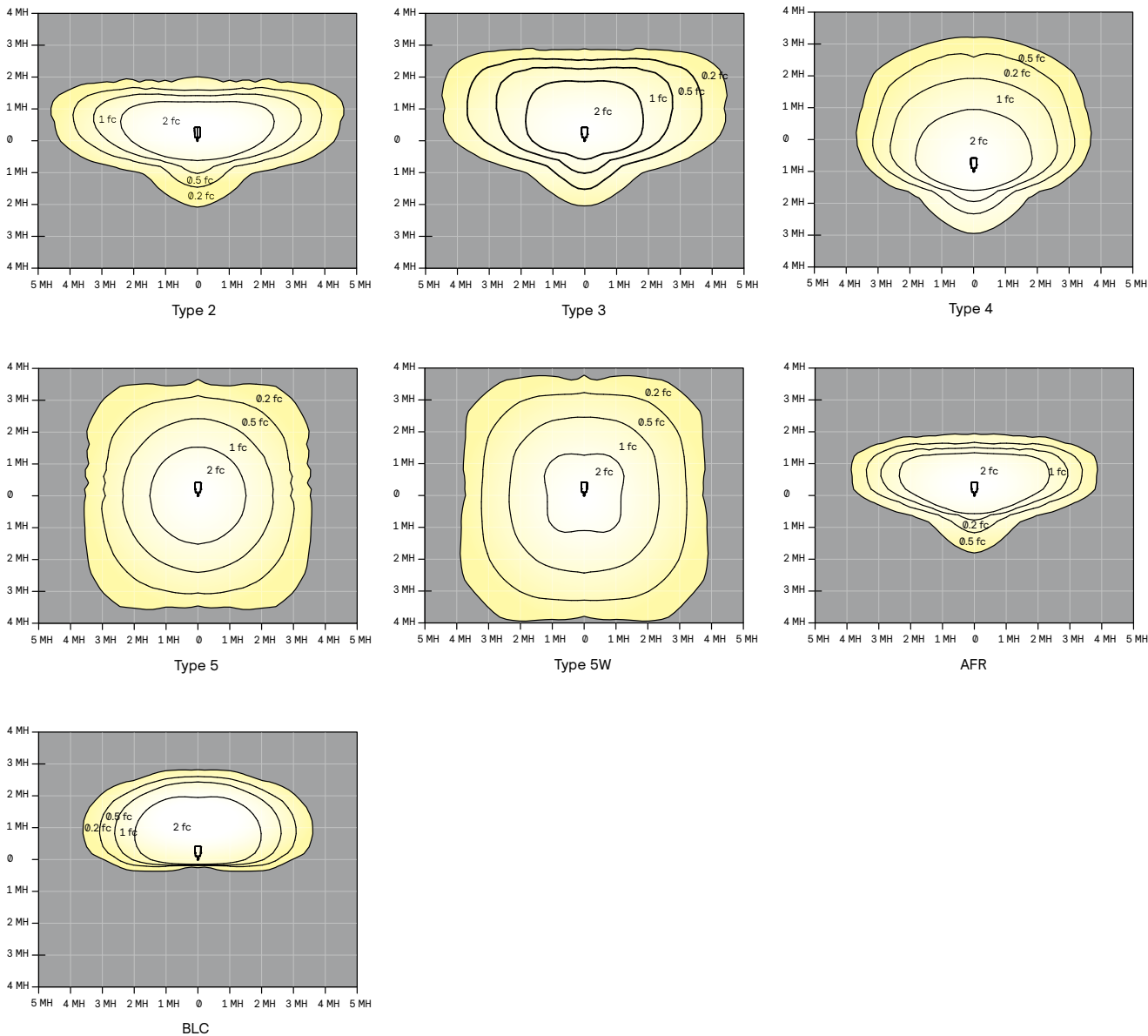
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer’s data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours

Ambient Temperature °C	Driver mA	Calculated L70 Hours	L70 per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 900 mA	>100,000 hours	>60,000 hours	>88%

Optical Distributions

Based on 20' mounting height



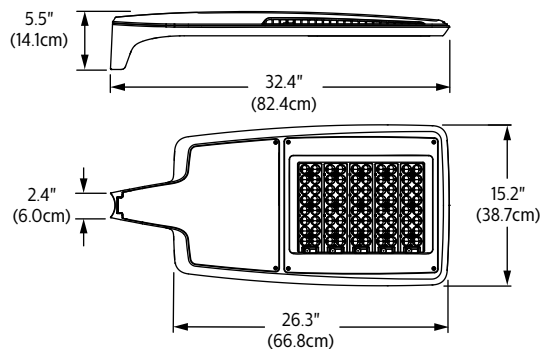
P26 PureForm LED medium

Area light

Dimensions

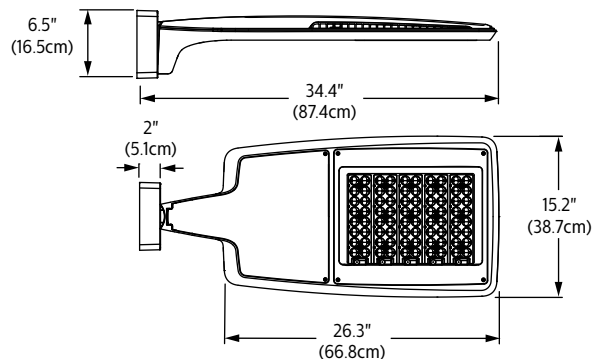
Standard Arm (AR)

Weight: 27 Lbs (12.4 Kg) EPA: 0.26ft² (.024m²)



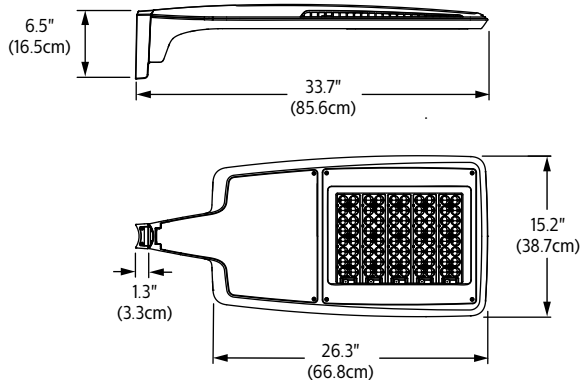
Wall (WS)

Weight: 30 Lbs. (13.7 Kg) EPA: 0.30ft² (.028m²)



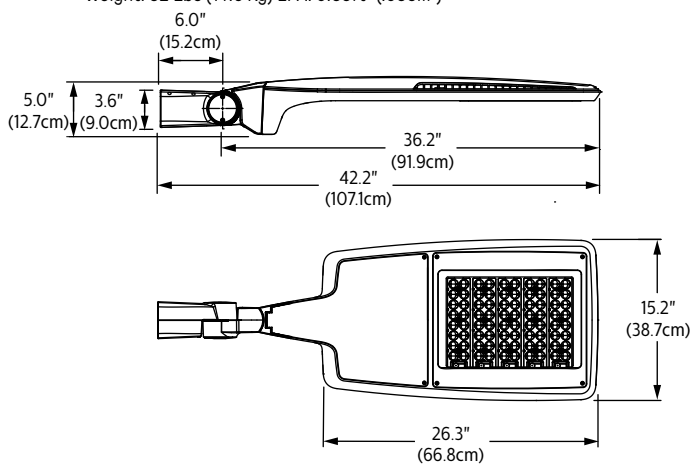
Retrofit Arm (RAM)

Weight: 28 Lbs (12.7 Kg) EPA: 0.28ft² (.026m²)

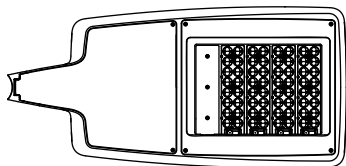


Slip fitter (SF)

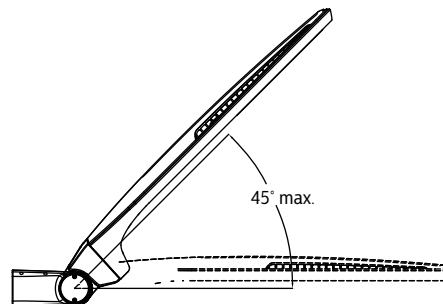
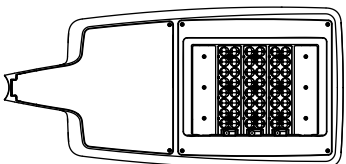
Weight: 32 Lbs (14.6 Kg) EPA: 0.38ft² (.035m²)



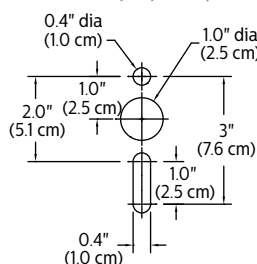
4 module configuration



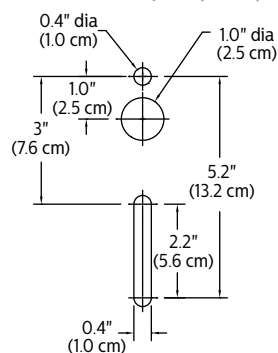
3 module configuration



Standard Arm (AR) drill pattern



Retrofit arm (RAM) drill pattern



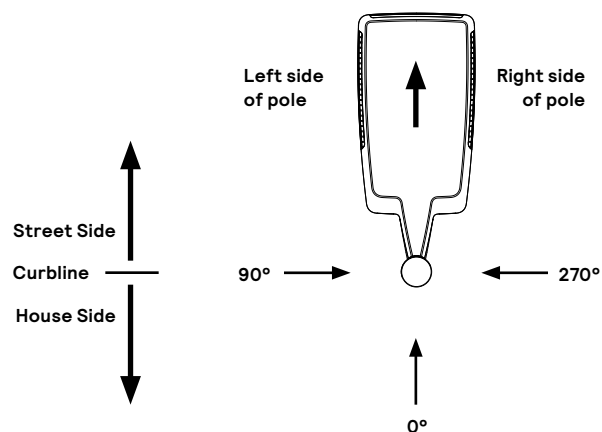
P26 PureForm LED medium

Area light

Optical Orientation Information

Standard Optic Position

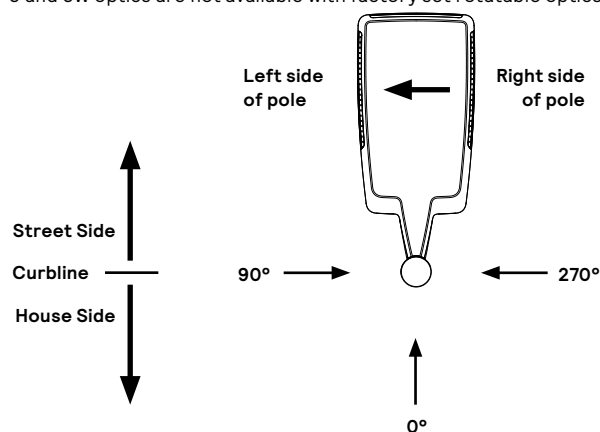
Luminaires ordered with asymmetric optical systems in the standard optic position will have the optical system oriented as shown below:



Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Left (90°) Optic Position

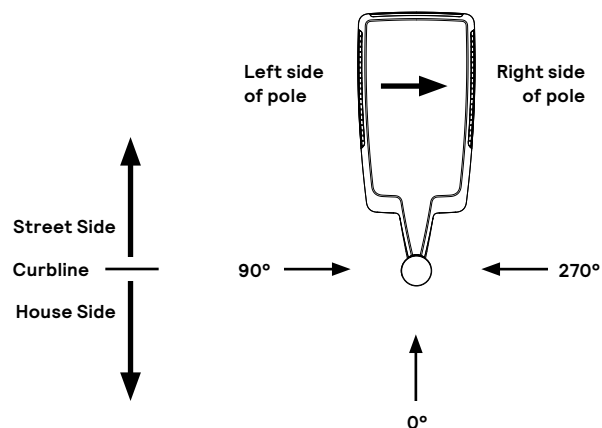
Luminaires ordered with optical systems in the Optic Rotated Left (90°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

Optic Rotated Right (270°) Optic Position

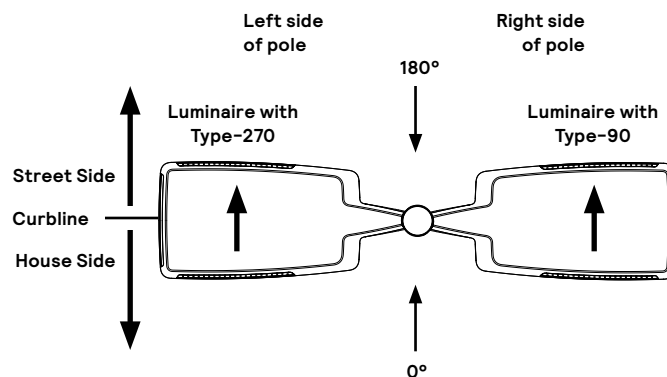
Luminaires ordered with optical systems in the Optic Rotated Right (270°) optic position will have the optical system oriented as shown below (Type 5 and 5W optics are not available with factory set rotatable optics):



Note: The hand hole will normally be located on the pole at the 0° point.

Twin Luminaire Assemblies with Type-90/Type-270 Rotated Optical Systems

Twin luminaire assemblies installed with rotated optical systems are an excellent way to direct light toward the interior of the site (Street Side) without additional equipment. It is important, however, that care be exercised to insure that luminaires are installed in the proper location.



Luminaires with Optic Rotated Right (270°) are installed on the LEFT Side of Pole

Luminaires with Optic Rotated Left (90°) are installed on the RIGHT Side of Pole

Note: The hand hole location will depend on the drilling configuration ordered for the pole.

P26 PureForm LED medium

Area light

Specifications

Housing

Two-piece sealed enclosure with main part of the housing designed as the structural and heat sink frame enclosed by cover to give its unique form. It also includes integral arm and separate, self-retained hinged, one-piece die cast door frame. All die-cast parts made of low copper die cast aluminum alloy for a high resistance to corrosion. The sleek profile with optimized surface area allows housing to provide excellent convection heat transfer with minimum use of heat fins, giving the freedom to have a clean minimalist aesthetic design. Luminaire housing rated to IP66, tested in accordance to Section 9 of IEC 60598-1.

Vibration resistance

Luminaire is tested and rated 3G over 100,000 cycles conforming to standards set forth by ANSI C136.31-2010. Testing includes vibration in three axes, all performed on the same luminaire.

Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 3, 4 and 5 modules or 48, 64 and 80 LEDs. Module is RoHS compliant. Color temperatures: 3000K +/- 125K, 4000K, 5000K +/- 200K. Minimum CRI of 70. Also available in 2700K, 3500K, and Direct Amber with extended lead times. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Energy saving benefits

System efficacy up to 150 lms/W with significant energy savings over Pulse Start Metal Halide luminaires. Optional control options provide added energy savings during unoccupied periods.

Optical systems

Type 2, 3, 4, 5, 5W, and AFR distributions available. Internal Shield option mounts to LED optics and is available with Type 2, 3, 4, and AFR distributions including a dedicated BLC optic to provide the best backlight control possible for those stringent requirements around property lines. Types 2, 3, 4, AFR, and BLC when specified and used as rotated, are factory set only. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (UO per IESNA TM-15).

Mounting

Standard luminaire arm mounts to 4" O.D. round poles. Can also be used with 5" O.D. poles. Square pole adapter included with every luminaire. Round Pole Adapter (RPA) required for 3-3.9" poles. PureForm features a retrofit arm kit. When specified with the retrofit arm (RAM) option, PureForm seamlessly simplifies site conversions to LED by eliminating the need for additional pole drilling on most existing poles. RAM will be boxed separately. Also optional are slipfitter and wall mounting accessories. Note that only fixed mounts (AR, RAM, WS) are required to meet IDA compliance. SF mounting will not meet IDA.

Control options

0-10V dimming (DD): Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Dual Circuit Control (DCC): Luminaire equipped with the ability to have two separate circuits controlling drivers and light engines independently. Permits separate switching of separate modules controlled by use of two sets of leads, one for each circuit. Not recommended to be used with other control options, motion response, or photocells.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

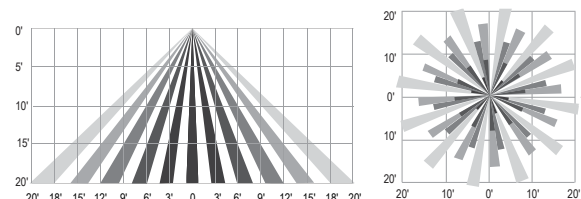
Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profiles provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. Dimming profiles include two dimming settings including dim to 30% or 50% of the total lumen output. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1 or 2 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

Wireless system (LLC): Optional wireless controller integral to luminaire ready to be connected to a Limelight system (sold by others). The system allows you to wirelessly manage the entire site, independent lighting groups or individual luminaires while on-site or remotely. Based on a high-density mesh network with an easy to use web-based portal, you can conveniently access, monitor and manage your lighting network remotely. Wireless controls can be combined with site and area, pedestrian, and parking garage luminaires as well, for a completely connected outdoor solution. Equipped with motion response with #3 lens for 8-25' mounting heights.

LLC-IMRI3 Luminaire with #3 lens



Motion response options

Bi-Level Infrared Motion Response (BL-IMRI): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

P26 PureForm LED medium

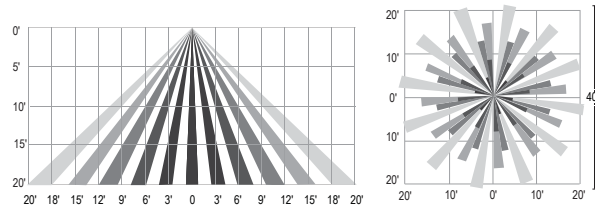
Area light

Specifications (cont'd)

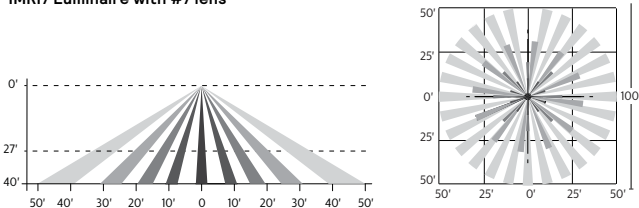
Infrared Motion Response with Other Controls: When used in combination with other controls (Automatic Dimming Profile), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (IMRI3/IMRI7): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. Lens #7 is designed for higher mounting heights up to 40' with larger coverage areas up to 100' diameter coverage area. See charts for approximate detection patterns:

IMRI3 Luminaire with #3 lens



IMRI7 Luminaire with #7 lens



Electrical

Twist-Lock Receptacle (TLRD5/TLRD7/ TLRPC): Twist Lock Receptacle with 5 pins enabling dimming or with 7 pins with additional functionality (by others) can be used with a twistlock photoelectric cell or a shorting cap. Dimming Receptacle Type B (5-pin) and Type D-24 (7-pin) in accordance to ANSI C136.41. Can be used with third-party control system. Receptacle located on top of luminaire housing. When specifying receptacle with twistlock photoelectric cell, voltage must be specified. When ordering Twist-lock receptacle (TLRD5 or TLRD7), photocell or shorting cap is not included. TLRPC is shipped standard with 5 pin.

Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit www.signify.com/baa to view a current list of BAA-compliant products to confirm this product's current compliance.

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground, and in accordance with DOE MSSLC Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High test level 10kV/10kA. 20kV / 10kA surge protection device that provides extra protection beyond the SP1 10kV/10kA level

Listings

UL/cUL wet location listed to the UL 1598 standard, suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Most PureForm P26 configurations are qualified under Premium DesignLights Consortium® category. Consult DLC Qualified Products list to confirm your specific luminaire selection is approved. CCTs 3000K and warmer are Dark Sky Approved.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty. See signify.com/warranties for complete details and exclusions.





Gardco PureForm LED wall scone PWS features narrow spectrum amber LEDs combined with special shielding, making it a wildlife friendly lighting solution. Multiple distribution and shielding options are available to achieve maximum control. A full range of control options provides additional energy savings.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lamps: _____ Qty: _____
 Notes: _____

TYPE W:

[PWS-48L-400-AM-G2-3-UNV-PCB-F1-BK](#)

Ordering guide

example: **PWS-48L-500-AM-G2-2-UNV-FWC-DGY**

Prefix	Number of LEDs	Drive Current	LED Color - Generation	Distribution	Voltage	Options				Finish	
						Dimming controls	Motion-sensing lens	Photo-sensing	Electrical & Shield		
PWS											
PWS Pure-Form wall scone	48L 48 LEDs	400 400mA	AM-G2 Direct Amber (590nm) Generation 2 ²	2 Type 2	UNV 120-277V	DD 0-10V External dimming (controls by others) ⁴	IMRI2 ¹¹ Integral with #2 lens IMRI3 ¹⁶ Integral with #3 lens	PCB Photocontrol Button ^{7,8,12}	Fusing		BK Black WH White BZ Bronze DGY Dark Gray MGY Medium Gray Customer specified RAL Specify optional color or RAL (ex: RAL7024) CC Custom color (Must supply color chip for required factory quote)
		600 600mA		3 Type 3	HVU 347-480V	DCC Dual Circuit Control ^{4,5,6,9} FAWS Field Adjustable Wattage Selector ^{4,5}			F1 Single (120, 277, 347VAC) ⁸		
				4 Type 4	120 120V	SW Interface Module for SiteWise ^{3,4,6} BL Bi-level functionality ^{4,10}			F2 Double (208, 240, 480VAC) ⁸		
				208 208V	DynaDimmer: Automatic Profile Dimming ^{4,7}	F3 Canadian Double Pull (208, 240, 480VAC) ⁸					
				240 240V	CS50 Security 50% Dimming, 7 hours CM50 Median 50% Dimming, 8 hours CE50 Economy 50% Dimming, 9 hours DA50 All Night 50% Dimming	Surge Protection (10kA is standard)					
	64L 64 LEDs	600 600mA	277 277V	347 347V	480 480V	CS30 Security 30% Dimming, 7 hours CM30 Median 30% Dimming, 8 hours CE30 Economy 30% Dimming, 9 hours DA30 All Night 30% Dimming	SP2 Increased 20kA FWC Wildlife Friendly External House side shield ¹				

1. External shield shipped with luminaire.
2. Extended lead times apply. Contact factory for details.
3. Available only in 120 or 277V.
4. Not available with other dimming control options.

5. Not available with motion sensor.
6. Not available with photocontrol.
7. Not available in 347 or 480V.
8. Must specify input voltage.
9. Not available with 64L.

10. Must specify a motion sensor lens.
11. Not available with DD, DCC, and FAWS dimming control options.



PWS PureForm LED wall sconce

wall mount

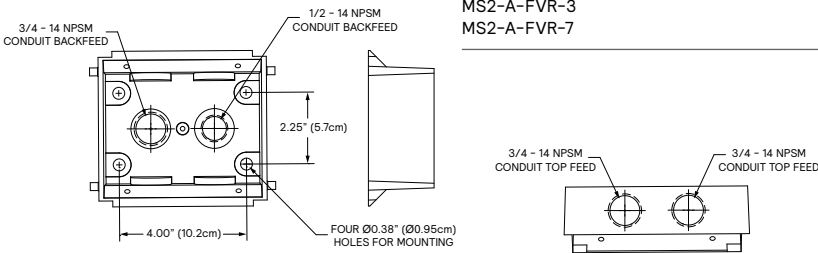
Luminaire Accessories (order separately)

Mounting Accessories	
Wall Mount	
PWS-WS-G2	Wall Mounted Box for Surface Conduit Painted Black

System accessories	
Wireless system remote mount module	
LLCR2-(F)	#2 lens - specify finish in place of (F)
LLCR3-(F)	#3 lens - specify finish in place of (F)
Central Remote Motion Response (used connected to SiteWise main panel)	
MS2-A-FVR-3	
MS2-A-FVR-7	

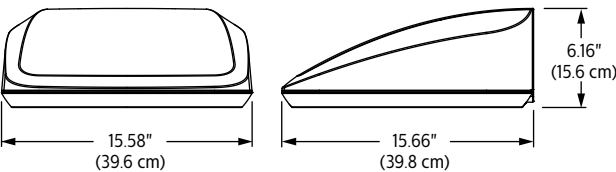
Wireless system remote controller accessory

Wireless system offers a remote radio/sensor module that allows connection to a Limelight system (sold by others). Remote module can be mounted to wall or pole with j-box supplied. May be specified by choosing one of two different lenses to accommodate a variety of mounting heights/sensor detection ranges. Must specify option DD on luminaires that are planned to be used with remote mount controllers.

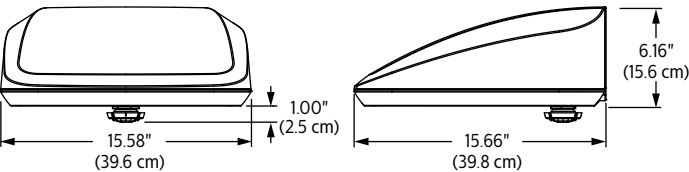


Dimensions

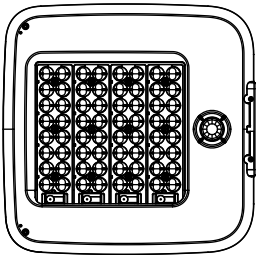
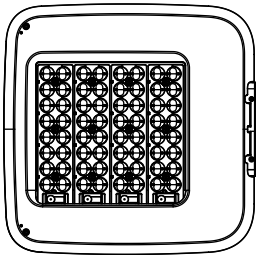
Standard Luminaire



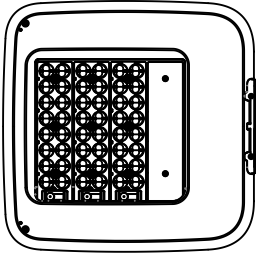
Motion Response and Wireless System



4 modules



3 modules



Luminaire Weights	
PureForm LED wall sconce PWS	Weight
Luminaire	24 lbs

PWS PureForm LED wall sconce

wall mount

LED Wattage and Lumen Values – Unshielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	Type 2			Type 3			Type 4		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	2834	59	B1-U0-G1	2740	57	B1-U0-G1	2843	60	B1-U0-G1
PWS-48L-600-AM-G2-x	48	600	596	73	3316	46	B1-U0-G1	3207	44	B1-U0-G1	3327	46	B1-U0-G1
PWS-64L-600-AM-G2-x	64	600	596	94	4367	46	B1-U0-G1	4223	45	B1-U0-G1	4381	46	B1-U0-G1

LED Wattage and Lumen Values – Shielded

Ordering Code	LED Qty	LED Current (mA)	Dominant Wavelength (nm)	Average System Wattage (W)	2-FWC			3-FWC			4-FWC		
					Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating	Lumen Output	Efficacy (Lm/W)	BUG Rating
PWS-48L-400-AM-G2-x	48	400	596	48	1094	23	B1-U0-G0	1058	22	B1-U0-G0	1098	23	B1-U0-G0
PWS-48L-600-AM-G2-x	48	600	596	73	1280	18	B1-U0-G0	1238	17	B1-U0-G0	1284	18	B1-U0-G0
PWS-64L-600-AM-G2-x	64	600	596	94	1686	18	B1-U0-G0	1630	17	B1-U0-G0	1691	18	B1-U0-G0

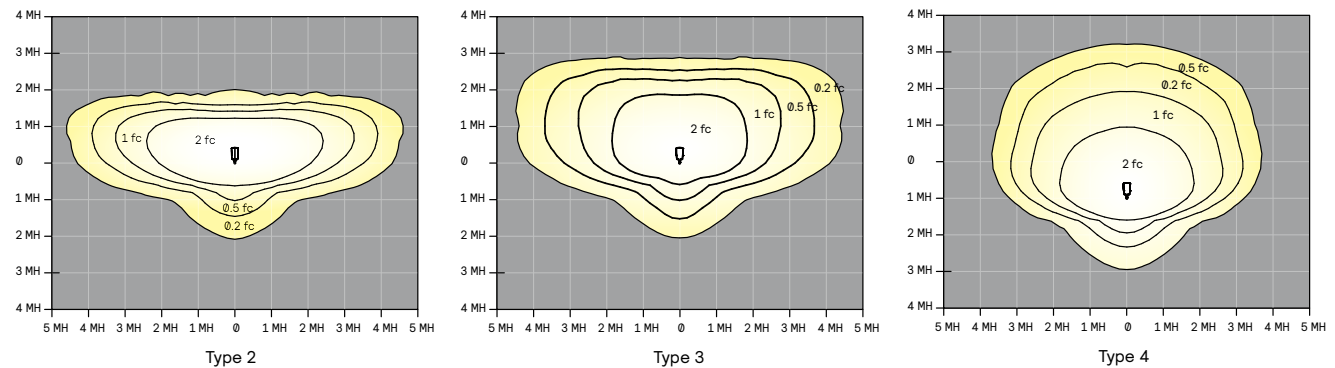
Predicted Lumen Depreciation Data

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L₇₀ is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L₇₀ hours limited to 6 times actual LED test hours

Ambient Temperature °C	Drive current	Calculated L ₇₀ Hours	L ₇₀ per TM-21	Lumen Maintenance % at 60,000 hrs
25°C	up to 600 mA	>100,000 hours	>60,000 hours	>88%

Optical Distributions

Based on 20' mounting height



PWS PureForm LED wall sconce

wall mount

Specifications

Housing

Main body housing and door frame made of low copper die cast aluminum alloy for a high resistance to corrosion. Door hinges secured by aircraft cable to allow access to driver or other electronic components for servicing. The door frame acts as the main heat transfer component and it is optimized to allowing the main housing to have no fins, giving the freedom to have a clean minimalist aesthetic design while allowing it to house emergency battery backup equipment and various other options. Luminaire housing rated to IP65, tested in accordance to Section 9 of IEC 60598-1.

Light engine

Light engine comprises of a module of 16-LED aluminum metal clad board fully sealed with optics offered in multiples of 3 and 4 modules or 48 and 64 LEDs. Module is RoHS compliant. Direct Amber LED is narrow spectrum with dominant wavelength at 596 nm (peak wavelength at 601 nm). Contact factory for details. LED light engine is rated IP66 in accordance to Section 9 of IEC 60598-1.

Optical systems

Type 2, 3, and 4 distributions available. Performance tested per LM-79 and TM-15 (IESNA) certifying its photometric performance. Luminaire designed with 0% uplight (U0 per IESNA TM-15).

Mounting

Mounting is completed through integral back plate that features a separate recessed feature for hook and lock quick mount plate that secures with two set screws from bottom of luminaire. Luminaire ships fully assembled, ready to install.

Control options

0-10V dimming (DD): Access to 0-10V dimming leads supplied through back of luminaire (for secondary dimming controls by others). Cannot be used with other control options.

Field Adjustable Wattage Selector (FAWS): Luminaire equipped with the ability to manually adjust the wattage in the field to reduce total luminaire lumen output and light levels. Comes pre-set to the highest position at the lumen output selected. Use chart below to estimate reduction in lumen output desired. Cannot be used with other control options or motion response.

FAWS Position	Percent of Typical Lumen Output
1	25%
2	50%
3	55%
4	65%
5	75%
6	80%
7	85%
8	90%
9	95%
10	100%

Note: Typical value accuracy +/- 5%

SiteWise (SW): SiteWise system includes a controller fully integrated in the luminaire that enables the luminaires to communicate with a dimming signal transmitter cabinet located on site using patented central dimming technology. A locally accessible mobile app allows users to access the system and set functionalities such as ON/OFF, dimming levels and scheduling. SiteWise is available with motion response options in order to bring the light back to 100% when motion is detected. Cannot be used with other control options or photocell options. Additional functionalities are available such as communication with indoor lighting and connection to BMS systems. Complete information on the control system can be found on the SiteWise website at philips.com/sitewise.

Automatic Profile Dimming (CS/CM/CE/CA): Standard dimming profile of 30% or 50% provide flexibility towards energy savings goals while optimizing light levels during specific dark hours. When used in combination with not programmed motion response it overrides the controller's schedule when motion is detected. After 5 minutes with no motion, it will return to the automatic dimming profile schedule. Automatic dimming profile scheduled with the following settings:

- **CS50/CS30:** Security for 7 hours night duration (Ex., 11 PM - 6 AM)
- **CM50/CM30:** Median for 8 hours night duration (Ex., 10 PM - 6 AM)
- **CE50/CE30:** Economy for 9 hours night duration (Ex., 9 PM - 6 AM)
- **CA50/CA30:** for all night (during all dark hours)

All above profiles are calculated from mid point of the night. Dimming is set for 6 hours after the mid point and 1, 2, or 3 hours before depending of the duration of dimming. Cannot be used with other dimming control options.

PWS PureForm LED wall sconce

wall mount

Specifications (cont'd)

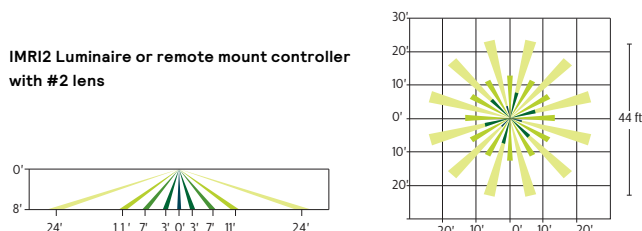
Motion response options

Bi-Level Infrared Motion Response (BL-IMRI3): Motion Response module is mounted integral to luminaire factory pre-programmed to 50% dimming when not ordered with other control options. BL-IMRI is set/operates in the following fashion: The motion sensor is set to a constant 50%. When motion is detected by the PIR sensor, the luminaire returns to full power/light output. Dimming on low is factory set to 50% with 5 minutes default in "full power" prior to dimming back to low. When no motion is detected for 5 minutes, the motion response system reduces the wattage by 50%, to 50% of the normal constant wattage reducing the light level. Other dimming settings can be provided if different dimming levels are required. This can also be done with FSIR-100 Wireless Remote Programming Tool (contact Technical Support for details).

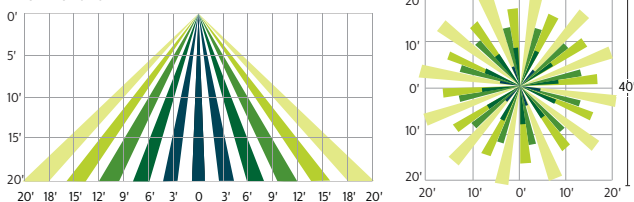
Infrared Motion Response with Other Controls (SW-IMRI3): When used in combination with other controls (Automatic Dimming Profile and SiteWise), motion response device will simply override controller's schedule with the added benefits of a combined dimming profile and sensor detection. In this configuration, the motion response device cannot be re-programmed with FSIR-100 Wireless Remote Programming Tool. The profile can only be re-programmed via the controller.

Infrared Motion Response Lenses (IMRI2/IMRI3): Infrared Motion Response Integral module is available with two different sensor lens types to accommodate various mounting heights and occupancy detection ranges. Lens #2 (IMRI2) is designed for lower mounting heights up to 8' with larger coverage areas up to 44' diameter coverage area. Lens #3 (IMRI3) is designed for mounting heights up to 20' with a 40' diameter coverage area. See charts for approximate detection patterns:

IMRI2 Luminaire or remote mount controller with #2 lens



IMRI3 Luminaire or remote mount controller with #3 lens



Electrical

Driver: Driver efficiency (>90% standard). 120-480V available (restrictions apply). Open/short circuit protection. Optional 0-10V dimming to 10% power. RoHS compliant.

Button Photocontrol (PCB): Button style design for internal luminaires mounting applications. The photocontrol is constructed of a high impact UV stabilized polycarbonate housing. Rated voltage of 120V or 208-277V with a load rating of 1000 VA. The photocell will turn on with 1-4Fc of ambient light.

Surge protection (SP1/SP2): Each luminaire is provided as standard with surge protector tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/5kA waveforms for Line Ground, Line Neutral and Neutral Ground, and in accordance with U.S. DOE (Department of Energy) MSSLC (Municipal Solid-State Street Lighting Consortium) Model Specification for LED Roadway Luminaires Appendix D Electrical Immunity High Test Level 10kV / 5kA. Optional 20kV is available for additional protection.

Listings

UL/cUL listed to the UL 1598 standard, suitable for wet locations when mounted downward facing. Also listed for damp locations when inverted upward facing when mounted in covered ceiling application. Suitable for use in ambient temperatures from -40° to 40°C (-40° to 104°F). Florida Wildlife Certified.

Finish

Each standard color luminaire receives a fade and abrasion resistant, electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish. The surface treatment achieves a minimum of 1000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. Standard colors include bronze (BZ), black (BK), white (WH), dark gray (DGY), and medium gray (MGY). Consult factory for specs on optional or custom colors.

Warranty

PureForm luminaires feature a 5-year limited warranty. See signify.com/warranties for complete details and exclusions.

