

MONROE COUNTY PUBLIC LIBRARY BOARD OF TRUSTEES MEETING

Wednesday, March 17, 2021

Main Library Room 1B/C, 5:45 p.m., Immediately following Public Hearing on Preliminary Determination to Issue Bonds

Join Zoom Meeting

<https://us02web.zoom.us/j/83233849146?pwd=Z1VYQlhNUmFvN2UyODdzZ21BQjhtZz09>

AGENDA

1. Call to Order –John Walsh - President
2. Consent Agenda – action item – Marilyn Wood, Director
 - a. Minutes of February 17, 2020 Board Meeting (page 1-3)
 - b. Monthly Financial Report (page 4-43)
 - c. Monthly Bills for Payment (page 44-55)
 - d. Personnel Reports (page 56-62)
 - e. 2021 Board Meeting Calendar (page 63)
3. Director’s Monthly Report – Marilyn Wood, Director (page 64-73)
4. Old Business
 - a. Southwest Branch Design Development Presentation and Approval – Christine Matheu (page 74-385)
5. New Business
 - a. Resolution Declaring Certain Property Surplus – Gary Lettelleir (page 386)
 - b. Proposed Media Relations Policy – Marilyn Wood, Grier Carson (page 387-391)
6. Update: Monroe County Public Library Foundation – Emily Bedwell, President
7. Public Comment
8. Adjournment

View the Board Packet on the Library’s website: <https://mcpl.info/library-trustees/meetings>

MONROE COUNTY PUBLIC LIBRARY BOARD OF TRUSTEES PUBLIC COMMENT POLICY

The Library Board of Trustees shall have a time providing for public comment during all public meetings. Comments should be relevant to Library matters, excluding personnel issues. Individual speakers are asked to limit their remarks to three–five minutes. The chair shall be allowed to limit the time for individual speakers and to limit the total time for public comment.

Public comment time is provided for the public to express their opinions or concerns about matters over which the Board of Trustees has authority or responsibility. Comments are intended to be statements from speakers; speakers may not engage the Board in a question & answer exchange during public comments. Questions relating to Library or administrative procedures which could be addressed outside of a Library board meeting should be referred to the appropriate Library staff at other times. Expressions of opinion about these matters are appropriate for the public comment time on the agenda.

Approved by the Library Board of Trustees July 17, 2019

MONROE COUNTY PUBLIC LIBRARY BOARD OF TRUSTEES MEETING
Wednesday, February 17, 2021; 5:45pm; via Zoom

Join Zoom meeting: <https://us02web.zoom.us/j/83317341665?pwd=a0NBRmdSZXYwZXZVcStVNk5XTzJqZz09>

Present Board Members: Jaime Burkhart, Kari Esarey, David Ferguson, Christine Harrison, Katherine Loser, Fred Risinger, John Walsh.

Absent Board Members: N/A

Library staff: Kim Baker, Grier Carson, CATS production staff, Edwin Fallwell, Jen Hoffman, Gary Lettelleir, Loraine Martin, Bethany Turrentine, Marilyn Wood.

Others: Tom Bungler.

Call to Order

The meeting was called to order at 5:47 PM by Board President John Walsh.

Consent Agenda

Board members Katherine Loser moved to approve the consent agenda; Kari Esarey seconded the motion. The consent agenda passed unanimously through a roll call vote.

Director's Monthly Report

Marilyn Wood reported that the January use of e-Library resources hit an all-time high across a variety of platforms. Take and make kits are also very popular for all ages. The Library launched a community reading challenge called *Everyone Has a Story* designed to highlight diverse people and stories.

The 2020 annual report has been submitted and received by the Indiana State Library (ISL). This primarily reports statistics and use across the Libraries facilities and programs. The report is reviewed by the ISL to ensure we are meeting all prescribed Library standards. Many standards were waived for 2020 due to the pandemic and the inability to provide services. MCPL also prepared an Achievement report for 2020 which shows how the library adapted its services in response to the COVID_19 public health crisis. The Board had a short discussion regarding measuring impact and statistics to better understand our overall service to the community.

Old Business

Southwest Branch

Closing on the property is scheduled for next week. Planning for construction and design development is moving forward. The board had a short discussion regarding next steps.

New Business – Action Items

- a. Election of Officers for 2021

Secretary Fred Risinger recommended the slate of officers for 2021 as follows:

John Walsh, President; Christine Harrison, Vice President; Kari Esarey, Secretary; David Ferguson, Treasurer. Board members Fred Risinger moved to approve the Election of Officers for 2021; Jaime Burkhart seconded the motion. The action item passed unanimously through a roll call vote. President John Walsh thanked everyone for their service.

b. Adoption of Reimbursement Resolution

Gary Lettelleir, Finance Manager shared an update regarding the 2022 growth quotient which is now estimated to be over four percent (4.57%). If so, the 2022 budget EOY balance would have approximately a one-million-dollar surplus.

The Reimbursement Resolution on the agenda today, allows the library to reimburse (from proceeds of the bond) for costs related to issuing the bonds if the payments are made before the bonds are sold. This practice has been done for previous bonds.

Board members Katherine Loser moved to approve the Adoption of Reimbursement Resolution; Christine Harrison seconded the motion. The action item passed unanimously through a roll call vote.

c. Adoption of 2021A Bond Resolution

The proposed two million bond can be approved now by the Board, as it is not related to a controlled project.

Board members Kari Esarey moved to approve the Adoption of 2021A Bond Resolution; Fred Risinger seconded the motion. The action item passed unanimously through a roll call vote.

d. Introduction of 2021A Appropriation Resolution

Gary provided an explanation of how the two-million-dollar bond will be used. The project will ensure the library's technology equipment and facilities remain up to date and in good working order. A public notice and hearing is needed before this resolution can be approved. The hearing is scheduled for the April 2021 board meeting.

e. Introduction of 2021B Bond Resolution

The six-million-dollar bond is for a controlled project to pay for portions of the new branch construction. Two public hearings are needed for a project of this size. Those hearings will be held at the next two board meetings. Once the resolution is adopted, the library will publish a public notice. Property owners and registered voters will have an opportunity to petition through a remonstrance process, which would require at least 500 people. This is uncommon unless the bond is being used in some controversial way.

f. Introduction of 2021B Appropriation Resolution

This resolution will be heard at a Public hearing at the April 2021 board meeting. The approved resolution will appropriate the proceeds of the series B bond into the library's budget.

e. Continuing Disclosure document.

This document is approved as part of the bond process. It identifies the steps taken if there are events that cause any risk of bond payments not being made or anything that would substantially change the financial position of the library.

Update: Staff Development and Pioneer Grant - Bara Swinson, Professional Development Strategist

Bara Swinson, Professional Development Strategist provided an overview of the central goals of her position, inclusive of: state certification requirements for library professionals, promotion of learning amongst staff, creating

a culture of learning and agility at the speed of change. Bara provided a further overview of the ways staff have learned and adapted to changing operational needs to provide services during the pandemic, such as learning Zoom, remote phone application, new scheduling software for patron curbside appointments, virtual programming, COVID health and safety, etc. Staff have training opportunities through Niche Academy and Ryan Dowd (an expert on Libraries and Homelessness). Mental health for our community and staff is a focus going forward. Trauma informed management was recently introduced to the library's leadership team.

Pioneer Grants

The Library, with funding from the Friends of the Library, seeks applications from staff each year for this grant. Innovative projects must benefit the public/patrons. The 2020 Pioneer Grant recipients presented an overview of their projects.

MCPL: A Dyslexia-Friendly Library: -Kim Baker, Community Librarian and Bethany Turrentine, VITAL Coordinator
Kim provided an overview of the need for this program. The national estimate is ten to twenty percent of adults and twenty percent of children have dyslexia. Dyslexia affects the way an individual processes language and is different for each individual. This project meets the Library's goals of equity of access and being a welcoming space. Kim participated in a training program to learn more about dyslexia and how to provide welcoming spaces, programs and content. Bethany and Kim developed a training plan for MCPL and it is available to all staff. Becoming a dyslexia-friendly library is a strategic action for 2021.

Adventure Backpacks: - Edwin Fallwell, Senior Information Assistant and Jen Hoffman, Community Engagement Librarian

Adventure Backpacks were created to assist patrons in discovering the outdoors of our regions. This is part of the *Library of Things* collection. Each kit contains guide books, simple tools, compass, binoculars, maps, and a voucher park pass to any Indiana State Park through partnership with the Department of Natural Resources (DNR). There has been a positive response from the community and these have been a welcome activity during the pandemic. A related program was also created - the *Winter Hiking Club*, which meets virtually on Zoom with the public. In 2021 the DNR will continue the park pass voucher in partnership with the library.

Public Comment

N/A

Adjournment

Board members Fred Risinger moved to adjourn the meeting, Christine Harrison seconded at 7:08 PM.

Financial Report Comments

Reports as of 2-28-2021

Board Meeting Date 3/17/2021

Monthly Budget Report:

The following table compares the actual percentage of the budget used so far in the major expense categories this year compared to the guideline which is 16.7% after two months.

Spending	% Spending		Previous Year
	Guideline	Actual % Spending	
	February 28, 2021		
Wages and Benefits	16.7%	13.7%	17.8%
Supplies	16.7%	-5.5%	7.9%
Other Services & Charges	16.7%	19.5%	16.2%
Capital Outlay	16.7%	8.8%	14.6%
Total Operating Expenditures	16.7%	14.1%	16.9%
Total Operating Spending		1,382,083	1,604,385

There is a negative amount on the COVID supplies line (23400) in the detail report because we received reimbursement in January for spending in the previous year. The supplies category in total is a negative so far this year. Also – March health insurance premiums which run about \$50,000 per month were paid in February. There is a negative amount on the computer services line because we received a state technology grant to offset internet service fees – grant was about \$20,000. All these factors result in about \$220,000 less operating cost through February 2021 compared to last year.

The following table is a look at revenue so far this year.

Revenue	2021	Year to Date		Previous Year
February 28, 2021	Budget	Actual		
Property Tax Receipts	7,170,879			-
Local Income Tax	2,250,000	458,345		418,016
Investment Income	30,000	442		25,109
Lost and Damage Fees	40,000	2,248		7,431
Other Revenue	29,000	1,799		5,668
	9,519,879	462,834		456,224

The report below shows the Library's cash balances at the end of the month and how the cash is allocated to the Operating, Rainy Day, LIRF and the rest of the accounting funds.

MCPL Cash and Fund Balances		As of 2/28/2021				
	Bank Name -->	Old National	German American	First Financial Checking	First Financial Money Market	
		06300	06400	06600	06610	
	Fund Name					
01	Operating	552,717.38	24,732.35	57,998.34	(628,327.99)	1,098,314.68
02	Jail	-				
03	Clearing	-				
04	gift	10,504.53			10,504.53	
05	plac	30.65		65.00	(34.35)	
07	LIRF	2,092,072.93			342,884.37	1,749,188.56
08	debt	165,097.09			165,097.09	
09	rainy day	4,987,570.19			148,165.00	4,839,405.19
16	gift restricted	10,756.79			10,756.79	
19	gift fdn	166,772.65			166,772.65	
20	special rev	973,241.84			93,241.84	880,000.00
35	branch bond	(8,598.00)			(8,598.00)	
30	bond 2019	551,501.02			(23,498.98)	575,000.00
		9,501,667.07	24,732.35	58,063.34	276,962.95	9,141,908.43

This Funds Ledger Report shows spending, revenue, and ending balance for each fund

MCPL Funds Ledger Report					
2/28/2021		Beg	Rev	Exp	2/28/2021
		1/1/2021			
	Fund Name				
01	Operating	2,600,965.81	462,834.32	1,382,082.75	1,681,717.38
	Operating - Rainy Day Transfer			1,129,000.00	(1,129,000.00)
02	Jail	-			-
03	COVID Clearing	-			-
04	gift	10,504.53			10,504.53
05	plac	420.65	65.00	455.00	30.65
07	LIRF	2,092,072.93			2,092,072.93
08	debt	165,097.09			165,097.09
09	rainy day	3,858,570.19	1,129,000.00		4,987,570.19
13	Petty Cash	185.00			185.00
14	Change	630.00			630.00
16	gift restricted	27,775.31	11,000.00	28,018.52	10,756.79
19	gift fdn	171,220.44	760.00	5,207.79	166,772.65
20	special rev	944,470.51	112,823.50	84,052.17	973,241.84
30	bond 2019	792,731.19		241,230.17	551,501.02
35	branch bond	(8,598.00)			(8,598.00)
		10,656,045.65	1,716,482.82	2,870,046.40	9,502,482.07

The next page shows bond spending by project with the remaining unspent balance.

Bond Spending Report		Issue cost	Available Bal			
2019-2021 Gen Obligation bond - \$2,000,000		81,635.78	1,918,364.22			
2/28/2021						
Projected Spending	2019	2020	2021	TOTAL Projection	Total Spent	Balance
equipment/IT	533,150.00	193,750.00	148,900.00	875,800.00	513,640.29	362,159.71
Facility/Long term maintenanc	322,000.00	113,700.00	56,000.00	491,700.00	458,469.38	33,230.62
Branch	257,500.00	275,000.00		532,500.00	393,453.53	139,046.47
Issuance costs	81,635.78			100,000.00	82,935.78	17,064.22
TOTAL	1,112,650.00	582,450.00	204,900.00	2,000,000.00	1,448,498.98	551,501.02
Bond Spending by project	2019	2020	2021			
Issuance cost - accounting	38,685.78	750.00	(250.00)	39,185.78		
Issuance cost - legal	42,950.00	800.00		43,750.00		
IT Equipment & Software	238,148.09	185,927.61	17,406.75	441,482.45		
Other Equipment	33,663.32	37,625.00	(29,879.08)	41,409.24		
CATS Equip	18,656.95	1,102.93		19,759.88		
Branch - Architect & legal-land	17,593.94	121,907.09	253,952.50	393,453.53		
LT facility expenses	30,508.65	120,930.44		151,439.09		
Carpet Project	70,427.49	195,193.56		265,621.05		
Outreach Van		48,232.50		48,232.50		
Teens - level up equip	4,165.46			4,165.46		
Bond spending so far	494,799.68	712,469.13	241,230.17	1,448,498.98		
Bond Balance Remaining	551,501.02					

MONROE COUNTY PUBLIC LIBRARY
MONTHLY SUMMARY OF BUDGET CATEGORIES
AS OF FEBRUARY 28, 2021
12 MONTHS = 100%

	2021 FEBRUARY	2020 FEBRUARY	2021 Y-T-D ACTUAL	2021 BUDGET	2020 Y-T-D ACTUAL	2021 Y-T-D BUDGET REMAINING	2021 % OF BUDGET USED	2021 % OF BUDGET REMAINING
PERSONNEL SERVICES								
SALARIES	333,960.31	362,706.90	666,966.58	4,939,464.00	901,712.43	4,272,497.42	13.5%	86.5%
EMPLOYEE BENEFITS	95,305.66	112,800.15	254,096.06	1,703,739.00	256,779.34	1,449,642.94	14.9%	85.1%
OTHER WAGES	0.00	0.00	0.00	77,000.00	1,042.54	77,000.00	0.0%	100.0%
TOTAL PERSONNEL SERVICES	<u>429,265.97</u>	<u>475,507.05</u>	<u>921,062.64</u>	<u>6,720,203.00</u>	<u>1,159,534.31</u>	<u>5,799,140.36</u>	<u>13.7%</u>	<u>86.3%</u>
SUPPLIES								
OFFICE SUPPLIES	535.94	3,768.35	6,694.55	51,200.00	7,813.86	44,505.45	13.1%	86.9%
OPERATING SUPPLIES	2,753.04	5,103.68	3,974.80	119,500.00	6,830.65	115,525.20	3.3%	96.7%
REPAIR & MAINT. SUPPLIES	2,126.74	1,789.83	-22,570.07	47,500.00	2,251.83	70,070.07	-47.5%	147.5%
TOTAL SUPPLIES	<u>5,415.72</u>	<u>10,661.86</u>	<u>-11,900.72</u>	<u>218,200.00</u>	<u>16,896.34</u>	<u>230,100.72</u>	<u>-5.5%</u>	<u>105.5%</u>
OTHER SERVICES & CHARGES								
PROFESSIONAL SERVICES	22,931.54	33,487.95	41,269.98	558,600.00	57,562.87	517,330.02	7.4%	92.6%
COMMUNICATION & TRANSPORTATION	4,936.12	3,357.19	6,621.77	100,000.00	11,028.49	93,378.23	6.6%	93.4%
PRINTING & ADVERTISING	766.88	1,958.50	1,503.12	61,000.00	2,408.50	59,496.88	2.5%	97.5%
INSURANCE	85,744.00	63,900.00	85,744.00	110,800.00	82,778.00	25,056.00	77.4%	22.6%
UTILITIES	26,143.75	27,202.81	54,256.50	436,000.00	47,472.47	381,743.50	12.4%	87.6%
REPAIR & MAINTENANCE	1,308.13	8,350.92	2,827.11	85,500.00	8,363.88	82,672.89	3.3%	96.7%
RENTALS	183.96	-4.74	433.56	52,900.00	-70.69	52,466.44	0.8%	99.2%
ELECTRONIC SERVICES	23,257.80	14,992.03	199,161.83	602,047.00	48,464.90	402,885.17	33.1%	66.9%
OTHER CHARGES	0.00	3,574.00	5,163.98	27,800.00	8,512.85	22,636.02	18.6%	81.4%
TOTAL OTHER SERVICES & CHARGES	<u>165,272.18</u>	<u>156,818.66</u>	<u>396,981.85</u>	<u>2,034,647.00</u>	<u>266,521.27</u>	<u>1,637,665.15</u>	<u>19.5%</u>	<u>80.5%</u>
CAPITAL OUTLAY								
FURNITURE & EQUIPMENT	491.57	55.00	1,201.57	20,000.00	4,169.81	18,798.43	6.0%	94.0%
OTHER CAPITAL OUTLAY	21,379.62	68,466.18	74,737.41	840,953.00	157,263.77	766,215.59	8.9%	91.1%
TOTAL CAPITAL OUTLAY	<u>21,871.19</u>	<u>68,521.18</u>	<u>75,938.98</u>	<u>860,953.00</u>	<u>161,433.58</u>	<u>785,014.02</u>	<u>8.8%</u>	<u>91.2%</u>
TOTAL OPERATING EXPENDITURES	<u>621,825.06</u>	<u>711,508.75</u>	<u>1,382,082.75</u>	<u>9,834,003.00</u>	<u>1,604,385.50</u>	<u>8,451,920.25</u>	<u>14.1%</u>	<u>85.9%</u>
TRANSFER TO RAINY DAY	0.00		1,091,000.00					
TOTAL OPERATING EXP. AFTER TRANSFER	<u>621,825.06</u>		<u>2,473,082.75</u>	2020 BUDGET	9,070,993.31			
				% USED IN 2020	17.7%			

MONROE COUNTY PUBLIC LIBRARY
MONTHLY BUDGET REPORT
AS OF FEBRUARY 28, 2021

	2021 FEBRUARY	2020 FEBRUARY	2021 Y-T-D ACTUAL	2021 BUDGET	2020 Y-T-D ACTUAL	2021 Y-T-D BUDGET REMAINING	2021 % OF BUDGET USED	2021 % OF BUDGET REMAINING
PERSONNEL SERVICES (1000'S)								
SALARIES								
1120 ADMINISTRATION/DIRECTORS	15,507.26	15,859.43	31,014.51	211,843.00	39,648.58	180,828.49	14.6%	85.4%
1130 MANAGERS/ASST. MANAGERS	81,225.98	86,452.91	164,822.12	1,144,406.00	214,813.53	979,583.88	14.4%	85.6%
1140 LIBRARIANS, EXPERTS	74,524.38	84,359.07	148,968.54	1,129,840.00	210,673.10	980,871.46	13.2%	86.8%
1150 SPECIALISTS	20,840.89	18,837.98	41,689.48	271,786.00	47,026.93	230,096.52	15.3%	84.7%
1160 ASSISTANTS/PARAPROFESSIONALS	66,850.94	65,646.47	133,673.14	894,790.00	164,075.68	761,116.86	14.9%	85.1%
1170 TECH/OPERATORS/SECRETARIES	2,541.00	5,404.43	5,081.99	73,125.00	13,504.44	68,043.01	6.9%	93.1%
1190 BUILDING SERVICES/MAINTENANCE	11,210.77	15,916.44	22,317.24	217,835.00	40,149.57	195,517.76	10.2%	89.8%
1200 BUILDING SERVICES/SECURITY	12,033.92	10,446.19	24,067.84	140,370.00	25,959.79	116,302.16	17.1%	82.9%
1280 PRODUCTION ASSISTANTS	1,616.07	1,564.96	3,188.99	20,397.00	3,805.96	17,208.01	15.6%	84.4%
1290 INFORMATION ASST/MATERIAL/SUPPORT	27,829.15	34,420.35	54,960.31	447,499.00	84,184.01	392,538.69	12.3%	87.7%
1300 SUPPORT/MATERIAL HANDLERS	19,779.95	23,798.67	37,182.42	387,573.00	57,870.84	350,390.58	9.6%	90.4%
TOTAL SALARIES	333,960.31	362,706.90	666,966.58	4,939,464.00	901,712.43	4,272,497.42	13.5%	86.5%
EMPLOYEE BENEFITS								
1210 EMPLOYER CONTRIBUTION/FICA	19,790.75	21,486.34	39,349.97	306,247.00	53,393.39	266,897.03	12.8%	87.2%
1220 UNEMPLOYMENT COMPENSATION	48.76		48.76	20,000.00		19,951.24	0.2%	99.8%
1230 EMPLOYER CONTRIBUTION/PERF	15,277.33	32,187.99	45,667.08	437,358.00	80,093.18	391,690.92	10.4%	89.6%
1235 EMPLOYEE/PERF	4,079.18	8,621.74	12,193.50	117,149.00	22,093.45	104,955.50	10.4%	89.6%
1240 EMPLOYER CONT/INSURANCE	67,648.49	66,051.26	183,571.00	751,363.00	140,473.53	567,792.00	24.4%	75.6%
1242 EMPLOYER INS-W/H	-16,189.43	-20,572.29	-35,986.54		-51,761.39	35,986.54	#DIV/0!	#DIV/0!
1250 EMPLOYER CONT/MEDICARE	4,650.58	5,025.11	9,252.29	71,622.00	12,487.18	62,369.71	12.9%	87.1%
TOTAL EMPLOYEE BENEFITS	95,305.66	112,800.15	254,096.06	1,703,739.00	256,779.34	1,449,642.94	14.9%	85.1%
OTHER WAGES								
1310 WORKSTUDY				7,000.00		7,000.00	0.0%	100.0%
1350 WAGE CONTINGENCY				60,000.00		60,000.00	0.0%	100.0%
1180 TEMPORARY STAFF				10,000.00	1,042.54	10,000.00	0.0%	100.0%
TOTAL OTHER WAGES	0.00	0.00	0.00	77,000.00	1,042.54	77,000.00	0.0%	100.0%
TOTAL PERSONNEL SERVICES	429,265.97	475,507.05	921,062.64	6,720,203.00	1,159,534.31	5,799,140.36	13.7%	86.3%
SUPPLIES (2000'S)								
OFFICE SUPPLIES								
2110 OFFICIAL RECORDS				1,200.00		1,200.00	0.0%	100.0%
2120 STATIONERY & PRINTING		100.38		500.00	148.30	500.00	0.0%	100.0%
2130 OFFICE SUPPLIES	258.43		429.33	16,000.00	2,041.24	15,570.67	2.7%	97.3%
2135 GENERAL SUPPLIES	164.14	173.12	164.14	4,000.00	511.88	3,835.86	4.1%	95.9%

MONROE COUNTY PUBLIC LIBRARY
MONTHLY BUDGET REPORT
AS OF FEBRUARY 28, 2021

	2021 FEBRUARY	2020 FEBRUARY	2021 Y-T-D ACTUAL	2021 BUDGET	2020 Y-T-D ACTUAL	2021 Y-T-D BUDGET REMAINING	2021 % OF BUDGET USED	2021 % OF BUDGET REMAINING
2140 DUPLICATING	113.37	3,494.85	6,101.08	29,500.00	4,883.44	23,398.92	20.7%	79.3%
2150 PROMOTIONAL MATERIALS						0.00	#DIV/0!	#DIV/0!
2160 PUBLIC USE SUPPLIES					229.00	0.00	#DIV/0!	#DIV/0!
TOTAL OFFICE SUPPLIES	535.94	3,768.35	6,694.55	51,200.00	7,813.86	44,505.45	13.1%	86.9%
OPERATING SUPPLIES								
2210 CLEANING SUPPLIES	875.69	3,652.62	1,929.10	42,000.00	3,764.97	40,070.90	4.6%	95.4%
2220 FUEL, OIL, & LUBRICANTS	391.02	515.99	391.02	13,000.00	1,052.21	12,608.98	3.0%	97.0%
2230 CATALOGING SUPPLIES-BOOKS		643.07	168.35	12,000.00	643.07	11,831.65	1.4%	98.6%
2240 A/V SUPPLIES-CATALOGING	94.44		94.44	3,500.00		3,405.56	2.7%	97.3%
2250 CIRCULATION SUPPLIES	246.79		246.79	35,000.00	1,078.40	34,753.21	0.7%	99.3%
2260 LIGHT BULBS	292.00	292.00	292.00	10,000.00	292.00	9,708.00	2.9%	97.1%
2280 UNIFORMS	853.10		853.10	2,000.00		1,146.90	42.7%	57.3%
2290 DISPLAY/EXHIBIT SUPPLIES				2,000.00		2,000.00	0.0%	100.0%
TOTAL OPERATING SUPPLIES	2,753.04	5,103.68	3,974.80	119,500.00	6,830.65	115,525.20	3.3%	96.7%
REPAIR & MAINTENANCE SUPPLIES								
2300 IT SUPPLIES	416.87	1,339.85	455.36	16,000.00	1,697.40	15,544.64	2.8%	97.2%
2310 BUILDING MATERIALS & SUPPLIES	686.08	449.98	1,586.73	30,000.00	554.43	28,413.27	5.3%	94.7%
2320 PAINT & PAINTING SUPPLIES	114.72		261.09	1,500.00		1,238.91	17.4%	82.6%
2340 COVID 19 SUPPLIES	909.07		-24,873.25			24,873.25	#DIV/0!	#DIV/0!
TOTAL REPAIR & MAINTENANCE SUPPLIES	2,126.74	1,789.83	-22,570.07	47,500.00	2,251.83	70,070.07	-47.5%	147.5%
TOTAL SUPPLIES	5,415.72	10,661.86	-11,900.72	218,200.00	16,896.34	230,100.72	-5.5%	105.5%
OTHER SERVICES/CHARGES (3000'S)								
PROFESSIONAL SERVICES								
3004 MISC. UNAPPROPRIATED		0.50			1.50	0.00	#DIV/0!	#DIV/0!
3110 CONSULTING SERVICES		650.00		11,000.00	650.00	11,000.00	0.0%	100.0%
3120 ENGINEERING/ARCHITECTURAL				7,000.00		7,000.00	0.0%	100.0%
3130 LEGAL SERVICES	5,035.00	1,600.00	5,684.00	21,000.00	3,090.24	15,316.00	27.1%	72.9%
3140 BUILDING SERVICES	2,738.66	1,989.40	3,908.41	55,000.00	4,016.31	51,091.59	7.1%	92.9%
3150 MAINTENANCE CONTRACTS	8,400.93	24,772.27	18,159.70	244,600.00	32,336.26	226,440.30	7.4%	92.6%
3160 COMPUTER SERVICES (OCLC)	5,961.06	3,547.80	-5,208.53	94,000.00	3,547.80	99,208.53	-5.5%	105.5%
3165 DIGITIZATION SERVICES	0.00	927.98	6,230.34	25,000.00	13,920.76	18,769.66	24.9%	75.1%
3170 ADMIN/ACCOUNTING SERVICES	795.89		12,496.06	101,000.00		88,503.94	12.4%	87.6%
TOTAL PROFESSIONAL SERVICES	22,931.54	33,487.95	41,269.98	558,600.00	57,562.87	517,330.02	7.4%	92.6%
COMMUNICATION & TRANSPORTATION								
3210 TELEPHONE	3,453.42	1,293.25	3,954.60	35,000.00	5,512.18	31,045.40	11.3%	88.7%
3215 CABLE TV	16.63	15.56	36.26		62.75	-36.26	#DIV/0!	#DIV/0!
3220 POSTAGE	1,466.07	1,675.82	2,630.91	30,000.00	3,029.90	27,369.09	8.8%	101.2%
3230 TRAVEL EXPENSE						0.00	#DIV/0!	#DIV/0!

MONROE COUNTY PUBLIC LIBRARY
MONTHLY BUDGET REPORT
AS OF FEBRUARY 28, 2021

	2021 FEBRUARY	2020 FEBRUARY	2021 Y-T-D ACTUAL	2021 BUDGET	2020 Y-T-D ACTUAL	2021 Y-T-D BUDGET REMAINING	2021 % OF BUDGET USED	2021 % OF BUDGET REMAINING
3240 PROFESSIONAL MTG.		372.56		35,000.00	2,423.66	35,000.00	0.0%	100.0%
3250 CONTINUING ED.						0.00	#DIV/0!	#DIV/0!
3260 FREIGHT & DELIVERY						0.00	#DIV/0!	#DIV/0!
TOTAL COMMUNICATION & TRANSPORTATION	4,936.12	3,357.19	6,621.77	100,000.00	11,028.49	93,378.23	6.6%	93.4%
PRINTING & ADVERTISING								
3310 ADVERTISING & PUBLICATION	727.93	1,050.00	1,464.17	18,000.00	1,500.00	16,535.83	8.1%	91.9%
3320 PRINTING	38.95	908.50	38.95	43,000.00	908.50	42,961.05	0.1%	99.9%
TOTAL PRINTING & ADVERTISING	766.88	1,958.50	1,503.12	61,000.00	2,408.50	59,496.88	2.5%	97.5%
INSURANCE								
3410 OFFICIAL BOND				800.00	654.00	800.00	0.0%	100.0%
3420 OTHER INSURANCE	85,744.00	63,900.00	85,744.00	110,000.00	82,124.00	24,256.00	77.9%	22.1%
TOTAL INSURANCE	85,744.00	63,900.00	85,744.00	110,800.00	82,778.00	25,056.00	77.4%	22.6%
UTILITIES								
3510 GAS	79.60	208.72	173.79	6,000.00	406.38	5,826.21	2.9%	97.1%
3520 ELECTRICITY	25,431.55	26,026.62	52,768.36	392,000.00	44,805.13	339,231.64	13.5%	86.5%
3530 WATER	632.60	967.47	1,314.35	38,000.00	2,260.96	36,685.65	3.5%	96.5%
TOTAL UTILITIES	26,143.75	27,202.81	54,256.50	436,000.00	47,472.47	381,743.50	12.4%	87.6%
REPAIR & MAINTENANCE								
3610 BUILDING REPAIR		8,025.24		38,000.00	8,025.24	38,000.00	0.0%	100.0%
3630 OTHER EQUIP/FURNITURE REPAIRS	224.99		224.99	16,000.00		15,775.01	1.4%	98.6%
3640 VEHICLE REPAIR & MAINTENANCE	1,083.14	325.68	2,602.12	30,000.00	338.64	27,397.88	8.7%	91.3%
3650 MATERIAL BINDING/REPAIR SERV.				1,500.00		1,500.00	0.0%	100.0%
TOTAL REPAIR & MAINTENANCE	1,308.13	8,350.92	2,827.11	85,500.00	8,363.88	82,672.89	3.3%	96.7%
RENTALS								
3710 REAL ESTATE RENTAL/PARKING	183.96	-4.74	433.56	52,900.00	-70.69	52,466.44	0.8%	99.2%
3720 EQUIPMENT RENTAL						0.00	#DIV/0!	#DIV/0!
3730 EVENTS-BOOTH & EQUIP. RENTAL						0.00	#DIV/0!	#DIV/0!
TOTAL RENTALS	183.96	-4.74	433.56	52,900.00	-70.69	52,466.44	0.8%	99.2%
ELECTRONIC SERVICES								
38450 DATABASES SERVICES	-1,000.00	4,200.00	13,029.88	259,047.00	14,051.00	246,017.12	5.0%	95.0%
38460 E-BOOKS SERVICES	24,257.80	10,792.03	186,131.95	343,000.00	34,413.90	156,868.05	54.3%	45.7%
TOTAL ELECTRONIC SERVICES	23,257.80	14,992.03	199,161.83	602,047.00	48,464.90	402,885.17	33.1%	66.9%
OTHER CHARGES								

MONROE COUNTY PUBLIC LIBRARY
MONTHLY BUDGET REPORT
AS OF FEBRUARY 28, 2021

	2021 FEBRUARY	2020 FEBRUARY	2021 Y-T-D ACTUAL	2021 BUDGET	2020 Y-T-D ACTUAL	2021 Y-T-D BUDGET REMAINING	2021 % OF BUDGET USED	2021 % OF BUDGET REMAINING
3910 DUES/INSTITUTIONAL			5,163.98	7,800.00	4,938.85	2,636.02	66.2%	33.8%
3940 TRANSFER TO LIRF						0.00	#DIV/0!	#DIV/0!
3944 TRANSFER TO CATS SUBSIDY				15,000.00		15,000.00	0.0%	100.0%
3945 TRANSFER TO ANOTHER FUND		3,574.00			3,574.00	0.00	#DIV/0!	#DIV/0!
3950 EDUCATIONAL SERV/LICENSING				5,000.00		5,000.00	0.0%	100.0%
TOTAL OTHER CHARGES	0.00	3,574.00	5,163.98	27,800.00	8,512.85	22,636.02	18.6%	81.4%
TOTAL OTHER SERVICES/CHARGES	165,272.18	156,818.66	396,981.85	2,034,647.00	266,521.27	1,637,665.15	19.5%	80.5%
CAPITAL OUTLAY (4000'S)								
FURNITURE & EQUIPMENT								
4410 FURNITURE				10,000.00	3,680.00	10,000.00	0.0%	100.0%
4430 OTHER EQUIPMENT				5,000.00		5,000.00	0.0%	100.0%
4440 LAND & BUILDINGS						0.00	#DIV/0!	#DIV/0!
4445 BUILDING RENOVATIONS				5,000.00		5,000.00	0.0%	100.0%
4460 IT EQUIPMENT		0.00	710.00		434.81	-710.00	#DIV/0!	#DIV/0!
4465 IT SOFTWARE	130.00	55.00	130.00		55.00	-130.00	#DIV/0!	#DIV/0!
4470 EQUIPMENT - CATS	361.57		361.57			-361.57	#DIV/0!	#DIV/0!
4475 SOFTWARE - CATS						0.00	#DIV/0!	#DIV/0!
TOTAL FURNITURE & EQUIPMENT	491.57	55.00	1,201.57	20,000.00	4,169.81	18,798.43	6.0%	94.0%
OTHER CAPITAL OUTLAY								
4510 BOOKS	16,813.32	41,388.64	61,636.75	555,753.00	94,087.30	494,116.25	11.1%	88.9%
4520 PERIODICALS & NEWSPAPERS	-729.47	400.71	162.47	30,000.00	1,110.93	29,837.53	0.5%	99.5%
4530 NONPRINT MATERIALS	5,295.77	26,676.83	12,938.19	255,200.00	62,065.54	242,261.81	5.1%	94.9%
TOTAL OTHER CAPITAL OUTLAY	21,379.62	68,466.18	74,737.41	840,953.00	157,263.77	766,215.59	8.9%	91.1%
TOTAL CAPITAL OUTLAY	21,871.19	68,521.18	75,938.98	860,953.00	161,433.58	785,014.02	8.8%	91.2%
TOTAL OPERATING EXPENDITURES	621,825.06	711,508.75	1,382,082.75	9,834,003.00	1,604,385.50	8,451,920.25	14.1%	85.9%
TRANSFER TO RAINY DAY			1,129,000.00					
TOTAL OPERATING EXP. AFTER TRANSFER	621,825.06	711,508.75	2,511,082.75		1,604,385.50			

MONROE COUNTY PUBLIC LIBRARY
Operating Budget Expenditure Report
Feb, 2021

Object	Object Descr	2021 Budget	Jan.	Feb.	2021 YTD Amt	2021 YTD Balance	2019 %YTD Budget
11200	ADMINISTRATION DIRE	\$211,842.51	\$15,507.25	\$15,507.26	\$31,014.51	\$180,828.00	14.64%
11300	MANAGERS/ASST. MAN	\$1,144,405.69	\$83,596.14	\$81,225.98	\$164,822.12	\$979,583.57	14.40%
11400	LIBRARIANS, EXPERTS	\$1,129,839.98	\$74,444.16	\$74,524.38	\$148,968.54	\$980,871.44	13.18%
11500	SPECIALISTS	\$271,785.80	\$20,848.59	\$20,840.89	\$41,689.48	\$230,096.32	15.34%
11600	ASSISTANTS/PARAPROF	\$894,790.00	\$66,822.20	\$66,850.94	\$133,673.14	\$761,116.86	14.94%
11700	TECH/OPERATORS/SEC	\$73,125.00	\$2,540.99	\$2,541.00	\$5,081.99	\$68,043.01	6.95%
11800	TEMPORAY STAFF	\$10,000.00	\$0.00	\$0.00	\$0.00	\$10,000.00	0.00%
11900	BUILDING SERVICES/M	\$217,834.50	\$11,106.47	\$11,210.77	\$22,317.24	\$195,517.26	10.25%
12000	BUILDING SERVICES/SE	\$140,370.10	\$12,033.92	\$12,033.92	\$24,067.84	\$116,302.26	17.15%
12100	FICA/EMPLOYER CONTR	\$306,246.77	\$19,559.22	\$19,790.75	\$39,349.97	\$266,896.80	12.85%
12200	UNEMPLOYMENT COMP	\$20,000.00	\$0.00	\$48.76	\$48.76	\$19,951.24	0.24%
12300	PERF/EMPLOYER CONT	\$437,357.88	\$30,389.75	\$15,277.33	\$45,667.08	\$391,690.80	10.44%
12350	PERF/EMPLOYEE CONT	\$117,149.36	\$8,114.32	\$4,079.18	\$12,193.50	\$104,955.86	10.41%
12400	INS/EMPLOYER CONTRI	\$751,362.73	\$115,922.51	\$67,648.49	\$183,571.00	\$567,791.73	24.43%
12420	EMPLOYEE INS W-H	\$0.00	-\$19,797.11	-\$16,189.43	-\$35,986.54	\$35,986.54	0.00%
12500	MEDICARE/EMPLOYER	\$71,622.22	\$4,601.71	\$4,650.58	\$9,252.29	\$62,369.93	12.92%
12800	PRODUCTION ASSISTA	\$20,397.00	\$1,572.92	\$1,616.07	\$3,188.99	\$17,208.01	15.63%
12900	INFORMATION ASST/M	\$447,499.00	\$27,131.16	\$27,829.15	\$54,960.31	\$392,538.69	12.28%
13000	SUPPORT/MATERIAL HA	\$387,574.20	\$17,402.47	\$19,779.95	\$37,182.42	\$350,391.78	9.59%
13100	WORK STUDY	\$7,000.00	\$0.00	\$0.00	\$0.00	\$7,000.00	0.00%
13500	STIPEND/RECLASSIFICA	\$60,000.00	\$0.00	\$0.00	\$0.00	\$60,000.00	0.00%
21100	OFFICIAL RECORDS	\$1,200.00	\$0.00	\$0.00	\$0.00	\$1,200.00	0.00%
21200	STATIONERY/BUS. CAR	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
21300	OFFICE SUPPLIES	\$16,000.00	\$170.90	\$258.43	\$429.33	\$15,570.67	2.68%
21350	GENERAL SUPPLIES	\$4,000.00	\$0.00	\$164.14	\$164.14	\$3,835.86	4.10%
21400	DUPLICATING	\$29,500.00	\$5,987.71	\$113.37	\$6,101.08	\$23,398.92	20.68%
22100	CLEANING SUPPLIES	\$42,000.00	\$1,053.41	\$875.69	\$1,929.10	\$40,070.90	4.59%
22200	FUEL/OIL/LUBRICANTS	\$13,000.00	\$0.00	\$391.02	\$391.02	\$12,608.98	3.01%
22300	CATALOGING SUPPLIES	\$12,000.00	\$168.35	\$0.00	\$168.35	\$11,831.65	1.40%
22400	A/V SUPPLIES/CATALOG	\$3,500.00	\$0.00	\$94.44	\$94.44	\$3,405.56	2.70%
22500	CIRCULATION SUPPLIE	\$35,000.00	\$0.00	\$246.79	\$246.79	\$34,753.21	0.71%
22600	LIGHT BULBS	\$10,000.00	\$0.00	\$292.00	\$292.00	\$9,708.00	2.92%
22800	UNIFORMS	\$2,000.00	\$0.00	\$853.10	\$853.10	\$1,146.90	42.66%
22900	DISPLAY/EXHIBITS SUP	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0.00%
23000	IT SUPPLIES	\$16,000.00	\$38.49	\$416.87	\$455.36	\$15,544.64	2.85%
23100	BUILDING MATERIAL S	\$30,000.00	\$900.65	\$686.08	\$1,586.73	\$28,413.27	5.29%
23200	PAINT/PAINTING SUPPL	\$1,500.00	\$146.37	\$114.72	\$261.09	\$1,238.91	17.41%
23400	COVID SUPPLIES	\$0.00	-\$25,782.32	\$909.07	-\$24,873.25	\$24,873.25	0.00%
31100	CONSULTING SERVICES	\$11,000.00	\$0.00	\$0.00	\$0.00	\$11,000.00	0.00%
31200	ENGINEERING/ARCHITE	\$7,000.00	\$0.00	\$0.00	\$0.00	\$7,000.00	0.00%
31300	LEGAL SERVICES	\$21,000.00	\$649.00	\$5,035.00	\$5,684.00	\$15,316.00	27.07%
31400	BUILDING SERVICES	\$55,000.00	\$1,169.75	\$2,738.66	\$3,908.41	\$51,091.59	7.11%
31500	MAINTENANCE CONTRA	\$244,600.00	\$9,758.77	\$8,400.93	\$18,159.70	\$226,440.30	7.42%

Object	Object Descr	2021 Budget	Jan.	Feb.	2021 YTD Amt	2021 YTD Balance	2019 %YTD Budget
31600	COMPUTER SERVICES	\$94,000.00	-\$11,169.59	\$5,961.06	-\$5,208.53	\$99,208.53	-5.54%
31650	DIGITIZATION SERVICE	\$25,000.00	\$6,230.34	\$0.00	\$6,230.34	\$18,769.66	24.92%
31700	ADMIN/ACCOUNTING S	\$101,000.00	\$11,700.17	\$795.89	\$12,496.06	\$88,503.94	12.37%
32100	TELEPHONE	\$35,000.00	\$501.18	\$3,453.42	\$3,954.60	\$31,045.40	11.30%
32150	CABLE TV SERVICE	\$0.00	\$19.63	\$16.63	\$36.26	-\$36.26	0.00%
32200	POSTAGE	\$30,000.00	\$1,164.84	\$1,466.07	\$2,630.91	\$27,369.09	8.77%
32400	PROFESSIONAL DEVELO	\$35,000.00	\$0.00	\$0.00	\$0.00	\$35,000.00	0.00%
33100	ADVERTISING/PUBLICA	\$18,000.00	\$736.24	\$727.93	\$1,464.17	\$16,535.83	8.13%
33200	PRINTING SERVICES	\$43,000.00	\$0.00	\$38.95	\$38.95	\$42,961.05	0.09%
34100	OFFICIAL BOND INS.	\$800.00	\$0.00	\$0.00	\$0.00	\$800.00	0.00%
34200	OTHER INSURANCE	\$110,000.00	\$0.00	\$85,744.00	\$85,744.00	\$24,256.00	77.95%
35100	GAS	\$6,000.00	\$94.19	\$79.60	\$173.79	\$5,826.21	2.90%
35200	ELECTRICITY	\$392,000.00	\$27,336.81	\$25,431.55	\$52,768.36	\$339,231.64	13.46%
35300	WATER	\$38,000.00	\$681.75	\$632.60	\$1,314.35	\$36,685.65	3.46%
36100	BUILDING REPAIRS	\$38,000.00	\$0.00	\$0.00	\$0.00	\$38,000.00	0.00%
36300	OTHER EQUIP/FURNITU	\$16,000.00	\$0.00	\$224.99	\$224.99	\$15,775.01	1.41%
36400	VEHICLE MAINTENANCE	\$30,000.00	\$1,518.98	\$1,083.14	\$2,602.12	\$27,397.88	8.67%
36500	MATERIALS BINDING/R	\$1,500.00	\$0.00	\$0.00	\$0.00	\$1,500.00	0.00%
37100	REAL ESTATE RENTAL/P	\$52,900.00	\$249.60	\$183.96	\$433.56	\$52,466.44	0.82%
38450	DATABASES	\$259,047.00	\$14,029.88	-\$1,000.00	\$13,029.88	\$246,017.12	5.03%
38460	E-BOOKS	\$343,000.00	\$161,874.15	\$24,257.80	\$186,131.95	\$156,868.05	54.27%
39100	DUES/INSTITUTIONAL	\$7,800.00	\$5,163.98	\$0.00	\$5,163.98	\$2,636.02	66.20%
39440	TRANSFER TO CATS SU	\$15,000.00	\$0.00	\$0.00	\$0.00	\$15,000.00	0.00%
39450	TRANSFER TO ANOTHE	\$0.00	\$1,129,000.00	\$0.00	\$1,129,000.00	-\$1,129,000.00	0.00%
39500	EDUCATIONAL/LICENSI	\$5,000.00	\$0.00	\$0.00	\$0.00	\$5,000.00	0.00%
44100	FURNITURE	\$10,000.00	\$0.00	\$0.00	\$0.00	\$10,000.00	0.00%
44300	OTHER EQUIPMENT	\$5,000.00	\$0.00	\$0.00	\$0.00	\$5,000.00	0.00%
44450	BUILDING RENOVATIO	\$5,000.00	\$0.00	\$0.00	\$0.00	\$5,000.00	0.00%
44600	IT EQUIPMENT	\$0.00	\$710.00	\$0.00	\$710.00	-\$710.00	0.00%
44650	IT SOFTWARE	\$0.00	\$0.00	\$130.00	\$130.00	-\$130.00	0.00%
44700	EQUIPMENT - CATS	\$0.00	\$0.00	\$361.57	\$361.57	-\$361.57	0.00%
45100	BOOKS	\$555,753.00	\$44,823.43	\$16,813.32	\$61,636.75	\$494,116.25	11.09%
45200	PERIODICALS/NEWSPA	\$30,000.00	\$891.94	-\$729.47	\$162.47	\$29,837.53	0.54%
45300	NONPRINT MATERIALS	\$255,200.00	\$7,642.42	\$5,295.77	\$12,938.19	\$242,261.81	5.07%
		\$9,834,002.74	\$889,257.69	\$621,825.06	\$2,511,082.75	\$7,322,919.99	25.53%

MONROE COUNTY PUBLIC LIBRARY

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LIRF Budget Expenditure Report

Page 1

Feb, 2021

Objec	Object Descr	2021 Budget	Jan.	Feb.	YTD Amount	2021 YTD Balance	2020 %YTD Budget
3610	BUILDING REPAIRS	\$114,000.00	\$0.00	\$0.00	\$0.00	\$114,000.00	0.00%
4410	FURNITURE	\$25,000.00	\$0.00	\$0.00	\$0.00	\$25,000.00	0.00%
4430	OTHER EQUIPMENT	\$125,000.00	\$0.00	\$0.00	\$0.00	\$125,000.00	0.00%
4445	BUILDING RENOVATIO	\$370,000.00	\$0.00	\$0.00	\$0.00	\$370,000.00	0.00%
		<u>\$634,000.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$634,000.00</u>	<u>0.00%</u>

MONROE COUNTY PUBLIC LIBRARY
Debt Service Budget Expenditures Report
Feb, 2021

Objec	Object Descr	2021 Budget	Jan.	Feb.	2021 YTD Amt	2021 YTD Balance	2019 %YTD Budget
3710	REAL ESTATE RE	\$700,810.00	\$0.00	\$0.00	\$0.00	\$700,810.00	0.00%
3920	INTEREST/TEMP	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
3925	PAYMENT ON BO	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
3945	TRANSFER TO A	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
		<u>\$700,810.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$0.00</u>	<u>\$700,810.00</u>	<u>0.00%</u>

MONROE COUNTY PUBLIC LIBRARY
Rainy Day Budget Expenditures Report
Feb 2021

03/04/21 1:26 PM

Page 1

Object	Object Descr	2021 Budget	Jan.	Feb.	2021 YTD Amt	2021 YTD Balance	2019 %YTD Budget
31100	CONSULTING SERVICES	\$20,000.00	\$0.00	\$0.00	\$0.00	\$20,000.00	0.00%
31200	ENGINEERING/ARCHITE	\$20,000.00	\$0.00	\$0.00	\$0.00	\$20,000.00	0.00%
31300	LEGAL SERVICES	\$20,000.00	\$0.00	\$0.00	\$0.00	\$20,000.00	0.00%
36100	BUILDING REPAIRS	\$25,000.00	\$0.00	\$0.00	\$0.00	\$25,000.00	0.00%
44450	BUILDING RENOVATION	\$514,000.00	\$0.00	\$0.00	\$0.00	\$514,000.00	0.00%
		\$599,000.00	\$0.00	\$0.00	\$0.00	\$599,000.00	0.00%

MONROE COUNTY PUBLIC LIBRARY
Special Revenue Budget Expenditure Report
Feb, 2021

03/04/21 1:28 PM

Page 1

Objec	Object Descr	2021 Budget	Jan.	Feb.	YTD Amount	2021 YTD Balance	2019 %YTD Budget
1130	MANAGERS/ASST. MANAG	\$181,420.16	\$14,036.90	\$14,339.80	\$28,376.70	\$153,043.46	15.64%
1140	LIBRARIANS, EXPERTS	\$46,702.50	\$3,592.49	\$3,592.48	\$7,184.97	\$39,517.53	15.38%
1210	FICA/EMPLOYER CONTRIB	\$27,594.70	\$2,096.46	\$2,109.78	\$4,206.24	\$23,388.46	15.24%
1230	PERF/EMPLOYER CONTRI	\$33,230.87	\$2,429.88	\$1,221.53	\$3,651.41	\$29,579.46	10.99%
1235	PERF/EMPLOYEE CONTRI	\$8,901.12	\$650.87	\$327.20	\$978.07	\$7,923.05	10.99%
1240	INS/EMPLOYER CONTRIB	\$51,666.83	\$7,264.15	\$4,009.06	\$11,273.21	\$40,393.62	21.82%
1250	MEDICARE/EMPLOYER CO	\$6,453.60	\$490.31	\$493.41	\$983.72	\$5,469.88	15.24%
1280	PRODUCTION ASSISTANT	\$169,591.50	\$9,852.45	\$9,883.95	\$19,736.40	\$149,855.10	11.64%
1290	INFORMATION ASST/MAT	\$47,361.60	\$3,646.87	\$3,702.49	\$7,349.36	\$40,012.24	15.52%
1310	WORK STUDY	\$100.00	\$0.00	\$0.00	\$0.00	\$100.00	0.00%
2120	STATIONERY/BUS. CARDS	\$100.00	\$0.00	\$0.00	\$0.00	\$100.00	0.00%
2130	OFFICE SUPPLIES	\$600.00	\$0.00	\$0.00	\$0.00	\$600.00	0.00%
2140	DUPLICATING	\$1,000.00	\$0.00	\$0.00	\$0.00	\$1,000.00	0.00%
2220	FUEL/OIL/LUBRICANTS	\$1,000.00	\$0.00	\$0.00	\$0.00	\$1,000.00	0.00%
2270	VIDEO TAPE/MEDIA STOR	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
2300	IT SUPPLIES	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0.00%
2350	AUDIO/VIDEO MATERIALS	\$1,000.00	\$0.00	\$0.00	\$0.00	\$1,000.00	0.00%
3110	CONSULTING SERVICES	\$7,000.00	\$0.00	\$0.00	\$0.00	\$7,000.00	0.00%
3130	LEGAL SERVICES	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
3150	MAINTENANCE CONTRAC	\$25,000.00	\$0.00	\$0.00	\$0.00	\$25,000.00	0.00%
3160	COMPUTER SERVICES	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
3170	ADMIN/ACCOUNTING SER	\$400.00	\$0.00	\$0.00	\$0.00	\$400.00	0.00%
3210	TELEPHONE	\$4,000.00	\$0.00	\$113.37	\$113.37	\$3,886.63	2.83%
3215	CABLE TV SERVICE	\$1,000.00	\$102.86	\$95.86	\$198.72	\$801.28	19.87%
3220	POSTAGE	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
3230	TRAVEL EXPENSE	\$500.00	\$0.00	\$0.00	\$0.00	\$500.00	0.00%
3240	PROFESSIONAL DEVELOP.	\$1,000.00	\$0.00	\$0.00	\$0.00	\$1,000.00	0.00%
3260	FREIGHT/DELIVERY	\$100.00	\$0.00	\$0.00	\$0.00	\$100.00	0.00%

Objec	Object Descr	2021 Budget	Jan.	Feb.	YTD Amount	2021 YTD Balance	2019 %YTD Budget
3630	OTHER EQUIP/FURNITUR	\$2,500.00	\$0.00	\$0.00	\$0.00	\$2,500.00	0.00%
3710	REAL ESTATE RENTAL/PA	\$1,500.00	\$0.00	\$0.00	\$0.00	\$1,500.00	0.00%
3910	DUES/INSTITUTIONAL	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0.00%
3950	EDUCATIONAL/LICENSING	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
3960	COMMUNITY NEWS SERVI	\$14,500.00	\$0.00	\$0.00	\$0.00	\$14,500.00	0.00%
4410	FURNITURE	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0.00%
4445	BUILDING RENOVATION	\$2,000.00	\$0.00	\$0.00	\$0.00	\$2,000.00	0.00%
4470	EQUIPMENT - CATS	\$50,000.00	\$0.00	\$0.00	\$0.00	\$50,000.00	0.00%
		\$694,222.88	\$44,163.24	\$39,888.93	\$84,052.17	\$610,170.71	12.11%

MONROE COUNTY PUBLIC LIBRARY
Gen. Obligation Bond Budget Expenditure 2019
Feb, 2021

03/04/21 1:33 PM

Page 1

Object	Object Descr	2021 Budget	Jan.	Feb.	YTD Amount	2021 YTD Balance	2019 %YTD Budget
23400	COVID SUPPLIES	\$0.00	-\$31,625.00	\$0.00	-\$31,625.00	\$31,625.00	0.00%
31200	ENGINEERING/ARCHI	\$0.00	\$0.00	\$115,992.00	\$115,992.00	\$115,992.00	0.00%
31500	MAINTENANCE CONT	\$0.00	\$650.00	\$0.00	\$650.00	-\$650.00	0.00%
31700	ADMIN/ACCOUNTING	\$0.00	\$0.00	-\$250.00	-\$250.00	\$250.00	0.00%
44300	OTHER EQUIPMENT	\$0.00	\$0.00	\$1,745.92	\$1,745.92	-\$1,745.92	0.00%
44400	LAND/BUILDINGS	\$0.00	\$0.00	\$137,960.50	\$137,960.50	\$137,960.50	0.00%
44600	IT EQUIPMENT	\$0.00	\$1,495.00	\$0.00	\$1,495.00	-\$1,495.00	0.00%
44650	IT SOFTWARE	\$0.00	\$0.00	\$15,261.75	\$15,261.75	-\$15,261.75	0.00%
		\$0.00	-\$29,480.00	\$270,710.17	\$241,230.17	\$241,230.17	0.00%

MONROE COUNTY PUBLIC LIBRARY

***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
FUND 001 OPERATING					
R 001-001-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-00400 LOCAL/COUNTY O	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-11500 STATE DISTRIBUT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-001-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-004-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-004-04200 MEETING ROOM F	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-004-21300 RENT INCOME	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-00100 PROPERTY TAX/A	\$6,617,218.00	\$0.00	\$0.00	\$6,617,218.00	0.00%
R 001-005-00200 INTANGIBLES TAX	\$20,874.00	\$0.00	\$0.00	\$20,874.00	0.00%
R 001-005-00300 LICENSE EXCISE	\$484,101.00	\$0.00	\$0.00	\$484,101.00	0.00%
R 001-005-00400 LOCAL/COUNTY O	\$2,250,000.00	\$458,344.66	\$458,344.66	\$1,791,655.34	20.37%
R 001-005-00500 COMMERCIAL VE	\$48,686.00	\$0.00	\$0.00	\$48,686.00	0.00%
R 001-005-00600 US FORESTRY FU	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-03700 BLGTN COPIERS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-04300 GARNISHMENT FE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-04500 PLAC DISTRIBUTI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-18000 COIN TELEPHONE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-18500 INTEREST FROM	\$30,000.00	\$210.38	\$441.66	\$29,558.34	1.47%
R 001-005-19000 TEMPORARY LOA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-19400 INVESTMENT INC	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-005-21300 RENT INCOME	\$4,000.00	\$0.00	\$1,800.00	\$2,200.00	45.00%
R 001-006-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-007-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-008-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-010-03700 BLGTN COPIERS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-010-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-010-17000 READER PRINTER	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-010-17500 OBITS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-011-53000 LSTA INKIND GRA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-012-03500 LOST/DAMAGED	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-012-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-012-03650 COLLECTION AGE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-012-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-012-04500 PLAC DISTRIBUTI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-00400 LOCAL/COUNTY O	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-03400 ELL COPIERS/PRI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-03500 LOST/DAMAGED	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-03700 BLGTN COPIERS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY

***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
R 001-013-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-04500 PLAC DISTRIBUTI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-10000 REALESTATE REC	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-11500 STATE DISTRIBUT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-17000 READER PRINTER	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-18000 COIN TELEPHONE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-19000 TEMPORARY LOA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-013-20000 CABLE ACCESS F	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-014-03400 ELL COPIERS/PRI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-014-03500 LOST/DAMAGED	\$0.00	\$40.97	\$72.95	-\$72.95	0.00%
R 001-014-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-014-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-015-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-20000 CABLE ACCESS F	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-20100 CABLE ACCESS F	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-20200 CABLE ACCESS F	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-016-21100 MCPL OPERATING	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-018-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-019-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-019-04400 E-RATE RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-03500 LOST/DAMAGED	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-03700 BLGTN COPIERS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-17000 READER PRINTER	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-024-17500 OBITS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-025-03500 LOST/DAMAGED	\$40,000.00	\$1,065.72	\$2,175.05	\$37,824.95	5.44%
R 001-025-03600 FINES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-025-03650 COLLECTION AGE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 001-025-03700 BLGTN COPIERS	\$12,500.00	\$0.00	\$0.00	\$12,500.00	0.00%
R 001-025-04100 PUBLIC LIBRARY	\$12,500.00	\$0.00	\$0.00	\$12,500.00	0.00%
R 001-025-17500 OBITS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 001 OPERATING	\$9,519,879.00	\$459,661.73	\$462,834.32	\$9,057,044.68	4.86%
FUND 002 JAIL					
R 002-013-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 002-015-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 002-018-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 002 JAIL	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 003 CLEARING					
R 003-005-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-03800 CONFERENCE/RE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-10000 REALESTATE REC	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-10100 YMCA RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY

***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
R 003-013-18100 PHONE REIMBUR	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-21500 ILL FINES/FEES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-30000 REIMBURSEMENT/	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-40000 INSURANCE/COBR	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-40100 FEMA/CLEARING	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-013-43000 INSURANCE/CLAI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-021-21150 MCPLF CC RECEI	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 003-021-21160 MCPLF RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 003 CLEARING	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 004 GIFT UNRESTRICTED					
R 004-001-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-001-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-001-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-001-42000 INTEREST/DIVIDE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-012-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-013-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-013-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-013-42000 INTEREST/DIVIDE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-014-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-024-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-025-03700 BLGTN COPIERS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 004-025-41000 UNRESTRICTED G	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 004 GIFT UNRESTRICTED	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 005 PLAC					
R 005-012-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 005-013-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 005-014-04100 PUBLIC LIBRARY	\$0.00	\$65.00	\$65.00	-\$65.00	0.00%
R 005-024-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 005-025-04100 PUBLIC LIBRARY	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 005 PLAC	\$0.00	\$65.00	\$65.00	-\$65.00	0.00%
FUND 006 RETIREES					
R 006-013-19500 RETIREES INSUR	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 006 RETIREES	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 007 LIRF					
R 007-001-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-001-21300 RENT INCOME	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-005-19000 TEMPORARY LOA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-013-07000 LIRF RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-014-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 007-016-07000 LIRF RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY
***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
FUND 007 LIRF	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 008 DEBT SERVICE					
R 008-005-00100 PROPERTY TAX/A	\$700,811.00	\$0.00	\$0.00	\$700,811.00	0.00%
R 008-005-00200 INTANGIBLES TAX	\$2,129.00	\$0.00	\$0.00	\$2,129.00	0.00%
R 008-005-00300 LICENSE EXCISE	\$34,174.00	\$0.00	\$0.00	\$34,174.00	0.00%
R 008-005-00500 COMMERCIAL VE	\$5,007.00	\$0.00	\$0.00	\$5,007.00	0.00%
R 008-005-00600 US FORESTRY FU	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-005-19000 TEMPORARY LOA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-005-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-016-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 008-017-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 008 DEBT SERVICE	\$742,121.00	\$0.00	\$0.00	\$742,121.00	0.00%
FUND 009 RAINY DAY					
R 009-005-00400 LOCAL/COUNTY O	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 009-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 009-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$1,129,000.00	-\$1,129,000.00	0.00%
R 009-013-00400 LOCAL/COUNTY O	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 009-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 009-013-21100 MCPL OPERATING	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 009 RAINY DAY	\$0.00	\$0.00	\$1,129,000.00	-\$1,129,000.00	0.00%
FUND 010 PAYROLL					
R 010-013-22000 GROSS PAYROLL	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 010 PAYROLL	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 011 INVESTMENT-GIFT					
R 011-001-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 011-013-18900 INVESTMENT INTE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 011 INVESTMENT-GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 012 TEEN COUNCIL					
R 012-013-11000 UNUSED AWARD	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 012-013-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 012-013-31000 CITY OF BLOOMIN	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 012 TEEN COUNCIL	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 013 PETTY CASH					
R 013-013-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY
***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
FUND 013 PETTY CASH	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 014 CHANGE					
R 014-013-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 014 CHANGE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 015 LSTA					
R 015-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 015-013-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 015 LSTA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 016 GIFT-RESTRICED					
R 016-001-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-001-21000 RECEIPTS	\$0.00	\$10,500.00	\$10,500.00	-\$10,500.00	0.00%
R 016-001-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-002-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-004-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-005-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-008-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-009-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-010-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-010-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-010-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-011-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-011-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-012-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-013-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-013-51000 INTEREST/DIVIDE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-014-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-014-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-014-51000 INTEREST/DIVIDE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-015-50000 RESTRICED GIFT	\$0.00	\$0.00	\$500.00	-\$500.00	0.00%
R 016-016-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-016-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-017-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-019-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-021-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-021-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-025-30000 REIMBURSEMENT/	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 016-026-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 016 GIFT-RESTRICED	\$0.00	\$10,500.00	\$11,000.00	-\$11,000.00	0.00%
FUND 017 LEVY EXCESS					
R 017-013-11600 EXCESS LEVY - O	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 017-013-11700 EXCESS LEVY - D	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 017-013-11800 EXCESS LEVY-PT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 017-013-11900 EXCESS LEVY/HO	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY

***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
R 017-013-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 017 LEVY EXCESS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 018 IN KIND CONTRIBUTION/BLDG CORP					
R 018-003-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-008-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-010-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-011-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-011-53000 LSTA INKIND GRA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-012-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-015-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-016-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 018-019-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 018 IN KIND CONTRIBUTION/BLDG	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 019 GIFT-FOUNDATION					
R 019-001-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-001-21160 MCPLF RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-001-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-005-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-015-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-016-50000 RESTRICED GIFT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 019-025-50000 RESTRICED GIFT	\$0.00	\$760.00	\$760.00	-\$760.00	0.00%
FUND 019 GIFT-FOUNDATION	\$0.00	\$760.00	\$760.00	-\$760.00	0.00%
FUND 020 SPECIAL REVENUE					
R 020-016-03900 MISCELLANEOUS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 020-016-20000 CABLE ACCESS F	\$451,294.28	\$112,823.50	\$112,823.50	\$338,470.78	25.00%
R 020-016-20100 CABLE ACCESS F	\$295,001.41	\$0.00	\$0.00	\$295,001.41	0.00%
R 020-016-20200 CABLE ACCESS F	\$17,870.39	\$0.00	\$0.00	\$17,870.39	0.00%
R 020-016-20300 CONTRACT-BLOO	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 020-016-21100 MCPL OPERATING	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 020 SPECIAL REVENUE	\$764,166.08	\$112,823.50	\$112,823.50	\$651,342.58	14.76%
FUND 021 CAPITAL PROJECTS					
R 021-003-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-003-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-003-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-003-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-18500 INTEREST FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-005-19000 TEMPORARY LOA	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-014-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-014-00200 INTANGIBLES TAX	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-014-00300 LICENSE EXCISE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%

MONROE COUNTY PUBLIC LIBRARY
***Revenue Guideline**

Current Period: February 2021

Account Descr	2021 YTD Budget	February 2021 Amt	2021 YTD Amt	YTD Balance	% of YTD Budget
R 021-014-00500 COMMERCIAL VE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-015-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-016-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 021-019-00100 PROPERTY TAX/A	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 021 CAPITAL PROJECTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 022 GATES HARDWARE GRANT					
R 022-019-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 022 GATES HARDWARE GRANT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 023 LSTA-CIVIL WAR					
R 023-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 023 LSTA-CIVIL WAR	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 024 FINRA GRANT					
R 024-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 024 FINRA GRANT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 025 LSTA-SMITHVILLE NEWS PAPER					
R 025-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 025 LSTA-SMITHVILLE NEWS PAP	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 026 G O BOND					
R 026-005-08000 BOND SALE	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 026 G O BOND	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 027 COMMUNITY FDTN GRANT					
R 027-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 027 COMMUNITY FDTN GRANT	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 028 FINRA 2014					
R 028-010-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 028-010-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 028 FINRA 2014	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 029 GO BOND 2016					
R 029-005-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 029 GO BOND 2016	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 030 GO BOND 2019					
R 030-005-21000 RECEIPTS	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
R 030-005-21200 TRANSFER FROM	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
FUND 030 GO BOND 2019	\$0.00	\$0.00	\$0.00	\$0.00	0.00%
	\$11,026,166.08	\$583,810.23	\$1,716,482.82	\$9,309,683.26	15.57%

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 1

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
CHASE/BANK ONE CHECKING				
OPERATING	G 001-06100	\$0.00	\$0.00	\$0.00
PAYROLL	G 010-06100	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-06100	\$0.00	\$0.00	\$0.00
SPECIAL REVENUE	G 020-06100	\$0.00	\$0.00	\$0.00
Total	CHASE/BANK ONE CHECKING	\$0.00	\$0.00	\$0.00
OLD NATIONAL BANK CHECKING				
OPERATING	G 001-06300	\$139.26	\$0.00	\$24,732.35
JAIL	G 002-06300	\$0.00	\$0.00	\$0.00
CLEARING	G 003-06300	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-06300	\$0.00	\$0.00	\$0.00
PLAC	G 005-06300	\$0.00	\$0.00	\$0.00
RETIREEES	G 006-06300	\$0.00	\$0.00	\$0.00
LIRF	G 007-06300	\$0.00	\$0.00	\$0.00
DEBT SERVICE	G 008-06300	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-06300	\$0.00	\$0.00	\$0.00
TEEN COUNCIL	G 012-06300	\$0.00	\$0.00	\$0.00
LSTA	G 015-06300	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-06300	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-06300	\$0.00	\$0.00	\$0.00
SPECIAL REVENUE	G 020-06300	\$0.00	\$0.00	\$0.00
FINRA GRANT	G 024-06300	\$0.00	\$0.00	\$0.00
COMMUNITY FDTN GRANT	G 027-06300	\$0.00	\$0.00	\$0.00
FINRA 2014	G 028-06300	\$0.00	\$0.00	\$0.00
GO BOND 2016	G 029-06300	\$0.00	\$0.00	\$0.00
GO BOND 2019	G 030-06300	\$0.00	\$0.00	\$0.00
Total	OLD NATIONAL BANK CHECKING	\$139.26	\$0.00	\$24,732.35
GERMAN AMER./CHECKING				
OPERATING	G 001-06400	\$17,134.59	\$8,558.85	\$57,998.34
CLEARING	G 003-06400	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-06400	\$0.00	\$0.00	\$0.00
PLAC	G 005-06400	\$65.00	\$665.00	\$65.00
LIRF	G 007-06400	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-06400	\$5,564.81	\$0.00	\$0.00
PAYROLL	G 010-06400	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-06400	\$0.00	\$11,640.88	\$0.00
GIFT-FOUNDATION	G 019-06400	\$0.00	\$5,250.00	\$0.00
SPECIAL REVENUE	G 020-06400	\$0.00	\$4,174.89	\$0.00
GO BOND 2016	G 029-06400	\$0.00	\$0.00	\$0.00
Total	GERMAN AMER./CHECKING	\$22,764.40	\$30,289.62	\$58,063.34
GERMAN AMER./MONEY MKT				
OPERATING	G 001-06410	\$0.00	\$0.00	\$0.00
LIRF	G 007-06410	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-06410	\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 2

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
GO BOND 2016	G 029-06410	\$0.00	\$0.00	\$0.00
Total GERMAN AMER./MONEY MKT		\$0.00	\$0.00	\$0.00
5-3 LIQUIDITY MGMT ACCT				
LIRF	G 007-06520	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-06520	\$0.00	\$0.00	\$0.00
Total 5-3 LIQUIDITY MGMT ACCT		\$0.00	\$0.00	\$0.00
FIRST FINANCIAL CKNG				
OPERATING	G 001-06600	\$487,885.81	\$659,011.36	-\$628,327.99
JAIL	G 002-06600	\$0.00	\$0.00	\$0.00
CLEARING	G 003-06600	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-06600	\$0.00	\$0.00	\$10,504.53
PLAC	G 005-06600	\$665.00	\$0.00	-\$34.35
RETIREEES	G 006-06600	\$0.00	\$0.00	\$0.00
LIRF	G 007-06600	\$0.00	\$0.00	\$342,884.37
DEBT SERVICE	G 008-06600	\$0.00	\$0.00	\$165,097.09
RAINY DAY	G 009-06600	\$0.00	\$5,564.81	\$148,165.00
PAYROLL	G 010-06600	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-06600	\$22,140.88	\$8,513.90	\$10,756.79
LEVY EXCESS	G 017-06600	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-06600	\$6,010.00	\$2,259.89	\$166,772.65
SPECIAL REVENUE	G 020-06600	\$116,998.39	\$39,888.93	\$93,241.84
FINRA GRANT	G 024-06600	\$0.00	\$0.00	\$0.00
G O BOND	G 026-06600	\$0.00	\$0.00	\$0.00
COMMUNITY FDTN GRANT	G 027-06600	\$0.00	\$0.00	\$0.00
FINRA 2014	G 028-06600	\$0.00	\$0.00	\$0.00
GO BOND 2016	G 029-06600	\$0.00	\$0.00	\$0.00
GO BOND 2019	G 030-06600	\$250.00	\$270,960.17	-\$23,498.98
S W BRANCH BOND 2020	G 035-06600	\$0.00	\$0.00	-\$8,598.00
Total FIRST FINANCIAL CKNG		\$633,950.08	\$986,199.06	\$276,962.95
FIRST FINANCIAL SAVGS				
OPERATING	G 001-06610	\$210.38	\$0.00	\$1,098,314.68
JAIL	G 002-06610	\$0.00	\$0.00	\$0.00
CLEARING	G 003-06610	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-06610	\$0.00	\$0.00	\$0.00
PLAC	G 005-06610	\$0.00	\$0.00	\$0.00
RETIREEES	G 006-06610	\$0.00	\$0.00	\$0.00
LIRF	G 007-06610	\$0.00	\$0.00	\$1,749,188.56
DEBT SERVICE	G 008-06610	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-06610	\$0.00	\$0.00	\$4,839,405.19
PAYROLL	G 010-06610	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-06610	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-06610	\$0.00	\$0.00	\$0.00
SPECIAL REVENUE	G 020-06610	\$0.00	\$0.00	\$880,000.00
FINRA GRANT	G 024-06610	\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 3

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
G O BOND	G 026-06610	\$0.00	\$0.00	\$0.00
COMMUNITY FDTN GRANT	G 027-06610	\$0.00	\$0.00	\$0.00
FINRA 2014	G 028-06610	\$0.00	\$0.00	\$0.00
GO BOND 2016	G 029-06610	\$0.00	\$0.00	\$0.00
GO BOND 2019	G 030-06610	\$0.00	\$0.00	\$575,000.00
Total FIRST FINANCIAL SAVGS		\$210.38	\$0.00	\$9,141,908.43
PETTY CASH				
PETTY CASH	G 013-06900	\$0.00	\$0.00	\$185.00
Total PETTY CASH		\$0.00	\$0.00	\$185.00
CHANGE				
CHANGE	G 014-06910	\$0.00	\$0.00	\$630.00
Total CHANGE		\$0.00	\$0.00	\$630.00
ONB CD INVESTMENT				
OPERATING	G 001-09110	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-09110	\$0.00	\$0.00	\$0.00
INVESTMENT-GIFT	G 011-09110	\$0.00	\$0.00	\$0.00
Total ONB CD INVESTMENT		\$0.00	\$0.00	\$0.00
SCUDDER/MUTUAL FUND/IRA				
INVESTMENT-GIFT	G 011-09230	\$0.00	\$0.00	\$0.00
Total SCUDDER/MUTUAL FUND/IRA		\$0.00	\$0.00	\$0.00
EVERGREEN FUNDS INVESTMENT				
INVESTMENT-GIFT	G 011-09300	\$0.00	\$0.00	\$0.00
Total EVERGREEN FUNDS INVESTMENT		\$0.00	\$0.00	\$0.00
VECTREN STOCK				
INVESTMENT-GIFT	G 011-09400	\$0.00	\$0.00	\$0.00
Total VECTREN STOCK		\$0.00	\$0.00	\$0.00
INDPLS PUBLIC SCHOOL BOND-GIFT				
INVESTMENT-GIFT	G 011-09500	\$0.00	\$0.00	\$0.00
Total INDPLS PUBLIC SCHOOL BOND-GIFT		\$0.00	\$0.00	\$0.00
INVEST. CD/1ST FIN/MAINSOURCE				
OPERATING	G 001-09600	\$0.00	\$0.00	\$0.00
LIRF	G 007-09600	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-09600	\$0.00	\$0.00	\$0.00
INVESTMENT-GIFT	G 011-09600	\$0.00	\$0.00	\$0.00
Total INVEST. CD/1ST FIN/MAINSOURCE		\$0.00	\$0.00	\$0.00
BONDS				
INVESTMENT-GIFT	G 011-09610	\$0.00	\$0.00	\$0.00
Total BONDS		\$0.00	\$0.00	\$0.00
MUTUAL FUNDS				
INVESTMENT-GIFT	G 011-09620	\$0.00	\$0.00	\$0.00
Total MUTUAL FUNDS		\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 4

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
JCB CD INVESTMENT				
OPERATING	G 001-09700	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-09700	\$0.00	\$0.00	\$0.00
Total	JCB CD INVESTMENT	\$0.00	\$0.00	\$0.00
DUE FROM OTHER FUNDS				
LIRF	G 007-09800	\$0.00	\$0.00	\$0.00
DEBT SERVICE	G 008-09800	\$0.00	\$0.00	\$0.00
Total	DUE FROM OTHER FUNDS	\$0.00	\$0.00	\$0.00
MONEY TRANSFERS				
OPERATING	G 001-10000	\$16,165.96	\$16,165.96	\$0.00
JAIL	G 002-10000	\$0.00	\$0.00	\$0.00
CLEARING	G 003-10000	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-10000	\$0.00	\$0.00	\$0.00
PLAC	G 005-10000	\$665.00	\$665.00	\$0.00
RETIRES	G 006-10000	\$0.00	\$0.00	\$0.00
LIRF	G 007-10000	\$0.00	\$0.00	\$0.00
DEBT SERVICE	G 008-10000	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-10000	\$5,564.81	\$5,564.81	\$0.00
PAYROLL	G 010-10000	\$0.00	\$0.00	\$0.00
INVESTMENT-GIFT	G 011-10000	\$0.00	\$0.00	\$0.00
TEEN COUNCIL	G 012-10000	\$0.00	\$0.00	\$0.00
PETTY CASH	G 013-10000	\$0.00	\$0.00	\$0.00
CHANGE	G 014-10000	\$0.00	\$0.00	\$0.00
LSTA	G 015-10000	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-10000	\$11,640.88	\$11,640.88	\$0.00
LEVY EXCESS	G 017-10000	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-10000	\$5,250.00	\$5,250.00	\$0.00
SPECIAL REVENUE	G 020-10000	\$4,174.89	\$4,174.89	\$0.00
CAPITAL PROJECTS	G 021-10000	\$0.00	\$0.00	\$0.00
GATES HARDWARE GRANT	G 022-10000	\$0.00	\$0.00	\$0.00
FINRA GRANT	G 024-10000	\$0.00	\$0.00	\$0.00
G O BOND	G 026-10000	\$0.00	\$0.00	\$0.00
COMMUNITY FDTN GRANT	G 027-10000	\$0.00	\$0.00	\$0.00
FINRA 2014	G 028-10000	\$0.00	\$0.00	\$0.00
GO BOND 2016	G 029-10000	\$0.00	\$0.00	\$0.00
GO BOND 2019	G 030-10000	\$0.00	\$0.00	\$0.00
Total	MONEY TRANSFERS	\$43,461.54	\$43,461.54	\$0.00
ACCOUNTS PAYABLE				
OPERATING	G 001-10100	\$0.00	\$0.00	\$0.00
JAIL	G 002-10100	\$0.00	\$0.00	\$0.00
CLEARING	G 003-10100	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-10100	\$0.00	\$0.00	\$0.00
PLAC	G 005-10100	\$0.00	\$0.00	\$0.00
RETIRES	G 006-10100	\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 5

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
LIRF	G 007-10100	\$0.00	\$0.00	\$0.00
DEBT SERVICE	G 008-10100	\$0.00	\$0.00	\$0.00
RAINY DAY	G 009-10100	\$0.00	\$0.00	\$0.00
PAYROLL	G 010-10100	\$0.00	\$0.00	\$0.00
INVESTMENT-GIFT	G 011-10100	\$0.00	\$0.00	\$0.00
TEEN COUNCIL	G 012-10100	\$0.00	\$0.00	\$0.00
PETTY CASH	G 013-10100	\$0.00	\$0.00	\$0.00
CHANGE	G 014-10100	\$0.00	\$0.00	\$0.00
LSTA	G 015-10100	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-10100	\$0.00	\$0.00	\$0.00
LEVY EXCESS	G 017-10100	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-10100	\$0.00	\$0.00	\$0.00
SPECIAL REVENUE	G 020-10100	\$0.00	\$0.00	\$0.00
CAPITAL PROJECTS	G 021-10100	\$0.00	\$0.00	\$0.00
GATES HARDWARE GRANT	G 022-10100	\$0.00	\$0.00	\$0.00
LSTA-CIVIL WAR	G 023-10100	\$0.00	\$0.00	\$0.00
FINRA GRANT	G 024-10100	\$0.00	\$0.00	\$0.00
Total ACCOUNTS PAYABLE		\$0.00	\$0.00	\$0.00
FICA/EMPLOYEE WITHHOLDING				
PAYROLL	G 010-10200	\$0.00	\$0.00	\$0.00
Total FICA/EMPLOYEE WITHHOLDING		\$0.00	\$0.00	\$0.00
MEDICARE/EMPLOYEE WITHHOLDING				
PAYROLL	G 010-10300	\$0.00	\$0.00	\$0.00
Total MEDICARE/EMPLOYEE WITHHOLDING		\$0.00	\$0.00	\$0.00
FEDERAL EMPLOYEE WITHHOLDING				
PAYROLL	G 010-10400	\$0.00	\$0.00	\$0.00
Total FEDERAL EMPLOYEE WITHHOLDING		\$0.00	\$0.00	\$0.00
STATE EMPLOYEE WITHHOLDING				
PAYROLL	G 010-10500	\$0.00	\$0.00	\$0.00
Total STATE EMPLOYEE WITHHOLDING		\$0.00	\$0.00	\$0.00
COUNTY EMPLOYEE WITHHOLDING				
PAYROLL	G 010-10600	\$0.00	\$0.00	\$0.00
Total COUNTY EMPLOYEE WITHHOLDING		\$0.00	\$0.00	\$0.00
PRE-TAX HEALTH EMPLOYEE W/H				
PAYROLL	G 010-10700	\$0.00	\$0.00	\$0.00
Total PRE-TAX HEALTH EMPLOYEE W/H		\$0.00	\$0.00	\$0.00
OPTPRE-TAX EMPLOYEE W/H				
PETTY CASH	G 013-10740	\$0.00	\$0.00	\$0.00
Total OPTPRE-TAX EMPLOYEE W/H		\$0.00	\$0.00	\$0.00
POST TAX INS EMPLOYEE WITHHOLD				
PAYROLL	G 010-10800	\$0.00	\$0.00	\$0.00
Total POST TAX INS EMPLOYEE WITHHOLD		\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 6

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
403b TSA-AUL EMPLOYEE WITHHOLD				
PAYROLL	G 010-10900	\$0.00	\$0.00	\$0.00
Total	403b TSA-AUL EMPLOYEE WITHHOLD	\$0.00	\$0.00	\$0.00
GARNISHMENT EMPLOYEE W/H				
PAYROLL	G 010-10910	\$0.00	\$0.00	\$0.00
Total	GARNISHMENT EMPLOYEE W/H	\$0.00	\$0.00	\$0.00
GARNISHMENT FEE W/H				
PAYROLL	G 010-10915	\$0.00	\$0.00	\$0.00
Total	GARNISHMENT FEE W/H	\$0.00	\$0.00	\$0.00
STAFF ORDERS EMPLOYEE W/H				
PAYROLL	G 010-10920	\$0.00	\$0.00	\$0.00
Total	STAFF ORDERS EMPLOYEE W/H	\$0.00	\$0.00	\$0.00
PREPAID LEGAL/IDENTITY W/H				
PAYROLL	G 010-10930	\$0.00	\$0.00	\$0.00
Total	PREPAID LEGAL/IDENTITY W/H	\$0.00	\$0.00	\$0.00
VISION INS W/H				
PAYROLL	G 010-10940	\$0.00	\$0.00	\$0.00
Total	VISION INS W/H	\$0.00	\$0.00	\$0.00
WELLNESS SERVICES W/H				
PAYROLL	G 010-10950	\$0.00	\$0.00	\$0.00
Total	WELLNESS SERVICES W/H	\$0.00	\$0.00	\$0.00
EMPLOYEE ADVANCE W/H				
PAYROLL	G 010-10960	\$0.00	\$0.00	\$0.00
Total	EMPLOYEE ADVANCE W/H	\$0.00	\$0.00	\$0.00
FLEXIBLE SPENDING ACCT W/H				
PAYROLL	G 010-10970	\$0.00	\$0.00	\$0.00
Total	FLEXIBLE SPENDING ACCT W/H	\$0.00	\$0.00	\$0.00
HEALTH SAVINGS ACCT W/H				
PAYROLL	G 010-10980	\$0.00	\$0.00	\$0.00
Total	HEALTH SAVINGS ACCT W/H	\$0.00	\$0.00	\$0.00
YMCA EMPLOYEE W/H				
PAYROLL	G 010-10990	\$0.00	\$0.00	\$0.00
Total	YMCA EMPLOYEE W/H	\$0.00	\$0.00	\$0.00
PERF/VOLUNTARY EMPLOYEE W/H				
PAYROLL	G 010-11000	\$0.00	\$0.00	\$0.00
Total	PERF/VOLUNTARY EMPLOYEE W/H	\$0.00	\$0.00	\$0.00
UNITED WAY EMPLOYEE W/H				
PAYROLL	G 010-11100	\$0.00	\$0.00	\$0.00
Total	UNITED WAY EMPLOYEE W/H	\$0.00	\$0.00	\$0.00
DUE TO OTHER FUNDS				
LIRF	G 007-20000	\$0.00	\$0.00	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/04/21 1:40 PM

Page 7

Cash Balances

Current Period: February 2021

FUND Descr	Account	MTD Debit	MTD Credit	Current Balance
DEBT SERVICE	G 008-20000	\$0.00	\$0.00	\$0.00
Total DUE TO OTHER FUNDS		\$0.00	\$0.00	\$0.00
DUE TO TEMPORARY LOAN				
OPERATING	G 001-21000	\$0.00	\$0.00	\$0.00
DEBT SERVICE	G 008-21000	\$0.00	\$0.00	\$0.00
CAPITAL PROJECTS	G 021-21000	\$0.00	\$0.00	\$0.00
Total DUE TO TEMPORARY LOAN		\$0.00	\$0.00	\$0.00
FUND BALANCE				
OPERATING	G 001-99000	\$651,404.25	\$489,204.08	-\$552,717.38
JAIL	G 002-99000	\$0.00	\$0.00	\$0.00
CLEARING	G 003-99000	\$0.00	\$0.00	\$0.00
GIFT UNRESTRICTED	G 004-99000	\$0.00	\$0.00	-\$10,504.53
PLAC	G 005-99000	\$0.00	\$65.00	-\$30.65
RETIREEES	G 006-99000	\$0.00	\$0.00	\$0.00
LIRF	G 007-99000	\$0.00	\$0.00	-\$2,092,072.93
DEBT SERVICE	G 008-99000	\$0.00	\$0.00	-\$165,097.09
RAINY DAY	G 009-99000	\$0.00	\$0.00	-\$4,987,570.19
PAYROLL	G 010-99000	\$0.00	\$0.00	\$0.00
INVESTMENT-GIFT	G 011-99000	\$0.00	\$0.00	\$0.00
TEEN COUNCIL	G 012-99000	\$0.00	\$0.00	\$0.00
PETTY CASH	G 013-99000	\$0.00	\$0.00	-\$185.00
CHANGE	G 014-99000	\$0.00	\$0.00	-\$630.00
LSTA	G 015-99000	\$0.00	\$0.00	\$0.00
GIFT-RESTRICED	G 016-99000	\$8,513.90	\$10,500.00	-\$10,756.79
LEVY EXCESS	G 017-99000	\$0.00	\$0.00	\$0.00
IN KIND CONTRIBUTION/BLDG CORP	G 018-99000	\$0.00	\$0.00	\$0.00
GIFT-FOUNDATION	G 019-99000	\$2,259.89	\$760.00	-\$166,772.65
SPECIAL REVENUE	G 020-99000	\$39,888.93	\$112,823.50	-\$973,241.84
CAPITAL PROJECTS	G 021-99000	\$0.00	\$0.00	\$0.00
GATES HARDWARE GRANT	G 022-99000	\$0.00	\$0.00	\$0.00
LSTA-CIVIL WAR	G 023-99000	\$0.00	\$0.00	\$0.00
FINRA GRANT	G 024-99000	\$0.00	\$0.00	\$0.00
LSTA-SMITHVILLE NEWS PAPER	G 025-99000	\$0.00	\$0.00	\$0.00
G O BOND	G 026-99000	\$0.00	\$0.00	\$0.00
COMMUNITY FDTN GRANT	G 027-99000	\$0.00	\$0.00	\$0.00
FINRA 2014	G 028-99000	\$0.00	\$0.00	\$0.00
GO BOND 2016	G 029-99000	\$0.00	\$0.00	\$0.00
GO BOND 2019	G 030-99000	\$270,960.17	\$250.00	-\$551,501.02
S W BRANCH BOND 2020	G 035-99000	\$0.00	\$0.00	\$8,598.00
Total FUND BALANCE		\$973,027.14	\$613,602.58	-\$9,502,482.07
Grand Total		\$1,673,552.80	\$1,673,552.80	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/01/21 11:33 AM

Page 1

***Check Reconciliation©**

ONB CHECKING

06300 ONB/MONROE

February 2021

Account Summary

Beginning Balance o 2/1/2021	\$24,593.09	Cleared	\$24,732.35
+ Receipts/Deposits	\$139.26	Statement	\$24,732.35
- Payments (Checks and Withdrawals)	\$0.00	Difference	\$0.00
Ending Balance as of 2/28/2021	\$24,732.35		

Check Book Balance

Active 001-06300 OPERATING	\$24,732.35	Beginng Balance	\$24,593.09
Active 002-06300 JAIL	\$0.00	+ Total Deposits	\$139.26
Active 003-06300 CLEARING	\$0.00	- Checks Written	\$0.00
Active 004-06300 GIFT UNRESTRICTED	\$0.00	Check Book Balance	\$24,732.35
Active 005-06300 PLAC	\$0.00	Difference	\$0.00
Active 006-06300 RETIREES	\$0.00		
Active 007-06300 LIRF	\$0.00		
Active 008-06300 DEBT SERVICE	\$0.00		
Active 009-06300 RAINY DAY	\$0.00		
Active 012-06300 TEEN COUNCIL	\$0.00		
Active 015-06300 LSTA	\$0.00		
Active 016-06300 GIFT-RESTRICED	\$0.00		
Active 019-06300 GIFT-FOUNDATION	\$0.00		
Active 020-06300 SPECIAL REVENUE	\$0.00		
Active 024-06300 FINRA GRANT	\$0.00		
Active 027-06300 COMMUNITY FDTN GRANT	\$0.00		
Active 028-06300 FINRA 2014	\$0.00		
Active 029-06300 GO BOND 2016	\$0.00		
Active 030-06300 GO BOND 2019	\$0.00		
Cash Balance	\$24,732.35		

MONROE COUNTY PUBLIC LIBRARY

03/01/21 11:33 AM

Page 2

***Check Reconciliation©**

ONB CHECKING

06300 ONB/MONROE

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
Deposit	020821REC	2/8/2021		(\$62.99)
Deposit	022221REC	2/22/2021		(\$76.27)
000000	No Receipts or Checks			
	Receipts/Deposits		\$0.00	(\$139.26)
			Total Deposits	(\$139.26)
	Payments/Withdrawal		\$0.00	\$0.00
	Outstanding + Cleared Checks = Total Checks Written			\$0.00

*NM Next Month items not included in Total Checks Written and Total Deposits

MONROE COUNTY PUBLIC LIBRARY

03/01/21 10:55 AM

Page 1

***Check Reconciliation©
GERMAN-AMER/CHECKING**

06400 GER AME/UC

February 2021

Account Summary

Beginning Balance o 2/1/2021	\$65,588.56
+ Receipts/Deposits	\$17,197.79
- Payments (Checks and Withdrawals)	\$24,723.01
Ending Balance as of 2/28/2021	<u>\$58,063.34</u>

Cleared	\$58,063.34
Statement	<u>\$58,063.34</u>
Difference	\$0.00

Check Book Balance

Active 001-06400 OPERATING	\$57,998.34
Active 003-06400 CLEARING	\$0.00
Active 004-06400 GIFT UNRESTRICTED	\$0.00
Active 005-06400 PLAC	\$65.00
Active 007-06400 LIRF	\$0.00
Active 009-06400 RAINY DAY	\$0.00
Active 010-06400 PAYROLL	\$0.00
Active 016-06400 GIFT-RESTRICED	\$0.00
Active 019-06400 GIFT-FOUNDATION	\$0.00
Active 020-06400 SPECIAL REVENUE	\$0.00
Active 029-06400 GO BOND 2016	\$0.00
Cash Balance	\$58,063.34

Beginng Balance	\$65,588.56
+ Total Deposits	\$17,197.79
- Checks Written	\$24,723.01
Check Book Balance	<u>\$58,063.34</u>
Difference	\$0.00

MONROE COUNTY PUBLIC LIBRARY

03/01/21 10:55 AM

Page 2

***Check Reconciliation©**
GERMAN-AMER/CHECKING
06400 GER AME/UC

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
Deposit	020821REC-2	2/8/2021		(\$239.35)
Deposit	021021REC-3	2/10/2021		(\$16,165.96)
Deposit	021721REC-5	2/17/2021		(\$287.97)
Deposit	021921REC	2/19/2021		(\$154.40)
Deposit	030121REC	3/1/2021		(\$351.31)
Deposit	030121REC-2	3/1/2021		\$1.20
001053E	FIRST FINANCIAL BANK	2/10/2021		\$16,165.96
001054E	GERMAN AMERICAN BANK/HSA	2/11/2021		\$3,926.97
001055E	GERMAN AMERICAN BANK/HSA	2/25/2021		\$3,926.97
001056E	GERMAN AMERICAN BANK	3/1/2021		(\$0.60)
2112021	GERMAN AMERICAN BANK	2/11/2021		\$703.71
	Receipts/Deposits			(\$17,197.79)
			Total Deposits	(\$17,197.79)
	Payments/Withdrawal			\$24,723.01
	Outstanding + Cleared Checks = Total Checks Written			\$24,723.01

*NM Next Month items not included in Total Checks Written and Total Deposits

MONROE COUNTY PUBLIC LIBRARY

03/01/21 1:55 PM

Page 1

***Check Reconciliation©
1ST FIN/MAINSOU CKNG**

06600 FIRST CKG

February 2021

Account Summary

Beginning Balance o 2/1/2021	\$834,453.90	Cleared	\$451,589.72
+ Receipts/Deposits	\$604,647.71	Statement	\$351,589.72
- Payments (Checks and Withdrawals)	<u>\$987,511.89</u>	Difference	<u>\$100,000.00</u>
Ending Balance as of 2/28/2021	\$351,589.72		

Check Book Balance

Active 001-06600 OPERATING	-\$628,327.99	Beginng Balance	\$834,453.90
Active 002-06600 JAIL	\$0.00	+ Total Deposits	\$604,647.71
Active 003-06600 CLEARING	\$0.00	- Checks Written	<u>\$1,062,138.66</u>
Active 004-06600 GIFT UNRESTRICTED	\$10,504.53	Check Book Balance	\$376,962.95
Active 005-06600 PLAC	-\$34.35	Difference	\$100,000.00
Active 006-06600 RETIREES	\$0.00		
Active 007-06600 LIRF	\$342,884.37		
Active 008-06600 DEBT SERVICE	\$165,097.09		
Active 009-06600 RAINY DAY	\$148,165.00		
Active 010-06600 PAYROLL	\$0.00		
Active 016-06600 GIFT-RESTRICED	\$10,756.79		
Active 017-06600 LEVY EXCESS	\$0.00		
Active 019-06600 GIFT-FOUNDATION	\$166,772.65		
Active 020-06600 SPECIAL REVENUE	\$93,241.84		
Active 024-06600 FINRA GRANT	\$0.00		
Active 026-06600 G O BOND	\$0.00		
Active 027-06600 COMMUNITY FDTN GRANT	\$0.00		
Active 028-06600 FINRA 2014	\$0.00		
Active 029-06600 GO BOND 2016	\$0.00		
Active 030-06600 GO BOND 2019	-\$23,498.98		
Active 035-06600 S W BRANCH BOND 2020	-\$8,598.00		
Cash Balance	\$276,962.95		

MONROE COUNTY PUBLIC LIBRARY

03/01/21 1:55 PM

Page 2

***Check Reconciliation©**
1ST FIN/MAINSOU CKNG
06600 FIRST CKG

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
Deposit	020421REC	2/4/2021		(\$229,172.33)
Deposit	020421REC-2	2/4/2021		(\$1,000.00)
Deposit	021021REC	2/10/2021		(\$760.00)
Deposit	021021REC-2	2/10/2021		(\$16,165.96)
Deposit	021721REC	2/17/2021		(\$10,500.00)
Deposit	021721REC-2	2/17/2021		(\$508.33)
Deposit	021721REC-3	2/17/2021		(\$1,000.23)
Deposit	021721REC-4	2/17/2021		(\$122.46)
Deposit	021921REC-2	2/19/2021		(\$112,823.50)
Deposit	022221REC-2	2/22/2021		(\$229,172.33)
Deposit	022321REC	2/23/2021		(\$3,422.57)
Deposit	020121REC	2/1/2021		(\$315.69)
Deposit	020121REC-3	2/1/2021		\$315.69
001127E	FIRST FINANCIAL/PAYROLL & TAX	2/1/2021		\$21,104.26
001130E	GERMAN AMERICAN BANK	2/10/2021		\$16,165.96
001131E	FIRST FINANCIAL/PAYROLL & TAX	2/11/2021		\$188,708.36
001132E	FIRST FINANCIAL/PAYROLL & TAX	2/17/2021		\$592.90
001133E	FIRST FINANCIAL/PAYROLL & TAX	2/17/2021		\$96.28
001134E	FIRST FINANCIAL/PAYROLL & TAX	2/17/2021		\$21,319.19
001135E	BUNGER & ROBERTSON, LLP	2/24/2021		\$137,960.50
001136E	FIRST FINANCIAL/PAYROLL & TAX	2/25/2021		\$190,482.49
001137E	TASC	3/1/2021		\$188.86
001138E	FIRST FINANCIAL BANK	3/1/2021		\$21.00
001139E	FIRST FINANCIAL/PAYROLL & TAX	3/1/2021		\$341.37
008216	MOLLY R. GEENE	1/30/2019	\$27.95	
008597	HANTING LIU	4/16/2019	\$47.98	
008675	ARIEL L KUNERT	5/9/2019	\$24.99	
008797	CHARLOTTE BOSHEARS	6/5/2019	\$23.00	
008883	JENNA TIEMAN	6/17/2019	\$40.00	
009217	IU HEALTH BLOOMINGTON, INC.	8/26/2019	\$75.00	
009289	DISCARDIA	9/12/2019	\$100.00	
009297	KAYE LEE JOHNSON	9/12/2019	\$100.00	
009325	IU HEALTH BLOOMINGTON, INC.	9/19/2019	\$75.00	
009379	IU HEALTH BLOOMINGTON, INC.	10/3/2019	\$75.00	
009421	IU HEALTH BLOOMINGTON, INC.	10/10/2019	\$75.00	
009423	JOHN L. THOMPSON, JR.	10/10/2019	\$24.00	
009457	JOHN L. THOMPSON, JR.	10/16/2019	\$22.91	
009605	STACY L. SINGH	11/14/2019	\$64.99	
009777	IU HEALTH BLOOMINGTON, INC.	12/20/2019	\$300.00	
009865	VICTORIA M. GABHART	1/9/2020		\$53.93
009908	CAILIN T DUNHAM	1/27/2020	\$36.98	
010665	CENTERSTONE	8/21/2020		(\$500.00)
010665	CENTERSTONE	8/21/2020		\$500.00
011171	INNOVATIVE USERS GROUP	12/16/2020		\$110.00
011219	CONVENANT SECURITY EQUIPMENT	12/30/2020	\$6,000.00	
011275	CONTEGIX	1/14/2021		\$650.00
011296	BLACKSTONE, IN PUBLISHING	1/20/2021		\$585.97
011314	THOMSON REUTERS - WEST	1/20/2021		\$523.33

MONROE COUNTY PUBLIC LIBRARY

03/01/21 1:55 PM

Page 3

***Check Reconciliation©**

1ST FIN/MAINSOU CKNG

06600 FIRST CKG

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
011315	TUMBLEWEED PRESS INC.	1/20/2021		\$1,140.00
011316	UKG INC.	1/20/2021		\$10,904.36
011317	YOURMEMBERSHIP.COM, INC.	1/20/2021		\$808.20
011318	AMERICAN HERITAGE LIFE INS. CO	1/27/2021		\$255.32
011319	BLOOMINGTON PAINT & WALLPAPER	1/27/2021		\$146.37
011320	CARMICHAEL TRUCK & AUTOMOTIVE	1/27/2021		\$1,518.98
011321	CHARDON LABORATORIES, INC.	1/27/2021		\$912.00
011322	DISH NETWORK	1/27/2021		\$57.05
011323	FERGUSON FACILITIES SUPPLY	1/27/2021		\$1,053.41
011324	FREEDOM BUSINESS SOLUTIONS LL	1/27/2021		\$298.00
011325	GORDON FLESCH CO., INC	1/27/2021		\$13.66
011326	HFI MECHANICAL CONTRACTORS	1/27/2021		\$992.00
011327	ICE MILLER LLP	1/27/2021		\$649.00
011328	INDIANA STATE LIBRARY	1/27/2021		\$455.00
011329	MIDWEST PRESORT SERVICE	1/27/2021		\$303.70
011330	QUILL CORPORATION	1/27/2021		\$50.11
011331	ROBIN HALPIN YOUNG	1/27/2021		\$320.00
011332	SCHINDLER ELEVATOR CORPORATIO	1/27/2021		\$3,785.52
011333	SIHO	1/27/2021		\$51,239.00
011334	YES PEST PROS, INC	1/27/2021		\$200.00
011335	ACCIDENT FUND INSURANCE CO.	2/3/2021		\$16,279.00
011336	AFSCME COUNCIL 62	2/3/2021		\$1,389.40
011337	AMERICAN UNITED LIFE (403B)	2/3/2021		\$2,515.15
011338	AT&T (IL)	2/3/2021		\$1,352.74
011339	AT&T MOBILITY	2/3/2021		\$365.71
011340	BAKER & TAYLOR BOOKS	2/3/2021		\$6,406.31
011341	BLACKSTONE, IN PUBLISHING	2/3/2021		\$126.49
011342	CDW GOVERNMENT, INC.	2/3/2021		\$52.66
011343	CENGAGE LEARNING INC/GALE	2/3/2021		\$285.63
011344	CENTER POINT LARGE PRINT	2/3/2021		\$230.10
011345	CHASE CARD SERVICES	2/3/2021		\$6,539.94
011346	DUKE ENERGY	2/3/2021		\$4,470.70
011347	ELLETTSVILLE TRUE VALUE	2/3/2021		\$81.96
011348	ELLETTSVILLE UTILITIES	2/3/2021		\$181.03
011349	INDIANA DEPT WORKFORCE DEVELO	2/3/2021		\$48.76
011350	INNOVATIVE INTERFACES, INC.	2/3/2021		\$15,261.75
011351	KLEINDORFER HDWE	2/3/2021		\$7.99
011352	LEGAL SHIELD/PRE-PAID LEGAL	2/3/2021		\$161.50
011353	MENARDS - BLOOMINGTON	2/3/2021		\$93.94
011354	MIDWEST PRESORT SERVICE	2/3/2021		\$274.31
011355	MIDWEST TAPE	2/3/2021		\$2,480.64
011356	MONROE COUNTY HISTORY CENTER	2/3/2021		\$45.00
011357	OLD NATIONAL BANK	2/3/2021		\$18.75
011358	QUILL CORPORATION	2/3/2021		\$163.98
011359	SADDLEBACK EDUCATIONAL PUBL.	2/3/2021		\$12.27
011360	SMITHVILLE COMMUNICATION/INDY	2/3/2021		\$1,971.00
011361	T-MOBILE	2/3/2021		\$762.83
011362	UNITED WAY	2/3/2021		\$44.00

MONROE COUNTY PUBLIC LIBRARY

03/01/21 1:55 PM

Page 4

***Check Reconciliation©**

1ST FIN/MAINSOU CKNG

06600 FIRST CKG

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
011363	YOURMEMBERSHIP.COM, INC.	2/3/2021		\$434.00
011364	AMERICAN UNITED LIFE (LIFE)	2/4/2021		\$3,500.59
011365	G & G LAWN CARE	2/4/2021		\$255.00
011366	GIBSON TELDATA, INC.	2/4/2021		\$1,430.00
011367	MATRIX INTEGRATION LLC	2/4/2021		\$1,669.11
011368	STAPLES	2/4/2021		\$35.30
011369	ALT & WITZIG ENGINEERING, INC	2/10/2021		\$9,650.00
011370	ARTISAN ALLEY	2/10/2021	\$500.00	
011371	AT&T (IL)	2/10/2021		\$165.63
011372	BRCJ, INC.	2/10/2021		\$850.00
011373	CARMICHAEL TRUCK & AUTOMOTIVE	2/10/2021		\$460.08
011374	CITY OF BLOOMINGTON UTILITIES	2/10/2021		\$451.57
011375	FIRST INSURANCE GROUP, INC.	2/10/2021		\$69,465.00
011376	FREEDOM BUSINESS SOLUTIONS LL	2/10/2021		\$102.89
011377	G & G LAWN CARE	2/10/2021		\$255.00
011378	GOOLDY & SONS, INC.	2/10/2021		\$50.00
011379	MIDWEST PRESORT SERVICE	2/10/2021		\$340.01
011380	NITE OWL PROMOTIONS INC	2/10/2021		\$853.10
011381	OCLC, INC.	2/10/2021		\$4,598.11
011382	QUILL CORPORATION	2/10/2021		\$88.72
011383	SMITHVILLE COMMUNICATION/INDY	2/10/2021		\$184.55
011384	STAPLES	2/10/2021		\$125.98
011385	SYNCHRONY BANK/AMAZON	2/10/2021		\$3,261.64
011386	VECTREN ENERGY DELIVERY	2/10/2021		\$79.60
011387	VERIZON WIRELESS	2/10/2021		\$120.03
011388	ACTIVATE HEALTHCARE/CLINIC	2/18/2021		\$4,852.51
011389	AMERICAN UNITED LIFE (403B)	2/18/2021	\$2,515.15	
011390	BAKER & TAYLOR BOOKS	2/18/2021		\$5,386.20
011391	BIBLIOTHECA, LLC.	2/18/2021		\$3,685.35
011392	BLACKSTONE, IN PUBLISHING	2/18/2021		\$74.50
011393	B-TECH	2/18/2021	\$120.00	
011394	BUNGER & ROBERTSON, LLP	2/18/2021		\$5,035.00
011395	CARMICHAEL TRUCK & AUTOMOTIVE	2/18/2021		\$623.06
011396	CDW GOVERNMENT, INC.	2/18/2021		\$83.71
011397	CENGAGE LEARNING INC/GALE	2/18/2021		\$1,167.29
011398	CENTER POINT LARGE PRINT	2/18/2021	\$230.10	
011399	CENTURYLINK COMMUNICATIONS LL	2/18/2021	\$29.84	
011400	CITY OF BLOOMINGTON GARAGES	2/18/2021		\$1,060.00
011401	COMCAST	2/18/2021	\$55.44	
011402	DEMCO SOFTWARE	2/18/2021		\$1,597.18
011403	DUKE ENERGY	2/18/2021		\$20,960.85
011404	EBSCO	2/18/2021	\$6.60	
011405	FERGUSON FACILITIES SUPPLY	2/18/2021	\$875.69	
011406	INDIANA CHAMBER OF COMMERCE	2/18/2021		\$115.25
011407	JANWAY COMPANY USA, INC.	2/18/2021	\$20.38	
011408	KLEINDORFER HDWE	2/18/2021		\$71.57
011409	LAKESHORE	2/18/2021		\$66.97
011410	MATHEU ARCHITECTS, PC	2/18/2021		\$105,492.00

MONROE COUNTY PUBLIC LIBRARY

03/01/21 1:55 PM

Page 5

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1ST FIN/MAINSOU CKNG

06600 FIRST CKG

Check Nbr	Vendor Name	Check Date	Outstanding	Cleared
011411	MENARDS - BLOOMINGTON	2/18/2021		\$604.33
011412	MIDWEST PRESORT SERVICE	2/18/2021	\$241.09	
011413	MIDWEST TAPE	2/18/2021		\$1,886.81
011414	NATIONAL AUDUBON SOCIETY	2/18/2021	\$30.00	
011415	NATURES WAY, INC.	2/18/2021	\$90.00	
011416	OVERDRIVE	2/18/2021		\$20,572.45
011417	QUILL CORPORATION	2/18/2021		\$28.20
011418	SAMS CLUB/SYNCHRONY BANK	2/18/2021		\$93.13
011419	THOMSON REUTERS - WEST	2/18/2021	\$523.33	
011420	ALL-PHASE ELECTRIC SUPPLY CO.	2/24/2021	\$292.00	
011421	AMERICAN HERITAGE LIFE INS. CO	2/24/2021	\$255.32	
011422	AT&T (IL)	2/24/2021	\$1,348.29	
011423	DISH NETWORK	2/24/2021	\$57.05	
011424	ENGRAVING AND STAMP CENTER IN	2/24/2021	\$30.95	
011425	G & G LAWN CARE	2/24/2021	\$3,555.00	
011426	GORDON FLESCH CO., INC	2/24/2021	\$10.48	
011427	HB WAREHOUSE	2/24/2021	\$190.03	
011428	HEALTH RESOURCES, INC.	2/24/2021	\$4,089.70	
011429	MIDWEST PRESORT SERVICE	2/24/2021	\$385.10	
011430	SIHO	2/24/2021	\$51,239.00	
011431	STAPLES	2/24/2021	\$411.47	
011432	TASC	2/24/2021	\$320.58	
011433	U PRINTING	2/24/2021	\$38.95	
011434	UKG INC.	2/24/2021	\$52.43	
Receipts/Deposits			\$0.00	(\$604,647.71)
			Total Deposits	(\$604,647.71)
Payments/Withdrawal			\$74,626.77	\$987,511.89
Outstanding + Cleared Checks = Total Checks Written				\$1,062,138.66
*NM Next Month items not included in Total Checks Written and Total Deposits				

MONROE COUNTY PUBLIC LIBRARY

*Paid Check Register

Check	Search Name	Account	Invoice	Amount	Comments
	MONROE COUNTY TREAS	R 001-005-00400 LOCAL/C		\$229,172.33	LOCAL/COUNTY OPTION
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		\$216.37	TSYS DEPOSITS 1/29 - 2/5
	GERMAN AMERICAN BANK	R 001-014-03500 LOST/DA		\$22.98	TSYS DEPOSITS 1/29 - 2/5
	FIRST FINANCIAL BANK	R 019-025-50000 RESTRIC		\$760.00	VITAL/PERRY CONTRACT
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		\$154.40	TSYS PYMT - WK END 2/1
	CITY OF BLGTN - TREASU	R 020-016-20000 CABLE A		\$112,823.50	CATS JAN-FEB-MAR 2021
	OLD NATIONAL BANK	R 001-025-03500 LOST/DA		\$76.27	LOST AND DAMAGED
	MONROE COUNTY TREAS	R 001-005-00400 LOCAL/C		\$229,172.33	LOCAL/COUNTY TAX
	UNITED STATES TREASUR	E 001-005-12100 FICA/EM		\$53.52	
	HUNTINGTON NATIONAL B	E 030-005-31700 ADMIN/A		\$250.00	CK # 1749686
	TASC	E 001-005-12420 EMPLOY		\$12.98	CK # 2394691
	GANNETT NATIONAL SHARE	E 001-018-45200 PERIODI		\$766.07	CK # 2393588
	ACCIDENT FUND INSURAN	E 001-006-11300 MANAGE	CK101809179	\$780.00	1/27/2021 - 02/02/2021
	ACCIDENT FUND INSURAN	E 001-006-11300 MANAGE	CK101799082	\$780.00	02/03/2021 - 02/09/2021
	ACCIDENT FUND INSURAN	E 001-006-11300 MANAGE	CK101805022	\$557.14	02/10/2021 - 02/14/2021
	ACCIDENT FUND INSURAN	E 001-006-11300 MANAGE	CK101808884	\$222.86	02/15/2021 - 02/16/2021
	UNITED WAY	E 001-018-38450 DATABAS		\$1,000.00	SHARED PAYMENT FOR C
	GERMAN AMERICAN BANK	G 005-10000 MONEY TRA		\$665.00	TRANSFER FROM GERM
	GERMAN AMERICAN BANK	G 009-10000 MONEY TRA		-\$5,564.81	TRANSFER FROM GERM
	GERMAN AMERICAN BANK	G 016-10000 MONEY TRA		\$11,640.88	TRANSFER FROM GERM
	GERMAN AMERICAN BANK	G 019-10000 MONEY TRA		\$5,250.00	TRANSFER FROM GERM
	GERMAN AMERICAN BANK	G 020-10000 MONEY TRA		\$4,174.89	TRANSFER FROM GERM
	FIRST FINANCIAL BANK	G 001-10000 MONEY TRA		\$16,165.96	FF CHKING TRANSFER TO
	FIRST FINANCIAL/PAYROL	E 001-005-12420 EMPLOY		\$122.46	BELL/INSURANCE
	OLD NATIONAL BANK	R 001-025-03500 LOST/DA		\$62.99	CASH REGISTER COUNT
		R 001-005-18500 INTERES		\$210.38	FF sav int feb
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		\$286.31	TSYS/HRTLAND
	CITY OF BLGTN-COMMUNI	R 016-001-21000 RECEIPT	20DIGITALGRAN	\$10,500.00	DIGITAL EQUITY GRANT
	FIRST FINANCIAL/PAYROL	E 001-005-12420 EMPLOY		\$508.33	WASMER/INSURANCE
	FIRST FINANCIAL/PAYROL	E 001-005-12400 INS/EMPL		\$1,000.23	TASC REIMBURSEMENT
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		\$29.99	TSYS
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		\$239.99	TSYS
	GERMAN AMERICAN BANK	R 001-014-03500 LOST/DA		\$17.99	TSYS
	GERMAN AMERICAN BANK	R 005-014-04100 PUBLIC L		\$65.00	ELL PLAC
	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA		-\$1.20	KEY ERROR PLUS NEGAT
001053E	2/10/2021	FIRST FINANCIAL BANK	G 005-10000 MONEY TRA	\$665.00	TRANSFER FROM GERM
001053E	2/10/2021	FIRST FINANCIAL BANK	G 009-10000 MONEY TRA	-\$5,564.81	TRANSFER FROM GERM
001053E	2/10/2021	FIRST FINANCIAL BANK	G 016-10000 MONEY TRA	\$11,640.88	TRANSFER FROM GERM
001053E	2/10/2021	FIRST FINANCIAL BANK	G 019-10000 MONEY TRA	\$5,250.00	TRANSFER FROM GERM
001053E	2/10/2021	FIRST FINANCIAL BANK	G 020-10000 MONEY TRA	\$4,174.89	TRANSFER FROM GERM
001054E	2/11/2021	GERMAN AMERICAN BANK	E 001-005-12400 INS/EMPL	\$3,926.97	02/12 PAYROLL HAS FUND
001055E	2/25/2021	GERMAN AMERICAN BANK	E 001-005-12400 INS/EMPL	\$3,926.97	2/26/2021
001056E	3/1/2021	GERMAN AMERICAN BANK	R 001-025-03500 LOST/DA	-\$0.60	TSYS RECEIPT KEY ERRO
001130E	2/10/2021	GERMAN AMERICAN BANK	G 001-10000 MONEY TRA	\$16,165.96	FF CHKING TRANSFER TO
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-001-11200 ADMINIS	\$4,394.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-002-11300 MANAGE	\$2,758.37	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-003-11200 ADMINIS	\$3,359.13	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-004-11300 MANAGE	\$1,879.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-005-11300 MANAGE	\$2,754.96	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-005-11500 SPECIALI	\$1,485.00	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-006-11300 MANAGE	\$2,675.12	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL	E 001-006-11500 SPECIALI	\$1,633.50	02/12/2021 PAYROLL & TA

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-11300 MANAGE		\$2,503.36	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-11400 LIBRARIA		\$2,061.76	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-11500 SPECIALI		\$3,786.56	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-12900 INFORMA		\$660.80	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-008-11300 MANAGE		\$4,420.70	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-008-11400 LIBRARIA		\$1,796.24	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-008-11900 BUILDIN		\$5,551.60	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-009-12000 BUILDIN		\$6,016.95	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-010-11300 MANAGE		\$2,192.07	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-011-11300 MANAGE		\$2,314.55	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-015-11300 MANAGE		\$2,814.51	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-016-12800 PRODUC		\$784.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-016-12900 INFORMA		\$667.83	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-11300 MANAGE		\$1,985.69	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-11400 LIBRARIA		\$7,897.51	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-11500 SPECIALI		\$1,926.00	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-11600 ASSISTA		\$2,817.01	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-11700 TECH/OP		\$1,270.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-12900 INFORMA		\$4,419.42	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-13000 SUPPOR		\$9,833.66	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-11300 MANAGE		\$2,573.32	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-11400 LIBRARIA		\$1,994.25	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-11500 SPECIALI		\$1,566.00	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-11600 ASSISTA		\$751.20	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-11300 MANAGE		\$8,419.26	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-11400 LIBRARIA		\$23,487.29	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-11600 ASSISTA		\$29,852.35	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-12900 INFORMA		\$7,776.28	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-026-11300 MANAGE		\$2,282.33	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-027-11300 MANAGE		\$2,173.30	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-11300 MANAGE		\$7,054.82	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-11400 LIBRARIA		\$1,796.24	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-12800 PRODUC		\$4,923.73	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-12900 INFORMA		\$1,869.32	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 016-021-11400 LIBRARIA		\$1,774.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 016-021-11700 TECH/OP		\$1,349.24	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-005-12400 INS/EMPL		\$653.86	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-001-12100 FICA/EM		\$270.50	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-002-12100 FICA/EM		\$162.90	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-003-12100 FICA/EM		\$194.85	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-004-12100 FICA/EM		\$115.52	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-005-12100 FICA/EM		\$264.15	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-006-12100 FICA/EM		\$227.24	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-12100 FICA/EM		\$554.34	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-008-12100 FICA/EM		\$712.82	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-009-12100 FICA/EM		\$329.26	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-010-12100 FICA/EM		\$129.25	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-011-12100 FICA/EM		\$143.35	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-015-12100 FICA/EM		\$164.90	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-12100 FICA/EM		\$1,046.93	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-12100 FICA/EM		\$1,822.98	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-12100 FICA/EM		\$387.95	02/12/2021 PAYROLL & TA

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 016-021-12100 FICA/EM		\$183.86	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-12100 FICA/EM		\$4,156.66	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-026-12100 FICA/EM		\$115.67	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-027-12100 FICA/EM		\$132.71	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-001-12500 MEDICAR		\$63.26	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-002-12500 MEDICAR		\$38.10	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-003-12500 MEDICAR		\$45.57	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-004-12500 MEDICAR		\$27.02	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-005-12500 MEDICAR		\$61.78	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-006-12500 MEDICAR		\$53.14	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-007-12500 MEDICAR		\$129.64	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-008-12500 MEDICAR		\$166.70	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-009-12500 MEDICAR		\$81.91	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-010-12500 MEDICAR		\$30.23	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-011-12500 MEDICAR		\$33.53	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-015-12500 MEDICAR		\$38.56	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 020-016-12500 MEDICAR		\$244.83	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-018-12500 MEDICAR		\$426.33	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-019-12500 MEDICAR		\$90.73	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 016-021-12500 MEDICAR		\$42.99	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-025-12500 MEDICAR		\$972.09	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-026-12500 MEDICAR		\$27.06	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-027-12500 MEDICAR		\$31.04	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-005-12420 EMPLOY		-\$11,478.03	02/12/2021 PAYROLL & TA
001131E	2/11/2021	FIRST FINANCIAL/PAYROL E 001-005-37100 REAL ES		-\$492.55	02/12/2021 PAYROLL & TA
001132E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12400 INS/EMPL		\$54.00	GARNISHMENT/E.GRAY
001132E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12400 INS/EMPL		\$123.79	GARNISHMENT/M JOHNS
001132E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12400 INS/EMPL		\$251.53	GARNISHMENT/B KELLY
001132E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12400 INS/EMPL		\$163.58	GARNISHMENT/J NOEL
001133E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12420 EMPLOY		\$96.28	TASC FUNDING
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-001-12350 PERF/EM	3502586	\$125.40	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-001-12300 PERF/EM	3502586	\$468.15	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-002-12350 PERF/EM	3502586	\$78.71	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-002-12300 PERF/EM	3502586	\$293.85	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-003-12350 PERF/EM	3502586	\$107.10	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-003-12300 PERF/EM	3502586	\$399.84	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-004-12350 PERF/EM	3502586	\$127.63	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-004-12300 PERF/EM	3502586	\$476.49	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12350 PERF/EM	3502586	\$127.08	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12300 PERF/EM	3502586	\$474.45	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-006-12350 PERF/EM	3502586	\$122.31	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-006-12300 PERF/EM	3502586	\$456.62	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-007-12350 PERF/EM	3502586	\$213.44	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-007-12300 PERF/EM	3502586	\$796.85	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-008-12350 PERF/EM	3502586	\$302.01	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-008-12300 PERF/EM	3502586	\$1,127.55	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-009-12350 PERF/EM	3502586	\$76.12	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-009-12300 PERF/EM	3502586	\$284.16	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-010-12350 PERF/EM	3502586	\$62.55	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-010-12300 PERF/EM	3502586	\$233.53	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-011-12350 PERF/EM	3502586	\$66.05	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-011-12300 PERF/EM	3502586	\$246.57	PERF

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-015-12350 PERF/EM	3502586	\$80.32	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-015-12300 PERF/EM	3502586	\$299.84	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-018-12350 PERF/EM	3502586	\$535.15	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-018-12300 PERF/EM	3502586	\$1,997.87	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-019-12350 PERF/EM	3502586	\$173.91	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-019-12300 PERF/EM	3502586	\$649.26	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-025-12350 PERF/EM	3502586	\$1,754.26	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-025-12300 PERF/EM	3502586	\$6,549.40	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-026-12350 PERF/EM	3502586	\$65.12	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-026-12300 PERF/EM	3502586	\$243.14	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-027-12350 PERF/EM	3502586	\$62.02	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-027-12300 PERF/EM	3502586	\$231.53	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 020-016-12350 PERF/EM	3502586	\$327.20	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 020-016-12300 PERF/EM	3502586	\$1,221.53	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 016-021-12350 PERF/EM	3502586	\$87.46	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 016-021-12300 PERF/EM	3502586	\$326.49	PERF
001134E	2/17/2021	FIRST FINANCIAL/PAYROL E 001-005-12300 PERF/EM	3502586	\$48.23	PERF
001135E	2/24/2021	BUNGER & ROBERTSON, L E 030-005-44400 LAND/BUI		\$137,960.50	LAND BRANCH SITE WIRE
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-001-11200 ADMINIS		\$4,394.50	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-002-11300 MANAGE		\$2,758.36	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-003-11200 ADMINIS		\$3,359.13	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-004-11300 MANAGE		\$1,917.09	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-11300 MANAGE		\$2,754.96	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-11500 SPECIALI		\$1,489.95	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-006-11300 MANAGE		\$2,675.12	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-006-11500 SPECIALI		\$1,668.90	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-11300 MANAGE		\$2,503.36	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-11400 LIBRARIA		\$2,061.76	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-11500 SPECIALI		\$3,786.56	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-12900 INFORMA		\$660.80	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-008-11300 MANAGE		\$4,420.71	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-008-11400 LIBRARIA		\$1,826.19	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-008-11900 BUILDIN		\$5,659.17	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-009-12000 BUILDIN		\$6,016.97	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-010-11300 MANAGE		\$2,192.07	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-011-11300 MANAGE		\$2,314.55	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-015-11300 MANAGE		\$2,814.51	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-016-12800 PRODUC		\$831.57	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-016-12900 INFORMA		\$647.60	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-11300 MANAGE		\$1,985.69	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-11400 LIBRARIA		\$7,900.39	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-11500 SPECIALI		\$1,932.42	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-11600 ASSISTA		\$2,817.01	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-11700 TECH/OP		\$1,270.50	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-12900 INFORMA		\$4,404.00	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-13000 SUPPOR		\$9,946.29	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-11300 MANAGE		\$2,573.32	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-11400 LIBRARIA		\$2,014.19	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-11500 SPECIALI		\$1,566.00	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-11600 ASSISTA		\$751.20	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-11300 MANAGE		\$8,453.56	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-11400 LIBRARIA		\$23,484.80	PAYROLL 2/26/2021

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-11600	ASSISTA	\$29,862.17	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-12900	INFORMA	\$8,592.42	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-026-11300	MANAGE	\$2,282.33	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-027-11300	MANAGE	\$2,173.31	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-11300	MANAGE	\$7,284.98	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-11400	LIBRARIA	\$1,796.24	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-12800	PRODUC	\$4,960.22	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-12900	INFORMA	\$1,833.17	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 016-021-11400	LIBRARIA	\$1,774.50	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 016-021-11700	TECH/OP	\$1,351.50	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-12400	INS/EMPL	\$653.86	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-001-12100	FICA/EM	\$270.49	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-002-12100	FICA/EM	\$162.91	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-003-12100	FICA/EM	\$194.86	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-004-12100	FICA/EM	\$117.84	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-12100	FICA/EM	\$264.46	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-006-12100	FICA/EM	\$229.44	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-12100	FICA/EM	\$554.34	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-008-12100	FICA/EM	\$720.99	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-009-12100	FICA/EM	\$330.05	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-010-12100	FICA/EM	\$129.25	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-011-12100	FICA/EM	\$143.35	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-015-12100	FICA/EM	\$164.89	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-12100	FICA/EM	\$1,062.85	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-12100	FICA/EM	\$1,829.80	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-12100	FICA/EM	\$388.50	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 016-021-12100	FICA/EM	\$183.99	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-12100	FICA/EM	\$4,209.65	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-026-12100	FICA/EM	\$115.68	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-027-12100	FICA/EM	\$132.72	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-001-12500	MEDICAR	\$63.26	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-002-12500	MEDICAR	\$38.10	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-003-12500	MEDICAR	\$45.57	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-004-12500	MEDICAR	\$27.56	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-12500	MEDICAR	\$61.85	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-006-12500	MEDICAR	\$53.66	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-007-12500	MEDICAR	\$129.63	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-008-12500	MEDICAR	\$168.63	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-009-12500	MEDICAR	\$81.89	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-010-12500	MEDICAR	\$30.22	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-011-12500	MEDICAR	\$33.52	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-015-12500	MEDICAR	\$38.57	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 020-016-12500	MEDICAR	\$248.58	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-018-12500	MEDICAR	\$427.94	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-019-12500	MEDICAR	\$90.86	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 016-021-12500	MEDICAR	\$43.04	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-025-12500	MEDICAR	\$984.54	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-026-12500	MEDICAR	\$27.05	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-027-12500	MEDICAR	\$31.04	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-12420	EMPLOY	-\$11,277.49	PAYROLL 2/26/2021
001136E	2/25/2021	FIRST FINANCIAL/PAYROL E 001-005-37100	REAL ES	-\$489.49	PAYROLL 2/26/2021
001137E	3/1/2021	TASC	E 001-005-12420	EMPLOY	\$188.86

MONROE COUNTY PUBLIC LIBRARY

*Paid Check Register

Check	Search Name	Account	Invoice	Amount	Comments
001138E	3/1/2021 FIRST FINANCIAL BANK	E 001-005-31700 ADMIN/A		\$21.00	ACH DEBIT BLOCK
001139E	3/1/2021 FIRST FINANCIAL/PAYROL	E 001-005-12400 INS/EMPL		\$54.00	GARNISHMENT/E GRAY
001139E	3/1/2021 FIRST FINANCIAL/PAYROL	E 001-005-12400 INS/EMPL		\$123.79	GARNISHMENT/M JOHNS
001139E	3/1/2021 FIRST FINANCIAL/PAYROL	E 001-005-12400 INS/EMPL		\$163.58	GARNISHMENT/J NOEL
011335	2/3/2021 ACCIDENT FUND INSURAN	E 001-005-34200 OTHER I		\$16,279.00	WORKS COMP PREMIUM
011336	2/3/2021 AFSCME COUNCIL 62	E 001-005-12400 INS/EMPL		\$1,389.40	JAN 2021 DUES
011337	2/3/2021 AMERICAN UNITED LIFE (4	E 001-005-12420 EMPLOY		\$2,515.15	403B PAY PERIOD ENDIN
011338	2/3/2021 AT&T (IL)	E 001-019-32100 TELEPHO	812Z84926701	\$1,230.99	PHONE BILL
011338	2/3/2021 AT&T (IL)	E 001-016-32100 TELEPHO	812Z84926701	\$121.75	PHONE BILL
011339	2/3/2021 AT&T MOBILITY	E 001-008-32100 TELEPHO	75277653X01242	\$146.28	WIRELESS BILL
011339	2/3/2021 AT&T MOBILITY	E 001-015-32100 TELEPHO	75277653X01242	\$54.86	WIRELESS BILL
011339	2/3/2021 AT&T MOBILITY	E 001-019-32100 TELEPHO	75277653X01242	\$51.20	WIRELESS BILL
011339	2/3/2021 AT&T MOBILITY	E 020-016-32100 TELEPHO	75277653X01242	\$113.37	WIRELESS BILL
011340	2/3/2021 BAKER & TAYLOR BOOKS	E 001-018-45100 BOOKS		\$6,323.84	BOOKS
011340	2/3/2021 BAKER & TAYLOR BOOKS	E 019-018-45100 BOOKS		\$59.16	PR ADULT
011340	2/3/2021 BAKER & TAYLOR BOOKS	E 019-018-45100 BOOKS		\$23.31	PR TEEN
011341	2/3/2021 BLACKSTONE, IN PUBLISH	E 001-018-45300 NONPRIN	1199689	\$23.99	NON PRINT
011341	2/3/2021 BLACKSTONE, IN PUBLISH	E 001-018-45300 NONPRIN	1199879	\$102.50	NON PRINT
011342	2/3/2021 CDW GOVERNMENT, INC.	E 001-019-23000 IT SUPPL	7311440	\$52.66	HEADSET
011343	2/3/2021 CENGAGE LEARNING INC/	E 001-018-45100 BOOKS	73089452	\$285.63	BOOKS
011344	2/3/2021 CENTER POINT LARGE PRI	E 001-018-45100 BOOKS	1816938	\$230.10	BOOKS
011345	2/3/2021 CHASE CARD SERVICES	E 019-025-39100 DUES/IN		\$169.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-025-32400 PROFES		\$45.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-005-37100 REAL ES		\$106.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-015-22200 FUEL/OIL		\$338.84	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-44650 IT SOFT		\$50.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-23000 IT SUPPL		\$38.45	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-44650 IT SOFT		\$80.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-23000 IT SUPPL		\$92.05	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-23000 IT SUPPL		\$50.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-019-23000 IT SUPPL		\$75.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-026-31500 MAINTEN		\$96.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$13.12	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$28.15	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$67.32	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$47.67	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$32.11	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-026-21350 GENERA		\$155.79	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-026-23000 IT SUPPL		\$25.00	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-010-21600 PUBLIC U		\$265.46	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-010-21350 GENERA		\$55.15	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-011-21300 OFFICE S		\$36.84	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-011-21350 GENERA		\$54.89	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-008-22200 FUEL/OIL		\$52.18	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-008-31400 BUILDIN		\$1,048.66	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-008-23400 COVID S		\$234.42	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 030-008-44300 OTHER E		\$1,745.92	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-018-22400 A/V SUPP		\$94.44	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-007-33100 ADVERTI		\$293.93	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-007-31500 MAINTEN		\$365.59	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-015-21350 GENERA		\$51.37	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-016-44700 EQUIPME		\$361.57	CREDIT CARD PURCHASE

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
011345	2/3/2021 CHASE CARD SERVICES	E 001-004-32200 POSTAG		\$101.26	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-004-32200 POSTAG		\$124.30	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 001-004-21350 GENERA		\$95.46	CREDIT CARD PURCHASE
011345	2/3/2021 CHASE CARD SERVICES	E 019-004-32400 PROFES		\$49.00	CREDIT CARD PURCHASE
011346	2/3/2021 DUKE ENERGY	E 001-014-35200 ELECTRI		\$4,470.70	ELECTRIC BILL
011347	2/3/2021 ELLETTSVILLE TRUE VALU	E 001-014-23100 BUILDIN	78492	\$31.98	ICE MELT AND PAINT
011347	2/3/2021 ELLETTSVILLE TRUE VALU	E 001-014-23200 PAINT/PA	78492	\$49.98	ICE MELT AND PAINT
011348	2/3/2021 ELLETTSVILLE UTILITIES	E 001-014-35300 WATER		\$181.03	WATER BILL
011349	2/3/2021 INDIANA DEPT WORKFOR	E 001-005-12200 UNEMPL		\$48.76	JAN STATEMENT
011350	2/3/2021 INNOVATIVE INTERFACES,	E 030-019-44650 IT SOFT	INC27027	\$15,261.75	POLARIS CONTRACT YEA
011351	2/3/2021 KLEINDORFER HDWE	E 001-008-23100 BUILDIN	657567	\$7.99	JOINT COMPOUND
011352	2/3/2021 LEGAL SHIELD/PRE-PAID L	E 001-005-12400 INS/EMPL		\$161.50	PRE PAID LEGAL
011353	2/3/2021 MENARDS - BLOOMINGTO	E 001-008-23100 BUILDIN	64438	\$93.94	GAS CAN, STORMGUARD,
011354	2/3/2021 MIDWEST PRESORT SERV	E 001-004-32200 POSTAG	59294	\$274.31	POSTAGE, PICKUP/DELIV
011355	2/3/2021 MIDWEST TAPE	E 001-018-45300 NONPRIN		\$2,155.21	NON PRINT
011355	2/3/2021 MIDWEST TAPE	E 001-018-45100 BOOKS		\$325.43	BOOKS
011356	2/3/2021 MONROE COUNTY HISTOR	E 001-018-45100 BOOKS		\$45.00	3 RCA BOOKS
011357	2/3/2021 OLD NATIONAL BANK	E 001-005-31700 ADMIN/A		\$18.75	SAFE BOX RENTAL
011358	2/3/2021 QUILL CORPORATION	E 001-004-21300 OFFICE S	13844635	\$107.19	OFFICE SUPPLIES
011358	2/3/2021 QUILL CORPORATION	E 001-025-21300 OFFICE S	13844635	\$56.79	OFFICE SUPPLIES
011359	2/3/2021 SADDLEBACK EDUCATION	E 001-018-45100 BOOKS	681912	\$12.27	TOM SAWYER GRAPHIC N
011360	2/3/2021 SMITHVILLE COMMUNICAT	E 001-019-31600 COMPUT		\$1,773.90	INTERNET MONTHLY BILL
011360	2/3/2021 SMITHVILLE COMMUNICAT	E 001-016-31600 COMPUT		\$197.10	INTERNET MONTHLY BILL
011361	2/3/2021 T-MOBILE	E 001-018-45300 NONPRIN		\$762.83	MONTHLY BILL
011362	2/3/2021 UNITED WAY	E 001-005-12420 EMPLOY		\$44.00	JAN 2021
011363	2/3/2021 YOURMEMBERSHIP.COM, I	E 001-018-33100 ADVERTI	R49552981	\$434.00	JOBLIST
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-001-12400 INS/EMPL		\$30.87	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-002-12400 INS/EMPL		\$26.85	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-003-12400 INS/EMPL		\$30.91	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-004-12400 INS/EMPL		\$67.22	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-005-12400 INS/EMPL		\$37.37	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-006-12400 INS/EMPL		\$61.56	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-007-12400 INS/EMPL		\$91.30	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-008-12400 INS/EMPL		\$128.68	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-009-12400 INS/EMPL		\$45.25	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-010-12400 INS/EMPL		\$25.40	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-011-12400 INS/EMPL		\$24.24	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-015-12400 INS/EMPL		\$49.39	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-018-12400 INS/EMPL		\$223.74	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-019-12400 INS/EMPL		\$61.77	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-025-12400 INS/EMPL		\$860.03	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-026-12400 INS/EMPL		\$15.39	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-027-12400 INS/EMPL		\$22.28	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 020-016-12400 INS/EMPL		\$128.22	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 016-021-12400 INS/EMPL		\$40.28	LIFE, ADD, SHORT & LON
011364	2/4/2021 AMERICAN UNITED LIFE (L	E 001-005-12420 EMPLOY		\$1,529.84	LIFE, ADD, SHORT & LON
011365	2/4/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7209	\$170.00	DE-ICING SERVICE
011365	2/4/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7208	\$85.00	DE-ICING SERVICE
011366	2/4/2021 GIBSON TELDATA, INC.	E 001-019-31400 BUILDIN	90090	\$717.50	SERVICE CALL
011366	2/4/2021 GIBSON TELDATA, INC.	E 001-019-31400 BUILDIN	90089	\$712.50	SERVICE CALL
011367	2/4/2021 MATRIX INTEGRATION LLC	E 001-019-31500 MAINTEN	AAAQ143609	\$1,669.11	SOFTWARE MAINT.
011368	2/4/2021 STAPLES	E 001-004-21300 OFFICE S	8061062029	\$17.65	STAMP PAD REFILL

MONROE COUNTY PUBLIC LIBRARY

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Check	Search Name	Account	Invoice	Amount	Comments
011368	2/4/2021 STAPLES	E 001-018-21300 OFFICE S	8061062029	\$17.65	STAMP PAD REFILL
011369	2/10/2021 ALT & WITZIG ENGINEERI	E 030-005-31200 ENGINEE	20IN0689	\$9,650.00	SW BRANCH
011370	2/10/2021 ARTISAN ALLEY	E 019-011-31000 PERFOR		\$400.00	ROTATING MURAL PROJE
011370	2/10/2021 ARTISAN ALLEY	E 019-026-31000 PERFOR		\$100.00	ROTATING MURAL PROJE
011371	2/10/2021 AT&T (IL)	E 001-019-32100 TELEPHO	812R06136602	\$150.72	MONTHLY STATEMENT
011371	2/10/2021 AT&T (IL)	E 001-016-32100 TELEPHO	812R06136602	\$14.91	MONTHLY STATEMENT
011372	2/10/2021 BRCJ, INC.	E 030-005-31200 ENGINEE	24333	\$850.00	TOPOGRAPHIC SURVEY
011373	2/10/2021 CARMICHAEL TRUCK & AU	E 001-015-36400 VEHICLE	49989	\$460.08	BKM SERVICE
011374	2/10/2021 CITY OF BLOOMINGTON U	E 001-008-35300 WATER		\$410.93	MONTHLY STATEMENT
011374	2/10/2021 CITY OF BLOOMINGTON U	E 001-016-35300 WATER		\$40.64	MONTHLY STATEMENT
011375	2/10/2021 FIRST INSURANCE GROUP	E 001-005-34200 OTHER I		\$69,465.00	RENEW POLICY EMN 0521
011376	2/10/2021 FREEDOM BUSINESS SOL	E 001-007-21400 DUPLICA	12046	\$102.89	PRINTER CARTRIDGES
011377	2/10/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7233	\$85.00	DE-ICING
011377	2/10/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7234	\$170.00	DE-ICING
011378	2/10/2021 GOOLDY & SONS, INC.	E 001-008-31400 BUILDIN	H1778	\$50.00	ICE MACHINE SERVICE
011379	2/10/2021 MIDWEST PRESORT SERV	E 001-004-32200 POSTAG	59435	\$340.01	PICKUP DELIVERY POSTA
011380	2/10/2021 NITE OWL PROMOTIONS I	E 001-008-22800 UNIFORM	SH12489	\$853.10	SECURITY/FACILITIES SHI
011381	2/10/2021 OCLC, INC.	E 001-018-31600 COMPUT	1000099482	\$3,990.06	CATALOGING & METADAT
011381	2/10/2021 OCLC, INC.	E 001-019-31500 MAINTEN	1000098770	\$608.05	EZPROXY
011382	2/10/2021 QUILL CORPORATION	E 001-008-23100 BUILDIN	14156539	\$88.72	ICE MELT
011383	2/10/2021 SMITHVILLE COMMUNICAT	E 001-014-32100 TELEPHO		\$184.55	ELL PHONE BILL
011384	2/10/2021 STAPLES	E 001-008-23100 BUILDIN	8061230678	\$125.98	ICE MELT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 001-018-45100 BOOKS		\$2,336.77	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 001-018-45300 NONPRIN		\$222.96	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 019-018-45100 BOOKS		\$307.96	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 019-018-45100 BOOKS		\$107.71	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 019-018-45100 BOOKS		\$12.86	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 019-011-21350 GENERA		\$46.97	MONTHLY STATEMENT
011385	2/10/2021 SYNCHRONY BANK/AMAZ	E 001-018-22500 CIRCULA		\$226.41	MONTHLY STATEMENT
011386	2/10/2021 VECTREN ENERGY DELIV	E 001-014-35100 GAS		\$35.19	GAS STATEMENTS
011386	2/10/2021 VECTREN ENERGY DELIV	E 001-008-35100 GAS		\$44.41	GAS STATEMENTS
011387	2/10/2021 VERIZON WIRELESS	E 001-015-32100 TELEPHO	9872144310	\$120.03	MONTHLY STATEMENT
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-003-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-004-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-005-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-006-12400 INS/EMPL	3778	\$178.07	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-007-12400 INS/EMPL	3778	\$178.07	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-008-12400 INS/EMPL	3778	\$222.59	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-009-12400 INS/EMPL	3778	\$89.04	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-010-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-015-12400 INS/EMPL	3778	\$178.07	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-018-12400 INS/EMPL	3778	\$934.89	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-019-12400 INS/EMPL	3778	\$222.59	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-025-12400 INS/EMPL	3778	\$1,869.77	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-026-12400 INS/EMPL	3778	\$178.07	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-027-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 020-016-12400 INS/EMPL	3778	\$400.67	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 016-021-12400 INS/EMPL	3778	\$89.04	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-005-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011388	2/18/2021 ACTIVATE HEALTHCARE/C	E 001-002-12400 INS/EMPL	3778	\$44.52	APRIL 2021 CLINIC SERVI
011389	2/18/2021 AMERICAN UNITED LIFE (4	E 001-005-12420 EMPLOY		\$2,515.15	403B
011390	2/18/2021 BAKER & TAYLOR BOOKS	E 001-018-45100 BOOKS		\$5,218.31	BOOKS

MONROE COUNTY PUBLIC LIBRARY

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Check	Search Name	Account	Invoice	Amount	Comments
011390	2/18/2021 BAKER & TAYLOR BOOKS	E 019-018-45100 BOOKS		\$97.97	PR ADULT
011390	2/18/2021 BAKER & TAYLOR BOOKS	E 019-018-45100 BOOKS		\$69.92	PR CHILDRENS
011391	2/18/2021 BIBLIOTHECA, LLC.	E 001-018-38460 E-BOOKS	INV-US40406	\$3,685.35	E CONTENT
011392	2/18/2021 BLACKSTONE, IN PUBLISH	E 001-018-45300 NONPRIN	1201721	\$74.50	NONPRINT
011393	2/18/2021 B-TECH	E 001-014-31400 BUILDIN	19738	\$20.00	WEBSERVICE/DOOR REA
011393	2/18/2021 B-TECH	E 001-008-31400 BUILDIN	19733	\$100.00	WEBSERVICE/DOOR REA
011394	2/18/2021 BUNGER & ROBERTSON, L	E 001-001-31300 LEGAL S	3078	\$5,035.00	LEGAL SERVICES
011395	2/18/2021 CARMICHAEL TRUCK & AU	E 001-015-36400 VEHICLE	50032	\$623.06	BOOKMOBILE MAINT.
011396	2/18/2021 CDW GOVERNMENT, INC.	E 001-019-23000 IT SUPPL	7698586	\$83.71	LIVE STRESAMER CAM31
011397	2/18/2021 CENGAGE LEARNING INC/	E 001-018-45100 BOOKS		\$1,167.29	BOOKS
011398	2/18/2021 CENTER POINT LARGE PRI	E 001-018-45100 BOOKS	1824324	\$230.10	BOOKS
011399	2/18/2021 CENTURYLINK COMMUNIC	E 001-008-32100 TELEPHO	200306819	\$27.15	VOICE SERVICES
011399	2/18/2021 CENTURYLINK COMMUNIC	E 001-016-32100 TELEPHO	200306819	\$2.69	VOICE SERVICES
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-001-37100 REAL ES	113125	\$21.52	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-002-37100 REAL ES	113125	\$21.52	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-003-37100 REAL ES	113125	\$21.52	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-004-37100 REAL ES	113125	\$47.70	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-006-37100 REAL ES	113125	\$35.83	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-007-37100 REAL ES	113125	\$21.52	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-008-37100 REAL ES	113125	\$119.36	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-019-37100 REAL ES	113125	\$35.83	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-010-37100 REAL ES	113125	\$21.52	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-011-37100 REAL ES	113125	\$4.77	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-015-37100 REAL ES	113125	\$4.77	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-018-37100 REAL ES	113125	\$202.88	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-019-37100 REAL ES	113125	\$23.85	PARKING
011400	2/18/2021 CITY OF BLOOMINGTON G	E 001-025-37100 REAL ES	113125	\$477.41	PARKING
011401	2/18/2021 COMCAST	E 020-016-32150 CABLE T		\$38.81	MONTHLY BILL
011401	2/18/2021 COMCAST	E 001-019-32150 CABLE T		\$16.63	MONTHLY BILL
011402	2/18/2021 DEMCO SOFTWARE	E 001-019-31500 MAINTEN	INV00012705	\$1,597.18	EVANCED - SIGNUP & SP
011403	2/18/2021 DUKE ENERGY	E 001-008-35200 ELECTRI		\$19,074.37	ELECTRIC MONTHLY BILL
011403	2/18/2021 DUKE ENERGY	E 001-016-35200 ELECTRI		\$1,886.48	ELECTRIC MONTHLY BILL
011404	2/18/2021 EBSCO	E 001-018-45200 PERIODI	2104456	\$6.60	PERIODICALS
011405	2/18/2021 FERGUSON FACILITIES SU	E 001-008-22100 CLEANIN	0264758	\$875.69	CLEANING SUPPLIES
011406	2/18/2021 INDIANA CHAMBER OF CO	E 001-018-45100 BOOKS	0000473029	\$115.25	BOOKS
011407	2/18/2021 JANWAY COMPANY USA, I	E 001-018-22500 CIRCULA	A-140797	\$20.38	SUPPLIES
011408	2/18/2021 KLEINDORFER HDWE	E 001-008-23400 COVID S	657434	\$11.58	HOOKS, TAPE AND CHAIN
011408	2/18/2021 KLEINDORFER HDWE	E 001-008-23400 COVID S	657091	\$59.99	HOOKS, TAPE AND CHAIN
011409	2/18/2021 LAKESHORE	E 001-018-45300 NONPRIN	3384190121	\$66.97	JUMBO MAGNETIC LETTE
011410	2/18/2021 MATHEU ARCHITECTS, PC	E 030-005-31200 ENGINEE		\$105,492.00	NEW BRANCH PROJECT #
011411	2/18/2021 MENARDS - BLOOMINGTO	E 001-008-23400 COVID S	65335	\$319.92	ACRYLIC SHEET
011411	2/18/2021 MENARDS - BLOOMINGTO	E 001-008-23200 PAINT/PA	65335	\$64.74	DRY ERASE PAINT
011411	2/18/2021 MENARDS - BLOOMINGTO	E 001-008-23100 BUILDIN	65308	\$75.84	SALT & ICE MELT
011411	2/18/2021 MENARDS - BLOOMINGTO	E 001-008-23100 BUILDIN	65381	\$50.96	CABLE ORG BOX & CORD
011411	2/18/2021 MENARDS - BLOOMINGTO	E 001-008-23100 BUILDIN	65670	\$92.87	DUCT TAPE, BLK & YLW T
011412	2/18/2021 MIDWEST PRESORT SERV	E 001-004-32200 POSTAG	59522	\$241.09	PICKUP, DELIVERY, POST
011413	2/18/2021 MIDWEST TAPE	E 001-018-45300 NONPRIN		\$1,886.81	NONPRINT
011414	2/18/2021 NATIONAL AUDUBON SOCI	E 001-018-45200 PERIODI		\$30.00	MEMBERSHIP RENEWAL
011415	2/18/2021 NATURES WAY, INC.	E 001-008-31400 BUILDIN	51746	\$90.00	PLANT MAINTENANACE
011416	2/18/2021 OVERDRIVE	E 001-018-38460 E-BOOKS		\$20,572.45	ECONTENT
011417	2/18/2021 QUILL CORPORATION	E 001-018-21300 OFFICE S	14262931	\$14.10	STAPLES BLUE COVER S
011417	2/18/2021 QUILL CORPORATION	E 001-004-21300 OFFICE S	14262931	\$14.10	STAPLES BLUE COVER S

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Check	Search Name	Account	Invoice	Amount	Comments
011418	2/18/2021 SAMS CLUB/SYNCHRONY	E 001-008-23400 COVID S		\$93.13	MONTHLY STATEMENT
011419	2/18/2021 THOMSON REUTERS - WE	E 001-018-45100 BOOKS	843845317	\$523.33	SUBSCRIPTION CHARGES
011420	2/24/2021 ALL-PHASE ELECTRIC SUPE	E 001-008-22600 LIGHT BU	0740-1000770	\$292.00	8W LMP
011421	2/24/2021 AMERICAN HERITAGE LIFE	E 001-005-12400 INS/EMPL		\$255.32	CASE #22142
011422	2/24/2021 AT&T (IL)	E 001-019-32100 TELEPHO	812Z84926702	\$1,226.94	MONTHLY STATEMENT
011422	2/24/2021 AT&T (IL)	E 001-016-32100 TELEPHO	812Z84926702	\$121.35	MONTHLY STATEMENT
011423	2/24/2021 DISH NETWORK	E 020-016-32150 CABLE T		\$57.05	MONTHLY STATEMENT
011424	2/24/2021 ENGRAVING AND STAMP	E 001-004-21300 OFFICE S	36777	\$30.95	NOTARY
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7183	\$85.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7184	\$170.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7210	\$150.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7211	\$240.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7212	\$150.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7213	\$240.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7251	\$65.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7252	\$155.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7315	\$450.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7316	\$1,100.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7317	\$360.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-008-31500 MAINTEN	7318	\$150.00	DE-ICING AND SNOW RE
011425	2/24/2021 G & G LAWN CARE	E 001-014-31500 MAINTEN	7319	\$240.00	DE-ICING AND SNOW RE
011426	2/24/2021 GORDON FLESCH CO., INC	E 001-025-21400 DUPLICA	IN13230791	\$10.48	PRINTER READING
011427	2/24/2021 HB WAREHOUSE	E 001-008-23400 COVID S	00035977D	\$190.03	COVID CURBSIDE SERVIC
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-001-12400 INS/EMPL	2103029901	\$5.73	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-002-12400 INS/EMPL	2103029901	\$49.08	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-003-12400 INS/EMPL	2103029901	\$49.08	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-004-12400 INS/EMPL	2103029901	\$54.80	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-005-12400 INS/EMPL	2103029901	\$224.12	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-006-12400 INS/EMPL	2103029901	\$110.83	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-007-12400 INS/EMPL	2103029901	\$99.79	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-008-12400 INS/EMPL	2103029901	\$199.99	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-009-12400 INS/EMPL	2103029901	\$95.70	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-010-12400 INS/EMPL	2103029901	\$48.67	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-011-12400 INS/EMPL	2103029901	\$2.45	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-015-12400 INS/EMPL	2103029901	\$108.79	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-016-12400 INS/EMPL	2103029901	\$1.23	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-018-12400 INS/EMPL	2103029901	\$569.70	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-019-12400 INS/EMPL	2103029901	\$163.18	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-025-12400 INS/EMPL	2103029901	\$1,837.09	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-026-12400 INS/EMPL	2103029901	\$69.93	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 001-027-12400 INS/EMPL	2103029901	\$48.67	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 020-016-12400 INS/EMPL	2103029901	\$257.24	DENTAL AND VISION
011428	2/24/2021 HEALTH RESOURCES, INC	E 016-021-12400 INS/EMPL	2103029901	\$93.63	DENTAL AND VISION
011429	2/24/2021 MIDWEST PRESORT SERV	E 001-004-32200 POSTAG	59554	\$385.10	PICKUP, DELIVERY, POST
011430	2/24/2021 SIHO	E 001-001-12400 INS/EMPL	30166	\$71.73	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-002-12400 INS/EMPL	30166	\$614.87	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-003-12400 INS/EMPL	30166	\$614.87	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-004-12400 INS/EMPL	30166	\$686.60	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-005-12400 INS/EMPL	30166	\$2,807.90	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-006-12400 INS/EMPL	30166	\$1,388.58	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-007-12400 INS/EMPL	30166	\$1,250.23	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-008-12400 INS/EMPL	30166	\$2,505.59	MAR 2021 PREMIUM

MONROE COUNTY PUBLIC LIBRARY

***Paid Check Register**

Check	Search Name	Account	Invoice	Amount	Comments
011430	2/24/2021 SIHO	E 001-009-12400 INS/EMPL	30166	\$1,198.99	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-010-12400 INS/EMPL	30166	\$609.74	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-011-12400 INS/EMPL	30166	\$30.74	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-015-12400 INS/EMPL	30166	\$1,362.96	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-016-12400 INS/EMPL	30166	\$15.37	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-018-12400 INS/EMPL	30166	\$7,137.59	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-019-12400 INS/EMPL	30166	\$2,044.44	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-025-12400 INS/EMPL	30166	\$23,016.56	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-026-12400 INS/EMPL	30166	\$876.19	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 001-027-12400 INS/EMPL	30166	\$609.74	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 020-016-12400 INS/EMPL	30166	\$3,222.93	MAR 2021 PREMIUM
011430	2/24/2021 SIHO	E 016-021-12400 INS/EMPL	30166	\$1,173.38	MAR 2021 PREMIUM
011431	2/24/2021 STAPLES	E 001-008-36300 OTHER E	3469670118	\$224.99	CHAIR
011431	2/24/2021 STAPLES	E 001-008-23100 BUILDIN	3469670119	\$117.80	ICE MELT
011431	2/24/2021 STAPLES	E 001-004-21350 GENERA	3469670117	\$68.68	CORK BOARD
011432	2/24/2021 TASC	E 001-005-12420 EMPLOY	IN1973740	\$320.58	COBRA/FSA
011433	2/24/2021 U PRINTING	E 001-007-33200 PRINTIN	07734786	\$38.95	POST CARDS
011434	2/24/2021 UKG INC.	E 001-006-31700 ADMIN/A	ARINV0028504	\$52.43	1095C FORMS PRINTING
2112021	2/11/2021 GERMAN AMERICAN BANK	E 001-005-31700 ADMIN/A		\$57.68	BUSINESS ONLINE CHAR
2112021	2/11/2021 GERMAN AMERICAN BANK	E 001-005-31700 ADMIN/A		\$245.40	HRTLAND TXNS/FEES
2112021	2/11/2021 GERMAN AMERICAN BANK	E 001-005-31700 ADMIN/A		\$400.63	TSYS TXNS/FEES
Grand Total				\$1,603,814.84	

MONROE COUNTY PUBLIC LIBRARY

***Check Detail Register©**

Check #	Check Date	Vendor Name	Amount	Invoice	Comment
06600 1ST FIN/MAINSOU CKNG					
11345	02/03/21	CHASE CARD SERVICES			
E 019-025-39100		DUES/INSTITUTIONAL	\$169.00		CREDIT CARD PURCHASES
E 019-025-32400		PROFESSIONAL DEVEL	\$45.00		CREDIT CARD PURCHASES
E 001-005-37100		REAL ESTATE RENTAL/	\$106.00		CREDIT CARD PURCHASES
E 001-015-22200		FUEL/OIL/LUBRICANTS	\$338.84		CREDIT CARD PURCHASES
E 001-019-44650		IT SOFTWARE	\$50.00		CREDIT CARD PURCHASES
E 001-019-23000		IT SUPPLIES	\$38.45		CREDIT CARD PURCHASES
E 001-019-44650		IT SOFTWARE	\$80.00		CREDIT CARD PURCHASES
E 001-019-23000		IT SUPPLIES	\$92.05		CREDIT CARD PURCHASES
E 001-019-23000		IT SUPPLIES	\$50.00		CREDIT CARD PURCHASES
E 001-019-23000		IT SUPPLIES	\$75.00		CREDIT CARD PURCHASES
E 001-026-31500		MAINTENANCE CONTRA	\$96.00		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$13.12		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$28.15		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$67.32		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$47.67		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$32.11		CREDIT CARD PURCHASES
E 019-026-21350		GENERAL SUPPLIES	\$155.79		CREDIT CARD PURCHASES
E 001-026-23000		IT SUPPLIES	\$25.00		CREDIT CARD PURCHASES
E 019-010-21600		PUBLIC USE SUPPLIES	\$265.46		CREDIT CARD PURCHASES
E 019-010-21350		GENERAL SUPPLIES	\$55.15		CREDIT CARD PURCHASES
E 001-011-21300		OFFICE SUPPLIES	\$36.84		CREDIT CARD PURCHASES
E 019-011-21350		GENERAL SUPPLIES	\$54.89		CREDIT CARD PURCHASES
E 001-008-22200		FUEL/OIL/LUBRICANTS	\$52.18		CREDIT CARD PURCHASES
E 001-008-31400		BUILDING SERVICES	\$1,048.66		CREDIT CARD PURCHASES
E 001-008-23400		COVID SUPPLIES	\$234.42		CREDIT CARD PURCHASES
E 030-008-44300		OTHER EQUIPMENT	\$1,745.92		CREDIT CARD PURCHASES
E 001-018-22400		A/V SUPPLIES/CATALO	\$94.44		CREDIT CARD PURCHASES
E 001-007-33100		ADVERTISING/PUBLICA	\$293.93		CREDIT CARD PURCHASES
E 001-007-31500		MAINTENANCE CONTRA	\$365.59		CREDIT CARD PURCHASES
E 019-015-21350		GENERAL SUPPLIES	\$51.37		CREDIT CARD PURCHASES
E 001-016-44700		EQUIPMENT - CATS	\$361.57		CREDIT CARD PURCHASES
E 001-004-32200		POSTAGE	\$101.26		CREDIT CARD PURCHASES
E 001-004-32200		POSTAGE	\$124.30		CREDIT CARD PURCHASES
E 001-004-21350		GENERAL SUPPLIES	\$95.46		CREDIT CARD PURCHASES
E 019-004-32400		PROFESSIONAL DEVEL	\$49.00		CREDIT CARD PURCHASES
		Total	\$6,539.94		

06600 1ST FIN/MAINSOU CKNG \$6,539.94

Fund Summary

06600 1ST FIN/MAINSOU CKNG	
001 OPERATING	\$3,759.99
019 GIFT-FOUNDATION	\$1,034.03
030 GO BOND 2019	\$1,745.92
	\$6,539.94

TO: Monroe County Public Library – Board of Trustees
FROM: Kyle Wickemeyer-Hardy, Human Resources Manager
RE: Personnel Report
DATE March 17, 2021

Beginning Employment

- None.

Ending Employment

- Elias McDermott-Sipe, Access & Content Services, Material Handler, Pay Grade 1, 15 hours per week effective February 10, 2021.

Job Changes

- Tom Pendley, Building Services, Custodian, Pay Grade 3, 25 hours per week to Building Services Technician, Pay Grade 6, 37.5 hours per week effective February 15, 2021.

Pay Date 02.12.2021
 Pay Period 01.18.2021 to 01.31.2021

Employee Earnings Report by Pay Date

#	Fund Type	Employee Name	Status	Title	Unit
1	Operating	Bergin, Cheryl L.	A	Materials Handler	ACCESS & CONTENT
2		Bradtmiller, Amanda G.	A	Materials Handler	ACCESS & CONTENT
3		Bredemeyer, Sara A.	A	Materials Handler	ACCESS & CONTENT
4		Cagle, Alia M.	A	Materials Handler	ACCESS & CONTENT
5		Hagan, Elizabeth A.	A	Materials Handler	ACCESS & CONTENT
6		Hines, Michelle L.	A	Materials Handler	ACCESS & CONTENT
7		Horton, Samantha M.	A	Materials Handler	ACCESS & CONTENT
8		Ketring, Brittney M.	A	Materials Handler	ACCESS & CONTENT
9		Koester, William D.	A	Materials Handler	ACCESS & CONTENT
10		Kopper, Sarah E.	A	Materials Handler	ACCESS & CONTENT
11		Kowalchuk, Jason M.	A	Materials Handler	ACCESS & CONTENT
12		Lenox, Caitlin C.	A	Materials Handler	ACCESS & CONTENT
13		Marino, Steven J.	A	Materials Handler	ACCESS & CONTENT
14		McDermott-Sipe, Elias F.	T	Materials Handler	ACCESS & CONTENT
15		Moore, Dean C.	A	Materials Handler	ACCESS & CONTENT
16		Mullens, Anna M.	A	Materials Handler	ACCESS & CONTENT
17		Perry, Diva T.	A	Materials Handler	ACCESS & CONTENT
18		Polley, Elizabeth A.	A	Materials Handler	ACCESS & CONTENT
19		Rauh, Therese	A	Materials Handler	ACCESS & CONTENT
20		Ruch, Cassie M.	A	Materials Handler	ACCESS & CONTENT
21		Schrougham, Auston W.	A	Materials Handler	ACCESS & CONTENT
22		Scouten, Adam R.	A	Materials Handler	ACCESS & CONTENT
23		Smith, Karen S.	A	Materials Handler	ACCESS & CONTENT
24		Snell, Avalon M.	A	Materials Handler	ACCESS & CONTENT
25		Williams, Maxwell E.	A	Materials Handler	ACCESS & CONTENT
26		Balzer, Cynthia L.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
27		Brewington, Emily D.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
28		Cagle, Chantal G.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
29		Duneman, Katharine A.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
30		Greene, Troy J.	A	Security Technician	BUILDING SRV-SECURITY
31		Hsiao, Anna	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
32		Hutt, Margaret M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
33		Jackson, Ross A.	A	Security Technician	BUILDING SRV-SECURITY
34		Ortell, Mikayla G.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
35		Polley, Claudia M.	A	Custodian	BUILDING SRV-MAINTENANCE
36		Price, Daniel A.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
37		Purcell, Emily S.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
38		Rogers, Addison C.	A	CATS-Master Control Op	CATS
39		Shipley, Martin D.	A	Custodian	BUILDING SRV-MAINTENANCE
40		Sinex, Lucas C.	A	Information Tech Asst	INFORMATION TECHNOLOGY
41		Snider, Benjamin B.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
42		Thomas, Deborah D.	A	Custodian	BUILDING SRV-MAINTENANCE
43		Thornburg, Jonathan W.	A	Security Technician	BUILDING SRV-SECURITY
44		Weaver, William C.	A	Web Support	COMMUNICATIONS/MARKETI CM
45		Wright, Megan B.	A	Graphic Designer Spec	COMMUNICATIONS/MARKETI CM
46		Anderson, Erica A.	A	Senior Materials Handler	ACCESS & CONTENT
47		Bowman-Sarkisian, Shannoc	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
48		Clark, Craig J.	A	Senior Materials Handler	ACCESS & CONTENT
49		Hoagland, Ian M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
50		Jenness, Claire L.	A	Senior Materials Handler	ACCESS & CONTENT
51		Jenness, Lillian M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
52		Mounlio, Daniel T.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
53		Tincher, Cheryl L.	A	Custodian	BUILDING SRV-MAINTENANCE
54		Vollmar, Justin M.	A	CATS - Production Asst	CATS
55		Wise, Laura E.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
56		Lenn, Tracy M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
57		Adams, Meghan E.	A	Copy Cataloger Asst	ACCESS & CONTENT
58		Arnholter, Ellen P.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
59		Baker, Kimberly A.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
60		Baugh, Ned T.	A	Info Technology MGR	INFORMATION TECHNOLOGY
61		Blanchard, Annise D.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
62		Brown, Erica N.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA

Pay Date 02.12.2021
 Pay Period 01.18.2021 to 01.31.2021

Employee Earnings Report by Pay Date

63	Bruecks, Melissa E.	A	CoCu Assistant Manager	COMMUNITY & CUSTOMER ENGA
64	Carson, Grier E.	A	Director - Associate	ADMIN-ASSOCIATE DIRECTOR
65	Carter, Kenneth B.	A	Senior Materials Handler	ACCESS & CONTENT
66	Caswell, Amy M.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
67	Caswell, Joshua A.	A	Subject Expert	COMMUNITY & CUSTOMER ENGA
68	Champelli, Lisa M.	A	Childrens Strat	STRATEGIST-CHILDREN/ SE
69	Champion, Michael C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
70	Cheek, Jared P.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
71	Clark, Marion C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
72	Cooper, Burl	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
73	Crane, Deanna J.	A	Custodian	BUILDING SRV-MAINTENANCE
74	Dockerty, Katelynn E.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
75	Duffy, Dana R.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
76	Dunnuck, Aubrey R.	A	Visual Marketing Special	COMMUNICATIONS/MARKETI CM
77	Duszynski, Paul A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
78	Fallwell, Edwin M.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
79	Friesel, Christine E.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
80	Gesten, Joshua F.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
81	Gray, Elizabeth L.	A	Adult Strategist	STRATEGIST-ADULT/ SERVI
82	Gray, Marla S.	A	Human Resources Spec	ADMIN-HUMAN RESOURCES
83	Gray-Overtom, Paula E.	A	Web Administrator	COMMUNICATIONS/MARKETI CM
84	Green, Cheryl R.	A	Librarian Cataloger	ACCESS & CONTENT
85	Greene, Ronald	A	Custodian	BUILDING SRV-MAINTENANCE
86	Hoffman, Jennifer L.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
87	Hosler, Christopher A.	A	Program-Branch Strat	STRATEGIST-PROGRAM/B
88	Hosler, Virginia J.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
89	Hussey, Amanda L.	A	Communications/Mrkt MGR	COMMUNICATIONS/MARKETI CM
90	Jackson, Christopher B.	A	Special Audience Strat	STRATEGIST-SPECIAL AUDIEN
91	Johnson, Michael J.	A	Security Technician	BUILDING SRV-SECURITY
92	Kelly, Bruce W.	A	Maintenance Expert	BUILDING SRV-MAINTENANCE
93	Kinsler, Julia L.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
94	Leibacher, Brian J.	A	BLDS MGR	BUILDING SRV-MAINTENANCE
95	Lettelleir, Gary P.	A	MGR Finance	ADMIN-FINANCE
96	Lovings, Jacqueline D.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
97	MacDowell, Kevin S.	A	Teen/Digital Create Strat	STRATEGIST-TEENS/DC
98	Macklin, Rachel A.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
99	Martin, Loraine K.	A	Admin. Coordinator	ADMIN-BUS OFFICE
100	Matney, Jason L.	A	BLDS Asst Mgr	BUILDING SRV-MAINTENANCE
101	Mestre, Amber C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
102	Mullis, Cody H.	A	Information Tech Spec	INFORMATION TECHNOLOGY
103	Neer, Matthew M.	A	CoCu Assistant Manager	COMMUNITY & CUSTOMER ENGA
104	Niemeyer, Stephanie R.	A	Access & Content MGR	ACCESS & CONTENT
105	Ody, Martha F.	A	Librarian Selector	ACCESS & CONTENT
106	Ott, Samuel W.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
107	Overman, Roberta J.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
108	Paull, Jonathon J.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
109	Pendley, Marc T.	A	Custodian	BUILDING SRV-MAINTENANCE
110	Phillips, Amanda E.	A	Senior Materials Handler	ACCESS & CONTENT
111	Rome, M Brandon	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
112	Ruddick, Jane	A	Librarian Selector	ACCESS & CONTENT
113	Salvaggio, Elizabeth A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
114	Schwegman, Vanessa M.	A	Information Tech Analyst	INFORMATION TECHNOLOGY
115	Scott, Sarah A.	A	Graphic Designer Spec	COMMUNICATIONS/MARKETI CM
116	Sims, James L.	A	Security Technician	BUILDING SRV-SECURITY
117	Slater, Andrew R.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
118	Smith, Benjamin E.	A	Security Technician	BUILDING SRV-SECURITY
119	Sneed, Christine M.	A	Copy Cataloger Asst	ACCESS & CONTENT
120	Sowder, Christa N.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
121	Stacy, Ryan P.	A	Librarian Selector	ACCESS & CONTENT
122	Starks-Dyer, Kathleen R.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
123	Swinson, Barbara M.	A	Professional Devel Strat	STRATEGIST-PROFESSION
124	Thompson, Timothy J.	A	Acquisitions Technician	ACCESS & CONTENT
125	Todd, Hunter A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
126	Turrentine, Bethany G.	A	Vital Coordinator	COMMUNITY & CUSTOMER ENGA

Pay Date 02.12.2021
 Pay Period 01.18.2021 to 01.31.2021

Employee Earnings Report by Pay Date

127	Wallace, Pamela J.	A	Financial Assistant	ADMIN-FINANCE
128	White, Pamela K.	A	Acquisitions Specialist	ACCESS & CONTENT
129	Wickemeyer-Hardy, Kyle A.	A	MGR Human Resources	ADMIN-HUMAN RESOURCES
130	Wolf, Joshua	A	CoCu MGR	COMMUNITY & CUSTOMER ENGA
131	Wood, Marilyn D.	A	Director	ADMIN - DIRECTOR

Sub-Total Operating Fund **\$168,571.69** **7,749.00**

	Fund Type	Employee Name	Status	Title	Unit
1	Special	Arena, Nile J.	A	CATS-Master Control Op	CATS
2	Revenue	Muyskens-Toth, Casey L.	A	CATS-Master Control Op	CATS
3		Torneo, Samuel J.	A	CATS-Master Control Op	CATS
4		Horton, Israel H.	A	CATS - Production Asst	CATS
5		Miller, Thomas J.	A	CATS - Production Asst	CATS
6		Noel, Jarrett A.	A	CATS - Production Asst	CATS
7		Adams, Michael D.	A	CATS - Production Asst	CATS
8		Burns, Michael F.	A	FL Bookstore Oper	FRIENDS OF THE LIBRARY
9		ONeill, Martin	A	CATS Asst Mgr Production	CATS
10		Regoli, Mary Jean	A	FOL Office Manager	FRIENDS OF THE LIBRARY
11		Stillwell, Adam A.	A	CATS Asst Mgr Program	CATS
12		Stockwell, Robert R.	A	CATS Equip Oper Expert	CATS
13		Walter, David P.	A	CATS - Production Asst	CATS
14		White, Michael B.	A	CATS General MGR	CATS
		Sub-Total Special Fund		18916.77	876.5
		Grand Total		187488.46	8625.5

Pay Date 02.26.2021
 Pay Period 02.01.2021 to 02.14.2021

Employee Earnings Report by Pay Date

#	Fund Type	Employee Name	Status	Title	Unit
1	Operating	Bergin, Cheryl L.	A	Materials Handler	ACCESS & CONTENT
2		Bradtmiller, Amanda G.	A	Materials Handler	ACCESS & CONTENT
3		Bredemeyer, Sara A.	A	Materials Handler	ACCESS & CONTENT
4		Cagle, Alia M.	A	Materials Handler	ACCESS & CONTENT
5		Hagan, Elizabeth A.	A	Materials Handler	ACCESS & CONTENT
6		Hines, Michelle L.	A	Materials Handler	ACCESS & CONTENT
7		Horton, Samantha M.	A	Materials Handler	ACCESS & CONTENT
8		Ketring, Brittney M.	A	Materials Handler	ACCESS & CONTENT
9		Koester, William D.	A	Materials Handler	ACCESS & CONTENT
10		Kopper, Sarah E.	A	Materials Handler	ACCESS & CONTENT
11		Kowalchuk, Jason M.	A	Materials Handler	ACCESS & CONTENT
12		Lenox, Caitlin C.	A	Materials Handler	ACCESS & CONTENT
13		Marino, Steven J.	A	Materials Handler	ACCESS & CONTENT
14		McDermott-Sipe, Elias F.	T	Materials Handler	ACCESS & CONTENT
15		Moore, Dean C.	A	Materials Handler	ACCESS & CONTENT
16		Mullens, Anna M.	A	Materials Handler	ACCESS & CONTENT
17		Perry, Diva T.	A	Materials Handler	ACCESS & CONTENT
18		Polley, Elizabeth A.	A	Materials Handler	ACCESS & CONTENT
19		Rauh, Therese	A	Materials Handler	ACCESS & CONTENT
20		Ruch, Cassie M.	A	Materials Handler	ACCESS & CONTENT
21		Schrougham, Auston W.	A	Materials Handler	ACCESS & CONTENT
22		Scouten, Adam R.	A	Materials Handler	ACCESS & CONTENT
23		Smith, Karen S.	A	Materials Handler	ACCESS & CONTENT
24		Snell, Avalon M.	A	Materials Handler	ACCESS & CONTENT
25		Williams, Maxwell E.	A	Materials Handler	ACCESS & CONTENT
26		Balzer, Cynthia L.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
27		Brewington, Emily D.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
28		Cagle, Chantal G.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
29		Duneman, Katharine A.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
30		Greene, Troy J.	A	Security Technician	BUILDING SRV-SECURITY
31		Hsiao, Anna	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
32		Hutt, Margaret M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
33		Jackson, Ross A.	A	Security Technician	BUILDING SRV-SECURITY
34		Ortell, Mikayla G.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
35		Polley, Claudia M.	A	Custodian	BUILDING SRV-MAINTENANCE
36		Price, Daniel A.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
37		Purcell, Emily S.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
38		Rogers, Addison C.	A	CATS-Master Control Op	CATS
39		Shipley, Martin D.	A	Custodian	BUILDING SRV-MAINTENANCE
40		Sinex, Lucas C.	A	Information Tech Asst	INFORMATION TECHNOLOGY
41		Snider, Benjamin B.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
42		Thomas, Deborah D.	A	Custodian	BUILDING SRV-MAINTENANCE
43		Thornburg, Jonathan W.	A	Security Technician	BUILDING SRV-SECURITY
44		Weaver, William C.	A	Web Support	COMMUNICATIONS/MARKETI CM
45		Wright, Megan B.	A	Graphic Designer Spec	COMMUNICATIONS/MARKETI CM
46		Anderson, Erica A.	A	Senior Materials Handler	ACCESS & CONTENT
47		Bowman-Sarkisian, Shannoc	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
48		Clark, Craig J.	A	Senior Materials Handler	ACCESS & CONTENT
49		Ellis, William P.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
50		Hoagland, Ian M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
51		Jenness, Claire L.	A	Senior Materials Handler	ACCESS & CONTENT
52		Jenness, Lillian M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
53		Mounlio, Daniel T.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
54		Tincher, Cheryl L.	A	Custodian	BUILDING SRV-MAINTENANCE
55		Vollmar, Justin M.	A	CATS - Production Asst	CATS
56		Wise, Laura E.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
57		Lenn, Tracy M.	A	Information Assistant	COMMUNITY & CUSTOMER ENGA
58		Adams, Meghan E.	A	Copy Cataloger Asst	ACCESS & CONTENT
59		Arnholter, Ellen P.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
60		Baker, Kimberly A.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
61		Baugh, Ned T.	A	Info Technology MGR	INFORMATION TECHNOLOGY
62		Blanchard, Annise D.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA

Pay Date 02.26.2021
 Pay Period 02.01.2021 to 02.14.2021

Employee Earnings Report by Pay Date

63	Brown, Erica N.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
64	Bruecks, Melissa E.	A	CoCu Assistant Manager	COMMUNITY & CUSTOMER ENGA
65	Carson, Grier E.	A	Director - Associate	ADMIN-ASSOCIATE DIRECTOR
66	Carter, Kenneth B.	A	Senior Materials Handler	ACCESS & CONTENT
67	Caswell, Amy M.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
68	Caswell, Joshua A.	A	Subject Expert	COMMUNITY & CUSTOMER ENGA
69	Champelli, Lisa M.	A	Childrens Strat	STRATEGIST-CHILDREN/ SE
70	Champion, Michael C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
71	Cheek, Jared P.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
72	Clark, Marion C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
73	Cooper, Burl	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
74	Crane, Deanna J.	A	Custodian	BUILDING SRV-MAINTENANCE
75	Dockerty, Katelynn E.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
76	Duffy, Dana R.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
77	Dunnuck, Aubrey R.	A	Visual Marketing Special	COMMUNICATIONS/MARKETI CM
78	Duszynski, Paul A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
79	Fallwell, Edwin M.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
80	Friesel, Christine E.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
81	Gesten, Joshua F.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
82	Gray, Elizabeth L.	A	Adult Strategist	STRATEGIST-ADULT/ SERVI
83	Gray, Marla S.	A	Human Resources Spec	ADMIN-HUMAN RESOURCES
84	Gray-Overtoom, Paula E.	A	Web Administrator	COMMUNICATIONS/MARKETI CM
85	Green, Cheryl R.	A	Librarian Cataloger	ACCESS & CONTENT
86	Greene, Ronald	A	Custodian	BUILDING SRV-MAINTENANCE
87	Hoffman, Jennifer L.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
88	Hosler, Christopher A.	A	Program-Branch Strat	STRATEGIST-PROGRAM/B
89	Hosler, Virginia J.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
90	Hussey, Amanda L.	A	Communications/Mrkt MGR	COMMUNICATIONS/MARKETI CM
91	Jackson, Christopher B.	A	Special Audience Strat	STRATEGIST-SPECIAL AUDIEN
92	Johnson, Michael J.	A	Security Technician	BUILDING SRV-SECURITY
93	Kelly, Bruce W.	A	Maintenance Expert	BUILDING SRV-MAINTENANCE
94	Kinser, Julia L.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
95	Leibacher, Brian J.	A	BLDS MGR	BUILDING SRV-MAINTENANCE
96	Lettelleir, Gary P.	A	MGR Finance	ADMIN-FINANCE
97	Lovings, Jacqueline D.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
98	MacDowell, Kevin S.	A	Teen/Digital Create Strat	STRATEGIST-TEENS/DC
99	Macklin, Rachel A.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
100	Martin, Loraine K.	A	Admin. Coordinator	ADMIN-BUS OFFICE
101	Matney, Jason L.	A	BLDS Asst Mgr	BUILDING SRV-MAINTENANCE
102	Mestre, Amber C.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
103	Mullis, Cody H.	A	Information Tech Spec	INFORMATION TECHNOLOGY
104	Neer, Matthew M.	A	CoCu Assistant Manager	COMMUNITY & CUSTOMER ENGA
105	Niemeyer, Stephanie R.	A	Access & Content MGR	ACCESS & CONTENT
106	Ody, Martha F.	A	Librarian Selector	ACCESS & CONTENT
107	Ott, Samuel W.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
108	Overman, Roberta J.	A	Community Librarian	COMMUNITY & CUSTOMER ENGA
109	Paull, Jonathon J.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
110	Pendley, Marc T.	A	Custodian	BUILDING SRV-MAINTENANCE
111	Phillips, Amanda E.	A	Senior Materials Handler	ACCESS & CONTENT
112	Rome, M Brandon	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
113	Ruddick, Jane	A	Librarian Selector	ACCESS & CONTENT
114	Salvaggio, Elizabeth A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
115	Schwegman, Vanessa M.	A	Information Tech Analyst	INFORMATION TECHNOLOGY
116	Scott, Sarah A.	A	Graphic Designer Spec	COMMUNICATIONS/MARKETI CM
117	Sims, James L.	A	Security Technician	BUILDING SRV-SECURITY
118	Slater, Andrew R.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
119	Smith, Benjamin E.	A	Security Technician	BUILDING SRV-SECURITY
120	Sneed, Christine M.	A	Copy Cataloger Asst	ACCESS & CONTENT
121	Sowder, Christa N.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
122	Stacy, Ryan P.	A	Librarian Selector	ACCESS & CONTENT
123	Starks-Dyer, Kathleen R.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA
124	Swinson, Barbara M.	A	Professional Devel Strat	STRATEGIST-PROFESSION
125	Thompson, Timothy J.	A	Acquisitions Technician	ACCESS & CONTENT
126	Todd, Hunter A.	A	Senior Information Asst	COMMUNITY & CUSTOMER ENGA

Pay Date 02.26.2021
 Pay Period 02.01.2021 to 02.14.2021

Employee Earnings Report by Pay Date

127	Turrentine, Bethany G.	A	Vital Coordinator	COMMUNITY & CUSTOMER ENGA
128	Wallace, Pamela J.	A	Financial Assistant	ADMIN-FINANCE
129	White, Pamela K.	A	Acquisitions Specialist	ACCESS & CONTENT
130	Wickemeyer-Hardy, Kyle A.	A	MGR Human Resources	ADMIN-HUMAN RESOURCES
131	Wolf, Joshua	A	CoCu MGR	COMMUNITY & CUSTOMER ENGA
132	Wood, Marilyn D.	A	Director	ADMIN - DIRECTOR
Sub-Total Operating Fund			\$169,798.24	7,805.50

	Fund Type	Employee Name	Status	Title	Unit
1	Special	Arena, Nile J.	A	CATS-Master Control Op	CATS
2	Revenue	Muyskens-Toth, Casey L.	A	CATS-Master Control Op	CATS
3		Torneo, Samuel J.	A	CATS-Master Control Op	CATS
4		Horton, Israel H.	A	CATS - Production Asst	CATS
5		Miller, Thomas J.	A	CATS - Production Asst	CATS
6		Noel, Jarrett A.	A	CATS - Production Asst	CATS
7		Adams, Michael D.	A	CATS - Production Asst	CATS
8		Burns, Michael F.	A	FL Bookstore Oper	FRIENDS OF THE LIBRARY
9		ONeill, Martin	A	CATS Asst Mgr Production	CATS
10		Regoli, Mary Jean	A	FOL Office Manager	FRIENDS OF THE LIBRARY
11		Stillwell, Adam A.	A	CATS Asst Mgr Program	CATS
12		Stockwell, Robert R.	A	CATS Equip Oper Expert	CATS
13		Walter, David P.	A	CATS - Production Asst	CATS
14		White, Michael B.	A	CATS General MGR	CATS
Sub-Total Special Fund			\$19,149.53	875.25	
Grand Total			\$188,947.77	8,680.75	

2021 BOARD OF TRUSTEE'S CALENDER

All meetings held in the Main Library Room 1B at 5:45pm unless otherwise noted

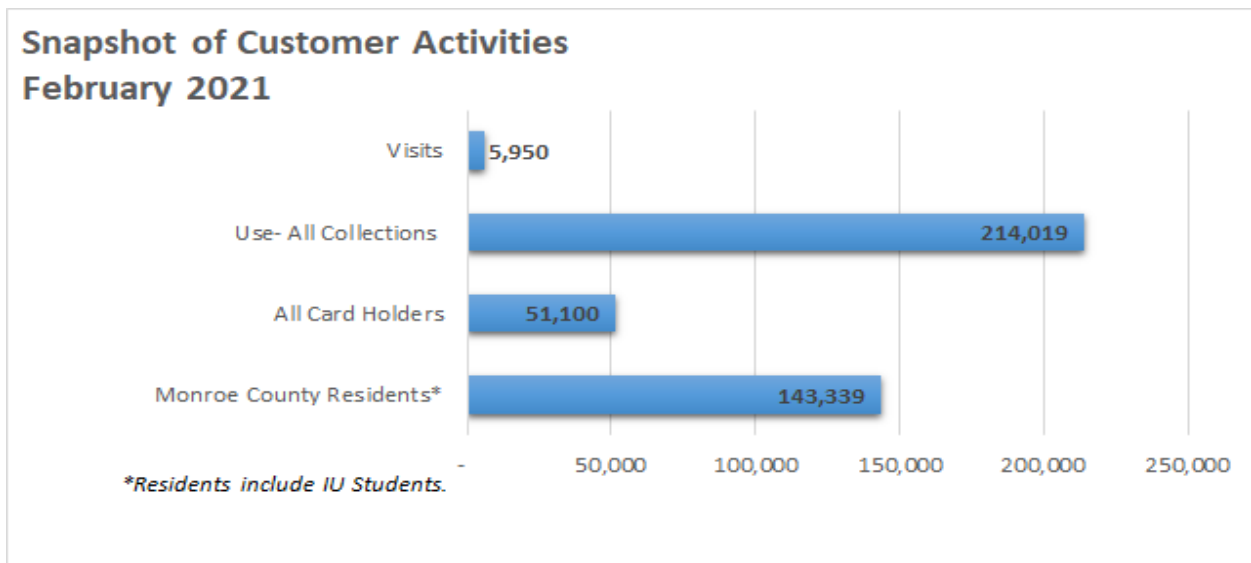
Month	Date	Meeting Type	Potential Topics
January	13	Work Session*	
January	20	Board Meeting	Budget line-item transfers; officer slate approved; Conflict of Interest forms; Update: Communications & Marketing
January	20	Board of Finance	Review Investment Report and Policy
February	10	Work Session*	
February	17	Board Meeting	Election of Board Officers; Update: Professional Development Strategist and Pioneer Grant Recipients; annual report review
March	10	Work Session*	
March	17	Board Meeting	Review Long Range Strategic Plan; Update: Teen Services
April	14	Work Session*	
April	21	Board Meeting	Update: Information Technology
May	12	Work Session*	
May	19	Board Meeting	Update: Children's Services
June	9	Work Session*	
June	16	Board Meeting	Update: Programming and Branch Services
July	14	Work Session*	
July	21	Board Meeting	Draft 2022 Budget; Update: Community Engagement & VITAL
August	11	Work Session*	
August	18	Board Meeting	Review any revisions to 2022 Budget, Approve 2022 Budget for advertising; Update: Special Audience Services
September	8	Work Session* Ellettsville Branch Library	
September	15	Board Meeting	2022 Budget; Update: Building Services
September	15	Public Hearing	Public Hearing on 2022 Budget
October	13	Work Session*	
October	20	Board Meeting	Adopt 2022 Budget; approve 2022 employee insurance package; Update: Adult Services
November	10	Work Session*	
November	17	Board Meeting	Update: Access & Content Services; review Internet and Computer Use Policy,
December	8	Work Session*	
December	15	Board Meeting	Approve 2022 salary schedule, Pay Schedule(dates), director's salary; 2022 Holiday & Closing Schedule; CATS contracts, Fee schedule; El Centro Contract; Update: CATS

*Work session dates are placeholders. Meetings are held only as needed.



Director’s Report for February 2021

The Main Library and Ellettsville Branch reopened facilities to onsite browsing and technology use on February 22. The renovated Drive Up Window reopened February 25. The overall visitor count was 5,950 for the week. Customers retrieved 146,103 digital collection items (a daily average of 5,217 items) and checked out or renewed 67,916 physical items (a daily average of 2,426 items) during the month. 5,203 unique individuals checked out an item and 6,228 unique users have checked out an item so far in 2021, 12% of the Library’s total card holder population, which decreased by 728 individuals. The library added 3,083 items to the collection and deleted 3,093 items.



550 attendees enjoyed one of 56 live virtual programs, and 15 attended one offsite program sponsored by the Library. There were 325 views of seven different video programs on our YouTube channel. During the week the buildings were open to the public, patrons used the Library’s computers for 666 sessions, approximately 95 per day, for a total of 405 hours.

Monroe County Public Library Strategic Direction 2021-2023

Our Mission: Monroe County Public Library strengthens our community and enriches lives by providing equitable and impartial access to information and opportunities to read, learn, connect, and create.

Goal 1: Provide free and equitable access to information, materials, and services

- Curbside pickup of materials went smoothly throughout most of February. The transition to in-person browsing has increased circulation of physical materials dramatically. In February, Materials Handlers ran 58,500 items through the sorter - 16,155 of those were Holds. Cart turnaround time/reshelving has remained steady around 48 hours, even as the number of returns has increased.
- Senior Materials Handlers continued an ongoing Inventory project to ensure all physical materials are accurately shelved and represented in the online catalog.
- ACS created an official *Library of Things* collection for the catalog to ensure consistent and convenient access to our *things* which include Adult and Juvenile Book Club Kits, Toys, Plug-in Energy Monitors, Calculators, Hotspots, and more.

Media coverage included:

- [The Herald-Times published this article](#) on 1/30/21 on our Winter Hiking Club.
- [WTIU/WFIU published this article](#) on 2/2/21 on the Library restart.
- [The Indiana Daily Student published this article](#) on 2/2/21 on the Library restart.
- [The Herald-Times published this article](#) on 2/3/21 on the Library restart.
- WFHB's local news [interviewed Mandy Hussey on 2/3/21](#) regarding the Library restart.
- [The weekly Herald-Times "At the Library" article was published](#) on 2/4/21, featuring the Library restart, Northstar Learning basic computer skills help, and this week's events.
- The [IDS published an article on 2/10](#) featuring our Lunar New Year initiatives.
- The [Ellettsville Journal published an article on 2/10](#) on the Library's restart.
- The weekly [Herald-Times "At the Library" article was published on 2/11/21](#), featuring the Bookstore reopening and upcoming events. The Ellettsville Journal is now publishing a portion of these columns on the Wednesday of the following week.
- The weekly [Herald-Times "At the Library" article was published on 2/18/21](#), featuring restart information and upcoming events.
- [The 2/19 South Central Indiana News Network "What's Happening" podcast](#) featured Marilyn Wood and Kevin MacDowell talking about reopening and the new Southside branch. The segment starts at 13:22 in.
- [This 2/22 article from WTIU/WFIU](#) features Library restart information.
- [This 2/22 IDS article](#) included the Library's closure due to a water main break.
- [This 2/22 Herald-Times article](#) featured the Library's closure due to a water main break.
- [The weekly Herald-Times "At the Library" article was published on 2/25/21](#), featuring the Bookstore opening, and this week's events.

Newsletters:

- MCCSC, The Project School, [RBB](#), [HAND](#), Ellettsville Chamber, Bloomington Chamber, and Downtown Bloomington all included info on the library restart in their weekly newsletters.
- [A newsletter went out on 1/31](#) featuring February events.
- [A newsletter went out on 2/3](#) regarding the Library restart.
- [A newsletter went out on 2/20](#) regarding the Library restart.
- [A newsletter went out on 2/22](#) regarding the water main-related closure at Main.

- [A newsletter went out on 2/24](#) regarding 2/25's inaccessible parking situation at Main.

Website updates:

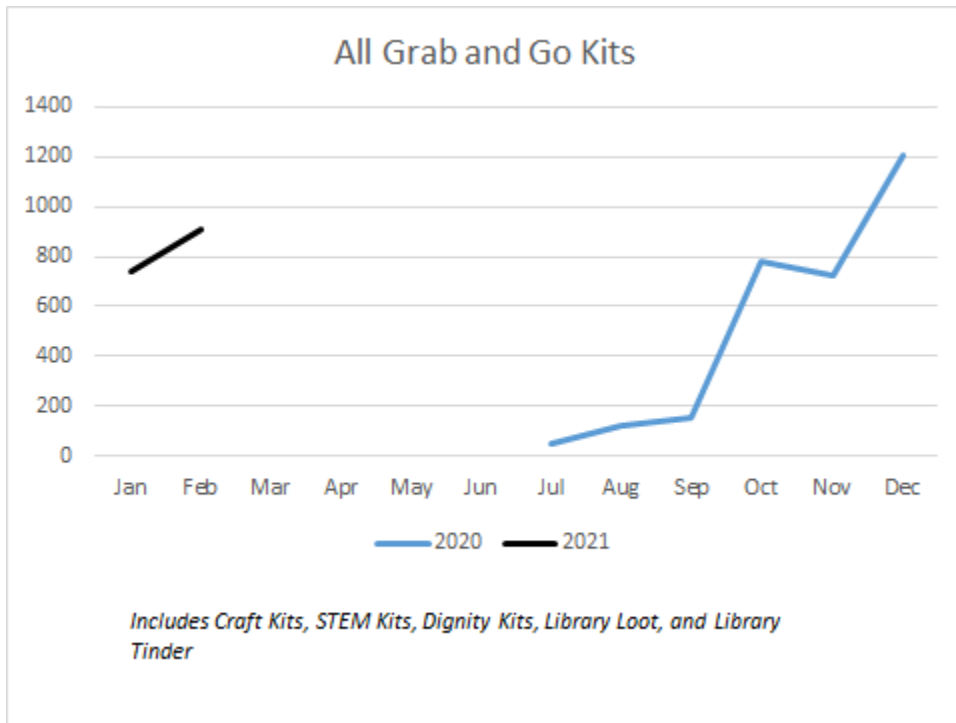
- A new banner alert was added to our website to showcase COVID-related services and other important news.
- The website was updated to include information about the Library restart. The drive-up pickup webpage was renamed "Contactless Pickup" with an increased emphasis that patrons may walk, bike, or drive up to the window.
- The featured eLibrary resource for February was Freegal. During February there was an 18.32% increase in Freegal clicks over January.
- Featured staff picks lists were centered around Black History Month. Titles from these lists received 4,697 clicks.
- Website views had an increase of 2.39% from last month, excluding the library catalog views and is down 12.20% from February of last year. Catalog usage is down 3.22% from last month and down 37.80% from last year. Our most popular pages for February were the Library home page, Curbside Pickup by Appointment, Library Restart pages, the Obituary Index, eBooks eLibrary, Hours and Locations, and How to Use the Dewey Decimal System.
- Notable increases in traffic included the Friends Virtual Bookstore, Black History Bingo, and Coffee with Friends.
- A new 3D-printing giveaway web page went live on Monday, February 1. 82 people entered the contest.
- Google ad campaigns had an 18.8% increase this month. Notable clicks were titles in the catalog, Lynda, job and career training, and vaccination information. 2020 data shows that 92% of users responding to Google ad campaigns are new to our website. The ad grant currently contributes 9% of total web traffic and 10% of new visitors.

Social Media updates:

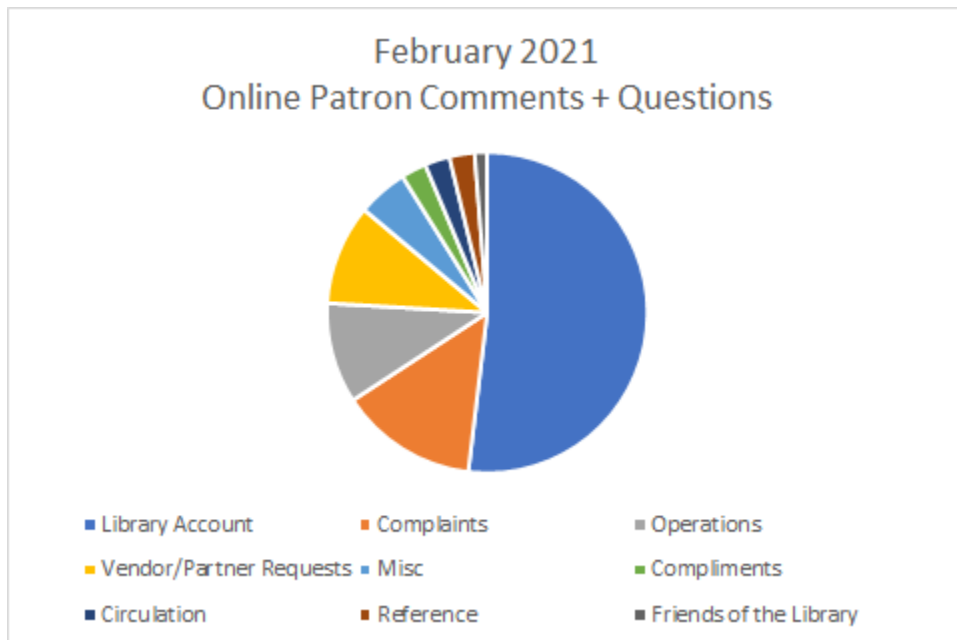
- Unsurprisingly, February's biggest posts were all about reopening. We gained 81 followers on Facebook, a very good number. Many of the new followers came from paid boosted posts sent to local area zip codes (beyond our own followers). We did paid ads for Black History Month Bingo, reopening, and started one for contactless pickup. An announcement about our water main-related closures was our biggest performer, followed by a post about the IU Family Engineering Kits.
- On Instagram, our most popular posts were also about reopening. We were more active on Instagram stories this month, with weather-related stories receiving well above-average views.
- YouTube watch time was up slightly, while views were down slightly from last month. Our most popular videos this month were all older, including [Painting Weatherproof Pots](#), [DIY Bleached Shirt Art](#), and three older fingerplays. Most views are coming from YouTube and Google searches. The most popular recent programs were [Getting Dressed: Virtual Storytime](#), and [Coffee with Friends with James Madison](#).
- Twitter stats nearly doubled this month. Our top tweets of the month were a video book review, and a tweet about our new vaccine registration station. Also, though this was technically tweeted on 1/31, Twitter counted [this patron shoutout as our top mention for February](#).
- On our new LinkedIn account, we had 135 page views and gained 15 followers for a total of 449. Our most engaging page updates were about our 2020 accomplishments, a reopening announcement from the beginning of the month, and a share of [the blog post by our Bloomington North intern](#). As our free job posting, we shared the Benefits and Payroll Coordinator position, which had 3 apply clicks and 56 views.
- We get two free posts on our Nextdoor pages per month. In February we posted about our reopening date and our "Everyone Has a Story Reading" challenge to both our Main and Ellettsville pages, reaching

over 300 people. We also added banners to both Nextdoor pages and a gallery of photos to the Ellettsville Branch page. We hope to build our reach ability here.

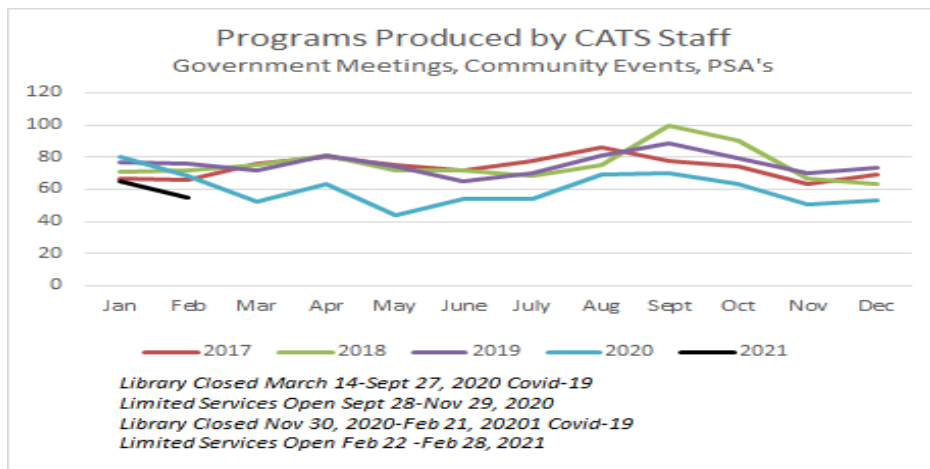
- Community members are able to discover a variety of engaging Take and Make kits when they visit the Library, as well as at various Little Free Libraries around town. Hundreds of kits helping children celebrate Lunar New Year, create little owls and perform seed experiments have been shared with children and their caregivers, along with a kit that included the materials and instructions for making a worry doll. This kit included information about the custom of sharing your worries with the doll before you go to bed so that the doll can help you sleep worry-free.



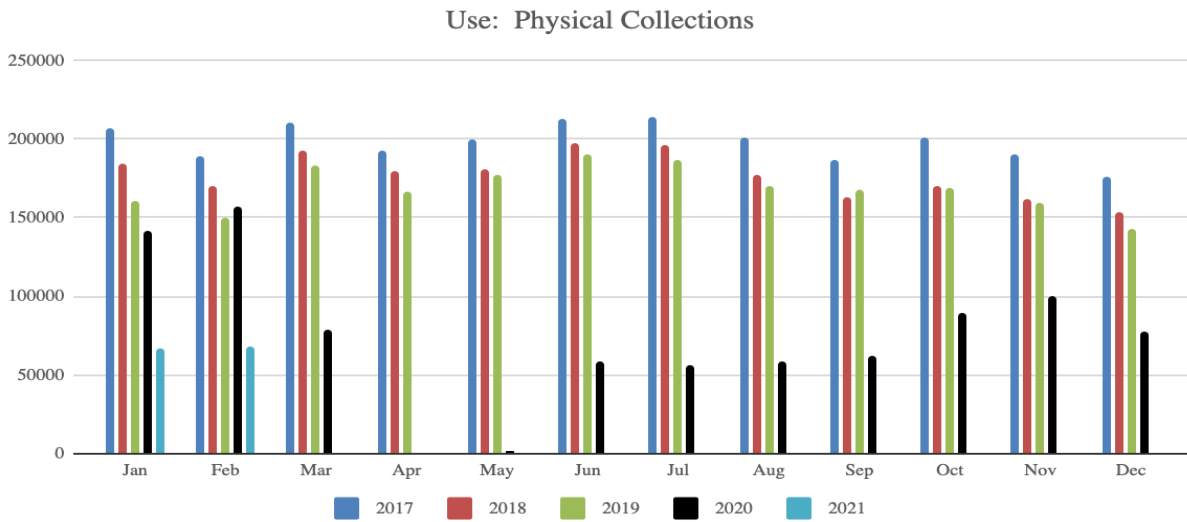
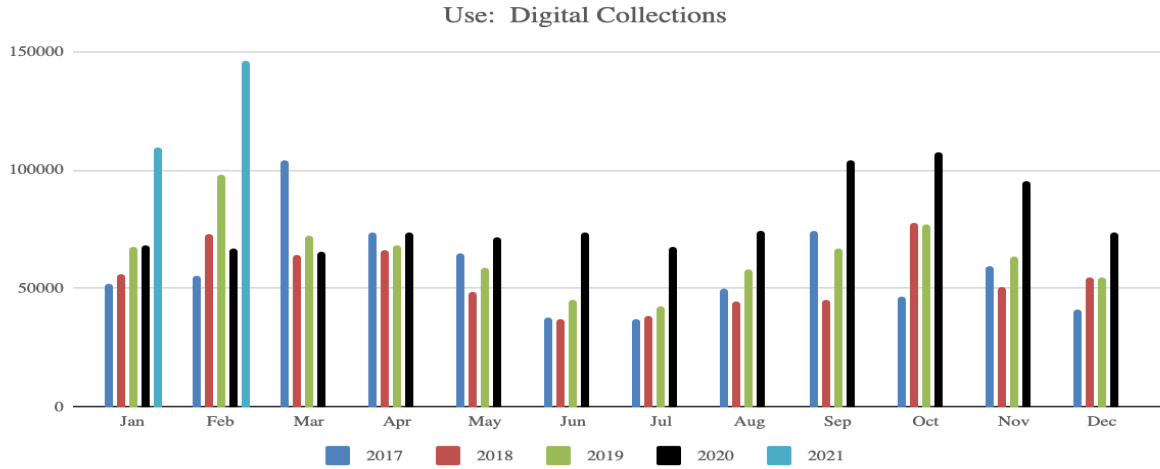
Online Patron Comments and Questions



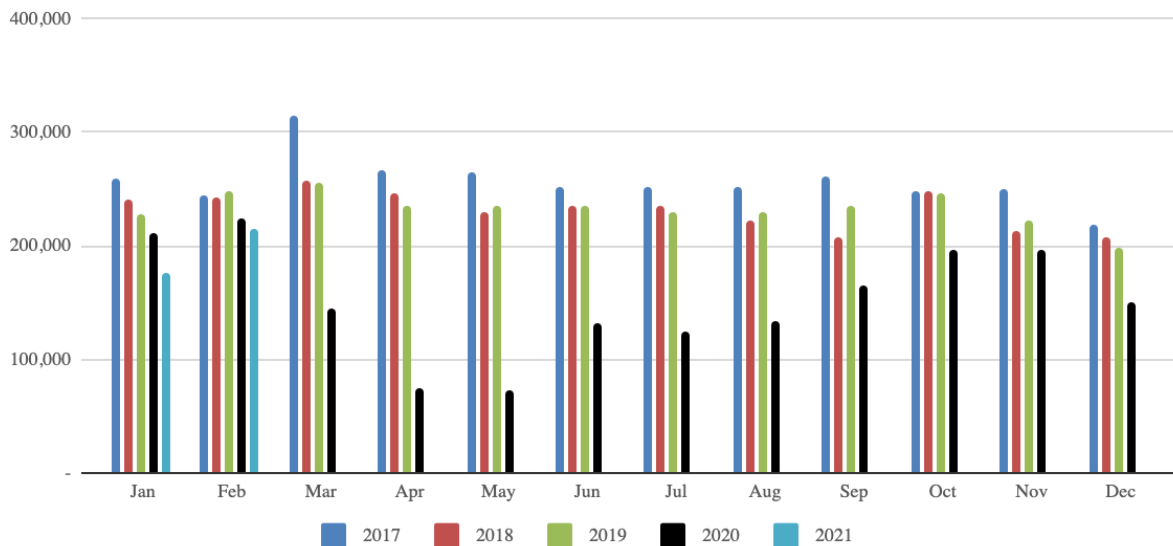
- The majority of comments and questions related to patron library accounts (~41), such as holds, claimed returned items, damaged materials, replacement fees, etc. More complaints than usual for those concerned about the library’s limited services reopening on February 22nd (~11). Operations came next (~8) regarding general inquiries about reopening procedures, tax services, the Indiana Room, and STEM programming. Increase in vendor inquiries regarding virtual programming and publisher/author promotions (~8). Miscellaneous inquiries followed with questions about internships, the Children’s area flooring, and media requests (~4). Circulation regarding e-resources on the New York Times (~2) and reference questions (~2). Compliments on reopening and book list offerings (~2). One question about donations to the Friends of the Library Bookstore.
- In February, CATS once again featured lots of timely government meetings, celebrated Black History Month and continued to work on the digitization of the CATS collection for tapeless playback. In addition to the 55 meetings produced during the month, CATS staff recorded four new episodes of the joint CATS-WFHB news round-up, CATSweek, and two new episodes of Pets Without Partners, produced in conjunction with the Bloomington Animal Shelter. Additionally, CATS was there for production of the State of the Black Community, the Monroe County Women’s Commission, the League of Women Voters Legislative Update, the Monroe County Board of Health, as well as the State of the City Address from Mayor John Hamilton.
- CATS worked with the Neal-Marshall Black Culture Center to digitize and share programs from the CATS collection in celebration of Black History Month. CATS has been able to cover IU African American Arts Ensembles for many years, including; the IU African American Choral Ensemble, the IU African American Dance Company and the IU Soul Revue. Many recordings of these ensemble’s annual Spring Concerts were played throughout the month of February, including several performances of the annual Potpourri of the Arts, a concert that features performances from all three of the renowned IU groups together each Fall from the Buskirk-Chumley Theater.
- CATS held meetings during the month with representatives from Monroe County government and an outside vendor to discuss plans for proposed renovations to the Nat U. Hill Room of the Monroe County Courthouse. Upgrades are long overdue, and will address audio issues in the room and for the purposes of CATS recording. Equipment purchases will potentially include gear for CATS recording on site, such as new cable runs and a new switcher. Everyone at the County is also working to incorporate virtual participation in the post-pandemic meeting environment. CATS staff were able to lend some insight based on lessons learned from working to incorporate a virtual component within live MCPL Board of Trustees meetings. Renovations are expected to begin this summer and be completed later this year.



Goal 2: Support reading, lifelong learning, technological literacy, and other essential life skills



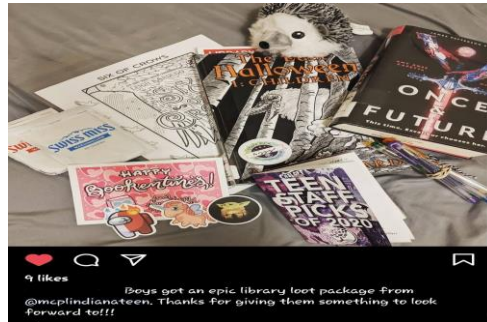
Use: All Collections



- Digital collection use was at an all-time high in February 2021 with resources like CLCD (Children’s Literature Comprehensive Database), Freegal, Hoopla, Herald Times Online, Lynda, and Overdrive (Indiana Digital Media consortium) reporting some of their highest use.
- Overdrive (Indiana Digital Media consortium) recently absorbed RBDigital so our e-magazines are all available through Overdrive now, and with this merger MCPL is able to provide access to about 3,000 more magazine titles.
- Katelynn Dockerty, the Senior Information Assistant who co-coordinates our Homebound program, reports that a patron new to service ends every phone call by telling her how grateful they are to be able to access books again and that, for them, the service is “lifesaving.”
- Librarian Erica Brown coordinated “A Study of 4 Beers.” Amanda Korvack from Switchyard Brewing explained the 5 S’s of tasting to lead patrons in experiencing four beers. The 33 participants also asked questions about the beers and about the brewing process. There was an unexpected addition of people watching at the Switchyard tasting room. People as far away as California joined this virtual program.
- Attendees of the “Winter Hiking Club” enjoyed virtually discussing their experiences at Porter West Preserve and other Sycamore Land Trust hikes throughout Monroe County.
- VITAL English language groups continue to grow, with seven sessions offered weekly during the month of February. The newest session is a Media Club, where learners practice both traditional and media literacy skills. This program supports receptive language skills (listening to podcasts, watching documentaries, and reading the news) as well as expressive language skills (discussions of media bias, analyzing messages, and writing opinions). Highlights from Distance Tutoring Activities:
 - Learner started speaking English at home with her kids.
 - Her reading comprehension, conversation, and comfort speaking English have ALL increased.
 - “We are learning vocabulary needed to go to doctor and having baby. We do some study in American culture too.”
- The Northstar Online Learning program now offers self-paced online courses for learning and improving basic computer skills. A patron commented “I’d like to take a short course or two on how to navigate my

MAC computer. I'm tired of feeling uneducated when it comes to technology". VITAL staff assist with creating Northstar accounts and helping patrons navigate digital learning resources.

- Teen Librarians Sam Ott, Jen Hoffman, and Macklin, along with SIA Lizzy Salvaggio, oversaw a Bookentine themed run of Library Loot. It continues to be one of our more popular programs and most of the participants chose to have multiple books, so the changes we made are proving popular.
- TDC staff created a Teen Staff Picks of 2020 zine, featuring 23 book and graphic novel recommendations from nine staff members. The zine is available in print at Ellettsville and the Main Library, and a digital version is up on the Teen Downloads page of the website. Special thanks to Edwin for the design and layout of the zine!
- We received this email from a patron about Library Loot: "I picked up the loot bag yesterday and Lauren was thrilled! She loved the Playaway choices and all the extra goodies. Thank you so much!!"
- An Instagram post @mcplindianateen was tagged in: "Boys got an epic library loot package from @mcplindianateen. Thanks for giving them something to look forward to!!!"



- [The Everyone Has a Story](#) reading challenge continued in February to highlight our need for diverse people and stories. Since its launch on January 15, 168 readers have enrolled in the challenge, which helps participants discover both books and short video profiles of people from different races and life experiences. Participants are asked to share a brief response describing something they learned from a book they read or video they watched. Some of responses include:
 - "I watched Stacey Abrams TedTalk. And I learned that people don't let people in to places they want/need to go to. And I learned that people judged people on their actions and movements and skin. I learned that you can't judge people no matter what. Even if they are different."
 - I read: [La Frontera, My Journey with Papa](#) by Devorah Mills, Alfredo Alva, and Claudia Navarro. I learned how it must be to sleep in a field or on a hard rock and scary it must be to be homeless.
 - I watched Grace Lin's TedTalk, "I learned that I need to have books that are windows AND mirrors, ones that look like you and ones that don't look like you."
 - I would like people to know that I am not white but I want to be treated the same way as white people.
 - I watched Audrey Mason-Hyde's TedTalk and I learned how every time I assume someone's gender I could be hurting them by accident instead of making them feel better about themselves.
 - I read the book [George](#) by Alex Gino. I learned that the gender you identify as doesn't always match the body you are born with.
- Community members picked up a bingo card at the Library, or downloaded it from the website, to receive suggestions for different ways to celebrate Black History Month, including: Use World Book for Kids to find a painting, poem, or song from the Harlem Renaissance; Watch "Martin's Big Words" by Doreen Rappaport on Hoopla; Watch a PBS Kids Talk episode on race and racism. Several families completed the bingo and claimed a small prize.
- Twelve children attended the "Love Monster Plushie" program presented by Librarian Kim Baker via Zoom to learn how to complete the plushie, using a whip and chain stitch, and how to attach safety eyes.

Individuals who couldn't attend the program were able to gain information from a blog posting Kim created on hand sewing which included an instructional video and a downloadable pdf pattern.

- Librarians continue to present weekly storytime programs via Zoom for infants and toddlers and their caregivers, preschoolers and school-age children. Participants express appreciation for the opportunity to engage with the Librarians and other children.

Library Volunteer Management Program:

- Loraine Martin, the Library's Administrative and Volunteer Coordinator has been working on various aspects of coordinating volunteer engagement. We continue to have active volunteering both within the Friends of the Library Bookstore, as well as in VITAL. Loraine is currently working on limited, remote volunteering that is project-based.

She is engaged with the IT and Communications and Marketing unit staff on the continued development of a volunteer database, which includes a refined application process and presence on the Library's website. A tremendous amount of effort has gone into this project that will streamline data reporting and management of the Library's volunteer program. Loraine is also working with the library on ways to recognize volunteers during National Volunteer Week/Month in April.

Loraine is working with Kevin MacDowell on the library's ACE Community Partnership through Indiana University's Center for Innovative Teaching and Learning. Together they will oversee the new ACE student that will be assigned to the library for four years. She also continues to supervise an intern from Bloomington High School North along with Bara Swinson. She continues to serve in her role as Library staff liaison on Friends of the Library (FOL) Bookstore Committee regarding volunteers and Bookstore operations. Active recruitment is in process for volunteers needed this summer.

- Loraine remains the primary coordinator of the Nonprofit Alliance (NPA) of Monroe County's (supported by the United Way of Monroe County and the Community Foundation of Bloomington and Monroe County) monthly outreach meetings. The February meeting focused Virtual Engagement that featured speakers from Hoosier Hills Food Bank and WonderLab on fundraising and educational online events for nonprofits.

Goal 3: Facilitate and promote inclusive, diverse, and respectful dialogue in safe and welcoming spaces

- The Library makes regular deliveries to all the Head Start classrooms in the county, tailoring them to the requests of individual teachers. There are typical topics like seasons, emotions, colors, shapes and numbers. But we have also fulfilled recent requests for preschool books that specifically address single black mothers, transgendered parents, transgendered children, coping with the loss of a pet, celebrations of adoption and new siblings, and splitting time between divorced parents.
- Members of the IU Asian Culture Center collaborated with Children's Services to host a virtual Lunar New Year program, helping children and families learn about this holiday and some of its traditions and customs. The program included both a blog posting featuring a video from an IUACC member demonstrating how to make dumplings and an interactive Zoom event, attended by more than 45 people. The Zoom event featured short videos of a song and a dance prepared by students and teachers from the Bloomington Chinese School, a reading of the legend of the Chinese Zodiac, and a demonstration of how to make paper lanterns and gift envelopes. Before the program concluded, participants took the opportunity to unmute themselves and ask questions or share information in the chat. 100 community members also enjoyed the Lunar New Year Take and Make kit, prepared by Librarian Kim Baker.

- “QueerTalk” attendees spent two meetings discussing the book *In the Dream House* by Carmen Maria Machado. Librarian Annise Blanchard led the discussions about the memoir which details the author’s abusive same-sex relationship.

Goal 4: Adapt and respond to community and partner needs

- Despite the challenges 2020 posed, the Library staff pivoted and creatively focused on new ways to serve our community. [An annual accomplishments document was created to showcase this.](#)
- While we have not been able to provide direct patron service at the Monroe County Correctional Center due to the pandemic, we are still there three days a week curating mini-book collections for each cell block that are then delivered by Jail staff. And we can still fulfill individual title and genre requests. These come to us through typical intra-jail channels, but also through other service agencies working with incarcerated individuals.
- Librarian Annise Blanchard dropped off 25 dignity kits, and 5 pizzas donated by Pizza X for Beacon residents. They also delivered five pizzas and 22 books to the Beacon isolation center, pizzas provided by Avers who called the Library when a large order wasn’t picked up, knowing that the Library would be happy to transport them to Beacon.
- The MCPL Indiana Teen Instagram hit 600 followers as of March 1st. Instagram and Discord are our primary platforms to reach teens during the pandemic, so it’s nice to see our number of followers continue to grow.
- In response to a request from a local school counselor seeking recommended books for children on social and emotional health topics, Librarians Kim Baker and Ginny Hosler developed new booklists, available on the Library’s website. The counselor remarked: “ This is great, thank you so much! I'll be putting them all on hold in the upcoming months.”
- Children’s Services also has started featuring books on social and emotional health topics as part of an ongoing display in the children’s area at the Main Library.
- In support of the IU School of Education’s Family Engineering program, the Library helped distribute 3 different types of kits supplied by the program to 20 different families. Caregivers use the materials included in the kits to spend time making and building with their school-age children and learning about design concepts and problem-solving skills. The kits come complete with an instructional guide, and a companion video.
- Children’s and Teen Services responded to a request for community support for Artisan Alley’s [Rotating Mural Project](#) with a \$500 sponsorship made possible by the Friends of the Library support. The project aims to combine student talents with professional direction and provide quality art that will be visible to everyone in Bloomington. The Library’s sponsorship will support creation of a mural representing the mission of the Library that will be displayed in local schools and businesses.



MONROE COUNTY PUBLIC LIBRARY
SOUTHWEST BRANCH
Design Development

10 March 2021

MATHEU ARCHITECTS, P C

205 N. College Ave, Suite 010

Bloomington, IN 47404

Tel. 812 339 1235

www.matheuarchitects.com



TABLE OF CONTENTS

INTRODUCTION	3
LIBRARY SERVICES & SPACE PROGRAM	
<i>Indoor Spaces</i>	7
<i>Outdoor Spaces</i>	19
PROJECT DESCRIPTION	
<i>Site/Civil Design</i>	21
<i>Architectural Design</i>	27
<i>Structural Design</i>	31
<i>Mechanical, Electrical, and Plumbing Design</i>	35
CODE SUMMARY	49
DESIGN DEVELOPMENT DRAWINGS	53
<i>Site/Civil</i>	
<i>Architectural</i>	
DESIGN DEVELOPMENT PROJECT COST ESTIMATE	60
PROJECT SCHEDULE	62
APPENDIX	64
<i>Appendix 'A': Interior Finishes and Architectural Product Information</i>	66
<i>Appendix 'B': Site Furnishings Product Information</i>	80
<i>Appendix 'C': Mechanical, Electrical, and Plumbing Equipment Information</i>	88



MONROE COUNTY PUBLIC LIBRARY

SOUTHWEST BRANCH

Design Development

INTRODUCTION

The Design Development phase of the Monroe County Public Library Southwest Branch builds on information presented at the completion of the Schematic Design phase in November 2020.

Since the completion of the Schematic Design, MCPL has purchased land for the new branch library from the Monroe County Community School Corporation. The newly purchased land parcel is located on Gordon Pike at the southwest corner of the Monroe County Community Schools Batchelor Middle School property. Monroe County is currently re-designing Gordon Pike in this area to accommodate a new roundabout at the juncture of South Clearview Drive and the Batchelor Middle School entry drive. The new Branch will be located east of the roundabout.

The new Branch faces Gordon Pike, capitalizing on the Branch as a public resource for the Monroe County community which may be accessed from all directions. The site slopes down from the west to the east, and there are large parcels of trees to the north and east ends of the property. Access to the property is from the Batchelor Middle School entry drive. The building is located at the east side of a surface parking area and, taking advantage of the 15' drop in elevation from the west to east ends of the building, a parking garage is located on the lower level of the library.

The main level of the two-story library facility provides space for most library services. A parking garage, storage, and utilities spaces are located on the lower level. The garage contributes to environmental sustainability by reducing the quantity of surface parking and by limiting the extent of tree removal. The garage also offers sheltered parking for Library patrons and Library vehicles.

Through the exploration of various design strategies and through discussions with MCPL Director Marilyn Wood and the MCPL Building Committee, the design team has developed site, building, and engineering design for the Design Development phase of the project.

The Design Development phase includes the following documents: site/civil, architectural, structural, mechanical, electrical, and plumbing engineering drawings; an interior finishes board; and a report with an updated space program, narrative descriptions of the architectural and

engineering approaches to the project, a code summary, and an updated project schedule. A project cost estimate prepared by Blundall Associates, Inc. is submitted under separate cover.

Following the review and approval of the Design Development, the Architect and Engineers will move directly into the Construction Documents phase in preparation for bidding the project at the end of July 2021.

PROJECT REPRESENTATIVES

The Monroe County Public Library Southwest Branch project team is composed of the following dedicated Library representatives, professional architects, engineers, and consultants:

Monroe County Public Library

Board of Trustees

President: John A. Walsh
Vice President: Christine Harrison
Treasurer: David L. Ferguson
Secretary: Kari Esarey
Fred Risinger
Katherine E. Loser
Jaime Burkhart

Branch Review and Design Team

Ned Baugh	Grier Carson
Lisa Champelli	Elizabeth Gray
Christine Harrison	Christopher Hosler
Mandy Hussey	Chris Jackson
Brian Leibacher	Kevin MacDowell
Macklin	Christa Sowder
Joshua Wolf	Marilyn Wood

Architect and Consultant Team

Architect:

MATHEU ARCHITECTS, PC
205 N. College Ave., Suite 010
Bloomington, IN 47404

Structural Engineer:

LYNCH, HARRISON & BRUMLEVE, INC
550 Virginia Ave.
Indianapolis, IN 46203

Cost Consultant:

BLUNDALL ASSOCIATES, INC.
7223 Engle Road, Suite 215
Fort Wayne, IN 46804

Civil Engineer:

BLED SOE RIGGERT COOPER JAMES
1351 W. Tapp Rd.
Bloomington, IN 47403

Mechanical, Electrical & Plumbing Engineers

CIRCLE DESIGN GROUP, INC.
9229 Delegates Row, Suite 150
Indianapolis, IN 46240

Code Consultant:

RTM CONSULTANTS
6640 Parkdale Place, Suite 'J'
Indianapolis, IN 46254

LIBRARY SERVICES AND SPACE PROGRAM

Based on information gathered from the Monroe County community, the Monroe County Library staff, and from library planning resources, Matheu Architects has prepared and updated the Southwest Branch Space Program. The Space Program reflects a user service area population of 50,000 and services typically offered to a service area this size, and then customized to meet specific preferences identified by MCPL for the southwest County. The net and gross square feet indicated below coordinates with the size of spaces on the floor plans.

INDOOR SPACES

SPACE	QTY	NSF/UNIT	TOTAL NSF
FIRST FLOOR			
1 ENTRY			
1.1 ENTRY VESTIBULE			123
a. Double set of automatic sliding glass doors			
1.2 ENTRY RECEPTION LOBBY			735
a. Seating			
b. Art display wall			
c. Tack surface for notices			
d. Display case			
e. Book drop-off			
f. Acknowledgement plaque			
<i>Services:</i>			
- Informal conversation/waiting area			
- Library orientation			
- Book drop-off			
1.3 WHEELCHAIR PARKING			<u>67</u>
a. Space for storing 1 – 2 wheelchairs & 1 roll-a-tor			
TOTAL ENTRY NET ASSIGNED AREA			925
<hr/>			
2 SERVICE AREA			
2.1 PUBLIC SERVICE DESK			<u>816</u>
a. Mobile service desks: circulation, assistance, reference, & checkout: 3 @ 80 sf			
b. Staff printer			
c. Self- checkout stations: two (2)			
d. Public access printing/copy area:			
- Work counter w/tabletop printer/scanner & photocopier			
e. Book holds:			
- Shelving: 5 frames @ 36" W x 12" D x 72"H (4 Shelves)			

SPACE	QTY	NSF/UNIT	TOTAL NSF
PUBLIC SERVICE DESK, Cont'd:			
f. Browsing, new books, popular materials & overflow adult collection overflow:			
- Face out shelving:			
12 frames @ 36" W x 12" D x 48"H (3 Shelves)			
- Standard shelving:			
6 frames @ 36"W x 12"D x 60" (4 shelves)			
g. Lounge seating: four (4) @ 35 sf			
h. Public access computer station: two (2)			
i. Digital orientation monitor			
j. Acknowledgement plaque			
TOTAL SERVICE AREA NET ASSIGNED AREA			816
<hr/>			
3 MEETING ROOMS			
3.1 LARGE PROGRAM/MEETING ROOM			1,443
a. Stackable Seating for 100 @ 15 sf			
b. Operable partition to divide space in two			
c. Powered projection screen			
d. Flip-top training tables - twenty (20)			
e. Multi-level lighting			
f. Windows for natural light & outdoor viewing			
g. Powered blackout roller shades			
<i>Services:</i>			
- Community meetings			
- Computer training & internet safety classes			
- Health & wellness programs			
- Financial literacy programs			
- Public presentations, performances & movies			
- Social services programs			
<i>Note:</i>			
- Locate to allow access after-hours.			
- Locate restrooms nearby & accessible during restricted access.			
- Zone for moderate/loud noise level.			
- Locate near Teaching Kitchen			
3.2 LARGE PROGRAM/MEETING ROOM STORAGE			131
a. Lockable storage for flip top tables, stackable chairs, lectern			
<i>Note:</i>			
- Access from Program/Meeting Room			
3.3 LARGE PROGRAM/MEETING ROOM RECEPTION LOBBY			814
a. Lounge Seating: 12 @ 35 sf			
b. Picture rail for hanging temporary exhibits			

SPACE	QTY	NSF/UNIT	TOTAL NSF
3.3 LARGE PROGRAM/MEETING ROOM RECEPTION LOBBY, Cont'd			
<u>Services:</u>			
- Spill-out space for events			
- Temporary Exhibit gallery			
- Informal gathering			
- Lounge seating			
<u>Note:</u>			
- Locate to access Large Program/Meeting Room and restrooms.			
- Restrict access to rest of building after-hours.			
- Zone for moderate/loud noise level.			
3.4 INDIVIDUAL CONFERENCE/STUDY ROOMS	2	126	252
a. Table and seating for four (4) @25 sf per person			
b. Consider removable glass partitions			
c. Wall monitor, personal laptop & headphones plug-in			
<u>Services:</u>			
- Social services referral			
- Job interviews			
- Studying and tutoring			
<u>Note:</u>			
- Locate near Adult Collections.			
- Zone for moderate noise level.			
3.5 MID-SIZE CONFERENCE ROOM			425
a. Table & seating for twelve (12) @ 25 sf per person			
b. Marker board, smart board, and/or wash-off wall paint			
c. Wall monitor, personal laptop & headphones plug-in			
<u>Services:</u>			
- Adult literacy programs			
- Job search training			
- Community meetings			
- Collaborative meetings			
<u>Note:</u>			
- Zone for moderate noise level.			
- Locate near Adult Collections			
3.6 MID-SIZE CONFERENCE ROOM STORAGE			<u>18</u>
TOTAL MEETING ROOMS NET ASSIGNED AREA			3,083

SPACE	QTY	NSF/UNIT	TOTAL NSF
4 TEACHING KITCHEN			
4.1 TEACHING KITCHEN			<u>585</u>
a. 3-compartment sink			
b. Hand washing sink			
c. Residential appliances by Owner: refrigerator, freezer, two (2) cooktops with exhaust hoods, double wall oven, dishwasher, microwave			
d. Teaching island 34" high with quartz countertop, overhead angled mirror, two (2) monitors, lockable base cabinets on one side and space for four (4) stools on the other side.			
e. Food pantry cabinet			
f. Two (2) four-top tables & chairs			
g. 34" High counter w/lockable lower cabinets and stainless countertop			
h. WIFI			
i. Open stainless shelves			
<i>Services:</i>			
- Program/Meeting Room support			
- Cooking classes – adults, teens, and children			
- STEAM activities			
- Health & wellness nutrition programs			
- Community gathering			
<i>Note:</i>			
- Locate adjacent to Program/Meeting Room.			
- Zone for moderate sound.			
- Locate vending machines nearby in corridor			
- Smooth washable ceiling, floor, countertops to meet Board of Health requirements			
- Dimmer to provide flexible lighting			
- Trash & recycling receptacles			
TOTAL TEACHING KITCHEN NET ASSIGNED AREA			585
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5 ADULT COLLECTIONS AND SERVICES			
5.1 PUBLIC COMPUTING			717
a. Public Access Computer Stations: 20 @ 35 sf			
b. Public Printer Station @ 25 sf			
5.2 COLLECTIONS			
a. Frames: 211* @ 36"W X 12"D X 60"H (4 Shelves) w/48"W Aisle Adult Fic, Adult NF, Adult GN/MNG, Adult LP, Adult BOCD, Adult PLWY, Adult DVD, Adult VG, Adult CD, Ref., Periodicals, Library of Things			3,017
<i>*Note:</i>			
See Seating & Study Area, Entry Lobby for additional frame locations.			

SPACE	QTY	NSF/UNIT	TOTAL NSF
5.3 COLLECTIONS SEATING & STUDY AREA			779
a. Lounge Seating: 9 @ 35 sf			
b. Study Tables – 1 Person: 4 @ 35 sf			
c. Study Tables – 4 Person: 2 @ 100 sf			
5.4 SEATING & STUDY AREA			150
a. Frames: 5 @ 36"W x 12"D x 60"H (4 shelves)			
b. Lounge Seating: 4 @ 35 sf			
5.5 ATRIUM TIERED SEATING & STUDY AREAS			522
a. Study Tables – 1 Person: 7 @ 35 sf			
b. Study Tables – 4 Person: 1 @ 100 sf			
c. Lounge seating: 1 @ 35 sf			
5.6 QUIET ROOM			478
a. Lounge Seating: 10 @ 35 sf			
b. Study Tables – 1 Person: 6 @ 35 sf			
TOTAL ADULT COLLECTIONS & SERVICES NET ASSIGNED AREA			5,663

6 ALL AGES COLLABORATION

6.1 COLLABORATIVE MAKER SPACE & LEARNING SPACE			806
a. Tall worktable and stools for six (6) @ 25 sf: 150 sf			
b. Sink counter with upper and lower cabinets: 48 sf			
c. Lockable tools and material supply storage cabinet: 20 sf			
d. Flat file paper storage cabinet: 20 sf			
e. Standard height table and seating for six (6) @ 25 sf: 150 sf			
- Smart board and/or monitor			
f. Write-off board: 10 sf			
g. Equipment:			
- Copy machine: 24 sf			
- 3-D Printer: 24 sf			
- Ellison die cut machine and laminator: 12 sf			
h. Public access computers and seating for (4) @ 35 sf: 140 sf			
i. Lounge seating for six (6) @ 30 sf: 120 sf			
j. Bar height counter and seating for (4) @ 18 sf: 72 sf			
k. One (1) game table and seating for two (2) @ 25 sf: 100 sf			

Services:

- STEAM activities & programs
- Maker space activities
- Arts and Crafts
- 3-D printing
- Collaborative learning
- Small business support center
- Hobby clubs
- Game hub
- Co-working

SPACE	QTY	NSF/UNIT	TOTAL NSF
6.1 COLLABORATIVE MAKER SPACE & LEARNING SPACE, Cont'd:			
<u>Note:</u>			
- Zone for moderate noise level.			
6.2 STORAGE ROOM			34
TOTAL ALL AGES COLLABORATION SPACE NET ASSIGNED AREA			840

7 CHILDREN'S COLLECTION AND SERVICES

7.1 INFANTS/PRE-K COLLECTION: 919

- a. Frames: 35* @ 35"W x 11 ½"D x 48"H (3 Shelves) w/48" Aisle
BBs, EJ Fic, EJ NF
- b. Lounge seating
 - Inter-generational seating: 3 @ 30 sf
 - Rocking chair: 1 @ 35 sf
- c. Youth floor seating: 8 @ 8 sf
- d. Pre-K four-place tables: 2 @ 80 sf
- e. Imaginative play/story telling/group area @ 125 sf
- f. Computer stations: 2 @ 35 sf
- g. Service desk: 1 @ 35 sf

Services:

- Imaginative play
- Pre-K story time & programs
- Parent/child shared reading
- Infants programs
- Inclusive children's programs
- Inter-generational programs

Note:

- *42 frames preferred if space available
- Zone for moderate to loud sound level.
- Soft lighting.
- Natural light.

7.2 JUVENILE COLLECTION 1,267

- a. Frames: 76* @ 35"W x 11 ½"D x 48"H (3 Shelves) w/48" Aisle
J VG, J CD, J LNCPD
- b. Lounge seating: 3 @ 20 sf
- c. Youth two-place table @ 40 sf
- d. Youth four-place table @ 80 sf
- e. Computer station – four person @ 80 sf
- f. Program/group activity area @ 110 sf

SPACE	QTY	NSF/UNIT	TOTAL NSF
7.2 JUVENILE COLLECTION, Cont'd: <u>Services:</u> - Inclusive children's programs - Inter-generational programs - STEAM programs - Computing - Group activities/learning - Independent & shared reading <u>Note:</u> - *86 frames preferred if space available - Zone for moderate to loud sound level. - Locate computers in less visible area. - Natural light.			
7.3 CHILDREN'S PROGRAM ROOM a. Lockable storage cabinets/closets b. Powered projection screen c. Stackable seating for 30 @ 15 sf d. (5) flip-top tables e. Windows for natural light & outdoor viewing f. Multi-level lighting g. Powered combo black-out and light filter roller shades h. Sink & counter <u>Services:</u> - Children's programs - Story time - Children's activities <u>Note:</u> - Available to others when not used for children's programs - Zone for loud noise level. - Locate adjacent to or near Children's Room.			460
7.4 CHILDREN'S STORAGE ROOM	2	26	52
<u>Note:</u> - Access from Children's Program/Multi-Purpose Room			
7.5 NURSING ROOM a. Indirect soft lighting b. Lounge chair			58
7.6 STROLLER, COATS, BOOTS, AND BACKPACK STORAGE a. Coat and backpack wall pegs at two heights b. Open space for strollers c. Bench for putting on jackets, shoes			158

SPACE	QTY	NSF/UNIT	TOTAL NSF
7.7 CHILDREN'S RESTROOM			<u>57</u>
a. Drop-down changing table			
TOTAL CHILDREN'S NET ASSIGNED AREA			2,971

8 TEEN COLLECTION AND SERVICES

8.1 YOUNG ADULT COLLECTION & ACTIVITY AREA: 932

- a. Frames: 18 @ 36"W X 12"D X 60"H (4 Shelves) w/48"W Aisle
- b. Public computers: 4 modular computer/study tables w/chairs @ 80 sf
- c. Lounge seating: 6 @ 30 sf: 180 sf
- d. Counter seating: 2 @ 120 sf: 240 sf
- e. Sink counter with base cabinets & upper open shelving
- f. Gaming area @ 150 sf
 - Tiered seating for 6 & chairs for 4
 - Wall monitor
- g. Service desk @ 35 sf
- h. Maker Space @ 230 sf
 - Bar height table and stools for 4 @ 25 sf: 100 SF
 - Sink counter with upper & lower storage cabinets @ 60 sf
 - Supply storage cabinet @ 10 sf
 - Paper supply storage @ 10 sf

Services:

- Hanging- out
- STEAM/maker space activities
- Gaming
- Reading/studying
- Group collaboration
- Computing/ tech training/internet literacy
- After school clubs
- Presentations & performances
- Virtual reality programs/camp
- Volunteering opportunities
- Homework help

Note:

- Zone for moderate to loud noise level.
- Natural light.

8.2 TEEN MEETING ROOM			<u>185</u>
a. Conference table & chairs/bench for 6			
b. Wall monitor			
c. Marker board			
d. Lounge seating: 2 @ 25 sf: 50 sf			
TOTAL TEENS NET ASSIGNED AREA			1,117

SPACE	QTY	NSF/UNIT	TOTAL NSF
9 STAFF			
9.1 ADMINISTRATIVE OFFICE			148
a. L-Shape desk with task chair			
b. File cabinet			
c. Small conference table with three (3) chairs			
<i>Note:</i>			
- Provide window for view to Public Service Area			
9.2 OPEN STAFF WORK AREA			726
a. Desk, task chair, and space for 2 carts: 5 @ 64 sf			
b. Counter with upper & lower storage shelves @ 32 sf			
<i>Note:</i>			
- Locate with easy access to Service Desk.			
- Locate adjacent to Materials Processing.			
9.3 MATERIALS PROCESSING			160
a. Exterior window return, but not drive-up			
b. Interior window return			
c. Automated book return and sorting equipment			
d. Storage shelving			
<i>Services:</i>			
- Collection materials processing			
<i>Note:</i>			
- Locate adjacent to Open Staff Work Area			
- Locate adjacent to Book Cart Parking			
- Provide access to Lobby			
- Prevent views of Work Staff Area from return windows			
- Zone for moderate noise level			
9.4 BOOK TRUCK PARKING			57
a. Book carts: 12 @ 8 sf			
9.5 SUPPORT/STORAGE			26
a. Counter w/upper & lower storage cabinets			
9.6 GENERAL STORAGE			9
9.7 STAFF LOUNGE			319
a. Serving counter with sink, base & upper cabinets, microwave, refrigerator/freezer: 48 sf			
b. Table & chairs: 2 four-place tables @ 25 sf per person: 200 sf			
c. Lounge seating: 4 @ 30 sf: 120 sf			
d. Tack surface			
e. Windows for views & natural light			

SPACE	QTY	NSF/UNIT	TOTAL NSF
9.7 STAFF LOUNGE, Cont'd:			
<u>Services:</u>			
- Break space for staff			
- Informal staff meeting space			
<u>Note:</u>			
- Locate remotely from public building areas.			
- Zone for quiet to moderate sound level.			
9.8 STAFF ENTRY/LOCKERS			70
a. Lockers: 8 (includes 2 for volunteers) double stack @ 3 sf: 12 sf			
9.9 STAFF RESTROOM			<u>53</u>
<u>Note:</u>			
- Locate near Staff Lounge			
TOTAL STAFF NET ASSIGNED AREA			1,568
<hr/>			
10 SUPPORT SPACES			
10.1 PUBLIC RESTROOMS	2	232	464
a. Men			
b. Women			
<u>Note:</u>			
- Accessible when library is closed			
- Locate near Large Program/Meeting Room			
10.2 FAMILY/UNISEX RESTROOM			63
<u>Note:</u>			
- Accessible when library is closed			
- Locate near Large Program/Meeting Room			
10.3 CUSTODIAL STORAGE			48
a. Mop sink with mop hangars			
b. Storage shelving			
10.4 CUSTODIAL/WATER HEATER CLOSET			23
a. Storage shelving			
<u>Note:</u>			
- Locate near Restrooms			
10.5 STAFF/DELIVERY ENTRY VESTIBULE			64
a. Double exterior doors			
10.6 SHORT TERM STORAGE ROOM			41
a. Short term storage			
b. Trash/Recycling Area			

SPACE	QTY	NSF/UNIT	TOTAL NSF
10.6 SHORT TERM STORAGE ROOM, Cont'd:			
<i>Services:</i>			
- Temporary storage of 'in-transit' circulating materials			
- Temporary supply storage			
<i>Note:</i>			
- Locate for easy access from delivery drop-off			
10.7 ELEVATOR LOBBY			<u>97</u>
TOTAL SUPPORT NET ASSIGNED AREA			<u>800</u>
TOTAL FIRST FLOOR NET ASSIGNED AREA			18,368
NON-ASSIGNED STRUCTURE & CIRCULATION @ 13.4%			<u>2,846</u>
TOTAL FIRST FLOOR GROSS SQUARE FEET AREA			21,214
<hr/>			
LOWER LEVEL			
11 LOWER LEVEL ENTRY			
11.1 ENTRY VESTIBULE			188
11.2 ELEVATOR LOBBY			137
11.3 LOWER LEVEL FOYER			<u>118</u>
TOTAL LOWER LEVEL ENTRY NET ASSIGNED AREA			<u>443</u>
<hr/>			
12 OPERATIONS SUPPORT SPACES			
12.1 NETWORK TECHNOLOGY WORK ROOM			180
a. Worktable			
b. WIFI access controls			
12.2 MAINTENANCE OFFICE			178
a. Desk and task chair			
b. Storage shelving			
c. Bookcase			
12.3 LIBRARY STORAGE ROOM			496
12.4 MECHANICAL ROOM			219
12.5 ELECTRICAL ROOM			181
12.6 ELEVATOR MACHINE ROOM			44
12.7 STORAGE ROOM			257
a. Short term storage			
b. Trash/Recycling Area			

SPACE	QTY	NSF/UNIT	TOTAL NSF
12.8 SMALL STORAGE ROOM			80
12.9 BOILER ROOM			<u>102</u>
TOTAL OPERATIONS SUPPORT SPACES NET ASSIGNED AREA			1,737
<hr/>			
13 PARKING			
13.1 PARKING			<u>15,361</u>
Total of 41 spaces:			
a. Visitor parking: 37 spaces			
b. ADA vehicle parking: 2 spaces			
c. Library van parking: 1 space			
d. Maintenance vehicle parking: 1 space			
 <i>Note:</i>			
- Provide automatic garage door.			
- Provide natural light openings with security grilles.			
TOTAL PARKING NET ASSIGNED AREA			<u>15,361</u>
<hr/>			
TOTAL LOWER LEVEL NET ASSIGNED AREA			17,541
NON-ASSIGNED STRUCTURE & CIRCULATION @14%			<u>2,894</u>
TOTAL LOWER LEVEL GROSS SQUARE FEET AREA			20,435
<hr/>			
TOTAL FIRST FLOOR & LOWER LEVEL NET ASSIGNED AREA			35,909
NON-ASSIGNED STRUCTURE & CIRCULATION @ 13.7%			<u>5,740</u>
TOTAL FIRST FLOOR & LOWER LEVEL GROSS SQUARE FEET AREA			41,649

OUTDOOR SPACES

13 PARKING

13.1 ON GRADE PARKING

Total of 56 Spaces as follows:

- a. Visitor Parking: 50 Spaces
- b. ADA Visitor Parking: 4 Spaces
- c. ADA Van Parking: 2 Spaces

13.2 SCHOOL BUS PARKING

- a. School Bus Parking: 2 Spaces

13.3 BICYCLE AND SCOOTER STATION

- a. Covered Bicycle Racks: 8 Spaces
- b. Bike/Scooter Share Station: 4 Spaces

13.4 ADA DROP-OFF/PICK UP

14 MAINTENANCE SUPPORT

14.1 DUMPSTER/RECYCLING ENCLOSURE

15 VISITOR AMENITIES

15.1 FLAG POLE

15.2 LAWN AMPHITHEATER (ALTERNATE)

- a. Terraced lawn/limestone seating
- b. Hard surface performance pad or open lawn area

Services:

- *Outdoor events*
- *Informal gathering*
- *Fitness & yoga classes/outdoor activities*
- *Quite reading area*
- *Outdoor parenting and inter-generational programs*
- *Camps and school group gatherings*

Note:

- *Provide lighting at steps*
- *Provide power at stage area*

PROJECT DESCRIPTION

SITE/CIVIL DESIGN

BLEDSOE, RIGGERT, COOPER, JAMES, Civil Engineer

Site and Location

The Monroe County Public Library Southwest Branch is located on a five-acre parcel located on the north side of Gordon Pike west of South Rogers Street, and east of the entry drive to Batchelor Middle School and originally owned by Monroe County Community School Corporation. The parcel indicated is based upon the anticipated R/W take for the planned Gordon Pike and Batchelor school driveway improvements that is currently under design for Monroe County. The R/W purchase area was provided by Structurepoint, the County's project consultant. The anticipated dedication area was left under the ownership of MCCSC.

The proposed Library site slopes down to the east from the Batchelor entry drive at the west. There is a large open field in this area. To the north and east end of the field is a densely wooded area which has been planted over the years by Monroe County Community School Corporation and friends of Batchelor Middle School. The Monroe County community has expressed a desire to keep the densely wooded area. The Library sees most of the trees as an asset to the location. The Architect and Civil Engineer have taken the Batchelor Middle School drive, Gordon Pike, the sloped site, and wooded areas as key considerations in the siting and design of the new SW Branch.

Gordon Pike Improvements

Monroe County Planning Department is in the process of planning significant improvements to Gordon Pike including the south frontage of the new MCPL Branch. These improvements include vertical and horizontal road realignments, a roundabout, and the Batchelor School driveway realignment. The roundabout will serve as a traffic control node for South Clear View Drive, Gordon Pike, and the Batchelor Middle School entry drive. Access to the proposed Branch site will be from the east side of Batchelor Middle School entry drive just north of the new roundabout.

The proposed Gordon Pike (GP) improvements affect the planning and construction strategy for the new MCPL branch facility. More specifically, significant grade changes are planned for the GP improvements such that when complete the old road and sidewalk will be removed and an entirely new road location and multi-use path will be developed. The plans for this indicate a significant change in grade at the two locations where accessible sidewalks to the library facility will be located at the east and west ends of the building. For example, at the west sidewalk connection the future GP multi-use path is 3' or more above the existing GP sidewalk. At the proposed east end sidewalk connection, the future GP multi-use path is approximately 10' above the existing GP sidewalk.

Because construction of the new Branch precedes the GP improvements, it is recommended that some elements of the development of the land between the Branch

site and the GP sidewalk be done under separate contract after GP improvements are complete. Until the GP improvements are built, the Branch facility will not have sidewalk access to the existing GP sidewalk due to the substantial elevation changes. Once the GP improvements are complete, accessible sidewalk connections, some site grading, and landscaping must be done as part of the future phase.

Our team has worked with the County and their roadway consultant to ensure that our proposed plans will work successfully with the future Gordon Pike improvements. The current Design Development plan set reflects how this will occur. However, as we transition into the Construction Documents phase, we will have to revise our plans to reflect what our project will need to build to meet existing conditions, in order to more accurately indicate the exact scope of work for bidding documents.

Entrance Improvements

The driveway entrance to the new Branch parking lot has been widened to reflect the minimum required driveway width to meet Monroe County Highway driveway requirements at the direction of the County Highway Department. This is only for a short section and then the driveway narrows. A narrower driveway both inherently slows down drivers upon entering the site and reduces the intrusion into and impact of the proposed improvements to the adjacent wooded area to the north.

A temporary section of drive will be required to extend from the proposed Gordon Pike Improvements to the existing Bachelor Middle School driveway. This temporary section will need to be removed to allow the eventual Gordon Pike improvement construction. The temporary section of driveway is designed to match the grade of the existing sidewalk where they meet in order to avoid any unnecessary temporary improvement cost. Also, curbs are not indicated along this temporary driveway and instead are transitioned down to flush just short of the property line (future R/W take line)

Parking Lot Layout

The parking lot layout has been revised from the Schematic Design phase. As a means by which to provide a location for a transformer and/or generator pad location, one parking space was removed along the north side of the lot, leaving a total of 56 spaces in the lot.

Four accessible parking spaces, including two van and two car accessible, are provided nearest the main building entry at the southeast corner of the parking lot. The adjacent sidewalk area is depressed so the curb and walkway is flush with the parking lot to ease access. Concrete wheel stops are indicated to control vehicle intrusion into the sidewalk area. Immediately adjacent is a covered bicycle and scooter parking area.

There are two parking spaces for school bus parking at the north side of the parking lot.

Parking Lot Materials

The use of pervious paver material was evaluated during the Schematic Design phase, and it was determined based on cost and existing soil conditions that traditional asphalt pavement materials were the best solution for the project.

Dumpsters

A dumpster enclosure is located at the north side of the surface parking area where it is close to the staff entry and where it is easily accessible to service vehicles. It is located so as not to be a prominent element viewed upon entering the site. The dumpster enclosure is intended to be of masonry materials, with a gated access for pick-up and a man door to the side, so employees don't have to open the larger gates to gain access. The dumpster enclosure is large enough to easily house the 3 c.f. dumpster as well as the recycling container anticipated for use by the library.

Bike and Scooter Parking

Bicycle and scooter parking is located adjacent to the southeast corner of the surface parking lot. The curb in this location is kept flush with the parking lot pavement to make the parking easily accessible without having to mount a curb or negotiate ramps. Eight bicycle and four scooter covered spaces are indicated. There is approximately twelve feet of space in front of parking vehicles before reaching parked bicycles or scooters. These parking spaces will be covered by an open structure.

Pedestrian Access

The site design only considers access to the Gordon Pike sidewalk as it will be planned as part of the Gordon Pike improvements, not to the existing Gordon Pike sidewalk. Based on the grading established for the new Branch, once the Gordon Pike improvements are complete, good at grade ADA access to the proposed sidewalk may be provided at both the east and west ends of the library facility. As mentioned earlier, to provide that same level of access to the existing sidewalk as well as to the future sidewalk is not feasible, particularly at the east end where the proposed Gordon Pike sidewalk is approximately ten feet higher in elevation than the existing sidewalk. For that reason, the east section of sidewalk that will connect to the future Gordon Pike multi-use pathway is indicated as "by others" and not planned as part of the scope of this project. We have, however, at both sidewalk locations, indicated how the sidewalk connections can be made and the current grades for the GP multi-use path slightly alter in order to provide PROWAG/ADA accessible connections at both locations.

Lower Level Garage Parking

Early in the development of the site plan, it was determined that due to slope and the desire to reduce impact on the existing tree stands, that a lower level parking garage provided the ideal solution instead of the typical sprawling surface parking lot areas. The change of floor elevation between main floor and garage floor is 15'.

A driveway is provided, with t-shaped turn around, for vehicles to access the garage floor. Since the driveway must descend 15', a barrier curb was added along the north and east

side of the driveway. In addition, a 4' flat area provided adjacent to the curb for landscaping to provide both a visual and physical barrier to the adjacent fill slope that will extend to the existing wooded meadow floor.

An evaluation of the lower level parking garage and its impact on anticipated bedrock removal was prepared during the Design Development phase. Due to the drop in existing grade and the full lower level parking garage, the building is situated on a sloped area, where the east end is in fill and the west end is in cut. A geotechnical report was prepared by Alt & Witzig which included approximately 30 soil borings at key locations around the building and site. Based upon the results of those borings, which include auger refusal depths, an approximate digital subsurface bedrock map was created to compare with the proposed building/garage grades, foundations, and utilities. The result of that study has indicated an approximate bedrock removal of about 200 cubic yards.

Amphitheater (Alternate)

As an Alternate to the project, a curvilinear Amphitheater is included in the design at the east end of the site. It serves numerous functions, including grade transition down the fill slope to existing grade, a method for library patrons to gain access to the lower meadow and wooded area and/or any pathways, a location for outdoor activities or lounging, as well as classes and/or performances.

The amphitheater is composed of quarried limestone block retaining walls, arranged in an arc, to create a series of four terraces. The top surface of the limestone blocks will be smooth so they can serve as 18 inch-high seat walls that descend the slope. Between the terraces are flat grassy areas. These areas will include intermittent trees to provide shade and a sense of human scale. There are two sets of limestone steps to that descend between the terraces down to the concrete stage level.

A pedestrian area is provided between the garage parking and the amphitheater. This area will include landscaping, low level lighting and sidewalks, with access directly from the garage.

Landscape Design

Landscape design for the project will be developed during the Construction Documents phase, though we have been anticipating locations and materials during the Schematic and Design Development phases. For an effective landscape plan to be developed, it is important that we wait for the full establishment of all utility services, grading, site improvements, building elevations, materials, and colors.

What is currently shown on the site design drawings are anticipated planting beds along the building. As mentioned, BRCJ has graded a flat area behind the curb on the north and east sides of the driveway that descends to the parking garage. This will provide an area for grouped plantings associated with the nearby woods and will provide a natural barrier and some protection from the steep fill slope adjacent to the drive. Some tree wells and

tree grates are indicated in the lower level plaza area to provide shade and human scale to the space.

The Monroe County Landscape Ordinance directs much of what we are required to do, including the types of vegetation that are allowed, where it must be planted and at what spacing and size. The ordinance requires a heavily planted parking lot perimeter, parking lot islands, and it spells out landscaping that is required between the facility and the public R/W.

This ordinance does not, however, dictate much in the way of plantings around the building. Most of the planting done in these areas, within the plaza area to the east of the parking garage, along the drive to the lower level garage and within the amphitheater are voluntary and under the control of the Owner.

Storm Drainage and Detention

The storm drainage detention system has been expanded since the Schematic Design phase as a means by which to meet the new Monroe County standards for peak flow reduction, channel protection, and stormwater quality. To provide the required storm water detention volume, the Design Development plans include both a) underground detention chambers which will be placed below the parking lot; and b) surface detention in the form of a dry pond. There is no room on the site to create sufficient surface detention volume without significant removal of the wooded area, so a combination of both surface detention and underground detention is proposed.

The basis of design for the underground detention system consists of roughly 135 StormTech SC-740 detention chambers which would be installed and backfilled with free-draining aggregate beneath the parking lot on the west side of the library building. Surface runoff from the west parking lot will be routed through a mechanical treatment device to remove suspended sediment and floatable trash prior to entering the UG detention system. Runoff from a large portion of the library rooftop will also be directed into the UG detention system, where stormwater will be detained prior to release through a pre-cast concrete control structure located near the top of the garage access drive. An Oil-Water Separator device will be installed to treat drainage from the floor of the parking garage level prior to discharge into the storm drainage system.

In addition to runoff collected on the south side of the library building, the discharge from the UG detention system will be directed to a surface detention dry pond located in the southeast corner of the project site. The dry pond is designed to drain completely between storm events, filling to a maximum depth of 4 to 5 feet during large storm events. At the time the project is scheduled to be constructed, some of the storm drain collection system elements proposed along the south property line will be installed several feet above existing grade, but these should still serve to provide appropriate drainage from the MCPL site. When Gordon Pike is improved, the roadway contractor will complete the grading along the south property line to complement the drainage infrastructure installed for the MCPL project.

At the request of Monroe County Public Works, BRCJ is exploring the possibility of protecting the naturalized drainage area that receives the runoff from the project at the northwest corner of Gordon Pike and Rogers on MCCSC property. BRCJ will approach MCCSC about the possibility of designating a Stormwater Conservancy Area (SCA) that would protect and preserve the apparent wetland that exists at this location. It should be noted that a number of utilities through the area may complicate the designation of a SCA.

Utilities Services

Water will be served to the MCPL project from the existing 8" diameter CBU water main located on the south side of Gordon Pike. An 8" diameter combined private water service will be extended across Gordon Pike to a water service vault to be located near the south property line of the MCPL project. The vault will contain a domestic water meter and double check detector assembly (DCDA) for the 8" fire service. One private fire hydrant to be located near the north east corner of the building will be fed through the fire service vault. Two public fire hydrants will be fed directly from CBU's 8" main via 6" DIP hydrant branches crossing Gordon Pike.

Sanitary sewerage from the project will be collected on the north and east sides of the library building into a 6" PVC sanitary lateral. A 1,000 gallon grease interceptor located on the north side of the building adjacent to the garage access drive will collect grease laden waste from the teaching kitchen. The sanitary lateral will cross Gordon Pike to connect with the public sewer main on the south side of the street.

Natural gas will be provided by Vectren from their main along the south side of Gordon Pike with a service line running to a meter set that will be located in the vicinity of the northeast corner of the building.

Electricity will be provided by Duke Energy from their overhead distribution lines along the south side of Gordon Pike with primary conductors running underground in conduits to a transformer that will be locate along the west of the dumpster enclosure. Service conductors will run underground in conduits from the transformer to the mechanical room in the building.

ARCHITECTURAL DESIGN

MATHEU ARCHITECTS, PC

Building Design Concept

As an important community beacon for Monroe County, the new Monroe County Public Library Southwest Branch faces Gordon Pike, where the building may easily be seen and recognized. The site for the new Branch offers opportunities for the building to capture distant views to the east and woodland views to the north. Capitalizing on these site features, the design integrates natural light and views throughout the building. The natural site offers the opportunity for the building to respond to the community's expressed preference for a library that has a 'natural' atmosphere in keeping with the rural character of the southwest area of the County.

A grade drop of 15 feet from the west to the east ends of the building provides the opportunity for parking and some building support spaces to be located on the lower level. The garage provides sheltered parking for visitors as well as a secure location for the library van and maintenance vehicle. As a means by which to welcome visitors who arrive at the lower level, an atrium stair and tiered study area extends up from the garage and east entry to connect with the upper level lobby.

Visitors who park in the surface parking lot at the west enter the building at the south. Staggered building canopies provide shelter at the southwest and southeast identify the building entrances.

The building form responds to site conditions and to different spatial characteristics of the building interior. Different roof heights reflect different interior ceiling heights. To maintain appropriate spatial scale and comfort, large library spaces have higher ceilings than small spaces. To provide a sense of openness and transparency throughout the building and to capitalize on the natural setting, many spaces are glass enclosed.

Building Organization

All library services are provided on the main building level and spaces are organized to reflect different service areas in the library.

West Zone:

The west zone of the building contains spaces that provide services during regular library hours as well as after hours. A roll-down gate and glass doors separate this wing from the rest of the building when activities take place after hours. Visitors may access the building from either the main south entry or the delivery/staff west entry. Spaces at the west end of the building include:

- **Entry Lobby:** The Entry Lobby is a welcoming space which orients visitors to the Branch. In this space there is seating, a wall display, a book drop-off, and RFID security gates. From the Lobby visitors may access the Atrium Stair and Elevator as well as other areas of the building.
- **Service Area:** At the east end of the Lobby is the Service Area where library staff provide assistance to visitors and where visitors may browse new materials, gather with others, and access self-checkout terminals, the Holds Area, and printing and copying equipment.
- **Administrative and Staff Area:** The Open Staff Work Area, Administrative Office, and Materials Processing are located together at the west end of the Lobby. From this location staff may easily support the Public Service Area as needed, and an exterior and interior book drop-off may be

easily accessed by the public. The book drop-off connects immediately with Materials Processing.

- **Staff Lounge:** The Staff Lounge is situated at the northwest corner of the building where it may be immediately accessed from the Staff Entry or corridor.

- **All Ages Collaboration Space:** MCPL anticipates that the All Ages Collaboration space, a new state-of-the-art activity center, will accommodate activities which may take place during or after regular library hours. Some activities, such as the maker space, may involve higher sound levels. By locating the All Ages Collaboration space at the west end of the building loud sounds may be separated from the quieter areas of the building to the east. The space is glass enclosed along the corridor to maintain openness and security.

- **Teaching Kitchen:** The Teaching Kitchen provides a multi-generational hands-on learning opportunity. The space accommodates cooking classes as well as serves as a social gathering hub for the building. In response to potential noise and the likelihood that classes may be taught after normal library hours, locating the Teaching Kitchen at the west end of the building makes good sense. The space is glass enclosed on two sides to maintain a sense of openness and to contain noise and cooking smells.

- **Large Program/Meeting Room and Reception Lobby:** The Large Program/Meeting Room accommodates myriad types of activities, such as special events, programs, and films. The space will likely be used during and after normal library hours. An adjacent Reception Lobby provides large group spill-out space without interfering with other library activities. The Teaching Kitchen and Restrooms support and are in proximity to the Large Program/Meeting Room.

- **Teen Center:** Like the All Ages Collaboration space, the Teen Center is likely to generate loud sounds at times. Activities in the Teen Center may take advantage of its proximity to the All Ages Collaboration space, the Large Program/Meeting Room, and the Teaching Kitchen. Restrooms, vending machines, and water fountains are nearby.

- **Restrooms:** Restrooms are accessed via the Reception Lobby and during and after normal library hours. A single occupancy ADA Family Unisex Restroom is located west of the Reception Lobby. A single-occupancy ADA restrooms is located near the Staff Lounge.

East Zone:

The east zone of the building accommodates activities that typically take place during regular library hours. This area is generally quieter than the spaces at the west end of the building.

Spaces at the east end of the library include:

- **Adult Collections and Services:** Most of the Branch's collection of books, periodicals, and media finds its home in the large open space at the east end of the building. Shelving is no higher than five feet to keep a sense of openness. Reading and study areas are located along the outside walls to take advantage of natural light and views.

- **Quiet Reading Room:** For those library patrons who prefer optimal quiet while they read and study, a Quiet Reading Room is located at the southeast corner of the building. The room is glass enclosed to maintain a sense of openness and to provide security.

- **Public Computing:** The Public Computing Area is located adjacent to the Public Service Area for purposes of monitoring and assisting library patrons. Computing stations are located along the balcony overlooking the Stair Atrium and outdoor views to the south. A printer station is associated with this area.

- **Individual Conference/Study Rooms:** Two small Conference/Study Rooms flank the west end of the Adult Collections space. They are glass enclosed to maintain openness and to provide security.

- **Conference Room:** A Conference Room is located at the southeast corner of the building and may be accessed from Collections. Windows are at the southwest corner of the room. A wall-mounted marker board and monitor is on the east wall.

- **Children's Area:** The Children's Area is a large space with interior windows on the south and windows looking towards the woods on the north. The interior windows control sound levels and provide security. An Entry Foyer accommodates strollers, coats, boots, and backpacks. An ADA Children's Toilet Room and a Nursing Mother's Room is accessed from the Foyer. The main space separates the Infants/Pre-K area from the Juvenile area via shelving and furniture groupings. A Children's Program Room is located at the west end of the space.

South Zone:

- **Atrium Stair/Study:** The south zone of the building houses the Atrium Stair which includes tiered stair access to the Lower Level Entry and Garage. The tiered stair landings expand to accommodate open reading/study pods. The tall ceiling height, natural light, and views to the south characterize this space and provide a creative solution for circulation from the lower level.

Lower Level:

- **Parking:** Garage parking offers 41 sheltered spaces for visitors and library vehicles. Access to the Branch's Lobby is via the Lower Level Entry and Atrium Stair at the southeast corner of the Garage and via an Elevator further west.

- **Library Storage:** Library Storage is located at the southwest corner of the lower level.

- **Electrical Room, IT Room, Mechanical Room, and Maintenance Office:** These spaces are located at the northwest corner of the lower level. Site utilities will be brought to this location.

- **Boiler Room:** A Boiler Room is located at the northeast corner of the lower level.

Building Materials:

Exterior:

- **Walls:** Exterior building materials are a combination of native ashlar limestone, 3" composite metal panels, and 1 ½" metal panel siding. The exterior walls will be insulated with 3" of rigid insulation with taped joints installed on the exterior side of the wall framing. This location allows for continuous insulation on the building exterior reducing thermal breaks in the wall system.

- **Windows:** Windows are typically anodized aluminum curtain wall. Sunscreens are provided at the south curtain wall and standard silk screen frit on the glass at the east and west curtain walls to help reduce glare and heat gain.

- **Roof:** The roofing is typically TPO membrane roofing in a light tone which offers the best energy efficiency. The sloped butterfly roof system over the center portion of the building is TPO membrane roofing over 1 ½" metal roof deck, 5" roof insulation, recovery board, and TPO membrane roofing. The flat roof areas to the north and south sides of the building will be the same system with 5" minimum tapered insulation to direct rainwater to the roof drains.

- **Motorized Garage Security Grille:** Anodized aluminum.

Interior Finishes:

- **Walls:** Latex painted gypsum board typical; Restrooms walls are porcelain tile.
- **Ceilings:** 2' x 2' lay-in acoustical tile typical; smooth washable lay-in tiles in Teaching Kitchen.
- **Floor Finishes:** Walk-off carpet in Entry Vestibules; vinyl plank and/or carpet tiles in public spaces and offices; sheet vinyl in Children's Area; porcelain tile in Restrooms and Teaching Kitchen; rubber stair treads & risers in Atrium Stair.
- **Interior Window & Door Frames:** Hollow metal, painted.
- **Windows at Exterior Walls:** Curtain wall and storefront in anodized aluminum.
- **Window Sills:** Solid surface.
- **Interior Doors:** Solid core flush and full glass plain sliced White Maple hardwood veneer; painted steel at fire exit doors.
- **Door Hardware:** Satin stainless steel.
- **Casework:** Plastic laminate typical; stainless steel shelving in Teaching Kitchen.
- **Casework Hardware:** Satin chrome.
- **Countertops:** Quartz in Restrooms and Teaching Kitchen island; plastic laminate in Administration, Materials Processing, Staff Breakroom, Teen Center, Children's Program Room, All Ages Collaboration; stainless steel in Teaching Kitchen.
- **Tackable Wall Surface:** Colored linoleum cork in Entry Lobby, Staff Lounge, All Ages Collaboration, and Teen Center.
- **Picture Rail:** Cable track system with aluminum silver finish, stainless steel cables and hooks in Large Program/Meeting Room Reception Lobby.
- **Toilet Partitions:** Solid plastic, pebble grained, floor to ceiling anchored.
- **Operable Partition:** Powered operable partition with heavy-duty vinyl coated fabric wall covering in Large Program/Meeting Room.

A more detailed list of interior finishes may be found in the Appendix of this report. Also reference the Design Development architectural drawings for more detailed room location information.

Interior Finishes Board:

Matheu Architects has prepared an Interior Finishes Board with samples of proposed materials under separate cover.

Building Signage:

Building signage including an exterior wall-mounted building sign, ADA compliant interior room signs and code required exiting signs will be designed during the Construction Documents phase. Signage design will reflect the natural setting of the building.

STRUCTURAL DESIGN

LYNCH, HARRISON & BRUMLEVE, INC., Structural Engineer

A. Owner's Requirements

1. There are no planned or known areas of future expansion.

B. Load and Analysis Criteria

1. **Soil Conditions:** A geotechnical investigation has been completed at the project site and a Geotechnical Report has been provided. The report indicates that the site consists of highly plastic soils which necessitate special foundations and soil stabilization.

2. Live Loads

- a. Roof (Snow): 20 PSF + Drift as applicable per ASCE 7
- b. Supported Floors:
 1. Mechanical 125 PSF
 2. Library Per IBC Table 1607.1 as follows:

TABLE 1607.1
MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS, L_o , AND
MINIMUM CONCENTRATED LIVE LOADS^a

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
19. Libraries		
Corridors above first floor	80	1,000
Reading rooms	60	1,000
Stack rooms	150 ^{b, m}	1,000

- c. Live Load Reduction: No reduction

3. Dead Loads

- a. Weight of floors and roofs as determined by systems selected.
- b. Mechanical piping and ductwork allowance of 3 PSF.
- c. Electrical equipment allowance of 2 PSF.
- d. Ceiling allowance of 5 PSF.

4. Lateral Loads

- a. Wind for Primary System (per IBC & ASCE 7)
 1. Basic Wind Speed: 115 MPH
 2. Exposure: B
 3. Importance Factor I: 1.00
 4. Internal Pressure Coefficient, GCpi: +/-0.18
 5. Building Category: II
- b. Seismic: Per IBC & ASCE 7

C. Structural System Criteria

1. Concrete

- a. Foundations: 4000 PSI, normal weight
- b. Slabs on Grade: 4000 PSI, normal weight
- c. Slabs on Metal Deck: 4000 PSI, normal weight

2. Reinforcing Steel

- a. Reinforcing Bars: ASTM A615, Grade 60
- b. Welded Wire Fabric: ASTM A185

3. Structural Steel

- a. Tube Sections: ASTM A992, Grade 50
ASTM A500

4. Roof Deck: ASTM A446, 1 1/2" deep, galvanized metal roof deck

5. Floor Deck: ASTM A446, 2" deep, galvanized composite floor deck.

D. Proposed Systems

1. Foundations

a. A Geotechnical Investigation has been completed at the project site and a Geotechnical Report has been provided. The report indicates that the site consists of highly plastic soils which necessitate special foundations and soil stabilization. Reference the report for detailed discussion.

b. The foundations will consist of reinforced concrete footings below all concrete walls and columns. The perimeter foundation walls will be reinforced concrete walls built-up from the wall footings. Continuous, rigid insulation will be installed where necessary based on coordination with the Architect. All perimeter foundations will be located below local frost depth.

c. The slab on grade will be 5" thick with fiber reinforcing for crack control. The slab will be thickened under all interior non-load-bearing masonry walls. The slab will be cast on a 6" layer of granular drainage fill and a 15 mil vapor barrier and will include a chemical admixture for internal curing without the need for traditional curing methods.

d. All foundation excavations will be properly backfilled and compacted.

e. The perimeter foundation wall will include a continuous foundation drain.

2. Framing

a. The roof structure for the new building will consist of a structural steel frame supporting steel beams, joists and metal roof deck. The first floor framing above the proposed parking area will consist of steel beams supporting a composite floor deck

Framing, cont'd.

assembly. The slab on deck will be normal weight concrete with #4 reinforcing for crack control. The floor deck will not require shoring during slab pours. All floor beams will have headed anchor studs welded to the top flange extending into the slab to maximize the composite action. The structure will be specifically designed to support all mechanical loads including rooftop equipment as applicable.

b. All roof framing will be sloped for positive drainage where practical and tapered insulation will be used as needed. All roof deck penetrations such as ductwork feeding rooftop equipment will be reinforced with an angle frame.

c. Lateral loads in the new construction will be resisted by a combination of the following systems (pending coordination with the Architect): structural steel X-bracing and/or diagonal tube bracing; masonry shear walls if applicable; rigid connections between beams & columns (note: requires larger/heavier members with more complicated connections); and concrete perimeter basement walls and interior concrete "H" configured shear walls.

MECHANICAL, ELECTRICAL AND PLUMBING DESIGN

CIRCLE DESIGN GROUP, INC., MEP Engineer

APPLICABLE CODES

- Fire Prevention and Building Safety Commission
- Indiana Building Code (IBC), 2014, consisting of:
 - (1) International Building Code, 2012
 - (2) Indiana Amendments
- Indiana Electrical Code (IEC), 2009, consisting of:
 - (1) NFPA 70, National Electrical Code, 2008
 - (2) Indiana Amendments
- Indiana Mechanical Code (IMC) 2014 consisting of:
 - (1) International Mechanical Code 2012
 - (2) Indiana Amendments
- Indiana Plumbing Code (IPC), 2012 Edition, consisting of:
 - (1) International Plumbing Code 2006 Second Printing
 - (2) Indiana Amendments
- Indiana Energy Conservation Code (IECC) 2010, consisting of:
 - (1) American Society of Heating, Refrigeration, and Air Conditioning Engineers, Inc. Standard 90.1, 2007 Edition
 - (2) Indiana Amendments
- Indiana Elevator Safety Code 2011 Edition 675 IAC21-3 (ANSI ASME A17.1, 2007 Edition)
- Indiana Fire Code (IFC), 2014, consisting of:
 - (1) International Fire Code, 2012
 - (2) Indiana Amendments

MECHANICAL SYSTEM

Primary Design Assumptions

Summer Load Calculations

Base cooling load calculations will be performed based on ASHRAE Standard 90.1 – 2007 requirements using 0.4% occurrence climatic weather data for Indianapolis, IN of 91.3°F dry bulb and 75.0°F wet bulb temperatures as published in the 2017 ASHRAE Handbook of Fundamentals.

Winter Load Calculations

Base heating load calculations will be performed based on ASHRAE Standard 90.1 – 2007 requirements using 99.6% occurrence using climatic weather data for Indianapolis, IN of -1.8°F dry bulb temperature as published in the 2017 ASHRAE Handbook of Fundamentals.

Indoor Conditions

Dry-Bulb Temperature:

Summer = Occupied - 73°F, Unoccupied - 85°F

Winter = Occupied - 68°F, (no credit for internal gains or solar contribution) Unoccupied - 55°F

Relative Humidity:

Summer = Occupied maximum 60%, Unoccupied maximum 65%

Winter = no minimum

Mechanical/Electrical/Elevator Machine Room Support Spaces: These will be ventilated or conditioned to maintain space temperatures within the manufacturer's recommended limits.

Lighting Power Densities

The following are maximum lighting power densities per the Indiana Energy Code and will be reduced from these levels to actual lighting design once complete:

Office Areas: 1.1 Watts per square foot.

Restrooms: 0.9 Watts per square foot.

Corridors: 0.5 Watts per square foot.

Gymnasium: 1.9 Watts per square foot for court area, 0.4 Watts per square foot for spectator area.

Auditorium: 2.6 Watts per square foot.

Lobby: 3.3 Watts per square foot.

Electrical/Mechanical Rooms: 1.5 Watts per square foot.

Equipment Heat Load

Office Areas: 150 Watts per workstation

Other Areas: Based upon actual equipment

Outside Air Ventilation

Provided as specified in ASHRAE 62.1-2007.

System Diversity: Occupant levels will be defined based upon the "head count" population per space as designed in lieu of code egress values.

Ventilation levels will be established using the Ventilation Rate Procedure as established by ASHRAE 62.1-2007. The Ventilation Rate Procedure will be used to determine the zone minimum outdoor air flow. When using an overhead distribution system, there is an 80% effectiveness rate of getting outdoor air to the breathing zone. When using an underfloor distribution system, the effectiveness rate increases to 120%.

Infiltration

Infiltration will not be accounted for in our load calculations. The buildings will be designed to be positively pressurized to prevent infiltration. Special attention will be paid to the lobbies, understanding that these have the potential to have doors open for extended periods of time due to the building occupancy.

Noise Criteria

Sound attenuation equipment will be provided based on standard design practice. Equipment and products will be selected, and sound calculations will be performed to determine sound attenuator requirements.

Mechanical Design

Rooftop Air Handling Units

The building will be mainly served by three packaged rooftop air handling units (RTU's), two of which will be single zone variable air volume (SZVAV) units and the third a variable air volume (VAV) unit. The units will utilize natural gas for heating and direct expansion (DX) for cooling. Units will have at least one variable capacity compressor which allow for load matching and quiet, low vibration operation, and system redundancy. The VAV RTU will provide conditioned primary air to twelve (12) variable air volume (VAV) terminal boxes which control temperature in individual spaces. The VAV terminal boxes shall incorporate hot water reheat coils to allow for space heating or reheat as required. Each zone will have a thermostat to control the temperature in the individual space.

The AHU's will have the following options:

- Interlaced DX coil to provide some cooling if one circuit requires maintenance.
- Natural gas heat exchanger.
- Economizer mode based on differential enthalpy.
- CO₂ monitoring and control.
- Variable capacity compressors.
- Two-inch double wall casing with rigid foam insulation, minimum R-12.
- Stainless steel cooling coil drain pan.
- Minimum two direct drive, plenum fans to provide redundancy.
- MERV 13 final filters.
- Airflow measuring station to always ensure proper outdoor air.
- Bi-polar ionization air cleaning system.

Variable Refrigerant Flow (VRF) System

A VRF system will serve the Quiet Room, Mid-size Conference, Seating and Study, and Elevator Waiting. The VRF system contains ceiling cassettes and floor-mounted units, all supported by a VRF heat recovery condensing unit located on the roof and heat recovery box located in the ceiling space.

Ductless Split AC System

Ductless split AC pumps will be provided to serve IT Room 012.

Ductless Split Heat Pump System

Ductless split heat pumps will be provided to serve the Electrical Room 013, Maintenance Office 011, Library Storage 009, and Elevator Machine 007.

Heating Hot Water Plant

One high efficiency condensing boiler will be used to generate hot water up to 140°F. Condensate neutralization will be provided for boiler condensate.

Boiler intake and flue piping will be in accordance with manufacturer's instruction and routed to the exterior of the mechanical room while maintaining proper distances between flues and intakes.

Hot water will be distributed to the VAV terminal boxes via an in-line hot water pump.

The heating water system will consist of a water/propylene glycol mixture with 30% of the mixture being propylene glycol, for freeze protection.

Hydronic Distribution Systems

Heating water will be distributed through Type L copper piping with soldered or press fit joints for pipes 2" and smaller, and Schedule 40 carbon steel piping with flanged, welded, or grooved coupling joints for pipes 2-1/2" and larger. Unions will not be required at terminal heating devices in copper piping. Valves 2" and under will be Class 150. Valves 2-1/2" larger will be Class 150/175 flanged end connections. Shutoff valves will be commercial grade butterfly valves.

All hydronic piping will be labeled, and color coded in accordance with industry standard and marked in direction of flow.

All hydronic piping will be sized as follows: Maximum pressure drops of 4 ft of water/100 ft of piping for piping 4" and smaller. 10 fps maximum velocity for piping 6" and larger.

Heating water piping will be insulated with rigid glass fiber insulation per ASHRAE 90.1-2007 requirements with appropriate insulation jacket.

Distribution pump will be provided with a variable frequency drive (VFD). A differential pressure transmitter between the supply and return mains will be utilized to vary the speed of the pump, via variable frequency drives, to maintain a constant pressure differential between the piping mains. 3-way control valves will be provided as needed to maintain a minimum system flow rate, based on the equipment provided.

Finned Tube Radiators

Finned tube radiators will be provided in Seating and Study D111 and Quiet Room C104. Radiators will be fed water from the heating hot water plant.

Electric Wall Heaters

Electric wall heaters will be provided in Stair 'B' D110.

Electric Unit Heaters

Electric unit heaters will be provided in Storage 004, Storage 008, Mechanical 010, Electrical 013, and Boiler 015.

Electric Ceiling Unit Heaters

Electric ceiling unit heaters will be provided in Lower Level Vestibule 001, Elevator Lobby 005, Entry Vestibule A100, Staff Entry/Deliveries B108

Electric Draft Barrier Convection Heaters

Electric draft barrier convection heaters will be provided in Elevator Waiting, Stair 'A' C107, Seating C106A, Seating C106B, and Seating C106C.

Exhaust Fans

Exhaust fans will be down-blast centrifugal (mushroom style) fans, coordinated with building architecture and structure. The parking garage will have a propeller-type fan(s) to provide code required ventilation. Makeup air to the garage will be through wall louvers.

The teaching kitchen is provided with a residential style range hood over the domestic stove, exhausted to the outside.

Toilet and janitorial rooms will be exhausted to the outside.

Ductwork and Air Distribution

Medium pressure galvanized steel ductwork will distribute supply air from the air handling units to the VAV boxes. This ductwork will be constructed to 4" pressure class and Seal Class A. Low pressure galvanized steel ductwork (2" pressure class) will be utilized downstream of VAV boxes to distribute supply air to the spaces. Ductwork will be constructed in accordance with SMACNA Standards for appropriate pressure class. Ductwork will be sealed to meet SMACNA Seal Class A as a minimum and to limit ductwork leakage not exceeding 1% of the design flow rate. 100% of ductwork above 2" pressure class will be leak tested.

Representative samples of low-pressure duct will be tested (approximately 10% of ductwork). Sample size will vary with preliminary results of leak tests.

Supply ductwork sizing for ductwork (duct air flows based on diversified air flows) shall be as follows:

From air handling unit to air terminal (AT) Device: Maximum pressure drop of 0.15"/100 ft and maximum velocity of 2,000 fpm

(Duct size to AT device = AT inlet size up to 10 ft from AT)

From air terminal Device to Supply Diffuser: Maximum pressure drop of 0.08"/100 ft and maximum velocity of 1,000 fpm

Ductwork will not be lined. Sound attenuating flexible duct up to 5 feet in total length will be provided at the supply diffusers to control noise. Sound attenuators at the discharge of air moving devices will be provided where required to meet noise criteria. Supply air ductwork will be externally insulated with fiberglass insulation with foil jackets per energy code requirements. Where exposed ductwork is designed, pre-insulated, double-walled ductwork will be specified.

For overhead systems, at finished ceiling areas of the building, flush panel type ceiling diffusers will be provided in all lay-in ceilings and panel or slot diffusers with rapid mount frames will be provided in all gypsum ceilings. Framed return grilles will be provided in areas throughout the building.

Air outlets will be selected for high APDI comfort index as defined by ASHRAE Handbook of Fundamentals. Finishes will be appropriate to each space. Standard finish will be baked white enamel on aluminum or steel.

All equipment with moving components will be properly supported with vibration isolators and flexible connections to eliminate the conduction of vibrations to other building components or areas.

Fire dampers will be provided in ductwork penetrating any rated construction assemblies. Approved firestopping material around piping, etc., to maintain rating of walls and floors will also be provided as required.

Plenum ratings: All ductwork, piping, insulation, jackets, coverings, sealers, mastics, and adhesives will be plenum rated, having a flame-spread index of 25 or less, and a smoke-developed index of 50 or less, as required by code.

Third party systems testing and balance will be provided by certified technicians. Certified reports will be submitted to Owner at completion of project.

Facility Management System

Mechanical systems and terminal devices will be controlled and monitored through a DDC based Facility Management System (FMS) with distributed processing at the local level. FMS will monitor and control temperature, humidity, supply, and exhaust air quantities for all systems.

DDC controllers will utilize distributed architecture and will not rely on "front-end" or higher-level controller to perform required control sequence.

All control panels and DDC controllers will be served by standby power. All mechanical room controllers will be housed in NEMA 1 control panels. All DDC system primary LAN controllers, PC's and communications equipment that monitors life safety and critical points (fire alarm, elevator emergency, etc.) will be supported by standby power.

FMS provided will integrate all building systems and equipment. BACnet system architecture shall be specified throughout.

Electric actuation will be utilized for all control valves, dampers, and terminal units.

ELECTRICAL SYSTEM

Electrical Service

The electrical service is derived from a pad mounted utility transformer and enters the building underground into a dedicated electrical equipment room on the lower parking level of the building. The new service is anticipated to be 1600A, 3 phase, 4 wire, 120/208 volt.

A 1600A, 3 phase, 4 wire, 120/208 main switchboard with a main service disconnect circuit breaker will be installed in the main electrical room. Branch circuit breakers will be provided in the switchboard to serve major 3 phase HVAC equipment, elevator, and branch panelboards within the building.

3 phase, 4 wire, 120/208-volt branch panelboards will be located in the electrical equipment room. Branch panelboards will serve 120 and 208 volt loads such as receptacles, lighting and miscellaneous HVAC loads throughout the building.

Electrical Distribution

120-volt duplex receptacles will be provided throughout the building for general maintenance in common areas and in locations as determined for owner's use and as coordinated with furniture and equipment. Special outlets will be provided for specific equipment as required by the owner.

At locations which are not adjacent to walls but require power or data access, fire rated poke-through boxes with 20A receptacles, data outlets or a combination of both will be provided. These may include conference room tables, service desks, computer stations and other equipment or furniture as designated by the design team and owner. The poke-through devices are installed in a 4" or 6" diameter hole either formed or core drilled in the floor and fed by conduits routed in the garage level below. They will also feature recessed connections so that cables can be plugged in and used with the cover closed with the plug secure and only the cable is seen coming out of the box. The access covers for these devices will be of minimum height to avoid a tripping hazard.

In open areas where future flexibility for locations of floor outlets is desired, fire rated poke-through floor boxes mentioned above will be placed in a pattern to allow access to power and data in future furniture configurations. New holes may also be core drilled in the future and devices installed where required with the conduit connected to the existing conduit in the garage level below.

Wiring methods for branch circuits will include copper wire in EMT conduit and Type MC (metal clad flexible cable with copper conductors) where concealed within walls or above ceilings.

Conduits for site power and lighting will be routed from panelboards in the main electrical room underground outside to site electrical loads.

Power to the Amphitheater stage area is an Alternate for the project.

Lighting Systems

2x4 and 2x2 direct/indirect LED lay in fixtures will be utilized for offices and common spaces with lay in tile ceilings. This type may also be used in restrooms at the owner's discretion.

Pendant mounted LED fixtures will be utilized in areas with open exposed structure. Pendants may be down light only or a combination of down light and up light components to highlight the structure as desired by the design team and owner.

LED recessed down lights and wall washer type fixtures will be provided to highlight lobby areas.

LED industrial fixtures will be used for mechanical and unfinished storage areas.

In meeting and conference rooms, pendant mounted LED fixtures with up and down lighting components may be used. Lighting control in these rooms will be capable of dimming fixtures for presentation, conference and other room activities.

Occupancy/Vacancy sensors will be utilized in offices, storage, restrooms, and common spaces to reduce energy consumption when the spaces are unoccupied. Daylight sensors may be incorporated in areas subject to outdoor light to further reduce energy use during daylight hours.

The total building lighting system will be designed to comply with the current Indiana Energy Code (based on ASHRAE 90.1).

Emergency exit and egress lights with LED lamps and integral battery back-up will be placed throughout the building to provide code required exit passage light levels and guide occupants to the exits in the case of a power outage.

Exterior lighting will consist of LED pole mounted and building mounted light fixtures controlled by a combination of photocell and time clock.

Amphitheater step lighting is an Alternate for the project.

Fire Alarm System

A microprocessor-based, digital, fully addressable fire alarm system will be provided. This system will include manual pull stations at exterior doors, duct detectors for all air handling systems over 2,000 CFM, area detectors for mechanical and storage rooms, elevator

equipment room and elevator lobbies and flow and tamper switches to monitor the sprinkler system.

Annunciation devices (horn/strobe units and strobe only units) will be placed throughout the building to provide ADA required sound and candela levels in the event of an alarm.

The system will include batteries to provide 90 minutes of operation without building power.

A remote annunciator panel will be located at the entrance as determined with the local fire department requirements and will have an alpha numeric display listing which detector is in alarm.

The fire alarm control panel will be located in the main electrical equipment room.

Tele Data and Other Low Voltage Systems

The electrical documents will locate recessed tele-data back boxes throughout the spaces per specific owner request and the design team's recommendations. Additional boxes will be dedicated to security camera and access control devices and audio-visual devices with locations as directed by the owner's security and AV providers. Rough-ins will consist of a recessed box with a 1" conduit turned out above accessible ceilings for routing of required cabling. 120V power outlets will also be provided at locations designated by the owner's tele-data, security, and AV providers for powering equipment.

Standby Power

Standby power for the facility will consist of battery backup for egress lighting and the fire alarm system. Battery backup will be able to operate systems for a minimum of 90 minutes.

The elevator will be provided with battery lowering which will lower the elevator cab to the lowest level and open the doors upon loss of normal power.

PLUMBING SYSTEM

Plumbing System

Plumbing systems will consist of plumbing equipment and fixtures; storm water drainage, sanitary waste, and vent; domestic cold, hot, and hot water return, water softening and natural gas systems.

Storm Water Drainage System

Storm water on all new roof surfaces shall be collected with a system of roof drains having cast iron grates and adjacent overflow drains as required by the Indiana Plumbing Code. Piping shall be routed to below grade within the building and thence to the storm sewer system outside the building.

All above ground and underground storm drainage piping will be DWV, service weight hubless cast iron soil pipe; plain cut ends; conforming to CISPI Standard 301 and ASTM A888.

Roof and overflow drain bodies and horizontal above ground storm pipe shall be insulated to prevent condensation.

The primary storm drainage system will be sized based on a maximum rainfall rate of 3.1 in/hour per local code. A secondary storm drainage piping system exiting to the building exterior is not required by code in the State of Indiana, but overflow drains are connected to the primary storm drainage system.

Sanitary Waste and Vent System

A sanitary waste and vent system will be provided for all plumbing fixtures and other devices that produce sanitary waste. Plumbing fixtures will be drained by gravity through conventional soil, waste, and vent piping to the sewer system outside the building.

The sanitary waste piping will be pitched to maintain a minimum velocity of 2 fps when flowing half full.

The sanitary vents and the venting system will be designed and installed so that the water seal of a trap will be subject to a maximum pneumatic pressure differential equal to 1" water column. This will be accomplished by sizing and locating the vents in accordance with the venting tables contained in the plumbing code.

Piping 2 1/2" and under shall have a minimum slope of 2 percent (1/4" per ft.), Piping 3" and larger shall have a minimum slope of 1 percent (1/8" per ft.).

Above ground and underground sanitary waste and vent piping will be DWV, service weight hubless cast iron soil pipe; plain cut ends; conforming to CISPI Standard 301 and ASTM A888.

All fixtures will have traps and will be vented through the roof. Vent terminals will be located away from air intakes, doors, operable windows, and parapet walls at distances required by the plumbing code. Floor drains, floor sinks and indirect waste receptors will be provided with trap seals when subject to loss of waters due to evaporation caused by infrequent use.

Special waste traps will be provided in the teen center that can be used to catch particle debris and prevent clogs in the drainage system. These will be hidden in the cabinets below the sinks.

If requested by the owner a garbage disposal will be provided in the teaching kitchen/café.

Domestic Water System

The domestic water will be provided by the local water utility. A water room will be located in the parking garage and pipe up to the library. It is not anticipated that a water softener system will be required for the project.

Systems shall be designed to provide sufficient pressure to operate plumbing fixtures and equipment during peak demand. The supply capacity for the cold and hot water piping will be determined based on fixture units using recognized engineering standards. Current assumption is that the water pressure from the utility is adequate such that a pressure booster pump is not required.

Vacuum breakers and backflow prevention devices shall be provided to protect against cross-connection.

The domestic hot and cold-water piping will be Type L copper tube with wrought copper fittings and soldered joints. The piping will be sized to limit the velocity in any section of the system to a maximum of 8 fps for cold water system and 4 fps for hot water and hot water circulating systems.

Dielectric unions shall be installed between the connections of pipe of dissimilar metals.

Domestic cold-water piping will be insulated to prevent condensation from forming. The hot water system will be insulated in accordance with Code to minimize energy use.

Isolation valves will be provided at all riser connections, branch piping run-outs to fixture groups, and at devices requiring maintenance. Stop valves are to be provided for each fixture.

Water hammer arrestors will be provided at all quick closing solenoid valves and at other potential water hammer sources. Water hammer arrestor sizing shall be per the Plumbing and Drainage Institute requirements.

Domestic Hot Water System

Domestic hot water will be extended from centralized tank type water heaters located in a mechanical equipment room on the lower level. Domestic hot water will be produced at 140°F. A thermostatic mixing valve shall be provided to temper hot water to 120°F for occupant use.

Domestic 120°F hot water will be circulated with wet rotor recirculation pumps to insure a supply of hot water to all fixtures in a timely manner.

Non-recirculated fixture branch piping shall not exceed 20 feet in length. The hot water return will be looped back through the domestic water heaters to help prevent Legionella. Dead-end piping shall not be installed, except for valved and capped branches for future.

Plumbing Fixtures

All plumbing fixtures will be commercial grade products. Plumbing fixtures designated as barrier-free will be manufactured and installed in accordance with local, state, and federal accessibility requirements. Each type of fixture shall be provided with trim and fittings including faucets, supplies, stops, traps, tailpieces, waste nipples, hangers, plates, brackets, anchors, supports, hardware, and fastening devices required for a complete installation.

Public area restroom water closets will be wall-mounted, white vitreous china, with elongated bowls, white solid plastic, open front, integral check seat, less cover, and flush valves. The flush valves will be diaphragm type battery powered sensor operated, with 1.6-gallon flush.

Public area restroom urinals will be wall-mounted, white vitreous china, with flush valves. The flush valves will be diaphragm type battery powered sensor operated, with 0.5-gallon flush.

Public area restroom lavatories will be wall mounted with battery powered sensor operated faucets with 0.5 gpm flow control.

Electric water coolers will be provided as required by the building design. The electric water coolers will be provided with sensor operated bottle fillers and manual operated drinking fountains.

Casework sinks will be countertop mounted stainless steel. Faucets will be hot and cold mixing type, 1.5 gpm flow control.

Janitor sinks will be floor mounted, molded stone, with stainless steel splash panels. Faucets will be hot and cold mixing type with hose connections and vacuum breakers. A utility sink will be added to the maintenance room in the lower level.

Exterior hose bibbs will be flush mounted, freeze resistant, with vacuum breakers and loose key operators. Mechanical room hose bibbs will be surface mounted, with vacuum breakers.

Plumbing fixtures will be provided to accommodate the physically challenged and will be provided with protective covers on fixture traps and supplies.

Natural Gas System

Natural gas is anticipated for ancillary uses include the rooftop units, domestic water heaters, and heating boilers.

Natural gas will be distributed at 2 psig pressure within the building to minimize pipe sizes. Gas pressure regulators at each appliance shall reduce pressure to equipment requirements. Pipe shall be Schedule 40 black steel pipe, with malleable iron threaded fittings. Pressure regulators, shut off valves, unions, and dirt legs will be provided at each piece of equipment.

Fire Protection System

The buildings will be protected throughout with hydraulically calculated sprinkler systems and will be a dry pipe sprinkler system. A nitrogen generator will be provided to hold pressure in the dry pipe system. The dry pipe system was chosen to prevent chances of freezing in the parking garage. It also would prevent any damage to the library collection caused by leaks or a nuisance trip of a sprinkler head. All areas of the building will be protected in accordance with NFPA Standard 13, including electrical rooms, parking garage, and mechanical rooms.

The following sprinkler design densities shall apply:

Areas designated as Light Hazard will be designed for a minimum sprinkler flow of 0.10 gpm per sq ft.

Areas designated as Ordinary Hazard, Group 1 and where stockpiles of combustibles do not exceed 8 ft, will be designed for a minimum sprinkler flow of 0.20 gpm per sq ft.

The system demand will be based upon the most remote 1500 sq ft.

The piping for the dry pipe sprinkler system will be black steel. Piping 2" and smaller in size will be Schedule 40 with threaded joints. Piping larger than 2" will be Schedule 10 with rolled groove couplings or Schedule 40 with welded, threaded, or cut groove coupling. The pipe sizing for the systems will be as required to satisfy the hydraulic demand.

The type of sprinkler head used in a particular area will be selected by the Engineer and the Architect. Generally, concealed sprinklers with flush covers will be installed in all public areas with high quality finishes. Pendent or upright sprinklers will be installed in areas without ceilings. Sidewall sprinklers will be used only when other types cannot be used due to space limitations. Sprinkler heads which are subject to mechanical injury and less than 84" above finished floor shall be protected with approved guards.

CODE SUMMARY

RTM CONSULTANTS, INC., Building Code Consultant

The preliminary Code Summary for the Monroe County Public Library Southwest Branch follows.

**Monroe County Public Library - New Branch
Code Summary**



Applicable Codes:	2014 Indiana Building Code (IBC)* 2009 ANSI A117.1 Accessibility Standards 2014 Indiana Fire Code (IFC) 2014 Indiana Mechanical Code (IMC) 2009 Indiana Electrical Code (NEC) 2012 Indiana Plumbing Code (IPC) *Code referenced unless otherwise noted
Occupancy Classifications:	Library/Assembly Spaces A-3 Occupancy [303.4] Offices and spaces with an occupant load of less than 50 - B Occupancy (Accessory) [304.1, 303.1.2] Enclosed Parking Garage - S-2 Occupancy [311.3]
Scope of Project:	The project involves construction of a new 1-story plus basement branch library building with parking on the lower level. The building will have approximately 21,000 square feet per floor. The building will be Type VB Construction and classified non-separated A-3 and S-2 Occupancies. The building will be protected throughout with an automatic sprinkler system in accordance with NFPA 13.
Construction Type:	Type VB Construction permitted based upon allowable area/height
Allowable Area:	Tabular area: 6,000 sf [Table 503] Frontage increase: +4,500 sf [506.2] Sprinkler increase: <u>+18,000 sf</u> [506.3] Allowable area per floor: 28,500 sf Actual area per floor: 21,000 sf
Allowable Height:	2 stories permitted, 1 story actual [Table 503, 504.2]
Occupancy Separations:	Occupancy separations are not required, based upon classification as non-separated occupancies. [508.3]
Incidental Use Separations:	None applicable to this project [Table 509]
Stairways:	Unenclosed exit access stairways are permitted where connecting only 2 stories. [1009.3 Exc.1]

Occupant Load Factors:	Program/Meeting Rooms 7 sf per occupant Library Reading Areas 50 sf per occupant Library Stack Areas 100 sf per occupant Office 100 sf per occupant Storage/Mechanical 300 sf per occupant Parking Garage 200 sf per occupant [Table 1004.1.2]
Panic Hardware:	Panic hardware is required for egress doors serving an occupant load of 50 or more [1008.1.10]

Means of Egress:	2 means of egress are required from rooms with a calculated occupant load of 50 or more for A-3 or B Occupancy spaces and 30 or more for S-2 Occupancy spaces, or where exceeding 75 feet common path of travel in A-3 Occupancy spaces and 100 feet in B or S-2 Occupancy spaces [1015.1]
Exit Access Travel Distance:	The maximum travel distance to an exterior exit is permitted to be a maximum of 250 feet for A-3 Occupancy, 300 feet for B Occupancy and 400 feet for S-2 Occupancy. [1016.1]
Automatic Sprinklers:	An automatic sprinkler system is required throughout based upon non-separated A-3 fire area over 12,000 sf and occupant load over 300, and S-2 enclosed parking garage over 12,000 sf and beneath another group. [903.2.1.3, 903.2.10]
Fire Alarm System:	A fire alarm system is required based upon A-3 occupancy fire area over 300 occupants. Manual fire alarm boxes are not required based upon automatic sprinkler initiation of the system. [907.2.1]
Smoke Detectors:	Smoke detectors are required for HVAC shutdown for systems delivering in excess of 2,000 cfm [606.1, IMC] Required to initiate elevator recall. [3003.2] Smoke detection is required in the room containing fire alarm control equipment. [NFPA 72]

DESIGN DEVELOPMENT DRAWINGS

The overall site plan, floor plans, and building elevations for the new Monroe County Public Library Southwest branch follow.

A complete set of Design Development drawings may be found under separate cover. Drawings include site/civil, architectural, structural, mechanical, electrical, and plumbing design.

GENERAL NOTES

- A. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED OTHERWISE. CASE OF CONFLICT, THE DIMENSIONS SHOWN ON THIS DRAWING SHALL TAKE PRECEDENCE OVER ANY DIMENSIONS SHOWN ON ANY OTHER DRAWING.
- B. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE INTERNATIONAL CODE BOOKS AND SPECIFICATIONS.
- C. ALL DIMENSIONS SHALL BE TO FACE UNLESS SPECIFIED OTHERWISE.
- D. ALL DIMENSIONS SHALL BE TO FACE UNLESS SPECIFIED OTHERWISE.
- E. ALL DIMENSIONS SHALL BE TO FACE UNLESS SPECIFIED OTHERWISE.

PLAN NOTES

1. ASPHALT PAVEMENT - REFER TO DETAIL 7(C)(1)
2. ASPHALT PAVEMENT PATCH - REFER TO DETAIL 7(C)(1)
3. STANDARD DUTY CONCRETE PAVEMENT - REFER TO DETAIL 7(C)(1)
4. HEAVY DUTY CONCRETE PAVEMENT - REFER TO DETAIL 7(C)(1)
5. INTEGRAL CURB AND WALK - REFER TO DETAIL 7(C)(1)
6. DEPRESSIONED INTEGRAL CURB AND WALK - REFER TO DETAIL 7(C)(1)
7. STANDING CONCRETE CURB 6" HEIGHT - REFER TO DETAIL 7(C)(1)
8. STANDING CONCRETE CURB 9" HEIGHT - REFER TO DETAIL 7(C)(1)
9. CONCRETE CURB TRANSITION - REFER TO DETAIL 7(C)(1)
10. DEPRESSIONED STANDING CONCRETE CURB - REFER TO DETAIL 7(C)(1)
11. EXPANSION AND/OR SCORE JOINT (TYPICAL) - REFER TO DETAIL 7(C)(1)
12. FLAG POLE - REFER TO DETAIL 7(C)(1)
13. ADA COMPLIANT VEHICULAR SPACE - INCLUDES PAVEMENT MARKING 4" WIDE, 2" HIGH, 18" WIDE WITH GRATE. HIGH RISE BEARING SIGN 4" HIGH, 18" WIDE, WITH MOUNTED ON OIL FINISH. REFER TO DETAIL 7(C)(1)
14. ADA COMPLIANT CAR PARKING SPACE - INCLUDES PAVEMENT MARKING 4" WIDE, 2" HIGH, 18" WIDE WITH GRATE. HIGH RISE BEARING SIGN 4" HIGH, 18" WIDE, WITH MOUNTED ON OIL FINISH. REFER TO DETAIL 7(C)(1)
15. PAVEMENT MARKING 4" WIDE WHITE - AUTO PARKING
16. STOP SIGN - REFER TO DETAIL 7(C)(1)
17. COMPLETE ENCLOSURE - REFER TO ARCHITECTURAL PLANS
18. THERMOPLASTIC PAVEMENT MARKING 2" WIDE STOP BAR, WHITE, LENGTH AS SHOWN. REFER TO DETAIL 7(C)(1)
19. THERMOPLASTIC PAVEMENT MARKING 2" WIDE STOP BAR, WHITE, LENGTH AS SHOWN. REFER TO DETAIL 7(C)(1)
20. THERMOPLASTIC PAVEMENT MARKING CROSS WALK 1" FROM EDGE OF EXISTING WALK 6" LINE WIDTH, WHITE.
21. BICYCLE PARKING - DUAL GUARD STANDARD INVERTED L-SHAPED FIBER REINFORCED POLYESTER CONCRETE CROSS WALK 1" FROM EDGE OF EXISTING WALK 6" LINE WIDTH, WHITE.
22. BICYCLE SHED - DUAL GUARD STANDARD INVERTED L-SHAPED FIBER REINFORCED POLYESTER CONCRETE CROSS WALK 1" FROM EDGE OF EXISTING WALK 6" LINE WIDTH, WHITE.
23. SCOOTER PARKING - REFER TO SCOOTER ACCESSORIES BACKSPACE, POWDER COATED, COLOR BY ARCHITECT/TOWNER, ANCHORED TO CONCRETE.
24. QUARRIED LIMESTONE WALL - REFER TO DETAIL 7(C)(1)
25. LIMESTONE STEPS - REFER TO DETAIL 7(C)(1)
26. 18" WIDE WALK GRATE WITH 6" BEARING SIGN 4" HIGH, 18" WIDE, WITH MOUNTED ON OIL FINISH. REFER TO DETAIL 7(C)(1)
27. FUTURE SIDEWALK - BY OTHERS
28. RELOCATE EXISTING SIGN

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**MONROE COUNTY PUBLIC LIBRARY
 NEW BRANCH LIBRARY**
 BLOOMINGTON - INDIANA

- LEGEND**
- LIMITS OF NEW ASPHALT PAVEMENT
 - LIMITS OF NEW STANDARD DUTY CONCRETE PAVING
 - LIMITS OF NEW HEAVY DUTY CONCRETE PAVING
 - PAVEMENT STRIPING 2" O.C.
 - LIMITS OF ASPHALT PAVEMENT PATCH

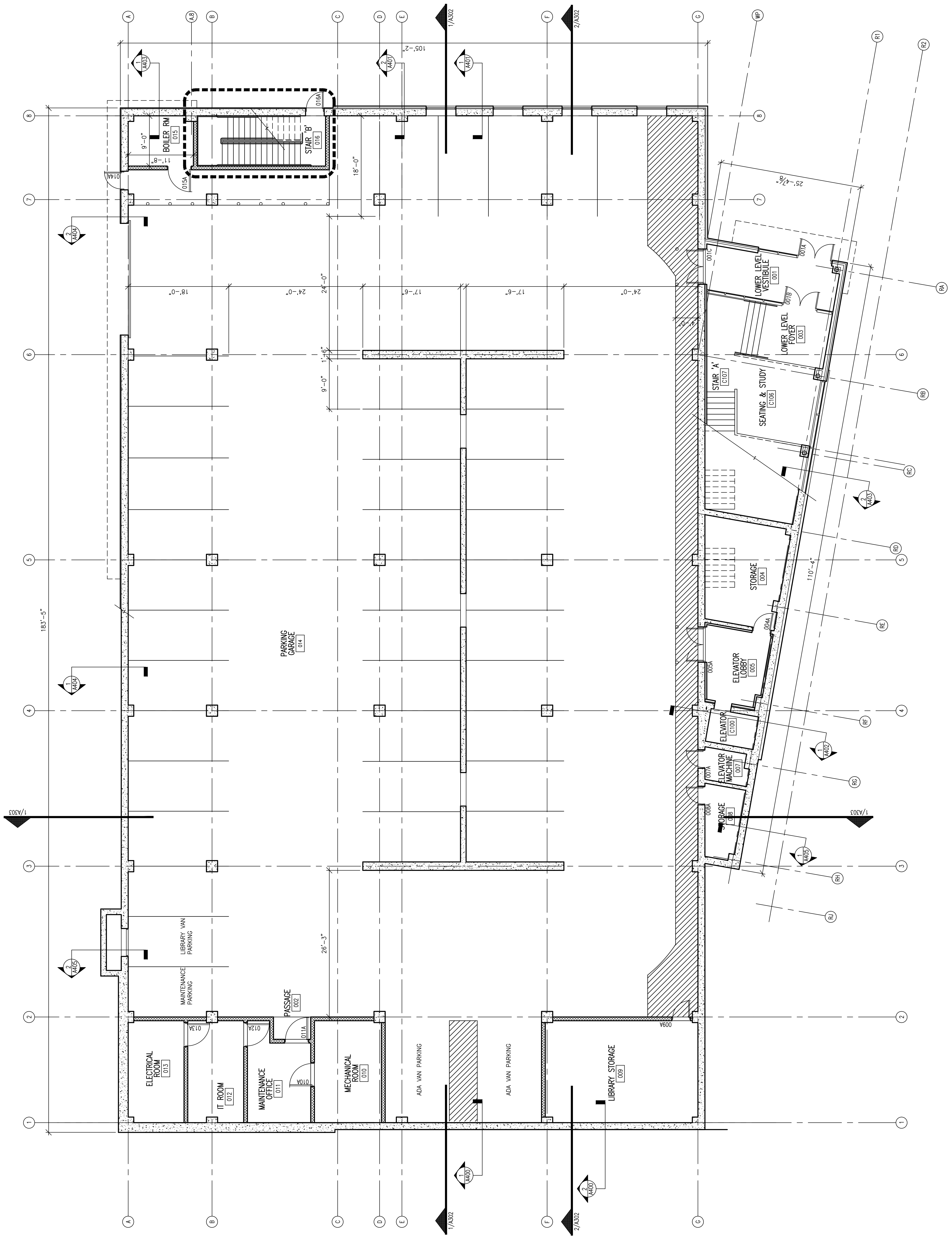
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2	311067.791	310577.643	36	311137.770	310577.643	72	311207.849
3	311137.770	310577.643	37	311207.849	310577.643	73	311277.928
4	311207.849	310577.643	38	311277.928	310577.643	74	311348.007
5	311277.928	310577.643	39	311348.007	310577.643	75	311418.086
6	311348.007	310577.643	40	311418.086	310577.643	76	311488.165
7	311418.086	310577.643	41	311488.165	310577.643	77	311558.244
8	311488.165	310577.643	42	311558.244	310577.643	78	311628.323
9	311558.244	310577.643	43	311628.323	310577.643	79	311698.402
10	311628.323	310577.643	44	311698.402	310577.643	80	311768.481
11	311698.402	310577.643	45	311768.481	310577.643	81	311838.560
12	311768.481	310577.643	46	311838.560	310577.643	82	311908.639
13	311838.560	310577.643	47	311908.639	310577.643	83	311978.718
14	311908.639	310577.643	48	311978.718	310577.643	84	312048.797
15	311978.718	310577.643	49	312048.797	310577.643	85	312118.876
16	312048.797	310577.643	50	312118.876	310577.643	86	312188.955
17	312118.876	310577.643	51	312259.034	310577.643	87	312259.034
18	312259.034	310577.643	52	312329.113	310577.643	88	312329.113
19	312329.113	310577.643	53	312399.192	310577.643	89	312399.192
20	312399.192	310577.643	54	312469.271	310577.643	90	312469.271
21	312469.271	310577.643	55	312539.350	310577.643	91	312539.350
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29	313029.903	310577.643	63	313099.982	310577.643	99	313099.982
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32	313240.140	310577.643	66	313310.219	310577.643	102	313310.219
33	313310.219	310577.643	67	313380.298	310577.643	103	313380.298
34	313380.298	310577.643	68	313450.377	310577.643	104	313450.377
35	313450.377	310577.643	69	313520.456	310577.643	105	313520.456
36	313520.456	310577.643	70	313590.535	310577.643	106	313590.535
37	313590.535	310577.643	71	313660.614	310577.643	107	313660.614
38	313660.614	310577.643	72	313730.693	310577.643	108	313730.693
39	313730.693	310577.643	73	313800.772	310577.643	109	313800.772
40	313800.772	310577.643	74	313870.851	310577.643	110	313870.851
41	313870.851	310577.643	75	313940.930	310577.643	111	313940.930
42	313940.930	310577.643	76	314011.009	310577.643	112	314011.009
43	314011.009	310577.643	77	314081.088	310577.643	113	314081.088
44	314081.088	310577.643	78	314151.167	310577.643	114	314151.167
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49	314431.483	310577.643	83	314501.562	310577.643	119	314501.562
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52	314641.720	310577.643	86	314711.799	310577.643	122	314711.799
53	314711.799	310577.643	87	314781.878	310577.643	123	314781.878
54	314781.878	310577.643	88	314851.957	310577.643	124	314851.957
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58	315062.194	310577.643	92	315132.273	310577.643	128	315132.273
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73	316113.379	310577.643	107	316183.458	310577.643	143	316183.458
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77	316393.695	310577.643	111	316463.774	310577.643	147	316463.774
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98	317865.354	310577.643	132	317935.433	310577.643	168	317935.433
99	317935.433	310577.643	133	318005.512	310577.643	169	318005.512
100	318005.512	310577.643	134	318075.591	310577.643	170	318075.591
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102							

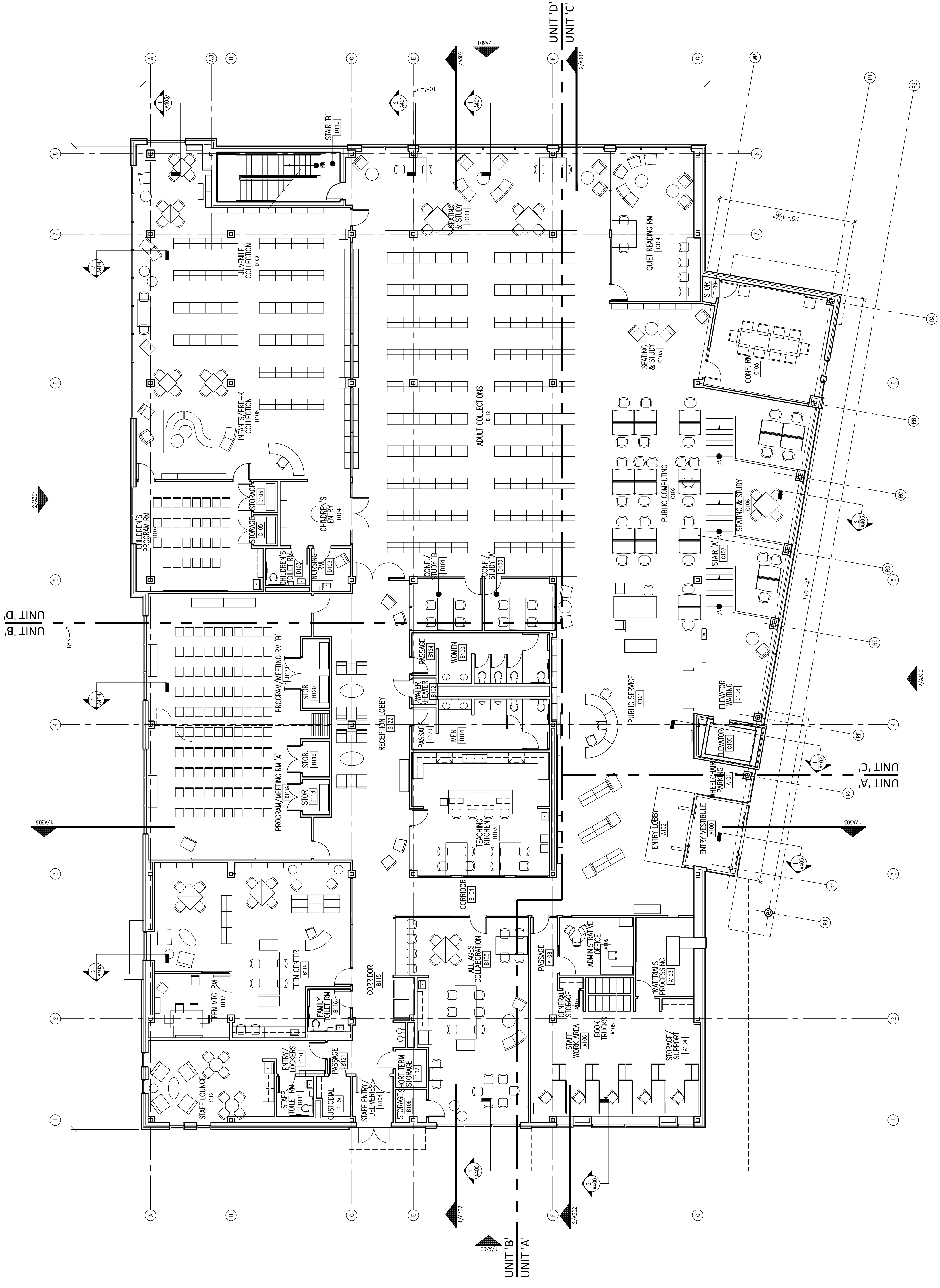
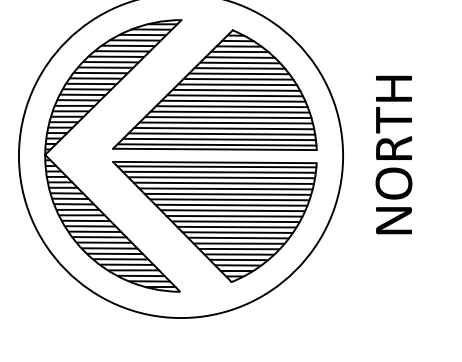
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OVERALL
 FIRST FLOOR PLAN

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A201

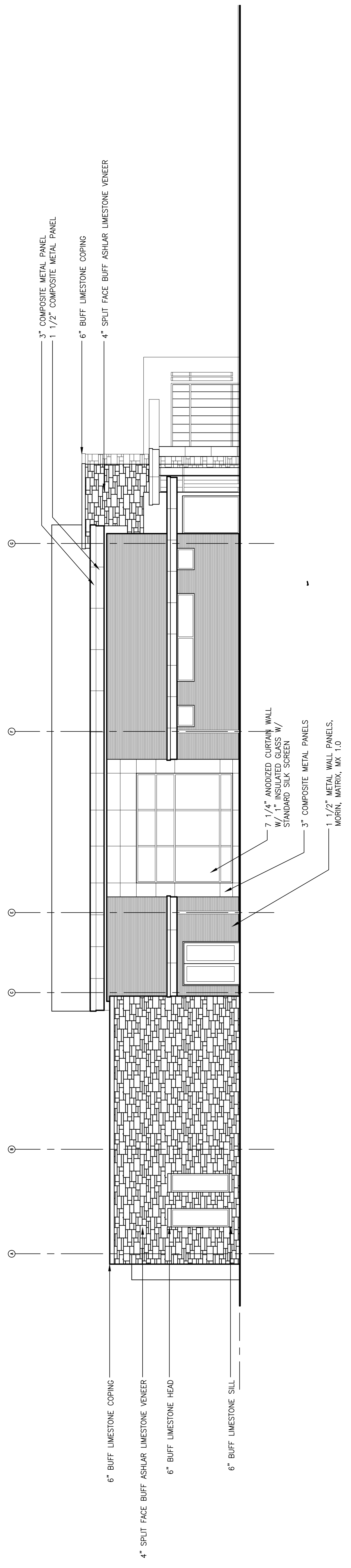
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WEST ELEVATION
SCALE: 1/8" = 1'-0"



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SOUTH & WEST
ELEVATIONS

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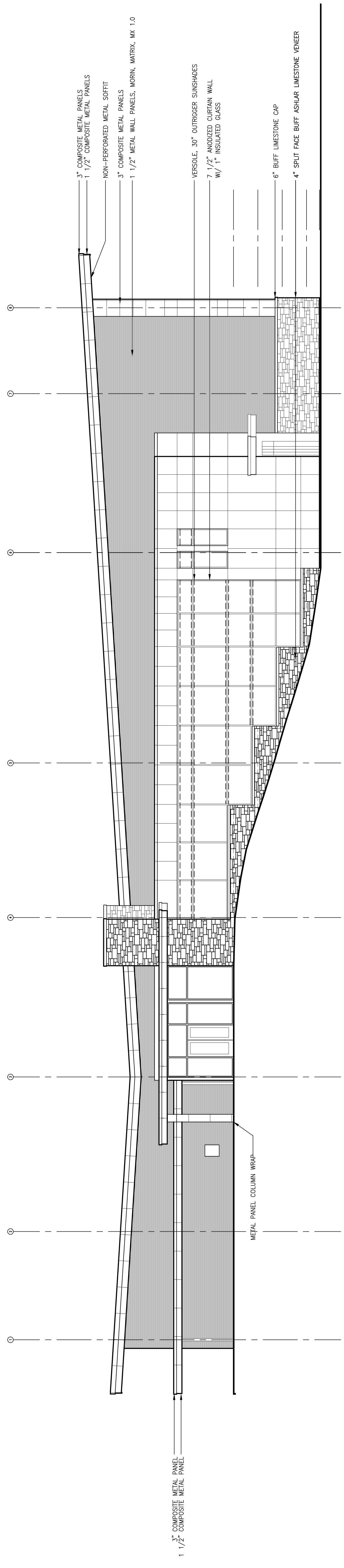
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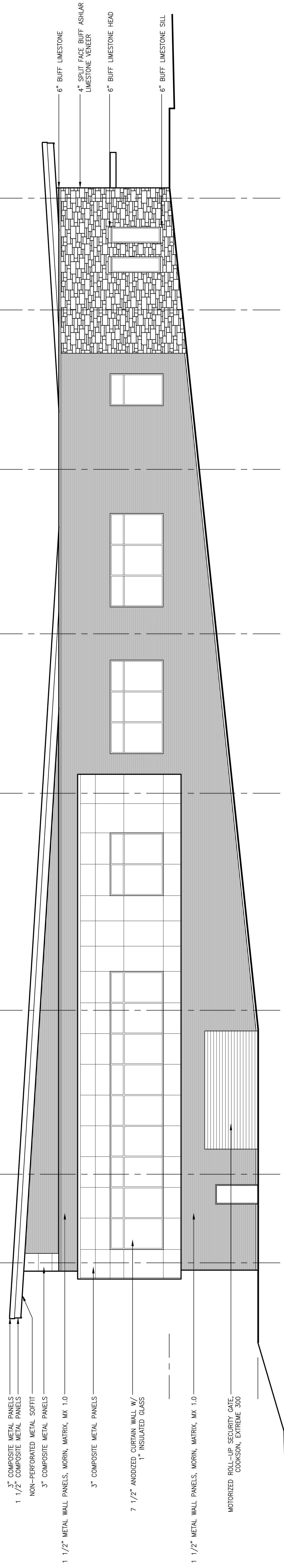
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SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



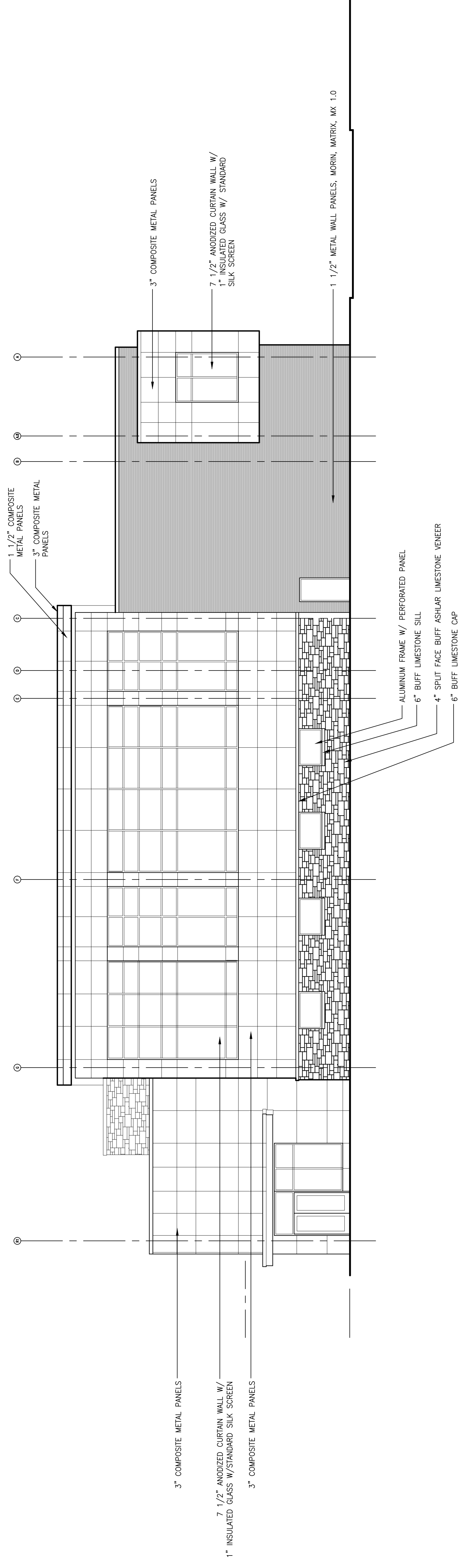
SOUTH ELEVATION
SCALE: 1/8" = 1'-0"



3" COMPOSITE METAL PANELS
 1 1/2" COMPOSITE METAL PANELS
 NON-PERFORATED METAL SOFFIT
 3" COMPOSITE METAL PANELS
 1 1/2" METAL WALL PANELS, MORIN, MATRIX, MX 1.0
 3" COMPOSITE METAL PANELS
 7 1/2" ANODIZED CURTAIN WALL W/
 1" INSULATED GLASS
 1 1/2" METAL WALL PANELS, MORIN, MATRIX, MX 1.0
 MOTORIZED ROLL-UP SECURITY GATE,
 COOKSON, EXTREME 300

NORTH ELEVATION
 SCALE: 1/8" = 1'-0"

1



3" COMPOSITE METAL PANELS
 7 1/2" ANODIZED CURTAIN WALL W/
 1" INSULATED GLASS W/ STANDARD SILK SCREEN
 3" COMPOSITE METAL PANELS
 1 1/2" METAL WALL PANELS, MORIN, MATRIX, MX 1.0
 3" COMPOSITE METAL PANELS
 1 1/2" COMPOSITE METAL PANELS
 3" COMPOSITE METAL PANELS
 7 1/2" ANODIZED CURTAIN WALL W/
 1" INSULATED GLASS W/ STANDARD SILK SCREEN
 1 1/2" METAL WALL PANELS, MORIN, MATRIX, MX 1.0
 ALUMINUM FRAME W/ PERFORATED PANEL
 6" BUFF LIMESTONE SILL
 4" SPLIT FACE BUFF ASHLAR LIMESTONE VENEER
 6" BUFF LIMESTONE CAP

EAST ELEVATION
 SCALE: 1/8" = 1'-0"

1

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ARCHITECT'S PROJECT NO.: 19008
 DATE: MARCH 10, 2021

NORTH & EAST ELEVATIONS

SHEET NO. **A301**

DESIGN DEVELOPMENT PROJECT COST ESTIMATE

The Design Development project cost estimate summary for the Monroe County Public Library Southwest Branch may be found under separate cover.

MCPL SOUTHWEST BRANCH PROJECT SCHEDULE

2020:

Aug. 1 – 17	MA & BRCJ prepare site concept options and analysis.
Aug. 18	MA & BRCJ present site concept options and analysis to MCPL for discussion and direction.
Aug. 18 - 21	BRCJ prepares site topo survey Agreement for MCPL approval & signature.
Aug. 24 - Sept. 11	BRCJ prepares topographic site survey. JW and MCPL arrange for environmental Phase I study.
Aug. 20 – Sept. 10	MA, BRCJ, & BA prepare preliminary design & concept construction cost estimates for two preferred site/building options.
Sept. 11	MA presents preliminary design & concept construction cost estimates for 2 options to MCPL for review and discussion.
Sept. 11-26	MCPL reviews prelim design & concept construction cost estimates and Board gives MA direction to pursue one option.
Sept. 1 - 30	MCPL contracts Phase I Environmental Study. Phase I Environmental study prepared and submitted to MCPL
Sept. 27	BRCJ reviews preferred site concept option(s) with MCCSC and Monroe County Planning Dept. to confirm direction. BRCJ revises site concept as required.
Sept. 28 – Oct. 25	MA prepares building Schematic Design.
Sept. 28 – Oct. 25	BRCJ prepares site development package/civil engineering plan set, subdivision documents, and plat for County review.
Oct. 26	BRCJ submits site survey and legal description to JW.
Oct. 26 – 29	JW prepares amendment to extend property purchase agreement date and submits to MCPL.
Nov. 2	MCPL Board approves amendment to extend MCCSC property agreement purchase date.
Nov. 4	BRCJ files for Minor Subdivision, Preliminary Plat, and Site Plan Approval.
Nov. 9	JW submits to MCCSC amendment to extend property purchase Agreement.
Nov. 11	MA presents Schematic Design to MCPL Building Committee for discussion and approval.
Nov. 17	MCCSC Board meeting approval of amendment to extend property Agreement.
Nov. 19 – Mar. 17	MA and consultants prepare Design Development documents. MA meets with MCPL Building Committee and Consultants intermittently for input, review, and coordination.
Dec. 17	BRCJ submits request to Plat Committee for two waivers – (1) overhead line along S. Rogers St. and (2) street trees along Rogers St. and Gordon Pike. Jackie Nester to check with Hwy Dept. to see if Fullerton Pike project includes street trees along Gordon Pike.

2021:

Jan. 5	Plan Commission hearing if required by Plat Committee due to request for waivers.
(Jan. 19)	(Second Plan Commission hearing if required.)
Jan. 6 – 20	Monroe County Recorder signs and records Plat.
(Jan. 20 – Feb. 5)	(Monroe County Recorder signs and records Plat.)

PROJECT SCHEDULE, CONT'D:

Jan. 20	MCPL Board meeting approval of MCCSC property purchase.
Jan. 26	MCCSC Board meeting; property purchase approval.
Jan. 27	JW orders property title commitment.
Jan. 27 - Feb. 16	MCPL purchases land from MCCSC.
March 10	MA presents Design Development documents and Interior Finishes Board to MCPL Building Committee for review.
March 17	MA presents Design Development documents to MCPL Board for approval.
March 28 – July 20	MA and consultants prepare Construction Documents. MA meets with MCPL Building Committee and Consultants intermittently for input, review, and coordination.
July 20	MA presents Construction Documents to MCPL Building Committee for approval.
July 21	MA presents Construction Documents to MCPL Board for approval to go to bid.
July 27 – Aug. 9	MCPL advertises for Bids.
Aug. 10 – Aug. 31	Construction Bidding. MA prepares Addenda and distributes to Contractors
Aug. 31	Bid Opening
Sept. 1 - 7	Owner – Contractor Agreement Prep
Sept. 8	Construction begins.
<u>2022:</u>	
Sept. 9	Substantial Completion of Construction; Architect & Engineers Prepare Punch List
Sept. 23	Contractor Completes Construction
Sept. 26 – Oct. 21	FFE Move-In
Oct. 22	Building opens

APPENDIX

APPENDIX A: INTERIOR FINISHES AND ARCHITECTURAL PRODUCT INFORMATION

INTERIOR FINISHES

Reference the Architectural floor plans and finish schedule for locations of the following interior finishes. Reference the Interior Finish Board for samples of the materials.

ACOUSTICAL PANEL CEILINGS

Typical Ceilings:

APC-A:
Manuf.: USG
Product: Acoustical Panel Ceiling
Type: 24" x 24" Lay-In Tile
Style: Eclipse or Eclipse High-NRC
Grid: 2' x 2'

Teaching Kitchen:

APC-B:
Manuf.: USG
Product: Acoustical Panel Ceiling
Type: 24" x 24" Lay-In Tile
Style: Kitchen Lay-In Panel
Grid: 2' x 2'

PAINT

P- : PAINT
Manuf.: Sherwin Williams

General Wall Paint:

P-A: SW 7064 Passive

Wall Accent Paint:

P-B: SW 7068 Grizzle Gray
P-C: SW 6402 Antiquity
P-D: SW 6370 Saucy G

Hollow Metal Door & Window Frames:

P-E: SW 7066 Gray Matters

CERAMIC TILE

Restrooms:

CT-A:
Manuf.: Daltile
Product: Ceramic Porcelain Floor Tile
Collection: Assemble
Size: 12 x 24
Color: Proxy AS10
Finish: Matte
Installation: Brick

CT-B:
Manuf.: Daltile
Product: Ceramic Porcelain Wall Tile
Collection: Chord
Size: 12 x 24
Color: Canon Grey CH22
Finish: Light Polished
Installation: Brick

CT-C:
Manuf.: Daltile
Product: Ceramic Porcelain Wall Tile
Collection: Chord
Size: 12 x 24
Color: Forte Grey CH25
Finish: Light Polished
Installation: Brick

Children's Restroom:

CT-D:
Manuf.: Daltile
Product: Ceramic Porcelain Floor Tile
Collection: Portfolio Confetti
Size: 12 x 24
Color: Electric Blue PF35
Finish: Matte
Installation: Brick

CT-E:
Manuf.: Daltile Wall tile
Product: Ceramic Porcelain Wall Tile
Collection: Portfolio Confetti
Size: 12 x 24
Color: White PF30
Finish: Matte
Installation: Brick

CERAMIC TILE, Cont'd:

Teaching Kitchen:

CT-F:

Manuf.: Daltile
Product: Ceramic Porcelain Floor Tile
Collection: Astronomy
Size: 12 x 24
Color: AT73 Nebula
Finish: Matte with Stepwise
Installation: Brick

CT-G:

Manuf.: Daltile
Product: Ceramic Porcelain Wall Tile
Collection: Remedy
Size: 2-3/8 x 9-1/2
Color: Herbal RD21
Finish: Glazed
Installation: Stacked

CARPET:

Entry Vestibules & Lower Level Foyer:

CPT-A:

Manuf.: Shaw
Product: Modular Walk-Off Carpet
Collection: All Access
Size: 24 x 24
Style: Portal
Color: Sterling 34557
Installation: Monolith

Adult Collections, Study/Reading Area:

CPT-B:

Manuf.: Patcraft
Product: Modular Carpet
Collection: Subtle Impressions
Style: Pressed 10531
Size: 24" x 24"
Color: Pewter 00550
Installation: Stagger

CARPET, Cont'd:

Adult Collections:

CPT-C:

Manuf.: Patcraft
Product: Modular Carpet
Collection: Subtle Impressions
Style: Perennial 10530
Size: 12" x 48"
Color: Tansy 00516
Installation: Stagger

Quiet Reading Room:

CPT-D

Manuf.: Patcraft
Product: Modular Carpet
Collection: Subtle Impressions
Style: Floraculture 10529
Size: 12" x 48"
Color: Tansy 00516
Installation: Stagger

Children's Area:

CPT-E:

Manuf.: Patcraft
Product: Modular Carpet
Collection: Subtle Impressions
Style: Floraculture 10529
Size: 12" x 48"
Color: Calla 00513
Installation: Stagger

Administration Area:

CPT-F:

Manuf.: Patcraft
Product: Modular Carpet
Collection: Crafted Surface
Style: Tapis 10551
Size: 18" x 36"
Color: Yellow Silk 00280
Installation: Monolithic

CARPET, Cont'd:

Program/Meeting Room:

CPT-G

Manuf.: Patcraft
Product: Modular Carpet
Collection: Crafted Surface
Style: Tapis 10551
Size: 18" x 36"
Color: Shadow Loop 00530
Installation: Monolithic

LUXURY VINYL TILE

Entry Lobby, Public Service Area, Public Computing, Adult Reading Area, Study/Reading Area, Program/Meeting Room Reception Lobby, Mid-Size Conference Room, Study Rooms, Atrium Reading/Study Tiers, Corridors:

LVT-A:

Manuf.: Shaw
Product: Luxury Vinyl Tile
Collection: Unite
Style: Inlet
Size: 9" x 48"
Thickness: 5.0 mm
Color: Spindle 26140
Installation: Staggered with Random Joints

All Ages Collaborative Area, Teen Center:

LVT-B:

Manuf.: Shaw
Product: Luxury Vinyl Tile
Collection: Compound V2
Style/Color: 77530 Foundation
Size: 24' x 24"
Thickness: 5.0 mm
Installation: Monolithic

All Ages Collaborative Area, Teen Center:

LVT-C:

Manuf.: Shaw
Product: Luxury Vinyl Tile
Collection: Compound V2
Style/Color: 77715 Terra Cotta
Size: 24' x 24"
Thickness: 5.0 mm
Installation: Monolithic

SHEET VINYL FLOORING

Children's Program Room:

SVF-A:

Manuf.: Gerflor
Product: Cushioned Sheet Vinyl Flooring
Collection: Taralay Impression
Style: 0738 Rice
Color: Copper

RUBBER FLOORING

Atrium Stair 'A':

RF-A:

Manuf.: Johnsonite
Product: Rubber Floor Treads & Accessories
Style: Raised Square or TBD
Color: Dark Gray

RESILIENT WALL BASE

RB-A:

Manuf.: Johnsonite
Product: Resilient Wall Base
Size: 4" H
Color: 38 Pewter

PLASTIC LAMINATE

All Ages Collaborative Space, Administration Storage/Support, Materials Processing, Staff Break Room:

Casework:

PL-A:

Manuf.: Wilsonart
Product: Plastic Laminate
Style, Color: 8214K-28 Phantom Charcoal
Finish: Gloss Line

Countertop:

PL-B:

Manuf.: Wilsonart
Product: Plastic Laminate
Style, Color: 4856-60 Cloud Zephyr
Finish: Matte

Teaching Kitchen Island, Teen Center, Children's Program Room, Nursing Room:

Casework:

PL-C:

Manuf.: Wilsonart
Product: Plastic Laminate
Style, Color: 8227K-79 White River Forest
Finish: Ridgewood Texture Finish

PLASTIC LAMINATE, Cont'd:

Teen Center:

Countertop:

PL-E:

Manuf.: Wilsonart
Product: Plastic Laminate
Style, Color: 4879-38 Steel Mesh
Finish: Fine Velvet

Children's Program Room, Nursing Room:

Countertop:

PL-D:

Manuf.: Wilsonart
Product: Plastic Laminate
Style, Color: 4915-60 Tangerine
Finish: Matte

QUARTZ SURFACE

Teaching Kitchen Island:

Countertop:

QS-A:

Manuf.: Wilsonart
Product: Quartz
Color: Q4024 Via Augusta

Restrooms:

Countertop:

QS-B:

Manuf.: Corian
Product: Quartz
Color: Storm Grey

SOLID SURFACE

Windowsills:

SS-A:

Manuf.: Wilsonart
Product: Solid Surface
Color: Zen Grey 9115GS (3)

CASEWORK HARDWARE

Finish: Satin Chrome

STAINLESS STEEL COUNTERTOP

Teaching Kitchen:

Countertop and Shelving:

Manuf.: TBD
Product: Stainless Steel Sheet Metal
Finish: Brushed

BULLETIN BOARD WALL SURFACE

Entry Lobby, Teen Center:

BB-A:
Manuf.: Claridge
Product: Colored Linoleum Cork
Color: 1136 Graphite

INTERIOR WOOD DOORS

WD-A:
Manuf.: Marshfield-Algoma
Product: Solid Core Flush Wood Door & Solid Core Full Glass Wood Door
Species: White Maple
Cut: Plain Sliced
Finish: Clear

DOOR HARDWARE

Finish: US32D/630 Satin Stainless Steel

PICTURE RAIL

PR-
Manuf.: AS Hanging System
Product: Cable Track System
Accessories: Stainless Steel Cables, Hooks
Finish: Aluminum Silver

TOILET PARTITIONS

TP-A
Manuf.: Accurate Partitions Corp.
Product: Solid Plastic (HDPE) Partitions
Color: White 9201
Finish: Pebble Grained
Installation: Floor to Ceiling Anchored

OPERABLE PARTITION

OP-
Manuf.: Modernfold
Product: Acousti-Seal Encore Series
Trim Color: SW7668 Smoke Gray
Panel Finish: Heavy Duty Vinyl Coated Fabric Wall Covering
Panel Color: 494(H) Sonesta – Grayson

CURTAIN WALL & STOREFRONT

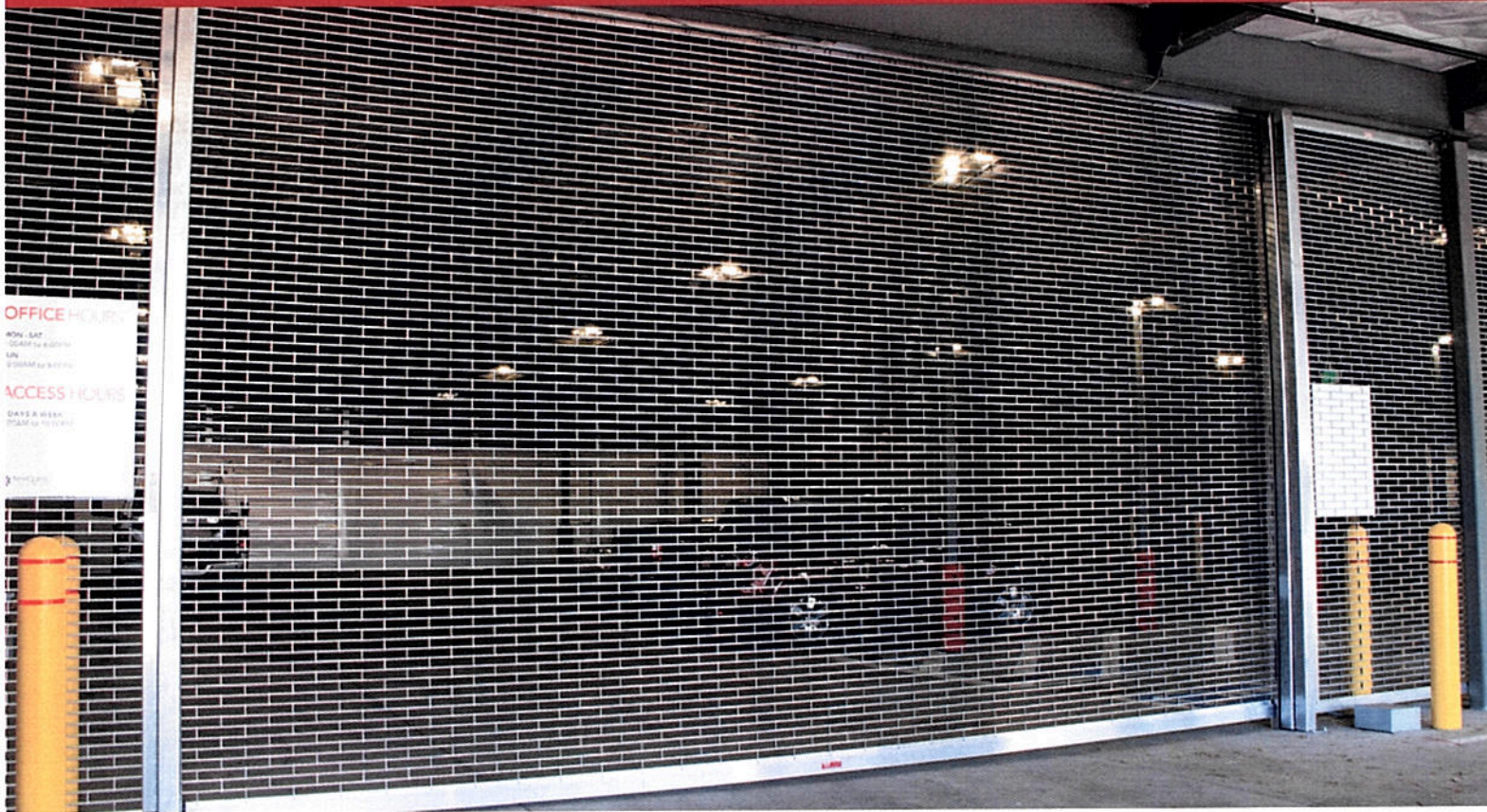
Metal Finish: Anodized Aluminum

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Models EPG324 (straight) & EPG324B (brick)



INTELLIGENT OPERATION AND HIGH CYCLE LIFE

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The Extreme 300 Series Grille operates up to **3 times faster** than standard coiling grilles and performs 300,000 cycles. Opening at speeds up to 24" per second and closing at 12" per second, it maximizes productivity, smooths traffic flow and reduces downtime in applications like parking facilities, airports and transportation hubs.

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An intelligent control panel featuring plug and play wiring makes installing and servicing the 300 Series Grille easier than ever before. The LCD screen communicates grille status messages, provides easy-to-follow instructions for grille commissioning, and electronically sets door limits. When the grille limits are set, they are continuously monitored and adjusted.

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To ensure maximum uptime, the 300 Series Grille requires no maintenance, other than routine checks and no replacement parts. It accepts virtually all activation systems and features a 2 year operator warranty and a 2 year/300,000 cycle component warranty.

SMOOTH HIGH-SPEED OPERATION

The compact operator features a variable-frequency drive that ensures a soft start and stop - reducing wear and tear on both the grille and the operator. The 300 Series Grille operates at speeds of up to 24 inches per second. In addition, the operator's direct drive design means there's no sprocket and chain to wear or replace. With flexibility in mind, the 300 series grille is compatible with a 120V service (requires transformer, provided with upgrade).

800.294.4358 | cooksondoor.com

CornellCookson, LLC, is an ISO 9001:2015 registered company
1.2021

Preferred door solutions.
COOKSON 151

HIGH PERFORMANCE LINE

Extreme® 300 SERIES GRILLE

Models EPG324 (straight) and EPG324B (brick)

MEASURE THE WIDTH AND HEIGHT OF THE OPENING

FACE OF WALL

6'	15"	15"	5.5"	11"	7"
7'	15"	15"			
8'	16"	16"			
9'	16"	16"			
10'	16"	16"			
11'	17"	17"			
12'	17"	17"			
13'	18"	18"			
14'	18"	18"			
15'	19"	19"			
16'	19"	19"			

BETWEEN JAMBS

6'	17"	17"	5.5"	11"	7"
7'	17"	17"			
8'	17"	17"			
9'	17"	17"			
10'	17"	17"			
11'	17"	17"			
12'	17"	17"			
13'	18"	18"			
14'	18"	18"			
15'	19"	19"			
16'	19"	19"			

HEIGHT

A

B

C

D

E

HEIGHT

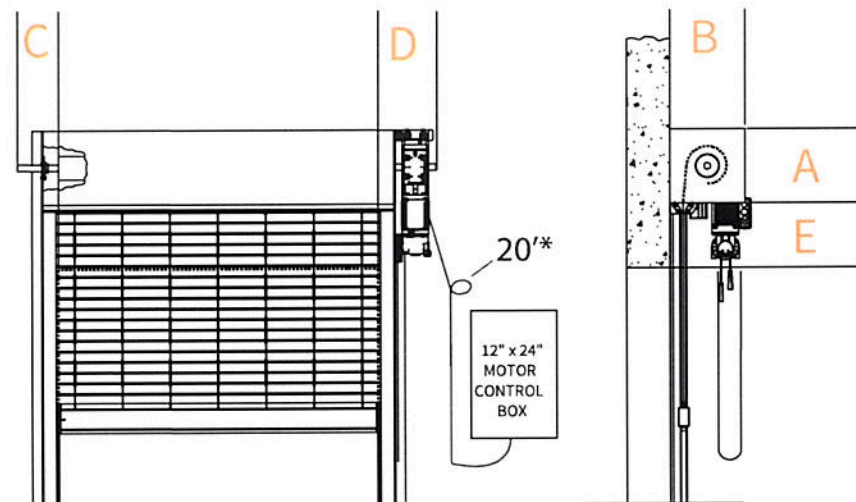
A

B

C

D

E



CURTAIN DESIGNS Straight and Brick



Straight



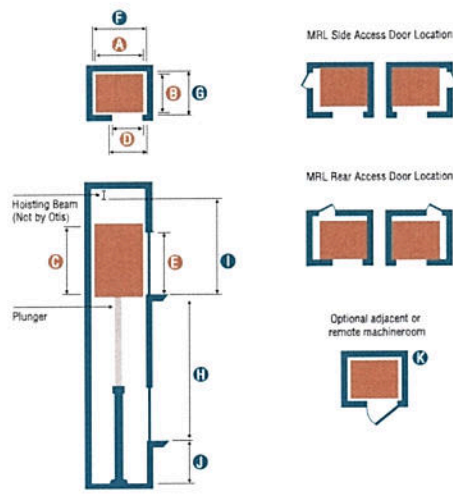
Brick

The dimensions featured on this sheet are provided as a guide. Please consult factory for exact dimensions.

*For additional lengths please contact the factory.

HYDROFIT SPECIFICATIONS

Travel height maximum	26'-6" 8m
Maximum stops	4
Speed (ft/min)	100 0.51m/s
	125 0.64m/s



IMPORTANT:
To assist in your planning, we recommend that you call your Otis representative at the beginning of the project.

Dimensions

PASSENGER

Rated lbs.	2100 (953kg)	2500 (1134kg)	3000 (1361kg)	3500 (1588kg)
Passenger Capacity	13	15	18	21

Car¹

A Interior width	5'-8 1/4" (1735mm)	6'-5 1/4" (1970mm)
B Interior depth	4'-3 3/8" (1309mm)	5'-0 1/4" (1528mm)
for front and rear openings	4'-4 1/4" (1324mm)	5'-0 1/4" (1543mm)
C Interior height ²	7'-9" Optional 9'-9" [2362mm Optional 2972mm]	
D Car door width	3'-0" (914mm)	3'-6" (1067mm)
E Entrance height	7'-0" Optional 8'-0" [2134mm Optional 2438mm]	

SERVICE

4500 (2041kg)	5000 (2268kg)	5000AIA (2268kg)
28	31	31

5'-5 1/4" (1655mm)	5'-11 1/4" (1811mm)	5'-6 1/4" (1697mm)
7'-10 1/4" (2411mm)	8'-4 3/4" (2544mm)	8'-11 1/4" (2728mm)
7'-11 1/2" (2426mm)	8'-4 1/4" (2559mm)	9'-0" (2743mm)
7'-9" Optional 9'-9" (2362mm Optional 2972mm)		
4'-0" (1219mm)	4'-6" (1371mm)	4'-0" (1219mm)
7'-0" Optional 8'-0" [2134mm Optional 2438mm]		

Hoistway

F Width ³	7'-7" (2311mm) ⁴	8'-4" (2540mm)		7'-9" (2362mm) ⁵	8'-4" (2540mm) ⁵	7'-11" (2413mm) ⁵
G Depth	5'-9" (1753mm)	6'-4" (1930mm)	6'-11" (2108mm)	9'-7" (2921mm)	10'-1" (3073mm)	10'-8" (3251mm)
for MRL rear door access ¹⁰	6'-8" (2033mm)	7'-3" (2210mm)	7'-10" (2388mm)	10'-7" (3226mm)	11'-1" (3378mm)	11'-8" (3556mm)
for front and rear openings	6'-3 1/4" (1911mm) ⁴	6'-11 1/4" (2130mm)	7'-5 1/4" (2267mm)	10'-4 1/2" (3162mm)	10'-9 1/4" (3295mm)	11'-5" (3479mm)
H Maximum rise	SINGLE STAGE			TWO STAGE		
@100 ft/min (with 4' pit depth)	13'-5" (4089mm)			21'-6" (6553mm)		
@125 ft/min (with 4' pit depth)	13'-2" (4013mm)			21'-6" (6553mm)		
@100 ft/min (with 5' pit depth)	14'-5" (4394mm)			26'-6" (8077mm)		
@125 ft/min (with 5' pit depth)	14'-2" (4318mm)			26'-6" (8077mm)		
I Clear overhead to hoist beam	SINGLE STAGE		TWO STAGE	SINGLE STAGE		TWO STAGE
@100 ft/min (with 7'-9" cab)	12'-0" (3658mm)		12'-4" (3759mm)	12'-3" (3734mm)		12'-6" (3810mm)
@125 ft/min (with 7'-9" cab)	12'-1" (3683mm)		12'-7" (3835mm)	12'-3" (3734mm)		12'-10" (3912mm)
@100 ft/min (with 9'-9" cab)	14'-0" (4268mm)		14'-4" (4369mm)	14'-3" (4343mm)		14'-6" (4420mm)
@125 ft/min (with 9'-9" cab)	14'-1" (4293mm)		14'-7" (4445mm)	14'-3" (4343mm)		14'-10" (4521.2mm)
J Minimum pit depth	4'-0" / 5'-0" (1219mm/1524mm) ⁷			4'-0" / 5'-0" (1219mm/1524mm) ⁷		

Machine Room (optional)

K Minimum width and depth ⁴	5'-9" (1753mm) x 7'-4" (2235mm)	5'-9" (1753mm) x 7'-4" (2235mm)
---	---------------------------------	---------------------------------

- Interior dimensions may vary depending on finishes selected.
- Clear cab height varies by ceiling type and floor recess.
- The hoistway width and depth dimensions listed represent the minimum requirements for MRL applications. Construction efficiencies can be realized by increasing these dimensions by up to 2" (51 mm).
- For 2100 lb systems that opt for a machine room, the hoistway width can be reduced by 3".
- For 4500 lb, 5000 lb, and 5000AIA systems that opt for a machine room, the hoistway width can be reduced by 2".
- Front & Rear openings for 2100 and 2500 lb machine-roomless installations allow for rear openings at 2nd and 3rd floors only.
- Some locations require a 5'-0" pit. Contact your local Otis representative for details.
- Machine room dimensions for 2 car group arrangements vary by hoistway dimension. Contact your local Otis representative for details.
- Maximum rise is based on a combination of speed and duty. Contact your local Otis representative for details.
- Rear door access is allowed on front opening units only. For MRL rear access door location, contact your Otis representative.
- In certain instances the MRL access door can be located on the 2nd floor. Contact your local Otis representative for details.
- For multiple car applications, or pre 2008 A17.1, contact your local Otis representative for details.

OTIS

www.otis.com

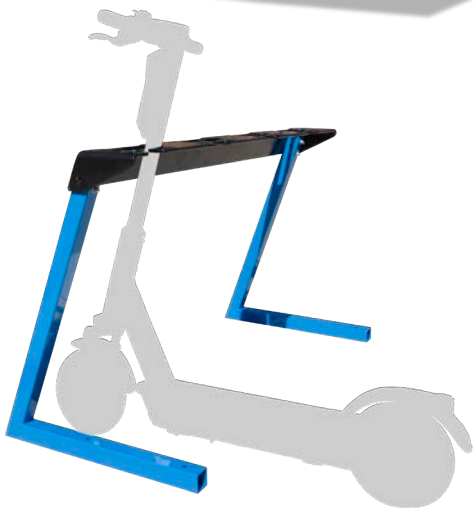
publication HYD-1201 (0116) AKS © Otis Elevator Company 2016.
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APPENDIX B: SITE FURNISHINGS PRODUCT INFORMATION

Reference the Site/Civil drawings for locations of the following site furnishings products.



157



E-Scooter Rack

Declutter sidewalks and create orderly parking for electric scooters. The E-Scooter Rack accommodates numerous scooter models, with its unique tapered openings (four per rack). The rubber coated top plate also protects scooters and provides extra grip for parking stability.

Patent Pending

E-Scooter Rack

- Accommodates numerous electric scooter models
- Unique tapered openings in top plate securely hold e-scooters
- Black rubber coated top plate protects scooters and provides extra hold grip
- Use freestanding or anchored to the ground
- Numerous locking points
- Durable hot-dip galvanized coating on uprights
- Minimal assembly and ships flat
- Custom logo branding is available upon request
- Not suitable for bike parking



FINISH OPTIONS FOR UPRIGHTS

Galvanized



Powder Coat



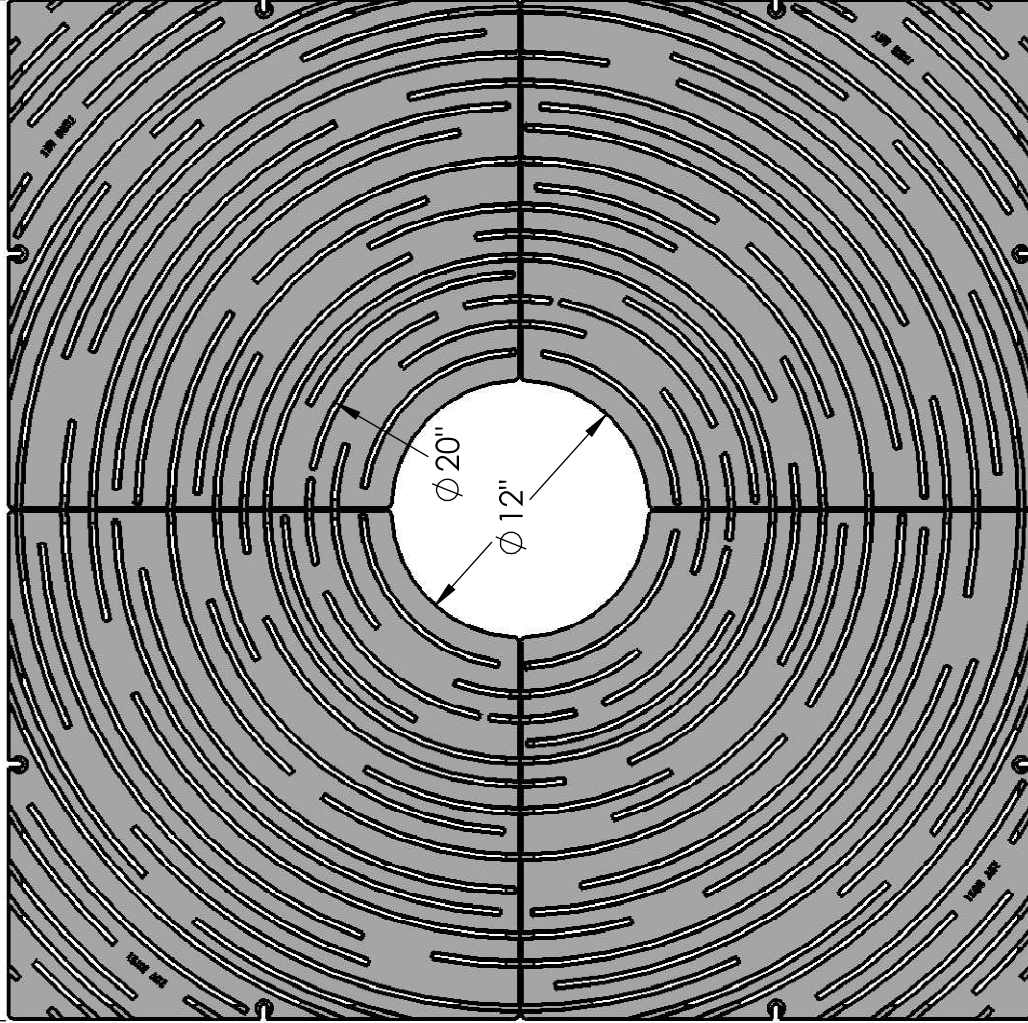
CROSSPIECE FINISH

PVC Dip

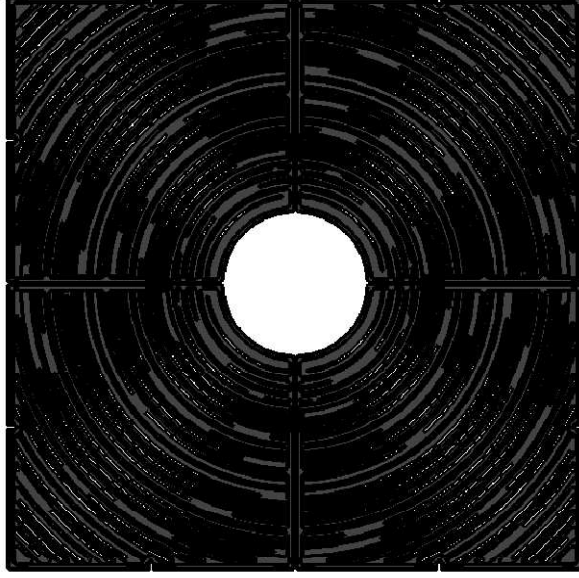


Top

47.875"sq.



Bottom



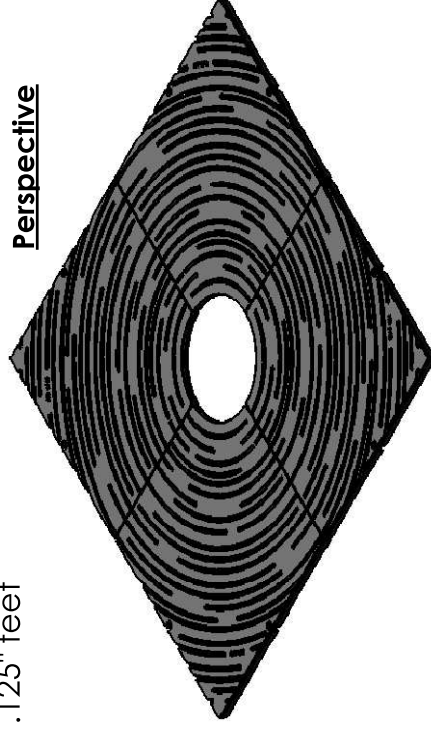
Edge



1.00" @ Edge

.125" feet

Perspective



NOTES:

1. Material: cast iron
2. Finish: Natural
3. Edge thickness: 1"
4. Fits frame by: Iron Age
5. Heel-Proof: No openings greater than 1/4"
6. Weight approx: 211 lbs [53 lbs per section]
7. Due to casting inconsistencies all dimensions are nominal



2104 SW 152nd St. #4 TEL 206.276.0925
 Burien, WA 98166 FAX 206.257.0318
 www.ironagedesigns.com

Spin 4' x 4' Heel-Proof Tree Grate

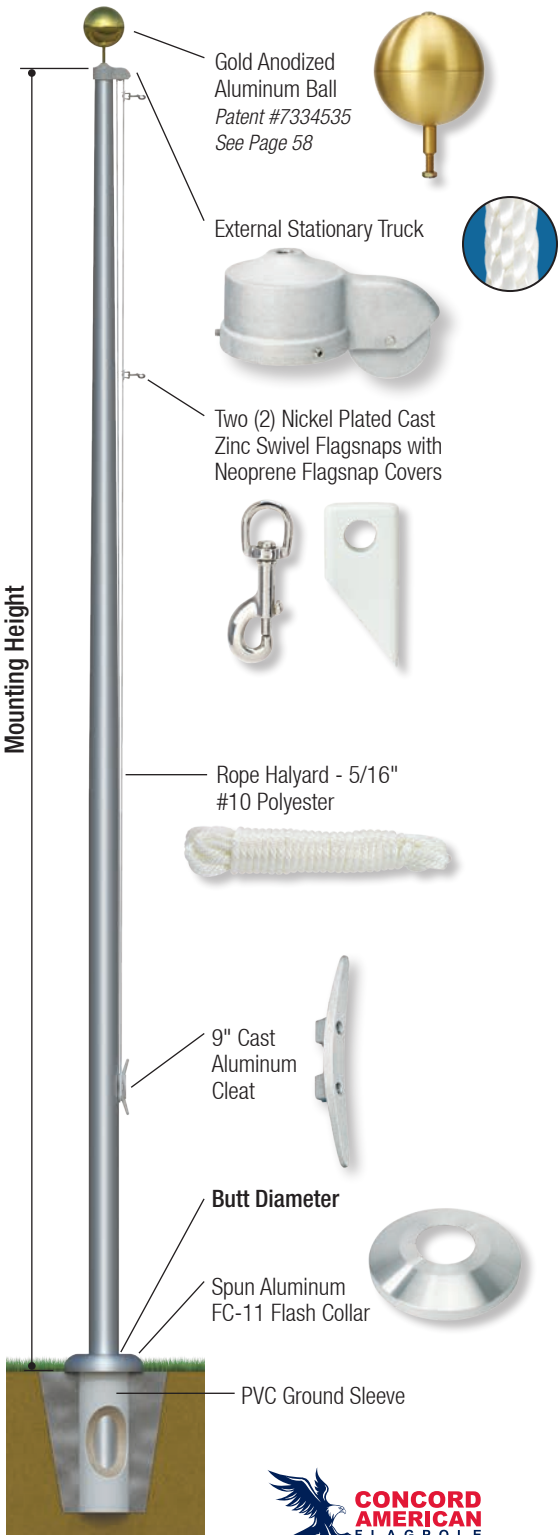
JOB NO. _____ Drawn by: JH
 DWG. NO. 01-SPI.I.48sq_TG Date: 11/24/15
 Scale: Not to Scale

Estate Series - ESS

External Single Stationary - Rope Halyard

The **Estate Series** from Concord American Flagpole provides commercial grade flagpoles that are a perfect fit for budget minded projects. Manufactured to the same quality standards as our Continental Series, our Estate Series offers flagpoles with heights from **15' to 35'** which are ideal for residential homes, small businesses and commercial complexes.

STANDARD FLAGPOLE ACCESSORIES - 3" TO 5" BUTT DIAMETERS



Standard Specifications

- Patented, Heavy-Duty Gold Anodized Aluminum Ball
- Cast Aluminum Single Stationary Truck Assembly with Aluminum Pulley
- Complete External Halyard Assembly
 - Rope Halyard - 5/16" #10 Polyester
 - Two (2) Nickel Plated Cast Zinc Swivel Flagsnaps
 - Two (2) Neoprene Flagsnap Covers
- 9" Cast Aluminum Cleat
- Spun Aluminum FC-11 Flash Collar
- PVC Ground Sleeve



Estate Series - ESS External Single Stationary - Rope Halyard

MTG HGT.	BUTT DIA.	WALL THICKNESS	POLE SECTIONS	SET DEPTH	TOP DIAM.	STD FLAG SIZE	MAX WIND SPEED WITH NYLON FLAG	MAX WIND SPEED NO FLAG	CATALOG NUMBER ***SPECIFY FINISH	Satin	CLEAR ANODIZED	DARK BRONZE OR BLACK ANODIZED	BRONZE TONE, BLACK, WHITE, OR CLEAR POWDERCOAT
15'	3"	.125"	1	2'-0"	2"	3' x 5'	113	149	ESS15B31-***	\$494	\$571	\$607	\$554
20'	3"	.125"	1	2'-0"	2"	4' x 6'	83	108	ESS20B31-***	\$576	\$686	\$709	\$665
	4"	.125"	1	2'-0"	3"	4' x 6'	109	147	ESS20B41-***	\$865	\$1,020	\$1,069	\$988
	5"	.125"	1	2'-0"	3"	4' x 6'	136	229	ESS20B51-***	\$1,077	\$1,248	\$1,335	\$1,211
	5"	.156"	1	2'-0"	3"	4' x 6'	160	262	ESS20C51-***	\$1,199	\$1,378	\$1,457	\$1,337
	5"	.188"	1	2'-0"	3"	4' x 6'	182	287	ESS20D51-***	\$1,407	\$1,585	\$1,664	\$1,538
25'	3"	.125"	1	2'-6"	2"	5' x 8'	63	83	ESS25B31-***	\$690	\$824	\$893	\$799
	4"	.125"	1	2'-6"	3"	5' x 8'	83	106	ESS25B41-***	\$959	\$1,113	\$1,188	\$1,079
	5"	.125"	1	2'-6"	3"	5' x 8'	98	136	ESS25B51-***	\$1,258	\$1,490	\$1,576	\$1,445
	5"	.156"	1	2'-6"	3"	5' x 8'	111	178	ESS25C51-***	\$1,482	\$1,714	\$1,800	\$1,662
	5"	.188"	1	2'-6"	3"	5' x 8'	124	209	ESS25D51-***	\$1,868	\$2,100	\$2,186	\$2,036
30'	4"	.125"	1	3'-0"	2"	6' x 10'	66	85	ESS30B41-***	\$1,030	\$1,242	\$1,333	\$1,206
	4"	.125"	2	3'-0"	2"	6' x 10'	66	85	ESS30B42-***	\$1,100	\$1,313	\$1,404	\$1,274
	5"	.125"	1	3'-0"	3"	6' x 10'	78	96	ESS30B51-***	\$1,388	\$1,661	\$1,754	\$1,612
	5"	.125"	2	3'-0"	3"	6' x 10'	78	96	ESS30B52-***	\$1,511	\$1,784	\$1,877	\$1,732
	5"	.156"	1	3'-0"	3"	6' x 10'	86	112	ESS30C51-***	\$1,700	\$1,973	\$2,066	\$1,914
	5"	.156"	2	3'-0"	3"	6' x 10'	86	112	ESS30C52-***	\$1,759	\$2,032	\$2,123	\$1,970
	5"	.188"	1	3'-0"	3"	6' x 10'	94	131	ESS30D51-***	\$1,960	\$2,233	\$2,326	\$2,166
	5"	.188"	2	3'-0"	3"	6' x 10'	94	131	ESS30D52-***	\$2,018	\$2,291	\$2,383	\$2,222
35'	5"	.125"	1	3'-6"	3"	6' x 10'	66	78	ESS35B51-***	\$1,638	\$1,952	\$2,075	\$1,893
	5"	.125"	2	3'-6"	3"	6' x 10'	66	78	ESS35B52-***	\$1,734	\$2,064	\$2,149	\$1,976
	5"	.156"	1	3'-6"	3"	6' x 10'	73	87	ESS35C51-***	\$1,755	\$2,085	\$2,275	\$1,998
	5"	.156"	2	3'-6"	3"	6' x 10'	73	87	ESS35C52-***	\$1,788	\$2,102	\$2,225	\$2,038
	5"	.188"	1	3'-6"	3"	6' x 10'	79	95	ESS35D51-***	\$2,134	\$2,449	\$2,571	\$2,374
	5"	.188"	2	3'-6"	3"	6' x 10'	79	95	ESS35D52-***	\$2,306	\$2,627	\$2,737	\$2,564

***** - Finish Options**


- SAT = Satin
- ACL = Anodized - Clear
- ADB = Anodized - Dark Bronze
- ABL = Anodized - Black
- BZT = Powder Coat - BronzeTone
- BLK = Powder Coat - Black
- WHT = Powder Coat - White
- CLR = Powder Coat - Clear

Quantity Discounts

- 5+ = 5%
- 8+ = 10%
- 15+ = 12%
- *Flagpoles From All Flagpole Series May Be Combined To Achieve Quantity Discounts.


ESTATE SERIES - ESS OPTIONS

Cap Mounted Style Single Revolving Truck In Lieu Of Standard Stationary Truck.




See Page 64 Add **\$62**

Cast Aluminum, Gold Powder Coated Stationary Ball Truck. Replaces Standard Truck and Ball Combination.




See Page 65 Add **\$34**

Cleat Cover (Specify Cylinder Lock or Padlock) - See Page 77.
3"-4" Butt Diameters Add **\$118**
5" Butt Diameters Add **\$146**



Cleat Cover Box with 5' Halyard Cover (Specify Cylinder Lock or Padlock) - See Page 77.
3"-4" Butt Diameters Add **\$225**
5" Butt Diameters Add **\$282**

Cast Aluminum FC-11 Collar In Lieu of Spun Collar - See Page 81.
3"-5" Butt Diameters Add **\$62**



Flagpole Lighting Options are available for all Estate Series Flagpoles – See Pages 84-91.

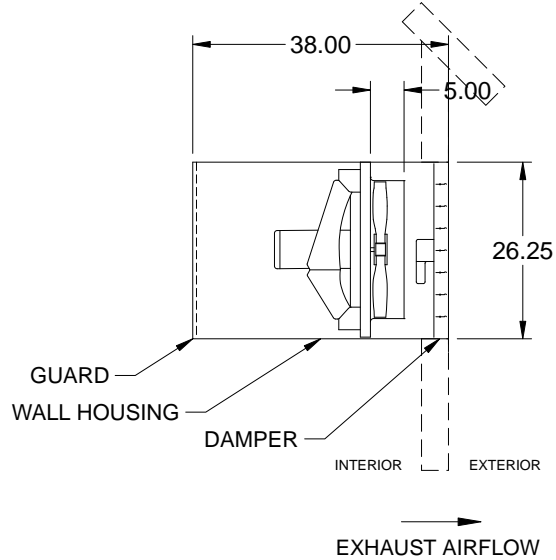
Shoe Base Designs for Surface Mount Installations are available in 4" and 5" Estate Series – ESS Flagpoles. See Page 14.
4"-5" Butt Diameters . . Add **\$227**

APPENDIX C: MECHANICAL, ELECTRICAL, & PLUMBING EQUIPMENT INFORMATION

Reference the Mechanical, Electrical, & Plumbing drawings for locations of the following equipment.

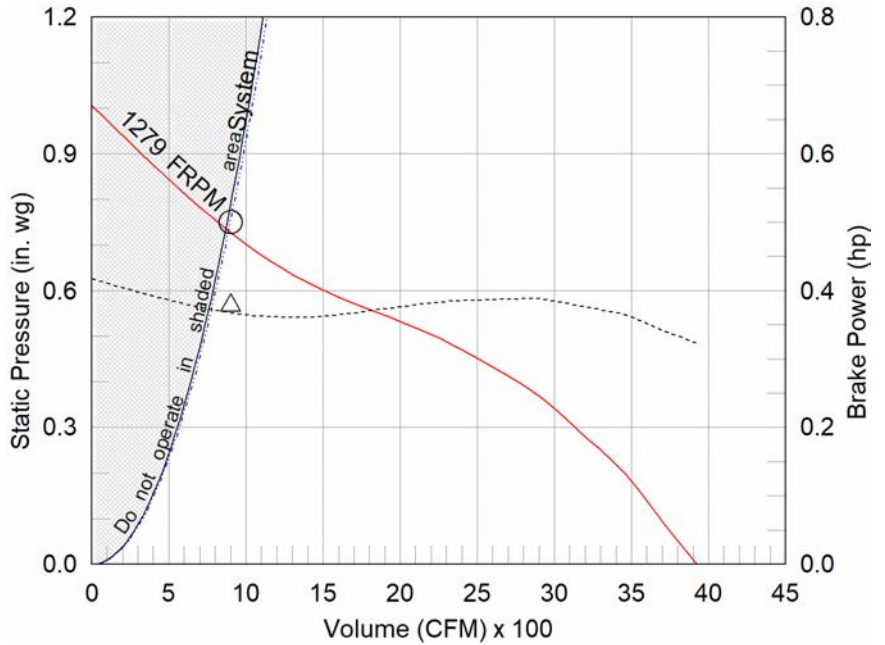
Model: AER-E20C-620-VG

Sidewall Direct Drive Fan
Motor Access From Int. of Bldg.



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	71
Weight w/ Acc's (lb)	197
Optional Damper (in.)	22 x 22
Wall Opening (in.)	27.5 x 27.5

Performance	
Requested Volume (CFM)	900
Actual Volume (CFM)	900
Total External SP (in. wg)	0.75
Fan RPM	1279
Operating Power (hp)	0.38
Elevation (ft)	807
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	6,741
Static Eff. (%)	28



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Motor	
Motor Mounted	Yes
Size (hp)	3/4
Voltage/Cycle/Phase	115/60/1
Enclosure	ODP
Motor RPM	1450
Efficiency Rating	High
Windings	1
FLA (Amps)	10

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	68	75	73	74	71	68	63	57	76	65	12.4

Notes:

All dimensions shown are in units of in.
*Please consult factory for actual motor amp draw
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: AER-E20C-620-VG

Sidewall Direct Drive Fan

Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Cast aluminum airfoil blade propeller - Ball bearing motors - Corrosion resistant fasteners

Selected Options & Accessories:

- Motor - Vari-Green EC motor
- Control - Dial for balancing
- Airflow Direction: Exhaust
- Damper Mounted, WD-320-PB-22X22, Not Coated
- Damper Actuator (MP-310), 208 VAC Actuated
- Long Wall Hsg, Flush Exterior, w/ OSHA Grd.
- Motor Access: From Int. of Bldg.
- Switch, NEMA-1, Toggle, Shipped with Unit
- Junction Box Mounted & Wired
- Closure Angles
- Aluminum Damper Guard
- Unit Warranty: 1 Yr (Standard)

AMCA

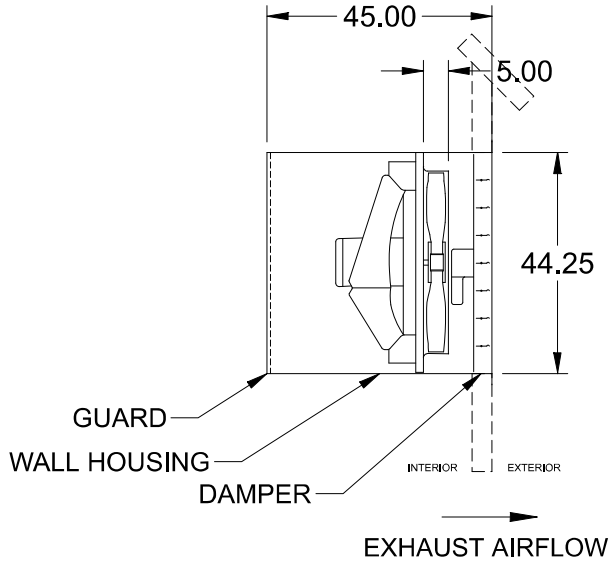


AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. The A-Weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to LwiA and inlet sone ratings only.

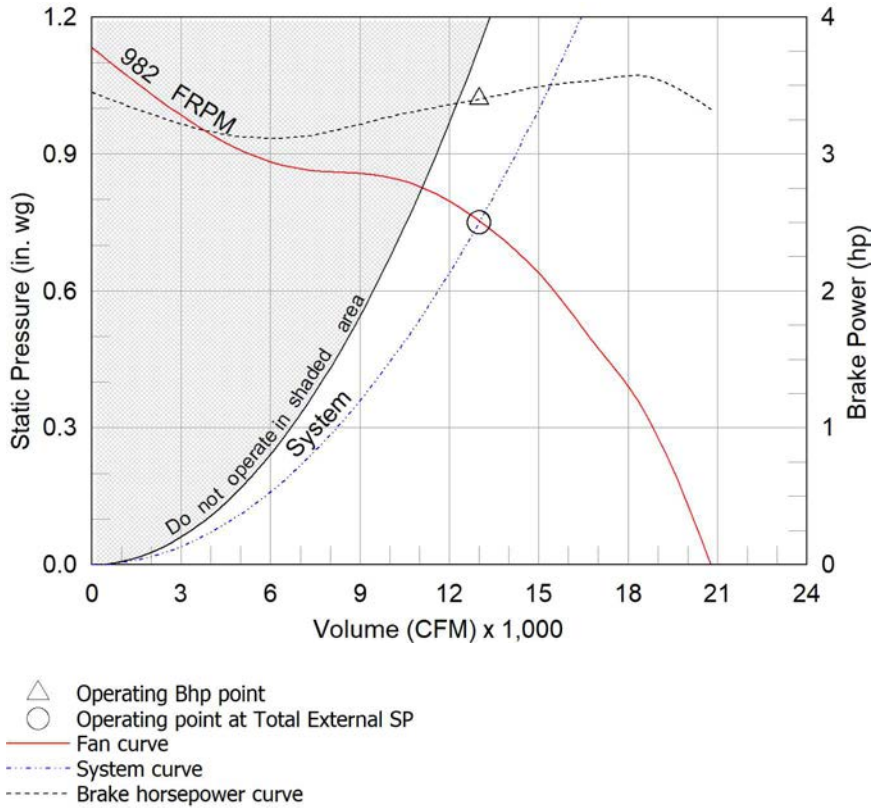
Model: AER-E36C-1220-VG

Sidewall Direct Drive Fan
Motor Access From Int. of Bldg.



Dimensional	
Quantity	1
Weight w/o Acc's (lb)	84
Weight w/ Acc's (lb)	338
Optional Damper (in.)	38 x 38
Wall Opening (in.)	45.75 x 45.75

Performance	
Requested Volume (CFM)	13,000
Actual Volume (CFM)	13,000
Total External SP (in. wg)	0.75
Fan RPM	982
Operating Power (hp)	3.4
Elevation (ft)	807
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	9,290
Static Eff. (%)	45



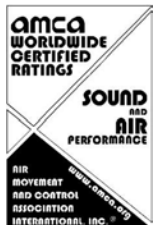
Motor	
Motor Mounted	Yes
Size (hp)	7 1/2
Voltage/Cycle/Phase	208/60/3
Enclosure	TEFC
Motor RPM	1025
Efficiency Rating	High
Windings	1
FLA (Amps)	0

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	69	87	83	73	69	67	54	41	78	67	14.6

Notes:

All dimensions shown are in units of in.
*Please consult factory for actual motor amp draw
LwA - A weighted sound power level, based on ANSI S1.4
dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
Sones - calculated using AMCA 301 at 5 ft



Model: AER-E36C-1220-VG

Sidewall Direct Drive Fan

Standard Construction Features:

- Galvanized steel fan panel - Die formed, galvanized steel drive frame assembly
- Cast aluminum airfoil blade propeller - Ball bearing motors - Corrosion resistant fasteners

Selected Options & Accessories:

- Motor - Vari-Green EC motor
- Control - 0-10VDC Input
- Control - Dial for balancing
- Airflow Direction: Exhaust
- Damper Mounted, WD-320-PB-38X38, Not Coated
- Damper Actuator (MP-310), 208 VAC Actuated
- Long Wall Hsg, Flush Exterior, w/ OSHA Grd.
- Motor Access: From Int. of Bldg.
- Switch, NEMA-1, Toggle, Shipped with Unit
- Junction Box Mounted & Wired
- Closure Angles
- Aluminum Damper Guard
- Non-Standard Motor (Q9999999)
- Unit Warranty: 1 Yr (Standard)

AMCA

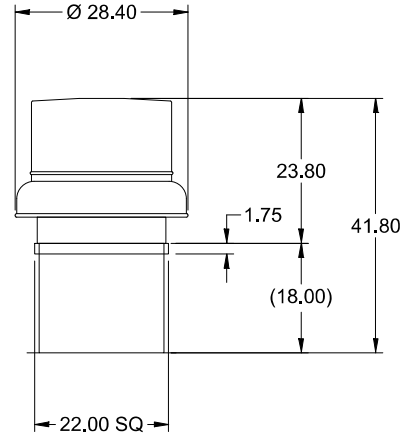


AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. The A-Weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to LwiA and inlet sone ratings only.

Model: G-143-VG

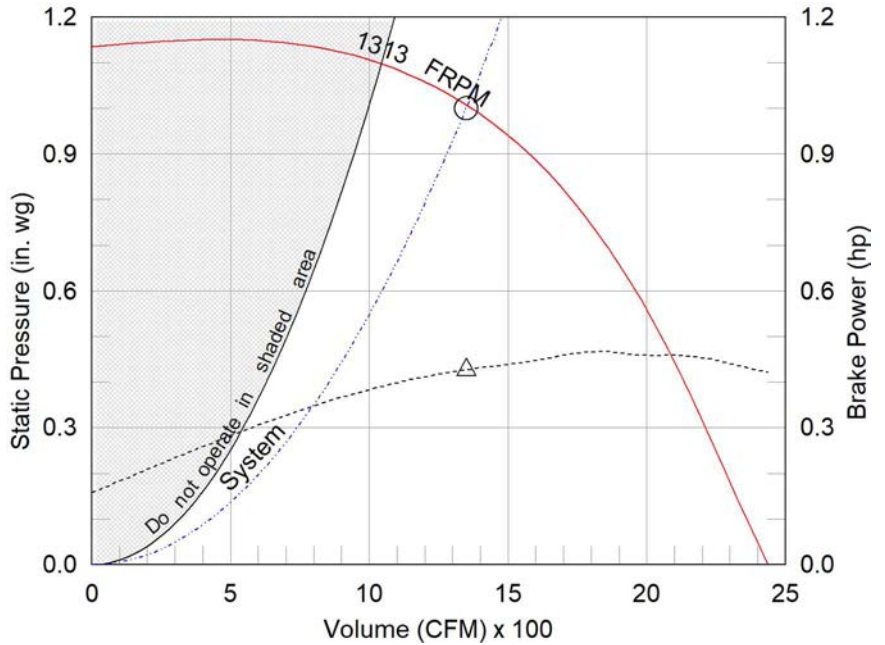
Direct Drive Centrifugal Roof Exhaust Fan



OVERALL HEIGHT MAY BE GREATER DEPENDING ON MOTOR, ADAPTER, AND/OR HINGE BASE.

Dimensional	
Quantity	1
Weight w/o Acc's (lb)	53
Weight w/ Acc's (lb)	59
Weight w/ Acc's and Curb (lb)	88
Roof Opening (in.)	18.5 x 18.5

Performance	
Requested Volume (CFM)	1,350
Actual Volume (CFM)	1,350
Total External SP (in. wg)	1
Fan RPM	1313
Operating Power (hp)	0.43
Elevation (ft)	807
Airstream Temp.(F)	70
Air Density (lb/ft3)	0.073
Tip Speed (ft/min)	5,029
Static Eff. (%)	50



- △ Operating Bhp point
- Operating point at Total External SP
- Fan curve
- - - System curve
- - - Brake horsepower curve

Motor	
Motor Mounted	Yes
Size (hp)	1
Voltage/Cycle/Phase	115/60/1
Enclosure	TENV
Motor RPM	1725
Efficiency Rating	High
Windings	1
FLA (Amps)	11.5

Sound Power by Octave Band

Sound Data	62.5	125	250	500	1000	2000	4000	8000	LwA	dBA	Sones
Inlet	80	77	74	68	61	60	56	51	71	59	10.2

Notes:

All dimensions shown are in units of in.
 *NEC FLA - based on tables 430.248 or 430.250 of National Electrical Code 2017. Actual motor FLA may vary, for sizing thermal overload, consult factory.
 LwA - A weighted sound power level, based on ANSI S1.4
 dBA - A weighted sound pressure level, based on 11.5 dB attenuation per Octave band at 5 ft - dBA levels are not licensed by AMCA International
 Sones - calculated using ANSI/AMCA 301 at 5 ft



Model: G-143-VG

Direct Drive Centrifugal Roof Exhaust Fan

Standard Construction Features:

- Aluminum housing - Backward inclined composite (sizes 60-95) or aluminum (sizes 97-300) wheel - Aluminum curb cap with prepunched mounting holes - Birdscreen - Ball bearing motors (sizes 85-300 and all Vari Green), sleeve bearing motors (sizes 60-80) - Motor isolated on shock mounts - Corrosion resistant fasteners

Selected Options & Accessories:

Motor - Vari-Green EC motor
Control - Dial for balancing
UL/cUL 705 Listed - "Power Ventilators"
Switch, NEMA-1, Toggle, Shipped with Unit
Junction Box Mounted & Wired
Birdscreen: Galvanized, nom. 84% Free Area
Unit Warranty: 1 Yr (Standard)

Selected Sub Marks

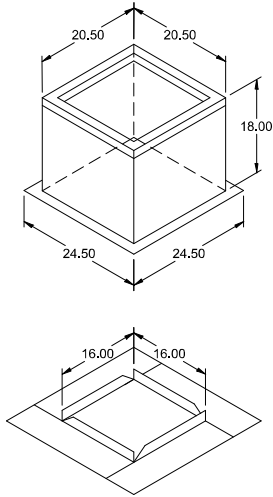
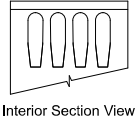
See individual submittals for full details
ATI-22-16-G18

AMCA



AMCA Licensed for Sound and Air Performance. Power rating (BHP/kW) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP/kW) does not include transmission losses. Performance ratings include the effects of birdscreen. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5 m) in a hemispherical free field calculated per ANSI/AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels. dBA levels are not licensed by AMCA International. The AMCA Certified Ratings Seal applies to sone ratings only.



Model: ATI

Sound Roof Curb

Standard Construction Features:

- Roof Curb fits between the building roof and the fan mounted directly to the roof support structure - Constructed of either 18 ga galvanized steel or 0.064 in. aluminum - Straight Sided without a cant - Wood nailer for attachment of roof flashing material - 2 in. mounting flange - 1 in. thick 6 lb density insulation - Designed to reduce the sound passed back down the duct with perforated fiberglass filled baffles Notes: - The maximum roof opening dimension should not be greater than the "Actual" top outside dimension minus 2 in.. - The minimum roof opening dimension should be at least 2.5 in. more than the damper dimension or recommended duct size. - The Roof Opening Dimension may or may not be the same as the Structural Opening Dimension. - Damper Tray is standard and sized same as damper size.

General

Tag	Qty	Model	Sizing Method	Undersizing (in.)	Weight (lb)	Shipped Assembled
	1	ATI-22	Nominal	1.5	29	Yes

Dimensions

Curb Height (in.)	Nominal Outside Width (in.)	Nominal Outside Length (in.)	Actual Outside Width (in.)	Actual Outside Length (in.)	Actual Inside Width (in.)	Actual Inside Length (in.)	Flange Width (in.)	Flange Length (in.)	Hinge Base Width* (in.)	Hinge Base Length* (in.)
18	22	22	20.5	20.5	17	17	24.5	24.5	21	21

*May not be applicable

Damper Tray

Damper Tray Width (in.)	Damper Tray Length (in.)
16	16

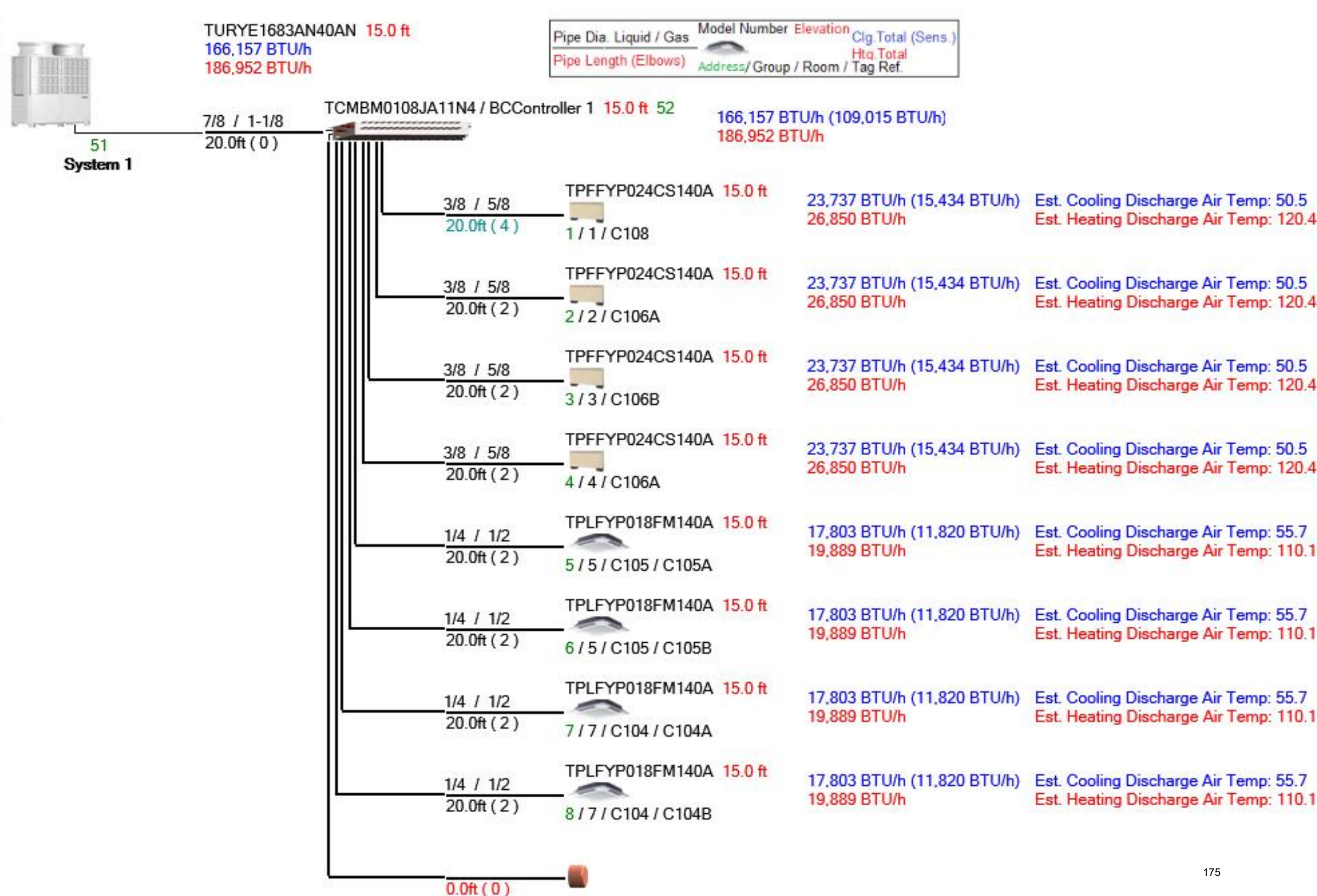
Accessories

Material	Security Bars	Liner	Insulation (in.)
Galvanized	No	No	1

Indoor Units: 8 / 1 to 42
 Capacity: 168 / 84 to 252 (100.0%)
 * Connectable capacity is not actual capacity.
 Total Pipe Length: 209.5 / 1968.5 feet
 Furthest Actual: 40.0 / 541.0 feet
 Furthest Equiv.: 46.6 / 623.0 feet
 After 1st Branch Actual: 0.0 / 0.0 feet
 After 1st Branch Equiv.: 0.0 / 0.0 feet
 Furthest IU from BC Actual: 20.0 / 197.0 feet
 Furthest IU from BC Equiv.: 26.6 / 197.0 feet

Correction Factors
 Outdoor Unit Capacity: 1.00 1.00
 Temperature: 1.00 1.00
 Piping Length: 0.99 0.99
 Defrosting: - 1.00
 User Derate: 1.00 1.00
 Total Derate: 0.99 0.99
 Additional Refrigerant: 33.1 lb
 Total Refrigerant Amount: 56.9 lb

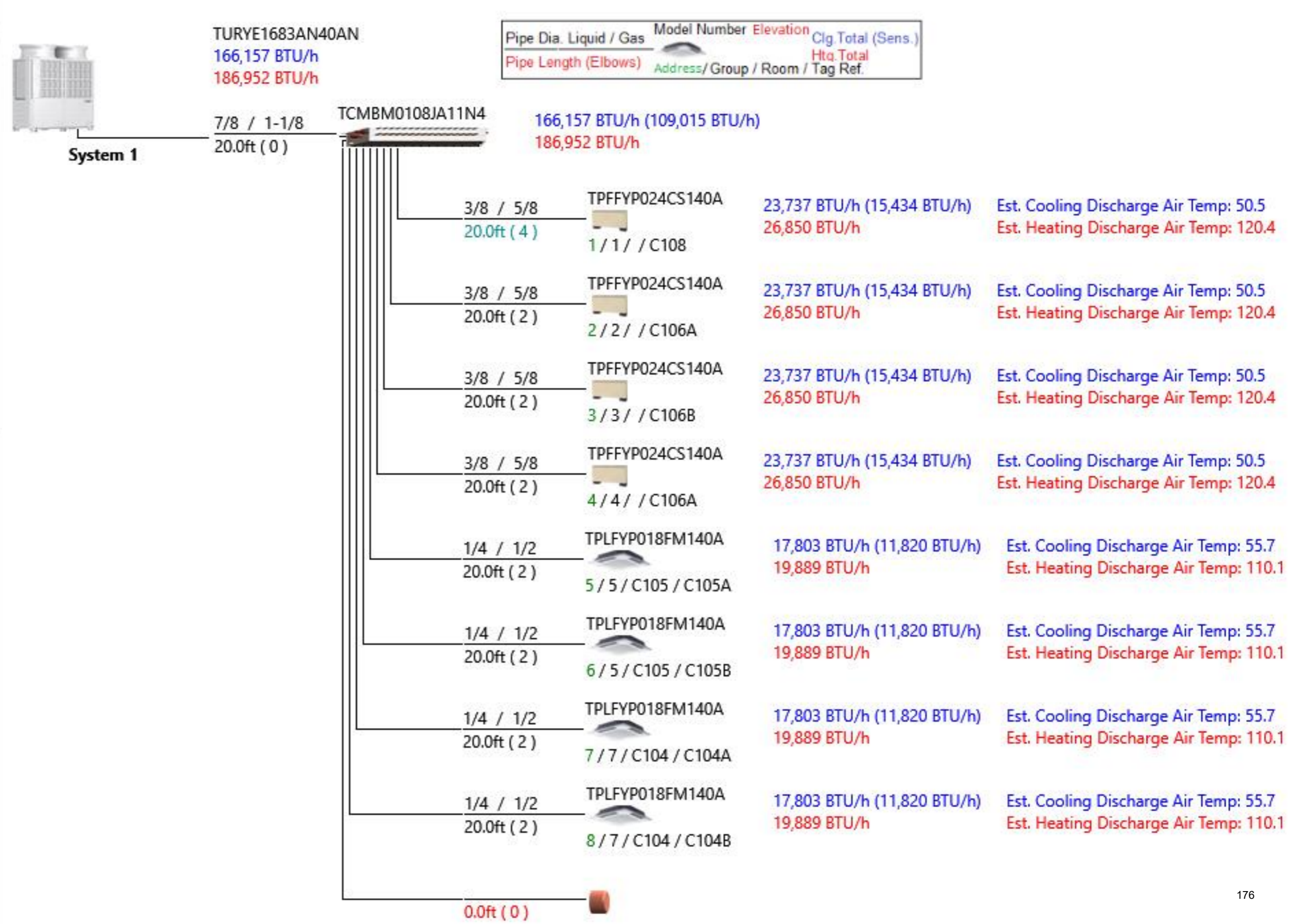
Conditions (°F)
Cooling
 Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
 Outdoor DB 95.0
Heating
 Indoor DB 70.0
 Outdoor DB 47.0 Humidity 72.8% Outdoor WB 43.0



Indoor Units: 8 / 1 to 42
 Capacity: 168 / 84 to 252 (100.0%)
 * Connectable capacity is not actual capacity.
 Total Pipe Length: 209.5 / 1968.5 feet
 Furthest Actual: 40.0 / 541.0 feet
 Furthest Equiv.: 46.6 / 623.0 feet
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 Defrosting: - 1.00
 User Derate: 1.00 1.00
 Total Derate: 0.99 0.99
 Additional Refrigerant: 33.1 lb
 Total Refrigerant Amount: 56.9 lb

Conditions (°F)
Cooling
 Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
 Outdoor DB 95.0
Heating
 Indoor DB 70.0
 Outdoor DB 47.0 Humidity 72.8% Outdoor WB 43.0



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 Total Pipe Length: 209.5 / 1968.5 feet
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 After 1st Branch Equiv.: 0.0 / 0.0 feet
 Furthest IU from BC Actual: 20.0 / 197.0 feet
 Furthest IU from BC Equiv.: 26.6 / 197.0 feet

Correction Factors





















Outdoor Unit Capacity: 1.00 1.00
 Temperature: 1.00 1.00
 Piping Length: 0.99 0.99
 Defrosting: - 1.00
 User Derate: 1.00 1.00

Total Derate: 0.99 0.99
 Additional Refrigerant: 33.1 lb
 Total Refrigerant Amount: 56.9 lb

Conditions (°F)

Cooling
 Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
 Outdoor DB 95.0

Heating
 Indoor DB 70.0
 Outdoor DB 47.0 Humidity 72.8% Outdoor WB 43.0

Centralized System - 1		Interfaces	Input/Output Devices	Accessory Panels
Groups	Indoor Units Lossnays	Local Remote Controllers	System Remote Controllers	
 1 Group 1	1 R2  TPFFYP024CS140A No Room C108		<input checked="" type="checkbox"/>	
 2 Group 2	2 R2  TPFFYP024CS140A No Room C106A		<input checked="" type="checkbox"/>	
 3 Group 3	3 R2  TPFFYP024CS140A No Room C106B		<input checked="" type="checkbox"/>	
 4 Group 4	4 R2  TPFFYP024CS140A No Room C106A		<input checked="" type="checkbox"/>	
 5 Group 5	5 R2  TPLFYP018FM140A C105 C105A 6 R2  TPLFYP018FM140A C105 C105B		<input checked="" type="checkbox"/>	
 7 Group 7	7 R2  TPLFYP018FM140A C104 C104A 8 R2  TPLFYP018FM140A C104 C104B		<input checked="" type="checkbox"/>	

AMC-1AD1/2 Series Single/Dual Zone Monitor

The AMC-1AD Series Gas Monitor provides a highly economical monitoring package for multipoint vehicle exhaust monitoring applications.

Incorporating micro-controller based design; it provides accuracy, durability, and ease of use within a compact package. The AMC-1AD Series Monitor works with any combination of AMC-122X Series sensor modules, with up to 8 modules per zone.

The monitor delivers low cost and versatility, turning even the simplest job into big savings. It incorporates a robust enclosure designed to provide years of trouble free operation.



SPECIFICATIONS

Enclosure: ASA 61 gray enameled 16 gauge steel
Nema 4X Fiberglass (Optional)

Supply Voltage: 120 VAC, 60 Hz

Dimensions: 20.32cm H x 20.32cm W x 12.70cm D
(8" x 8" x 5")

Weight: 4.54 kg (10 lb)

Operating Temperature: -20°C to 40°C (-4°F to 104°F)

Storage Temperature: -40°C to 65°C (-40°F to 149°F)

Monitor Warranty: Two years

Relay Contacts: 2 or 4 DPDT 10A @ 250 VAC Res.

Alarm Thresholds: Set at Sensor Modules

Indicators (per Zone):

Red LED – Alarm

Yellow LED – Warning

Green LED

- LED On – Run
- LED Flashing – Fault
- LED Off – Off

Recommended Mounting Height: 4-5 ft. A.F.F.



Features

Alarms disabled during warm up

System test switch

User selectable:

- Activation delays, five minutes for Warning and/or Alarm set points
- Minimum Run Timer
- 95 dBa Audio alarm with Warning and/or Alarm set points

Hinged door

Optional latching relays with manual reset

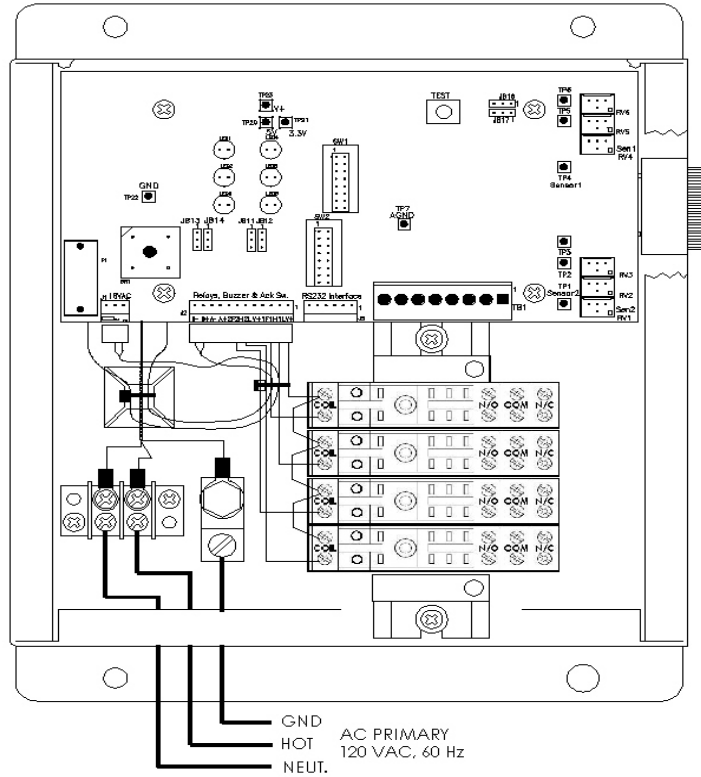
Optional enclosure key lock

Available VFD Output Option

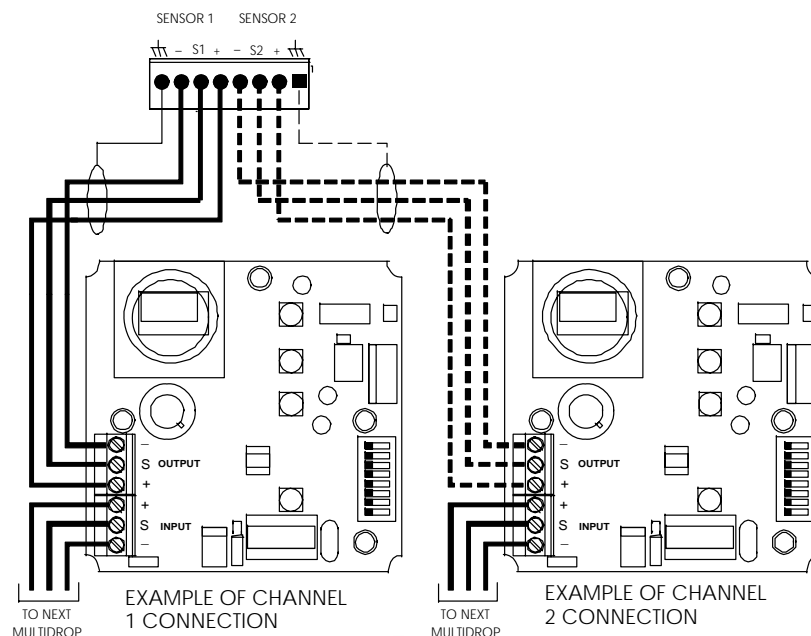
BUILT WITH 100% GREEN ELECTRICITY



AMC-1AD Series Internal View



AMC-1AD Sensor Wiring



AMC-1220 Series Multi Drop Gas Sensor Modules

For gas monitoring applications requiring a large number of sensors, installation costs represent a significant share of total project expenses. In an effort to lower these costs, AMC developed the AMC-1220 Series multi drop gas sensor module.

Compatible with the AMC 1AD1/D2 Series, as well as the AMC-1400 and 1800, sensors are wired in series utilizing low power, three wire cabling. Dual wiring inputs on some models, combined with multi zone capabilities, permit a nearly unlimited range of configurations, thereby minimizing both installation time and materials.

Up to eight AMC-1220s of different sensor types can be connected to a single zone with a maximum of 150ft between sensors and panel. Power supplies can be upgraded allowing more sensors per zone making the AMC-1220 Series an economical solution to your gas monitoring needs.



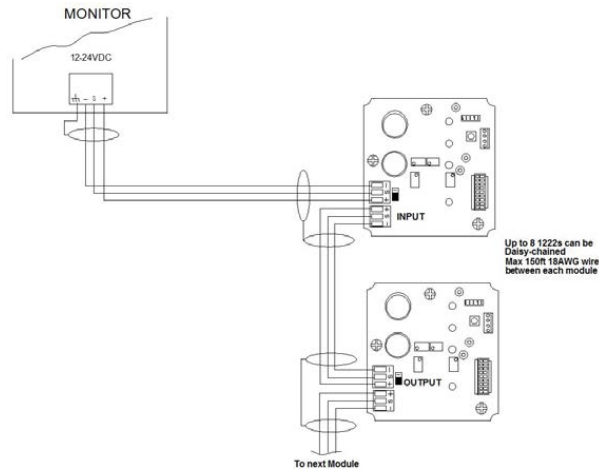
Part Number	AMC-1222	AMC-1225	AMC-1228-20s	AMC-1228-28s
Detectable Gas(es)	CO & NO ₂	Combustible Gas	CO	NO ₂
Sensor Type	Electrochemical	Solid State	Electrochemical	Electrochemical
Range	0-100 ppm CO/0-3 ppm NO ₂	0-50% LEL	0-100 PPM	0-10 PPM
Sensor Warranty	CO – 3 Years NO ₂ – 1 Year	2 Years	3 Years	1 Year
Standard Trip Points	25/100 ppm CO 1/3 ppm NO ₂	20/40 % LEL	25/100 ppm	1/3 ppm
Installation Wiring	3 Wire 18 AWG Shielded			
Dimensions	11.77 cm W x 5.97 cm H x 13.83 cm L (4.64" W x 2.35" H x 5.45" L)			
Operating Temperature	-20°C to 40°C			
Operating Humidity	15-90% RH Non Condensing			
Coverage Area	50' Radius	25' Radius	50' Radius	50' Radius
Replacement Sensor(s)	AMC-91AP / AMC-98AC	AMC-F4168E	AMC-91AO	AMC-98AC

Comfort Zone Technology

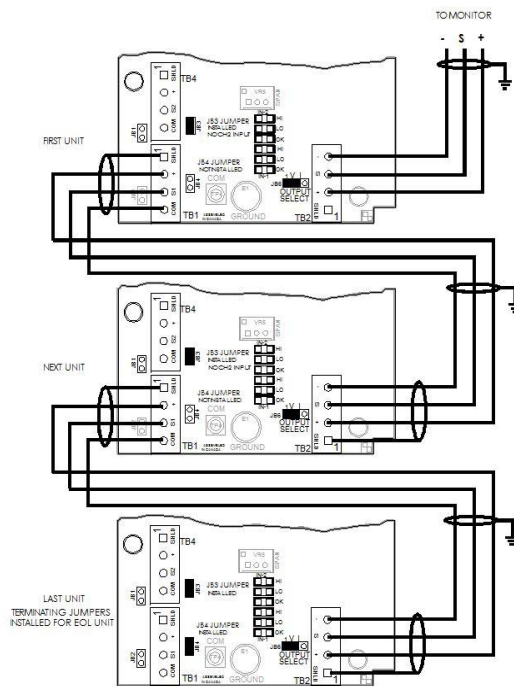
Unique to the AMC-1222, our "Comfort Zone" technology utilizes an interactive logic function with a simple user interface to allow incremental sensitivity adjustments without the need for recalibration, in order to optimize indoor air quality and occupant comfort.



Wiring for AMC-1222 (CO & NO2)



Wiring for AMC-1228s



Warranty: All Armstrong Monitoring equipment is warranted against defects in materials and workmanship for two years from date of delivery, with the exception of sensors. Please contact factory for specific sensor warranty. During the warranty period, we will repair or replace components that prove, in our opinion, to be defective. We are not liable for auxiliary interfaced equipment, nor consequential damage. All warranty returns require a return authorization number. For more information please refer to our Terms & Conditions.

Note: Due to ongoing product development, the manufacturer reserves the right to change specifications without prior notice. The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data.

A variety of factors, not limited to variances in temperature, humidity, pressure, vibrations, EMI/RF may impact on the performance of the equipment. Testing within harsh or unusual environments is recommended. Please contact the factory for assistance with field validation trials.

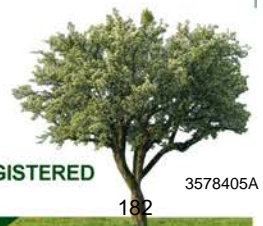
Published sensor data was obtained using a raw sensor in controlled conditions; actual performance may vary due to site conditions.

215 Colonnade Road South Ottawa, Ontario K2E 7K3 CANADA

Toll Free: 800.465.5777 gas@armstrongmonitoring.com www.armstrongmonitoring.com

ISO 9001 REGISTERED

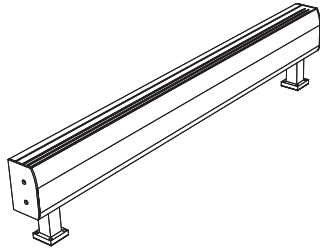
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470 Beauty Spot Rd. E, Bennettsville, SC 29512

SUBMITTAL SHEET
Slim Line Draft Barrier
Convection Heaters
Type SLQDB



Dimensions

Type	Height	Width	Length
SLQDB	4" 101.6mm	2-5/8" 67mm	24" - 12' 610mm-3658mm

JOB NAME: _____

LOCATION: _____

ARCHITECT: _____

ENGINEER: _____

CONTRACTOR: _____

SUBMITTED BY: _____

DATE: _____

ITEM	QTY.	CATALOG NUMBER	TAG	WATTS	VOLTS	PHASE Ø	AMPS	BUILT-IN CONTROLS

ACCESSORIES
AND
CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION

SUBMITTED BY:	DATE	APPROVED BY:	DATE

SLQDB SERIES - SLIM LINE DRAFT BARRIER CONVECTOR HEATERS

SPECIFICATIONS

CATALOG NUMBER (See Note 2)	DIMENSIONS (SEE NOTE 1) W x H x L	WATT DENSITY	NO. OF ELEMENTS	SHIP WEIGHT LBS.
SLQDB024	2 5/8" x 4" x 24"	100 W/Ft. ‡ 125 W/Ft. * 150 W/Ft. * 188 W/Ft. *	1	8
SLQDB028	2 5/8" x 4" x 28"	100 W/Ft. ‡ 125 W/Ft. * 150 W/Ft. * 188 W/Ft. *	1	8
SLQDB03	2 5/8" x 4" x 3'	100 W/Ft. * 125 W/Ft. ** 150 W/Ft. ** 188 W/Ft. **	1	10
SLQDB04	2 5/8" x 4" x 4'	100 W/Ft. ** 125 W/Ft. ** 150 W/Ft. ** 188 W/Ft.	1	13
SLQDB05	2 5/8" x 4" x 5'	100 W/Ft. ** 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	17
SLQDB06	2 5/8" x 4" x 6'	100 W/Ft. 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	20
SLQDB07	2 5/8" x 4" x 7'	100 W/Ft. 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	24
SLQDB08	2 5/8" x 4" x 8'	100 W/Ft. 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	27
SLQDB09	2 5/8" x 4" x 9'	100 W/Ft. 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	30
SLQDB10	2 5/8" x 4" x 10'	100 W/Ft. 125 W/Ft. 150 W/Ft. 188 W/Ft.	1	33

- Cabinet available up to 12' length. Custom length cabinets are priced with heater and blank to the next larger size.
- Backs are provided standard with no finish. For finished backs, add 10% to List price.
- Knockouts on back omitted by request only.

* Not available in 347V or 600V.

** Not available in 600V.

‡ Not available in 277V, 347V, or 600V.

NOTE: All models are NON-STOCK made-to-order. When ordering, specify quantity, catalog number, voltage, wattage, optional controls, and color. Consult sales representative for lead times.

BLANK SECTIONS & ACCESSORIES (FOR MODEL SLQDB DRAFT BARRIER CONVECTORS)

CATALOG NUMBER (SEE NOTE 1)	DIMENSIONS W x H x L	SHIP WEIGHT LBS.
SLDBS1B	2 5/8" x 6" x 1'	4
SLDBS2B	2 5/8" x 6" x 28"	7
SLDBS3B	2 5/8" x 6" x 3'	9
SLDBS4B	2 5/8" x 6" x 4'	12
SLDBS5B	2 5/8" x 6" x 5'	16
SLDBS6B	2 5/8" x 6" x 6'	19
SLDBS7B	2 5/8" x 6" x 7'	22.5
SLDBS8B	2 5/8" x 6" x 8'	24
SLDBS9B	2 5/8" x 6" x 9'	27
SLDBS10B	2 5/8" x 6" x 10'	30

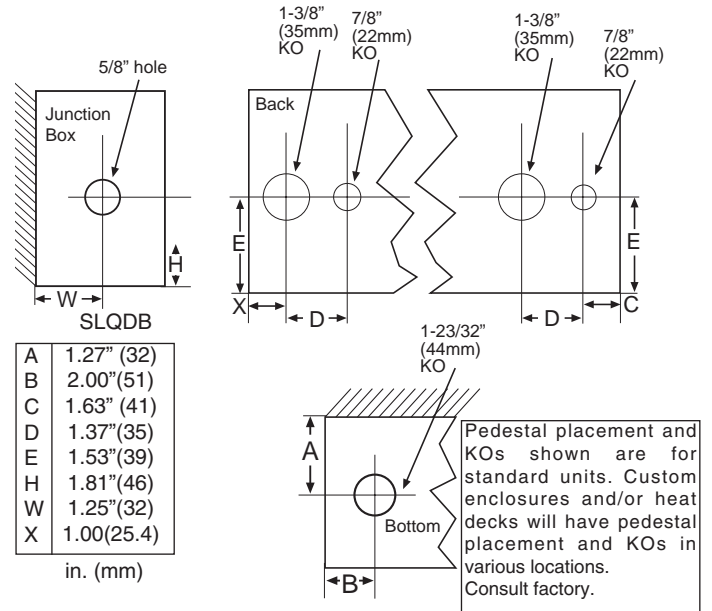
NOTE: Blank section grilles are not punched unless requested.

ACCESSORY CATALOG NUMBER *	DESCRIPTION	ADDITIONAL WALL SPACE REQUIRED	SHIP WEIGHT LBS.
SLDECL	End Cap - Left	1/8"	1
SLDECR	End Cap - Right		
SLDICB	Inside Corner-Bottom In	8 1/2"	5
SLDOCB	Outside Corner-Bottom In	5"	4
SLD135ICB	135° Inside Corner-Bot In	8 1/2"	5
SLD135OCB	135° Outside Corner-Bot In	5"	4
SLDSP	Splice Plate	0" - 1/4"	1
SLDFL3	Filler Section 3"	0" - 3"	1
SLDFL6	Filler Section 6"	3" - 6"	1
SLDFL9	Filler Section 9"	6" - 9"	1
SLDFL12	Filler Section 12"	9" - 12"	1
SLDFL18	Filler Section 18"	12" - 18"	1.5
SLDFL24	Filler Section 24"	18" - 24"	1.5
SLDDR	Receptacle Section-Bot In (Must use 1ft blank section)	12"	
SLDPK3A **	Architectural Pedestal	-	2
SO1A	Stand-Off Bracket	-	1

N/A - Not Available.

* Add suffix -P for painted, -C for clear anodized, -B for bronze anodized (excludes PK3S - Black only).

** One pedestal. Two required on units up to 10', three required on units over 10'.



OPTIONAL BUILT-IN CONTROLS (FOR DRAFT BARRIER CONVECTORS)

SUFFIX ADDITION TO BASIC CAT. NO.	OPTIONAL BUILT-IN CONTROLS	RATINGS
T	1-Pole Thermostat	Rated 24 amps @ 120-240 VAC and 22 amps @ 277 VAC. Pilot duty rating of 125 VA (all voltages). 60-120°F temperature range adjustable through outlet grille-tamper-resistant. (See Note B.) Not available on three-phase heaters.
2T	2-Pole Thermostat	Rated 24 amps @ 120-240 VAC and 22 amps @ 277 VAC. Pilot duty rating of 125 VA (all voltages). 60-120°F temperature range adjustable through outlet grille-tamper-resistant. (See Note B for amperage restrictions.)
DS	Power On/Off Switch	Double-pole, rated 20 amp @ 120-277 VAC. (See Note A.) For 3Ø heaters and 1Ø heaters over 20 amps specify two.
PR	Power Relay	Single-pole magnetic relay, rated 25 amps @ 120-600 VAC. Specify control voltage.

For 1Ø loads over 20A and all 3Ø loads, specify 2 power on/off switches. This control option is not available on single-phase heaters over 24 amps (22 amps on 277 VAC).

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS*

Furnish and install, where indicated on plans, SLQDB Draft Barrier convector type heaters, suitable for continuous operation, as manufactured by QMark, A Marley Engineered Products Brand, Bennettsville, SC.

ENCLOSURE Shall be 12-gauge (.080" min.) aluminum extrusion. The one-piece back and bottom shall join to the one-piece top and front utilizing QMark's Snap-Lock design (patent pending). Both inlet and outlet air grilles shall be punched pencil-proof slots negating the need for mesh under the grille.

SIZE Heaters shall be low profile (2-5/8" x 4") and available in length from 24 inches through 10 feet. Additionally, custom length cabinets up to 12 feet with single or multiple heat decks shall be furnished as specified.

HEATING LENGTHS AND VOLTAGES Heater lengths, voltages and wattage capacities shall be as indicated on the plans.

FINISH The top and front shall be finished with polyester powder paint or anodized.

HEATING ELEMENTS The nickel-chromium heating element wire shall be encased in a steel sheath for maximum, trouble-free element life. Aluminum fins shall be pressure bonded to the steel sheath. Elements shall be centered anchored and shall float freely at each end through high-temperature Noryl bushings.

CONTROL SECTIONS Control sections, finished to match heaters, shall be furnished as an optional accessory for field installation of controls, or shall be used to house factory-installed controls as specified.

OPTIONAL BUILT-IN CONTROLS Thermostats, lowvoltage control relays, and power on/off switches, may be specified for factory installation in heaters. Thermostats and power on/off switches are accessible through the grille.

PEDESTALS The heater shall be convertible for use as a self-standing unit with pedestal conversion kit. Pedestals shall be painted steel or anodized aluminum. Pedestals can either be mounted on or embedded in the floor surface and wiring or conduit brought through the pedestal during installation.

*QMark reserves the right to change specifications without prior notice.notice.

Job/Project: 19096 MCPL / 19096 MCPL	Representative: Hydronic & Steam Equipment Co., Inc	
ESP-Systemwize: WIZE-E5B4A3	Created On: 03/05/2021	Phone: (317) 577-8326
Location/Tag: HWP-1	Email: mkring@hydstm.com	
Engineer:	Submitted By:	Date:
Contractor:	Approved By:	Date:

Close Coupled In-Line Centrifugal Pump

Series: e-80

Model: 1.5x1.5x9.5B

Features & Design

- Best in Class Hydraulic Performance
- Low Operating and Maintenance Cost
- Horizontal or Vertical Installation



The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

<http://bellgossett.com/pumps-circulators/in-line-pumps/series-e-80/>

Pump Selection Summary

Duty Point Flow	27 US gpm
Duty Point Head	80 ft
Control Head	0 ft
Duty Point Pump Efficiency	36.6 %
Part Load Efficiency Value (PLEV)	0.0 %
Impeller Diameter	8.75 in
Motor Power	5 hp
Duty Point Power	1.54 bhp
Motor Speed	1800 rpm
RPM @ Duty Point	1750 rpm
NPSHr	4.68 ft
Minimum Shutoff Head	82.1 ft
Minimum Flow at RPM	10.6 US gpm
Flow @ BEP	70.4 US gpm
Fluid Temperature	68 °F
Fluid Type	Water
Weight (approx. - consult rep for exact)	190 lbs
Pump Floor Space Calculation	1.8 ft ²

Performance Curve

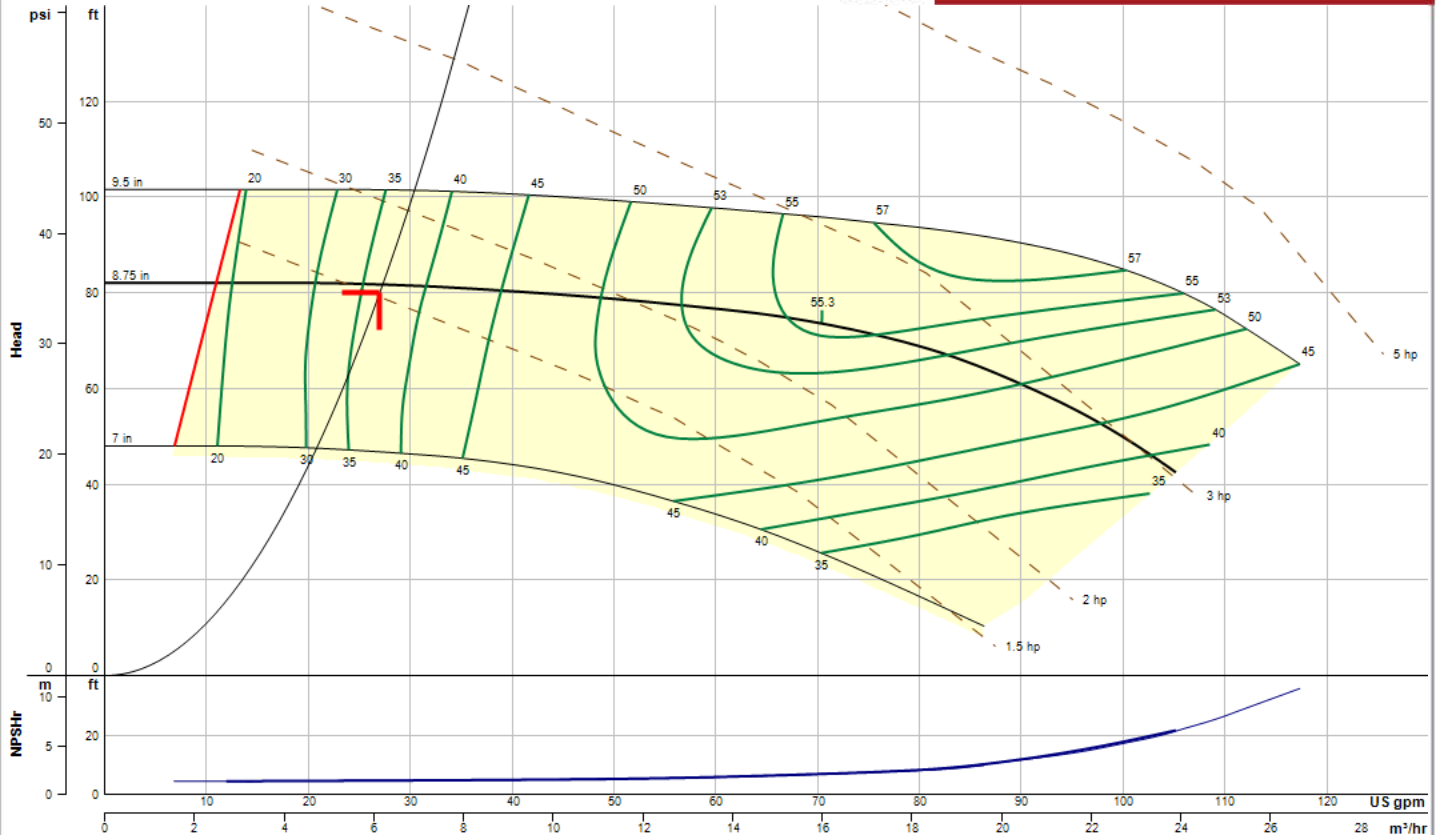
Energy Efficiency Ratings:

Pump & Motor PEIc: 0.8 ERcI: 20
Pump, Motor & Drive: PEIv: 0.42 ERvI: 58



e-80
1.5x1.5x9.5B
1750 RPM

Sensorless

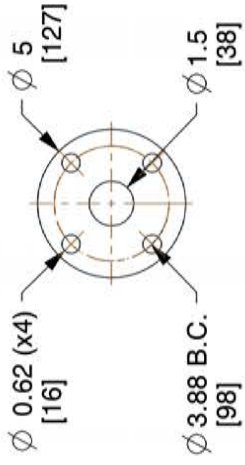
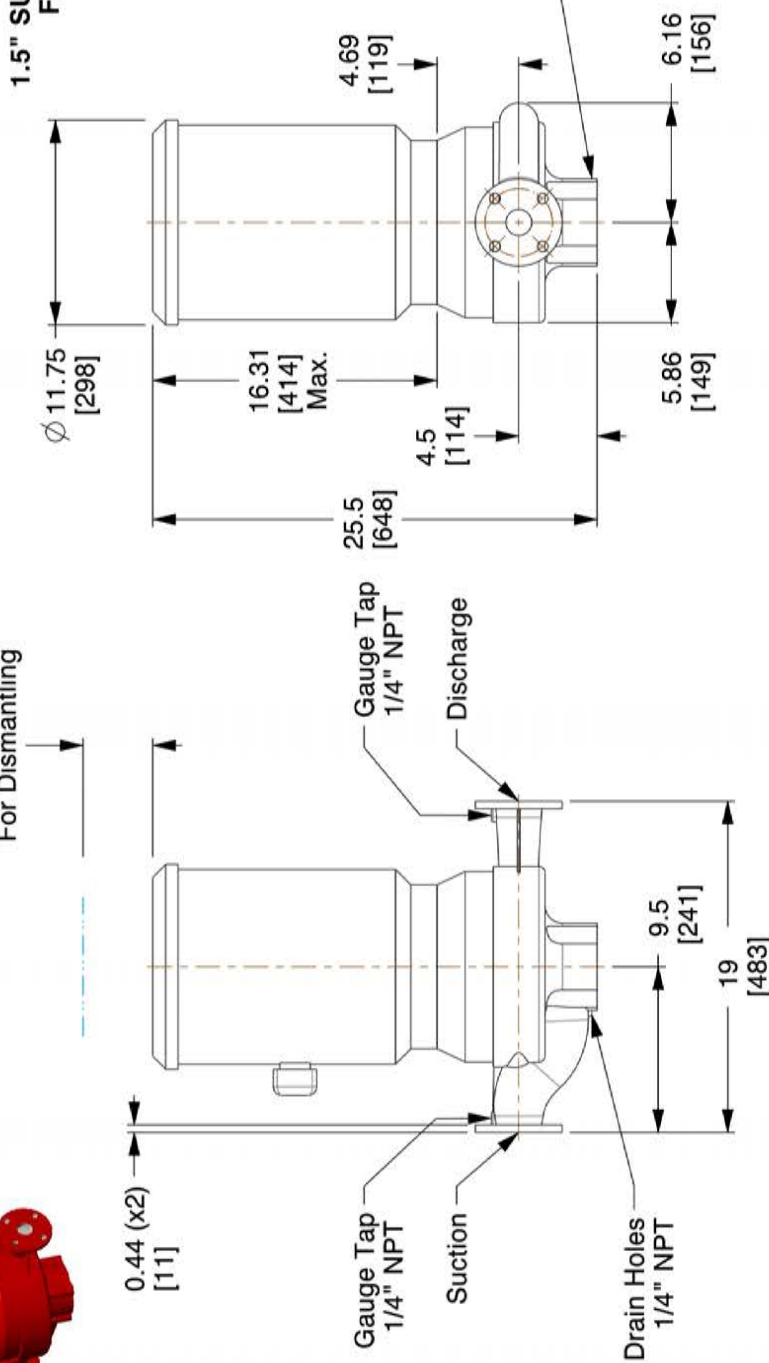


Performance curve meets 14.6 / ISO 9906 acceptance criteria

WIZE-E5B4A3



4 [102]
Space Required
For Dismantling



1.5" SUCTION & DISCHARGE
FLANGE DETAILS
ANSI 125#

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Dimensions are subject to change
Not to be used for construction unless certified

Bell & Gossett
a xylem brand

8200 N. Austin Ave.
Morton Grove, IL 60053, USA

BG-E80-1.5x1.5x9.5B-SS184JM-1-IN

Series e-80 Close Coupled In-Line Centrifugal Pump
Seal Type: Standard Seal | Motor Frame: 184JM | Flange: ANSI 125#

Dimensions : IN (mm) Scale : N.T.S. Submittal # : B-139.2B

Standard Materials of Construction

Construction:	Stainless Steel Fitted Pump
1 Shaft:	Carbon Steel
2 Volute:	Cast Iron ASTM A48 Class B
3 Impeller:	ASTM A743 Grade CF8 - 304 Stainless Steel
4 Shaft Sleeve:	Stainless Steel
5 Impeller Key:	#304 Stainless Steel
6 Impeller Washer:	Carbon Steel
7 Impeller Lock Washer:	#304 Stainless Steel
8 Impeller Cap Screw:	#304 Stainless Steel
9 Volute Gasket:	Cellulose Fiber

Pump Options *contact your local rep to configure

TECHNOLOGIC STANDARD FEATURES

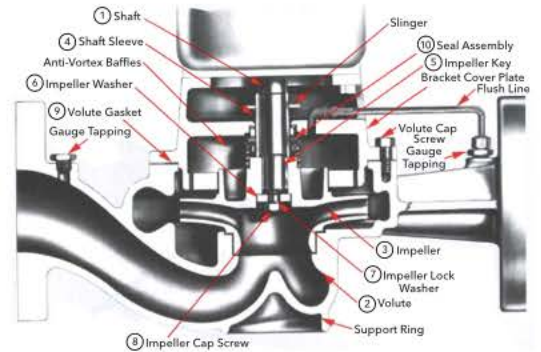
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® SENSORLESS CONTROL (ITSC)	Factory configured for sensorless operation.
CONTROL METHOD WITH INTEGRATED TECHNOLOGIC® (IT)	Field configurable for sensor by others, building management system input, or optional sensor(s) provided.
ENCLOSURE	NEMA 12 (same as IP55 & UL type 12)
POWER DISCONNECT SWITCH	Included standard. Fused Disconnect Switch optional with three phase input voltage.
HARMONIC SUPPRESSION	Integrated non-saturating dual DC link reactors provide better harmonic performance than a 5% AC line reactor.
COOLING	Fan-cooled through temperature controlled and easy replacement.
AMBIENT TEMPERATURE RATING	14°F to 113°F (-10°C to 45°C)
COMMUNICATION PROTOCOLS	BACnet, Modbus RTU, N2 Metasys, FLN Apogee
ANALOG INPUTS	2 configurable for either voltage (0 to 10VDC) or current(0/4 to 20mA)
ANALOG OUTPUTS	1 (0/4 to 20mA) up to 500 ohm load accurate to 1% of full scale
DIGITAL INPUTS	4 (0 to 24VDC), NPN or PNP, 0 to 24VDC, on 5 msec scan interval, Up to 2 can be configured as pulse inputs.
DIGITAL OUTPUTS	2 (0 to 24VDC), 40mA max current, configurable as pulse outputs.
RELAY OUTPUTS	2 programmable, 240VAC or 400VAC up to 2 A
MINIMUM CONTROL HEAD	_____ ft (default set to 40% of design head if not unknown)

10 Standard Mechanical Seal Assembly

Bellows	Buna N
Faces	Carbon-Ceramic
Metal Parts	Brass or Stainless Steel
Spring	Stainless Steel

Maximum Working Pressure

Max Working Pressure (standard)	175 psi (12 bar)
Max Working Pressure (optional)	175#, 250#, and 300# working pressure designs.



Job/Project: 19096 MCPL / 19096 MCPL	Representative: Hydronic & Steam Equipment Co., Inc		
ESP-Systemwize: WIZE-E5B4A3	03/05/2021	Phone: (317) 577-8326	
Location/Tag: ET-1	Email: mkring@hydstm.com		
Engineer:	Submitted By:	Date:	
Contractor:	Approved By:	Date:	

Expansion Tanks : Pressurized (Air Elimination)

Bell & Gossett Series : B-LA ASME

Model: B-35LA

Series "B-LA" expansion tanks are ASME rated precharged bladder-type pressure vessels. The Series "B-LA" tank is designed to absorb the expansion forces of heating/cooling system water while maintaining proper system pressurization under varying operating conditions. The replaceable heavy duty bladder contains system water thereby eliminating tank corrosion and waterlogging problems.



Tank Selection

Model	B-35LA
Required Tank Volume	4.86 gal
Required Acceptance	2.93 gal
Actual Tank Volume	10.0 gal
Actual Acceptance Volume	10.0 gal
Orientation	Vertical
Type	Bladder
ASME Rate	true
Fill Temperature	40 °F
Max Temperature	180 °F
System Volume	105.9 gal
System Medium	Water

Designed and constructed per ASME Section VIII, Division 1

Tank Details:

Not For Potable Water Systems

B-35LA

- Increases System Performance
- Reduces Oxygen Corrosion
- Prevents Waterlogging
- Replaceable Bladder
- Meets ASME Section VIII, Division 1 Standards
- 125 PSI Working Pressure Standard
- High Maximum Operating Temperature 240°F
- Seismic Restraints Available
- Sight Glass Available

Operating Data

Max Design Temperature	240.0 °F
Max Working Pressure	125.0 psig
Shipping Weight	65.0 lbs

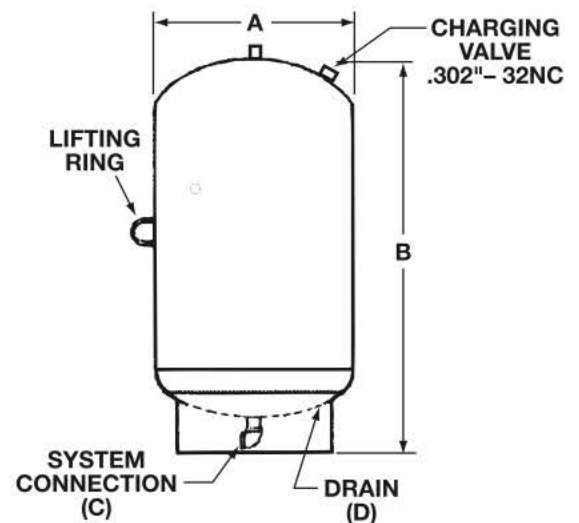
Dimensional Data:

Dimensions are subject to change. Not to be used for construction purposes unless certified.

Materials of construction

Shell	Carbon Steel
Diaphragm	Replaceable Heavy Duty Butyl Rubber
System Connection	Malleable Iron

Tanks are factory pre-charged at 12 psi (83 kPa)
 Tanks can be installed in the vertical position only.
 System Connection 1" NPT. Drain Plug 3/4"

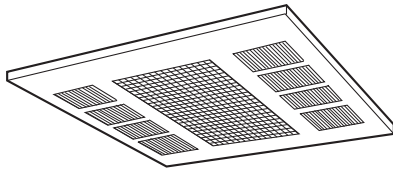


DIMENSIONS: GALLONS (Ltrs) INCHES (mm), WEIGHTS: LBS. (KG) *Approximate weight 100% full occurs if bag fails or if air charge is lost.

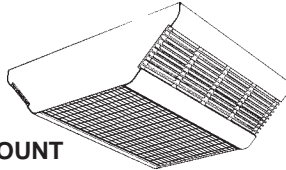
MODEL NUMBER	TANK VOLUME GAL (LTRS)	ACCEPTANCE VOLUME GAL (LTRS)	A IN. (MM)	B IN. (MM)	APPROX. SHPG. WT. LBS. (KG)	APPROX. WT* 100% FULL LBS. (KG)
B-35LA	10 (38)	10 (38)	10 (254)	37-5/16 (948)	65 (29)	144 (67)



470 Beauty Spot Rd. E, Bennettsville, SC 29512



RECESSED MOUNT



SURFACE MOUNT

**CDF 500 SERIES
FAN FORCED
CEILING MOUNTED HEATER
SUBMITTAL SHEET**

CAPACITIES	
4KW	Field Convertible to 3KW or 2KW 208V, 1Ø or 3Ø, 240V, 1Ø or 3Ø 277V, 1Ø
5KW	Field convertible to 3.8KW or 2.5KW 208V, 1Ø or 3Ø; 240V, 1Ø or 3Ø; 277V, 1Ø

ITEM	QTY.	CATALOG NUMBER	TAG	HEATER			AMPS	CONTROL CKT. VOLTS	MOTOR RPM	AIR FLOW		BUILT-IN CONTROLS
				KW	VOLTS	PHASE Ø				CFM	F RISE	

ACCESSORIES AND CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION

SUBMITTED BY:	DATE:

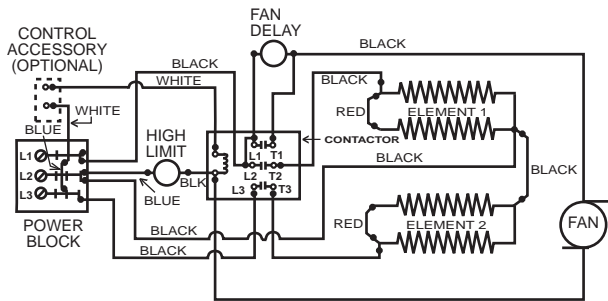
APPROVED BY:	DATE:

CDF 500 SERIES - CEILING MOUNTED HEATER



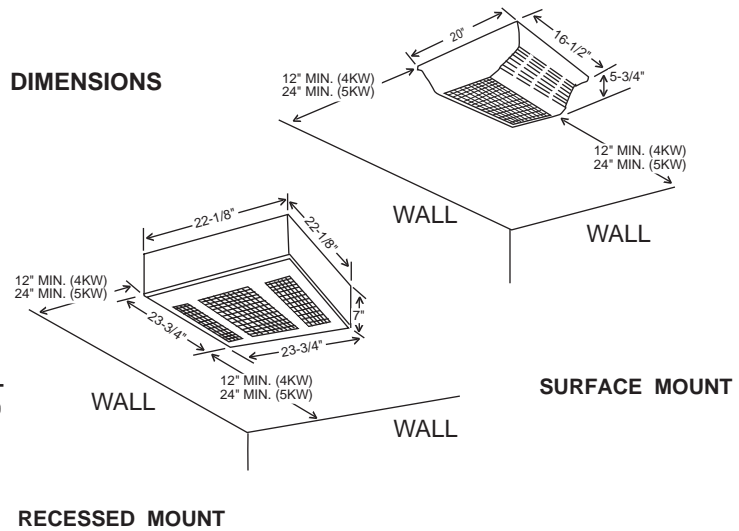
470 Beauty Spot Rd. E, Bennettsville SC 29512

ELECTRICAL WIRING Standard Factory Wired Diagram



CAUTION: Field wiring must be #10 AWG. min. rated 90°C. min.

DIMENSIONS



ARCHITECT'S AND ENGINEER'S SPECIFICATIONS*

The heating equipment shall include an electric, ceiling-mounted type CDF Series 500 fan-forced air heater suitable for large area heating as manufactured by QMark, a Marley Engineered Products Brand, Bennettsville, SC. Heater shall be UL listed.

The heater shall be designed for surface, recess, or T-Bar mounting. For surface mounting, a QMark CDF-SE surface enclosure shall be used. For T-Bar mounting, a QMark CDF-RE recess enclosure shall be used. For recessed mounting in a permanent ceiling, a QMark CDF-RE recess enclosure and CDF-TK trim kit shall be used.

The heaters shall be factory wired for single-phase operation and field convertible to three-phase operation by removing one jumper wire.

The heaters should be factory wired for full wattage and field convertible to 75% or 50% wattage by the removal of one or two wires respectively.

HEATER SECTION - The heater section shall consist of a 20 gauge steel chassis on which are mounted the heating elements, fan motor and blade, fan control, thermal cutout, and 3-pole contactor. Heater section shall be completely prewired.

HEATER ELEMENTS - The heating elements shall be guaranteed for five years and shall be of non-glowing design consisting of 80/20 NiCh resistance wire, enclosed in a steel sheath, to which steel plate fins are brazed. The elements shall cover the entire air intake area to ensure uniform heating of all discharged air.

MOTOR AND CONTROLS - The fan motor shall be impedance-protected, permanently lubricated, and with totally-enclosed rotor. Fan control shall be bi-metallic, snap-action type and shall activate the fan immediately and continue to operate the fan after the thermostat is

satisfied and until all heated air has been discharged. Thermal cutout shall be bi-metallic snap-action type designed to automatically shut off the heater in the event of overheating and reactivate the heater when temperature returns to normal.

OPERATIONAL CONTROLS - Thermostat, disconnect switch, and all interlock relays shall be installed within the heater enclosure.

RECESS ENCLOSURE - The back box shall be designed for duty as a recessed rough-in box in masonry, T-Bar, or frame ceiling construction. The back box shall be 20 gauge galvanized steel and shall contain knockouts through which field wiring leads are brought. Enclosures to recess into a maximum 7 inches of ceiling space.

The louvered recess faceplate shall be of 20 gauge cold rolled steel, phosphatized, then electrostatically painted Navajo white by a baked enamel process.

SURFACE ENCLOSURE - The surface mounting plate shall be designed for duty as a rough-in box on masonry, T-Bar, or frame ceiling construction. The surface mounting plate shall be 20 gauge galvanized steel and shall contain knockouts through which field wiring leads are brought. Enclosure to extend a maximum of 6 inches into the heated space.

The louvered surface wrapper shall be contoured aluminum extrusion and 20 gauge sheet metal combination with rounded corners. The surface wrapper shall be electrostatically painted Navajo white by a baked enamel process.

*QMark reserves the right to change specifications without prior notice.

SPECIFICATIONS:

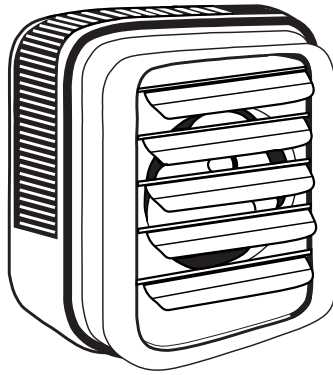
CAT. NO.	MOUNTING	KW ¹	BTU/HR (000)	MOTOR RPM	VOLTS	PHASE ²	AMPS ³	CFM	F T
CDF-548	HEATER	4/3/2	13.7/10.2/6.8	1400	208	1 - 3	19.2/14.4/9.6	300	42
CDF-542	SECTION				240	1 - 3	16.7/12.5/8.3		
CDF-547	ONLY				277	1	14.4/10.8/7.2		
CDF-558	HEATER	5/3.8/2.5	17.1/13.0/8.5	1400	208	1 - 3	24.0/18.3/12.9	300	45
CDF-552	SECTION				240	1 - 3	20.8/15.8/10.4		
CDF-557	ONLY				277	1	18.1/13.7/9.0		
CDF-SE	Surface Mounting Enclosure only - To be used with above heater sections. Dimensions: 20"L x 16-1/2"W x 5-3/4"D.								
CDF-RE	Recess Mounting Enclosure only - To be used with above heater sections. Dimensions: 23-3/4"L x 23-3/4"W x 7"D.								
CDFSENW	Surface mounted Northern White - To Be Used With Above Heater Section. Dimensions: 20"L x 16 1/2"W x 5 3/4"D.								
CDFRENW	Recessed mounted Northern White - To Be Used With Above Heater Sections. Dimensions: 23 3/4"L x 23 3/4"W x 7"D.								
OPTIONAL ACCESSORIES					FIELD INSTALLED KITS				
CDF-T ⁴	Thermostat SPST. Range 45 to 95 Degrees F.								
CDF-24R	Relay (Time Delay 45 - 60 sec. to close when energized) requires 24 volt supply from remote source.								
CDF-R12	Relay (Time Delay 45 - 60 sec. to close when energized) requires 120 volt supply from remote source.								
CDF-DS	Power Disconnect Switch (3-Pole) 30 amps, 600 volts, 3 phase, 60 Hz.								
CDF-TK	Trim Ring for mounting on permanent ceiling (cannot be factory installed).								
CDF-TR4	208 240 Primary Transformer/24V sec. and 24V holding coil control relay.								
CDF-TR7	277V Primary Transformer/24V sec. and 24V holding coil control relay.								

¹Factory wired for highest wattage, field convertible to lower wattages.

²Factory wired 1 Phase, field convertible to 3 Phase.

³On dual-phase units, maximum amp draw is listed.

⁴CDF-T, CDF-PE mount in same location - only one can be used for any application.



**SUBMITTAL SHEET
MUH SERIES
HORIZONTAL/VERTICAL
UNIT HEATERS**

MUH SERIES - HORIZONTAL/VERTICAL UNIT HEATERS

JOB NAME: _____

LOCATION: _____

ARCHITECT: _____

ENGINEER: _____

CONTRACTOR: _____

SUBMITTED BY: _____

DATE: _____

ITEM	QTY.	CATALOG NUMBER	TAG	WATTS	VOLTS	Ø	AMPS	GRILLE FINISH	CEILING MOUNT

ACCESSORIES
AND
CONTROLS

ITEM	QTY.	CAT. NO.	TAG	DESCRIPTION

SUBMITTED BY:	DATE	APPROVED BY:	DATE

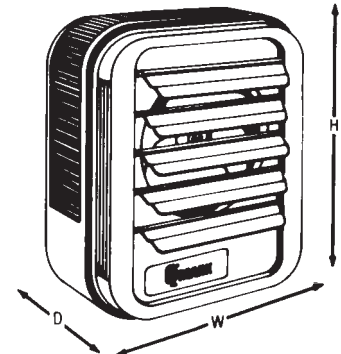


A Marley Engineered Products Brand
 470 Beauty Spot Rd. E, Bennettsville, SC 29512
 visit www.qmarkmep.com for more info

ARCHITECT'S AND ENGINEER'S SPECIFICATIONS*

- Unit mounts either horizontally or vertically. Totally versatile. For factories, warehouses, garages, stores, shipping rooms, power stations. Can be used for primary, supplementary, spot, or dual-system heating.
- Wide range of optional control kits are field installable, increasing the MUH adaptability to the specification market.
- Forced air unit heater with 10 power ratings; from 3KW to 50 KW heating output; 208, 240, 277 and 480V, 10,230 to 170,500 BTU/hr.
- 32 compatible models (no need to try to assemble a heating system from 70 or 80 models!)
- Heavy gauge die-formed steel housing. Two-toned, smartly styled with stainless steel louvers.
- Advanced pull-through air flow design draws air across heating element for more even air distribution and cooler element operation.
- Specially designed venturi outlet to meet that added throw as required in vertical position.
- Branch circuit fusing (when required).
- Completely enclosed fan motor.
- 1- or 3-phase wiring on 5 through 10 KW 208/240V and 15 KW 208V units (field interchangeable).
- Aluminum-finned, copper clad steel sheath heating element has longer useful life, because of cooler sheath temperature and faster heat dissipation.
- 24V control transformer standard on most models, providing a safer and more accurate means of temperature control. 3KW and 5KW, 208-277V, have line voltage controls as standard (24V control available on made-to-order basis).
- Automatic reset linear thermal cut-out, capillary type, provides protection over entire length of element areas (Manual reset protection available on made-to-order basis).

- 2-speed fan selector switch (25 to 50 KW models).
- Fan delay feature eliminates cold drafts. Element heats up before fan cuts in, then fan continues to distribute heat after element shuts off.
- Ruggedly built, yet lighter weight for easier installation. No piping flutes, valves, or traps.
- Individually adjustable discharge louvers to control air flow.
- Choice of optional diffusers for variety of air patterns, maximizing heat concentration and coverage in the vertical position.
- Meets all UL, NEC, and OSHA requirements.



DIMENSIONS

CAT. NO.	HEIGHT	WIDTH	DEPTH
MUH-03 & 05	16"	14"	7 1/2"
MUH-07 & 10	21 3/4"	19"	7 1/2"
MUH-15 & 20	21 3/4"	19"	12 3/4"
MUH-25 & 30	30"	26 5/8"	11 3/4"
MUH-40 & 50	30"	26 5/8"	17 1/8"

SELECTION CHART

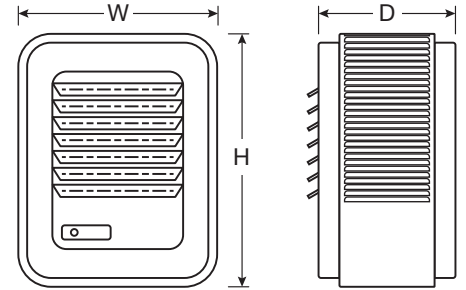
CAT. NO.	VOLTS	ELECTRICAL DATA				CONTROL VOLT (1)	2 STAGE ELEMENT CONTROL	AIR DELIVERY DATA			FAN MOTOR DATA			MAXIMUM EFFECTIVE MOUNTING HEIGHT		HORI. AIR THROW	WIRE SIZE	INSTALLED WEIGHT (LBS.) W/BRACK.
		PHASE	KW	BTU/HR. 000	AMPS (3)			CFM(2)	FPM(2)	ΔT(°F)	VOLTS	RPM(2)	HP	HORIZ.	VERT.			
MUH03-81	208	1Ø	3.0	10.2	14.5	208	N/A	350	800	27°	208	1600	1/100	8	9	12	AWG 12	27
MUH03-21	208/240	1Ø	2.2/3.0	7.5/10.2	11.0/12.5	208/240	N/A	350	800	27°	208/240	1600	1/100	8	9	12	AWG 12	27
MUH03-71	277	1Ø	3.0	10.2	11.0	277	N/A	350	800	27°	277	1600	1/100	8	9	12	AWG 14	27
MUH03-31	347	1Ø	3.0	10.2	8.6	24	N/A	350	800	27°	347	1600	1/100	8	9	12	AWG 14	27
MUH03-41	480	3Ø	3.0	10.2	3.6	24	N/A	350	800	27°	480	1600	1/100	8	9	12	AWG 14	27
MUH03-61	600	3Ø	3.0	10.2	2.9	24	N/A	350	800	27°	600	1600	1/100	8	9	12	AWG 14	27
MUH05-81	208	1-3Ø	5.0	17.0	24.0	208	5A	350	800	45°	208	1600	1/100	8	9	12	AWG 10	27
MUH05-21	208/240	1-3Ø	3.75/5.0	12.6/17.0	18.0/21.0	208/240	5A	350	800	45°	208/240	1600	1/100	8	9	12	AWG 10	27
MUH05-71	277	1Ø	5.0	17.0	18.0	277	N/A	350	800	45°	277	1600	1/100	8	9	12	AWG 10	27
MUH05-31	347	1Ø	5.0	17.0	14.4	24	N/A	350	800	45°	347	1600	1/100	8	9	12	AWG 10	27
MUH05-41	480	3Ø	5.0	17.0	6.0	24	N/A	350	800	45°	480	1600	1/100	8	9	12	AWG 14	27
MUH05-61	600	3Ø	5.0	17.0	4.8	24	N/A	350	800	45°	600	1600	1/100	8	9	12	AWG 10	27
MUH-07-8	208	1-3Ø	7.5	25.6	36.0	24	5B	650	970	37°	208	1600	1/30	9	14	18	AWG 6	38
MUH-07-2	208/240	1-3Ø	5.6/7.5	19.1/25.6	27.0/31.3	24	5B	650	970	37°	208/240	1600	1/30	9	14	18	AWG 8	38
MUH-07-7	277	1Ø	7.5	25.6	27.0	24	5B	650	970	37°	277	1600	1/30	9	14	18	AWG 8	38
MUH-07-3	347	1Ø	7.5	25.6	21.6	24	5B	650	970	37°	347	1600	1/30	9	14	18	AWG 14	38
MUH-07-4	480	3Ø	7.5	25.6	9.0	24	5B	650	970	37°	480	1600	1/30	9	14	18	AWG 14	38
MUH-07-6	600	3Ø	7.5	25.6	7.3	24	5B	650	970	37°	600	1600	1/30	9	14	18	AWG 14	38
MUH-10-8	208	1-3Ø	10.0	34.1	48.0	24	5B	650	970	49°	208	1600	1/30	9	14	18	AWG 4	38
MUH-10-2	208/240	1-3Ø	7.5/10.0	25.6/34.1	36.0/42.0	24	5B	650	970	49°	208/240	1600	1/30	9	14	18	AWG 6	38
MUH-10-7	277	1Ø	10.0	34.1	36.0	24	5B	650	970	49°	277	1600	1/30	9	14	18	AWG 6	38
MUH-10-3	347	1Ø	10.0	34.1	28.8	24	5B	650	970	49°	347	1600	1/30	9	14	18	AWG 14	38
MUH-10-4	480	3Ø	10.0	34.1	12.0	24	5B	650	970	49°	480	1600	1/30	9	14	18	AWG 14	38
MUH-10-6	600	3Ø	10.0	34.1	9.7	24	5B	650	970	49°	600	1600	1/30	9	14	18	AWG 14	38
MUH-15-8	208	1-3Ø	15.0	51.2	72.0	24	5A	910	1640	52°	208	1530	1/20	11	20	35	AWG 2	53
MUH-15-2	208/240	3Ø	11.2/15.0	38.2/51.2	31.3/36.1	24	5C	910	1640	52°	208/240	1530	1/20	11	20	35	AWG 6	53
MUH-15-4	480	3Ø	15.0	51.2	18.0	24	5C	910	1640	52°	480	1530	1/20	11	20	35	AWG 10	53
MUH-15-6	600	3Ø	15.0	51.2	14.5	24	5C	910	1640	52°	600	1530	1/20	11	20	35	AWG 12	53
MUH-20-8	208	3Ø	20.0	68.2	56.0	24	5A	1320	2060	48°	208	1500	1/10	12	23	41	AWG 4	60
MUH-20-2	208/240	3Ø	15.0/20.0	51.2/68.2	41.2/48.0	24	5C	1320	2060	48°	208/240	1500	1/10	12	23	41	AWG 4	60
MUH-20-4	480	3Ø	20.0	68.2	24.0	24	5C	1320	2060	48°	480	1500	1/10	12	23	41	AWG 10	60
MUH-20-6	600	3Ø	20.0	68.2	19.3	24	5C	1320	2060	48°	600	1500	1/10	12	23	41	AWG 12	60
MUH-25-2	208/240	3Ø	18.7/25.0	63.8/85.2	52.0/60.0	24	5A	2100/1800	2100/2030	38°/44°	208/240	1600/1375	1/4	13	23	50	AWG 3	93
MUH-25-4	480	3Ø	25.0	85.2	30.0	24	5C	2100/1800	2100/2030	38°/44°	480	1600/1375	1/4	13	23	50	AWG 8	93
MUH-25-6	600	3Ø	25.0	85.2	24.2	24	5C	2100/1800	2100/2030	38°/44°	600	1600/1375	1/4	13	23	50	AWG 10	93
MUH-30-8	208	3Ø	30.0	102.3	84.0	24	5A	2100/1800	2100/2030	45°/53°	208	1600/1375	1/4	12	20	50	AWG 1	93
MUH-30-2	208/240	3Ø	22.5/30.0	76.7/102.3	63.0/72.3	24	5A	2100/1800	2100/2030	45°/53°	208/240	1600/1375	1/4	12	20	50	AWG 2	93
MUH-30-4	480	3Ø	30.0	102.3	36.0	24	5C	2100/1800	2100/2030	45°/53°	480	1600/1375	1/4	12	20	50	AWG 6	93
MUH-30-6	600	3Ø	30.0	102.3	29.0	24	5C	2100/1800	2100/2030	45°/53°	600	1600/1375	1/4	12	20	50	AWG 8	93
MUH-40-2	208/240	3Ø	30.0/40.0	102.3/136.4	83.4/96.4	24	5A	3000/2600	3260/2900	42°/49°	208/240	1525/1420	1/2	15	28	60	AWG 1/0	114
MUH-40-4	480	3Ø	40.0	136.4	48.0	24	5A	3000/2600	3260/2900	42°/49°	480	1525/1420	1/2	15	28	60	AWG 4	114
MUH-40-6	600	3Ø	40.0	136.4	38.7	24	5A	3000/2600	3260/2900	42°/49°	600	1525/1420	1/2	15	28	60	AWG 6	114
MUH-50-8	208	3Ø	50.0	170.5	139.0	24	5A	3000/2600	3260/2900	53°/61°	208	1525/1420	1/2	15	25	60	AWG 4/0	114
MUH-50-2	208/240	3Ø	37.5/50.0	127.3/170.5	104.2/120.4	24	5A	3000/2600	3260/2900	53°/61°	208/240	1525/1420	1/2	15	25	60	AWG 3/0	114
MUH-50-4	480	3Ø	50.0	170.5	60.2	24	5A	3000/2600	3260/2900	53°/61°	480	1525/1420	1/2	15	25	60	AWG 4	114
MUH-50-6	600	3Ø	50.0	170.5	48.3	24	5A	3000/2600	3260/2900	53°/61°	600	1525/1420	1/2	15	25	60	AWG 3	114

Note:

- All standard units are supplied with a low voltage control transformer and contactor (24V) except MUH-03 & 05, 208, 240 & 277 volt models. Low voltage control on these units are available on made to order. All units are also available on special order for 120 volt control; internal and transformer or external without transformer.
- On dual voltage units; CFM, FPM, and RPM are shown at higher voltage.
- On dual phase units, maximum amp draw is listed for respective voltage.
- 25 thru 50 KW models have two speed motors and dual CFM ratings.
- 5A. Standard.
- 5B. Optional - made to order - amp load unbalanced on 3 Phase.
- 5C. Optional - made to order - amp load balanced on 3 Phase.

MUH SERIES UNIT HEATER

DIMENSIONS			
CATALOG NO.	HEIGHT (IN)	WIDTH (IN)	DEPTH (IN)
MUH03 & 05	16	14	7-1/2
MUH07 & 10	21-3/4	19	7-1/2
MUH15 & 20	21-3/4	19	12-3/4
MUH25 & 30	30	26-5/8	11-3/4
MUH40 & 50	30	26-5/8	17-1/8



OPTIONAL FIELD-INSTALLED CONTROLS				
CATALOG NO.	UPC	DESCRIPTION	ELECTRICAL RATING	COMPATIBLE WITH
UHMT1	6 85360 15241 7	Single Pole Internal Thermostat-Temp Range: 40°- 85°F	25A @ 120, 240VAC Res. 22A @ 277VAC Res.	All MUH Series Heaters (except MUH0521 3 PH, MUH0581 3 PH which use UHMT2)
UHMT2	6 85360 15242 4	Two Stage Internal Thermostat-Temp Range: 40°- 85°F	25A @ 120, 240VAC Res. 22A @ 277VAC Res. 125VA	MUH0521 3 PH, MUH0581 3 PH, MUH158, MUH208, MUH252, MUH302, MUH308, MUH402, MUH404, MUH406, MUH502, MUH504, MUH506, MUH508
MCFS	6 85360 04637 2	Internal Summer Fan Switch 250, 480, 600V.A.C. 1,2 OR 3 PH	Pilot Duty 6A, 600VAC Res. 2 HP	All MUH Series Heaters
MRFS1	6 85360 04708 9	Remote Summer Fan Switch (Line Voltage)	2 HP, 250-480VAC	All MUH Series Heaters
MRFS2	6 85360 04709 6	Remote Summer Fan Switch with Relay (24V Coil-Single Pole Normally Open)	6 AFL, 35 ALR, 250VAC, 60Hz 3 AFL, 18 ALR, 480VAC, 60Hz	All MUH Series Heaters (except MUH0321, MUH0371, MUH0381, MUH0521, MUH0571, MUH0581) Units unless optional control transformer is supplied
MHRT	6 85360 04694 5	Heat Recovery Thermostat with Relay (24V Coil-Single Pole Normally Open) Hi - 120°F, Low - 60°F	6 AFL, 35 ALR, 250VAC, 60Hz 3 AFL, 18 ALR, 480VAC, 60Hz	All MUH Series Heaters (except MUH0321, MUH0371, MUH0381, MUH0521, MUH0571, MUH0581) Units unless optional control transformer is supplied
MPDS25	6 85360 04703 4	Power Disconnect Switch (3-Pole)	30A @ 600VAC, Res.	MUH0321, MUH0341, MUH0371, MUH0381, MUH0521, MUH0541, MUH0571, MUH0581, MUH073, MUH074, MUH076, MUH104, MUH106, MUH154, MUH156, MUH204, MUH206
MPDS60	6 85360 04704 1	Power Disconnect Switch (3-Pole)	80A @ 600VAC, Res.	MUH072, MUH077, MUH078, MUH102, MUH103, MUH107, MUH108, MUH152, MUH202, MUH208, MUH252, MUH254, MUH256, MUH304, MUH306, MUH404, MUH406, MUH504, MUH506

NOTE: Any field installed options assembled in the factory require added surcharge. See price book for charges. MPDS60 disconnect switch is not suitable for field installation on 7.5kw and 10kw unit heaters.

DIFFUSER SELECTOR TABLES FOR VERTICAL MOUNTING					
CATALOG NO.	DESCRIPTION	CATALOG NO.	MAX. MOUNTING HEIGHT	(A) DIMENSION	DIFFUSER PATTERN AND AREA
NONE	WITHOUT DIFFUSER No diffuser needed where a straight downflow air pattern is required. For maximum air throw, remove louvers. Any of three diffusers can be added to basic heater.	MUH03 & MUH05	9	18 26	
NONE		MUH07 & MUH10	14	35 40	
NONE		MUH15	20	63 55	
NONE		MUH20	23	70 63	
NONE		MUH25	20		
NONE		MUH30	20		
NONE	MUH40	28			
NONE	MUH50	25			
MLDS	LOUVER DIFFUSER Permits directional (straight line) air flow as in air curtain application over doorways. Rectangular coverage, Louvers can be turned in either direction.	MUH03 & MUH05	9	25(A) 12(B)	
MLDM		MUH07 & MUH10	14	39(A) 19(B)	
MLDM		MUH15	18	50(A) 25(B)	
MLDM		MUH20	20	56(A) 28(B)	
MLDL		MUH25	23	72(A) 36(B)	
MLDL		MUH30	20		
MLDL		MUH40	24	88(A) 44(B)	
MLDL		MUH50	22	80(A) 40(B)	

MUH SERIES UNIT HEATER

OPTIONAL MOUNTING BRACKETS

CATALOG NO.	UPC	COMPATIBLE WITH	SHIP WT. (LBS)
B10	6 85360 15229 5	MUH03 - 10	8
B20	6 85360 15230 1	MUH15 & 20	10
B30	6 85360 15231 8	MUH25 & 30	13
B50	6 85360 15232 5	MUH40 & 50	15

OPTIONAL CEILING MOUNTING BRACKETS

CATALOG NO.	UPC	COMPATIBLE WITH	SHIP WT. (LBS)
CMB10	6 85360 15236 3	MUH03 - 10	3
CMB20	6 85360 15237 0	MUH15 & 20	4
CMB30	6 85360 15238 7	MUH25 & 30	5
CMB50	6 85360 15239 4	MUH40 & 50	6

OPTIONAL VERTICAL CEILING MOUNTING BRACKETS

CATALOG NO.	UPC	COMPATIBLE WITH	SHIP WT. (LBS)
VDMB5	6 85360 15245 5	MUH03 - 05	5
VDMB20	6 85360 15246 2	MUH07 - 20	7
VDMB50	6 85360 15247 9	MUH25 - 50	9

MOUNTING LIMITATIONS: Unit heaters should not be used in potentially explosive atmospheres. The finish is not intended for direct salt spray exposure in marine applications or the highly corrosive atmospheres of swimming pools, chemical storage bins, etc. Do not install unit heaters above recommended maximum mounting height. Obstructions must not block unit heater air inlet or discharge. Heaters must be mounted at least 7 ft. above the floor to prevent accidental contact with the heating element or fan blade which could cause injury.

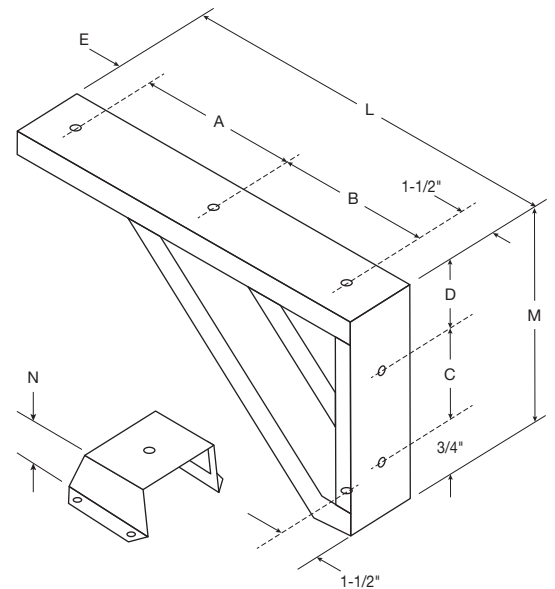
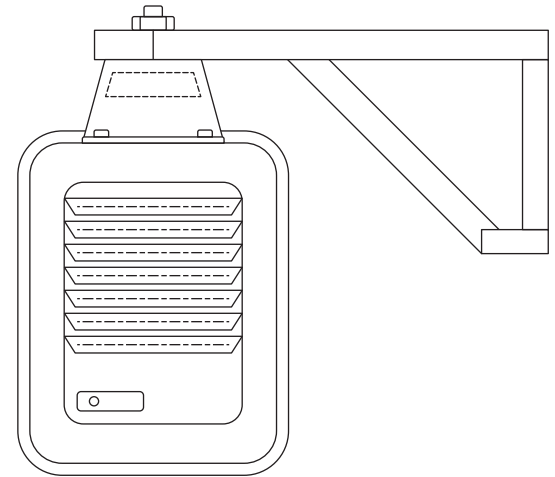
FACTORY-INSTALLED OPTIONS FOR CONTROLS & ACCESSORIES

DESCRIPTION
MUH03 & 05 (208, 208/240, 277V Supply) 24 or 120V Control Transformer and Power Contactor 24 or 120V H.C. Power Contactor
MUH03 & 05 (480V Supply) & MUH07 thru MUH50 Optional 120V Control
2-Stage Control of Elements (See Note 5)
Manual Reset
Outlet Mesh (Bird Screen) For all MUH Heaters

NOTE: Any factory-installed options require added surcharge. See price book for charges or contact factory.

BRACKET SIZE

DIMENSION	3-20 kW (IN.)	25-50 kW (IN.)
A	7-1/4	9-7/16
B	9-1/2	14-3/8
C	7-1/4	12-1/8
D	11-5/16	2-1/16
E	2-1/4	3
L	20-1/2	28-15/16
M	9-15/16	14-15/16
N	3-1/4	4-1/2



PRODUCT SUBMITTAL SHEET



Capacities
1500, 2000, 3000, 4000 OR 4800 WATTS
120, 208, 240 OR 277V
1Ø and 3Ø
Thermostat Range: 40° - 90° F
Air Movement: 100 CFM MAX

AWH ARCHITECTURAL SERIES FAN-FORCED WALL HEATERS

Job Name: _____

Location: _____

Architect: _____

Engineer: _____

Contractor: _____

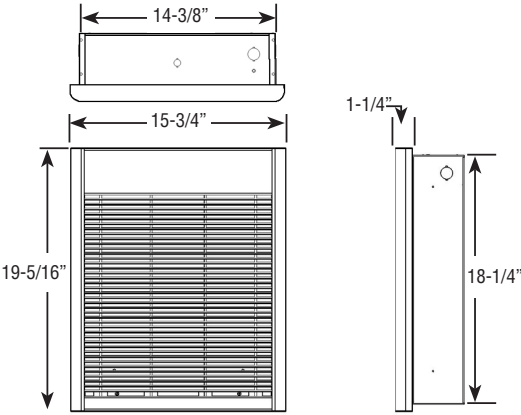
Submitted By: _____

Date: _____

Submitted By:		Date:	
Approved By:		Date:	

Item	QTY	Catalog Number	Tag	Watts	Volts	PH	AMPS	Weight

ACCESSORIES			
Item	QTY	Part Number	Tag



Marley
Engineered Products

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and CSA C22.2, No. 46

MODELS & SPECIFICATIONS							
CATALOG NO.	UPC	VOLTS	WATTS	AMPS	PHASES	BTU/HR.	SHIP WT. (LBS.)
AWH3150F	6 85360 16186 0	120	1500	12.5	1	5118	25
AWH3180F	6 85360 16188 4	120	1800	15	1	6142	25
AWH4408F	6 85360 16210 2	208	4000/2000	19.2 / 9.6	1	13,649/6824	25
AWH4404F*	6 85360 16198 3	240	4000/2000	16.7/8.3	1	13,649/6824	25
		208	3000/1500	14.4 / 7.2		10,236/5118	
AWH4407F*	6 85360 16206 5	277	4000/2000	14.4 / 7.2	1	13,649/6824	25
		240	3000/1500	12.5/6.3		10,236/5118	
AWH4307F	6 85360 16194 5	277	3000/1500	10.8 / 5.4	1	10,236/5118	25
AWH4303F	6 85360 16402 1	347	3000	8.6	1	10,236	25
AWH4306F	6 85360 16406 9	600	3000	5	1	10,236	25
AWH4506F	6 85360 16414 4	600	4800	8	1	16,378	25
AWH4508F	6 85360 16230 0	208	4800	23.1	1	16,378	25
AWH4504F*	6 85360 16218 8	240	4800	20	1	16,378	25
		208	3600	17.3		12,284	
AWH4507F*	6 85360 16226 3	277	4800	17.3	1	16,378	25
		240	3600	15		12,284	
AWH4503F	6 85360 16410 6	347	4800	13.8	1	16,378	25
AWH44083F	6 85360 16214 0	208	4000	11.1	3	13,649	25
AWH45083F	6 85360 16222 5	208	4800	13.3	3	16,378	25
AWH44043F	6 85360 16202 7	240	4000	9.6	3	13,649	25
AWH45043F	6 85360 16234 8	240	4800	11.6	3	16,378	25

NOTE: *Factory-wired for higher wattage, field-convertible to half wattage. Standard finish is Bronze; For White, add W suffix to catalog number. Allow two weeks delivery for models with White finish.

ACCESSORIES

CATALOG NUMBER	DESCRIPTION
AWHPE	Pneumatic/Electric switch. Factory set at 10 psig to “make” on pressure drop. May be field wired to “break” on pressure drop. Pressure set point adjustable to 30 psig. (Field installed.)
AWHR2 (24 volt) AWHR12 (120 volt)	Time delay relay 40-60 seconds to close when energized. Use 120V or 24V power supply from remote source (feld installed).
AWHS1	1” deep surface mounting frame for semi-recessed installation - Bronze
AWHS2	2” deep surface mounting frame for semi-recessed installation - Bronze
AWHSM	Surface mounting frame for surface installations. Painted to match heater decor, 3 13/16” deep - Bronze
LFKSFCNW	14 gauge security front cover, White

The heating equipment shall include electric, automatic fan forced air heater suitable for large area heating, as manufactured by QMark®, A Marley Engineered Products Brand, Bennettsville, SC. The heater shall be designed for wall recess or surface mounting. Heaters shall be UL listed or equivalent (ETL).

HEATER ASSEMBLY: The heater assembly which fits into the back box shall consist of a fan panel upon which is mounted all of the operational parts of the heater.

HEATING ELEMENT: The heating element shall be of the non-glowing design consisting of a special resistance wire enclosed in a steel sheath to which steel plate fins are copper brazed. It shall be warranted for 5 years.

FAN AND MOTOR: Fan shall be five-bladed aluminum. Fan motor shall be totally enclosed.

FAN DELAY SWITCH: Fan control shall be of bi-metallic, snap-action type and shall activate fan after heating element reaches operating temperature. The fan shall continue to operate after the thermostat is satisfied and until the heating element is cool.

THERMOSTAT: The tamper-proof thermostat shall be of the bi-metallic snap-action type with enclosed contacts. It shall be completely concealed behind the front cover to become tamper proof.

THERMAL CUTOUT: A manual-reset thermal cutout shall be built into the system to shut off the heater in the event of overheating.

POWER ON/OFF SWITCH: A double-pole, single throw ON/OFF switch shall be mounted on the back box for positive disconnect of power supply. It will be completely concealed behind the front grille panel.

PNEUMATIC/ELECTRIC SWITCH: An optional pneumatic/electric switch shall be available for use with energy management systems employing pneumatic pressure devices for controlling comfort levels and set-back operations.

LOW VOLTAGE RELAYS: 24-volt and 120 volt low voltage relays shall be available as optional equipment to control 208, 240 or 277 volt heaters in conjunction with central energy control systems. The built-in thermostat can then be used as one of the thermostats in an automatic night set back operation.

BACK BOX: The back box shall be designed for duty as a recessed rough-in box in either masonry or frame installations, and is also used with the surface mounting frame in surface mounting installations. The back box shall be 20-gauge galvanized steel and shall contain knockouts through which power leads are brought.

FRONT PANEL: The front panel shall be of the bar grille type and shall be constructed of 16-gauge cold-rolled steel, welded into a uniform grille to direct the warmed air toward the floor. The front grille shall be surrounded by a decorative satin-finish aluminum “picture” frame.

THREE PIECE DESIGN: The heater shall be made up of a back box, a heater assembly and a front panel.

*QMark reserves the right to change specifications without prior notice.



KNIGHT® FIRE TUBE BOILER PRODUCT SUMMARY (WHB) 55,000 - 399,999 BTU/HR

	WHB055	WHB085	WHB110	WHB155	WHB199	WHB285	WHB399
WATER							
GALLON CAPACITY	2.3	2.2	3.2	3.2	5.0	4.9	6.5
HEATING SURFACE (SQ. FT.)	5.92	8.33	10.00	14.07	15.66	21.60	36.58
WATER CONNECTIONS	1"	1"	1"	1"	1-1/4"	1-1/4"	1-1/2"
20°F ΔT WATER FLOW (GPM)	5	8	10	15	19	27	38
HEAD LOSS (FT. OF HD.)	0.27	0.94	1.53	3.50	1.13	2.42	1.42
35°F ΔT WATER FLOW (GPM)	3	5	6	9	11	16	22
HEAD LOSS (FT. OF HD.)	0.10	0.37	0.55	1.45	0.38	0.85	0.48
MAX. WORKING PRESSURE (PSI)	80	80	80	80	80	80	80
# OF RELIEF VALVES	1	1	1	1	1	1	1
RELIEF VALVE SIZE	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
RELIEF VALVE RATING (MBH)	535	535	535	535	535	535	535
RELIEF VALVE PRESSURE RATING (PSI)	30	30	30	30	30	30	30
GAS							
INLET CONNECTION	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	3/4"
MAX. INLET PRESSURE, NAT	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.
MIN. INLET PRESSURE, NAT	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.	4.0" w.c.
MAX. INLET PRESSURE, LP	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.	14.0" w.c.
MIN. INLET PRESSURE, LP	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.	8.0" w.c.
BTU/HR INPUT	55,000	85,000	110,000	155,000	199,999	285,000	399,999
BTU/HR OUTPUT (HIGH FIRE)	52,250	80,750	104,500	147,250	189,999	270,750	379,999
BTU/HR OUTPUT (LOW FIRE)	7,790	8,075	10,450	14,725	18,999	27,075	76,000
ELECTRICAL							
VOLTAGE/HEATER	120	120	120	120	120	120	120
VOLTAGE/CONTROL	24	24	24	24	24	24	24
FLA	1.8	2.1	2.1	2.2	3.3	3.6	4
MCA	2.3	2.7	2.7	2.8	4.2	4.5	4.5
DIMENSIONS							
HEIGHT	33-1/4"	33-1/4"	33-1/4"	33-1/4"	33-1/4"	33-1/4"	35-1/2"
WIDTH	18-1/2"	18-1/2"	18-1/2"	18-1/2"	18-1/2"	18-1/2"	25"
DEPTH	16"	16"	19"	19"	19"	19"	21-3/4"
SERVICE CLEARANCES							
FRONT	24"	24"	24"	24"	24"	24"	24"
BOTTOM	24"	24"	24"	24"	24"	24"	24"
RIGHT SIDE	0"	0"	0"	0"	0"	0"	0"
LEFT SIDE	12"	12"	12"	12"	12"	12"	12"
TOP	24"	24"	24"	24"	24"	24"	24"
DIRECT VENTING							
SIZE	2"	2"	3"	3"	3"	3"	4"
VENT CATEGORY	IV	IV	IV	IV	IV	IV	IV
VENT MATERIAL	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP	PVC/CPVC/SS/PP

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WHB-PS-01

06/18-Printed in U.S.A.



KNIGHT FIRE TUBE BOILERS - FLOOR AND WALL MOUNT MODELS

Job Name:

Engineer:

Contractor:

Model #:

Location:

Agent/Wholesaler:

Type Gas:

Equipment Tag(s):

JOB NOTES:

Smart System Features

- › **Smart System Digital Operating Control**
Multi-Color Graphic LCD Display w/Navigation Dial, Soft Keys and Loch-N-Link USB programming
- › **Three Boiler Setpoint Temperature Inputs**
Plus Domestic Hot Water Prioritization
- › **Built-in Cascading Sequencer for up to 8 Boilers, with Cascade Redundancy**
Multiple Size Boiler Cascade
Lead Lag
Efficiency Optimization
Front End Loading Capability
- › **Outdoor Reset Control with Outdoor Air Sensor**
Programmable for Three Reset Temperature Inputs
- › **Programmable System Efficiency Optimizers**
SH Night Setback
DHW Night Setback
Anti-Cycling
Outdoor Air Reset Curve
Ramp Delay
Modulation Factor Control
Boost Temperature & Time

Standard Features

- › **95% DOE AFUE Efficiency (55-285)**
- › **Modulating Burner with up to 10:1 Turndown****
Direct Spark Ignition
Low NOx Operation
- › **ASME Stainless Steel Heat Exchanger**
30 PSI ASME Relief Valve
- › **Top and bottom water connections (MNPT, WHB 55-285 Only)**
- › **Vertical & Horizontal Direct Vent**
PVC, CPVC, Polypropylene or SS Venting up to 100 ft.
- › **Universal Vent Adapter**
Built-in Combustion Analyzer Port

- › **Four Pump Control**
System Pump with Parameter for Continuous Operation
Boiler Pump with Variable Speed Control
Domestic Hot Water Pump
Domestic Hot Water Recirculation
- › **Domestic Hot Water Prioritization**
DHW tank piped with priority in the boiler loop
DHW tank piped as a zone in the system with the pumps controlled by the SMART SYSTEM
DHW Modulation Limiting
Separately Adjustable Space Heat/DHW Switching Times
- › **Building Management System Integration**
0-10 VDC Input to Control Modulation or Setpoint
0-10 VDC Modulation Rate Output
0-10 VDC Input to Enable/Disable Call for Heat
- › **Access to BMS Settings through Graphic LCD Display**
- › **High-Voltage Terminal Strip**
120 VAC / 60 Hertz / 1 Phase Power Supply
Three Sets of Pump Contacts
- › **Low-Voltage Terminal Strip**
DHW Recirculation Pump Start/Stop
24 VAC Device Relay
Configurable Proving Contacts
Flow Switch Contacts
Alarm on Any Failure Contacts
Runtime Contacts
DHW Thermostat Contacts
3 Space Heat Thermostat Contacts
System Sensor Contacts
DHW Tank Sensor Contacts
Outdoor Air Sensor Contacts
Cascade Contacts



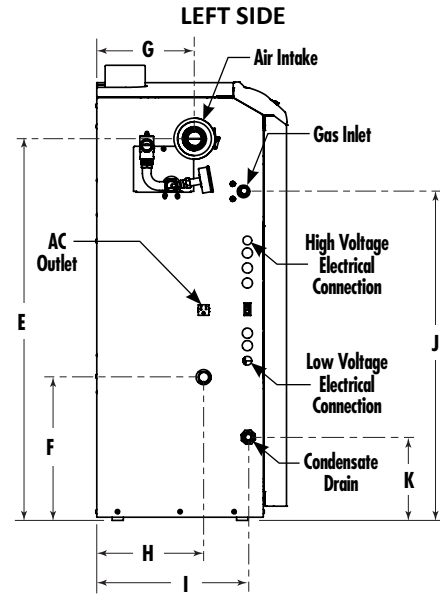
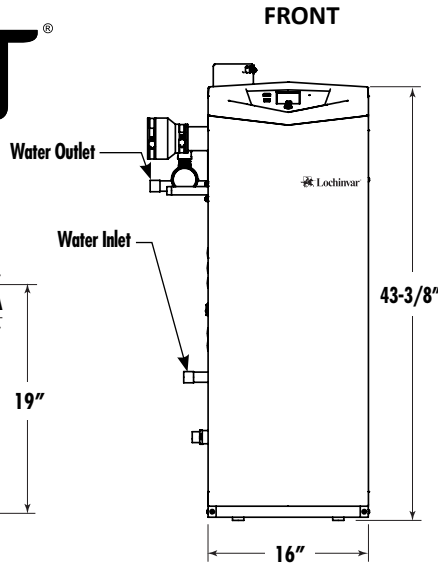
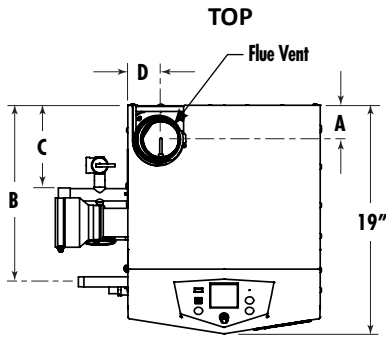
- 0-10 VDC BMS External Control Contact
- 0-10 VDC Boiler Rate Output Contacts
- 0-10 VDC Variable Speed System Pump Signal Input
- 0-10 VDC Signal to Control Variable Speed Boiler Pump
- Modbus Contacts

- › **Time Clock**
- › **Data Logging**
Hours Running, Space Heating
Hours Running, Domestic Hot Water
Ignition Attempts
Last 10 Lockouts
- › **Maintenance Reminder**
Custom Maintenance Reminder with Contractor Contact Information
Installer Ability to De-activate Service Reminder
- › **Low-Water Flow Safety Control & Indication**
- › **Password Security**
- › **Customizable Freeze Protection Parameters**

Optional Equipment

- CON-X-US Remote Connectivity
- Modbus Communication
- BACnet MSTP
- Flow Switch
- Low-Water Cutoff w/Manual Reset & Test Alarm Bell
- Concentric Vent Kit
- Condensate Neutralization Kit
- BMS Gateway to LON or BACnet IP
- Multi-Temperature Loop Control
- Sidewall Vent Termination
- Wireless Outdoor Sensor
- LP Gas Conversion Kit
- › **Firing Codes**
M9 Standard Construction

**5:1 on WHB399

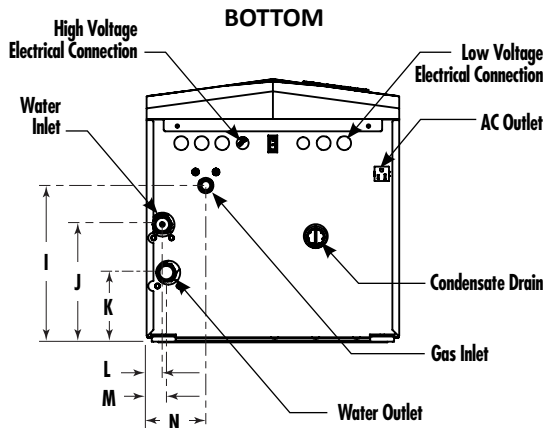
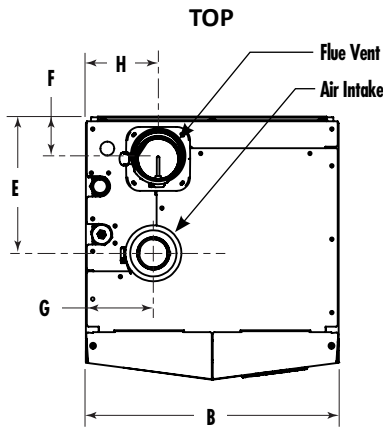


FLOOR MOUNT

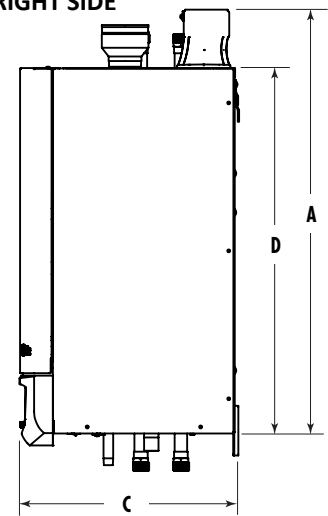


Model Number	Input MBH			Heating Capacity MBH	Net AHRI Rating MBH	Dimensions (inches)										Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Weight (lbs.)	
	Min	Max	AFUE%			A	B	C	D	E	F	G	H	I	J						K
KHB055N	8.3	55	95	51	44	3-1/2"	13-1/4"	6"	2-3/4"	37-2/3"	13-1/2"	8-1/3"	10-1/2"	15"	32-1/2"	8-1/3"	1/2"	1"	2"	2"	160
KHB085N	8.5	85	95	79	69	3-1/2"	13-1/4"	6"	2-3/4"	37-2/3"	13-1/2"	8-1/3"	10-1/2"	15"	32-1/2"	8-1/3"	1/2"	1"	2"	2"	165
KHB110N	11	110	95	102	89	2-3/4"	14-3/4"	7-1/2"	2-3/4"	38"	14-1/3"	9-3/4"	10-1/2"	15"	33"	8-1/3"	1/2"	1"	3"	3"	170
KHB155N	15.5	155	95	144	125	2-3/4"	14-3/4"	7-1/2"	2-1/2"	38"	14-1/3"	9-3/4"	10-1/2"	15"	33"	8-1/3"	1/2"	1"	3"	3"	175
KHB199N	19.9	199.9	95	185	161	3"	15-1/2"	7-1/2"	2-1/2"	38-1/3"	14-1/3"	10-1/2"	11-1/2"	15"	33"	8-1/3"	1/2"	1-1/4"	3"	3"	195
KHB285N	28.5	285	95	264	229	3"	15-1/2"	7-1/2"	2-1/2"	38-1/3"	14-1/3"	10-1/2"	11-1/2"	15"	33"	8-1/3"	1/2"	1-1/4"	3"	3"	205

- Information subject to change without notice. Change "N" to "L" for LP gas models. • The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15.
- Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. • The ratings have been determined under the provisions governing forced draft burners.



RIGHT SIDE



WALL MOUNT



Model Number	Input			Heating Capacity MBH	Net AHRI Rating MBH	Dimensions (inches)														Gas Conn.	Water Conn.	Air Inlet	Vent Size	Shipping Wt. (lbs.)
	Max. MBH	Min. MBH	AFUE %			A	B	C	D	E	F	G	H	I	J	K	L	M	N					
WHB055N	55	8.3	95	51	44	40"	18-3/4"	16"	31-1/8"	8-1/2"	3-3/4"	4-1/2"	6-1/2"	7-1/4"	8-7/8"	3-1/2"	1-1/2"	1-1/2"	6"	1/2"	1"	2"	2"	139
WHB085N	85	8.5	95	79	69	39-3/4"	18-3/4"	16"	31-1/8"	8-1/2"	3-3/4"	4-1/2"	6-1/2"	7-1/4"	8-7/8"	3-1/2"	1-1/2"	1-1/2"	6"	1/2"	1"	2"	2"	142
WHB110N	110	11	95	102	89	41-1/4"	18-3/4"	19"	31-1/8"	10"	2-3/4"	5"	5-1/4"	11-1/2"	8-1/2"	5"	1"	1"	4-1/2"	1/2"	1"	3"	3"	159
WHB155N	155	15.5	95	144	125	41-1/4"	18-3/4"	19-1/8"	31-1/8"	10"	2-3/4"	5"	5-1/4"	11-1/2"	8-1/2"	5"	1"	1"	4-1/2"	1/2"	1"	3"	3"	166
WHB199N	199.9	19.9	95	185	161	41-1/4"	18-3/4"	19-1/8"	31-1/8"	10-1/2"	3"	5-1/4"	6"	11"	9-1/2"	6-1/4"	1-1/2"	1-1/2"	4-1/2"	1/2"	1-1/4"	3"	3"	175
WHB285N	285	28.5	95	264	229	41-3/4"	18-3/4"	21-1/8"	31-1/8"	15"	3"	3-3/4"	5-1/4"	12-1/4"	11"	6-1/4"	1-1/2"	1-1/2"	6-1/2"	1/2"	1-1/4"	3"	3"	184
WHB399N	399	80	94.4*	377#	328	43-1/4"	25-1/4"	21-7/8"	34"	3-1/2"	4-1/4"	22-1/2"	3-7/8"	8-7/8"	12-1/2"	9-1/4"	2"	2"	21-1/2"	3/4"	1-1/2"	4"	4"	213

* Thermal Efficiency%

Gross Output MBH

**10:1 Turndown ratio and top and bottom water connections are not included on WHB399.

WHB399 operates with a 5:1 turndown.

- Information subject to change without notice. Change "N" to "L" for LP gas models. • The Net AHRI Water Ratings shown are based on a piping and pickup allowance of 1.15. • Lochinvar should be consulted before selecting a boiler for installations having unusual piping and pickup requirements, such as intermittent system operation, extensive piping systems, etc. • The ratings have been determined under the provisions governing forced draft burners.



Lochinvar, LLC
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Lochinvar.com



H



Unit Overview - YCD420BE6D3G1B*0C*E**HH*0*K0*T*00*0000XA*******

Unit Function	Tonnage	Estimated Installed Weight	EER @ AHRI	IEER @ AHRI	System Power	Elevation
DX Cooling, natural gas heat	35 Ton	5278.0 lb	10.5 EER	13.6 EER	42.36 kW	0.00 ft

Unit Features

Efficiency/Condenser Coil	High efficiency, eStage
System Control	VAV (DTC)w/ BP w/ shaft grounding
Airflow Configuration	Downflow supply and upflow return
Filters	4" MERV 14 Throwaway filters
Outside Air Selection	Economizer, dry bulb, w/ Traq OA measure



Unit Electrical

Voltage/Phase/Hertz	208/60/3
Unit Mounted Power Connection 1	Non-fused disconnect switch
Convenience Outlet	Field Powered GFCI Conv. Outlet
SCCR Rating	5k SCCR

Condenser Motor FLA	7.00 A
Condenser Motor Count	3.00 Each
Compressor 1 RLA	28.00 A
Compressor 2 RLA	44.90 A
Compressor 3 RLA	44.90 A

Supply Fan FLA	42.40 A
Exhaust Fan FLA	4.10 A
Exhaust Fan Count	2.00 Each

MCA	200.63 A
MOP	225.00 A
DSS	217.00 A

Cooling Section

Efficiency/Condenser Coil	High efficiency, eStage	Gross Total Capacity	396.89 MBh
Condenser Coil Type	MCHE	Gross Sensible Capacity	310.48 MBh
Condenser Coil Rows	1	Gross Latent Capacity	86.41 MBh
Evaporator Face Area	31.70 sq ft	Net Total Capacity	363.34 MBh
Evaporator Coil Rows	4	Net Sensible Capacity	276.92 MBh
Evaporator Face Velocity	394 ft/min	Net Sensible Heat Ratio (%)	0.76 %
Design Airflow	12500 cfm	Leaving Coil Dry Bulb	56.29 F
Entering Dry Bulb	78.80 F	Leaving Coil Wet Bulb	55.37 F
Entering Wet Bulb	65.80 F	Leaving Unit Dry Bulb	58.96 F
Ambient Dry Bulb	95.00 F	Leaving Unit Wet Bulb	56.45 F
		Compressor Power	29.18 kW

Heating Section

Function	DX Cooling, natural gas heat	Heating EAT	41.30 F
Heat Type & Capacity	Low modulating gas 27.5, 30, 35T	Heating LAT	62.40 F
Input Heating Capacity	350.00 MBh	Heating Delta T	21.10 F
Output Heating Capacity	280.00 MBh		

Modulating Hot Gas Reheat (HGRH)

Hot Gas Reheat	Modulating hot gas reheat	Leaving Unit Dew Point in HGRH	52.19 F
Entering DX DB (in HGRH)	73.00 F	Reheat Setpoint (LUDB in HGRH)	70.00 F
Entering DX WB (in HGRH)	64.00 F	Reheat Mode Moisture Removal	0.27 gpm
Ambient DB (in HGRH)	75.00 F	Reheat Mode Sensible Capacity	206.72 MBh
		Reheat Mode Latent Capacity	149.86 MBh



Fan Section

Unit Airflow Design	Downflow supply and upflow return	Exhaust Fan Data	
Supply Fan Data		Exhaust Fan Type	Prop
Supply Fan Type	FC	Exhaust Fan Option	100% Power exhaust w/ stratitrac
System Control/SGR	VAV (DTC)w/ BP w/ shaft grounding	Exhaust Fan Drive	Direct
Design Airflow	12500 cfm	Exhaust Fan Count	2.00 Each
Design ESP	1.400 in H2O	Outdoor Fan Data	
Total Static Pressure	2.968 in H2O	Outdoor Fan Type	Prop
Supply Fan Motor HP	15 Hp	Outdoor Fan Drive	Direct
Total Supply BHP	11.65 bhp	Low Ambient Temp	0 F
Supply Fan Drive	800/664 (60/50 hz)	Condenser Fan Count	3.00 Each
Operating Speed (RPM)	803 rpm	Outdoor Fan Motor Power	0.01 kW
Supply Motor Power	8.70 kW		

Acoustics

	63	125	250	500	1K	2K	4K	8K
Supply Duct	87 dB	88 dB	83 dB	85 dB	78 dB	75 dB	71 dB	66 dB
Outdoor Noise	100 dB	96 dB	97 dB	96 dB	93 dB	89 dB	90 dB	83 dB
Return Duct (low)	94 dB	93 dB	84 dB	84 dB	85 dB	84 dB	84 dB	81 dB
Return Duct (medium)	93 dB	91 dB	86 dB	85 dB	86 dB	86 dB	85 dB	84 dB
Return Duct (high)	91 dB	88 dB	87 dB	85 dB	86 dB	87 dB	86 dB	85 dB

Service Options

Hinged Service Access	Hinged service access	Condenser Coil Guards	Louvered condenser coil hail guards
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Accessories/Misc.

Roof Curb	Flat roof curb
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AHRI Certification

Packaged Rooftop units cooling, heating capacities and efficiencies are rated within the scope of the Air-Conditioning, Heating & Refrigeration Institute (AHRI) Certification Program and display the AHRI Certified® mark as a visual confirmation of conformance to the certification sections of AHRI Standard 340-360 (I-P) and ANSIZ21.47 and 10 CFR Part 431 pertaining to Commercial Warm Air Furnaces. Certified units may be found in the AHRI directory at www.ahridirectory.org



Job Name: 19096
 Prepared By:
 Unit Tag: RTU-1
 Quantity: 1

Trane Precedent Gas/Electric Packaged Rooftop

Unit Overview - YHC120F3RLA**C6*00000B000000000000000000

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
		Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum			
DX cooling, gas heat	10 Ton	4800 cfm	1.000 in H2O	4.24 ft	5.27 ft	8.31 ft	1259.0 lb	1608.0 lb	12.4 EER	15.20	

Unit Features

Fresh Air Selection	Econ-dry bulb 0-100% 3hp
SupplyFan/Drive/ MotorType	Single Zone VAV

Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	48.00 A
MOP	60.00 A



Controls

Unit Controls	Microprocessor controls
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Cooling Section

		Capacity	
Entering Dry Bulb	80.00 F	Gross Total	115.93 MBh
Entering Wet Bulb	67.00 F	Gross Sensible	99.28 MBh
Ambient Temp	95.00 F	Net Total	111.00 MBh
Leaving Coil Dry Bulb	60.85 F	Net Sensible	94.36 MBh
Leaving Coil Dry Bulb	60.85 F	Fan Motor Heat	4.92 MBh
Leaving Coil Wet Bulb	59.16 F	Refrig Charge-circuit 1	8.0 lb
Leaving Coil Wet Bulb	59.16 F	Refrig Charge-circuit 2	5.0 lb
Leaving Unit Dry Bulb	62.03 F		
Leaving Unit Wet Bulb	59.59 F		
Refrigeration System Options			
Dehumidification/Hot Gas Reheat	97.23 MBh		
Cooling Leaving Dry Bulb	79.52 F		
Leaving Dew Point	58.14 F		
Reheat Temperature Rise	18.67 F		
Moisture Removal Rate	2.20 gph		

Heating Section

Heat Type	Gas Heat
Heating Stages	2
Output Heating Capacity	120.00 MBh
Output Heating Capacity with Fan	124.92 MBh
Heating EAT	70.00 F
Heating LAT	93.50 F
Heating Temp Rise	23.50 F



Job Name: 19096
 Prepared By:
 Unit Tag: RTU-1
 Quantity: 1

Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	BC Plenum	Type	Propeller
Drive Type	Direct	Fan Quantity	1
Evap Fan FLA	0.00 A	Drive Type	Direct
Indoor Fan Performance		Outdoor Fan Performance	
Airflow	4800 cfm	Outdoor Motor Power	0.53 kW
Design ESP	1.000 in H2O	Condenser Fan FLA	2.70 A
Component SP	0.500 in H2O		
Total SP	1.500 in H2O		
Supply Motor Horsepower	2.750 hp		
Indoor Motor Operating Power	1.71 bhp		
Indoor Motor Power	1.28 kW		
Indoor RPM	1649 rpm		

Compressor Section

Power	7.84 kW
Circuit 1 RLA	19.60 A
Circuit 2 RLA	13.20 A

Acoustics

Sound Path	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz



Job Name: 19096
 Prepared By:
 Unit Tag: RTU-2
 Quantity: 1

Trane Precedent Gas/Electric Packaged Rooftop

Unit Overview - YHC092F3*LA**06E000000000000000000000

Application	Unit Size	Supply Fan		External Dimensions (in.)			Operating Weight		EER	IEER/SEER	Elevation
DX cooling, gas heat	7.5 Ton Dual compressor	Airflow	External Static Pressure	Height	Width	Length	Minimum	Maximum	12.6 EER	15.00	
		2500 cfm	1.000 in H ₂ O	3.91 ft	4.44 ft	7.39 ft	1026.0 lb	1291.0 lb			

Unit Features

SupplyFan/Drive/ MotorType	Single Zone VAV
Hinged Service Access/Filters	Hinged pnl/2 in pltd filters MERV 13

Unit Electrical

Voltage/phase/hertz	208-230/60/3
MCA	42.00 A
MOP	50.00 A



Cooling Section

Cooling Section		Capacity	
Entering Dry Bulb	80.00 F	Gross Total	88.19 MBh
Entering Wet Bulb	67.00 F	Gross Sensible	64.26 MBh
Ambient Temp	95.00 F	Net Total	85.31 MBh
Leaving Coil Dry Bulb	56.20 F	Net Sensible	61.39 MBh
Leaving Coil Wet Bulb	55.43 F	Fan Motor Heat	2.87 MBh
Leaving Unit Dry Bulb	57.71 F	Refrig Charge-circuit 1	5.5 lb
Leaving Unit Wet Bulb	56.03 F	Refrig Charge-circuit 2	4.2 lb
Refrigeration System Options			
Leaving Dew Point	54.91 F		

Heating Section

Heat Type	Gas Heat
Heating Stages	1
Output Heating Capacity	96.00 MBh
Output Heating Capacity with Fan	98.87 MBh
Heating EAT	70.00 F
Heating LAT	105.80 F
Heating Temp Rise	35.80 F

Fan Section

Indoor Fan Data		Outdoor Fan Data	
Type	BC Plenum	Type	Propeller
Drive Type	Direct	Fan Quantity	1
Evap Fan FLA	0.00 A	Drive Type	Direct
Indoor Fan Performance		Outdoor Fan Performance	
Airflow	2500 cfm	Outdoor Motor Power	0.71 kW
Design ESP	1.000 in H ₂ O	Condenser Fan FLA	4.00 A
Component SP	0.122 in H ₂ O		
Total SP	1.122 in H ₂ O		
Supply Motor Horsepower	2.750 hp		
Indoor Motor Operating Power	0.98 bhp		
Indoor Motor Power	0.73 kW		
Indoor RPM	1125 rpm		

Compressor Section

Power	6.04 kW
Circuit 1 RLA	15.90 A
Circuit 2 RLA	10.00 A



Job Name: 19096
Prepared By:
Unit Tag: RTU-2
Quantity: 1

Acoustics

Sound Path	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
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The Runtal® Family of Products

For Hydronic, Electric, and Steam Heating Systems

Runtal Commercial and Institutional Radiators

RUNTAL RADIATORS: Where Innovative

Runtal Radiators provide the unparalleled comfort of soft radiant heat, sleek Eurostyle design and a range of models and sizes to accommodate even the most demanding environments and applications. Comfort, style, energy efficiency, versatility and durability are all engineered into every radiator that Runtal builds. The panel radiator was invented in 1953 by Swiss engineer, Egon Runtal and architect, Jürg Altherr; thus the name Runtal. Since then Runtal has had millions of installations worldwide in schools, government buildings, hospitals, corporate offices, libraries, museums and homes. Over 30 years ago, a major commitment was made to the US and Canadian markets with the opening of a state-of-the-art factory in Ward Hill, MA (Haverhill).

Runtal is the world leader in Radiator Technology and Specialty Design. Runtal's flat steel tube construction provides maximum radiant comfort in a space saving design and is the choice of leading architects, engineers, and designers. Runtal Radiators may be discreetly blended into a classic décor or used as a bold complement to today's modern design.

Though originally intended exclusively for use in hydronic (closed loop hot water) heating systems, the Runtal line of radiators has expanded to include products that offer solutions for electric and steam heating systems as well. This brochure presents our complete line: from flat panel hydronic radiators to the Bisque Collection of high design radiators, to round tube towel radiators, to electric products (including the revolutionary Runtal Electric Baseboards and Wall Panels) and finally our unique designer steam products.

If you are in the Boston area, we cordially invite you to experience the beauty and practicality of Runtal at our gallery showroom in Ward Hill (Haverhill). We also encourage you to visit our extensive website: www.runtalnorthamerica.com for additional technical and specification information or call us at 800-526-2621 for your nearest Runtal Representative.

Cover photo: Prudential Center, Newark, NJ
The atrium is heated with Runtal curved perimeter style radiators.

Hydronic Radiators



Electric Radiators



Steam Radiators



Technology is Wedded to Unique Design

Runtal Radiators: The Best Choice

Style and Design Flexibility

Finally, a heating system which can blend into a traditional décor, highlight an ultra modern design or accent any style in-between. From baseboard to wall panels, to fancy curves and dramatic room dividers, Runtal manufactures the perfect welded steel radiator for every application. Since Runtal manufactures an almost unlimited selection of sizes, colors, and heat outputs it affords the architect and engineer choices. Innovation in architectural details is no longer limited by traditional heating systems. Runtal offers ten standard colors and over 100 optional colors, metallic finishes as well as color matching. Imagine the possibilities, confident that the final design will be comfortable and stylish.

Rugged Durability

Runtal's rugged all-welded steel construction ensures long life at peak operating efficiency. Runtal's powder coat finish provides a long-lasting, easy to maintain, protective finish.

Quiet, Comfortable Radiant Heating

Runtal Radiators provide an exceptionally quiet blanket of radiant warmth, without the drafts, cold spots, and dryness of most other heating systems.

Reduced Heating Costs

Runtal's broad radiating surface areas reduce energy consumption by providing soft, radiant comfort at lower thermostat settings.

Healthy

Hospitals have come to rely on Runtal for its designs are easy to clean, present minimal air movements, won't trap dust or dry out the air. Runtal offers as standard an antimicrobial paint in white and in other colors as optional.

Quick Turnaround and Efficient Installation

Stock products for immediate delivery and custom "made to order radiators" manufactured right in Ward Hill, Massachusetts means Runtal delivers exactly what you need, when you need it. Continuous mounting systems and individualized wrapping and tagging make Runtal Radiators easy to order, easy to locate on the job site and easy to install.

5-Year Limited Warranty

Runtal Radiators are warranted for five years against defects in materials or manufacturing.

Contents

Hydronic Products

Flat Panel Radiators	4
In Stock Product	8
Runtal NEO	9
Bisque Collection	10
Round Tube Towel Radiators	12
Accessories	13

Electric Products

Electric Baseboard	14
Baseboard Accessories	14
Electric Wall Panels	15
Electric Towel Radiators	16

Steam Products

Steam Radiators	17-18
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Technical Data

Hydronic , Electric & Steam	19
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Flat Panel Radiators

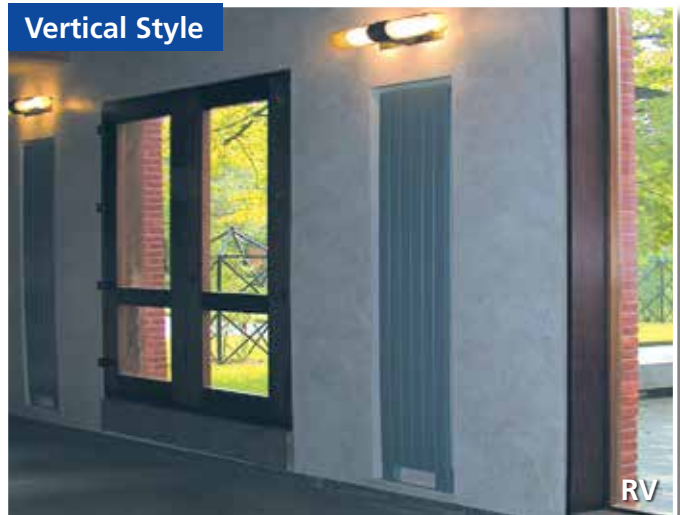
The flat panel design is the essence of the Runtal line. The modular concept allows one to best achieve the required heat load in the most effective and aesthetic manner. Products are offered from 160 BTUH per foot to over 4000 BTUH per foot AWT of 180° at lengths from 20" to 29'6" in increments of 2". This flexibility allows the engineer and architect a heating solution for almost every project.



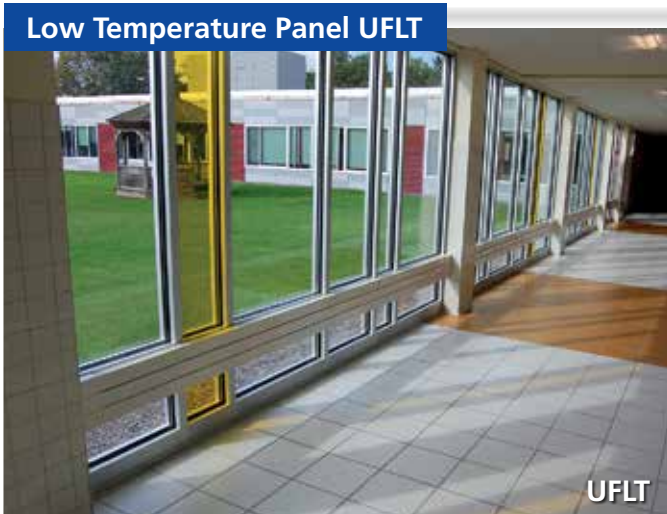
- Provides an even blanket of radiant warmth around the perimeter with a sleek 2" depth
- Pipe cover trims are available for wall-to-wall continuous appearance.



- Ideal for glass wall or limited sill height applications
- Can be designed for wall, pedestal, mullion, or cantilever mounting



- Heat areas with limited perimeter space, such as entryways and stairwells
- Provide heat in otherwise unused space, such as behind columns or doors



- A low temperature double-sided radiator for glass wall installation
- The inactive front panel provides a low temperature surface to the room.



- Designed for low surface temperature applications such as schools and hospitals
- Surface temperatures up to 60°F less than the supply water temperature

Curved and Other Specialty Styles



- May be field curved to a 15' (or greater) radius, or factory curved to a radius from 5' to 20'
- Angled radiators are available for bay windows

Wall Panel



- Ideal centered under a window
- Perfect replacement for old cast iron radiators

Ceiling Style



- Provides heat in spaces with no available wall space; like entryways or stairwells
- Excellent overhead radiant heating for maintenance or sports facilities

Column Radiators



- Ideal for floor-to-ceiling glass applications, allowing light to shine between the tubes
- Can be designed for wall, pedestal, or mullion mounting

Omnipanel Style



- Ideal for hotel, corporate and dormitory bathrooms
- Source of heat for the bathroom as well as towel dryer and warmer

The following is a key to the models offered:

Model R:
R radiators are primarily radiant, mount horizontally and consist of steel panels through which the water passes.

Model RF:
RF radiators are more convective, mount horizontally and consist of a row of steel panels with hidden fins on the backside.

Model R2F:
R2F radiators are mounted horizontally and consist of two rows of fins sandwiched between two layers of panels.

Model R3F:
R3F radiators are mounted horizontally and consist of two layers of fins sandwiched between two layers of panels and a third row of fins on the backside.

Model RV:
RV radiators are mounted vertically and consist of steel panels only.

Model RC:
RC radiators are made for ceiling applications and consist of steel panels only.

Model RS2:
RS2 radiators have the tubes positioned vertically and sideways.

Model TW:
The Omnipanel is a wall panel with missing panels to hang towels or clothing to warm or dry.

Model TT:
TT is a radiator which has a hidden second panel in which the water passes and provides a low surface temperature up to 60° F less than the water temperature passing through the radiator.

Model UFLT:
The UFLT has an inactive panel added to the front of the RF radiator resulting in a low surface temperature.

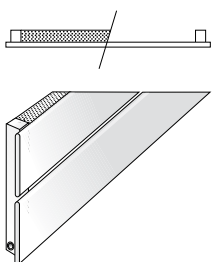
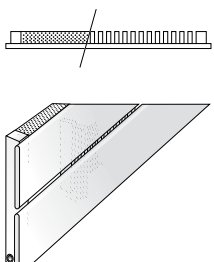
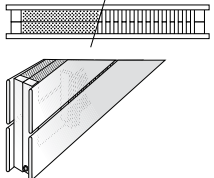
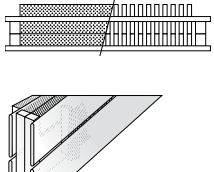
Heating Capacities

Runtal Radiators have been tested to ISO standards #3147-3150 for panel radiation. The ratings shown in the tables are based on a 65°F (18°C) entering air temperature, and include a 15% heat effect factor.

To determine the rating of a radiator at an average water temperature (AWT) other than what is shown in the tables, multiply the rating at 215°F (102°C) by the appropriate factor in the table below.

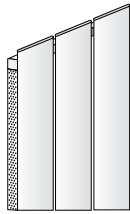
CORRECTION FACTOR AT AVERAGE HEATING WATER TEMPERATURE

Temperature	215°F	200°F	190°F	180°F	170°F	160°F	150°F	140°F	130°F	120°F	110°F
Correction Factor	1.0	.87	.79	.70	.63	.55	.51	.40	.33	.27	.21

	MODEL	UNIT HEIGHT INCHES	MOUNTING DEPTH INCHES	215°F BTUH/FT	180°F BTUH/FT	140°F BTUH/FT
R MODELS 	R-1	2.8	2.0	230	160	90
	R-2	5.7	2.0	420	300	170
	R-3	8.6	2.0	620	440	250
	R-4	11.5	2.0	820	580	330
	R-5	14.4	2.0	1020	720	410
	R-6	17.3	2.0	1220	860	500
	R-7	20.2	2.0	1430	1010	580
	R-8	23.1	2.0	1640	1160	660
	R-9	26.0	2.0	1850	1300	750
	R-10	29.0	2.0	2060	1450	830
RF MODELS 	RF-1	2.8	2.0	550	390	220
	RF-2	5.7	2.0	870	620	350
	RF-3	8.6	2.0	1120	790	460
	RF-4	11.5	2.0	1360	960	550
	RF-5	14.4	2.0	1720	1210	700
	RF-6	17.3	2.0	1990	1400	800
	RF-7	20.2	2.0	2150	1510	880
	RF-8	23.1	2.0	2390	1680	970
	RF-9	26.0	2.0	2530	1780	1020
	RF-10	29.0	2.0	2660	1880	1080
R2F MODELS 	R2F-1	2.8	5.0	980	690	400
	R2F-2	5.7	5.0	1590	1120	640
	R2F-3	8.6	5.0	2020	1420	820
	R2F-4	11.5	5.0	2420	1700	980
	R2F-5	14.4	5.0	3100	2180	1250
	R2F-6	17.3	5.0	3470	2450	1400
R3F MODELS 	R3F-1	2.8	5.0	1300	920	530
	R3F-2	5.7	5.0	2020	1420	820
	R3F-3	8.6	5.0	2580	1810	1040
	R3F-4	11.5	5.0	3090	2170	1250
	R3F-5	14.4	5.0	3790	2670	1530
	R3F-6	17.3	5.0	4270	3000	1720

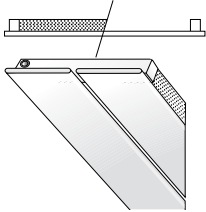
LENGTHS AVAILABLE IN 2" INCREMENTS FROM 20" TO 29'6".

RV MODELS



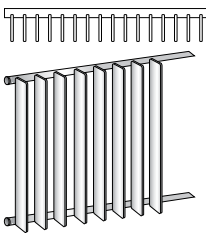
MODEL	UNIT HEIGHT INCHES	MOUNTING DEPTH INCHES	215°F BTUH/FT	180°F BTUH/FT	140°F BTUH/FT
RV-2	5.7	2.0	400	290	160
RV-3	8.6	2.0	600	430	250
RV-4	11.5	2.0	800	570	330
RV-5	14.4	2.0	1000	710	410
RV-6	17.3	2.0	1200	850	490
RV-7	20.2	2.0	1400	990	570
RV-8	23.1	2.0	1600	1130	650

RC MODELS



RC-2	5.7	3.0	270	190	110
RC-3	8.6	3.0	400	290	170
RC-4	11.5	3.0	530	380	220
RC-5	14.4	3.0	660	470	270
RC-6	17.3	3.0	800	560	320
RC-7	20.2	3.0	940	660	380
RC-8	23.1	3.0	1070	760	430

RS2 MODELS



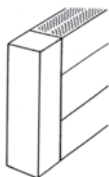
RS2-16	16.0	4.0	1380	960	540
RS2-24	23.6	4.0	1920	1320	780
RS2-30	29.5	4.0	2280	1620	900
RS2-36	35.6	4.0	2640	1860	1080
RS2-78	78.8	4.0	6300	4380	2520
RS2-84	84.6	4.0	6780	4740	2700

UFLT MODELS



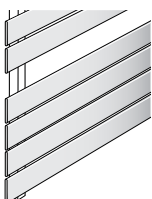
UFLT-2	5.7	2.0	867	610	347
UFLT-3	8.6	2.0	1118	787	448
UFLT-4	11.5	2.0	1351	951	541
UFLT-5	14.4	2.0	1718	1209	688

THERMOTOUCH MODELS



TT-2F	6.0	3.3	870	610	349
TT-3F	9.0	3.3	1120	784	451
TT-4F	12.0	3.3	1360	952	544

OMNIPANEL MODELS



HYDRONIC OMNIPANELS (180°F RATING SHOWN)

MODEL	UNIT HEIGHT INCHES	16" WIDE BTUH	20" BTUH	24" BTUH	30" BTUH	36" BTUH
TW9	26.1	1600	2000	2400	3000	3600
TW12	34.8	1920	2400	2880	3600	4320
TW15	43.6	2400	3000	3600	4500	5400
TW18	52.3	3040	3800	4560	5700	6840
TW21	61.1	3520	4400	5280	6600	7920

DEPTH: 3.8"

In Stock Radiators for Immediate Delivery

For projects on a short-time frame Runtal offers stock radiators in many sizes and styles.

Baseboard style is offered in three heights and fifteen lengths. Wall panels are offered in two heights and three lengths. Vertical panels are offered in two heights and two widths. These products are available for immediate delivery in white and the other standard colors are available within two weeks.

The stock baseboard and wall panel styles have multiple tapings that allow the option of any bottom or side opposite end piping connections. All stock vertical panels have bottom tapings and an air vent tapping on either side allowing the option of having the supply on either the right or left side.

In Stock Baseboard UF Series



Runtal offers 2, 3 and 4 panels high baseboards in white for immediate delivery in 2', 2.5', 3', 3.5', and from 4'-14' in even foot increments. All stock baseboards have multiple tapings (AB) that allow for all types of opposite end bottom and side piping connections. Stock baseboards may be special ordered in any of the other nine standard colors with a two-week delivery.

MODEL	UNIT HEIGHT INCHES	MOUNTING DEPTH INCHES	215°F BTUH/FT	180°F BTUH/FT	140°F BTUH/FT
UF-2	5.7	2.0	870	620	350
UF-3	8.6	2.0	1120	790	460
UF-4	11.5	2.0	1360	960	550

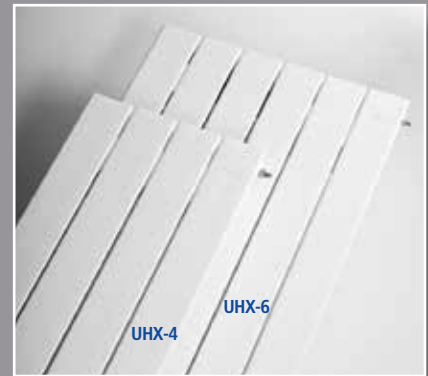
In Stock Wall Panels UF Series



Runtal offers 2 wall panels (6 and 8 panels) in 2', 3', and 4' lengths in white for immediate delivery. All stock wall panels have multiple tapings (AB) that allow for all opposite end bottom and side piping connections. Stock wall panels may be special ordered in any of the other nine standard colors with a two-week delivery.

MODEL	UNIT HEIGHT INCHES	MOUNTING DEPTH INCHES	215°F BTUH/FT	180°F BTUH/FT	140°F BTUH/FT
UF-6	17.3	2.0	1990	1400	800
UF-8	23.1	2.0	2390	1680	970

In Stock Vertical Panels UHX Series



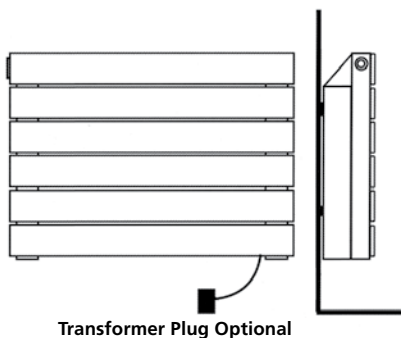
Runtal offers vertical panels (4 and 6 panels wide) in 3' and 6' heights for immediate delivery in white. All stock vertical panels have bottom tapings and air vent tapings on both sides allowing flexibility of supply and return. Stock vertical panels may be special ordered in any of the other nine standard colors with a two-week delivery.

MODEL	UNIT WIDTH INCHES	MOUNTING DEPTH INCHES	215°F BTUH/FT	180°F BTUH/FT	140°F BTUH/FT
UHX-4	11.5	2.0	800	570	330
UHX-6	17.3	2.0	1200	850	490

Runtal NEO

Runtal North America, Inc. Introduces the Runtal NEO: The Radiator for Today, Tomorrow and Beyond

The revolutionary Runtal NEO (New Energies Optimized) combines the sleek and elegant lines of a Runtal panel with a heat exchanger and low voltage fans to provide a large heating capacity in a small compact unit. The Runtal NEO provides high outputs when using low temperature heating solutions such as: heat pumps, solar-thermal systems or condensing boilers. In mild conditions, the radiator can operate without fans to create radiant comfort. As conditions grow colder, three stages of fans boost the radiator's output to keep the space warm and comfortable with nearly silent fan operation. The Runtal NEO is available in two heights (17.5" and 23.3") and four lengths (31.5", 39.4", 47.2" and 59"). The Runtal NEO offers outputs up to 13,850 BTUH per unit.



MODEL	HEIGHT INCHES	DEPTH INCHES	LENGTH INCHES	160°F BTUH	140°F BTUH	120°F BTUH
NEO 6-800	17.5	4.6	31.5	5101	4057	3020
NEO 6-1000	17.5	4.6	39.4	7882	6330	4774
NEO 6-1200	17.5	4.6	47.2	9458	7599	5729
NEO 6-1500	17.5	4.6	59.0	12874	10441	7971
NEO 8-800	23.3	4.6	31.5	5487	4344	3207
NEO 8-1000	23.3	4.6	39.4	8479	6776	5074
NEO 8-1200	23.3	4.6	47.2	10175	8031	6087
NEO 8-1500	23.3	4.6	59.0	13850	11175	8469



Job Name: 19096
 Prepared By:
 Unit Tag: SINGLE-1
 Quantity: 1

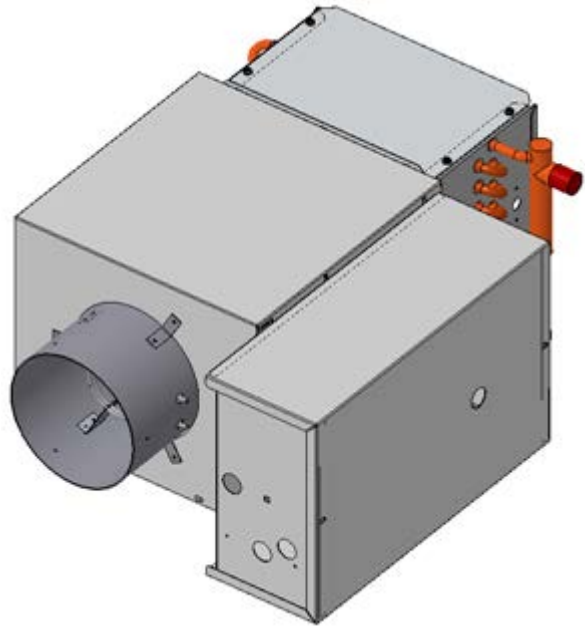
Variable Air Volume Single Duct

Unit Overview - SINGLE-1

Unit model	Primary inlet	Design cooling airflow	Min cooling airflow	Trane Supplied Controls
VCWF (Hot Water Heating)	6" (152mm)	300 cfm	150 cfm	Trane elec actuator only

Construction and Airflow

APD @ cooling airflow	0.260 in H2O
Cooling inlet velocity	1528 ft/min
Valve heating airflow	150 cfm
Connection side	Left
Unit Insulation	Dual wall with 1" insulation
Elevation	0.00 ft
Operating weight	26.0 lb
Air Leakage Class	Standard Air Leakage



Controls and Sensors

Actuator	Standard actuator
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Accessory Options

Disconnect Switch	Disconnect switch
Integral Attenuator w/Bottom Access	Atten & bot acc left conn

Heating Coil

Primary EDB	55.00 F
Room heating setpoint	68.00 F
Room heat loss	5.83 MBh
Fluid type	Water
Heating ent fluid temp	140.00 F
Heating flow rate	0.80 gpm
Heating delta T	20.00 F
Coil fluid PD	0.41 ft H2O
Unit LAT	103.84 F
Coil heating capacity	7.94 MBh
Hot water coil	2 Row hot water coil
Main coil rows	2 ROW
Main coil tube wall	Standard

Acoustics

Max inlet SP	Discharge transfer function				Radiated transfer function		
	AHRI 885-98/08				AHRI 885-98/08 Mineral Fiber		
0.750 in H2O	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	NC
Discharge valve	60 dB	49 dB	43 dB	42 dB	42 dB	37 dB	-1
Radiated valve	51 dB	47 dB	43 dB	41 dB	39 dB	36 dB	16

Note: Sound power level in dB re 1 pW. Acoustical data obtained in accordance with AHRI 880-11

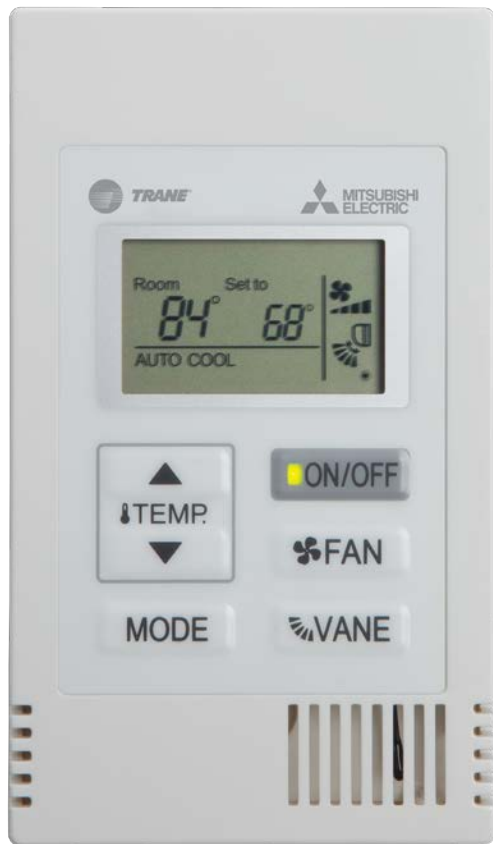
Note: -1 = NC level is less than 15.

Note: Casing noise criteria (NC) estimate is calculated using the following transfer function: AHRI 885-2008.

Job Name:

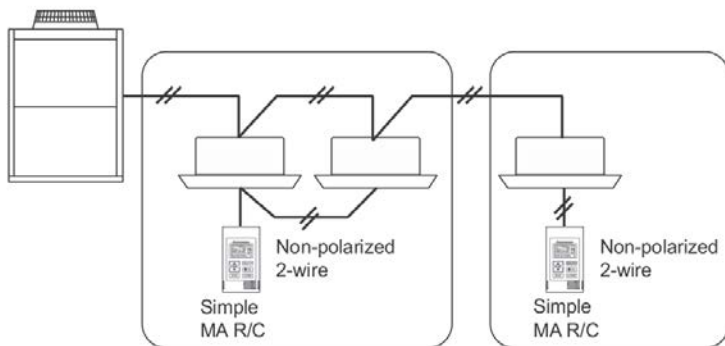
System Reference:

Date:



SIMPLE MA REMOTE CONTROLLER (TAC-YT53CRAU-J) SPECIFICATIONS

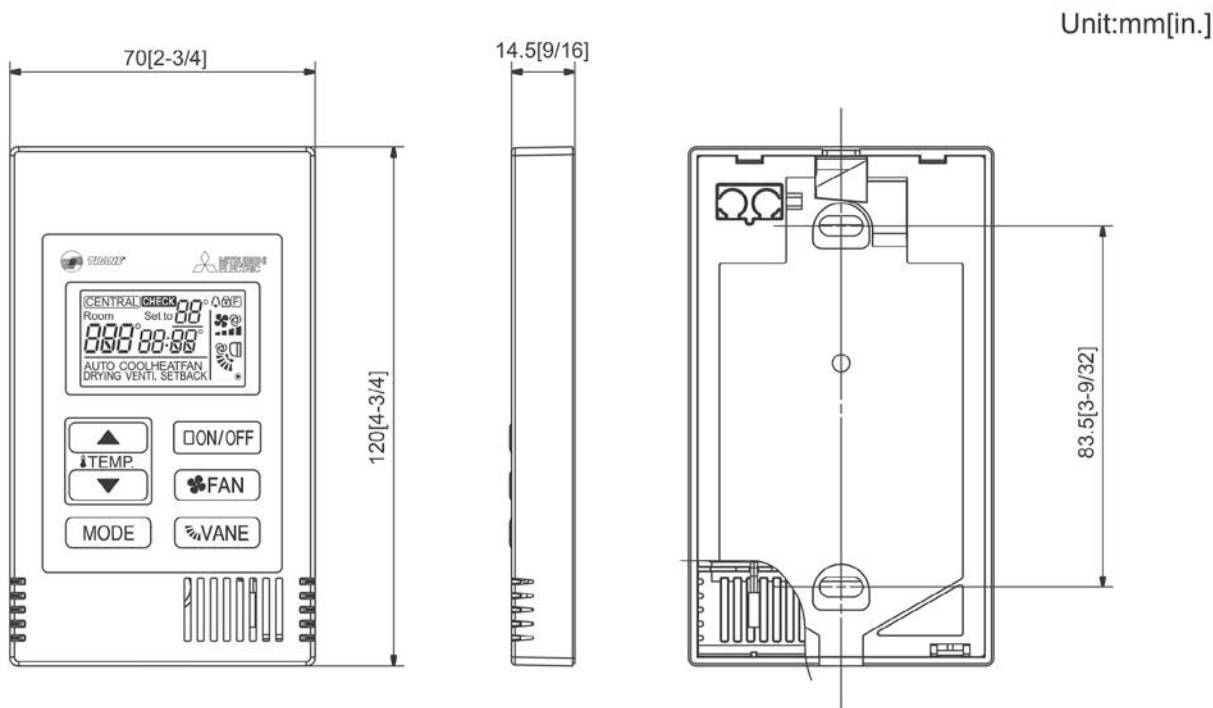
- Controls group operation for up to 16 indoor units in a single group
- Supports both Fahrenheit and Celsius
- User defined functions:
 - ON/OFF
 - Operation mode: AUTO (R2-Series only), COOL, HEAT, FAN, DRYING, or SETBACK
 - Set temperature
 - Fan speed setting
 - Air flow direction
 - Set temperature range: 40°F to 95°F depending on operation mode and indoor unit connected.
- Set temperature range limit: Simple MA allowable set temperature range can be reduced for cool and heat modes.
- LOSSNAY®: Simple MA for interlocked system can set high/low/Stop on LOSSNAY.
- Room temperature can be sensed either at the indoor unit (default) or at the remote controller.
- Diagnostics: Displays four-digit error code and error unit address.
- Grouping: Same group use only with other TAC-YT53CRAU-J Simple MA Controllers, PAR-33 Deluxe MA Remote Controllers, and TAR-FL/A32MA Wireless MA Remote Controllers with up to two remote controllers per group.
- Addressing: No addressing required.
- Wiring: Uses two-wire, stranded, non-polar control wire for connecting TB15 connection terminal on the indoor unit.
- Requires crossover wiring for grouping across indoor units.
- Dimensions: 2-3/4 x 9/16 x 4-3/4" (70 x 14.5 x 120mm).



System example

NOTES:

DIMENSIONS: TAC-YT53CRAU-J



Job Name:
System Reference:

Date:



ACCESSORIES

Branch Joint (Downstream capacity ≤72,000 Btu/h)	CMY-Y102SS-G2*
Branch Joint (Downstream capacity 73,000-96,000 Btu/h)	CMY-Y102LS-G2*
Branch Joint (Downstream capacity ≤126,000 Btu/h)	CMY-R201S-G*
Branch Joint (Downstream capacity 127,000-216,000 Btu/h)	CMY-R202S-G*
Branch Joint (Downstream capacity 217,000-234,000 Btu/h)	CMY-R203S-G*
Branch Joint (Downstream capacity 235,000-360,000 Btu/h)	CMY-R204S-G*
Branch Joint (Downstream capacity ≥316,000 Btu/h)	CMY-R205S-G*
Condensate Pump (Blue Diamond)	X87-721
Condensate Pump (Sauer mann)	SI3100-230
Ball Valve (3/8" SAE Brazed)	BV38BBSI
Ball Valve (5/8" SAE Brazed)	BV58BBSI
Reducer (Between ODU and BC)	CMY-R302S-G1*
Reducer (Between Main and Sub BC)	CMY-R303S-G1

*See Data Book or Install Manual for more details

SPECIFICATIONS

Indoor Unit Capacity Connectable to 1 Branch	Btu/h	54,000
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Number Of Branches	8
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Electrical Requirements		
Electrical Power Requirements	208 / 230V, 1 phase, 60Hz	
Minimum Circuit Ampacity (MCA)	A	0.83 / 0.97
Maximum Overcurrent Protection (MOCP)	A	15

Power Input (208 / 230V)		
Cooling	kW	0.137 / 0.176
Heating		0.076 / 0.098

Current Input (208 / 230V)		
Cooling	A	0.66 / 0.77
Heating		0.37 / 0.43

External Dimensions	In. (mm)	9-7/8 x 35-7/8 x 21-1/2 (250 x 911 x 545)
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Net Weight	Lbs. (kg)	106 (48)
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External finish	Galvanized steel plate (Lower part drain pan: Pre-coated galvanized sheets + powder coating)	
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Connectable Outdoor / Heat Source Unit Capacity	72,000 to 336,000
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Refrigerant Piping Diameter to Indoor Unit (Brazed)			
		Liquid	Gas
Less than 18,000 Btu/h	In. (mm)	1/4 (6.35)	1/2 (12.7)
	In. (mm)	3/8 (9.52)	5/8 (15.88)
Greater than 18,000 Btu/h	In. (mm)	3/8 (9.52)	3/4 (19.05)
	In. (mm)	3/8 (9.52)	7/8 (22.2)

Field drain pipe size	In. (mm)	3/4 NPT
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Refrigerant	R410A
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Refrigerant Piping Diameter to Outdoor Unit (Brazed)			
		High Pressure	Low Pressure
072	In. (mm)	5/8 (15.88)	3/4 (19.05)
096	In. (mm)	3/4 (19.05)	7/8 (22.2)
120	In. (mm)	3/4 (19.05)	7/8 (22.2) or 1-1/8 (28.58)
144 to 192	In. (mm)	3/4 (19.05)	1-1/8 (28.58)
216	In. (mm)	7/8 (22.2) or 1-1/8 (28.58)	1-1/8 (28.58)
240	In. (mm)	7/8 (22.2) or 1-1/8 (28.58)	1-3/8 (34.93)
264 to 288	In. (mm)	1-1/8 (28.58)	1-3/8 (34.93)
312	In. (mm)	1-1/8 (28.58)	1-3/8 (34.93) or 1-5/8 (41.28)
336	In. (mm)	1-1/8 (28.58)	1-5/8 (41.28)

Refrigerant Piping Diameter to other BC Controller (Brazed)				
		High Pressure	Liquid Pipe	Low Pressure Pipe
072	In. (mm)	5/8 (15.88)	3/8 (9.52)	3/4 (19.05)
073 to 108	In. (mm)	3/4 (19.05)	3/8 (9.52)	7/8 (22.2)
109 to 126	In. (mm)	3/4 (19.05)	1/2 (12.7)	1-1/8 (28.58)
127 to 144	In. (mm)	7/8 (22.2)	1/2 (12.7)	1-1/8 (28.58)
145 to 216	In. (mm)	7/8 (22.2)	5/8 (15.88)	1-1/8 (28.58)
217 to 234	In. (mm)	1-1/8 (28.58)	5/8 (15.88)	1-1/8 (28.58)
235 to 288	In. (mm)	1-1/8 (28.58)	3/4 (19.05)	1-3/8 (34.93)
289 to 360	In. (mm)	1-1/8 (28.58)	3/4 (19.05)	1-5/8 (41.28)
361 or above	In. (mm)	1-3/8 (34.93)	3/4 (19.05)	1-5/8 (41.28)

Sound power level (measured in anechoic room)		
Rated operation	dB(A)	68
Defrost		74

Sound pressure level (measured in anechoic room)		
Rated operation	dB(A)	50
Defrost		56

NOTES:

1. Installation/foundation work, electrical connection work, insulation work, power source switch, and other items shall be referred to the Installation Manual.
2. The equipment is for R410A refrigerant.
3. Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors. (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
4. Sound pressure/power level differs depending on the connected outdoor/heat source unit capacity or operation condition. The sound pressure/power level at the rated operation is the value of the cooling mode.
5. The sound pressure/power level values were obtained in an anechoic room. Actual sound pressure level is usually greater than that measured in anechoic room due to ambient noise and deflection sound.
6. The sound pressure level values were obtained at the location below 1.5m from the unit.
7. The solenoid valve switching sound is 56 dB (sound pressure level) regardless of the unit model.
8. Refrigerant piping diameter for connection of plural indoor units with 1 branch shall be referred to the Installation Manual.
9. This unit is not designed for outside installations.
10. When brazing the pipes, be sure to braze, after covering a wet cloth to the insulation pipes of the units in order to prevent it from burning and shrinking by heat.
11. Indoor unit capacity connectable to 1 branch is changed depending on the indoor unit type and connection method. Please refer to the Installation Manual for more information.
12. For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.

TCMB0108, 1012, 1016JA

Unit: mm(in)

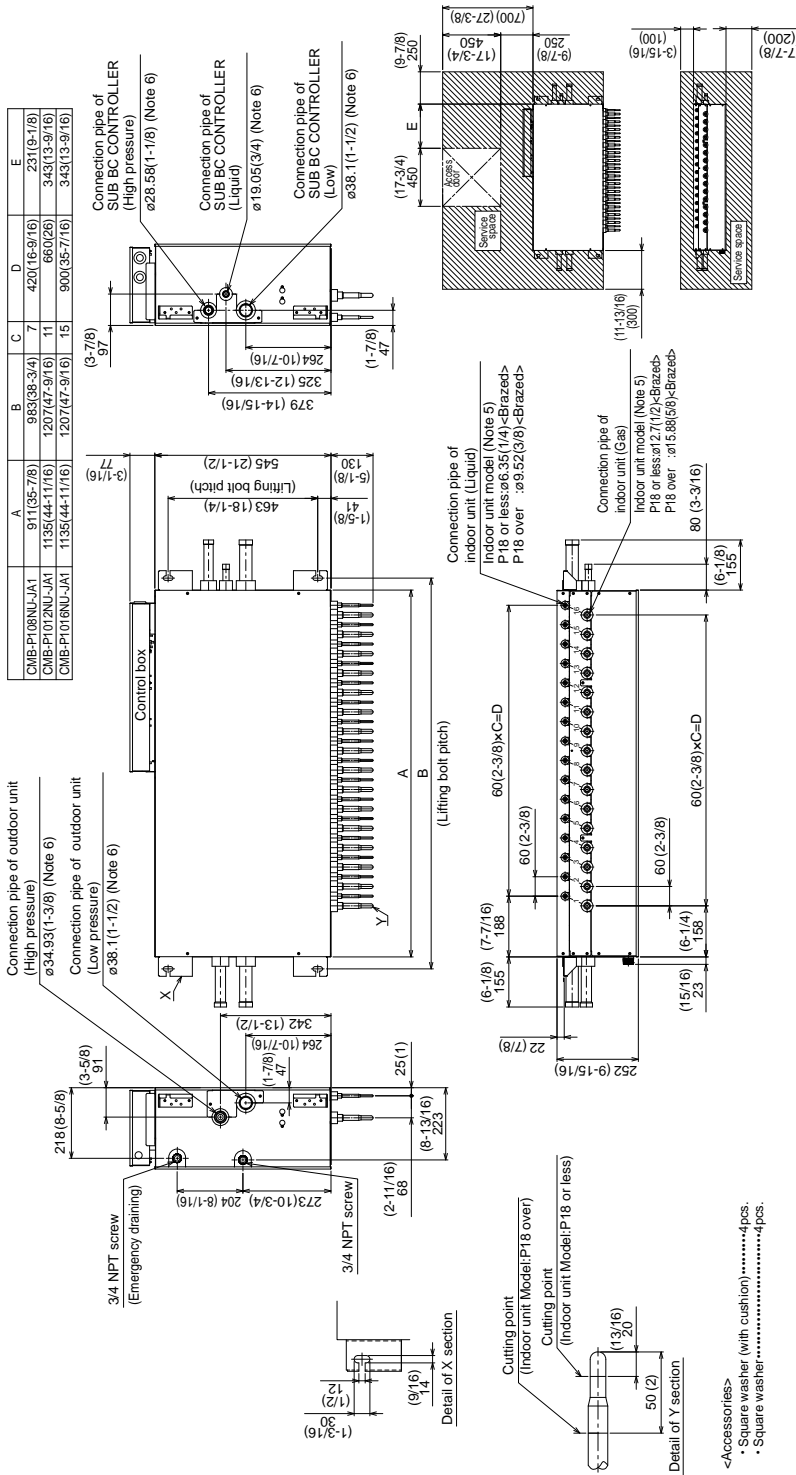


Table-2. To other BC controller (Note.6)

Indoor unit capacity	High press. Pipe	Liquid Pipe	Low press. Pipe
072	φ15.88(5/8)	φ8.52(3/8)	φ19.05(3/4)
096	φ15.88(5/8)	φ8.52(3/8)	φ19.05(3/4)
120	φ15.88(5/8)	φ8.52(3/8)	φ19.05(3/4)
144 to 192	φ22.27(7/8)	φ12.11(1/2)	φ28.58(1-1/8)
216	φ22.27(7/8)	φ12.11(1/2)	φ28.58(1-1/8)
240	φ22.27(7/8)	φ12.11(1/2)	φ28.58(1-1/8)
264 to 288	φ28.58(1-1/8)	φ15.88(5/8)	φ28.58(1-1/8)
312	φ28.58(1-1/8)	φ15.88(5/8)	φ28.58(1-1/8)
336	φ28.58(1-1/8)	φ15.88(5/8)	φ28.58(1-1/8)

Table-1. To outdoor/heat source unit (Note.6)

Connectable unit capacity	High press. Pipe	Low press. Pipe
072	φ15.88(5/8)	φ19.05(3/4)
096	φ15.88(5/8)	φ19.05(3/4)
120	φ15.88(5/8)	φ19.05(3/4)
144 to 192	φ22.27(7/8)	φ28.58(1-1/8)
216	φ22.27(7/8)	φ28.58(1-1/8)
240	φ22.27(7/8)	φ28.58(1-1/8)
264 to 288	φ28.58(1-1/8)	φ34.93(1-3/8) or φ41.28(1-5/8)
312	φ28.58(1-1/8)	φ34.93(1-3/8) or φ41.28(1-5/8)
336	φ28.58(1-1/8)	φ41.28(1-5/8)

*For the refrigerant pipe size, refer to Installation Manual of outdoor units/heat source units.

- Note 1. Suspension bolt(φ10) and nut(M10) prepare in the field.
 2. Take notice of service space as shown.
 3. Please take service space for connection pipe of SUB BC CONTROLLER.
 4. Install this product in a location where noise (refrigerant noise) emitted by the unit will not disturb the neighbors.
 (For use in quiet environments with low background noise, position the BC CONTROLLER at least 5m away from any indoor units.)
 5. Refer to the Installation Manual for refrigerant piping diameter size when connecting plural indoor units with 1 branch.
 6. Refer to the Table-1,2 connection pipe of outdoor unit or SUB BC CONTROLLER diameter size.
 7. Refer to the Installation Manual for insulation of connection pipe and drain piping.
 8. Do not place the BC controller directly on the floor.

<Accessories>
 • Square washer (with cushion).....4pcs.
 • Square washer.....4pcs.



Job Name:

System Reference:

Date:

208/230V OUTDOOR VRF HEAT RECOVERY SYSTEM**UNIT OPTION**
 Standard Model.....TURYE1683AN40AN
 Seacoast (BS) Model.....TURYE1683AN40AB
ACCESSORIES
 BC Controller (Required).....for details see BC Controller Submittals
 Joint Kit.....for details see Pipe Accessories Submittal
 Panel Heater Kit.....for details see Panel Heater Kit Submittal
 Snow/Hail Guards Kit.....for details see Snow/Hail Guards Kit Submittal

Specifications		System	
Unit Type		TURYE1683AN40A(N/B)	
Cooling Capacity (Nominal)	BTU/H	168,000	
Heating Capacity (Nominal)	BTU/H	188,000	
Guaranteed Operating Range ¹	Cooling ²	°F [°C] 23.0~126.0 [-5.0~52.0]	
	Heating ³	°F [°C] -13~60 [-25.0~15.5]	
Extended Operating Range	Heating	°F [°C] -25.0~60.0 [-31.5~15.5]	
External Dimensions (H x W x D)	In. [mm]	71-5/8 x 68-29/32 x 29-5/32 [1,818 x 1,750 x 740]	
Net Weight	Lbs. [kg]	777 [352]	
External Finish		Pre-coated galvanized steel sheet (+powder coating for -BS type) <MUNSELL 5Y 8/1>	
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance	208/230V, 3-phase, 60 Hz, ±10%	
Minimum Circuit Ampacity	A	57.0/53.0	
Maximum Overcurrent Protection	A	90/80	
Recommended Fuse Size	A	70	
Recommended Minimum Wire Size	AWG [mm]	4/4 [21.2/21.2]	
SCCR	kA	5	
Refrigerant Piping Diameter	Liquid (High Pressure)	In. [mm]	7/8 [22.2] Brazed
	Gas (Low Pressure)	In. [mm]	1-1/8 [28.58] Brazed
Max. Total Refrigerant Line Length	Ft.	1968	
Max. Refrigerant Line Length (Between ODU & IDU)	Ft.	541	
Max. Control Wiring Length	Ft.	1640	
Indoor Unit Connectable	Total Capacity	50.0~130.0% of outdoor unit capacity	
	Model/Quantity	P05~P96/1.0~42.0	
Sound Pressure Levels	dB(A)	62.5~66.5	
Sound Power Levels	dB(A)	81.0/85.5	
FAN ⁴	Type x Quantity	Propeller fan x 2	
	Airflow Rate	CFM	14850
	External Static Pressure	In. WG	Selectable; 0.00, 0.12, 0.24, 0.32 In. WG; factory set to 0 In. WG
Compressor Operating Range		15.0% to 100.0%	
Compressor	Type x Quantity	Inverter scroll hermetic compressor x 1	
Refrigerant	Type x Original Charge	R410A x 23 lbs + 12 oz [10.8 kg]	
Protection Devices	High Pressure Protection	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter Circuit (Comp./Fan)	Over-heat protection, Over-current protection	
	Fan Motor	Over-current protection	
AHRI Ratings (Ducted/Non-ducted)	EER	11.2/11.9	
	IEER	23.4/28.0	
	COP	3.3/3.8	
	SCHE	24.7/28.3	

NOTES:

Nominal cooling conditions (Test conditions are based on AHRI 1230)
 Indoor: 80°F D.B./67°F W.B. (26.7°C D.B./19.4°C W.B.), Outdoor: 95°F D.B. (35°C D.B.)
 Nominal heating conditions (Test conditions are based on AHRI 1230)
 Indoor: 70°F D.B. (21.1°C D.B.), Outdoor: 47°F D.B./43°F W.B. (8.3°C D.B./6.1°C W.B.)

¹Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region

²For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal

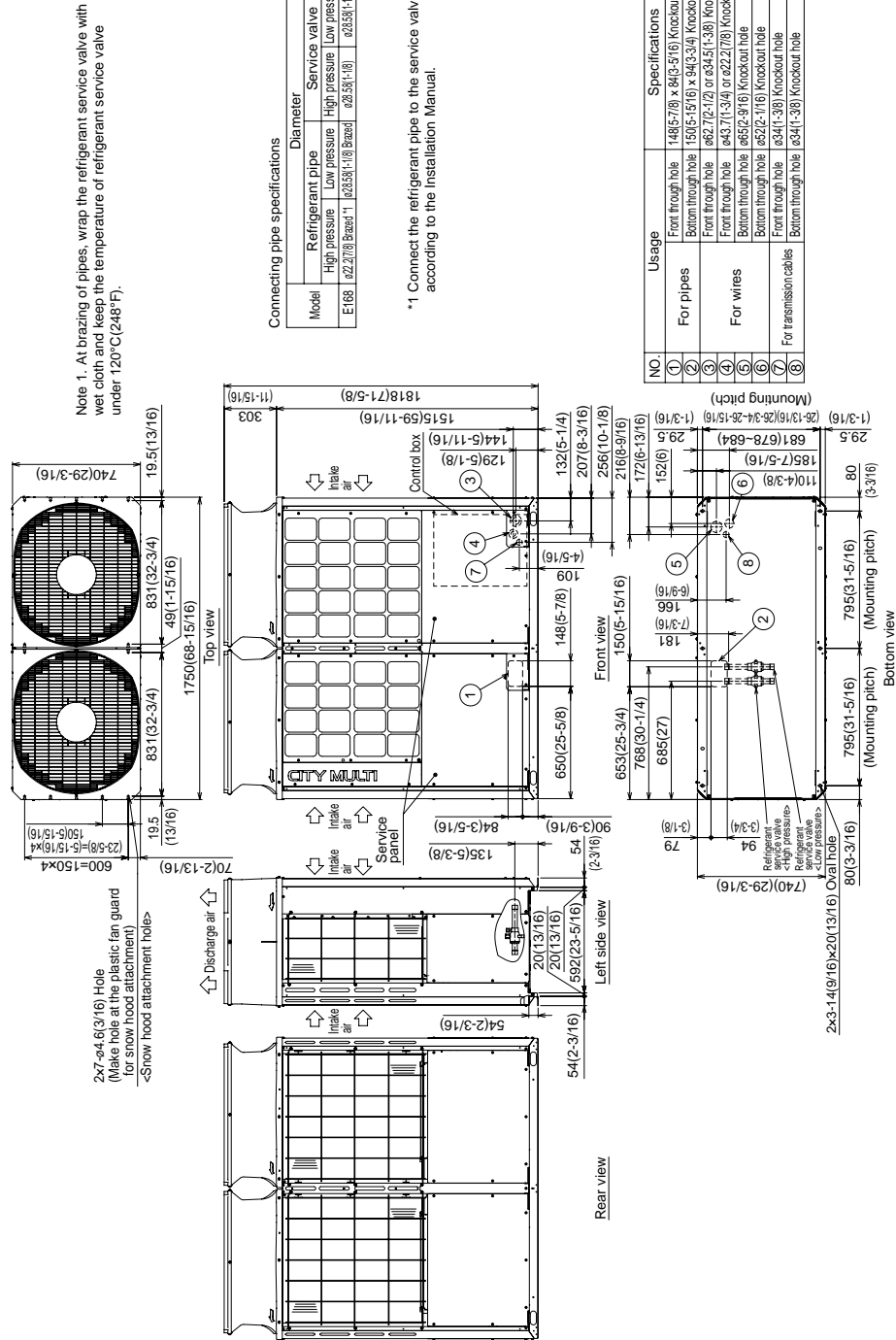
³When applying product below -4°F, consult your design engineer for cold climate application best practices, including the use of a backup source for heating

⁴Unit will continue to operate in extended operating range, but capacity is not guaranteed

OUTDOOR UNIT: TURYE1683AN40A(N/B) – DIMENSIONS

TURYE1683AN40A(N/B)

Unit: mm(in)



NOTES:
 SEACOAST PROTECTION
 Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.
 Standard: Salt Spray Test Method - no unusual rust development to 480 hours.
 Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

FORM# TURYE1683AN40A(N/B) - 202011



Job Name:	
System Reference:	Date:

**GENERAL FEATURES:**

- Dual set point functionality
- Compact floor-mount
- Two-speed settings
- Controls can be wall-mounted or unit-mounted in a hidden case

ACCESSORIES:

CN24 Relay Kit (CN24RELAY-KIT-CM3)

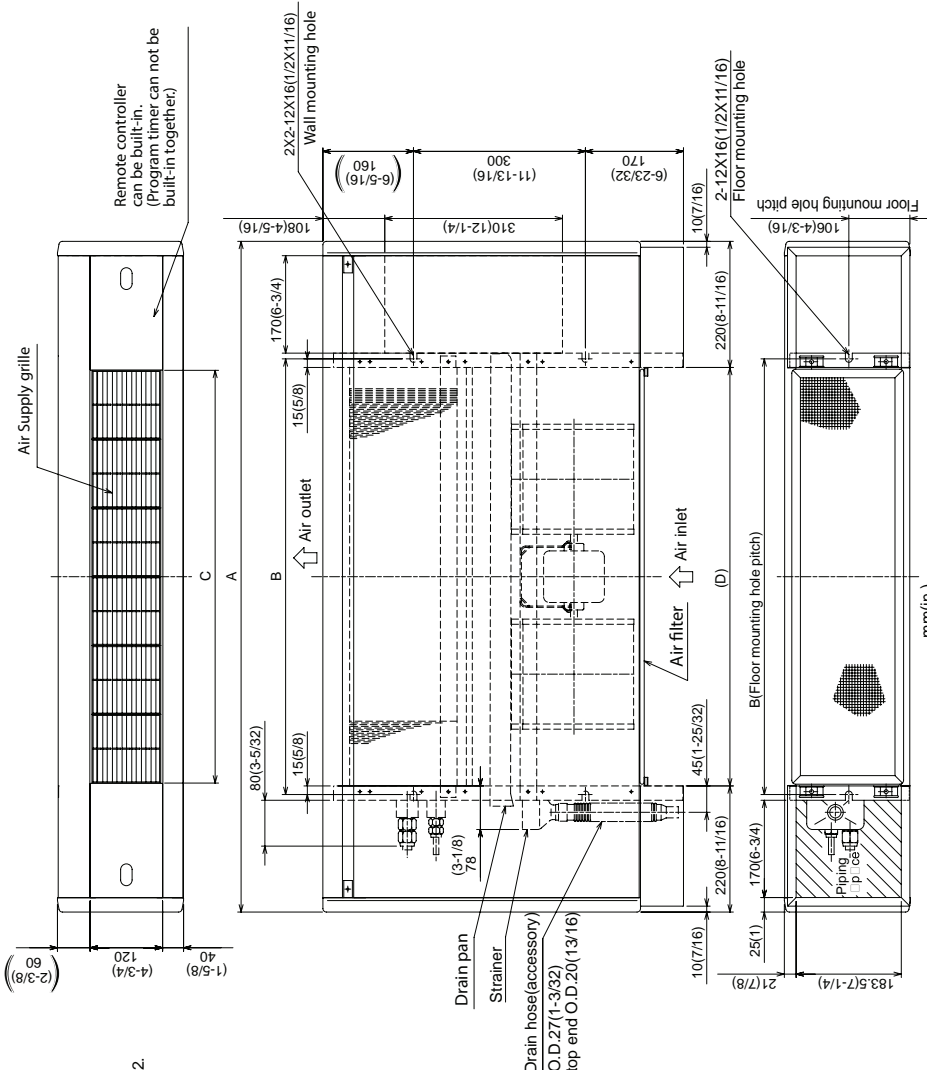
SPECIFICATIONS:

Capacity*			
Cooling	Btu/h	24,000	
Heating	Btu/h	27,000	
* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions: Cooling Indoor : 80° F (27° C) DB / 67° F (19° C) WB Cooling Outdoor : 95° F (35° C) DB Heating Indoor : 70° F (21° C) DB Heating Outdoor : 47° F (8° C) DB / 43° F (6° C) WB			
Electrical			
Electrical Power Requirements	208 / 230V, 1-phase, 60Hz		
Minimum Circuit Ampacity (MCA)	A	0.59 / 0.64 (60Hz)	
External Dimensions			
Unit (H x W x D) In. (mm)	24-13/16 x 55-17/32 x 8-11/16 (630 x 1,410 x 220)		
Net Weight			
Unit	Lbs. (kg)	89 (40)	
External Finish	Acrylic painted		
Coil Type	Cross fin (Aluminium fin and copper tube)		
Fan			
Type x Quantity	Sirocco fan x 2		
Airflow rate (Low-High)	CFM	353 - 494	
Motor Type	1-phase induction motor		
Air Filter	Standard filter		
Refrigerant Piping Diameter			
Liquid (High Pressure)	In.(mm)	3/8 (9.52) Flare	
Gas (Low Pressure)	In.(mm)	5/8 (15.88) Flare	
Field Drain Pipe Size	In.(mm)	I.D. 1 (26)	
Sound Level			
Low-High	dB(A)	208/230V	40 - 46

Notes:

Model: TPFYP024CS140A – DIMENSIONS

Draw. : IU-W660125
Unit : mm(in)



Note: On Model :18, you would use flare nut when connecting the Outdoor Unit for R22.

Model	A	B	C	D	① Gas pipe <flare>	② Liquid pipe <flare>
TPFFYP08CS140A	1050(41-11/32)	640(25-7/32)	600(23-5/8)	610(24-1/16)	ø12.7(1/2)	ø6.35(1/4)
TPFFYP08CS140A	1050(41-11/32)	640(25-7/32)	600(23-5/8)	610(24-1/16)	ø12.7(1/2)	ø6.35(1/4)
TPFFYP02CS140A	1170(46-1/16)	760(29-15/16)	720(28-3/8)	730(28-3/4)	ø12.7(1/2)	ø6.35(1/4)
TPFFYP015CS140A	1170(46-1/16)	760(29-15/16)	720(28-3/8)	730(28-3/4)	ø12.7(1/2)	ø6.35(1/4)
TPFFYP018CS140A	1410(55-17/32)	1000(39-3/8)	960(37-13/16)	970(38-1/4)	ø12.7(1/2)	ø6.35(1/4)
TPFFYP024CS140A	1410(55-17/32)	1000(39-3/8)	960(37-13/16)	970(38-1/4)	ø15.88(5/8)	ø9.52(3/8)



Job Name:

System Reference:

Date:

**GENERAL FEATURES**

- Square edge, sleek design
- 3D i-see Sensor™ available as an option
- Improved installation features¹
- Occupancy detection¹
- Energy saving features¹
- Improved occupant comfort
- Four fan speed settings including auto-fan
- Individual vane settings
- 2' x 2' size matches size of many ceiling tiles
- Corner-pocket design for simplified installation
- Built-in condensate lift mechanism designed to provide up to 33" of lift
- Ventilation air intake supported

SPECIFICATIONS: TPLFYP018FM140A

Model	TPLFYP018FM140A	
Nominal Capacity¹		
Cooling	Btu/h	18,000
Heating	Btu/h	20,000
Electrical		
Electrical Power Requirements	1-phase 208-230V 60Hz	
Minimum Circuit Ampacity (MCA)	A	0.5
Recommended Fuse Size	A	15
External Dimensions (H x W x D)		
Unit	in. (mm)	8-3/16 x 22-7/16 x 22/7-16 (208 x 570 x 570)
Grill (SLP-18FAU)	in. (mm)	13/32 x 24-19/32 x 24-19/32 (10 x 625 x 625)
Net Weight		
Unit	lbs (kg)	31.3 (14.2)
Grill (SLP-18FAU)	lbs (kg)	5.3 (2.4)
External Finish		
Unit	Galvanized steel sheet	
Grill (SLP-18FAU)	Munsell 1.0Y 9.2/0.2	
Coil Type	Cross fin (Aluminum fin and copper tube)	
Fan		
Type x Quantity	Turbo fan x 1	
Airflow rate	CFM	315-390-460
Motor Type	DC motor	
Motor Output	kW	0.05
Motor F.L.A.	A	0.40
Air Filter	PP honeycomb fabric (long life type)	
Refrigerant Piping Diameter		
Liquid (High Pressure)	in. (mm)	1/4 (6.35) Flare
Gas (Low Pressure)	in. (mm)	1/2 (12.7) Flare
Field Drain Pipe Size	in. (mm)	O.D. 1-1/4 (32)
Sound Pressure Level (Low-Mid-High)	dB(A)	33-39-43

¹ Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:

Cooling | Indoor: 81° F (27° C) DB / 66° F (19°C) WB; Outdoor 95° F (35° C) DB

Heating | Indoor: 68° F (20° C) DB; Outdoor 45° F (7° C) DB / 43° F (6° C) WB

ACCESSORIES: TPLFYP018FM140A

Grille (required)	□ SLP-18FAU
Grille with 3D i-see Sensor™	□ SLP-18FAEU
Corner Panel with 3D i-see Sensor™	□ PAC-SF1ME-E
Signal Receiver Corner Panel	□ PAR-SF9FA-E
Wireless Remote Controller	□ PAR-FL32MA-E
Wireless Remote Controller	□ PAR-SL100A-E
Wireless Remote Receiver	□ PAR-FA32MA-E
Wired MA Controller	□ PAR-33MAA-J
Simple MA Controller	□ PAC-YT53CRAU
Smart ME Remote Controller	□ PAR-U01MEDU-K
Wired Remote Sensor	□ PAC-SE41TS-E
Thermostat Interface	□ PAC-US444CN-1
Wireless Interface	□ PAC-WHS01WF-E
Connector cable for remote display	□ PAC-SA88HA-EP
Connector for CN32 (remote on/off)	□ PAC-SE55RA-E
Remote Operation Adapter (with wire terminals for remote ON/OFF and operation status/ error)	□ PAC-SF40RM-E ¹
External Fan / Heater Control Relay Adapter	□ CN24RELAY-KIT-CM3
Drain Pan Level Sensor (Control for indoor unit shut off to prevent drain pan overflow)	□ DPLS2

¹ Unable to use with wireless remote controller

Project Name:	Part Number:	Type:
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UFO LOW BAY

INDUSTRIAL



407-478-3759
www.ilp-inc.com

FEATURES

- Low profile die-cast aluminum housing
- Frosted Polycarbonate Lens (std.)
- Quick mount bracket standard for easy surface mount installation
- ½" coin plug on top for center pendant mount or jbox w/ cord lock
- Four ½" coin plugs on sides for conduit or photocell
- Motion and Daylight Harvesting available
- Sensor Ready for Grouping/Zones & IoT (provided by others)
- Bronze and White housing (stocked)
- Custom color options available
- 3000K, 4000K, & 5000K available
- 0-10V Dimming Driver (std.)
- 120V-277V Universal Voltage
- 5 Year Warranty
- IP66 Rated
- DesignLights Consortium® Premium Qualified Luminaire



SUITABLE APPLICATIONS

- Warehouses
- Manufacturing Plants
- Coolers / Freezers
- Distribution Centers
- Gymnasiums
- Saw Mills

LED INFO		40W	58W	75W		40W	58W	75W
Calculated L ₇₀	4000K	>100K	>100K	>100K	5000K	>100K	>100K	>100K
Delivered Lumens		5,567 lm	7,260 lm	9,482 lm		5,610 lm	7,297 lm	9,640 lm
Total Input Watts		40 W	58 W	77 W		40 W	58 W	77 W
Efficacy Rating		139 lm/W	126 lm/W	124 lm/W		140 lm/W	127 lm/W	126 lm/W
CCT		4000K	4000K	4000K		5000K	5000K	5000K
CRI		>80	>80	>80		>80	>80	>80
Ambient Max		130°F	130°F	125°F		130°F	130°F	125°F

LED System data above based on UFO-40WLED-UNIV-40-LB, UFO-58WLED-UNIV-40-LB, UFO-75WLED-UNIV-40-LB, UFO-40WLED-UNIV-50-LB, UFO-58WLED-UNIV-50-LB & UFO-75WLED-UNIV-50-LB. LED Lumen Maintenance Estimates based on TM-21 projections for the light source at 25°C ambient.

ORDERING GUIDE:

Series	Watts	Driver	Color	Options
UFO Low Bay	40WLED 58WLED 75WLED†	UNIV 120-277 Driver	50 40 30	<input checked="" type="checkbox"/> LB CORDx WLOS** USBD** BDxx BDxxPC DIM FSIR/100 HB-XX-18Y-PAD TB SP1 SP2 SP480V2 LEDBCT ILBCP05 SD480* SD347*
				Low Bay Optic Cord (x = ft) Wet Location Occupancy Sensor User Select Bi-Level Dim w/ Occ. Sensor Preset Bi-Level Dim Sensor (xx=% e.g. 20, 30) Preset Bi-Level Dim Sensor w/ Photocell Dimming Leads Added Remote Configuration Tool for WLOS, and USBD, Control Options Y-Toggle Cable System (x=in) Trunnion Mount Bracket 10kA Max Univolt Surge Protector 22kA Max Univolt Surge Protector 20kA Max 480V Surge Protector -4°F - 80°F Battery Backup 5W Battery Backup Factory Installed (32°F - 100°F) 480V Step Down Transformer 347V Step Down Transformer

* Option not currently DLC Qualified

** Must Use w/ FSIR/100 Remote

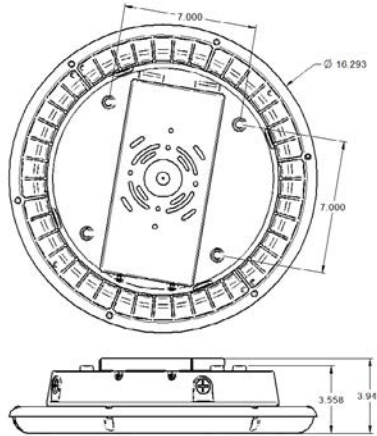
† DLC Standard

LEDBCT & SD480 Cannot Be Installed Together

UFO LOW BAY

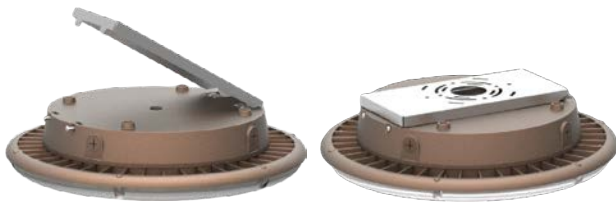
INDUSTRIAL

LINE DRAWING

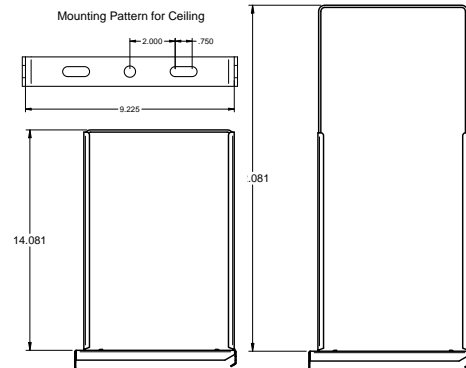


MOUNTING OPTIONS

- **Quick Mount Bracket** - Standard for base of installation when surface mounting to either the ceiling or junction box
- **Pendant** - 1/2" threaded pendant can be mounted through 1/2" coin plug on top of fixture (Supplied by other)
- **TB** - Trunion Mount Bracket

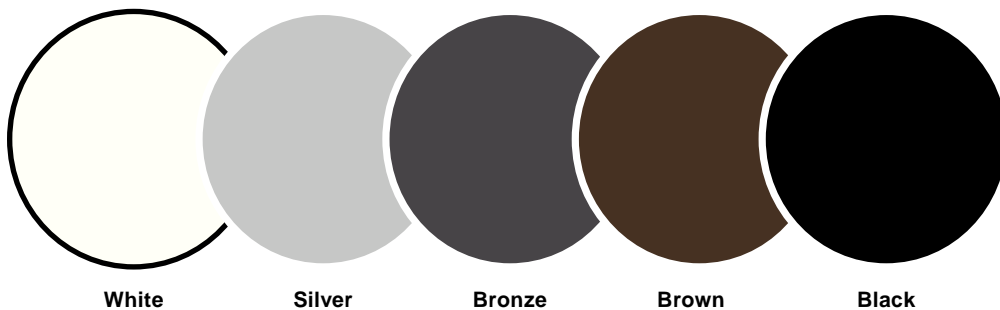


Quick Mount Bracket



Trunion Mount Bracket

COLOR GUIDE



White

Silver

Bronze

Brown

Black

COLOR NAME AND DESCRIPTION	SHEEN	PRODUCT	VENDOR
WHT - ILP White - in stock	SEMI GLOSS	POLANE T	SHERWIN-WILLIAMS
SLV - ILP Silver - Ultrasonic Chrome	GLOSS	POLANE T	SHERWIN-WILLIAMS
BRZ - ILP Bronze - std. & in stock	SEMI GLOSS	POLANE T	SHERWIN-WILLIAMS
BRN - ILP Brown	SEMI GLOSS	POLANE T	SHERWIN-WILLIAMS
BLK - ILP Black	SEMI GLOSS	POLANE T	SHERWIN-WILLIAMS

**COLORS SHOWN ABOVE ARE TO BE USED AS REFERENCE, NOT EXACT MATCH.
PLEASE REQUEST PAINT CHIPS FOR EXACT MATCH.**

UFO LOW BAY

INDUSTRIAL

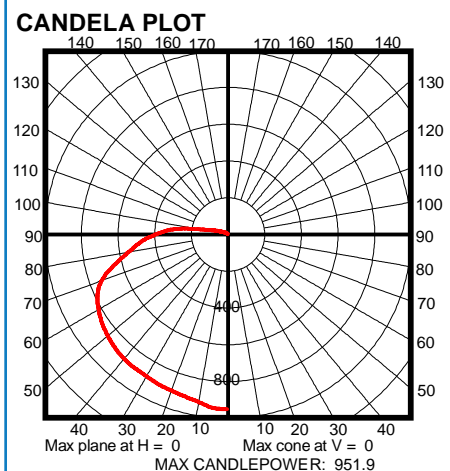
PHOTOMETRIC REPORTS

Photometric values based upon tests performed in compliance with LM-79. IES files can be downloaded at www.ilp-inc.com

UFO-40WLED-UNIV-40-LB

SUMMARY DATA

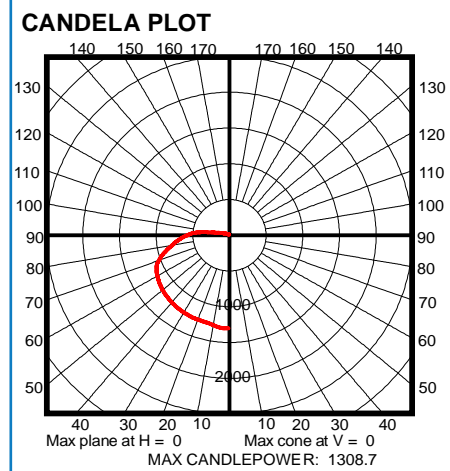
HEMISPHERES TESTED:	BOTH
EFFICIENCY (Down / Up):	90.3 % / 9.7 %
EFFICIENCY (Street / House):	50.0 % / 50.0 %
ROADWAY CLASSIFICATION:	TYPE V
CUTOFF CLASSIFICATION:	NON CUTOFF
LUMENS:	5244.37
INPUT WATTS:	40.67



UFO-58WLED-UNIV-40-LB

SUMMARY DATA

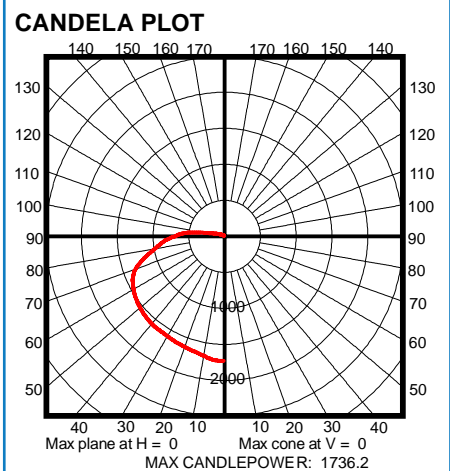
HEMISPHERES TESTED:	BOTH
EFFICIENCY (Down / Up):	89.8 % / 10.2 %
EFFICIENCY (Street / House):	50.0 % / 50.0 %
ROADWAY CLASSIFICATION:	TYPE V
CUTOFF CLASSIFICATION:	NON CUTOFF
LUMENS:	7420.37
INPUT WATTS:	58.15



UFO-75WLED-UNIV-40-LB

SUMMARY DATA

HEMISPHERES TESTED:	BOTH
EFFICIENCY (Down / Up):	90.4 % / 9.6 %
EFFICIENCY (Street / House):	50.0 % / 50.0 %
ROADWAY CLASSIFICATION:	TYPE V
CUTOFF CLASSIFICATION:	NON CUTOFF
LUMENS:	9448.5
INPUT WATTS:	77.3



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- HE lumen packages available
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

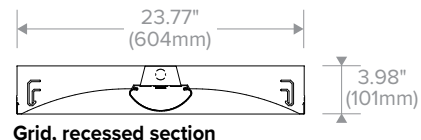
CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards



RELATED PRODUCTS

- [LCAT12](#)
 [LCAT14](#)
 [LCAT22](#)



CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2142-9304
Wattage Range	19-75
Efficacy Range (LPW)	92-141
Reported Life (Hours)	L80/60,000

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

ORDERING GUIDE

Example: LCAT24-35MLG-ESDU

CATALOG #

LCAT24													
Model	CRI	Color Temp		Delivered Lumens ³		Ceiling Type		Shielding	Air Function	Driver			
LCAT24 2' x 4' LED Contemporary Architectural Troffer	Blank	>80	30	3000K	XW	2341-2524	G	Grid Lay-in ⁴	Blank	Static	E	Fixed Output	
	9	>90 ¹	35	3500K	XWHE	2458-2650	SM	Surface Mount ^{5,12}	Curve	A	Air Return Side Slots	ED	0-10V Dimming
			40	4000K	VW	3124-3558			R	Rectangular		ED1	0-10V 1% Dimming
			50	5000K	VWHE	3310-3770	CM	Cable Suspended Mount ^{5,6}				EDD	0-10V Dim-to-Dark
			2750T	2700K-5000K	MW	3363-3831						ESD	Step Dimming ^{7,9,13}
				SpectraSync™ Tunable White ²	MWHE	3717-4234						LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{7,9,13}
			2765T	2700K-6500K	LW	4268-4861						LUT5	5-Series EcoSystem LED driver ^{7,9,13}
				SpectraSync™ Tunable White ²	ML	4771-5434						DALIP	DALI Power Bus ^{9,16}
					HL	5443-6200							
					VL	6999-7972							
				XL	8168-9304								

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁴	ELL14 Emergency Battery Pack Installed, 1400 Lumens ^{8,9} ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test ^{8,9} ELL14H2 Emergency Battery Pack, 2-Hour Run Time ^{8,9} DTS Dimming Bypass Module ^{9,10} C388 3-wire Flex ¹⁵ C488 4-wire Flex ¹⁵ C588 5-wire Flex ¹⁵ GLR Fast Blow Fuse EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.) ⁵ INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.) ⁵ CP Chicago Plenum SAF SpectraSAFE™ Integrated Surveillance Lighting System ¹¹	NX Standalone NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount ^{13,14} NX Networked – Wired NXE NX, Dual SmartPORTs ^{13,14} NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs ^{13,14} NX Networked – Wireless NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor ^{12,13,14} NXWE NX Wireless Enabled ^{12,13,14} NX Networked – Wired/Wireless Hybrid NXSWD NX Wireless, PIR BT Occupancy/Daylight Sensor, Dual SmartPORTs ^{13,14} NXWD NX Wireless, Dual SmartPORTs ^{13,14} Third-Party Control Options ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{9,16,20} LV Lutron VIVE Attached FCJS POWPAK Fixture Control (RF only for 0-10V drivers) ^{9,17,18,19,20} LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{9,16,18,20} LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing) ^{9,16,18,20} ZRE ControlScope® compatible ^{9,20,21}

Accessories

- FK24** 2' x 4' Single Flange Kit (Shipped separately)
- CM48Y2SC3F-KIT** 48" Cable Mount Kit for 2' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Not available with HE lumen output
- 2 Available with ED driver and 80 CRI only. Not available with HE, VL or XL lumen outputs
- 3 High efficacy versions designated with "HE"
- 4 For drywall, order G with Flange Kit Accessory
- 5 Not available with Air Return (A) air function
- 6 Order hanger accessories separately
- 7 Limitations apply based on lumen packages (see [Product Exceptions & Details](#))
- 8 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
- 9 Not available in 347V
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram
- 11 SpectraSync+NX+SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V

NX In-Fixture Control Options:

- 12 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
- 13 NX is not available with ESD, LUTH, LUT5 or DALIP driver options
- 14 NX combined with SpectraSync is not available in 347V
- 15 For NX control and Flex Wire together, consult factory

Third-Party Control Options:

- 16 LVS, LVR and ODPG only available with DALIP driver option
 - 17 Only available with ED driver option
 - 18 VIVE is a trademark of Lutron Electronics Co., Inc
 - 19 Installations controlled solely by the Lutron Pico controller require accessing the LV (Lutron FCJS) module for commissioning after the circuit has been energized
 - 20 Not available with SpectraSync (2750T or 2765T)
 - 21 Registered trademark of Daintree Networks, used by permission
- For questions about configuration options, contact Hubbell Representative

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE											
	XW	XWHE	VW	VWHE	MW	MWHE	LW	ML	HL	VL	XL
E	X	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X	X
EDD			X		X		X	X	X		
ESD						X	X	X	X	X	X
LUT5	X		X		X		X	X	X		
LUTH	X		X		X		X	X	X		
DALIP			X	X	X	X	X	X	X	X	X
347	X		X		X		X	X	X	X	X

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network
 2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the GPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense
 2 [See link to Philips commissioning](#)
 3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)

Wireless Switch Accessories¹

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

CONTROLS (CONTINUED)

SpectraSAFE™ Integrated Surveillance Lighting System

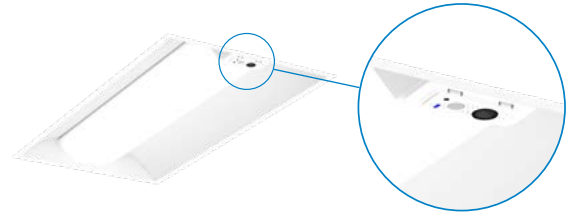


Technical Features

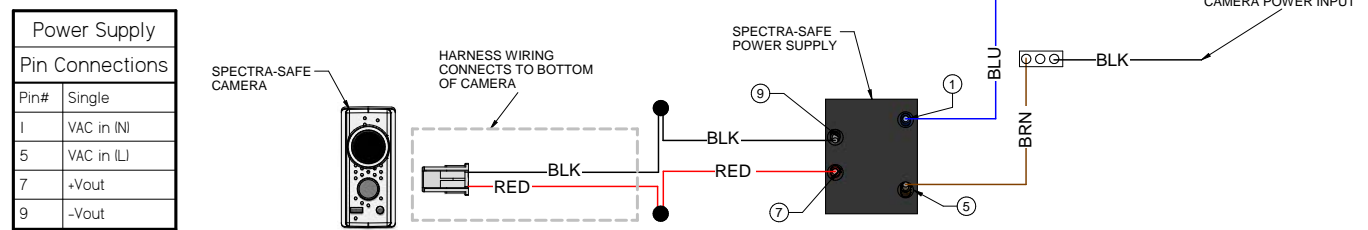
- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM



SpectraSync™ Color Tuning Technology:

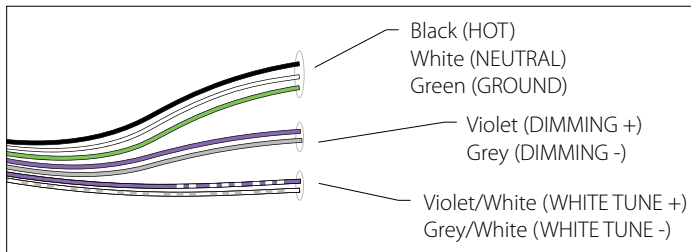
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASync COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

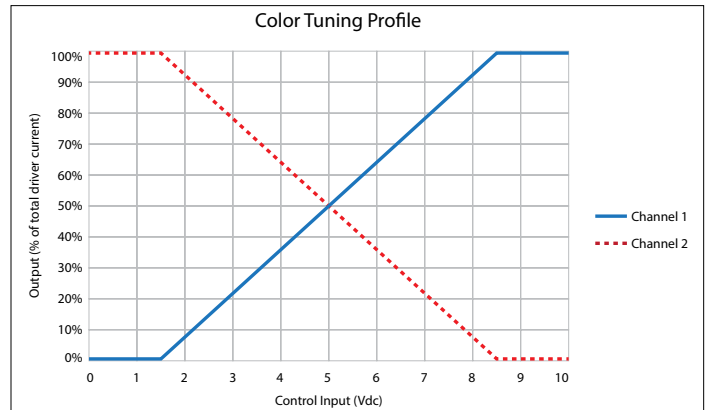


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASync™



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2240	117	2341	123	2383	125	2414	126	2493	131	2456	129
	VW	28	2990	108	3124	113	3180	115	3221	117	3327	121	3277	119
	MW	30	3218	107	3363	111	3424	113	3467	115	3582	119	3528	117
	LW	36	4084	113	4268	118	4345	120	4400	122	4545	126	4477	124
	ML	39	4566	118	4771	123	4857	125	4919	127	5081	131	5005	129
	HL	44	5209	118	5443	124	5541	126	5612	128	5797	132	5710	130
Rectangle	XW	20	2489	123	2601	128	2648	130	2682	132	2770	136	2728	134
	VW	28	3085	109	3224	114	3282	116	3324	118	3434	122	3382	120
	MW	30	3323	110	3472	115	3534	117	3580	119	3698	122	3642	121
	LW	36	4230	117	4420	122	4500	125	4557	126	4707	130	4637	128
	ML	39	4711	121	4923	127	5012	129	5076	131	5243	135	5164	133
	HL	43	5295	123	5533	128	5633	131	5705	132	5893	137	5804	135

DELIVERED LUMENS

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT24-30XW	Curve	2341	19	123
LCAT24-30XWx-R	Rectangle	2601	20	128
LCAT24-30XWHE	Curve	2458	19	129
LCAT24-30XWHEx-R	Rectangle	2555	20	128
LCAT24-35XW	Curve	2424	19	127
LCAT24-35XWx-R	Rectangle	2690	20	133
LCAT24-35XWHE	Curve	2542	19	134
LCAT24-35XWHEx-R	Rectangle	2642	20	132
LCAT24-40XW	Curve	2458	19	129
LCAT24-40XWx-R	Rectangle	2732	20	135
LCAT24-40XWHE	Curve	2581	19	136
LCAT24-40XWHEx-R	Rectangle	2683	20	134
LCAT24-50XW	Curve	2524	19	132
LCAT24-50XWx-R	Rectangle	2805	20	138
LCAT24-50XWHE	Curve	2650	19	139
LCAT24-50XWHEx-R	Rectangle	2754	20	138
LCAT24-30VW	Curve	3124	28	113
LCAT24-30VWx-R	Rectangle	3224	28	114
LCAT24-30VWHE	Curve	3310	27	123
LCAT24-30VWHEx-R	Rectangle	3280	26	126
LCAT24-35VW	Curve	3217	28	117
LCAT24-35VWx-R	Rectangle	3334	28	118
LCAT24-35VWHE	Curve	3409	27	126
LCAT24-35VWHEx-R	Rectangle	3391	26	130
LCAT24-40VW	Curve	3267	28	118
LCAT24-40VWx-R	Rectangle	3386	28	120
LCAT24-40VWHE	Curve	3462	27	128
LCAT24-40VWHE-R	Rectangle	3443	26	132
LCAT24-50VW	Curve	3558	28	129
LCAT24-50VW-R	Rectangle	3476	28	123
LCAT24-50VWHE	Curve	3770	27	140
LCAT24-50VWHE-R	Rectangle	3535	26	136

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT24-930XW	Curve	2142	20	106
LCAT24-930XWx-R	Rectangle	2212	20	109
-	-	-	-	-
-	-	-	-	-
LCAT24-935XW	Curve	2187	20	108
LCAT24-935XWx-R	Rectangle	2259	20	111
-	-	-	-	-
-	-	-	-	-
LCAT24-940XW	Curve	2234	20	110
LCAT24-940XWx-R	Rectangle	2308	20	114
-	-	-	-	-
-	-	-	-	-
LCAT24-950XW	Curve	2380	20.3	117
LCAT24-950XWx-R	Rectangle	2458	20.3	121
-	-	-	-	-
-	-	-	-	-
LCAT24-930VW	Curve	2655	28	96
LCAT24-930VWx-R	Rectangle	2740	28	97
-	-	-	-	-
-	-	-	-	-
LCAT24-935VW	Curve	2717	28	98
LCAT24-935VWx-R	Rectangle	2799	28	99
-	-	-	-	-
-	-	-	-	-
LCAT24-940VW	Curve	2780	28	101
LCAT24-940VWx-R	Rectangle	2859	28	101
-	-	-	-	-
-	-	-	-	-
LCAT24-950VW	Curve	2936	28	106
LCAT24-950VWx-R	Rectangle	3045	28	108
-	-	-	-	-
-	-	-	-	-

(Tables continue on next page.)



LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS, CONT'D

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT24-30MW	Curve	3363	30	111
LCAT24-30MWx-R	Rectangle	3472	30	115
LCAT24-30MWHE	Curve	3717	31	120
LCAT24-30MWHE-R	Rectangle	3660	29	126
LCAT24-35MW	Curve	3464	30	115
LCAT24-35MWx-R	Rectangle	3590	30	119
LCAT24-35MWHE	Curve	3829	31	124
LCAT24-35MWHE-R	Rectangle	3785	29	131
LCAT24-40MW	Curve	3518	30	116
LCAT24-40MWx-R	Rectangle	3646	30	121
LCAT24-40MWHE	Curve	3888	31	125
LCAT24-40MWHE-R	Rectangle	3843	29	133
LCAT24-50MW	Curve	3831	30	127
LCAT24-50MWx-R	Rectangle	3744	30	124
LCAT24-50MWHE	Curve	4234	31	137
LCAT24-50MWHEx-R	Rectangle	3946	29	136
LCAT24-30LW	Curve	4268	36	118
LCAT24-30LWx-R	Rectangle	4420	36	122
LCAT24-35LW	Curve	4396	36	122
LCAT24-35LWx-R	Rectangle	4570	36	127
LCAT24-40LW	Curve	4465	36	124
LCAT24-40LWx-R	Rectangle	4642	36	129
LCAT24-50LW	Curve	4861	36	135
LCAT24-50LWx-R	Rectangle	4766	36	132
LCAT24-30ML	Curve	4771	39	123
LCAT24-30MLx-R	Rectangle	4923	39	127
LCAT24-35ML	Curve	4914	39	127
LCAT24-35MLx-R	Rectangle	5091	39	131
LCAT24-40ML	Curve	4990	39	129
LCAT24-40MLx-R	Rectangle	5170	39	133
LCAT24-50ML	Curve	5434	39	140
LCAT24-50MLx-R	Rectangle	5308	39	137
LCAT24-30HL	Curve	5443	44	124
LCAT24-30HLx-R	Rectangle	5533	43	128
LCAT24-35HL	Curve	5606	44	127
LCAT24-35HLx-R	Rectangle	5721	43	133
LCAT24-40HL	Curve	5694	44	129
LCAT24-40HLx-R	Rectangle	5810	43	135
LCAT24-50HL	Curve	6200	44	141
LCAT24-50HLx-R	Rectangle	5966	43	138
LCAT24-30VL	Curve	6999	59	119
LCAT24-30VLx-R	Rectangle	6952	58	121
LCAT24-35VL	Curve	7209	59	122
LCAT24-35VLx-R	Rectangle	7189	58	125
LCAT24-40VL	Curve	7321	59	124
LCAT24-40VLx-R	Rectangle	7301	58	127
LCAT24-50VL	Curve	7972	59	135
LCAT24-50VLx-R	Rectangle	7496	58	130
LCAT24-30XL	Curve	8168	74	111
LCAT24-30XLx-R	Rectangle	8112	75	109
LCAT24-35XL	Curve	8412	74	114
LCAT24-35XLx-R	Rectangle	8388	75	112
LCAT24-40XL	Curve	8547	74	116
LCAT24-40XLx-R	Rectangle	8519	75	114
LCAT24-50XL	Curve	9304	74	126
LCAT24-50XLx-R	Rectangle	8747	75	117

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT24-930MW	Curve	2859	30	95
LCAT24-930MWx-R	Rectangle	2953	30	98
-	-	-	-	-
-	-	-	-	-
LCAT24-935MW	Curve	2926	30	97
LCAT24-935MWx-R	Rectangle	3015	30	100
-	-	-	-	-
-	-	-	-	-
LCAT24-940MW	Curve	2993	30	99
LCAT24-940MWx-R	Rectangle	3080	30	102
-	-	-	-	-
-	-	-	-	-
LCAT24-950MW	Curve	3161	30	105
LCAT24-950MWx-R	Rectangle	3280	30	109
-	-	-	-	-
-	-	-	-	-
LCAT24-930LW	Curve	3628	36	100
LCAT24-930LWx-R	Rectangle	3759	36	104
LCAT24-935LW	Curve	3713	36	103
LCAT24-935LWx-R	Rectangle	3838	36	106
LCAT24-940LW	Curve	3798	36	105
LCAT24-940LWx-R	Rectangle	3920	36	109
LCAT24-950LW	Curve	4012	36	111
LCAT24-950LWx-R	Rectangle	4175	36	116
LCAT24-930ML	Curve	4055	39	105
LCAT24-930MLx-R	Rectangle	4186	39	108
LCAT24-935ML	Curve	4150	39	107
LCAT24-935MLx-R	Rectangle	4274	39	110
LCAT24-940ML	Curve	4246	39	109
LCAT24-940MLx-R	Rectangle	4366	39	113
LCAT24-950ML	Curve	4484	39	116
LCAT24-950MLx-R	Rectangle	4651	39	120
LCAT24-930HL	Curve	4810	43	112
LCAT24-930HLx-R	Rectangle	4704	43	109
LCAT24-935HL	Curve	4913	43	114
LCAT24-935HLx-R	Rectangle	4803	43	111
LCAT24-940HL	Curve	5019	43	116
LCAT24-940HLx-R	Rectangle	4907	43	114
LCAT24-950HL	Curve	5346	43	124
LCAT24-950HLx-R	Rectangle	5227	43	121
LCAT24-930VL	Curve	5883	58	102
LCAT24-930VLx-R	Rectangle	5912	58	103
LCAT24-935VL	Curve	6007	58	104
LCAT24-935VLx-R	Rectangle	6036	58	105
LCAT24-940VL	Curve	6136	58	107
LCAT24-940VLx-R	Rectangle	6166	58	107
LCAT24-950VL	Curve	6537	58	114
LCAT24-950VLx-R	Rectangle	6568	58	114
LCAT24-930XL	Curve	7058	75	95
LCAT24-930XLx-R	Rectangle	6895	75	92
LCAT24-935XL	Curve	7207	75	97
LCAT24-935XLx-R	Rectangle	7043	75	94
LCAT24-940XL	Curve	7362	75	99
LCAT24-940XLx-R	Rectangle	7194	75	96
LCAT24-950XL	Curve	7842	75	105
LCAT24-950XLx-R	Rectangle	7664	75	103

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

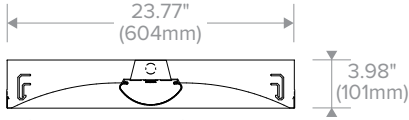
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TYPE: _____ PROJECT: _____

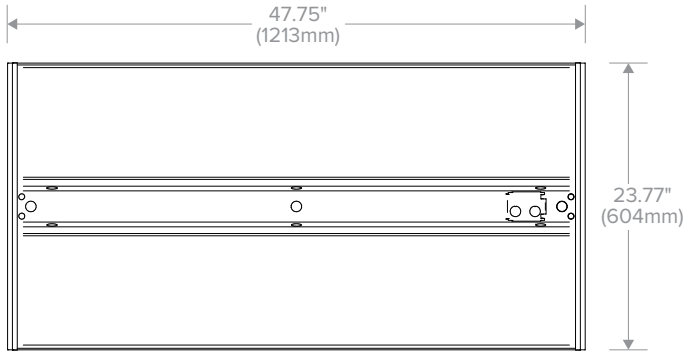
CATALOG #: _____

DIMENSIONS

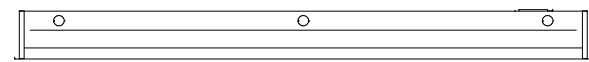
GRID



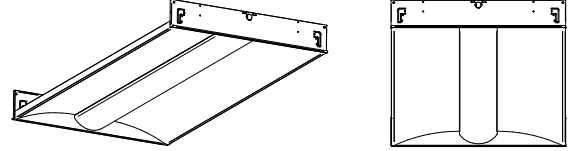
Grid, recessed section



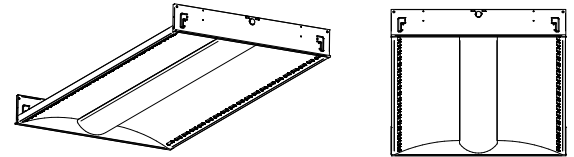
Grid, back of housing



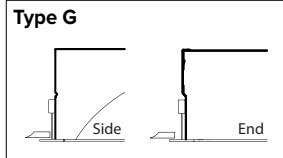
GRID, STATIC



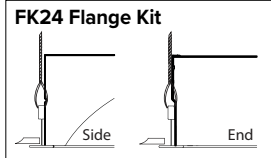
GRID, AIR RETURN



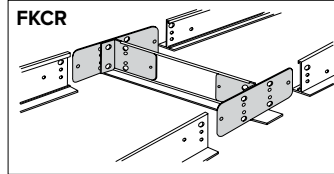
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.

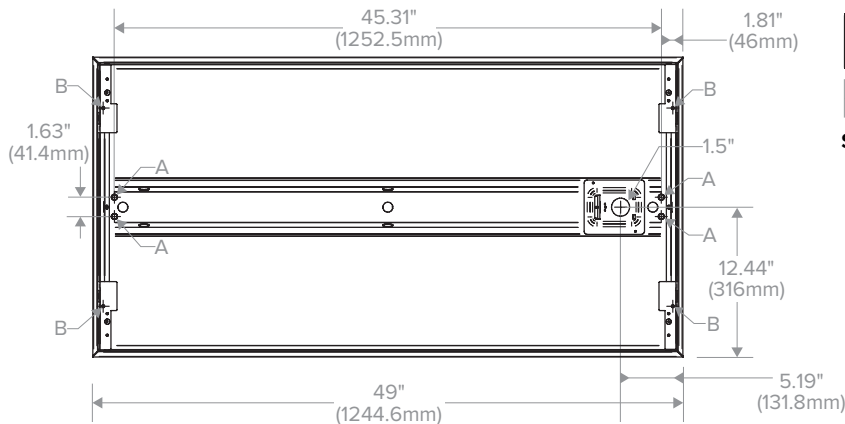


For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK24 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK24 & (1) FKCR)

Row cut out dimensions using FK24s & FKCR adapters:
Width 24³/₈", Length [48" x (# in row)] + ³/₈".
Example: (48" x 2) + ³/₈" = 96³/₈"

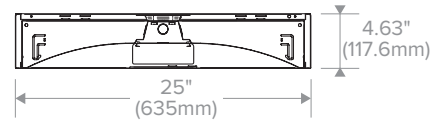
Flange kit cut out dimension for single unit only: 24³/₈" x 48³/₈"

SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount (SM) and Cable Mount (CM), back of housing

* For Cable Mount a 2" x 3" access plate with (4) ⁷/₈" KOs provided in place of Mounting Collar shown.



Surface section (SM)

Surface Mount:
Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

Cable Mount:
Order CM ceiling type. Use CM48Y2SC3F-KIT 48" Cable Mount Kit for 2" wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

LCAT24

2' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY

LCAT24-35LWG-EU

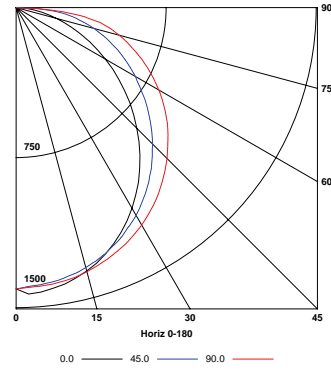
LUMINAIRE DATA

Test No.	16519
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4396
Watts	36.10
Efficacy	122
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.32

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1098	25
0-40	1804	41
0-60	3240	73.7
0-90	4396	100
0-180	4396	100

POLAR GRAPH



LCAT24-35MLG-EU

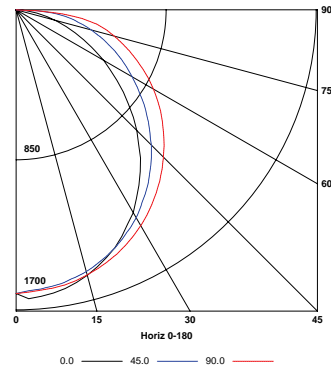
LUMINAIRE DATA

Test No.	16522
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4914
Watts	38.80
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1250	25.4
0-40	2049	41.7
0-60	3648	74.2
0-90	4914	100
0-180	4914	100

POLAR GRAPH



LCAT24-35HLG-EU

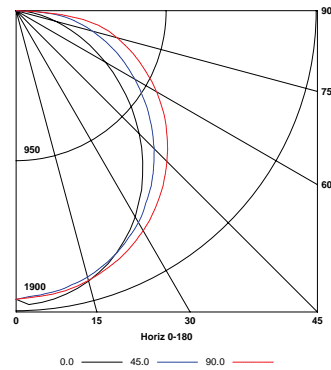
LUMINAIRE DATA

Test No.	16525
Description	2' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5607
Watts	44.00
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.22 90° = 1.31

ZONAL LUMEN SUMMARY

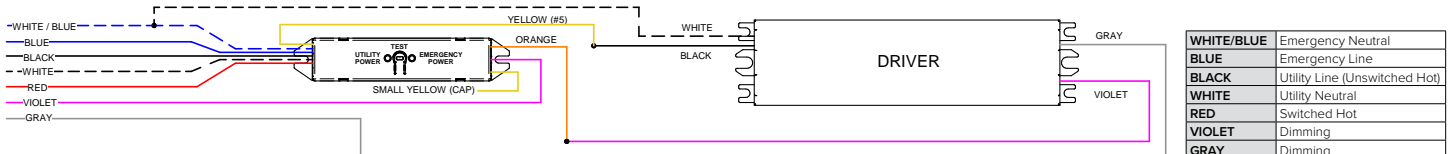
Zone	Lumens	% Luminaire
0-30	1422	25.4
0-40	2333	41.6
0-60	4161	74.2
0-90	5607	100
0-180	5607	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)

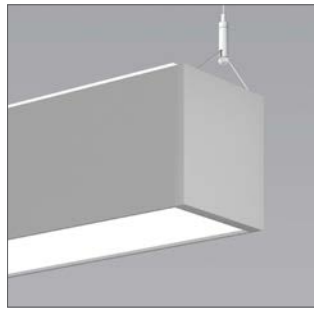


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PHOTOMETRY
IES
PDF
IES
PDF
IES
PDF
IES
PDF
DTS Integration Guide

Beam 4

Pendant mount - Direct / Indirect



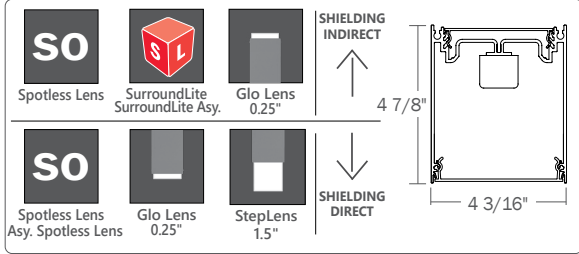
Flush Spotless Lens - down
Glo Lens - up



StepLens 1.5 - down



SurroundLite up
Flush Spotless lens - down



Project _____

Type _____

Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT		INPUT WATTS*	EFFICACY	SHIELDING I/D
UPLIGHT	DOWNLIGHT			
400 lm/ft	400 lm/ft	6.78 W/ft	118 lm/W	0.25G/0.25G
400 lm/ft	400 lm/ft	7.13 W/ft	112 lm/W	SO/0.25G
400 lm/ft	1000 lm/ft	12.04 W/ft	116 lm/ft	0.25G/0.25G
400 lm/ft	1000 lm/ft	12.4 W/ft	113 lm/ft	SO/0.25G
1100 lm/ft	400 lm/ft	12.5 W/ft	131 lm/W	0.25G/0.25G
1100 lm/ft	400 lm/ft	13.43 W/ft	112 lm/W	SO/0.25G
1100 lm/ft	1100 lm/ft	17.48 W/ft	119 lm/W	0.25G/0.25G
1100 lm/ft	1100 lm/ft	18.7 W/ft	112 lm/W	SO/0.25G

Please consult factory for custom lumen output and wattage.



Ordering Guide

TB4DILED		NOM. LUM/FT UP		NOM. LUM/FT DOWN		CRI		COLOR TEMP.		SHIELDING INDIRECT	
TB4DILED	BEAM4 - Pendant Direct/Indirect LED	400 400 lm/ft - Min.	1100 1100 lm/ft-Max.	400 400 lm/ft - Min.	1000 1000 lm/ft - Max.	80 80 CRI*	90 90 CRI**	27 2700 K	TW2750 2700-5000 K - Tunable White	SO spotless lens	
								30 3000 K	TW2765 2700-6500 K - Tunable White	SL surroundlite	
								35 3500 K	DW3020 3000-2000 K - Dim to Warm	SLA surroundlite asymmetric	
								40 4000 K	TC1680 1650-8000 K - Color Tuning	0.25G 0.25" Glo lens	
								B30 3000 K - Bios*			
								B35 3500 K - Bios*			
								B40 4000 K - Bios*			
Outputs between listed min and max are available. Consult factory for outputs outside of the listed range. Consult factory for max output with BIOS						* Not available with color tuning ** Not available with Bios.		Consult Axitone technical sheet for more information on color technology. *Consult BIOS guide for more information on BIOS technology		Choose only one of the options above	

SHIELDING DIRECT	LENGTH (FT)	MR (OPTIONAL)	FINISH	VOLTAGE	DRIVER
SO spotless lens	2 2'	DMLED(#) downlight module LED	AP aluminum paint	120 120 V	DP dimming (0-10V) 1%
ASO asymmetric with SO	3 3'		W white	277 277 V	LT(#) Lutron*
0.25G 0.25" Glo lens	4 4'		BLK black	347 347 V	BI bi-level dimming
1.5M StepLens, lum. end cap	5 5'		C custom	UNV universal	O(#) other**
UB Ultra blend lens*	8 8'			DC low voltage*	DPB(#) dimming (0-10V) 1% with Bios*
	12 12'				TW(#) tunable white drivers*
	S(L) System Run*				CT(#) color tuning drivers*
					POE(#) POE drivers*
Choose only one of the options above; SurroundLite not available with direct; * Default lens for Color Tuning, Tunable white and BIOS. Consult factory for other lens.		* SurroundLite available in 1' increments	Add 6" per lamp, Specify quantity Separate circuits included Requires 120V or 277V Available in luminaires with Axitone and BIOS but downlight modules will not be tunable white, color tuning, or BIOS LEDs	* Only available with POE drivers.	**See page 2 to specify system **Please consult factory; see page 2 Consult factory for other control options.

CIRCUITS	MOUNTING/SUSPENSION	BATTERY (OPTIONAL)	OTHER (OPTIONAL)	IC CONTROLS (OPTIONAL)	CUSTOM (OPTIONAL)
1 1 circuit	CA(L) drywall+cable length (36" std.)	B(#) battery pack (integral)	F fuse	DS(#) daylight sensor	C custom
2 2 circuits	CT9(L) TB/TG 9/16+cable length (36" std.)			OS(#) occupancy sensor	
+E(#) emergency circuit*	CT15(L) TB/TG15/16+cable length (36" std.)			DOS(#) daylight & occupancy sensor	
+NL(#) night light circuit*	CTS(L) ST+cable length (36" std.)			EN(#) Enlighted integral*	
+GTD(#) generator transfer device*	SA(L) drywall+stem length >48" (18" std.)			ENR(#) Enlighted remote	
+M MR				WC(#) wireless control dimming	
*Specify quantity	White canopy standard	Minimum 5ft; Not available with 347V Not available with color tuning Please consult factory	Requires 120V or 277V	Specify quantity. Requires 8" blank. See integrated controls guide for more details. Not available with Color Tuning. Consult factory for Tunable White. Not available with DPB (DY) driver for BIOS with Dynamic Spectrum. *For flush option only, please consult factory	Please specify

CONSTRUCTION

Housing	Extruded aluminum (0.075" nominal) Up to 70% recycled content
End Cap	Cast aluminum
Interior Brackets	Die formed sheet steel (20 gauge)
Reflectors	White powder coated sheet steel (22 gauge)
Lenses	Extruded acrylic (0.070" nominal)
Hanger	Die cast aluminum
Suspension	Sliding aircraft cable along product length

ELECTRICAL

Lutron driver*	LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-Black LDE5 - 5-Series EcoSystem LTEA - Hi-lume 1% 2-wire (120V forward phase only) *Consult factory
Other drivers	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
BIOS DPB drivers*	STC - BIOS control 0-10V with static spectrum and BIOS SkyBlue enabled from 100% to 1%. DYN - BIOS control 0-10V with dynamic spectrum and BIOS SkyBlue® with Bio-Dimming™ enabled 100% to 50%, light output dimming from 49% to 1%.
Tunable White TW drivers*	DALIDT6 - DALI Type 6 (Two DALI Addresses) DALIDT8 - DALI Type 8 (One DALI Address) LTTW - Lutron T-Series Tunable White
Color Tuning CT drivers*	DMX - Standard (required for full color control) LTA5 - Lutron Araya 5 Ecosystem DALIDT8 - DALI Type 8 (Single DALI Address) DLM - Wattstopper DLM
Power over Ethernet POE drivers*	MOLEX IGOR UL2108 certified for integral or remote driver
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV, DC.

*Choose driver from available options.

i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

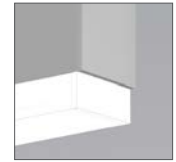
OPTICS



SO Spotless lens
UB Ultra Blend Lens



0.25G Glo lens



1.5M 1.5" StepLens

ULTRA BLEND LENS

Frosted acrylic snap-in micro lens suitable for Tunable White and BIOS applications.

SPOTLESS LENS

Frosted acrylic snap-in micro lens

GLO LENS

0.25" frosted acrylic drop lens. Patented design.

STEPLENS

1.5" StepLens, illuminated end cap.

LED SYSTEM

CRI	Minimum 80 or 90 color rendering index.
CRI BIOS	Minimum 80 color rendering index with R9>90 for all CCTs.
CRI Color Tuning	Minimum 90 color rendering index.
CCT Single Color	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.
CCT BIOS	BIOS Static (STC) Choice of 3000K, 3500K and 4000K. BIOS SkyBlue® Dynamic (DYN) Choice of 3000K, 3500K, and 4000K with Bio-Dimming™
CCT Axitune Systems	Consult BIOS guide for more information on BIOS technology. Consult Axitune technical sheet for more information on color technology.
LED life	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal Management	Aluminum housing acting as the heat sink to maximize life.
Environment	Dry and damp rated in operating ambient temperatures of 0-40°C (32-104F).

● SYSTEM (S#)

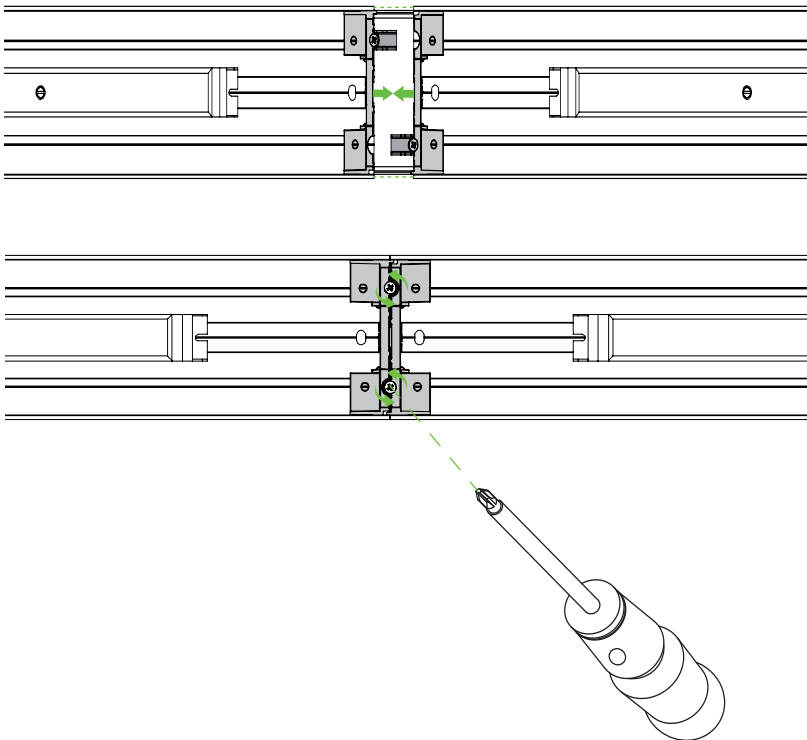
BEAM 4 linear systems, with the use of a strong profile, allow for a nearly hair thin connection system of continuous runs. Lengths of 4', 8', 12' as well as custom lengths are available. Runs of BEAM 4 that are greater than 12' in length are designated as systems (S#). This means that the run is comprised of a combination of 4', 8' and/or 12' sections to be assembled on site using our joining system. System runs with SurroundLite available in 1' increments only. For more information on systems and joining, please refer to the BEAM installation sheets available for download at www.axislighting.com.

● JOINERS

BEAM 4 luminaires feature the joining mechanism shown below. This mechanism joins and aligns multiple luminaires to create long continuous runs of light.

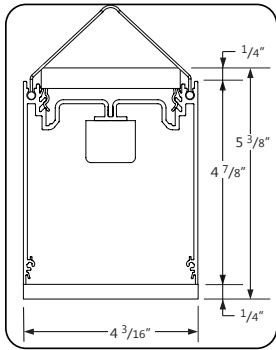
NOTE: Mount each system segment individually.

Do not assemble system prior to mounting



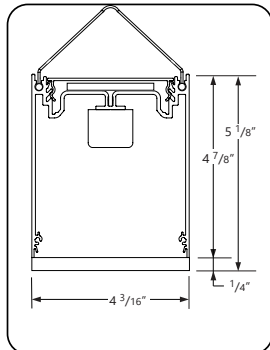
SECTION VIEWS

0.25G 0.25" Glo lens - Indirect



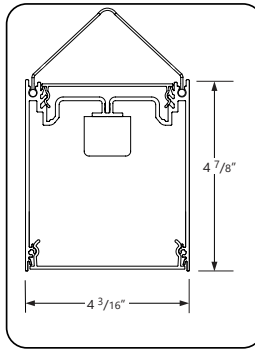
0.25G 0.25" Glo lens - Direct

SL SurroundLite - Indirect



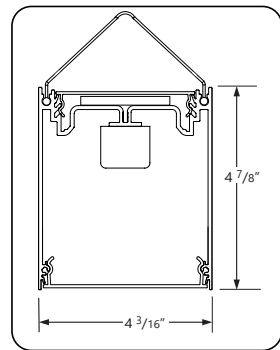
0.25G 0.25" Glo lens - Direct

SO Spotless lens - Indirect



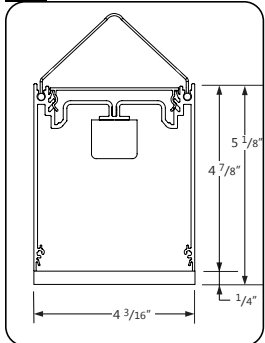
SO Spotless lens - Direct

SL SurroundLite - Indirect



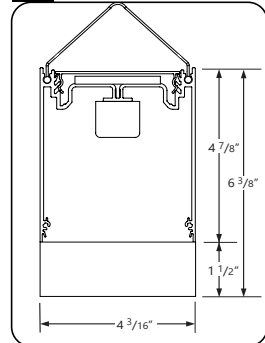
SO Spotless lens - Direct

SO Spotless lens - Indirect



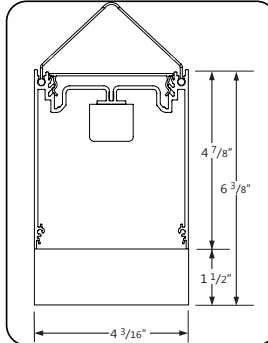
0.25G 0.25" Glo lens - Direct

SL SurroundLite - Indirect



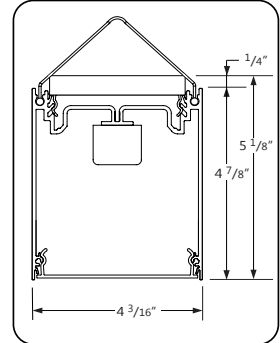
1.5M 1.5" StepLens - Direct

SO Spotless lens - Indirect



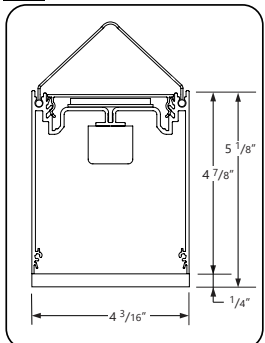
1.5M 1.5" StepLens - Direct

0.25G 0.25" Glo lens - Indirect



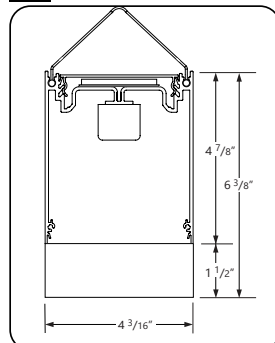
SO Spotless lens - Direct

SLA SurroundLite Asymmetric - Indirect



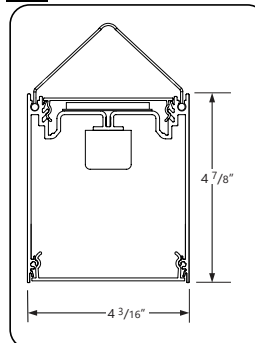
0.25G 0.25" Glo lens - Direct

SLA SurroundLite Asymmetric - Indirect



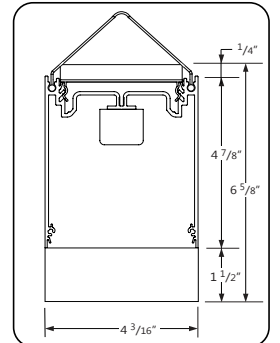
1.5M StepLens - Direct

SLA SurroundLite Asymmetric - Indirect



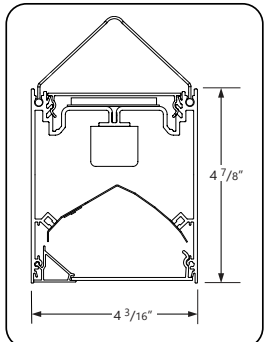
SO Spotless lens - Direct

0.25G 0.25" Glo lens - Indirect



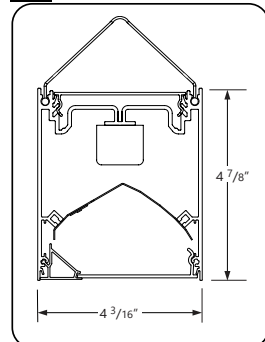
1.5M 1.5" StepLens - Direct

SLA SurroundLite Asymmetric - Indirect



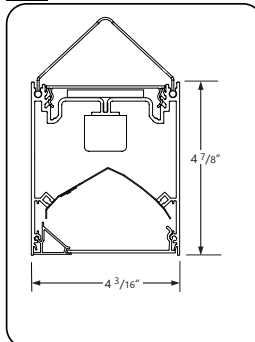
ASY Asy. SO lens - Direct

SO Spotless lens - Indirect



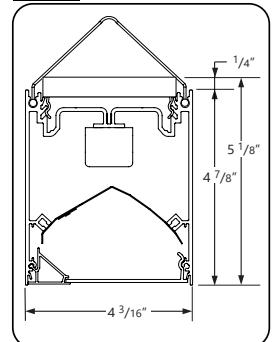
ASY Asy. SO lens - Direct

SL SurroundLite - Indirect



ASY Asy. SO lens - Direct

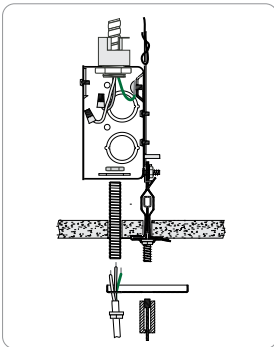
0.25G 0.25" Glo lens - Indirect



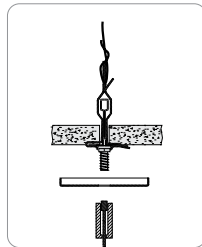
ASY Asy. SO lens - Direct

● MOUNTING OPTIONS

CT TILE CEILING - ON GRID

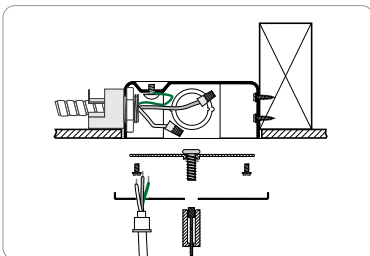


Power feed

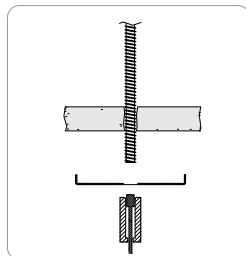


Non power feed

CA DRYWALL CEILING

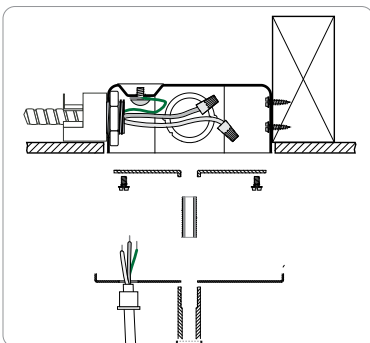


Power feed

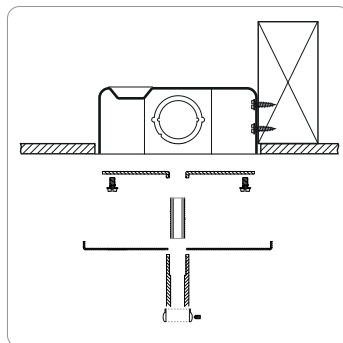


Non power feed

SA STEM MOUNT IN DRYWALL CEILING



Power feed



Non power feed

● OTHER MOUNTING OPTIONS

BEAM 4 is also available with wall mounted option.

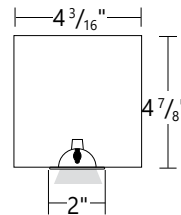
i Specification sheets and installation sheets for all mountings for BEAM 4 luminaires are available for download at www.axislighting.com

● DOWNLIGHT MODULE LED

Blank DMLED Quantity

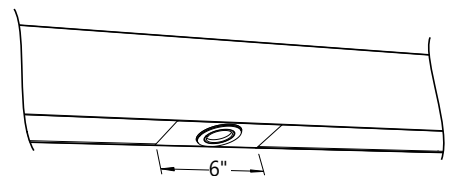
Extruded aluminum (0.075" nominal)
1.4" diameter
For every 4' section, there may be up to a maximum of 4 x DM LED lamps.
Each DM LED lamp is placed centered on a blank section 6" in length.

Spacing

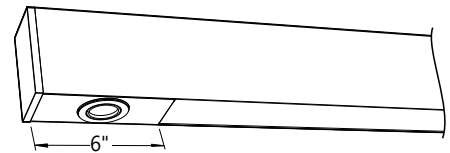


For a series of DM's within a given section length, they will be spaced evenly on a longer blank section.
The directed light of DM LED lamps are fixed downward.
Custom spacing may be available on special request.

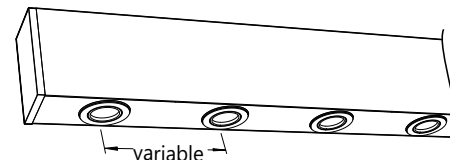
Between sections



At luminaire ends



Several in a long blank section



Beam Angle	45 nominal degrees
Input Watts	3W
Nominal Lumens	50 lumens
Efficacy	17 lumens per watt
Color Rendering Index (CRI)	80
Life	25,000 hours at L ₇₀
Correlated color temperature (CCT)	2700K

i More options are available upon request. Please consult factory.

● FINISH

Aluminium paint, powder coated and custom finishes are also available.

● APPROVALS

Certified to UL and CSA standards
Meets NYC requirements
Meets ADA requirements.
Suitable for damp locations.



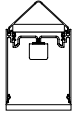
Beam 4

Pendant mount - Direct / Indirect

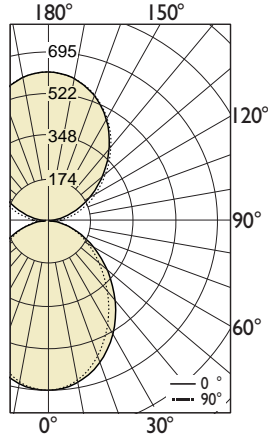
● PHOTOMETRIC DATA

0.25G 0.25 Glo Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
400 lm/ft
 Downlight
400 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 400 lm/ft
Lumen/ft down: 401 lm/ft
Total Lumens: 3205 lm (for 4ft)
Input Watts: 27.1 W
Efficacy: 118 lm/W

IES FILE: TB4DILED-400-400-80-35-0.25G-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	695	695	695	695	695
5	691	690	689	690	689
15	654	651	645	640	637
25	584	577	565	553	547
35	487	480	463	446	439
45	379	372	355	339	332
55	272	268	255	242	237
65	175	173	166	160	157
75	90	92	93	92	91
85	26	30	35	39	40
90	6	19	37	52	57
95	26	35	48	59	64
105	87	96	109	122	127
115	166	173	182	193	197
125	254	260	267	273	275
135	349	353	357	361	362
145	441	443	446	448	449
155	520	520	522	524	524
165	576	576	577	578	578
175	605	605	606	606	606
180	609	609	609	609	609

ZONAL LUMENS

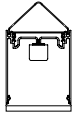
Zone	Lumens
0	
0-10	65
10-20	182
20-30	260
30-40	289
40-50	274
50-60	228
60-70	165
70-80	98
80-90	41
90	
90-100	54
100-110	115
110-120	181
120-130	238
130-140	275
140-150	278
150-160	240
160-170	163
170-180	57
180	

LUMINANCE DATA (cd/m²)

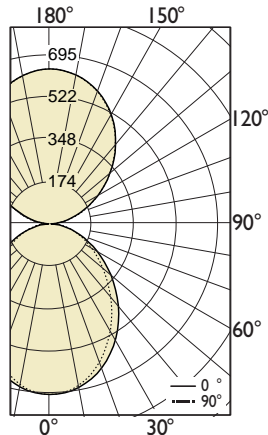
Vertical Angle	Horizontal Angles		
	0	45	90
45	4717	4420	4127
55	4179	3907	3633
65	3632	3466	3261
75	3063	3151	3103
85	2611	3580	4007

SO Spotless Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
400 lm/ft
 Downlight
400 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 401 lm/ft
Lumen/ft down: 400 lm/ft
Total Lumens: 3203 lm (for 4ft)
Input Watts: 28.5 W
Efficacy: 112 lm/W

IES FILE: TB4DILED-400-400-80-35-SO-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	695	695	695	695	695
5	691	690	689	690	689
15	654	651	645	640	637
25	584	577	565	553	547
35	487	480	463	446	439
45	379	372	355	339	332
55	272	268	255	242	237
65	175	173	166	160	157
75	90	92	93	92	91
85	26	30	35	39	40
90	4	9	18	23	26
95	25	26	26	25	23
105	91	93	95	97	96
115	175	177	178	179	178
125	270	271	272	272	270
135	369	369	369	370	367
145	463	463	462	463	461
155	542	543	541	542	540
165	598	598	598	598	597
175	627	627	627	627	627
180	631	631	631	631	631

ZONAL LUMENS

Zone	Lumens
0	
0-10	65
10-20	182
20-30	260
30-40	289
40-50	274
50-60	228
60-70	165
70-80	98
80-90	39
90	
90-100	32
100-110	101
110-120	176
120-130	243
130-140	285
140-150	289
150-160	249
160-170	169
170-180	60
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4717	4420	4127
55	4179	3907	3633
65	3632	3466	3261
75	3063	3151	3103
85	2611	3580	4007

i All IES files are available for download at: www.axislighting.com

Beam 4

Pendant mount - Direct / Indirect

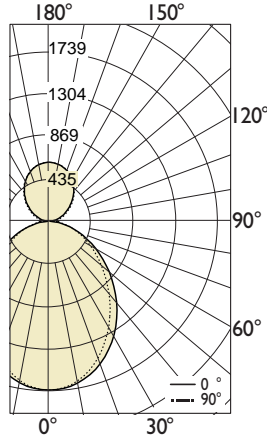
● PHOTOMETRIC DATA

0.25G 0.25 Glo Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
400 lm/ft
 Downlight
1000 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 401 lm/ft
Lumen/ft down: 1001 lm/ft
Total Lumens: 5608 lm (for 4ft)
Input Watts: 48.15 W
Efficacy: 116 lm/W

IES FILE: TB4DILED-400-1000-80-35-0.25G-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1739	1739	1739	1739	1739
5	1728	1725	1724	1724	1722
15	1636	1627	1613	1601	1594
25	1459	1444	1412	1383	1368
35	1219	1200	1157	1116	1097
45	948	931	888	848	829
55	681	669	637	606	592
65	436	432	416	400	392
75	225	231	232	230	228
85	65	76	89	97	99
90	11	31	58	79	86
95	26	35	48	59	64
105	87	96	109	122	127
115	166	173	182	193	197
125	254	260	267	273	275
135	349	353	357	361	362
145	441	443	446	448	449
155	520	520	522	524	524
165	576	576	577	578	578
175	605	605	606	606	606
180	609	609	609	609	609

ZONAL LUMENS

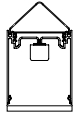
Zone	Lumens
0	
0-10	163
10-20	454
20-30	650
30-40	724
40-50	686
50-60	571
60-70	413
70-80	245
80-90	99
90	
90-100	56
100-110	115
110-120	181
120-130	238
130-140	275
140-150	278
150-160	240
160-170	163
170-180	57
180	

LUMINANCE DATA (cd/m²)

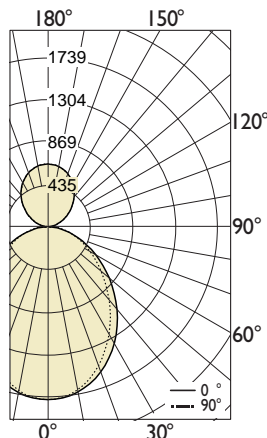
Vertical Angle	Horizontal Angles		
	0	45	90
45	11792	11049	10317
55	10448	9767	9082
65	9081	8664	8153
75	7657	7878	7757
85	6528	8951	10016

SO Spotless Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
400 lm/ft
 Downlight
1000 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 402 lm/ft
Lumen/ft down: 1000 lm/ft
Total Lumens: 5606 lm (for 4ft)
Input Watts: 49.6 W
Efficacy: 113 lm/W

IES FILE: TB4DILED-400-1000-80-35-SO-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1739	1739	1739	1739	1739
5	1728	1725	1724	1724	1722
15	1636	1627	1613	1601	1594
25	1459	1444	1412	1383	1368
35	1219	1200	1157	1116	1097
45	948	931	888	848	829
55	681	669	637	606	592
65	436	432	416	400	392
75	225	231	232	230	228
85	65	76	89	97	99
90	9	21	37	48	51
95	25	26	26	25	23
105	91	93	95	97	96
115	175	177	178	179	178
125	270	271	272	272	270
135	369	369	369	370	367
145	463	463	462	463	461
155	542	543	541	542	540
165	598	598	598	598	597
175	627	627	627	627	627
180	631	631	631	631	631

ZONAL LUMENS

Zone	Lumens
0	
0-10	163
10-20	454
20-30	650
30-40	724
40-50	686
50-60	571
60-70	413
70-80	245
80-90	96
90	
90-100	34
100-110	101
110-120	176
120-130	243
130-140	285
140-150	289
150-160	249
160-170	169
170-180	60
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	11792	11049	10317
55	10448	9767	9082
65	9081	8664	8153
75	7657	7878	7757
85	6528	8951	10016

i All IES files are available for download at: www.axislighting.com

Beam 4

Pendant mount - Direct / Indirect

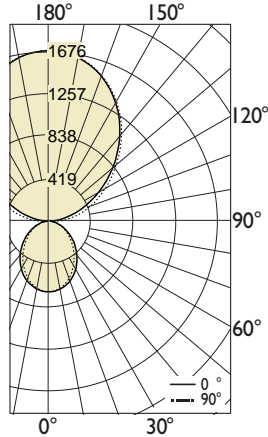
● PHOTOMETRIC DATA

0.25G 0.25 Glo Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
1100 lm/ft
 Downlight
400 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 1100 lm/ft
Lumen/ft down: 402 lm/ft
Total Lumens: 6011 lm (for 4ft)
Input Watts: 49.9 W
Efficacy: 120 lm/W

IES FILE: TB4DILED-1100-400-80-35-0.25G-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	695	695	695	695	695
5	691	690	689	690	689
15	654	651	645	640	637
25	584	577	565	553	547
35	487	480	463	446	439
45	379	372	355	339	332
55	272	268	255	242	237
65	175	173	166	160	157
75	90	92	93	92	91
85	26	30	35	39	40
90	12	39	76	110	122
95	72	97	131	163	175
105	240	265	300	336	351
115	455	474	502	529	541
125	699	715	734	750	757
135	960	969	983	992	996
145	1213	1218	1227	1233	1234
155	1429	1430	1436	1440	1442
165	1584	1584	1586	1589	1590
175	1665	1665	1665	1666	1666
180	1676	1676	1676	1676	1676

ZONAL LUMENS

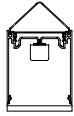
Zone	Lumens
0	
0-10	65
10-20	182
20-30	260
30-40	289
40-50	274
50-60	228
60-70	165
70-80	98
80-90	47
90	
90-100	144
100-110	317
110-120	497
120-130	655
130-140	757
140-150	766
150-160	661
160-170	447
170-180	158
180	

LUMINANCE DATA (cd/m²)

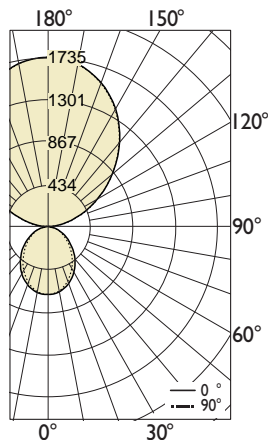
Vertical Angle	Horizontal Angles		
	0	45	90
45	4717	4420	4127
55	4179	3907	3633
65	3632	3466	3261
75	3063	3151	3103
85	2611	3580	4007

SO Spotless Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
1100 lm/ft
 Downlight
400 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 1101 lm/ft
Lumen/ft down: 400 lm/ft
Total Lumens: 6002 lm (for 4ft)
Input Watts: 53.7 W
Efficacy: 112 lm/W

IES FILE: TB4DILED-1100-400-80-35-SO-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	695	695	695	695	695
5	691	690	689	690	689
15	654	651	645	640	637
25	584	577	565	553	547
35	487	480	463	446	439
45	379	372	355	339	332
55	272	268	255	242	237
65	175	173	166	160	157
75	90	92	93	92	91
85	26	30	35	39	40
90	4	9	18	23	26
95	69	72	72	68	64
105	250	256	262	267	264
115	482	487	490	493	488
125	742	746	747	748	743
135	1014	1015	1014	1016	1009
145	1274	1274	1271	1272	1266
155	1491	1492	1488	1490	1485
165	1644	1645	1644	1645	1642
175	1724	1725	1724	1725	1724
180	1735	1735	1735	1735	1735

ZONAL LUMENS

Zone	Lumens
0	
0-10	65
10-20	182
20-30	260
30-40	289
40-50	274
50-60	228
60-70	165
70-80	98
80-90	39
90	
90-100	82
100-110	277
110-120	485
120-130	667
130-140	782
140-150	795
150-160	685
160-170	463
170-180	164
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4717	4420	4127
55	4179	3907	3633
65	3632	3466	3261
75	3063	3151	3103
85	2611	3580	4007

i All IES files are available for download at: www.axislighting.com

Beam 4

Pendant mount - Direct / Indirect

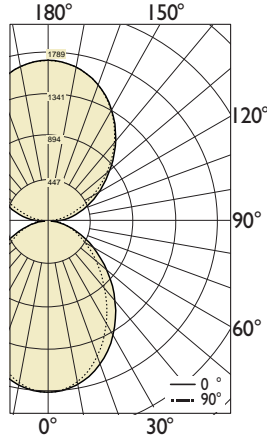
● PHOTOMETRIC DATA

0.25G 0.25 Glo Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
1100 lm/ft
 Downlight
1000 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 1101 lm/ft
Lumen/ft down: 1002 lm/ft
Total Lumens: 8414 lm (for 4ft)
Input Watts: 71 W
Efficacy: 119 lm/W

IES FILE: TB4DILED-1100-1000-80-35-0.25G-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1739	1739	1739	1739	1739
5	1728	1725	1724	1724	1722
15	1636	1627	1613	1601	1594
25	1459	1444	1412	1383	1368
35	1219	1200	1157	1116	1097
45	948	931	888	848	829
55	681	669	637	606	592
65	436	432	416	400	392
75	225	231	232	230	228
85	65	76	89	97	99
90	16	50	97	137	151
95	72	97	131	163	175
105	240	265	300	336	351
115	455	474	502	529	541
125	699	715	734	750	757
135	960	969	983	992	996
145	1213	1218	1227	1233	1234
155	1429	1430	1436	1440	1442
165	1584	1584	1586	1589	1590
175	1665	1665	1665	1666	1666
180	1676	1676	1676	1676	1676

ZONAL LUMENS

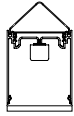
Zone	Lumens
0	
0-10	163
10-20	454
20-30	650
30-40	724
40-50	686
50-60	571
60-70	413
70-80	245
80-90	104
90	
90-100	147
100-110	317
110-120	497
120-130	655
130-140	757
140-150	766
150-160	661
160-170	447
170-180	158
180	

LUMINANCE DATA (cd/m²)

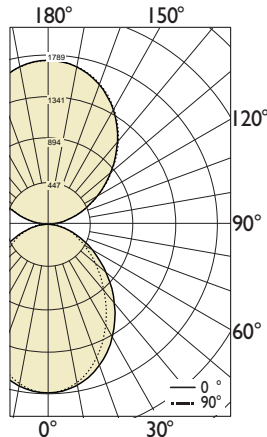
Vertical Angle	Horizontal Angles		
	0	45	90
45	11792	11049	10317
55	10448	9767	9082
65	9081	8664	8153
75	7657	7878	7757
85	6528	8951	10016

SO Spotless Lens - Up
0.25G 0.25 Glo Lens - Down

Uplight
1100 lm/ft
 Downlight
1000 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 1100 lm/ft
Lumen/ft down: 999 lm/ft
Total Lumens: 8405 lm (for 4ft)
Input Watts: 74.8 W
Efficacy: 112 lm/W

IES FILE: TB4DILED-1100-1000-80-35-SO-0.25G-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1739	1739	1739	1739	1739
5	1728	1725	1724	1724	1722
15	1636	1627	1613	1601	1594
25	1459	1444	1412	1383	1368
35	1219	1200	1157	1116	1097
45	948	931	888	848	829
55	681	669	637	606	592
65	436	432	416	400	392
75	225	231	232	230	228
85	65	76	89	97	99
90	11	24	41	52	53
95	69	72	72	68	64
105	250	256	262	267	264
115	482	487	490	493	488
125	742	746	747	748	743
135	1014	1015	1014	1016	1009
145	1274	1274	1271	1272	1266
155	1491	1492	1488	1490	1485
165	1644	1645	1644	1645	1642
175	1724	1725	1724	1725	1724
180	1735	1735	1735	1735	1735

ZONAL LUMENS

Zone	Lumens
0	
0-10	163
10-20	454
20-30	650
30-40	724
40-50	686
50-60	571
60-70	413
70-80	245
80-90	97
90	
90-100	85
100-110	277
110-120	485
120-130	667
130-140	782
140-150	795
150-160	685
160-170	463
170-180	164
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	11792	11049	10317
55	10448	9767	9082
65	9081	8664	8153
75	7657	7878	7757
85	6528	8951	10016

i All IES files are available for download at: www.axislighting.com

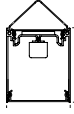
Beam 4

Pendant mount - Direct / Indirect

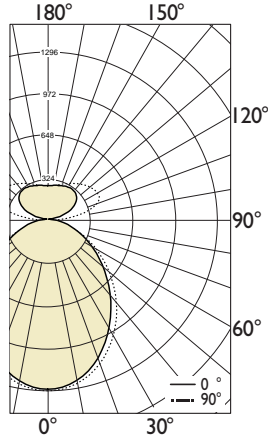
● PHOTOMETRIC DATA

SL Surroundlite - Up
SO Spotless Lens - Down

Uplight
400 lm/ft
 Downlight
750 lm/ft



PHOTOMETRIC CURVE



Lumen/ft up: 750.96 lm/ft
Lumen/ft down: 400.45 lm/ft
Total Lumens: 4606 lm/4ft)
Input Watts: 41.8 W
Efficacy: 110 lm/W

IES FILE: TB4DILED-400-750-80-35-SL-SO-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1296	1296	1296	1296	1296
5	1285	1285	1285	1287	1287
15	1195	1199	1206	1215	1218
25	1036	1044	1062	1081	1088
35	840	851	877	903	912
45	638	650	678	706	715
55	453	463	487	511	518
65	291	299	315	331	335
75	158	161	169	176	176
85	46	47	49	50	50
90	21	19	15	9	4
95	24	48	61	65	61
105	119	150	214	300	334
115	210	234	289	382	433
125	267	288	325	387	422
135	292	306	332	368	387
145	292	301	320	339	348
155	280	284	296	307	312
165	267	268	273	277	279
175	258	259	259	260	260
180	257	257	257	257	257

ZONAL LUMENS

Zone	Lumens
0	122
0-10	340
10-20	489
20-30	548
30-40	523
40-50	436
50-60	313
60-70	179
70-80	56
80-90	68
90	231
90-100	302
100-110	300
110-120	260
120-130	201
130-140	137
140-150	78
150-160	25
160-170	
170-180	
180	

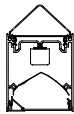
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7938	8436	8892
55	6941	7469	7938
65	6067	6566	6978
75	5355	5735	5982
85	4667	4936	5085

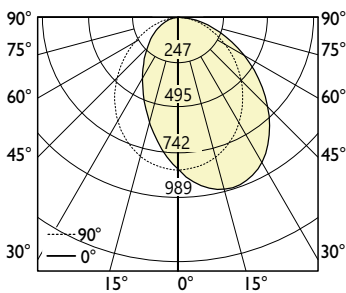
● PHOTOMETRIC DATA - ASYMMETRIC DIRECT

ASO Asy. Spotless Lens - Down

Downlight
500 lm/ft



PHOTOMETRIC CURVE



Lumen/ft down: 524 lm/ft
Total Lumens: 2096 lm/4ft)
Input Watts: 22.03 W
Efficacy: 95 lm/W

IES FILE: TB4LED-500-80-30-ASO-4.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	846	846	846	846	846
5	915	911	897	867	839
15	986	972	932	872	798
25	965	949	901	821	719
35	860	846	801	719	611
45	694	686	653	581	484
55	508	502	479	428	353
65	324	321	308	277	228
75	164	164	159	144	120
85	36	37	39	38	34
90					

ZONAL LUMENS

Zone	Lumens
0	
0-10	80
10-20	225
20-30	331
30-40	381
40-50	372
50-60	315
60-70	227
70-80	128
80-90	37
90	0

LUMINANCE DATA (cd/m²)

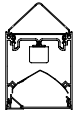
Vertical Angle	Horizontal Angles		
	0	45	90
45	10871	10226	7583
55	9798	9254	6821
65	8480	8078	5982
75	7030	6809	5125
85	4622	4976	4276

i All IES files are available for download at: www.axislighting.com

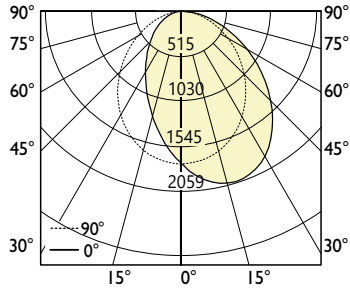
● PHOTOMETRIC DATA - ASYMMETRIC DIRECT

ASO Asy. Spotless Lens - Down

Downlight
1000 lm/ft



PHOTOMETRIC CURVE



CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1901	1901	1901	1901	1901
5	1890	1844	1808	1782	1775
15	1789	1666	1560	1487	1463
25	1600	1428	1280	1181	1148
35	1346	1165	1010	910	877
45	1059	900	768	683	657
55	769	650	553	492	474
65	498	421	361	324	314
75	257	220	194	178	174
85	73	62	56	53	53
90	3	2	2	2	2

ZONAL LUMENS

Zone	Lumens
0	
0-10	179
10-20	499
20-30	722
30-40	816
40-50	783
50-60	653
60-70	463
70-80	254
80-90	72
90	0

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	16354	11862	10150
55	14654	10532	9020
65	12876	9334	8114
75	10856	8180	7360
85	9124	7008	6627

Lumen/ft down: 1110 lm/ft

Total Lumens: 4441 lm/4ft)

Input Watts: 44.28 W

Efficacy: 100 lm/W

IES FILE: TB4LED-1000-80-30-ASO-4 .IES

TESTED ACCORDING TO IES LM-79-2008

i All IES files are available for download at: www.axislighting.com

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

FEATURES

- Uninterrupted ribbon of light; row mounting optional
- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Three lens options as well as less lens (NL)
- Modular replaceable LED boards and driver accessible for future maintenance or upgrades
- Surface mount, wall mount or suspended



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Housing, wireway, and ends are formed from code-gauge steel
- Housing components act as heat sink for LED heat dissipation
- White painted parts are treated with a five stage phosphate bonding process and finished with high reflectance baked enamel

OPTICS

- Available with or without frosted acrylic lens

INSTALLATION

- Knockouts are provided for electrical access and mounting

ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance
- Driver options include fixed output for on/off function, step dimming (high/low/ off), or continuous 0–10V dimming
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life
- Drivers < 10% THD at 120V, power factor > 0.95

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

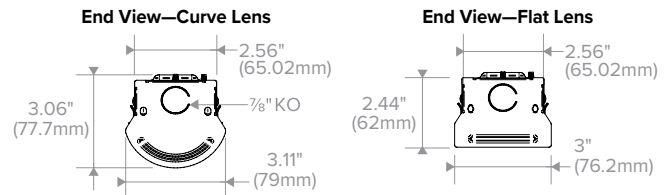
- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products
- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate cCSAus labels
- Damp Location label standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options

RELATED PRODUCTS

- [Revalume™ Linear Wrap](#)
- [Reverie™ Decorative Low Bay](#)



CERTIFICATIONS (CONTINUED)

- Adheres to LM79, LM80, and TM21 industry standards
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 10 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1377–16,833
Wattage Range	13.5–133.8
Efficacy Range (LPW)	111–142
Reported Life (Hours)	L80–60,000

ORDERING GUIDE

Example: MPS4-40ML-CW-EDU

CATALOG # _____

MPS			Color Temp			Nominal Lumens ⁴			Lens		Distribution ⁵			
Model	Size ¹	CRI												
MPS MultiPurpose Linear	2	2'	Blank	>80	30	3000K	XW	4' (2700), 8' (5400)	LWHE	2' (2600), 4' (4100), 8' (8200)	C	Curve, Frosted Acrylic	N	Narrow Distribution ⁶
	4	4'	9	90 ²	35	3500K	XWHE	4' (2500), 8' (5000)	ML	2' (3600), 4' (4800), 8' (9500)	F	Flat, Frosted Acrylic	W	Wide Distribution
	8	8'			40	4000K	VW	2' (1700), 4' (3400), 8' (6900)	MLHE	4' (4700), 8' (9400)	NL	Less Lens		
					50	5000K	VWHE	4' (3300), 8' (6600)	HL	2' (3800), 4' (6000), 8' (12,000)	CP	Curve, Frosted Polycarbonate		
					2750T	2700K-5000K SpectraSync™ Tunable White ³	MW	2' (2300), 4' (3800), 8' (7700)	HLHE	4' (5700), 8' (11,500)				
					2765T	2700K-6500K SpectraSync™ Tunable White ³	MWHE	2' (2100), 4' (3700), 8' (7400)	VL	4' (7100), 8' (14,200)				
							LW	2' (2500), 4' (4200), 8' (8400)	XL	4' (8400), 8' (17,000)				

Driver		Voltage		Options		Control Options ^{15,16}	
E	Fixed Output	U	120V-277V	ELL14	Emergency Battery Pack, 10W ^{9,10,11}	NX Standalone	
ED	0-10V Dimming	347	347V (E, ED, ED1 only)	ELL14H2	Emergency Battery Pack, 2-Hour Run Time ^{9,10,11}	NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount ^{17,19}	
ED1	0-10V 1% Dimming			GLR	Fast Blow Fuse	NX Networked – Wired	
EDD	0-10V Dim-to-Dark			GTD	Generator Transfer Device ¹²	NXE NX, Dual SmartPORTs ^{17,18,19}	
ESD	Step Dimming			DTS	Dimming Bypass Module ¹³	NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTs ^{17,18,19}	
LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ⁷			MPSCE	Injection Molded ABS Material Curve Endcap ¹⁵	NX Networked – Wireless	
LUT5	5-Series EcoSystem LED driver ⁷			MPSCE-MB	Injection Molded ABS Material Curve Endcap, Matte Black	NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor ^{17,19}	
DALIP	DALI Power Bus ⁸			MPSFE	Injection Molded ABS Material Flat Endcap ¹⁵	NXWE NX Wireless Enabled ^{17,19}	
				MPSFE-MB	Injection Molded ABS Material Flat Endcap, Matte Black	Third-Party Control Options	
				MB	Matte Black	ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200 ^{20,22}	
				ZT	ZET Metallic Silver	LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only) ^{20,21,22}	
				PAF	Painted After Fabrication	LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM- OCC (RF with daylight and occupancy sensing) ^{20,21,22}	
				SAF	SpectraSAFE™ Integrated Surveillance Lighting System ¹⁴		

Accessories					
<input type="checkbox"/>	S18	18" Stem, Canopy	<input type="checkbox"/>	MPSCRK-C	Continuous Row Kit, Curve
<input type="checkbox"/>	SS18	18" Swivel Stem—45° Swivel	<input type="checkbox"/>	MPSCRK-F	Continuous Row Kit, Flat
<input type="checkbox"/>	CM24SCF3-KIT	24" Adjustable Cable Mounting Kit, 3-wire feed ²³	<input type="checkbox"/>	MPSWG2	2' Wire Guard
<input type="checkbox"/>	CM48SCF3-KIT	48" Adjustable Cable Mounting Kit, 3-wire feed ²³	<input type="checkbox"/>	MPSWG4	4' Wire Guard, two Required for 8' Fixture
<input type="checkbox"/>	CM24NF-KIT	Single Point Non-Feed Cable Mount with Canopy, Single - 24" ²³	<input type="checkbox"/>	MPSCE	Injection Molded ABS Material Curve Endcap
<input type="checkbox"/>	CM48NF-KIT	Single Point Non-Feed Cable Mount with Canopy, Single - 48" ²³	<input type="checkbox"/>	MPSCE-MB	Injection Molded ABS Material Curve Endcap, Matte Black
<input type="checkbox"/>	CSHC	Chain Hanger Assembly	<input type="checkbox"/>	MPSFE	Injection Molded ABS Material Flat Endcap
<input type="checkbox"/>	MPSZT	Zip Tee Hanger - 1½" Spacer on T-Bar Ceiling	<input type="checkbox"/>	MPSFE-MB	Injection Molded ABS Material Flat Endcap, Matte Black
<input type="checkbox"/>	MPSTH	Slide Tong Hanger			

Notes:
 1 For continuous row mounting, see [Continuous Row Mount Example Guide](#) on page 3
 2 Not available with HE lumen packages
 3 See [SpectraSync and NX Availability Table](#) on page 6
 4 High efficacy versions designated with "HE"
 5 Applicable to lens only
 6 Only available with Curve, Frosted Acrylic lens
 7 Not available in VL, XL, HE packages
 8 DALIP only available when LVS, LVR or ODPG control options are selected
 9 Delivered Emergency Lumens = ELL14 = 1210 lms
 10 Not available in 2ft size or with thru wire on XL 4ft and 8ft
 11 Emergency battery pack max ambient temperature: 25°C
 12 Only available with fixed output driver
 13 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Not available with ESD driver option. Universal voltage only. DTS with 2' cannot be combined with Controls or SpectraSync options. See page 10 for wiring diagram

14 SpectraSync+NX+SAF can not be configured. Only available with NXE or NXWE. Not available in 347V
NX In-Fixture Control Options:
 15 Standard PAF when this option is chosen
 16 Control Options include Injection Molded ABS End Cap
 17 Only available with 0-10V dimming drivers (ED, ED1 & EDD)
 18 Not available with surface mounting
 19 Not available in 2ft when SpectraSync and SpectraSAFE are chosen
Third-Party Control Options:
 20 LVS, LVR and ODPG only available with DALIP driver option
 21 VIVE is a trademark of Lutron Electronics Co., Inc
 22 Not available with SpectraSync (2750T or 2765T)
Accessory Notes:
 23 See [Columbia Mounting Accessories page](#) for additional options

ORDERING GUIDE (CONTINUED)

CONTINUOUS ROW MOUNT EXAMPLE GUIDE					
Continuous Row Length	MPS4	MPS8	MPSCRK-*	CM**SCF*-KIT	CM**NF-KIT
12' — Option 1	1	1	1	1	1
12' — Option 2	3	0	2	1	1
16' — Option 1	0	2	1	1	1
16' — Option 2	2	1	2	1	2
32' — Option 1	0	4	3	2	1
32' — Option 2	2	3	4	2	1

[Link to Columbia Mounting Accessories page](#)

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE — 2'							
	VW	MW	MWHE	LW	LWHE	ML	HL
E	x	x	x	x	x	x	x
ED	x	x	x	x	x	x	x
ED1	x	x	x	x	x	x	x
EDD	x	x		x		x	x
ESD	x	x		x		x	x
LUT5	x	x		x		x	x
LUTH	x	x		x		x	x
347	x	x		x		x	x
DALIP	x	x	x	x	x	x	x

DRIVER AVAILABILITY TABLE — 4' & 8'														
	XW	XWHE	VW	VWHE	MW	MWHE	LW	LWHE	ML	MLHE	HL	HLHE	VL	XL
E	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ED	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ED1	x	x	x	x	x	x	x	x	x	x	x	x	x	x
EDD	x		x		x		x		x		x		x	x
ESD	x		x		x		x		x		x		x	x
347	x		x		x		x		x		x		x	x
LUT5	x		x		x		x		x		x			
LUTH	x		x		x		x		x		x			
DALIP	x	x	x	x	x	x	x	x	x	x	x	x	x	x

TEMPERATURE TABLE (C°) — 4' & 8'												
		80 CRI										
		E/ED/ED1		ESDU		ED347		EDD		LUT		
Size	Lumen Package	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	Ceiling/Surface Mount	Pendant/TH Mount	
2'	VW	35	40	35	40	35	40	35	40	35	40	
	MW	35	40	35	40	35	40	35	40	35	40	
	LW	35	40	35	40	35	40	35	40	35	40	
	ML	35	40	35	40	35	40	35	40	35	40	
	HL	30	35	30	35	30	35	30	35	30	35	
	XW	35	45	35	45	35	45	30	35	30	35	
4'	VW	35	45	35	45	35	45	30	35	30	35	
	MW	35	45	35	45	35	45	30	35	30	35	
	LW	35	45	35	45	35	45	30	35	30	35	
	ML	35	45	35	45	35	45	30	35	30	35	
	HL	35	40	35	40	35	40	25	30	30	35	
	VL	30	30	30	30	30	30	30	30	—	—	
XL*	25	25	25	25	25	25	25	25	—	—		
8'	XW	35	45	35	45	35	45	30	35	30	35	
	VW	35	45	35	45	35	45	30	35	30	35	
	MW	35	45	35	45	35	45	30	35	30	35	
	LW	35	45	35	45	35	45	30	35	30	35	
	ML	35	45	35	45	35	45	30	35	30	35	
	VL	30	30	30	30	30	30	30	30	—	—	
XL*	25	25	25	25	25	25	25	25	—	—		

*XL not available with thru wire

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network
 2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the QPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense
 2 [See link to Philips commissioning](#)
 3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)

Wireless Switch Accessories¹

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white



SPECTRASAFE

SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

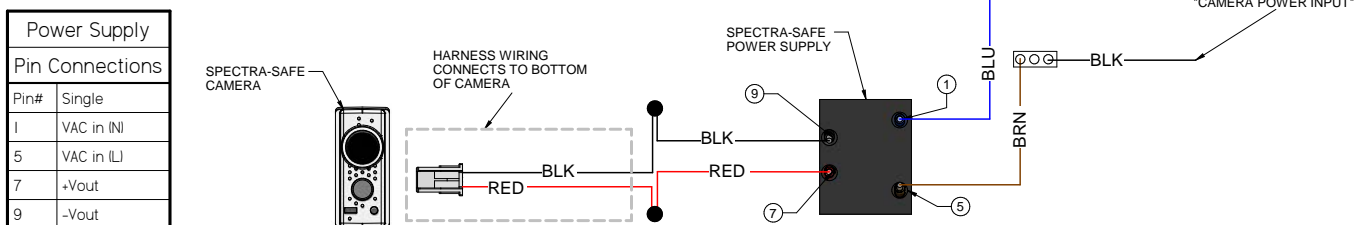


Note: Camera and end cap add 2.2" to the overall length.

Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

SPECTRASAFE WIRING DIAGRAM



DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

CONTROLS (CONTINUED)

SpectraSync™ Color Tuning Technology:

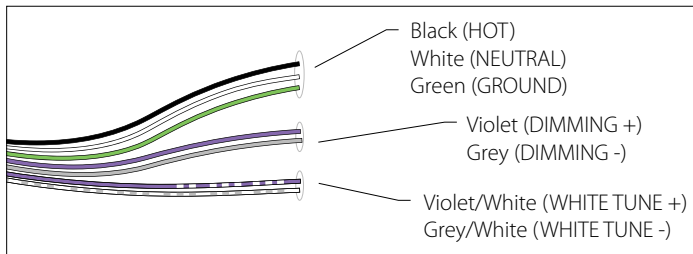
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASYNC COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

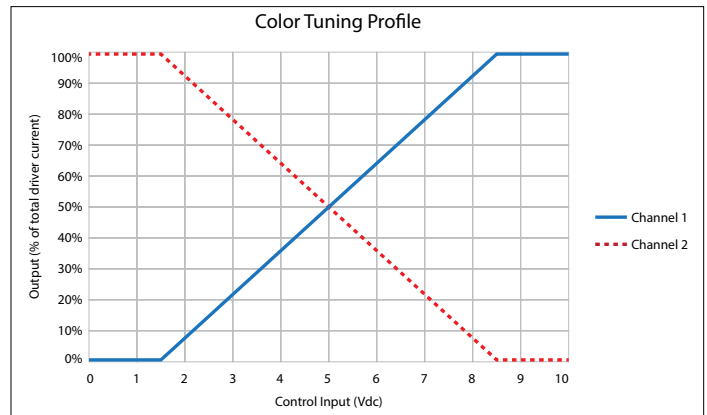


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

SPECTRASYNC™ AND NX AVAILABILITY TABLE



Size	Lumen package	Only With 80 CRI No Battery Pack			Only With 80 CRI With Battery Pack		
		CTC	NX	CTC+NX	CTC	NX	CTC+NX
2ft	VW	Y	Y	N	—	—	—
	MW	Y	Y	N	—	—	—
	LW	Y	Y	N	—	—	—
	ML	N	Y	N	—	—	—
	HL	N	Y	N	—	—	—
4ft	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	Y	Y	Y	Y	Y	Y
	LW	Y	Y	Y	Y	Y	Y
	ML	Y	Y	Y	Y	Y	Y
	HL	Y	Y	Y	Y	Y	Y
	VL	N	Y	N	N	Y	N
8ft	XL	N	Y	N	N	Y	N
	XW	Y	Y	Y	Y	Y	Y
	VW	Y	Y	Y	Y	Y	Y
	MW	N	Y	N	N	Y	N
	LW	N	Y	N	N	Y	N
	ML	N	Y	N	N	Y	N
	HL	N	Y	N	N	Y	N

DELIVERED LUMENS

STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW
MPS2-VW	3500K	Curve	Wide	1659	13.8	120
			Narrow	1597	13.5	118
		Flat	Wide	1584	13.5	117
		No Lens		1724	13.8	125
	4000K	Curve	Wide	1681	13.8	122
			Narrow	1618	13.5	120
Flat		Wide	1604	13.5	119	
	No Lens		1746	13.8	127	
MPS2-MW	3500K	Curve	Wide	2201	18.2	121
			Narrow	2092	17.8	118
		Flat	Wide	2076	17.8	117
		No Lens		2287	18.2	126
	4000K	Curve	Wide	2229	18.2	122
			Narrow	2119	17.8	119
Flat		Wide	2102	17.8	118	
	No Lens		2316	18.2	127	
MPS2-LW	3500K	Curve	Wide	2444	20.4	120
			Narrow	2328	19.9	117
		Flat	Wide	2309	19.9	116
		No Lens		2540	20.4	124
	4000K	Curve	Wide	2475	20.4	121
			Narrow	2358	19.9	118
Flat		Wide	2338	19.9	118	
	No Lens		2572	20.4	126	
MPS2-ML	3500K	Curve	Wide	3452	29	119
			Narrow	3447	28.8	120
		Flat	Wide	3414	28.8	119
		No Lens		3587	29	124
	4000K	Curve	Wide	3496	29	121
			Narrow	3491	28.8	121
Flat		Wide	3458	28.8	120	
	No Lens		3632	29	125	
MPS2-HL	3500K	Curve	Wide	3655	31.7	115
			Narrow	3707	31.5	118
		Flat	Wide	3678	31.5	117
		No Lens		3797	31.7	120
	4000K	Curve	Wide	3701	31.7	117
			Narrow	3754	31.5	119
Flat		Wide	3725	31.5	118	
	No Lens		3846	31.7	121	
MPS4-XW	3500K	Curve	Wide	2574	20	129
			Narrow	2574	20	129
		Flat	Wide	2463	20	123
		No Lens		2674	20	134
	4000K	Curve	Wide	2606	20	130
			Narrow	2574	20	129
Flat		Wide	2494	20	125	
	No Lens		2708	20	135	
MPS4-VW	3500K	Curve	Wide	3279	26.7	123
			Narrow	3152	26.5	119
		Flat	Wide	3134	26.5	118
		No Lens		3450	26.7	129
	4000K	Curve	Wide	3321	26.7	124
			Narrow	3192	26.5	120
Flat		Wide	3174	26.5	120	
	No Lens		3564	26.7	133	
MPS4-MW	3500K	Curve	Wide	3656	30.4	120
			Narrow	3511	30.1	117
		Flat	Wide	3491	30.1	116
		No Lens		3847	30.4	127
	4000K	Curve	Wide	3702	30.4	122
			Narrow	3556	30.1	118
Flat		Wide	3535	30.1	117	
	No Lens		3974	30.4	131	
MPS4-LW	3500K	Curve	Wide	4043	34.4	118
			Narrow	4094	32.5	126
		Flat	Wide	4072	32.5	125
		No Lens		4255	34.4	124
	4000K	Curve	Wide	4095	34.4	119
			Narrow	4147	32.5	128
Flat		Wide	4124	32.5	127	
	No Lens		4395	34.4	128	

DELIVERED LUMENS (CONTINUED)

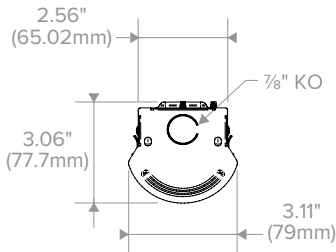
STANDARD EFFICACY PERFORMANCE TABLE							
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW	
MPS4-ML	3500K	Curve	Wide	4556	40.1	114	
			Narrow	4649	37.7	123	
		Flat	Wide	4625	37.8	122	
	4000K	No Lens	Curve	Wide	4794	40.1	120
				Narrow	4614	40.1	115
			Flat	Wide	4709	37.7	125
MPS4-HL		3500K	Curve	Wide	4684	37.8	124
				Narrow	4952	40.1	123
			Flat	Wide	5760	49.5	116
	4000K	No Lens	Curve	Wide	6061	49.5	122
				Narrow	5833	49.5	118
			Flat	Wide	5855	49.4	119
MPS4-VL		3500K	Curve	Wide	5814	49.4	118
				Narrow	6261	49.5	126
			Flat	Wide	6769	54.1	125
	4000K	No Lens	Curve	Wide	6675	54.1	123
				Narrow	6637	54.1	123
			Flat	Wide	7122	54.1	132
MPS4-XL		3500K	Curve	Wide	6855	54.1	127
				Narrow	6760	54.1	125
			Flat	Wide	6722	54.1	124
	4000K	No Lens	Curve	Wide	7357	54.1	136
				Narrow	8045	66.5	121
			Flat	Wide	7878	66.8	118
MPS8-XW		3500K	Curve	Wide	7813	66.9	117
				Narrow	8466	66.5	127
			Flat	Wide	8148	66.5	123
	4000K	No Lens	Curve	Wide	7979	66.8	119
				Narrow	7913	66.9	118
			Flat	Wide	8745	66.5	132
MPS8-VW		3500K	Curve	Wide	5147	40	129
				Narrow	4939	39.8	124
			Flat	Wide	4925	40	123
	4000K	No Lens	Curve	Wide	5348	40	134
				Narrow	5213	40	130
			Flat	Wide	5002	39.8	126
MPS8-MW		3500K	Curve	Wide	4988	40	125
				Narrow	5416	40	135
			Flat	Wide	6558	53.4	123
	4000K	No Lens	Curve	Wide	6303	53	119
				Narrow	6269	53	118
			Flat	Wide	6814	53.4	128
MPS8-LW		3500K	Curve	Wide	6642	53.4	124
				Narrow	6384	53	120
			Flat	Wide	6349	53	120
	4000K	No Lens	Curve	Wide	6901	53.4	129
				Narrow	7311	60.8	120
			Flat	Wide	7022	60.2	117
MPS8-ML		3500K	Curve	Wide	6981	60.2	116
				Narrow	7596	60.8	125
			Flat	Wide	7405	60.8	122
	4000K	No Lens	Curve	Wide	7112	60.2	118
				Narrow	7071	60.2	117
			Flat	Wide	7693	60.8	127
MPS8-LW		3500K	Curve	Wide	8087	68.8	118
				Narrow	8189	65	126
			Flat	Wide	8144	65	125
	4000K	No Lens	Curve	Wide	8402	68.8	122
				Narrow	8190	68.8	119
			Flat	Wide	8293	65	128
MPS8-ML		3500K	Curve	Wide	8248	65	127
				Narrow	8510	68.8	124
			Flat	Wide	9111	80.2	114
	4000K	No Lens	Curve	Wide	9298	75.4	123
				Narrow	9250	75.6	122
			Flat	Wide	9466	80.2	118
MPS8-ML		3500K	Curve	Wide	9227	80.2	115
				Narrow	9417	75.4	125
			Flat	Wide	9368	75.6	124
	4000K	No Lens	Curve	Wide	9587	80.2	120
				Narrow			
			Flat	Wide			

DELIVERED LUMENS (CONTINUED)

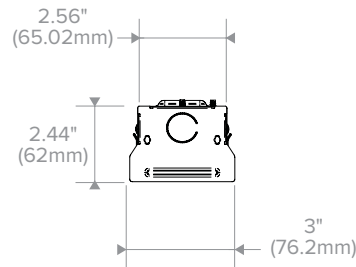
STANDARD EFFICACY PERFORMANCE TABLE						
FIXTURE	COLOR	LENS	DISTRIBUTION	LUMENS	INPUT WATTS	LPW
MPS8-HL	3500K	Curve	Wide	11520	99	116
			Narrow	11562	98.8	117
		Flat	Wide	11481	98.8	116
	4000K	No Lens		11969	99	121
		Curve	Wide	11667	99	118
			Narrow	11710	98.8	119
		Flat	Wide	11628	98.8	118
		No Lens		12122	99	122
MPS8-VL	3500K	Curve	Wide	13537	108.2	125
			Narrow	13350	108.2	123
		Flat	Wide	13275	108.2	123
	4000K	No Lens		14065	108.2	130
		Curve	Wide	13710	108.2	127
			Narrow	13521	108.2	125
		Flat	Wide	13444	108.2	124
		No Lens		14245	108.2	132
MPS8-XL	3500K	Curve	Wide	16091	133	121
			Narrow	15757	133.6	118
		Flat	Wide	15626	133.8	117
	4000K	No Lens		16718	133	126
		Curve	Wide	16296	133	123
			Narrow	15958	133.6	119
		Flat	Wide	15826	133.8	118
		No Lens		16932	133	127

DIMENSIONS

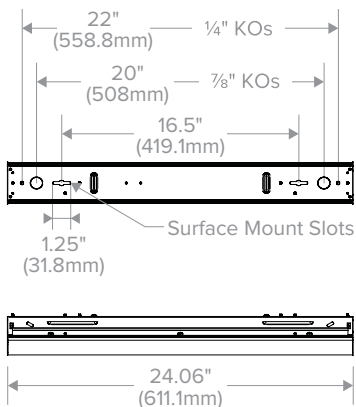
MPS END View - Curve Lens



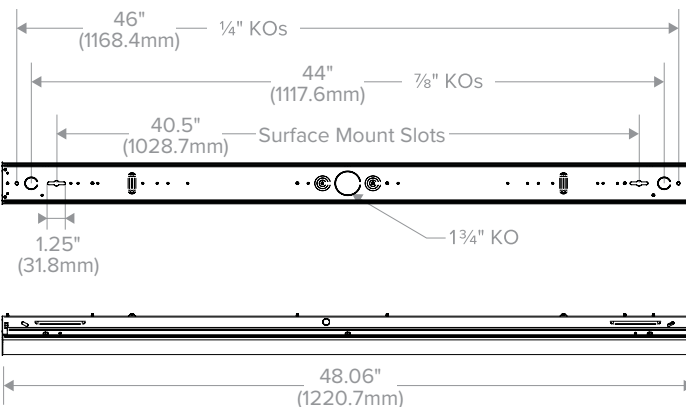
MPS END View - FLAT Lens



MPS 2' Dimensions

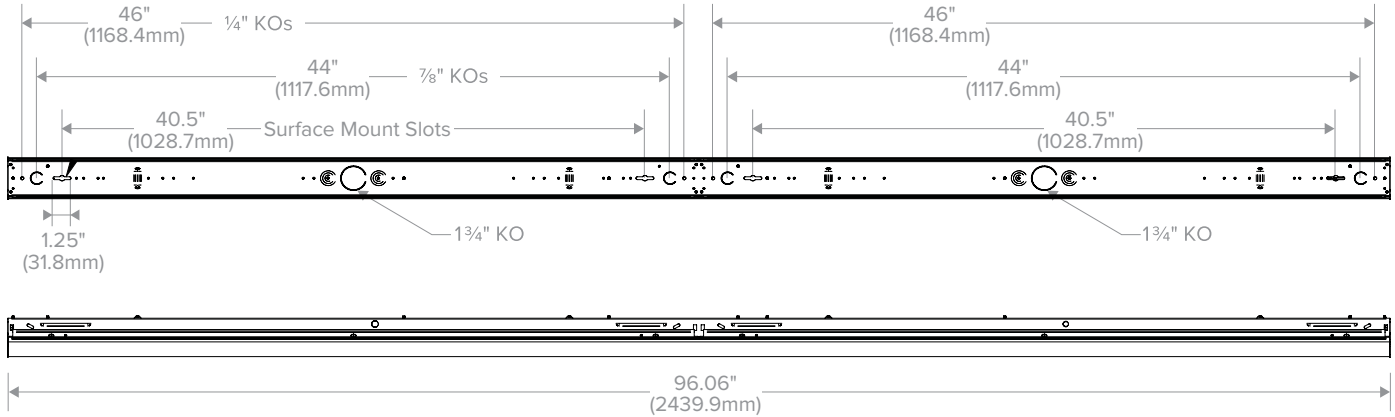


MPS 4' Dimensions



DIMENSIONS (CONTINUED)

MPS 8' Dimensions



PHOTOMETRY

MPS4-40ML-CN-EDU

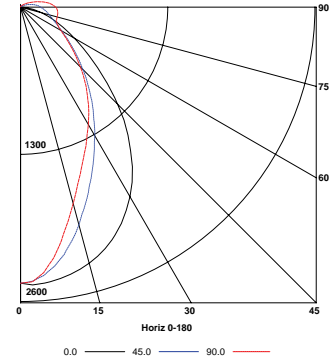
LUMINAIRE DATA

Test No.	19735
Description	MultiPurpose Linear, Narrow, LED 4ft, Frosted Linear Prisms Lens
Delivered Lumens	4742
Watts	37.70
Efficacy	126
Mounting	Surface
Spacing Criterion	0° = 1.18 90° = 1.77

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1542	32.5
0-40	2326	49.1
0-60	3518	74.2
0-90	4385	92.5
0-180	4742	100

POLAR GRAPH



MPS4-40ML-CW-EDU

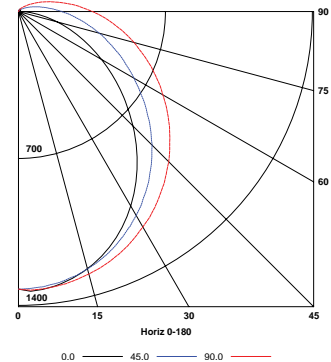
LUMINAIRE DATA

Test No.	19600
Description	MultiPurpose Linear, Wide, LED 4ft, Frosted Linear Prisms Lens
Delivered Lumens	4615
Watts	40.10
Efficacy	115
Mounting	Surface
Spacing Criterion	0° = 1.20 90° = 1.33

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1029	22.3
0-40	1688	36.6
0-60	3019	65.4
0-90	4248	92
0-180	4615	100

POLAR GRAPH



PHOTOMETRY (CONTINUED)

MPS4-40ML-FW-EDU

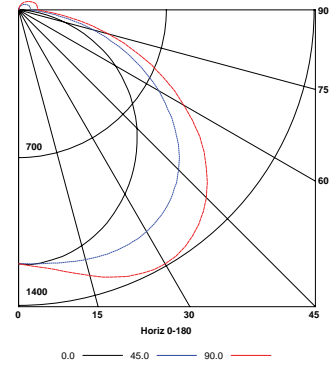
LUMINAIRE DATA

Test No.	19652
Description	MultiPurpose Linear, Wide, LED 4ft, Frosted Linear Prisms Lens
Delivered Lumens	4685
Watts	37.80
Efficacy	124
Mounting	Surface
Spacing Criterion	0° = 1.24 90° = 1.67

ZONAL LUMEN SUMMARY

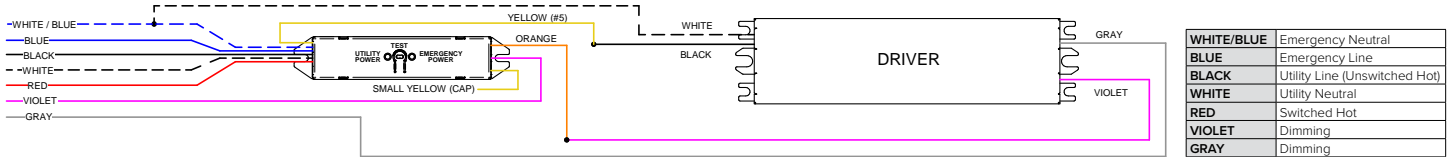
Zone	Lumens	% Luminaire
0-30	1026	21.9
0-40	1756	37.5
0-60	3324	70.9
0-90	4435	94.7
0-180	4685	100

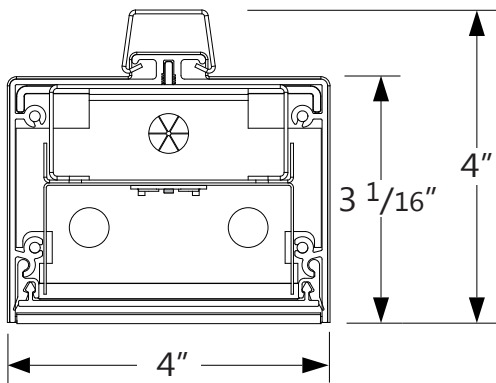
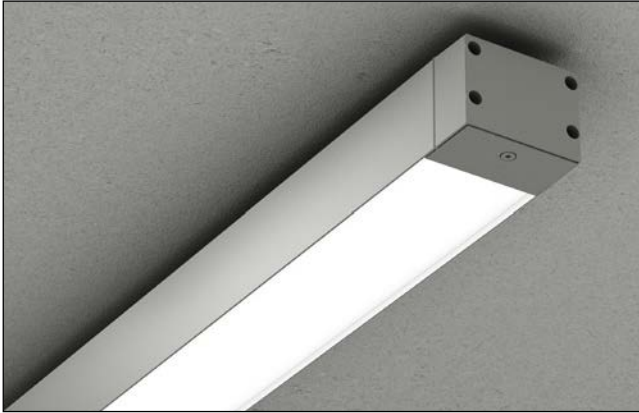
POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)





Project _____
 Type _____
 Notes _____

PERFORMANCE PER LINEAR FOOT AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
500 lm/ft	5.5 W/ft	91 lm/W
900 lm/ft	9.9 W/ft	91 lm/W

Please consult factory for custom lumen output and wattage.



cULus Listed
Type I.C.



Ordering Guide

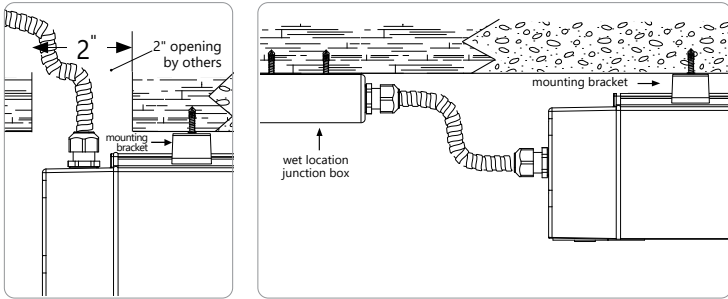
WBSLED		NOM.LUMENS/FT		CRI		COLOR TEMP.		S		LENGTH (FT)	
PRODUCT ID		500	900	80	90	27	30	35	40	S	
Surface LED		500 lm/ft - Min.	900 lm/ft - Max.	80 CRI	90 CRI	2700 K	3000 K	3500 K	4000 K	S satin lens	2 2'
											3 3'
											4 4'
											5 5'
											8 8'
											S# system run
		Outputs between listed min and max are available. Consult factory for outputs outside of the listed range.									

FINISH		VOLTAGE		DRIVER		CIRCUITS		MOUNTING/SUSPENSION	
AP	aluminum paint	120	120 V	DP	dimming (0-10V) 1%	1	1 circuit	SC	surface solid ceiling
W	white	277	277 V	LT(#)	Lutron *	2	2 circuits		
BLK	black	347	347 V	BI	bi-level dimming	+E(#)	emergency circuit *		
C	custom	UNV	universal	O(#)	other **	+NL(#)	night light circuit *		
		DC	low voltage*	POE(#)	POE drivers*	+GTD(#)	generator transfer device *		
		* Only available with POE drivers.		* Operating up to -20°C; Specify system ** Please consult factory; see page 2		* Specify quantity			

BATTERY (OPTIONAL)		OTHER (OPTIONAL)		IC CONTROLS (OPTIONAL)		CUSTOM (OPTIONAL)	
B#	battery pack (integral)	F	fuse ⁽⁴⁾	OS#	occupancy sensor	C	custom
		EF	end feed*	EN	Enlighted integral	N	natatorium finish
				WC#	wireless control dimming		
Not available with 347V Please consult factory		(4) Requires 120V or 277V; * See page 2 for more details.		See integrated controls guide for further details Please consult factory		Please specify	

● **MOUNTING OPTIONS**

SC SURFACE SOLID CEILING



Power top feed

Power end feed

● **OTHER MOUNTING OPTIONS**

WET BEAM 4 LED is available with recessed horizontal, recessed vertical, pendant, and wall mounted options.

● **CONSTRUCTION**

Housing	Extruded Aluminum (0.062" nominal) Up to 70% Recycled Content
End Cap	Die Cast Zinc (0.070" nominal)
Interior Brackets	Die Formed Sheet Steel (16 gauge)
Gaskets	Moulded Elastomer (0.100" nominal)
Lens Gaskets	Extruded Elastomer (0.045" nominal)
Satin Lens	Extruded Polycarbonate

● **ELECTRICAL**

Lutron driver*	LDE1 - Hi-lume 1% EcoSystem with Soft-on, Fade-to-Black LDE5 - 5-Series EcoSystem LTEA - Hi-lume 1% 2-wire (120V forward phase only) *Consult factory
Other drivers**	DALI - Digital Addressable Lighting Interface DMX - Digital Multiplex LV - line voltage - Advance Mark 10 Xitanium SR - For wireless sensor
Power over Ethernet POE drivers*	MOLEX IGOR O - Other (Consult factory)
Emergency	Integral emergency battery pack or emergency circuit optional.
Input Voltage	120V, 277V, 347V, UNV.

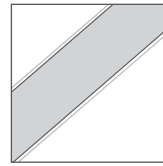
i Incorporating these components may have limitations or affect the length of the luminaire. Please contact factory for more details.

● **LED SYSTEM**

CRI	Minimum 80 or 90 color rendering index.
CCT	Choice of 2700K, 3000K, 3500K and 4000K color temperature with a great color consistency (within 3-step MacAdam ellipse). Both within fixture and fixture to fixture.
LED life	Minimum 50,000h with 85% of lumen maintenance in 25°C ambient temperature, in compliance with IES LM-80 testing measurements.
Thermal Management	Aluminum housing acting as the heat sink to maximize life.

i Row configuration, specification sheets and mounting spacing guides are available for download at: www.axislighting.com

● **OPTICS**



S satin lens

SATIN LENS
Extruded Polycarbonate

● **WEIGHT**

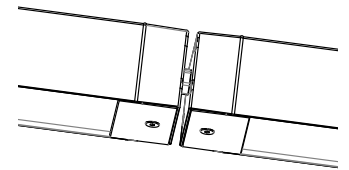
Surface 4 ft	12.8 lbs / 5.8 kg
Surface 8 ft	24.5 lbs / 11.1 kg

● **GASKETTED FIXTURE**

With its gasketted end cap and lens the Wet BEAM 4 LED is made for wet locations, and is ideal for exterior soffits and canopies of malls, hospitals and other institutions.

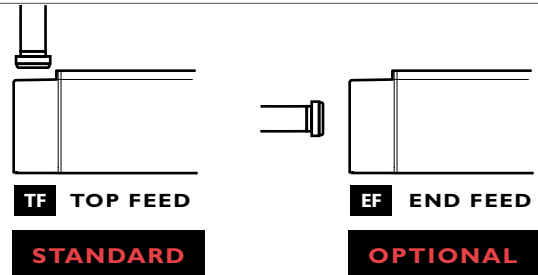
● **JOINER SYSTEM**

Wet BEAM 4 modular system consists of smaller modules joined and gasketted together allowing for system runs in lengths of 4' and 8' as well as custom lengths up to 12'.



* For continuous rows allow 2" for connectors between each fixture.

● **POWER FEED**



* Not available with 347 V.

● **FINISH**

Powder coated and custom finishes are also available.

● **APPROVALS**

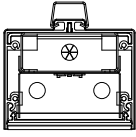
Certified wet locations to UL and CSA standards 

● **WARRANTY**

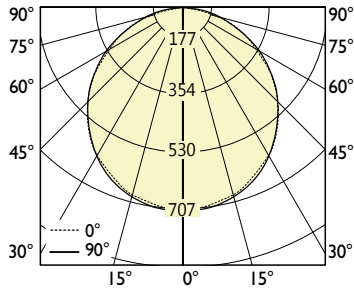
Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

● PHOTOMETRIC DATA

500 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 500 lm/ft
Input Watts: 5.5 W/ft
Efficacy: 91 lm/W
 IES FILE: WBSLED-500-80-35-S.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	704	704	704	704	704
5	697	701	700	703	706
15	672	677	677	679	682
25	623	626	627	628	631
35	552	555	555	554	555
45	465	466	466	465	465
55	363	365	364	362	361
65	249	250	249	246	244
75	129	130	126	123	121
85	29	25	20	17	16
90	0	0	0	0	0

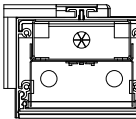
ZONAL LUMENS

Zone	Lumens
0	
0-10	67
10-20	191
20-30	289
30-40	347
40-50	359
50-60	324
60-70	245
70-80	133
80-90	28
90	

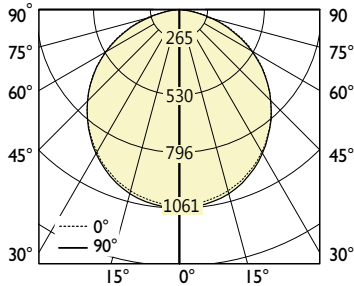
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	5567	5579	5567
55	5357	5372	5328
65	4987	4987	4887
75	4219	4121	3957
85	2817	1942	1554

750 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 750 lm/ft
Input Watts: 8.3 W/ft
Efficacy: 90 lm/W
 IES FILE: WBSLED-750-80-35-S.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1056	1056	1056	1056	1056
5	1046	1052	1050	1055	1059
15	1008	1016	1016	1019	1023
25	935	939	941	942	947
35	828	833	833	831	833
45	698	699	699	698	698
55	545	548	546	543	542
65	374	375	374	369	366
75	194	195	189	185	182
85	44	38	30	26	24
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	100
10-20	287
20-30	433
30-40	520
40-50	539
50-60	486
60-70	368
70-80	200
80-90	43
90	

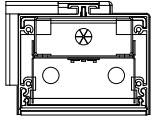
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	8350	8368	8350
55	8036	8058	7992
65	7481	7481	7331
75	6329	6181	5936
85	4225	2914	2331

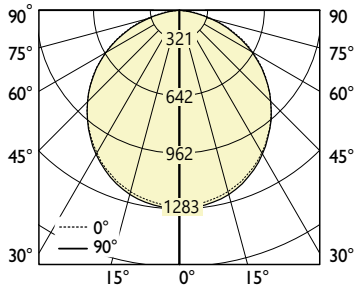
i All IES files are available for download at: www.axislighting.com

● PHOTOMETRIC DATA

900 lm/ft



PHOTOMETRIC CURVE



Luminaire Lumens: 900 lm/ft
Input Watts: 9.9 W/ft
Efficacy: 91 lm/W
 IES FILE: WBSLED-900-80-35-S.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	1278	1278	1278	1278	1278
5	1265	1272	1271	1276	1281
15	1220	1229	1229	1232	1238
25	1131	1136	1138	1140	1145
35	1002	1007	1007	1006	1007
45	844	846	846	844	844
55	659	662	661	657	655
65	452	454	452	446	443
75	234	236	229	223	220
85	53	45	36	31	29
90	0	0	0	0	0

ZONAL LUMENS

Zone	Lumens
0	
0-10	121
10-20	347
20-30	524
30-40	629
40-50	652
50-60	589
60-70	445
70-80	242
80-90	52
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	10104	10125	10104
55	9723	9750	9670
65	9052	9052	8870
75	7658	7480	7183
85	5112	3526	2821

i All IES files are available for download at: www.axislighting.com

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

FEATURES

- High efficiency acrylic center lens features linear prisms for high performance without pixelation
- Appropriate for offices, schools, medical, and public spaces
- High performance reflector with matte white paint standard
- HE lumen packages available
- LED modules and electrical accessible from below
- Optional architecturally styled integration of daylight and occupancy sensor(s)
- QR code traceability
- Compatible with Dual-Lite inverters



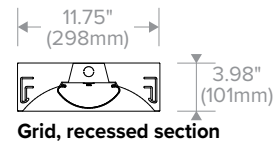
See Certification Specifications

CONTROL TECHNOLOGY



RELATED PRODUCTS

⌘ [LCAT12](#) ⌘ [LCAT22](#) ⌘ [LCAT24](#)



SPECIFICATIONS

CONSTRUCTION

- Luminaire housing, reflectors and end caps are die-formed code-gauge cold-rolled steel
- High transmission extruded acrylic enclosed lens features linear prisms with custom frost for high efficacy without pixelation
- All reflective surfaces are finished after fabrication with unique formula high-reflectivity matte white paint for soft, uniform indirect illumination

OPTICS

- Removable lens for easy access to LED module and electrical components

INSTALLATION

- An access plate is furnished with each luminaire for fast wiring access without the necessity to open the fixture or wireway
- Luminaire fits recessed exposed Grid ceilings (G); four integral NEC compliant T-bar clips are standard
- Can be placed in Slot Grid (SG) style ceiling with regress 3/8" above ceiling plane
- A Flange Kit (FK) accessory is available for recessed hard ceiling applications
- Surface Mount (SM) option allows placement below ceiling plane
- Cable Mount (CM) option allows suspension below ceiling plane

ELECTRICAL

- 60,000 hour LEDs at L80 for reduced maintenance

ELECTRICAL (CONTINUED)

- 83 CRI standard or optional 90 CRI for color sensitive applications

CONTROLS

- Optional SpectraSync™ offers two modes of Tunable White solutions and integrates seamlessly into a variety of control systems
- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- IC label is standard for recessed products. Note that IC label is void if product is installed on site with a combination of both battery pack plus through wiring or for air return fixtures
- All luminaires are built to UL1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Damp Location label standard
- Adheres to LM79, LM80, and TM21 industry standards

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- NX is available in U.S., Canada and Mexico. For other locations consult factory
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 8 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 04/03/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2039–7738
Wattage Range	19–59
Efficacy Range (LPW)	94–146
Reported Life (Hours)	L80/60,000

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

ORDERING GUIDE

Example: LCAT14-35MLG-ESDU

CATALOG # _____

LCAT14														
Model	CRI	Color Temp		Delivered Lumens ³		Ceiling Type		Shielding		Air Function	Driver			
LCAT14 1' x 4' LED Contemporary Architectural Troffer	Blank	>80	30	3000K	XW	2036-2586	G	Grid Lay-in ⁴	Blank	Curve	Blank	Static	E	Fixed Output
	9	>90 ¹	35	3500K	XWHE	2457-2680	SM	Surface Mount ^{5,13}	R	Rectangular	A	Air Return Side Slots	ED	0-10V Dimming
			40	4000K	VW	2591-3584							ED1	0-10V 1% Dimming
			50	5000K	VWHE	3083-3511	CM	Cable Suspended Mount ^{5,6}					EDD	0-10V Dim-to-Dark
			2750T	2700K-5000K SpectraSync™ Tunable White ²	MW	3107-4164							ESD	Step Dimming ^{7,9,14}
			2765T	2700K-6500K SpectraSync™ Tunable White ²	MWHE	3540-4351							LUTH	Hi-lume 1% EcoSystem LED driver with Soft-on, Fade-to-Black dimming technology ^{7,9,14}
					LW	3611-4985							LUT5	5-Series EcoSystem LED driver ^{7,9,14}
					ML	4039-5341							DALIP	Dali Power Bus ¹⁷
					HL	4471-6156								
					VL	5615-7738 ¹²								

Voltage	Options	Control Options
U 120-277V 347 347V ¹⁵	<p>ELL14 Emergency Battery Pack Installed, 1400 Lumens^{8,9}</p> <p>ELL14ST Emergency Battery Pack, 1400 Lumens, Self Test^{8,9}</p> <p>ELL14H2 Emergency Battery Pack, 2-Hour Run Time^{8,9}</p> <p>DTS Dimming Bypass Module¹⁰</p> <p>C388 3-wire Flex¹⁶</p> <p>C488 4-wire Flex¹⁶</p> <p>C588 5-wire Flex¹⁶</p> <p>GLR Fast Blow Fuse</p> <p>EOR End of Row (SM and CM only. Provides end wiring access for continuous row mounting.)⁵</p> <p>INT Intermediate (SM and CM only. Provides ends with wiring access for continuous row mounting.)⁵</p> <p>CP Chicago Plenum</p> <p>SAF SpectraSAFE™ Integrated Surveillance Lighting System¹¹</p>	<p><u>NX Standalone</u></p> <p>NXS NX, PIR BT Occupancy/Daylight Sensor, Slide Mount^{14,15}</p> <p><u>NX Networked – Wired</u></p> <p>NXE NX, Dual SmartPORTS^{14,15}</p> <p>NXES NX, PIR BT Occupancy/Daylight Sensor, Slide Mount, Dual SmartPORTS^{14,15}</p> <p><u>NX Networked – Wireless</u></p> <p>NXSW NX Wireless, PIR BT Occupancy/Daylight Sensor^{13,14,15}</p> <p>NXWE NX Wireless Enabled^{13,14,15}</p> <p><u>NX Networked – Wired/Wireless</u></p> <p>NXSWD NX, PIR BT Occupancy/Daylight Sensor, Wireless enabled, Dual SmartPORTS^{14,15}</p> <p>NXWD NX, Wireless Enabled, Dual SmartPORTS^{14,15}</p> <p><u>Third-Party Control Options</u></p> <p>ODPG Occupancy and Daylight Sensors w/ Grouping, Philips SNS200^{9,17,21}</p> <p>LV Lutron VIVE Attached FCJS POWPAK Fixture Control (RF only for 0-10V drivers)^{9,18,19,20,21}</p> <p>LVR Lutron VIVE Integral Fixture Control DFCSJ-OEM-RF (RF only)^{9,17,19,21}</p> <p>LVS Lutron VIVE Integral Fixture Control DFCSJ-OEM-OCC (RF with daylight and occupancy sensing)^{9,17,19,21}</p> <p>ZRE ControlScope® compatible^{9,21,22}</p>

Accessories

- FK14** 1' x 4' Single Flange Kit (Shipped separately)
- CM48Y1SC3F48** 48" Cable Mount Kit for 1' wide Cable Mount fixtures, 3-wire

Notes:

- 1 Not available with HE lumen output
- 2 Available with ED driver and 80 CRI only. Not available with HE or VL lumen outputs
- 3 High efficacy versions designated with "HE"
- 4 For drywall, order G with Flange Kit Accessory
- 5 Not available with Air Return (A) air function
- 6 Order hanger accessories separately
- 7 Limitations apply based on lumen packages (see [Product Exceptions & Details](#))
- 8 For compatibility with Dual-Lite LiteGear® inverters, contact Hubbell Lighting Representative
- 9 Not available in 347V
- 10 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Only available with 0-10V drivers. Universal voltage only. See page 8 for wiring diagram
- 11 SpectraSync+NX+SAF can not be configured. Only available with NXE, NXWE or NXWD. Not available in 347V

NX In-Fixture Control Options:

- 12 NX control function not available with VL lumen output
- 13 NXSW, NXWE, NXSWD and NXWD cannot be used with surface mount versions
- 14 NX is not available with ESD, LUTH, LUT5 or DALIP driver options
- 15 NX combined with Spectrasync is not available in 347V
- 16 For NX control and Flex Wire together, consult factory

Third-Party Control Options:

- 17 LVS, LVR and ODPG only compatible with DALIP driver option
 - 18 Only available with ED driver option
 - 19 VIVE is a trademark of Lutron Electronics Co., Inc
 - 20 Installations controlled solely by the Lutron Pico controller require accessing the LV (Lutron FCJS) module for commissioning after the circuit has been energized
 - 21 Not available with SpectraSync (2750T or 2765T)
 - 22 Registered trademark of Daintree Networks, used by permission
- For questions about configuration options, contact Hubbell Representative

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

PRODUCT EXCEPTIONS & DETAILS

Driver options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE										
	XW	XWHE	VW	VWHE	MW	MWHE	LW	ML	HL	VL
E	X	X	X	X	X	X	X	X	X	X
ED	X	X	X	X	X	X	X	X	X	X
ED1	X	X	X	X	X	X	X	X	X	X
EDD			X		X		X	X	X	
ESD	X	X	X	X	X	X	X	X	X	X
LUT5	X		X		X		X	X	X	
LUTH	X		X		X		X	X	X	
DALIP			X	X	X	X	X	X	X	X
347	X		X		X		X	X	X	

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync™ Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wired								
NXE	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ¹
NXES	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWE	N/A	Yes	Yes	No	No	Yes	Yes	No ²
NX Networked – Wired/Wireless								
NXSWD	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NXWD	N/A	Yes	Yes	No	No	Yes	Yes	Requires NXBTC/R ^{1,2}

1 NXBTC/R needs to be plugged into an available NX SmartPORT™ on the fixture network
 2 To program NXWE option, need to consult factory. If connected to an area controller, programming can be done from that

Philips EasySense Controls ODPG Sensor:



- Occupancy sensing, daylight harvesting, task tuning and grouping in one device
- Standalone control or grouping to wireless switches¹
- Uses Philips field apps for on site commissioning^{2,3}
- Ability to create scenes for various room configurations
- Cost-effective solution for energy-savings and code-compliance strategies
- DLC® Qualified: Listed on the GPL for Networked Lighting Controls. Please refer to the DLC website for specific product qualifications at www.designlights.org

1 Wireless switches only compatible with ODPG Philips EasySense
 2 [See link to Philips commissioning](#)
 3 Requires android device or IR dongle. See links for [phone compatibility](#) and [IR dongle](#)

Wireless Switch Accessories¹

- [PESR-WH](#) EasySense compatible wireless single rocker switch, white
- [PEDR-WH](#) EasySense compatible wireless dual rocker switch, white



LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

CONTROLS (CONTINUED)

SpectraSAFE™ Integrated Surveillance Lighting System

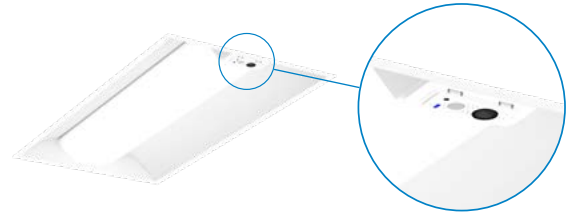


Technical Features

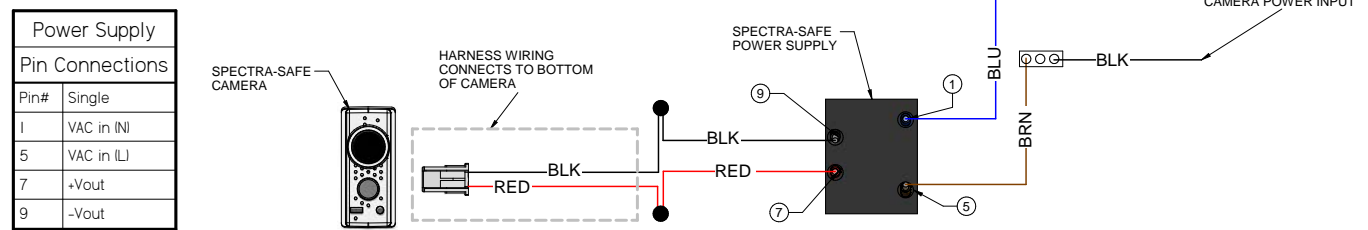
- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL

Software & Support

- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty



SPECTRASAFE WIRING DIAGRAM



SpectraSync™ Color Tuning Technology:

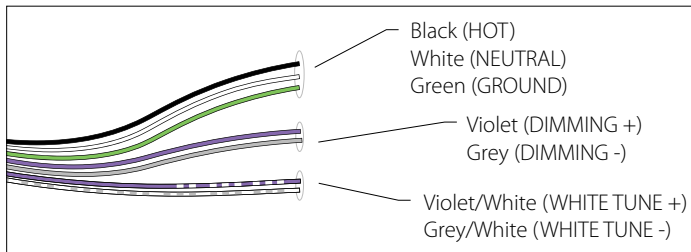
Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with distinct SpectraSync™ Color Tuning Technologies.



SPECTRASync COLOR TUNING TECHNOLOGY		
Mode	Kelvin Range	Description
Tunable White	2700K–5000K 2700K–6500K	Offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space

SpectraSync Tunable White

Available in two options: 2750T (2700K–5000K) or 2765T (2700K–6500K). Requires two 0–10V controllers, one for intensity and one for CCT. Minimum 5% dimming.

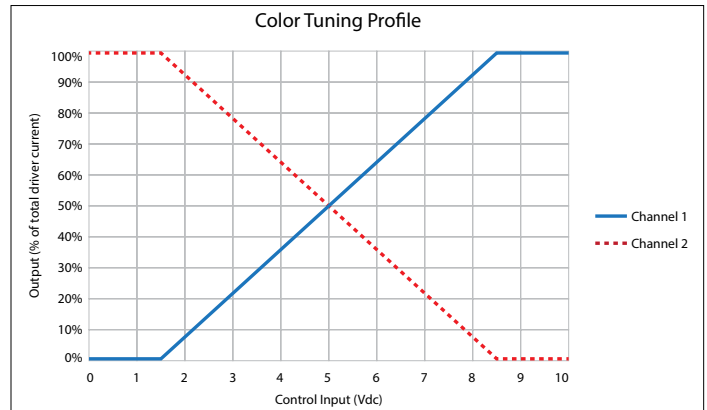


SpectraSync Tunable White luminaires are provided with two 0–10V circuits. The violet and grey circuit is for wiring to any qualified 0–10V controller for dimming. The violet/white and grey/white circuit is for wiring to any qualified 0–10V controller for Tunable White CCT control.

Controller Manufacturer Data

SpectraSync Tunable White was designed to be used with sinking style dimmers (provided by others) and is compatible with:

- Hubbell Control Solutions (HCS): NX Distributed Intelligence™ Room Controllers (NXRC) and In-fixture Controllers (NXFM)
- Lutron: DDTV, DVSTV, and NFTV dimmers
- Wattstopper: ADF120277 and CD4BL (Titan) dimmers



To enable scheduling and for use with NX wall control preset stations please refer to Hubbell Control Solutions NX SpectraSync technical sheet.

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DELIVERED LUMENS, SPECTRASync™



Shielding	Lumen Output	Watts	2700		3000		3500		4000		5000		6500	
			Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
Curve	XW	19	2200	113	2299	119	2340	121	2370	122	2448	126	2412	124
	VW	28	3012	110	3147	114	3204	116	3245	118	3352	122	3301	120
	MW	32	3499	108	3656	113	3722	115	3769	117	3894	121	3835	119
	LW	36	4188	116	4376	122	4455	124	4512	125	4660	129	4590	128
	ML	38	4487	117	4689	122	4773	125	4834	126	4994	130	4919	128
	HL	44	5173	118	5405	123	5502	125	5573	127	5756	131	5670	129
	VL	58	6501	113	6793	118	6915	120	7004	122	7235	126	7126	124
Rectangle	XW	21	2295	111	2398	116	2441	119	2472	120	2554	124	2516	122
	VW	28	2916	106	3047	111	3102	113	3141	114	3245	118	3196	116
	MW	32	3508	109	3666	113	3732	116	3780	117	3904	121	3846	119
	LW	36	4063	113	4246	118	4322	120	4378	122	4522	126	4454	124
	ML	38	4545	119	4749	124	4834	126	4896	128	5058	132	4982	130
	HL	44	5034	116	5260	121	5355	123	5423	125	5602	129	5518	127
	VL	58	6322	109	6606	114	6725	116	6811	118	7035	122	6930	120

DELIVERED LUMENS

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30XW	Curve	2299	19	119
LCAT14-30XWx-R	Rectangle	2398	21	116
LCAT14-30XWHE	Curve	2457	19	129
LCAT14-30XWHEx-R	Rectangle	2486	20	124
LCAT14-35XW	Curve	2377	19	123
LCAT14-35XWx-R	Rectangle	2480	21	120
LCAT14-35XWHE	Curve	2540	19	134
LCAT14-35XWHEx-R	Rectangle	2570	20	129
LCAT14-40XW	Curve	2414	19	124
LCAT14-40XWx-R	Rectangle	2519	21	122
LCAT14-40XWHE	Curve	2580	19	136
LCAT14-40XWHEx-R	Rectangle	2610	20	131
LCAT14-50XW	Curve	2478	19	128
LCAT14-50XWx-R	Rectangle	2586	21	126
LCAT14-50XWHE	Curve	2648	19	139
LCAT14-50XWHEx-R	Rectangle	2680	20	134
LCAT14-30VW	Curve	3147	28	114
LCAT14-30VWx-R	Rectangle	3047	28	111
LCAT14-30VWHE	Curve	3083	24	128
LCAT14-30VWHEx-R	Rectangle	3161	26	122
LCAT14-35VW	Curve	3241	28	118
LCAT14-35VWx-R	Rectangle	3150	28	115
LCAT14-35VWHE	Curve	3175	24	132
LCAT14-35VWHEx-R	Rectangle	3268	26	126
LCAT14-40VW	Curve	3291	28	120
LCAT14-40VWx-R	Rectangle	3200	28	116
LCAT14-40VWHE	Curve	3224	24	134
LCAT14-40VWHEx-R	Rectangle	3319	26	128
LCAT14-50VW	Curve	3584	28	130
LCAT14-50VWx-R	Rectangle	3285	28	119
LCAT14-50VWHE	Curve	3511	24	146
LCAT14-50VWHEx-R	Rectangle	3407	26	131

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-930XW	Curve	2105	21	102
LCAT14-930XWx-R	Rectangle	2039	21	99
LCAT14-935XW	Curve	2150	21	104
LCAT14-935XWx-R	Rectangle	2082	21	101
LCAT14-940XW	Curve	2197	21	107
LCAT14-940XWx-R	Rectangle	2127	21	103
LCAT14-950XW	Curve	2340	21	114
LCAT14-950XWx-R	Rectangle	2266	21	110
LCAT14-930VW	Curve	2674	28	97
LCAT14-930VWx-R	Rectangle	2591	28	94
LCAT14-935VW	Curve	2738	28	100
LCAT14-935VWx-R	Rectangle	2645	28	96
LCAT14-940VW	Curve	2801	28	102
LCAT14-940VWx-R	Rectangle	2702	28	98
LCAT14-950VW	Curve	2958	28	108
LCAT14-950VWx-R	Rectangle	2878	28	105

(Tables continue on next page.)

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

DELIVERED LUMENS (CONTINUED)

Product Availability 80 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-30MW	Curve	3656	32	113
LCAT14-30MWx-R	Rectangle	3666	32	113
LCAT14-30MWHE	Curve	3820	31	123
LCAT14-30MWHEx-R	Rectangle	3540	29	122
LCAT14-35MW	Curve	3766	32	117
LCAT14-35MWx-R	Rectangle	3791	32	117
LCAT14-35MWHE	Curve	3935	31	127
LCAT14-35MWHEx-R	Rectangle	3661	29	126
LCAT14-40MW	Curve	3824	32	118
LCAT14-40MWx-R	Rectangle	3850	32	119
LCAT14-40MWHE	Curve	3996	31	129
LCAT14-40MWHEx-R	Rectangle	3717	29	128
LCAT14-50MW	Curve	4164	32	129
LCAT14-50MWx-R	Rectangle	3953	32	122
LCAT14-50MWHE	Curve	4351	31	140
LCAT14-50MWHEx-R	Rectangle	3816	29	132
LCAT14-30LW	Curve	4376	36	122
LCAT14-30LWx-R	Rectangle	4246	36	118
LCAT14-35LW	Curve	4508	36	125
LCAT14-35LWx-R	Rectangle	4391	36	122
LCAT14-40LW	Curve	4578	36	127
LCAT14-40LWx-R	Rectangle	4459	36	124
LCAT14-50LW	Curve	4985	36	138
LCAT14-50LWx-R	Rectangle	4578	36	127
LCAT14-30ML	Curve	4689	38	122
LCAT14-30MLx-R	Rectangle	4749	38	124
LCAT14-35ML	Curve	4830	38	126
LCAT14-35MLx-R	Rectangle	4911	38	128
LCAT14-40ML	Curve	4905	38	128
LCAT14-40MLx-R	Rectangle	4988	38	130
LCAT14-50ML	Curve	5341	38	139
LCAT14-50MLx-R	Rectangle	5122	38	134
LCAT14-30HL	Curve	5405	44	123
LCAT14-30HLx-R	Rectangle	5260	44	121
LCAT14-35HL	Curve	5567	44	127
LCAT14-35HLx-R	Rectangle	5439	44	125
LCAT14-40HL	Curve	5653	44	129
LCAT14-40HLx-R	Rectangle	5524	44	127
LCAT14-50HL	Curve	6156	44	140
LCAT14-50HLx-R	Rectangle	5672	44	130
LCAT14-30VL	Curve	6793	58	118
LCAT14-30VLx-R	Rectangle	6606	58	114
LCAT14-35VL	Curve	6997	58	122
LCAT14-35VLx-R	Rectangle	6830	58	118
LCAT14-40VL	Curve	7106	58	124
LCAT14-40VLx-R	Rectangle	6937	58	120
LCAT14-50VL	Curve	7738	58	135
LCAT14-50VLx-R	Rectangle	7122	58	123

Product Availability 90 CRI				
Lumen Package	Shielding	Lumens	Input Watts	LPW
LCAT14-930MW	Curve	3107	32	96
LCAT14-930MWx-R	Rectangle	3118	32	97
LCAT14-935MW	Curve	3180	32	98
LCAT14-935MWx-R	Rectangle	3183	32	99
LCAT14-940MW	Curve	3254	32	101
LCAT14-940MWx-R	Rectangle	3252	32	101
LCAT14-950MW	Curve	3437	32	106
LCAT14-950MWx-R	Rectangle	3464	32	107
LCAT14-930LW	Curve	3720	36	103
LCAT14-930LWx-R	Rectangle	3611	36	100
LCAT14-935LW	Curve	3808	36	106
LCAT14-935LWx-R	Rectangle	3686	36	102
LCAT14-940LW	Curve	3895	36	108
LCAT14-940LWx-R	Rectangle	3766	36	105
LCAT14-950LW	Curve	4113	36	114
LCAT14-950LWx-R	Rectangle	4011	36	111
LCAT14-930ML	Curve	4158	38	109
LCAT14-930MLx-R	Rectangle	4039	38	105
LCAT14-935ML	Curve	4247	38	111
LCAT14-935MLx-R	Rectangle	4124	38	108
LCAT14-940ML	Curve	4339	38	113
LCAT14-940MLx-R	Rectangle	4213	38	110
LCAT14-950ML	Curve	4621	38	121
LCAT14-950MLx-R	Rectangle	4487	38	117
LCAT14-930HL	Curve	4656	43	107
LCAT14-930HLx-R	Rectangle	4471	44	103
LCAT14-935HL	Curve	4756	43	110
LCAT14-935HLx-R	Rectangle	4567	44	105
LCAT14-940HL	Curve	4859	43	112
LCAT14-940HLx-R	Rectangle	4665	44	107
LCAT14-950HL	Curve	5175	43	119
LCAT14-950HLx-R	Rectangle	4969	44	114
LCAT14-930VL	Curve	5621	58	97
LCAT14-930VLx-R	Rectangle	5615	58	97
LCAT14-935VL	Curve	6192	59	105
LCAT14-935VLx-R	Rectangle	5735	58	99
LCAT14-940VL	Curve	6283	59	107
LCAT14-940VLx-R	Rectangle	5859	58	101
LCAT14-950VL	Curve	6450	59	110
LCAT14-950VLx-R	Rectangle	6240	58	108

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

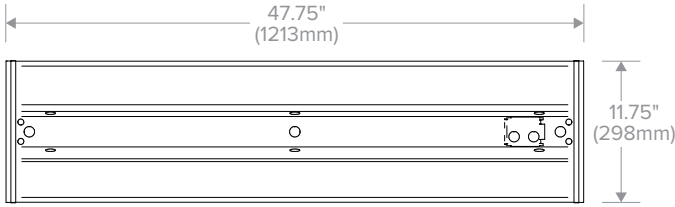
CATALOG #: _____

DIMENSIONS

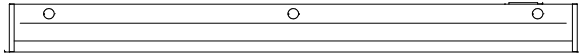
GRID



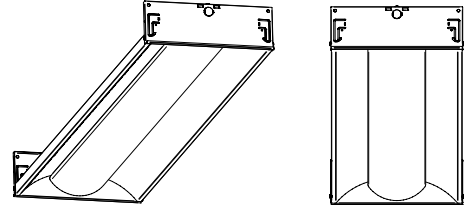
Grid, recessed section



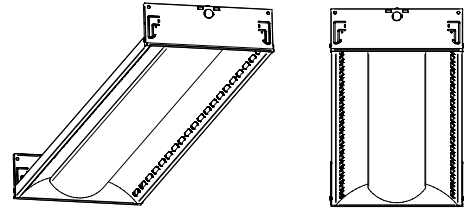
Grid, back of housing



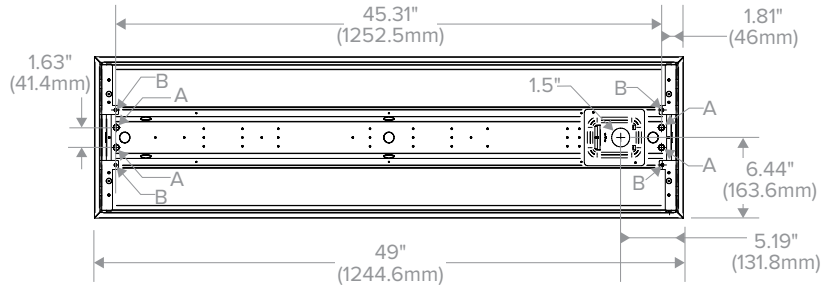
GRID, STATIC



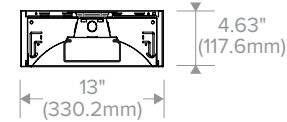
GRID, AIR RETURN



SURFACE MOUNT OR CABLE MOUNT, STATIC ONLY



Surface Mount (SM) and Cable Mount (CM), back of housing



Surface section (SM)

Surface Mount:

Order SM ceiling type. Mounting collar required for surface mounting. (4) Mounting knock-outs, 3/8", provided in center channel as indicated at left, marked A.

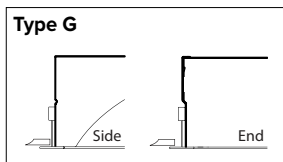
Cable Mount:

Order CM ceiling type. Use CM48Y1SC3F48 48" Cable Mount Kit for 1' wide CM trim fixtures. Mounting holes are provided in diagonal straps shown at left, marked B.

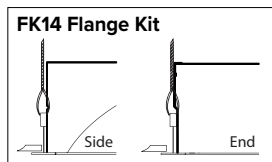
* For Cable Mount a 2" x 3" access plate with (4) 3/8" KO's provided in place of Mounting Collar shown.

NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

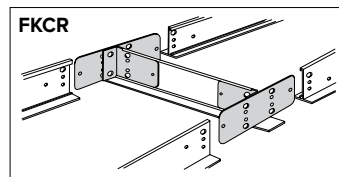
CEILING COMPATIBILITY



For lay-in installation in exposed grid ceilings. Maximum tee widths of 1" and maximum tee heights of 2" allowed.



For hard ceiling applications, order FK24 flange kit. Flange kit wires directly into concealed ceiling opening for a clean, finished appearance.



For flanged fixtures in row configurations, the FKCR adapter bracket kit is required in addition to the FK14 kit. Order one less FKCR than the total number of fixtures in row. (Example: Row of two, order (2) FK14 & (1) FKCR)

Row cut out dimensions using FK14s & FKCR adapters: Width 12 3/8", Length [48" x (# in row)] + 3/8". Example: (48" x 2) + 3/8" = 96 3/8"

Flange kit cut out dimension for single unit only: 12 3/8" x 48 3/8"

LCAT14

1' x 4' LED CONTEMPORARY ARCHITECTURAL TROFFER

DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

PHOTOMETRY

LCAT14-35LWG-EU

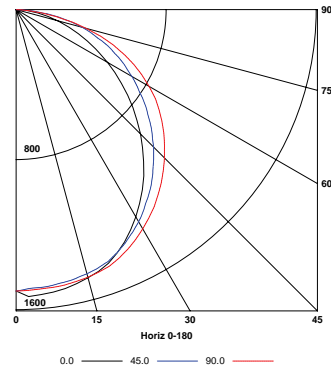
LUMINAIRE DATA

Test No.	16477
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4508
Watts	36.00
Efficacy	125
Mounting	Recessed
Spacing Criterion	0° = 1.25 90° = 1.33

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1193	26.5
0-40	1959	43.5
0-60	3482	77.3
0-90	4508	100
0-180	4508	100

POLAR GRAPH



LCAT14-35MLG-EU

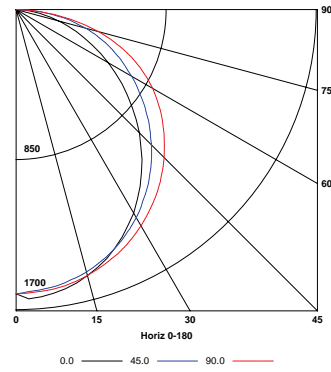
LUMINAIRE DATA

Test No.	16480
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	4830
Watts	38.30
Efficacy	126
Mounting	Recessed
Spacing Criterion	0° = 1.23 90° = 1.30

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1253	25.9
0-40	2054	42.5
0-60	3663	75.8
0-90	4830	100
0-180	4830	100

POLAR GRAPH



LCAT14-35HLG-EU

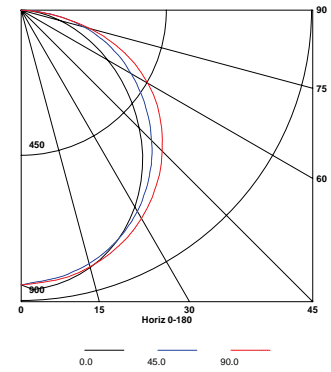
LUMINAIRE DATA

Test No.	16483
Description	1' x 4' LED architectural troffer with frosted linear prisms lens
Delivered Lumens	5567
Watts	43.090
Efficacy	127
Mounting	Recessed
Spacing Criterion	0° = 1.23 90° = 1.30

ZONAL LUMEN SUMMARY

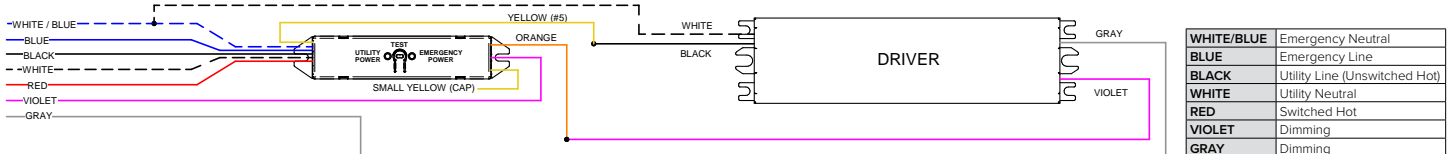
Zone	Lumens	% Luminaire
0-30	1472	26.4
0-40	2413	43.3
0-60	4287	77
0-90	5567	100
0-180	5567	100

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



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Dash™

PENDANT / SCNCE

FEATURES

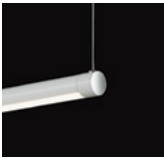
- SIMPLE LINEAR PROFILE CAN BE CONNECTED TO CREATE LONG CONTINUOUS RUNS
- FIXTURE IS ROTATABLE 350 DEGREES
- STRAIGHT AND ADJUSTABLE CONNECTORS AVAILABLE
- SUSPENSION SYSTEM FEATURES MINIMAL CEILING FITTINGS
- 3 STEP LED BINNING



CATALOG CODES

DA1	-	B	-	C	-	MW	-	E	-	i	-	UNV	-	H	-	I	-	J
SERIES		HANGING SYSTEM		SIZE		DIFFUSER		FINISH		LIGHT SOURCE		VOLTAGE		OAH		CONTROL		OPTIONS

SPECIFY CATALOG CODE

A		B		C	D	E		
SERIES	HANGING SYSTEM		SIZE	DIFFUSER	FINISH			
 DA1 DASH	PIEW	PENDANT WITH AN AIRCRAFT CABLE ON ONE END OF THE FIXTURE AND A POWER CORD ON THE OTHER (REMOTE DRIVER)		27	MW MATTE WHITE	POWDER COAT FINISHES		
		SISC	ARM SCNCE (REMOTE DRIVER)			39	BKP BLACK	MWP MATTE WHITE
			51	BMP BRASS METALLIC		SGP STEEL GRAY		
			63	BNP BRONZE		SMP SILVER METALLIC		
			75	BTP BLACK TEXTURED		SWP SKY WHITE		
XX	GRP GRAPHITE		WTP WHITE TEXTURED					
					PREMIUM METAL FINISHES			
					BAL BRUSHED ALUMINUM			

F		G	H	I	J	
LIGHT SOURCE		VOLTAGE	OAH*	CONTROL	OPTIONS	
LED OUTPUT	COLOR TEMP	UNV 120-277	48	DM1 0-10V DIMMING 1%	SCN STRAIGHT CONNECTOR	
LED1	27K		100	DM3 LUTRON HI-LUME ECOSYSTEM 1% (LDE1)	ACN ADJUSTABLE CONNECTOR (PIEW ONLY)	
LED2	30K		144		SCY 3.5" DIA. SMALL CANOPIES (REQUIRES PRE-INSTALLATION OF 3" MUD RING BY OTHERS; SISC ONLY)	
	35K		NOTE: LEAVE BLANK FOR SISC		PRA 4" PROJECTION OFF WALL (SISC ONLY)	
	40K				ULD DAMP LABEL	
					MOD MODIFIED LUMINAIRE (CONTACT LOCAL REP)	

SAMPLE CODE: DA1-PIEW-51-MW-BTP-LED1/35K-UNV-48-DM1-ULD

*For Minimum OAH, see hanging systems details. PIEW will ship with one of three standard OAH's (48", 100" or 144") field adjustable to the desired height
 Fixtures larger than 74.75" will be shipped in connectible segments
 Fixture is provided with 5" dia. canopies finished to match fixture

UP TO **90** LM/W

LUMENS AND WATTAGE CHART						
		27"	39"	51"	63"	75"
LED1	LUMENS DELIVERED	1080	1620	2160	2700	3240
	SYSTEM WATTAGE	12	18	24	30	36
LED2	LUMENS DELIVERED	1680	2520	3360	4200	5040
	SYSTEM WATTAGE	20	30	40	50	60

This chart was created for a 35K color temp. Multiply by 0.95 for 27k color temp, 0.97 for 30k color temp, and 1.03 for 40k color temp.

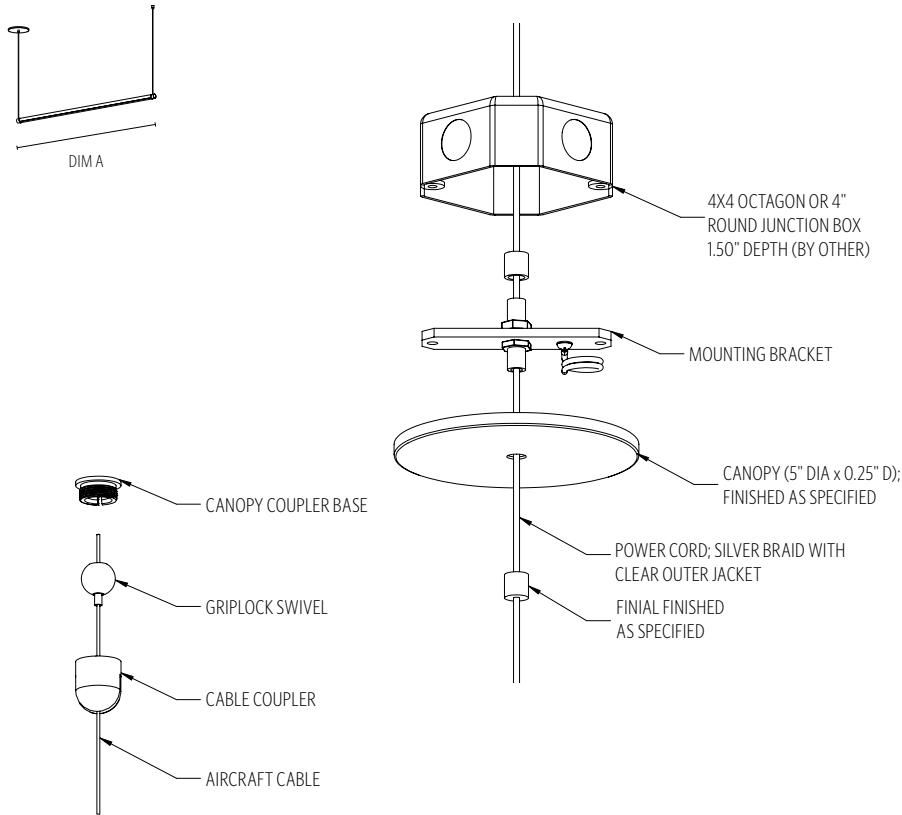
MODS, NOTES, & COMMENTS



This product meets the material restrictions of Article 4 of the RoHS Directive (2011/65/EU), including Commission Delegated Directive 2015/863.

HANGING SYSTEM

P1EW PENDANT WITH AN AIRCRAFT CABLE ON ONE END OF THE FIXTURE AND A POWER CORD ON THE OTHER

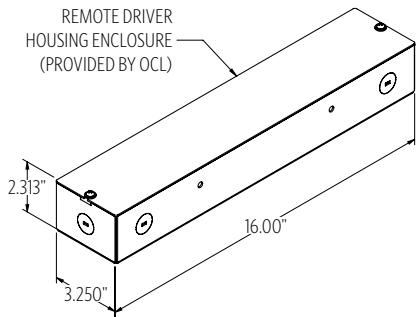


MOUNTING INFORMATION CHART

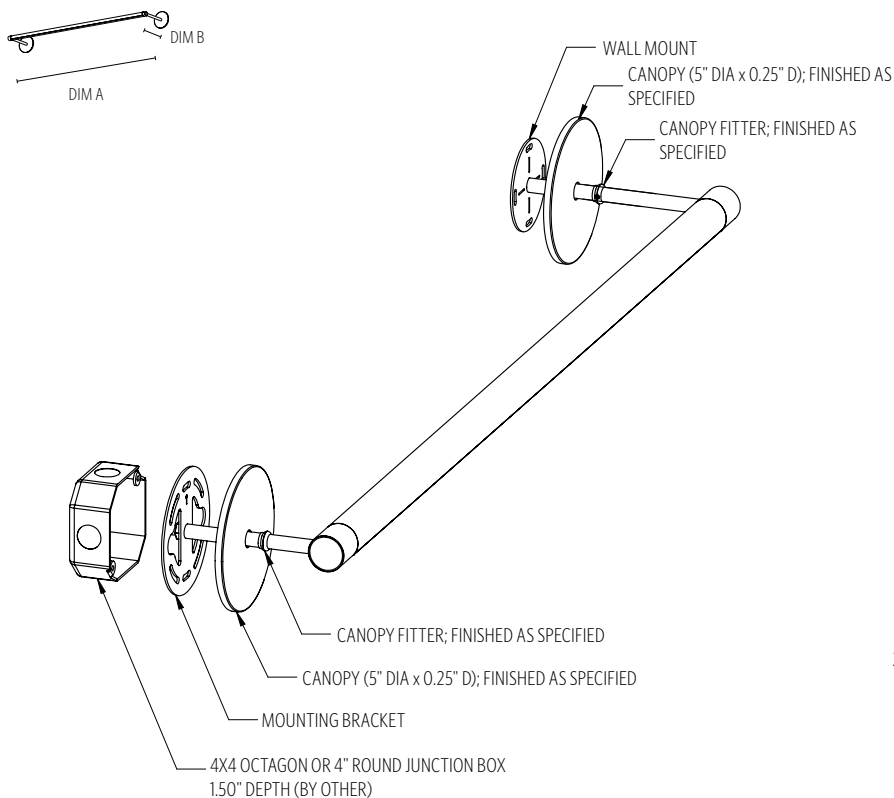
LUMINAIRE SIZE	LUMINAIRE WEIGHT	MOUNTING DISTANCE DIM A	MOUNTING POINTS	MIN/MAX OAH
26.75"	3 LBS	25.75"	2	5"/144"
38.75"	5 LBS	37.75"	2	5"/144"
50.75"	6 LBS	49.75"	2	5"/144"
62.75"	8 LBS	61.75"	2	5"/144"
74.75"	9 LBS	73.75"	2	5"/144"

P1EW ships with one of three standard OAH's (48", 100" or 144") field adjustable to the desired height.

P1EW will include ETL listed enclosure for remote mounting drivers. Max 30' distance from luminaire for DM1 and 10' max remote distance for DM3. Enclosure must remain accessible after installation.



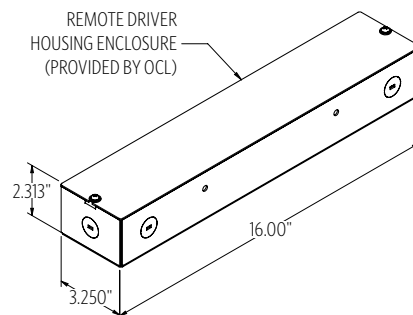
S1SC ARM SCENCE



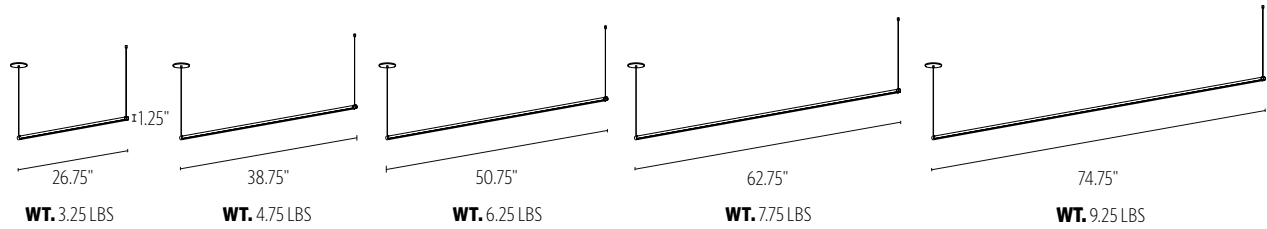
MOUNTING INFORMATION CHART

LUMINAIRE SIZE	LUMINAIRE WEIGHT	MOUNTING DISTANCE DIM A	MOUNTING DISTANCE DIM B	MOUNTING POINTS
26.75"	3 LBS	25.75"	6"	2
38.75"	5 LBS	37.75"	6"	2
50.75"	6 LBS	49.75"	6"	2
62.75"	8 LBS	61.75"	6"	2
74.75"	9 LBS	73.75"	6"	2

S1SC will include ETL listed enclosure for remote mounting drivers. Max 30' distance from luminaire for DM1 and 10' max remote distance for DM3. Enclosure must remain accessible after installation.



SIZES



DIFFUSER



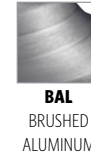
MW MATTE WHITE

FINISH

METALLIC POWDER COAT FINISHES:



PREMIUM METAL FINISHES:



SOLID POWDER COAT FINISHES:



TEXTURED POWDER COAT FINISHES:



RAL®, Pantone® or custom finishes are also available.

These colors are for reference only. Please be aware that colors may vary per monitor. Contact your local rep for finish samples or with any questions.

LIGHT SOURCE

LUMENS AND WATTAGE CHART

		27"	39"	51"	63"	75"
LED1	LUMENS DELIVERED	1080	1620	2160	2700	3240
	SYSTEM WATTAGE	12	18	24	30	36
LED2	LUMENS DELIVERED	1680	2520	3360	4200	5040
	SYSTEM WATTAGE	20	30	40	50	60

This chart was created for a 35K color temp. Multiply by 0.95 for 27k color temp, 0.97 for 30k color temp, and 1.03 for 40k color temp.

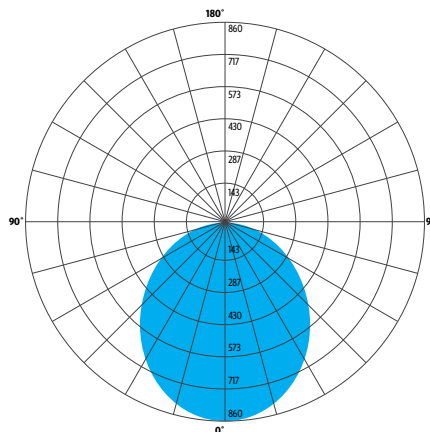
STANDARD COLOR TEMPERATURE OPTIONS	CRI (RA)
2700K	80+
3000K	80+
3500K	80+
4000K	80+

ZONE	LUMENS	% OF LUMINAIRE
0-30	643	26%
0-60	1798	72%
0-90	2410	96%
90-180	112	5%
0-180	2520	100%

PHOTOMETRY:

FIXTURE: DA1-XXXX-39-MW-PTD-LED2_35K-120
 COLOR TEMP #: 3500K
 OUTPUT: 2520
 EFFICACY: 90 LM/W
 TEST REPORT: TEST NO. 18921.0

For all available IES files, please visit our website at ocl.com.



CONTROL

DM1 0-10V DIMMING DOWN TO 1%

- 0-10V DIMMING
- 1% MINIMUM DIMMING LEVEL
- ELECTRONIC DRIVER
- POWER FACTOR >0.9
- THD <20%
- MIN AMBIENT OPERATING TEMPERATURE = -32°F
- FIELD REPLACEABLE

DM3 LUTRON HI-LUME ECOSYSTEM 1% (LDE1)

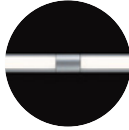
- LUTRON DIGITAL ECOSYSTEM DIMMING
- 1% MINIMUM DIMMING LEVEL
- SOFT-ON / FADE-TO-BLACK
- ELECTRONIC DRIVER
- POWER FACTOR >0.9 @ 120V
- THD <23% @ 120V
- MIN AMBIENT OPERATING TEMPERATURE = -32°F
- FIELD REPLACEABLE

OPTIONS

ULD DAMP LABEL LUMINAIRE

- MAY BE USED IN A OUTDOOR AREA THAT IS PROTECTED FROM DIRECT CONTACT WITH WIND, RAIN, SNOW OR EXCESSIVE MOISTURE

SCN STRAIGHT CONNECTOR



ACN ADJUSTABLE CONNECTOR (PIEW ONLY)

SCY 3.5" DIA. SMALL CANOPIES

- (REQUIRES PRE-INSTALLATION OF 3" MUD RING BY OTHERS; **SISC ONLY**)



PRA 4" PROJECTION OFF WALL (SISC ONLY)

MOD MODIFIED LUMINAIRE

- LUMINAIRE IS MODIFIED FROM STANDARD OPTIONS; CONTACT LOCAL REP FOR MORE INFORMATION

SPECIFICATIONS

CONSTRUCTION

- EXTRUDED AND MACHINED ALUMINUM BODY AND END CAPS
- EXTRUDED HIGH-PERFORMANCE FROSTED OPAL ACRYLIC DIFFUSER
- GALVANIZED STEEL AIRCRAFT CABLE
- HARDWARE IS ZINC PLATED STEEL OR STAINLESS STEEL
- CANOPY IS ALUMINUM

MOUNTING

- **PIEW** AND **SISC** BOTH MOUNT TO 4X4" OCTAGON OR 4" ROUND J-BOX (BY OTHER)

ELECTRICAL

- DIMMING ELECTRONIC DRIVER(S), COMES STANDARD WITH 0-10V DOWN TO 1%.
- LUTRON (LDE1) ECOSYSTEM 1% ALSO AVAILABLE
- OCL PROPRIETARY LED ARRAYS USE NICHIA 757 DIODES
- LUMINAIRE WIRE LEADS ARE LOW-VOLTAGE; THE WIRES SHOULD BE CONNECTED TO OCL PROVIDED REMOTE DRIVER ENCLOSURE ONLY!

LISTING

- ETL LISTED TO UL1598 FOR INDOOR; DRY LOCATION (DAMP LOCATION OPTIONAL)

WARRANTY

- 5 YEAR; ALL ELECTRICAL COMPONENTS RETAIN THE MANUFACTURER'S WARRANTY

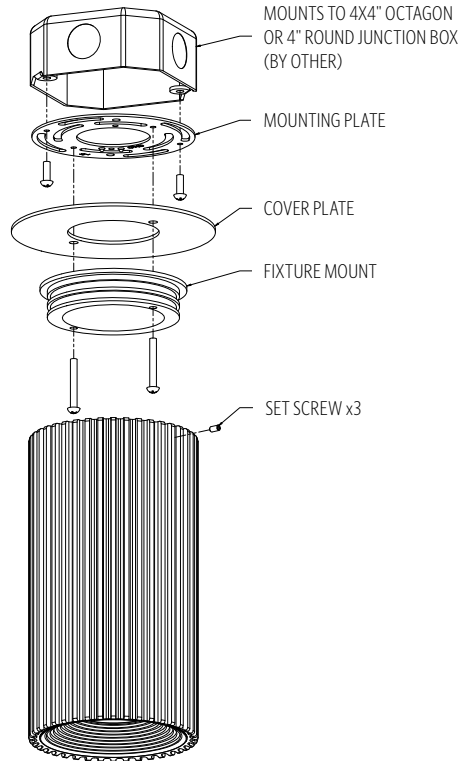
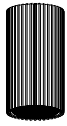
SUSTAINABILITY

- THIS PRODUCT MEETS THE MATERIAL RESTRICTIONS OF ARTICLE 4 OF THE **ROHS** DIRECTIVE (2011/65/EU), INCLUDING COMMISSION DELEGATED DIRECTIVE 2015/863

The drawings and specifications and ideas, designs and arrangements represented on these drawings are and shall remain the property of The Original Cast Lighting (OCL Architectural Lighting) and no part thereof shall be copied, disclosed, to others or used in conjunction with any work or project other than the specified project for which they have been prepared and developed, without written consent of OCL. Visual contact with these plans or specifications shall constitute conclusive evidence of acceptance of these restrictions. All specifications and information subject to change without notice.

HANGING SYSTEM

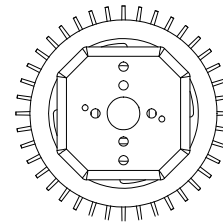
C1NA INDOOR SURFACE CEILING MOUNT



MOUNTING INFORMATION CHART

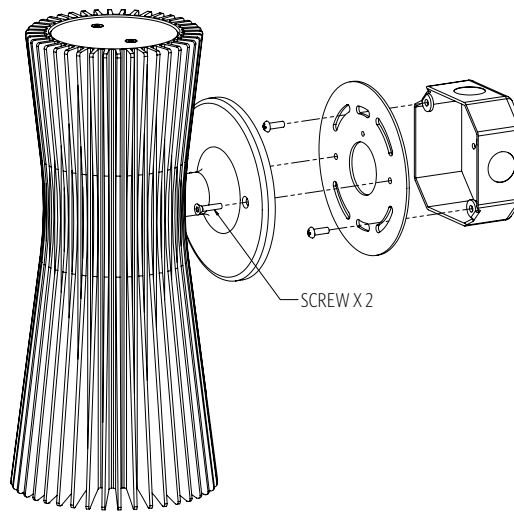
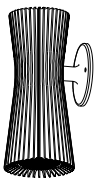
LUMINAIRE HEIGHT	LUMINAIRE WEIGHT	MOUNTING POINTS
8"	6 LBS	1
13"	9 LBS	1

Fixture is provided with 5" dia. cover plate finished to match the fixture body; if no visible cover plate is desired, a 3" mud ring should be pre-installed (supplied by others); 5" dia. cover plate can be discarded if unused.



MOUNTS TO 4X4" OCTAGON OR 4" ROUND JUNCTION BOX (BY OTHER)

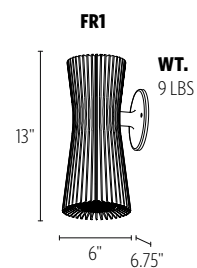
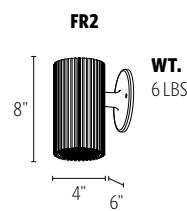
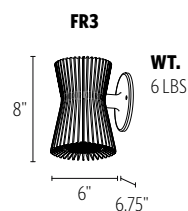
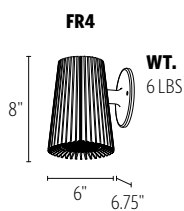
S1SC INDOOR SCONCE O10B OUTDOOR SCONCE (ETL LISTED FOR WET LOCATION)



MOUNTING INFORMATION CHART

LUMINAIRE HEIGHT	LUMINAIRE WEIGHT	MOUNTING POINTS
8"	6 LBS	1
13"	9 LBS	1

SIZES



FINISH

METALLIC POWDER COAT FINISHES:



SOLID POWDER COAT FINISHES:



TEXTURED POWDER COAT FINISHES:



RAL®, Pantone®, or custom finishes are also available.

These colors are for reference only. Please be aware that colors may vary per monitor. Contact your local rep for finish samples or with any questions.

LIGHT SOURCE

LUMENS AND WATTAGE CHART		8" 13"	
		8"	13"
LED1	LUMENS DELIVERED	1500	1500
	SYSTEM WATTAGE	16	16
LED2	LUMENS DELIVERED	NA	2135
	SYSTEM WATTAGE	NA	26
LED3	LUMENS DELIVERED	NA	2855
	SYSTEM WATTAGE	NA	37
2LED1*	LUMENS DELIVERED	NA	2750
	SYSTEM WATTAGE	NA	32

STANDARD COLOR TEMPERATURE OPTIONS	CRI (RA)
2700K	80+
3000K	80+
3500K	80+
4000K	80+

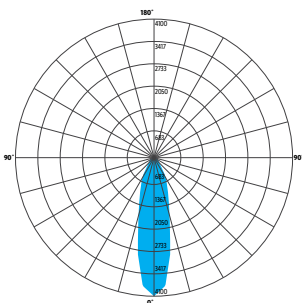
PHOTOMETRY:

FIXTURE: FRI-P1CB-13-NF-PTD-1LD15/35K-120
 COLOR TEMP #: 3500K
 OUTPUT: 1500
 EFFICACY: 93 LM/W
 TEST REPORT: TEST NO. 18332.0

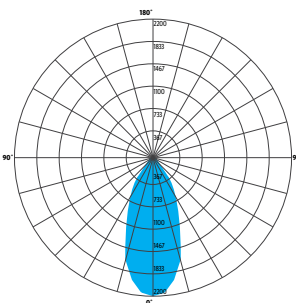
For all available IES files, please visit our website at ocl.com.

This chart was created for a 35K color temp. Multiply by 0.95 for 27k color temp, 0.97 for 30k color temp, and 1.03 for 40k color temp.
 *2LED1 is up/down illumination. LED1, LED2, & LED3 are same direction.

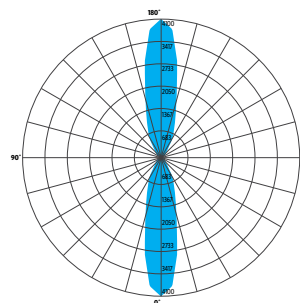
ZONE	NARROW FLOOD		WIDE FLOOD		NARROW FLOOD UP/DOWN (2LED1)		WIDE FLOOD UP/DOWN (2LED1)	
	LUMENS	% OF LUMINAIRE	LUMENS	% OF LUMINAIRE	LUMENS	% OF LUMINAIRE	LUMENS	% OF LUMINAIRE
0-30	1187	81%	1112	74%	1187	40%	1112	37%
0-60	1468	99.7%	1499	100%	1468	49%	1499	50%
0-90	1472	100%	1499	100%	1472	50%	1499	50%
0-120	-	-	-	-	2374	80%	2224	74%
0-150	-	-	-	-	2936	99%	2998	100%
0-180	-	-	-	-	2944	100%	2998	100%



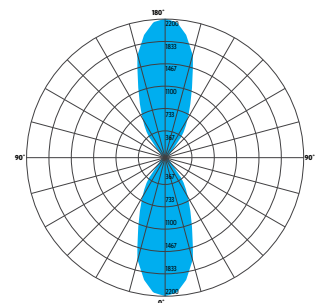
NARROW FLOOD



WIDE FLOOD



NARROW FLOOD UP & DOWN (2LED1)



WIDE FLOOD UP & DOWN (2LED1)

CONTROL

DMO 0-10V DIMMING DOWN TO 10%

- 0-10V DIMMING
- 10% MINIMUM DIM LEVEL
- ELECTRONIC DRIVER
- POWER FACTOR >0.9
- THD <20%
- MIN AMBIENT OPERATING TEMPERATURE = -31°F
- FIELD REPLACEABLE

DM1 0-10V DIMMING DOWN TO 1%

- 0-10V DIMMING
- 1% MINIMUM DIMMING LEVEL
- ELECTRONIC DRIVER
- POWER FACTOR >0.9
- THD <20%
- MIN AMBIENT OPERATING TEMPERATURE = -31°F
- FIELD REPLACEABLE

DM3 LUTRON HI-LUME ECOSYSTEM 1% (LDE1; FR1 ONLY)

- LUTRON DIGITAL ECOSYSTEM DIMMING
- 1% MINIMUM DIMMING LEVEL
- SOFT-ON / FADE-TO-BLACK
- ELECTRONIC DRIVER
- POWER FACTOR >0.9 @ 120V
- THD <23% @ 120V
- MIN AMBIENT OPERATING TEMPERATURE = 32°F
- FIELD REPLACEABLE

OPTIONS

ULD DAMP LABEL LUMINAIRE

- MAY BE USED IN AN OUTDOOR AREA THAT IS PROTECTED FROM DIRECT CONTACT WITH WIND, RAIN, SNOW OR EXCESSIVE MOISTURE

HCL HEX CELL LOUVER

- PROVIDES A 45° VISUAL CUT-OFF TO HELP REDUCE GLARE

SFL SOFTENING LENS

- TEXTURED LENS THAT SOFTENS AND SPREADS BEAM

SPL SPREAD LENS

- DIRECTS THE LAMP BEAM TO CREATE A DIFFUSED SPREAD IN AN EVEN PATTERN IN ALL DIRECTIONS

LSL LINEAR SPREAD LENS

- PRODUCES ASYMMETRICAL LIGHT DISTRIBUTION, CREATING AN OVAL OF LIGHT

MOD MODIFIED LUMINAIRE

- LUMINAIRE IS MODIFIED FROM STANDARD OPTIONS; CONTACT LOCAL REP FOR MORE INFORMATION

SPECIFICATIONS

CONSTRUCTION

- FIXTURE IS EXTRUDED AND MACHINED ALUMINUM
- HARDWARE IS ZINC PLATED OR STAINLESS STEEL

LENSING

- STANDARD LENS INCLUDED FOR **2LED1** ONLY
- FOR **SISA** IN UPWARD FACING ORIENTATION, NOTE IN MODIFICATIONS AND A LENS WILL BE PROVIDED

ELECTRICAL

- DIMMING ELECTRONIC DRIVER(S), COMES STANDARD WITH 0-10V DOWN TO 10%
- 0-10V DOWN TO 1% AND LUTRON ECOSYSTEM (LDE1) 1% ALSO AVAILABLE AS MODIFICATION (REQUIRES REMOTE DRIVERS; **FR1 ONLY**, NOT AVAILABLE IN **2LED1**)
- BRIDGELUX COB
- LUMINAIRE CONNECTS TO BUILDING SUPPLY (120V-277V 50/60HZ) UNLESS DRIVERS ARE REMOTE

LISTING

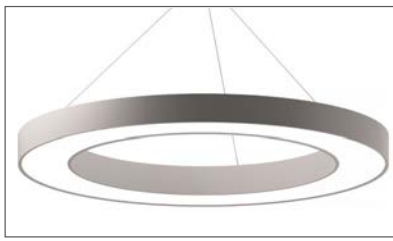
- ETL LISTED TO UL 1598 FOR DRY LOCATIONS; DAMP LOCATION LISTED IS OPTION

WARRANTY

- 5 YEAR; ALL ELECTRICAL COMPONENTS RETAIN THE MANUFACTURER'S WARRANTY

The drawings and specifications and ideas, designs and arrangements represented on these drawings are and shall remain the property of The Original Cast Lighting (OCL Architectural Lighting) and no part thereof shall be copied, disclosed, to others or used in conjunction with any work or project other than the specified project for which they have been prepared and developed, without written consent of OCL. Visual contact with these plans or specifications shall constitute conclusive evidence of acceptance of these restrictions. All specifications and information subject to change without notice.

Sketch | Pendant



Full Circle Shown



C Shape Shown



S Shape Shown

Project _____
Type _____
Notes _____

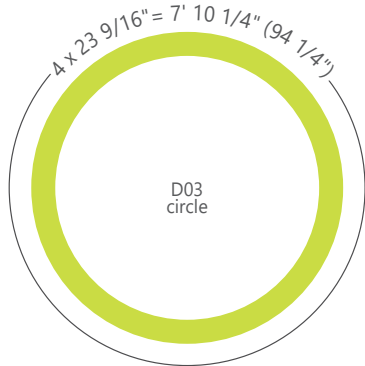
PERFORMANCE AT 3500K

NOMINAL LUMEN OUTPUT	INPUT WATTS*	EFFICACY
1000 lm/ft	10.4 W/ft	96 lm/W

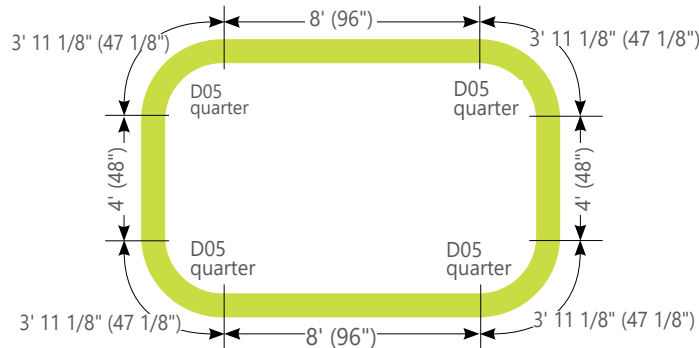
*for a 48" diameter with 60%up/40%down



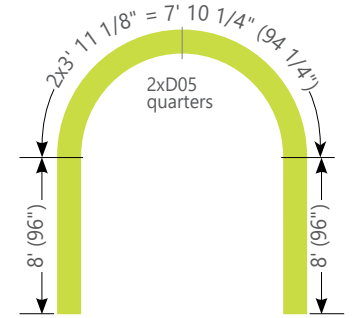
i Patent pending **i** Drawings are not to scale



SKPE-10003-SL60/40-CIR-AL7' 10 1/4"
Circle Pattern



SKPE-#-SL60/40-REC-AL43' 8 1/4"
Rectangle Pattern



SKPE-#-SL60/40-ASO-AL23' 10 1/4"
Other Shape Pattern

ALL ORDERS MUST BE SUBMITTED WITH DRAWINGS INDICATING DIMENSIONS, ANGLES AND DIAMETER

SKPE		PROJECT REFERENCE #		LIGHT ENGINE		PATTERNS		LENGTH	
PRODUCT ID	SKPE Sketch Pendant	10003	D03-30" diameter circle	SL 60/40	surroundlite 60%up/40%down - direct/indirect	REC	rectangle	AL(L)	pattern length *
		10004	D04-48" diameter circle	SL 0/100	surroundlite 0%up/100%down - direct	CIR	circle		
		10005	D05-60" diameter circle			ARC	arc section		
		10008	D08-90" diameter circle			ASO	other shape		
		10013	D13-150" diameter circle			LIN	linear run		
		10018	D18-210" diameter circle						
		10023	D23-270" diameter circle						
		#	for all other shapes *						
								* to be assigned by the factory	
								* Nominal length	

NOM. LUMENS/FT		CRI		COLOR TEMP.		SO SHIELDING		FINISH		VOLTAGE		DRIVER	
400	400 lm/ft - Minimum	80	80 CRI	27	2700 K	SO	spotless lens	AP	aluminum paint	120	120 V	DP	dimming (0-10V) 1%
700	700 lm/ft- Maximum for SL0/100	90	90 CRI	30	3000 K			W	white	277	277 V	LT	Lutron *
1000	1000 lm/ft- Maximum for SL60/40			35	3500 K			BLK	black	UNV	universal	O	other *
				40	4000 K			C	custom	DC	low voltage*	POE(#)	POE drivers**
Applies for both up and down Outputs between listed min and max are available Consult factory for outputs outside of the provided range.										* Only available with POE drivers.		** Not available for 10003, 10004, 10005 or 10008 ** Please consult factory; see page 4;	

CIRCUITS		MOUNTING/SUSPENSION		BATTERY (OPT.)		OTHER (OPT.)		IC CONTROLS (OPTIONAL)		CUSTOM (OPT.)			
1	1 circuit	CA(#)	drywall+cable length (36" std.)	B(#)	battery pack	F	fuse	DS(#)	daylight sensor	C	custom		
+E(#)	emergency circuit *	CT9(#)	TB/TG 9/16+cable length (36" std.)		4' sections *			OS(#)	occupancy sensor				
+NL(#)	night light circuit *	CT15(#)	TB/TG15/16+cable length (36" std.)					DOS(#)	daylight & occupancy sensor				
+GTD(#)	generator transfer device *	CTS(#)	ST+cable length (36" std.)					WC(#)	wireless control dimming				
		SA(#)	drywall+stem length >48" (18" std.)										
		+SM	seismic option										
* Specify system				* Remote only for 10003, 10004, 10005 or 10008; Not available with 347V; Please consult factory				Requires 120V or 277V		Applies to both UP & DOWN. See pages 6-7 for more details. See integrated controls guide for more details.		Please specify	

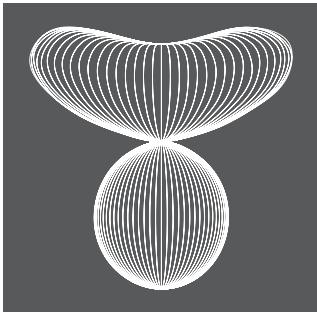
● SURROUNDITE TECHNOLOGY

Sketch with SurroundLite provides the flexibility of high efficacy spherical three dimensional wide batwing distributions and shielding options that all result in true lighting effectiveness. Sketch is only 2 3/4" in depth with integral driver and a light guide with proper cutoff and no view of bugs or dust particles.

An innovative technology to get much more out of LEDs: Axis SurroundLite is based on the fundamental physics of how light interacts with matter. The specially engineered lightguide is made of precisely coded and aligned molecules that shape LED output in all three dimensions.

With SurroundLite extra-wide, multidimensional light distribution, light is directed in all three planes and sent in every corner of the room. SurroundLite brings the promise of balanced brightness, facilitating lighting design.

3D Polar Curve (SL 60/40)



● SURROUNDITE BENEFITS



With **SurroundLite**

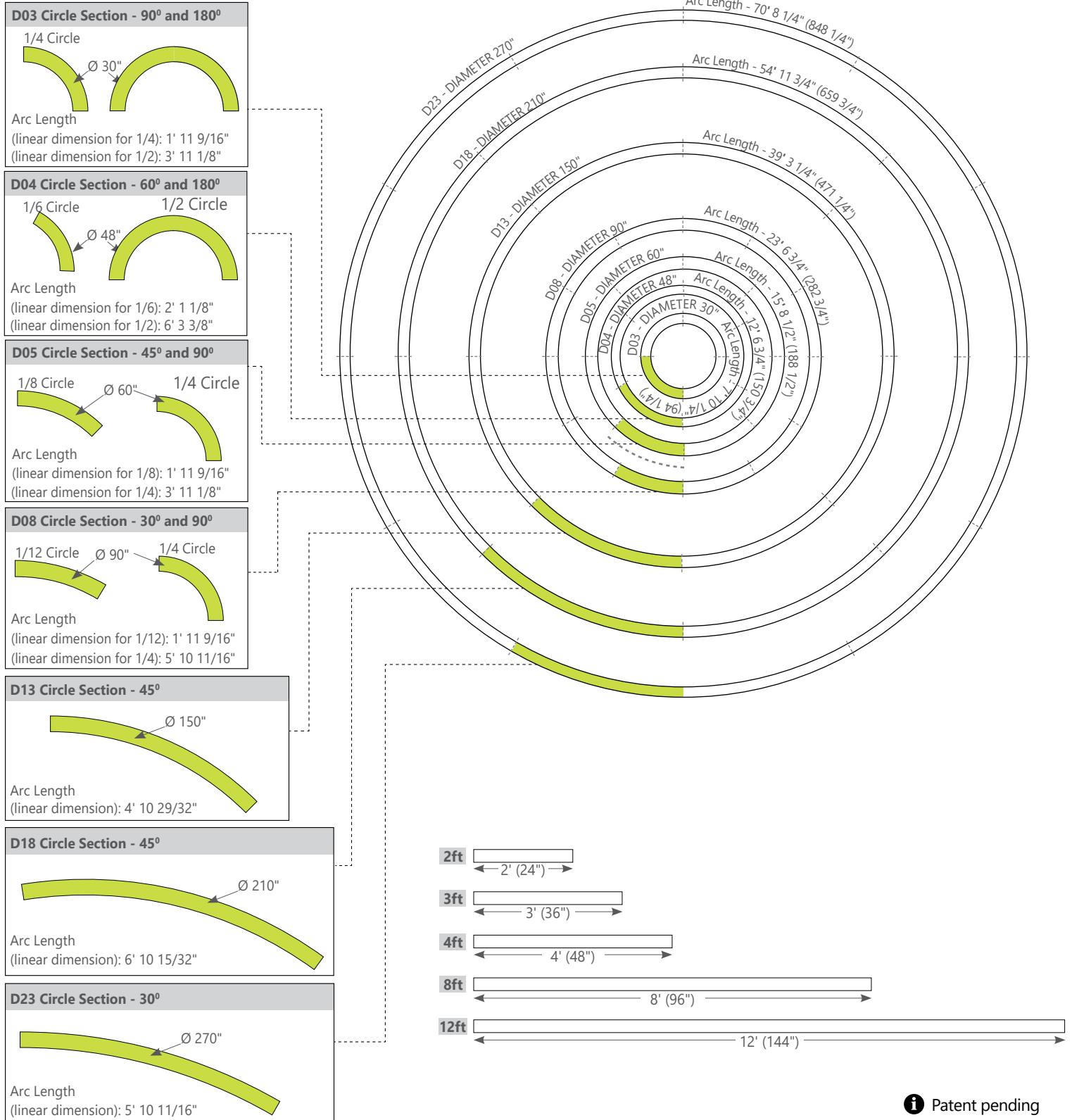


Without **SurroundLite**

ALL ORDERS MUST BE SUBMITTED WITH DRAWINGS INDICATING DIMENSIONS, ANGLES AND DIAMETER

LUMINAIRE SECTIONS

The center line indicates the diameter at the center of the curve. Regardless to the mounting style, the centre line remains the same. This is the dimension that should be used when planning a layout.



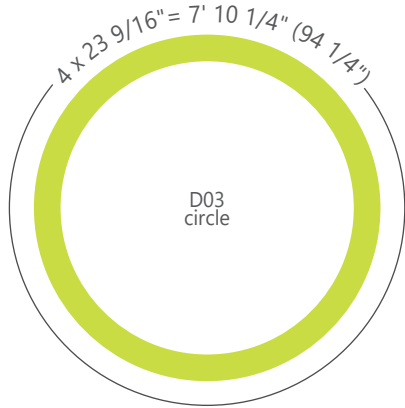
i Patent pending

ALL ORDERS MUST BE SUBMITTED WITH DRAWINGS INDICATING DIMENSIONS, ANGLES AND DIAMETER

● HOW TO ORDER?

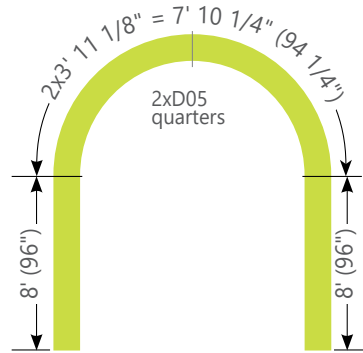
i Drawings are not to scale

EXAMPLE 1 - Circle Pattern



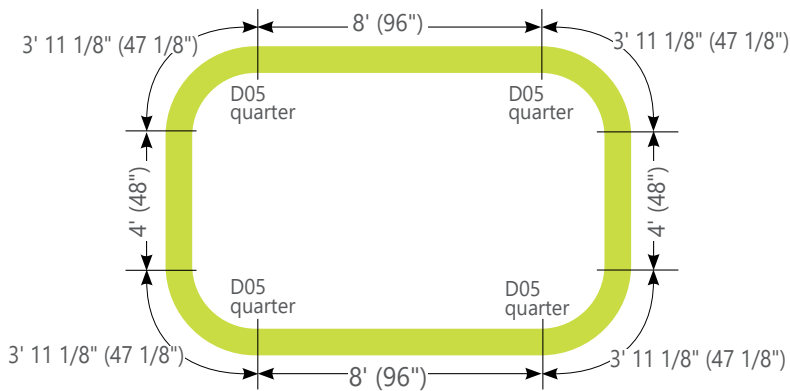
CODE: SKPE-10003-SL60/40-CIR-AL7'10 1/4"

EXAMPLE 2 - Custom Shape Pattern



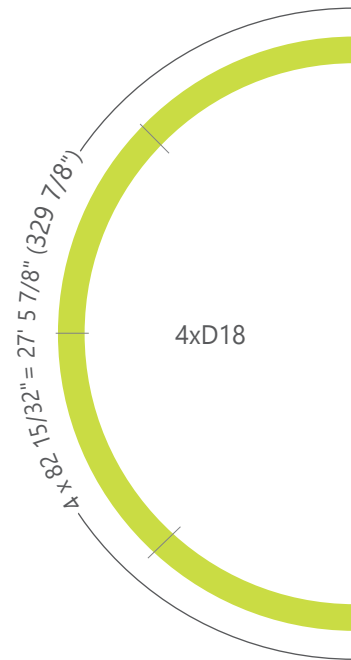
CODE: SKPE-#-SL60/40-ASO-AL23'10 1/4"

EXAMPLE 3 - Rectangle Pattern



SKPE-#-SL60/40-REC-AL43'8 1/4"

EXAMPLE 4 - Arc Section Pattern

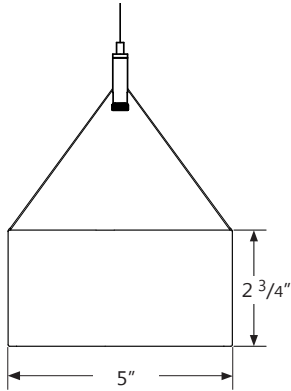


SKPE-10018-SL60/40-ARC-AL27'5 7/8"

i Patent pending

Sketch | Pendant

● DIMENSIONS - SECTION VIEWS



● PRODUCT DESCRIPTION

Sketch allows freedom to create shapes of continuous light. Its modules offer a wide range of options making possible to build partial and complete circles with 3', 5', 8', 13', and 23' nominal diameters. These can be combined with straight sections.

- i** Consult your Axis Representative to coordinate specification. A detailed drawing of the intended installation must be provided with each order.

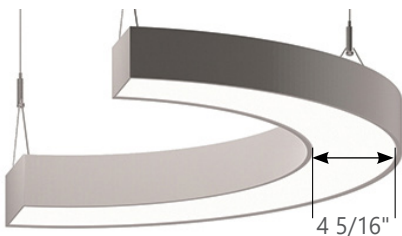
● CONSTRUCTION

Housing walls	Extruded aluminum (0.075" nominal)
Housing top	Die formed cold rolled sheet steel (24 gauge)
Interior reflectors	Die formed cold rolled sheet steel (24 gauge)
Mounting brkts.	Die formed cold rolled sheet steel (16 gauge)
Joining brackets.	Die formed zinc
Incap & Cross Brkt.	Die cast aluminum (0.10" nominal)

● WEIGHT

Approximately 2.9lbs/ft = 1.3kg/ft (linear)

● SKETCH APERTURE DIMENSIONS



● LENS

Spotless Lens Highly transmissive polycarbonate (0.08" thick).

● ELECTRICAL

Lutron driver* LDE1 - EcoSystem H-Series (1%)
LDE5 - EcoSystem 5-Series (5%)
LTE - Hi-Lume® A-series 2Wires Forward Phase (1%)
*Consult factory

Other drivers* DALI - Digital Addressable Lighting Interface
DMX - Digital Multiplex
LV - line voltage - Advance Mark 10
Xitanium SR - For wireless sensor
*Consult factory

Power over Ethernet MOLEX
POE drivers* IGOR
(consult factory for more information) O - Other (Consult factory)
UL2108 certified for integral or remote driver

Emergency* Integral emergency battery pack or emergency circuit optional.
*Consult factory


Input Voltage 120V, 277V, UNV.

- i** Incorporating these components may have limitations or effect the length of the luminaire, please contact factory for more details.

● FINISH

Highly reflective, white powder coat finish paint for high efficiency. Matte texture to diffuse glare and lamp image on the surface within the optical chamber exterior. Custom finishes are also available.

● APPROVALS

Certified to CSA standards 
Meets NYC requirements
Suitable for damp locations.

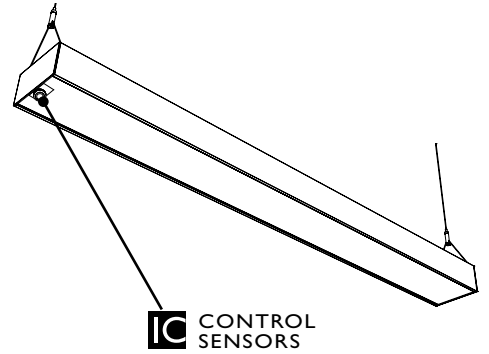
● WARRANTY

Axis Lighting will warrant defective LEDs, boards, and drivers for 5 years from date of purchase. Warranty is valid if luminaire is installed and used according to specifications. If defective, Axis will send replacement boards or drivers at no cost along with detailed replacement instructions and instructions on how to return defective components to Axis.

● INTEGRATED CONTROLS

Sketch luminaires allow the use of integrated controls such as daylight sensors (DS), occupancy sensors (OS) and combination daylight/occupancy sensors (DOS). These options can be seamlessly integrated into our luminaires. The control system could be used to optimize the lighting of the space by reducing energy consumption through daylight harvesting and occupancy, thereby improving the overall interior environment and allowing for LEED credits.

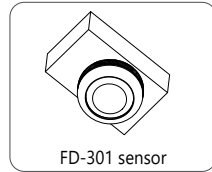
- Consult factory for other options.



The integrated control systems offered are:

● DAYLIGHT HARVESTING (DS):

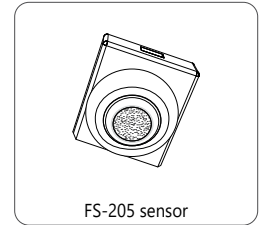
With daylight sensors, maximum lamp output is reduced according to the available amount of natural light. By reducing maximum lamp output, energy consumption is reduced by up to 20 percent in a process known as "Daylight Harvesting".



EC-DIR-WH, FD-301

● OCCUPANCY (OS):

When a room is vacated, occupancy sensors ensure the light will be turned off after a programmed delay as well as ensuring that light remains on while the room is occupied.



FS-205

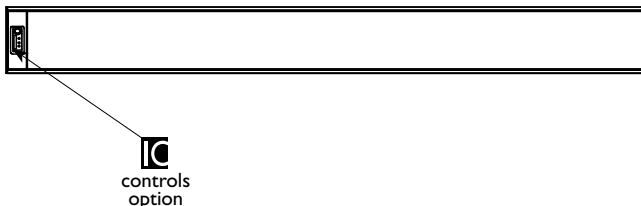
● DAYLIGHT HARVESTING AND OCCUPANCY (DOS):

A combination of Daylight & Occupancy sensor from Philips, EasySense can be used with SimpleSet drivers for better control



● INSTALLATION EXAMPLES

Sensor location option



● INTEGRATED CONTROL OPTIONS

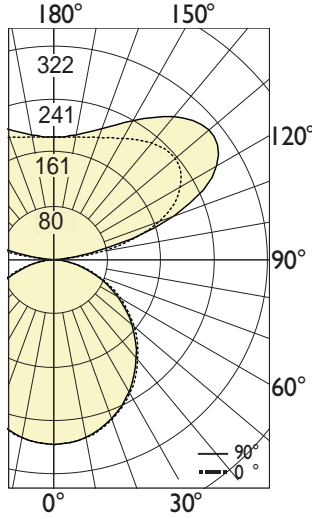
SENSORS	BRAND	Model	TYPE
Daylight Sensor (DS)	Lutron	EC-DIR-WH (1)	Daylight
	Wattstopper	FD-301 (1)	Daylight
	Lutron	LRF2-DCRB-WH	Wireless Daylight Sensor
Occupancy Sensor (OS)	Wattstopper	FS-205v2 (1)	PIR Occupancy & Ambient light level
	Lutron	LRF2-OCR2B-P-WH	Wireless Daylight Sensor
Daylight & Occupancy Sensors (DOS)	Philips	Easysense (1)	Daylight & PIR Occupancy
	Lutron	LRF2-DCRB-WH & LRF2-OCR2B-P-WH	Daylight & PIR Occupancy

(1) Not available for 10003, 10005 or 10008;
Please consult factory

PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10003-SL60/40-ARC-AL1'-11 9/16"-1000-80-35-SO
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 2000 lm
Input Watts: 23.44 W
Efficacy: 85 lm/W

IES FILE:
(D03 CIR Section)
SKPE-10003-SL60/40-ARC-AL1'-11 9/16"-1000-80-35-SO.ies

TESTED ACCORDING TO IES LM-79-2008

i All IES files are available for download at: www.axislighting.com

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	294	294	294	294	294
5	292	292	292	292	292
15	281	281	280	280	280
25	258	258	257	256	256
35	227	226	225	224	223
45	188	188	186	185	184
55	145	145	143	141	141
65	99	98	96	94	94
75	51	50	48	47	47
85	11	10	10	10	10
90	1	1	2	3	3
95	26	22	17	17	19
105	136	129	129	127	130
115	212	218	234	254	263
125	246	256	281	307	318
135	249	257	280	303	313
145	232	238	254	270	276
155	214	217	225	233	237
165	202	202	205	208	209
175	196	196	196	196	196
180	195	195	195	195	195

ZONAL LUMENS

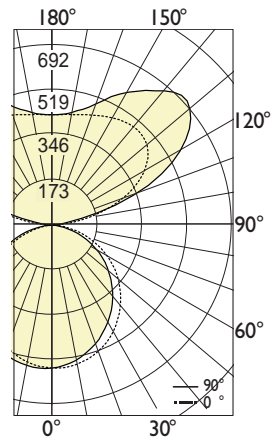
Zone	Lumens
0	
0-10	28
10-20	79
20-30	118
30-40	141
40-50	144
50-60	128
60-70	95
70-80	52
80-90	13
90	
90-100	27
100-110	136
110-120	231
120-130	251
130-140	216
140-150	160
150-160	105
160-170	59
170-180	19
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3904	3861	3816
55	3713	3649	3591
65	3417	3329	3255
75	2863	2741	2655
85	1812	1737	1707

PHOTOMETRIC CURVE

SKPE-4'-SL60/40-LIN-AL4'-1000-80-35-SO
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 3845 lm
Input Watts: 49.7 W
Efficacy: 77 lm/W

IES FILE:
(4' LIN Section)
SKPE-4'-SL60/40-LIN-AL4'-1000-80-35-SO.ies

TESTED ACCORDING TO IES LM-79-2008

i All IES files are available for download at: www.axislighting.com

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	538	538	538	538	538
5	530	531	533	535	538
15	499	502	509	515	522
25	451	457	467	476	487
35	391	398	410	422	434
45	322	329	343	355	367
55	246	253	267	279	290
65	164	171	184	195	204
75	83	88	98	107	114
85	17	21	25	29	33
90	1	1	2	4	6
95	24	26	31	50	42
105	179	201	229	234	194
115	456	457	441	378	345
125	633	618	560	468	442
135	691	660	572	505	481
145	619	594	543	494	476
155	534	520	491	464	453
165	452	455	446	435	431
175	419	421	420	419	418
180	417	417	417	417	417

ZONAL LUMENS

Zone	Lumens
0	
0-10	51
10-20	145
20-30	219
30-40	261
40-50	269
50-60	241
60-70	181
70-80	100
80-90	26
90	
90-100	46
100-110	225
110-120	411
120-130	485
130-140	447
140-150	342
150-160	229
160-170	127
170-180	40
180	

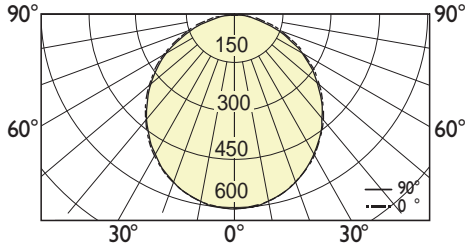
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3388	3612	3868
55	3192	3463	3768
65	2890	3239	3597
75	2375	2831	3276
85	1484	2138	2815

PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10004-SL0-100-ARC-AL2_1_18-700-80-35-SO.IES
0% up / 100% down at 700 lm/ft



Luminaire Lumens: 1647 lm
Input Watts: 23.87 W
Efficacy: 69 lm/W

IES FILE:
(D04 CIR Section)

SKPE-10004-SL0-100-ARC-AL2_1_18-700-80-35-SO.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	600	600	600	600	600
5	597	596	596	597	596
15	573	573	572	572	571
25	527	527	526	525	524
35	464	464	462	460	459
45	387	386	384	381	381
55	299	298	296	294	292
65	204	203	201	198	197
75	107	106	104	102	101
85	26	25	24	23	22
90					

ZONAL LUMENS

Zone	Lumens
0	
0-10	57
10-20	161
20-30	242
30-40	289
40-50	296
50-60	264
60-70	199
70-80	110
80-90	28
90	

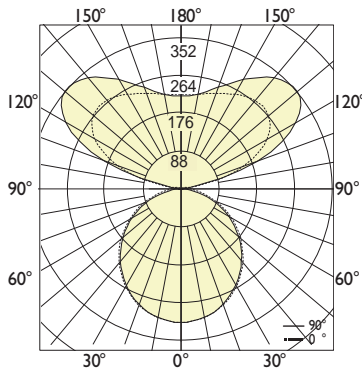
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	7890	7824	7773
55	7531	7443	7353
65	6965	6854	6732
75	5958	5800	5629
85	4262	3939	3676

i All IES files are available for download at: www.axislighting.com

PHOTOMETRIC CURVE

SKPE-10004-SL60-40-ARC-AL2 1 18-1000-80-35-SO.IES
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 2081 lm
Input Watts: 21.63 W
Efficacy: 96 lm/W

IES FILE:
(D04 CIR Section)

SKPE-10004-SL60-40-ARC-AL2 1 18-1000-80-35-SO.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	309	309	309	309	309
5	308	308	308	308	308
15	296	296	296	295	295
25	273	273	272	271	271
35	240	240	239	238	238
45	201	200	199	198	197
55	156	155	154	152	152
65	106	106	105	103	103
75	56	56	54	53	53
85	14	13	13	12	12
90	1	0	0	0	0
95	21	16	9	7	7
105	110	110	106	100	97
115	199	206	223	247	258
125	251	262	290	324	339
135	266	276	304	335	349
145	257	264	284	306	315
155	239	243	254	265	270
165	224	225	229	232	234
175	216	216	216	217	217
180	215	215	215	215	215

ZONAL LUMENS

Zone	Lumens
0	
0-10	29
10-20	83
20-30	125
30-40	150
40-50	154
50-60	137
60-70	103
70-80	58
80-90	15
90	
90-100	16
100-110	110
110-120	221
120-130	260
130-140	236
140-150	179
150-160	118
160-170	65
170-180	21
180	

LUMINANCE DATA (cd/m²)

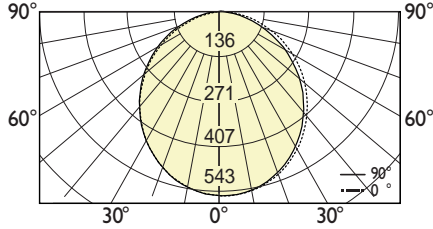
Vertical Angle	Horizontal Angles		
	0	45	90
45	4097	4060	4026
55	3914	3866	3817
65	3630	3568	3500
75	3119	3028	2939
85	2258	2084	1949

i All IES files are available for download at: www.axislighting.com

● PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10003-SLO-100-ARC-AL1 11916-700-80-35-SO
0% up / 100% down at 700 lm/ft



Luminaire Lumens: 1465 lm
Input Watts: 23.6 W
Efficacy: 62 lm/W

IES FILE:
(D03 ARC Section)
SKPE-10003-SLO-100-ARC-AL1 11916-700-80-35-SO.ies

TESTED ACCORDING TO IES LM-79-2008

i All IES files are available for download at: www.axislighting.com

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	542	542	542	542	542
5	541	540	540	540	540
15	521	521	519	518	518
25	482	480	477	475	474
35	426	422	418	414	413
45	357	351	345	341	339
55	278	272	264	257	254
65	194	185	175	167	164
75	106	96	85	78	75
85	29	21	15	11	10
90	4	1	1	1	1

ZONAL LUMENS

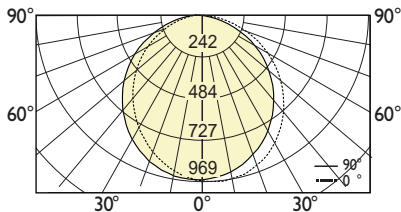
Zone	Lumens
0	
0-10	51
10-20	146
20-30	218
30-40	259
40-50	264
50-60	235
60-70	175
70-80	95
80-90	23
90	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	8182	7919	7769
55	7878	7456	7199
65	7442	6723	6311
75	6657	5346	4696
85	5382	2810	1811

PHOTOMETRIC CURVE

SKPE-SLO-100-LIN-AL4-700-80-35-SO.IES
0% up / 100% down at 700 lm/ft



Luminaire Lumens: 2632 lm
Input Watts: 45.9W
Efficacy: 57 lm/W

IES FILE:
(4° LIN Section)
SKPE-SLO-100-LIN-AL4-700-80-35-SO.ies
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	948	948	948	948	948
5	960	960	961	956	943
15	960	960	952	935	913
25	918	914	905	883	848
35	834	832	818	792	753
45	719	718	704	677	635
55	582	581	568	542	500
65	428	428	416	392	352
75	264	264	253	233	197
85	107	107	98	83	58
90	44	44	37	27	11

ZONAL LUMENS

Zone	Lumens
0	
0-10	90
10-20	255
20-30	384
30-40	458
40-50	471
50-60	422
60-70	319
70-80	180
80-90	53
90	

LUMINANCE DATA (cd/m²)

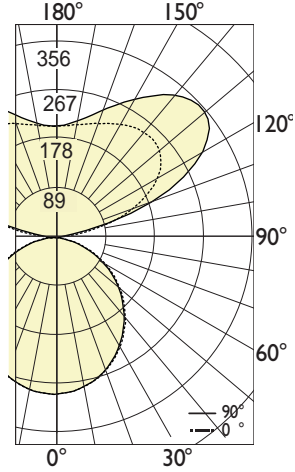
Vertical Angle	Horizontal Angles		
	0	45	90
45	7579	7413	6693
55	7559	7374	6495
65	7542	7331	6204
75	7589	7294	5664
85	9145	8391	4930

i All IES files are available for download at: www.axislighting.com

PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10005-SL60-40-ARC-AL1 11 9 16-1000-80-35-SO.IES
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 1981 lm
Input Watts: 23.3 W
Efficacy: 85 lm/W

IES FILE:
(D05 CIR Section)

SKPE-10005-SL60-40-ARC-AL1 11 9 16-1000-80-35-SO.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	284	284	284	284	284
5	282	282	282	282	282
15	271	271	271	270	270
25	249	249	249	248	248
35	219	219	218	217	216
45	182	182	181	179	179
55	141	141	139	138	137
65	96	95	94	93	92
75	50	49	48	47	47
85	11	11	11	10	10
90	1	0	1	0	1
95	20	15	9	7	7
105	107	107	107	104	101
115	189	198	221	248	260
125	238	251	287	326	344
135	253	266	299	336	352
145	245	254	277	302	314
155	228	233	246	259	264
165	213	215	219	224	226
175	203	204	204	205	205
180	202	202	202	202	202

ZONAL LUMENS

Zone	Lumens
	0
0-10	27
10-20	76
20-30	115
30-40	136
40-50	139
50-60	124
60-70	93
70-80	51
80-90	13
90	
90-100	17
100-110	112
110-120	218
120-130	256
130-140	232
140-150	175
150-160	114
160-170	63
170-180	20
180	

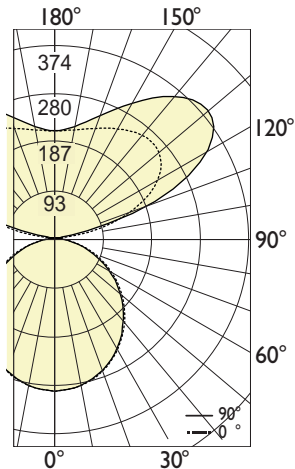
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3642	3610	3574
55	3465	3425	3372
65	3193	3142	3076
75	2705	2627	2543
85	1852	1720	1604

i All IES files are available for download at: www.axislighting.com

PHOTOMETRIC CURVE

SKPE-10008-SL60-40-ARC-AL1 11 9 16-1000-80-35-SO
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 2021 lm
Input Watts: 23.5 W
Efficacy: 86 lm/W

IES FILE:
(D08 CIR Section)

SKPE-10008-SL60-40-ARC-AL1 11 9 16-1000-80-35-SO.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	286	286	286	286	286
5	285	285	285	285	285
15	274	274	273	273	273
25	252	252	251	251	250
35	222	221	220	219	219
45	185	185	183	181	181
55	143	142	140	139	138
65	97	96	94	93	92
75	50	49	48	46	46
85	11	11	10	9	9
90	1	1	0	0	0
95	23	16	9	8	8
105	113	113	113	108	104
115	196	206	232	262	277
125	244	257	296	342	364
135	256	268	304	346	366
145	245	255	279	307	320
155	227	232	246	260	266
165	211	213	218	223	226
175	202	203	203	203	204
180	201	201	201	201	201

ZONAL LUMENS

Zone	Lumens
	0
0-10	27
10-20	77
20-30	116
30-40	138
40-50	141
50-60	125
60-70	93
70-80	51
80-90	12
90	
90-100	18
100-110	117
110-120	229
120-130	266
130-140	237
140-150	177
150-160	115
160-170	62
170-180	20
180	

LUMINANCE DATA (cd/m²)

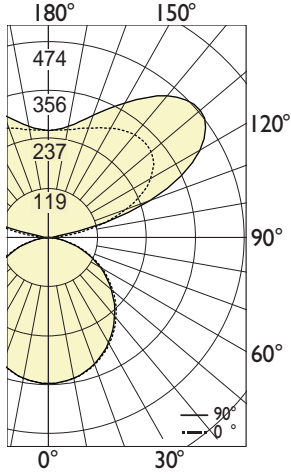
Vertical Angle	Horizontal Angles		
	0	45	90
45	3691	3651	3605
55	3513	3454	3389
65	3235	3151	3067
75	2720	2602	2489
85	1779	1618	1487

i All IES files are available for download at: www.axislighting.com

PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10013-SL60-40-ARC-AL2 5 1 532-1000-80-35-SO.IES
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 2537 lm
Input Watts: 30.3 W
Efficacy: 84 lm/W

IES FILE:
(D13 CIR Section)
SKPE-10013-SL60-40-ARC-AL2 5 1 532-1000-80-35-SO.IES
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	350	350	350	350	350
5	348	348	348	348	348
15	335	334	334	334	334
25	309	308	308	307	306
35	272	272	270	269	269
45	228	227	225	223	223
55	176	175	174	172	171
65	120	119	118	116	115
75	62	62	60	59	59
85	14	14	14	13	13
90	1	1	1	1	2
95	28	20	9	9	9
105	141	141	143	143	140
115	246	258	291	332	351
125	307	324	376	434	460
135	325	341	388	443	467
145	313	325	357	393	410
155	291	297	315	333	341
165	270	273	279	285	288
175	259	259	260	260	261
180	257	257	257	257	257

ZONAL LUMENS

Zone	Lumens
0	33
0-10	94
10-20	142
20-30	169
30-40	174
40-50	155
50-60	116
60-70	64
70-80	17
80-90	20
90-100	148
100-110	289
110-120	337
120-130	302
130-140	226
140-150	147
150-160	80
160-170	25
170-180	20
180	148

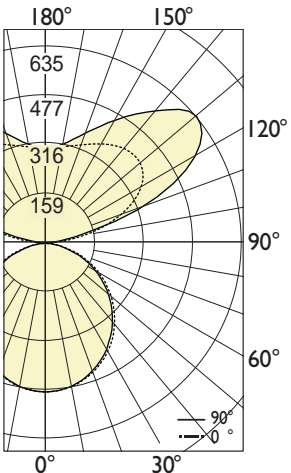
LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	4325	4277	4232
55	4128	4067	4003
65	3811	3739	3657
75	3233	3139	3037
85	2206	2109	2026

i All IES files are available for download at: www.axislighting.com

PHOTOMETRIC CURVE

SKPE-10018-SL60-40-ARC-AL3 5 14-1000-80-35-SO.IES
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 3326 lm
Input Watts: 42.3 W
Efficacy: 79 lm/W

IES FILE:
(D18 CIR Section)
SKPE-10018-SL60-40-ARC-AL3 5 14-1000-80-35-SO.IES
TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	478	478	478	478	478
5	476	476	476	476	475
15	458	458	457	456	456
25	424	423	421	419	418
35	375	374	370	367	366
45	314	312	308	305	303
55	244	242	238	234	232
65	166	165	161	157	155
75	86	85	82	79	78
85	20	19	18	17	17
90	1	1	1	0	1
95	40	26	13	12	12
105	181	197	190	165	158
115	311	344	396	432	455
125	385	411	496	575	616
135	403	425	487	565	608
145	384	401	440	486	507
155	352	361	383	406	416
165	324	327	335	343	346
175	308	309	310	310	311
180	306	306	306	306	306

ZONAL LUMENS

Zone	Lumens
0	45
0-10	129
10-20	194
20-30	232
30-40	238
40-50	212
50-60	159
60-70	88
70-80	22
80-90	30
90-100	193
100-110	380
110-120	440
120-130	382
130-140	279
140-150	178
150-160	96
160-170	30
170-180	0
180	193

LUMINANCE DATA (cd/m²)

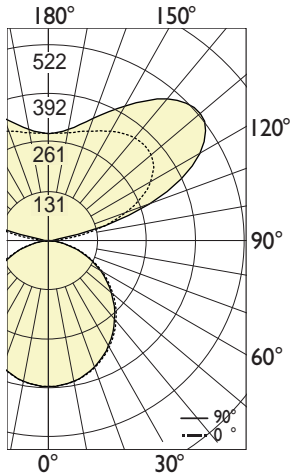
Vertical Angle	Horizontal Angles		
	0	45	90
45	3558	3490	3434
55	3402	3317	3242
65	3149	3045	2942
75	2671	2543	2423
85	1828	1662	1538

i All IES files are available for download at: www.axislighting.com

● PHOTOMETRIC DATA

PHOTOMETRIC CURVE

SKPE-10023-SL60-40-ARC-AL2 11 1132-1000-80-35-SO.IES
60% up / 40% down at 1000 lm/ft



Luminaire Lumens: 2786 lm
Input Watts: 36.3 W
Efficacy: 88 lm/W

IES FILE:

(D23 CIR Section)

SKPE-10023-SL60-40-ARC-AL2 11 1132-1000-80-35-SO.IES

TESTED ACCORDING TO IES LM-79-2008

CANDELA DISTRIBUTION

Vertical Angle	Horizontal Angles				
	0	22.5	45	67.5	90
0	386	386	386	386	386
5	384	384	384	384	384
15	370	369	369	369	368
25	342	341	339	338	338
35	302	300	298	296	295
45	252	250	248	246	244
55	195	194	191	189	187
65	133	132	129	127	126
75	68	68	66	64	63
85	15	14	14	13	13
90	1	0	1	0	1
95	33	21	12	12	11
105	160	158	159	156	151
115	275	288	325	371	393
125	340	358	414	480	511
135	355	373	424	484	510
145	339	352	386	426	445
155	311	319	338	358	366
165	288	291	299	306	308
175	275	276	277	278	278
180	274	274	274	274	274

ZONAL LUMENS

Zone	Lumens
0	
0-10	36
10-20	104
20-30	156
30-40	187
40-50	191
50-60	171
60-70	128
70-80	70
80-90	17
90	
90-100	23
100-110	164
110-120	322
120-130	372
130-140	330
140-150	245
150-160	158
160-170	85
170-180	27
180	

LUMINANCE DATA (cd/m²)

Vertical Angle	Horizontal Angles		
	0	45	90
45	3335	3282	3235
55	3181	3115	3058
65	2940	2862	2780
75	2473	2373	2275
85	1575	1469	1382

i All IES files are available for download at: www.axislighting.com



Glowstick™

PENDANT


FEATURES

- ELEGANT & CONTEMPORARY DESIGN WITH END LIT DIFFUSER
- EXCELLENT THERMAL MANAGEMENT IS ACHIEVED THROUGH AN EXTRUDED AND MACHINED ALUMINUM FIXTURE BODY
- FIXTURES CAN BE CLUSTERED TOGETHER TO CREATE LARGE SCALE INSTALLATIONS.
- AVAILABLE IN 80+ CRI AND 90+ CRI (R9>50)
- 3 STEP LED BINNING
- FIELD REPLACEABLE LEDS AND DRIVERS



CATALOG CODES

GS1	B	C	CR	E	LED1	UNV	H	I	J
SERIES	HANGING SYSTEM	SIZE	DIFFUSER	FINISH	LIGHT SOURCE	VOLTAGE	OAH	CONTROL	OPTIONS

SPECIFY CATALOG CODE		C		E	
A	B	C	D	E	
SERIES	HANGING SYSTEM	SIZE	DIFFUSER	FINISH	
 GS1 GLOWSTICK	PICF PENDANT WITH SURFACE MOUNT CANOPY, SINGLE SILVER POWER CORD; MOUNTS TO 4X4 OCTAGON J-BOX (BY OTHERS)	14 18	CR CLEAR ACRYLIC ROD	POWDER COAT FINISHES	
	PIFE PENDANT WITH FLAT MATTE WHITE CANOPY, SINGLE SILVER POWER CORD; MOUNTS TO OCL RECESSED J-BOX (PROVIDED BY OCL)	24 30 36		BKP BLACK BMP BRASS METALLIC BNP BRONZE BTP BLACK TEXTURED GRP GRAPHITE GLP GOLDTASTIC	MWP MATTE WHITE SGP STEEL GRAY SMP SILVER METALLIC SWP SKY WHITE WTP WHITE TEXTURED

F		G		H	I	J
LIGHT SOURCE		VOLTAGE		OAH	CONTROL	OPTIONS
LED OUTPUT LED1	COLOR TEMP (80+ CRI) 27K 30K 35K 40K	COLOR TEMP (90+ CRI) 927K 930K 935K 940K	UNV 120-277	48 100 144	DM1 0-10V DIMMING 1% DM3 LUTRON HI-LUME ECOSYSTEM 1% (LDE1)	HCL HEX CELL LOUVER ULD UL DAMP LABEL MOD MODIFIED LUMINAIRE (CONTACT LOCAL REP)

SAMPLE CODE: GS1-PICF-24-CR-WTP-LED1/35K-UNV-48-DM1

*For Minimum OAH, see hanging systems details. Fixture will ship with one of three standard OAH's (48", 100" or 144") field adjustable to the desired height.

UP TO **75** LM/W

		ALL SIZES
LED1	LUMENS DELIVERED	825
	SYSTEM WATTAGE	11

This chart was created for a 35K color temp. Multiply by 0.95 for 27k color temp, 0.97 for 30k color temp, and 1.03 for 40k color temp.

Values shown for 80+ CRI. For 90+ CRI lumens use 0.85 multiplier.

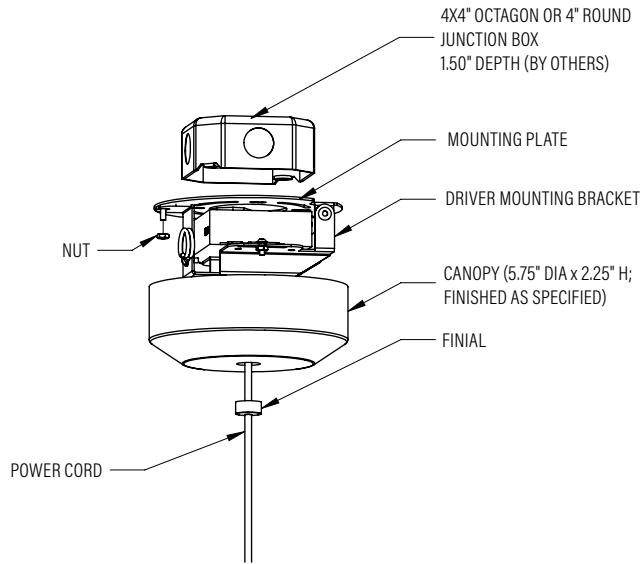
MODS, NOTES, & COMMENTS



This product meets the material restrictions of Article 4 of the RoHS Directive (2011/65/EU), including Commission Delegated Directive 2015/863

HANGING SYSTEM

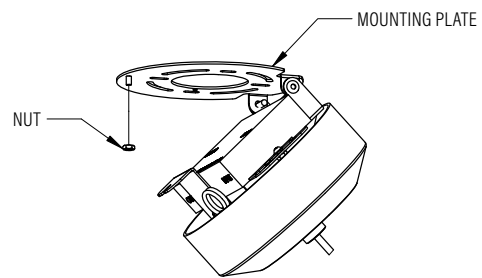
PICF PENDANT WITH SURFACE MOUNT CANOPY, SINGLE **SILVER** POWER CORD; MOUNTS TO 4X4 OCTAGON J-BOX (BY OTHERS)



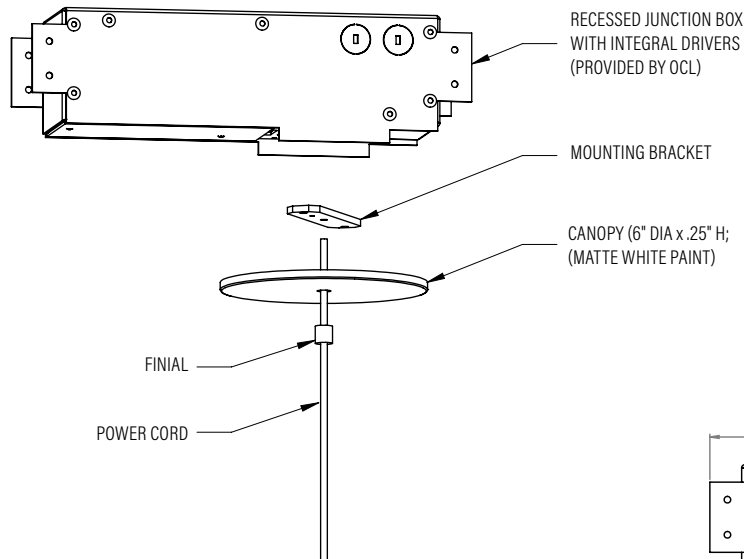
MOUNTING INFORMATION CHART

FIXTURE LENGTH	FIXTURE WEIGHT	MIN/MAX OAH
14"	4 LBS	20/120"
18"	4 LBS	24/120"
24"	5 LBS	30/120"
30"	5 LBS	36/120"
36"	5 LBS	42/120"

Fixture will ship with one of three standard OAH's (48", 100" or 144") field adjustable to the desired height.



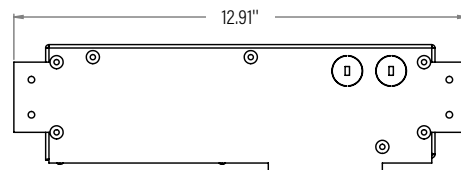
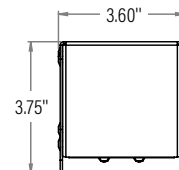
PIFE PENDANT WITH FLAT MATTE WHITE CANOPY, SINGLE **SILVER** POWER CORD; MOUNTS TO OCL RECESSED J-BOX (PROVIDED BY OCL)



MOUNTING INFORMATION CHART

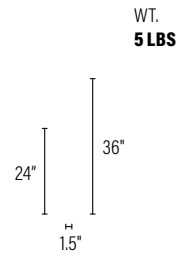
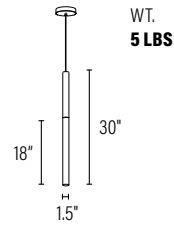
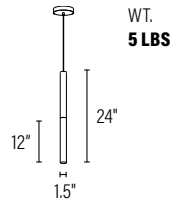
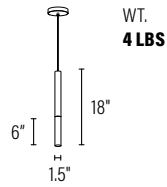
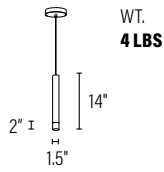
FIXTURE LENGTH	FIXTURE WEIGHT	MIN/MAX OAH
14"	4 LBS	17/120"
18"	4 LBS	21/120"
24"	5 LBS	27/120"
30"	5 LBS	33/120"
36"	5 LBS	39/120"

Fixture will ship with one of three standard OAH's (48", 100" or 144") field adjustable to the desired height.



PROFILE VIEW
RECESSED JUNCTION BOX

SIZE AND SECTIONS



DIFFUSER

FINISH

ACRYLIC FINISHES:



CR CLEAR ACRYLIC ROD

METALLIC POWDER COAT FINISHES:



SMP
SILVER



GRP
GRAPHITE



SGP
STEEL GRAY



GLP
GOLD



BMP
BRASS



BNP
BRONZE

SOLID POWDER COAT FINISHES:



SWP
SKY WHITE



MWP
MATTE
WHITE



BKP
BLACK

TEXTURED POWDER COAT FINISHES:



BTP
BLACK
TEXTURED



WTP
WHITE
TEXTURED

RAL, Pantone® or custom finishes are also available.

These colors are for reference only. Please be aware that colors may vary per monitor. Contact your local rep for finish samples or with any questions.

LIGHT SOURCE

		ALL SIZES
LED1	LUMENS DELIVERED	825
	SYSTEM WATTAGE	11

This chart was created for a 35K color temp. Multiply by 0.95 for 27k color temp, 0.97 for 30k color temp, and 1.03 for 40k color temp.

Values shown for 80+ CRI. For 90+ CRI lumens use 0.85 multiplier.

PHOTOMETRY:

LUMINAIRE: GS1-P1CB-24-CR-PTD-LED1/35K-UNV
 COLOR TEMP #: 3500K
 EFFICACY: 75 LM/W
 TEST REPORT: TEST NO. 18917.0

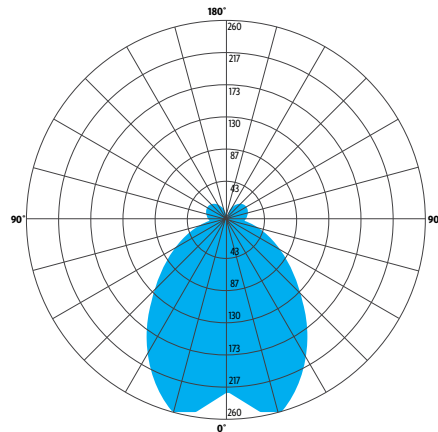
For all available IES files, please visit our website at ocl.com.

STANDARD COLOR TEMPERATURE OPTIONS	CRI (RA)	
	2700K	80+
3000K	80+	90+
3500K	80+	90+
4000K	80+	90+

LUMEN MAINTENANCE

REPORTED: L70 AT >60,000 HRS
 CALCULATED: L70 AT 140,000 HRS
 REPORTED: L90 AT 42,000 HRS
 CALCULATED: L90 AT 42,000 HRS

Derived from EPA TM-21 calculator. Based on typical conditions. Consult the factory for additional details



ZONE	LUMENS	% OF LUMINAIRE
0-30	215	26%
0-60	520	63%
0-90	655	79%
90-180	175	21%
0-180	825	100%

CONTROL

DM1 0-10V DIMMING 1%

- 0-10V DIMMING
- 1% MINIMUM DIM LEVEL
- ELECTRONIC DRIVER
- POWER FACTOR >0.9
- THD <20%
- MINIMUM AMBIENT OPERATING TEMPERATURE -31°F
- FIELD REPLACEABLE

DM3 LUTRON HI-LUME ECOSYSTEM 1% (LDE1)

- LUTRON DIGITAL ECOSYSTEM DIMMING
- 1% MINIMUM DIMMING LEVEL
- SOFT-ON / FADE-TO-BLACK
- ELECTRONIC DRIVER
- POWER FACTOR >0.9 @ 120V
- THD <23% @ 120V
- MIN AMBIENT OPERATING TEMPERATURE = -32°F
- FIELD REPLACEABLE

OPTIONS

HCL HEX CELL LOUVER

- PROVIDES A 45° VISUAL CUT-OFF TO HELP REDUCE GLARE

ULD DAMP LABEL LUMINAIRE

- MAY BE USED IN AN OUTDOOR AREA THAT IS PROTECTED FROM DIRECT CONTACT WITH WIND, RAIN, SNOW OR EXCESSIVE MOISTURE

MOD MODIFIED LUMINAIRE

- LUMINAIRE IS MODIFIED FROM STANDARD OPTIONS; CONTACT LOCAL REP FOR MORE INFORMATION

SPECIFICATIONS

CONSTRUCTION

- HOUSING IS EXTRUDED AND MACHINED ALUMINUM
- DIFFUSER IS CLEAR ACRYLIC
- CANOPY IS SPUN ALUMINUM
- HARDWARE IS ZINC PLATED OR STAINLESS STEEL

MOUNTING

- P1CF MOUNTS TO 4X4" OCTAGON OR 4" ROUND J-BOX (BY OTHER)
- P1FE MOUNTS TO OCL PROPRIETARY RECESSED J-BOX WITH INTEGRAL DRIVER (PROVIDED BY OCL)

ELECTRICAL

- DIMMING ELECTRONIC DRIVER(S), COMES STANDARD WITH 0-10V DOWN TO 1%
- LUTRON (LDE1) ECOSYSTEM 1% ALSO AVAILABLE
- BRIDGELUX COB
- 80+ CRI = 80 RA, R9 > 0 (10-15 TYP)
- 90+ CRI = 90 RA, R9 > 50
- LUMINAIRE CONNECTS TO BUILDING SUPPLY (120V-277V 50/60HZ) UNLESS DRIVERS ARE REMOTE

LISTING

- ETL LISTED TO UL 1598 FOR DRY LOCATIONS; DAMP LOCATION LISTED IS OPTION

WARRANTY

- 5 YEAR; ALL ELECTRICAL COMPONENTS RETAIN THE MANUFACTURER'S WARRANTY

SUSTAINABILITY

- THIS PRODUCT MEETS THE MATERIAL RESTRICTIONS OF ARTICLE 4 OF THE **ROHS** DIRECTIVE (2011/65/EU), INCLUDING COMMISSION DELEGATED DIRECTIVE 2015/863

The drawings and specifications and ideas, designs and arrangements represented on these drawings are and shall remain the property of The Original Cast Lighting (OCL Architectural Lighting) and no part thereof shall be copied, disclosed, to others or used in conjunction with any work or project other than the specified project for which they have been prepared and developed, without written consent of OCL. Visual contact with these plans or specifications shall constitute conclusive evidence of acceptance of these restrictions. All specifications and information subject to change without notice.

JOB NAME _____

CONTACT _____

ORDERING CODE _____

ECO NU4" Round Downlight



DESCRIPTION

The EcoNU4RD is an economical and highly efficient spec grade 4" recessed downlight with thoughtful construction and pleasing aesthetics. Offered standard with premium dimming using EldoLED 1% flicker free drivers 120V-277V universal voltage. Also offered 347V. Several beam angles available, plus an optional high-efficiency BrightView diffused lens for smooth light distribution and obscured LED image.

For the trim version, a minimalistic look is achieved with an ultrathin 1/16" trim that is only 5/16" wide. Color choices of both trim and bezel are offered for a customized look. For the trimless version, a perforated, mud up, regressed trim assembly provides for clean, trim free installation. Perforated mud frame's integrated lip helps guide the joint compound creating a sharp and clean opening.

HOUSING

Electrocoated 16-gauge cold-rolled steel provides enhanced structural reinforcement and rust prevention. Superior, UL-certified, injection-molded commercial-grade Lexan™(PC) is used for the frame and regressed bezel trim. Lexan provides unmatched durability and impact resistance, and is tested for UV resistance and water exposure in outdoor applications. Alternative high-grade die-cast aluminum alloy trim and bezel that has superior corrosion resistance properties, combined with a smooth aesthetic finish consistently meeting stringent performance criteria. The thermally-advanced, anodized heat sink uses 6063 aluminum alloy. Wet location rated is offered standard. A 90-minute constant-power IOTA emergency battery backup is available.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and driver serviceability from below the ceiling. The LED assembly uses die-cast aluminum mounting clamp grips (MCG) that swing out to tighten onto variable ceiling thicknesses. Integrated rubber feet on each MCG provide a non-slip vibration-resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in lens/ bezel assembly with either the included suction cup or a screwdriver blade. Integrated bar hangers feature integral toothed nails, T-bar mounting slots with locking holes, tabs for joist positioning. Retrofit mounting option allows for installation from below ceiling by use of compact driver box. No risk damaging LED or bezel assembly during installation, these are installed during last steps. Fixture and driver are easily removed for servicing after install without damaging drywall.

MOUNTING DIMENSIONS	CEILING THICKNESS	CEILING CUTOUT	New Construction Bar Hangers (included)	Mounting Length: 14-3/4" to 26"
Trim	1/8" to 1-5/8"	4-3/8" diameter	Extension Kit p/n: K20266 (ordered separately, 1 per fixture)	Extends a pair of Bar Hangers Total Mounting Length: 29" to 48"
Trimless	3/8" to 1-3/4"	4-1/2" diameter		
Millwork (Trimless)	1/2" to 1-3/4"	4-3/8" diameter		

- LISTINGS**
- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
 - IP65 with lens - Suitable for wet locations with lens - Suitable for damp locations without lens
 - Non-conductive, Lexan dead-front construction
 - Made in the USA - meets the requirements of the Buy American provision within the ARRA

RATINGS / CERTIFICATIONS	NC	RET	IC	ICAT	CP
Type non-IC	✓	✓			
Type IC			✓	✓	✓
Chicago Plenum (CCEA)					✓
Suitable for air handling plenums				✓	✓
Reduced airflow (with lens) ASTM E283	✓	✓	✓	✓	✓

LED INFO

- 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs
- 80 CRI: SDCM = 3-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs

ORDERING CODE	
SERIES	NU4
TYPE	RD round downlight RDT round downlight trimless RDM round downlight metal RDTMW round downlight trimless millwork
LED	SW static white
DELIVERED LUMENS	07LM 560 lm 10LM 800 lm 13LM 1040 lm 15LM 1200 lm 20LM 1600 lm 25LM 2000 lm 30LM 2400 lm 40LM 3000 lm Calculated Delivered Lumens = [Delivered Lumen Value] x [CCT Multiplier] x [Reflector Multiplier] Standard Configuration: 3000K 80CRI WH70
CCT	22K 2200K 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K
CRI	80 80 CRI 90 90 CRI
REFLECTOR & LM MULTIPLIER	HE40 40° high efficiency diffused lens (0.96) HE60 60° high efficiency diffused lens (0.96) HE70 70° high efficiency diffused lens (0.92) SS30 30° semi-specular with clear lens (0.90) SS40 40° semi-specular with clear lens (0.82) SS60 60° semi-specular with clear lens (0.94) D40 40° diffused with clear lens (0.86) D50 50° diffused with clear lens (0.90) D60 60° diffused with clear lens (0.90) WH70 70° brilliant white with clear lens (1.00) 10° narrow beam angle, see page 2 for details.
NO LENS OPTION	NL ³ no lens
ACCESSORIES	HCL ³ honeycomb louver
VOLTAGE	120 UNV 347 ¹⁰ 120V-277V 347V
DIMMING	10V ⁸ 0-10V 1% dimming standard DIM10 ⁴ eldoLED flicker free 0-10V dimming to 1% DIM10Z ⁴ eldoLED flicker free 0-10V dimming to 0% DALI ¹ eldoLED flicker free DALI dimming to 1% DALIZ ⁵ eldoLED flicker free DALI dimming to 0% DMX ² flicker free DMX dimming to 0% LTE ^{5,11} Lutron Hi-lume 2-Wire (Triac) dimming to 1% LUT Lutron Hi-lume EcoSystem dimming to 1%, Soft-on & Fade-to-Black LUTP ⁷ Lutron Hi-lume Premier EcoSystem dimming to 0.1%, Soft-on & Fade-to-Black ELV ^{5,11} leading & trailing edge (Triac/ELV) dimming to < 10% ELV1 ^{5,11} leading & trailing edge (Triac/ELV) dimming to 1%
MOUNTING OPTIONS	NC new construction with ceiling fitting plate IC ² insulation contact housing ICAT ² insulation contact/airtight housing CP ² chicago plenum housing RET retrofit, no ceiling fitting plate
TRIM COLOR	BK black WH white MC matte chrome BZ bronze WT wheat Not applicable to trimless option. Do not include in trimless ordering code.
BEZEL COLOR	BK black WH white MC matte chrome BZ bronze WT wheat
ELECTRICAL OPTIONS	EM7 ⁶ emergency battery backup, 90 minutes at 7 watts to LED EM12 ⁶ emergency battery backup, 90 minutes at 12 watts to LED

ORDERING CODE _____

Follow the steps to specify your fixture, example:
NU4 - RD - SW - 10LM - 35K - 90 - D50 - 120 - DIM10 - NC - WH - WH - EM7

SW (LED)	POWER
DELIVERED LM	W (80/90 CRI)
560	7
800	9
1040	12
1200	14
1600	16
2000	20
2400	24
3000	32

Power Factor ≥ 0.9

NOTES

- 90 CRI not available in 2200K or 5000K.
- IC/ICAT/CP not available in 40LM.
- "No lens" option available for SS30, SS40, SS60, D40, D50, D60, or WH70 and is damp location rated.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- Triac/ELV dimming and LTE available in 120V only.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture. Not available for RDM.
- LUTP not available in 25LM, 30LM or 40LM.
- 10V dimming not available in 07LM and 10LM.
- HCL not available with lens. Multiply delivered lumens by (0.78) and beam spread by (0.80) when honeycomb louver is used.
- DIM10 offered in 347V using a dedicated 347V Cosram 0-10V 1% Driver. All other dimming options are offered in 347V using a 3000mW Miniature Step-Down Transformer integrated with the Electrical Box. Triac and ELV dimming are not available.
- ELV, ELV1 and LTE not available in 07LM.

10° NARROW BEAM - ORDERING CODE

SERIES	NU4	
TYPE	RD	round downlight
	RDT	round downlight trimless
	RDM	round downlight metal
	RDTMW	round downlight trimless millwork
LED	SW	static white
DELIVERED LUMENS	07LM	640 lm
	10LM	910 lm
	13LM	1280 lm
	15LM	1365 lm
	20LM	1920 lm
	25LM	2400 lm
	30LM	3050 lm
	Calculated Delivered Lumens = [Delivered Lumen Value] x [CCT Multiplier] Standard Configuration: 3000K 80CRI	
CCT	22K	2200K
	27K	2700K
	30K	3000K
	35K	3500K
	40K	4000K
	50K	5000K
	CCT MULTIPLIER FOR LUMEN OUTPUT	
	CCT	2200K 2700K 3000K 3500K 4000K 5000K
	CRI	80+ 90+ 80+ 90+ 80+ 90+ 80+ 90+ 80+ 90+ 80+ 90+
		0.85 N/A 0.96 0.81 1.00 0.84 1.01 0.85 1.03 0.87 1.04 N/A
CRI	80	80 CRI
	90 ¹	90 CRI
REFLECTOR	S10	10° specular with clear lens
NO LENS OPTION	NL	no lens
ACCESSORIES	HCL ⁸	honeycomb louver
VOLTAGE	120	120V
	UNV	120V-277V
	347 ⁷	347V
DIMMING	10V ⁶	0-10V 1% dimming standard
	DIM10 ²	eldoLED flicker free 0-10V dimming to 1%
	DIM10Z ²	eldoLED flicker free 0-10V dimming to 0%
	DALI ²	eldoLED flicker free DALI dimming to 1%
	DALIZ ²	eldoLED flicker free DALI dimming to 0%
	DMXZ	flicker free DMX dimming to 0%
	LTE ^{3,9}	Lutron Hi-lume 2-Wire (Triac) dimming to 1%
	LUT	Lutron Hi-lume EcoSystem dimming to 1%, Soft-on & Fade-to-Black
	LUTP ⁵	Lutron Hi-lume Premier EcoSystem dimming to 0.1%, Soft-on & Fade-to-Black
	ELV ^{3,9}	leading & trailing edge (Triac/ELV) dimming to < 10%
	ELV1 ^{3,9}	leading & trailing edge (Triac/ELV) dimming to 1%
MOUNTING OPTIONS	NC	new construction with ceiling fitting plate
	IC ¹⁰	insulation contact housing
	ICAT ¹⁰	insulation contact/airtight housing
	CP ¹⁰	chicago plenum housing
	RET	retrofit, no ceiling fitting plate
TRIM COLOR	BK	black
	WH	white
	MC	matte chrome
	BZ	bronze
	WT	wheat
	Not applicable to trimless option. Do not include in trimless ordering code.	
BEZEL COLOR	BK	black
	WH	white
	MC	matte chrome
	BZ	bronze
	WT	wheat
ELECTRICAL OPTIONS	EM7 ⁴	emergency battery backup, 90 minutes at 7 watts to LED
	EM12 ⁴	emergency battery backup, 90 minutes at 12 watts to LED

ORDERING CODE

Follow the steps to specify your fixture, example:

NU4 - RD - SW - 10LM - 35K - 90 - S10 - 120 - DIM10 - NC - WH - WH - EM7

SW (LED)	POWER
DELIVERED LM	W (80/90 CRI)
640	11
910	18
1280	20
1365	24
1920	27
2400	31
3050	35

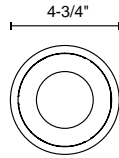
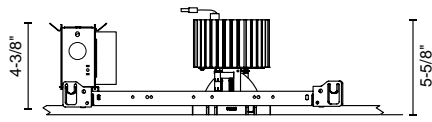
Power Factor ≥ 0.9

NOTES

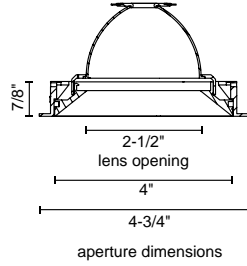
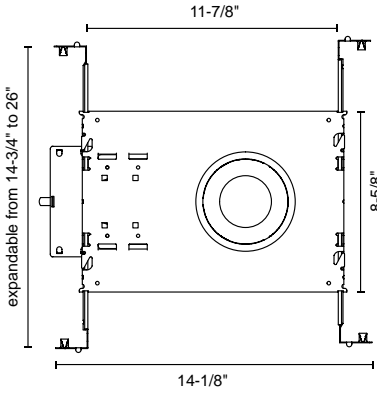
- 90 CRI not available in 2200K or 5000K.
- Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
- Triac/ELV dimming and LTE available in 120V only.
- For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture. Not available for RDM.
- LUTP not available in 25LM or 30LM.
- 10V dimming not available in 07LM and 10LM.
- DIM10 offered in 347V using a dedicated 347V Osram 0-10V 1% Driver. All other dimming options are offered in 347V using a miniature Step-Down Transformer integrated with the Electrical Box. Triac and ELV dimming are not available.
- HCL not available with lens. Multiply delivered lumens by (0.78) and beam spread by (0.80) when honeycomb louver is chosen.
- ELV, ELV1 and LTE not available in 07LM.
- IC/ICAT/CP not available in 30LM.

MOUNTING OPTIONS

NC - NEW CONSTRUCTION TRIM

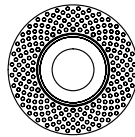
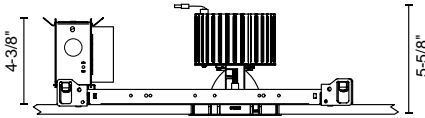


ceiling cutout
4-3/8" diameter

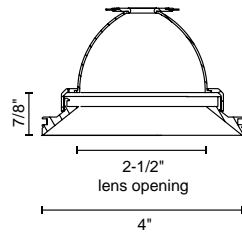
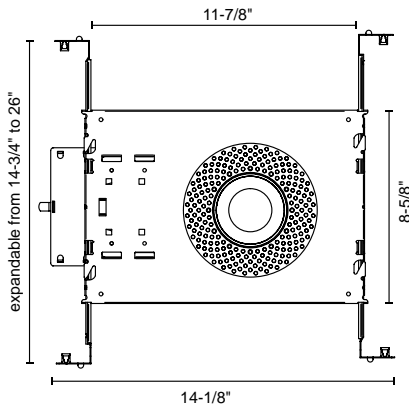


aperture dimensions

NC - NEW CONSTRUCTION TRIMLESS



ceiling cutout
4-1/2" diameter



aperture dimensions



1. Fasten mud frame to ceiling.



2. Insert protective cover (included).
Apply joint compound over the mud frame.



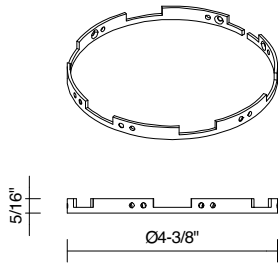
3. Install LED assembly.



4. Install bezel.

MOUNTING OPTIONS (CONTINUED)

RDTMW – MILLWORK TRIMLESS



Millwork Mounting Bracket

NOTES

- 1 Ceiling cutout 4-3/8".
- 2 Millwork Mounting Bracket & Mounting Screws are included with each Luminaire.
- 3 One Plastic Spacer and two C-Clamps are included with each order.
- 4 Refer to Installation Instructions for further details.



1. Insert Millwork Mounting Bracket using the included Plastic Spacer for proper depth positioning.



2. Use the included C-Clamps to temporarily hold the Plastic Spacer in position. Fasten the included wood screws into the Mounting Bracket using a right-angle impact driver (supplied by others).



3. Remove Plastic Spacer.



4. Install Luminaire.

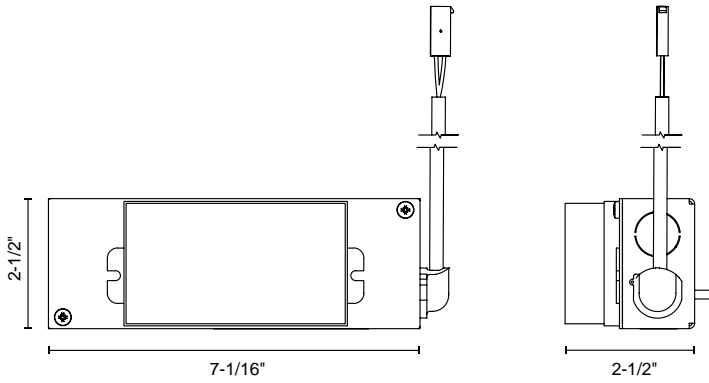


5. Insert Bezel to finish the installation.

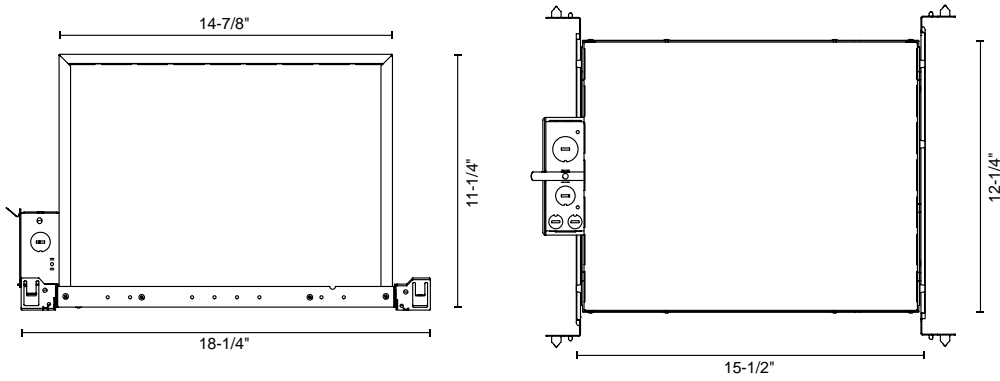


MOUNTING OPTIONS (CONTINUED)

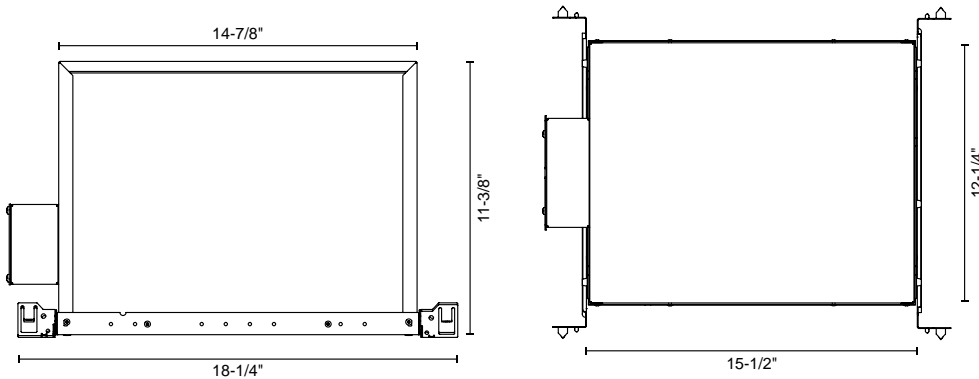
RET - RETROFIT TRIM/TRIMLESS



IC¹ - INSULATION CONTACT HOUSING TRIM/TRIMLESS



CP - CHICAGO PLENUM ICAT - INSULATION CONTACT / AIR TIGHT TRIM/TRIMLESS



NOTES

¹ Consult factory for smaller IC Housings when selecting lower lumen packages.

UR20 EDGE-LIT

ARCHITECTURAL AREA/SITE

FEATURES

- 20" size in post top, pole and wall mount
- High performance optics up to 16,091 delivered lumens
- Elegant form factor
- Edge-Lit Light Guide
- SiteSync™ and NX wireless control options
- UL/cUL listed for wet locations, IP66 and 1.5G and 4G vibration rated



CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Low copper aluminum alloy die-casting is designed as one-piece, low profile luminaire
- Molded silicone gasket throughout ensures the sealing between the two compartments and provides ingress protection
- Housing is designed with integral heat sink fins to aid in thermal transfer of the electrical components
- IK07 rated enclosure protects electrical equipment against external mechanical impacts
- All fasteners are stainless steel
- One-piece low copper aluminum alloy die-cast lens frame is secured to housing with a tool-less latch and integral offset hinge
- LEDs mount to a metal printed circuit board assembly (MCPCB)

INSTALLATION

- Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failure to do so may result in serious personal injury

ELECTRICAL

- Universal voltage, 120 through 277V with a ±10% tolerance. Driver is Underwriters Laboratories listed
- High voltage configurations, 347/480. Driver has a 0-10V dimming interface for multi-level illumination options. Driver is Underwriters Laboratories listed

ELECTRICAL (CONTINUED)

- "Thermal Shield", secondary side, thermistor provides protection for the sustainable life of LED module and electronic components

- Drivers shall have greater than a 0.9 power factor, less than 20% harmonic distortion, and be suitable for operation in -40°C to 40°C ambient environments
- Luminaire shall be capable of operating at 100% brightness in a 40°C environment. Both driver and optical array have integral thermal protection that will dim the luminaire upon detection of temperatures in excess of 85°C
- Surge protection: 10kV and 20kA in series
- Wiring: No. 18AWM rated 105°C, wet rating

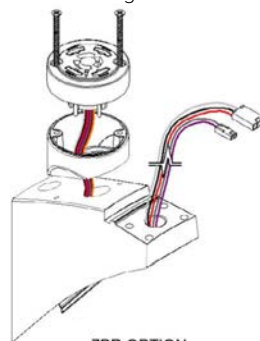
CONTROLS

7PR

- Fully gasketed and wired 7-pin receptacle option. Easy access location above the electrical compartment. 7-pin construction allows for a user-defined interface and provides a controlled definition of operational performance. ANSI twist-lock control module by-others

Standard customer operation modes:

- Traditional on/off photoelectric control
- 5-pin wireless photoelectric control for added dimming feature



7PR OPTION

Ouro™
EDGE-LIT



Ouro Edge-Lit Arm Mount

RELATED PRODUCTS

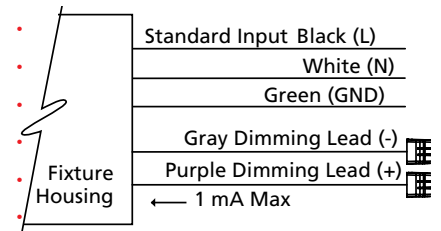
[Ouro Small Post Top](#)

[Ouro Large Post Top](#)

[Ouro Large Arm Mount](#)

CONTROLS (CONTINUED)

- 7-pin wireless photoelectric control for for dimming and additional I/O connections for customer use



DIMMING:

- Dimming range from 100% to 10% through the use of the standard 0-10V interface on the programmable driver
- Modular wiring harness in the service area provides user access to the dimming circuitry

(Specifications continued on page 3)

KEY DATA	
Lumen Range	3,105 - 16,091
Wattage Range	27.5 - 138.3W
Efficacy Range (LPW)	88.8 - 131.8 lm/W
Reported Life (Hours)	L70/>60,000
Weight	21 lbs - 9.5 Kg
EPA	0.372

UR20 EDGE-LIT

ARCHITECTURAL AREA/SITE

ORDERING GUIDE

Example: UR20-96L-50-3K8-3-L-UNV-ASQ-BL-7PR-SWP

CATALOG #

HOUSING

UR20		LED Engine		CCT		Distribution		Rotation		Voltage		Mounting	
UR20	Ouro	Type 2M and 3		3K7	3000K, 70 CRI	2M	Type II Medium	Blank	No rotation	UNV	120-277V	ASQ	Arm Square pole
		96L-30	30W, 3,000 lm	3K8	3000K, 80 CRI	3	Type III Short	L 1	Optic rotation left	347	347V	A34	Arm mt 3.3-4.2" OD pole
		96L-50	50W, 5,000 lm	3K9	3000K, 90 CRI	5W	Type V Wide	R 1	Optic rotation right	480	480V	A46	Arm mt 4.5-6.0" OD pole
		96L-70	70W, 7,000 lm	4K7	4000K, 70 CRI							MAF	Horizontal Slip Fitter 2 3/8" OD arm
		96L-90	90W, 9,000 lm	4K8	4000K, 80 CRI							SVSF	Square Vertical Slipfitter for 2" Tenon (2-3/8" OD)
		96L-135	135W, 12,000 lm	5K7	5000K, 70 CRI							VSF	Round Vertical Slipfitter for 2" Tenon (2-3/8" OD)
		Type 5W										WB	Wall Bracket
		192L-30	30W, 3,000 lm										
		192L-45	45W, 5,000 lm										
		192L-60	60W, 7,000 lm										
		192L-75	75W, 9,000 lm										
		192L-110	110W, 12,000 lm										
		192L-135	135W, 15,000 lm										

Fixture Finish		Control Options		Options		Control Accessories	
BLS	Black Gloss Smooth	7PR-TL	7 pin PCR with twist lock photocontrol	SF	Single Fuse	SW7PR	SiteSync™ with 7 pin PCR ^{3,5}
BLT	Black Matte Textured	7PR-SC	7 pin PCR with shorting cap	DF	Double Fuse	SWUSB	SiteSync™ Software on USB
DBS	Dark Bronze Gloss Smooth	7PR	7 pin PCR, wireless control enabled	TPL	Tamper Proof Latch	SWTAB	SiteSync™ Windows Tablet
DBT	Dark Bronze Matte Textured	AD-01	AstroDIM: 50% output at midnight ³			SWBRG	SiteSync™ Wireless Bridge Node
GTT	Graphite Matte Textured	AD-02	AstroDIM: 50% output midnight to 4 AM ³			WIR-RME-L	wiSCAPE™ External Fixture Module
LGS	Light Grey Gloss Smooth	AD-03	AstroDIM: 50% output 10PM ³			NXOFM1R1D-UNV	NX™ 7-pin Module
LGT	Light Grey Matte Textured	AD-04	AstroDIM: 50% output 10PM to 4AM ³				
PSS	Platinum Silver Gloss Smooth	NXWE	NX Wireless™ Enabled				
VGT	Verde Green Matte Textured	SWP	SiteSync™ Pre-commission ^{3,4,5}				
WHS	White Gloss Smooth	WSP-40F	Dimming Occ. Sensor for up to 40' MH, 120-480V				
WHT	White Matte Textured						
Color Option							
CC	Custom Color ¹						

1 Not available with 5W distributions.
 2 Consult factory for custom color, marine and corrosive finish options
 3 Not available with other sensor or wireless control options
 4 Not available with 347V and 480V.

5 Specify group and zone at time of order. See www.hubbellighting.com/sitesync for more details. Order at least one SiteSync interface accessory SWUSB or SWTAB. Each option contains SiteSync License, GUI, and Bridge Node.

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

SPECIFICATIONS (CONTINUED)

CONTROLS (CONTINUED)

DIMMING (CONTINUED):

- Dimming circuitry compatible with 0-10V, user-defined control devices
- Optional factory programmed dimming profile

NX DISTRIBUTED INTELLIGENCE™

- Hubbell Control Solutions' NX Distributed Intelligence™ lighting control platform utilizes a Distributed Network Architecture (DNA) that connects intelligent devices including luminaires, controllers, panels, occupancy sensors, photocells, wall switches and dimmers, creating a system with an unmatched level of reliability, scalability and simplicity

SITESYNC™

- SiteSync™ wireless control system for reduction in energy and maintenance cost while optimizing light quality 24/7. See ordering information or visit [Sitesync's product page](#) for more details

ASTRODIM

- AstroDIM provides multi-stage night-time power reduction based on an internal timer referenced to the power on/off time. There is no need for an external control infrastructure. The unit automatically performs a dimming profile based on the predefined scheduled reference to the midpoint, which is calculated based on the power on/off times

WISCAPE™

- Hubbell Control Solutions' wiSCAPE™ wireless control modules allow an individual fixture to be managed, monitored and measured. The modules communicate securely over a robust certified meshed radio signal. The wiSCAPE modules provide on/off/dim control, external device input, alerts and metering.

MOUNTING

- High temperature fuse holders factory installed inside the fixture housing
- Fuse is included

SUPPORT ARM:

- Die-cast, low copper aluminum alloy, with splice access cover
- Die-cast pole adapter and an internal reinforcing plate are provided with a wire strain relief
- The arm adapter is square or circular cut for specified pole size and shape
- For field wire connections, a terminal block is mounted in the arm cavity and accessible behind the splice access cover. The block accepts #14 to #8 wire sizes and is factory prewired to the electrical module's quick-disconnect plug inside the electrical compartment

OPTIONAL WALL MOUNT:

- Optional, cast aluminum mounting plate attaches to a wall over a junction box and the speed mount is bolted to the cover plate. To complete the wiring, the luminaire assembly slides over the mounting plate

OPTIONAL FUSING:

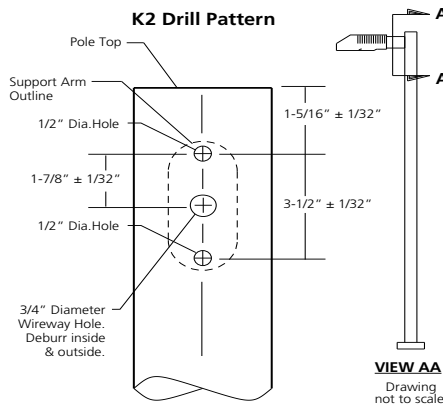
- SF for 120, 277, and 347 Line volts
- DF for 208, 240, and 480 Line volts

CERTIFICATIONS AND LISTINGS

- Listed to UL1598 and CSA C22.2#250.0-24 for wet locations and 40°C ambient temperatures
- ANSI C136.31-2010 Vibration tested and compliant 1.5G and 4G reference page 4
- IEC 66262 Mechanical Impact Code IK07
- IDA approved, 3000K and warmer CCTs only
- IP66 certified
- RoHS compliant
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 6/06/2020. [See Buy American Solutions](#)

WARRANTY

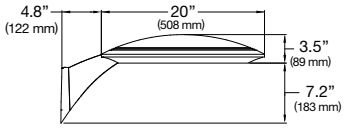
- 5 year warranty
- See [HLI Standard Warranty](#) for additional information



UR20 EDGE-LIT

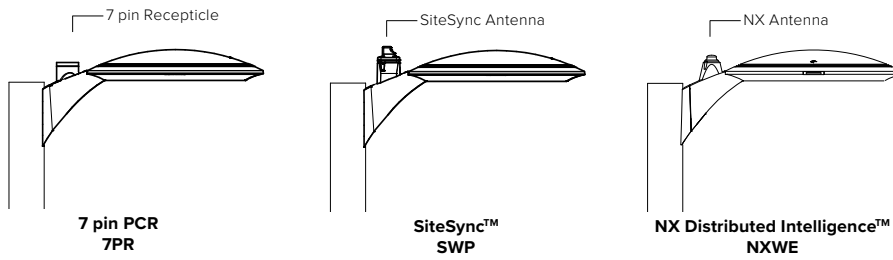
ARCHITECTURAL AREA/SITE

DIMENSIONS



Weight: 32 lbs EPA: .372

SENSOR PLACEMENT



MOUNTING VIBRATION RATINGS

UR 20 Arm		UR 20 Post Top	
Ordering Code	Rating	Ordering Code	Rating
ASQ	4G	FM33	4G
A34	4G	FM44	1.5G
A46	4G	PT23	4G
MAF	4G	PT24	4G
		PT34	1.5G

For the 4G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Test Level 1 Normal Applications, Vibration Test Level 2 Bridge/Overpass Applications, and Vibration Test Level 3

For the 1.5G test, ANSI C136.31-2010 Vibration is tested to comply with Vibration Level 1 Bridge/Overpass Applications

UR20 EDGE-LIT

ARCHITECTURAL AREA/SITE

DELIVERED LUMENS

LEDs #	Lumens Package	Drive Current (mA)	Nominal Watts	Distribution	3000K 70CRI					4000K 70CRI					5000K 70CRI				
					Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w	Lumen	BUG Rating			lm/w
						B	U	G			B	U	G			B	U	G	
96L	3,000	350	30	Type 2M	3105	2	0	2	110.1	3144	2	0	2	111.5	3176	2	0	2	112.6
	5,000	600	50		5076	3	0	3	108.9	5140	3	0	3	110.3	5192	3	0	3	111.4
	7,000	870	70		7206	3	0	3	104.3	7296	3	0	3	105.6	7370	3	0	3	106.7
	9,000	1150	90		9502	3	0	3	105.3	9622	3	0	3	106.7	9719	3	0	3	107.7
	12,000	800	135		12281	4	0	4	88.8	12435	4	0	4	89.9	12561	4	0	4	90.8
	3,000	350	30	Type 3	3369	1	0	2	119.5	3412	1	0	2	121.0	3446	1	0	2	122.2
	5,000	600	50		5507	1	0	2	118.2	5577	1	0	2	119.7	5633	1	0	2	120.9
	7,000	870	70		7818	2	0	3	113.1	7916	2	0	3	114.6	7996	2	0	3	115.7
	9,000	1150	90		10309	2	0	3	114.3	10439	2	0	3	115.7	10544	2	0	3	116.9
	12,000	800	135		13323	3	0	3	96.3	13491	3	0	3	97.5	13627	3	0	3	98.5
192L	3,000	350	30	Type 5W	3459	2	0	2	125.8	3503	2	0	2	127.4	3538	2	0	2	128.7
	5,000	560	45		5485	3	0	2	124.4	5554	3	0	2	125.9	5610	3	0	3	127.2
	7,000	800	60		7759	3	0	3	128.9	7857	3	0	3	130.5	7936	3	0	3	131.8
	9,000	960	75		9250	3	0	3	125.7	9366	3	0	3	127.3	9461	3	0	3	128.5
	12,000	680	110		12896	4	0	4	121.1	13058	4	0	4	122.6	13190	4	0	4	123.8
	15,000	840	135		15732	4	0	4	116.0	15930	4	0	4	117.5	16091	4	0	4	118.7

UR20 EDGE-LIT

ARCHITECTURAL AREA/SITE

PHOTOMETRY

UR20-96L-50-4K7-2M

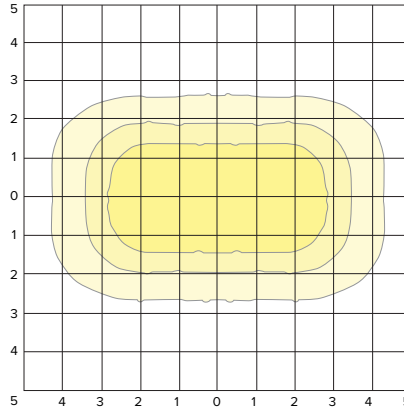
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5140
Watts	46.6
Efficacy	110.3
IES Type	III
BUG Rating	B3-U0-G3
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	2570	50%
Downward House Side	2570	50%
Downward Total	5140	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	5140	100%

ISOFOOT CANDLE PLOT



UR20-96L-50-4K7-3

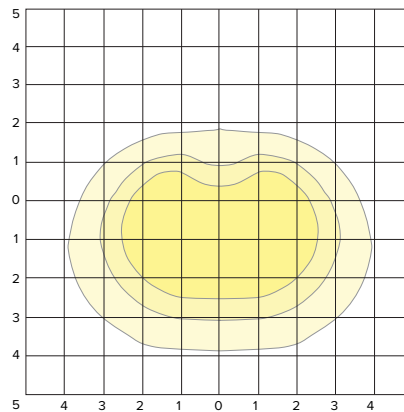
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	5576
Watts	46.6
Efficacy	119.7
IES Type	IV
BUG Rating	B1-U0-G2
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	4615	83%
Downward House Side	961	17%
Downward Total	5576	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	5576	100%

ISOFOOT CANDLE PLOT



UR20-192L-75-4K7-5W

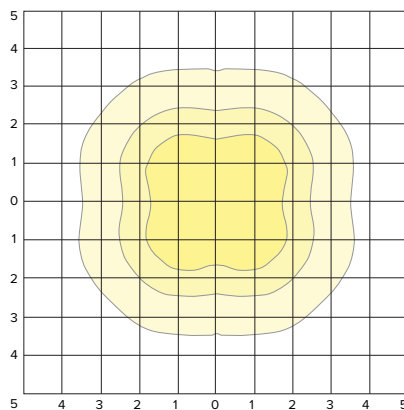
LUMINAIRE DATA

Description	4000K, 70CRI
Delivered Lumens	9366
Watts	73.6
Efficacy	127.3
IES Type	VS
BUG Rating	B3-U0-G3
Mounting Height	15 ft
Grid Scale	10 ft

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	4683	50%
Downward House Side	4683	50%
Downward Total	9366	100%
Upward Street Side	0	0%
Upward House Side	0	0%
Upward Total	0	0%
Total Flux	9366	100%

ISOFOOT CANDLE PLOT

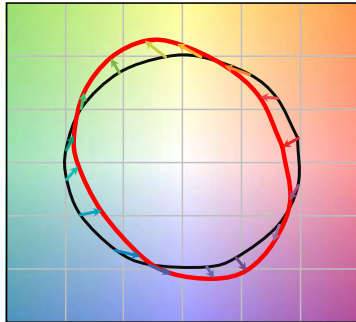


UR20 EDGE-LIT

ARCHITECTURAL AREA/SITE

TM-30 DATA

COLOR VECTOR GRAPHIC

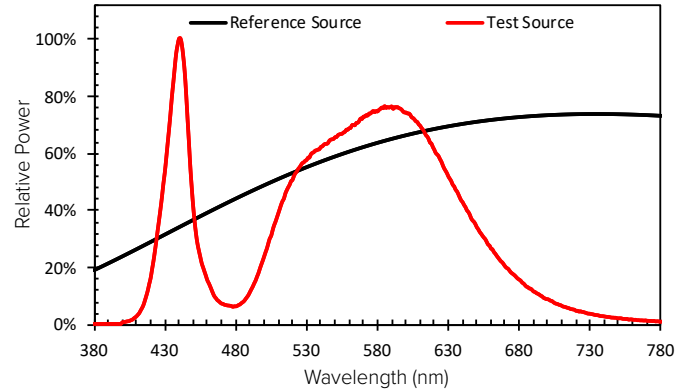


— Reference Illuminant — Test Source

TEST SOURCE

R _f	68
R _a	99
CCT(K)	3947
D _{uv}	0.0004
x	0.3831
y	0.3793
CIE R _a	72

SPECTRAL POWER DISTRIBUTION COMPARISON



ELECTRICAL DATA

Type 2M and 3											Dimming						
Drive Current (mA)	LED Count	System Watts	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
350	96L	28.2	120-480	50/60	0.24	0.14	0.12	0.10	0.08	0.06	>0.9	20	10% to 100%	0mA	1mA	0V	10V
600		0.39			0.22	0.19	0.17	0.13	0.10								
870		0.58			0.33	0.29	0.25	0.20	0.14								
1150		0.75			0.43	0.38	0.33	0.26	0.19								
800*		1.15			0.66	0.58	0.50	0.40	0.29								

Type 5W											Dimming						
Drive Current (mA)	LED Count	System Watts	Line Voltage		Amps AC						Min. Power Factor	Max THD (%)	Dimming Range	Source current out of 0-10V		Absolute voltage range on 0-10V (+)	
			VAC	Hz	120	208	240	277	347	480				Min	Max	Min	Max
350	192L	27.5	120-480	50/60	0.23	0.13	0.11	0.10	0.08	0.06	>0.9	20	10% to 100%	0mA	1mA	0V	10V
560		0.37			0.21	0.18	0.16	0.13	0.09								
800		0.50			0.29	0.25	0.22	0.17	0.13								
960		0.61			0.35	0.31	0.27	0.21	0.15								
680*		0.89			0.51	0.44	0.38	0.31	0.22								
840*		1.13			0.65	0.57	0.49	0.39	0.28								

TM-21 Lifetime Calculation - Projected Lumen Maintenance (25°C / 77°C)						
Ambient Temp.	0	25,000	36,000	50,000	100,000	Reported L70
25°C / 77°F	100%	93.6%	91.5%	89.0%	80.4%	60khrs

CRI Lumen Multiplier	
CCT	80 CRI
3000K	0.9119
4000K	0.8941

* Multiple drivers used for this output, drive current listed is per driver



INSERT+ | RECESSED WALL

PRODUCT CODE

PROJECT

TYPE

PERFORMANCE
iN LIGHTING

PERFORMANCE **in** LIGHTING

Light sculpts the surrounding area to emphasize the meticulous planning that has gone into every piece of architecture. Aesthetics and function combine to create products that will satisfy the needs of the most ambitious of projects. Lighting becomes an integral part of the creative and design process, shaping nuances by highlighting texture and detail, becoming part of the construction process by perfectly complementing its architectural design.

Urban environments, roads, infrastructure, sporting venues, to name just a few. These are complex areas that call for an integrated lighting approach, parking lots, squares, green areas, every space that makes up the urban environment requires the right level of lighting, for a safer environment. Smart buildings and a variety of engineered lighting options provide the best results.



All products are covered by a 5-year warranty, provided that they are used and maintained according to instructions. Consumable materials, such as bulbs, starters, electronic ignitors and reactors, which are compliant with warranty regulations issued by the European Directive on the subject, are not included in the warranty.

Focus on quality, safety and product lifetime/longevity are the essential objectives of PERFORMANCE **in** LIGHTING.

For additional information, go to www.performanceinlighting.com



PERFORMANCE **in** LIGHTING offers a wide range of quick ship fixtures through the Pronto Program and a host of options to fit within the unique budget of your next project.

INDEX

RECESSED WALL



INSERT+ZERO
4



INSERT+ZERO CLIPS
6



INSERT+1
8



INSERT+2
10



INSERT+3
12

INSERT+ ZERO



Recessed wall steplight series. Fixtures consist of:

- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free precision die-cast aluminum housing and ring/faceplate.
- Frosted, flat, tempered silk-screened soda-lime glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote a long LED life.

- IESNA Type II light distribution.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.
- Mud Ring included for INSERT+ ZERO / ZERO CLIPS (J-Box provided by others).
- Consult factory for dimming options, custom finishes (please specify RAL color), and non-cataloged CCT (Kelvin) options including static colors.
- Product meets Buy American Act requirements within ARRA.
- 5-year warranty.

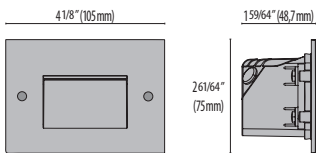


Standard finishes:

- AN-96 / Iron gray / Textured
- GR-94 / Aluminum metallic / Textured
- WH-87 / White / Textured

Other finish options:

- BK-81 / Black / Textured
- RB-10 / Iron rust / Textured



INSERT+
ZERO



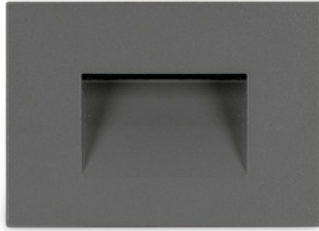
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INSERT+ ZERO

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
Mid Power LEDs 120-277 V													
6W	-	120-277V	80	4000	-	-	684 lm	196 lm	80	10	60000 h	●	070599
6W	-	120-277V	80	3000	-	-	660 lm	188 lm	80	10	60000 h	●	070598
6W	-	120-277V	80	4000	-	-	684 lm	196 lm	80	10	60000 h	●	070597
6W	-	120-277V	80	3000	-	-	660 lm	188 lm	80	10	60000 h	●	070596
6W	-	120-277V	80	4000	-	-	684 lm	196 lm	80	10	60000 h	○	070595
6W	-	120-277V	80	3000	-	-	660 lm	188 lm	80	10	60000 h	○	070594
4W	-	120-277V	80	4000	-	-	529 lm	153 lm	80	10	60000 h	●	071904
4W	-	120-277V	80	3000	-	-	511 lm	140 lm	80	10	60000 h	●	071902
4W	-	120-277V	80	4000	-	-	529 lm	153 lm	80	10	60000 h	●	071900
4W	-	120-277V	80	3000	-	-	511 lm	140 lm	80	10	60000 h	●	071898
4W	-	120-277V	80	4000	-	-	529 lm	153 lm	80	10	60000 h	○	071896
4W	-	120-277V	80	3000	-	-	511 lm	140 lm	80	10	60000 h	○	071894



INSERT+ ZERO CLIPS



Recessed wall steplight series. Fixtures consist of:

- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free precision die-cast aluminum housing and ring/faceplate.
- Frosted, flat, tempered silk-screened soda-lime glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote a long LED life.

- IESNA Type II light distribution.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.
- Mud Ring included for INSERT+ ZERO / ZERO CLIPS (J-Box provided by others).
- Consult factory for dimming options, custom finishes (please specify RAL color), and non-cataloged CCT (Kelvin) options including static colors.
- Product meets Buy American Act requirements within ARRA.
- 5-year warranty.

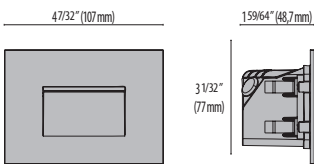


Standard finishes:

- AN-96 / Iron gray / Textured
- GR-94 / Aluminum metallic / Textured
- WH-87 / White / Textured

Other finish options:

- BK-81 / Black / Textured
- RB-10 / Iron rust / Textured



INSERT+
ZERO CLIPS



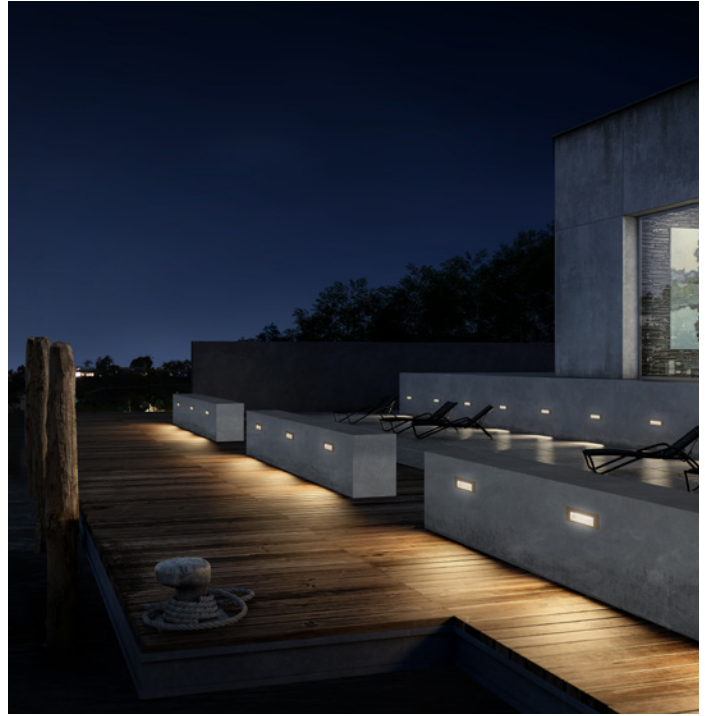
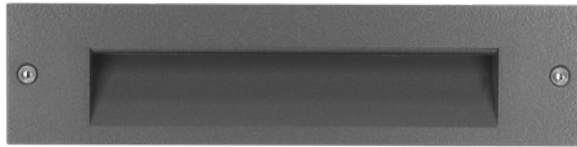
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INSERT+ ZERO CLIPS

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
Mid Power LEDs 120-277 V													
6W	-	120-277V	80	4000	-	-	684 lm	225 lm	80	10	60000 h	●	070605
6W	-	120-277V	80	3000	-	-	660 lm	217 lm	80	10	60000 h	●	070604
6W	-	120-277V	80	4000	-	-	684 lm	225 lm	80	10	60000 h	●	070603
6W	-	120-277V	80	3000	-	-	660 lm	217 lm	80	10	60000 h	●	070602
6W	-	120-277V	80	4000	-	-	684 lm	225 lm	80	10	60000 h	○	070601
6W	-	120-277V	80	3000	-	-	660 lm	217 lm	80	10	60000 h	○	070600
4W	-	120-277V	80	4000	-	-	529 lm	178 lm	80	10	60000 h	●	071921
4W	-	120-277V	80	3000	-	-	511 lm	162 lm	80	10	60000 h	●	071920
4W	-	120-277V	80	4000	-	-	529 lm	178 lm	80	10	60000 h	●	071918
4W	-	120-277V	80	3000	-	-	511 lm	162 lm	80	10	60000 h	●	071916
4W	-	120-277V	80	4000	-	-	529 lm	178 lm	80	10	60000 h	○	071908
4W	-	120-277V	80	3000	-	-	511 lm	162 lm	80	10	60000 h	○	071906



INSERT+1



Recessed wall step light series. Fixtures consist of:

- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free precision die-cast aluminum housing and ring/faceplate.
- Frosted, flat, tempered silk-screened soda-lime glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote a long LED life.
- IESNA Type III light distribution.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.
- Pre-wired factory sealed cable for external electrical

- connection included.
- Consult factory for dimming options, custom finishes (please specify RAL color), and non-cataloged CCT (Kelvin) options.
- Consult factory for custom pre-wired factory sealed cable length options.
- Stainless steel recessed rough-in kit to be ordered separately.
- Optional INSERT+ 1 marine-grade, polished, brass faceplate suitable for coastal applications available (ordered separately).
- Product meets Buy American Act requirements within ARRA.
- 5-year warranty.

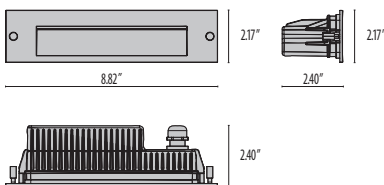


Standard finishes:

- AN-96 / Iron gray / Textured
- GR-94 / Aluminum metallic / Textured
- WH-87 / White / Textured

Other finish options:

- BK-81 / Black / Textured
- RB-10 / Iron rust / Textured



INSERT+
1



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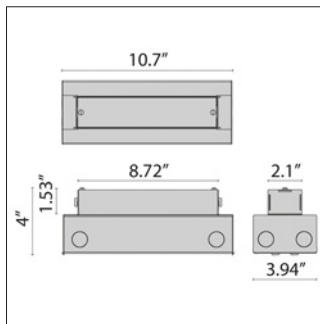
INSERT+1

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
Mid Power LEDs 120-277 V													
7W	-	120-277V	80	4000	-	-	850 lm	275 lm	80	10	60000 h	●	071423
7W	-	120-277V	80	3000	-	-	825 lm	250 lm	80	10	60000 h	●	071419
7W	-	120-277V	80	4000	-	-	850 lm	275 lm	80	10	60000 h	●	071422
7W	-	120-277V	80	3000	-	-	825 lm	250 lm	80	10	60000 h	●	071417
7W	-	120-277V	80	4000	-	-	850 lm	275 lm	80	10	60000 h	○	071424
7W	-	120-277V	80	3000	-	-	825 lm	250 lm	80	10	60000 h	○	071421



REQUIRED FOR INSTALLATION

DESCRIPTION	FINISH	PART NUMBER
INSERT+ 1		
Rough-In kit Insert+ 1		310485



310485

OPTIONAL ACCESSORIES

DESCRIPTION	FINISH	PART NUMBER
INSERT+ 1		
Brass Faceplate Insert +1		304970



304970

INSERT+2



Recessed wall spotlight series. Fixtures consist of:

- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free precision die-cast aluminum housing and ring/faceplate.
- Frosted, flat, tempered silk-screened soda-lime glass diffuser.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Custom MCPCB utilized to maximize heat dissipation and promote a long LED life.
- IESNA Type III light distribution.
- Input voltage: 120-277 V (50 / 60 Hz), integral driver.

- Pre-wired factory sealed cable for external electrical connection included.
- Consult factory for dimming options, custom finishes (please specify RAL color), and non-cataloged CCT (Kelvin) options.
- Consult factory for custom pre-wired factory sealed cable length options.
- Stainless steel recessed rough-in kit to be ordered separately.
- Product meets Buy American Act requirements within ARRA.
- 5-year warranty.

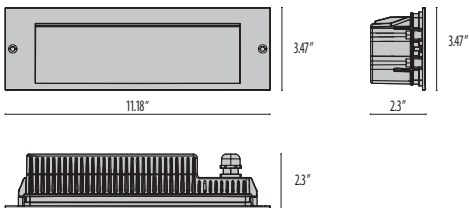


Standard finishes:

- AN-96 / Iron gray / Textured
- GR-94 / Aluminum metallic / Textured
- WH-87 / White / Textured

Other finish options:

- BK-81 / Black / Textured
- RB-10 / Iron rust / Textured



INSERT+
2



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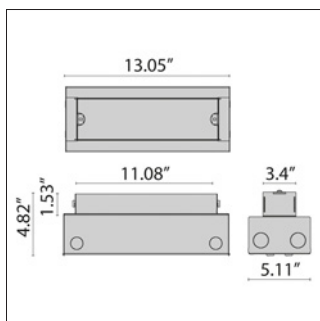
INSERT+2

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
11 W	-	120-277 V	80	4000	-	-	1410 lm	553 lm	80	10	60000 h	●	071413
11 W	-	120-277 V	80	3000	-	-	1350 lm	503 lm	80	10	60000 h	●	071407
11 W	-	120-277 V	80	4000	-	-	1410 lm	553 lm	80	10	60000 h	●	071411
11 W	-	120-277 V	80	3000	-	-	1350 lm	503 lm	80	10	60000 h	●	071405
11 W	-	120-277 V	80	4000	-	-	1410 lm	553 lm	80	10	60000 h	○	071415
11 W	-	120-277 V	80	3000	-	-	1350 lm	503 lm	80	10	60000 h	○	071409



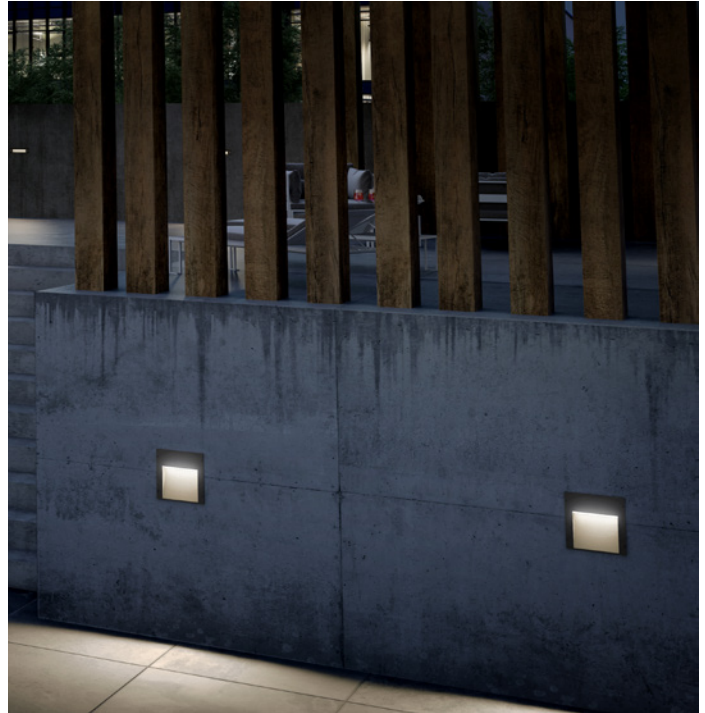
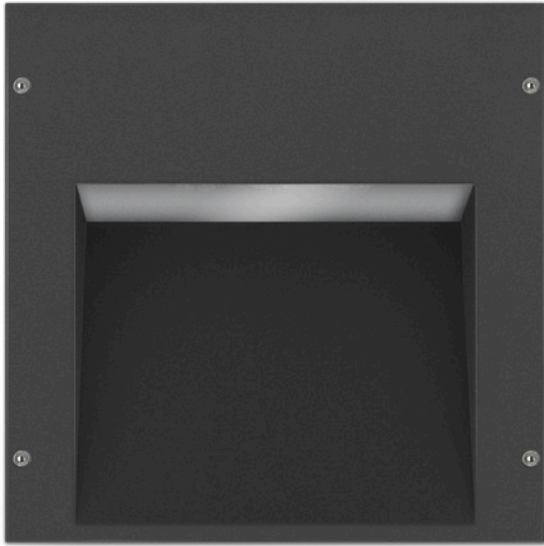
REQUIRED FOR INSTALLATION

DESCRIPTION	FINISH	PART NUMBER
INSERT+ 2		
Rough-In kit Insert+ 2		310486



310486

INSERT+3



Recessed wall spotlight series. Fixtures consist of:

- Multi-step powder-coat painting process, optimized against UV rays and corrosion.
- Copper-free precision die-cast aluminum housing and ring/faceplate.
- Custom molded, anti-aging gasket(s).
- Stainless steel external hardware.
- Extra-clear, flat, tempered soda-lime glass diffuser.
- Frosted, flat, tempered soda-lime glass diffuser.
- Custom MCPCB utilized to maximize heat dissipation and promote a long LED life.
- High-transmittance transparent optics.
- IESNA Type II light distribution.
- IESNA Type III light distribution.

- Input voltage: 120-277 V (50 / 60 Hz), integral 0-10 V dimming driver.
- Pre-wired factory sealed cable for external electrical connection included.
- Stainless steel recessed rough-in kit to be ordered separately.
- Suitable for concrete or hollow wall applications.
- Consult factory for dimming options, custom finishes (please specify RAL color), and non-cataloged CCT (Kelvin) options.
- Consult factory for custom pre-wired factory sealed cable length options.
- Product meets Buy American Act requirements within ARRA.
- 5-year warranty.

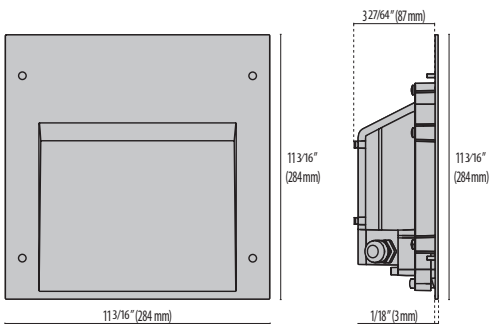


Standard finishes:

- AN-96 / Iron gray / Textured
- GR-94 / Aluminum metallic / Textured

Other finish options:

- BK-81 / Black / Textured
- WH-87 / White / Textured
- RB-10 / Iron rust / Textured



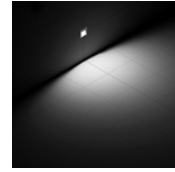
INSERT+
3



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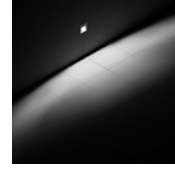
INSERT+3

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
Mid Power LEDs 120-277 V - Dimmable 0-10 V													
29 W	-	120-277 V	80	4000	-	-	4140 lm	1592 lm	80	10	60000 h	●	071982
29 W	-	120-277 V	80	3000	-	-	4020 lm	1502 lm	80	10	60000 h	●	071981
29 W	-	120-277 V	80	4000	-	-	4140 lm	1592 lm	80	10	60000 h	●	071984
29 W	-	120-277 V	80	3000	-	-	4020 lm	1502 lm	80	10	60000 h	●	071983



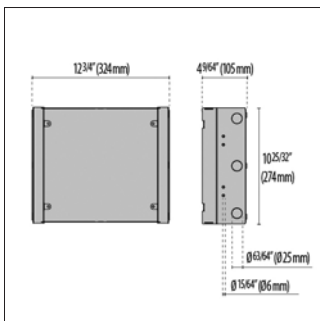
INSERT+3 TYPE II

WATTAGE	DLC	VOLTAGE	CRI	KELVIN	OPTIC	OPTIC BEAM	LIGHTSOURCE LUMEN OUTPUT	LUMINAIRE LUMEN OUTPUT	L	B	LIFETIME	FINISH	PART NUMBER
Mid Power LEDs 120-277 V - Dimmable 0-10 V													
26 W	-	120-277 V	70	4000	-	-	3585 lm	1399 lm	80	10	125000 h	●	071978
26 W	-	120-277 V	70	3000	-	-	3450 lm	1388 lm	80	10	125000 h	●	071977
26 W	-	120-277 V	70	4000	-	-	3585 lm	1399 lm	80	10	125000 h	●	071980
26 W	-	120-277 V	70	3000	-	-	3450 lm	1388 lm	80	10	125000 h	●	071979



REQUIRED FOR INSTALLATION

DESCRIPTION	FINISH	PART NUMBER
INSERT+3		
Rough-In kit INSERT+3	●	3100883



3100883



PERFORMANCE IN LIGHTING

2621 Keys Pointe
Conyers, GA 30013 - United States
Ph 770.822.2115
Fax 770.822.9925

www.performanceinlighting.com

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

FEATURES

- Available in 2', 4', or 8' lengths
- IP65, IP67 and IP66 all models with standard polyacetal (POM) latches
- NEMA 4X housing
- Fiberglass housing with F1 weatherability rating, standard
- IK10 rated when ordered with polycarbonate lens
- Impact modified acrylic lens equivalent to 100% DR
- UL Sanitation Certified per NSF Standards
- Includes stainless steel surface mounting brackets
- -20°C up to +50°C ambient operation; see table provided for details



RELATED PRODUCTS

- [LXEN](#)
- [LXEP](#)
- [LXEW](#)

SPECIFICATIONS

CONSTRUCTION

- Housing is formed from UL 5VA fiberglass
- F1 weatherability rating, suitable for indoor or outdoor use with respect to exposure to UV light
- Pour-in-place non-porous gasketing assures seal
- LED affixed to removable heat sinked gear tray
- 14 Latches per 8'; 8 per 4'; 6 per 2'
- Latches are provided tamper resistance ready, tamper resistant screws by others
- Latches are standard polyacetal (POM), optional in stainless steel
- Access openings are provided for electrical connection
- White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel

OPTICS

- Lineal ribbed frosted acrylic lens impact modified equivalent to 100% DR; modification adds flexibility to reduce impact breakage compared to standard acrylic formulations
- Optional ribbed polycarbonate lens or deep acrylic
- All lenses available in clear or frost

ELECTRICAL

- Long life 60,000 hour LEDs at L80 for reduced maintenance
- Extra High Lumen packages (XL) rated L70 at 60,000 hours
- 80 CRI
- Driver options include fixed output for on/off function, step dimming (high/low/off) or continuous 0-10V dimming
- QR code label affixed to housing for easy traceability

CERTIFICATIONS

- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate cCSAus labels
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options
- Wet Location label standard
- UL Sanitation certified to NSF standards
- Ingress protection IP65 and IP67 standard; IP66 on certain models

CERTIFICATIONS (CONTINUED)

- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 10 for wiring diagram. [Link to Dimming Bypass Module Specification sheet](#)
- This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2145–22,473
Wattage Range	20-183
Efficacy Range (LPW)	99-147
Reported Life (Hours)	L80/60,000

ORDERING GUIDE

Example: LXEM4-35HL-RFA-EDU

CATALOG # _____

LXEM		Color Temp			Nominal Lumens			Shielding		Driver		Voltage	
Model	Size												
LXEM LED Enclosed and Gasketed	2 2' ^{1,2,3,4} 4 4' 8 8'	30 3000K	35 3500K	40 4000K	50 5000K	VW 2' (2,145-2,708) 4' (2,802-3,433) 8' (6,078-6,866)	VL 2' (4,254-5,416) 4' (5,449-6,763) 8' (11,851-13,525)	HL 2' (4,254-5,416) 4' (5,449-6,763) 8' (11,851-13,525)	RFA Ribbed Frosted Acrylic RA Ribbed Clear Acrylic ⁵ DFA Deep Frosted Acrylic DCA Deep Clear Acrylic ⁵ RFP Ribbed Frosted Polycarbonate ⁶ RP Ribbed Clear Polycarbonate ^{5,6}	E Fixed Output ED 0-10V Dimming ED1 0-10V 1% Dimming ⁷ ESD Step Dimming ⁷	U 120-277V 347 347V		
		LW 2' (2,738-3,529) 4' (3,726-4,922) 8' (8,095-9,276)	ML 2' (3,862-4,921) 4' (4,533-5,646) 8' (9,844-11,293)	VL 4' (7,086-8,415) 8' (14,747-16,830)	XL 4' (9,059-11,237) 8' (19,558-22,473)								

Options	
ELL14	Emergency Battery Pack Installed, 1400 Lumens ^{3,7,8}
GLR	Fast Blow Fuse
DTS	Dimming Bypass Module ^{3,8,9}
OCM	Microwave Occupancy Sensor ^{8,13}
SSL	Stainless Steel Tamper Resistance Ready Latches
TP	Tamper Proof Latches
F3C8W	3-Wire 8' Wet Cord
F3C15W	3-Wire 15' Wet Cord
F4C8W	4-Wire 8' Wet Cord
F4C15W	4-Wire 15' Wet Cord
F5C8W	5-Wire 8' Wet Cord
F5C15W	5-Wire 15' Wet Cord
F6C6W	6-Wire 6' Wet Cord
SWH	Single Wet Hub ½" NPT Hub
DWH	Dual Wet Hub ½" NPT Hub
ZRE	ControlScope® compatible ^{8,10}

Accessories	
<input type="checkbox"/> XEDPM	Dual Pendant Brackets (pendant by others) ¹¹
<input type="checkbox"/> XEHC	Chain Hanger Kit (Includes 14" Chain)
<input type="checkbox"/> XE45MB	45° Mounting Bracket ¹²
<input type="checkbox"/> XE45MBSS	45° Stainless Steel Mounting Bracket ¹²

Sensor kits (Order Separately) All sensor kits include On/Off Occupancy & Daylight. Daylight activation requires setting of dip-switches on site.					
	Catalog #	# Relays	Lens Type	Voltage	Wet Label
120V/277V	<input type="checkbox"/> OS1360WLK	1	360°	120/277	Yes
	<input type="checkbox"/> OS2360WLK	2	360°	120/277	Yes
	<input type="checkbox"/> OS1AWLK	1	Aisle	120/277	Yes
	<input type="checkbox"/> OS2AWLK	2	Aisle	120/277	Yes

- Notes:
- 1 VL and XL not available in 2' size
 - 2 Not available with battery pack or DTS
 - 3 Not available with XL lumen package
 - 4 Not available with VL lumen package
 - 5 Clear lenses (RA, DCA and RP) may cause noticeable light patterns on lit surfaces. See ies files for exact distribution
 - 6 2' and 4' only. 8' not available
 - 7 See table for availability
 - 8 Not available in 347V
 - 9 For emergency circuit control loads including sensors and wireless systems listed to UL924. Only available with 0-10V drivers. See page 10 for wiring diagram
 - 10 Registered trademark of Daintree Networks, used by permission
 - 11 Requires ¾" OD threaded rod by others
 - 12 2 required for 8' fixture
 - 13 OCM option uses Wattstopper FM-105

PRODUCT EXCEPTIONS & DETAILS

Options listed below are available for the outputs as shown.

DRIVER AVAILABILITY TABLE							
Length	Output	Nominal Lumen Range	ESD Available	ED1 Available	347V Available	347V with ESD Available	347V with ED1 Available
2'	VW	2,145–2,708	Y	Y	Y	N/A	Y
	LW	2,738–3,529	Y	Y	Y	N/A	Y
	ML	3,862–4,921	Y	Y	Y	N/A	Y
	HL	4,254–5,416	Y	Y	Y	N/A	Y
4'	VW	2,802–3,433	Y	Y	Y	N/A	Y
	LW	3,726–4,922	Y	Y	Y	N/A	Y
	ML	4,533–5,646	Y	Y	Y	N/A	Y
	HL	5,449–6,763	Y	Y	Y	N/A	Y
	VL	7,086–8,415	Y	Y	Y	N/A	N/A
	XL	9,059–11,237	N/A	Y	Y	N/A	N/A
8'	VW	6,078–6,866	Y	Y	Y	N/A	Y
	LW	8,095–9,276	Y	Y	Y	N/A	Y
	ML	9,844–11,293	Y	Y	Y	N/A	Y
	HL	11,851–13,525	Y	Y	Y	N/A	Y
	VL	14,747–16,830	Y	Y	Y	N/A	N/A
	XL	19,558–22,473	N/A	Y	Y	N/A	N/A

MAX. AMBIENT OPERATING TEMP.							
Length	Output	Nominal Lumen Range	Watts	LPW	Max Ambient Operating Temperature (C°) (Universal Voltage)	ELL14 (with Universal Voltage)	347V
2'	VW	2,145–2,708	21	102–130	40	NA	35
	LW	2,738–3,529	26	105–135	40	NA	35
	ML	3,862–4,921	39	100–128	40	NA	35
	HL	4,254–5,416	44	97–123	35	NA	30
4'	VW	2,802–3,433	25	114–141	50	45	45
	LW	3,726–4,922	33	112–139	50	45	45
	ML	4,533–5,646	42	108–134	50	45	45
	HL	5,449–6,763	47	115–143	45	45	35
	VL	7,086–8,415	62	115–136	40	40	35
	XL	9,059–11,237	92	99–123	30	NA	25
8'	VW	6,078–6,866	49	124–141	50	45	45
	LW	8,095–9,276	67	122–139	50	45	45
	ML	9,844–11,293	84	117–134	50	45	45
	HL	11,851–13,525	95	125–143	45	45	35
	VL	14,747–16,830	123	120–136	40	40	35
	XL	19,558–22,473	183	107–123	30	NA	25

DELIVERED LUMENS

PRODUCT AVAILABILITY 80 CRI							
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp
LXEM2-30VW-RFP-EDU	Very Low Watt	30K	RFP	2,145	211	101.6	40°C
LXEM2-30VW-RA-EDU			RA	2,365	20.8	113.7	40°C
LXEM2-30VW-RP-EDU			RP	2,373	20.8	114.1	40°C
LXEM2-30VW-RFA-EDU			RFA	2,448	20.8	117.7	40°C
LXEM2-30VW-DFA-EDU			DFA	2,467	20.8	118.6	40°C
LXEM2-30VW-DCA-EDU			DCA	2,512	20.8	120.8	40°C
LXEM2-35VW-RFP-EDU		35K	RFP	2,217	211	105.1	40°C
LXEM2-35VW-RA-EDU			RA	2,446	20.8	117.6	40°C
LXEM2-35VW-RP-EDU			RP	2,454	20.8	118	40°C
LXEM2-35VW-RFA-EDU			RFA	2,531	20.8	121.7	40°C
LXEM2-35VW-DFA-EDU			DFA	2,551	20.8	122.6	40°C
LXEM2-35VW-DCA-EDU			DCA	2,598	20.8	124.9	40°C
LXEM2-40VW-RFP-EDU		40K	RFP	2,252	211	106.7	40°C
LXEM2-40VW-RA-EDU			RA	2,484	20.8	119.4	40°C
LXEM2-40VW-RP-EDU			RP	2,492	20.8	119.8	40°C
LXEM2-40VW-RFA-EDU			RFA	2,571	20.8	123.6	40°C
LXEM2-40VW-DFA-EDU			DFA	2,590	20.8	124.5	40°C
LXEM2-40VW-DCA-EDU			DCA	2,638	20.8	126.8	40°C
LXEM2-50VW-RFP-EDU		50K	RFP	2,312	211	109.6	40°C
LXEM2-50VW-RA-EDU			RA	2,550	20.8	122.6	40°C
LXEM2-50VW-RP-EDU			RP	2,558	20.8	123	40°C
LXEM2-50VW-RFA-EDU			RFA	2,639	20.8	126.9	40°C
LXEM2-50VW-DFA-EDU			DFA	2,659	20.8	127.8	40°C
LXEM2-50VW-DCA-EDU			DCA	2,708	20.8	130.2	40°C
LXEM2-30LW-RFP-EDU	Low Watt	30K	RFP	2,738	26	105.3	40°C
LXEM2-30LW-RP-EDU			RP	3,049	26.1	116.8	40°C
LXEM2-30LW-RA-EDU			RA	3,144	26	120.9	40°C
LXEM2-30LW-RFA-EDU			RFA	3,180	26.2	121.4	40°C
LXEM2-30LW-DFA-EDU			DFA	3,239	26.1	124.1	40°C
LXEM2-30LW-DCA-EDU			DCA	3,273	26.1	125.4	40°C
LXEM2-35LW-RFP-EDU		35K	RFP	2,831	26	108.9	40°C
LXEM2-35LW-RP-EDU			RP	3,153	26.1	120.8	40°C
LXEM2-35LW-RA-EDU			RA	3,251	26	125	40°C
LXEM2-35LW-RFA-EDU			RFA	3,289	26.2	125.5	40°C
LXEM2-35LW-DFA-EDU			DFA	3,349	26.1	128.3	40°C
LXEM2-35LW-DCA-EDU			DCA	3,385	26.1	129.7	40°C
LXEM2-40LW-RFP-EDU		40K	RFP	2,875	26	110.6	40°C
LXEM2-40LW-RP-EDU			RP	3,202	26.1	122.7	40°C
LXEM2-40LW-RA-EDU			RA	3,302	26	127	40°C
LXEM2-40LW-RFA-EDU			RFA	3,339	26.2	127.5	40°C
LXEM2-40LW-DFA-EDU			DFA	3,401	26.1	130.3	40°C
LXEM2-40LW-DCA-EDU			DCA	3,437	26.1	131.7	40°C
LXEM2-50LW-RFP-EDU		50K	RFP	2,951	26	113.5	40°C
LXEM2-50LW-RP-EDU			RP	3,287	26.1	125.9	40°C
LXEM2-50LW-RA-EDU			RA	3,390	26	130.4	40°C
LXEM2-50LW-RFA-EDU			RFA	3,428	26.2	130.9	40°C
LXEM2-50LW-DFA-EDU			DFA	3,492	26.1	133.8	40°C
LXEM2-50LW-DCA-EDU			DCA	3,529	26.1	135.2	40°C
LXEM2-30ML-RFP-EDU	Medium Lumen	30K	RFP	3,862	38.5	100.3	40°C
LXEM2-30ML-RP-EDU			RP	4,228	38.5	109.8	40°C
LXEM2-30ML-RFA-EDU			RFA	4,343	38.5	112.8	40°C
LXEM2-30ML-RA-EDU			RA	4,446	38.5	115.5	40°C
LXEM2-30ML-DFA-EDU			DFA	4,526	38.5	117.5	40°C
LXEM2-30ML-DCA-EDU			DCA	4,565	38.5	118.6	40°C
LXEM2-35ML-RFP-EDU		35K	RFP	3,993	38.5	103.7	40°C
LXEM2-35ML-RP-EDU			RP	4,371	38.5	113.5	40°C
LXEM2-35ML-RFA-EDU			RFA	4,490	38.5	116.6	40°C
LXEM2-35ML-RA-EDU			RA	4,597	38.5	119.4	40°C
LXEM2-35ML-DFA-EDU			DFA	4,680	38.5	121.5	40°C
LXEM2-35ML-DCA-EDU			DCA	4,720	38.5	122.6	40°C
LXEM2-40ML-RFP-EDU		40K	RFP	4,055	38.5	105.3	40°C
LXEM2-40ML-RP-EDU			RP	4,439	38.5	115.3	40°C
LXEM2-40ML-RFA-EDU			RFA	4,560	38.5	118.4	40°C
LXEM2-40ML-RA-EDU			RA	4,668	38.5	121.3	40°C
LXEM2-40ML-DFA-EDU			DFA	4,752	38.5	123.4	40°C
LXEM2-40ML-DCA-EDU			DCA	4,793	38.5	124.5	40°C
LXEM2-50ML-RFP-EDU		50K	RFP	4,163	38.5	108.1	40°C
LXEM2-50ML-RP-EDU			RP	4,558	38.5	118.4	40°C
LXEM2-50ML-RFA-EDU			RFA	4,682	38.5	121.6	40°C
LXEM2-50ML-RA-EDU			RA	4,793	38.5	124.5	40°C
LXEM2-50ML-DFA-EDU			DFA	4,879	38.5	126.7	40°C
LXEM2-50ML-DCA-EDU			DCA	4,921	38.5	127.8	40°C

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI								
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp	
LXEM2-30HL-RFP-EDU	High Lumen	30K	RFP	4,254	44.1	96.5	35°C	
LXEM2-30HL-RP-EDU			RP	4,700	44.1	106.6	35°C	
LXEM2-30HL-RA-EDU			RA	4,868	44.1	110.4	35°C	
LXEM2-30HL-RFA-EDU			RFA	4,874	44.1	110.5	35°C	
LXEM2-30HL-DFA-EDU			DFA	5,008	44.1	113.6	35°C	
LXEM2-30HL-DCA-EDU			DCA	5,024	44.1	113.9	35°C	
LXEM2-35HL-RFP-EDU		35K	RFP	4,399	44.1	99.7	35°C	
LXEM2-35HL-RP-EDU			RP	4,860	44.1	110.2	35°C	
LXEM2-35HL-RA-EDU			RA	5,033	44.1	114.1	35°C	
LXEM2-35HL-RFA-EDU			RFA	5,040	44.1	114.3	35°C	
LXEM2-35HL-DFA-EDU			DFA	5,179	44.1	117.4	35°C	
LXEM2-35HL-DCA-EDU			DCA	5,195	44.1	117.8	35°C	
LXEM2-40HL-RFP-EDU		40K	RFP	4,467	44.1	101.3	35°C	
LXEM2-40HL-RP-EDU			RP	4,935	44.1	111.9	35°C	
LXEM2-40HL-RA-EDU			RA	5,111	44.1	115.9	35°C	
LXEM2-40HL-RFA-EDU			RFA	5,117	44.1	116	35°C	
LXEM2-40HL-DFA-EDU			DFA	5,259	44.1	119.2	35°C	
LXEM2-40HL-DCA-EDU			DCA	5,275	44.1	119.6	35°C	
LXEM2-50HL-RFP-EDU		50K	RFP	4,586	44.1	104	35°C	
LXEM2-50HL-RP-EDU			RP	5,066	44.1	114.9	35°C	
LXEM2-50HL-RA-EDU			RA	5,248	44.1	119	35°C	
LXEM2-50HL-RFA-EDU			RFA	5,254	44.1	119.1	35°C	
LXEM2-50HL-DFA-EDU			DFA	5,399	44.1	122.4	35°C	
LXEM2-50HL-DCA-EDU			DCA	5,416	44.1	122.8	35°C	
LXEM4-30VW-RFP-EDU		Very Low Watt	30K	RFP	2,802	24.5	114.4	50°C
LXEM4-30VW-RP-EDU				RP	2,938	24.4	120.4	50°C
LXEM4-30VW-RA-EDU				RA	3,039	24.4	124.6	50°C
LXEM4-30VW-RFA-EDU				RFA	3,048	24.5	124.4	50°C
LXEM4-30VW-DCA-EDU				DCA	3,180	24.4	130.3	50°C
LXEM4-30VW-DFA-EDU				DFA	3,184	24.4	130.5	50°C
LXEM4-35VW-RFP-EDU	35K		RFP	2,897	24.5	118.2	50°C	
LXEM4-35VW-RP-EDU			RP	3,038	24.4	124.5	50°C	
LXEM4-35VW-RA-EDU			RA	3,143	24.4	128.8	50°C	
LXEM4-35VW-RFA-EDU			RFA	3,151	24.5	128.6	50°C	
LXEM4-35VW-DCA-EDU			DCA	3,288	24.4	134.8	50°C	
LXEM4-35VW-DFA-EDU			DFA	3,293	24.4	134.9	50°C	
LXEM4-40VW-RFP-EDU	40K		RFP	2,942	24.5	120.1	50°C	
LXEM4-40VW-RP-EDU			RP	3,085	24.4	126.4	50°C	
LXEM4-40VW-RA-EDU			RA	3,191	24.4	130.8	50°C	
LXEM4-40VW-RFA-EDU			RFA	3,200	24.5	130.6	50°C	
LXEM4-40VW-DCA-EDU			DCA	3,339	24.4	136.8	50°C	
LXEM4-40VW-DFA-EDU			DFA	3,344	24.4	137	50°C	
LXEM4-50VW-RFP-EDU	50K		RFP	3,020	24.5	123.3	50°C	
LXEM4-50VW-RP-EDU			RP	3,168	24.4	129.8	50°C	
LXEM4-50VW-RA-EDU			RA	3,276	24.4	134.3	50°C	
LXEM4-50VW-RFA-EDU			RFA	3,285	24.5	134.1	50°C	
LXEM4-50VW-DCA-EDU			DCA	3,428	24.4	140.5	50°C	
LXEM4-50VW-DFA-EDU			DFA	3,433	24.4	140.7	50°C	
LXEM4-30LW-RFP-EDU	Low Watt		30K	RFP	3,726	33.3	111.9	50°C
LXEM4-30LW-RP-EDU				RP	3,872	33.3	116.3	50°C
LXEM4-30LW-RFA-EDU				RFA	4,048	33.3	121.5	50°C
LXEM4-30LW-RA-EDU				RA	4,054	33.3	121.8	50°C
LXEM4-30LW-DFA-EDU				DFA	4,241	33.3	127.4	50°C
LXEM4-30LW-DCA-EDU				DCA	4,303	33.3	129.2	50°C
LXEM4-35LW-RFP-EDU		35K	RFP	3,853	33.3	115.7	50°C	
LXEM4-35LW-RP-EDU			RP	4,004	33.3	120.2	50°C	
LXEM4-35LW-RFA-EDU			RFA	4,185	33.3	125.7	50°C	
LXEM4-35LW-RA-EDU			RA	4,192	33.3	125.9	50°C	
LXEM4-35LW-DFA-EDU			DFA	4,385	33.3	131.7	50°C	
LXEM4-35LW-DCA-EDU			DCA	4,449	33.3	133.6	50°C	
LXEM4-40LW-RFP-EDU		40K	RFP	3,912	33.3	117.5	50°C	
LXEM4-40LW-RP-EDU			RP	4,066	33.3	122.1	50°C	
LXEM4-40LW-RFA-EDU			RFA	4,250	33.3	127.6	50°C	
LXEM4-40LW-RA-EDU			RA	4,257	33.3	127.8	50°C	
LXEM4-40LW-DFA-EDU			DFA	4,453	33.3	133.7	50°C	
LXEM4-40LW-DCA-EDU			DCA	4,518	33.3	135.7	50°C	
LXEM4-50LW-RFP-EDU		50K	RFP	4,017	33.3	120.6	50°C	
LXEM4-50LW-RP-EDU			RP	4,174	33.3	125.3	50°C	
LXEM4-50LW-RFA-EDU			RFA	4,363	33.3	131	50°C	
LXEM4-50LW-RA-EDU			RA	4,371	33.3	131.3	50°C	
LXEM4-50LW-DFA-EDU			DFA	4,572	33.3	137.3	50°C	
LXEM4-50LW-DCA-EDU			DCA	4,638	33.3	139.3	50°C	

DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI								
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp	
LXEM4-30ML-RFP-EDU	Medium Lumen	30K	RFP	4,533	41.9	108.2	50°C	
LXEM4-30ML-RP-EDU			RP	4,714	41.9	112.5	50°C	
LXEM4-30ML-RFA-EDU			RFA	4,922	42	117.2	50°C	
LXEM4-30ML-RA-EDU			RA	4,924	42	117.2	50°C	
LXEM4-30ML-DFA-EDU			DFA	5,160	42	122.9	50°C	
LXEM4-30ML-DCA-EDU			DCA	5,238	42	124.7	50°C	
LXEM4-35ML-RFP-EDU		35K	RFP	4,688	41.9	111.9	50°C	
LXEM4-35ML-RP-EDU			RP	4,875	41.9	116.3	50°C	
LXEM4-35ML-RFA-EDU			RFA	5,089	42	121.2	50°C	
LXEM4-35ML-RA-EDU			RA	5,091	42	121.2	50°C	
LXEM4-35ML-DFA-EDU			DFA	5,336	42	127	50°C	
LXEM4-35ML-DCA-EDU			DCA	5,416	42	128.9	50°C	
LXEM4-40ML-RFP-EDU		40K	RFP	4,760	41.9	113.6	50°C	
LXEM4-40ML-RP-EDU			RP	4,950	41.9	118.1	50°C	
LXEM4-40ML-RFA-EDU			RFA	5,168	42	123.1	50°C	
LXEM4-40ML-RA-EDU			RA	5,170	42	123.1	50°C	
LXEM4-40ML-DFA-EDU			DFA	5,418	42	129	50°C	
LXEM4-40ML-DCA-EDU			DCA	5,500	42	130.9	50°C	
LXEM4-50ML-RFP-EDU		50K	RFP	4,887	41.9	116.6	50°C	
LXEM4-50ML-RP-EDU			RP	5,082	41.9	121.3	50°C	
LXEM4-50ML-RFA-EDU			RFA	5,306	42	126.3	50°C	
LXEM4-50ML-RA-EDU			RA	5,308	42	126.4	50°C	
LXEM4-50ML-DFA-EDU			DFA	5,563	42	132.4	50°C	
LXEM4-50ML-DCA-EDU			DCA	5,646	42	134.4	50°C	
LXEM4-30HL-RFP-EDU		High Lumen	30K	RFP	5,449	47.4	115	45°C
LXEM4-30HL-RP-EDU				RP	5,648	47.2	119.7	45°C
LXEM4-30HL-RFA-EDU				RFA	5,926	47.4	125	45°C
LXEM4-30HL-RA-EDU				RA	5,932	47.3	125.4	45°C
LXEM4-30HL-DFA-EDU				DFA	6,214	47.3	131.4	45°C
LXEM4-30HL-DCA-EDU				DCA	6,273	47.4	132.4	45°C
LXEM4-35HL-RFP-EDU	35K		RFP	5,634	47.4	118.9	45°C	
LXEM4-35HL-RP-EDU			RP	5,840	47.2	123.7	45°C	
LXEM4-35HL-RFA-EDU			RFA	6,127	47.4	129.3	45°C	
LXEM4-35HL-RA-EDU			RA	6,133	47.3	129.7	45°C	
LXEM4-35HL-DFA-EDU			DFA	6,425	47.3	135.8	45°C	
LXEM4-35HL-DCA-EDU			DCA	6,487	47.4	136.9	45°C	
LXEM4-40HL-RFP-EDU	40K		RFP	5,721	47.4	120.7	45°C	
LXEM4-40HL-RP-EDU			RP	5,931	47.2	125.7	45°C	
LXEM4-40HL-RFA-EDU			RFA	6,222	47.4	131.3	45°C	
LXEM4-40HL-RA-EDU			RA	6,228	47.3	131.7	45°C	
LXEM4-40HL-DFA-EDU			DFA	6,525	47.3	137.9	45°C	
LXEM4-40HL-DCA-EDU			DCA	6,587	47.4	139	45°C	
LXEM4-50HL-RFP-EDU	50K		RFP	5,874	47.4	123.9	45°C	
LXEM4-50HL-RP-EDU			RP	6,089	47.2	129	45°C	
LXEM4-50HL-RFA-EDU			RFA	6,388	47.4	134.8	45°C	
LXEM4-50HL-RA-EDU			RA	6,394	47.3	135.2	45°C	
LXEM4-50HL-DFA-EDU			DFA	6,699	47.3	141.6	45°C	
LXEM4-50HL-DCA-EDU			DCA	6,763	47.4	142.7	45°C	
LXEM4-30VL-RP-EDU	Very High Lumen		30K	RP	7,086	61.6	115	40°C
LXEM4-30VL-RA-EDU				RA	7,373	61.7	119.5	40°C
LXEM4-30VL-RFP-EDU				RFP	7,388	61.6	119.9	40°C
LXEM4-30VL-RFA-EDU				RFA	7,395	61.6	120	40°C
LXEM4-30VL-DFA-EDU				DFA	7,756	61.7	125.7	40°C
LXEM4-30VL-DCA-EDU				DCA	7,806	61.7	126.5	40°C
LXEM4-35VL-RP-EDU		35K	RP	7,327	61.6	118.9	40°C	
LXEM4-35VL-RA-EDU			RA	7,624	61.7	123.6	40°C	
LXEM4-35VL-RFP-EDU			RFP	7,639	61.6	124	40°C	
LXEM4-35VL-RFA-EDU			RFA	7,646	61.6	124.1	40°C	
LXEM4-35VL-DFA-EDU			DFA	8,020	61.7	130	40°C	
LXEM4-35VL-DCA-EDU			DCA	8,072	61.7	130.8	40°C	
LXEM4-40VL-RP-EDU		40K	RP	7,440	61.6	120.8	40°C	
LXEM4-40VL-RA-EDU			RA	7,742	61.7	125.5	40°C	
LXEM4-40VL-RFP-EDU			RFP	7,757	61.6	125.9	40°C	
LXEM4-40VL-RFA-EDU			RFA	7,764	61.6	126	40°C	
LXEM4-40VL-DFA-EDU			DFA	8,144	61.7	132	40°C	
LXEM4-40VL-DCA-EDU			DCA	8,197	61.7	132.8	40°C	
LXEM4-50VL-RP-EDU		50K	RP	7,639	61.6	124	40°C	
LXEM4-50VL-RA-EDU			RA	7,948	61.7	128.8	40°C	
LXEM4-50VL-RFP-EDU			RFP	7,964	61.6	129.3	40°C	
LXEM4-50VL-RFA-EDU			RFA	7,971	61.6	129.4	40°C	
LXEM4-50VL-DFA-EDU			DFA	8,361	61.7	135.5	40°C	
LXEM4-50VL-DCA-EDU			DCA	8,415	61.7	136.4	40°C	

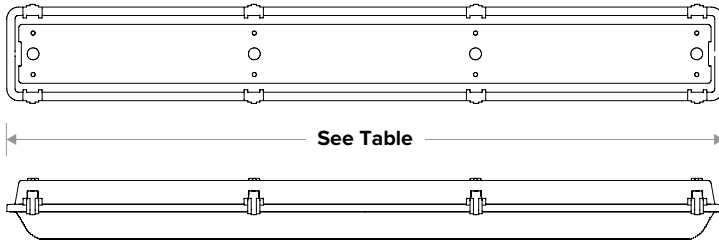
DELIVERED LUMENS (CONTINUED)

PRODUCT AVAILABILITY 80 CRI									
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp		
LXEM4-30XL-RFP-EDU	Xtra High Lumen	30K	RFP	9,059	91.3	99.2	30°C		
LXEM4-30XL-RP-EDU			RP	9,448	91.2	103.6	30°C		
LXEM4-30XL-RFA-EDU			RFA	9,779	91.2	107.2	30°C		
LXEM4-30XL-RA-EDU			RA	9,839	91.4	107.7	30°C		
LXEM4-30XL-DFA-EDU			DFA	10,358	91.4	113.3	30°C		
LXEM4-30XL-DCA-EDU			DCA	10,424	91.5	113.9	30°C		
LXEM4-35XL-RFP-EDU		35K	RFP	9,367	91.3	102.6	30°C		
LXEM4-35XL-RP-EDU			RP	9,769	91.2	107.1	30°C		
LXEM4-35XL-RFA-EDU			RFA	10,111	91.2	110.9	30°C		
LXEM4-35XL-RA-EDU			RA	10,174	91.4	111.3	30°C		
LXEM4-35XL-DFA-EDU			DFA	10,710	91.4	117.2	30°C		
LXEM4-35XL-DCA-EDU			DCA	10,778	91.5	117.8	30°C		
LXEM4-40XL-RFP-EDU		40K	RFP	9,512	91.3	104.2	30°C		
LXEM4-40XL-RP-EDU			RP	9,920	91.2	108.8	30°C		
LXEM4-40XL-RFA-EDU			RFA	10,268	91.2	112.6	30°C		
LXEM4-40XL-RA-EDU			RA	10,331	91.4	113	30°C		
LXEM4-40XL-DFA-EDU			DFA	10,876	91.4	119	30°C		
LXEM4-40XL-DCA-EDU			DCA	10,945	91.5	119.6	30°C		
LXEM4-50XL-RFP-EDU		50K	RFP	9,765	91.3	107	30°C		
LXEM4-50XL-RP-EDU			RP	10,184	91.2	111.7	30°C		
LXEM4-50XL-RFA-EDU			RFA	10,542	91.2	115.6	30°C		
LXEM4-50XL-RA-EDU			RA	10,607	91.4	116	30°C		
LXEM4-50XL-DFA-EDU			DFA	11,166	91.4	122.2	30°C		
LXEM4-50XL-DCA-EDU			DCA	11,237	91.5	122.8	30°C		
LXEM8-30VW-RA-EDU		Very Low Watt	30K	RA	6,078	48.8	124.6	50°C	
LXEM8-30VW-RFA-EDU				RFA	6,096	49	124.4	50°C	
LXEM8-30VW-DCA-EDU				DCA	6,360	48.8	130.3	50°C	
LXEM8-30VW-DFA-EDU				DFA	6,369	48.8	130.5	50°C	
LXEM8-35VW-RA-EDU				35K	RA	6,285	48.8	128.8	50°C
LXEM8-35VW-RFA-EDU					RFA	6,303	49	128.6	50°C
LXEM8-35VW-DCA-EDU	DCA		6,576		48.8	134.8	50°C		
LXEM8-35VW-DFA-EDU	DFA		6,585		48.8	134.9	50°C		
LXEM8-40VW-RA-EDU	40K		RA		6,382	48.8	130.8	50°C	
LXEM8-40VW-RFA-EDU			RFA		6,400	49	130.6	50°C	
LXEM8-40VW-DCA-EDU			DCA	6,678	48.8	136.8	50°C		
LXEM8-40VW-DFA-EDU			DFA	6,687	48.8	137	50°C		
LXEM8-50VW-RA-EDU			50K	RA	6,553	48.8	134.3	50°C	
LXEM8-50VW-RFA-EDU				RFA	6,571	49	134.1	50°C	
LXEM8-50VW-DCA-EDU	DCA			6,856	48.8	140.5	50°C		
LXEM8-50VW-DFA-EDU	DFA			6,866	48.8	140.7	50°C		
LXEM8-30LW-RFA-EDU	Low Watt			30K	RFA	8,095	66.6	121.5	50°C
LXEM8-30LW-RA-EDU					RA	8,109	66.6	121.8	50°C
LXEM8-30LW-DFA-EDU			DFA		8,482	66.6	127.4	50°C	
LXEM8-30LW-DCA-EDU			DCA		8,605	66.6	129.2	50°C	
LXEM8-35LW-RFA-EDU			35K		RFA	8,370	66.6	125.7	50°C
LXEM8-35LW-RA-EDU					RA	8,385	66.6	125.9	50°C
LXEM8-35LW-DFA-EDU				DFA	8,770	66.6	131.7	50°C	
LXEM8-35LW-DCA-EDU				DCA	8,898	66.6	133.6	50°C	
LXEM8-40LW-RFA-EDU				40K	RFA	8,500	66.6	127.6	50°C
LXEM8-40LW-RA-EDU					RA	8,514	66.6	127.8	50°C
LXEM8-40LW-DFA-EDU			DFA		8,906	66.6	133.7	50°C	
LXEM8-40LW-DCA-EDU			DCA		9,035	66.6	135.7	50°C	
LXEM8-50LW-RFA-EDU			50K		RFA	8,727	66.6	131	50°C
LXEM8-50LW-RA-EDU					RA	8,741	66.6	131.3	50°C
LXEM8-50LW-DFA-EDU		DFA		9,143	66.6	137.3	50°C		
LXEM8-50LW-DCA-EDU		DCA		9,276	66.6	139.3	50°C		
LXEM8-30ML-RFA-EDU		Medium Lumen		30K	RFA	9,844	84	117.2	50°C
LXEM8-30ML-RA-EDU					RA	9,847	84	117.2	50°C
LXEM8-30ML-DFA-EDU			DFA		10,320	84	122.9	50°C	
LXEM8-30ML-DCA-EDU			DCA		10,476	84	124.7	50°C	
LXEM8-35ML-RFA-EDU			35K		RFA	10,179	84	121.2	50°C
LXEM8-35ML-RA-EDU					RA	10,182	84	121.2	50°C
LXEM8-35ML-DFA-EDU				DFA	10,671	84	127	50°C	
LXEM8-35ML-DCA-EDU				DCA	10,832	84	128.9	50°C	
LXEM8-40ML-RFA-EDU				40K	RFA	10,336	84	123.1	50°C
LXEM8-40ML-RA-EDU					RA	10,340	84	123.1	50°C
LXEM8-40ML-DFA-EDU			DFA		10,836	84	129	50°C	
LXEM8-40ML-DCA-EDU			DCA		10,999	84	130.9	50°C	
LXEM8-50ML-RFA-EDU			50K		RFA	10,612	84	126.3	50°C
LXEM8-50ML-RA-EDU					RA	10,616	84	126.4	50°C
LXEM8-50ML-DFA-EDU	DFA			11,125	84	132.4	50°C		
LXEM8-50ML-DCA-EDU	DCA			11,293	84	134.4	50°C		

DELIVERED LUMENS (CONTINUED)

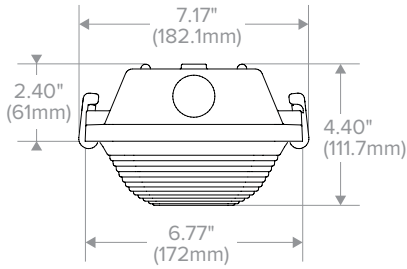
PRODUCT AVAILABILITY 80 CRI								
Lumen Package	Output	Color	Lens	Lumens	Watts	LPW	Max Ambient Operating Temp	
LXEM8-30HL-RFA-EDU	High Lumen	30K	RFA	11,851	94.8	125	45°C	
LXEM8-30HL-RA-EDU			RA	11,863	94.6	125.4	45°C	
LXEM8-30HL-DFA-EDU			DFA	12,428	94.6	131.4	45°C	
LXEM8-30HL-DCA-EDU			DCA	12,547	94.8	132.4	45°C	
LXEM8-35HL-RFA-EDU		35K	RFA	12,254	94.8	129.3	45°C	
LXEM8-35HL-RA-EDU			RA	12,267	94.6	129.7	45°C	
LXEM8-35HL-DFA-EDU			DFA	12,851	94.6	135.8	45°C	
LXEM8-35HL-DCA-EDU			DCA	12,973	94.8	136.9	45°C	
LXEM8-40HL-RFA-EDU		40K	RFA	12,444	94.8	131.3	45°C	
LXEM8-40HL-RA-EDU			RA	12,456	94.6	131.7	45°C	
LXEM8-40HL-DFA-EDU			DFA	13,049	94.6	137.9	45°C	
LXEM8-40HL-DCA-EDU			DCA	13,174	94.8	139	45°C	
LXEM8-50HL-RFA-EDU		50K	RFA	12,776	94.8	134.8	45°C	
LXEM8-50HL-RA-EDU			RA	12,789	94.6	135.2	45°C	
LXEM8-50HL-DFA-EDU			DFA	13,397	94.6	141.6	45°C	
LXEM8-50HL-DCA-EDU			DCA	13,525	94.8	142.7	45°C	
LXEM8-30VL-RA-EDU		Very High Lumen	30K	RA	14,747	123.4	119.5	40°C
LXEM8-30VL-RFA-EDU				RFA	14,789	123.2	120	40°C
LXEM8-30VL-DFA-EDU				DFA	15,512	123.4	125.7	40°C
LXEM8-30VL-DCA-EDU				DCA	15,613	123.4	126.5	40°C
LXEM8-35VL-RA-EDU	35K		RA	15,248	123.4	123.6	40°C	
LXEM8-35VL-RFA-EDU			RFA	15,292	123.2	124.1	40°C	
LXEM8-35VL-DFA-EDU			DFA	16,040	123.4	130	40°C	
LXEM8-35VL-DCA-EDU			DCA	16,143	123.4	130.8	40°C	
LXEM8-40VL-RA-EDU	40K		RA	15,484	123.4	125.5	40°C	
LXEM8-40VL-RFA-EDU			RFA	15,529	123.2	126	40°C	
LXEM8-40VL-DFA-EDU			DFA	16,288	123.4	132	40°C	
LXEM8-40VL-DCA-EDU			DCA	16,393	123.4	132.8	40°C	
LXEM8-50VL-RA-EDU	50K		RA	15,897	123.4	128.8	40°C	
LXEM8-50VL-RFA-EDU			RFA	15,943	123.2	129.4	40°C	
LXEM8-50VL-DFA-EDU			DFA	16,722	123.4	135.5	40°C	
LXEM8-50VL-DCA-EDU			DCA	16,830	123.4	136.4	40°C	
LXEM8-30XL-RFA-EDU	Xtra High Lumen		30K	RFA	19,558	182.4	107.2	30°C
LXEM8-30XL-RA-EDU				RA	19,678	182.8	107.7	30°C
LXEM8-30XL-DFA-EDU				DFA	20,716	182.8	113.3	30°C
LXEM8-30XL-DCA-EDU				DCA	20,847	183	113.9	30°C
LXEM8-35XL-RFA-EDU		35K	RFA	20,223	182.4	110.9	30°C	
LXEM8-35XL-RA-EDU			RA	20,348	182.8	111.3	30°C	
LXEM8-35XL-DFA-EDU			DFA	21,420	182.8	117.2	30°C	
LXEM8-35XL-DCA-EDU			DCA	21,556	183	117.8	30°C	
LXEM8-40XL-RFA-EDU		40K	RFA	20,536	182.4	112.6	30°C	
LXEM8-40XL-RA-EDU			RA	20,662	182.8	113	30°C	
LXEM8-40XL-DFA-EDU			DFA	21,752	182.8	119	30°C	
LXEM8-40XL-DCA-EDU			DCA	21,889	183	119.6	30°C	
LXEM8-50XL-RFA-EDU		50K	RFA	21,083	182.4	115.6	30°C	
LXEM8-50XL-RA-EDU			RA	21,213	182.8	116	30°C	
LXEM8-50XL-DFA-EDU			DFA	22,332	182.8	122.2	30°C	
LXEM8-50XL-DCA-EDU			DCA	22,473	183	122.8	30°C	

DIMENSIONS

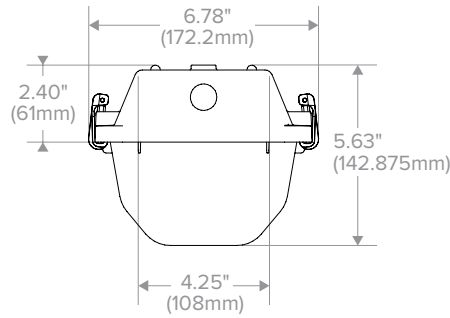


LXEM LENGTH DIMENSIONS								
Size	Lens	Length	Size	Lens	Length	Size	Lens	Length
2'	RFA	27 ² / ₃ "	4'	RFA	51 ¹ / ₂ "	8'	RFA	100"
	RA	27 ² / ₃ "		RA	51 ¹ / ₂ "		RA	N/A
	DFA	27 ² / ₃ "		DFA	51 ¹ / ₂ "		DFA	100"
	DCA	27 ² / ₃ "		DCA	51 ¹ / ₂ "		DCA	100"
	RFP	27 ² / ₃ "		RFP	51 ¹ / ₂ "		RFP	N/A
	RP	27 ² / ₃ "		RP	51 ¹ / ₂ "		RP	N/A

RFA Lens: 2', 4', 8', RFP Lens: 2', 4'



DFA or DCA Lens: 2', 4', 8'



NOTE: All dimensions are in inches; dimensions and specifications are subject to change without notice. Please consult factory or check sample for verification.

LXEM

ENCLOSED AND GASKETED FIBERGLASS EXTREME ENVIRONMENT

PHOTOMETRY

LXEM4-50ML-RFA-EDU

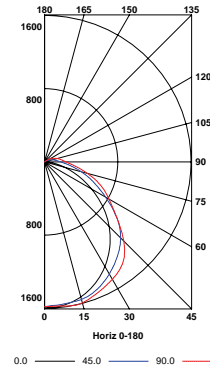
LUMINAIRE DATA

Test No.	17905
Description	LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with frosted ribbed acrylic lens
Delivered Lumens	5306
Watts	42.00
Efficacy	126
Mounting	Surface
Spacing Criterion	0° = 1.24 90° = 1.40

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1268	23.9
0-40	2105	39.7
0-60	3766	71.0
0-90	5025	94.7
0-180	5306	100.0

POLAR GRAPH



LXEM4-40HL-DFA-EDU

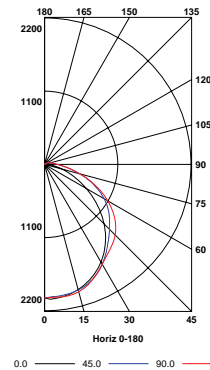
LUMINAIRE DATA

Test No.	17989
Description	LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with deep frosted acrylic lens
Delivered Lumens	6525
Watts	47.30
Efficacy	138
Mounting	Surface
Spacing Criterion	0° = 1.25 90° = 1.28

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1583	24.3
0-40	2594	39.8
0-60	4661	71.4
0-90	6235	95.6
0-180	6525	100.0

POLAR GRAPH



LXEM4-50XL-RA-EDU

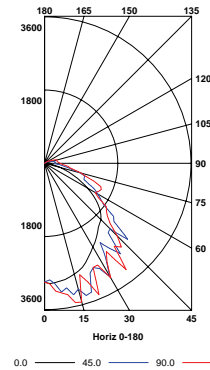
LUMINAIRE DATA

Test No.	18012
Description	LXEM LED Enclosed and Gasketed, Extreme Environment 7" x 51" LED with ribbed clear acrylic lens
Delivered Lumens	10607
Watts	91.40
Efficacy	116
Mounting	Surface
Spacing Criterion	0° = 1.21 90° = 1.38

ZONAL LUMEN SUMMARY

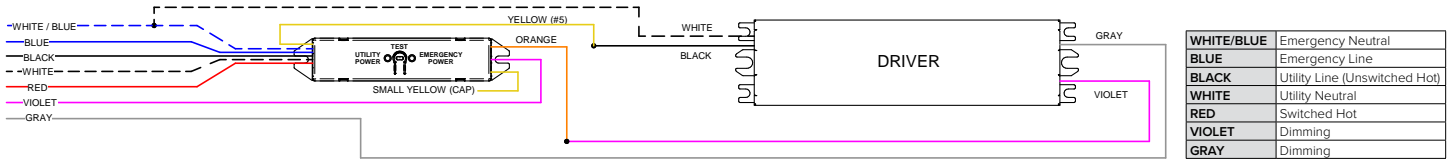
Zone	Lumens	% Luminaire
0-30	2547	24
0-40	4252	40.1
0-60	7643	72.1
0-90	10073	95
0-180	10607	100.0

POLAR GRAPH



ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



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PHOTOMETRY
IES
PDF
IES
PDF
IES
PDF
IES
PDF
DTS Integration Guide

DATE: _____ LOCATION: _____
 TYPE: _____ PROJECT: _____
 CATALOG #: _____

SLING Series

SLENDER WALLPACK

tradeSELECT®

FEATURES

- Two sizes for a variety of applications
- Ranges from 21W to 80W with up to 8000 lumens
- SG1 Series replaces from 100W-150W HID; SG2 Series replaces from 150W-250W HID
- Comfort lens available as an option or accessory provides glare control and enhanced uniformity
- Knuckle and trunnion accessory mounting kits available for flood applications
- IP65 and certified to UL 1598 for use in wet locations up to 40°C ambient
- DLC (DesignLights Consortium Qualified - see www.designlights.org)



RELATED PRODUCTS

- [LNC Litepak](#)
- [LNC2 Litepak](#)
- [LNC3 Litepak](#)
- [LNC4 Litepak](#)
- [GeoPak](#)
- [GeoPak2](#)



*3000K and warmer CCTs only

SPECIFICATIONS

HOUSING

- Rugged die-cast aluminum housing with corrosion resistant powder coat finish
- Heating dissipating fins provide superior thermal performance extending the life of the electronic components
- Impact resistant tempered glass offers zero uplight
- Comfort lens available as an option or accessory to reduce glare (7-10% lumen reduction) and provide better uniformity

OPTICS

- 3000K, 4000K and 5000K CCT nominal with 70 CRI
- Smaller SG1 housing has 2 LEDs, larger SG2 housing has 3 LEDs

INSTALLATION

- Side hinge allows for easy installation and wiring
- Side movement avoids damage to the lens and helps prevent injury common in drop down hinge designs
- Mounts to 4" junction box and includes a gasket to help seal electrical connections
- Four 1/2" threaded conduits hubs for surface conduit provided

ELECTRICAL

- 120-277V, 50/60Hz electronic drivers
- 347V and 480V available in large SG2 housing
- 10KA surge protection included

OPTIONS/CONTROLS

- Button photocontrol for dusk to dawn energy savings. Stock versions include 120V-277V PC with a cover which provides a choice to engage photocontrol or not. PC is installed in top hub
- Occupancy sensor available for on/off and dimming control in larger SG2 housing
- SiteSync™ wireless lighting control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution. See ordering information or visit www.hubbellighting.com/sitesync for more details
- Battery backup options available in larger SG2 housing rated for either 0° C or -30° C. Performance exceeds NEC requirement providing 1 fc minimum over 10'x10' at 11' mounting height

CERTIFICATIONS

- DesignLights Consortium® (DLC) qualified. Please refer to the DLC website for specific product qualifications at www.designlights.org
- Listed to UL1598 for use in wet location, listed for -40°C to 40°C applications
- IDA approved with zero uplight for 3000K and warmer CCTs
- IP65

WARRANTY

- 5 year limited warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	2263-8079
Wattage Range	21-80
Efficacy Range (LPW)	101-113
Fixture Projected Life (Hours)	L70>50K
Weights lbs. (kg)	4.3-11 (2.0-5.0)

SLING SERIES

SLENDER WALLPACK

ORDERING GUIDE

Example: SG1-20-3K7-FT-UNV-DBT-PCU-CS

CATALOG #

ORDERING INFORMATION

Housing	CCT/CRI	Distribution	Voltage	Color/Finish	Control Options	Options
SG1-10 Size 1,10W	3K7 3000K, 70 CRI	FT Fwd Throw	UNV 120V-277V	BLT Black Matte Textured	PCU Universal Button Photocontrol (120-277V)	CS Comfort Lens
SG1-20 Size 1,20W	4K7 4000K, 70 CRI		120 120V	BLS Black Gloss Smooth	SCP ^{1,2,3} Occupancy Sensor Programmable (Dim)	E ^{1,2} Battery 0°C
SG1-30 Size 1,30W	5K7 5000K, 70 CRI		277 277V	DBT Dark Bronze Matte Textured	SWP ^{1,2} SiteSync Pre-commission	EH ^{1,2} Battery w/ heater -20°
SG1-40 Size 1,40W			UHV 347V-480V	DBS Dark Brone Gloss Smooth	SWPM ^{1,2} SiteSync Pre-commission w/ Sensor	
SG2-50 Size 2,50W				GTT Graphite Matte Textured	Specify MTG HT for SCO/SCP & SWPM	
SG2-80 Size 2,80W				LGS Light Grey Gloss Smooth	8F Up to 8'	
				PSS Platinum Silver Smooth	20F Up to 20'	
				WHT White Matte Textured		
				WHS White Gloss Smooth		
				VGT Verde Green Textured		
				Color Option		
				CC Custom Color		

Notes:

- 1 Available in SG2 only, UHV available in SG2-50 only
- 2 Sensor controls & battery backup can not be used with flood accessory or kit or for inverted/up mounting, 120-227V only for SCO/SCP, 120 or 277 only for SWP, SWPM, E & EH
- 3 Must order minimum of one remote control to program dimming settings, 0-10V fully adjustable dimming with automatic daylight calibration and different time delay settings, 120-277V only

STOCK ORDERING INFORMATION

Catalog Number	CCT/CRI	Wattage	Mounting Height	Color	Color	Delivered Lumens	LPW	Weight lbs. (kg)
SG1-10-PCU	5000K/70	11W	8-12ft	120-277V	Dark Bronze	1349	122	4.3 (2.0)
SG1-10-4K-PCU	4000K/70	11W	8-12ft	120-277V	Dark Bronze	1424	129	4.3 (2.0)
SG1-20-PCU	5000K/70	21W	8-12ft	120-277V	Dark Bronze	2263	108	4.3 (2.0)
SG1-20-4K-PCU	4000K/70	21W	8-12ft	120-277V	Dark Bronze	2310	110	4.3 (2.0)
SG1-30-PCU	5000K/70	29W	10-15ft	120-277V	Dark Bronze	3270	113	4.3 (2.0)
SG1-30-4K-PCU	4000K/70	29W	10-15ft	120-277V	Dark Bronze	3060	105	4.3 (2.0)
SG1-40-PCU	5000K/70	38W	10-15ft	120-277V	Dark Bronze	4008	105	4.3 (2.0)
SG1-40-4K-PCU	4000K/70	38W	10-15ft	120-277V	Dark Bronze	4070	106	4.3 (2.0)
SG2-50-PCU	5000K/70	51W	12-18ft	120-277V	Dark Bronze	5548	110	11 (5.0)
SG2-50-4K-PCU	4000K/70	51W	12-18ft	120-277V	Dark Bronze	5526	109	11 (5.0)
SG2-80-PCU	5000K/70	80W	15-25ft	120-277V	Dark Bronze	8061	101	11 (5.0)
SG2-80-4K-PCU	4000K/70	80W	15-25ft	120-277V	Dark Bronze	8079	101	11 (5.0)

SLING SERIES

SLENDER WALLPACK

ORDERING GUIDE

OPTIONS AND ACCESSORIES

Catalog Number	Description	Weight lbs. (kg)
<input type="checkbox"/> SG1-CS	Acrylic comfort lens for SG1	1 (.45)
<input type="checkbox"/> SG2-CS	Acrylic comfort lens for SG2	1 (.45)
<input type="checkbox"/> SG1-YOKE	SG1 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
<input type="checkbox"/> SG1-KNUCKLE	SG1 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
<input type="checkbox"/> SG2-YOKE	SG2 Series Yoke/Floodlight mount kit, includes visor	2.0 (1.0)
<input type="checkbox"/> SG2-KNUCKLE	SG2 Series Knuckle/Floodlight mount kit, includes visor	2.0 (1.0)
<input type="checkbox"/> SCP-REMOTE*	Remote control for SCP option. Order at least one per project to program and control fixtures	1 (.45)
<input type="checkbox"/> SG1-SPC	Vandal Resistant Lens (shield polycarbonate), SG1	3 (1.5)
<input type="checkbox"/> SG2-SPC	Vandal Resistant Lens (shield polycarbonate), SG2	3 (1.5)
<input type="checkbox"/> SG1-WCP	Universal Wall Cover Plate, Dark Bronze, SG1	10 (5)
<input type="checkbox"/> SG2-WCP-H	Horizontal Mount Wall Cover Plate, Dark Bronze, SG2	10 (5)
<input type="checkbox"/> SG2-WCP-V	Vertical Mount Wall Cover Plate, Dark Bronze, SG2	10 (5)
<input type="checkbox"/> SG2XL-WCP-H	Horizontal Mount Wall Cover Plate, DB, SG2 with battery or sensor	10 (5)
<input type="checkbox"/> SG2XL-WCP-V	Vertical Mount Wall Cover Plate, DB, SG2 with battery or sensor	10 (5)

ACCESSORIES AND SERVICES (ORDERED SEPARATELY)

Control Options	
SWUSB¹	SiteSync™ interface software loaded on USB flash drive for use with owner supplied PC (Windows based only). Includes SiteSync™ license, software and USB radio bridge node.
SWTAB¹	Windows tablet and SiteSync™ interface software. Includes tablet with preloaded software, SiteSync™ license and USB radio bridge node.
SWBRG²	SiteSync™ USB radio bridge node only. Order if a replacement is required or if an extra bridge node is requested.

Notes:

- When ordering SiteSync™ at least one of these two interface options must be ordered per project.
- If needed, an additional Bridge Node can be ordered.

SLING SERIES

SLENDER WALLPACK

PERFORMANCE DATA

Description	# of LEDs	Drive Current	System Watts	5K (5000K NOMINAL 70 CRI)					4K (4000K NOMINAL 70 CRI)					3K (3000K NOMINAL 80 CRI)				
				Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
SG1-10	2	140mA	11	1349	122	1	0	0	1424	129	1	0	0	1003	91	1	0	0
SG1-20	2	250mA	21	2449	115	1	0	0	2310	110	1	0	0	2054	95	1	0	0
SG1-30	2	350mA	29	3332	117	2	0	0	3060	106	1	0	0	2913	100	1	0	0
SG-40	2	450mA	38	4008	105	2	0	0	4070	106	2	0	0	3845	100	2	0	0
SG2-50-UHV	3	350mA	44	4633	106	2	0	0	4609	105	2	0	0	3895	90	2	0	0
SG2-50	3	415mA	51	5548	109	2	0	0	5526	107	2	0	0	4700	92	2	0	0
SG2-80	3	650mA	80	7851	98	2	0	1	8079	103	2	0	1	6721	86	2	0	1

*347 and 480 VAC input Lumen values are from photometric test performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown. Actual performance may differ as a result of end-user environment application and inherent performance balances of the electrical components.

ELECTRICAL DATA

Catalog number	# of Drivers	Input Voltage	Current (AMPS)	System Power
SG1-10	1	120	0.09	11.0
	1	277	0.04	11.0
SG1-20	1	120	0.18	21.0
	1	277	0.08	21.0
SG1-30	1	120	0.24	28.9
	1	277	0.10	28.9
SG2-40	1	120	0.32	38.3
	1	277	0.14	38.3
SG-50-UHV	1	347	0.13	43.5
	1	480	0.18	43.5
SG2-50	1	120	0.42	50.6
	1	277	0.18	50.6
SG2-80	1	120	0.68	79.8
	1	277	0.29	79.8

PROJECTED LUMEN MAINTENANCE

Ambient Temperature	OPERATING HOURS					
	0	25,000	50,000	TM-21-11' L96 60,000	100,000	L70 (Hours)
25°C / 77°F	1.00	0.98	0.97	0.96	0.95	>791,000
40°C / 104°F	0.99	0.98	0.96	0.96	0.94	>635,000

1. Projected per IESNA TM-21-11 * (Nichia 219B, 700mA, 85°C Ts, 10,000hrs) Data references the extrapolated performance projections for the base model in a 40°C ambient, based on 10,000 hours of LED testing per IESNA LM-80-08

SLING SERIES

SLENDER WALLPACK

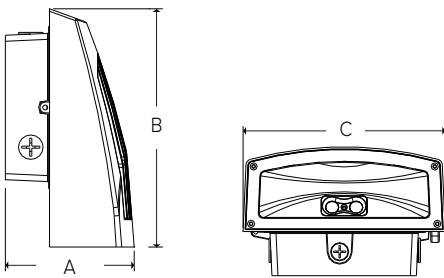
LUMINAIRE AMBIENT TEMPERATURE FACTOR (LATF)

Ambient Temperature		Lumen Multiplier
0° C	32° F	1.02
10° C	50° F	1.01
20° C	68° F	1.00
25° C	77° F	1.00
30° C	86° F	1.00
40° C	104° F	0.99
50° C	122° F	0.96

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

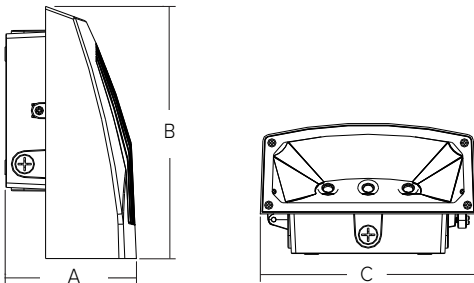
DIMENSIONS

SG1



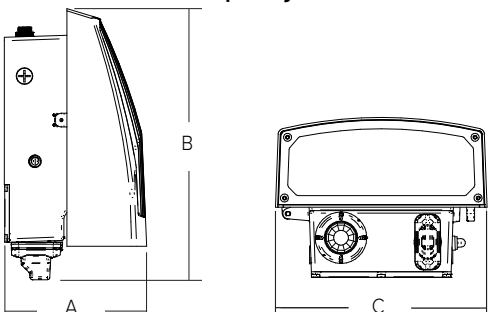
A	B	C	Weight
4.19" (107mm)	7.80" (198mm)	6.61" (168mm)	4.4lbs (2kg)

SG2



A	B	C	Weight
5.80" (147mm)	11.14" (283mm)	9.52" (242mm)	11lbs (5kg)

SG2 with occupancy sensor and battery options



A	B	C	Weight
7.26" (184mm)	13.84" (352mm)	9.52" (242mm)	11lbs (5kg)

SLING SERIES

SLENDER WALLPACK

PHOTOMETRY

SG1-10-4K7

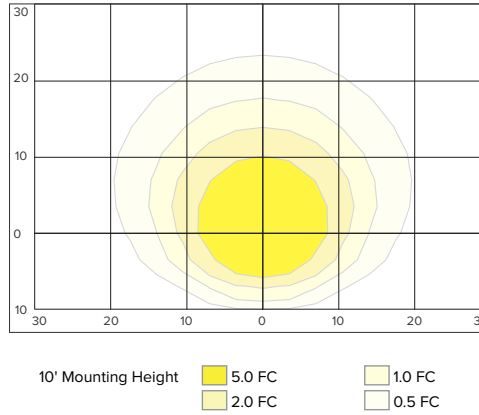
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Forward Throw
Delivered Lumens	1424
Watts	11.4
Efficacy	125
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	996.6	70.0
Downward House Side	427.8	30.0
Downward Total	1424.4	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	1424.4	100.0

ISOMETRIC FOOTCANDLE



SG1-20-4K7

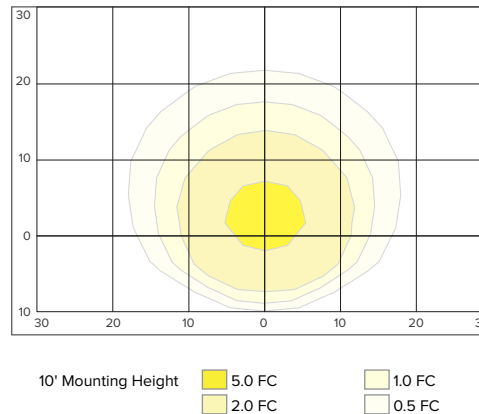
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Forward Throw
Delivered Lumens	2310
Watts	20.9
Efficacy	111
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	1618	70.0
Downward House Side	692.1	30
Downward Total	2310	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	2310.3	100.0

ISOMETRIC FOOTCANDLE



SG1-30

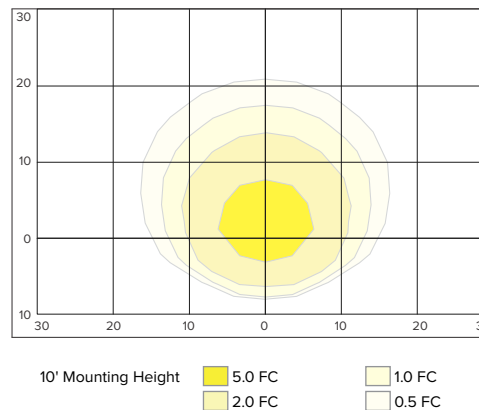
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Forward Throw
Delivered Lumens	3060
Watts	29.1
Efficacy	105
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	2619.4	70.9
Downward House Side	890.4	29.1
Downward Total	3059.8	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	3059.8	100.0

ISOMETRIC FOOTCANDLE



SLING SERIES

SLENDER WALLPACK

PHOTOMETRY

SG1-40-4K7

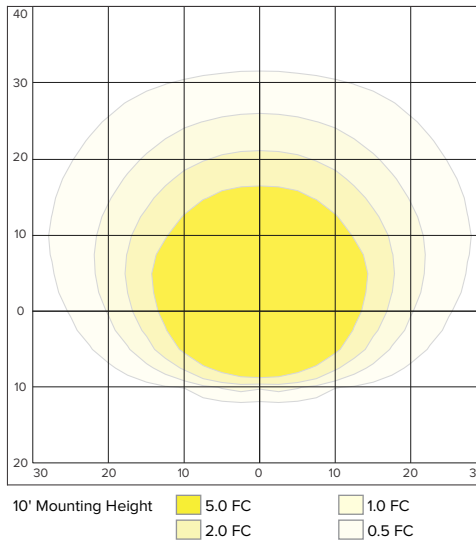
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Foward Throw
Delivered Lumens	4070
Watts	38.1
Efficacy	107
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	2857.7	70.2
Downward House Side	1215.5	29.8
Downward Total	4070.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	4070.2	100.0

ISOMETRIC FOOTCANDLE



SG2-50-4K7

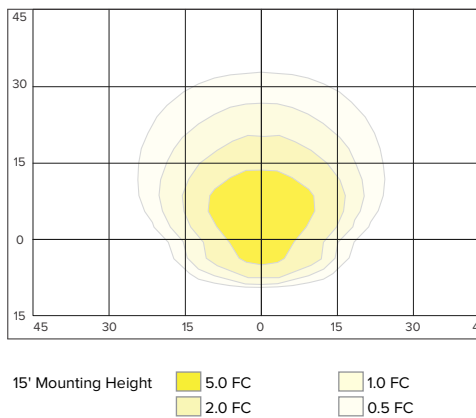
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Foward Throw
Delivered Lumens	5525.7
Watts	51.7
Efficacy	107
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	4611.8	83.5
Downward House Side	913.9	16.5
Downward Total	5525.7	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	5525.7	100.0

ISOMETRIC FOOTCANDLE



SG2-80-4K7

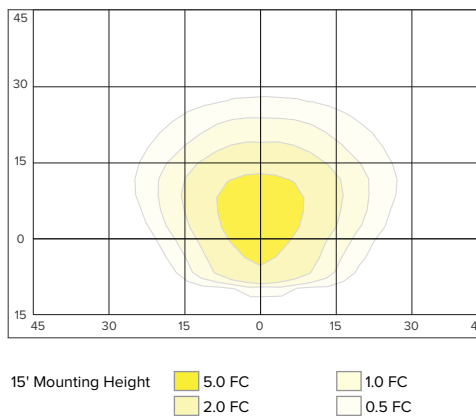
LUMINAIRE DATA

Description	4000 Kelvin, 70 CRI
Distribution Type	Foward Throw
Delivered Lumens	8453
Watts	78.5
Efficacy	108
Mounting	Wall

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
Downward Street Side	6677.7	79.0
Downward House Side	1775.5	21.0
Downward Total	8453.2	100.0
Upward Street Side	0.0	0.0
Upward House Side	0.0	0.0
Upward Total	0.0	0.0
Total Flux	8453.2	100.0

ISOMETRIC FOOTCANDLE



SLING SERIES

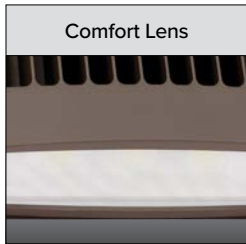
SLENDER WALLPACK

ADDITIONAL INFORMATION

Shipping Information

Catalog Number	G.W(kg)/ CTN	Carton Dimensions			Carton Qty. per Master Pack	Pallet Qty.
		Length Inch (cm)	Width Inch (cm)	Height Inch (cm)		
SG1	4.35lbs (2kg)	9.5 (24)	8.25 (21)	5.25 (13)	6	98
SG2	11lbs (5kg)	14 (36)	11.5 (29)	8 (20)	2	64

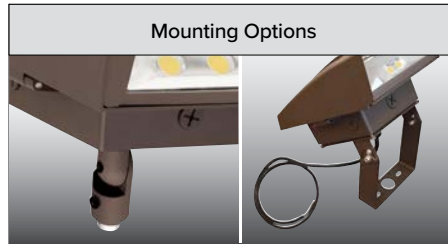
Accessories and Services



Acrylic comfort lens provides glare control, improved visual comfort and better uniformity



Visor accessory included with mounting accessory kits



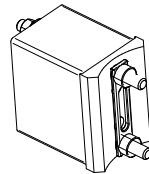
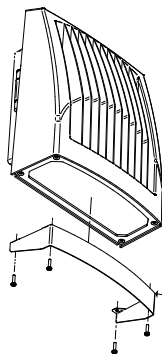
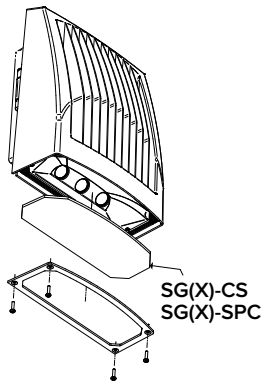
Flood mounting accessories - 1/2" threaded knuckle or yoke (includes grommet and 3' SO cord)



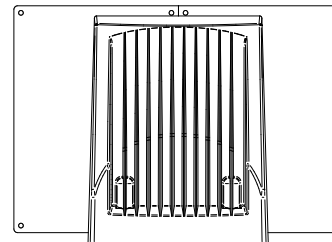
Photocontrol option available for energy-saving dusk-to-dawn operation



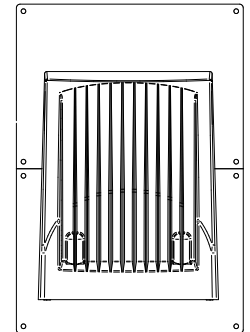
Side hinged for easy installation and wiring access, single screw secures housing closure



SG(X)-PMA-(X)-XX



SG(X)-WCP-H



SG(X)-WCP-V

Features



Battery back up feature with side indicator.

Exceeds Life Safety Code average illuminance of 1.0 fc. at 12' mounting height. Assumes open space with no obstructions. Battery backup units consume 6W when charging a dead battery and 2W during maintenance charging. EH (units with a heater) consume up to an additional 8W when charging if the battery temp is lower than 10°C

Diagrams for illustration purposes only, please consult factory for application layout.



SiteSync™ Lighting Control delivers flexible control strategies for reducing power consumption and minimizing maintenance costs while delivering the right light levels with a simple and affordable wireless solution.

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

FEATURES

- Superior color consistency within a 3-step MacAdam ellipse and greater than 80 CRI
- Available in 2', 4' or 8' lengths
- Optional integral emergency battery pack
- Heavy die-formed steel channel with 100% acrylic formed diffuser
- Surface mount, wall mount
- Occupancy controlled dimming of the LEDs increases energy savings while maintaining base light levels in stairwells at all times (see Occupancy Sensor section below)



RELATED PRODUCTS

Ø [LBIL](#)

CONTROL TECHNOLOGY



SPECIFICATIONS

CONSTRUCTION

- Housing, wireway, and ends are formed from code-gauge steel. Housing components act as heat sink for LED heat dissipation. Knockouts are provided for electrical access and mounting
- White painted parts are treated with a five-stage phosphate bonding process and finished with high reflectance baked enamel
- Shielded with 100% frosted prismatic acrylic lens

ELECTRICAL

- Long-life LEDs are rated for 60,000 hours at L80 lumen maintenance.
- Standard 0–10V dimming with High/Low integrated control outputs
- Superior drivers and long-life LEDs provide quality illumination for prolonged service life. Drivers < 10% THD at 120V, power factor >0.95

CONTROLS

- NX Distributed Intelligence™ provides options for standalone and networked integrated sensor with wired or wireless connectivity for NX system deployments
- NX is available in U.S., Canada and Mexico. For other locations consult factory

CONTROLS (CONTINUED)

- Hubbell Control Solutions internally mounted NX OMNI Passive Infrared Occupancy sensor is standard. Default settings: 15 min. unoccupied sensor dims luminaire to 50% output, once occupied luminaire returns to 100% output; never turning entirely off. LED indicator for easy verification of coverage. Coverage is 1:2.75 (mounting height: coverage ratio) up to 12', minimum 8' mounting height. Enables Intelliscope™ feature when paired with NX Bluetooth® mobile App, providing real time visibility of motion for improved accuracy of sensor sensitivity and time delay adjustments. Additional settings available within the NX Bluetooth mobile app

TECHNOLOGY

- SpectraSAFE™ is a scalable, cloud-enabled and lighting-based wireless video security solution for interior commercial and industrial applications

CERTIFICATIONS

- All luminaires are built to UL 1598 and 2108 standards, and bear appropriate CSA c/US labels. Damp location labeling is standard
- CSA certified to UL 924 standards with battery pack or DTS (Dimming Bypass Module) options

CERTIFICATIONS (CONTINUED)

- Adheres to LM79, LM80, and TM21 industry standards. The DTS, Dimming Bypass Module, is for emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. See page 5 for wiring diagram. [Link to Dimming Bypass Module Specification sheet.](#)
- DLC® (DesignLights Consortium) Qualified, with some Premium Qualified configurations. Please refer to the DLC website for specific product qualifications at www.designlights.org
- This product qualifies as a “designated country construction material” per FAR 52.225-11 Buy American-Construction Materials under Trade Agreements effective 06/01/2020. [See Buy American Solutions](#)

WARRANTY

- 5 year warranty
- See [HLI Standard Warranty](#) for additional information

KEY DATA	
Lumen Range	1630–9502
Wattage Range	13.8–67.6
Efficacy Range (LPW)	112–142
Reported Life (Hours)	L80/60,000

ORDERING GUIDE

Example: ESL4-40ML-FAW-EDU-NXOS

CATALOG #

ESL						W	ED
Model	Size	Color Temp	Lumen Output ¹	Lens	Distribution	Driver	
ESL Escalate Stairwell Luminaire	2 2'	30 3000K	VW 2' (1700), 4' (3300), 8' (6600)	FA Frosted Acrylic FP Frosted Polycarbonate	W Wide Distribution	ED 0-10V Dimming ²	
	4 4'	35 3500K	VWHE 4' (3200), 8' (6400)				
	8 8'	40 4000K	MW 2' (2200), 4' (3700), 8' (7400)				
		50 5000K	MWHE 2' (2000), 4' (3600), 8' (7200)				
		LW 2' (2400), 4' (4100), 8' (8200)					
		LWHE 2' (2600), 4' (4000), 8' (8000)					
		ML 2' (3500), 4' (4600), 8' (9200)					
		MLHE 4' (4600), 8' (9200)					
		HL 4' (5800), 8' (11,600)					
		HLHE 4' (5500)					
See Lumen Tables below.							

Voltage	Options	Control Options ⁷
U 120V-277V	ELL14 Emergency Battery Pack, 10W ^{4,5}	NXOS NX OMNI, PIR Occupancy Sensor, Dimming Daylight Harvesting, Standard
347 347V ³	ELL14H2 Emergency Battery Pack, 2-Hour Run Time ^{4,5}	NXS NX LMI, PIR Occupancy Sensor, Dimming Daylight Harvesting
	DTS Dimming Bypass Module ^{5,6,7}	NXOSW NX OMNI Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting
	GLR Fast Blow Fuse	NXSW NX LMI Wireless, PIR Occupancy Sensor, Dimming Daylight Harvesting
	SAF SpectraSAFE™ Integrated Surveillance Lighting System ⁷	HFU High Frequency Ultra-sonic Occupancy Sensor ⁸

Notes:

- 1 Nominal lumen output, refer to Performance Tables for exact values and available lumen outputs for fixture size. High efficacy versions designated with "HE"
- 2 External dimming leads not available
- 3 Not available with HE lumen packages
- 4 For compatibility with Dual-Lite LiteGear® inverters in lieu of installed battery pack, contact Hubbell Lighting representative
- 5 Not available with 2 ft size
- 6 For emergency circuit control loads including sensors and wireless systems CSA certified to UL 924. Universal voltage only See page 5 for wiring diagram
- 7 Universal voltage only
- 8 Not available with battery backup or DTS options. On/off functionality only

CONTROLS

NX Distributed Intelligence™ Lighting Controls:

Supports both indoor and outdoor applications in a variety of deployment options- wired, wireless, hybrid. Integrates with and enables a wide array of luminaires including those with SpectraSync Color Tuning Technology.



NX INTEGRATED CONTROLS REFERENCE								
NX Option	Sensor	Networkable	Scheduling	Occupancy	Daylight Harvesting	0-10V Dimming	On/off Control	Bluetooth® App Programming
NX Standalone								
NXOS	NXSMP-OMNI	No	Yes	Yes	Yes	Yes	Yes	Yes
NXS	NXSMP-SMI	No	Yes	Yes	Yes	Yes	Yes	Yes
NX Networked – Wireless								
NXOSW	NXSMP-OMNI	Yes	Yes	Yes	Yes	Yes	Yes	Yes, Bluetooth App
NXSW	NXSMP-SMI	Yes	Yes	Yes	Yes	Yes	Yes	Yes

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

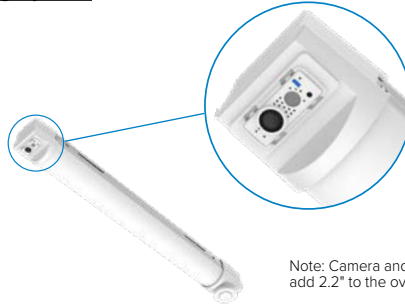
CONTROLS (CONTINUED)

SPECTRASAFE 

SpectraSAFE™ Integrated Surveillance Lighting System

Technical Features

- High resolution 1080p full HD camera
- 2.8mm lens / 140° field of view
- IR emitter for low / no-light conditions
- [Multiple wiring configurations available](#)
- Supports 2-way audio communication
- Supports 2.4GHz WPA-PSK/WPA2-PSK Wi-Fi
- Data encrypted using AES 256 standard
- Low power consumption (2-5W)
- Transmissions secured using Open TLS / SSL



Note: Camera and end cap add 2.2" to the overall length.

Software & Support

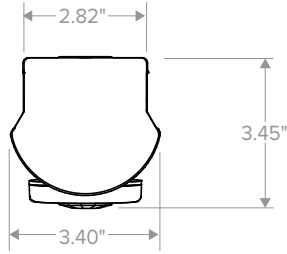
- Free Android, iOS and web-based app
- Versatile and supports multiple applications
- Multi-tenant web-based camera application
- Phone and in-app chat technical support
- Scalable cloud services and video storage
- Supported by a 5-year warranty

DELIVERED LUMENS

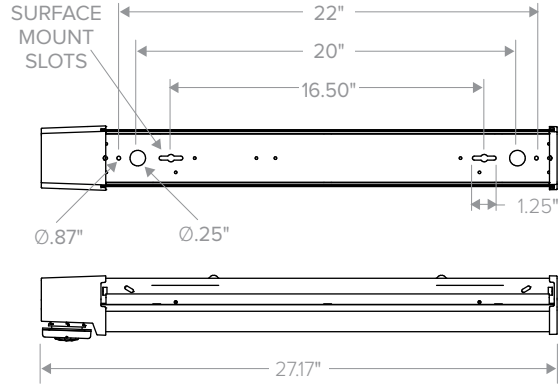
Fixture	3000K			3500K			4000K			5000K		
	LUMENS	WATTS	LPW	LUMENS	WATTS	LPW	LUMENS	WATTS	LPW	LUMENS	WATTS	LPW
ESL2-VW	1630	13.8	118	1659	13.8	120	1681	13.8	122	1736	13.8	126
ESL2-MW	2162	18.2	119	2201	18.2	121	2229	18.2	122	2303	18.20	127
ESL2-MWHE	1952	15.5	126	1987	15.5	128	2013	15.5	130	2079	15.5	134
ESL2-LW	2401	20.4	118	2444	20.4	120	2475	20.4	121	2557	20.4	125
ESL2-LWHE	2514	20.2	124	2559	20.2	127	2592	20.2	128	2677	20.2	133
ESL2-ML	3391	29.0	117	3452	29.0	119	3496	29.0	121	3611	29.0	125
ESL4-VW	3221	26.7	121	3279	26.7	123	3321	26.7	124	3430	26.7	128
ESL4-VWHE	3099	24.4	127	3155	24.4	129	3195	24.4	131	3300	24.4	135
ESL4-MW	3591	30.4	118	3656	30.4	120	3702	30.4	122	3824	30.4	126
ESL4-MWHE	3485	27.6	126	3548	27.6	129	3593	27.6	130	3712	27.6	134
ESL4-LW	3972	34.4	116	4043	34.4	118	4095	34.4	119	4230	34.4	123
ESL4-LWHE	3892	29.1	134	3962	29.1	136	4013	29.1	138	4145	29.1	142
ESL4-ML	4475	40.1	112	4556	40.1	114	4614	40.1	115	4766	40.1	119
ESL4-MLHE	4461	33.8	132	4541	33.8	134	4599	33.8	136	4751	33.8	141
ESL4-HL	5658	49.5	114	5760	49.5	116	5833	49.5	118	6026	49.5	122
ESL4-HLHE	5393	40.8	132	5490	40.8	135	5560	40.8	136	5744	40.8	141
ESL8-VW	6442	53.4	121	6558	53.4	123	6642	53.4	124	6861	53.4	128
ESL8-VWHE	6198	48.8	127	6310	48.8	129	6390	48.8	131	6601	48.8	135
ESL8-MW	7182	60.8	118	7311	60.8	120	7405	60.8	122	7649	60.8	126
ESL8-MWHE	6970	55.2	126	7095	55.2	129	7186	55.2	130	7423	55.2	134
ESL8-LW	7944	68.8	116	8087	68.8	118	8190	68.8	119	8460	68.8	123
ESL8-LWHE	7784	58.2	134	7924	58.2	136	8025	58.2	138	8290	58.2	142
ESL8-ML	8950	80.2	112	9111	80.2	114	9227	80.2	115	9532	80.2	119
ESL8-MLHE	8922	67.6	132	9083	67.6	134	9199	67.6	136	9502	67.6	141
ESL8-HL	11316	99	114	11520	99	116	11667	99	118	12052	99	122

DIMENSIONS

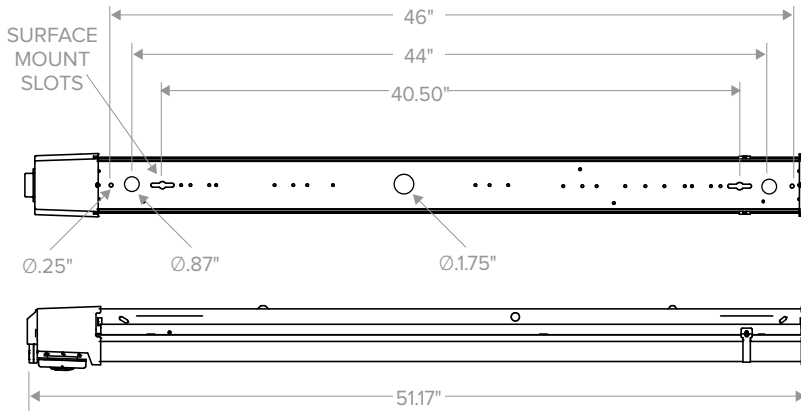
ESL END VIEW



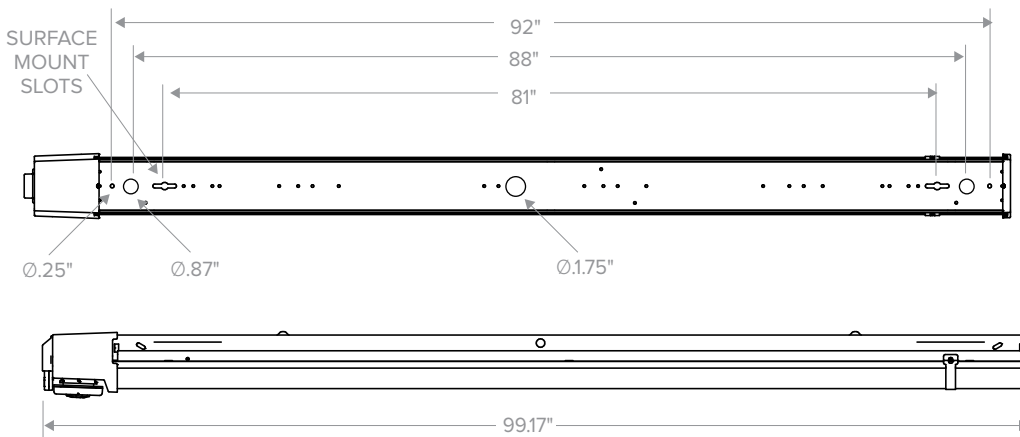
ESL 2' DIMENSIONS



ESL 4' DIMENSIONS

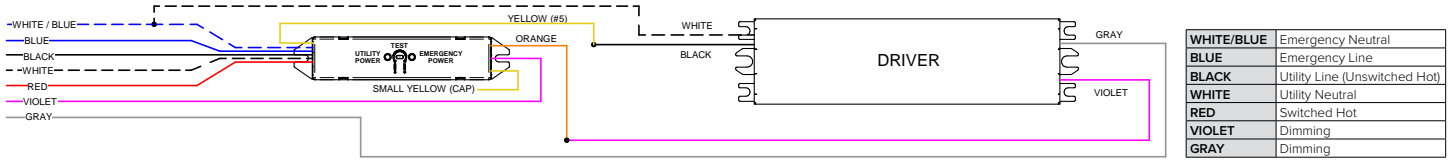


ESL 8' DIMENSIONS

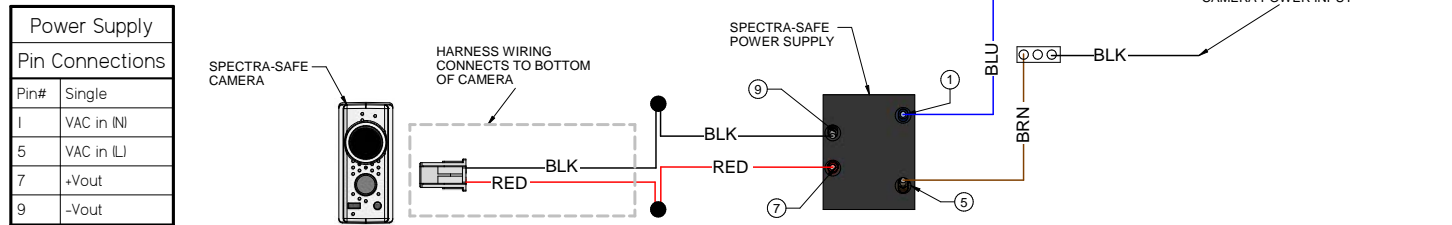


ADDITIONAL INFORMATION

DTS WIRING DIAGRAM (0-10V DIMMING DRIVER SHOWN)



SPECTRASAFE WIRING DIAGRAM



MAX AMBIENT OPERATING TEMPERATURE

Ambient Temp. for Driver Availability		
Voltage	Lumen Package	Ceiling/Surface/Mount
2'	VW	35
	MW	35
	LW	35
	ML	35
4'	VW	30
	MW	30
	LW	30
	ML	30
	HL	25
8'	VW	30
	MW	30
	LW	30
	ML	30
	HL	25

PHOTOMETRY

ESL4-40ML-FAW-EDU

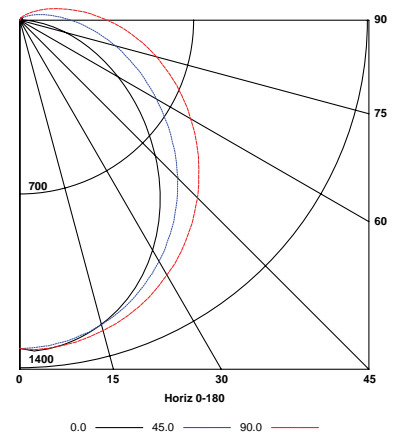
LUMINAIRE DATA

Test No.	20373
Description	Escalate™ Surface, Narrow LED 4ft, Frosted Linear Prisms Lens
Delivered Lumens	4615
Watts	40.10
Efficacy	115
Mounting	Recessed
Spacing Criterion	0° = 1.18 90° = 0.77

ZONAL LUMEN SUMMARY

Zone	Lumens	% Luminaire
0-30	1029	22.3
0-40	1688	36.6
0-60	3019	65.4
0-90	4248	92.0
0-180	4615	100.0

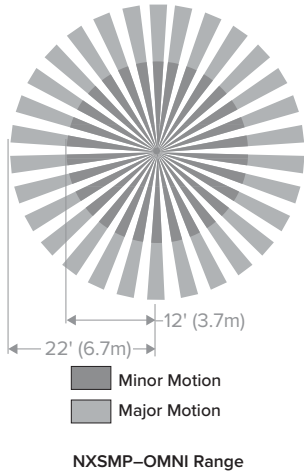
INDOOR CANDELA PLOT



NX SENSOR DATA

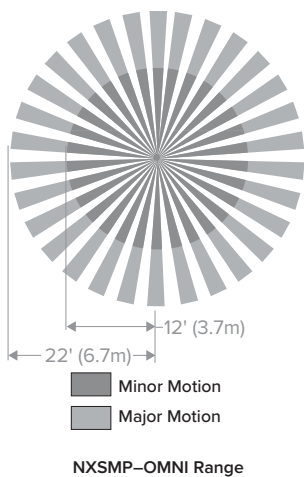
OMNI® (NXOS) PIR OCCUPANCY SENSOR, DIMMING DAYLIGHT HARVESTING

The NX OMNI Indoor Sensor Module houses a PIR motion sensor, a daylight sensor, and a Bluetooth® radio allowing wireless configuration and programming using the free Device Setup App



OMNI (NXOSW) WIRELESS, PIR OCCUPANCY SENSOR, DIMMING DAYLIGHT HARVESTING

The NX wireless option allows the fixture to communicate with other wireless equipped fixtures and with a building wide NX networked system. NXOSW allows for multiple stairwell fixtures to be linked together to accommodate different points of floor entry



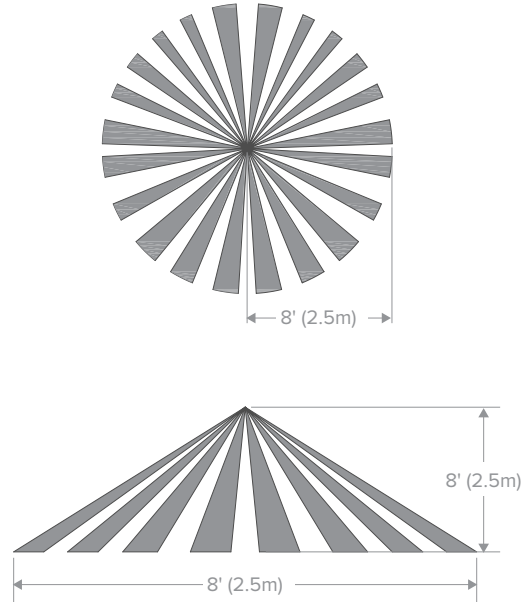
DATE: _____ LOCATION: _____

TYPE: _____ PROJECT: _____

CATALOG #: _____

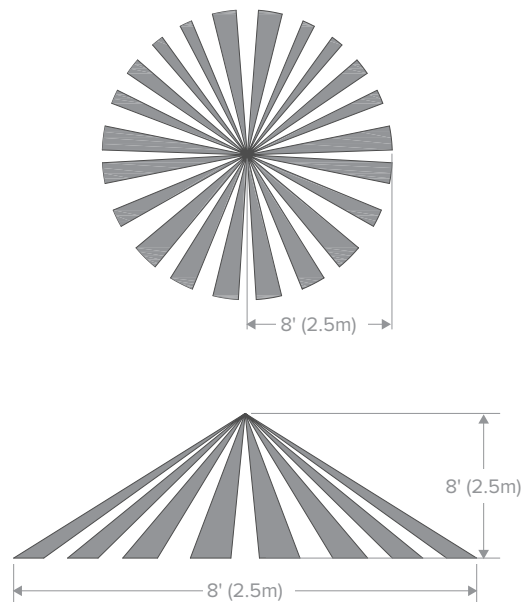
LMI (NXS) PIR OCCUPANCY SENSOR, DIMMING DAYLIGHT HARVESTING

The NX Low Mount Indoor Sensor Module has the same features as the OMNI version and is the ideal solution for integrated fixture control in applications where aesthetics demand that an exposed sensor has a limited visual impact



LMI (NXSW) WIRELESS, PIR OCCUPANCY SENSOR, DIMMING DAYLIGHT HARVESTING

The NX Low Mount Indoor Sensor Module wireless option allows the fixture to communicate with other wireless equipped fixtures and with a building wide NX networked system. NXSW allows for multiple stairwell fixtures to be linked together to accommodate different points of floor entry



DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

EVE Series

LED EXIT SIGN

FEATURES

- Architectural LED based exit and emergency light for wall, ceiling or end mounting commercial applications
- High impact, flame rated and UV stable white thermoplastic housing
- SW- Available with Special Wording
- 2C- 2 circuit operation
- FAP- Fire Alarm Panel
- FM- Flasher Module
- AF- Audible Flasher
- DC- Remote DC Operation
- 24K- 220-240VAC Input
- EV Unit Indoor Emergency Light



SPECIFICATIONS

APPLICATION

- The EVE series is a compact architectural LED exit sign designed for fast installation and reliable service

CONSTRUCTION

- The EVE Series has a flame-rated, UV stable thermoplastic housing with a lightly textured white or black finish
- The EVE series housing and canopy are made from durable injection molded ABS thermoplastic
- Available with special worded options
- Weight: 2.5 lbs

ELECTRICAL

- Available in AC only or emergency operation which includes a nickel metal hydride(NiMH) battery and provides a full 90 minutes of emergency exit illumination in the event of power failure
- Includes a constant current charger
- The EVE accepts 120/277VAC input at 60Hz and optional 220-240VAC input at 50 or 60 Hz with self-diagnostics option

INSTALLATION

- EVE can be wall mounted by use of back-plate with molded-in template, ceiling or end mounted with the use of supplied canopy to standard 3-1/2" or 4" square or octagonal electrical boxes
- Pre-stripped AC input leads provided

ILLUMINATION

- The EVE series provides bright and uniform exit panel illumination by using energy saving, long-life red or green LEDs with a 10 year lifecycle
- The panel face exceeds UL924 requirements for brightness and uniformity

EVLED
FAMILY



RELATED PRODUCTS

- [EVC Series Combination Emergency/Exit Sign](#)
- [Ev Series Emergency Light](#)
- [EV4R Recessed Emergency Light](#)
- [EVHC High Capacity Emergency Light](#)
- [EV4D-02WAL Emergency Light](#)
- [EVO Remote Head](#)

COMPLIANCES

- Listed to UL924 Standard
- NFPA 101
- NFPA 70
- UL Damp Location Listed
- CEC T20 Compliant

WARRANTY

- EVE: 5 year warranty
- Battery: 3 years full, 7 years pro-rata
- See [HLI Standard Warranty](#) for additional information

DATE:	LOCATION:
TYPE:	PROJECT:
CATALOG #:	

EVE Series

LED EXIT SIGN

ORDERING GUIDE

Example: EVEURW-2C

CATALOG #

EVE											
Model	Faces	Letter Color	Finish	Operation	Self-Diagnostic	Options					
EVE LED Exit Sign	U Universal Face	R Red G Green	W White B Black	A AC Only E Emergency	Blank None I Spectron® self-testing/self-diagnostic electronics ¹	2C 2 Circuit Operation ^{2,5} FAP Fire Alarm Panel ^{3,5,6,7} FM Flasher Module ^{1,6,7} AF Audible Flasher ^{1,6,7} DC Remote DC Operation ^{2,4,5} 24K 220 - 240 VAC 50, 60 Hz with Spectron® ^{1,7} SW Special Wording ^{8,9}					

Accessories

- EV Unit** 2 LED Indoor Emergency Light
- EVC** Exit Sign/ LED Emergency Light
- VRS3** Vandal Resistant Shield
- WGLX** Wire Guard (Wall Mount)
- WGLXC** Wire Guard (Ceiling Mount)
- PMLXW** 12 1/2" Pendant Mounting Kit (white)

Notes:

- 1 For use with emergency models only
- 2 For use with AC models only
- 3 Operates with 24 volt AC or DC fire alarm panels
- 4 For emergency illumination of sign from remote 6-24 VDC power source
- 5 DC option may not be specified with 2C or FAP options
- 6 AF, FM and FAP options may not be specified together
- 7 For use with Spectron® equipped models only
- 8 SW option limited to selections on pg.3
- 9 Special worded sign ships as a universal single or double face



EVC Combo Exit/ Light

ELECTRONICS

Upon failure of the normal utility power, a solid-state transfer switch automatically activates the exit LEDs. Upon resumption of the normal utility power, the battery is disconnected from the load and recharged through a constant current charger. The battery is a maintenance-free Nickel Metal Hydride(NiMH) type. The EVE series accepts 120/ 277VAC at 60 Hz, or an optional 220-240VAC input (-24K option)at 50 or 60 Hz. A low voltage battery disconnect(LVD) feature protects the battery from damage during prolonged power failures. Manual testing is available at any time using the push-to-test button. Rated LED lifecycle-greater than 100,000hrs. or 10 years.

STANDARD FEATURES INCLUDE

- External push-to-test switch and AC-on indicator
- Battery re-charge within 24 hours
- AC Lock-out circuit
- Low voltage battery disconnect

OPTIONAL SPECTRON FEATURE

- Self-diagnostics monitors LED status, LED load transfer circuit, battery capacity and charger function and displays any fault detection by means of a flashing code
- Self-Test feature automatically runs a 1 minute test once a month and an alternating 30 or 60 minute test once every 6 months. Multi-color LED indicator provides visible fault detection and charging status User initiated 1 or 90-minute system test feature
- 15 minute re-transfer delay
- Automatic unit transfer in brown-out conditions(below 80% of nominal AC input voltage)

OPERATING TEMPERATURE RANGE

0° to 40°C

WEIGHT

2.5 lbs

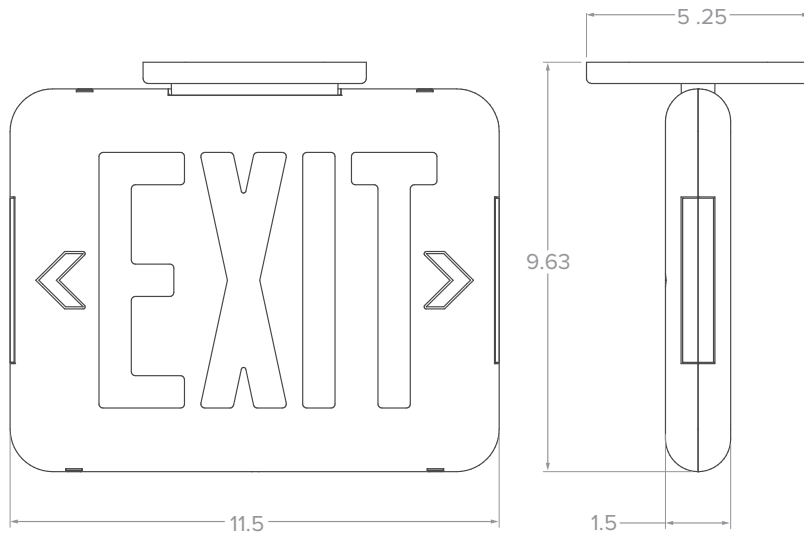
EVE Series

LED EXIT SIGN

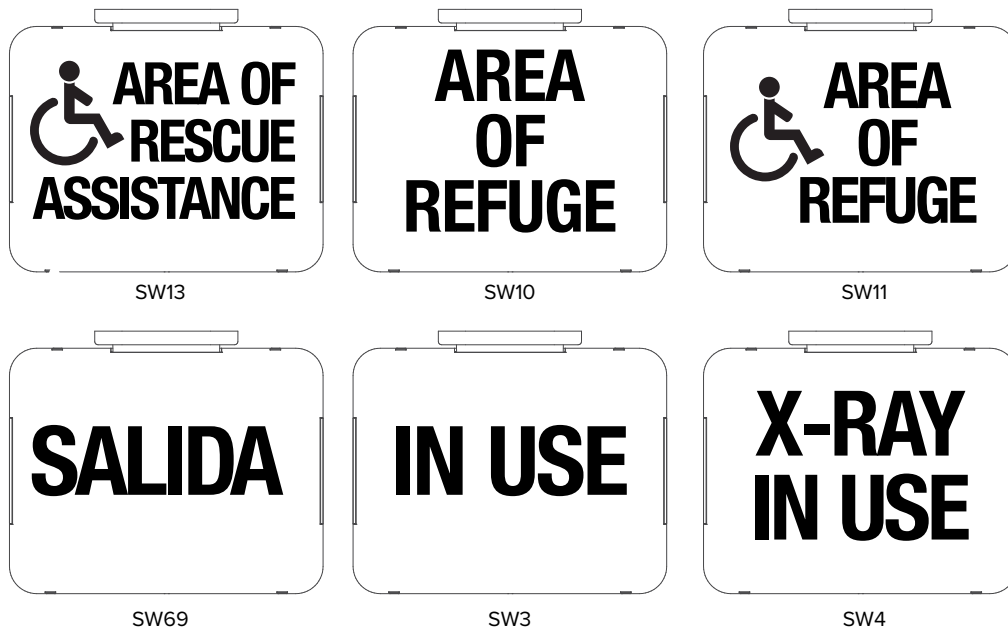
POWER CONSUMPTION (120/277VAC)

Model	120VAC, 60Hz			277VAC, 60Hz		
	A	W	PF	A	W	PF
Red AC Only	0.02	1.42	0.59	0.009	1.36	0.54
Green AC Only	0.02	1.36	0.57	0.009	1.30	0.57
Red Emergency	0.027	2.01	0.62	0.0127	1.94	0.55
Green Emergency	0.027	2.01	0.62	0.0127	1.94	0.55

DIMENSIONS



SPECIAL WORDING OPTIONS



* All special worded selections ship as a universal sign for single or double-face application.

For Health Hazard Applications

Job Name _____
 Job Location _____
 Engineer _____
 Approval _____

Contractor _____
 Approval _____
 Contractor's P.O. No. _____
 Representative _____

LEAD FREE*

Series LF909 Reduced Pressure Zone Assemblies

LF909 Sizes: ¾", 1" (20, 25mm)

LF909M1 Sizes: 1¼", 1½", 2" (32, 40, 50mm)

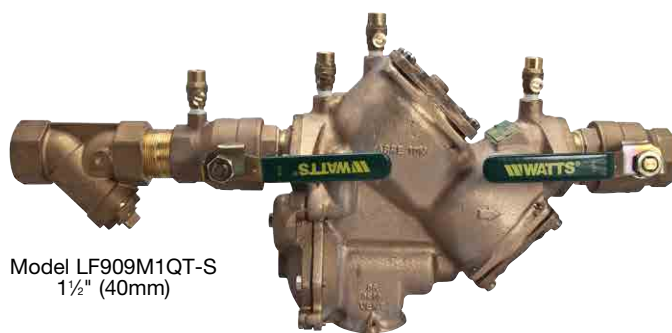
Series LF909 Reduced Pressure Zone Assemblies are designed to provide superior cross-connection control protection of the potable water supply in accordance with national plumbing codes and containment control for water authority requirements. This series can be utilized in a variety of installations, including health hazard cross-connections in plumbing systems or for containment at the service line entrance. The LF909 features Lead Free* construction to comply with Lead Free* installation requirements. With its exclusive, design incorporating the "air-in/water-out" principle it provides maximum relief valve discharge during the emergency conditions of combined backsiphonage and backpressure with both checks fouled. Model LF909QT, standardly furnished with full port, resilient seated and Lead Free* cast copper silicon alloy ball valve shutoffs. Sizes ¾" and 1" (20 and 25mm) shutoffs have tee handles.

Features

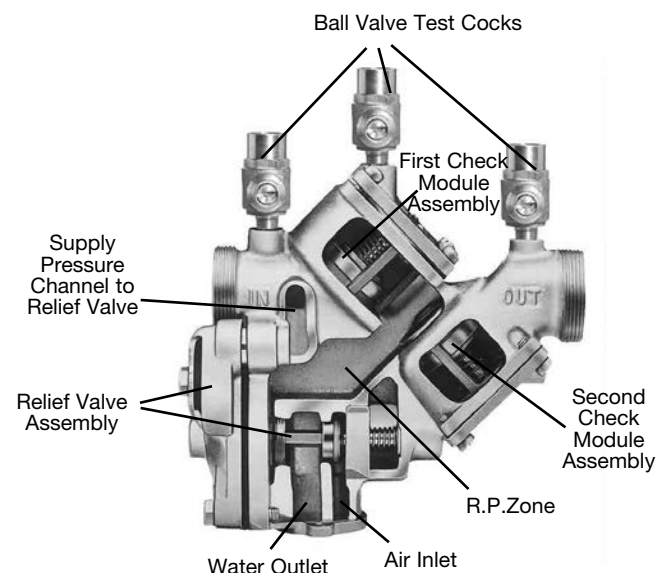
- Modular design
- Replaceable seats
- Compact for installation ease
- Horizontal or vertical (up or down) installation on limited sizes only
- No special tools required for servicing

Specifications

A Reduced Pressure Zone Assembly shall be installed at each cross-connection to prevent backsiphonage and backpressure of hazardous materials into the potable water supply. The assembly shall consist of a pressure differential relief valve located in a zone between two positive seating check valves. Backsiphonage protection shall include provision to admit air directly into the reduced pressure zone via a separate channel from the water discharge channel, or directly into the supply pipe via a separate vent. The assembly shall be constructed using Lead Free* cast copper silicon materials. The Lead Free* reduced pressure zone assembly shall comply with state codes and standards, where applicable, requiring reduced lead content. The assembly shall include two tightly closing shutoff valves before and after the assembly, test cocks and a protective strainer upstream of the No. 1 shutoff valve. The assembly (specify Model LF909 for temperatures up to 140°F (60°C) or Model LF909HW for temperatures up to 210°F (99°C)) shall meet the requirements of ASSE Std. 1013; AWWA Std. C-511-92 CSA B64.4; FCCCHR of USC Manual Section 10. Listed by IAPMO (UPC). SBCCI (Standard Plumbing code). The assembly shall be a Watts LF909QTS or LF909QTSHW.



Model LF909M1QT-S
1½" (40mm)



**Now Available
WattsBox Insulated Enclosures.**

For more information, send for literature ES-WB.

NOTICE

The information contained herein is not intended to replace the full product installation and safety information available or the experience of a trained product installer. You are required to thoroughly read all installation instructions and product safety information before beginning the installation of this product.

*The wetted surface of this product contacted by consumable water contains less than 0.25% of lead by weight.

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

WATTS®

Models

Suffix

QT	Quarter-turn ball valves
S	Bronze strainer
HW	Stainless steel check modules for hot and harsh water conditions

NOTICE

The installation of a drain line is recommended. When installing a drain line, an air gap is necessary.

Materials

Body: Lead Free* Cast Copper Silicon Alloy

Check Seats: 909 Celcon®

Relief Valve Seats: Stainless Steel 909HW

Test Cocks: Lead Free* Cast Copper Silicon Alloy

Celcon® is a registered trademark of Celanese, Limited

Connections

¾" – 1" (19 – 25mm) 909-NPT Female threaded body connection

1¼" – 2" (32 – 50mm) 909-M1-NPT Male threaded body connection

Standards

AWWA C-511-92

FCCCHR of USC Manual Section 10

IAPMO (UPC), SBCCI (Standard Plumbing code)

Tested and Certified by NSF International

Approvals

Listed by IAPMO

Listed by SBCCI



‡Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. (QT and S Models)

Vertical "flow-up" approval only on ¾" (20mm) and 1" (25mm) sizes (model LF909QT).

Pressure – Temperature

Temperature Range: 33°F – 140°F (0.5°C – 60°C) continuous, 180°F (82°C) intermittent

Maximum Working Pressure: 175psi (12.1 bar)

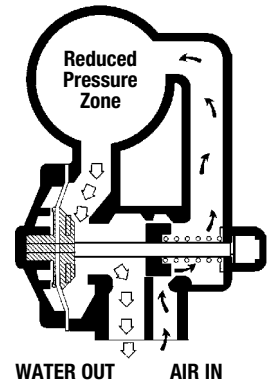
Series LF909HW:

Temperature Range: 33°F – 210°F (0.5°C – 99°C)

Maximum Working Pressure: 175psi (12.1 bar)

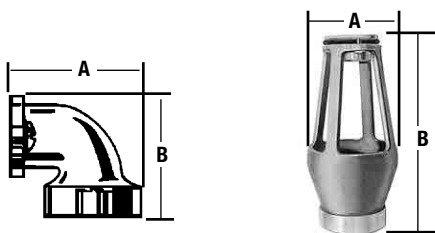
How it Operates

The unique relief valve construction incorporates two channels: one for air, one for water. When the relief valve opens, as in the accompanying air-in/water-out diagram, the right-hand channel admits air to the top of the reduced pressure zone, relieving the zone vacuum. The channel on the left then drains the zone to atmosphere. Therefore, if both check valves foul, and simultaneous negative supply and positive backpressure develop, the relief valve uses the air-in/water-out principle to stop potential backflow.



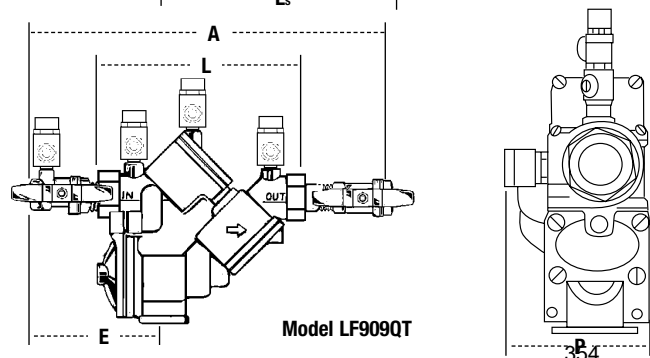
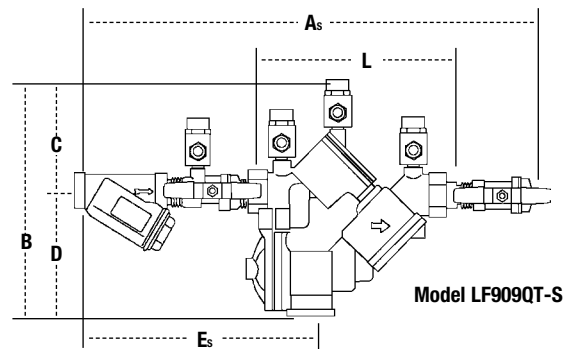
Dimensions – Weights

When installing a drain line use 909AG series Air Gaps on Series 909 backflow preventers. ††909EL series elbows are for air gaps on backflow preventers in vertical installations.



Series 909AG Air Gaps

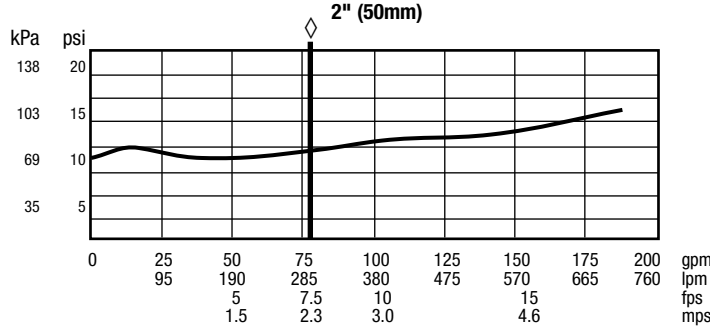
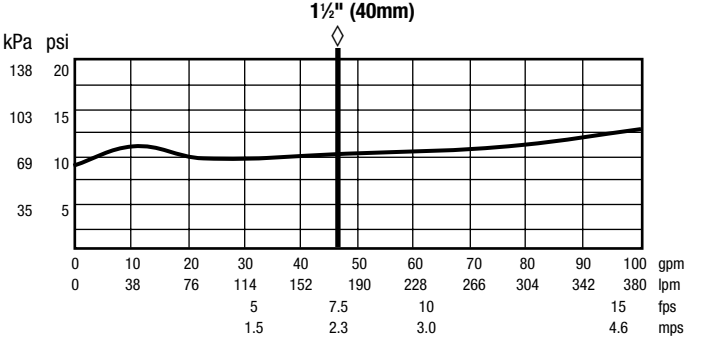
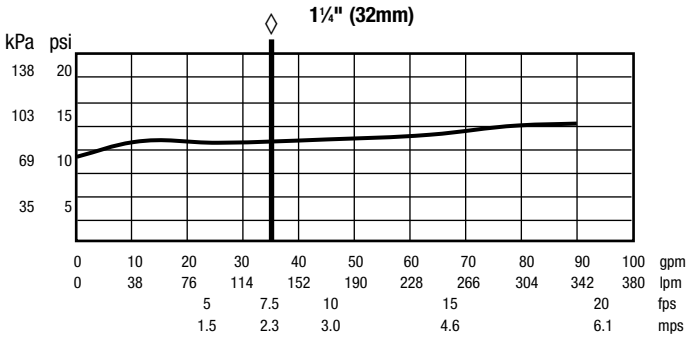
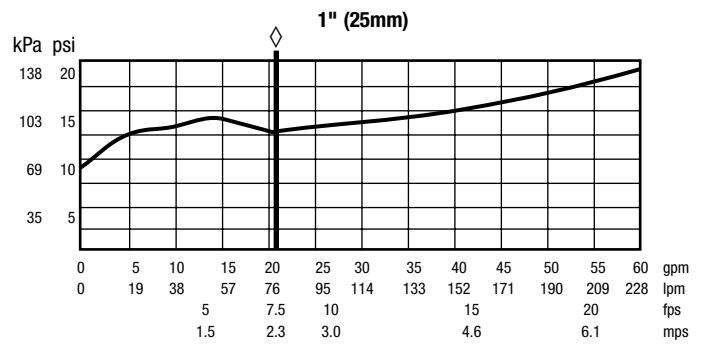
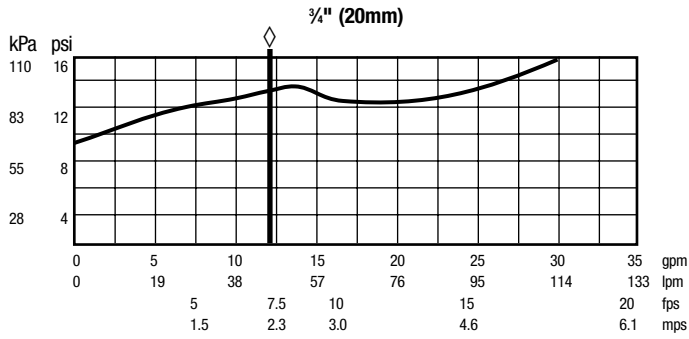
Iron Body No.	Desc.	909 DRAIN		OUTLET		DIMENSIONS		WEIGHTS			
		Sizes in.	Sizes mm	Sizes in.	Sizes mm	A in.	B in.	lbs.	kg.		
909AG-C	Air Gap	¾, 1	19, 25	1	25	¾	83	4 7/8	124	1 ½	.7
909EL-C	Elbow††	¾, 1	19, 25	–	–	2 ¾	60	2 ¾	60	¾	.2
909AG-F	Air Gap	1 ¼-2	32-50	2	50	4 ¾	111	6 ¾	171	3 ¾	1.5
909EL-F	Elbow††	1 ¼-2	32-50	–	–	3 ¾	92	3 ¾	92	2	.9



Capacity

As compiled from documented Foundation for Cross-Connection Control and Hydraulic Research of the University of Southern California lab tests.

◇ Typical maximum system flow rate (7.5 feet/sec.)



LF909QT, LF909QT-S

SIZE (DN)	DIMENSIONS												WEIGHT									
	A		As		B		C		D		E		Es		L		P		QT		QT-S	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	lbs.	kgs.	lbs.	kgs.
3/4"	14 3/8	365	18 1/16	459	8 3/4	222	4	102	4 3/4	121	6 3/4	171	10 1/16	259	7 5/16	186	3 3/8	98	14	6.4	15.6	7.1
1"	15 3/8	391	19 3/8	498	8 3/4	222	4	102	4 3/4	121	7	178	11	279	7 5/16	186	3 3/8	98	15	6.8	17.5	7.9
1 1/4"M1	18 1/2	470	23 3/16	595	11 1/8	295	5 1/2	140	6 1/2	165	7 1/2	191	12 3/16	310	10 3/8	264	5 1/4	133	40	18.1	42.8	19.4
1 1/2"M1	19	483	24 3/8	619	11 1/8	295	5 1/2	140	6 1/2	165	7 1/2	191	12 3/8	321	10 3/8	264	5 1/4	133	40	18.1	44.0	20.0
2"M1	19 1/2	495	25 1/16	659	11 1/8	295	5 1/2	140	6 1/2	165	7 3/4	197	13 1/16	354	10 3/8	264	5 1/4	133	40	18.1	47.4	21.5

Subscript 'S' = strainer model



PRODUCT SPECIFICATIONS

Elkay SwirlFlo® Fountain Bi-Level ADA Hands-Free Non-Filtered Refrigerated, Stainless. Chilling Capacity of 8.0 GPH (gallons per hour) of 50° F drinking water, based on 80° F inlet water and 90° F ambient, per ASHRAE 18 testing. Features shall include Hands Free. Furnished with Flexi-Guard® Safety Bubbler. Electronic Sensor Bubbler activation. Product shall be Wall Mount (Inwall Frame/Plate), for Indoor applications, serving 2 station(s). Unit shall be certified to UL 399 and CAN/CSA C22.2 No. 120. Unit shall be lead-free design which is certified to NSF/ANSI 61 & 372 (lead free) and meets Federal and State low-lead requirements.

Special Features:	Hands Free
Finish:	Stainless Steel
Power:	115V/60Hz
Bubbler Style:	Flexi-Guard® Safety Bubbler
Activation by:	Electronic Sensor Bubbler
Mounting Type:	Wall Mount (Inwall Frame/Plate)
Chilling Capacity*:	8.0 GPH
Full Load Amps	4.5
Rated Watts:	370
Dimensions (L x W x H):	38-1/2" x 19" x 40-13/16"
Approx. Shipping Weight:	108 lbs.
Installation Location:	Indoor
No. of Stations Served:	2
*Based on 80° F inlet water & 90° F ambient air temp for 50° F chilled drinking water.	

Special Note: Requires mounting frame MF200 which can be ordered seperately for early installation.

COOLING SYSTEM

- Compressor: Hermetically-sealed, reciprocating type, single phase. Sealed-in lifetime lubrication.
- Condenser: Fan cooled, copper tube with aluminum fins. Fan motor is permanently lubricated.
- Cooling Unit: Combination tube-tank type. Continuous copper tubing with is fully insulated with EPS foam that meets UL requirements for self-extinguishing material.
- Refrigerant Control: Refrigerant R-134a is controlled by accurately calibrated capillary tube.
- Temperature Control: Easily accessible enclosed adjustable thermostat is factory preset. Requires no adjustment other than for altitude requirements.



AMERICAN PRIDE. A LIFETIME TRADITION. Like your family, the Elkay family has values and traditions that endure. For almost a century, Elkay has been a family-owned and operated company, providing thousands of jobs that support our families and communities.



Included with Product: Fountain, Chiller

▼ Ships in multiple boxes.

PRODUCT COMPLIANCE

ADA & ICC A117.1
 ASME A112.19.3/CSA B45.4
 Buy American Act
 CAN/CSA C22.2 No. 120
 NSF/ANSI 61 & 372 (lead free)
 UL 399



Complies with ADA & ICC A117.1 accessibility requirements when installed according to the requirements outlined in these standards. Installation may require additional components and/or construction features to be fully compliant. Consult the local Authority Having Jurisdiction if necessary.

[Installation Instructions \(PDF\) - 1000003097](#)
[Installation Instructions \(PDF\) - 98005C](#)

5 Year Limited Warranty on the refrigeration system of the unit. Electrical components and water system are warranted for 12 months from date of installation. **Warranty pertains to drinking water applications only. Non-drinking water applications are not covered under warranty.**

[Warranty \(PDF\)](#)

OPTIONAL ACCESSORIES

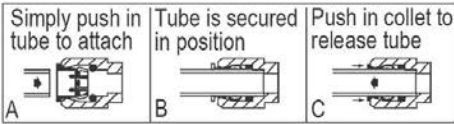
EW172 - Elkay WaterSentry VII Filter Kit (Coolers + Fountains)
MF200 - Elkay Mounting Frame 37-1/2" x 12" x 37-1/2"
LKAPR1 - Elkay Cane Apron for SwirlFlo Gray
ACCESS12X38-5 - Accessory - Stainless Steel Access Panel for Bi-Level Architectural Fountains

PART: _____ QTY: _____
 PROJECT: _____
 CONTACT: _____
 DATE: _____
 NOTES: _____
 APPROVAL: _____

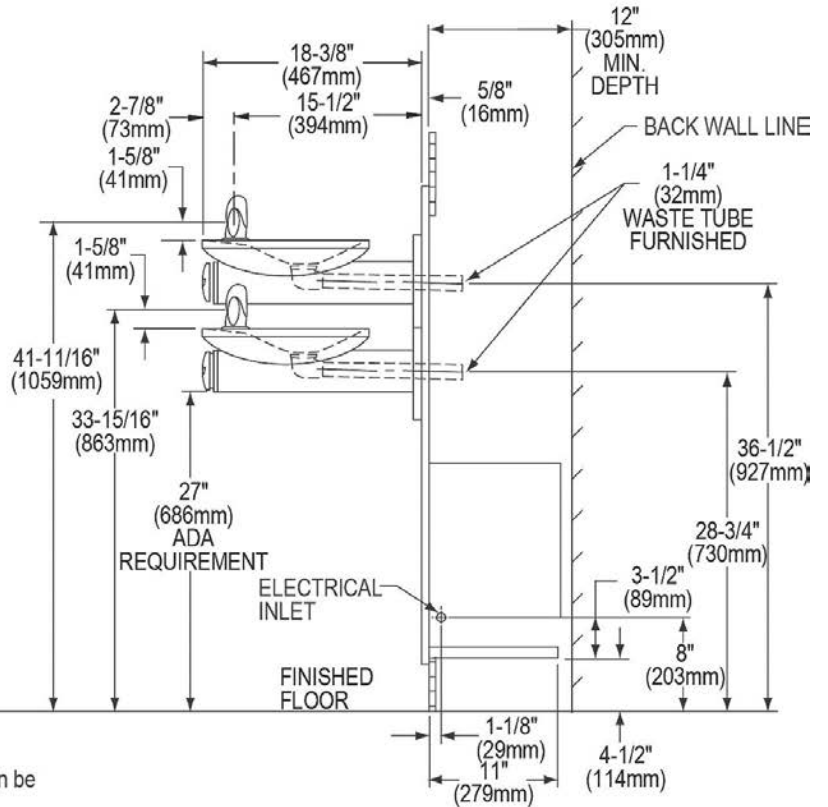
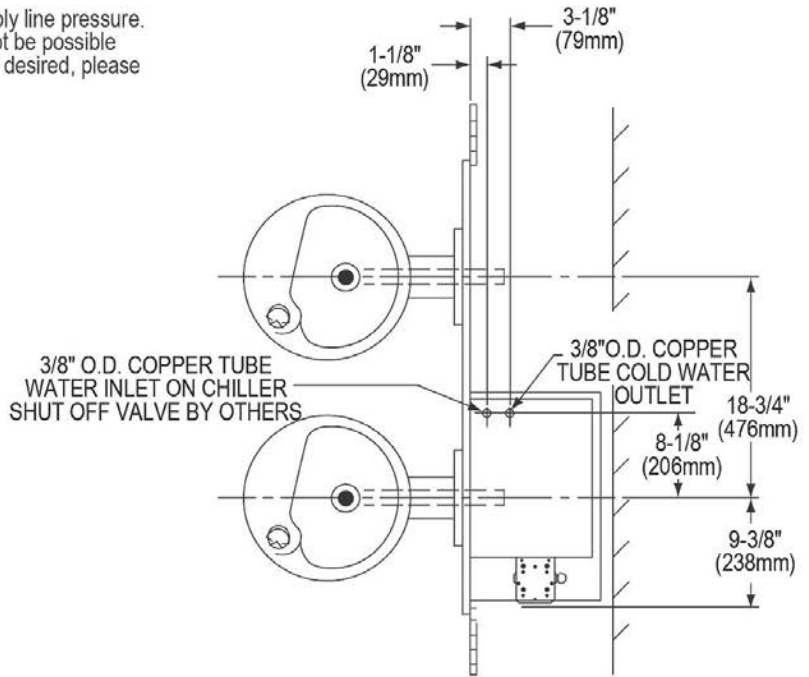
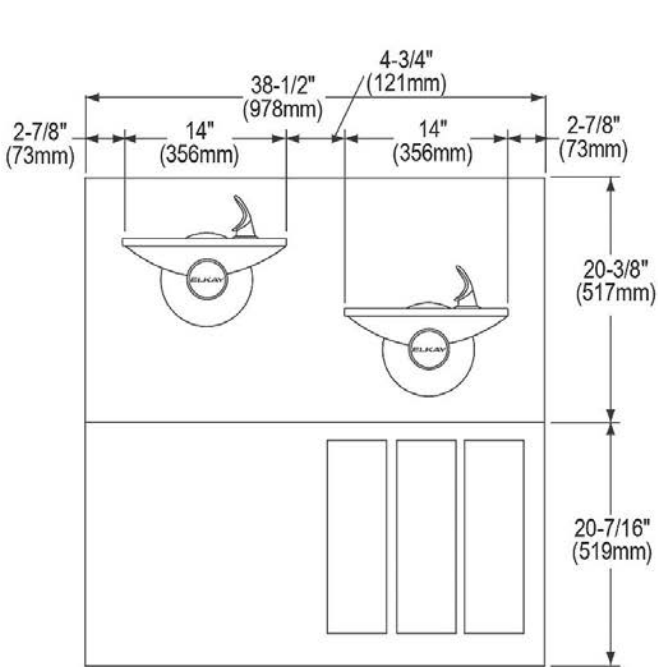
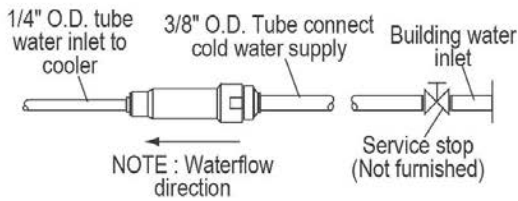
These products are designed to operate on 20 psi to 105 psi supply line pressure. Simultaneous operation of both bubblers on a bi-level unit may not be possible depending on water supply pressure. If simultaneous operation is desired, please ensure a minimum of 50 psi supply.

RATED FOR INDOOR USE ONLY

OPERATION OF QUICK CONNECT FITTINGS



Pushing tube in before pulling it out helps to release tube



NOTE: New installations must use Ground Fault Circuit Interrupter (GFCI). It is highly recommended that the circuit be dedicated and the load protection be sized for 20 amps.

**IMPORTANT!
INSTALLER PLEASE NOTE:**

The grounding of electrical equipment such as telephone, computers, etc., to water lines is a common procedure. This grounding may be in the building or may occur away from the building. This grounding can cause electrical feedback into a water cooler, creating an electrolysis which causes a metallic taste or causes an increase in the metal content of the water. This condition is avoidable by using the proper materials as indicated below.

The drain fitting which are provided by the installer should also be plastic to electrically isolate the cooler from the building plumbing system.

THIS DRINKING FOUNTAIN IS FURNISHED WITH A BUBBLER AND VALVE INCLUDING ALL CONNECTING FITTINGS WHICH ARE MANUFACTURED OF COMPLETELY LEAD FREE MATERIAL. SHUTOFF VALVE (NOT FURNISHED) TO ACCEPT 3/8" O.D. UNPLATED COPPER TUBE.

WALL OPENING

IMPORTANT: It is necessary to create a wall opening 37 1/2" W x 37 3/4" H and 4 1/2" above the floor line.

ELECTRICAL DATA

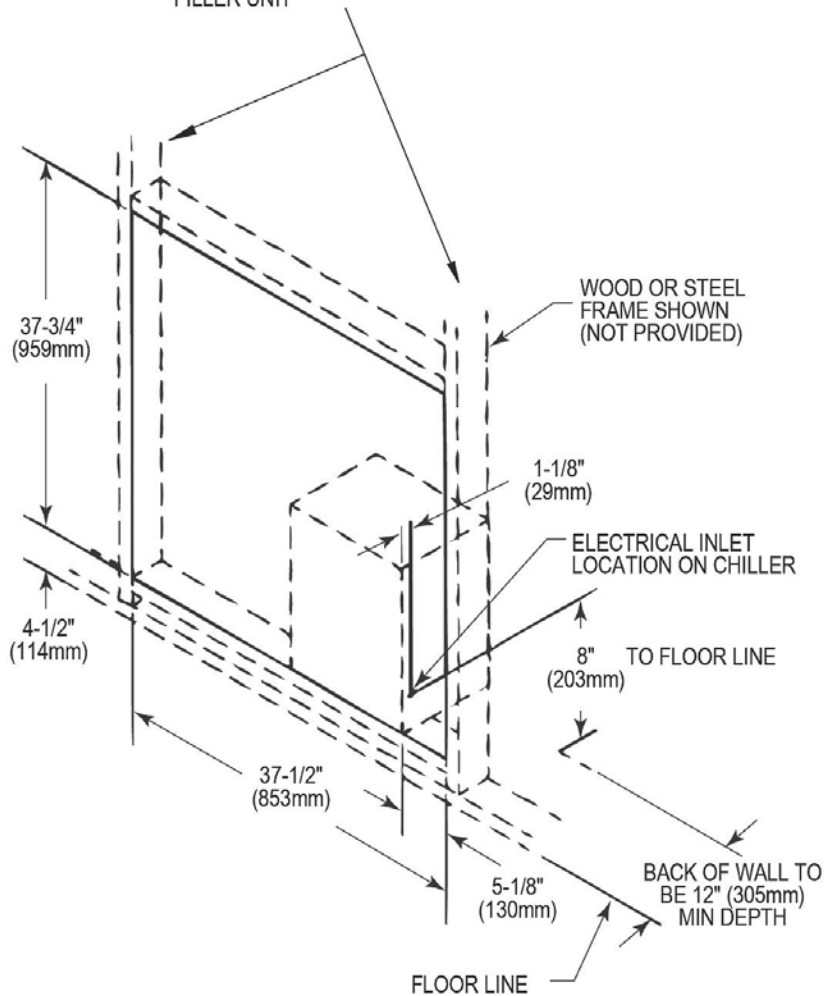
Electrical outlet, three (3) conductor grounded. Locate within safe reach of power cord.

MOUNTING INSTRUCTIONS

Refer to rough-in for location of plumbing and electrical sources. The support frame is to be installed first. Hang upper panel to hanger on frame. Fountains are to be attached to panel and wall frame. Water service lines, waste lines and electrical are assembled as required. Perform a final check for leaks and correct functions of fountains and chiller. (For details see the installation instructions.)

Installation requires trap to be installed in wall. Trap and service stop not included.

IMPORTANT :
DOUBLE STUD OR 3 INCHES (76mm)
BETWEEN MOUNTING FRAMES
IF PLACED NEXT TO A BOTTLE
FILLER UNIT



Features

- Vitreous china.
- Under-mount
- With overflow.
- Includes 1193643 clamp assembly.

Recommended Accessories

K-8998 P-Trap

Components

Additional included component/s: Basin Clamp Assembly.



ADA **CSA B651**

Codes/Standards











ASME A112.19.2/CSA B45.1
ADA
ICC/ANSI A117.1
CSA B651

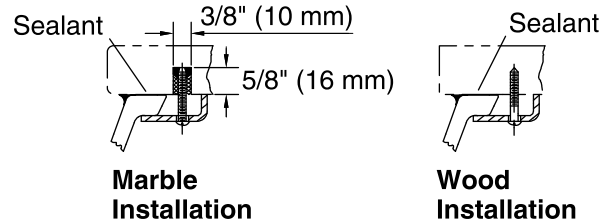
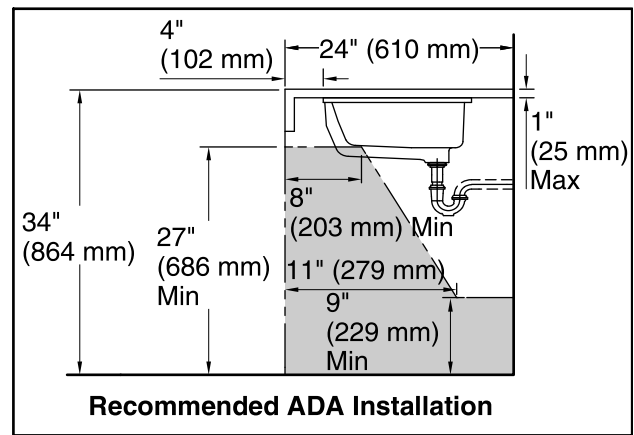
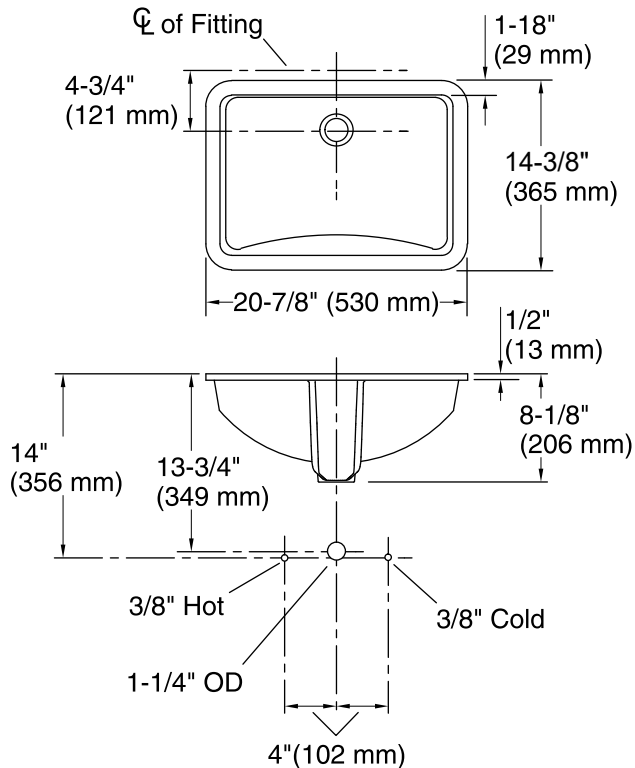
KOHLER® One-Year Limited Warranty

See website for detailed warranty information.

Available Color/Finishes

Color tiles intended for reference only.

Color	Code	Description
	0	White
	96	Biscuit
	47	Almond
	NY	Dune
	95	Ice™ Grey
	G9	Sandbar
	33	Mexican Sand™
	K4	Cashmere
	58	Thunder™ Grey
	7	Black Black™



Technical Information

All product dimensions are nominal.

Installation:	Under-mount
Bowl area	Length: 18-3/8" (467 mm) Width: 11-5/8" (295 mm) Water depth: 4-5/8" (117 mm)
Drain hole:	1-3/4" (44 mm)
Template:	1053195-7, required, not included

Notes

Install this product according to the installation instructions.

The product diagram is based on the K-8998 adjustable P-trap with 1" (25 mm) of tailpiece exposed.

NOTICE: Countertop manufacturer or cutter must use the current product template available at www.kohler.com, or by calling 1-800-4KOHLER. Kohler Co. is not responsible for cutout errors when the incorrect cutout template is used.

ADA, CSA B651 compliant when installed to the specific requirements of these regulations.


LUCERNE™ WALL-HUNG LAVATORY

- Wall-hung sink
- Vitreous china
- Front overflow
- D-shaped bowl
- Self-draining deck area with contoured back and side splash shields
- Faucet ledge
- Compliant with Texas accessibility standard (TAS) for children age group 13 and up

Faucet holes on 203mm (8") centers (Illus.):

- 0356.028** For exposed bracket support
Shown with 4801.862 Amarilis Heritage faucet with Triune Cross handles (not included)
- 0356.015** For wall hanger (included) or concealed arms support
- 0356.915** For wall hanger (included) or concealed arms support
 - Less overflow

Faucet holes on 102mm (4") centers:

- 0355.027** For exposed bracket support
- 0355.012** For wall hanger (included) or concealed arms support
- 0355.912** For wall hanger (included) or concealed arms support
 - Less overflow

Single center faucet hole (Illus.):

- 0356.041** For exposed bracket support
Shown with 1340.000 metering faucet (not included)
- 0356.421** For wall hanger (included) or concealed arms support
- 0356.921** For wall hanger (included) or concealed arms support
 - Less overflow
- 0356.439** For wall hanger (included) or concealed arms support
 - Single faucet hole on right
- 0356.066** For exposed bracket support
 - Single faucet hole on right

Nominal Dimensions:

521 x 464mm
(20-1/2" x 18-1/4")

Bowl sizes:

381mm (15") wide
254mm (10") front to back
165mm (6-1/2") deep

Compliance Certifications -
Meets or Exceeds the Following Specifications:

- ASME A112.19.2 / CSA B45.1 for Vitreous China Fixtures


0356.028

0356.041

SEE FOLLOWING PAGES FOR ROUGHING-IN DIMENSIONS

To Be Specified:

- Color: White
- Faucet*:
- Faucet Finish:
- Supplies:
- 1-1/4" Trap:
- Nipple:
- Bracket Support (by others):
- Concealed Arms Support (by others):

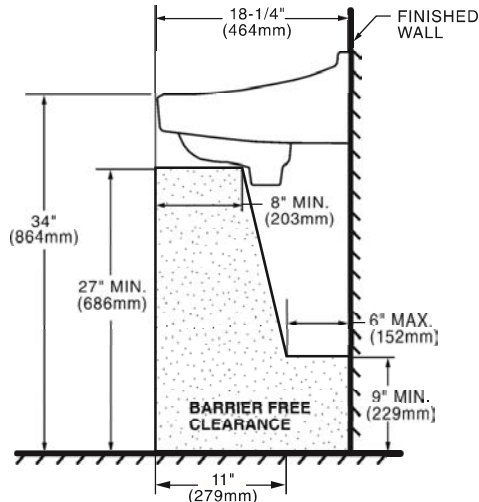
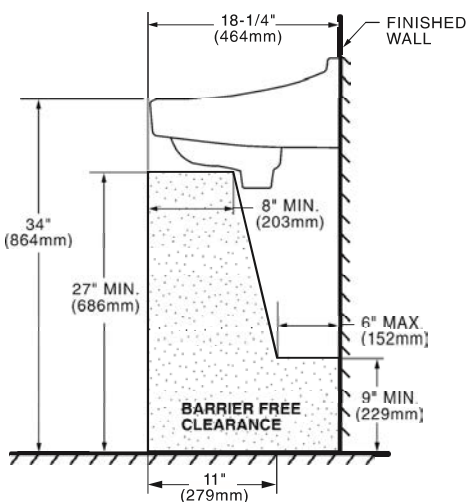
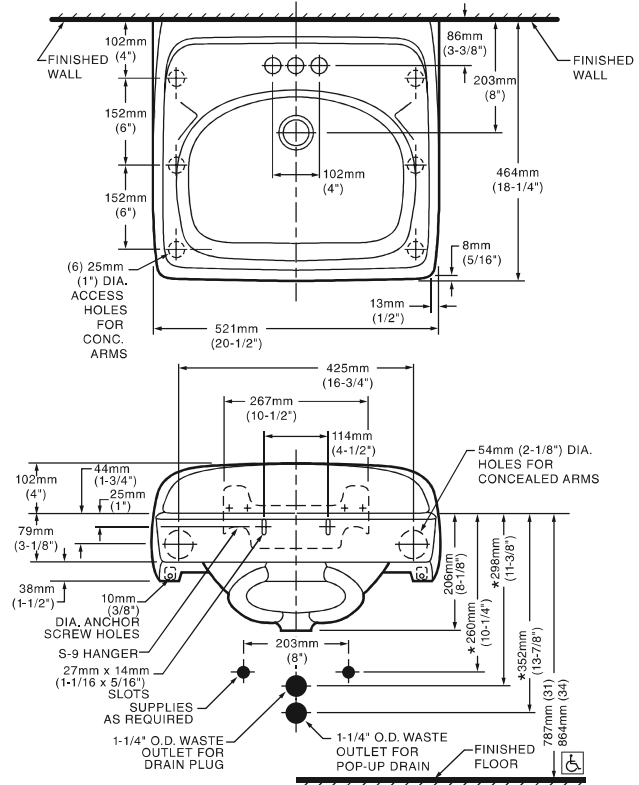
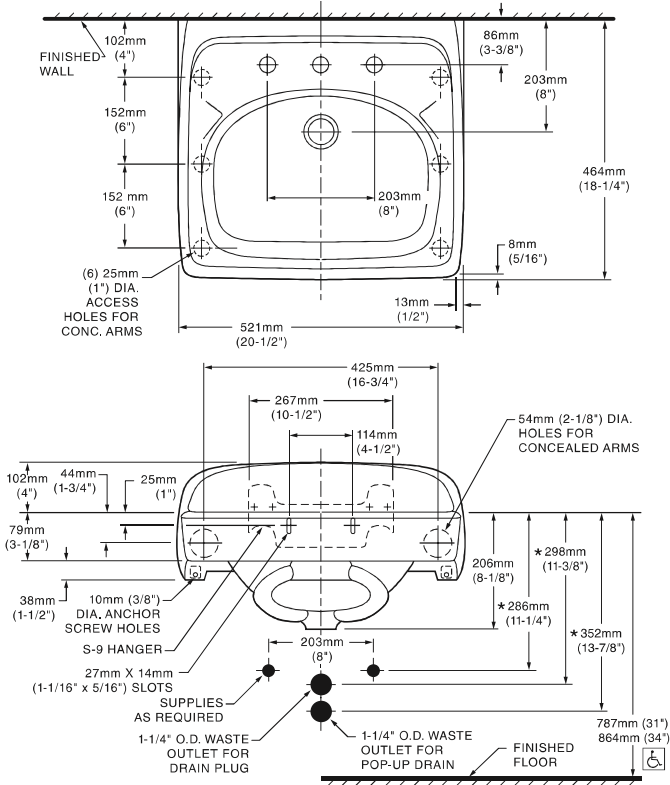
* See faucet section for additional models available


MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.

Top of front rim mounted 864mm (34") from finished floor.

- 0356.028** 8" CTRS FOR EXPOSED BRACKET SUPPORT
- 0356.015** 8" CTRS FOR WALL HANGER OR CONCEALED ARMS
- 0356.915** LESS OVERFLOW

- 0355.027** 4" CTRS FOR EXPOSED BRACKET SUPPORT
- 0355.012** 4" CTRS FOR WALL HANGER OR CONCEALED ARMS
- 0355.912** LESS OVERFLOW



NOTES:
 * DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
 PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.
 FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
 CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT SET AT 864MM (34") ABOVE FINISHED FLOOR.

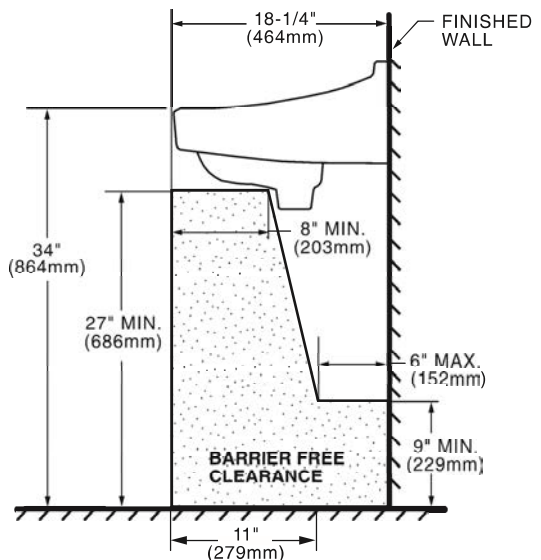
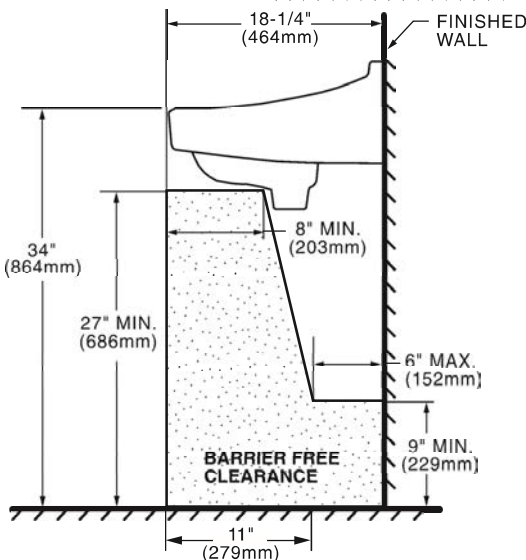
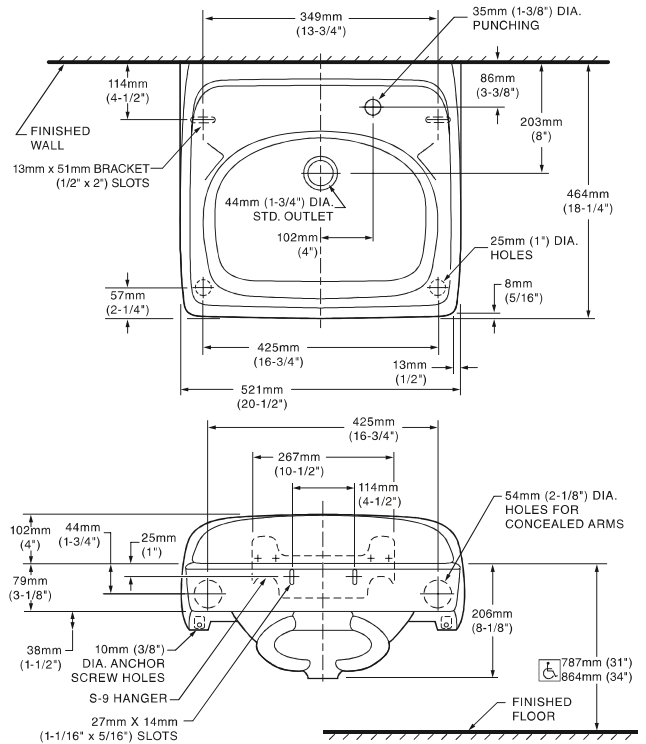
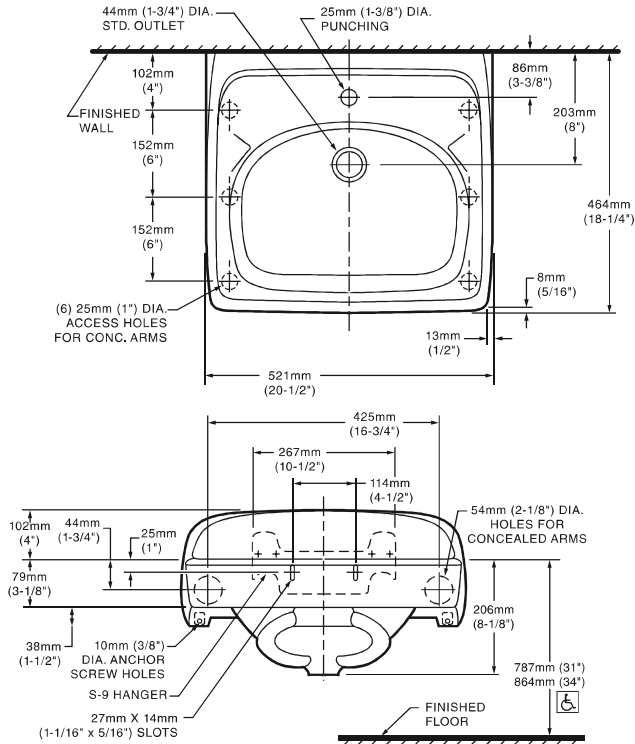
0356.041 SINGLE CENTER HOLE FOR EXPOSED BRACKET SUPPORT

0356.421 SINGLE CENTER HOLE FOR WALL HANGER OR CONCEALED ARMS

0356.921 LESS OVERFLOW

0356.439 SINGLE CENTER HOLE ON RIGHT FOR WALL HANGER OR CONCEALED ARMS

0356.066 SINGLE CENTER HOLE ON RIGHT FOR EXPOSED BRACKET SUPPORT



NOTES:
* DIMENSIONS SHOWN FOR LOCATION OF SUPPLIES AND "P" TRAP ARE SUGGESTED.
PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.
FITTINGS NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
CONCEALED ARM SUPPORT AS REQUIRED TO BE FURNISHED BY OTHERS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

LAVATORY DESIGNED TO MEET ADA HANDICAPPED GUIDELINES WITH MOUNTING HEIGHT SET AT 864MM (34") ABOVE FINISHED FLOOR.

Touchless Faucets

116.211.AB.1

Product Type

Touch-free, programmable faucet with above-deck electronics

Features & Specifications

- Includes optional 1.5 GPM (5.7 L/min) insert
- Single hole
- Traditional HyTronic Spout
- Vandal Proof Pressure compensating Econo-Flo™ non-aerating laminar spray 0.5 GPM
- ECAST® design provides durable construction with total lead content equal to or less than 0.25% by weighted average
- Complies with the requirements of the Buy American Act of 1933.





Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- 3-Year Limited Electronics and Solenoid Warranty
- Lifetime Limited Faucet Warranty
- 1-Year Limited Finish Warranty
- 5-Year Limited Mechanical Warranty

Codes & Standards

-  ASME A112.18.1/CSA B125.1
-  ADA ANSI/ICC A117.1
- Complies with CALGreen requirements
-  NSF/ANSI 372 Low Lead Content
-  NSF/ANSI 61, Section 9

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown

Submitted with Variations

Date _____

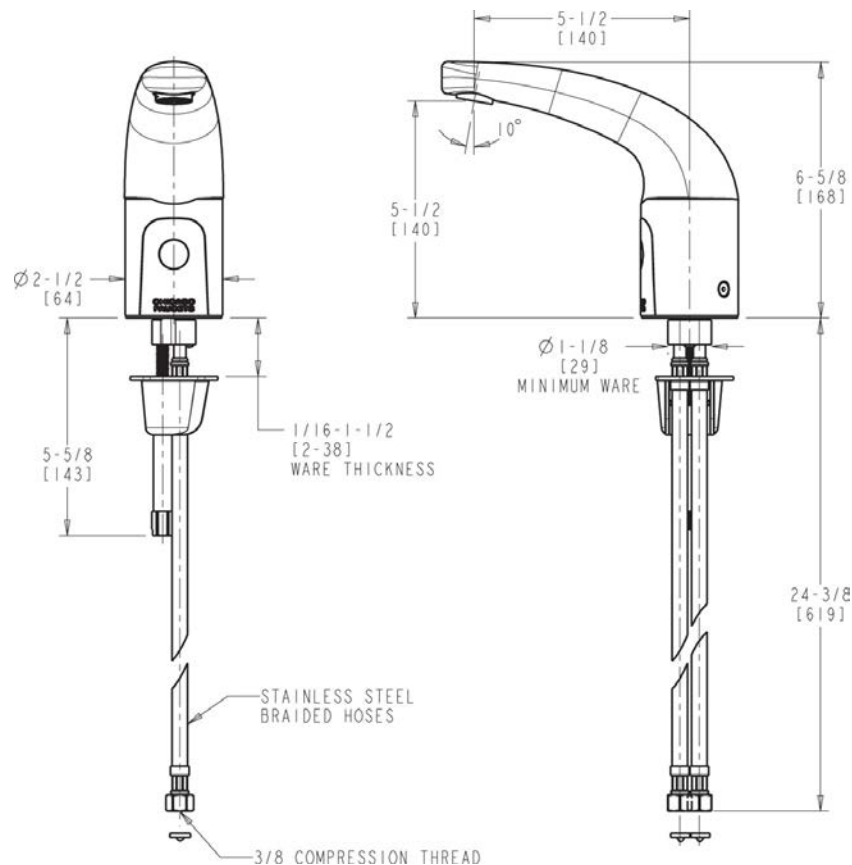


ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

Architect/Engineer Specification

Chicago Faucets No. 116.211.AB.1, HyTronic electronic faucet with dual-beam infrared sensor. Traditional-style integral spout, chrome plated. Single-hole deck mount. 0.5 GPM (1.9 L/min) vandal-proof, pressure compensating, Econo-Flo, non-aerating spray. Includes optional 1.5 GPM (5.7 L/min) insert. Dual supply for hot and cold water service. 6-volt lithium CRP2 battery included. Stainless steel hoses included. Concealed, internal temperature control mixer. Multiple field-adjustable modes and ranges. Compatible with Chicago Faucets Commander™ handheld programming unit. Compliant to CALGreen standard: .2 gallons per cycle maximum when used with supplied E2805 outlet. ECAST® construction with less than 0.25% lead content by weighted average. CALGreen compliant. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9 by CSA, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, NSF/ANSI 372 Low Lead Content, and California Green Building Standards Code (CALGreen).



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



Molded Stone[®] Mop Service Basins



MB-1



These rugged molded stone mop service basins are manufactured from the SMC process under the highest quality standards. The quality control molding is achieved in matched metal dies under intense heat and pressure with the result being a one-piece, dependable homogeneous product. Color is White.

SPECIFICATIONS

- 10" (254) high walls with 1" (25) wide shoulders. Model MSB-3624 includes an integrally molded shelf 10 9/16" (268) wide
- Stainless steel factory installed drain body complete with a QDC-3 joint connector for a 3" (76) drain pipe
- A combination dome strainer and stainless steel lint basket is included

Ces robustes cuves d'entretien de vadrouilles molded stone sont fabriquées grâce au procédé SMC selon les normes de qualité les plus rigoureuses afin d'en assurer la durabilité et d'éliminer les problèmes après l'installation. Le moulage se fait dans des matrices métalliques jumelées, à haute température et sous une forte pression, ce qui assure un produit homogène et fiable d'une seule pièce. La couleur est le blanc.

CARACTÉRISTIQUES

- Côtés de 10 po (254) avec épaulement de 1 po (25). Le modèle MSB-3624 comprend une tablette moulée intégrée de 10 9/16 po (268)
- Renvoi en acier inoxydable avec raccord QDC-3 pour tuyau de renvoi de 3 po (76)
- Crépine en coupole et filtre à charpie en acier inoxydable combinés compris

DIMENSIONS

MSB-3624

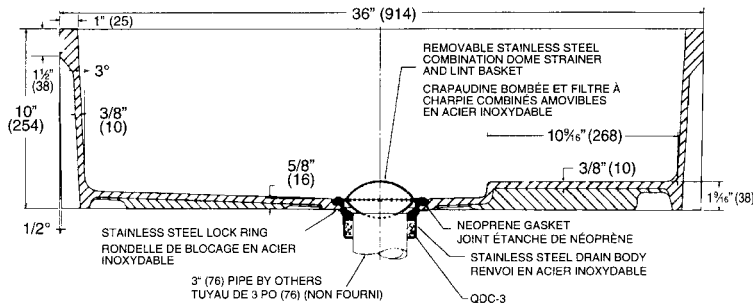
- 36" x 24" x 10" (914 x 610 x 254)
- Shipping weight / Poids à l'expédition: 70 lbs (32 kg)

MSB-2424

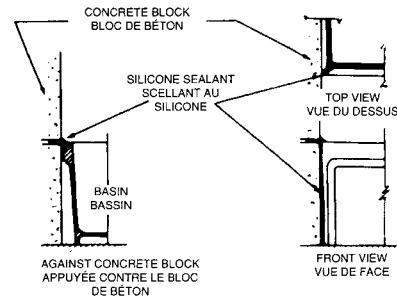
- 24" x 24" x 10" (610 x 610 x 254)
- Shipping weight / Poids à l'expédition: 50 lbs (23 kg)

OPTIONAL EQUIPMENT / ÉQUIPEMENT FACULTATIF

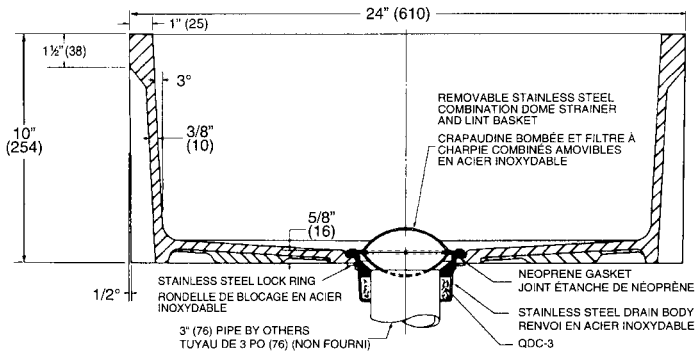
<p>830 AA – Wall mounted service faucet, chrome plated with vacuum breaker, integral stops, adjustable wall brace, pail hook and 3/4" (19) hose thread on spout. Body inlets 8" (203) center to center, four arm handles. Centre of spout outlet from back of wall flange 9 3/8" (238). CSA approved</p>		<p>830 AA – Robinet de service mural chromé avec coupe-vide, dispositif d'arrêt intégré, attache murale réglable et filets pour boyau 3/4 po (19) sur le bec. Conduites d'alimentation à 8 po (203) de centre à centre et clés à quatre ailettes. 9 3/8 po (238) entre le centre du bec et l'arrière de la bride murale. Homologué par L'ANCOR</p>																																								
<p>889 CC – Mop Bracket, 24" (610) long x 3" (76) wide, stainless steel with three (3) rubber grips</p>		<p>889 CC – crochet pour vadrouille, 24 po (610) de long par 3 po (76) de large, en acier inoxydable et muni de trois pinces à outils en caoutchouc</p>																																								
<p>E-77-AA – Vinyl bumper guards in 24" or 36" length</p>		<p>E-77-AA – butoirs en vinyle en 24 po ou 36 po de long</p>																																								
<p>1453 BB – Flat stainless steel strainer</p>		<p>1453 BB – Crépine plate en acier inoxydable pour utilisation résidentielle</p>																																								
<p>Quick Drain Connectors (QDC's)</p> <table border="1"> <thead> <tr> <th>For Use With</th> <th>QDC 3.2</th> <th>QDC 3SN</th> <th>QDC 3XH</th> <th>QDC 4</th> </tr> </thead> <tbody> <tr> <td>CAST IRON SOIL PIPE</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> </tr> <tr> <td>P.V.C. SCHED. 40 D.W.V.</td> <td>•</td> <td></td> <td>•</td> <td>•</td> </tr> <tr> <td>STEEL SCHED. 40</td> <td>•</td> <td></td> <td>•</td> <td>•</td> </tr> </tbody> </table>	For Use With	QDC 3.2	QDC 3SN	QDC 3XH	QDC 4	CAST IRON SOIL PIPE	•	•	•	•	P.V.C. SCHED. 40 D.W.V.	•		•	•	STEEL SCHED. 40	•		•	•		<p>Raccord rapide pour tuyau d'écoulement (QDC's)</p> <table border="1"> <thead> <tr> <th>For Use With</th> <th>QDC 3.2</th> <th>QDC 3SN</th> <th>QDC 3XH</th> <th>QDC 4</th> </tr> </thead> <tbody> <tr> <td>CAST IRON SOIL PIPE</td> <td>•</td> <td>•</td> <td>•</td> <td>•</td> </tr> <tr> <td>P.V.C. SCHED. 40 D.W.V.</td> <td>•</td> <td></td> <td>•</td> <td>•</td> </tr> <tr> <td>STEEL SCHED. 40</td> <td>•</td> <td></td> <td>•</td> <td>•</td> </tr> </tbody> </table>	For Use With	QDC 3.2	QDC 3SN	QDC 3XH	QDC 4	CAST IRON SOIL PIPE	•	•	•	•	P.V.C. SCHED. 40 D.W.V.	•		•	•	STEEL SCHED. 40	•		•	•
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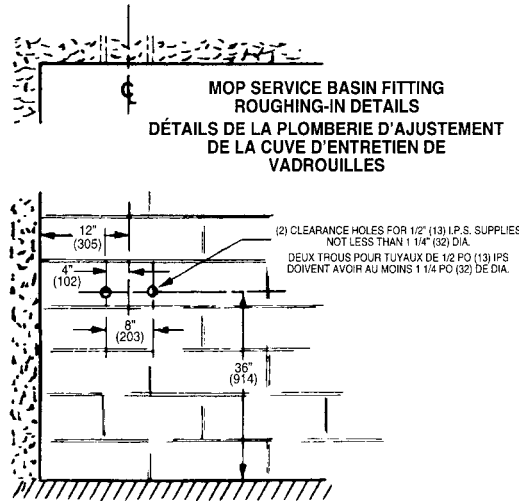
**SECTION THRU DRAIN CONNECTION
MSB-3624 (WITH SHELF)
VUE TRANSVERSALE DU RACCORD DE RENVOI
MSB-3624 (AVEC TABLETTE)**



**SUGGESTED INSTALLATION
INSTALLATION PROPOSÉE**



**SECTION THRU DRAIN CONNECTION
MSB-2424 (LESS SHELF)
VUE TRANSVERSALE DU RACCORD DE RENVOI
MSB-2424 (SANS TABLETTE)**



**SUGGESTED ROUGH-IN FOR SERVICE FAUCET - PLATES #830-AA
PLOMBERIE PROPOSÉE POUR LE ROBINET DE SERVICE - PLAQUES N° 830-AA**

OPTIONAL EQUIPMENT / ÉQUIPEMENT FACULTATIF

<p>Stainless Steel Wall Guards Made of heavy gauge stainless steel. Designed and is used to protect walls adjacent to the receptor. Two panels are supplied for a corner installation, a third panel is required for a recessed installation. The wall guard models are identified as follows: MSG 2424, MSG 3232, MSG 3624, and MSG 3636</p>		<p>Protecteurs muraux en acier inoxydable Fabriqués en acier inoxydable durable et de haut calibre. Conçus pour protéger les murs adjacents au récepteur. Deux panneaux sont fournis pour une utilisation en coin, un troisième panneau est requis pour une utilisation en alcôve. Les modèles de protecteurs muraux sont identifiés comme suit: MSG 2424, MGS 3232, MSG 3624 et MSG 3636</p>
<p>832 AA - Hose and Bracket; 30" (762) long flexible heavy duty 5/8" (16) rubber hose, cloth reinforced with 3/4" (19) chrome coupling at one end. Bracket is 5" (127) long x 3" (76) wide stainless steel with rubber grip</p>		<p>832 AA - Boyau et support : Boyau en caoutchouc flexible de 5/8" (16) résistant, 30" (762) de long, renforcé à une extrémité avec un assemblage de chrome de 3/4" (19). Support de 5" (127) de long X 3" (76) de large en acier inoxydable avec prise en caoutchouc.</p>

**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.



SHIELD™ COMMERCIAL GAS WATER HEATER

Job Name: _____ Model No. _____

Location: _____ Type Gas: _____ BTU/Hr
Input _____

Engineer: _____ Recovery Rate in GPH _____ @ _____ °F Rise

Agent/Wholesaler: _____ Equipment Tag(s): _____

Contractor: _____

NOTES:

Standard Features

- > Up to 96% Thermal Efficiency
- > Modulating Burner with 5:1 Turndown
- > Operates at Temperatures up to 180°F for Sanitizing Applications
- > Stainless Steel Heat Exchanger
- > Glass-Lined Steel Tank
- > Magnesium Anode Rods
- > 150 PSI Working Pressure
- > ASME Construction (SWA150–500)
- > ASME Temperature & Pressure Relief Valve
- > Zero Clearances to Combustible Material
- > Certified for Installation on Combustible Floors
- > PVC, CPVC, Polypropylene and Stainless Steel Venting up to 150 Equivalent Feet
- > Direct-Vent Sealed Combustion
- > Rooftop and Sidewall Venting
- > Advanced SMART CONTROL
 - LCD Display
 - Time Clock
 - Night Setback
 - Alarm Contacts
 - Runtime Contacts
 - Manual Reset High Limit
 - 3 Water Temperature Sensors
 - Flue Temperature Sensor
 - Contacts for Louvers
 - Adjustable Pump Delay
 - Security Protection
 - Enable/Disable Contacts

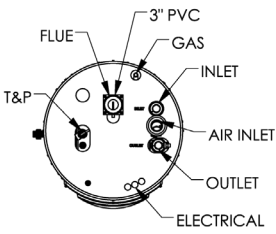
- > Low-NOx Operation, meets SCAQMD Rule 1146.2
- > Low Gas Pressure Operation
- > Direct-Spark Ignition
- > Brass Drain Valve
- > 8-Foot Power Cord
- > 3-Year Limited Warranty
- > 1-Year Parts Warranty

Optional Equipment

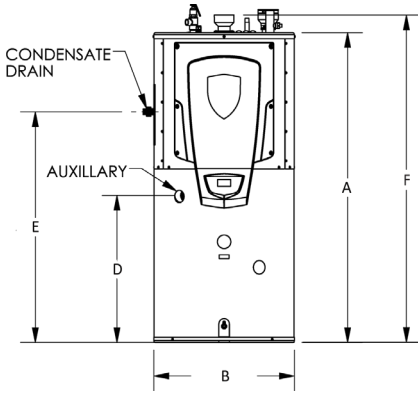
- Audible Alarm Kit
- BACnet Communication
- Concentric Vent Kit
- Condensate Neutralization Kit
- CON-X-US® Remote Connectivity
- Flow Switch
- Low Water Cutoff Kit
- Modbus Communication
- Sidewall Vent Termination Kit



SHIELD COMMERCIAL WATER HEATER – DIMENSIONS AND SPECIFICATIONS



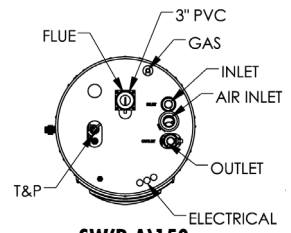
SW(R,A)125



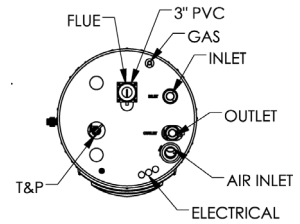
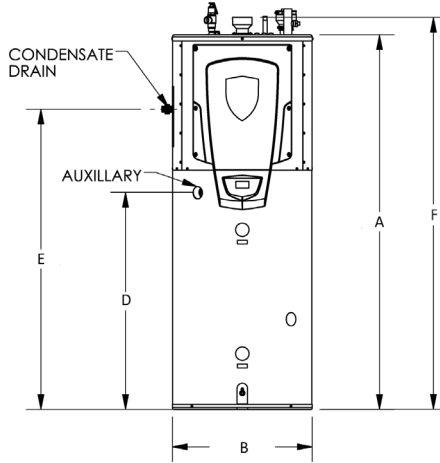
Model Number Guide

S	W	A	285	N
SHIELD	Water Heater	ASME Construction	285,000 Btu/hr Input	Natural Gas

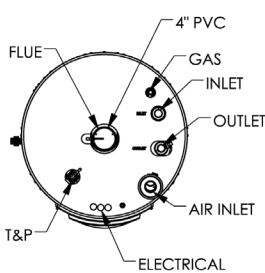
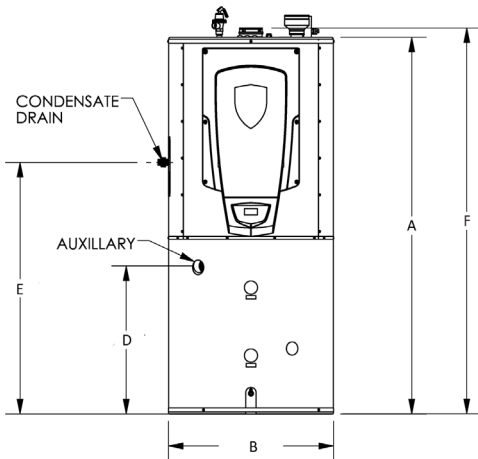
SHIELD
Water Heater
ASME
285,000 Btu/hr Input
Natural Gas



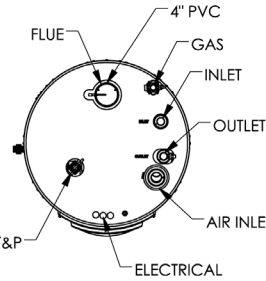
SW(R,A)150



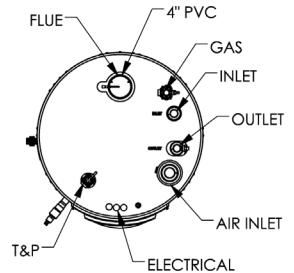
SW(R,A)200



SW(R,A)285



SW(R,A)400



SWA500

Model Number	Btu/hr Input	Capacity (Gals.)	Thermal Eff.	GPH @ 100° Rise	1st Hour	A	B	D	E	F	Gas Conn.	Water Conn.	Air Inlet	Vent Size	Ship Wgt. (lbs.)
Regular Construction															
SWR125N	125,000	65	96%	145	197	62 1/2"	28"	29-1/2"	46 1/2"	66"	1/2"	1-1/2"	3"	3"	377
SWR150N	150,000	90	96%	175	247	76"	28"	44"	61"	79-1/2"	1/2"	1-1/2"	3"	3"	700
SWR200N	199,000	90	96%	232	304	76"	28"	44"	61"	79-1/2"	1/2"	1-1/2"	3"	3"	725
SWR285N	285,000	110	95%	328	416	77-1/2"	34"	30-1/2"	51-3/4"	79-1/2"	1/2"	1-1/2"	4"	4"	800
SWR400N	399,000	110	95%	459	547	77-1/2"	34"	30-1/2"	51-3/4"	79-1/2"	1"	1-1/2"	4"	4"	850
ASME Construction															
SWA150N	150,000	90	96%	175	247	76"	28"	44"	61"	79-1/2"	1/2"	1-1/2"	3"	3"	700
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SWA500N	500,000	110	96%	582	670	77-1/2"	34"	30-1/2"	51-3/4"	79-1/2"	1"	1-1/2"	4"	4"	875

Change "N" to "L" for LP gas. Field convertible to LP Gas.

A = ASME Construction / Check local and state codes for ASME requirements

Electrical Requirements: 120V/1PH/60Hz

All Information is subject to change without notice.



Lochinvar, LLC
300 Maddox Simpson Parkway
Lebanon, Tennessee 37090
P: 615.889.8900 | F: 615.547.1000
Lochinvar.com



LOW LEAD CONTENT

HLW

201-AGN8AE2805FAB

Manual and Metering Faucets

Product Type

Deck Mounted 8" Fixed Centers Concealed Hot and Cold Water Sink Faucet

Features & Specifications

- 8" Fixed Centers
- 8" Rigid / Swing Gooseneck Spout
- 0.5 GPM (1.9 L/min) Vandal Proof Non-Aerating Spray Outlet
- 2-3/8" Lever Handle
- Quaturn Compression Operating Cartridge
- 1/2" NPSM Supply Inlets and Coupling Nut for 3/8" or 1/2" Flexible Riser
- ECAST® design provides durable brass construction with total lead content equal to or less than 0.25% by weighted average

Performance Specification

- Rated Operating Pressure: 20-125 PSI
- Rated Operating Temperature: 40-140°F

Warranty

- Lifetime Limited Faucet Warranty
- 5-Year Limited Cartridge Warranty
- 1-Year Limited Finish Warranty

Codes & Standards

- ASME A112.18.1/CSA B125.1
- Certified to NSF/ANSI 61, Section 9 by CSA
- California Health and Safety Code 116875 (AB1953-2006)
- Vermont Bill S.152
- NSF/ANSI 372 Low Lead Content
- ADA ANSI/ICC A117.1
- CALGreen

Job Name _____

Item Number _____

Section/Tag _____

Model Specified _____

Architect _____

Engineer _____

Contractor _____

Submitted as Shown Submitted with Variations

Date _____



ECAST

ECAST products are intended for installation where state laws and local codes mandate lead content levels or in any location where lead content is a concern.

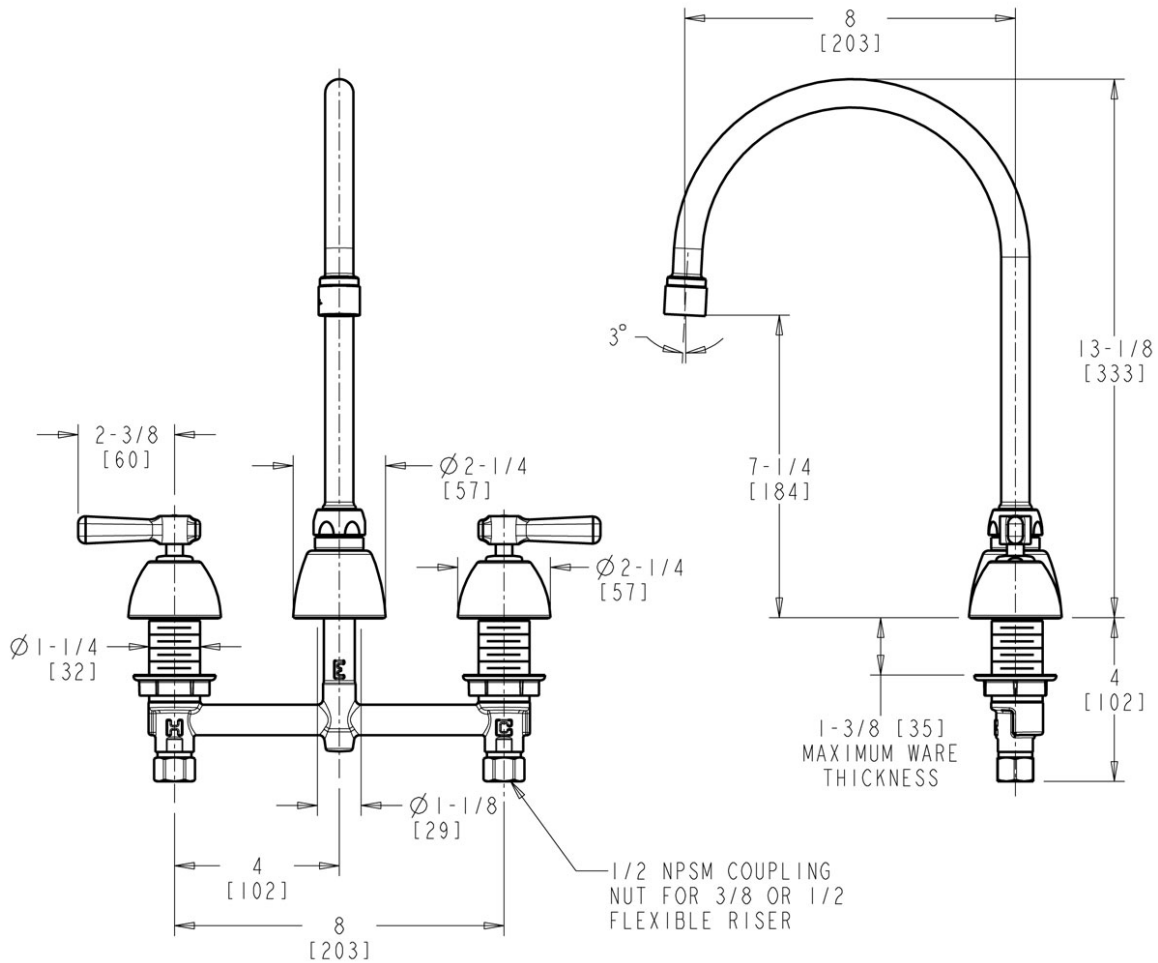


2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
371 F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com

Manual and Metering Faucets

Architect/Engineer Specification

Chicago Faucets No. 201-AGN8AE2805FAB, Deck Mounted 8" Fixed Centers Concealed Hot and Cold Water Sink Faucet, Chrome Plated solid brass construction. 8" Center to Center Rigid / Swing Gooseneck Spout. 0.5 GPM (1.9 L/min) Vandal Proof Non-Aerating Spray Outlet. 2-3/8" Metal Lever handle(s) with Eight Point Tapered Broach and Secured Blue and Red Buttons. Quatern™ rebuildable compression cartridge, opens and closes 90°, closes with water pressure, features square tapered stem. 1/2" NPSM Supply Inlets and Coupling Nut for 3/8" or 1/2" Flexible Riser. Mounting hardware included ECAST® construction with less than 0.25% lead content by weighted average. CALGreen Compliant. This product meets ADA ANSI/ICC A117.1 requirements and is tested and certified to industry standards: ASME A112.18.1/CSA B125.1, Certified to NSF/ANSI 61, Section 9 by CSA, California Health and Safety Code 116875 (AB1953-2006), Vermont Bill S.152, NSF/ANSI 372 Low Lead Content, and California Green Building Standards Code (CALGreen).



Operation and Maintenance

Installation should be in accordance with local plumbing codes. Flush all pipes thoroughly before installation. After installation, remove spout outlet or flow control and flush faucet thoroughly to clear any debris. Care should be taken when cleaning the product. Do not use abrasive cleaners, chemicals or solvents as they can result in surface damage. Use mild soap and warm water for cleaning and protecting the life of Chicago Faucet products. For specific operation and maintenance refer to the installation instructions and repair parts documents that are located at www.chicagofaucets.com.

Chicago Faucets, member of the Geberit Group, is the leading brand of commercial faucets and fittings in the United States, offering a complete range of products for schools, laboratories, hospitals, office buildings, food service, airports and sport facilities. Call 1.800.TECTRUE or 1.847.803.5000 Option 1 for installation or other technical assistance.



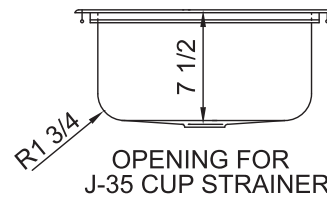
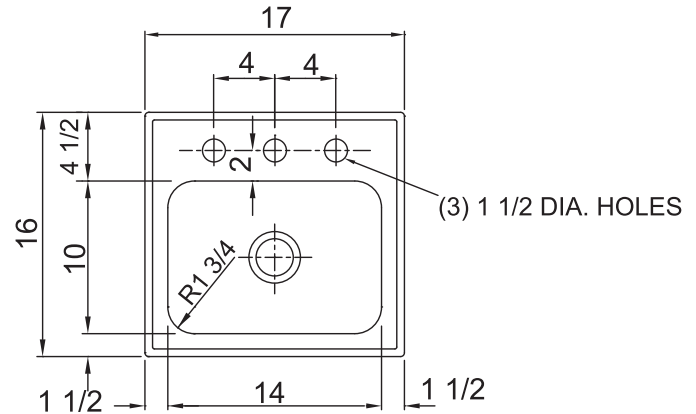
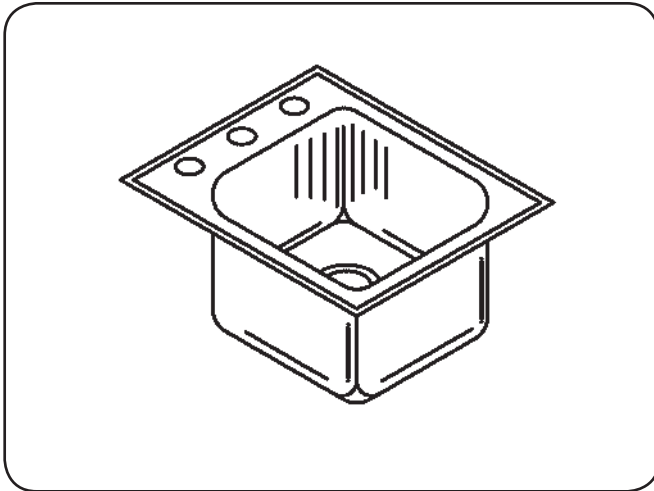
2100 South Clearwater Drive
Des Plaines, IL
P: 847/803-5000
372 F: 847/803-5454
Technical: 800/TEC-TRUE
www.chicagofaucets.com



SL-1617-A-GR

STYLIST GROUP LEDGE TYPE - SINGLE BOWL 18 GAUGE

SUBMITTAL DATA



SPECIFICATION

Seamless die-drawn construction of Type 304, 18-8 stainless steel. Interior and top surfaces polished to a non-porous Hand-Blended Just Finish with highlighted bowl rim. Fully coated underside insulated for sound and reduces condensation. Straight-sided compartment with radius corners provides greater capacity. Self-rimming top mount Grip-Rim Plus with stainless steel mounting channels. Conforms to ASME/ANSI A112.19.3M. Certified conformance with ASME A112.19.3/CSA B45.4, Canadian Standards (CSA), Uniform Plumbing Code (UPC) and International Plumbing Code (IPC). Drain punch 3-1/2" centered for Just J-35.

4.33
Gallon Capacity

Capacity Matters

Max ID sizing with straight sided bowl configuration (non tapered sides). Tight corner radius design.

TYPE 316 STAINLESS STEEL (Check if applicable)

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
SL-1617-A-GR	15-1/4	16-1/4

FAUCET PUNCHING - MUST BE SPECIFIED	
<input type="checkbox"/> (1) Hole Centered	
<input type="checkbox"/> (2) Holes on 4" centers	
<input type="checkbox"/> (3) Holes on 4 "centers(illustrated)	
<input type="checkbox"/> Alternate Punching: Faucet Model: _____	Punching Required:

APPROVED FOR MANUFACTURING

MODEL NO.: SL-1617-A-GR QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____



Most 18 gauge units are available in depths 4 1/2" to 6 1/2" . See ADA Specification sheets for your requirements.



JUST MFG. COMPANY CONTINUES TO MAKE QUALITY AND FUNCTIONALITY A MARK OF THE JUST PRODUCT LINE. TO DO SO REQUIRES THAT WE RESERVE THE RIGHT TO CHANGE PRODUCT INFORMATION WITHOUT NOTICE. DIMENSIONS MAY VARY AND ARE SUBJECT TO CHANGE WITHOUT NOTICE. NO RESPONSIBILITY IS ASSUMED FOR USE OF SUPERSEDED OR VOIDED DATA. FOR THE MOST CURRENT AND ACCURATE INFORMATION REGARDING THE COMPLETE LINE OF JUST SINKS, FAUCETS AND DRAINS, CLICK ON THE **SPEC LINE DRAWINGS** LINK ON OUR WEB SITE AT www.justmfg.com

JUST MANUFACTURING COMPANY 9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111

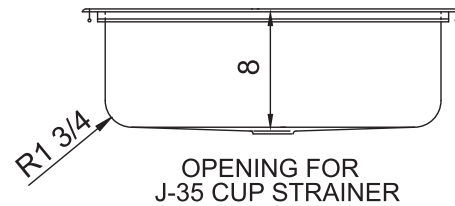
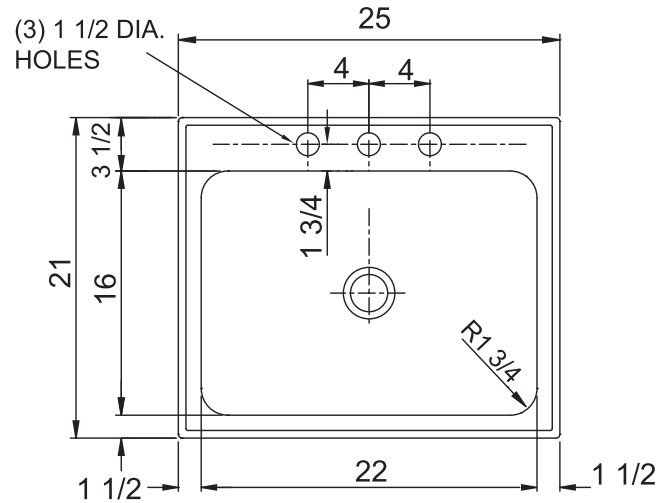
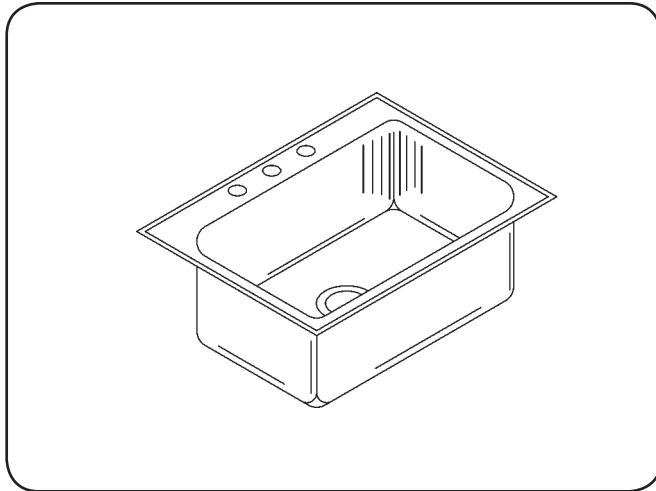
PH: 847-678-5150 FAX: 847-678-6817 E-MAIL: custserv@justmfg.com www.justmfg.com



SL-2125-A-GR

STYLIST GROUP
LEDGE TYPE - SINGLE BOWL
18 GAUGE

SUBMITTAL DATA



SPECIFICATION

Seamless die-drawn construction of Type 304, 18-8 stainless steel. Interior and top surfaces polished to a non-porous Hand-Blended Just Finish with highlighted bowl rim. Fully coated underside insulated for sound and reduces condensation. Straight-sided compartment with radius corners provides greater capacity. Self-rimming top mount Grip-Rim Plus with stainless steel mounting channels. Conforms to ASME/ANSI A112.19.3M. Certified conformance with ASME A112.19.3/CSA B45.4, Canadian Standards (CSA), Uniform Plumbing Code (UPC) and International Plumbing Code (IPC). Drain punch 3-1/2" centered for Just J-35.

11.89
Gallon Capacity

Capacity Matters

Max ID sizing with straight sided bowl configuration (non tapered sides). Tight corner radius design.

TYPE 316 STAINLESS STEEL (Check if applicable)

CUTOUT DIMENSIONS		
Model Number	Front-to-Back	Left-to-Right
SL-2125-A-GR	20-1/4	24-1/4

FAUCET PUNCHING - MUST BE SPECIFIED	
<input type="checkbox"/> (1) Hole Centered	
<input type="checkbox"/> (2) Holes on 4" centers	
<input type="checkbox"/> (3) Holes on 4" centers (illustrated)	
<input type="checkbox"/> Alternate Punching: Faucet Model:	Punching Required:



AVAILABLE
ADA COMPLIANT

Most 18 gauge units are available in depths 4 1/2" to 6 1/2". See ADA Specification sheets for your requirements.



JUST MFG. COMPANY CONTINUES TO MAKE QUALITY AND FUNCTIONALITY A MARK OF THE JUST PRODUCT LINE. TO DO SO REQUIRES THAT WE RESERVE THE RIGHT TO CHANGE PRODUCT INFORMATION WITHOUT NOTICE. DIMENSIONS MAY VARY AND ARE SUBJECT TO CHANGE WITHOUT NOTICE. NO RESPONSIBILITY IS ASSUMED FOR USE OF SUPERSEDED OR VOIDED DATA. FOR THE MOST CURRENT AND ACCURATE INFORMATION REGARDING THE COMPLETE LINE OF JUST SINKS, FAUCETS AND DRAINS, CLICK ON THE **SPEC LINE DRAWINGS** LINK ON OUR WEB SITE AT www.justmfg.com

APPROVED FOR MANUFACTURING

MODEL NO.: SL-2125-A-GR QTY: _____

JOB NAME: _____

TAG/ITEM: _____

CUSTOMER: _____

SIGNATURE: _____

JUST MANUFACTURING COMPANY 9233 KING STREET . FRANKLIN PARK . ILLINOIS . 60131-2111
 PH: 847-678-5150 . FAX: 847-678-6817 . E-MAIL: custserv@justmfg.com . www.justmfg.com

L

SMITH® JAY R. SMITH MFG. CO.®
 MEMBER OF MORRIS GROUP INTERNATIONAL
 POST OFFICE BOX 3237
 MONTGOMERY, ALABAMA 36109-0237 (USA)
 TEL: 334-277-8520 FAX: 888-377-7818 www.jrsmith.com



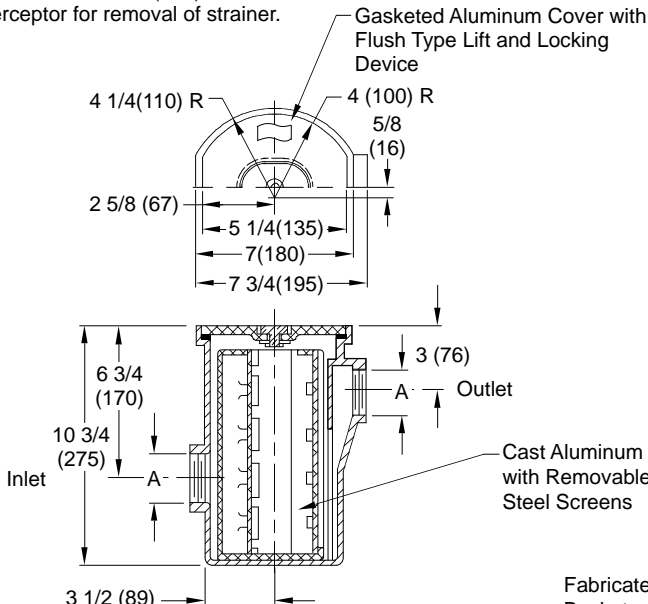
MEMBER OF:

LOCATION

SOLIDS INTERCEPTORS

FLUSH WITH FLOOR OR ON THE FLOOR TYPES

NOTE: Allow 9 1/4" (235) above interceptor for removal of strainer.



A (Pipe Size) = 0150 (38) or 02 (50)

□ Fig. 8710T

REGULARLY FURNISHED:

White Duco Coated Cast Iron Body and Aluminum Gasketed Cover and Sediment Strainer with Removable Stainless Steel Screens.

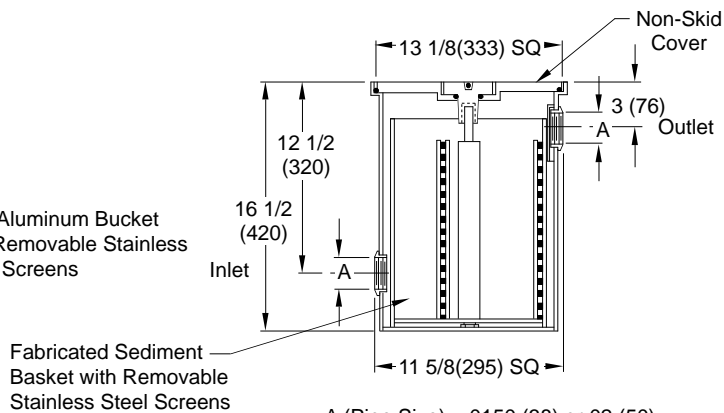
OPTIONAL MATERIALS:

- Acid Resistant Coating Inside - ARI
- Acid Resistant Coating Outside - ARO
- Acid Resistant Coating Inside and Outside - ARIO
- All ABS (Specify Fig. 8710-ABS)
- All Aluminum Body -AA

NOTE: Dimensions shown in parentheses are in millimeters.

NOTE: Allow 14 1/2" (370) above interceptor for removal of strainer.

NOTE: It is the responsibility of the installer to check all parts (internal and external) to verify they are in their proper operating order and location.



A (Pipe Size) = 0150 (38) or 02 (50)

□ Fig. 8715T

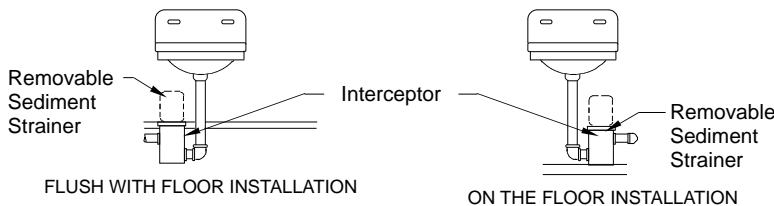
REGULARLY FURNISHED:

Fabricated Steel Body with White Duco Finish Inside and Outside, Sediment Strainer with Removable Stainless Steel Screens and Cast Iron Cover.

OPTIONAL MATERIALS:

- Acid Resistant Coating Inside - ARI
- Acid Resistant Coating Outside - ARO
- Acid Resistant Coating Inside and Outside - ARIO

TYPICAL INSTALLATIONS



DRAWING NUMBER
S8710

SIZE
A

SCALE:
NONE

DATE:
4-24-85

APPROVED BY:
JM

CHECKED BY:
KG

DRAWN BY:
PJ

8710, 8715

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
L K J H	11/6/20 05/14/04 7-10-03 7-16-02	Remove Function, Rev. Reg. Furn. 8715 Added to Optional Materials Changed Optional Materials Changed Regularly Furnished	TBW JJ RN RN	AM AM CL CL			8710, 8715



Thermostatic Water Controller Model 801 High-Low Water Mixer Unit No. 86208



Master water mixing valve shall be of the thermostatic type with liquid-filled thermal motor. It shall have bronze body construction with replaceable corrosion-resistant components. Valve construction shall employ a sliding piston control mechanism. Sliding piston and liner shall be of stainless steel material. Valve shall come equipped with union end stop and check inlets with removable stainless steel strainers. Valve shall control temperature from a low flow of 1 GPM* up to a maximum flow rate for a given pressure differential. Valve shall provide protection against hot or cold supply line failure and thermostat failure.

Unit includes a dial thermometer and shut-off valve on tempered water outlet. Unit is assembled and tested with necessary fittings and nipples.

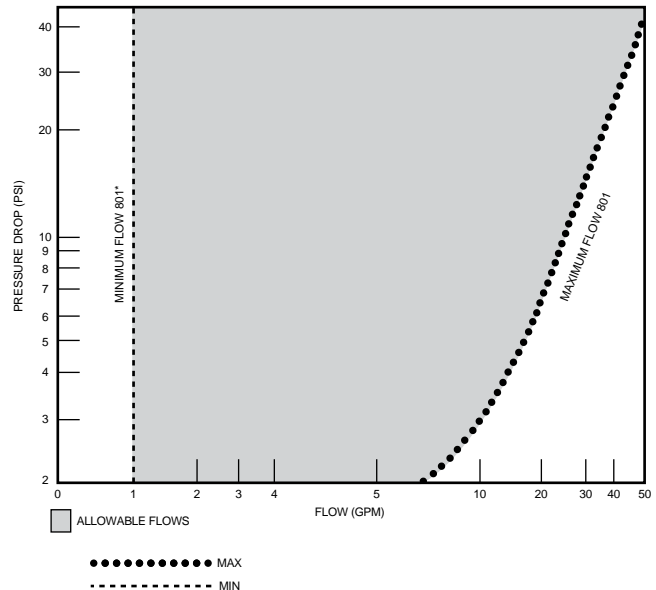
- FINISH:**
- Bronze
 - Chrome
 - Nickel Plated
 - Other

- | | | |
|--------------------|------------------|--------------------------|
| TEMP. RANGE | SET POINT | |
| 70° to 100°F | 80°F | <input type="checkbox"/> |
| 90° to 120°F | 110°F | <input type="checkbox"/> |
| 110° to 140°F | 130°F | <input type="checkbox"/> |

Special _____

Optional Test Connection
Including garden hose connection, shut-off and thermometer.

- Bronze
- Chrome



CAPACITIES - MODEL 801

Pressure Drop PSI	5	10	20	30	45	60	80
Valve Number	Capacity						
801-GPM	17	25	34	40	50	57	65
801-LPM	64	94	128	151	189	210	246

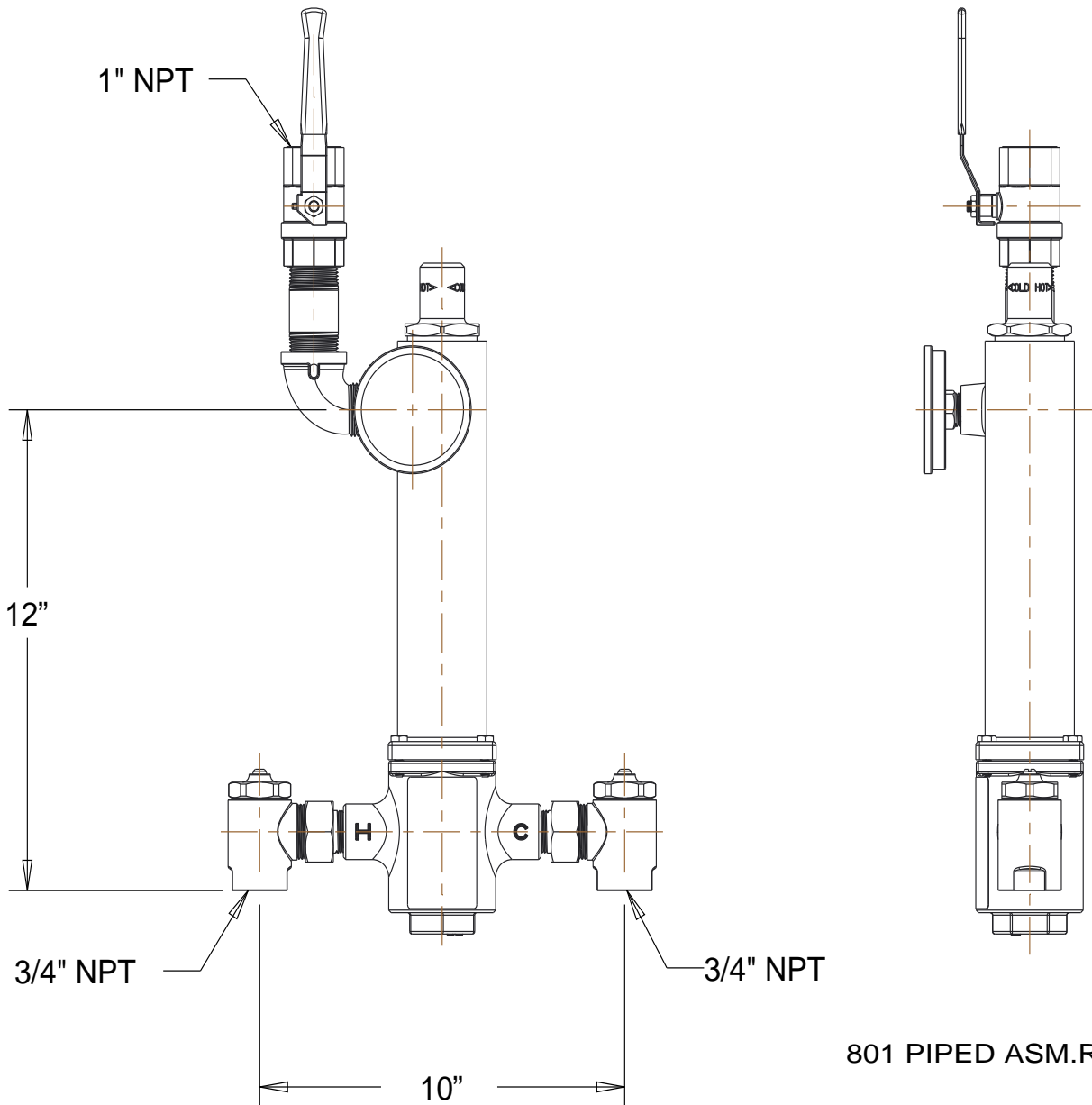
*1/2 gpm when properly installed in recirculated system.



MANUFACTURING CO., INC.

5330 East 25th Street
Indianapolis, Indiana 46218
Phone (317) 261-1212
Fax (317) 261-1208

Design and specification subject to change without notice.
Please refer to www.temperedwater.com to ensure most current data sheet and other design solutions



801 PIPED ASM.RB 90-120



MANUFACTURING CO., INC.

5330 East 25th Street
Indianapolis, Indiana 46218
Phone (317) 261-1212
Fax (317) 261-1208

Design and specification subject to change without notice.
Please refer to www.temperedwater.com to ensure
most current data sheet and other design solutions

CODE NUMBER

3250424

DESCRIPTION

0.5 gpf, Polished Chrome Finish, Fixture Connection Top Spud, Single Flush, Battery, G2 Exposed Sensor Urinal Flushometer.

DETAILS

- Flush Volume: 0.5 gpf (1.9 Lpf)
- Finish: Polished Chrome (CP)
- Power Type: Battery
- Battery Life: 6 years
- Valve: Diaphragm
- Valve Body Material: Semi-red Brass
- Fixture Type: Urinal
- Fixture Connection: Top Spud
- Rough-In Dimension: 11 ½" (292mm)
- Spud Coupling: ¾" (19mm)
- Supply Pipe: ¾" (19mm)

FEATURES

- Sweat Solder Adapter with Cover Tube and Cast Set Screw Wall Flange
- "Low Battery" Flashing LED
- Flex Tube Diaphragm designed for improved life and reduced maintenance
- Engineered Metal Cover with replaceable Lens Window
- Four (4) Size AA alkaline Batteries included
- Fixed Metering Bypass and No External Volume Adjustment to Ensure Water Conservation
- Handle Packing, Main Seat, Stop Seat and Vacuum Breaker Molded from PERMEX® Rubber Compound for Chloramine resistance
- Courtesy Flush® Override Button
- 3/4" I.P.S. Screwdriver Bak-Chek® Angle Stop with Vandal Resistant Stop Cap
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- PERMEX® Synthetic Rubber Diaphragm with Dual Filtered Fixed Bypass

VIDEOS

- [PVD Special Finishes](#)



COMPLIANCES & CERTIFICATIONS



(ADA Compliant, BAA Compliant, BREEAM Materials Credit, BREEAM Water Credit, Carbon Neutral, cUPC Certified, cUPC Green Certified, EPD, Green Globes Materials & Resources Credit, Green Globes Water Credit, HPD, LEED Materials & Resources EPD Credit, LEED Materials & Resources HPD Credit, LEED V4 Water Efficiency Credit, Satisfies LEED Credits, WaterSense Listed)

RECOMMENDED SPECIFICATION

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

ELECTRICAL SPECIFICATIONS

- Battery Life: 6 years

VALVE OPERATING PRESSURE (FLOWING)

15-80 PSI (103-552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

DOWNLOADS

- [Optima Plus Valve Installation Instructions](#)
- [G2 Repair and Maintenance Guide](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [Sloan Optima Plus Repair and Maintenance Guide](#)
- [Flushometer Pressure gauges](#)
- [Additional Downloads](#)

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com

NOTES

All information contained within this document subject to change without notice.

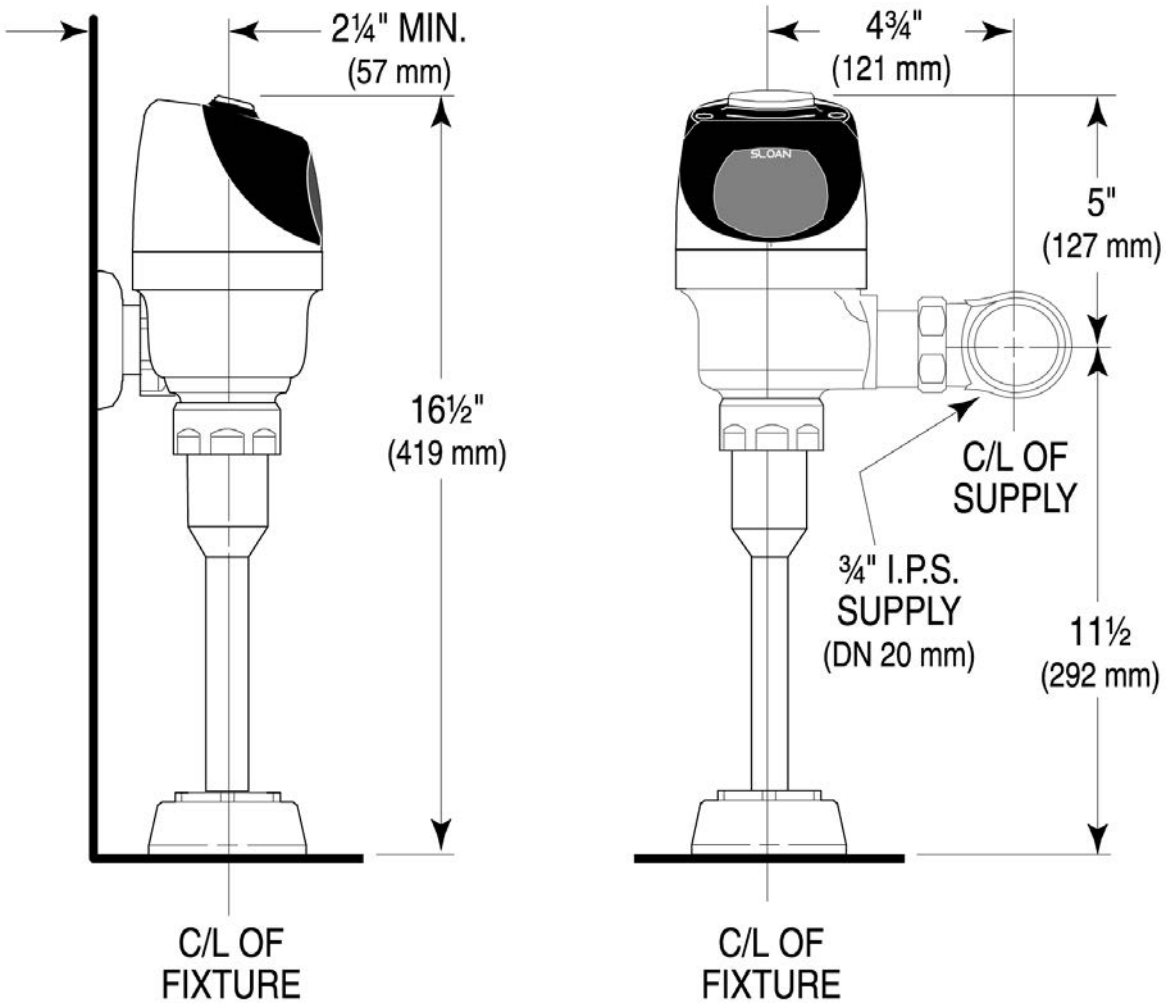
Looking for other variations of the G2 8186 product? [View the general spec sheet with all options.](#)

[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

WaterSense compliant when used with a WaterSense compliant fixture

ROUGH-IN



Sloan 10500 Seymour Ave, Franklin Park, IL 60131
Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com



Washbrook® FloWise® Universal Urinal

VITREOUS CHINA WITH EVERCLEAN®

BARRIER FREE

Washbrook® FloWise® Universal Urinal with EverClean®

- Vitreous china
- **Permanent EverClean® surface inhibits the growth of stain and odor causing bacteria, mold and mildew on the surface**
- Ultra High Efficiency, Low Consumption. Operates in the range of **0.125gpf to 1.0gpf** (0.5 Lpf to 3.8 Lpf)
- Flushing rim
- Elongated 14" rim from finished wall
- Washout flush action
- Extended sides for privacy
- 3/4" inlet spud
- Outlet connection threaded 2" inside (NPTF)
- 2 wall hangers
- Fixture only
- Strainer included
- Meets ASME flush requirements at 0.125 to 1.0 gpf

6590.001EC Universal Top spud with EverClean

Nominal Dimensions:

360 x 480 x 664mm
(14-1/8" x 18-7/8" x 26-1/8")

Recommended working pressure – between
20 psi at valve when flushing and 80 psi static

Compliance Certifications -

Meets or Exceeds the Following Specifications:

- ASME A112.19.2-2008/CSA B45.1-08 for Vitreous China Fixtures



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

To Be Specified:

- Color: White
- Flush Valve:
 - 1.0 gpf Flush Valve: Sensor-Operated:
 - American Standard Selectronic® #6063.101.002 DC Power (Top Spud)
 - 1.0 gpf Flush Valve: Manual-Operated:
 - American Standard # 6045.101.002
 - 0.5 gpf Flush Valve: Sensor-Operated:
 - American Standard Selectronic® #6063.051.002 DC Power (Top Spud)
 - 0.5 gpf Flush Valve: Manual-Operated:
 - American Standard #6045.051.002
 - 0.125 gpf Flush Valve: Sensor-Operated:
 - American Standard Selectronic® #6063.013.002 DC Power (Top Spud)
 - 0.125 gpf Flush Valve: Manual-Operated:
 - American Standard #6045.013.002



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES
AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND
FACILITIES - CHECK LOCAL CODES.

- When installed so top of rim is 432mm (17") MAXIMUM from finished floor.



When used with
0.125 gpf
urinal flush valve



When used with
0.125 or 0.5 gpf
urinal flush valve

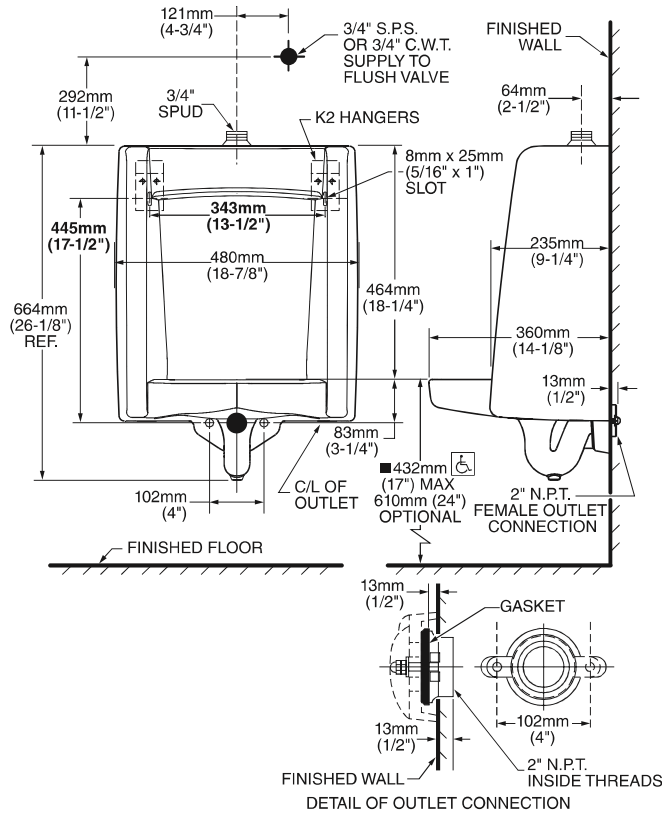


ADA
COMPLIANT



EVERCLEAN

6590.001EC TOP SPUD



ADA MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES - CHECK LOCAL CODES.
 • When installed so top of rim is 432mm (17") MAXIMUM from finished floor.

NOTES:
 FLUSH VALVE NOT INCLUDED AND MUST BE ORDERED SEPARATELY.
 PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORTS.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

CODE NUMBER

3790017

DESCRIPTION

1.6 gpf, Dual-Filtered Fixed Bypass Diaphragm, Polished Chrome Finish, Single Flush, Electrical Override, Battery, Sloan® Exposed Sensor Water Closet Flushometer.

DETAILS

- Flush Volume: 1.6 gpf (6.0 Lpf)
- Finish: Polished Chrome (CP)
- Power Type: Battery
- Battery Life: 6 years
- Valve: Diaphragm
- Bypass: Dual-Filtered Fixed Bypass Diaphragm (DFB)
- Valve Body Material: Semi-red Brass
- Fixture Type: Water Closet
- Fixture Connection: Top
- Rough-In Dimension: 11 ½" (292mm)
- Spud Coupling: 1 ½" (38mm)
- Supply Pipe: 1" (25mm)
- Override: Electrical (OR)

FEATURES

- 1" I.P.S. Screwdriver Bak-Chek® Angle Stop with Vandal Resistant Stop Cap
- Vacuum Breaker with Flush Connection
- Spud Coupling and Spud Flange for 1½" Top Spud
- Sweat Solder Adapter with Cover Tube and Cast Wall Flange
- User friendly three (3) second Flush Delay
- No External Volume Adjustment to Ensure Water Conservation
- Stop Seat and Vacuum Breaker Molded from PERMEX® Rubber Compound for Chloramine resistance
- Infrared Sensor with Multiple-focused, Lobular Sensing Fields for high and low target detection
- Engineered Plastic Cover with replaceable Lens Window
- Courtesy Flush® Override Button
- Four (4) Size AA Batteries included
- High Chloramine Resistant PERMEX® Synthetic Rubber Diaphragm with Linear Filtered Bypass and Vortex Cleansing Action™



COMPLIANCES & CERTIFICATIONS



(ADA Compliant, cUPC Certified, BAA Compliant)

RECOMMENDED SPECIFICATION

Valve Body, Cover, Tailpiece and Control Stop shall be in conformance with ASTM Alloy Classification for Semi- Red Brass. Valve shall be in compliance with the applicable sections of ASSE 1037 and ANSI/ASME 112.19.2.

ELECTRICAL SPECIFICATIONS

- Battery Life: 6 years

VALVE OPERATING PRESSURE (FLOWING)

15–80 PSI (103–552 kPa). Specific fixtures may require greater minimum flowing pressure - consult manufacturer requirements.

DOWNLOADS

- [G2 Optima Plus Installation Instructions](#)
- [Control Stop Repair and Maintenance Guide](#)
- [Flush Connections Flanges Repair and Maintenance Guide](#)
- [Tail Piece Repair and Maintenance Guide](#)
- [Sloan Optima Plus Repair and Maintenance Guide](#)
- [Additional Downloads](#)

NOTES

All information contained within this document subject to change without notice.

Looking for other variations of the SLOAN 8111 product? [View the general spec sheet with all options.](#)

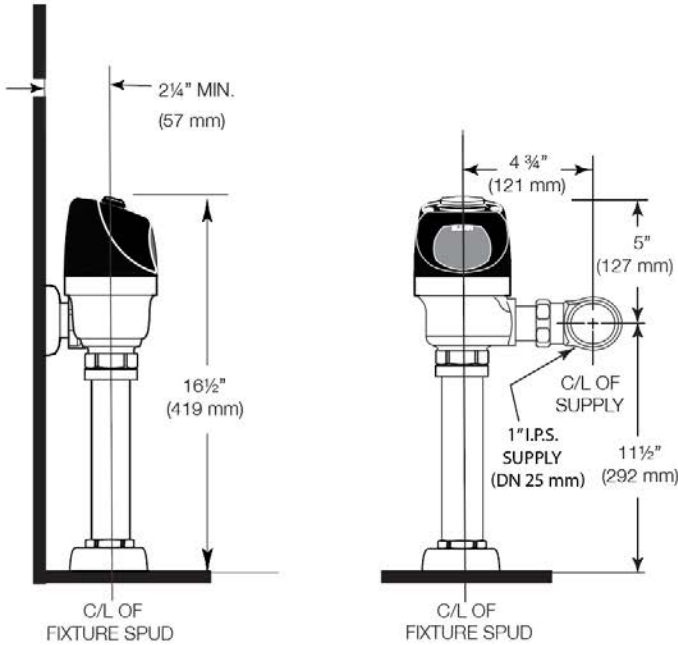
[Find a compatible urinal](#) for this flushometer.

[Find a compatible water closet](#) for this flushometer.

Sloan 10500 Seymour Ave, Franklin Park, IL 60131

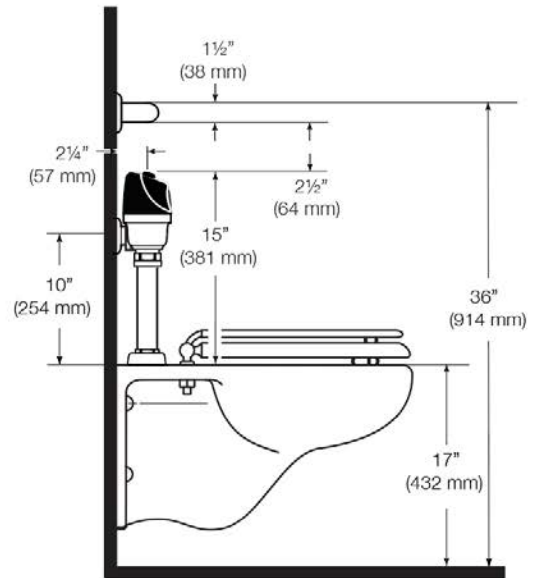
Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com

ROUGH-IN



ALTERNATE ADA INSTALLATION

Lower water supply rough-in to 10" (254 mm) and mount grab bar at the 36" (914 mm) maximum allowed height (top of grab bar at 36").



WHEN INSTALLING IN A HANDICAP STALL:

Per the ADA Guidelines (section 604.9.4) it is recommended that the grab bars be split or shifted to the wide side of the stall. If grab bars must be present over the valve, use the alternate ADA installation as shown to the right.

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Phone: 800.982.5839 • Fax: 800.447.8329 • sloan.com



Afwall® Millennium™ FloWise® Elongated Flushometer Toilet

VITREOUS CHINA LESS EVERCLEAN®

BARRIER FREE

Afwall® Millennium™ FloWise® Elongated Flushometer Toilet LESS EverClean®

- Wall-mounted flushometer valve toilet
- Vitreous china
- Conventional glaze
- High Efficiency, Low Consumption. Operates in the range of 1.1 gpf to 1.6 gpf (4.2 Lpf to 6.0 Lpf)
- Meets definition of HET (High Efficiency Toilet) when used with a high efficiency flush valve (1.1 gpf - 1.6 gpf or 1.28/1.1 gpf dual flush)
- Maximum Performance (MaP) score of 1,000 grams at 1.1 gpf - 1.6 gpf
- Condensation channel
- Concealed trapway design
- Elongated bowl
- Powerful direct-fed siphon jet action
- 1-1/2" inlet spud
- Fully-glazed 2-1/8" trapway
- 10" x 12" water surface area
- Tested to support static weight load of 1,000 lbs. (454 kg)

2257.101 Elongated bowl only, top spud

2633.101 Elongated bowl only, top spud with slotted rim for bedpan holding

2634.101 Elongated bowl only, back spud

System MaP* Score:

- 1,000 grams of miso @ 1.1 gpf to 1.6 gpf when used with an American Standard flush valve

* Maximum Performance (MaP) testing performed by IAPMO R&T Lab. MaP Report conducted by Veritec Consulting, Inc. and Koeller and Company.

Component Parts:

047007-0070A Inlet Spud (furnished with bowl)

Nominal Dimensions:

660 x 356 x 381mm
(26" x 14" x 15")

Recommended working pressure—between 25 psi at valve when flushing and 80 psi static

Fixture only, less seat, bolt caps, and flushometer valve

Compliance Certifications -

Meets or Exceeds the Following Specifications:

- ASME A112.19.2/CSA B45.1 for Vitreous China Fixtures



SEE REVERSE FOR ROUGHING-IN DIMENSIONS

To Be Specified:

Color: White

Seat:

American Standard #5901.100 Heavy duty open front less cover

American Standard #5905.100 Extra heavy duty open front less cover

Flushometer Valve:

1.6 gpf:

Sensor-Operated: American Standard Selectronic® DC Power #6065.161.002 (Top Spud)

AC Power #6067.161.002 (Top Spud)

Manual: American Standard #6047.161.002 (Top Spud)

1.28 gpf:

Sensor-Operated: American Standard Selectronic® DC Power #6065.121.002 (Top Spud)

AC Power #6067.121.002 (Top Spud)

Manual: American Standard #6047.121.002 (Top Spud)

1.6 / 1.1 gpf Dual Flush:

Sensor-Operated: American Standard Selectronic® DC Power #6065.761.002 (Top Spud)

AC Power #6067.761.002 (Top Spud)

1.28 / 1.1 gpf Dual Flush:

Sensor-Operated: American Standard Selectronic® DC Power #6065.721.002 (Top Spud)

AC Power #6067.721.002 (Top Spud)



MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USABLE BUILDING FACILITIES - CHECK LOCAL CODES.

- When installed so top of seat is 432 to 483mm (17" to 19") from the finished floor.



ENVIRONMENTAL
PRODUCT
DECLARATION



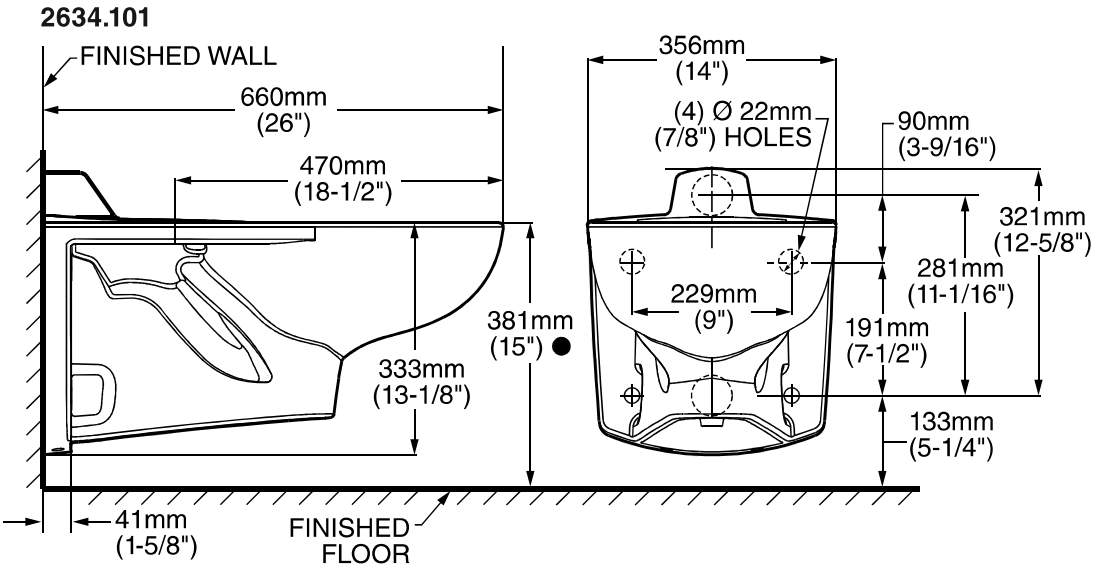
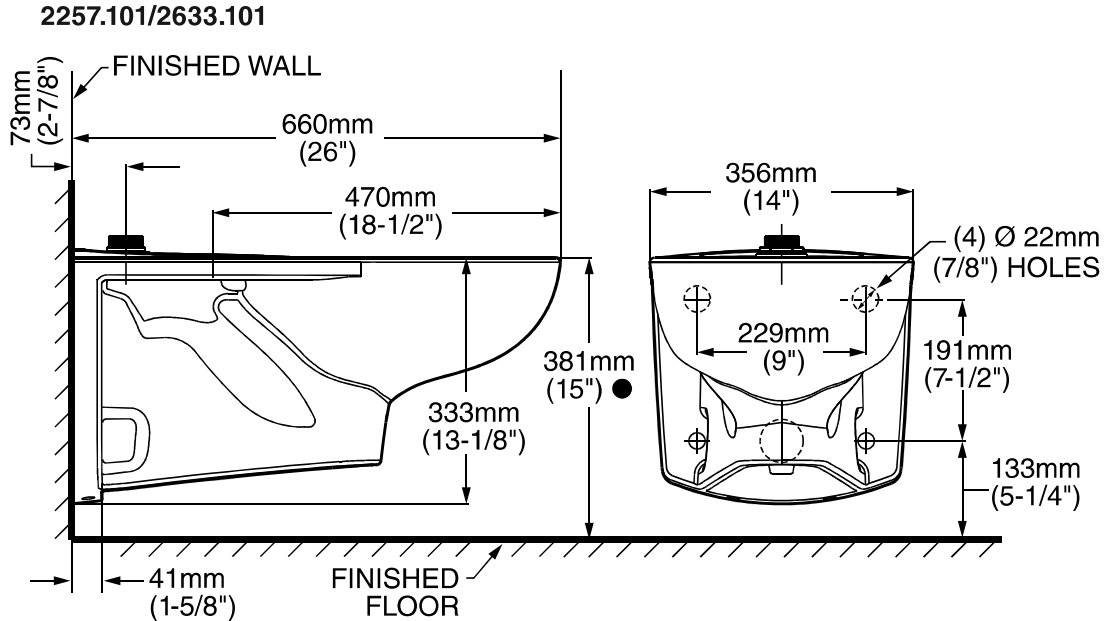
When used with
1.1 or 1.28 gpf
toilet flush valves



ADA
COMPLIANT



WATER
EFFICIENT



NOTES:

● Toilet designed to meet ADA accessibility standards when top of seat height set at 432 to 483mm (17" to 19") from finished floor.

PRODUCT 2257 SHOWN, 2366 SAME EXCEPT WITH SLOTTED RIM FOR BED PAN HOLDING.

WASTE OUTLET SEAL RING MUST BE NEOPRENE OR GRAPHITE-FELT (WAX RING NOT RECOMMENDED).

SUGGESTED 2mm (1/16) CLEARANCE BETWEEN FACE OF WALL AND BACK OF BOWL.

TO COMPLY WITH AREA CODE GOVERNING THE HEIGHT OF VACUUM BREAKER ON THE FLUSHOMETER VALVE, THE PLUMBER MUST VERIFY DIMENSIONS SHOWN FOR SUPPLY ROUGHING.

FLUSHOMETER VALVE NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY.

CARRIER FITTING AS REQUIRED TO BE FURNISHED BY OTHERS.

PROVIDE SUITABLE REINFORCEMENT FOR ALL WALL SUPPORT.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages

**MONROE COUNTY PUBLIC LIBRARY BOARD OF TRUSTEES
RESOLUTION DECLARING CERTAIN PROPERTY SURPLUS**

WHEREAS, the equipment listed below is no longer needed by the library, and

WHEREAS, the estimated value of the item(s) listed below is less than\$1,000 and the library has the authority to sell, transfer, demolish, or junk the items under IC 5-22-22-6 Public or private sale or transfer without advertising or IC 5-22-22-8 Worthless property,

NOW, THEREFORE, BE IT RESOLVED that the Board of Trustees of Monroe County Public Library declares the following item(s) surplus and authorizes disposition of the items.

Local Tag	Description	Serial #	Year
	10 boxes of 12 in x 12 in ciling tiles (480 tiles total)		
402213	PRINTER/3-D	PEAGASUS	2016

ADOPTED THIS 17th DAY OF MARCH, 2021

AYE

NAY

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Monroe County Public Library Media Relations Policy

(Note: this replaces the Library [Policy on Photography, Videotaping, and Use of Other Recording Devices](#) and [Social Media Policy](#))

Library Spokesperson

In order to provide the most current and consistent information about the Library, all contact with media will be carried out through the Library Director, Associate Director, or Communications & Marketing Manager, although at times these designees may refer the media to specific staff members. All inquiries from the media should initially be sent to the Communications & Marketing Manager. The Board President is the spokesperson for the Library Board of Trustees.

Inquiries related to the underlying principles of a policy that are open to interpretation from a political, constitutional, and/or legal perspective should be referred to the Director. All inquiries regarding the Library budget should be referred to the Director and/or Financial Officer.

When serving as spokesperson, employees who represent the Library should avoid speculation on any topic and refrain from offering personal opinions about Library policies or programs, even when asked to do so by a reporter.

Individual and Commercial Photography and Recordings

The Library's primary mission is to provide services to residents of Monroe County. Any photography or recording (defined as both video and audio recording) may not interfere with the provision of these services.

Individuals photographing or recording on Library premises have the sole responsibility of obtaining the necessary releases and permissions from those involved (minors require the permission of the minor's legal guardian). The Library undertakes no responsibility for obtaining these releases.

Individuals are subject to the Library's Behavioral Rules Policy and may not disturb the normal operations of the Library. Staff may terminate any photography or recording session that appears to compromise public safety or security.

The Library does not permit commercial photography or filming. Any exception requires the express advance written permission from the Library Director, Associate Director, or Communications & Marketing Manager.

Community organizations holding scheduled events or meetings in Library spaces may arrange for their own commercial photography or recording of their event. Such commercial photography and recording is restricted to the space reserved by the group, and the group is responsible for any necessary releases and permissions as noted above.

Library Representative Photography and Recordings

The Library reserves the right to document its services and the public's use of the Library. Official representatives of the Library may photograph or record (defined as both video and audio recording) within the Library and at Library-related events and activities. These photographs and recordings may be copied, displayed, telecast, and/or published (including on the Library's website and social media) to promote and inform the public about the Library.

This extends to Friends of the Library events and Library booths and/or programs in the community.

Public Social Media Rights and Responsibilities

Social media is defined here as websites and applications that enable users to create and share content or to participate in social networking. This includes, but is not limited to, Facebook, Twitter, Instagram, YouTube, LinkedIn, Meetup, SoundCloud, BuzzFeed, NextDoor, and Flickr. The Library makes use of these platforms to communicate with and be easily accessible to the public.

All official Library-represented social media platforms will be selected, created, and moderated by the Communications & Marketing unit, or those specifically designated by that unit.

The Library reserves the right to remove any content (posts, comments, tags, and/or images) that is deemed, in its sole view, to be inappropriate in nature. This includes content that contains:

- Abusive, harassing, or threatening language
- Illegal content, including copyrighted, trademarked, or plagiarized material
- Private or personal information, including phone numbers and addresses, or requests for personal information

- Unrelated commercial, advertising, political, or religious messages, including spam
- Solicitation of funds

The Library also reserves the right to ban or block users who post such content.

Public user posts may be shared by the Library. Users will follow the guidelines of individual social media platforms, and be moderated by those individual platforms. The Library is not responsible for, nor does it endorse, the content of its followers.

Proposed March 17, 2021

Current Policy as of March 17, 2021

[Monroe County Public Library Policy on Photography, Videotaping, and Use of Other Recording Devices](#)

The Library's primary mission is to provide services to residents of Monroe County. Photography, videotaping, or use of other recording devices may not interfere with the provision of these services. Staff will terminate any photography, videotaping, or recording session that appears to compromise public safety or security.

Individual Photography/Videotaping

Persons photographing, videotaping, or recording on Library premises have the sole responsibility for obtaining the necessary releases and permissions from persons who are to be photographed, videotaped, or recorded. Taking photographs or videotaping of a minor requires the permission of the minor's parent or guardian. The Library undertakes no responsibility for obtaining these releases.

Commercial Photography/Videotaping

The Library does not permit commercial photography or filming. Any exception requires the express written permission from the Library Director or the director's designee.

Community organizations holding scheduled events or meetings in the Library auditorium and/or Library meeting rooms may arrange for their own commercial photography or videotaping/recording of their event. Such commercial photography and videotaping is restricted to the space reserved by the group, and the group is responsible for any necessary releases and permissions.

Library Staff Photography/Videotaping

The Library reserves the right to document its services and the public's use of the Library. Official representatives of the Library may take photographs, videotape, or use other recording devices within the Library and at Library-related events and activities for Library purposes. These photographs and video may be copied, displayed, published (including on the Library's website), and telecast for such purposes as promotion, publicity, and news to inform the public about the Library. All such photography/videotaping will be in accordance with Library procedures.

This policy extends to photographs and filming by Library staff at Friends of the Library events and at Library booths and programs at public events in the community.

See also: [MCPL Behavioral Rules](#)

Approved by the Library Board of Trustees July 17, 2019

Updated July 19, 2019

Current policy as of March 17, 2021

[Monroe County Public Library Social Media Policy](#)

Purpose

This policy governs the Library's social media use, defined here as websites and applications that enable users to create and share content or to participate in social networking. This includes, but is not limited to, Facebook, Twitter, Instagram, YouTube, Meetup, SoundCloud, BuzzFeed, and Flickr. The Library makes use of these platforms to communicate with and be easily accessible to the public, providing information on topics related to the Library's mission, collections, programs, and services.

Rights and Responsibilities of the Library

All official Library-represented social media platforms will be selected, created, and moderated by the Communications and Marketing unit, or those specifically designated by that unit.

User comments and posts will be moderated for content and relevancy. The Library reserves the right to remove any content (comments, tags, and/or images) at its discretion.

User Responsibilities and Use Restrictions

Users will follow the guidelines of individual social media platforms, and be moderated by those individual platforms. The Library is not responsible for, nor does it endorse, the content of its followers.

Public user posts may be shared by the Library.

Related Library policies include:

[Internet and Computer Use Policy](#)

[Privacy Policy Regarding Web and Email Communications](#)

Approved by the Library Board of Trustees July 17, 2019

Updated July 19, 2019