

# MACC Capital Project Prioritization Model

Capital Investment Workgroup

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# MACC's Prioritization

## 10 Steps

<b>Steps</b>	<b>Factor</b>	<b>Factor Weight</b>	<b>Weight of Factor Weight</b>
1	Project Type	<p><b>Factor Weights</b> are determined by different calculations for each step. Once <b>Factor Weights</b> are determined, they are multiplied by the assigned <b>weight of factor weight</b>. These numbers are summed in Step 8.</p>	10%
2	Project Phase		25%
3	Building/Campus Age		5%
4	Weight for Facilities		10%
5	Weight for Current Inventory Needs		20%
6	Weight for Future Inventory Needs		20%
7	5-Year Funding History		10%
8	Multiply each <b>Factor Weight</b> by its Assigned <b>Weight of Factor Weights</b> and Sum the <b>Weighted Weights</b> .		
9	Weight for Colleges Priority		
10	<b>Aggregate Project Weight</b>		

# Weight for *TYPE*

## Step 1

<i>Type</i>	<i>Weight</i>	<i>Factor Weight</i>	<i>Weighted Weight</i>
Renovation	4	10%	0.4
Utilities	3		0.3
New Construction	2		0.2
Site Improvements	1		0.1

Example:

<b>College</b>	<b>Project</b>	<b>Type</b>	<b>Weight</b>	<b>Factor Weight</b>	<b>Weighted Weight</b>
Anne Arundel Community College	Careers Building Renovation	Renovation	4	10%	0.4
Prince George's Community College	Center for Health Studies	Construction	2	10%	0.2

# Weight for *PROJECT PHASE*

## Step 2

<i>Project Phase</i>	<i>Weight</i>	<i>Factor Weight</i>	<i>Weighted Weight</i>
Life Safety	6	25%	1.5
Completion	5		1.25
Construction	4		1
Design+	3		0.75
Design	2		0.5
Acquisition	1		0.25

<b>College</b>	<b>Project</b>	<b>Phase</b>	<b>Weight</b>	<b>Factor Weight</b>	<b>Weighted Weight</b>
Anne Arundel Community College	Careers Building Renovation	Completion	5	25%	1.25
Prince George's Community College	Center for Health Studies	Construction	4	25%	1

# Weight for ***BUILDING/CAMPUS AGE***

## Step 3

<i>Description</i>	<i>Example</i>	<i>Factor Weight</i>	<i>Weighted Weight</i>
Building age in years for renovations or average age of campus/college for new construction, utilities, or site improvement.	20	5%	
Divide age by <b>10</b> to adjust factor weight	2.0		0.1

<b>College</b>	<b>Project</b>	<b>Building/ Campus Age</b>	<b>Divide by 10</b>	<b>Factor Weight</b>	<b>Weighted Weight</b>
AACC	Careers Building Renovation	34	3	5%	<b>0.17</b>
PGOC	Center for Health Studies	40	4	5%	<b>0.2</b>

# Weight for *FACILITIES*

## Step 4

<i>Type of Facility</i>	<i>Weight</i>	<i>Factor Weight</i>
Academic/Instructional Support	3	10%
Student Support	2	
Institutional Support	1	

The MACC committee refined the concept of facilities to address all types of support within one facility. Here's an example of how facilities have multiple uses instead of one overarching type of facility. In Step 4, each type of support is calculated and prioritized before it is weighted. Academic support receives the highest weight.

<i>Example</i>	NASF	% NASF	Weight	Multiplied By Weight
Academic Support	4,143	13.22%	3	0.40
Student Support	27,187	86.78%	2	1.74
Institutional Support	0	0.00%	1	0.00
<b>Total</b>	<b>31,330</b>	<b>100%</b>		<b>2.13</b>

# Weight for CURRENT INVENTORY NEEDS

## Step 5

Type of Facility	NASF of Current Facilities Inventory	NASF of Facilities (Surplus)/ Deficit	Divide Surplus/ Deficit by Facilities Inventory	Weight	Multiply	% of Total Project NASF	Weight by Use of Current Inventory	Factor Weight
Academic/Instructional Support	The Facilities Inventory is broken down by the different types of facilities. Each community college's current NASF facilities inventory is grouped by the type of space	The Facilities Surplus/Deficit is broken down by the different types of facilities.	This is divided by type of facilities.	3	Each type of facility is multiplied by the Weight.	This is the Project % of NASF (used in Step 4)	After Campus NASF has been weighted and multiplied by the % of project NASF, it is totaled.	20%
Student Support				2				
Institutional Support				1				

Using standard formula, each college is assigned a deficit or surplus in NASF for each of the three space types.

The deficit/surplus is converted to a percentage of total inventory for each type of space.

The percent deficit/surplus is multiplied by the weight for that type of space.

A surplus is assigned a minus value. A deficit is a plus.

# Weight for FUTURE INVENTORY NEEDS

## Step 6

Type of Facility	NASF of Future Facilities Inventory	NASF of Facilities (Surplus)/ Deficit	Divide Surplus/ Deficit by Facilities Inventory	Weight	Multiply	% of Total Project NASF	Weight by Use of Current Inventory	Factor Weight
Academic/Instructional Support	The Facilities Inventory is broken down by the different types of facilities.	The Facilities Surplus/Deficit is broken down by the different types of facilities.	This is divided by type of facilities.	3	Each type of facility is multiplied by the Weight.	This is the Project % of NASF (used in Step 4)	After Campus NASF has been weighted and multiplied by the % of project NASF, it is totaled.	20%
Student Support				2				
Institutional Support Much like in Step 5, each community college's future NASF facilities inventory is grouped by the type of space.				1				

Using standard formula, each college is assigned a deficit or surplus in NASF for each of the three space types.

The deficit/surplus is converted to a percentage of total inventory for each type of space.

The percent deficit/surplus is multiplied by the weight for that type of space.

A surplus is assigned a minus value. A deficit is a plus.

# 5-Year Funding History

## Step 7

<i>College</i>	<i>Total of Colleges 5-Year State Capital Appropriation</i>	<i>Total of all Community Colleges 5-Year State Capital Appropriation</i>	<i>Divide College Amount by Total</i>	<i>Calculate Reciprocal</i>	<i>Divide by 10</i>	<i>Factor Weight</i>	<i>Weighted Weight</i>
AACC	\$12,975,000	\$250,395,939	5.18%	19.29833827	1.9	10%	0.19
PGCC	\$24,403,000	\$250,395,939	9.75%	10.26086707	1		0.1

# Calculating the Percentage of Each Weight

## Step 8

<i>Steps</i>	<i>AACC Factor Weight</i>	<i>PGCC Factor Weight</i>	<i>Weight of Factor Weight</i>	<i>AACC Weighted Weights</i>	<i>PGCC Weighted Weights</i>
Step 1	4	2	10%	0.4	0.2
Step 2	5	4	25%	1.25	1
Step 3	3	4	5%	0.17	0.2
Step 4	2.5	2.5	10%	0.25	0.25
Step 5	0.5	-0.9	20%	0.10	-0.18
Step 6	0.9	-0.8	20%	0.17	-0.17
Step 7	1.9	1	10%	0.19	0.1
Step 8	Multiply Each <i>Factor Weight</i> by its assigned weight of <i>Factor Weight</i> and sum the <i>Weighted Weights</i> .			<b>2.53</b>	<b>1.40</b>

# Weight for COLLEGES PRIORITY

## Step 9

<i>Project Priority</i>	<i>Weight</i>
1	1
2	0.5
3	0.333

*Project priority weighting is the result of calculating the Project Priority's reciprocal.*

In Step 9, each college chooses its number one priority project. The last step ensures that each college's number one choice for project request is given the greatest weight.

# Aggregate Project Weight

## Step 10

<i>College</i>	<i>Project</i>	<i>Step 8</i>	<i>Step 9</i>	<i>Step 10</i>
Anne Arundel Community College	Careers Building Renovation	2.53	1	<b>2.53</b>
Prince George's Community College	Center for Health Studies	1.40	1	<b>1.40</b>

After the total weights have been summed in Step 8, it is multiplied by the weight in Step 9 to determine the colleges number one priority project. Step 10 determines the **Aggregate Project Weight**. This number is what ranks all projects in the prioritization model.

# Community College Capital Project Prioritization Model

## Project Information

Name of College	<i>Your Community College</i>
Project Name	<i>Academic Building Renovation</i>
Project Cost	\$ <i>1,400,000</i>
Project Type	<i>Renovation</i>
Project Phase	<i>Completion</i>
Priority	<i>1</i>
Age of Building/Campus	<i>30</i>

**Total Aggregate Project Weight:**

## Campus Information

<b>Current Facilities Inventory</b>	
Instructional	<i>260,000</i>
Student Support	<i>250,000</i>
Institutional Support	<i>25,000</i>
<b>Current Facilities Inventory Surplus/Deficit</b>	
Instructional	<i>-20,000</i>
Student Support	<i>170,000</i>
Institutional Support	<i>10,000</i>
<b>Future Facilities Inventory Surplus/Deficit</b>	
Instructional	<i>15,000</i>
Student Support	<i>200,000</i>
Institutional Support	<i>15,000</i>
<b>Total College 5-Year State Capital Appropriation</b>	\$ <i>14,000,000</i>
<b>Total of all Colleges 5-Year State Capital Appropriation</b>	\$ <i>250,395,939</i>

**2.45**