


**PROVIDING IN-HOUSE CONSTRUCTION SERVICES**

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UVA Facilities Management

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Have a question or comment?

**Feel free to ask or share during the presentation**

Open discussion format

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**TODAY WE WILL COVER**

**Forming and maintaining an in-house construction unit**

- ① Organizational layout
- ④ Staffing Levels
- ② Benefits/Challenges
- ⑤ Operating Expenses
- ③ Considering Start Up
- ⑥ Billing Rates

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**ORGANIZATIONAL LAYOUT**

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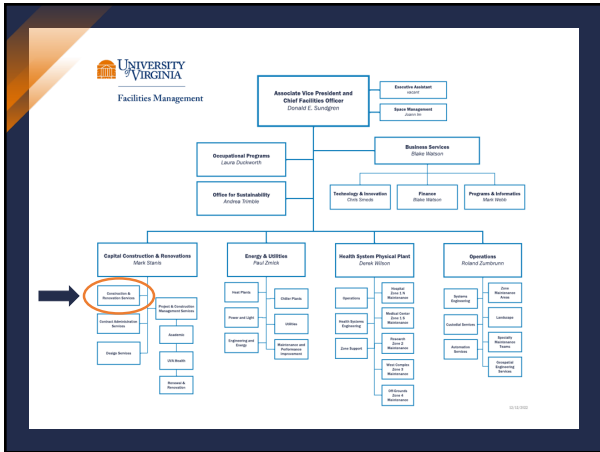
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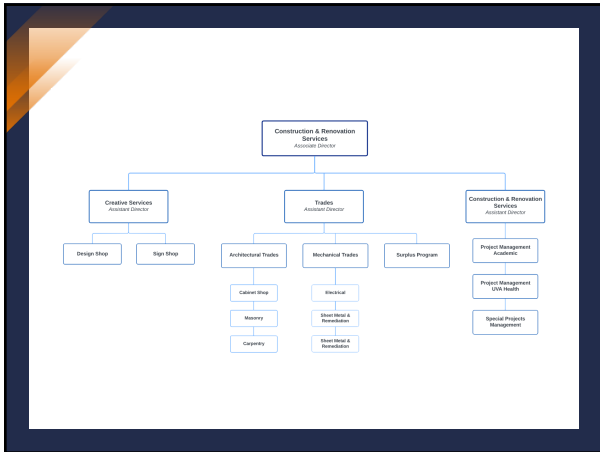
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### Our Construction Staff

Field	Office
<ul style="list-style-type: none"> <li>• Carpentry</li> <li>• Cabinetry</li> <li>• Masonry</li> <li>• Electrical</li> <li>• Sheet metal</li> <li>• Plumbing</li> <li>• Plaster/Drywall</li> <li>• Signage</li> <li>• Environmental Remediation</li> <li>• General services</li> </ul>	<ul style="list-style-type: none"> <li>• Construction management                             <ul style="list-style-type: none"> <li>• Project Managers</li> <li>• Superintendents</li> <li>• Associates</li> </ul> </li> <li>• Trades management</li> <li>• Supervisors</li> <li>• Estimating</li> <li>• Scheduling/Resourcing (*shared)</li> <li>• Contract Administrators (Central)</li> <li>• Administrative Support (Shared)</li> </ul>

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**GROUP ACTIVITY**

At your tables,  
list 1-2 benefits and challenges  
of an in-house construction group.

5-7 minutes

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**BENEFITS**

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**Benefits of in-house construction**

- Share a common mission with the institution
- Ownership and partner with maintenance staff
- Higher quality work
- Lower construction costs
- Lower project costs
- Institutional knowledge
- Increased responsiveness
- Return costs not expended (when does a GC do this?)
- Emergency response
  - 2020 – COVID-19 response as an example

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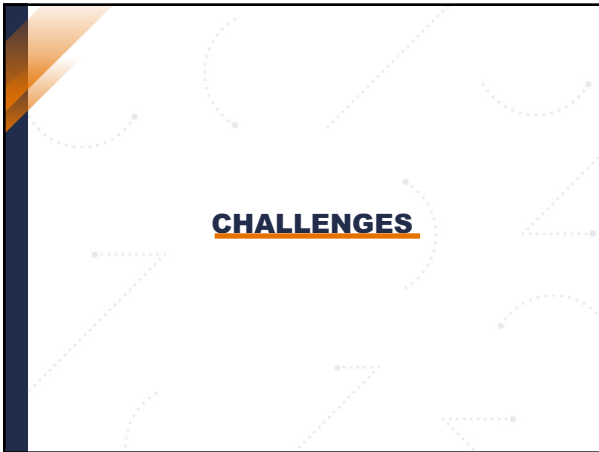
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**DARDEN MEDIA CENTER**  
UVA Darden School of Business

- Convert existing tiered classroom to accommodate two new media rooms to allow for virtual instruction.
- Total project - \$192K
- Fixed price - \$138K
- Construction start - June 2020
- Construction complete - August 2020

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**ABBOTT CENTER DINING**  
UVA Darden School of Business

- Renovate existing dining facilities. This portion is the first phase only.
- Total project - \$750K
- Fixed price - \$580K
- Construction start - June 2020
- Construction complete - August 2020

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**DARDEN ILAB AND CLASSROOM**  
UVA Darden School of Business

- Renovate to allow for relocation of iLab and conversion of two tiered classrooms to on large open floor plan classroom. In addition, the renovation included the addition of windows to allow for light.
- Total project - \$1.4M
- Fixed price - \$1.2M
- Construction start - May 2020
- Construction complete - August 2020

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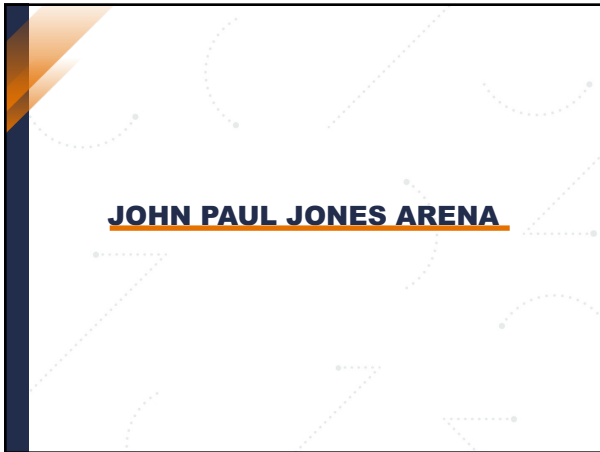
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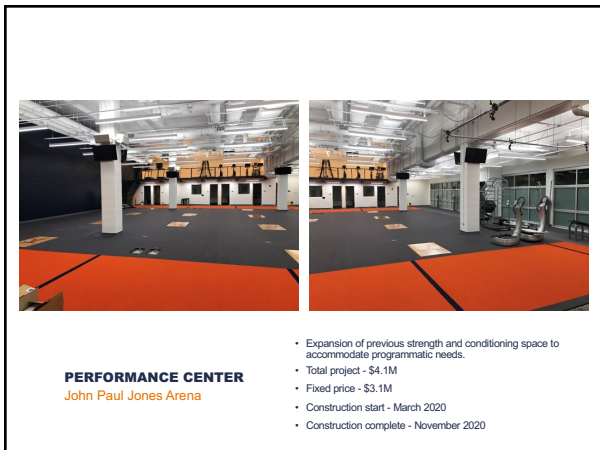
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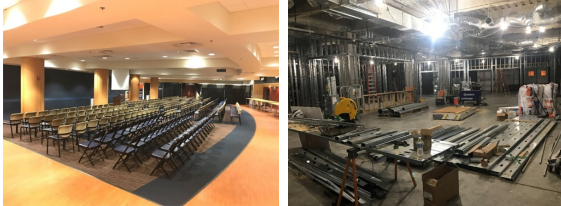
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**DINING HALL AND  
COURTSIDE CLUB**  
John Paul Jones Arena

- Renovation of existing Athletic Dining facility at JPJ. This renovation includes accommodations for the courtside club space lost during the relocation of the Visitor Team Locker Rooms.
- Total Project - \$2.4M
- Fixed Price - \$1.4M
- Construction start - July 2020
- Construction complete - Feb 2021

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**Questions and/or comments?**

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5 min

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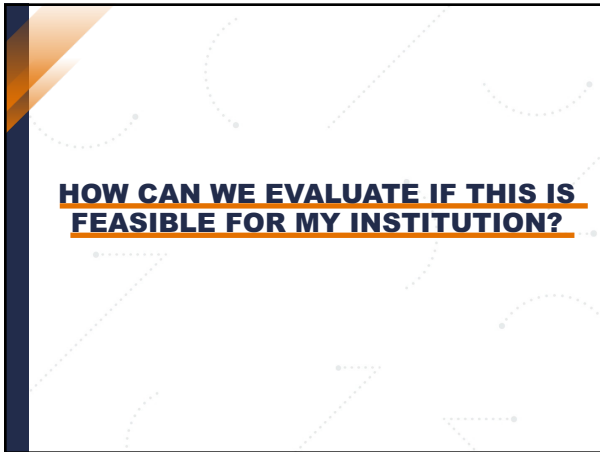
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**HOW CAN WE EVALUATE IF THIS IS FEASIBLE FOR MY INSTITUTION?**

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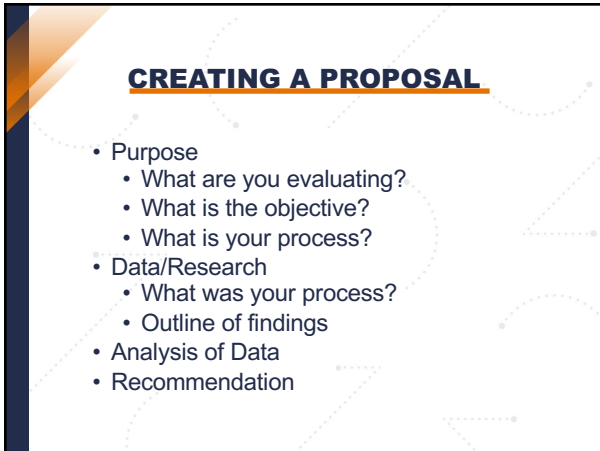
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**CREATING A PROPOSAL**

- Purpose
  - What are you evaluating?
  - What is the objective?
  - What is your process?
- Data/Research
  - What was your process?
  - Outline of findings
- Analysis of Data
- Recommendation

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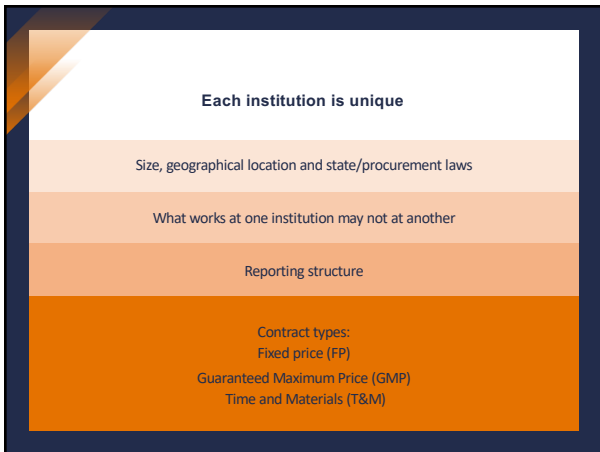
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**Each institution is unique**

Size, geographical location and state/procurement laws

What works at one institution may not at another

Reporting structure

Contract types:  
Fixed price (FP)  
Guaranteed Maximum Price (GMP)  
Time and Materials (T&M)

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## LONE STAR ACADEMY

**ASSUMPTIONS:**

- LONE STAR ACADEMY IS INTERESTED IN CONSIDERING THE FEASIBILITY OF AN IN HOUSE CONSTRUCTION UNIT.
- WE ARE A RECOVERABLE ORGANIZATION
- WE WILL USE EXISTING POSITIONS AND RESTRUCTURE TO START.
  - WE HAVE SOME A SMALL PROJECT TEAM THAT WE WILL INCREASE SCOPE OF PROJECTS.
  - WE HAVE SOME INTERNAL TRADES AND CAPACITY TO SHIFT THEM TO A SMALL GROUP FOR TESTING.

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## EXAMPLE BUSINESS PLAN

**Business Plan**

Creative Services	FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Revenue</b>					
Manager/ Director APFA Construction (2025%)	\$ 31,250	\$ 44,488	\$ 43,393	\$ 49,070	\$ 46,877
Construction Manager (2/2026)	\$ 170,000	\$ 174,100	\$ 188,315	\$ 204,764	\$ 203,326
Construction Superintendent (2/2026)	\$ 120,000	\$ 125,000	\$ 130,250	\$ 136,764	\$ 133,326
Total Fixed Price Budget	\$ 321,250	\$ 343,588	\$ 361,958	\$ 390,598	\$ 383,529
<b>Total Revenue</b>	\$ 321,250	\$ 343,588	\$ 361,958	\$ 390,598	\$ 383,529
<b>Expense</b>					
Manager/ Director APFA Construction	\$ 114,600	\$ 119,600	\$ 130,480	\$ 142,810	\$ 148,190
Construction Manager	\$ 100,850	\$ 100,700	\$ 110,265	\$ 119,480	\$ 118,997
Construction Superintendent	\$ 100,850	\$ 100,700	\$ 110,265	\$ 119,480	\$ 118,997
OTPS	\$ 30,000	\$ 30,000	\$ 32,827	\$ 35,760	\$ 35,760
Total Expense	\$ 346,150	\$ 351,000	\$ 383,837	\$ 417,530	\$ 421,954
<b>Net Income (Loss)</b>	\$ (24,900)	\$ (7,412)	\$ (21,879)	\$ (26,932)	\$ (38,425)
<b>Cumulative</b>	\$ (24,900)	\$ (32,312)	\$ (54,191)	\$ (81,123)	\$ (119,548)

**Assumptions**

Amount	Annual Management Available	2,613	Based on 1040 hours x 2.5 Accruals
Construction Manager (20 Rate Key)	\$ 300	3	Based on Research on Market and Review of Potential Projects
Construction Superintendent (20 Rate Key)	\$ 300	3	Based on Research on Market and Review of Potential Projects
Estimate Hours (100%)	\$ 1,700	4	Based on Research on Market and Review of Potential Projects
Manager/ Director APFA Construction	\$ 300	4	Based on Research on Market and Review of Potential Projects
Estimate Hours (10%)	\$ 413	1,000	
Manager/ Director APFA Construction	\$ 30,000		
Construction Manager	\$ 75,000		
Construction Superintendent	\$ 75,000		
Fringe Rate	\$ 16,800		
OTPS (per person)	\$ 30,000		
Escalation each year	\$ 3%		

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## EXAMPLE BUSINESS PLAN

**Business Plan for Trades**

Creative Services	FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Revenue</b>					
Trades Manager (1/10%)	\$ -	\$ -	\$ -	\$ -	\$ -
Carpenter (4/100%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
Electrician (4/100%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
Mechanical/HVAC (4/100%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
<b>Total Revenue</b>	\$ 1,387,200	\$ 1,428,816	\$ 1,471,680	\$ 1,515,816	\$ 1,561,296
<b>Expense</b>					
Trades Manager (1/10%)	\$ 124,740	\$ 128,482	\$ 132,337	\$ 136,307	\$ 140,396
Carpenter (4/100%)	\$ 349,272	\$ 359,250	\$ 370,343	\$ 381,659	\$ 393,101
Electrician (4/100%)	\$ 378,738	\$ 389,298	\$ 400,411	\$ 412,064	\$ 424,368
Mechanical/HVAC (4/100%)	\$ 378,738	\$ 389,298	\$ 400,411	\$ 412,064	\$ 424,368
OTPS	\$ 110,000	\$ 113,000	\$ 117,017	\$ 121,055	\$ 125,116
Start Up Equipment/Tools	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expense	\$ 1,432,788	\$ 1,490,038	\$ 1,543,839	\$ 1,604,048	\$ 1,671,559
<b>Net Income (Loss)</b>	\$ (45,588)	\$ (61,222)	\$ (72,159)	\$ (88,232)	\$ (110,263)
<b>Cumulative</b>	\$ (45,588)	\$ (106,810)	\$ (178,969)	\$ (267,201)	\$ (377,464)

**Assumptions**

Amount	
Carpenter	\$ 68,000
Electrician	\$ 68,000
Mechanical/HVAC Tech	\$ 68,000
Estimate Hours	\$ 1,700
Trades Manager	\$ 50,000
Carpenter	\$ 63,000
Electrician	\$ 63,000
Mechanical/HVAC Tech	\$ 63,000
Fringe Rate	\$ 16,800
OTPS (per person)	\$ 30,000
Escalation each year	\$ 3%

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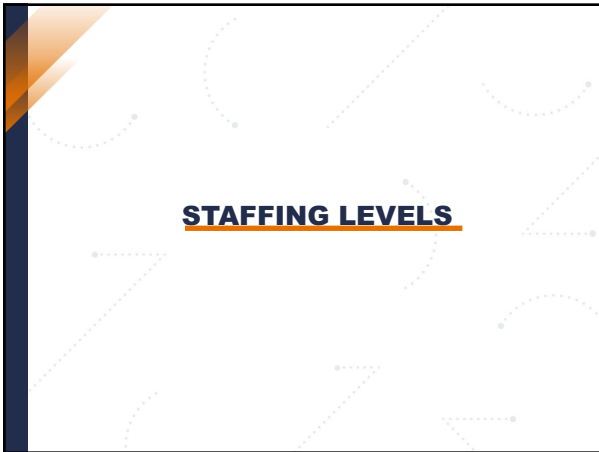
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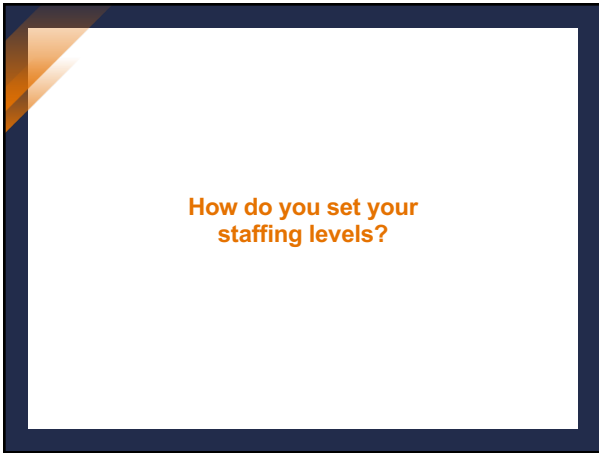
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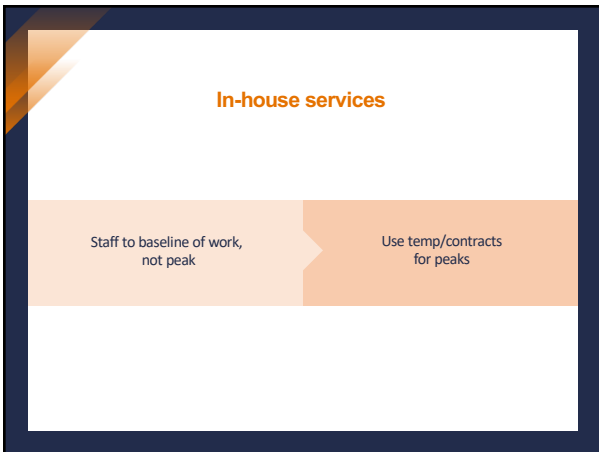
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### EXAMPLE BUSINESS PLAN (STAFFING)

Business Plan		FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Creative Services</b>						
<b>Revenue</b>						
Manager/Director APFA Construction (12/25%)	\$	41,520	\$ 41,468	\$ 41,362	\$ 41,212	\$ 41,027
Construction Manager (12/25%)	\$	120,880	\$ 120,708	\$ 120,512	\$ 120,344	\$ 120,124
Construction Superintendent (12/25%)	\$	120,000	\$ 119,700	\$ 119,352	\$ 118,944	\$ 118,476
OTPS (per person)	\$	20,000	\$ -	\$ -	\$ -	\$ -
<b>Total Revenue</b>	<b>\$</b>	<b>382,400</b>	<b>\$ 381,876</b>	<b>\$ 381,666</b>	<b>\$ 380,500</b>	<b>\$ 379,627</b>
<b>Expense</b>						
Manager/Director APFA Construction	\$	131,670	\$ 131,620	\$ 131,688	\$ 131,872	\$ 132,136
Construction Manager	\$	101,690	\$ 101,688	\$ 101,688	\$ 101,688	\$ 101,687
Construction Superintendent	\$	101,590	\$ 101,581	\$ 101,581	\$ 101,581	\$ 101,577
OTPS	\$	30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
<b>Total Expense</b>	<b>\$</b>	<b>365,950</b>	<b>\$ 365,989</b>	<b>\$ 365,957</b>	<b>\$ 365,941</b>	<b>\$ 365,990</b>
<b>Net Income (Loss)</b>	<b>\$</b>	<b>116,450</b>	<b>\$ 115,887</b>	<b>\$ 115,708</b>	<b>\$ 114,559</b>	<b>\$ 113,637</b>
<b>Cumulative</b>	<b>\$</b>	<b>116,450</b>	<b>\$ 115,887</b>	<b>\$ 115,708</b>	<b>\$ 114,559</b>	<b>\$ 113,637</b>

Assume 3 FTE (Management Staff)

Projected Hours based on Research (Management Staff)

**Assumptions**

Construction Manager (Billable Rate)	\$ 100
Construction Superintendent (Billable Rate)	\$ 200
Billable Hours (100%)	1,700
Manager/Director APFA Construction	120
Billable Hours (25%)	431
Manager/Director APFA Construction	\$ 90,000
Construction Manager	\$ 20,000
Construction Superintendent	\$ 70,000
Fringe Rate	38.60%
OTPS (per person)	\$ 20,000
Escalation each year	3%

**Annual Mgmt Hrs Available**

Annual Completed Large Projects	2,811
Full Year per Project	3
Annual Small/Renov Projects	60
Full Year per Renov Project	3
Annual Project Management Hours	3,000

2,811 Based on Billable hours in Assumptions  
3 Based on Research on Niche Market and Review of Potential Projects  
60 Based on Research on Niche Market and Review of Potential Projects

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### EXAMPLE BUSINESS PLAN

Business Plan for Trades		FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Creative Services</b>						
<b>Revenue</b>						
Trades Manager (12/25%)	\$	-	\$ -	\$ -	\$ -	\$ -
Carpenter (42/100%)	\$	462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,435
Electrician (42/100%)	\$	462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,435
Mechanical/HVAC (42/100%)	\$	462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,435
<b>Total Revenue</b>	<b>\$</b>	<b>1,387,200</b>	<b>\$ 1,428,816</b>	<b>\$ 1,471,680</b>	<b>\$ 1,515,816</b>	<b>\$ 1,561,305</b>
<b>Expense</b>						
Trades Manager (12/25%)	\$	124,740	\$ 128,462	\$ 132,337	\$ 136,307	\$ 140,396
Carpenter (42/100%)	\$	340,272	\$ 359,760	\$ 376,543	\$ 391,650	\$ 406,109
Electrician (42/100%)	\$	378,378	\$ 389,729	\$ 401,421	\$ 413,464	\$ 425,868
Mechanical/HVAC (42/100%)	\$	378,378	\$ 389,729	\$ 401,421	\$ 413,464	\$ 425,868
OTPS	\$	130,000	\$ 133,000	\$ 137,917	\$ 142,055	\$ 146,316
Small Tool Equipment/Tools	\$	60,000	\$ -	\$ -	\$ -	\$ -
<b>Total Expense</b>	<b>\$</b>	<b>1,420,768</b>	<b>\$ 1,461,981</b>	<b>\$ 1,443,639</b>	<b>\$ 1,446,948</b>	<b>\$ 1,451,556</b>
<b>Net Income (Loss)</b>	<b>\$</b>	<b>(33,568)</b>	<b>\$ 27,227</b>	<b>\$ 28,042</b>	<b>\$ 28,868</b>	<b>\$ 29,749</b>
<b>Cumulative</b>	<b>\$</b>	<b>(33,568)</b>	<b>\$ 66,941</b>	<b>\$ 21,699</b>	<b>\$ 50,587</b>	<b>\$ 80,333</b>

Assume 13 FTE (Trades Staff)

**Assumptions**

Carpenter	\$ 68,000
Electrician	\$ 68,000
Mechanical/HVAC Tech	\$ 68,000
Billable Hours	1,700
Trades Manager	\$ 80,000
Carpenter	\$ 63,000
Electrician	\$ 68,250
Mechanical/HVAC Tech	\$ 69,250
Fringe Rate	38.60%
OTPS (per person)	\$ 10,000
Escalation each year	3%

In this example we are going to assume that based on the construction management calculations that we will keep these trades busy and supplement with outside contractors.

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### OPERATING EXPENSES

(OTPS - OTHER THAN PERSONNEL EXPENSES)

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**office furniture and equipment**

labor employee benefits

**shop rent and upkeep**

vehicles management

**TYPICAL OPERATING EXPENSES**

**support salaries**

Supplies – Sanitization travel and training

equipment tools

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**EXAMPLE BUSINESS PLAN (OPERATING EXPENSES)**

**Business Plan:**

Creative Services	FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Revenue</b>					
Manager/ Director APMA Construction (12/29%)	\$ 41,250	\$ 41,488	\$ 41,726	\$ 41,965	\$ 42,203
Construction Manager (12/20%)	\$ 170,000	\$ 175,700	\$ 181,521	\$ 187,364	\$ 193,236
Construction Superintendent (12/20%)	\$ 170,000	\$ 175,700	\$ 181,521	\$ 187,364	\$ 193,236
Total Revenue	\$ 381,250	\$ 392,888	\$ 404,768	\$ 414,693	\$ 428,675
<b>Expense</b>					
Manager/ Director APMA Construction	\$ 111,450	\$ 115,431	\$ 119,488	\$ 123,619	\$ 127,826
Construction Manager	\$ 202,950	\$ 207,660	\$ 212,361	\$ 217,139	\$ 221,987
Construction Superintendent	\$ 202,950	\$ 207,660	\$ 212,361	\$ 217,139	\$ 221,987
OTPS	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Total Expense	\$ 547,350	\$ 560,751	\$ 574,209	\$ 587,897	\$ 601,800
<b>Net Income (Loss)</b>	\$ (166,100)	\$ (167,863)	\$ (169,441)	\$ (173,204)	\$ (173,125)
<b>Cumulative</b>	\$ -	\$ (166,100)	\$ (335,941)	\$ (510,145)	\$ (683,270)

**Assumptions**

Assumptions	Amount
Construction Manager (Billable Rate)	\$ 170
Construction Superintendent (Billable Rate)	\$ 170
Billable Hours (12/20%)	1,700
Manager/ Director APMA Construction	\$ 41,250
Billable Hours (12/20%)	412
Manager/ Director APMA Construction	\$ 111,450
Construction Manager	\$ 202,950
Construction Superintendent	\$ 202,950
Fringe Rate	38.00%
OTPS (per person)	30,000
Escalation (each year)	3%

**Annual Mgmt Hrs Available**

Annual Mgmt Hrs Available	# of Hours per Person
Annual Complete Large Projects	360
Annual Smaller Home Projects	60
Annual Project Management Hours	3,000

**Assumption per FTE Based on your organization's calculations**

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**EXAMPLE BUSINESS PLAN (OPERATING EXPENSES)**

**Business Plan for Trades**

Creative Services	FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Revenue</b>					
Trades Manager (12/20%)	\$ -	\$ -	\$ -	\$ -	\$ -
Carpenter (42/202%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
Electrician (42/202%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
Mechanical/HVAC (42/202%)	\$ 462,400	\$ 476,272	\$ 490,560	\$ 505,272	\$ 520,432
Total Revenue	\$ 1,387,200	\$ 1,428,816	\$ 1,471,680	\$ 1,515,816	\$ 1,561,296
<b>Expense</b>					
Trades Manager (12/20%)	\$ 124,740	\$ 128,492	\$ 132,344	\$ 136,200	\$ 140,160
Carpenter (42/202%)	\$ 462,272	\$ 476,128	\$ 490,344	\$ 505,056	\$ 520,192
Electrician (42/202%)	\$ 462,272	\$ 476,128	\$ 490,344	\$ 505,056	\$ 520,192
Mechanical/HVAC (42/202%)	\$ 462,272	\$ 476,128	\$ 490,344	\$ 505,056	\$ 520,192
OTPS	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000	\$ 30,000
Start Up Equipment (Loss)	\$ -	\$ -	\$ -	\$ -	\$ -
Total Expense	\$ 1,441,556	\$ 1,480,848	\$ 1,521,032	\$ 1,562,368	\$ 1,604,644
<b>Net Income (Loss)</b>	\$ (54,356)	\$ (52,032)	\$ (49,352)	\$ (46,552)	\$ (43,348)
<b>Cumulative</b>	\$ -	\$ (54,356)	\$ (106,408)	\$ (157,960)	\$ (209,308)

**Assumptions**

Assumptions	Amount
Carpenter	\$ 68,000
Electrician	\$ 68,000
Mechanical/HVAC Tech	\$ 68,000
Billable Hours	1,700
Trades Manager	\$ 61,000
Carpenter	\$ 61,000
Electrician	\$ 61,000
Mechanical/HVAC Tech	\$ 61,000
Fringe Rate	38.00%
OTPS (per person)	30,000
Escalation (each year)	3%

**Assume 13 FTE (Trades Staff)**

Here we are also assuming some start-up costs for the first year.

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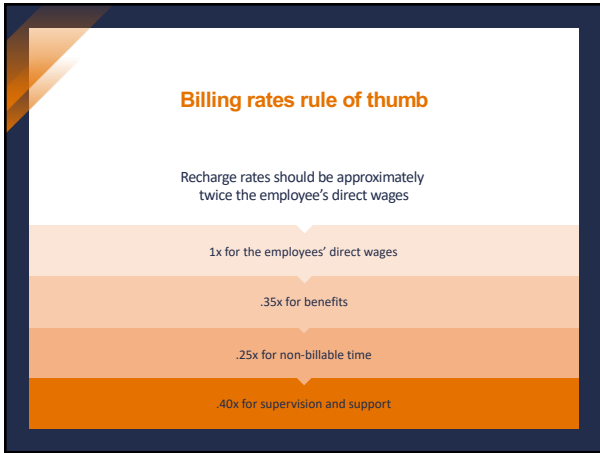
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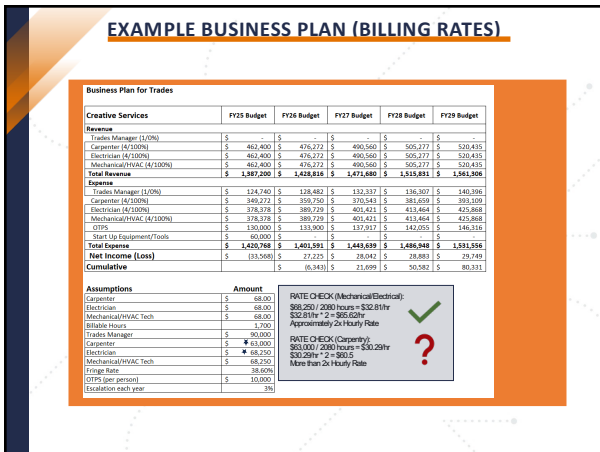
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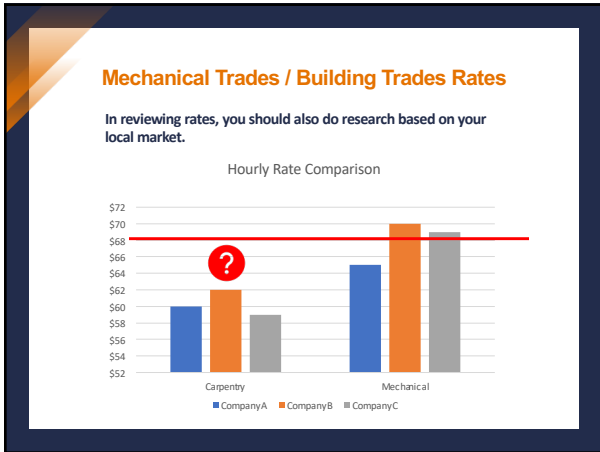
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### EXAMPLE BUSINESS PLAN (BILLING RATES)

Business Plan for Trades:

Creative Services	FY25 Budget	FY26 Budget	FY27 Budget	FY28 Budget	FY29 Budget
<b>Revenue</b>					
Trades Manager (1.0%)	\$ -	\$ -	\$ -	\$ -	\$ -
Carpenter (41.00%)	\$ 418,000	\$ 430,240	\$ 432,847	\$ 445,933	\$ 450,208
Electrician (42.00%)	\$ 494,400	\$ 476,272	\$ 490,500	\$ 509,277	\$ 520,415
Mechanical/MAAC (42.00%)	\$ 492,400	\$ 476,272	\$ 490,500	\$ 509,277	\$ 520,415
<b>Total Revenue</b>	<b>\$ 1,404,800</b>	<b>\$ 1,382,784</b>	<b>\$ 1,413,847</b>	<b>\$ 1,464,487</b>	<b>\$ 1,500,038</b>
<b>Expense</b>					
Trades Manager (1.0%)	\$ 124,140	\$ 128,463	\$ 133,337	\$ 136,307	\$ 140,396
Carpenter (41.00%)	\$ 340,272	\$ 359,750	\$ 375,343	\$ 381,459	\$ 393,109
Electrician (42.00%)	\$ 378,378	\$ 389,729	\$ 401,421	\$ 413,864	\$ 425,668
Mechanical/MAAC (42.00%)	\$ 378,378	\$ 389,729	\$ 401,421	\$ 413,864	\$ 425,668
OTPS	\$ -	\$ -	\$ -	\$ -	\$ -
Start-Up Equipment/Tools	\$ 150,000	\$ 150,000	\$ 157,817	\$ 142,050	\$ 146,310
<b>Total Expense</b>	<b>\$ 1,420,788</b>	<b>\$ 1,407,971</b>	<b>\$ 1,493,938</b>	<b>\$ 1,490,685</b>	<b>\$ 1,511,156</b>
<b>Net Income (Loss)</b>	<b>\$ (16,988)</b>	<b>\$ (25,187)</b>	<b>\$ (79,091)</b>	<b>\$ (25,198)</b>	<b>\$ (11,118)</b>
<b>Cumulative</b>	<b>\$ (16,988)</b>	<b>\$ (42,175)</b>	<b>\$ (141,266)</b>	<b>\$ (166,464)</b>	<b>\$ (177,582)</b>

Assumptions	Amount	
Carpenter	\$ 48.00	RATE CHECK (Mechanical/Electrical):
Electrician	\$ 68.00	\$62.50 / 2000 hours = \$31.25/hr
Mechanical/MAAC Tech	\$ 68.00	\$62.50 hr * 2 = \$62.50/hr
Trades Manager	\$ 7,000	Approximately 2x Hourly Rate
Carpenter	\$ 90,000	RATE CHECK (Carpentry):
Electrician	\$ 68,750	\$60,000 / 2000 hours = \$30.00/hr
Mechanical/MAAC Tech	\$ 68,750	\$30.00 hr * 2 = \$60.00
Trades Manager	\$ 8,600	More than 2x Hourly Rate
OTPS (per person)	\$ 10,000	
Excavation each year	\$ -	

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- ### Profit and loss
- Project profit/loss limits
  - Overall profit/loss distribution
  - Profit/loss carryover

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### EXAMPLE BUSINESS PLAN (BILLING RATES)

Business Plan		FY23 Budget	FY24 Budget	FY25 Budget	FY26 Budget	FY27 Budget
<b>Revenue</b>						
Manager/Executive/AFSA Compensation (24/22/24)	\$	4,260	\$	42,600	\$	42,600
Construction Manager (12/24/24)	\$	150,000	\$	150,000	\$	150,000
Construction Manager (12/24/24)	\$	150,000	\$	150,000	\$	150,000
Total Revenue	\$	304,260	\$	342,600	\$	345,600
<b>Expenses</b>						
Executive/AFSA Compensation	\$	112,400	\$	112,400	\$	112,400
Construction Manager	\$	100,000	\$	100,000	\$	100,000
Construction Supervisor	\$	100,000	\$	100,000	\$	100,000
Office	\$	100,000	\$	100,000	\$	100,000
Total Expense	\$	312,400	\$	312,400	\$	312,400
<b>Net Income (Loss)</b>	\$	(8,140)	\$	130,200	\$	133,200
<b>Comprehensive</b>	\$	(8,140)	\$	130,200	\$	133,200

Assumptions	Amount	Annual Management Fees Available	1,812
Construction Manager (Bills Rate)	\$	Annual Budgeted Fees	\$
Construction Supervisor (Bills Rate)	\$	# of Hours per Project	300
Management (Bills Rate)	\$	Annual Number of Projects	60
Office (Bills Rate)	\$	# of Fees per Hour/Project	100
Office (Bills Rate)	\$	Annual Project Management Hours	1,800

- Project Profit/Loss Limits
  - Use prior projects for data on total projected project billing per year and use these limits to estimate potential profit/loss
  - This example uses a 1% profit on projected \$10M in "business"
- Overall Profit/Loss Distribution
- Profit Loss Carryover

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### Market niche

- What is your target market?
- Services offered and not offered?
- Practical and imposed project size limitations

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**Estimating and Bidding Work**

- Estimating quantities and effort-hours
- Client should be given the option to use or not use in-house services
- Bidding against the market
- Fixed price work (FP)
- Time and materials basis (T&M)
- Guaranteed maximum price (GMP)

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**Further “in-house” considerations**

- Incremental changes in the scope of work that eat into the “margin”
- Change orders are paramount, but some of our staff have more of a Customer service attitude – this can be detrimental to the bottom line.

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**As an in-house unit,  
your warranty period may be  
much longer than an  
outside contractor**

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## EXAMPLE BUSINESS PLAN

**PURPOSE**

Requests for environmental graphics throughout the University are continuing to increase and the expansion of the new technology. Signage Guidelines Study will affect the Sign Shop in significant ways. There is a need to increase the Sign Shop's production and installation capabilities as well as graphic design services.

**NEW SERVICES**

- In-house Marketing Signage Packages**  
 1. In-house Marketing Signage Packages  
 2. Environmental Graphic Design Services  
 3. Operational Signage & AIA Lettering Systems

**SIGN SHOP FINANCIAL MODEL**

**RECOMMEND**

shop stock units

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## Questions and/or comments?

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This concludes The American Institute of Architects  
Continuing Education Systems Course



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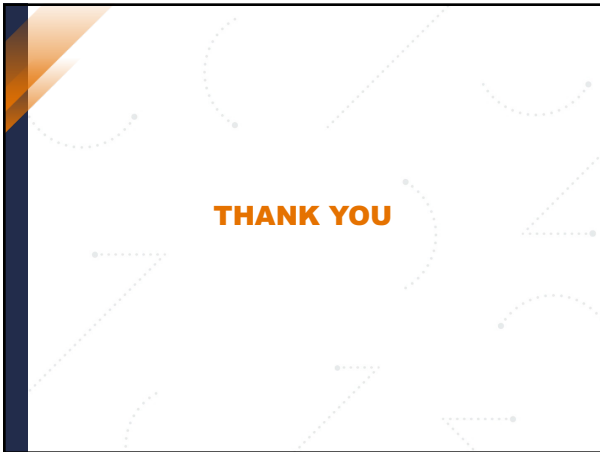
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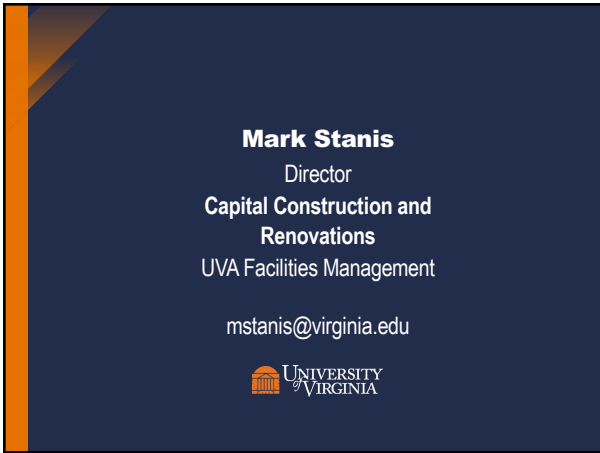
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