Shaping the Future of Architecture in Minnesota

September, 2010
Respondent Demographics - Contractors

Survey respondents represent contractors of all sizes working in all major segments.

- Number of people working at respondent’s current employer was equally distributed among across small, medium, and large firm sizes
- All contractors surveyed perform work in the commercial segment
- Contractors surveyed do a higher percentage of their work in the commercial segment than architects, architects largest segment is institutional

Percentage of respondents that do work in each segment

- Single-family residential: 10%
- Multi-family residential: 45%
- Commercial: 65%
- Industrial: 45%
- Institutional: 65%
- Other*: 5%

Source: Survey for contractors, Carlson Consulting Enterprise

Total responses: 20
Most contractors believe architects add high value in the building process and that architects fees are more than adequate.

Do you believe the fees architects are receiving for services performed are fair? (fair means appropriate for the value that architects add to the building construction process)

- Too much: 1
- About right: 12
- Fairness: 11
- Other: 4

How much value does each participant in the building construction process add to the overall end product?

- Program Manager: 100%
- Architect: 100%
- Engineers & Specialty Consultants: 50%
- Contractor: 100%
- Other*: 100%

Source: Survey for Contractors, Carlson Consulting Enterprise
Contractors importance and effectiveness of attributes

Architects significantly underperform contractors expectations in these four areas; partnering/collaboration, communication, on budget, and quality of design documents.

* Total Responses: 28

Source: Survey for Contractors, Carlson Consulting Enterprise
Contractors and architects perception gap

Strengths and weaknesses of architectural services provided

- Architects rate themselves higher than contractors rate them
- Contractors rate architects higher than architects rate themselves

*Other includes any function not explicitly listed

Total Responses: 28

Source: Survey for Contractors, Carlson Consulting Enterprise
Weaknesses
Architects feel more qualified than contractors rate them in these services;
• Program/project management
• Construction Administration
• Site selection

Strengths
Contractors say architects are more effective than they view themselves in these services;
• Acoustics
• Urban Design
• Landscape architecture

Possible reasons
• Contractors have a poor opinion of program managers, they rate them as adding the least value
• Lack of education or experience in those fields
• These services may be more complex, less visible, and generally less understood by the contractor
Contractors survey comments

What changes do you see in your organization that will affect the kinds of services you will need from architects in the future?

- Lean operation, working with design professionals that have a lean staff.
- Smaller more intensely designed projects
- Architects will need to learn how to better integrate their services with the contractor leading the construction process.
- Extensive use of BIM modeling for pre-construction planning/scheduling/scope reviews/constructibility
- I see the industry using more and more BIM models for use in constructing buildings. So architects will need to sharpen their skills with BIM modeling.
- BIM, collaboration, and transfer of electronic BIM files
- More Building Information Modeling will require legal hurdles regarding file sharing to be overcome.

Responses; 12

Source: Survey for contractors, Carlson Consulting Enterprise
Contractors top issues when working with architects

Opportunities for improving the contractor and architect relationship

Overall 28 contractors rated architects at 3.27 on a 5 point scale for effectiveness at providing services

Other notable answers

- Lack of respect for contractors role or opinion
- Complicated design that adds little or no value
- Lack of knowledge in building process
- Dress shoes

Issues with plans includes incomplete plans, slow response to plan documents, and interpretation of plans

Responses; 60

Source: Survey for contractors, Carlson Consulting Enterprise
What are the most pressing business issues you expect to face in the next 1-3 years?

Responses

<table>
<thead>
<tr>
<th>Issue</th>
<th>Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>General downturn in the economy</td>
<td>12</td>
</tr>
<tr>
<td>Human capital management*</td>
<td>10</td>
</tr>
<tr>
<td>Intense price competition/lower margins</td>
<td>8</td>
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<tr>
<td>Tighter financing and less cash for projects</td>
<td>7</td>
</tr>
<tr>
<td>Making a profit through and coming out of recession strong</td>
<td>6</td>
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<tr>
<td>Inflationary forces on materials and labor</td>
<td>4</td>
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</tbody>
</table>

Other notable answers:
- Architects willingness to adapt to design build approach
- Shifting needs and demands of the marketplace
- Increased competition at all levels
- Increased desire for “green” projects that cost substantially more with highly overrated results
- Risk of subcontractors going out of business before project completion
- Performance failure due to low fees for consultants, vendors, and subcontractors

*Human capital management includes; hiring, training, retaining top talent, and dealing with aging work force

Responses: 50
Source: Survey for contractors, Carlson Consulting Enterprise
Preliminary owners survey results

What are the most pressing business issues you expect to face in the next 1-3 years?

• Reduced margins/ higher price competition
• No demand for commercial buildings due to no employment growth
• Reduction in public and private financing for the construction of affordable housing
• Matching contractor and vendor capacity to start new project as they ramp up
• Less work to bid on
• Higher employee costs due to health care and taxes
• Steep learning curves as new forms of financing become available (stimulus)
• More government regulations

Responses: 9
Source: Survey for owners, developers, and owners agents. Carlson Consulting Enterprise
Preliminary owners survey results

What are the top 5 issues owners face when working with architects?

• They don’t consider what the project will cost to the client
• Listening; doing exactly what is asked and not what they think you need
• Increased need for low cost/no cost conceptual design
• Timeliness of work
• Unrealistic expectations of fees
• Maintaining the same staff on the project throughout the entire design process
• Designing a project I cant afford to build
• Increased need for architects, not just engineers, to have a high degree of understanding in the areas of energy efficiency and sustainability

Responses; 8

Source: Survey for owners, developers, and owners agents. Carlson Consulting Enterprise
### Conclusions from preliminary owners survey

Architects, contractors, and owners share some current concerns and views on future opportunities.

<table>
<thead>
<tr>
<th>Challenges;</th>
<th>Opportunities;</th>
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<td>• Broad state of the economy</td>
<td>• Building information modeling</td>
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<td>• Stronger price competition</td>
<td>• More intense collaboration</td>
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<td>• Finding financing for projects</td>
<td>• Green/Leeds and sustainability</td>
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Contractors and owners share common issues when working with architects.

- Listening and communication
- Cost to build design
- Timeliness
- Providing the requested design
- Expectations of architectural fees