

Norfolk Public Schools PPEA Project: Lessons in Shifting Risk and Reducing Cost

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Examples of Key Project Risks

A. Design Risks

1. Scope discrepancies
2. Disagreement over design concepts
3. Design errors / failures
4. Design changes

Examples of Key Project Risks

B. Inaccurate Cost Estimates

1. Program (scope)
2. Differing or unforeseen site conditions
3. Contingencies
 - (a) “Constructability” issues
 - (b) Scope gaps between trade contractors
 - (c) Subcontractor defaults

Examples of Key Project Risks

C. Construction Risks: Cost & Time Overruns

1. Increased cost of materials or labor
2. Delays that cause:
 - (a) cost increases
 - (b) unavailability of facility
3. Shortages in labor or materials
4. Defective work by trades
5. Accidents and casualties
 - (a) property damages
 - (b) personal injury
6. Coordination of other trades outside the prime's control
7. Weather or Force Majeure

Examples of Key Project Risks

D. Financing Risks

1. Availability of Financing / Debt Capacity
2. Project construction delays due to financing
3. Non-appropriation of funds

Examples of Key Project Risks

E. Legal Risks

1. Hazardous environmental conditions
2. Changes in law
3. Ownership of IP / infringement

Examples of Key Project Risks

F. Political Risks

1. Public opinion (Lack of Engagement)
2. Lack of public sector champion

Examples of Key Project Risks

G. Life Cycle Costs Risks

1. Maintenance life cycle costs
 - (a) Deferred maintenance
 - (b) Truth in budgeting
2. Operations life cycle costs
3. Lack of alignment between Owner / Developer

Interim Agreement

- A. Total project time (and thus costs) conserved
- HAZMAT survey / abatement
 - Demolition of existing facilities
 - Traffic studies
 - Topographical and boundary survey
 - Geotechnical examinations
 - Environmental examinations
 - Underground utilities, historical resources, endangered species

Interim Agreement

- B. Political and public opinion risks managed
 - Developer to conduct public outreach
 - Contractual obligation to incorporate public input into the design

Interim Agreement

- C. “Test drive” of the public-private working relationship
- The City’s timeline for review, comment and approval
 - Refining the scope and budget for a collaborative process
 - “Value engineering” at early stage

Interim Agreement

D. SWAM subcontractors required

- Subcontracting fairs and other outreach to minority suppliers, contractors and service providers
- Requirement to development a SWAM subcontracting plan

Interim Agreement

- E. Project costs and project schedule more definitively projected
 - Minimizing uncertainty or risk
 - Scope refined
 - Design requirements
 - Site conditions
 - Global GMP for bundled projects

Interim Agreement

F. Design Process Improved

- Agreement on design criteria and principles
- Specify the required deliverables from the developer in 35% design
- Reduce the risk of later disagreements over the scope of the work
- Determine whether design criteria such as LEED certification or similar certifications are cost effective
- More accurate cost estimate produces an agreed-upon guaranteed maximum price (GMP)
- Reduce contingency

Interim Agreement

G. Developer's Deliverables

- Basis of design narrative
- Major building systems and equipment checklist equipment checklist (to include major building operating systems only)
- Phase I Environmental Report
- HAZMAT surveys
- Project costs estimate
- Value engineering recommendations

Interim Agreement

G. Developer's Deliverables (continued)

- Geotechnical survey and Report
- 35% design calculations
- Preliminary (35% design) drawings
- Site design based on applicable storm water regulations
- LEED Scorecard
- Minority owned, woman owned and small business participation plan

Interim Agreement

H. General Conditions / Negotiations

- Clarifies pricing model
- Governs preliminary work and Comprehensive Agreement

Interim Agreement

I. Redesign Process?

- Substantial change in Program
- Change in design criteria or principles
- Other scope changes

Interim Agreement

J. Public hearing required.

Va. Code § 56-575.17

- No requirement under the PPEA for another public hearing before the comprehensive agreement is approved and signed
- Public hearing no later than 30 days before an interim agreement or comprehensive agreement is signed

Norfolk Public Schools Project

WHAT WORKED WELL

- **Having 1 Point of Contact** – Designer and Builder are one in the same
- **Building Trust** - Being Able to have City Staff/NPS
 - Staff/Designer/Builder all involved throughout the process – open communication is key
- **Community Involvement**

LESSONS LEARNED?

Norfolk Public Schools Project

WHAT WORKED WELL (GC's Perspective)

- **Direct Purchase of equipment** – Able to ensure same equipment on all 5 schools – Ease of maintenance for NPS (all the same equipment)
 - HVAC Equipment
 - Light Fixtures
 - Electrical Equipment
 - Generators
 - Plumbing Fixtures

Norfolk Public Schools Project

- **Constructability Reviews**
 - Multiple perspectives helped achieve efficient/buildable designs
 - Taking it beyond a design charrette. How do we build it? Is this the best way? Can we get the same look/same function in another way
 - Give and Take from All Team Members

Norfolk Public Schools Project

- **Quarterly Update Meetings**
 - OAC Meetings every two weeks at one site may not resonate at the other sites
 - Quarterly Updates kept all parties informed on what was going on
 - Many changes were able to be accommodated thru open communication. Many issues became non-issues through the open communication

Norfolk Public Schools Project

WHAT WORKED WELL (A/E's Perspective)

- **Site Investigations/Existing Conditions Review**
 - Good site investigations, on-site observations of school operations and existing conditions.

Norfolk Public Schools Project

Cost Control/Cost Estimating –

- Pricing based on sub-contractor bids, not estimates.
- GC & AE work together on coordination of materials and methods of construction, real time pricing along with decision making.
- Direct interaction between the designers and the major subcontractors (site, mechanical, steel, veneer, roofing, windows, etc.) during the design development phase is great for maintaining cost/schedule
- GMP established early. Known quantity for client.

Norfolk Public Schools Project

Quality Control –

- Lots of eyes (GC, subs, vendors) looking over drawings for errors, conflicts. Collaboration between the AE team and the contractor eliminates change orders.
- All share same goal due to limited contingency.
- GC's ability to select quality sub-contractors to team with.
- Dedicated to providing a good product in timely fashion.

Norfolk Public Schools Project

Creating Opportunities for Public Input

- Useful community interaction process on design.
- Hired PR entities to assist.
- Skillful in working through issues of renovation vs. building new.
- Design character to please community

Norfolk Public Schools Project

LESSONS LEARNED (A/E's Perspective)

- Heavy up-front commitment of A/E
- Client Interaction
- Multiple Projects/ Multiple Phases/ Multiple Clients/
Multiple Teams
- Schedule
- Value Engineering
- Construction

Design-Build Contractual Issues

A. Ownership of Plans

- Gives the public entity more leverage in the negotiation of the eventual comprehensive agreement
- Ownership of the design enables the public entity to bundle similar projects
- Developer must be held harmless from claims if not engaged for the construction

Design-Build Contractual Issues

A. Ownership of Plans (continued)

- Developer's independent design consultants must assign their rights in the design to the public entity
- Developer's transfer of its ownership rights in the design work product contingent on payment
- Developer should indemnify the public entity against infringement claims
- Developer retains prior IP

Design-Build Contractual Issues

B. Design Approvals

- Public sector retains right of final approval of the design
- Changes in “the Program” should entitle developer to a change in price and time
- Public entity must cooperate in developing a design that can be delivered within the project budget
- Agree to “turn around” design submissions within a fixed period of time

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Design-Build Contractual Issues

C. Financial Strength of Developer

- Comprehensive agreement requires “filing” of financial statements
- No requirement that the public entity keep such financial statements “on file”

Design-Build Contractual Issues

D. Approval of Subcontractors

- *Public Entity's Perspective*: quality assurance
- *Private Entity's Perspective*:
 - Overreach by the public
 - Additional costs without additional compensation
 - Reduces prime contractor's control
 - Reduces accountability if subcontractor fails to perform
- *Compromise*: allow the public entity to bar certain subcontractors for reasonable cause, provided objection is timely

Design-Build Contractual Issues

E. Coordination with Other Contractors

- Public entity may engage other contractors for related but different scopes of work (e.g., site work or “IT” work)
- Developer will resist liability – for cost and time impacts – due to defects or delayed work by such separate contractors
- Public entity may accept this risk provided real-time notice is given by Developer

Design-Build Contractual Issues

F. Differing Site conditions

- Typically, the Owner's risk at onset
- Hidden or underground physical conditions
- Underground utilities
- Change order for the increased time or cost
- Prompt written notice from Developer upon discovery
- Shift risk to the developer under the interim agreement?

Design-Build Contractual Issues

G. Hazardous Environmental Conditions

- Developer liable for hazardous materials it brings to the site
- Pre-existing hazardous environmental conditions are the owner's risk
- Shift risk to the Developer under interim agreement?

Design-Build Contractual Issues

H. Personal Injury / Property Damage

- Developer to indemnify public entity against claims for personal injury or property damage stemming from work performed by itself and its subcontractors
- Carve-out for claims from work separately contracted by public entity
- Carve-out for public entity's own negligence
- Exposure for "attorneys' fees"

Design-Build Contractual Issues

I. Design Flaws

- Design/build shifts risk to Developer
- Indemnity for design errors closely negotiated
- Architects and other experts will seek to limit their exposure to their negligence acts or omissions
- “Standards of skill and care customarily accepted as good practice and procedure by members of the same profession performing similar services in the locality.”
- Public entity may push back if lack of experts in that location

Design-Build Contractual Issues

J. Construction Warranty / Guaranty

- Right to uncover and test prior construction that was not previously approved on inspection
- Developer to recover its costs (including design fees), together with overhead and profit, if found work is not defective

Design-Build Contractual Issues

K. Contingency

- *Public Entity's Perspective:*
 - Limits use of funds that would revert to owner if not needed for the project
 - Contingency subject to Guaranteed Maximum Price
- *Private Entity's Perspective:*
 - Access to budget without change order
 - Contingency should be slimmed down by the time of the comprehensive agreement but not eliminated altogether

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Design-Build Contractual Issues

K. Contingency (continued)

- Contingency not intended to cover changes
- *Covers:*
 - Future refinements in design details
 - Scope gaps between trade subcontractors
 - Subcontractor defaults
 - “Constructability” problems
 - Reasonably unforeseen field conditions
- Bundled procurement: unused contingency for one building may be applied on other buildings

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Design-Build Contractual Issues

L. Weather Delays

- Do unbudgeted delays justify an extension of time *and* an increase in the contract price?
- Relieving the developer from liquidated damages
- Increased costs include:
 - jobsite overhead
 - bond and insurance premiums
 - BPOL taxes

Design-Build Contractual Issues

M. Changes in law

- Allocate risk for changes in law from preliminary stages through the permitting stage
- Stormwater management regulations
- Changes in VDOE and similar guidelines

Design-Build Contractual Issues

N. Project Completion

- Liquidated damages for delays?
- Early-completion bonuses?
- Standard for determining “substantial completion”
- Retainage:
 - Market rate on PPEA projects is 5%
 - Exclude design costs
 - Reduce retainage for discrete segments that are substantially complete
 - Exclude “general conditions” and fee?

Design-Build Contractual Issues

O. Operational Risks

- Majority of lifecycle costs lie in operating and maintaining the facility
- Public sector typically accepts vast majority of the risk
- Better solution to shift these risks to developer by transferring responsibility for maintenance and operation
- Governed by agreed-upon performance standards
- Incentive to design and construct the facility for durability and lower maintenance costs

Design-Build Contractual Issues

O. Operational Risks (continued)

- Availability payments (service fee payments) or concession agreement
- Presumption of cheaper financing by public entity
- However, costs of time, operations and maintenance embedded in most projects
- Availability (service fee) payments subject to annual appropriation
- Performance standards shift risk for deferred maintenance to developer

Design-Build Contractual Issues

P. Demand Risk

- Concession (Pocahontas Parkway) v. Availability Payment (Port of Miami Tunnel)
- Effect on cost of capital

Design-Build Contractual Issues

Q. Termination

- Developer to push back against “standard” termination clauses
- Failure to cure a material breach within no less than 30 days (preferably 45 days) following receipt of written notice from the public entity
- Developer must begin to cure the breach promptly (e.g., within 14 days) following the notice

Design-Build Contractual Issues

Q. Termination (continued)

- Termination for convenience
- Lost profit and overhead coverage
- Public wants to pay only for work performed up to date of termination for convenience
- Termination of a DBFOM comprehensive agreement requires intense negotiation
- Private entity's equity and debt investments at risk
- Termination process must face the realities of the financial markets.

Design-Build Contractual Issues

R. Dispute Resolution

- *Mediation*: mandatory mediation (but not arbitration) of disputes submitted to litigation.
- *Limitations on Consequential Damages*: developer typically does not want to waive delay damages. Statute protects developer unless PPEA project.