Confessions of a Five-Year Veteran of the NCRR Construction Program

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Outline

I. Lessons learned from five years in construction chaos

II. Some perspectives and advice from three years as an NCRR reviewer

Background

Frustration phase

1995: Unsuccessful application*

1996: Unsuccessful application*

1997: Unsuccessful application*

1998: Unsuccessful application*

Went to NCRR Workshop

Success phase

1999: Successful application #1 ($2 million)

2000: Successful application #2 ($4 million)

Veteran phase

2001–2004 Member of NCRR STRB

*NCRR Construction Program funding was $10 million

Post-Award Phase: A Few Things We Did Well

- We consulted the NIH Standards both before and after the proposal:

Division of Engineering Services, NIH

Research Laboratory Design Policy and Guidelines

*http://des.od.nih.gov/eWeb/policy/html/labtoc.htm*

Post-Award Phase: A Few Things We Did Well

- We had a coherent project team.
  - Departmental space coordinator with vested interest in project
  - Associate Dean (Grant PI)
  - Architects
  - Campus facilities planning rep
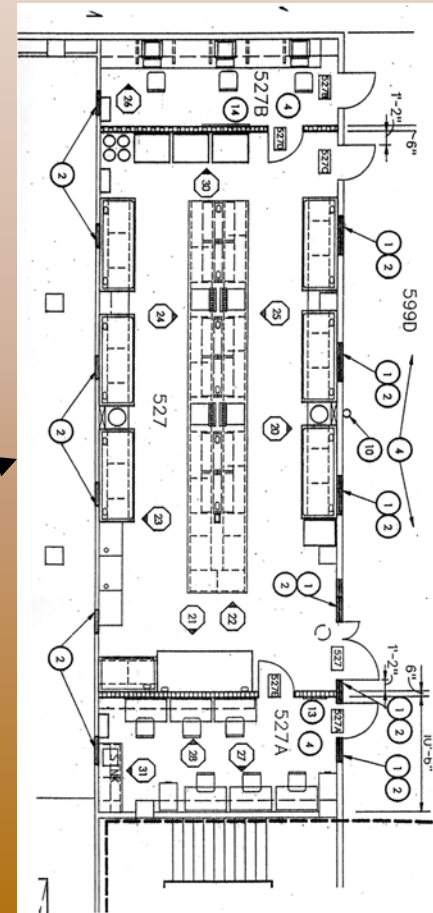 - *School facilities overseer to act as project manager (IMPORTANT).*

Post-Award Phase: A Few Things We Did Well

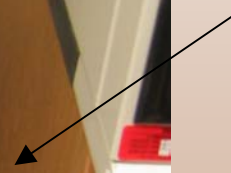- We involved grass-roots users in the design.
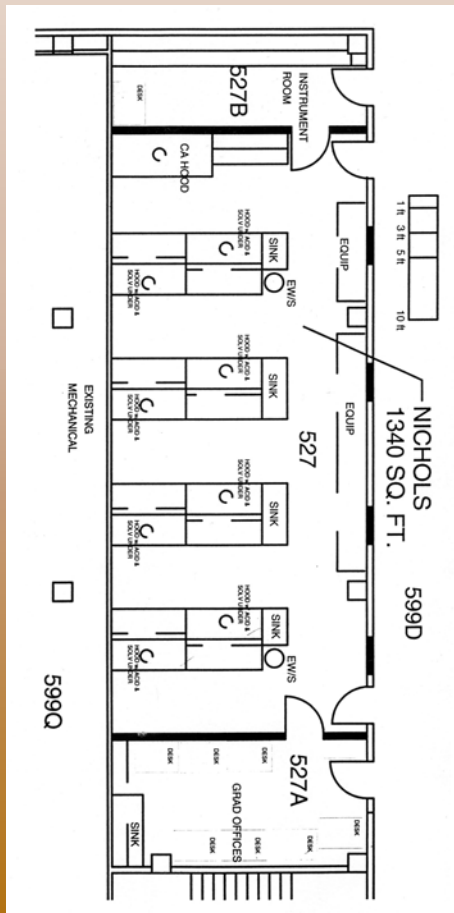
Proposal design

Actual design

Solvent
disposal
area

Post-Award Phase: A Few Things We Did Well

- We insisted that all floor plans and elevations be examined *in detail* by users and by members of the project team.

- We took minutes at all project meetings and got consensus or acknowledgment of changes.

Post-Award Phase:
Unpleasant Surprises Department (examples)

- Project book with a kitchen and swimming pool
- Backless lab drawers
- Faculty office with no power
- Stainless steel hood duct problems

Lesson: Make no assumptions. Check everything! The devil is in the details!!

Some Construction Grant Principles from an Experienced Reviewer

Principle: The construction should support ongoing NIH-funded research or research funded by others consonant with the NIH mission.

- Table of Support should show PI, title, grant type and number (i.e., R25 CA020657-04), current year amount, beginning and ending dates.
- Don't show expired grants.
- DO show pending grants that have been submitted.
- DO show non-NIH support relevant to the construction.
- Don't show "to be submitted" grants.
- Show ONLY the grants relevant to the construction.

Some Construction Grant Principles from an Experienced Reviewer

Principle: This is a construction grant, not a research grant.

- Reviewers do not in general review the research itself in detail.

- If research is well-supported, it is assumed to be of sufficient quality to merit consideration for construction support.

- Reviewers like to see *brief* research descriptions and the relationship of the research to the construction.

Some Construction Grant Principles from an Experienced Reviewer

Principle: The construction should make new directions possible.

- Answer the question in the PA that asks, "How will the proposed construction benefit the research?"
- Open-plan labs that facilitate collaboration generally are viewed favorably.
- Think *community*, not *fiefdoms*.
- Look to the future and design in as much flexibility as possible. (What happens when current occupant loses grants?)
- Describe how space is/will be managed. Can space management respond quickly to change, or is the faculty cemetery the primary agent of change?
- Inclusion of space for new and as yet unsupported faculty is reasonable and expected.

Principle: The needs of not only faculty but also of other research staff should be considered.

- How many graduate students, technicians, postdocs, will occupy the space? Are the numbers justified by program size?
- Do the plans clearly show where these staff are to be located?
- Research staff if possible should have desk areas separated from laboratories. (Not a regulation, but a desirable feature.)

Principle: The construction must be staged so as to provide minimal disruption to ongoing work.

- What is the logistical plan if the area is currently occupied by researchers?
- What is the effect on animals?

Principle: Estimates must be credible. Insufficient funding jeopardizes completion of the project, and too much money is wasteful and unfair.

- Reviewers don't worry about geographical cost disparities.
- Reviewers DO insist that there be a credible cost basis. Examples:
  - *Recent experience in constructing similar facilities*
  - *A detailed estimate by experienced person(s) or firm(s) knowledgeable about construction costs for the proposed type of construction in the area.*

Principle: The required tables and drawings should provide a coherent, at-a-glance summary to the reviewers.

- Read and follow the Supplemental Instructions.
- The plans should be legible and well keyed.
- The relationship between the Table of Requested Space and the plans should be straightforward; key this table to the plans with room numbers or labels.
(continued)

- The Table of Requested Space should show the cost per assignable square foot as well as the NIH share for each room or area.

  - Some (most?) architects will tell you that this type of breakout is artificial. *The important points about this Table are*—

    1. *that the assignable square feet per room is shown;*
    2. *that each room is keyed to the drawings;*
    3. *that the function and/or assignment of each room is clear;*
    4. *that the table shows a summary of net assignable square feet and cost per net assignable square foot for the entire project.*

  - Prorate the costs of nonassignable areas into the assignable ones.

  - Calculation of net square feet is somewhat subjective. Simply footnote the table with the basis of your calculation.

- The Table of Fixed Equipment should include all fixed equipment, for example—
  - Casework
  - Hoods
  - Cage washers
  - Certain types of caging

Even though these costs contribute to the costs shown in the Table of Requested Space, it is important for reviewers to know that they have been considered for proper budgeting.

Some Construction Grant Principles from an Experienced Reviewer

Principle: Reviewers are human. Doing common-sense things that help them out help your proposal.

- 12-pt font size.
- Specific page numbers for cross references.
- Make the proposal read as if one person wrote it rather than cut-and-pasted from various other sources.
- Have someone proofread for flow, grammar, and especially for critical omissions.

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