PROTOTYPES

DEFINITION

The method of utilizing architectural prototypes has been used for decades in WCPSS' building program to reduce professional services fees, expedite the time to design, and reduce change orders during construction. By definition, a prototype is an original model by which something is patterned. Whereas code revisions, continuous improvement methodologies, change of use, and site adaptation may force adjustments from one use of the design to the next, the similarities are sufficient to capitalize on redundant features in the base design.

BENEFITS

1) **Design Fee:** Savings on the designer fee since this is the reuse of a previous design. Cost for a new design typically ranges from 6 to 6.5% of the construction cost. The WCPSS reuse formula allows 2% of the building construction cost for the first time reuse, 1.5% for the second time reuse, and 1% for the third and subsequent reuses. An additional 3-4% is paid for construction administration, bidding, and site design, which are unique to each project. If the prototype is to be changed for items such as mirroring the building arrangement on the site or increasing the size of the school, then additional fees are charged.

DESIGN FEE EXAMPLE FOR $15.8M PROTOTYPE ($3.3M sitework - $12.5M building)

	New	1st Reuse	2nd Reuse	3rd Reuse
Bid Cost	$15.8M	$15.8M	$15.8M	$15.8M
Building Design Fee	12.5M x .06 x .65	12.5M x .02	12.5M x .015	12.5M x .01
Site Design Fee	3.3M x .08	3.3M x .08	3.3M x .08	3.3M x .08
Permitting/Bidding/Const. Admin.	12.5M x .06 x .35	12.5M x .06 x .35	12.5M x .06 x .35	12.5M x .06 x .35
TOTAL FEE	**$1,014,000 6.4%**	**$776,500 4.9%**	**$714,000 4.5%**	**$651,500 4.1%**

2) **Design Schedule:** For a prototype reuse project, development of design is expedited up to 6 months, when relatively minor revisions are anticipated. Typically the most significant design work is related to site design. Reducing design time also saves in construction inflation, since the construction is able to proceed sooner.

3) **Construction Bid Costs:** The construction of the prototype reuse typically bids more favorably than a new design due to contractor's familiarity with the design which enables them to construct more efficiently the second or third time.

4) **Reduced Change Orders:** The reuse of a design allows "lessons learned" to be incorporated into the subsequent design. It reduces the potential change orders with a new design and the additional time to make these changes. The prototype is also a "known" entity for energy performance as opposed to a new design.