**Lessons Learned: A Symposium on School Design**
**LAUSD / USC School of Architecture / J . PAUL GETTY Trust**

**Session: 3B - Circulation:**

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**Attendees:**
John Dale
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**Goals:**
First Cost
Maintenance
Safety
Environmental Quality

**Key Issues:**
Establishing adequate corridor widths in relation to number of students
(adequate circulation versus budget and program)(ADA access)
Multi-story access issues: stairs versus elevators
Security
Primary entry spaces
Pre-class functions
Campus-wide circulation
Natural daylight versus internal corridors;
Exterior versus interior circulation: which is more beneficial and cost effective?
Energy conservation
Bridges (safety, convenience, observation)
Circulation space as part of the Learning Environment
Social space; 'hang out' spaces
Dealing with needs for open space on sites where and is at a premium.

**Constraints and Problems:**
Overly arrow interpretations by project managers. From LAUSD's point of view, changing standards to allow more flexibility is cumbersome because the project managers are charged with keeping things moving.

Programs as currently formulated do not include public lobbies or gathering spaces. The circulation allowances are too tight.

Segregation of stair circulation by grade level in multi-story schools is a burden on the circulation allowances.

Circulation patterns sometimes engender racial segregation within the schools.

Adequate circulation versus budget and program

Are State guidelines too rigid?

Exterior versus Interior circulation; double loaded versus single loaded corridors - which is more beneficial versus cost effective?

Site: land is at a premium so corridors may be further compacted for the sake of leaving more open space.

Safety issues include:
Blind corners

Main entrances adjacent to streets where young children are not protected from traffic. Outside circulation parallel to the street.

Pressure to eliminate grand gestures. Architects need to look for trade-offs in design decisions.

**Solution Types:**
Pre-design workshops. Pre-design phase should allow a design team to propose alternate concepts and to create ways of dealing with budget constraints. Concepts should be revealed which may require / permit budget adjustments

Concepts (new approaches) allowed to be catalysts for making budget adjustments.
Varying corridors with:
Light
Double height Spaces
Stairs
Nodes - break-out spaces.
Architect and Project Manger as Partners

Formulas for circulation calculations that recognize unique site costs.

Vary standards / develop flexible standards that vary with size and type of school.

Program indoor / outdoor circulation spaces so that they can be built into the budget more affectively.

Augment budgets with in-house formulae for multi-story, dense sites, etc. as a mitigation measure.

Circulation to unite versus segment: how is plan orchestrated to counteract departmentalized organization?

Creative planning solutions that reduce the need for campus-wide circulation between every class (use of classroom clusters, academic 'houses', Academies etc.)

Standards need built-in exemptions to recognize diversity of sites.

DAC as advocate for design innovation.

Get message to managers: (they need to be more visionary in their approach)
Double purpose spaces as a means of expanding the allowance for circulation.

Integration of circulation with the landscape.

Under standing how children (of different ages) use the school. Circulation must reflect that.

Defensible spaces = observed circulation.

Program, circulation spaces for different uses.

Creative planning solutions involving more clustering and less departmentalized.

Group standard classrooms near science classrooms to create 'house-like' structures. Academies / Academic houses localize circulation

Big ideas can be lost due to cost: build in future expansion

Ensure circulation spaces are overlooked by offices, counseling rooms etc..

Use stairs as program spaces, amphitheaters….

Recognize different needs for elementary, middle and high schools/

Program needs to factor in 'in between' areas

Block scheduling reduces circulation load

**Examples:**
Perkins & Will: Hollywood High School includes a 520' long corridor. Given its length, it needs relief, eddies.

The corridor system is broken up by double height spaces; stairs are used to break up length or corridor. Lack of program for pull-out space.

Spaces between buildings and stairways as hang-out spaces.

Children do not have access to elevators although building is 6 stories high.

Steve Pierce of Gonzalez Goodale Architects……..

Creating exterior node at junction of corridors - an open space oriented to central space = hang out space.

Steve Ehrlich's office designed a school that can complete itself around a courtyard over time. Ehrlich's office fought to maintain bridge level with classrooms by -providing extra height at ground floor.