Bennett
Wagner
&
Grody

Architects PC

RODWIN ARCHITECTURE

Meeting Minutes

Date: 21 May 2009
Project: Columbine Elementary School - BVSD
Meeting No: 5th- D.A.T. Meeting

1. **Don Orr updated the DAT on the request for additional funding:**

   When the District approved the original Columbine project to expand from a "remodel" to a "rebuild," additional funding from the sale of the Washington property brought the construction budget up to $9.4 million. (This is enough to fund a 3-round K-5 program of approximately 59,000 GSF.)

   Responding to the DAT's desire to keep the Columbine program as a 4-round program with Pre-K, the proposed school grew to 68,000 GSF, with subsequent additional funding needs of about $1.5 – 2 million.

   Don submitted a request to CBOC for an additional $1.5 – 2 million out of additional monies available after the Bond Sale; after much discussion, the CBOC approved the request on a 9-3 vote.

   The BOE, however, struggled with the idea of disbursement of these additional Bond funds without an established process; Don Orr withdrew his request for funding from the BOE and will establish the disbursement process over the next few months.

   In the meantime, the DAT was asked to consider two options: (1) Stop at the end of SD's and postpone the project for one year *OR* (2) proceed with the design of the approved 3-track school with the full 4-track school as an alternate. Discussion on the pro's and con's of these two options included concern about future inflation, loss of project momentum, affect of the lagging curriculum visioning process and principal selection. Reasons to delay were, given the turmoil in the past 6 months, everything feels "rushed", delay would give everyone time to "breathe"; it would help the architects design the building. The DAT voted to continue with the design of the 3-track school with the full 4-track school as an alternate. The vote was 15 members in favor of Option 1, 1 member in favor of Option 2.

2. **Presentation of the perspective views of the proposed 4-track school: (to be posted on the website)**

   The view from the Northeast shows the impact of the 2-story wing from Glenwood, with existing trees/soccer field in the foreground and the flatirons in the background.

   The view from the East shows the ends of the cafeteria/gym wing and the 2-story wing from the corner of Forest and 22nd, with the bike path connection in the foreground and the mountains in the background.

   The view from the West shows the front of the proposed school; existing trees to remain are not shown in order to see the complete elevation of the school, heights, materials, and window patterns.

3. **Presentation of the Floor Plans: (to be posted on the website)**

   Changes to the previous Floor Plans include shortening the building in the east-west dimension in order to keep the new construction outside of the footprint of the existing building, while at the same time keeping as much space as possible for the north-south connection between the park and the playgrounds. This change increased the building in the north-south dimension.

1301 Wazee Street
Suite 100
Denver . Colorado
80204

303.623.7323
FAX 303.623.2836

The basic 3-track option would eliminate the 6 classroom (3/floor) at the east end of the 2-story wing, and shift 1st grade to the Kindergarten wing.
Request from a member to show heights of buildings (dimensions) on the elevations on the website.

Site Plan Review: (to be posted on the website)

Major adjustment from the last iteration included the extension of the drop-off drive toward the front door to the east, as the building has shifted to the east. There was much discussion regarding the increased paved surface area (beyond the existing conditions) in the new design.

The new drop-off drive replaces the currently unsafe existing condition where student drop-off occurs in Repplier Street. The traffic engineer has suggested 200' of student "drop-off" area. It was agreed, however, to reduce the "trombone" end of the drive, in order to reduce the amount of pavement, and to strengthen the connection between the park and the playground. The traffic engineer believed that an unsafe condition exists now with drop off on Repplier but the rebuttal was given that no incidents had occurred.

(**SUSBSEQUENT NOTE:** There was a concerned comment that the "open space" of the proposed new site has been drastically reduced from 2/3 of the existing site to 1/3 "open space" in the proposed design. Subsequent calculations show:

	Existing	**Proposed**
Building Footprint	58,780 sf Incl enclosed courtyd	54,086 sf incl courtyard stage
Asphalt (cars)	23,164 sf No drives, only parking	41,252 sf incl new drives and parking
Asphalt (play)	5,184 sf	14,178 sf
Totals	87,128 sf 20% of 10 acre site	109,516 sf 25.1% of 10 acre site

Neither calculation includes the concrete walks throughout the site.)

There was also a comment that the increase of parking doesn't reflect the values of the neighborhood that the school be designed as a walk in, bike to school rather than heavy use of automobiles. Rebuttal from Tom B that the traffic report doesn't support this, that drive-in traffic is heavy. Request was made that the traffic report be put on the website.

4. Landscape Concept Plan Summary (drawing posted on the website)

There are two kinds of walks: concrete and crusher fines.
There are two kinds of planting: formal and informal, with "meeting trees" @ the entry.
Eco play area
Playgrounds for PK, Kindergarten/1st/2nd, 3rd/4th/5th, and a swing pit.
Intent is to re-use existing trees and play equipment.
Intent is to have water-efficient planting plan, and to minimize blue grass.

Soccer field is shown at elementary school size (70%); DAT prefers current field size (80%).
Outdoor amphitheater @ west side.
Comment: Get rid of goatheads!
Comment: Biodiversity and permaculture planting @ natural spaces is preferred.
Courtyard between building wings with stage.
Community gardens to support "garden to table" program.

- Comment was made about possibly planting fruit trees along the path. Rebuttal by teacher is that this could cause problems with students.

Comment: replace trees removed recently north of existing parking lot.
There was a concern expressed that the site appeared too "filled," and that the site design had been developed too quickly without enough input. It was put to a vote of the DAT to (1) re-visit the site plan design: or (2) continue with the site design and shorten the drop off loop. The vote was 14 members in favor of Option 1, 2 members in favor of Option 2.
Question was asked if the stand of cottonwood trees directly to the east of the existing school would be removed, answer was yes, these must be taken out to make room for the new building.
Question was asked how long the current loop as shown is, answer was about 750 feet, auto queuing was about 300 feet; traffic engineer said about 350 feet would be desirable.

5. Sustainability Strategies (Summary):

- Not applying for 3rd party certification, but following LEED for Schools v3.0
- Focus is on energy efficiency, indoor environmental quality and resource conservation
- Searching for the most cost-effective solutions

Energy Efficiency

- Targeting 30% better than code (ASHRAE 90.1-2004)
- Passive Solar
- High performance envelope
- High efficiency mechanical and electrical systems
- Energy modeling and Commissioning
- Renewable energy

Passive Solar

- East/West primary axis
- Windows to North and South
- External shading devices
- Properly sized overhangs
- Window tuning - SHGC
- Thermal mass/absorber

High Performance Envelope

- Continuous envelope with no thermal breaks
- Extra insulation
- Walls R-30; Roof R-40
- Spray foam, cellulose and rigid insulation
- High performance windows (max. U-0.30)

High Efficiency Mechanical Systems

- Multiple HVAC options being considered
- Recommended: VAV w/ overhead distribution
- Energy saving system strategies:

- High efficiency condensing hot water boilers
- Indirect evaporative cooling
- Heat recovery from building exhaust
- Variable speed pumping, variable air volume control on the air systems
- High efficiency domestic water heaters (condensing type)
- High efficiency air-cooled water chiller
- White TPO roof to minimize "heat island effect" cooling loads
- Alternative options being considered
- Conventional VAV with Overhead Air Distribution, perimeter heat:
- VAV with Displacement Ventilation and perimeter heat
- Four Pipe Fan Coil with Dedicated Ventilation Units (outside air)
- Chilled Beam
- Radiant Floor Heating

High Efficiency Electrical Systems

- T5 and high efficiency fluorescent lighting throughout
- LED lights considered, but costly
- Multiple options
- Occupancy sensors
- Andover Energy Management & night-time "Lights off"
- Day-light harvesting
- Dual switched, stepped or dimmable ballasts
- Photo sensors

Energy Modeling and Commissioning

- Include energy modeling to optimize design – seeking Xcel grant
- Perform Fundamental systems commissioning to ensure that performance meets design intention
- HVAC & R, lighting and day-lighting, domestic hot water, renewable energy

Renewable Energy

- Photovoltaics (solar PV) - 10kW considered, but first cost is an issue; seeking grants
- Will pre-wire & allocate space for future installation
- Solar hot water - BVSD maintenance issue
- Geothermal - cost prohibitive
- Wind - 60 ft. tower; poor wind zone
- Possible purchase of Wind energy from Xcel

Indoor Environmental Quality

- Indoor air quality
- Minimize VOC's and toxins in all building products
- Increase outdoor air by 30% vs. code
- Operable windows
- Utilize EPA's Design Tools for Schools
- comprehensive program for preventing mold
- Construction IAQ Management plan
- Flush out period
- Optimized Natural day-lighting
- North/South windows for most classrooms
- Day-light in 100% of classrooms

- Solar shading devices to reduce glare
- Louvers or light shelves to bring light deeper into rooms
- Suntubes or Kalwall skylights to bring light into interior spaces
- Increased comfort and individual controls
- Classrooms and offices to have individual controls for lighting & HVAC
- All spaces will be modeled for thermal comfort
- Superior acoustical performance
- Achieve a maximum background noise Level 1 from HVAC systems in classrooms and other core learning spaces of 45 dBA.
- Design classrooms and other core learning spaces to include sufficient sound-absorptive finishes for compliance with ANSI Standard S12.60-2002, Acoustical Performance Criteria, Design Requirements and Guidelines for Schools.
- Noise Reduction Coefficient (NRC) of 0.70 or higher

Resource Conservation

- Water conservation
- Targeting ~40% reduction in overall water use vs. code
- Low flow faucets, toilets, appliances, kitchen equipment
- Waterless urinals
- Investigating grey-water
- Rooftop rainwater diversion into planting beds
- Use of Xeric and drought-tolerant plants; efficient irrigation
- Maximizing permeable surfaces
- Preservation of existing trees- requires no new irrigation
- Environmentally Preferable Materials
- Select materials that:
- include recycled content
- are recyclable
- are rapidly renewable
- are non-toxic
- are durable
- are local (extracted, harvested, processed and/or manufactured within a 500 mile radius)

Examples of a few specific products that may be considered include: Cradle-to-cradle carpeting, recycled ceiling tiles, min. 25% fly ash in concrete, local brick, cork flooring, recycled cellulose insulation and engineered lumber

- Site Protection
- Protection of existing trees, open space and views
- Utilize Xeriscape & Permaculture landscape
- Maintain or enhance existing stormwater quality and quantity
- Conservation of topsoil
- Balance cut and fill
- Dark skies lighting - Minimize light pollution
- Greenhouse Gas Reduction
- Dramatic reduction in utility costs and associated GHG vs. current school
- Minimize refrigerants in HVAC that contribute to global warming

- Site design to promote alternative transportation (pathways, bike racks, improved crossings, plug-in hybrid charging, no increase in parking for larger future student population)
- Future inclusion of PV to replace coal-fired electricity
- Waste Reduction, Deconstruction, and Construction Recycling
- Deconstruction rather than demolition of existing school
- Targeting min. 50% landfill diversion
- Re-use of some existing furniture
- Construction waste recycling on new school
- Targeting min. 50% landfill diversion
- Design includes convenient recycling facilities

School as a Teaching Tool

- Digital interface for observing building performance
- Learning Landscape Nature Walk
- Garden to Table
- Alternative modes of transport program
- Greenstar program; recycling and composting
- Creation of sustainability curriculum
- Sustainable Community
- Enhanced site and facilities for shared neighborhood use
- Improved playgrounds, pathways, fields, media center & gym
- Improved traffic patterns on Repplier
- Safer student drop-off/pick-up
- Future day-care addition planned (Phase 2)

6. Next Step: The Schematic Design Report will be posted on the Website for DAT Review. DAT to submit comments by June 23rd.

7. Next Meeting (final to review comments with DAT) is June 30th.