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Lighting/Electrical

Rosegarden Branch Library, San Jose, CA
Spring 2004

Construction Management Breadth

Cost Analysis

The San Jose Public Library is a project that has been on hold because of funding for several years. This cost analysis will help reduce the initial costs and maintenance cost of the library by changing the flooring system. The new system will reduce costs in order to make it a more feasible project to fund.

Aesthetics – The vision of this task is to create a cost effective yet aesthetically pleasing environment for library visitors. This was done by selecting the Vinyl composition tile as the material of choice. This material comes in a variety of colors and it is also easy to install.

Acoustics – The redesign of the interior flooring has to take into consideration the parking garage that is located below the library. Library visitors will expect quiet conditions inside the library, therefore the material must contain similar soundproofing capacity like the system in place.

Mold – Climate data for San Jose shows that this area is warm and humid. These conditions can create a potential mold problem within buildings. The San Jose Library contains a great amount of books. These books if wet can create a potential mold threat. The current carpeting system will help propagate the mold more quickly than the

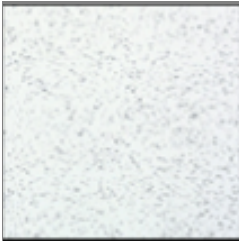


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proposed systems. A large percentage of glazing in the building also creates a potential for water infiltration and mold.

Current System: The current system in place in the library is a 32 oz Nylon Plush carpet. This carpet contains circular patterns to match the building theme. This carpet needs to be custom ordered which can add significant costs to the project.



Selected tile Courtesy of
www.congoleum.com

Proposed System: In order to address this problem, a proposed resilient flooring system is suggested. The resilient floor system selected is a vinyl 12" x 12" solid colored system. Because the tiles are relatively small, they can be arranged in sequences that can create patterns. This can be done without having to custom order the tiles, and without significantly increasing the installation time. The following charts show some of the pros and cons of the original system and the proposed system:

Resilient Flooring

| Pros | Cons |
|---------------------------------|-------------------------------|
| Cheaper | Lengthier installation |
| Can be replaced on a tile basis | Requires more quality control |
| Greater Durability | |
| Replacement tiles easily stored | |
| Waterproof | |
| Cleaned in house | |



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Carpeting

| Pros | Cons |
|----------------------|-------------------------|
| Quicker to install | Expensive to clean |
| Installed from rolls | Can obtain water damage |
| | Harder to replace |
| | Allergens |

Key notes:

Resilient floors are shown to be cheaper, but they take longer time to install and require a higher standard of quality control. In the San Jose Public Library the elevated slab would require scraping in order to prevent irregularities which could cause the tiles to rise. Also, they require underlayment panels over the surface.

Estimate:

| Floor Cover | Area | Cost/ SF | Daily output | Cost | Installation Days |
|--------------------|-------|----------|--------------|----------|-------------------|
| Resilient Flooring | 16288 | 2.45 | 500 | \$39,906 | 33 |
| | | | | | |
| Carpeting | 16288 | 3.49 | 630 | \$56,845 | 26 |

Location Factor 1.19

| | |
|----------------------|--------------------|
| Total Cost Resilient | \$47,487.66 |
| Total Cost Carpeting | \$67,645.69 |
| Difference | \$20,158.03 |

By looking at the estimate we can determine that resilient flooring gives the library considerable savings. These savings are also in the lifetime of the flooring system. Carpeting requires deep cleaning at a minimum of once a year. The cost of cleaning would be approximately \$3,295 . Carpeting can also store allergens which could make



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the environment less enjoyable for patrons. Vinyl flooring is designed to be highly durable therefore the cleaning can be done mostly in house.

References:

Website:www.congoleum.com

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