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Different interior surfaces have different requirements for appearance, durability, and cost-effectiveness. Selecting and specifying the right surface materials to suit those different conditions helps achieve quality projects and happy clients.

Specifying the Right Surface Material

Selecting between different laminated or veneer products depends primarily on the project conditions

Sponsored by Wilsonart | By Peter J. Arsenault, FAIA, NCARB, LEED AP

Finished surfaces in building interiors can be treated in a variety of ways. In any given project, or across different projects, several different surface types may be warranted, based on differing design and performance needs in different rooms, spaces, or applications. Recognizing such a diverse need, this course looks at some common surface options including high pressure laminate (HPL), thermo-fused laminate (TFL), wood veneer, and vinyl surfacing. Some specific attributes of each are reviewed and compared to help the design professional discern which products are the most appropriate choice for different applications and projects. At

the same time, some of the limitations that some choices may pose in other applications are identified. The goal is to be able to select and specify the most appropriate interior surface materials for a wide range of project types.

SURFACE MATERIAL SELECTION CRITERIA

Building interiors of all types are usually designed to meet a variety of user program requirements and often need to address the needs of a lot of different people. The surface materials used in such interior spaces similarly need to meet multiple criteria in support of the overall project requirements. Such surfaces include walls, partitions, counters,

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Learning Objectives

After reading this article, you should be able to:

1. Identify and recognize the needs of interior surfaces related to design, performance, cost-effectiveness, and sustainability.
2. Investigate the differences between different surface materials, particularly laminated products such as HPL and TFL.
3. Assess the suitability of HPL and TFL compared to other options such as wood veneers and vinyl surfacing for appropriate applications.
4. Explore how different surface materials are used through examples demonstrated in project case studies.

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cabinetry, wall and ceiling accents, doors, and any other designer surface within a building interior. As the first, and most visible, material that is seen and experienced by building users, the criteria that become prioritized during design include the following:

- **Design Flexibility:** Any selected interior building surface material is intended to be part of an overall design scheme. As such, choices need to be available that are consistent with that design scheme. A particular surface material may not even be considered if it is not available in a style, color, pattern, texture, or other attribute that is not consistent with the overall design. Hence, it becomes important to seek out materials that have the right options and choices to be able to find attributes that support the design. That could mean finding materials or products that have the right surface looks or appearance, or it could mean that they come in the right size and shape to be readily worked into a design. Flexibility and variability are important in this case, but so is compatibility. Very often, a single interior space requires more than one material, so a complete palette of choices between different materials is selected. That can include different materials for different surfaces or different types of materials suitable for floors, furnishings, etc. In this case, the end result is one of compatible colors, patterns, and textures that work together to create a unified, holistic design.
- **Predictable Performance:** Building owners and users may find that the surface materials in an interior design look great on the first day of operation, but the question then becomes, How will it look over time? Different materials have different levels of durability, which make some better suited for certain situations than others. The most common differentiator is to determine if the material is being used on a horizontal surface or a vertical surface. Horizontal surfaces are usually subject to having things placed on them, such that act as a display shelf, bench, or ledge. That makes them subject to wear from repeated use and potential scratching or damage from sharp objects. Countertops need to withstand even more usage requirements since they may be subject to harsher and more demanding use. Vertical surfaces, on the other hand, are not routinely subjected



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Horizontal and vertical surfaces can have different performance needs that can require consideration of a range of surface materials.

to the same rigors of wear use, hence they can often be covered with a less durable material quite satisfactorily. The exception is in buildings where vertical walls or corners are subject to damage from the passage or transport of equipment, carts, luggage, etc. In those cases, selected areas may need to be reinforced and protected.

Beyond the horizontal and vertical distinctions, the type of indoor environment becomes a performance consideration. If a space is subject to intense daylight, then protection against color fading becomes important. If intense cleaning is anticipated for hygiene or use requirements, then resistance to chemicals and cleaners is important. Any other special needs for a project will similarly play into the selection of a surface material so that it will indeed continue to look good and perform as intended for an extended period of time.

- **Sustainability:** Virtually every part of the design and construction industry has been heavily immersed for the past 20 years or so in making buildings, and building products, more sustainable. That includes interior surface materials, which are scrutinized for their impacts both on the natural environment and on people. That scrutiny and assessment is

applied throughout the entire life cycle of those materials, from sourcing their raw materials through manufacturing, transporting to distribution networks, installation in a building, and ultimately their removal and reuse or disposal.

Contained within that life-cycle process is the embodied energy used to accomplish all of those tasks, which often represents the embodied carbon that contributes to environmental degradation. There are many third party, independent assessment and rating systems available to help designers ascertain the sustainability of a product or material. It is incumbent upon the manufacturers not only to have their products tested for such sustainability attributes, but also to transparently report those so design professionals are able to compare products fairly. The goal is to select products that do little or no harm to either the natural environment or to the people who occupy the interior spaces where those products are installed.

- **Cost-effectiveness:** Every building project has a budget, and every material choice comes with a cost implication. Some surface materials are more costly than others to purchase, but some may involve more labor cost. Others may be less expensive up front but may not

last as long and need to be replaced more often than others. Matching the right material in terms of design and performance against its relative cost can ultimately be a matter of balance. If there is the need for a high-performance, more costly material, but only a small area that it is being installed, then the budget implication may be minimal. However, if there is a large surface area, particularly with less demanding requirements, it will be more prudent to pick a less costly material so that enough budget remains to meet the needs of other areas. It becomes significant, then, to have at least a relative awareness of the cost of different materials in order to compare and make final decisions.

- **Construction Availability:** A material selection may look great during the design phase of a project, but if it isn't readily available during construction, there will be a need to consider a substitution or reselection. Sometimes, the availability is dependent on the nature of the material or the specific type. Some are manufactured and distributed across the country, with ready inventories waiting to be used. Others require custom production, which can mean long lead times or minimum quantity orders. Still others may have been available for a time, but a change in manufacturer offerings means it has been discontinued or replaced with something else. While all of these things can't always be known ahead of time, particularly when projects can be in the design phase

for a year or more, a basic sense of the general availability of different types of materials can be helpful in making final selections.

Clearly, not all surface materials are equal – they each bring different attributes that need to be understood so that the best choice is made for each application. Ricky Crow, a vice president with Wilsonart, observes this regularly and points out, “Selecting the right surface for each application is the most important choice a designer can make to ensure that they meet their customer’s needs. It is important for designers to understand the differences in the performance of decorative surfacing materials so that they can make the right choices to balance looks, performance, and cost. Sometimes, what seems to be a small savings now can have huge cost implications in the future.”

Therefore, with all of the above in mind, different surface materials are reviewed in detail in the following sections.

HIGH-PRESSURE LAMINATE (HPL)

The most versatile and perhaps most widely used surfacing material discussed in this course is high-pressure laminate (HPL). This is a thin material made from laminated layers of a kraft paper core, a decorative sheet layer, and a wear-resistant overlay. The core paper is treated with phenolic resin to provide a suitable base. On top of the core, a decorative paper is added to provide a pattern, wood-grain look, or solid color for a sheet. Finally, overlay paper, saturated with melamine resin, gives HPL its surface strength and scratch resistance. The entire assembly is processed under pressure and heat to form a range of HPL products with different appearance and performance levels.

HPL has been used quite successfully for a broad range of both vertical and horizontal applications in commercial, institutional, and residential building interiors. It is commonly applied to a solid substrate and used for wall panels, furniture, cabinetry, countertops, doors, etc. A review of its attributes finds the following:

- **Design:** Manufacturers take pride in offering an artistic range of HPL panels that is in keeping with the latest interior design trends and preferences. Entire categories are available from manufacturers including a full range of solid colors and a wide variety of geometric and nature-inspired patterns. There are also

full libraries of HPL that provide the appearance of other materials such as wood grain patterns or natural stone. HPL panel color and appearance is determined primarily by the selection of the decorative layer on the panels. Hence, manufacturers can readily offer a full range of choices in a broad color spectrum by using a different decorative layer. There are also a variety of textures that can be created during the manufacturing process – gloss, matte, and even raised 3D textures. That allows panels to be used on walls, ceilings, doors, counters, cabinetry, and other applications with the best color, appearance, and texture to suit each individual use. For specific project needs, products can be customizable with edge and specialty feature options as desired.

The multiple panel sizes available for certain types of HPL allows for the efficient integration of the HPL panels into architectural and interior designs with greater control over seams, geometric patterns, and final appearance. Further, since the material can be easily cut in a fabrication shop or on site with common carpentry tools, custom sizes and shapes are easy to achieve. In those cases, the most efficient and economical size can be selected to cut multiple custom shapes to minimize waste.

- **Performance:** HPL is a highly durable product suitable for high-use vertical surfaces and demanding horizontal surfaces including countertops. That is because it is an engineered product that outperforms other traditional veneer products in terms of wear, scratch and scuff resistance and impact resistance. At least one manufacturer offers a special treatment which provides enhanced scratch resistance beyond the industry standard. Additionally, HPL will not discolor over time and is able to withstand a high level of disinfection without any visual change.

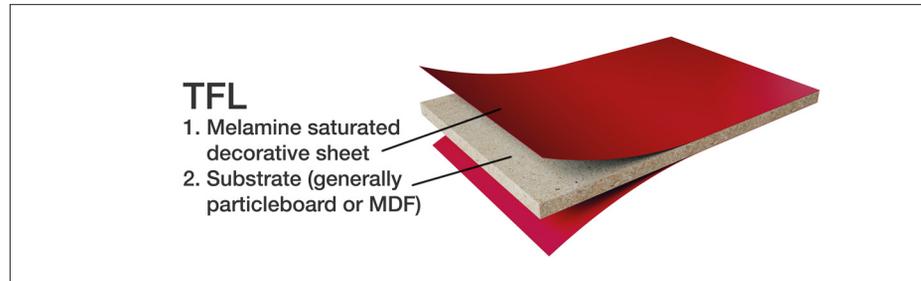
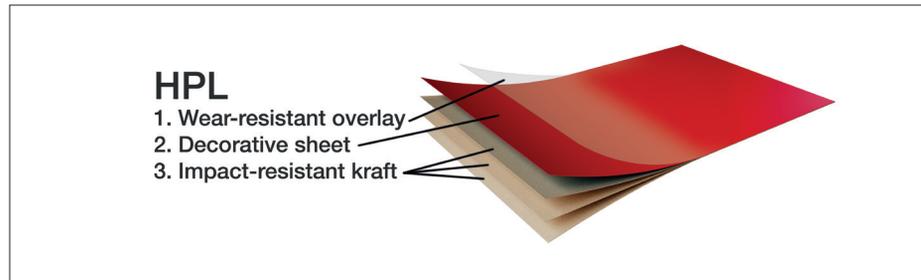
Where projects require special needs for even more demanding use, different surface options are available, such as high-wear tolerance, fingerprint resistance, chemical resistance, or fire resistance, etc. HPL can be specified to meet the specific needs of a facility. It is regarded as a very easy to maintain surface material because it's easy to clean, durable, and requires no sealing. HPL is a nonporous surface that can withstand frequent and harsh cleaning and disinfection

Photo courtesy of Yuzhu Zheng Photography



High-pressure laminate can be used to help create sustainable, healthy indoor environments that improve hygiene and wellness.

Images courtesy of Wilsonart



High-pressure laminate (HPL) is made from multiple layers of different materials that are pressed and heated under high pressure to create a versatile and durable surface material. Thermo-fused laminate (TFL) uses a thicker core material that is covered with a decorative sheet on both sides.

protocols. From an indoor environmental quality perspective, the ability of HPL to be cleaned and disinfected effectively and easily is an important advantage, particularly in the era of COVID and other public health concerns.

- **Sustainability:** HPL is manufactured, installed, and used in buildings in a very sustainable manner. At the outset, most HPL contains some percentage of post-consumer recycled content, reducing the impact on forests for kraft paper materials. When fresh raw material is needed, most HPL uses paper stock that comes from sustainably managed forests. As a substitute for wood finishes, due to the printing and finish technology, HPL can replicate the look of exotic or endangered woods and reduce the impact on those tree species. It will typically last longer than other traditional surface materials veneers due to its superior performance, thus extending its life cycle and reducing the need for new materials in the future.
- **HPL Sustainability Standards:** The sustainability of HPL has been independently assessed, tested, and certified in a variety of ways including the following:
 - Environmental Product Declarations (EPD) are an independently verified

and registered document that communicates transparent and comparable information about a product's life-cycle environmental impact. Currently an industry-wide EPD is available for HPL products and shows favorable results for sustainability in all categories.

- The Forest Stewardship Council is an independent, non-government, not-for-profit organization established to promote responsible forest management practices. FSC Chain-of-Custody (CoC) certification traces the path of products from forests through the supply chain, verifying that FSC-certified material is identified or kept separated from non-certified material. Since HPL is made up primarily of forestry-based paper products (typically up to 70 percent in the core, decorative, and overlay papers), manufacturers can choose to use FSC certified raw materials by working with their suppliers on proper sourcing.
- The Health Product Declaration Open Standard is a standard specification for the accurate, reliable, and consistent reporting of product contents and associated health information for products used in the built environment. The HPD Open Standard specification is harmonized with numerous rating

certification standards in the building industry. HPD version 2.2 is the current version that has been used to demonstrate minimal, if any, health impacts from using standard laminate products in building interiors.

- Products that achieve GREENGUARD Certification are scientifically proven to meet some of the world's most rigorous third-party chemical emissions standards, helping to reduce indoor air pollution and the risk of chemical exposure, while aiding in the creation of healthier indoor environments. The GREENGUARD Gold Certification standard includes health-based criteria for additional chemicals and also requires lower total VOC emissions levels to help ensure that products are acceptable for use in environments like schools and healthcare facilities. Manufactured HPL products have been tested using these rigorous standards and some are available with GREENGUARD Gold certification.
- SCS Indoor Advantage Gold Certification indicates low VOC emissions with the most transparent indoor air quality (IAQ) standard for furniture and building materials. It is recognized by the EPA and GSA and qualifies for many green building rating systems, including LEED v4, BREEAM, WELL Building, and Living Building Challenge. Some HPL products have been tested and certified based on this program.
- At least one manufacturer offers a DECLARE Label for Red List Approved ingredients under the Living Building Challenge, a program of the International Living Future Institute.
- Because of the inherent sustainability properties of the material, HPL often contributes to buildings that are seeking LEED, WELL, and Living Building Challenge certifications.
- **Cost-effectiveness:** Since there are multiple product categories of HPL available, the most appropriate choices can be made to match a project budget. Compared to other veneer type of products, such as traditional wood, HPL typically costs less – even more so when comparing it with exotic wood species. Due to the advancement in printing and finish technologies, HPL is continuing to offer more cost-competitive and environmentally friendly solutions to real wood veneer.
- **Construction availability:** Since HPL is so

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PERFORMANCE		
	HPL	TFL
IMPACT RESISTANCE	●	◐
WEAR RESISTANCE	●	◐
STAIN RESISTANCE	●	●
SCRATCH RESISTANCE	●	◐
POSTFORMABLE	Yes	No; Flat pan only

APPLICATIONS		
	HPL	TFL
CABINET DOORS/DRAWERS	✓	✓
FIXTURES	✓	✓
SHELVES	✓	✓
TABLES/WORKTOPS	✓	
CABINET BOXES		✓
ARCHITECTURAL DOORS	✓	
WALLS/WAINSCOTING	✓	

HPL & TFL Comparison					
Features	Benefit	HPL	TFL	Wilsonart® HPL	Wilsonart® TFL
HPL/TFL Finish Match	Allows matching of HPL/TFL on same component	Exact match not available		Best quality match of design and texture	
Design Availability	Wide variety of design choices available	Better	Good	Best	Better
Scratch/Wear Resistance	Built-in durability resists scratches and scuffs for long-lasting beauty	Better	Good	Best	Good
Impact Resistance	Built-in durability prevents damages caused by impact	Better	Good	Better	Good
Local Stocked Inventory	Inventory available for reliable and quick delivery	Better	Good	Best	Good
Order Minimums	Various order minimums allows flexibility for different products and cost savings	1 Sheet	20 Sheets	1 Sheet	20-50 Panels
Shipping Costs	Lower freight costs and shorter lead times	Better	Good	Best	Good
Sheet Sizes	Wide variety of standard and custom sheet sizes available	✓	✓	✓	✓
Surface Textures	Wide variety of surface textures: smooth, gloss, embossed	✓	✓	✓	✓
Stain/Chemical Resistance	Withstands ordinary household chemicals: alcohol, grease, polish remover	Better	Good	Better	Better
Design Consistency	Sheets are consistent from batch to batch	✓	✓	✓	✓
Specialty Applications	High wear resistance, high impact resistance, chemical resistance availability	Better	N/A	Best	N/A

Thermo-fused laminate (TFL) has different performance characteristics than HPL, making it better suited to certain applications compared to others.

widely used, it is generally readily available and on the shelves in many retail and wholesale locations around the country. This means that even small order or single sheet needs can likely be met without too much difficulty all around the country.

Overall, given its generally positive attributes, HPL is a preferred, “go-to” surface material for many building situations.

THERMO-FUSED LAMINATE (TFL)

Another widely used surfacing material is

Thermo-Fused Laminate (TFL). This is a decorative product suitable primarily for vertical applications that is typically offered as a fabricated panel on the order of ½ inch thick or more. It is fabricated by using a core substrate such as particleboard or medium density fiberboard (MDF) or other available options. Then, a melamine saturated decorative sheet is applied to both sides of the core.

TFL is suitable for appropriate uses in many residential and commercial applications, however, it is different than HPL in several ways. First it is a prebonded panel

that is not usually adhered to an additional substrate – it is commonly used for cabinet doors, panels, etc. Second, it does not have the same durability as HPL and is only suitable for many less-demanding uses such as vertical surfaces. TFL can often be combined with HPL in the same spaces with coordinated appearances if the two products are from the same manufacturer. TFL is also inherently stain- and moisture-resistant, making it easy to clean and disinfect.

Since TFL is made available as a manufactured panel, the substrate portion of the panel can be specified to suit particular uses or project needs. Some of the common choices include the following:

- Particleboard is an economical choice that is suitable for furniture, underlayment, TFL wall panels, and HPL countertops.
- Medium-density fiberboard is used for decorative finishes and joinery applications like interior cabinetry and wall and ceiling panels.
- Moisture-resistant fiberboard allows designers to access the benefits of medium-density fiberboard with the added protection of moisture resistance.
- Fire-rated fiberboard is medium-density fiberboard that is specifically manufactured to include flame retardants and prevent flame spread.
- Low VOC products are available as a sustainable substrate for eco-friendly design features with no added formaldehyde.
- FSC-certified substrates are available upon request from some manufacturers.

TFL panels are generally available in 4- and 5-foot widths and in standard lengths of 6, 8, 9, 10, and 12 feet. The edges of the panels can be treated with a separate edgeband material that may be selected to match the surface of the panels or to contrast with it. Many different choices are available and should be confirmed with manufacturers. For added impact resistance along the edge of panels, doors, and surfaces, a thicker edgeband can be specified instead of a more standard thinner one.

Further distinctions about TFL and its most appropriate uses are discussed further as follows:

- **Design:** TFL surfaces are available in different colors, appearances, and textures including wood grain, although the range of choices are not as broad as

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HPL CASE STUDY



Project: Grow Office

Location: Norfolk, Virginia

Design Firms: Work Program Architects with Campfire & Co., Richmond, Virginia

Interior Designer: Christina Kern and Rachel Howlett

The Project: Grow is a digital agency that creates experiences for some of the world's most beloved brands, including Google, Adidas, and Spotify. Their new workspace is a tenant upfit design within the larger multi-tenant creative office building.

The Design: With a delicate balance of modern and classic details, the interior design of Grow's office space is intended to be an extension of their brand culture and values. Muted colors, minimal patterns, and relaxed furniture combine with functional and flexible spaces to create a casual environment for producing award-winning work. A collection of muted colors in moss green, navy, and terracotta complements a foundation of black, white, and wood tones. Additional low-sheen finishes like leather, tweed, wool, and tile pair with minimal patterns to create a thoughtful representation of Grow's humanistic brand and subtle but purposeful design approach.

The Performance: Durability, quality, and believability were key for the performance of the interior surface materials. For HPL-covered cabinetry, the designers loved the super-matte finish and its reduction of fingerprints. For other areas where the HPL was selected because of its wood look, the grain and color looked like authentic wood. That was a major selling point in terms of believability of the material. In the kitchen area, a quartz countertop displayed depth and veining, which especially looks like natural stone. The combination of the wood laminate with the quartz looks great on the island and works well with the other finishes in the space.

The Results: The new space is bright and airy, simple, and handsome, creative and inspiring. Every detail is intentional and functional as well as comfortable and inviting.

for HPL. Since some manufacturers make both materials, TFL can be coordinated with HPL from the same manufacturer for visual coordination in a project or interior space. That allows designers to choose the best material for different applications in a single space or within the same building and still achieve the desired appearance. The panels can be fabricated with standard edge conditions and panel options to complete the overall design look.

- **Performance:** The decorative layers of TFL provide inherent standard stain and moisture resistance, which also makes it easy to clean and disinfect. However, there is a misconception or misunderstanding that HPL and TFL are equivalent product solutions in terms of

performance. In fact, some marketing messages are contributing to the confusion by suggesting or promoting TFL as equal to HPL, but that is not usually accurate. Therefore, it is always best to check manufacturers technical literature and review independent test results for the materials. As noted, the difference in performance makes TFL better suited only for certain applications.

- **Sustainability:** TFL sustainability is dependent on the substrate material even more so than the surface covering. Depending on the supplier and makeup of the substrate there may or may not be any recycled content or certification. The finished, decorative surfaces may meet some sustainability standards such as UL GREENGUARD Gold Certified

for low chemical emissions. Many of the sustainability certifications available for HPL may or may not be available for TFL products, therefore verification of this point is needed by manufacturers who can provide independent testing and certification results.

- **Cost-effectiveness:** TFL is generally a more affordable product than other surface materials, both in terms of the product and the labor to create a finished panel. However, if it is not used correctly, it will need to be replaced more often than HPL covered surfaces. Note that some designers have found that TFL is being proposed as a "value engineering" alternative to HPL because of lower overall cost. However, since the performance attributes are very different between the two, designers and owners should beware of false economies or false savings if the application does not justify the change.
- **Construction Availability:** Typically, TFL products aren't produced ahead of time and warehoused. Rather, they are made for specific projects. Hence, most suppliers will require a minimum-sized order (i.e., 50 – 100 sheets) which may not make it suitable for small projects. The lead time for such an order is often three to four weeks or more but should be verified with local suppliers.

WOOD VENEER

A very traditional surface material is to use a thin, real wood veneer over a substrate. That substrate could be plywood, particle board, MDF, or other common board stock materials. Typically, thin wood veneers are cut from large logs and glued to the substrate. Such materials have the following general attributes:

- **Design:** Wood veneers are available in select range of wood species. The surface can be stained or finished in any traditional manner to achieve the desired wood look. Natural wood does vary in appearance between sheets, so that should be expected and considered as part of the overall design look.
- **Performance:** Any wood is an organic material and subject to performance limitations accordingly. Humidity can cause the wood to swell or shrink and may cause cracking as a result. Bulk water can damage or deteriorate the wood and may cause unsightly and unhealthy mold. These limitations make it most suitable

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TFL CASE STUDY



Project: Fairview Slopes Residence
Location: Vancouver, British Columbia
Designer: Madeleine Design Group

The Project: When Madeleine Design Group set out to design this Vancouver townhome, modern West Coast living was the top priority. However, achieving this vision with the available space was an immediate challenge. The existing design included sharp angles, walls that constricted natural light, and rooms that lacked cohesiveness. Remodeling in the face of these features required thoughtful consideration and the help of some new surface materials.

The Design: The Fairview Slopes Residence breathes with duality. Madeleine Design Group chose to contrast crisp white walls and cabinets with rich wood detailing in the kitchen, office space, and bathrooms. This is where thermos-fused laminate (TFL) panels became a necessary solution. The woodgrain texture of walnut TFL offered a mid-century flair, and white cabinetry was the perfect complement for on-trend simplicity. More importantly, the cohesive design was an effective method for maximizing space. The strategic placement of TFL allows for a beautifully concealed refrigerator, a fireplace that fits comfortably on a wall corner, and a bathroom cabinet system that marries storage with style. With the help of TFL, modern form and traditional function were achieved.

The Results: Walnut TFL helps the kitchen, office space, primary and secondary bathrooms at Fairview Slopes speak a uniform design language. During broad daylight, the nature-inspired glow of TFL wall panels results in an office that seldom needs indoor lighting. The resulting home features ample storage and necessary appliances yet feels more inviting and expansive due to its use of TFL. In the end, the residence was transformed into 1,200 square feet of walnut detailing, radiant sunlight, and everyday functionality.

for vertical surfaces or very light-duty horizontal surface.

- **Sustainability:** The sustainability of wood veneer is also quite dependent on the substrate material even more so than the surface veneer. Recycled content is not common nor are green product certifications, although certain suppliers may be able to provide some products that are more sustainable than others.
- **Cost-effectiveness:** Wood products for interior surfaces are generally higher priced than other options. They also typically require more maintenance to keep them looking and performing as intended.
- **Construction Availability:** The availability of wood veneer products can vary quite a bit based on project location and the quantity needed. Lead times for large orders can also vary notably.

Overall, wood veneers have some design appeal and the lure of being a natural material, but those attributes need to be weighed against the performance, cost,

and availability limitations. Further, wood veneers' sustainability and environmental impact should also be considered.

VINYL SURFACING

A light-duty alternative to veneers is vinyl surfacing. This is different from vinyl wallcoverings in that it is a thin material bonded to a solid substrate using a vacuum forming process. The vacuum forming minimizes, or even eliminates, seams and edges from the final product. Vinyl surfacing is used for walls, cabinet doors, shelving, and countertops in both vertical and horizontal applications. Some considerations related to it are as follows:

- **Design:** As with many of the other manufactured products, a range of different colors and finish types are available. These include solid colors, patterns, and simulated materials. Availability varies by manufacturer, of course, so specific color palettes and patterns should be investigated before delving into a full design.

- **Performance:** Vinyl surfacing is less durable than HPL, TFL, or other veneers meaning that it will not wear as well or retain its color as well as those other materials. It is fairly easy to clean and disinfect depending on the amount of texture present, meaning that ongoing maintenance is straightforward.
- **Sustainability:** Vinyl materials are not known for being environmentally friendly when creating it from virgin ingredients. However, vinyl surfacing can contain recycled content which reduces the need for new ingredients. It is possible to specify an amount of recycled content, but consultation with manufacturers first is warranted to ascertain what is available.
- **Cost-effectiveness:** The cost of vinyl surfacing can vary considerably between different products and different manufacturers. Therefore, it is recommended that different materials be priced out to determine which ones work within a project budget or not.
- **Construction Availability:** The

availability of vinyl surfacing varies based on the type, style, and manufacturer. Typically, suppliers will require that it be purchased in minimum-sized orders (50-100 sheets).

Vinyl surfacing is a viable option for some light-duty applications or to address specific project needs. It is not as durable as other options and may or may not have a cost advantage. Specific products should be reviewed.

CONCLUSION

Different spaces, different surfaces, and different uses warrant different materials for finishes. By understanding the differences between the available materials, design professionals can select and specify the most appropriate choices suited to the needs of their projects. Knowing how to get the most out of every vertical and horizontal surface, as well as understanding where to leverage different materials to organize a space, can help achieve the right balance between

design, performance, sustainability, cost, and availability during construction.

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Wilsonart, a world-leading engineered surfaces company, is driven by a mission to create surfaces people love, with service they can count on, delivered by people who care. The company manufactures and distributes High Pressure Laminate, Coordinated TFL and Edgeband, Quartz, Solid Surface, Epoxy, and other decorative engineered surfaces.

Photos courtesy of Wilsonart; Veronica Bean on behalf of TPG Architecture

HPL CASE STUDY 2



Project: FINRA Corporate Office

Location: Jersey City, New Jersey

Architect: TPG Architecture

The Project: When the Financial Industry Regulatory Authority (FINRA) wanted to reimagine their corporate offices in Jersey City, New Jersey, they sought out the experts at TPG Architecture to create a design and bring it to life. They envisioned a welcoming space that embraced elements of nature with a modern sensibility.

The Challenge: As a high-traffic hub, FINRA's corporate office needed to accommodate communal functions, as well as private office nooks and work zones. Given the volume of people using the space, material selection was critical to ensure ease of maintenance and cleanability without sacrificing style.

The Solution: TPG Architecture sought out durable, sleek HPL products that would help them achieve a finished office as stunning as its New York City skyline view. "For FINRA's Jersey City corporate offices, TPG set about creating a welcoming space that has a neutral warmth that recalls our natural environment," said a representative of TPG Architecture. "We selected HPL laminates with enhanced durability technology for the cabinetry and worktops in contrasting tones and subtle patterns to create a modern workplace that felt organic and inspiring."

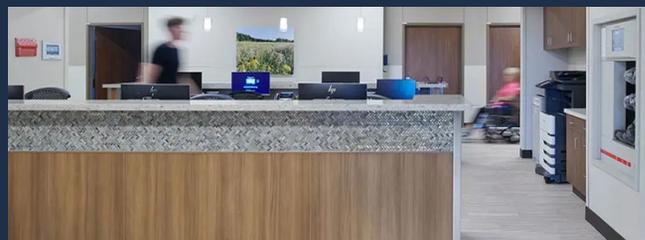
Design Attributes: A neutral palette grounded the space with a soft gold and subtle wood grain effect juxtaposed with the vertical grain bamboo design in charcoal and black tones. The combination of the two materials created a sense of coziness against a backdrop of the expansive city views.

Performance Attributes: The selected HPL with enhanced durability is dramatically more resilient than other laminates with similar finishes. Its scratch, scuff, and mar resistance ensure that even the glossy surfaces and darker tones of cabinets and worktops at FINRA's office will remain beautiful for years to come.

The Results: The final design is an inspired blend of warmth and sleek sophistication that functions as the perfect place for the FINRA corporate team to gather and focus on their critical mission of ensuring the integrity of America's financial system.

Photos courtesy of Wilsonart

HPL CASE STUDY 3



Project: Saint Luke's Rehabilitation Institute

Location: Overland Park, Kansas

Architect: ACI Boland

Interior Design: Benson Method

Construction: JE Dunn Construction

The Project: Before Saint Luke's Rehabilitation Institute in Overland Park, Kansas, was built, patients and family members would have to travel hours away to either Denver or Chicago for advanced injuries requiring specialized treatment. For many patients with long recovery times, they were forced to be away from home for months. By bringing a space with cutting-edge technology and comprehensive rehabilitative care to the Kansas City metro area, Saint Luke's Health System has been able to provide accessible, high-quality care right in its own backyard – helping more than 1,000 patients return to their optimal level of function each year.

The Design: The new 100,000-square-foot, 60-bed rehabilitation hospital includes additional inpatient rehab beds, state-of-the-art therapy spaces, flexibility to accommodate advanced robotic technology, and large windows that provide an abundance of natural light to aid patients' road to recovery. Biophilic design was a critical element of design, as it offers substantial healing benefits for patients – proven to reduce stress and help mitigate pain psychologically.

Surface Materials: Material selections were made which complemented this project, with priority criteria placed on durability and cleanability. There was also a conscious decision to use wellness-focused surfaces that enable staff to provide exceptional care and help patients feel at ease throughout their recovery. With all of that in mind, it was essential to the design team to select a classic wood-looking material and natural color that could reach across several campuses and be liked across all generations, lasting well into the new decade. The design team knew right away that high-pressure laminate in a walnut wood look was a great option to help make the transitions, ensuring it blended with current trends for new construction areas and still worked with renovations at existing campuses. "The HPL wood looks are very realistic, which allows a hospital to have a high-end look without sacrificing durability, wear and tear, and overall aesthetics," shares Ashlee Deck, AIA, NCARB, lead architect on the project. The walnut-wood-appearing HPL was used on the interior millwork and doors throughout the facility as a critical design feature in the main lobby, ground floor, patient rooms, rehab dining facility, and state-of-the-art rehab gym.

The Results: "Easy to clean and disinfect, the wood-appearing HPL with enhanced scratch- and scuff-resistant performance provides the hospital with long-lasting reliability and beauty," declares Ms. Deck. The overall natural look of the wood provides a warm and appropriate indoor design scheme to aid in healing and patient wellness.