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# White Paper: Digital Plan Review Tables

## The Shift to Digital: Understanding the Power and Benefits of Plan Review Tables in Modern Construction

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## 1. Introduction

In today's fast-paced digital world, the demand for efficient and effective tools in every industry is more pressing than ever. Among the numerous sectors experiencing significant digital transformation, the architecture, engineering, and construction (AEC) industries stand out. The move from traditional plan tables to digital plan review tables marks a significant leap in these sectors, promising a more collaborative, precise, and efficient way of reviewing and managing projects.

Sponsored by Volanti Displays, a leading innovator in display technology, this white paper aims to provide an in-depth exploration of Digital Plan Review Tables and their transformative impact on the AEC industries. By highlighting the technology's numerous benefits, its key components and functionalities, applicable sectors, and real-world use cases, we aim to paint a comprehensive picture of this powerful tool in the modern planning landscape.

Volanti Displays, known for its expertise in digital display solutions, offers a range of Digital Plan Review Tables designed to streamline project planning and management processes. With their Plan Review Tables, Tabletop Plan Review Displays, and Job Box Plan Review Displays, Volanti is revolutionizing how professionals in the AEC industries work with plans and blueprints.

This white paper seeks to inspire a deeper understanding of digital plan review tables, emphasizing their potential to reshape project planning and execution. We will delve into their adoption challenges and solutions, discuss their future prospects, and present compelling case studies.

Whether you're an architect, engineer, contractor, urban planner, or any professional involved in project planning and review, this white paper will provide valuable insights into the capabilities and benefits of Digital Plan Review Tables and how they can significantly enhance your operational efficiency and collaboration.

## 2. Background/History

The evolution of project planning and review tools over the years has been nothing short of remarkable. The journey from physical blueprints to computer-aided design (CAD) and now to

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Digital Plan Review Tables illustrates the industry's continuous pursuit of accuracy, efficiency, and collaboration.

Traditionally, architects, engineers, and construction professionals relied on large, printed blueprints. These physical plans were spread over a table for review, marking changes, and discussing project details. However, this method came with limitations, including difficulties in managing large volumes of plans, challenges in updating and sharing changes, and environmental concerns related to paper usage.

The advent of CAD software marked a significant shift in the industry. It allowed professionals to create, modify, analyze, and share their work digitally, eliminating many of the limitations of physical blueprints. However, the review and collaboration process remained challenging, often requiring printouts for group discussions or cumbersome attempts to view plans on small computer screens.

The emergence of Digital Plan Review Tables, such as those offered by Volanti Displays, marked the next significant leap in the evolution of planning tools. These digital tables combine the benefits of traditional plan tables and digital technology, providing a platform for easy review, markup, and collaboration. With large touchscreen displays, professionals can view, zoom, and annotate plans in high resolution, making the review process more efficient and effective.

Volanti Displays, recognizing the potential of this technology, has developed a series of innovative digital plan review products. With the standard Plan Review Table, Tabletop Plan Review Display, and portable Job Box Plan Review Display, Volanti has offered professionals a new and improved way to manage their projects.

The Digital Plan Review Tables are more than just a progression from physical to digital; they represent a new era of convenience, collaboration, and efficiency in project planning and management. As we continue to navigate an increasingly digital world, tools like these will play an integral role in shaping the future of the architecture, engineering, and construction industries.

### **3. Why Digital Plan Review Tables?**

Embracing digital transformation in project planning and management provides many benefits beyond the convenience of going paperless. Digital Plan Review Tables, like those offered by Volanti Displays, introduce significant improvements in efficiency, accuracy, collaboration, and cost savings. In this section, we delve into the key advantages of this innovative technology.

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### **3.1 Enhanced Efficiency**

Digital Plan Review Tables streamline the plan review process, allowing professionals to navigate, annotate, and share plans swiftly and efficiently. The touchscreen interface and high-resolution display enable seamless navigation through plans, saving time traditionally spent on manual handling and searching for specific details. Immediate updates ensure that all team members work with the most current version of the plan, eliminating potential delays and confusion.

### **3.2 Improved Accuracy**

Greater precision is another significant advantage offered by Digital Plan Review Tables. High-resolution displays allow a meticulous examination of even the minutest details of a plan, reducing errors and misinterpretations. Direct annotations on the digital plan further ensure clarity and accuracy in communication, avoiding costly mistakes.

### **3.3 Enhanced Collaboration**

Digital Plan Review Tables foster improved teamwork by offering an interactive real-time discussion and decision-making platform. Team members can simultaneously review plans, make annotations, and share insights, facilitating better communication and collaboration throughout the project lifecycle.

### **3.4 Significant Cost Savings**

Moving to a digital plan review process significantly reduces the operational costs associated with traditional methods. The elimination of printing and scanning costs, together with the reduction in paper usage, contributes to substantial savings over time. The digital format also ensures that the plans can be accessed on multiple devices, from handhelds to large screen plan review tables, providing flexibility and further enhancing efficiency.

### **3.5 Environmentally Friendly**

In addition to cost savings, reducing paper usage makes Digital Plan Review Tables a more sustainable and eco-friendly option. It reduces waste and the environmental impact of printing and disposing of large-format documents.

### **3.6 Customizable and Adaptable**

Digital Plan Review Tables, such as those from Volanti Displays, are designed to be versatile and adaptable to various workflows and project requirements. With adjustable table heights, portable solutions, and compatibility with a wide range of software applications, these tables can be tailored to meet the unique needs of each project and team.

The benefits of Digital Plan Review Tables are manifold, and their increasing adoption across the architecture, engineering, and construction industries is a testament to their transformative potential. These innovative tools are not only changing the way professionals approach project management, but they are also contributing to significant cost savings and sustainable practices.

## 4. Components and Functionality of Digital Plan Review Tables

### 4.1 Key Hardware Components

Digital Plan Review Tables incorporate a multitude of sophisticated components engineered to deliver a comprehensive, user-friendly experience:

**a. Touchscreen Interface:** The core of the Digital Plan Review Table is a large, high-resolution touchscreen display. This interactive interface allows users to engage directly with the plan, enabling easy navigation, detailed zooming, and on-screen annotations.

**b. Adjustable Table:** Volanti Displays' Digital Plan Review Tables are both height-adjustable and offer tilt-adjustment features. This flexibility caters to the ergonomic needs of users, enabling healthy work postures during prolonged review sessions and enhancing interactions with large touch screens, especially when navigating complex plans.



**c. Additional Side Monitors:** The Digital Plan Review Table model comes with the option of incorporating smaller side monitors, such as 24" displays. These additional screens extend the

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digital desktop, allowing users to view plans on the large central screen while using side displays for emails or other applications.

**d. Portable and Versatile Options:** Products like the Plan Review Job Box offer portability, enabling the advantages of Digital Plan Review Tables to be brought to any location. Additional features like lockable wheels further enhance mobility, making the tables easy to move around as needed.

**e. Added Features for Convenience:** Volanti Displays' Digital Plan Review Tables can be customized with additional features such as an integrated PC, battery backup to ensure uninterrupted work during power outages, and a side-mounted laptop tray for users to connect their own devices. These features are designed to provide convenience, flexibility, and reliability in various working conditions.



## 4.2 Important Software Features

The software used with Digital Plan Review Tables, such as the SmartUse plan viewer application, or construction applications such as Bluebeam, Procore, Stack, and others offer advanced capabilities designed to streamline project planning and review processes:

**a. File Compatibility:** As a Windows based system, the plan review table is fully compatible with software applications supporting all relevant file formats. Most plans are distributed in PDF format though there are a wide variety of CAD formats, and some applications have proprietary formats to provide enhanced features. This broad compatibility ensures that users can view and interact with various file types directly on the Digital Plan Review Table.

**b. Dynamic Collaboration Tools:** Most plan review software offers enhanced collaborative tools such as multi-user annotation, real-time sharing, and cloud connectivity. These features facilitate teamwork by allowing multiple team members to work together on the same plan, whether in the same room or remotely.

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**c. Automated Markups and Version Control:** The software streamlines the review process by enabling users to make and save markups directly on the plan. It also offers robust version control capabilities, ensuring all team members stay updated on project progress and changes.

**d. Document Management:** Beyond simple file viewing, plan review, construction management, and other relevant applications provide comprehensive document management capabilities. It allows users to organize files in a structured manner, track revisions, and access previous versions of documents. This feature facilitates project management and enhances overall efficiency.

**e. Offline Access:** Recognizing the need for access in remote locations or during internet outages, SmartUse enables offline access to documents. Any changes made offline are seamlessly synchronized once connectivity is restored.

## 5. How Digital Plan Review Tables Enhance Workflow

Digital Plan Review Tables offered by Volanti Displays bring about a paradigm shift in how architecture, engineering, and construction professionals manage their projects. By improving workflow efficiency, collaboration, accuracy, and adaptability, these tables play a pivotal role in various stages of a project, from initial costing to real-time modifications.

### 5.1 Seamless Integration with Existing Processes

Digital Plan Review Tables are designed to blend seamlessly into existing workflows. They support a wide range of file formats and offer easy organization and tracking of documents through software such as SmartUse and other industry related applications. This combination of hardware and software facilitates a smooth transition to a digital planning and review process, enhancing existing practices without requiring a complete overhaul.

### 5.2 Real-Time Collaboration and Sharing

Digital Plan Review Tables enable real-time sharing and multi-user annotation through advanced collaborative tools. Team members can work on the same plan, annotate, and share insights in real-time, regardless of location. This enhanced collaboration fast-tracks decision-making and improves communication, saving time and reducing costs.

### 5.3 Job Costing and Estimation



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The high-resolution displays and interactive capabilities of Digital Plan Review Tables facilitate detailed plan examination, which is crucial during the job costing phase. Users can zoom into minute details, make annotations, and share their inputs in real-time. This functionality leads to accurate and efficient cost estimation, a critical aspect of the quoting process.

#### **5.4 Improved Precision and Accuracy**

With the ability to make and save markups directly on plans, Digital Plan Review Tables promote accuracy in communication. These capabilities reduce the risk of misinterpretations and errors, leading to better outcomes, less rework, and cost savings.

#### **5.5 Real-Time Plan Modifications and Markups**

As a project progresses, unforeseen issues may arise that necessitate modifications to the original plan. While some users may have the ability to make these changes directly, most will likely need to communicate these proposed changes to someone with the authority to authorize or implement them. Digital Plan Review Tables facilitate this process by allowing easy, real-time annotations and markups.

Users can clearly illustrate required changes directly on the digital plan and add notes detailing the reasons for these changes. These markups are instantly visible to all team members, ensuring clear communication of proposed modifications. This capability is beneficial for efficiently addressing real-world issues that were not anticipated during the design stage and ensures that everyone is working with the most up-to-date information.

#### **5.6 Streamlined Document Management**

The SmartUse software provides robust document management capabilities, including tracking revisions, accessing previous versions of documents, and organizing files systematically. This streamlined document management enhances overall efficiency and ensures everyone works from the most recent version of a plan.

#### **5.7 Enhanced Location Flexibility**

With solutions like the Plan Review Job Box and remote communications, Digital Plan Review extends this functionality to other locations on a job site. These features provide effective collaboration, even in field locations.

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Digital Plan Review Tables enhance workflows across various project stages by integrating advanced hardware with intelligent software. They offer efficiency, collaboration, accuracy, and adaptability improvements, making them an indispensable tool in modern project management.

## 6. Case Studies

**Case Study 1 - General Contractor:** As a general contractor, digital files were typically received from clients, which were then forwarded to a nearby print shop. The preference for paper plans meant that this process was necessary, though time-consuming, requiring approximately 24 hours for the print shop to print and return the plans. This method also resulted in considerable costs. The contractor was seeking an efficient way to view and work with the plans.

The integration of a digital plan review table significantly transformed their operations. This technology enabled them to instantly access, examine, and adhere to plans obtained from clients. The immediate availability of these plans led to considerable time savings, reduced printing expenses, and improved communication with clients.

Utilizing the digital plan review table, the general contractor could engage in real-time discussions with their clients regarding plans, courtesy of the table's live markup features. This enabled more direct, interactive communication, fostering a streamlined workflow, minimizing errors, and enhancing understanding of client expectations. The contractor witnessed a notable improvement in overall project management and client satisfaction due to this implementation.

**Case Study 2 - On-Site Implementation:** A construction company adopted Digital Plan Review Tables within their on-site job trailers, marking a significant evolution in their working methodology. These digital tables offered unprecedented functionality, becoming an integral part of the setup at construction sites.

Equipped with the capacity to scrutinize and markup plans in real-time, the tables brought the office environment to the construction site. This reduced the need for constant back-and-forth communication and removed the barriers between the physical job site and the administrative hub, thus fostering seamless synergy between the two entities.

The impact of the Digital Plan Review Tables went beyond enhancing communication, playing a crucial role in strategic on-site decision-making. It provided site managers and field personnel rapid access to project blueprints, modification updates, and real-time feedback from the head office. This fluid exchange of information saved considerable time and facilitated immediate

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corrective measures, if necessary, dramatically reducing the likelihood of errors and misinterpretations.

The advantages of these changes were reflected in a decrease in expensive delays often caused by miscommunication or waiting for approval from the head office. The result was a smoother, more efficient operation with improved timelines and reduced costs. Adopting Digital Plan Review Tables marked a new era of on-site project management efficiency.

## **7. Implementing Digital Plan Review Tables in Your Workflow**

Implementing Digital Plan Review Tables in your workflow is a strategic decision that can deliver significant benefits. Here's how you can make this transition smoothly:

### **7.1 Identify Your Needs**

First, assess your current workflow and identify areas where digital plan review could bring improvements. For example, these include enhancing collaboration, speeding up the review process, improving accuracy, or facilitating real-time modifications.

### **7.2 Choose the Right Hardware**

Select the Digital Plan Review Table that suits your needs. Volanti Displays offers a variety of options, such as large touchscreen tables with different display sizes and options, tabletop touchscreen models, and portable solutions, all with high-resolution, interactive displays.

### **7.3 Integrate Appropriate Software**

Identify the software that will work best for your team. Software like SmartUse offers both intuitive ease of use as well as a wide range of features, including real-time collaboration, document management, and markup capabilities.

### **7.4 Train Your Team**

While touchscreen technology is inherently intuitive, and many users will be familiar with basic functions like planning, zooming, and drawing, effective use of Digital Plan Review Tables still requires some level of training. This is particularly true when it comes to leveraging the enhanced functions of plan review software like SmartUse.

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Even though the software is designed to be user-friendly, taking full advantage of its features may require a deeper understanding. For example, using automated markups, managing document versions, and collaborating in real-time are capabilities that can significantly improve efficiency and accuracy but may not be immediately obvious to new users.

To ensure your team can make the most of the technology, provide comprehensive training that covers both the basic and advanced features of the software. This will not only help users become more comfortable with the system but also empower them to leverage its full potential to benefit their work.

### **7.5 Monitor and Adjust**

Once implemented, monitor the new system's effectiveness and make adjustments as needed. Seek feedback from your team and look for ways to improve your workflow further.

## **8. Overcoming Potential Challenges**

Despite the numerous advantages that Digital Plan Review Tables offer, as with any technology, there can be challenges during implementation and use. Recognizing these potential hurdles and devising solutions to overcome them is a crucial part of the successful integration of this technology into your workflow.

### **8.1 Technological Adoption and Training**

One of the main challenges is getting used to a new technology and understanding its full functionality. Digital Plan Review Tables, while designed to be intuitive, have a myriad of features that may require some training to fully exploit.

Solutions: Provide comprehensive training to all users, ensuring they understand how to use the system efficiently and are familiar with all the functionalities it offers. Consider having a dedicated IT team to support staff during the initial phase of adoption.

### **8.2 Integration with Existing Systems**

For seamless workflow, the Digital Plan Review Tables need to integrate well with existing hardware and software systems within the organization. This can sometimes pose a challenge.

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Solutions: Look for Digital Plan Review Tables that offer compatibility with a range of systems. Volanti's Plan Review Tables, for instance, are designed to be compatible with a very wide range of devices and software. Prior to implementation, it's important to evaluate and ensure that the tables can interact effectively with your existing infrastructure.

### **8.3 Managing Digital Files**

As organizations transition from paper-based plans to digital files, managing these files effectively is crucial. Poor file management could lead to confusion, loss of data, and inefficiency.

Solutions: Implement a robust digital file management system. This includes a logical file naming convention, consistent directory structures, and regular data backups. Software like SmartUse and other construction management applications aid in effective file organization.

### **8.4 Technological Breakdowns and Maintenance**

Like all hardware, Digital Plan Review Tables may be subject to maintenance issues which can disrupt workflow.

Solutions: Regular preventative maintenance can reduce the likelihood of unexpected breakdowns. Volanti Displays, for instance, provides comprehensive customer support and warranty.

Embracing new technology always involves overcoming initial hurdles. However, with preparation, guidance, and a commitment to training, these challenges can be addressed effectively, paving the way for the numerous benefits that Digital Plan Review Tables can provide.

## **9. The Future of Digital Plan Review Tables**

The evolution of digital technology has opened up a world of possibilities for the architecture, engineering, and construction industries. As we look to the future, Digital Plan Review Tables are expected to play an increasingly vital role in shaping these fields.

### **9.1 Current trends in the market**

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The trend toward digitization is accelerating, with companies seeking ways to improve efficiency, collaboration, and accuracy in their operations. Cloud-based collaboration tools, artificial intelligence (AI), and machine learning are all set to become integral aspects of plan review processes.

### **9.2 Anticipated developments in the technology**

As technology evolves, we can expect to see advancements in the features and capabilities of Digital Plan Review Tables. Future iterations may incorporate more advanced AI for automated markups and suggestions, enhanced real-time collaboration features, and improved compatibility with a wider range of file formats and software applications.

### **9.3 Impact of these developments on users and the industry**

These technological advancements will provide users with even more powerful tools for managing their projects. The ability to collaborate in real time, make quick modifications, and leverage AI for improved accuracy will further streamline workflows and reduce the potential for costly errors or delays.

In turn, these changes are likely to have a profound impact on the broader industry. As more companies adopt Digital Plan Review Tables, we can expect to see a shift in industry standards and practices, leading to a more collaborative, efficient, and digital future.

## **10. Conclusion: The Future of Plan Review is Digital**

Digital Plan Review Tables, as exemplified by the offerings from Volanti Displays, represent a significant step forward in the architecture, engineering, and construction industries. By integrating high-resolution, interactive displays with intelligent software, these tables transform traditional workflows into more efficient, collaborative, and accurate processes.

The Digital Plan Review Tables offer seamless integration with existing workflows, enabling users to view and interact with all digital formats. They promote real-time collaboration and sharing, allowing team members to work on the same plan regardless of their location. This enhanced collaboration leads to improved communication, faster decision-making, and significant time savings.

Furthermore, Digital Plan Review Tables facilitate accurate job costing and estimation, crucial during the quoting process. They also allow users to make real-time markups, resulting in efficient communication of proposed changes and leading to better outcomes with less rework.

The case studies outlined in this white paper demonstrate the transformative potential of these tables in real-world scenarios. Whether in construction head offices or construction sites, the adoption of Digital Plan Review Tables leads to improved efficiency, accuracy, and adaptability.

As the digital revolution continues to transform various industries, it's clear that the future of plan review is digital. With their numerous benefits, Digital Plan Review Tables are poised to become an indispensable tool in modern project management. The adoption of this technology represents a strategic investment, one that can yield substantial returns in terms of improved productivity, efficiency, and collaboration.

## 11. References

This white paper is based on information gathered from various sources, including:

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