

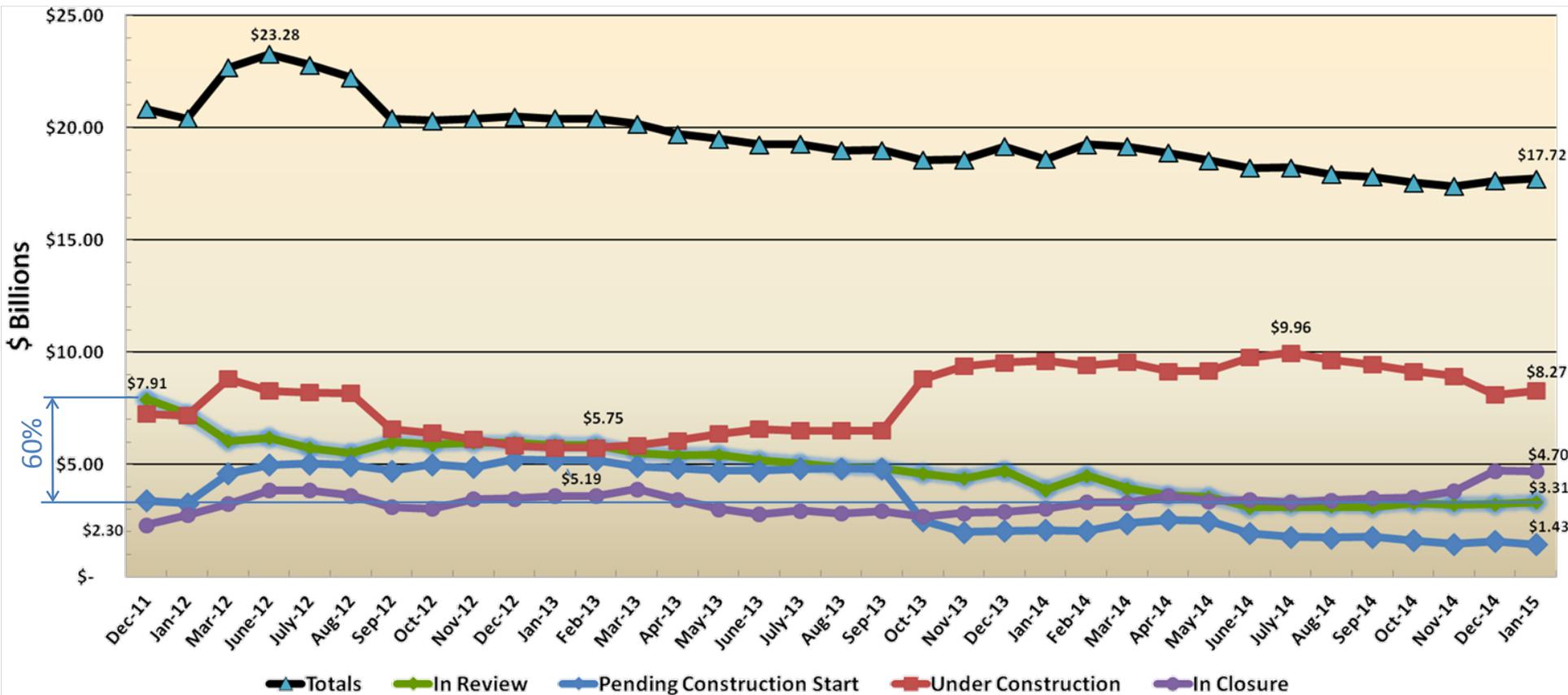
Facilities Development Division

California's Building Department for Hospitals

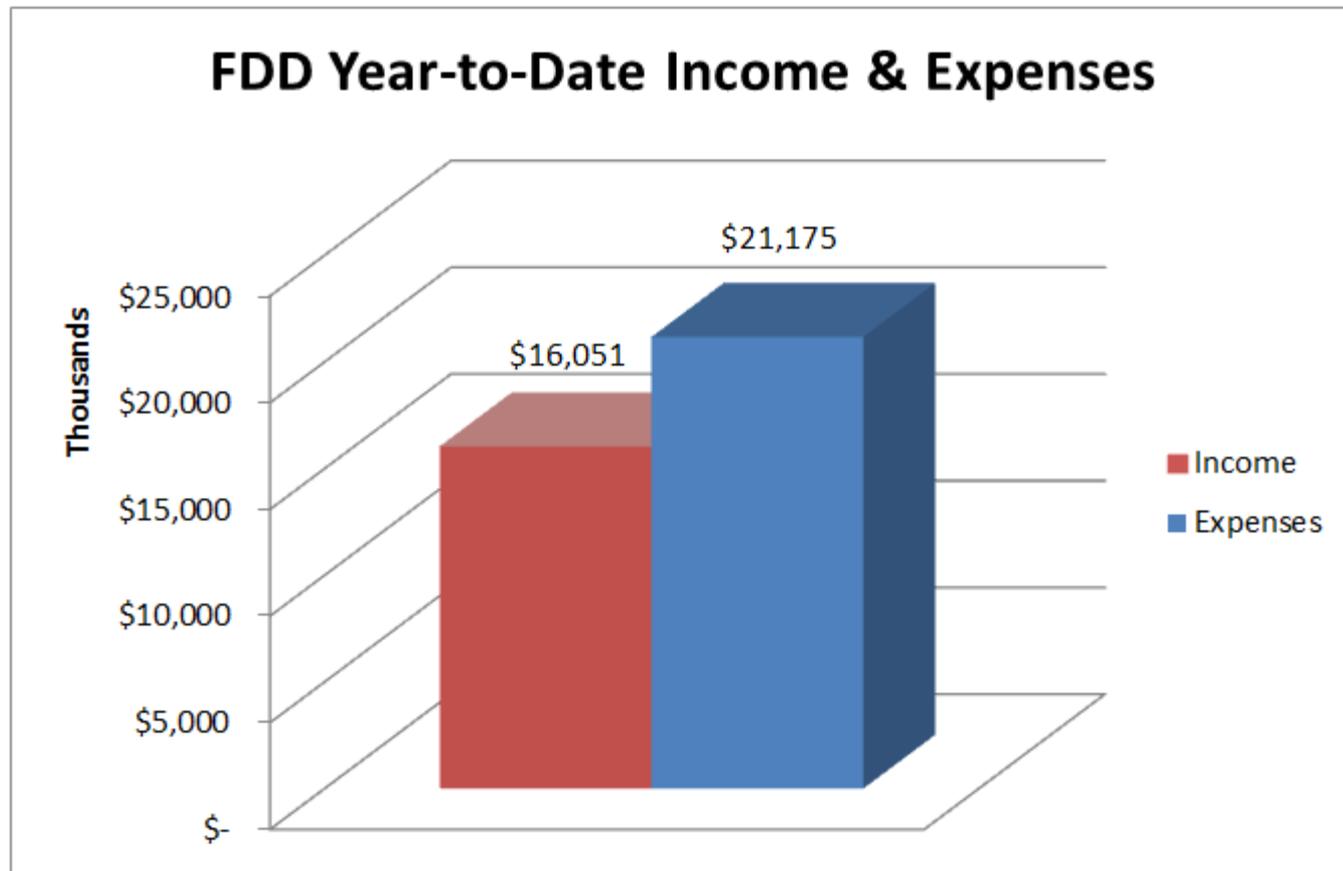
Paul A. Coleman, Architect, Deputy Director
Diana Scaturro, Supervisor Rapid Review Unit

**Presentation to the HBSB
Technology Committee**
March 4, 2015

Workload in Construction Values 2012+



FDD Year-to-Date Income and Expenses



(5,124)

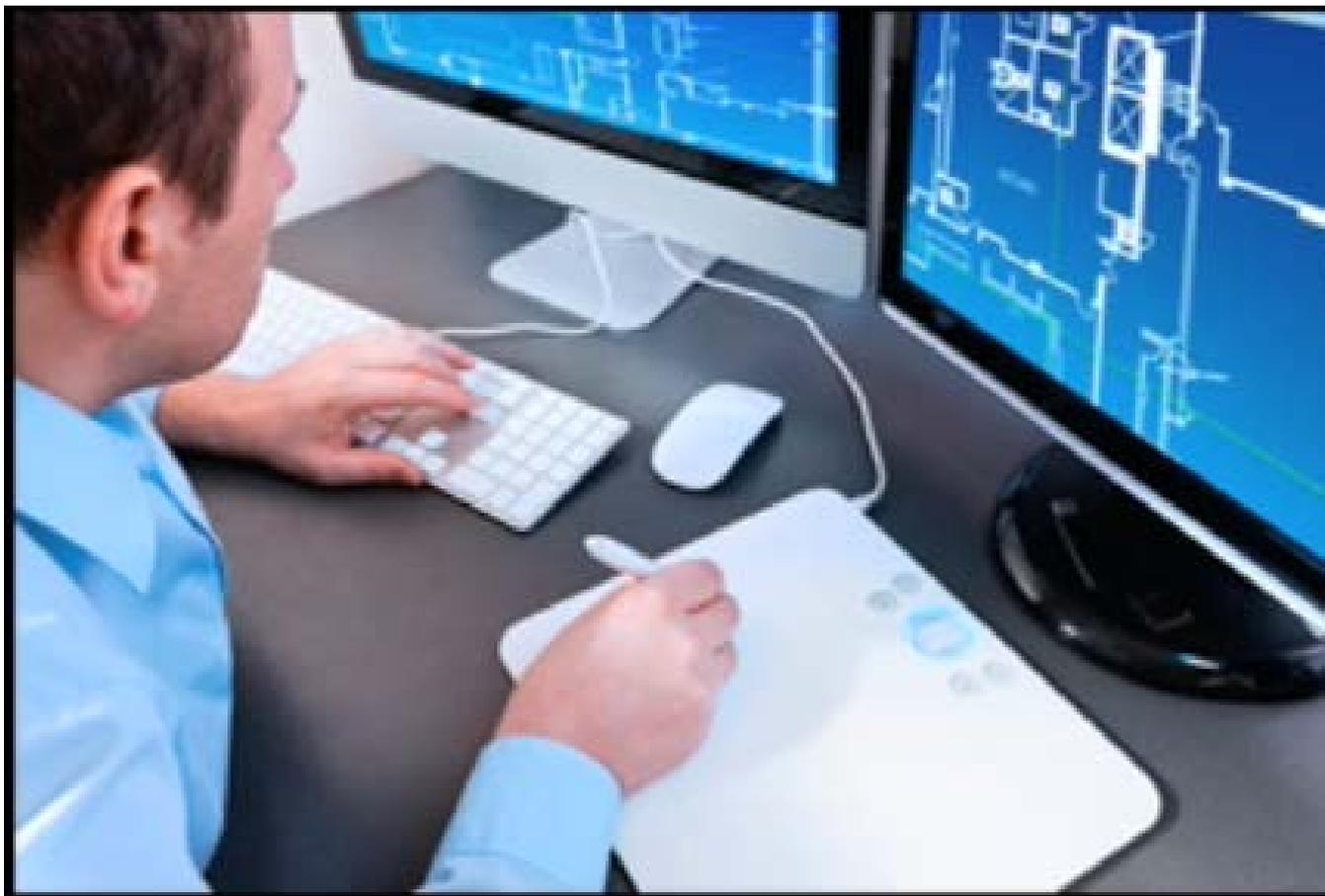
Increase Productivity and Efficiency

By automating processes to the extent possible...

Increase the use of Electronic Document Processing Review (EDP) through Electronic Plan Review (EPR)



Increase Productivity and Efficiency



Increase Productivity and Efficiency

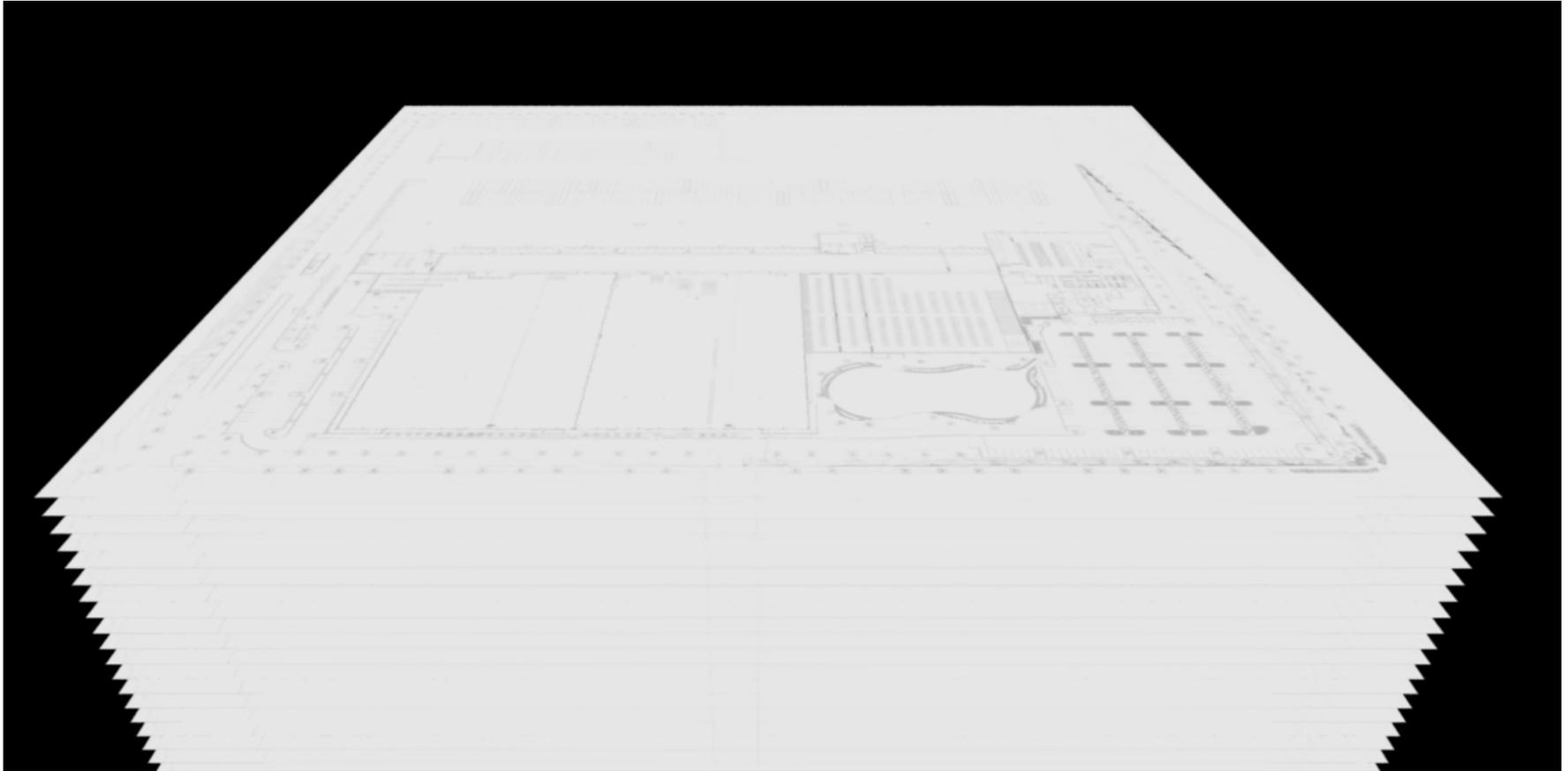


Increase Productivity and Efficiency

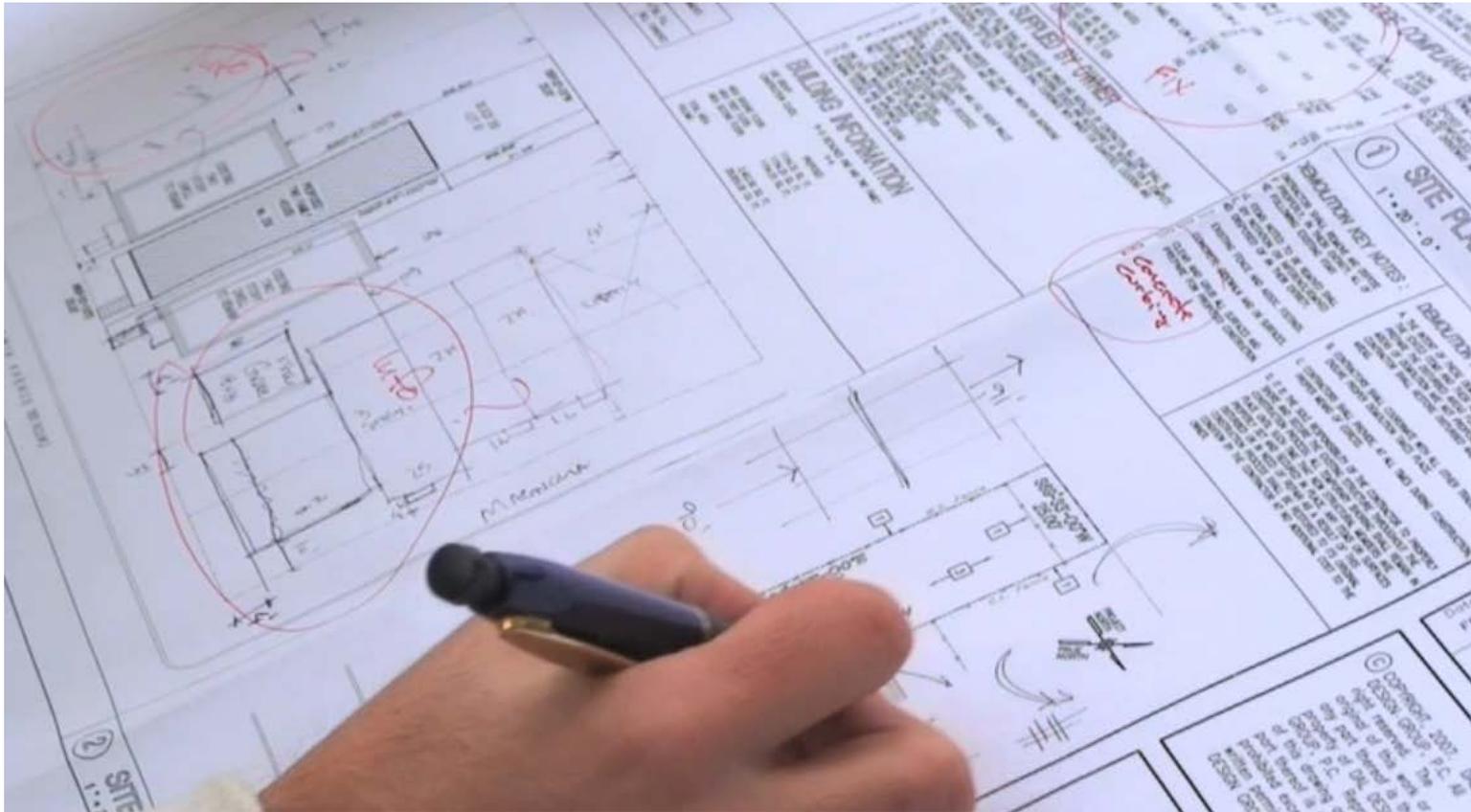


Client ships plans to FDD

Increase Productivity and Efficiency



Increase Productivity and Efficiency



Increase Productivity and Efficiency



FDD ships plans back to client

RRU Electronic Plan Review

- **History:**

- The Rapid Review Unit originally had conducted all reviews via paper submittals.
- This process required an abundance of time and cost to share resources between the Sacramento and Los Angeles offices, as well as impeding active interaction with clients.
- A faster, more economical and efficient means was needed to deliver quality plan review services by FDD staff that was located remotely from each other.
- **Electronic Plan Review** was the answer.



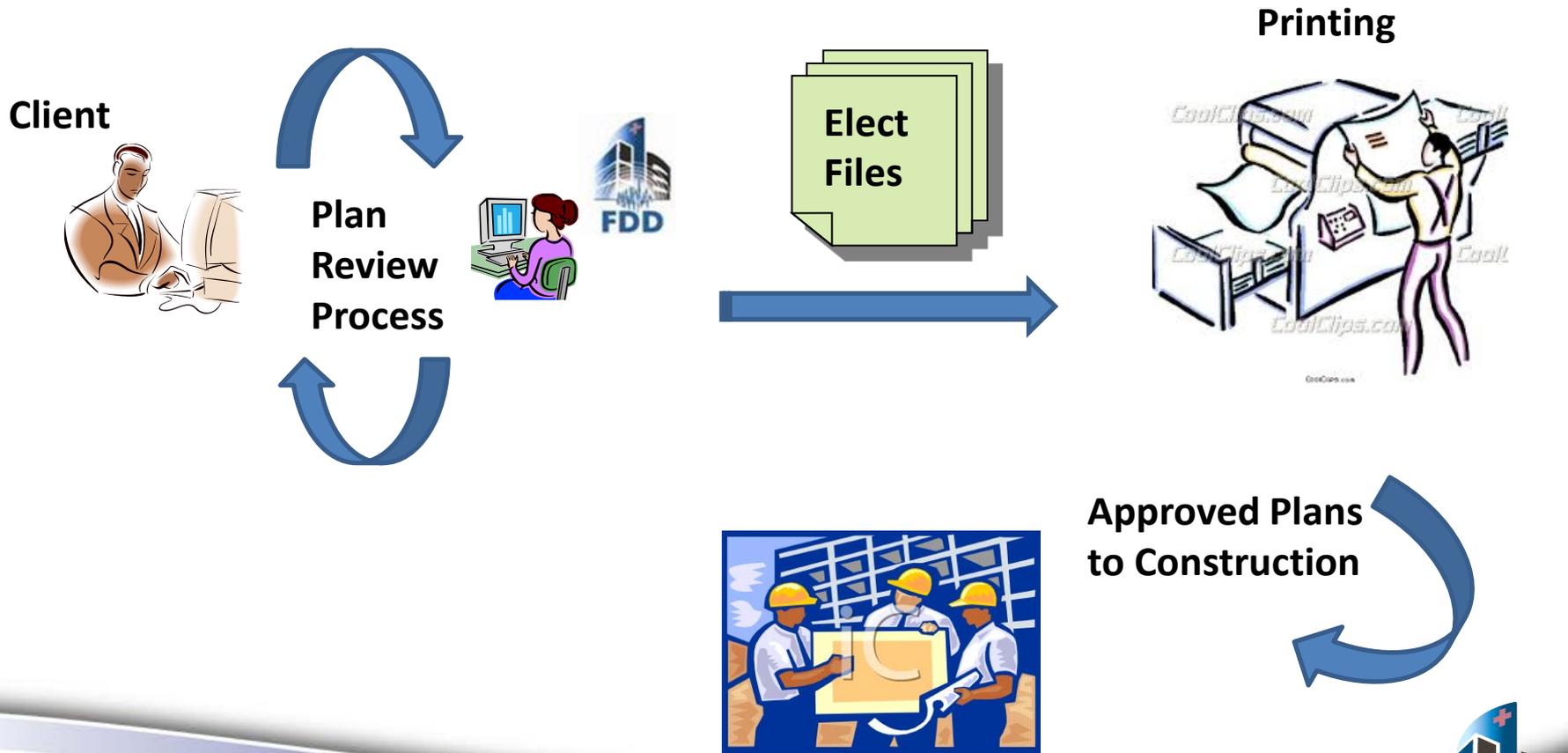
RRU Electronic Plan Review

- **Benefits:**

- Staff location no longer a factor. Network files can be accessed from any FDD location.
- Rapid interaction with clients as plans are sent electronically back and forth. Minor revisions can be implemented immediately.
- Due to increased workflow efficiencies, the cost of review has been reduced.

RRU Electronic Plan Review

- **Process**

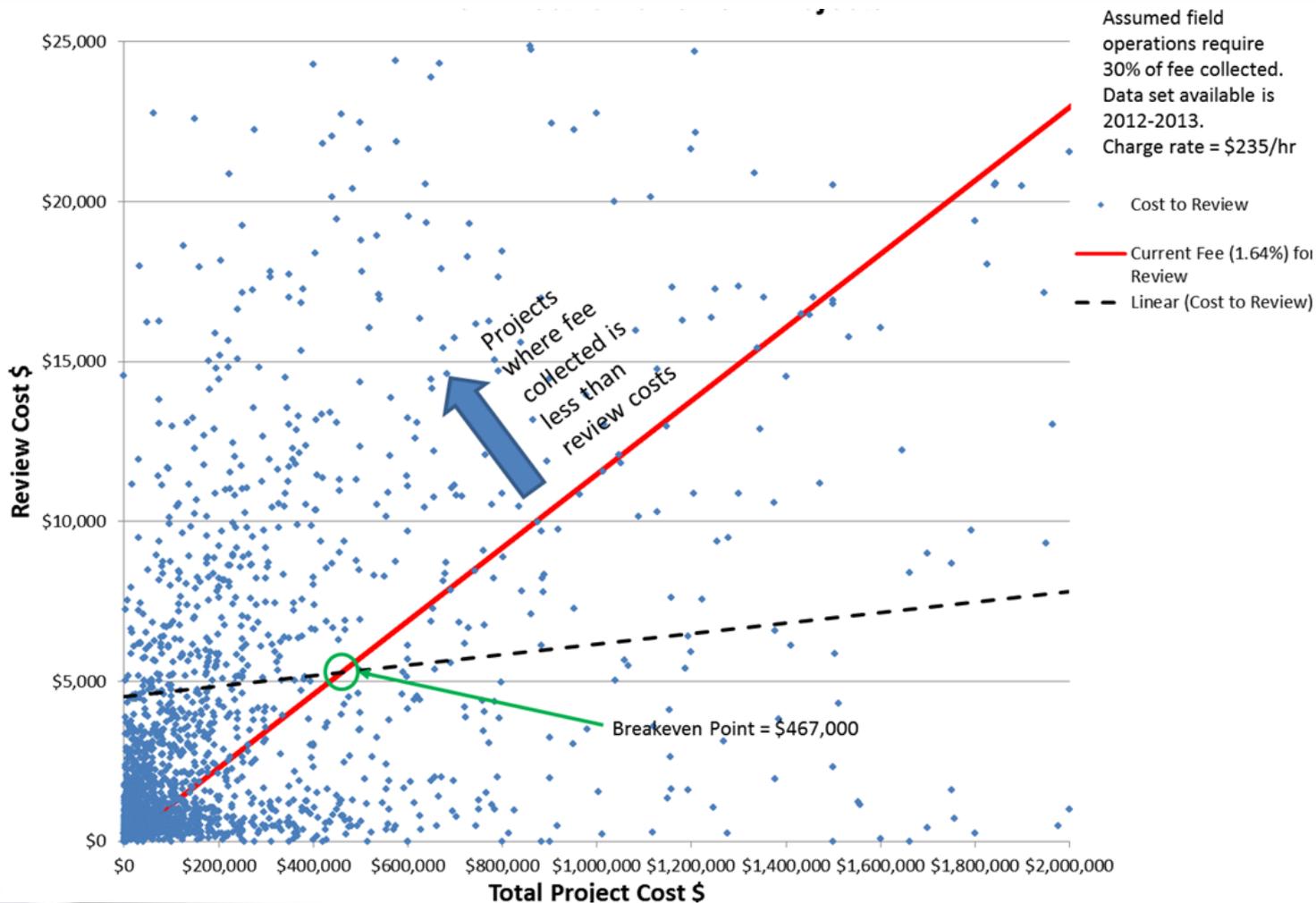


Electronic vs. Traditional Plan Review

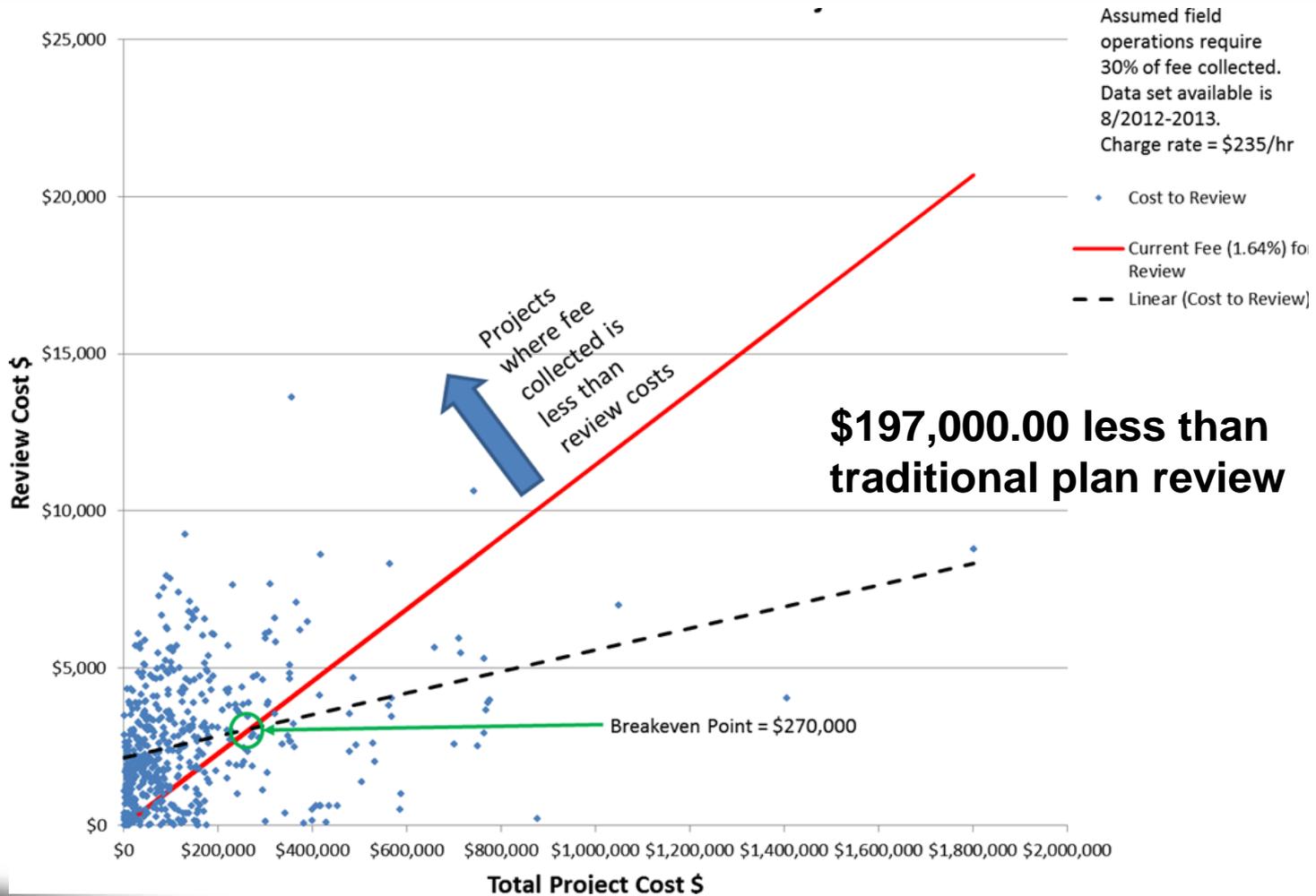
Data used in the preliminary models:

- Projects w/ similar scope and \$ value
- Electronic review projects are RRU projects approved after 8/1/2012
- Non-electronic review projects are all other projects approved after 1/1/2012 and include RRU projects before 8/1/2012

Traditional Plan Review Revenue to Cost

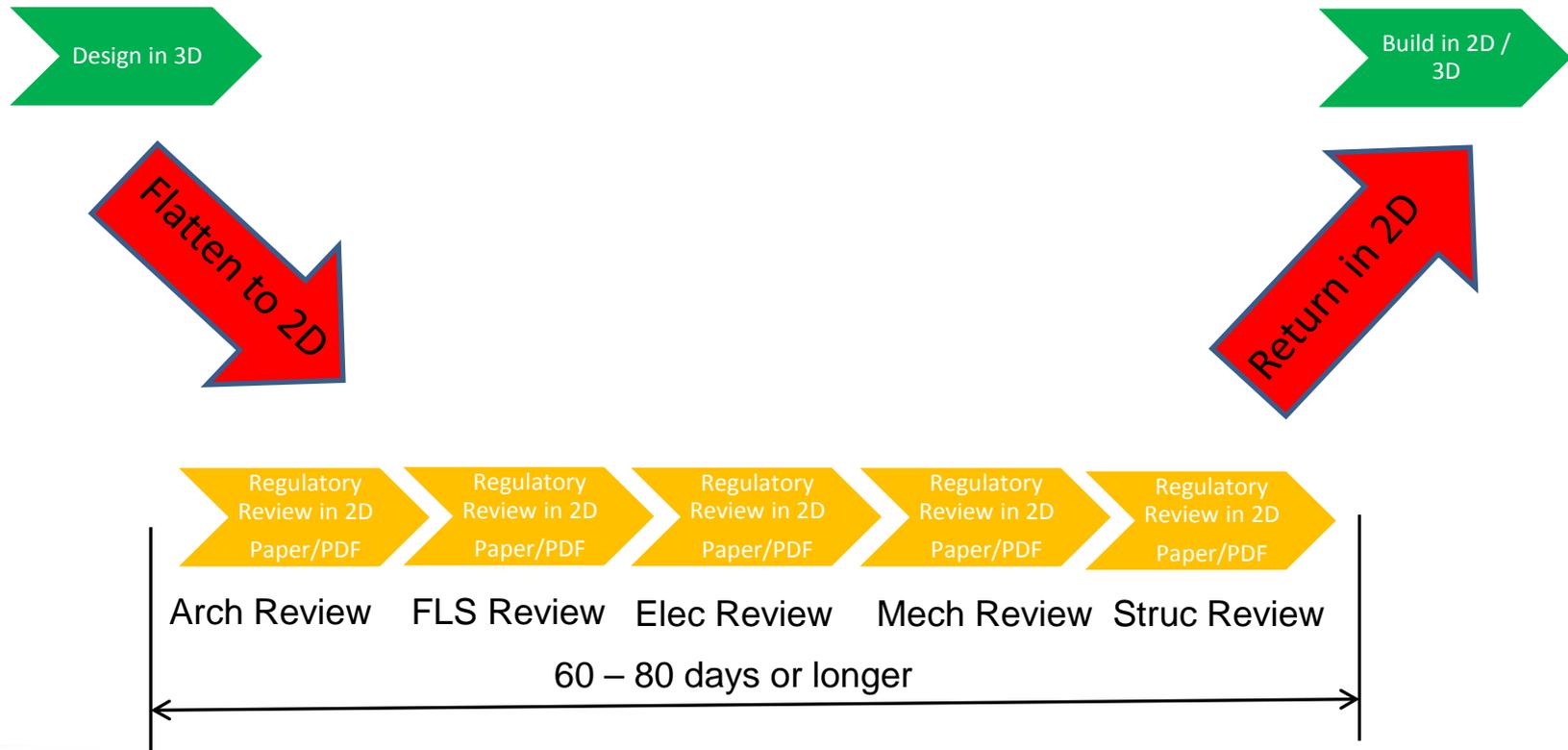


Electronic Plan Review Revenue to Cost



Increase Productivity and Efficiency

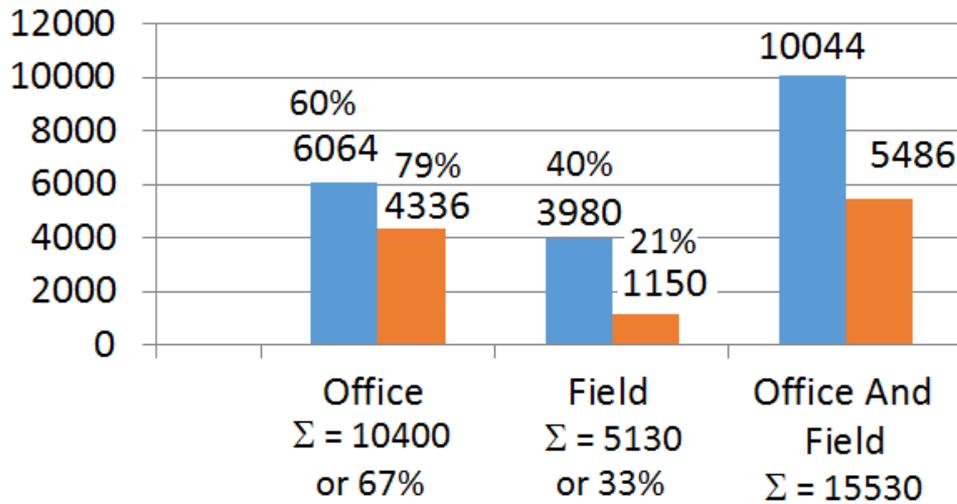
Design and Review Process *Today*



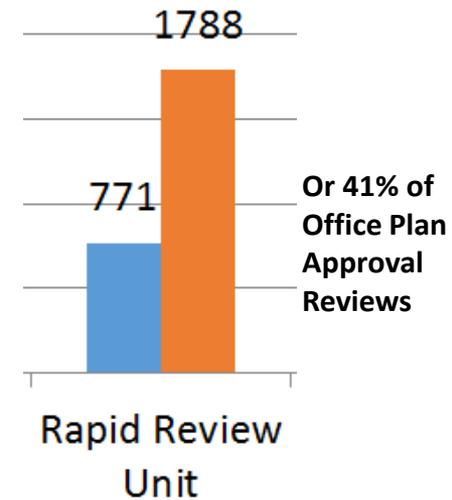
New RRU EPR Pilot:

- Use ePlanSoft
- EPR reduces time and cost for shipping and handling of plans
- Allows multiple disciplines to perform concurrent reviews
- Provides for the use of standard comments
- Provides a record of plan review comments
- Comments and project status available to Designer and Owner
- Provides for electronic stamping of plans
- In future program ePlanSoft will advance workflow in eSP

RRU Project Volume - 2014



■ PADs
■ Plan Reviews



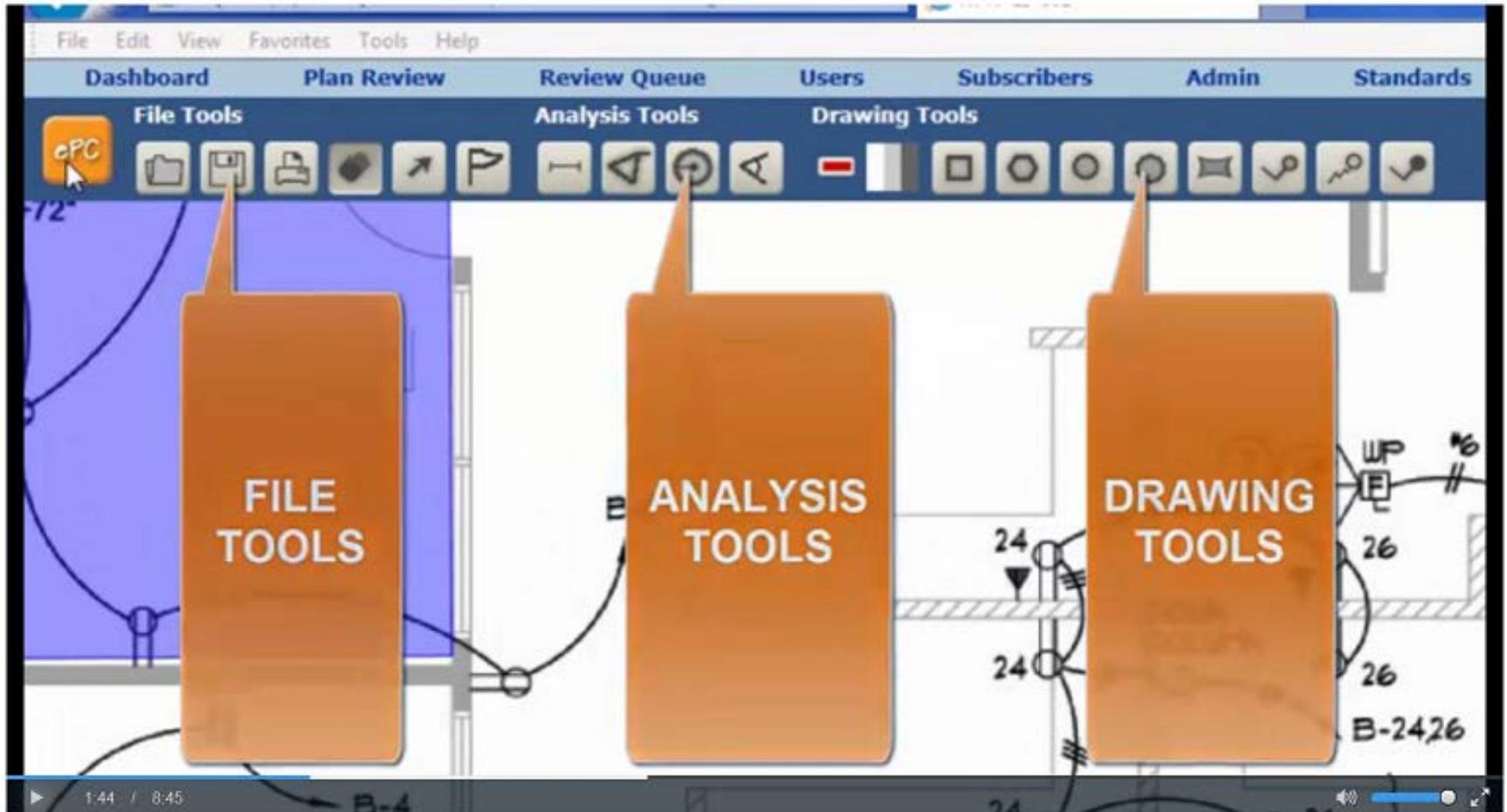
Or 41% of Office Plan Approval Reviews

$\Sigma=2559$ or 16.5% of All Projects

ePlanSoft Plan Review Screen

The screenshot displays the ePlanSoft Plan Review interface. At the top, a navigation bar includes links for Dashboard, Plan Review, Review Queue, Users, Subscribers, Admin, Standards, and Log Off. Below this is a toolbar with icons for File Tools, Analysis Tools, and Drawing Tools. The main workspace shows a technical drawing of a power and signal floor plan with various annotations and a key note. On the right side, there is a review panel with fields for Project Number, Address, Filename, Submittal, Department, Reviewer, Version, and Contact Via. Below these fields are buttons for Status, View Attachments, and BCC Codes. Further down, there are sections for Document Comments and Document Layers. The interface is annotated with three orange callout boxes: 'REVIEW TOOLBAR' pointing to the top toolbar, 'DOCUMENT VIEWER' pointing to the central drawing area, and 'REVIEW PANEL' pointing to the right-hand sidebar.

ePlanSoft Review Tools



Review Panel

The screenshot displays a web-based software interface for reviewing architectural drawings. The interface includes a top navigation bar with tabs for Dashboard, Plan Review, Review Queue, Users, Subscribers, Admin, Standards, and Log Off. Below the navigation bar is a toolbar with various icons for file, analysis, and drawing tools. The main workspace shows a detailed architectural floor plan with various rooms and annotations. Three orange callout boxes are overlaid on the drawing:

- REVIEW DATA**: Located at the top center, pointing to a specific area of the drawing.
- COMMENT LIST**: Located in the middle, pointing to a list of annotations on the drawing.
- DOCUMENT LAYERS**: Located at the bottom, pointing to a list of layers on the right side of the interface.

On the right side of the interface, there is a sidebar with the following sections:

- Project Information**: Includes fields for Permit Number (SAMPLE-0002), Address (23 Morgan), Elicseant (E3/Power and Signal), Floor Plan (LP), Submittal (2nd Submittal), Department (BLDG), Reviewer (Tracy Olera), Version (20140717), and Contact Via (8000330005).
- Status**: Set to WIP.
- View Attachments** and **EXC #Codes** buttons.
- Zoos** section with a list of items.
- Document Comments** section with a list of comments and a "Show the following details on plan" button.
- Document Layers** section with a list of layers including Comments, Sketches, Stamps, etc.

Adding Comments

The screenshot displays the ePC Plan Check System web application. The main interface includes a navigation menu with options like Dashboard, Plan Review, Review Queue, Users, Subscribers, Admin, Standards, and Log Off. A toolbar at the top provides various tools for file, analysis, and drawing. The central workspace shows a floor plan with a blue highlighted area and a green highlighted area labeled "OCCUPIED TENANT SUITE & OCCUPANCY". A modal window titled "ePC Project Comments - Internet Explorer" is open, allowing a user to add a comment. The form fields are as follows:

- Reviewer: JK with YourAgencyName
- Submital: 2nd Submital
- Description: BLDG
- Division: STRUCT
- Impact: [dropdown]
- Item: [text field]
- Comment Number: [text field]
- Category: MEANS OF EGRESS
- Sub-Category: [dropdown]
- Classification: Open
- Detail Number: [text field]
- Reviewer Comment: [text area with "This area not" and a cursor]

On the right side, there is a sidebar with project details (Permit Number: SAMPLE-0002, Address: 25 Morgan, etc.), a "Zoom" section, and a "Discussion Comments" section with a list of comments.

Inserting Standard Comments

The screenshot displays the ePC Plan Check System interface. A search window titled "Standard Comment Search - Document Explorer" is open, showing search filters and results. The search filters include "Containing (select one)", "Project Type", "Discipline", "Category", and "Sub Category". The search results table shows two entries:

Project Type	Category	Sub Category	Standard Comment
undefined	ADMINISTRATION	A. GENERAL REQUIREMENTS	Please provide the following information on your plot plan for each separate building under consideration: 1. Type of Construction 2. Total Square Foot (each floor) 3. Occupancy Classification 4. If side vents and/or automatic fire sprinklers have been used to increase the maximum allowable floor area, provide detailed calculations on drawings.
undefined	PART III: BUILDING CODE REQUIREMENTS	A. GENERAL REQUIREMENTS	Every room containing a boiler, central heating plant or hot water supply boiler shall be separated by a one hour occupancy separation. Exterior openings below openings in another story or less.

Below the search window, a callout box is shown over a drawing area, containing the text: "This area not referenced in other documents. Provide explanation".

Overlay Comparison

The screenshot shows a web-based software interface for comparing two versions of a floor plan. The main workspace displays a detailed architectural drawing with various rooms and areas highlighted in different colors to show changes between versions. A large red area on the right side of the plan indicates a significant change or deletion. The interface includes a top navigation bar with menus like 'File', 'Edit', 'View', 'Favorites', 'Tools', and 'Help'. Below this are tabs for 'Dashboard', 'Plan Review', 'Review Queue', 'Admin', and 'Log Off'. A toolbar with various icons for navigation and editing is located below the tabs. On the right side, there is a sidebar with project information, including 'Permit Number', 'Address', 'Submittal', 'Department', 'Revision', and 'Contact Via'. Below this is a 'Status' field showing 'WIP' and buttons for 'View Attachments' and 'BCE eCodes'. Further down is a 'Zoom' section and a 'Document Comments' section with a list of comments and their details. At the bottom right, there is a 'Document Layers' section with a list of layers and a small legend. The bottom of the interface features a video player control bar with a play button and a progress indicator showing '6:27 / 8:45'.

Corrections Report

PLAN REQUIREMENTS

1. Other documents refer to this Executive Office as two offices separated by a dividing wall, each with its own entrance. Make consistent. [Tag 0001] E3-001
2. Please provide the following information on your plot plan for each separate building under consideration: 1. Type of Construction 2. Total Square Feet (each floor) 3. Occupancy Classification [Tag 0003] E3-001

MEANS OF EGRESS

PLAN REQUIREMENTS

1. Show the following details on plans:
 1. 7 (7.75) rise min. 11 (10) run (1009.3)
 2. Min. 6-8 headroom clearance. (1009.2)
 3. Min. (36) clear width. (1009.1)
 4. Handrails 34 to 38 high above tread nosing. (1012.2)
 5. Handgrip portion of handrail shall not be less than 1.25 and no more than 2 cross-sectional dimension having a smooth surface with no sharp corners. (1012.3)
 6. Less than 4 clear spacing between rails. (1013.3)

[Tag 0002] E3-001

Clearing Review Items

Filename: E3;Power and Signal Floor Plan.pdf
Submittal: 2nd Submittal
Department: BLDG
Reviewer: Tracy Olvera
Version: 20140717B
Contact Via: 5555555555

Status: Resubmit

View Attachments ICC eCodes

Zoom

Document Comments

Add Refresh Logs

- 0001
Other documents refer to this Executive Office...
- 0002
Show the following details on plans:
1. 7'-
- 0003
Please provide the following information on your...

EXECUTIVE OFFICE
106

EXECUTIVE OFFICE

3/4" C.O.

8:14 / 8:45

Electronic Document Submittal Guidelines



Electronic Plan Review Document Submittal Recommendations

Please use the following instructions to prepare and submit your documents for electronic plan check. Note that Plans and supplemental documents/attachments have different submittal requirements.

A. NAMING PLANS AND PLAN SETS

- Each 'Plan' (or 'Plan set') must be saved in **PDF format** and each file should ideally be **under 5MB in size**. *If file size exceeds 5MB, please flatten the layers in your CAD program before creating the PDF. PDF bookmarks are encouraged* and are very helpful.
- For projects with more than 10 plans, we strongly recommend grouping and submitting smaller 'sets' to facilitate the electronic plan review. The chart below shows some examples for plan set names, where the plans are grouped into logical 'sets' using discipline codes (see chart, below).

At a minimum, create a separate PDF file for each 'discipline', as plans are typically routed to Plan Reviewers based on these disciplines.

- Use a semi-colon to 'separate' the *Discipline Code* from the *Plan Description* text.

Discipline Code	Separator	Plan Description Examples	Sample Plan set w/ Discipline Code
S	-	Structural Details	S _Structural Details.pdf
S	-	Floor Plans	S _Floor Plans.pdf
A	-	Building Elevations	A _Building Elevations.pdf
G	-	General notes	G _General notes.pdf

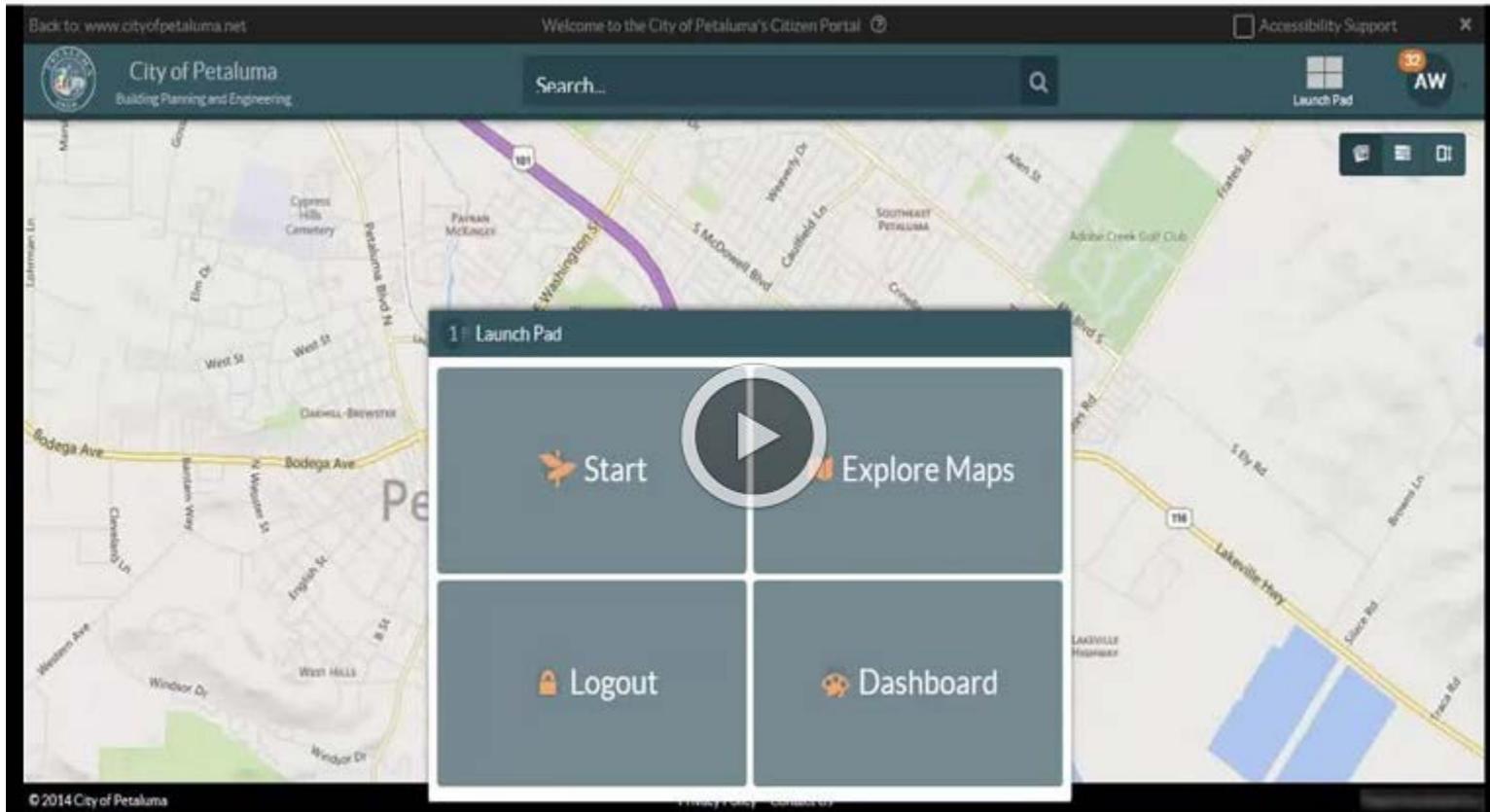
Use the chart provided below for naming your plan sets.

DISCIPLINE CODE CHART	
A – Architectural	M – Mechanical
B – Geotechnical	O – Operations
C – Civil	P – Plumbing
D – Process	Q – Equipment
E – Electrical	S – Structural
F – Fire Protection	T – Telecommunication
G – General	U – Railway
H – Hazardous Material	V – Survey / Mapping
I – Interiors	W – Civil Works
J – Justice / Detention	X – TITLE 24 / Other Disciplines
K – Food Service	Y – Security
L – Landscape	Z – Contractors / Shop Drawings

General Formatting

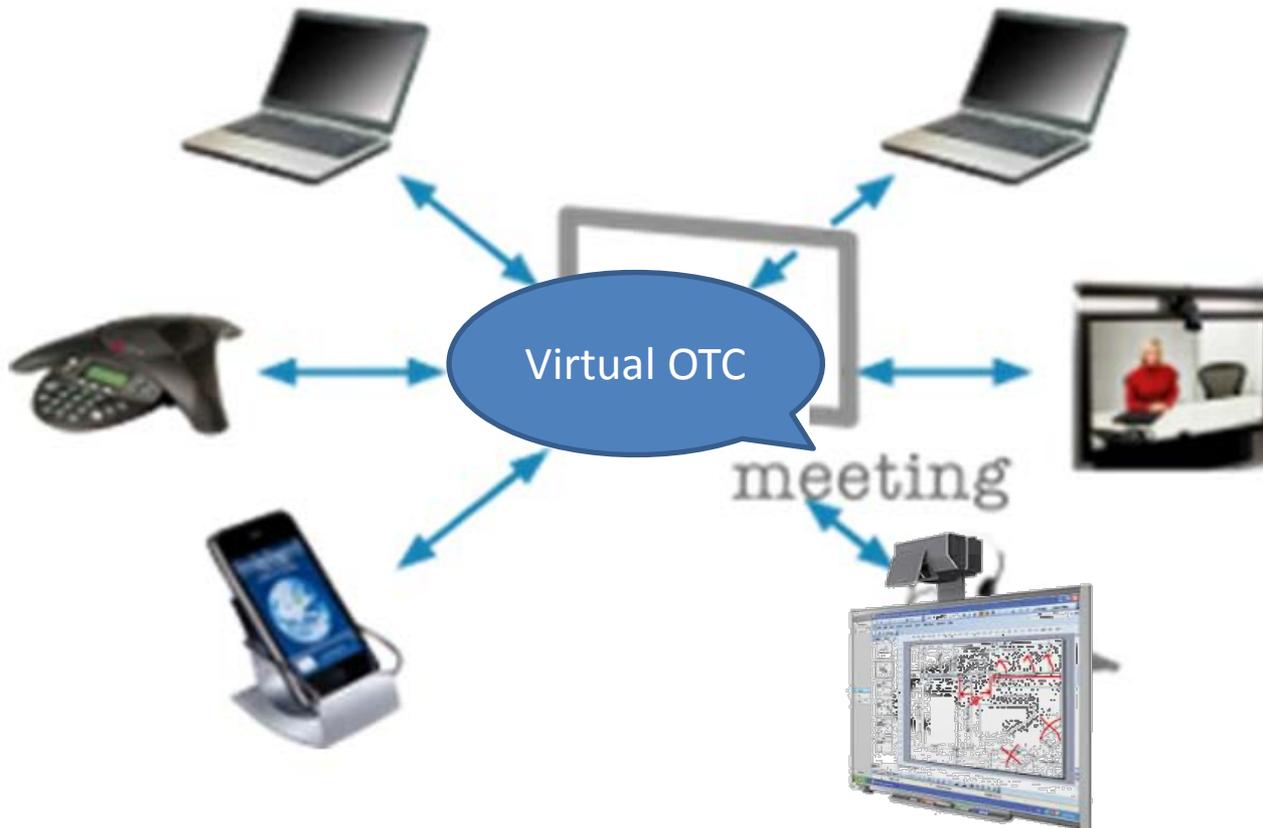
- PDF Format
- Black & White
- 5 MB File Size
- Naming Conventions
- Sheet Orientation
- Supplemental Documents

Video Link



https://www.dropbox.com/sh/li8qaoj8r3fvllz/AAaj1qTWQl6FuQMjT2i18uq_a/EPC%20Review%20Page%20with%20Permit%20System%20Integration%20v2.mp4?dl=0

Plan Reviews Everywhere



Using Multiple Contact Points

Change or Be Changed

Remember This

Every system produces exactly the result it is designed to produce – and none other.

We can change the people, the technology, the resources – but if we don't change the design, we will always get the same result.

If you keep doing what you're doing
You'll keep getting what you're getting
If you don't like what you're getting
Change what you're doing

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Looking Ahead



QUESTIONS?