The Focus of this Lesson is:

Input a building to compare Frame and Secondary costs for pricing considerations on:

- *Various Frame Types (CB, CT, RF & WB)*
- *7" vs. 8 ½" endwall girts*
- *7" vs. 8 ½" sidewall girts*

Lesson Comments:

In this lesson you will create a Building Shape using the given parameters in the "Building Description" box. This lesson will show you a few ways to use VP Command to determine the "most economical" method or "Value Engineer" a project.

Note: The results will vary according to many factors including the Building Code and loads used. Use your Loading conditions for this exercise.

Building Description:

- Your Loading Conditions
- Width = 180'-0"
- Length = 252'-0"
- Eave Height = 20'-0"
- Frames: 1 @ 26'-0"; 8 @ 25' bays; 1 @ 26' bay
- 1:12 roof pitch
- Various Interior Frames
- Post & Beam End frames with standard endpost spacing
- Endwall girts: revised one endwall to 7"
- Sidewall girts: revised one sidewall to 7"

Frames that need to be created for this Value Engineering project:

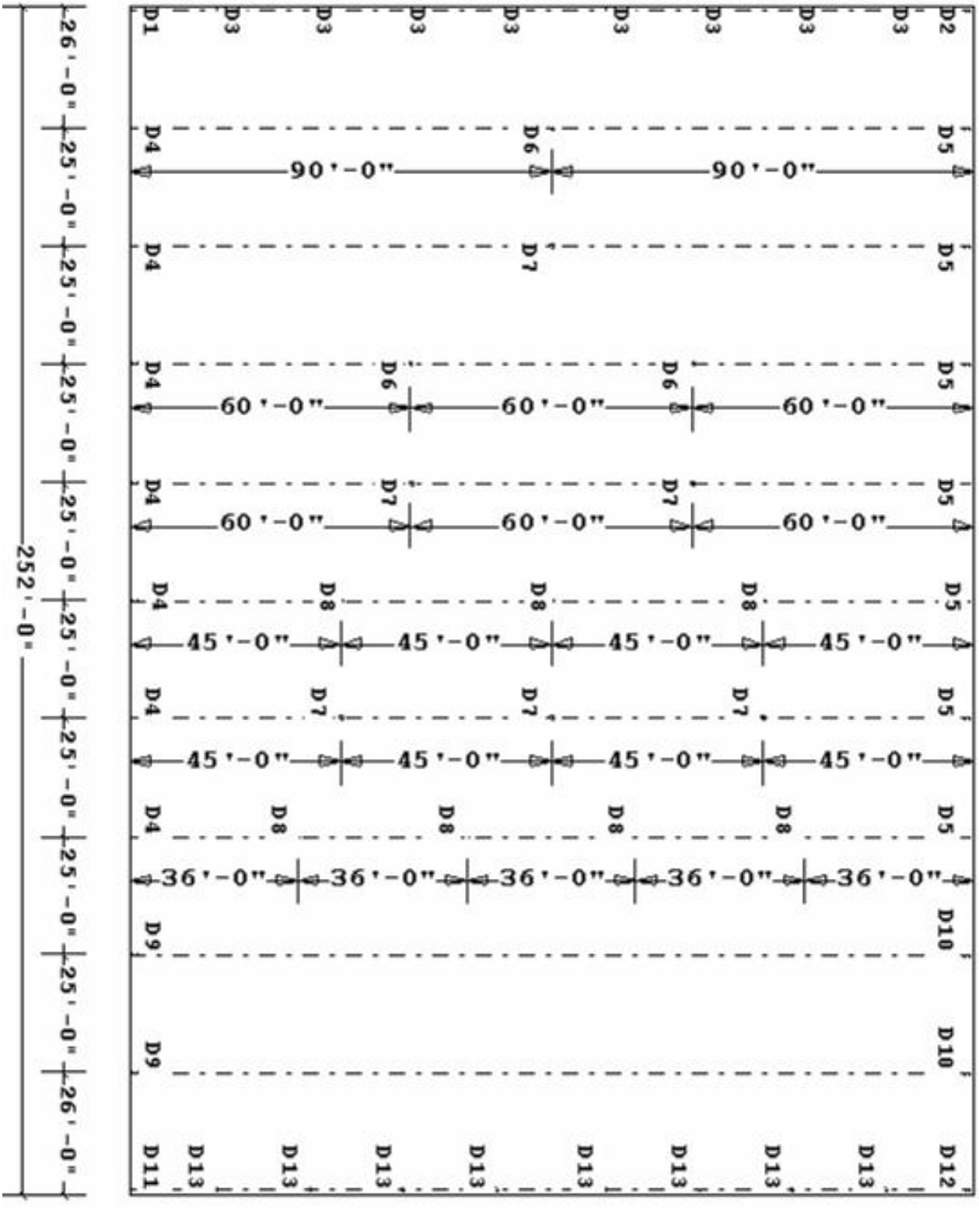
- CB-1 (2 @ 90' spans)
- CT-1 (2 @ 90' spans)
- CT-2 (3 @ 60' spans)
- CB-3 (4 @ 45' spans)
- CT-3 (4 @ 45' spans)
- CB-4 (5 @ 36' spans)

Frames that are already created to be used for this project:

- CB-2 (3 @ 60' spans)
- Wind Bent (Open Web Clear Span)
- Rigid Frame
- Post & Beam (standard end post spacing)

Girts:

- Wall 1: 7" continuous
- Wall 2: 8 ½" continuous [default]
- Wall 3: 8 ½" continuous [default]
- Wall 4: 7" continuous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Value Engineering Results: Primary Framing:

This lesson gives you just a few ways to use VP Command to determine the most economical method of building. A few other Value Engineering items to look at:

- Bracing: consider all brace rod options available (floor anchor, partial height rods, torsional bracing, etc.) before changing to portal braces or portal frames.
- Building orientation [note: if possible, make the smallest dimension the width and the largest dimension the length]
- Buildings with load bearing masonry walls: ledger angle in lieu of end frames, delete sidewall columns, shear walls in lieu of sidewall bracing.
- Buildings with mezzanines: run the beams the short distance and bar joist the long distance.
- End post spacing [note: if possible, keep the end post spacing the same on each endwall].
- Fix the base of sidewall columns [note: foundation costs will increase].
- Fix the top of CB interior columns.
- Gabled vs. single slope.
- Girts: 7", 8 ½", 10", or 11 ½".
- Purlins: 7", 8 ½", 10", or 11 ½".
- Vary the bay spacing [note: if possible, keep the end bays short and stretch-out the interior bays].
- Vary the slope [note: raise the slope for RF, WB & TB; lower the slope for CB & CT].

Note: Please remember that there are various factors, most obvious Loads and Codes (Building Code, Wind Load, Snow Load, etc.) that will affect these results. Once you become familiar with the Loading Conditions for your area, you will have a better idea what will be the most economical use of VP products.