

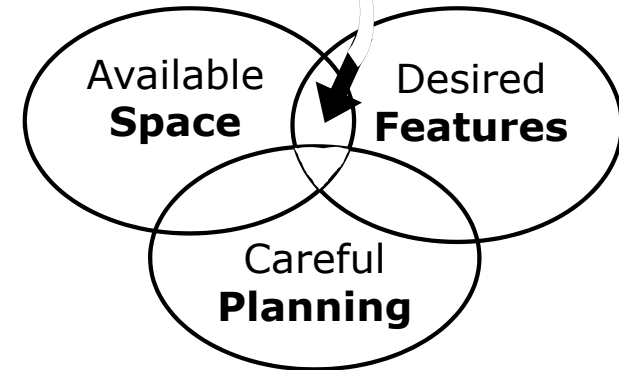
Layout Design & Track Planning

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Layout Design Basics

Your Dream
Layout



Layout Design Basics

Layout Design =

- **Railroad** Planning ("Theme" Research)
- **Track** Planning
- **Construction** Planning

1) Start with your Goals

- Interests - Budget - Time
- Trains - Scenery - Operations
- Talents - Social - Fun
- Other ...

Layout Design Basics

2) Topline Factors

- Scale, Gauge(s), Room Size (and Sketch)

3) Your Theme

- Prototype, Freelance, or Freeform?
- Railroad(s): Primary and Secondary
- Locale, Era, Types of Motive Power
- Traffic, Freight and Passenger Types

4) Operating Considerations

- Control Style, # of Operators, Staging

Layout Design Basics

5) Physical Considerations

- Minimum Radius and Turnout Number
- Minimum Aisle Width and Maximum Grade
- Single or Multiple Levels
- Single or Double Track Mainlines
- Deep or Shallow Scenes
- Number of Continuous Runs and Branches
- Duckunders or Lift Bridges
- One (Sincere) or More Passes thru Scenes

Layout Design Basics

6) Layout Design Elements

- Industries
- Bridges, Trestles and Viaducts
- Yard and Engine Facilities
- Junctions and Interchanges
- Rural City or Town Scenes
- Other ...

7) Construction Details

- Not covered here (valances, ...)

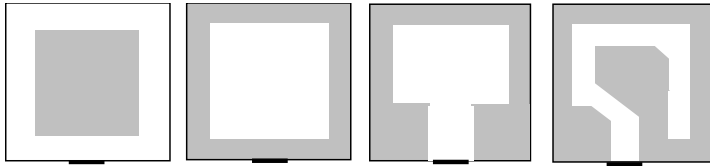
Track Planning Steps

- Make scale drawing of room
- Overlay a "minimum radius" grid (squares)
- Fit ribbon of track/benchwork through room
- Establish elevations and grades for each track
- Arrange scenic or track elements you like
 - towns, interchanges, industries, ...
 - passing tracks, sidings, yards
 - staging area(s), pocket tracks
 - bridges, tunnels, trestles, ...

Track Planning Tips

- Maximize both track & aisle lengths (frontage)
- Minimize turnback "blobs" (spiral plans best)
- Use staging yards and hidden "pocket" tracks
- Use z-dimension to maximize track/scenery
- Use illusions (compression, dividers, mirrors)
- Use space saving gimmicks as needed:
 - Moving staging shelves (vertical or horizontal)
 - Sector plates and vert. turnouts (vs. ladders)

Layout Shape Comparisons



Criteria	Island	Around the Walls (Shelf)	C Shape Walkaround	G Shape Walkaround
Large Layout Surface Area	Poor	Good	Good	Best
Size Illusion (Scene Isolation)	Poor	OK	OK	Best
Long Track Runs	Poor	Good	Good	Best
Long Straight Scenes	OK (4)	Good (4)	Poor (3)	Best (5-6)
Long Aisle Frontages	Good	Good	Good	Best
Wide Aisles	OK	Best	Good	Poor
Avoids Duck Unders	Good	Poor	Good	Good
Few Turning Blobs	? (nested blobs)	Best (none)	OK (2)	OK (2)

Example – Eastern Loggers

• Goals

- Learn and Model Eastern USA (Pa.) Logging
- Enjoy Fellowship of Model Railroaders
- Build and Exhibit Fine-Scale Sectional Layout
- Learn Modeling Techniques & Promote the Hobby

• Layout Design

- Portable sectional layout (10 x 10 then 20 ft)
- Compatible benchwork, scenery and connections
- 1921 era, 18" radius, 2.5 x 5 ft sections
- Single track continuous main (show loop)
- Switching and water feature on each section
- Undulating track and scenic dividers

Example – Eastern Loggers

