Building Serious Mountain Scenery

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MCR Division 10

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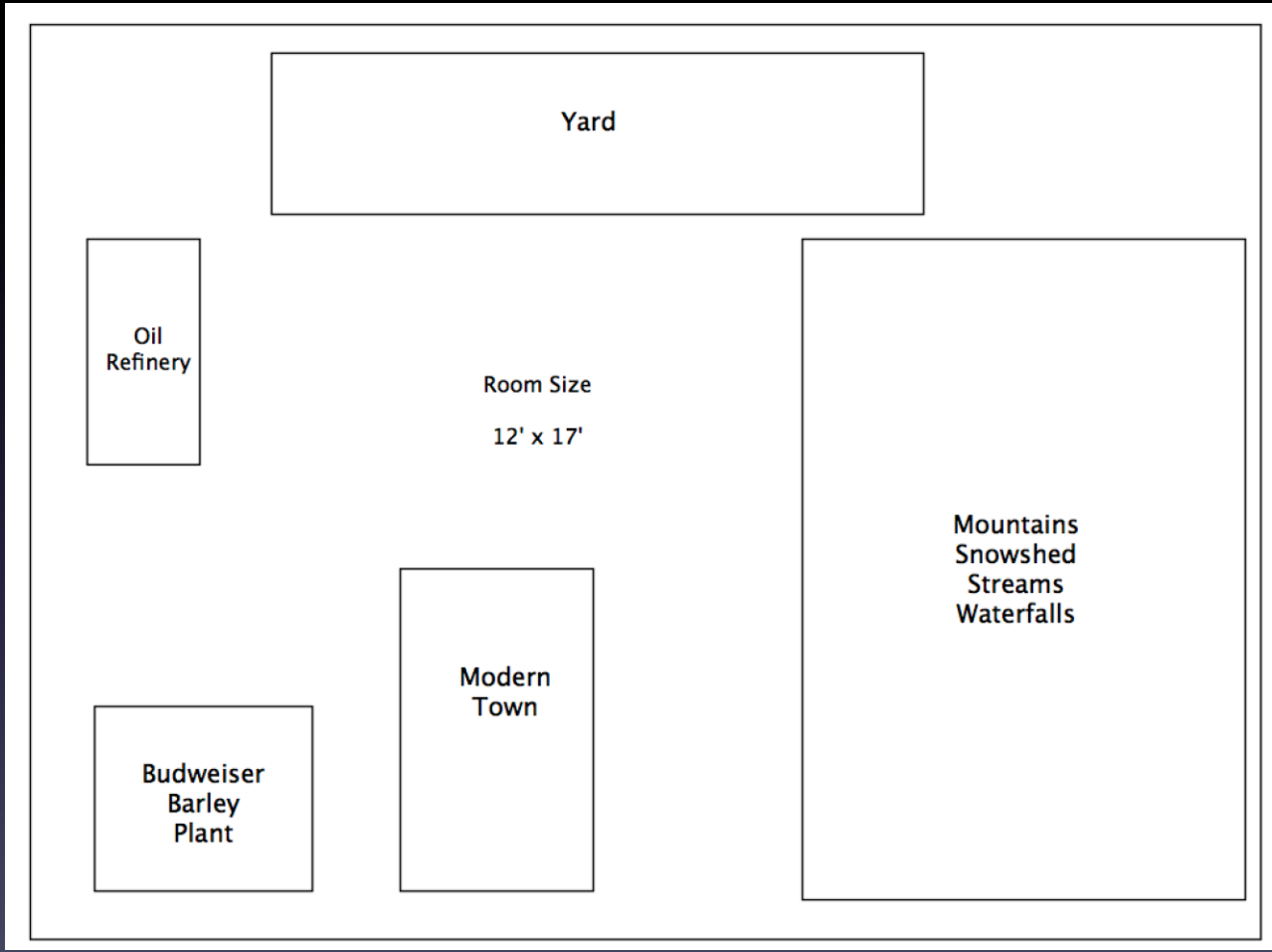
Layout Parameters

- How much Space for Layout in Train Room
- Choose your Layout's Geographical Location
- Determine Key Attributes of Layout
- Identify Space locations of Attributes

High Level Layout Plan Attributes



My Key Attributes

- Western Class 1 BNSF/Union Pacific/Montana Rail
- Grain Processing
- Small Oil Refinery
- Small modern Town
- Large Classification Yard, Maintenance Facility and small Intermodal Yard
- Large Area dedicated to Mountains

Steps-Start to Finish

- Decide where you are building your layout
- Modular vs. Fixed
- Determine how much space to dedicate to the mountains
- Get really good, prototype photographs, in person or internet
- Backdrop Design and Build
- Define the supporting track plan
- Build the track
- How many major peaks, streams, bridges, etc.
- Three dimensional model on a two dimensional topographical drawing
- Mountain materials – foam, plaster rock casting, rubber rocks, and Sculptamold
- Final sculpting, painting, water effects, landscaping

This Clinic Focuses on my Mountain Area

- Choose your prototype carefully
- Mountains come in many different flavors
  - Appalachians
  - Rocky Mountains
  - Big Hills
  - Iowa Prairie Dog Hill

My Choice of the Mountains

- Glacier National Park Area in Northern Montana
- Rugged Northern Rocky Mountain Area
- Rugged, pine and deciduous tree covered
- Heavily brushed slopes, grassy open areas
- Avalanche areas – snowshed
- Fast moving rivers
- Hunting Camp

How much space is needed

- To model western mountains it takes space
- Steep slopes reduce space needs
- Balance steepness against real world
- N scale – 6’ x 8’, HO scale – 12’ x 16’
- If you’re going to build serious mountains, do it right

Prototype Photos

Prototype Photos

Prototype Photos

Prototype Photos

Prototype Photos

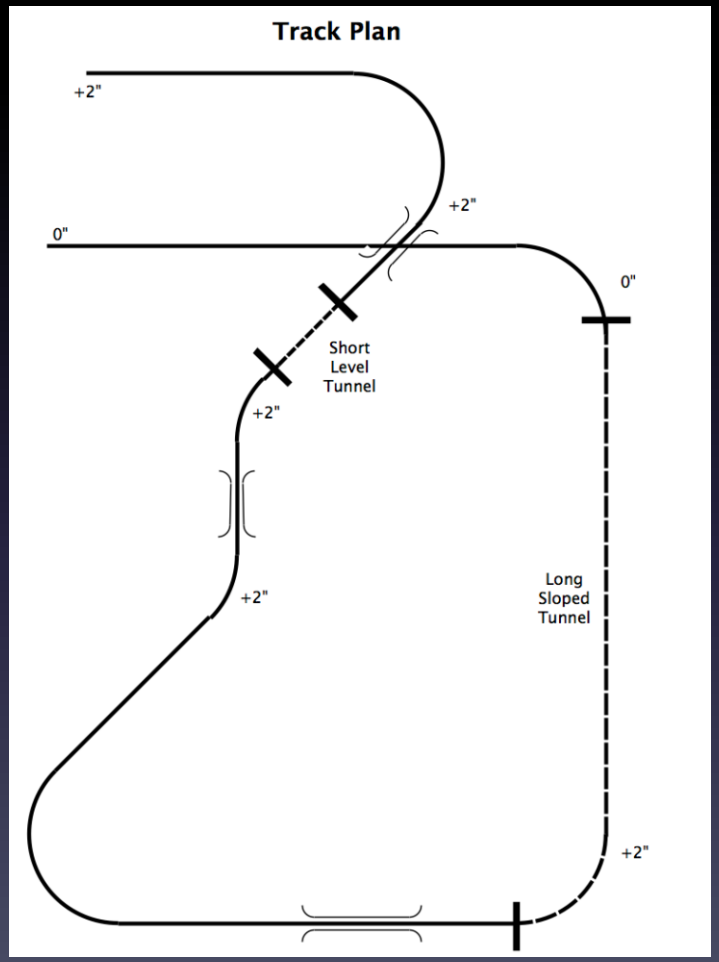
Prototype Photos

Backdrop Design & Build

- Installed my backdrop very early in my layout build, literally, the very first thing
- Used mountain photo scenery from Backdrop Junction – Colorado Mountains
- Vinyl sticky-back product
- Installed onto ½” plywood screwed into wall studs

Supporting Track Plan

Used Railmodeller Software

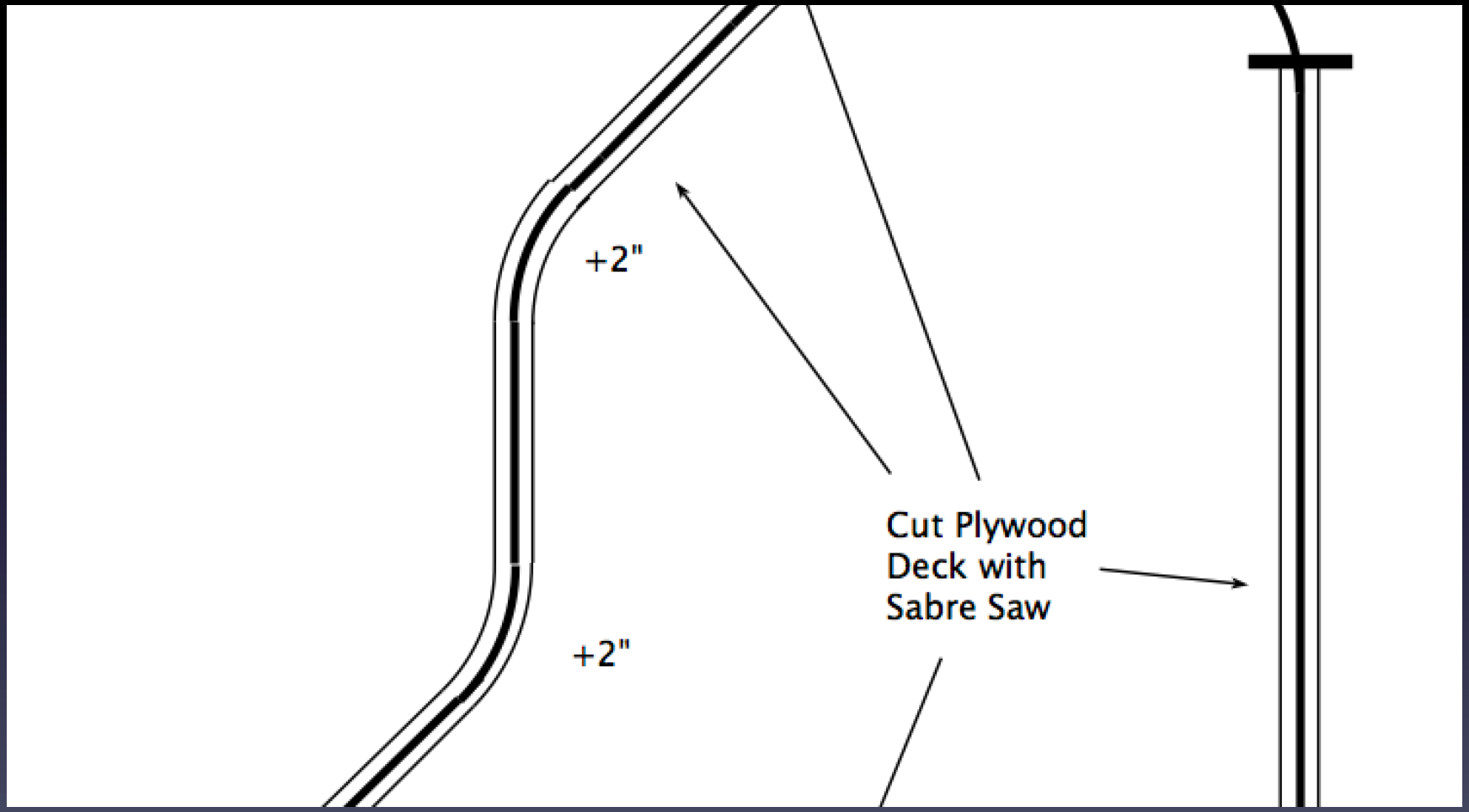


Determine the Physical location of your tracks

- Establishes your base level x and y axis
- Works best if you are using a 2D drawing application for your computerized track plan. I used Rail Modeller on my Mac Desktop computer.
- Track separations and minimum radius turns determine maximum mountain height
- Build the track base using either cookie cutter method or riser foam. I used the cookie cutter method

Cookie Cutter Risers

How did I do this



How Many Peaks

- One major double sided peak, rising almost 27 inches with a second double sided peak, rising almost 24 inches on the same mountain, with a large cirque forming the avalanche area.
- Lower rear buttes, 21 and 17 inches merging into the backdrop

Geological Sequence

- Mountains
- Streams
- Trails
- Rails and Roads

Topographic Mapping

- Large Scale Detail
- Quantitative representation of relief using contour lines (a line connecting places of equal elevation)
- Depicts ground relief (landforms), drainage (lakes and rivers), transportation routes (rails, roads and trails, other man-made features.

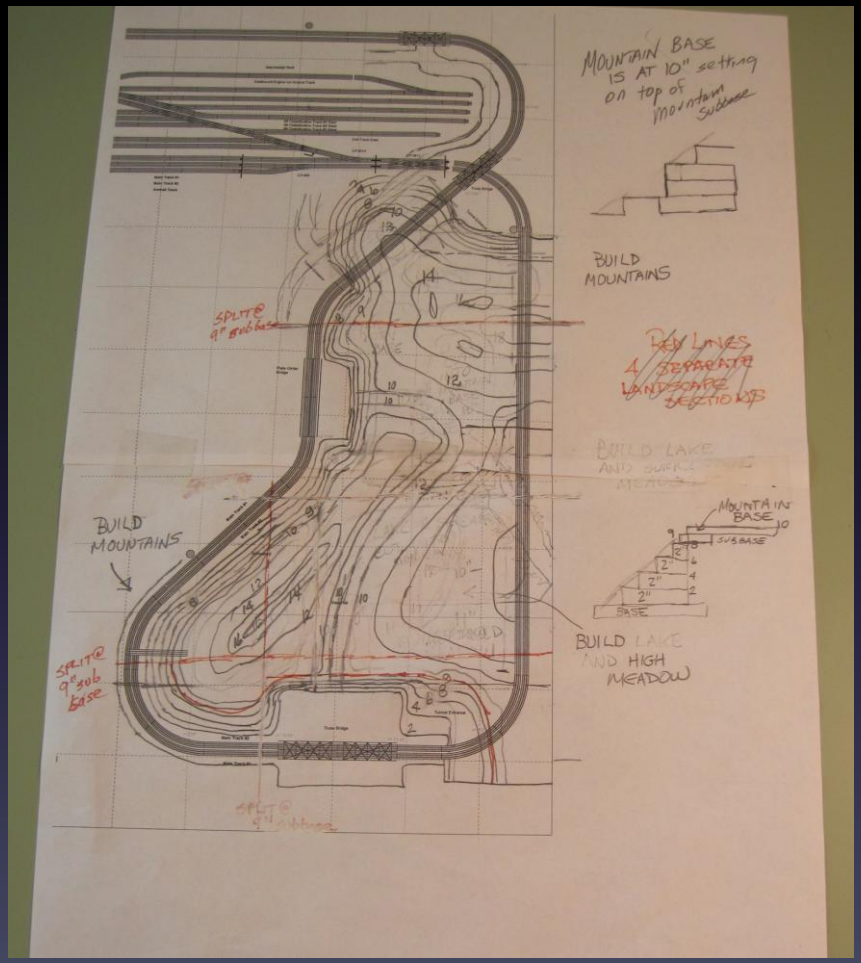
Contour Map

- Allows the designer to determine the X, Y, and Z location of every point in the scenery window
- Contour lines are curves that connect contiguous points of the same altitude
- Use 2” gradient points for N scale and 4” gradient points for HO Scale

Create your Contour Map

- Creates the X and Y Axis with the Z axis shown as gradients on the drawing
- I used 2” as my gradient separation, so in N scale, that represents about 25 feet

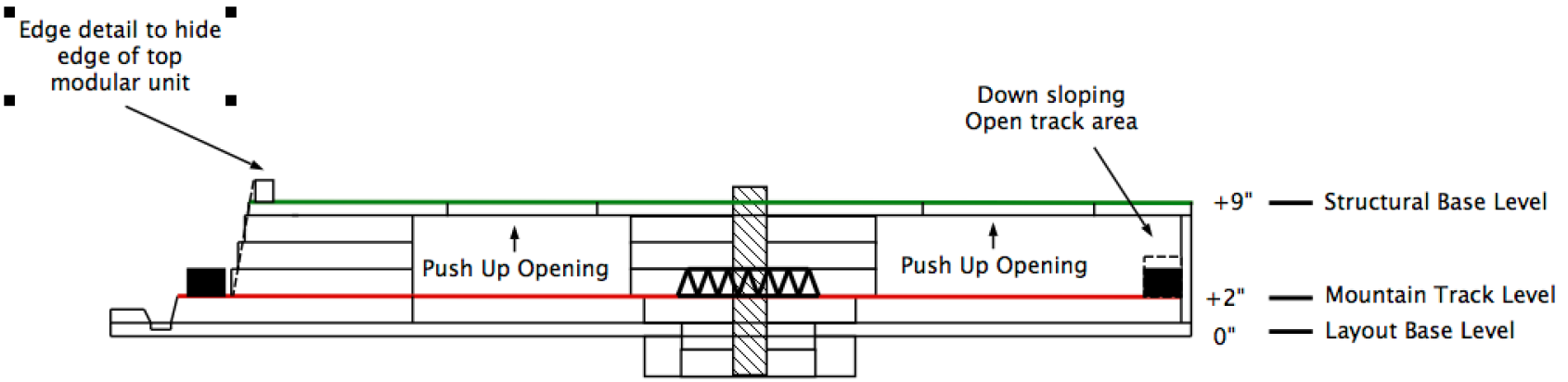
My Actual Contour Map



Mountain Materials

- High Density Polyurethane Foam – 1” and 2”
- Plaster Rock Casting
- Rubber Rocks
- Sculptamold
- EnviroTex Lite (River Effects)
- Silicone Caulking (Waterfalls)

Base Unit


Edge detail to hide edge of top modular unit
Down sloping Open track area
Push Up Opening
Push Up Opening
+9"
Structural Base Level
+2"
Mountain Track Level
0"
Layout Base Level

Early Photo of Base Walls

Major Bridge over River in Base

Full View of Mountain Base

Cross Section Example

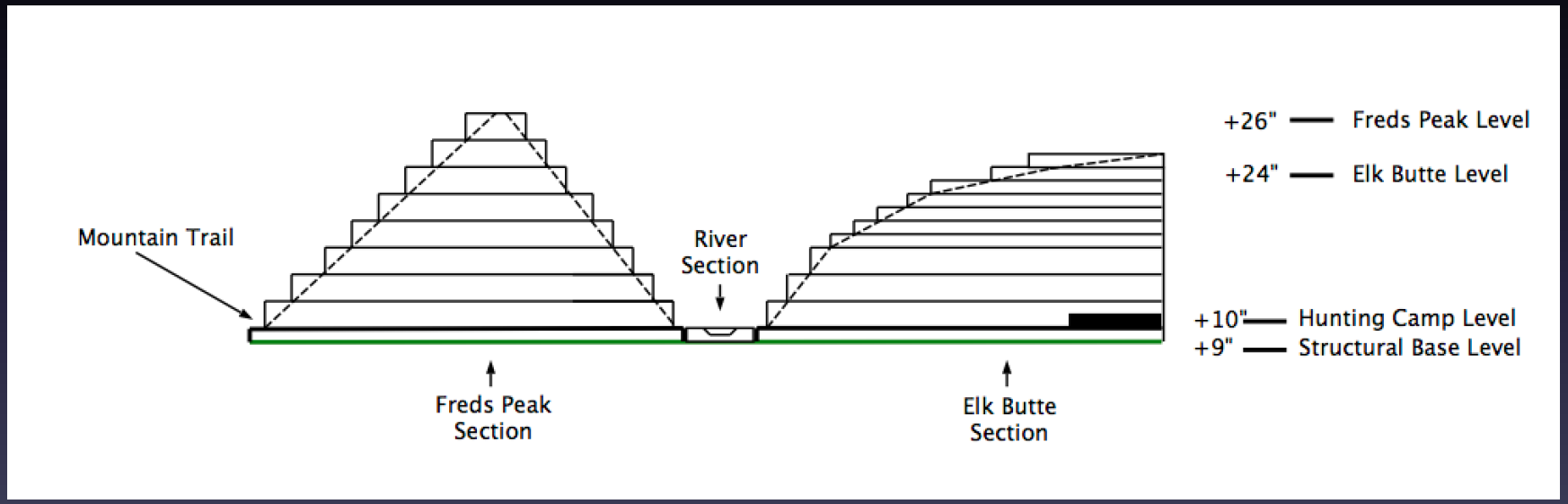
Elk Butte and Hunting Camp

Build the Mountain Tops

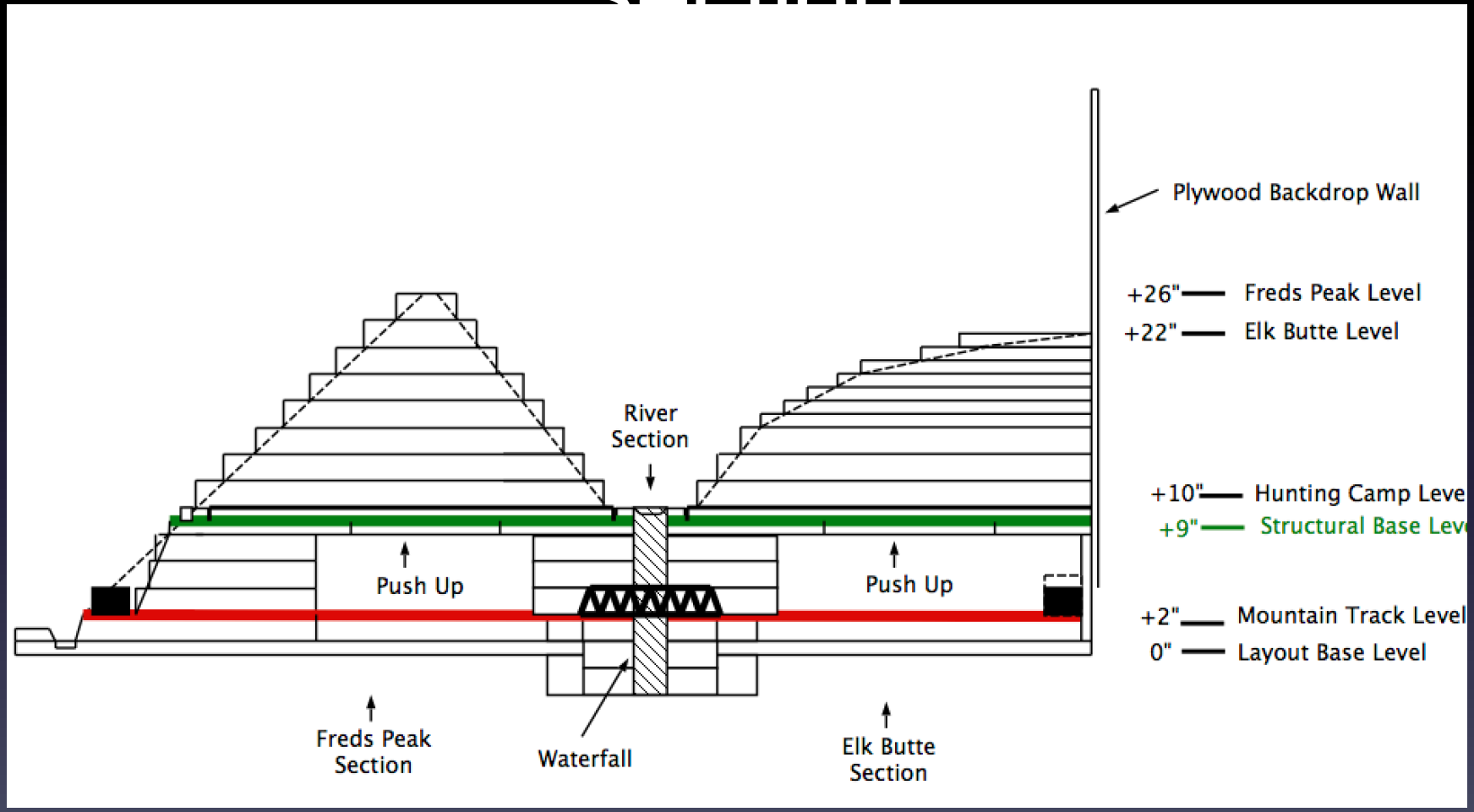
- Mountain tops consist of four separate units
  - Units are placed on the top of the base which is permanently attached to the bench work.
  - Three “portable sections” fitted on top of the base that can be removed from the layout to do landscaping work
  - River “section” is lightly glued to the base and forms a guide for the mountain tops to be finally positioned on the base

Four Modular Units

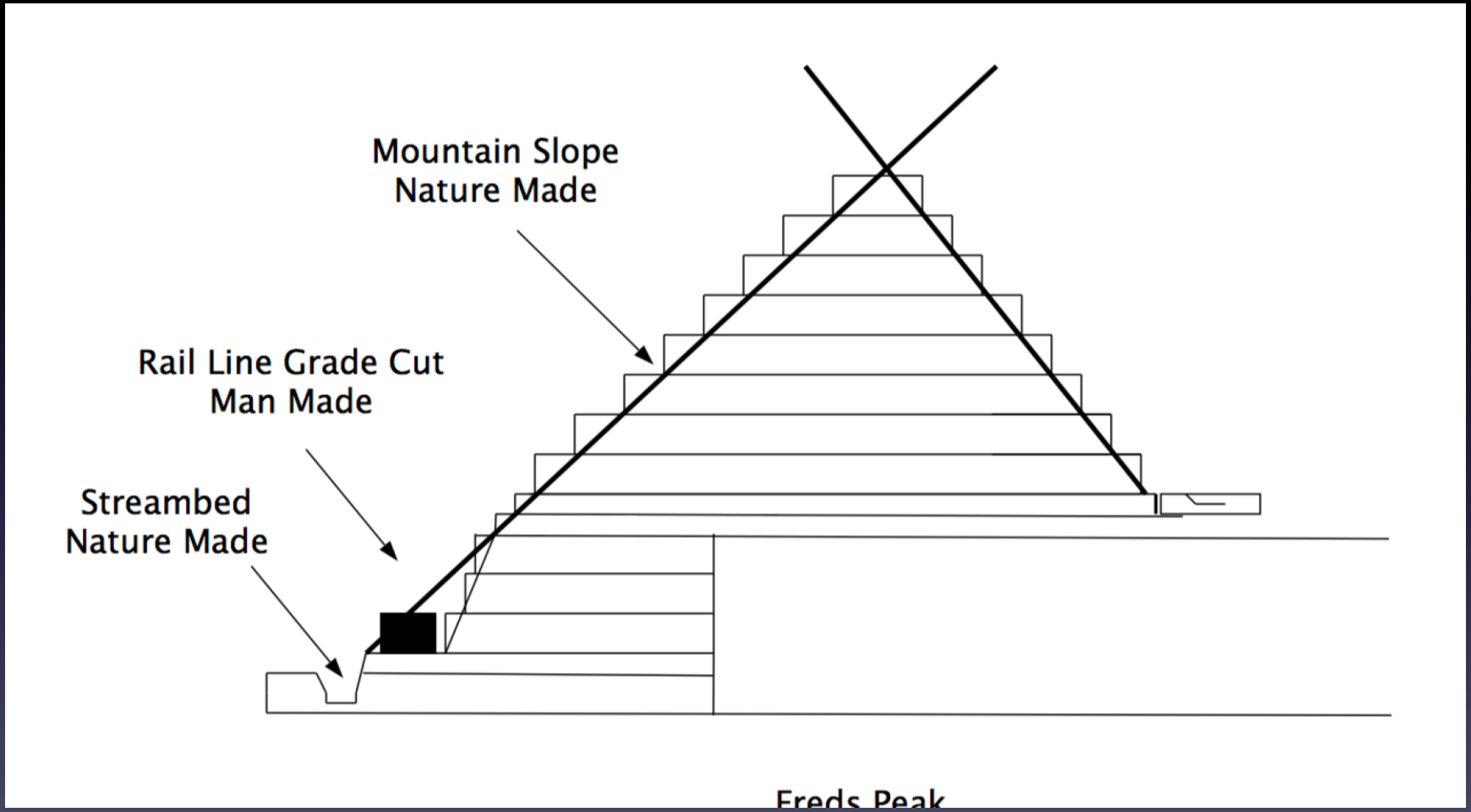
Fred's Peak
Elk Butte
Town Butte
River Section



Complete Mountain Cross Section



Nature vs. Man

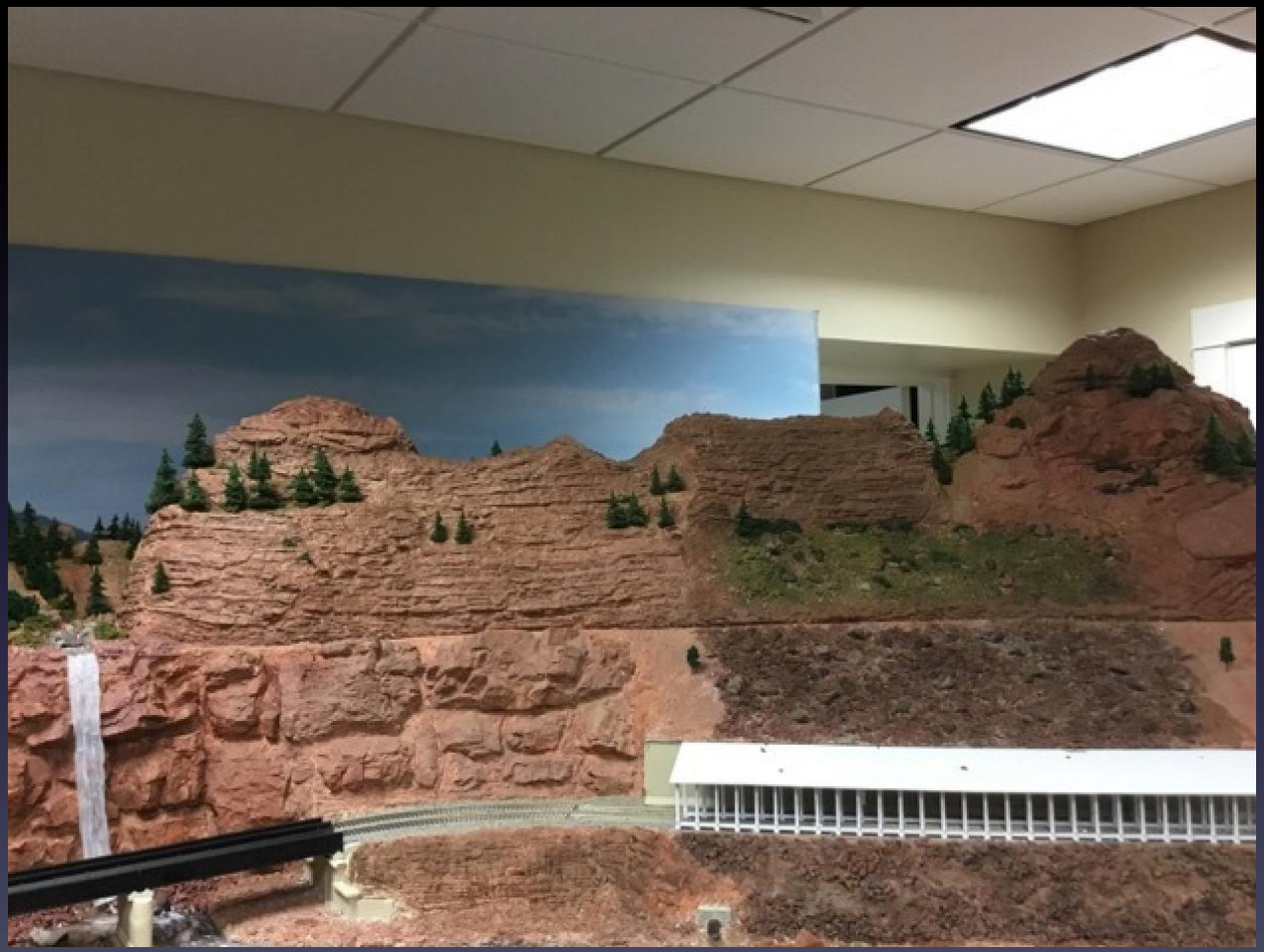


Mountain Tops Added

Before track, bridges and landscaping

Left Side of Fred’s Mountain

Mountain Top Landscaping Mostly Completed



Back Side of Fred's Mountain

Mountain Top Landscaping Mostly Completed

Portable Modules
An Easy Way to do Landscaping

Front Face of Elk Butte

Snowshed Issue

- Built the Snowshoe to GN Standard Design (1915)
- Presented a clinic on this design to the division and at our Thoroughbred Unlimited 2015 convention
- Need to find the perfect color of the shed, settling on tie brown with a light black wash.

Snowshed and Signal Bridge

Prepainting

Shell Gas Station Issue

- Limited Space
- Lighting
- Signage
- Scratch-built Building and Pump center
- Shapeways Pumps and Accessories

Shell Gas Station

Scratch built

Hunting Camp

Final Detail Landscaping

- Trees
- Shrubs
- Roadways
- Ballasting
- River
- Rock Climbers
- USFS Forest Horse Trail Bridges
- Waterfall
- Shell Gas Station
- Vehicle Tunnel
- Radio Tower
- Hunting Camp
- Horse Trail
- Snowshed
- Block Signal Masts

Future Plan

- I intend, over the next couple of months, to finish the enhancements to the scenery model and then submit it for Merit Award judging in the AP Scenery category.

AP-Scenery Category

- The completed section of the layout must contain the necessary scenic elements of Terrain, Structures, Background, Lighting, and Realism/Conformity as combined to achieve a realistic effect using applicable NMRA standards.

Scenery - Terrain

- The ground and all natural features such as rocks, water, trees, shrubs, hills and depressions, as well as man made features such as railroad roadbed, cuts, fills, drainage ditches, embankments, streets and roads, etc.
- Remember the detail on streets and roads, sewers / storm drains, shoulders, drainage ditches, cracks, patches, road wear marks, oil stains, and tire ruts in dirt roads.

Scenery - Structures

- Structures are considered from the standpoint of prototypical suitability, placement, and appearance as scenic effects - NOT as to construction
- This includes bridges, trestles, tunnels and culverts, buildings and all other types of structures (radio towers, signs, fences, retaining walls, etc.), track and right-of-way features such as snowsheds, signaling structures, and other service structures.

Scenery - Background

- Treatment of the wall, backdrop, and/or ceiling to realistically depict depth, distance, horizon, and sky.
- Your background should continue the 'illusion of reality ' that you are trying to create with your scenery. The background should match the scenery, and the transition where the two of them meet is smooth and/or hidden.

Scenery - Lighting

- A fully day lit scene is perfectly acceptable (although you may get more points for a scene that allows you to show off more lighting elements). However, even in a day lit scene, there may be evidence of lighting - even if it is not operational.
- Lighting elements such as vehicular tunnel lighting, radio tower flashers, commercial building lighting, and signal lighting all apply.

Scenery – Realism/Conformity

- In the other four judging areas, the judges evaluate what you were trying to do - what you remembered to include in your scene. In this one, they evaluate how well you did what you were trying to do.
- Your entire layout does not have to be completed to be judged - just enough to meet the minimum space requirements given above. However, the areas which are not to be judged should be blocked off (visually) from those that are.

Wrap Up

- Any questions?