

# Visual Design Fundamentals

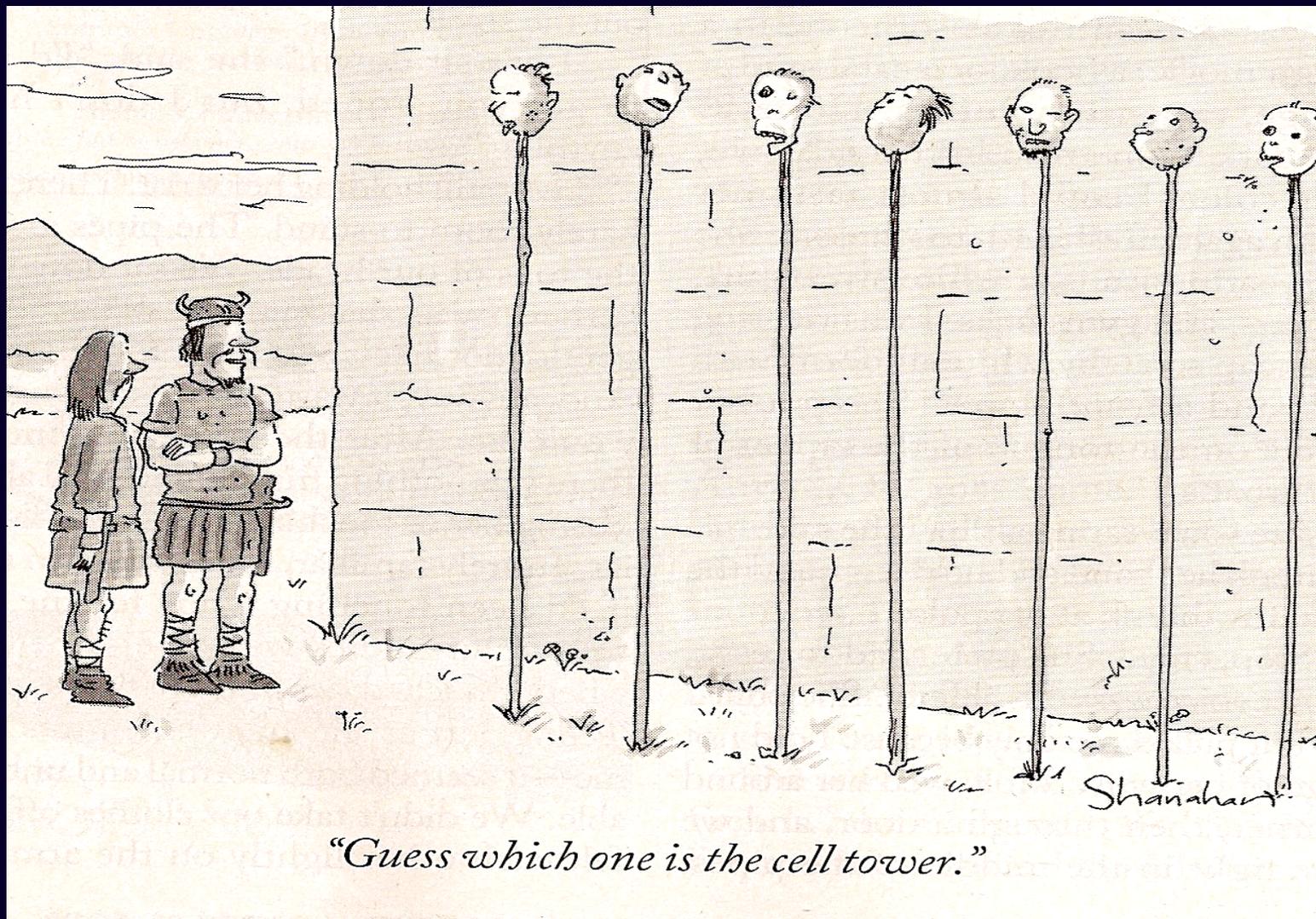


# Objective

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Students will learn concepts, methods, and techniques to design projects in a way that minimizes adverse affects to visual resources

# Visual Design Fundamentals



# Visual Design Fundamentals

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## Goal: Minimize Adverse Visual Impact

- **Proper Siting & Location**
- **Repetition of Landscape Character Elements**
- **Reduction of Unnecessary Surface Disturbance**

# Proper Siting & Location

- **Locating a project in the landscape in a manner that minimizes adverse visual impacts**



# Proper Siting & Location

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- The project is:
  - Screened by topography
  - Screened by vegetation
  - Located away from visually sensitive areas
  - Located away from dominant landscape features
  - Located project away from points of convergence
- Locate the project in a manner that reduces the visibility of both structures and associated surface disturbance

# Proper Siting & Location

Water tank located in plain view



# Proper Siting & Location

Better location for water tank



# Proper Siting & Location

Gas well exposed on skyline



# Proper Siting & Location

Gas well located below skyline



# Proper Siting & Location

Locating projects to minimize visual impacts



# Proper Siting and Location



# Proper Siting & Location

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Screen project with vegetation



# Proper Siting & Location

Hide projects behind a hill or knoll



# Proper Siting & Location

Water tank is screened from view



# Proper Siting & Location



- Bury projects underground

# Repetition of Landscape Character Elements

- **Designing and building a project in a manner that repeats or mimics the natural character elements in the landscape**

# Repetition of Landscape Character Elements



- Modifications repeat the **Forms** in the landscape
- Modifications repeat **Lines** in the landscape
- Modifications repeat **Colors** in the landscape
- Modification's texture is similar to **Texture** in the landscape

# Repeating FORM

Forms that are bold, regular, vertical, or solid tend to be dominant in the landscape



# Repeating Form



# Repeating FORM

Openings repeat natural forms



# Repeating FORM

Water tank form similar to vegetative form



# Repeating FORM

Ski Area Development – Cokeville, WY



# Repeating LINE

Road in Red Canyon



# Repeating LINE

Roads fit lines in the landscape



# NOT Repeating LINE

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# NOT Repeating LINE

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# NOT Repeating LINE

Straight line in a horizontal landscape



# Repeating COLOR

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- Color is a powerful design tool
- Color is increasingly effective in direct proportion to the distance the project is located from where it is viewed
- Color has not been used nearly as effectively as it should have been
- Past experience reveals that colors have often been lighter than they should be
- Use desert brown and greens with great caution

# Repeating COLOR

## Standard Environmental Colors

**Standard Environmental Colors**

**Selecting a Color**

Observe the color scheme of the overall landscape. Lighter colors visually advance toward the viewer, and darker colors recede into the landscape regardless of the actual distance. Choose a color that repeats the darker, more recessive color scheme of the surrounding soils and/or vegetation. Re-evaluate from a distance to select a color that is slightly darker than the undisturbed landscape.



Observe the color scheme of the overall landscape

**Color Choices**

**Carlsbad Canyon:** Use where herbaceous vegetation is dominant in a grassland or other light colored landscape.



**Covert Green:** Use in a mixed shrub/grass steppe where the shrub component is dominant.

**Shadow Gray:** Use in heavy shrublands, deciduous forests, or open pine or juniper woodlands where dark gray trunks and branches darken the landscape color.

**Juniper Green:** Use in mixed coniferous/deciduous or deciduous forests.

**Shale Green:** Use in dense shrublands, coniferous or deciduous forests, and mixed shrub woodlands.

**Sudan Brown:** Use where dark soils give the landscape a brownish color or in forests where dark brown trunks and branches are dominant.

**Beetle:** Use in spruce/fir or other dark coniferous forests having a bluish hue.

**Yuma Green:** Use in dense coniferous or deciduous forests. Use when viewing from a distance or in areas that are typically in shadow.

**Carob Brown:** Use when exposed red soil and rock clearly dominate color in the landscape. Use another dark color if the dominance of red tones is diminished by vegetation.

**Design Solutions**

Proper color selection can dramatically mitigate adverse visual impacts. However, the design solution is more effective if used in combination with other mitigation such as: repeating the elements of form, line, and texture; proper siting and location; minimizing scale; and reducing unnecessary surface disturbance.

For more information visit: <http://www.blm.gov/bmp>

BLM  
U.S. Department of the Interior - Bureau of Land Management

**Standard Environmental Colors**



Carlsbad Canyon      Covert Green      Shadow Gray

Juniper Green      Shale Green      Sudan Brown

Beetle      Yuma Green      Carob Brown

The Standard Environmental Colors chart was developed to assist with color selection to minimize the visual contrast of a facility in the landscape.

In order to ensure color accuracy, use an original color chart to match paint. When matching the color chip, request the paint company to have their computer scan set on "natural light." Compare the new paint sample to the color chip under indirect natural sunlight. Use semi-gloss paint, where appropriate, to enhance durability yet reduce reflectivity. Select colors a shade or two darker than the surrounding landscape to account for natural shadows, normal fading, and weathering.

Order Standard Environmental Colors charts by emailing your request to: Printed Material Distribution System (PMDS), BLM\_NOC\_PMDS@blm.gov or fax to 303-236-0845. Provide the quantity requested along with a contact name, physical address (no P.O. Boxes), and telephone number. For more information or questions, please call 202-785-6574.

Standard Environmental Colors Chart CC-001 June 2008

BLM/WY/ST-08-015-8450

# Repeating COLOR

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1. Color selected should match the color(s) in the landscape
2. Select a color that is equal to or SLIGHTLY DARKER than the surrounding colors.

# Repeating Color

Color of tank matches the color of vegetation



# Repeating COLOR

Water  
Tank at  
Arches  
National  
Park



# Repeating COLOR

Effective use  
of color to  
minimize  
visual  
impacts for  
power line  
development



# Repeating COLOR

## Recreation Site Development



# Repeating COLOR

Dark color matches dominant/adjacent colors in the landscape



# Repeating COLOR

Gas development near Parachute, CO



# Repeating COLOR

Same scene, better color (Simulation)



# Repeating COLOR

Visualize the impact with the proper color



# Selecting Color

Widespread use of *Carlsbad Canyon*



# Repeating Color

- **Western Landscapes are strongly influenced by the color gray**



# Repeating Texture

Repeating  
“Texture” means  
matching the  
overall character  
of the surfaces of  
major features in  
the landscape.



# Repeating Texture

Building with natural materials often results in a texture that fits the surroundings better than building with man-made materials



# Repeating Texture

Recreating texture through reclamation



# Repeating Texture

Reclamation to restore texture



# Reduction of Unnecessary Disturbance



- Fit the project to the landscape
- Use smallest area necessary for project
- Minimize cuts and fills
- Promote interim reclamation
- Complete final reclamation

# Reduction of Unnecessary Disturbance

I-70 Corridor – Glenwood Springs, Colorado



# Reduce Unnecessary Disturbance

Use the minimum road necessary



# Reduction of Unnecessary Disturbance

Use the smallest possible location



# Reduction of Unnecessary Disturbance

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# Reduction of Unnecessary Disturbance

It isn't always necessary to clear the ROW



# Class Exercise

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- Evaluate the photograph
- Identify the project that has caused visual impacts to the natural landscape
- Report whether the visual impact is a result of:
  - Improper siting & location
  - Failure to repeat landscape character elements, or
  - Failure to minimize unnecessary surface disturbance.
- Propose a solution that minimizes the visual impact











# Unit 7 - Continued



# Capacity of a Landscapes to Absorb Visual Impact

- Landscapes with greater visual variety generally have a greater capacity to absorb visual impacts



# Capacity of Landscapes to Absorb Visual Impact



# Capacity of a Landscape to Absorb Visual Impact



# Capacity of a Landscapes to Absorb Visual Impact



# Visual Absorption Capacity



This combines excellent site selection with good design and an especially good color

# Earthwork

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- **Carry out earthwork in a manner that:**
  - **Minimizes unnecessary surface disturbance**
  - **Repeats landscape character elements**
    - **Form**
    - **Line**
    - **Color**
    - **Texture**

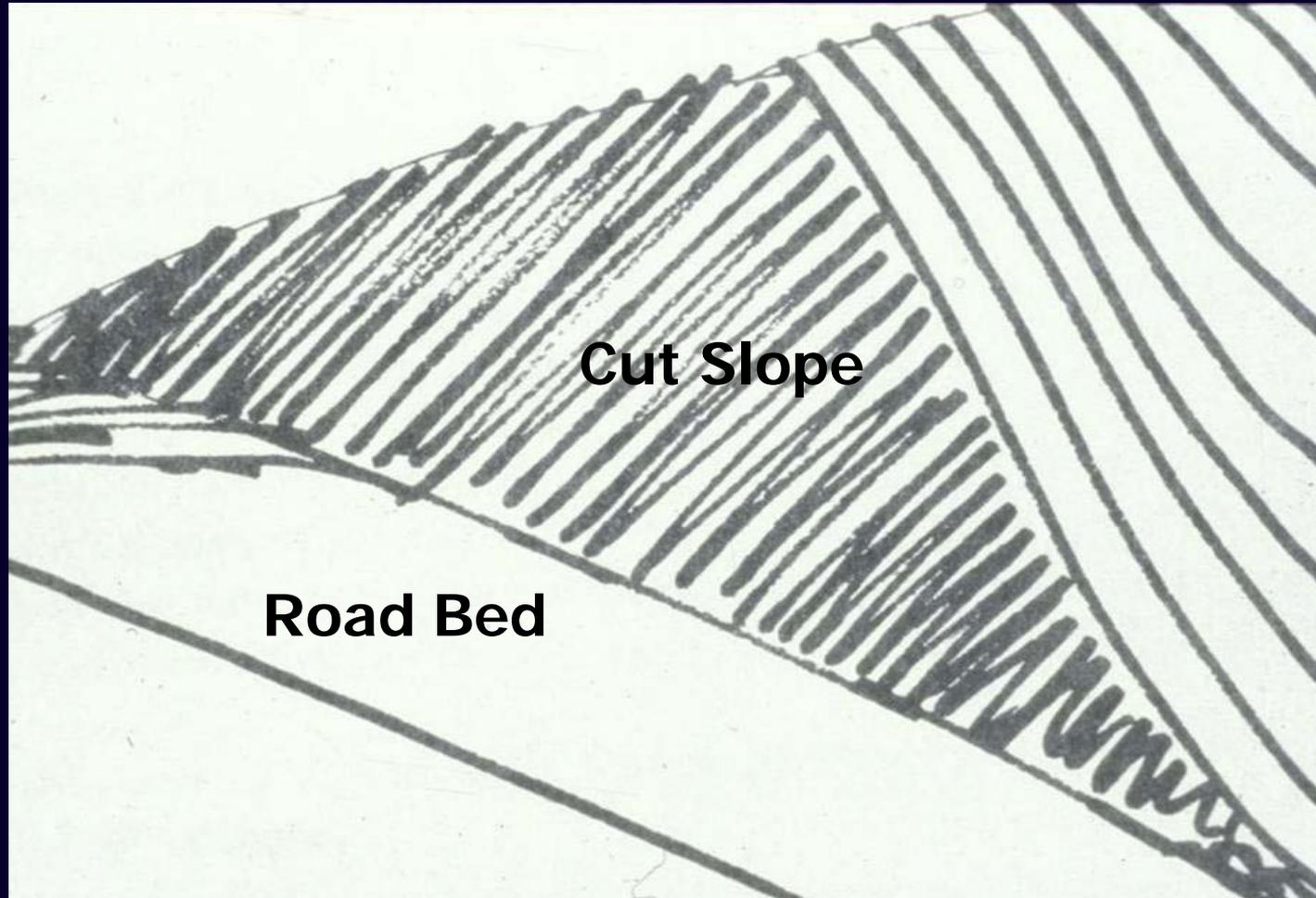
# Oil & Gas Developments

Minimize cut and fill

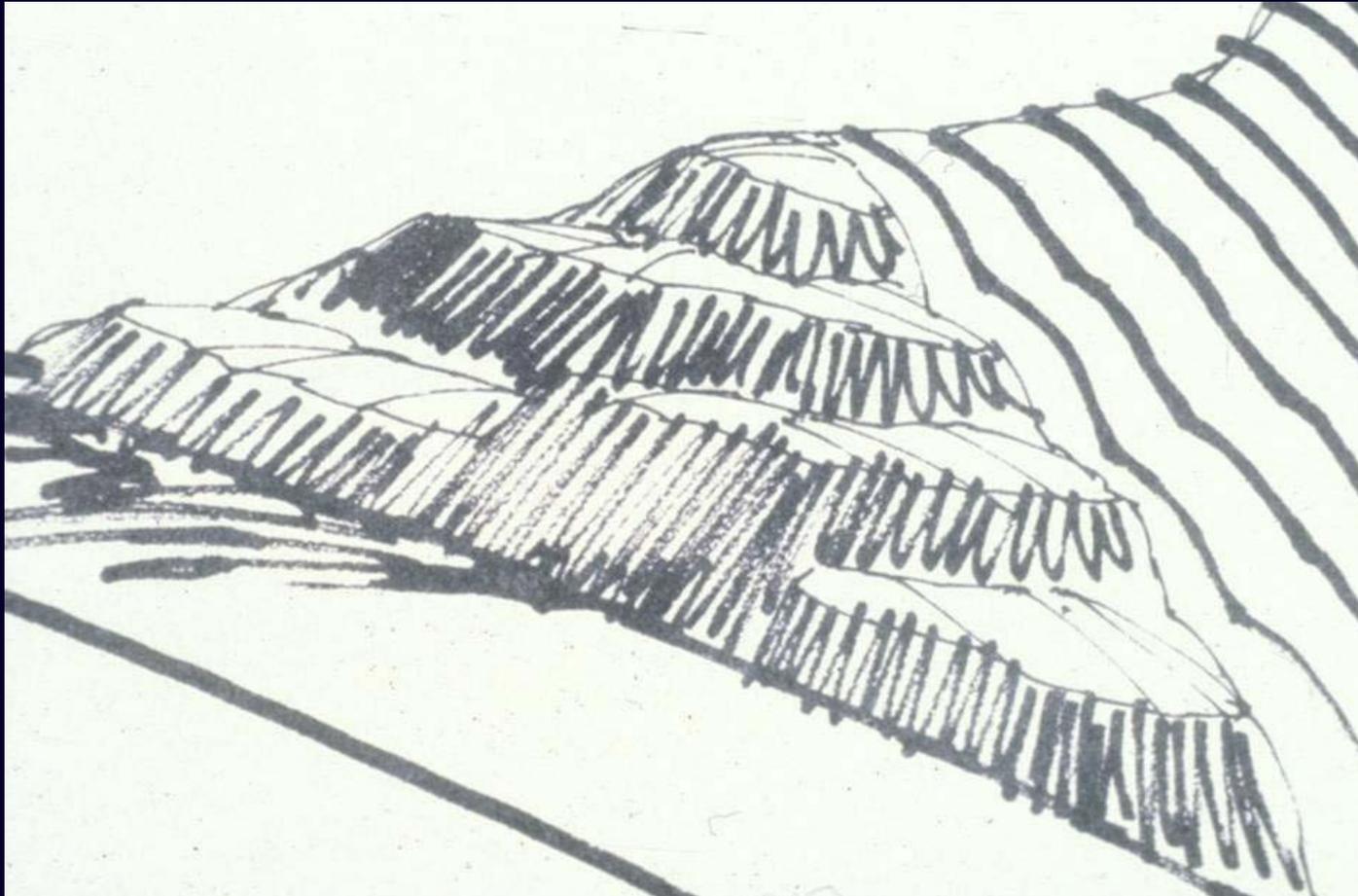


This large pad avoids excessive cuts & fills

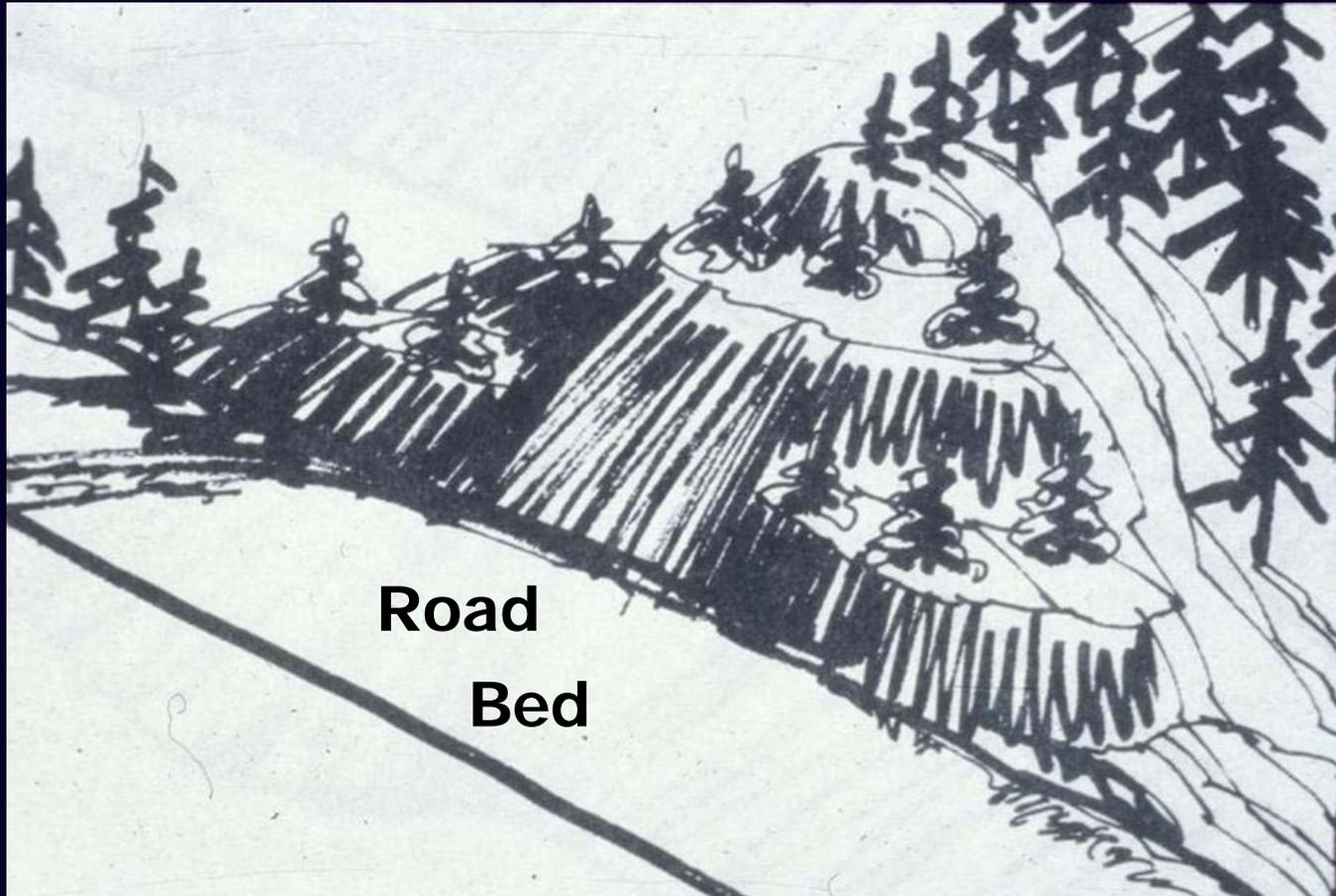
# Earthwork



# Earthwork



# Earthwork



# Linear Alignments

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- Fit contours of landscape
- Repeat Landscape Character Elements
- Don't over-build
- Co-locate with other facilities

# Locating Linear Alignments

There are lots of poor examples out there



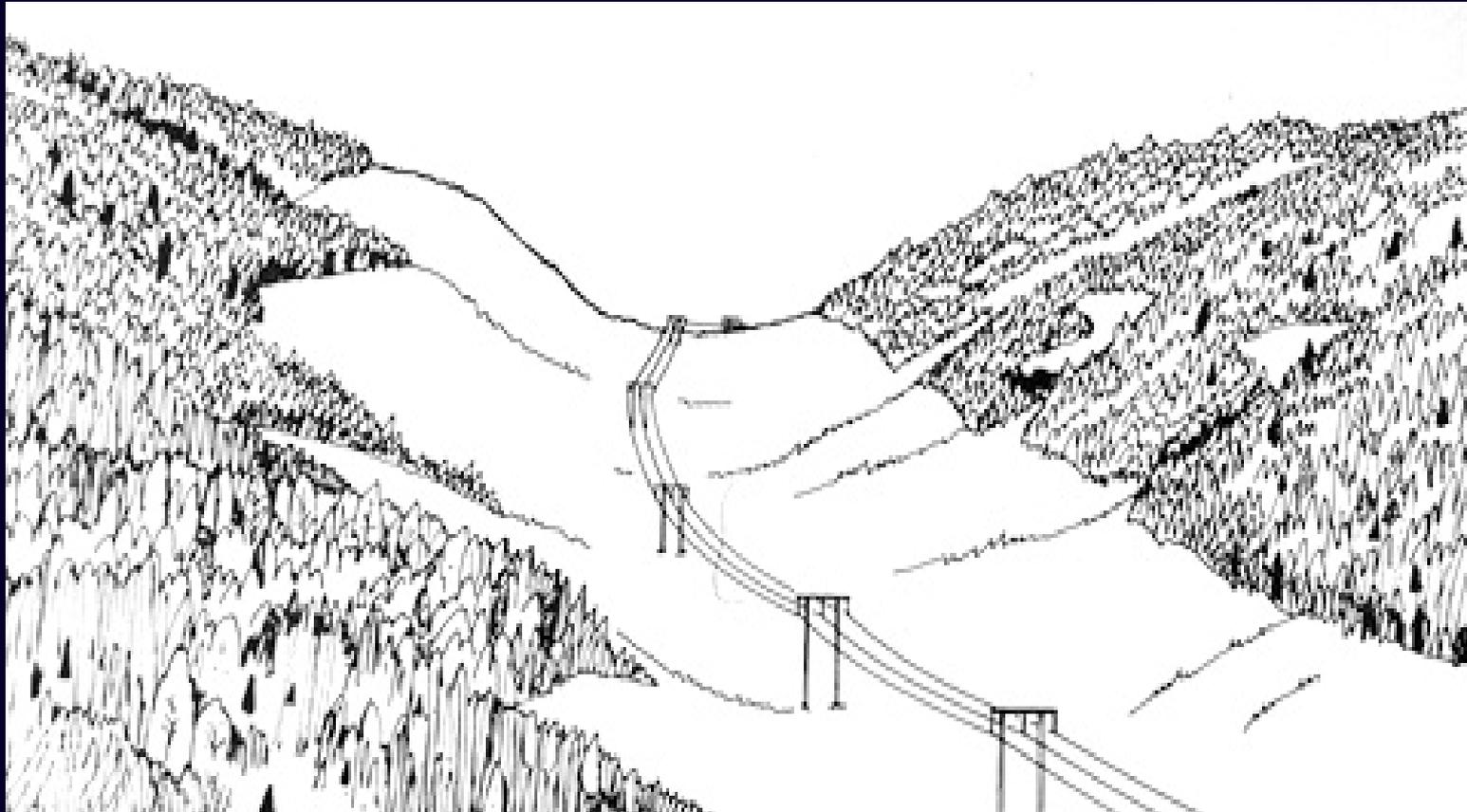
# Locating Linear Alignments

## Improper Location of Rights-of-way



# Locating Linear Alignments

Power line located in opening; creates new line



# Locating Linear Alignments

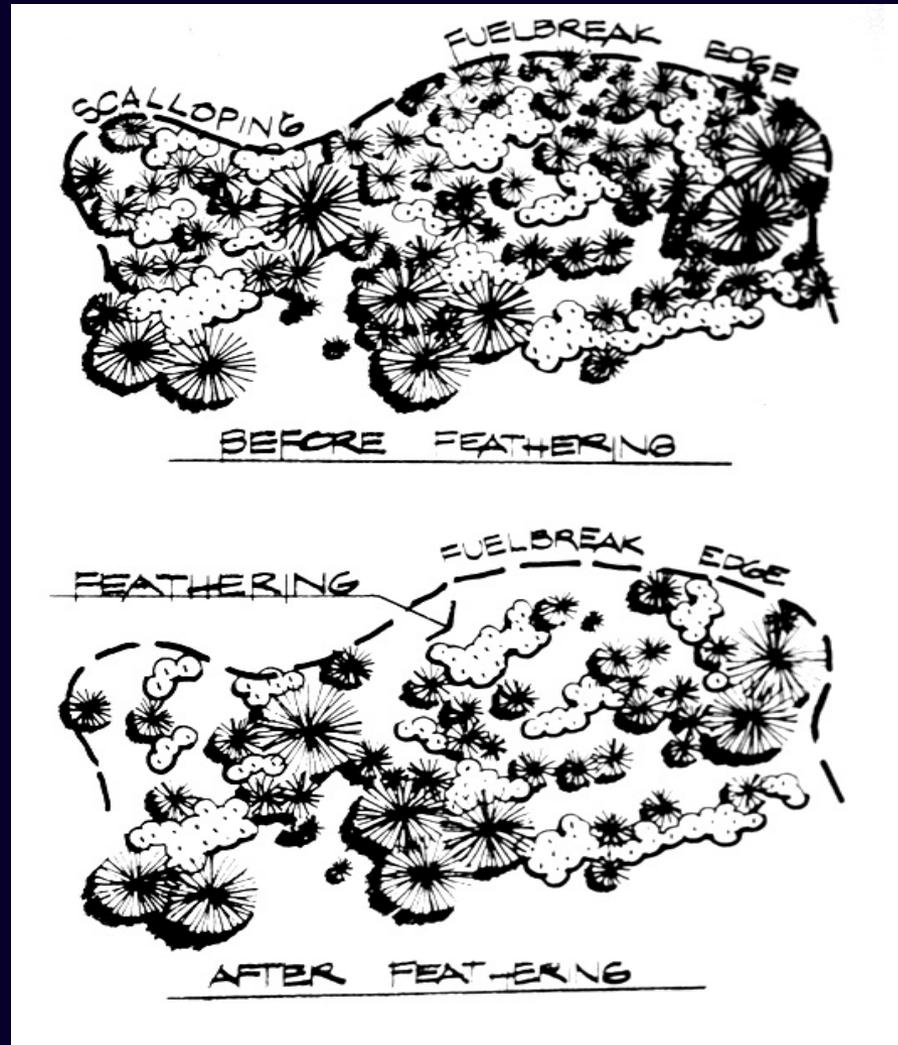
Relocate ROW to edge of opening; repeat linear element



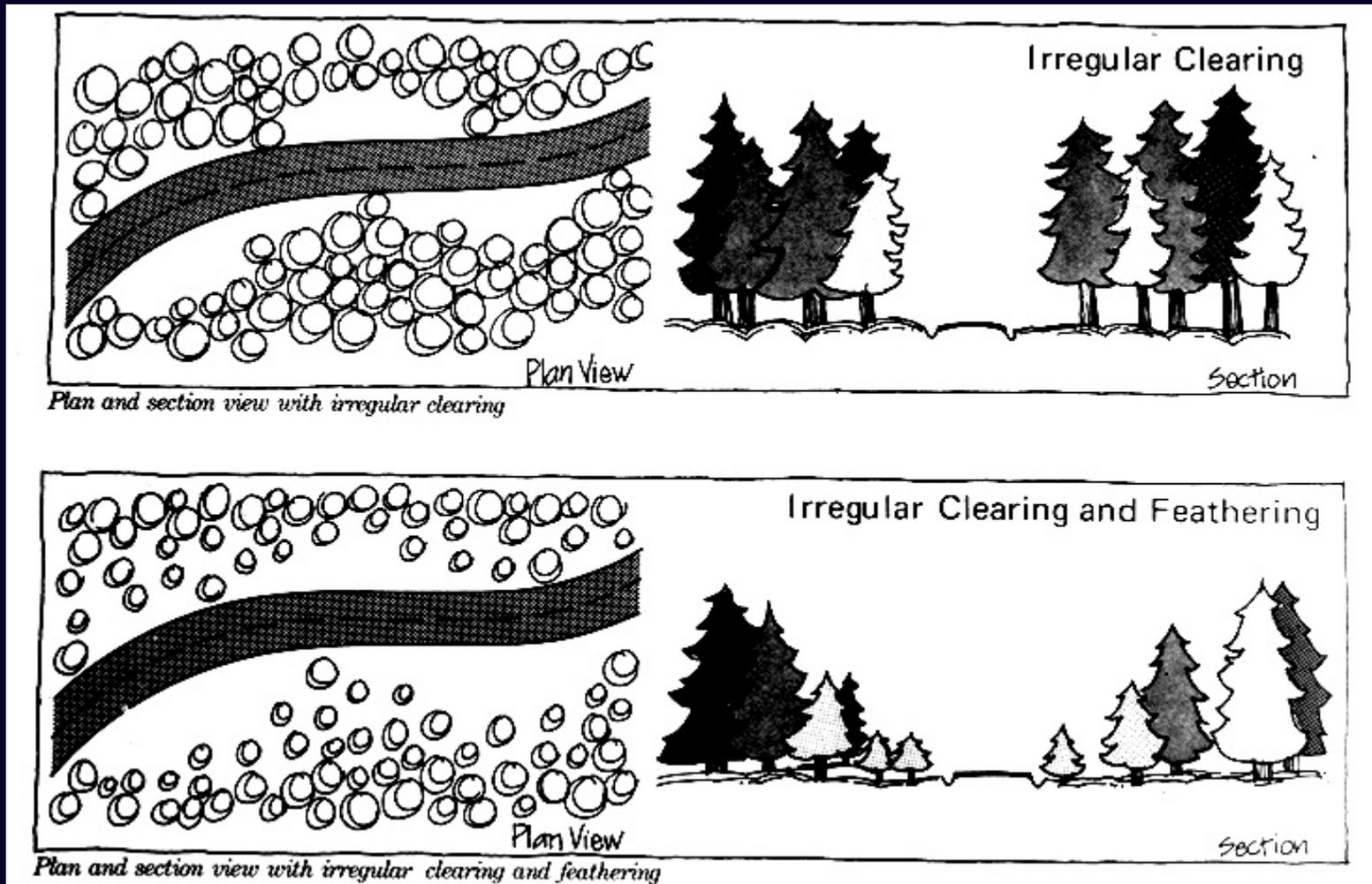
# Linear Alignments

## Vegetation Manipulation

Feathering  
Vegetation  
along edge of  
right-of-way



# Linear Alignments



# Linear Alignments

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A more gradual transition from  
forest to meadow

# Linear Alignments

Co-locate rights-of-way



Gas line buried in lots of rock



It's not always necessary to clear the ROW

# Linear Alignments

**Follow contours in the landscape, co-located right-of-way,  
Excellent rehab**



# Additional Thoughts on Color



# Selecting Color

Many landscapes exhibit complex color combinations and at a minimum, subtle color variation



# Selecting Color

Color variation is the rule



# Selecting Color

Use large color panels in the field to help select appropriate color



# Selecting Color



# Selecting Color

## Comparison of colors



# Selecting Color

## Comparison of colors



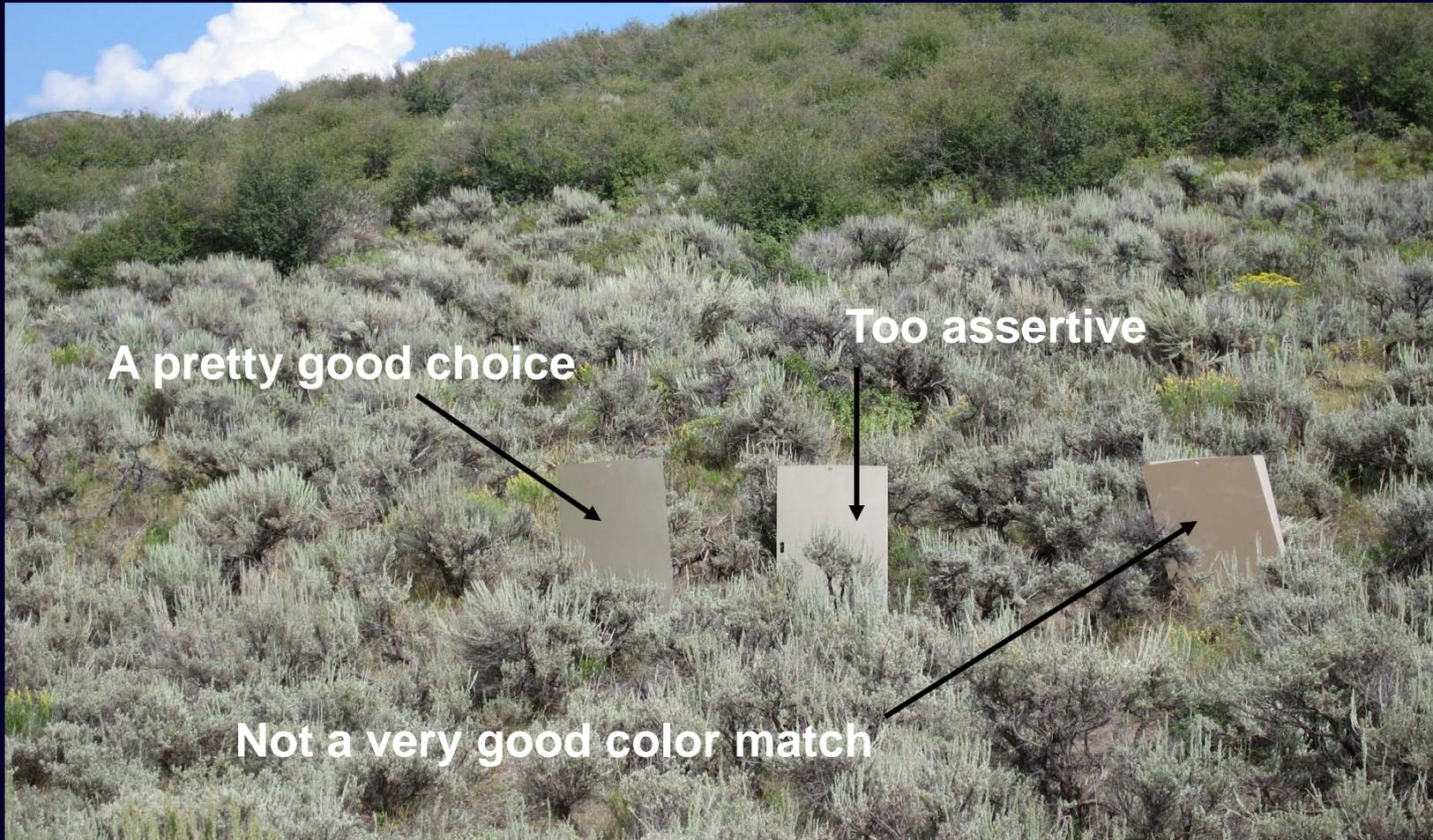
# Selecting Color

Which would you choose?



# Selecting Color

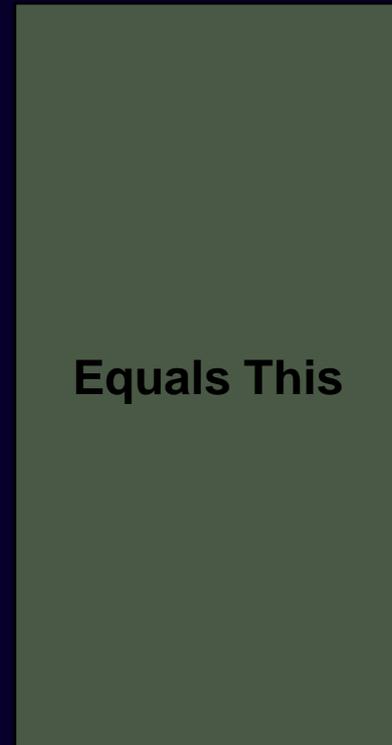
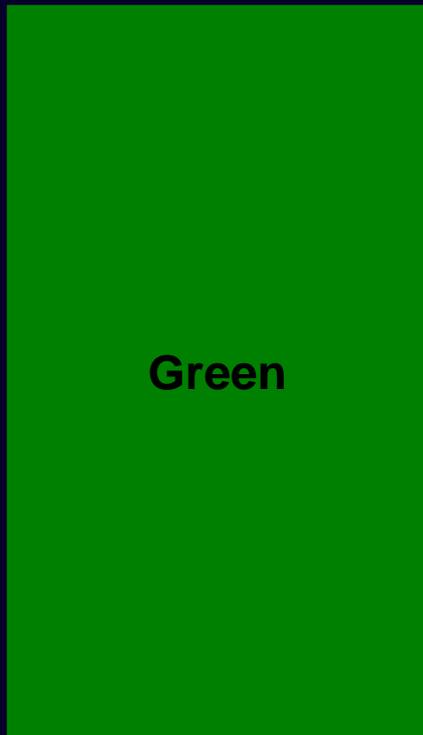
Which would you choose?



# Selecting Color

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The color **Gray** heavily influences western landscapes.



**Mixing Gray With Green**

# Reclamation & Land Restoration



**Visual Reclamation/Restoration means:**  
Restoration of Form, Line, Color &  
Texture of Landforms & Vegetation

# Reclamation & Land Restoration

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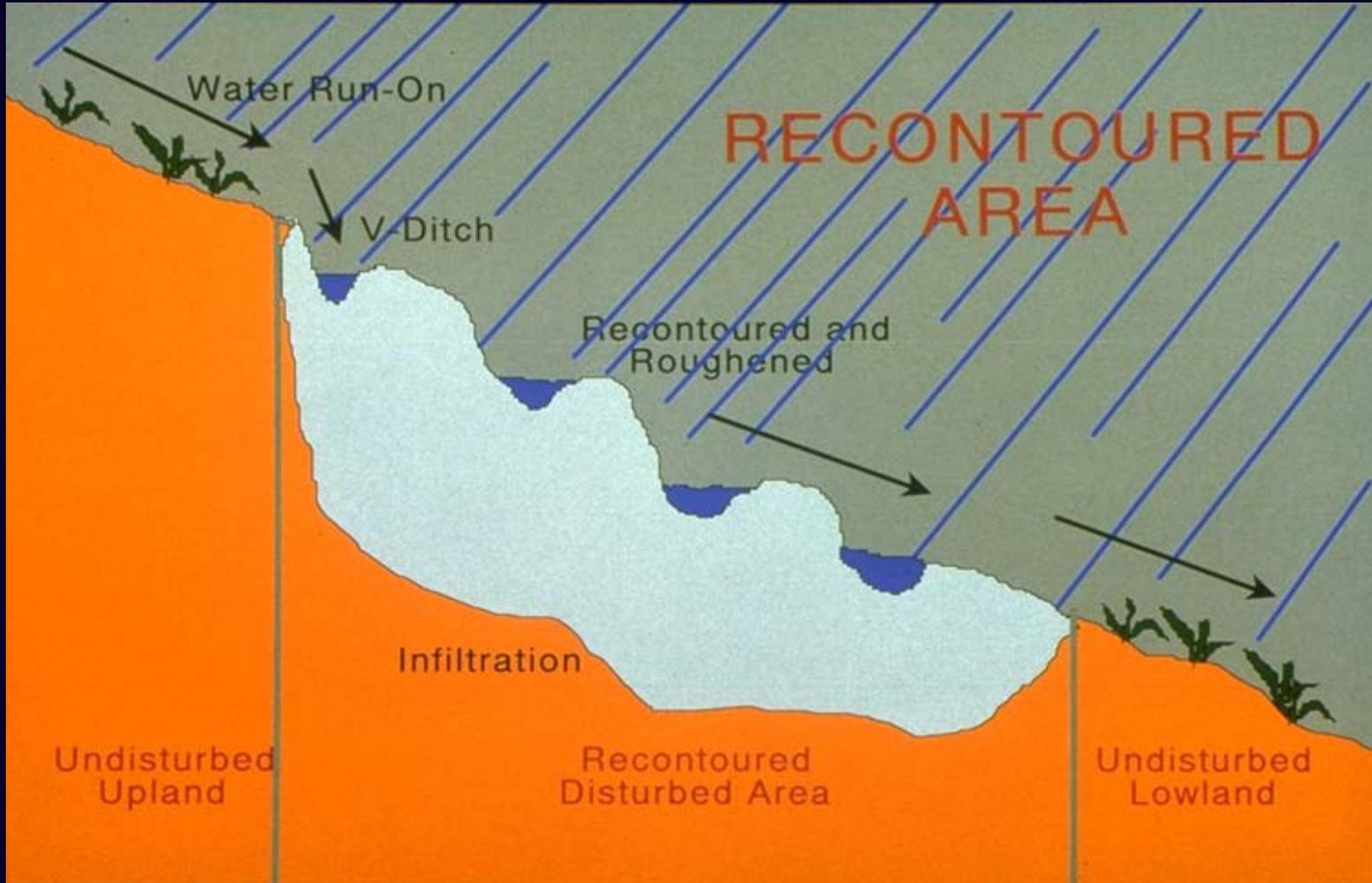
Reclamation Efforts Must

**ALWAYS**

Have

A Visual Objective

# Reclamation & Land Restoration



# Reclamation & Land Restoration

## Road closing and rehabilitation



# Reclamation & Land Restoration

Completed road rehab project



# Reclamation & Land Restoration

Completed road rehab project



# Reclamation & Land Restoration

## Pipeline construction



# Reclamation & Land Restoration

Completed pipeline project



# Oil & Gas Development

Always complete interim site reclamation



# Oil & Gas Developments

The Ultimate Goal: Good Reclamation & Land Restoration



# Mined Land Restoration

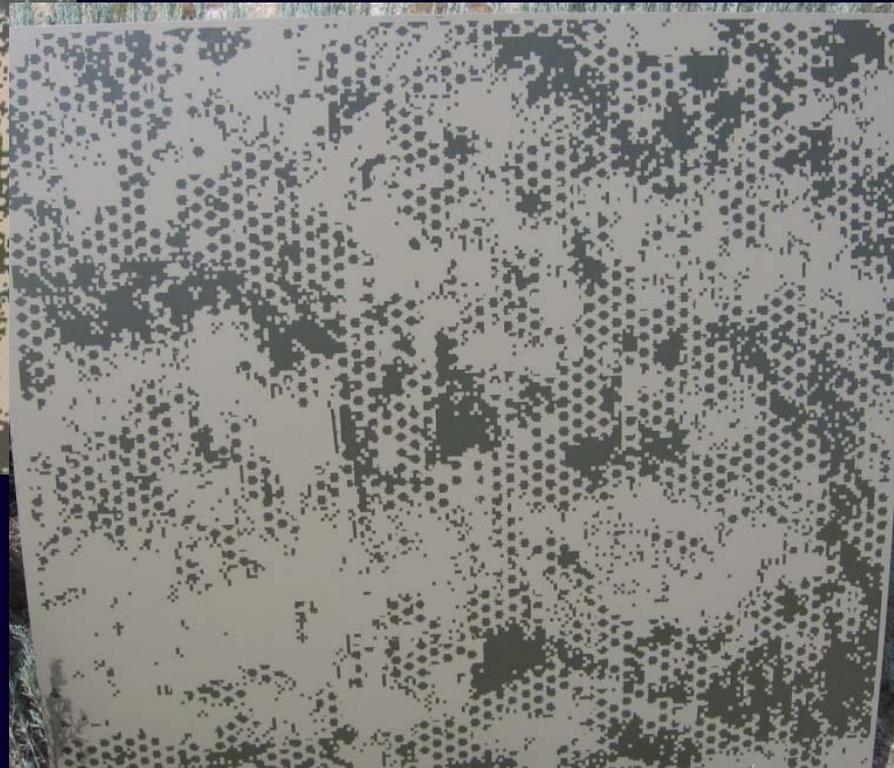
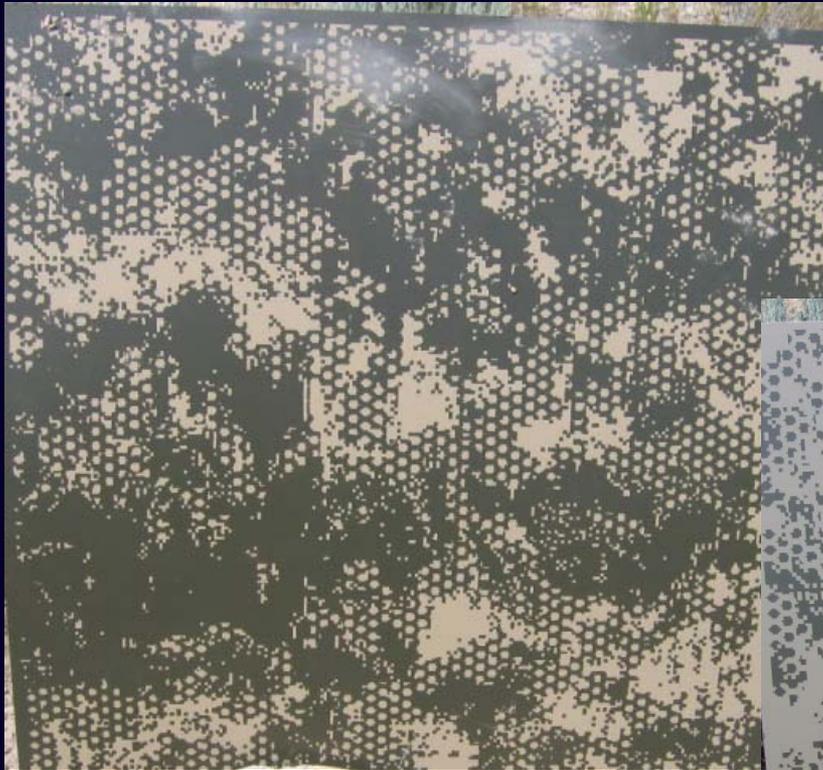


Reclamation focuses on restoration of Form, Line, Color, & Texture of the site to pre-mining conditions

# Camouflage Patterns



# Camouflage Patterns



# Camouflage Patterns

## Field testing camouflage patterns



# Camouflage Patterns



# Camouflage Patterns



# Disguising Cell Towers in Urban Areas

- City imposes design requirements for hiding wireless antennas.

By MARY JANE SMETANKA  
smetan@startribune.com

A year after passing an ordinance limiting the height of church steeples and bell towers, Bloomington has tweaked its regulations by imposing design requirements to make it clear that the same bell tower can't be replicated over and over again on church grounds all over town.

It's not that churches have gone mad for bell towers. The new rule is aimed at providers of cell phone service who are looking for places to hide wireless antennas in residential areas.

After T-Mobile last year masked its equipment in a simple three-legged bell tower erected at CrossPoint Church near 98th Street and France Avenue, the company came back to



Graphics courtesy city of Bloomington

Verizon has proposed adding a bell tower, right illustration, to Oak Hill Lutheran Brethren Church in Bloomington to hide a wireless antenna.