ArcGIS Pro: Data Alignment and Management

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SEE
WHAT
OTHERS
CAN'T

Agenda

- Creating aligned data
  - Templates, Snapping, Tracing, Auto complete
- Align data
  - Align features, Transform, Rubber sheet, Bulk snap
- Maintaining data alignment
  - Reshape, Rotate, Map topology – shared edge editing
- Discover and fix alignment issues
  - Geodatabase topology – rules, errors, fixes

Creating Aligned Data

Lisa

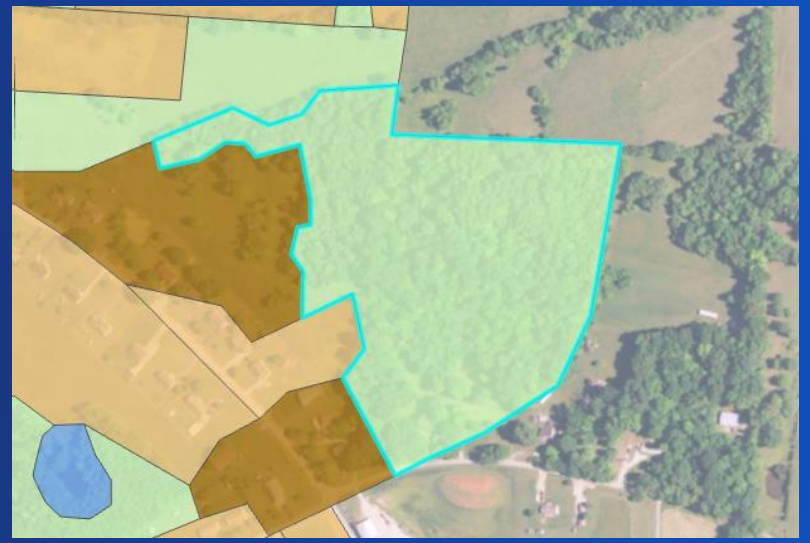
Advanced Feature Templates

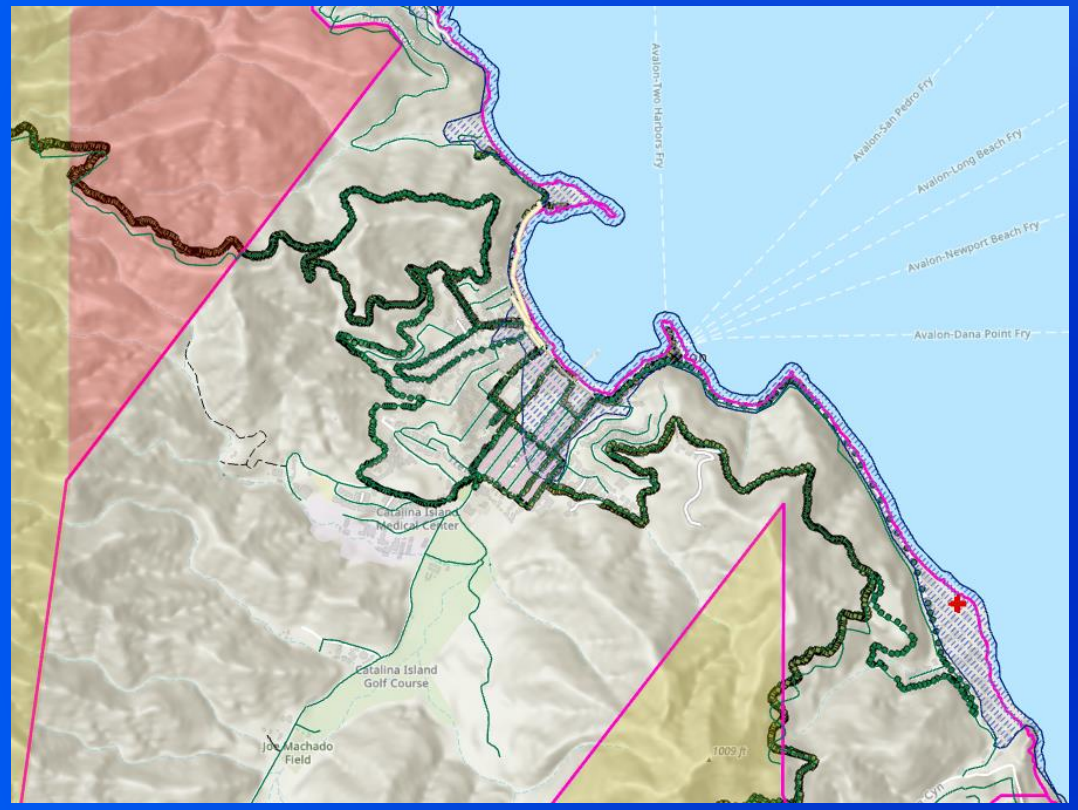
- **Group Templates**
  - Creates several features with one sketch
  - Primary template geometry determines builders

- **Preset Templates**
  - Generated from a selection of features
  - Placed with a point sketch

Tools

- Auto-Complete (polygon and freehand)
- Trace
- Snapping environment





Creating Aligned Features

Lisa

Aligning data

Sean

Transformations

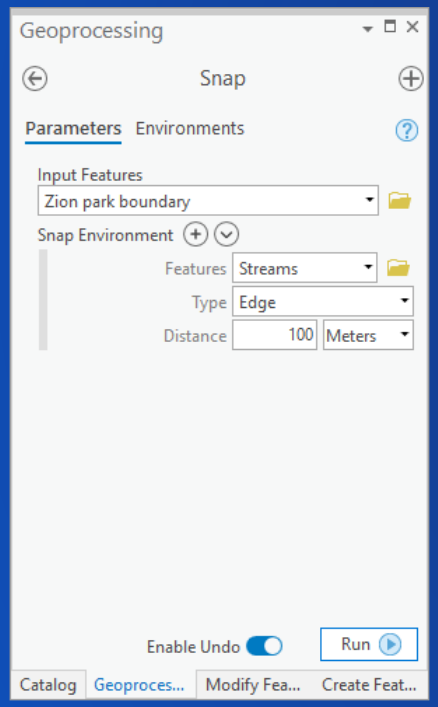
- **Transform**
  - Shift data in coordinate space
- **Rubber sheet**
  - Align data in close proximity
  - Massage data into alignment

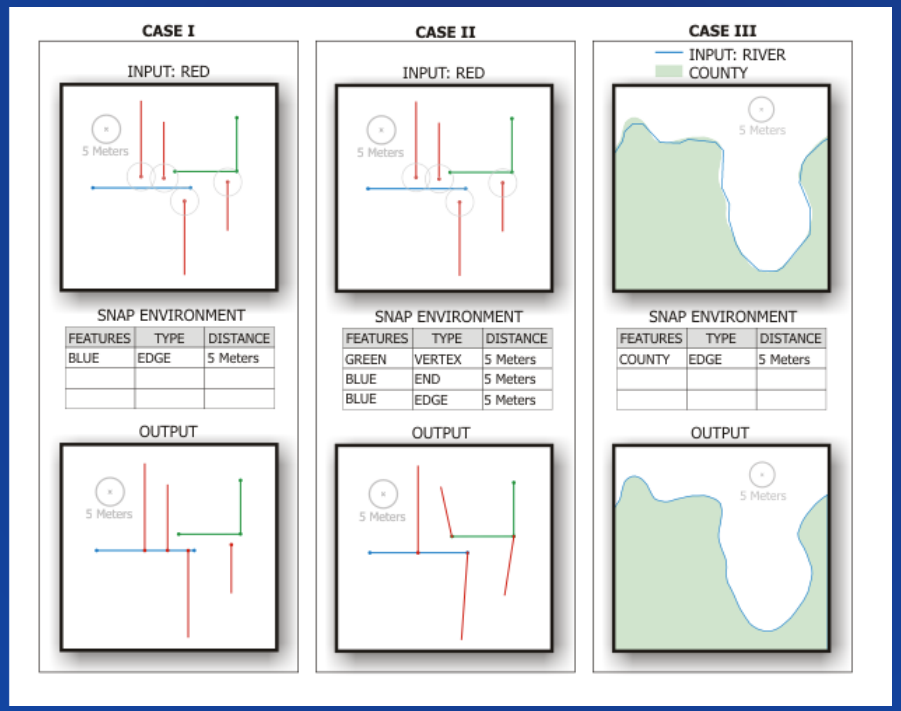
Align Features

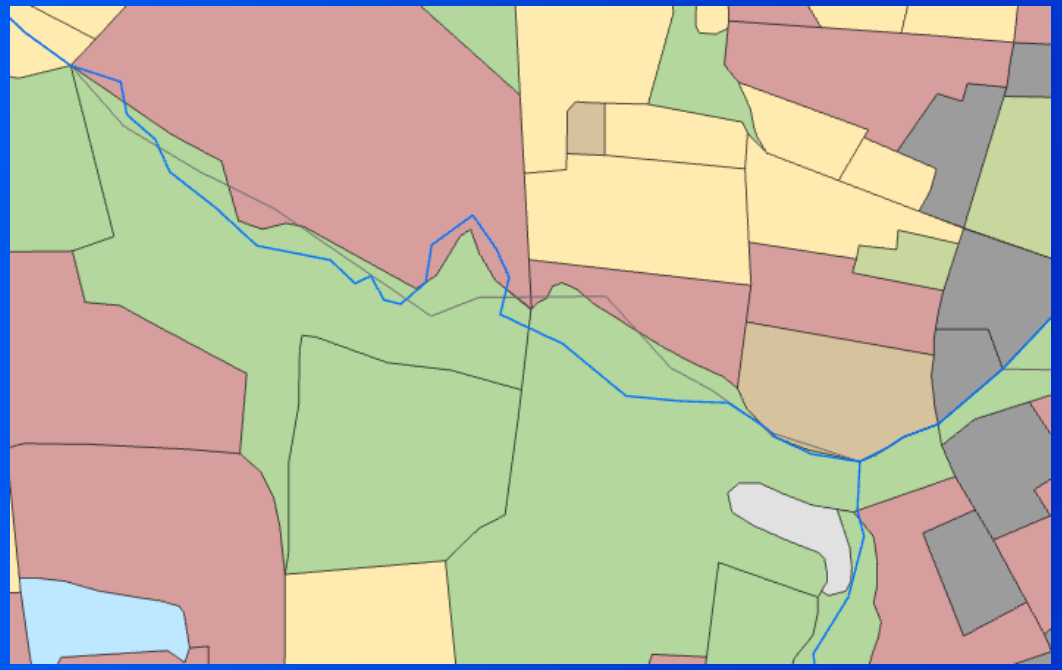
- Align features to a traced line
  - Features aligned within tolerance
  - Respects topology

Geoprocessing Alignment Tools

- **Snap – bulk snapping based on user specified rules**
  - **Edit session**







Aligning data demo

Sean

Modifying Aligned Data

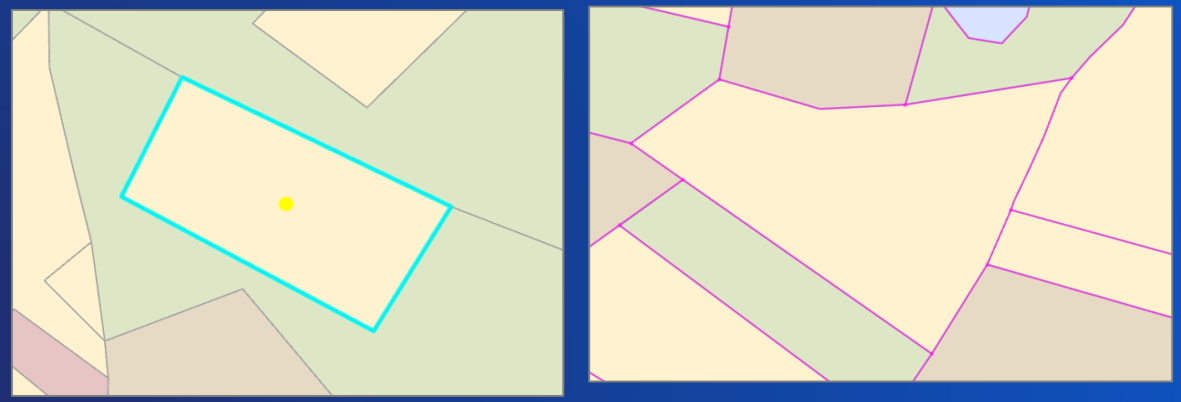
Lisa

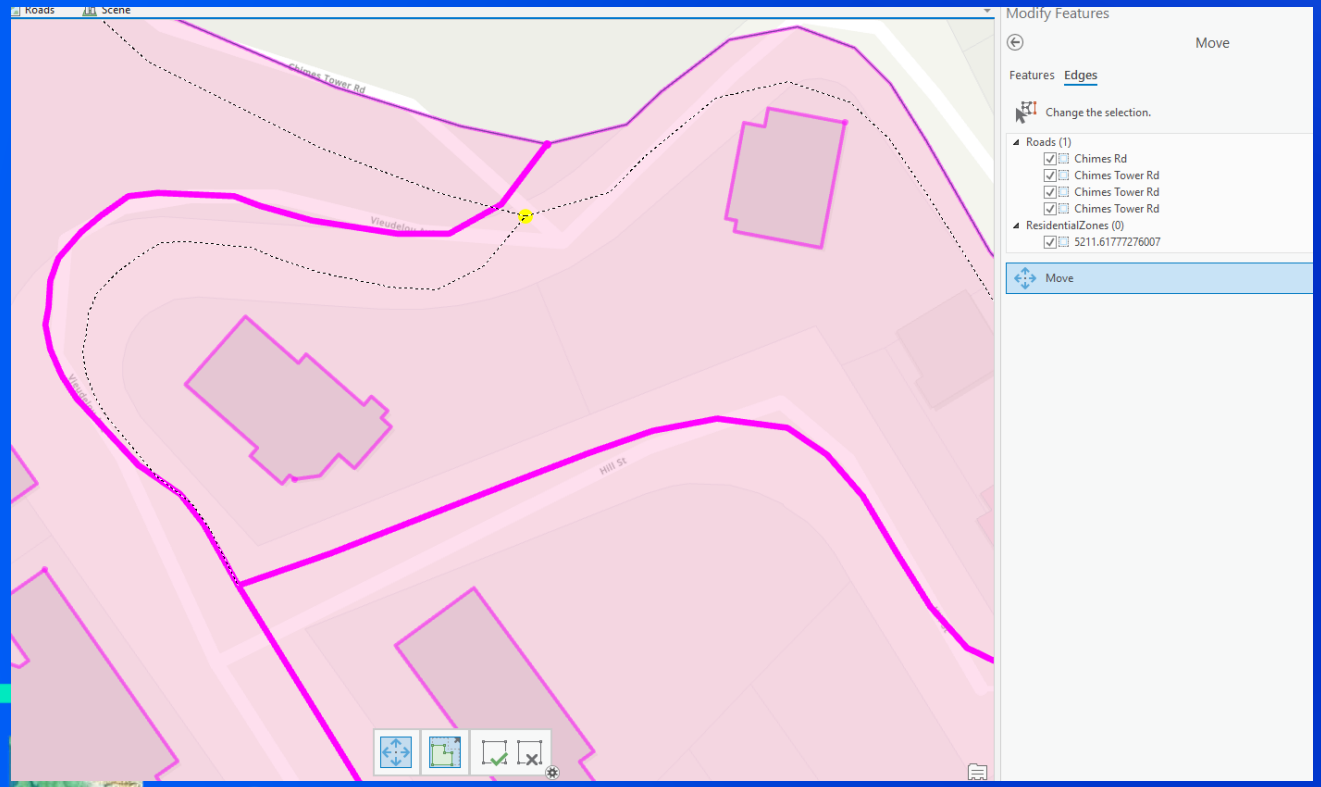
Core Editing Tools

- Reshape Multiple Features
- Extend or Trim
- Replace Geometry
- Auxiliary anchor (Rotate and Scale tools)
- Align Features– adjust layers to a sketched or traced shape

Shared-Edge Editing

- Topology – map or gdb
  - ALL visible editable layers in the map
- Edges tab
  - Supports moving, reshaping, vertices and aligning edges
- 2D only





Modifying Aligned Data

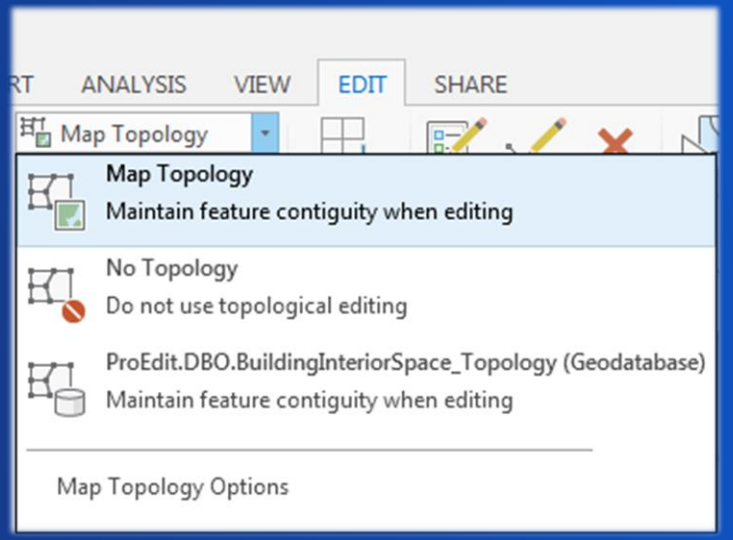
Lisa

Discover and fix alignment issues

Sean

Topologies – What kinds are there?

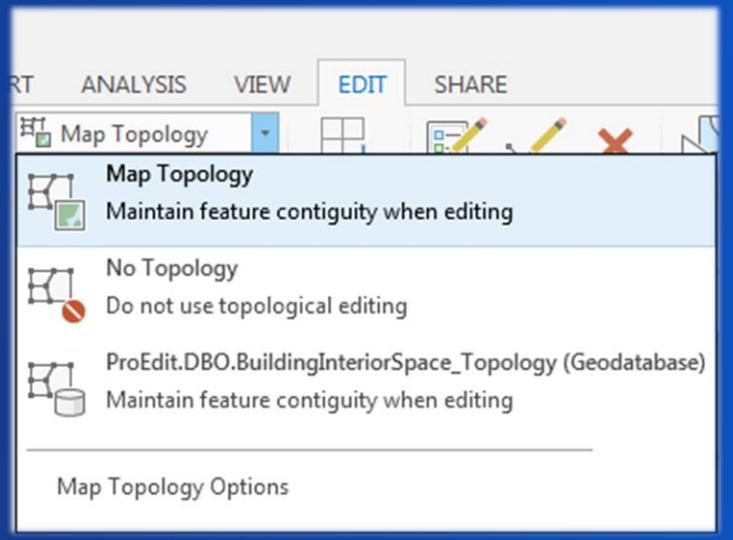
- **Map Topologies (Basic license)**
  - Allows you to edit shared edges and nodes while maintaining feature contiguity
  - Can be used with feature classes or shapefiles across workspaces. Uses any editable, visible layers in the map's contents pane
  - Saved in map document



Topologies – What kinds are there?

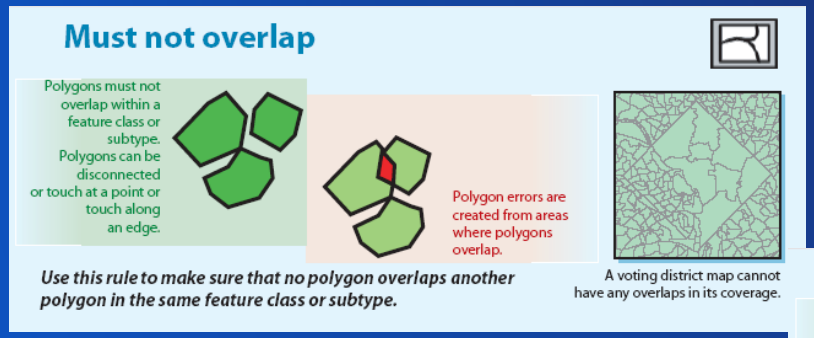
- **Geodatabase Topologies (requires Standard license)**
  - **Allows you to edit shared edges and nodes while maintaining feature contiguity**
  - **Rules-based methodology that involves validating spatial relationships**
  - **Topology errors**
  - **Persisted in the database**

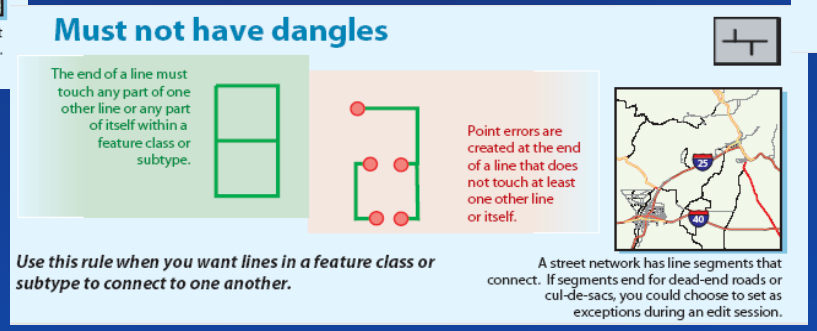
  - **Must be used with feature classes in same feature dataset**

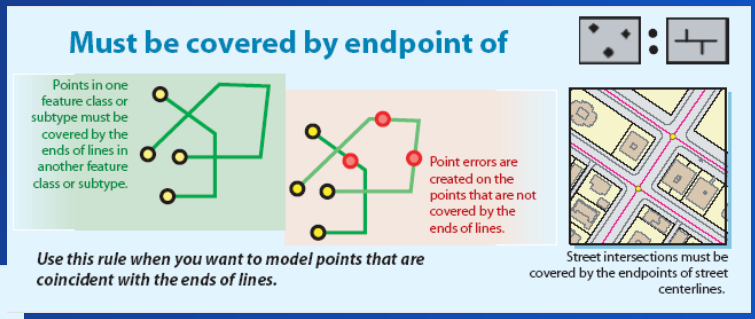


Geodatabase Topologies – Topology Rules

- 32 topology rules (no custom rules)
- Single or multiple feature classes
- Apply to feature class or subtype level
- Categorized by geometry type (polygon, line, point)
- Can export topology errors

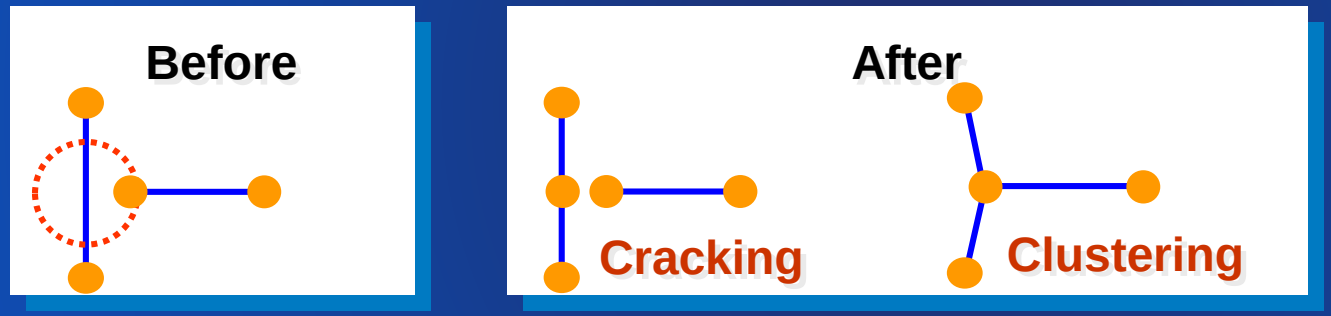






Geodatabase Topologies – Validating a Topology

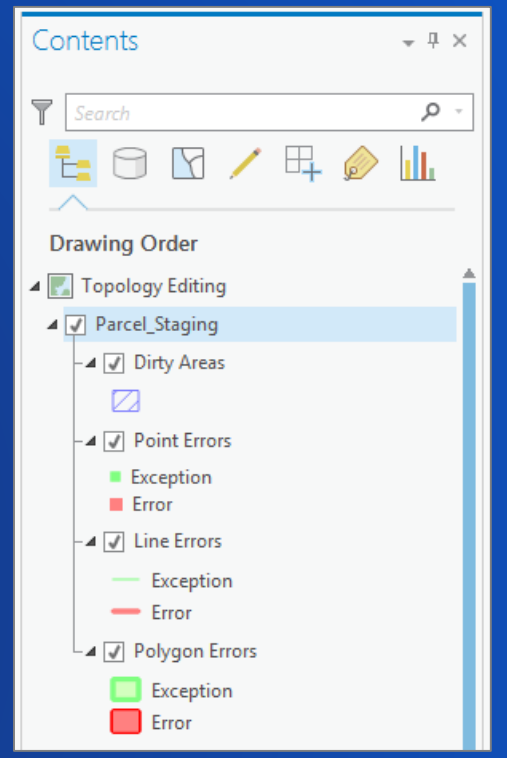
- Integrates geometries based on the cluster tolerance
  - Cracking –Vertices added at intersections of feature edges
  - Clustering – Snapping vertices that fall within cluster tolerance

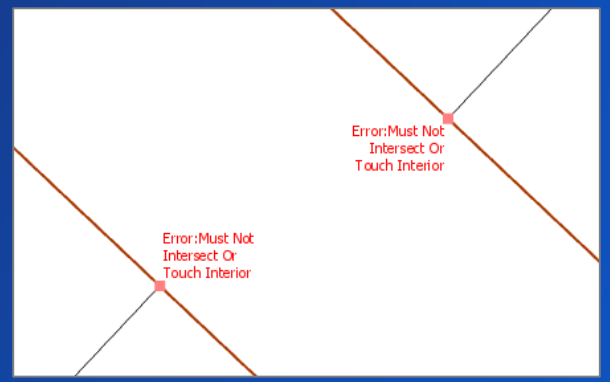


- Validates topology rules which may generate errors
  - Deletes errors if the rules are no longer violated
- No new features are created

Geodatabase Topology

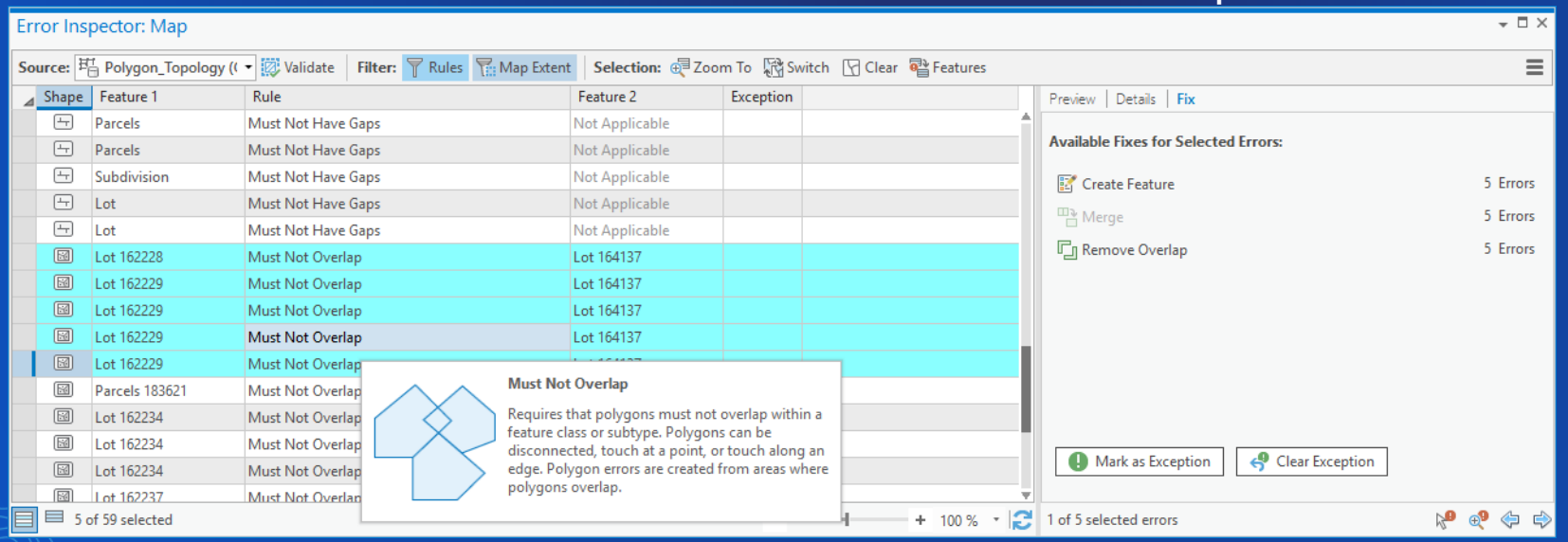
- Geodatabase Topology layer is now a group layer in the map
  - Allows you to work with errors as standard feature layers
  - Can now label errors in the map for visualization
- Geodatabase Topology tools are only available in 2D map views
- Geodatabase Topology Administration

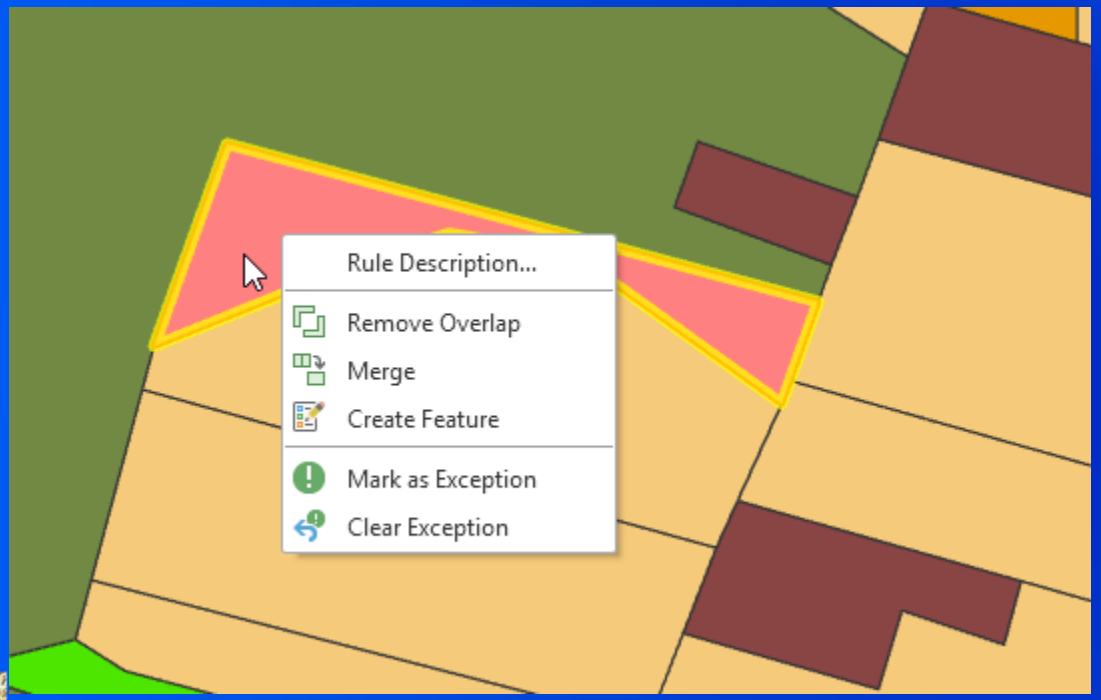




Geodatabase Topologies – Error Inspector

- **Error Inspector lets you view and fix topology errors in a table.**
  - The rule violated
  - The feature class or classes involved in the error
  - The geometry of the error
  - The feature ID of the features involved in the error
  - Whether or not the error has been marked as an exception





Geodatabase Topology

Sean

See Us Here

WORKSHOP	LOCATION	TIME FRAME
• **ArcGIS Pro Editing: An Overview**	• SDCC - Ballroom 06 B	• Thursday 8:30 – 9:30
• **ArcGIS Pro Editing: 3D Editing**	• SDCC - Room 33 A/B • SDCC - Room 07 A/B	• Wednesday 2:30 – 3:30 • Thursday 1:00 – 2:00
• **ArcGIS Pro Editing: Data Alignment and Management**	• SDCC - Room 07 A/B	• Thursday 2:30 – 3:30
• **ArcGIS Pro Editing: Managing Feature Attributes and Related Data**	• SDCC - Room 07 A/B	• Thursday 10:00 – 11:00