Contractor's Point of View
Bridging the Gap Between the Designer and the Contractor

NC Local User Group Meeting
2019 Winter Conference

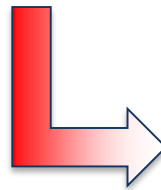Martha Hahn – Roadway
Seth Avants – Bridges
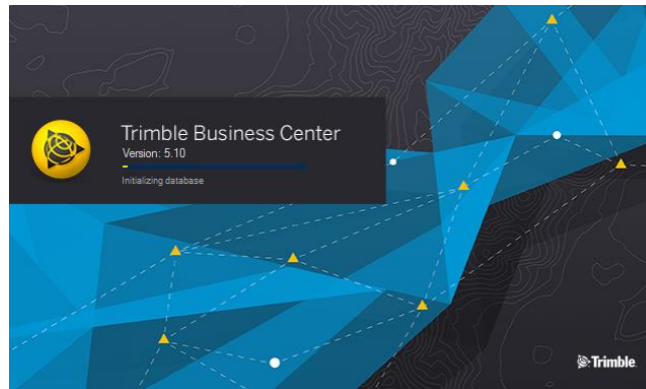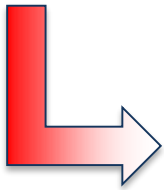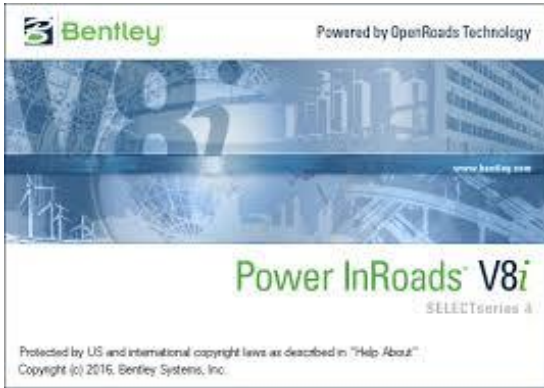
LANE

we build value

Discussion Topics

- What We Do
- Our Process
- Deliverables from Designers
- 3D Model Expectations
- Bridge Expectations
- Things to Consider
- Deliverables to the Project
- Feedback from other Designers
- Review

What We Do

We support the field personnel by providing CAD data for machine grading and data collectors for field layout, as well as files to aid in calculating quantities.

We also provide a line of defense to the project by verifying the constructability of the design.

Our Process

Deliverables from Designers

- XMLs of alignments
- RFC plans
- OG surfaces
- Roadway/bridge design .dgn linework
- Cross section .dgn files
- 3D models (looking forward)

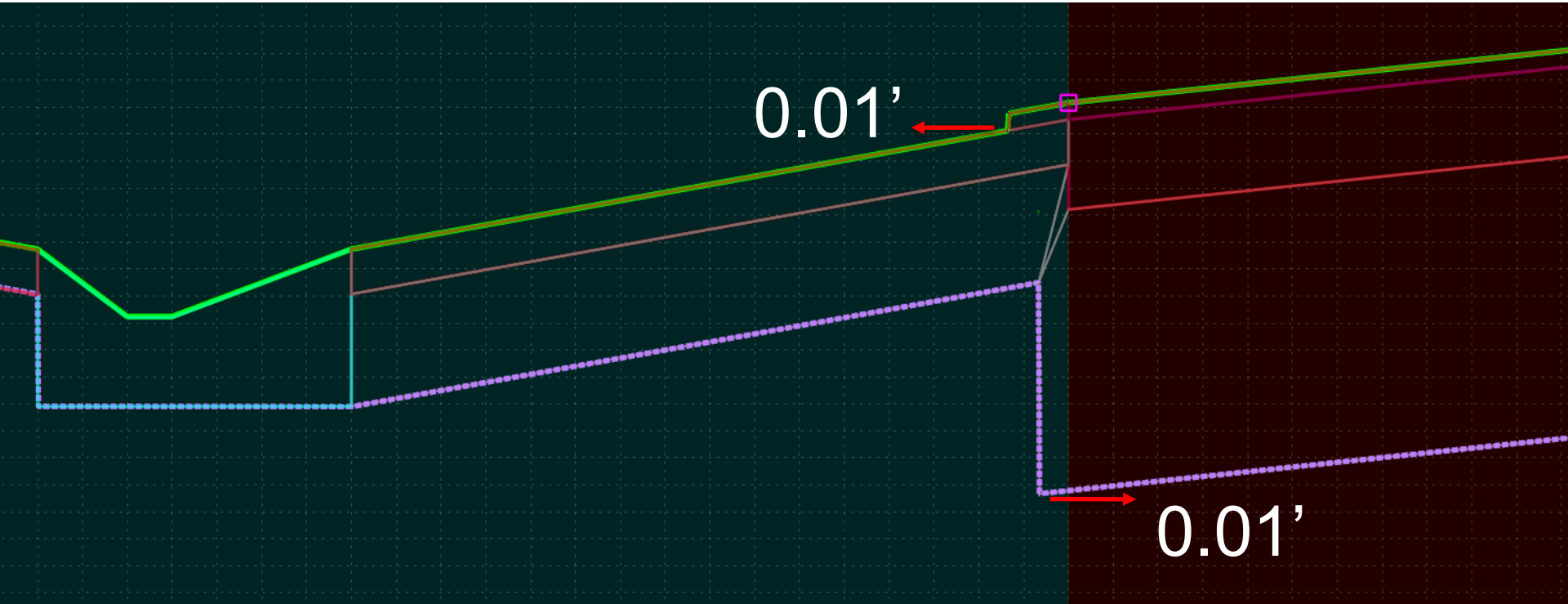*Using ProjectWise/Deliverables Management as a form of communication

3D Model Expectations

- Think constructability
- Level of detail (template interval) based on intricacy of design
  - Long straightaway: 5' – 10'
  - Intersection returns, islands, etc.: 1' – 5'
- Should be able to create FG/SG surfaces from model
  - No vertical points in templates if point is found on surface (walls/barrier, curb, friction course, SG)
  - Simplify common shapes (wall/barrier, curb, etc.); no radius

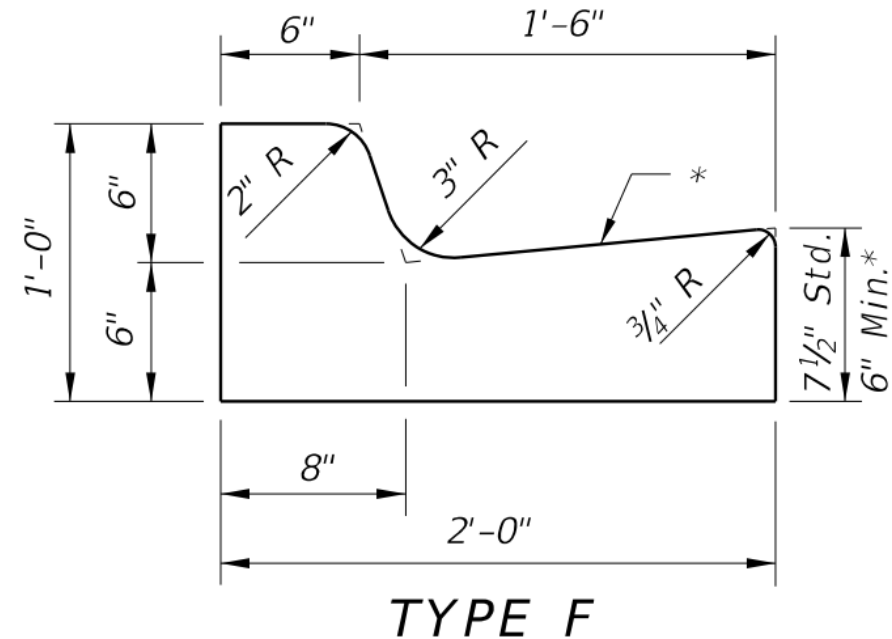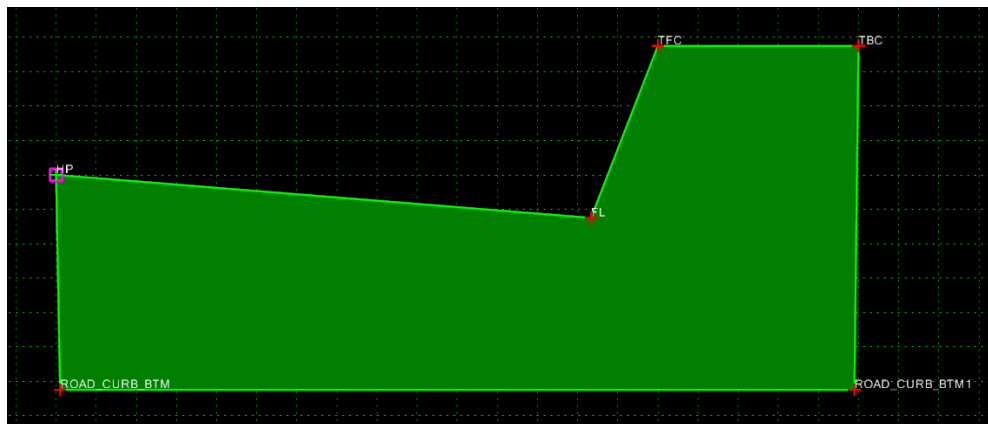For FG surfaces, think 0.01' to the outside.
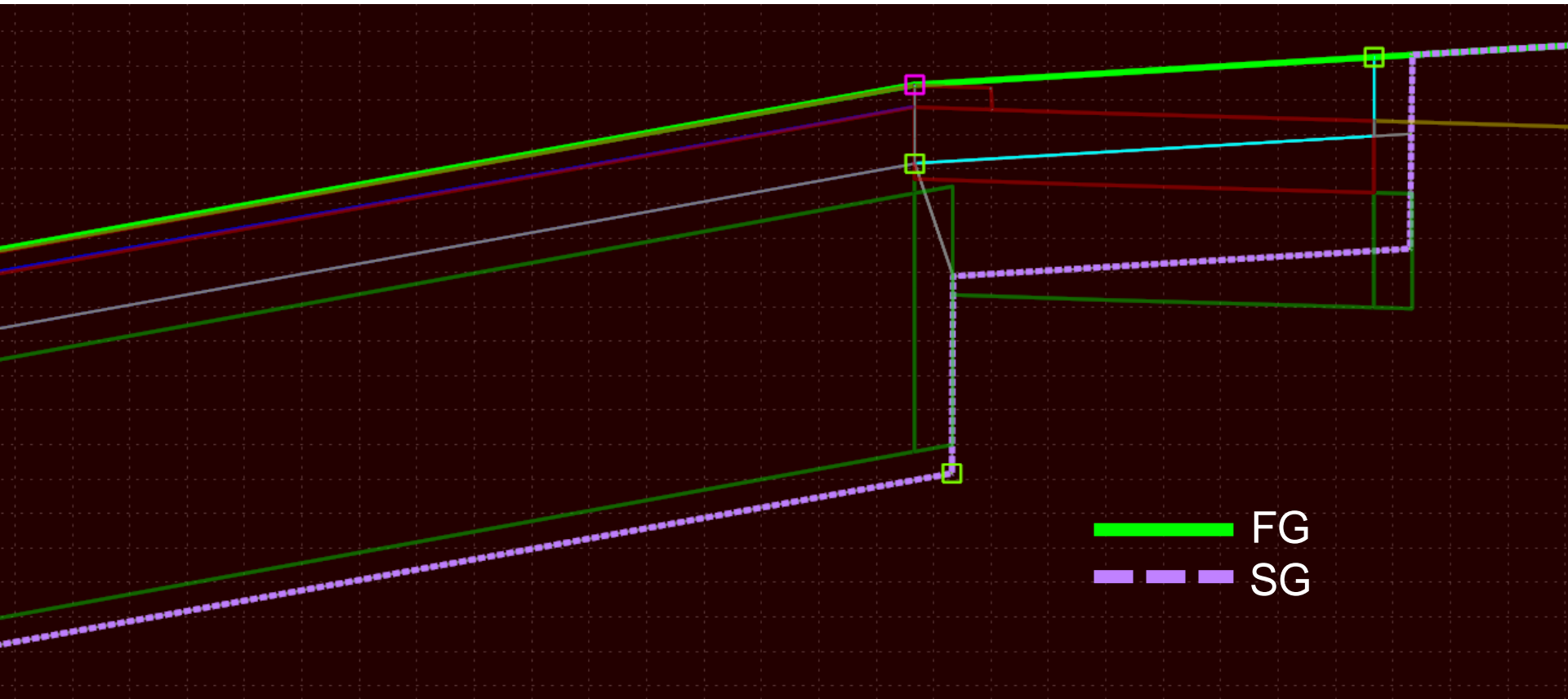For SG surfaces, think 0.01' to the inside.

Simplify common shapes

TYPE F

Example of designer model given to us before quick review of model

FG
SG
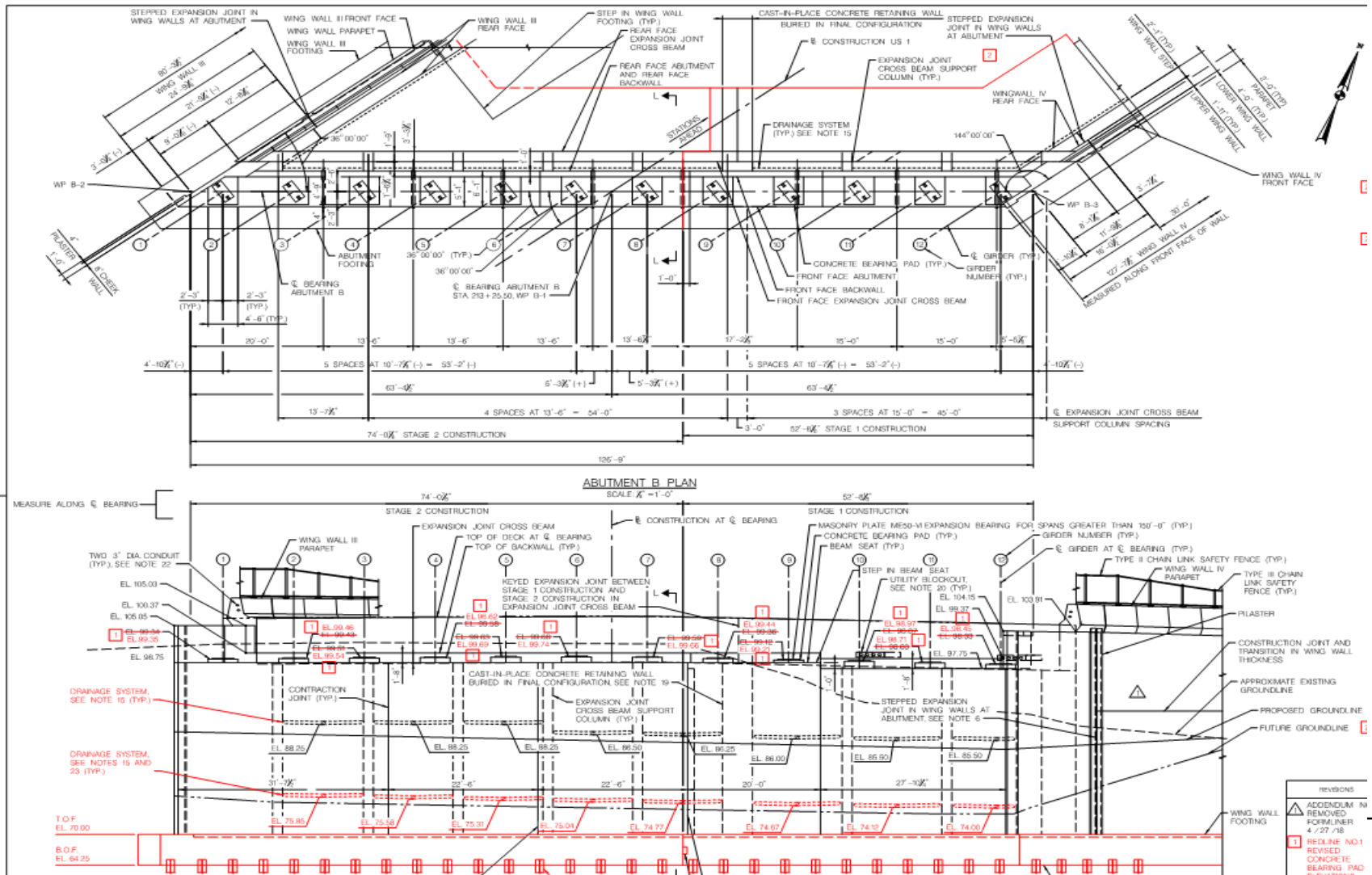
- Think constructability
- Limit +/- dimensions
- Elevations and dimensions must agree
- Clarity of the design / drawing

Example of a cluttered drawing and +/- dimensions
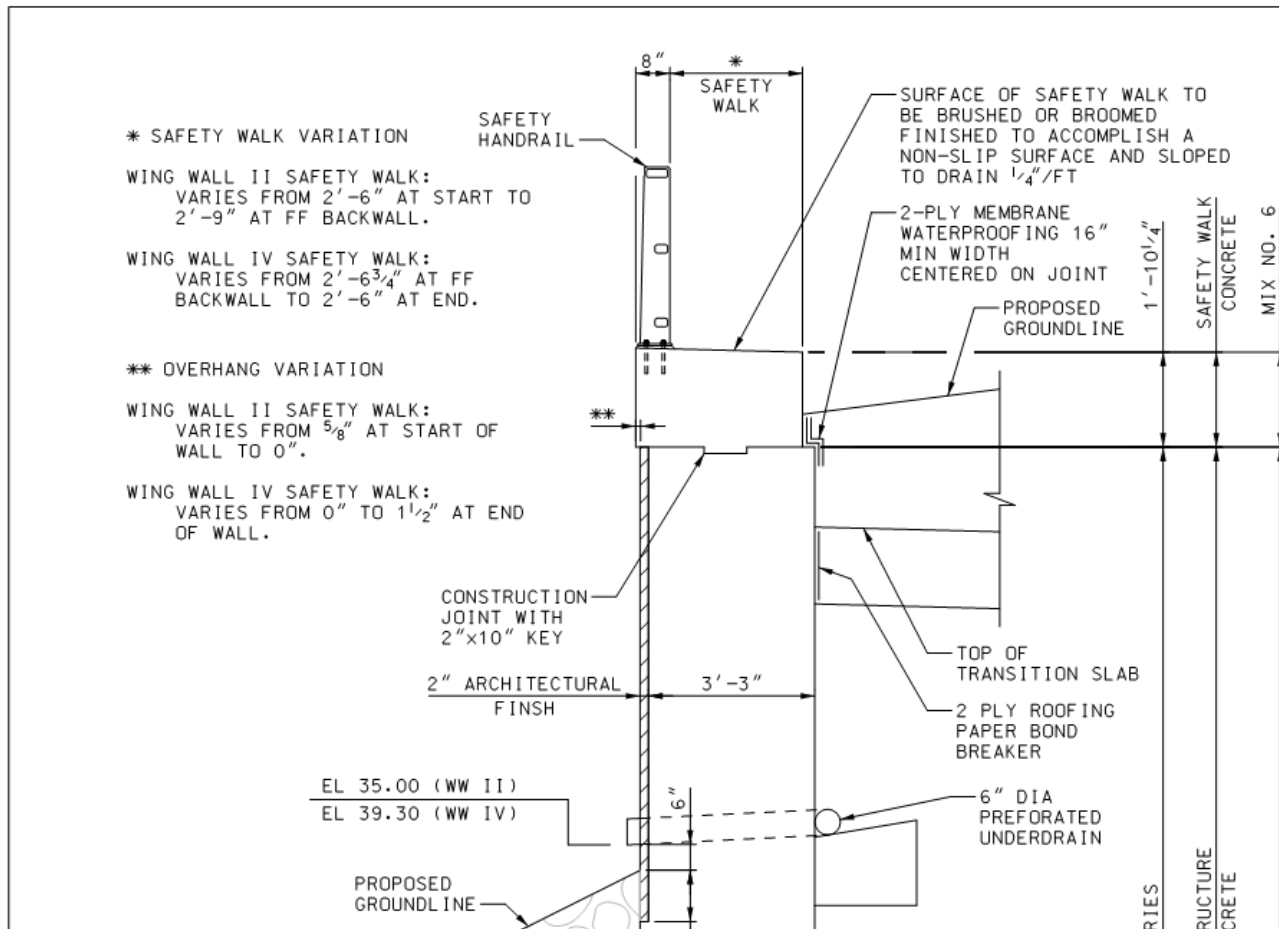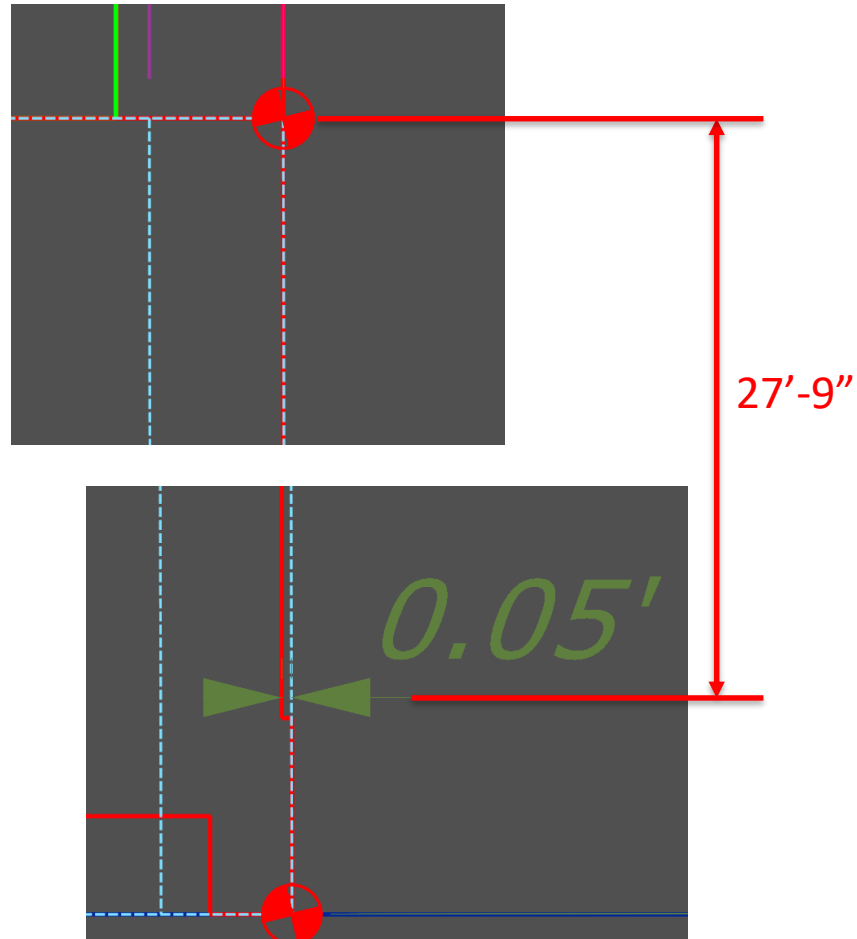
Example of constructablity

Example of constructablity

27'-9"

0.05'

Things to Consider...

Roadway
- Naming convention
  - Simplify feature definitions
  - Consistent point code names
- Use alternate surface labels

Bridges
- Reduce redundant labeling
- Elevation label placement

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Deliverables to the Project

Roadway
- XML alignments/surface
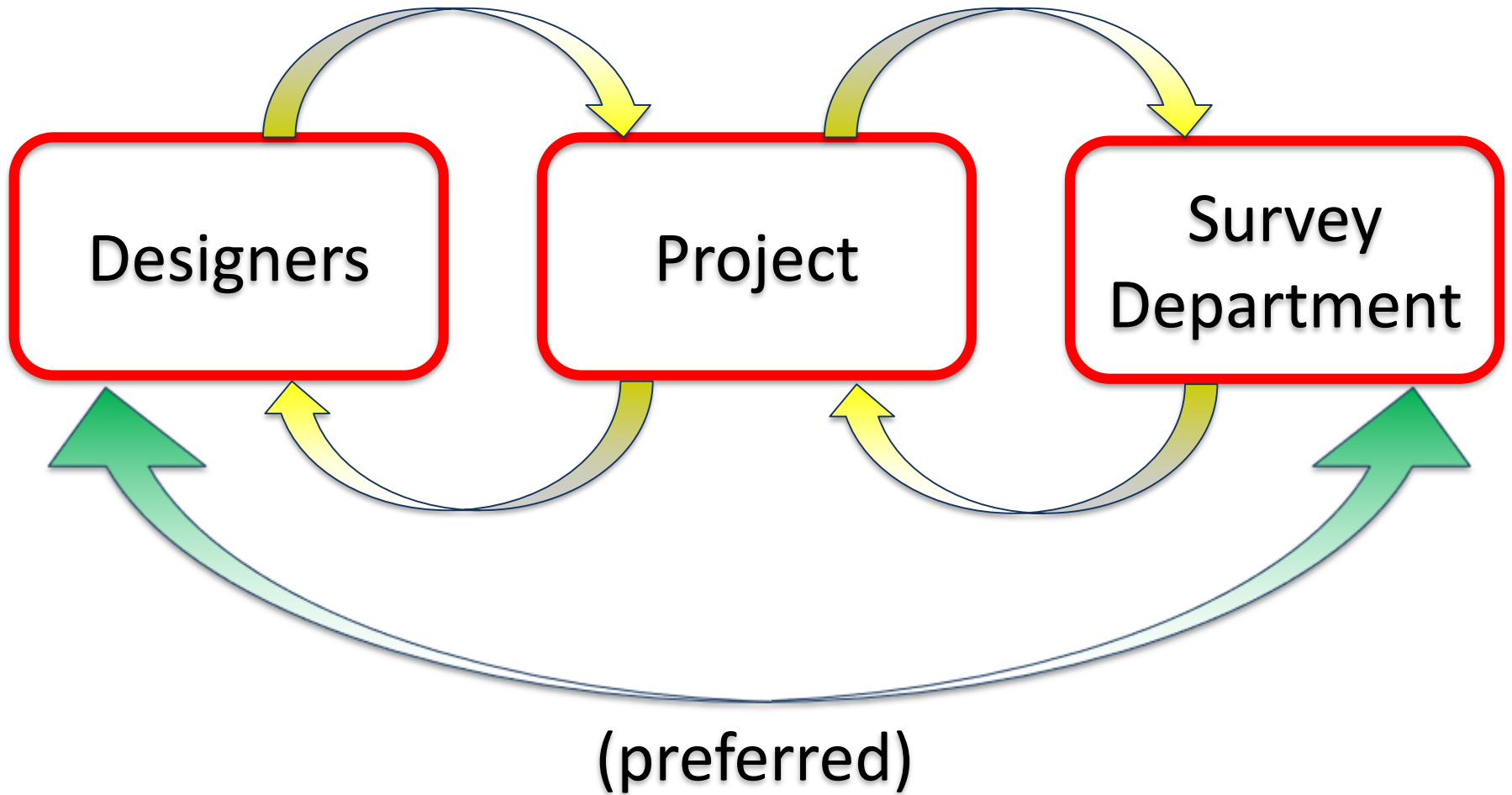- .dxf linework
- Machine files
- Data collector files

Bridges
- Plots (sub/super)
- .pro using .dxf/.csv from InRoads (sub)
- XML surface/.dxf linework (super)

Feedback from other Designers

- Field experience is invaluable
- Computer specs capable of handling large file sizes
- Knowing the needs of contractors

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Designers → Project → Survey Department

(preferred)

Any Questions?

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