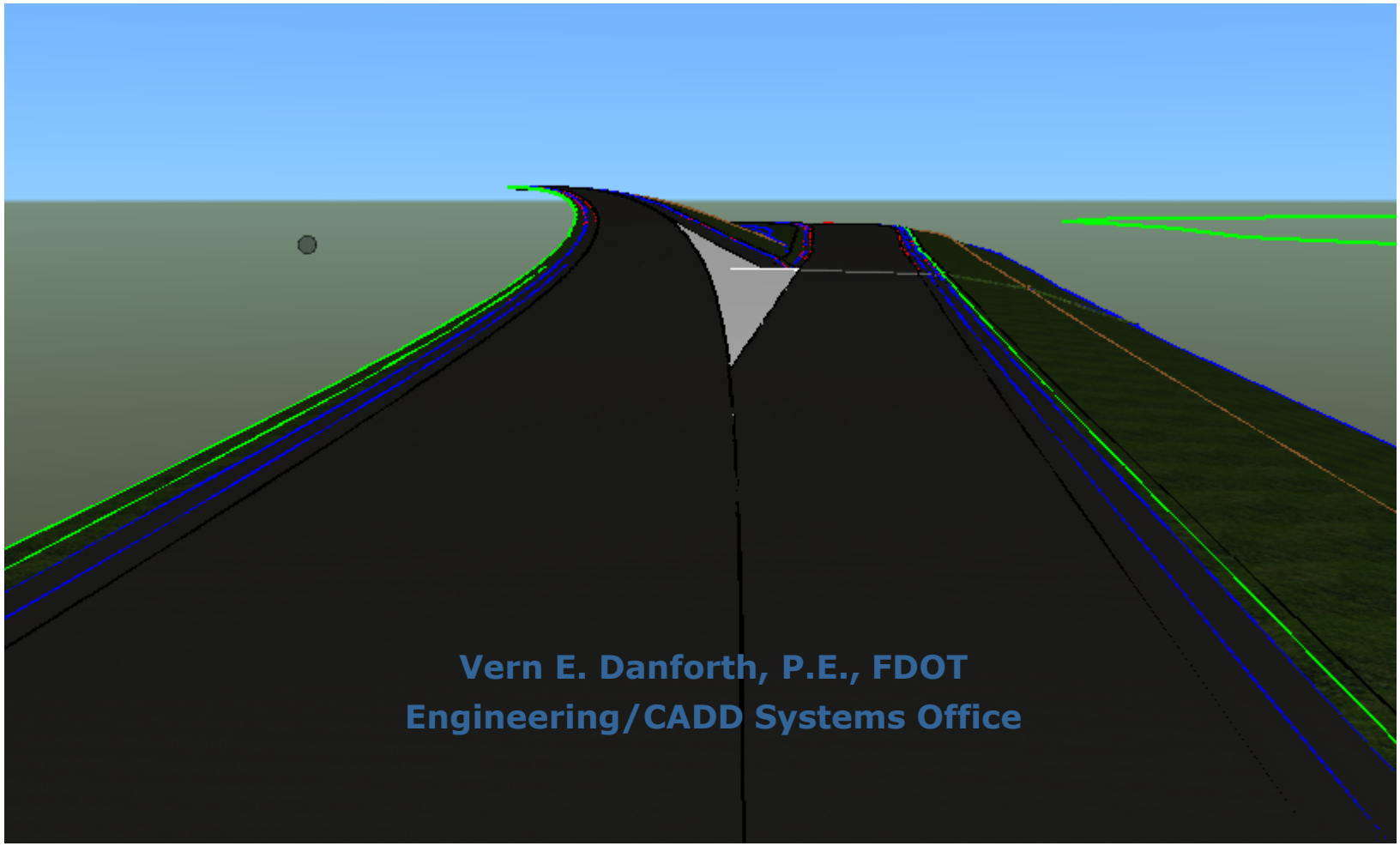
FDOTSS4 Design and 3D Modeling
Detailing Gore Areas



Vern E. Danforth, P.E., FDOT
Engineering/CADD Systems Office

Detailing the Corridor Design

- Intersections
- Traffic separator nose
- Turning Islands
- Driveway and sidewalk ramps
- Curb transitions
- Roundabouts
- MES slope transitions
- Median crown crossover
- Retention pond design
- **Ramp Terminals (Gore areas)**
- Restricted left turn islands

Gore (road) A **gore**, **gore** point, or **gore** zone is a triangular piece of land found where roads or rivers merge or split. When two roads merge, the **area** is sometimes referred to as a merge nose.

Gore (road) - Wikipedia, the free encyclopedia
en.wikipedia.org/wiki/**Gore**_(road) Wikipedia

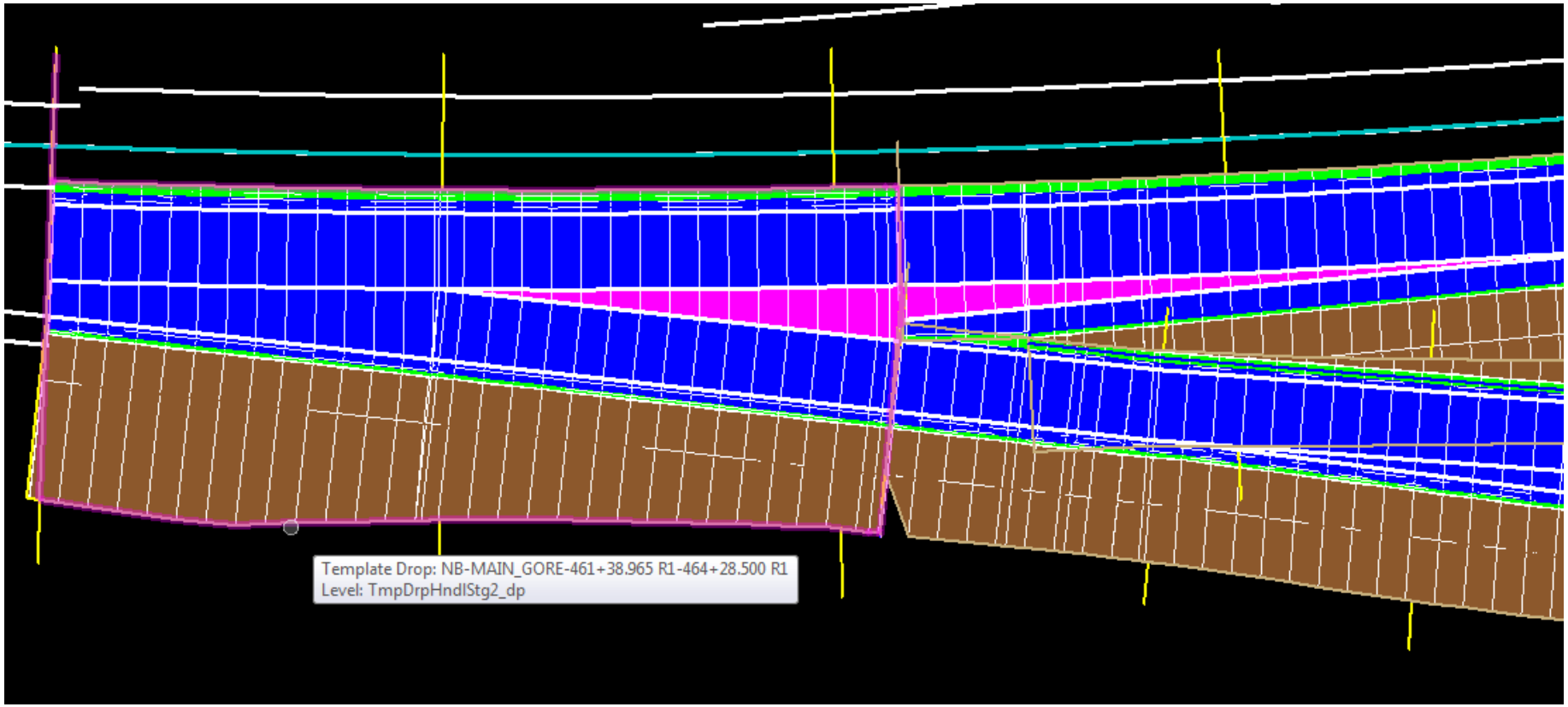
Detail(site) MODELING

GENERAL WORKFLOW STEPS:

1. Layout the Baseline Horizontal Geometry
2. Use the Ramp Terminal Civil Cell or build Planimetrics
3. Use Vertical Alignment tools:
   a) Project Slope to Element; PGL to EOP, EOP to BL Ramp
   b) Place Line at Gore End
   c) Construct Reverse Transition Ramp profile
   d) Complex Profile by Elements, Check Design Standards
4. Drop Templates; Main w/ Gore, Ramp, Main2

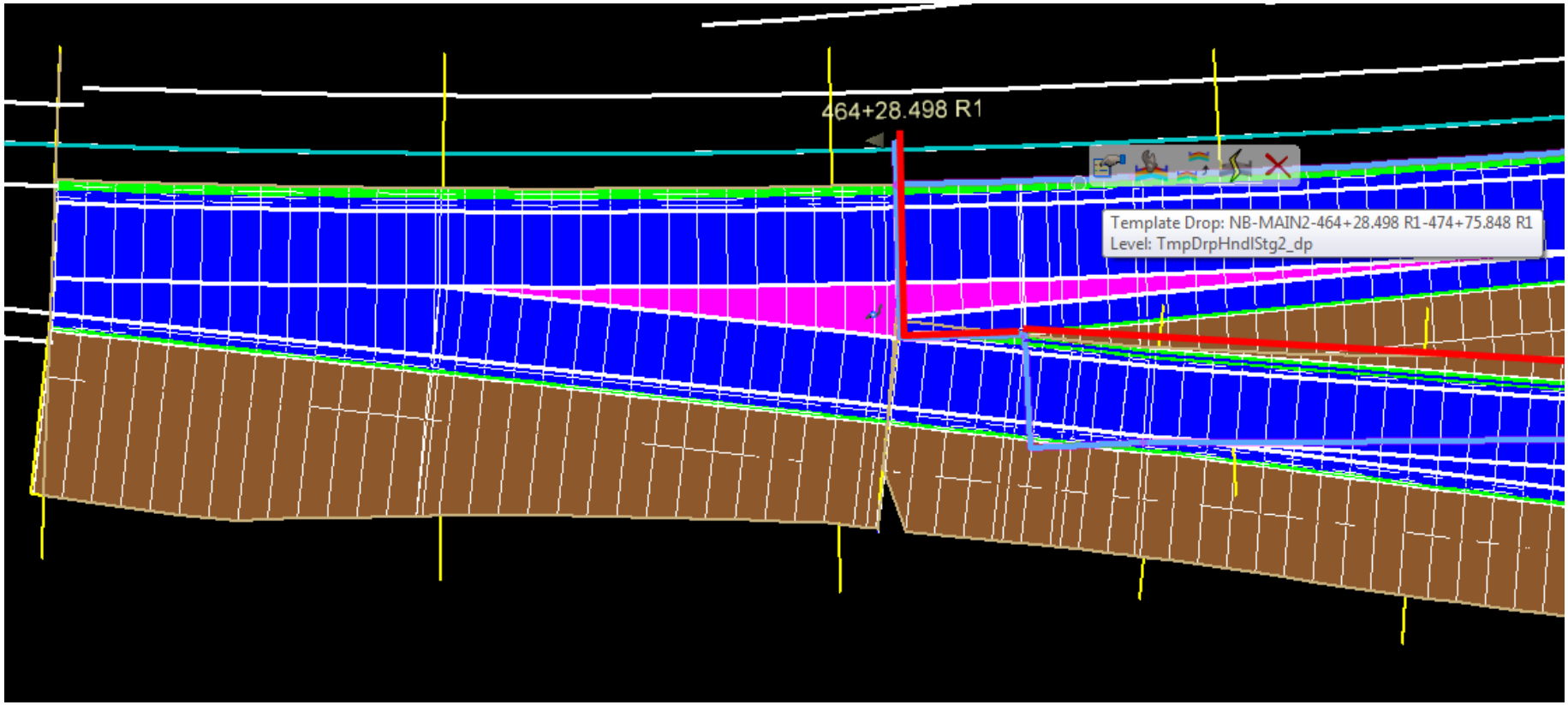
Detail(site) MODELING

Plan ahead –Main Corridor; Template Drop Location 1



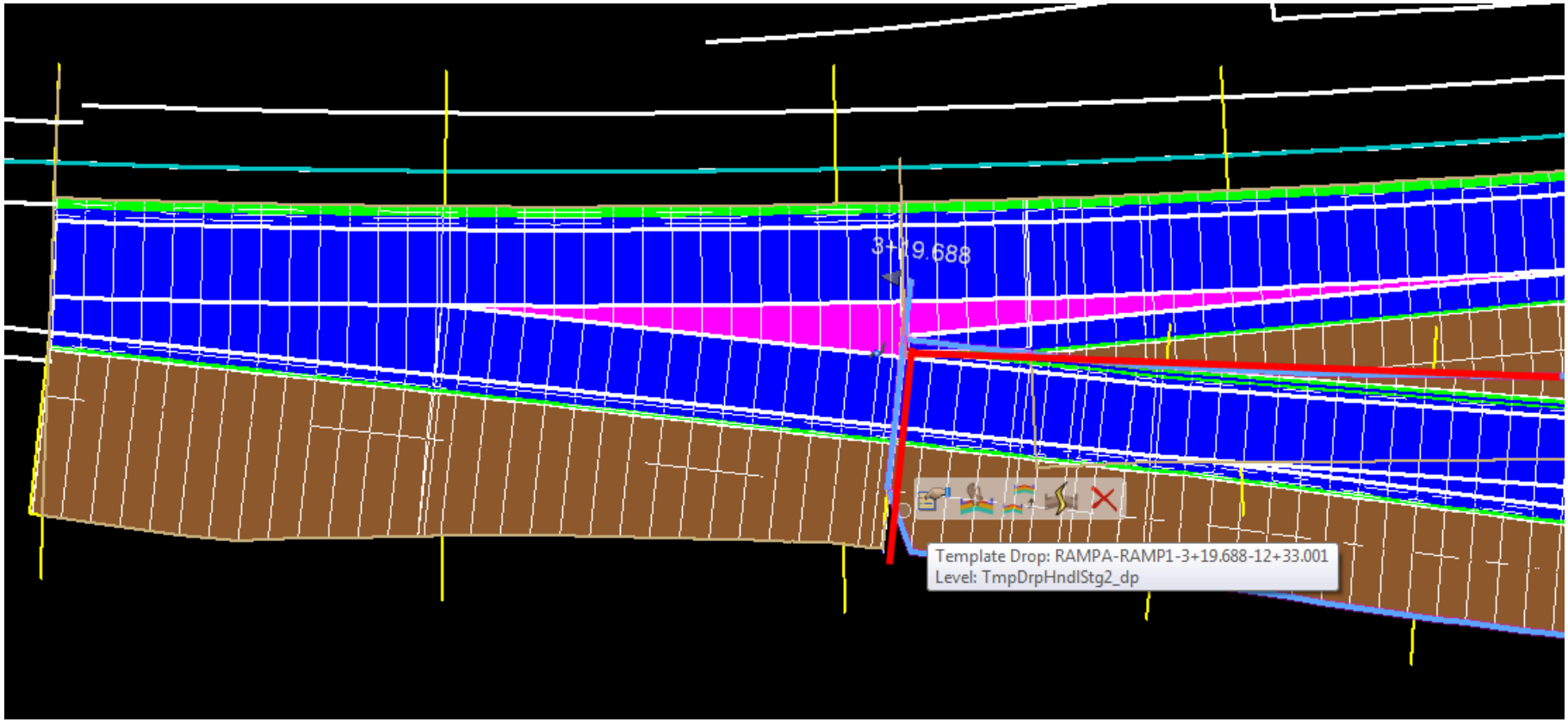
Detail(site) MODELING

Plan ahead –Main Corridor; Template Drop Location 2



Detail(site) MODELING

Plan ahead –Ramp Corridor; Template Drop Location 1



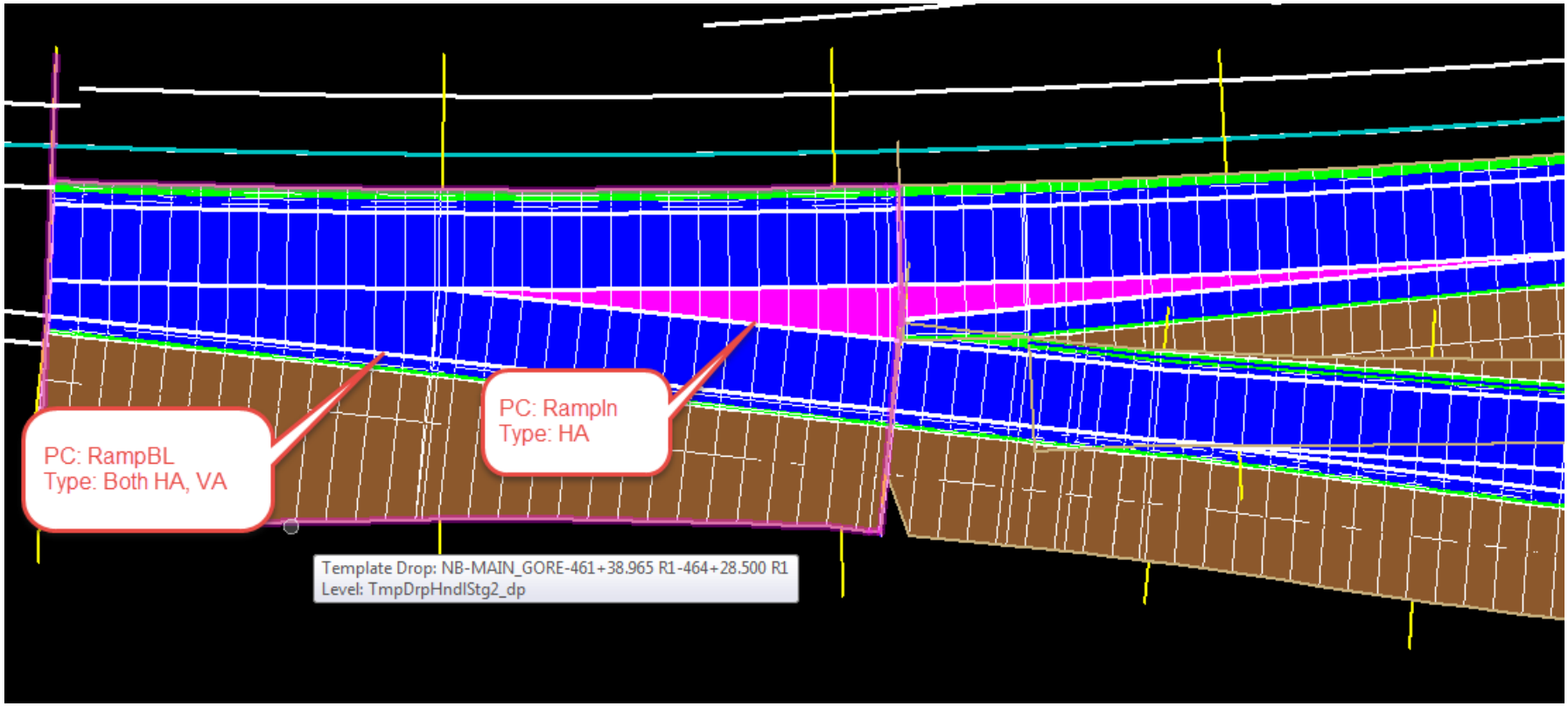
Detail(site) MODELING

GENERAL WORKFLOW STEPS:

1. Add Main Corridor Controls
    a. BL Point Control, Both
    b. RampIn Point Control, Horizontal
    c. Gore Slope Parametric Constraints- optional
    d. Shoulder Width Parametric Constraints
    1. Shoulder Slopes on Ramps

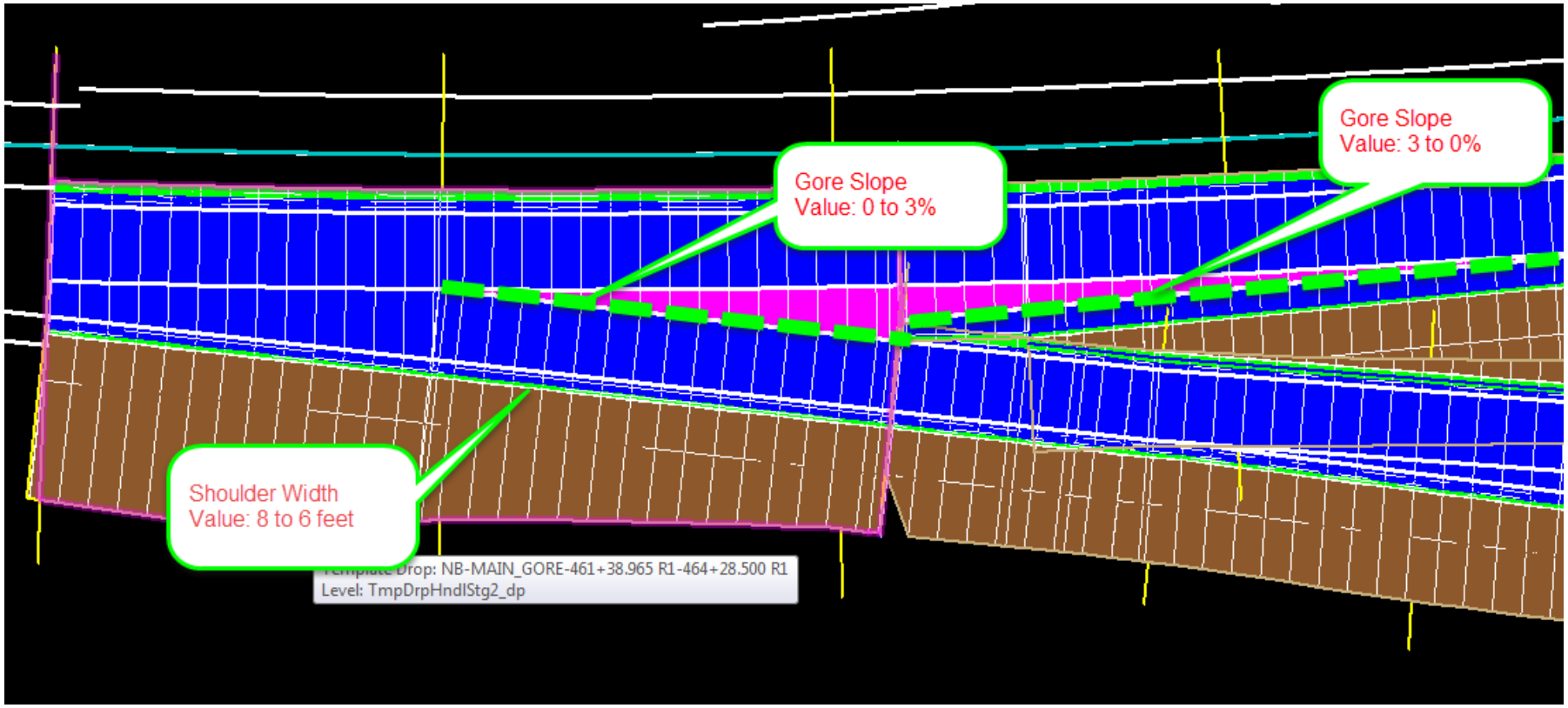
Detail(site) MODELING

Corridor Controls–Main Corridor; Point Controls



Detail(site) MODELING

Corridor Controls–Main Corridor; Parametric Constraints



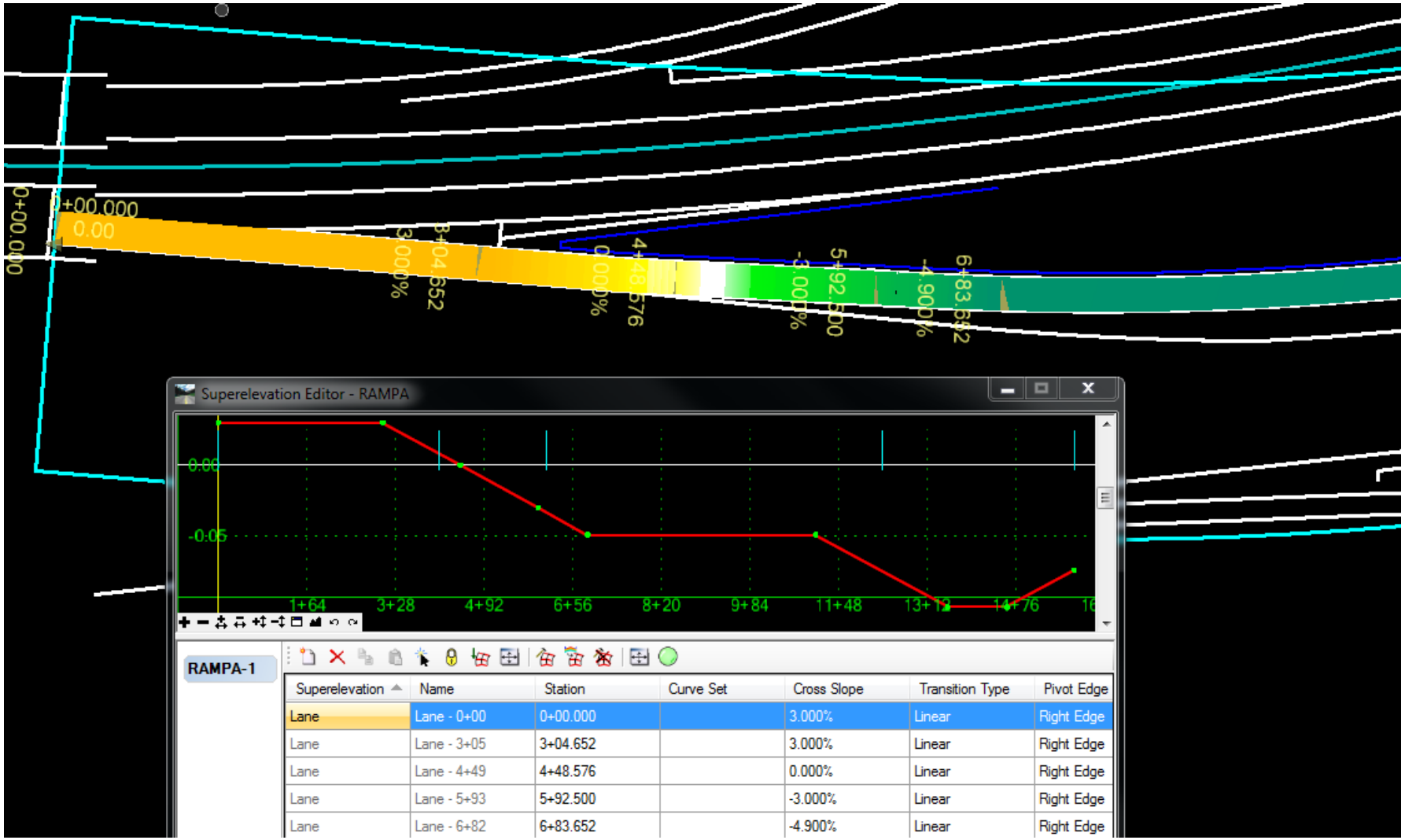
Detail(site) MODELING

GENERAL WORKFLOW STEPS

2. Add Ramp Corridor Controls
    a. Define Ramp Superelevation
    b. Associate the Profile and Superelevation to the Ramp Corridor
    c. i.e. Ramp EOP Inside Vertical Point Control
    d. Shoulder Width Parametric Constraints
    e. Inside Shoulder Slopes on Ramps

Detail(site) MODELING

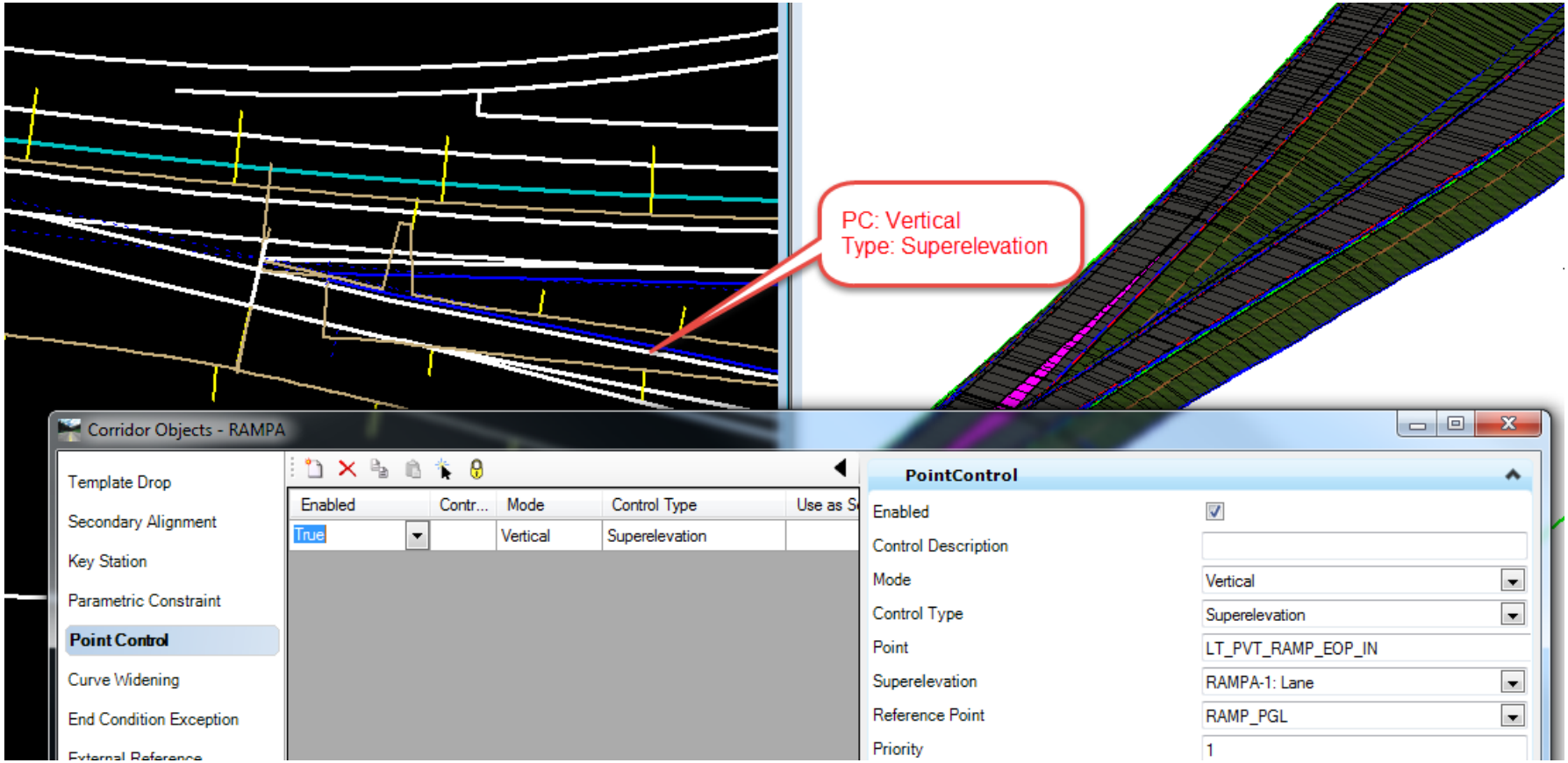
Corridor Controls–Ramp Corridor; Superelevation



Superelevation	Name	Station	Curve Set	Cross Slope	Transition Type	Pivot Edge
Lane	Lane - 0+00	0+00.000		3.000%	Linear	Right Edge
Lane	Lane - 3+05	3+04.652		3.000%	Linear	Right Edge
Lane	Lane - 4+49	4+48.576		0.000%	Linear	Right Edge
Lane	Lane - 5+93	5+92.500		-3.000%	Linear	Right Edge
Lane	Lane - 6+82	6+83.652		-4.900%	Linear	Right Edge

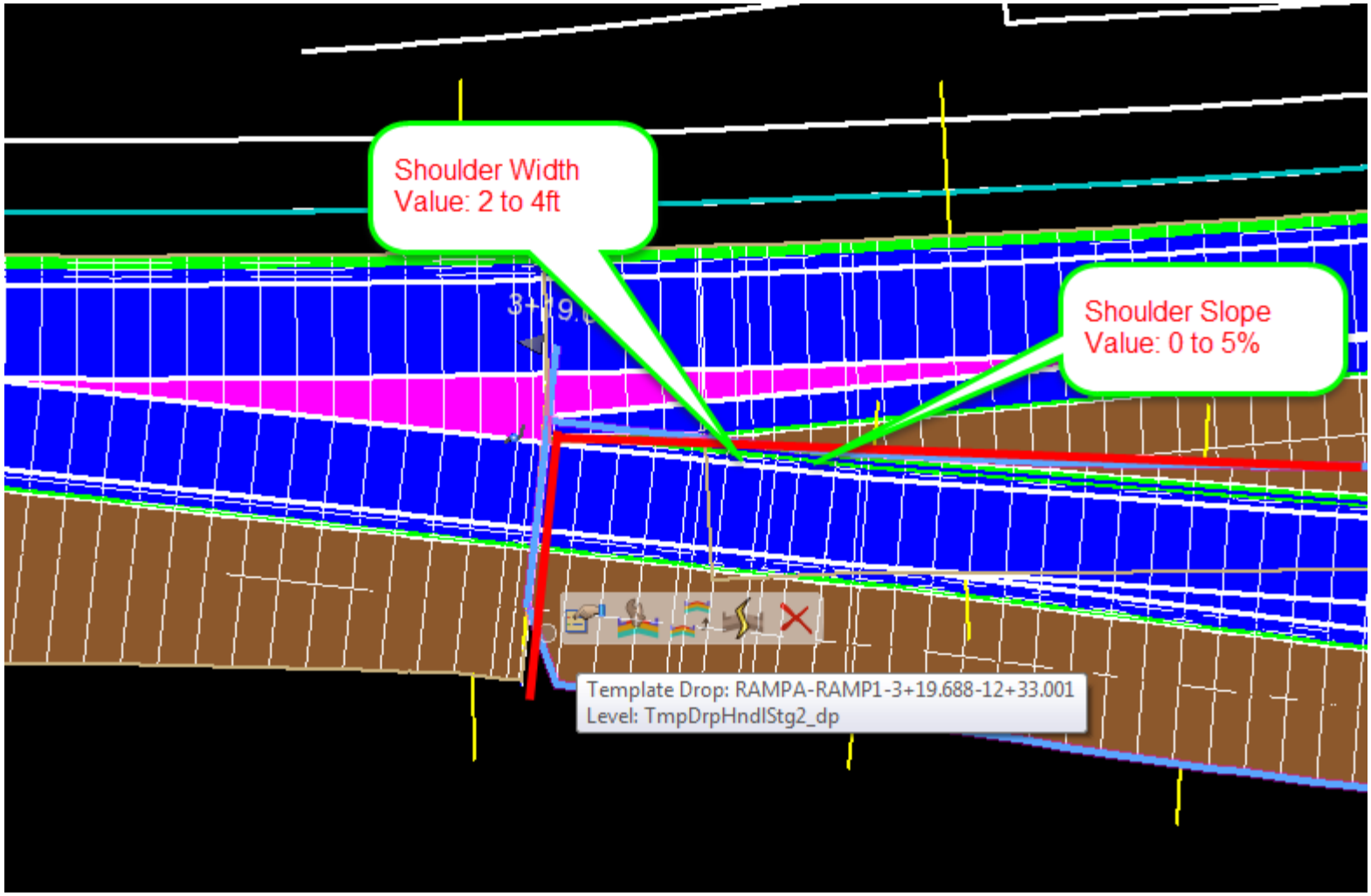
Detail(site) MODELING

Corridor Controls–Ramp Corridor; Superelevation



Detail(site) MODELING

Corridor Controls–Ramp Corridor; Parametric Constraints



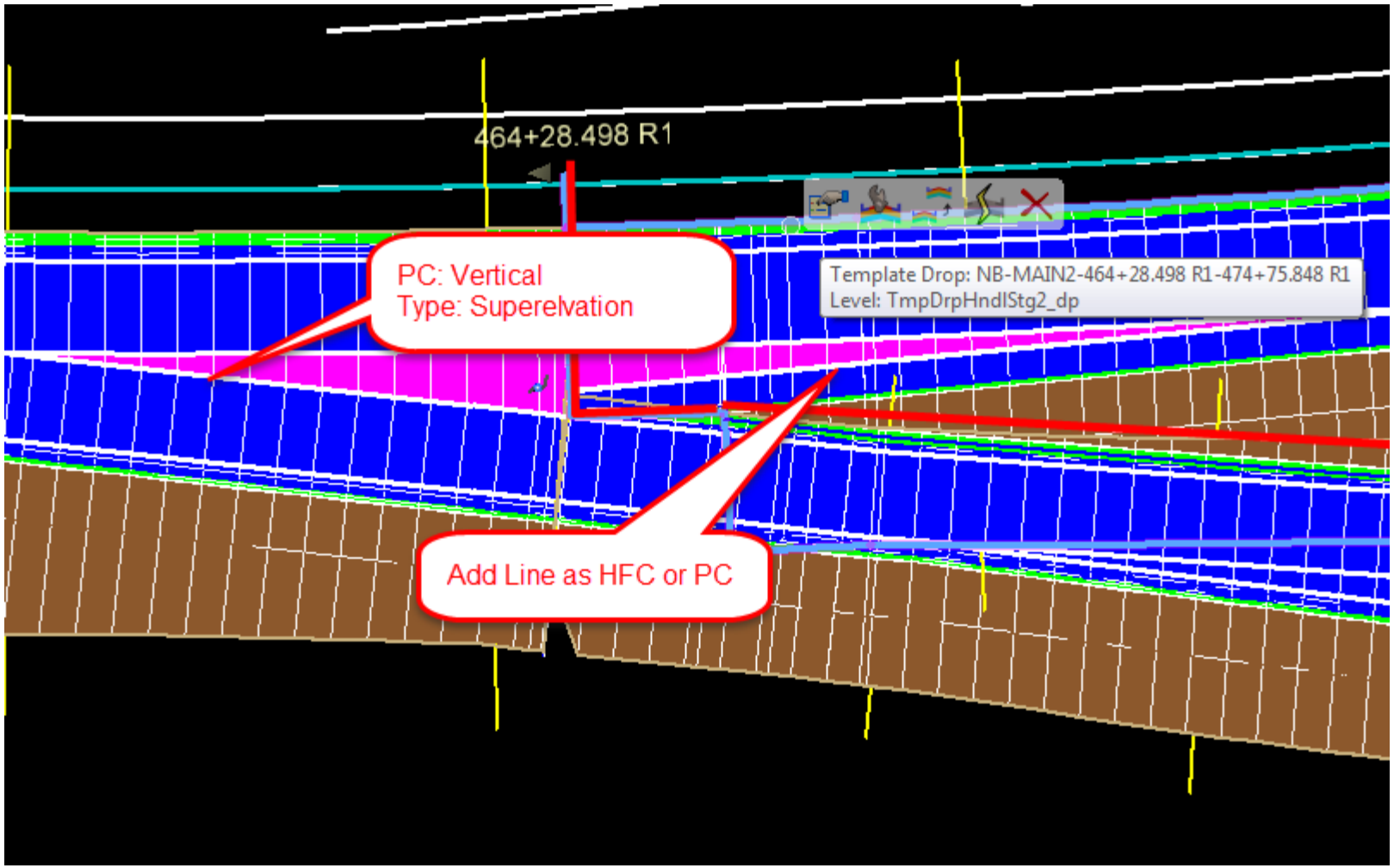
Detail(site) MODELING

GENERAL WORKFLOW STEPS

3. Add Mainline Corridor Controls
    a. Assign Ramp Superelvation Vertical Point Control to Main w/ Ramp Corridor
    b. Add Horizontal Feature or PC Ramp2 Corridor Controls

Detail(site) MODELING

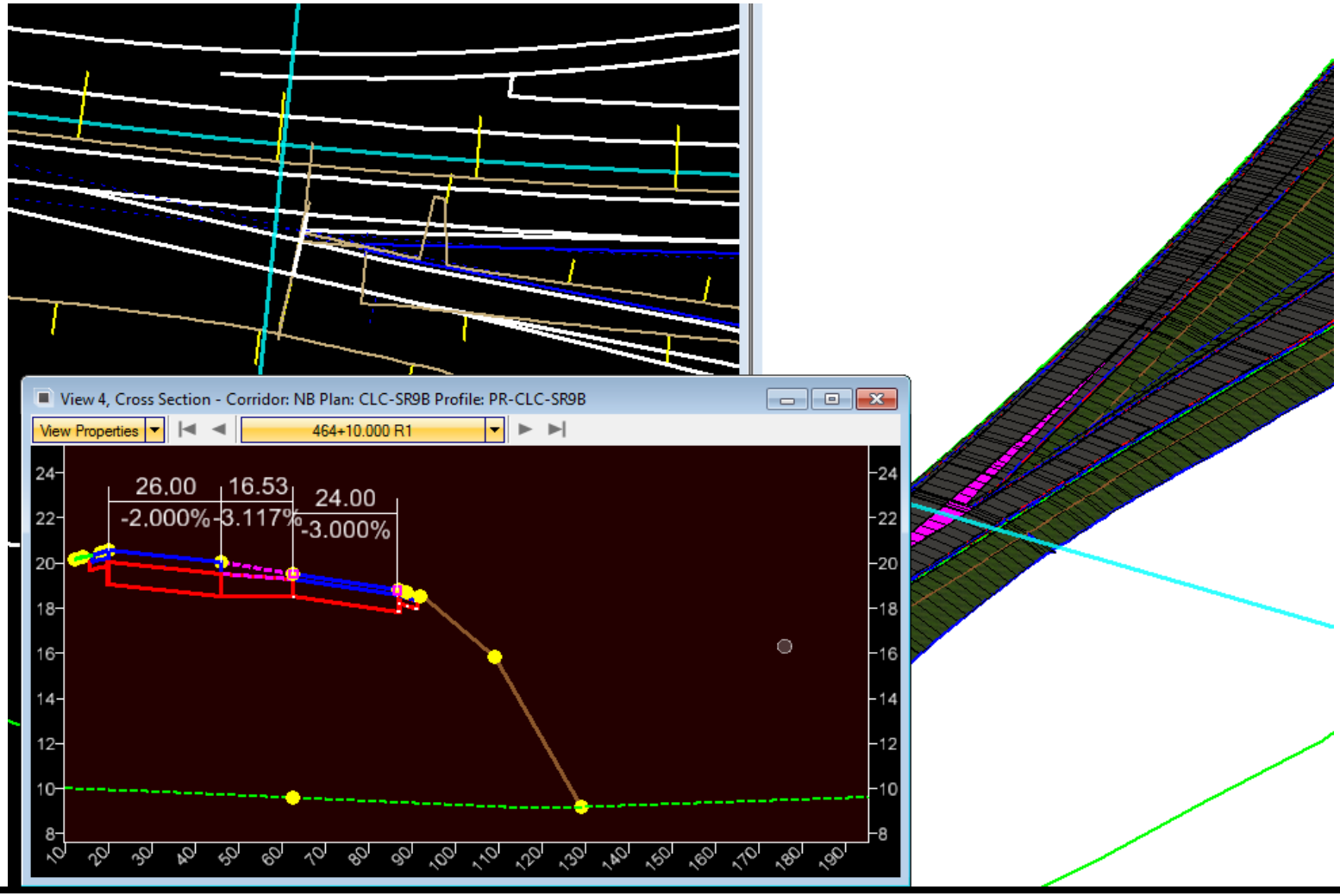
Plan ahead –Main Corridor; Template Drop Location 2



Detail(site) MODELING

GENERAL WORKFLOW STEPS

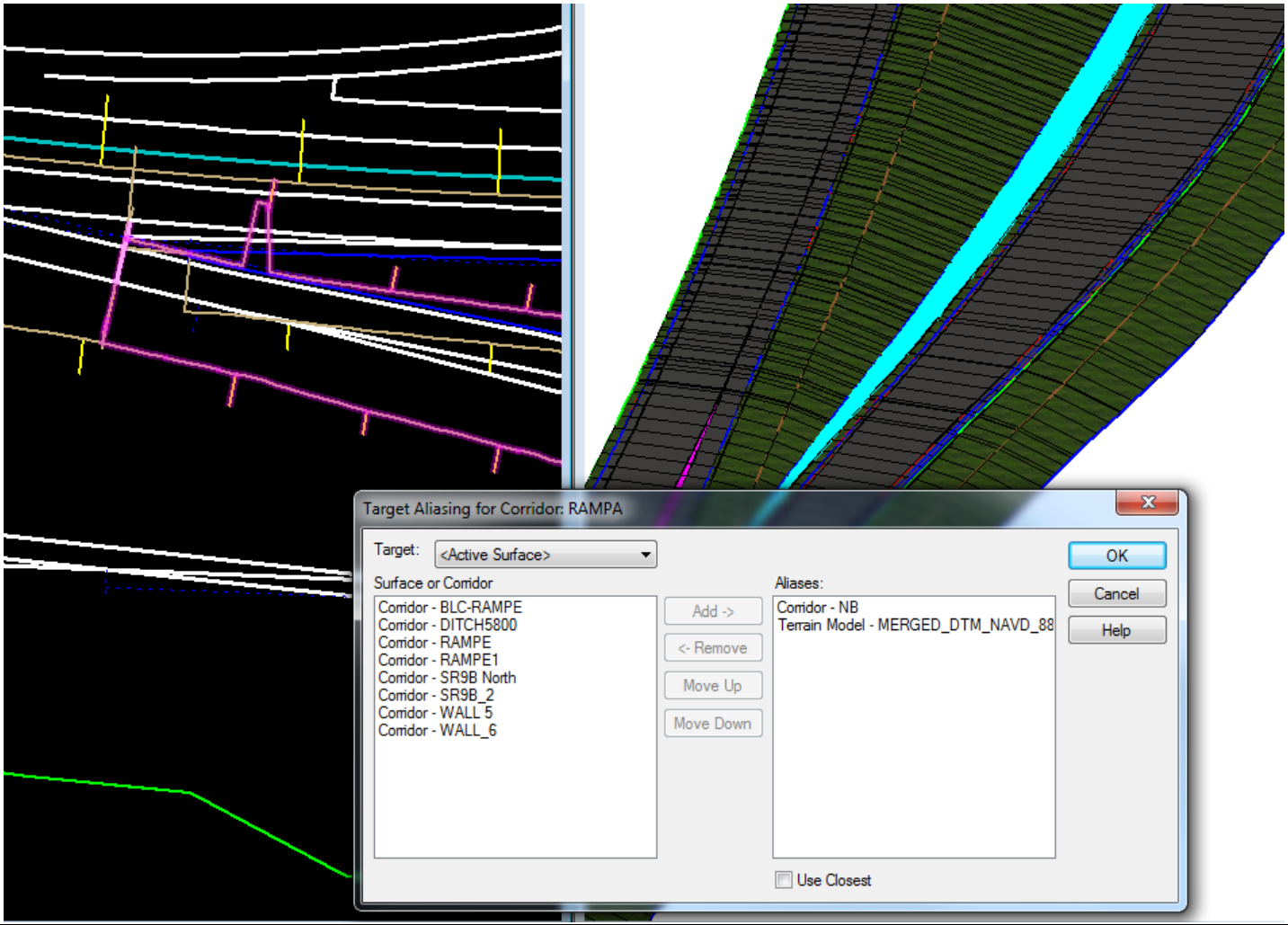
4. Use Cross Section Viewer to verify design



Detail(site) MODELING

GENERAL WORKFLOW STEPS

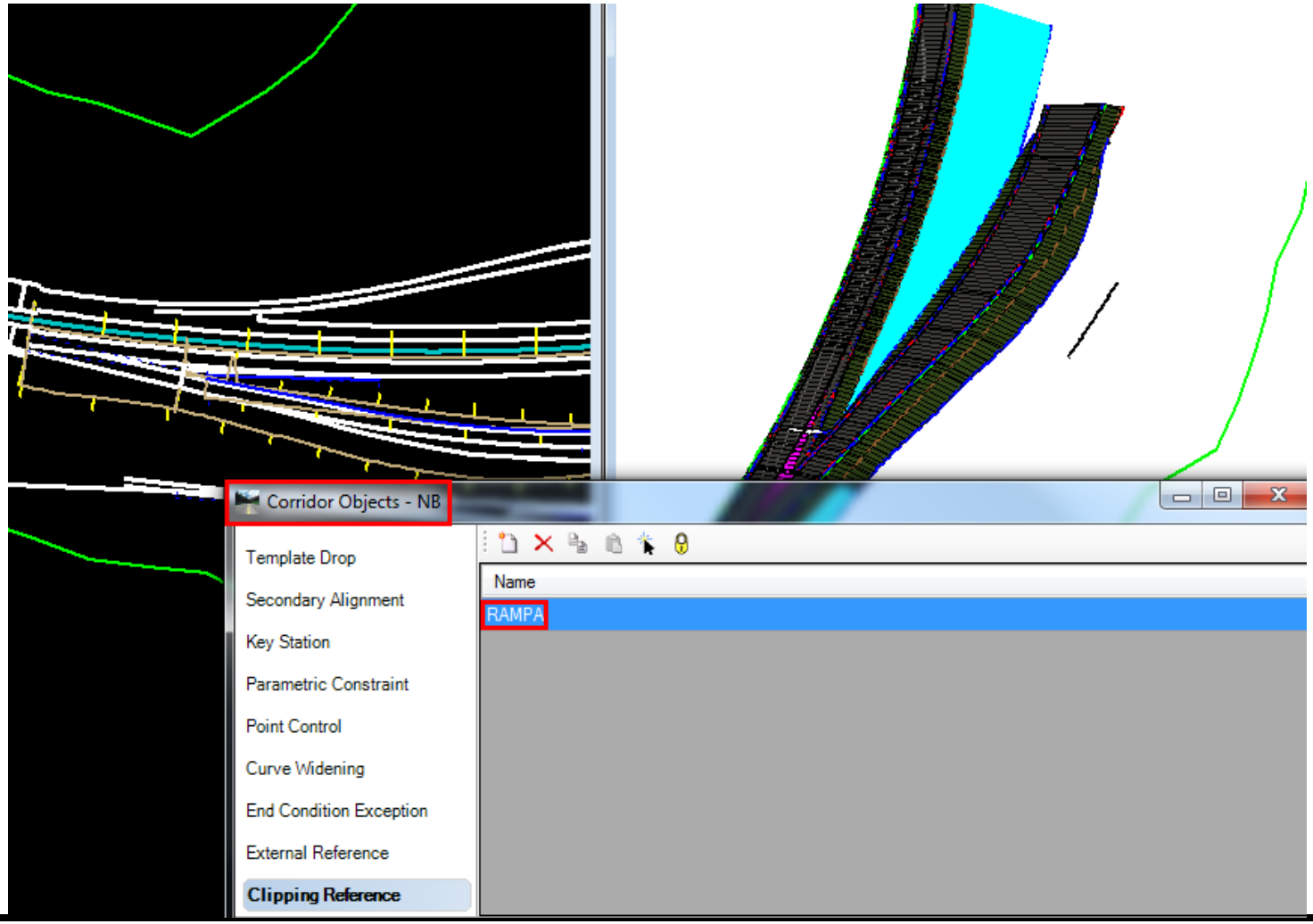
5. Add Target Alias to RampA Corridor , Main



Detail(site) MODELING

GENERAL WORKFLOW STEPS

6. Add Corridor Clipping Reference o Main, RampA



QUESTIONS AND COMMENTS

Thank you for attending !

http://www.dot.state.fl.us/ecso/

vern.danforth@dot.state.fl.us

(850) 414-4897

(866) 374-3368 x4897