

## Tips:

1. Create Geometry Project
2. Horizontal Alignment:
  - a. New Horizontal Alignment
  - b. Create text file, ne,xxxxxxx.xx.xxxxxx.xx
  - c. Add PI's
    - i. Geometry, Horizontal Curve Set, Add PI,
  - d. Type in input file name @c:/.....txt
  - e. Add curves
    - i. Geometry, Horizontal Curve Set, Define Curve
    - ii. Add radius
  - f. Add Stationing
    - i. Geometry, Horizontal Curve Set, Stationing
    - ii. Change to New Station
3. Vertical Alignment
  - a. New Vertical Alignment
  - b. Create text file, se=100+00,5485.56
  - c. Create Profile
    - i. Evaluation, Profile, Create Profile
  - d. Add PI's
    - i. Geometry, Vertical Curve Set, Add PI, Apply
    - ii. Type in input file name @c:/.....txt
  - e. Add curves
    - i. Geometry, Vertical Curve Set, Define Curve
    - ii. Add radius
4. Templates Library
  - a. New Typical Section
  - b. Modeler, Define Typical Section
  - c. Name typical (i.e. Station 3265+14)
  - d. Edit button
    - i. Create Layers (i.e. SH 119 top, SH 119 subgrade, SH 119 R40)
    - ii. Segment tab
      1. Create typical
        - a. Create Features needed
          - i. Edge of Travel Lt/Rt - Shoulder
          - ii. Shoulder Lt/Rt, - Edge of Pavement
          - iii. Hinge – POSS
          - iv. Cut – Top of Cut
          - v. Fill – Toe of Fill
        - b. Mirror template
          - i. Change Features from Rt to Lt
    - iii. superelevation tab

1. set range points
    2. set pivot points
  - e. Decision Table
    - i. Target – Existing terrain dtm
    - ii. Start TC – Hinge
    - iii. End TC – Cut of Fill
    - iv. Slope
    - v. Width
5. Roadway Library
  - f. New Roadway Library
  - g. Modeler, Define Roadway
  - h. Name Roadway (SH119)
  - i. Edit button
    - i. Main Tab (Add station and templates)
      1. Station
      2. Mode (Both, Lt, Rt, Lt and Rt)
      3. Interval (2)
      4. Transition Templates (? – No)
      5. Pick Template
      6. Pick catch point (Decision Table, Template)
      7. Name Pick name of Decision table
    - ii. Horizontal and Vertical Controls
      1. Pick transition Control Name (feature to be adjusted)
      2. Pick Horizontal and or Vertical Control
        - a. Select appropriate alignment
      3. Start Station
      4. Stop Station
    - iii. Defaults
      1. Enter interval
5. Superelevation
  - a. New Superelevation (under geometry project)
  - b. Modeler, superelevation, build transitions
    - i. Station
    - ii. Left Rate – Linear
    - iii. Right Rate – Linear
    - iv. Subgrade
      1. Left Rate
      2. Right Rate
    - v. Hand of Curve (left or right)
    - vi. Pivot Point Location (from template)
6. Roadway Modeler
  - a. Main Tab
    - i. Select original surface (or surface to interface)

- b. Advanced Tab
      - i. Sides (Lt. and Rt.)
      - ii. Superelevation (All layers)
      - iii. Transition Control Lines (First Layer)
      - iv. Subgrade Intercept (Previous Layer)
  
- 7. Draw up Cross Section
  - a. Set scale of Sections
    - i. Tools, options, factors, set scales
  - b. evaluation, cross sections, create cross sections
  - c. select preference
  - d. Annotate Cross Sections
    - i. evaluation, cross sections, annotate cross sections
    - ii. select preferences
    - iii. select surface to annotate (top)
  
- 8. Volumes
  - a. Evaluation, volumes, end-area volume
    - i. Main Tab
      - 1. Select cross section set
      - 2. Select original surface
      - 3. Select design surface (finished surface)
      - 4. Select subgrade surface (bottom)
    - ii. Layer volumes tab
      - 1. Fill in your surfaces
        - a. Top Layer
        - b. Bottom Layer
        - c. Add
  
- 9. Various
  - a. Draw up various surfaces
    - i. Surface, update 3-D/Plan Surface display
    - ii. Pick surface, features, or items
    - iii. To draw up a portion place fence and change fence mode
  - b. To transition a lane
    - i. Modeler, Define Roadway, Edit, Horizontal and Vertical Controls tab
      - 1. Pick horizontal alignment (make sure it is the active alignment)
      - 2. Pick transition control name (feature to transition)
      - 3. enter start and stop stations
      - 4. enter start and stop offsets
  - c. To find out feature properties
    - i. Surface, feature, feature properties
    - ii. Select surface

- iii. Select feature
- d. Check/Change properties for surface
  - i. Right click on surface
  - ii. Properties
  - iii. Check preferences
- e. Check/Change properties on alignment
  - i. Geometry rename geometry
  - ii. Go through horizontal and vertical to check and rename to get appropriate preference
- f. Scale Microstation Drawing
  - i. Models
  - ii. Edit model properties
  - iii. Change scale