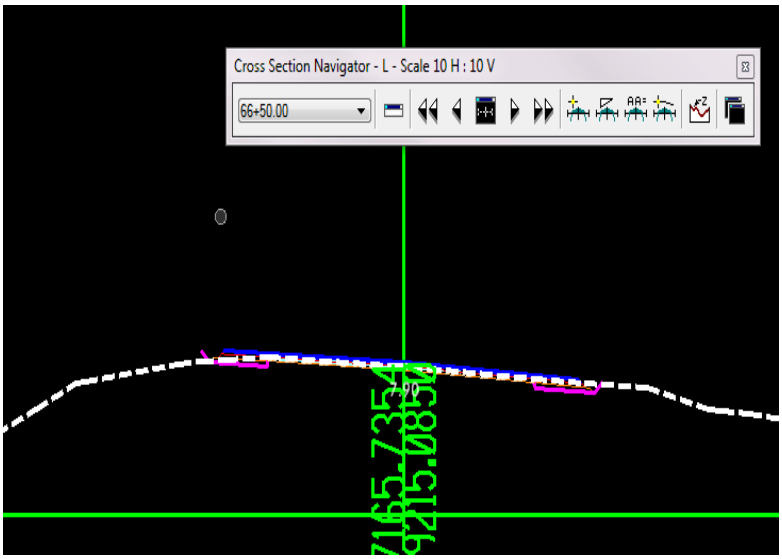
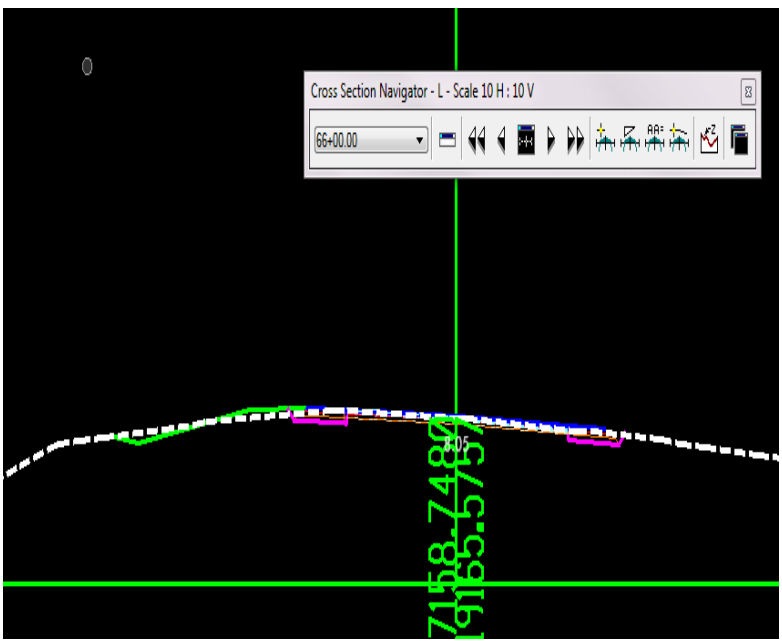
2_35 COMPLETING TEMPLATE TRANSITIONS

Question:

The last two cross sections are missing the side slopes. What is causing this issue?



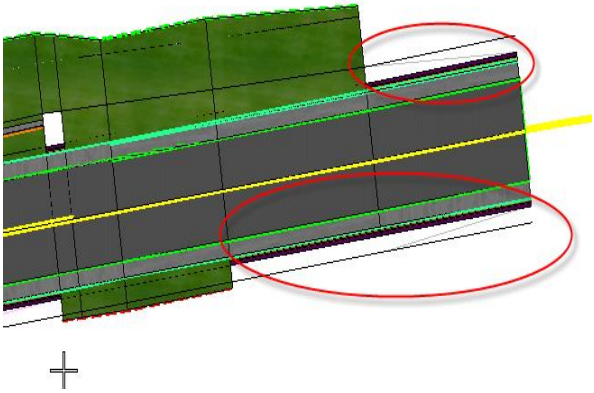


Answer:

Since cross sections are cut from the DTM, and the DTM is created from the template drops, the source of the problem can be directly traced to not completing the template transition in Roadway designer. Starting at station 65+50 (bottom) to ending station 66+50 (top), the right side is continuously transitioning **C** → **F** → **C**. The left side is transitioning at the last two template drops **C** → **C** → **F**.


12
10
8
6
4
-30
-20
-10
0
10
20
30
Station:
66+50.00
Interval:
50.0000
Template:
New Template7
TRANSITION: Cut to Fill
TRANSITION: Cut to Fill
12
10
8
6
4
-30
-20
-10
0
10
20
30
Station:
66+00.00
Interval:
50.0000
Template:
New Template7
TRANSITION: Fill to Cut
12
10
8
6
4
-30
-20
-10
0
10
20
30
Station:
65+50.00
Interval:
50.0000
Template:
New Template7

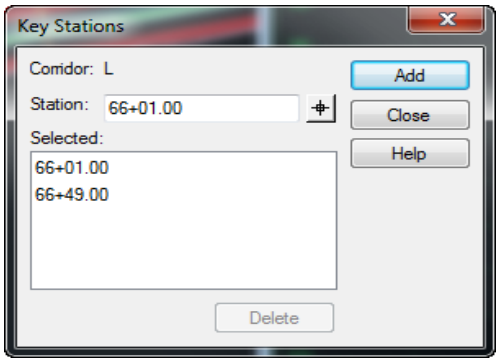
When creating a surface from these 50’ template drops, the DTM will likely to contain “gaps” because of not completing the transition.



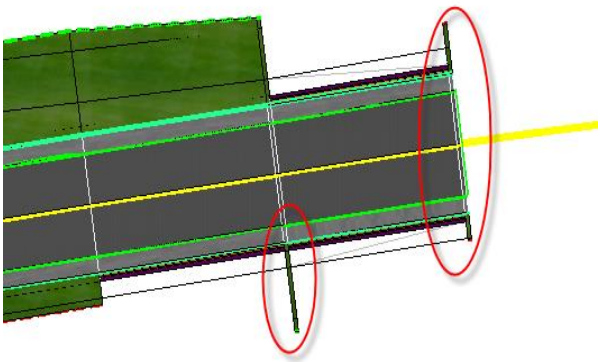
The cross sections (as shown above) then will not have the missing side slopes drawn. This is similar to the case as described in the below link.

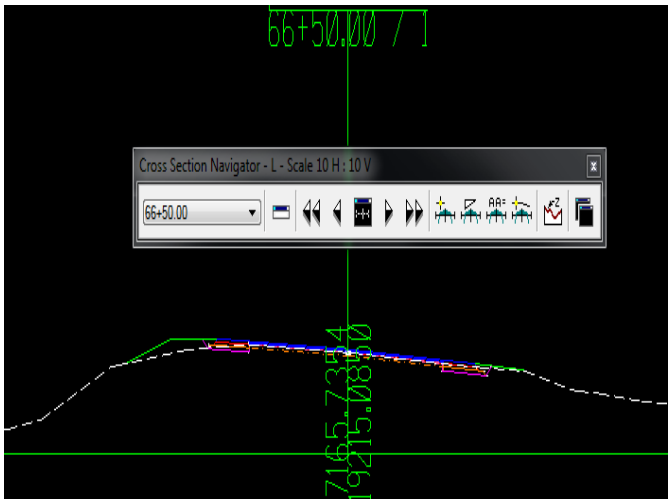
http://www.ncdot.gov/doh/preconstruct/highway/roadway/Corridor_Modeling/QA/model/cm0053.html

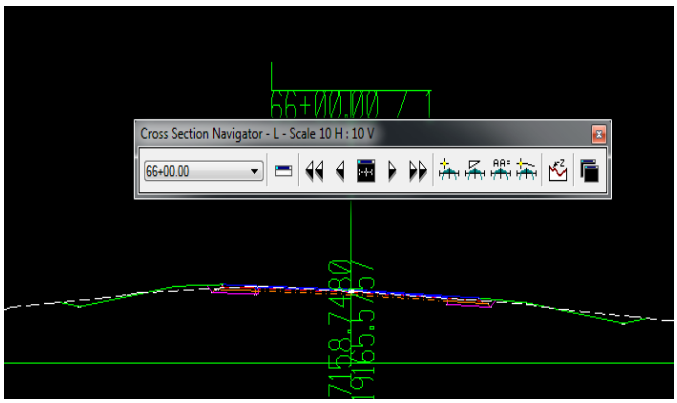
To resolve templates in a constant transitioning states, two “liked” templates drops must precede each other. Use the “Key Stations” feature in Roadway Designer and add a template drop near the cross section having DTM gaps. Although not 100% guaranteed, the likelihood of two template drops transitioning from Cut to Fill or vice versa is greatly reduced by having them in close proximity to each other.

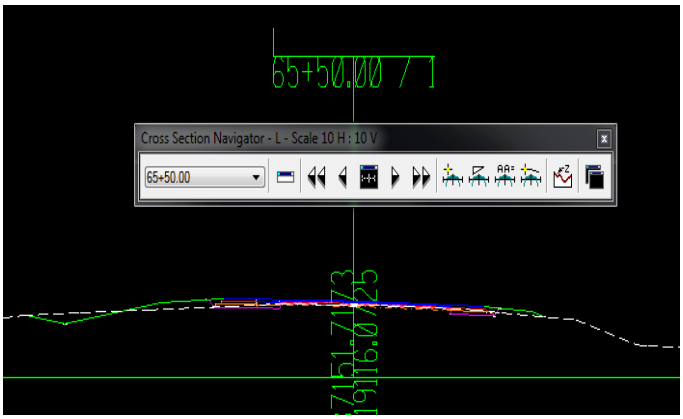


The resulting DTM surface (small but adequate to cut cross sections from).




66+50.00 / 1
Cross Section Navigator - L - Scale 10 H : 10 V
66+50.00


66+00.00 / 1
Cross Section Navigator - L - Scale 10 H : 10 V
66+00.00


65+50.00 / 1
Cross Section Navigator - L - Scale 10 H : 10 V
65+50.00