



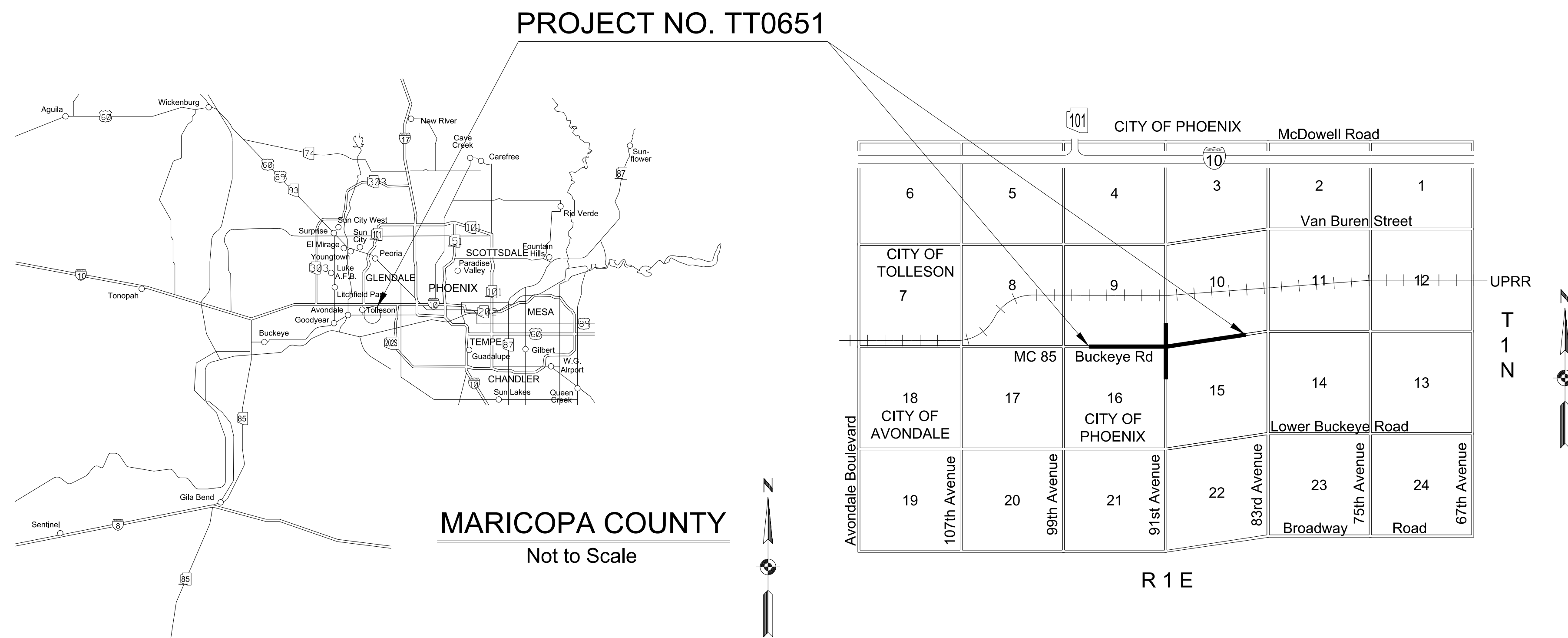
# MARICOPA COUNTY DEPARTMENT OF TRANSPORTATION

## EARTHWORK AND CROSS SECTION SHEETS FOR MC85 & 91ST AVE

### PROJECT NO. TT0651

#### INDEX

- 1..... EARTHWORK COVER SHEET
- 2..... EARTHWORK SUMMARY
- 3..... MASS DIAGRAM
- 4-54.... CROSS SECTIONS



4:27:16 PM 6/21/2022



## EARTHWORK SUMMARY REPORT

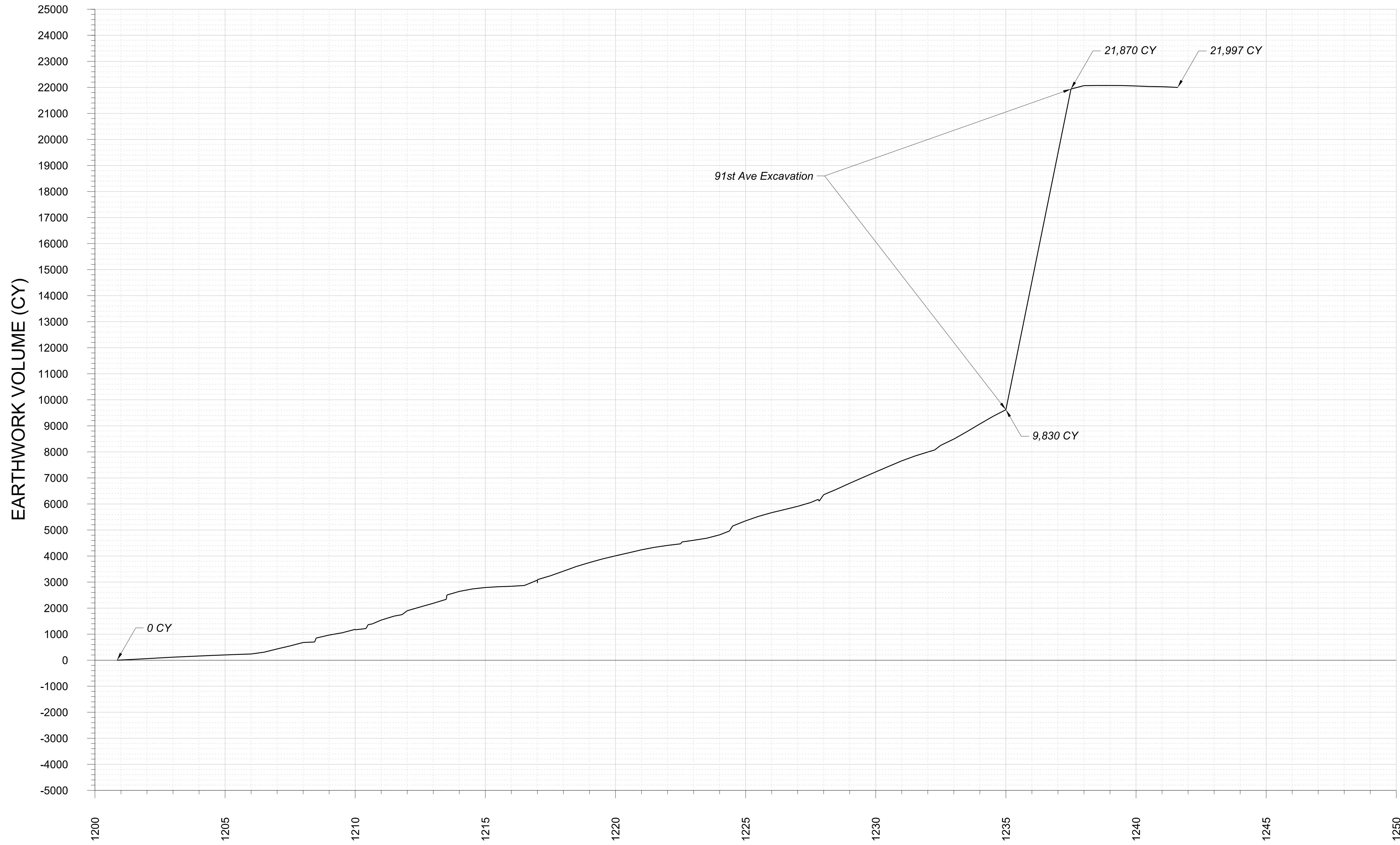
ESTIMATED EARTHWORK QUANTITIES	
<i>Roadway Excavation (from End Area Calculations)</i>	24,126 CY
<i>Shrink (-) or Swell (+)</i>	-213 CY
<i>Available for Embankment</i>	23,913 CY
<i>'Drainage' Excavation</i>	0 CY
<i>Shrink (-) or Swell (+)</i>	0 CY
<i>Available for Embankment</i>	0 CY
<i>Structure Excavation</i>	0 CY
<i>Shrink (-) or Swell (+)</i>	0 CY
<i>Available for Embankment</i>	0 CY
<i>Pipe Excavation</i>	0 CY
<i>Shrink (-) or Swell (+)</i>	0 CY
<i>Available for Embankment</i>	0 CY
<i>Over Excavation</i>	0 CY
<i>Shrink (-) or Swell (+)</i>	0 CY
<i>Available for Embankment</i>	0 CY
<i>Retention Basin Excavation</i>	0 CY
<i>Shrink</i>	0 CY
<i>Available for Embankment</i>	0 CY
<i>Total Available for Embankment †</i>	23,913 CY
<i>Ground Compaction</i>	201 CY
<i>Roadway Embankment (from End Area Calculations)</i>	1,715 CY
<i>Structural Backfill</i>	0 CY
<i>'Drainage' Embankment</i>	0 CY
<i>Pipe Bedding</i>	0 CY
<i>Pipe Backfill</i>	0 CY
<i>Retention Basin Embankment</i>	0 CY
<i>Total Required Embankment</i>	1,916 CY
<i>Waste Material</i>	21,997 CY
<i>Swell</i>	0 CY
<i>Total Waste Material</i>	21,997 CY

SOIL FACTORS			
Location	Shrink (%)	Swell (%)	Ground Compaction (feet)
1198+34.40 to 1261+45	10	0	0.1
296+82.64 to 334+35	10	0	0.1

3:13:45 PM 6/16/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_BX\_EarthworkSum.dgn

### MASS DIAGRAM



### MC 85 CENTERLINE STATIONING

**Mass Diagram Calculation Assumptions:**

1. Shrink Factor -10%
2. Ground Compaction of 0.10 feet
3. Removal of existing asphalt pavements is included in Roadway Excavation.

<b>4. Earthwork quantities</b>	
Roadway Excavation	24,126 CY
Shrink	-213 CY
Roadway Embankment	1,715 CY
Ground Compaction	201 CY
<b>Waste</b>	<b>21,997 CY</b>

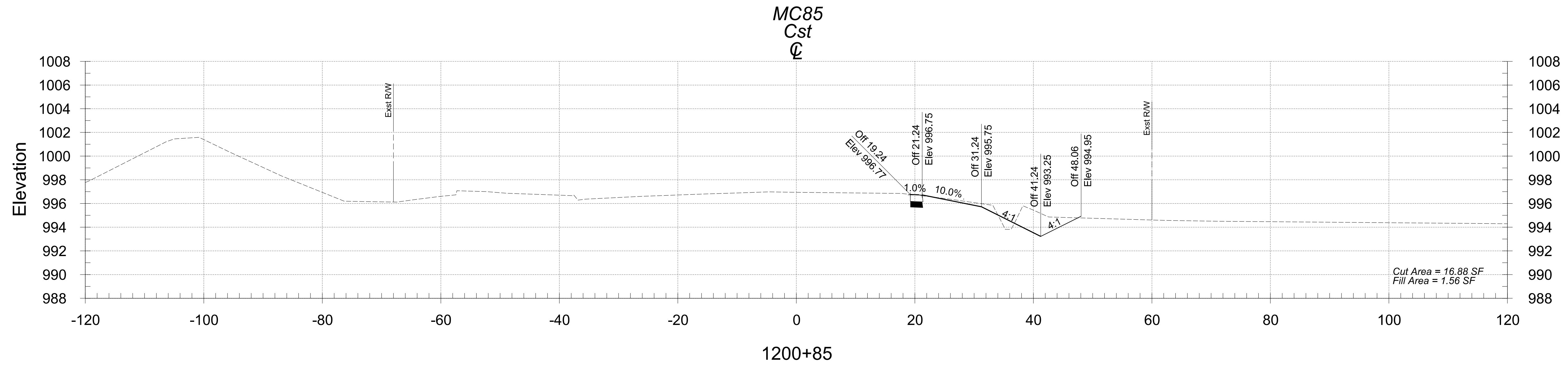
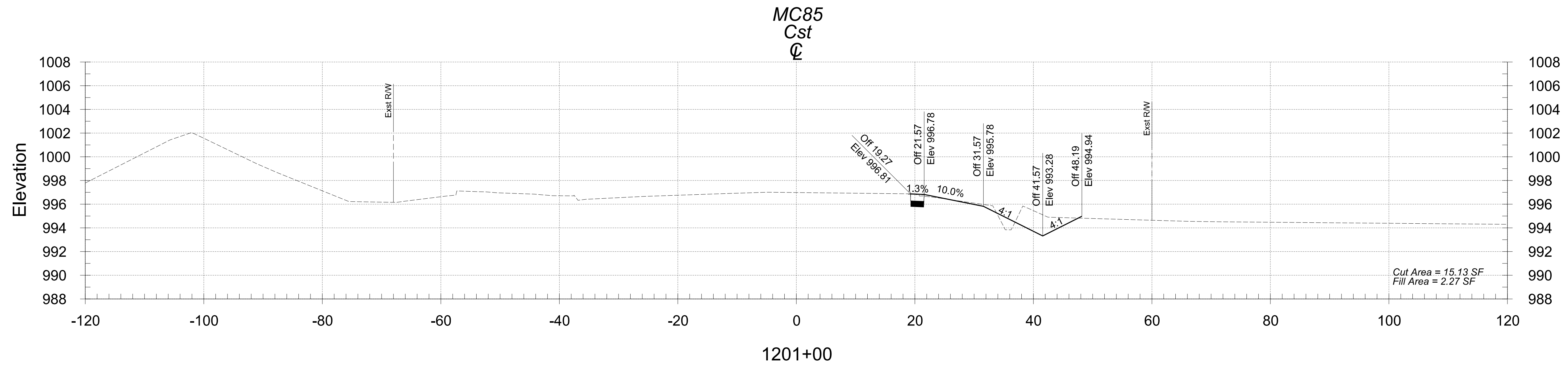
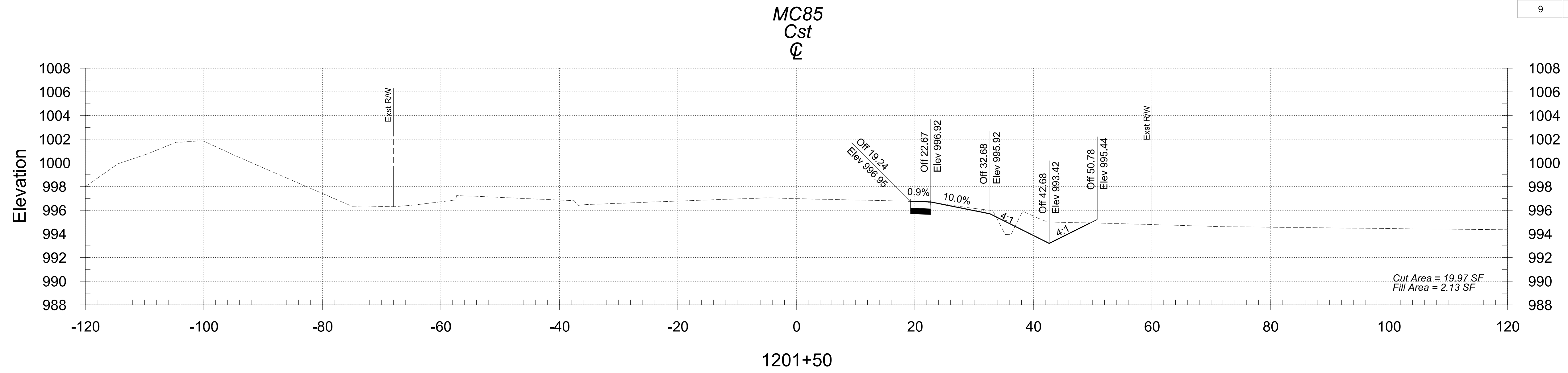
3:15:26 PM 6/16/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_BX\_MassHaul.dgn

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	4	54	

4:24:46 PM 6/21/2022

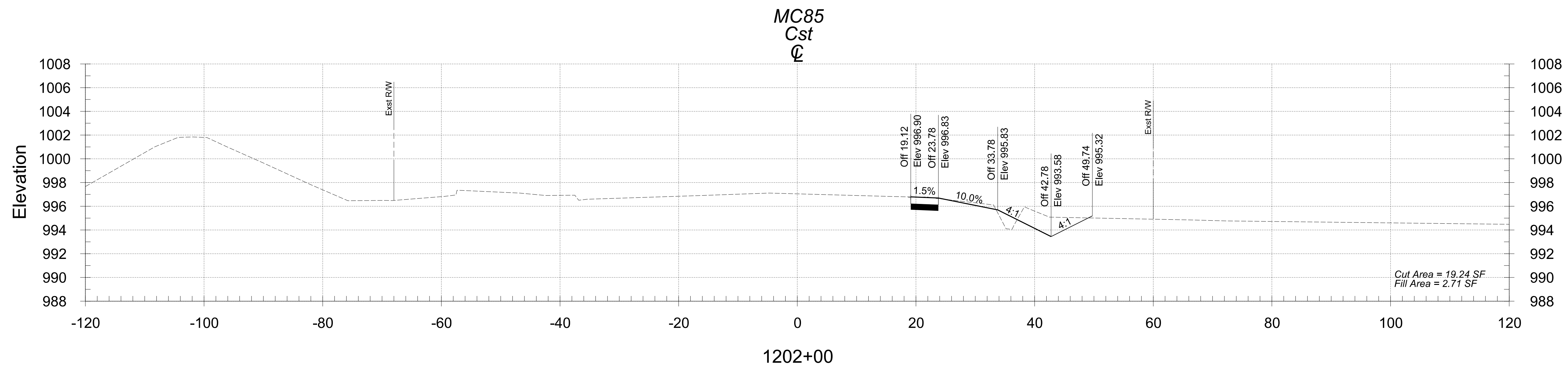
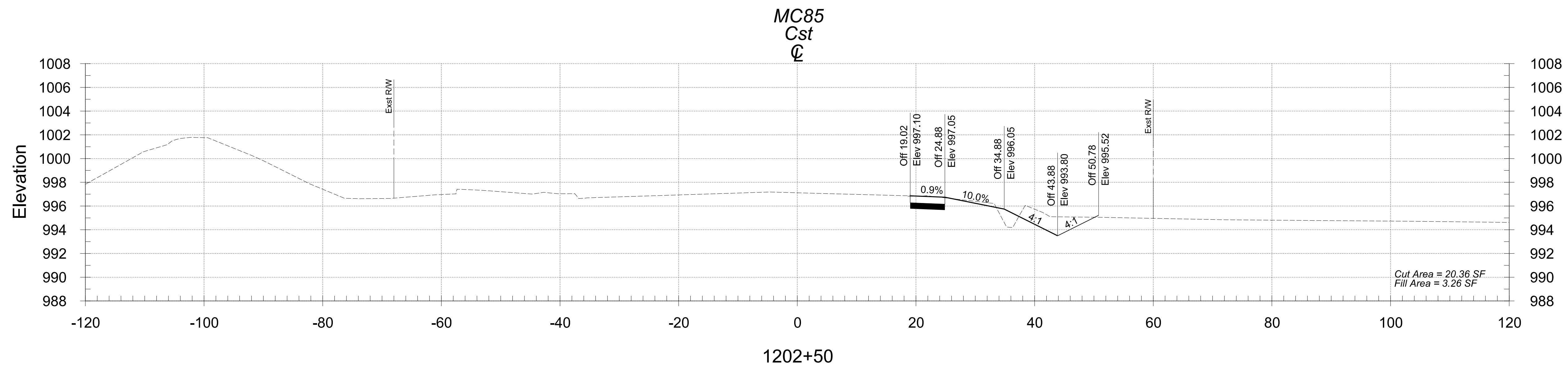
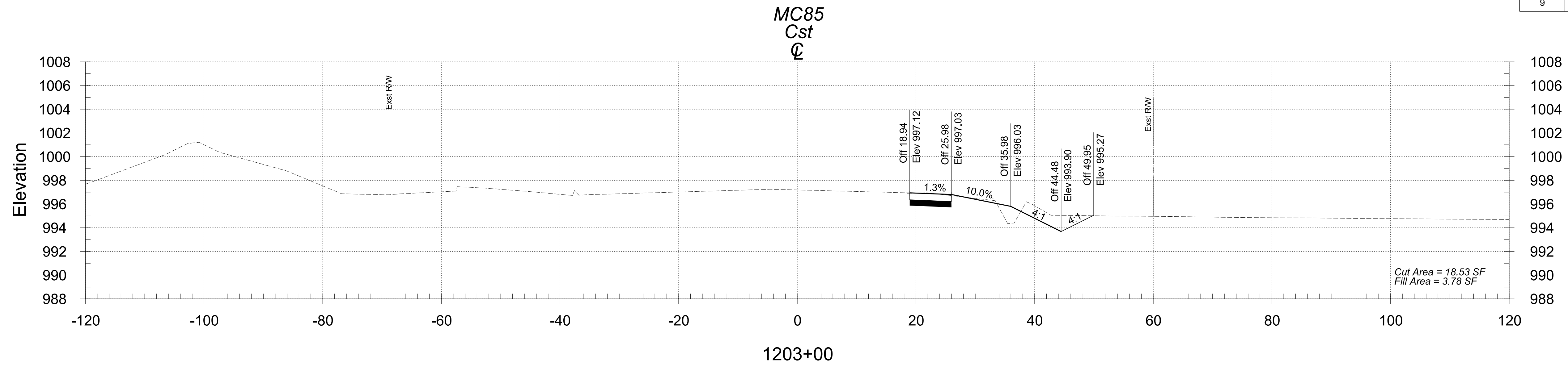
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	5	54	

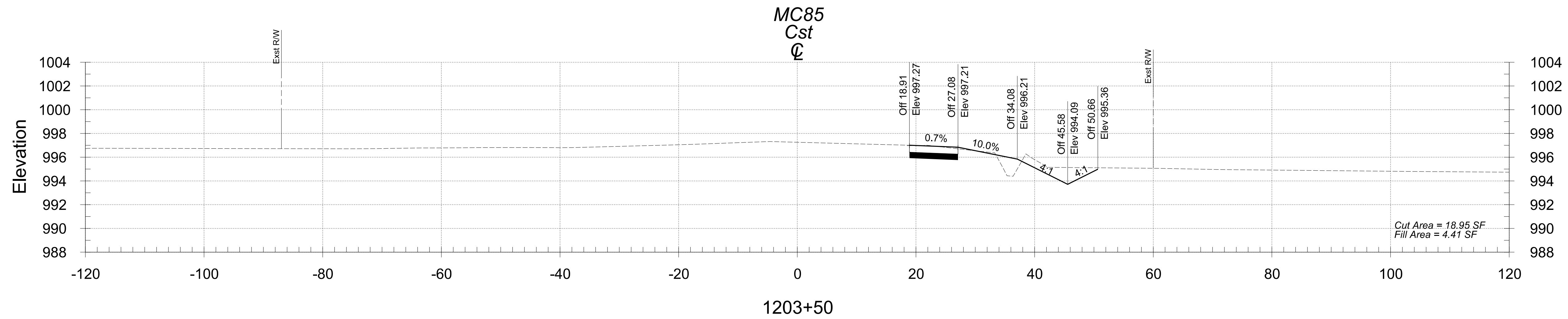
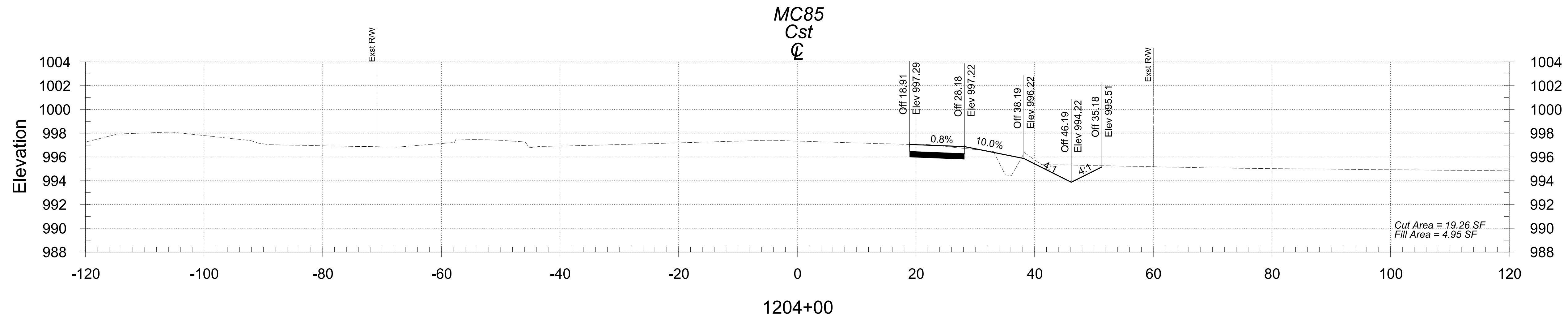
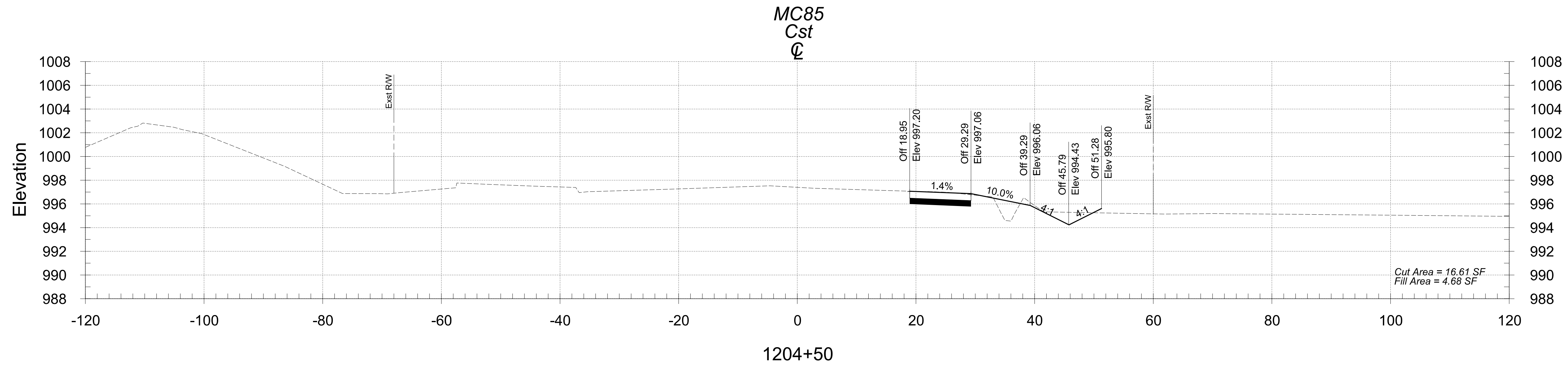
4:24:46 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:46 PM 6/21/2022

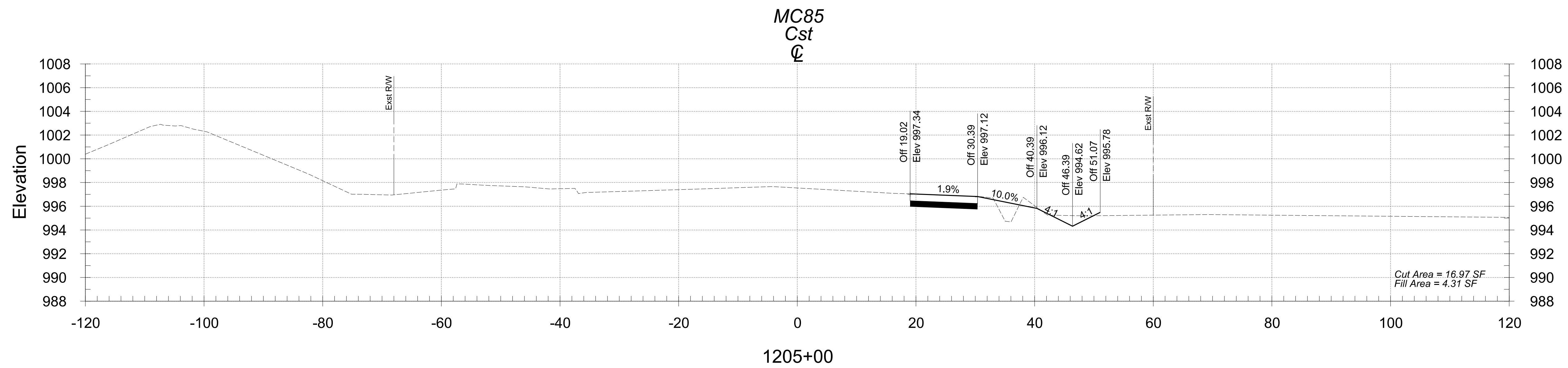
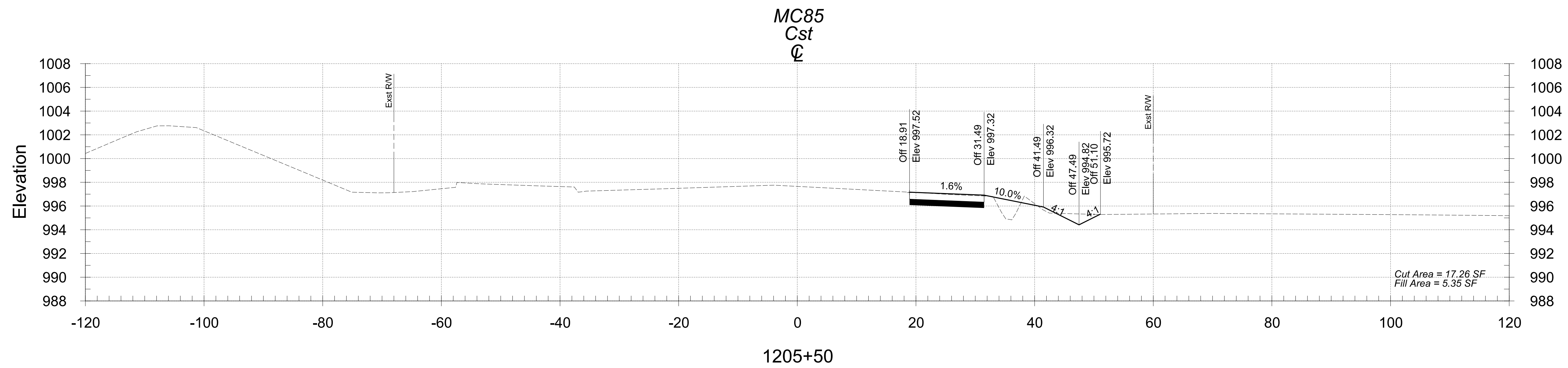
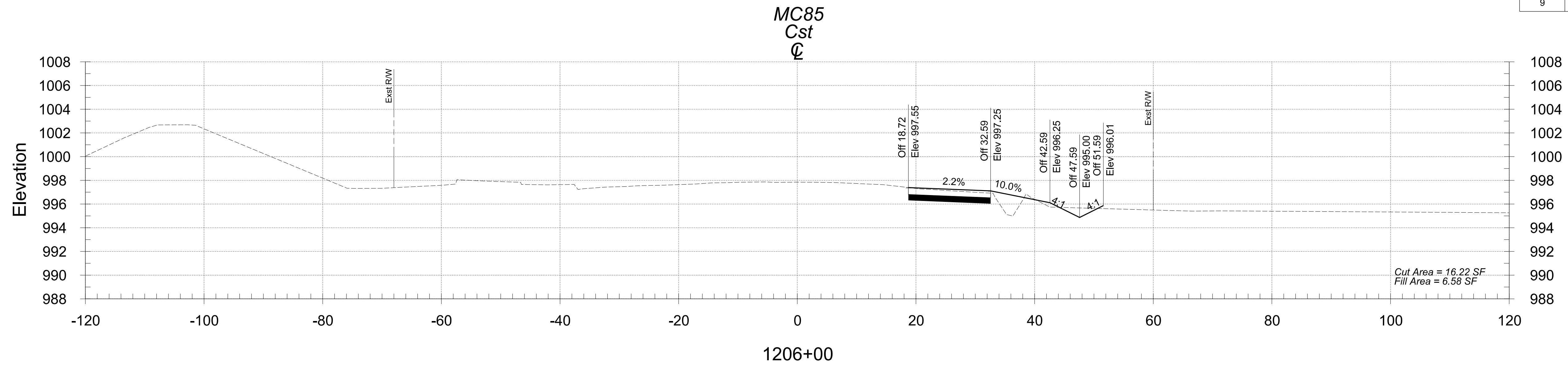
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	7	54	

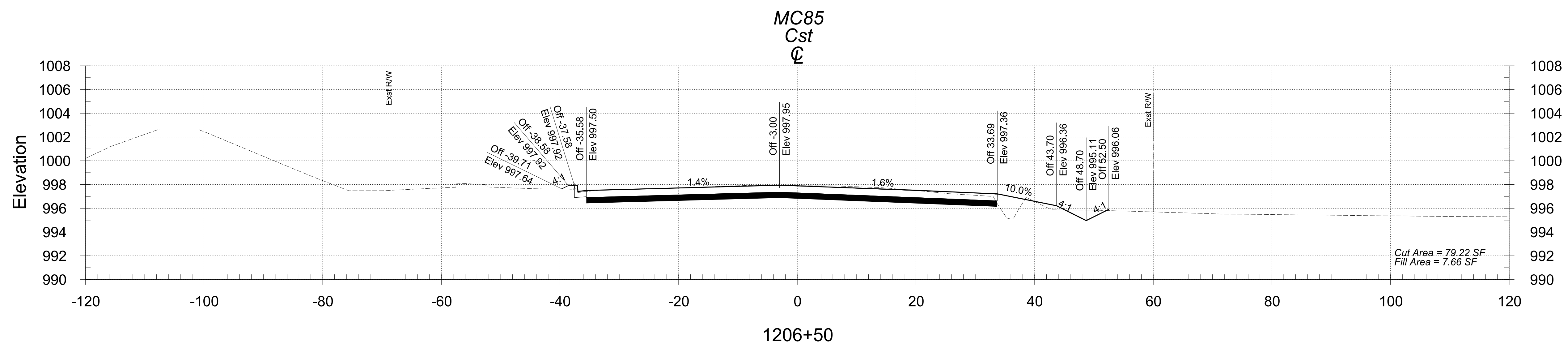
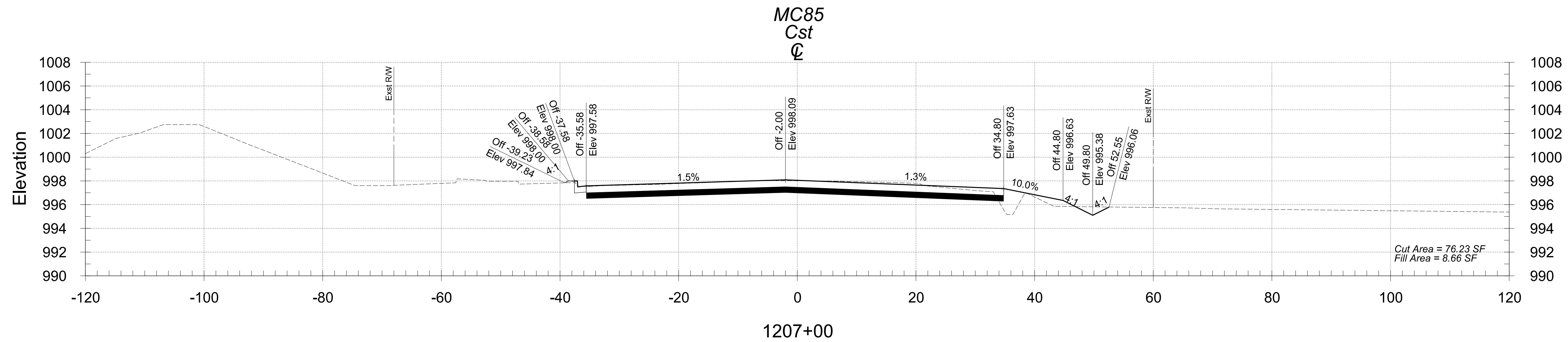
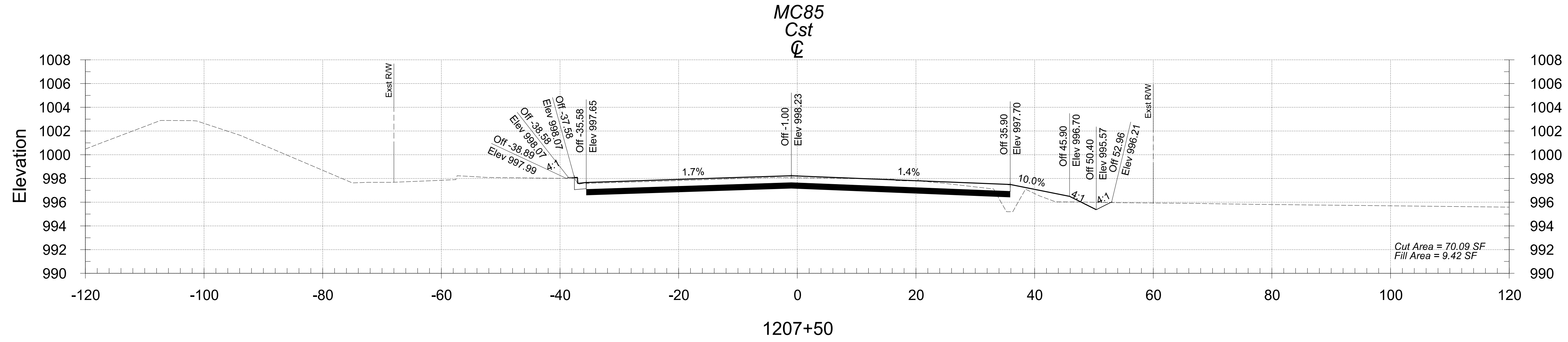
4:24:47 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:47 PM 6/21/2022

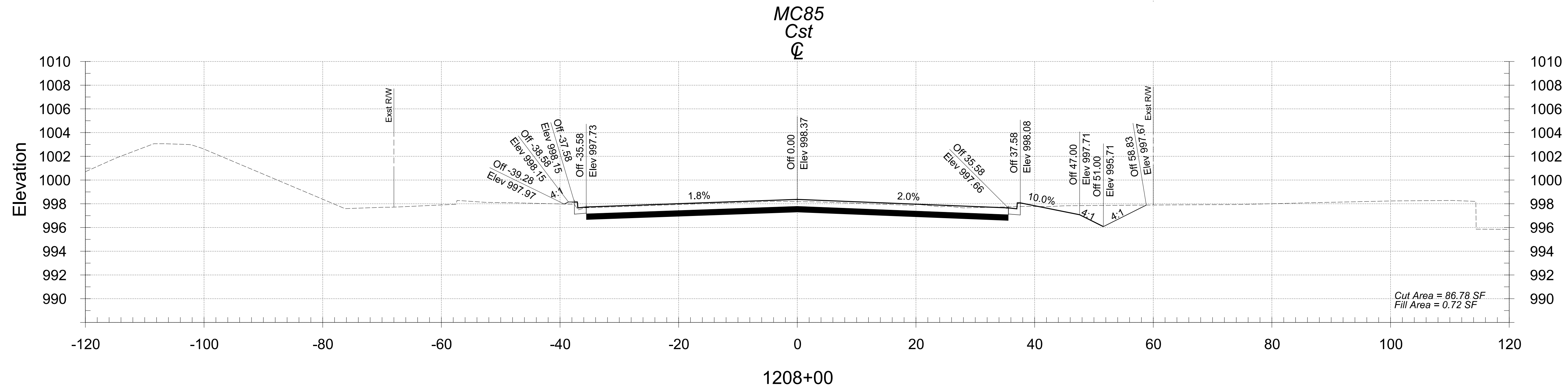
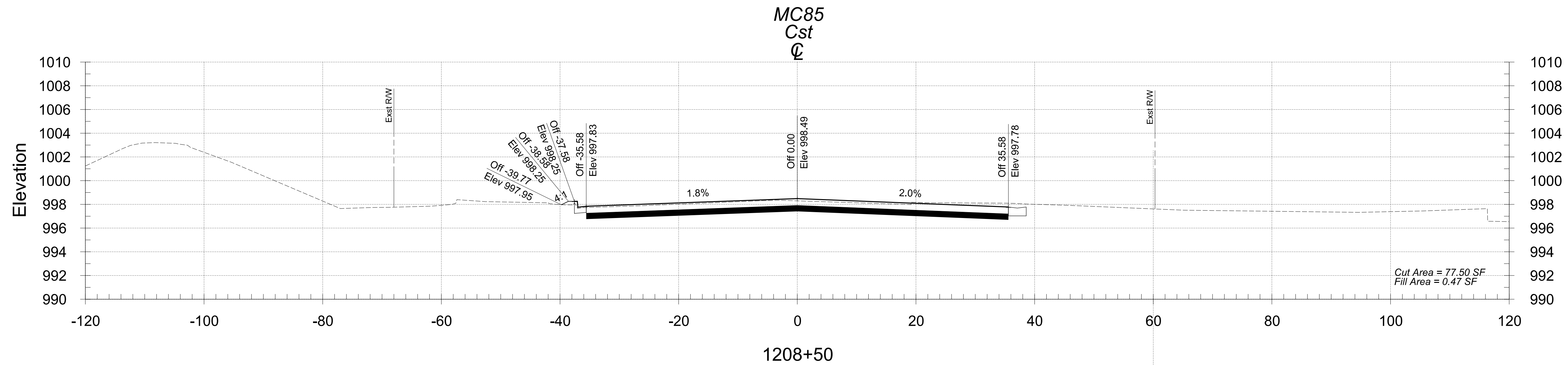
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn





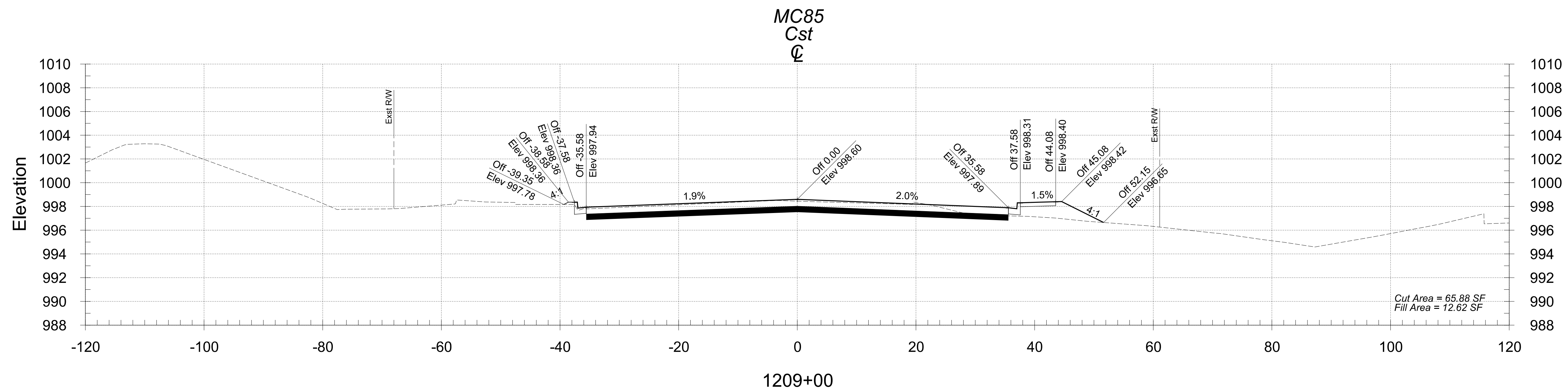
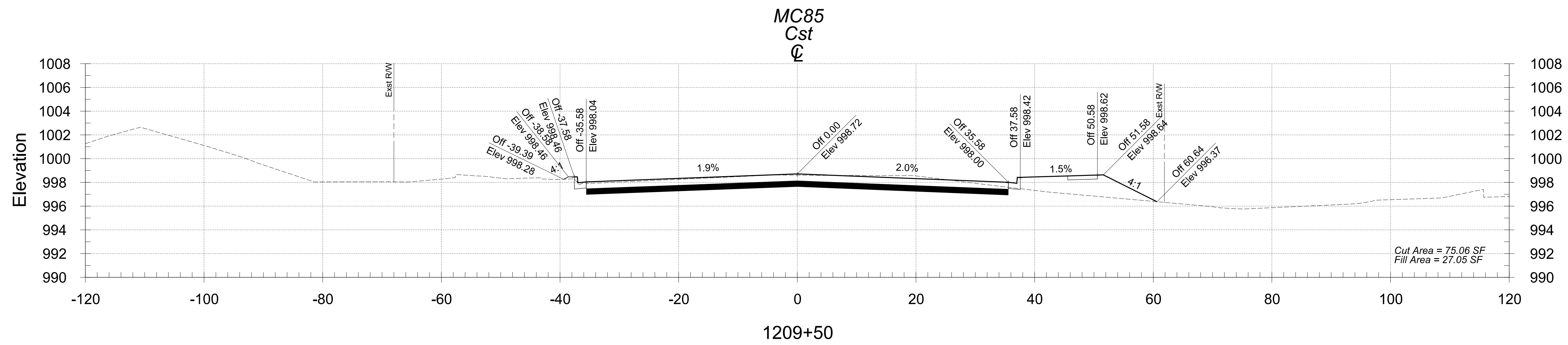
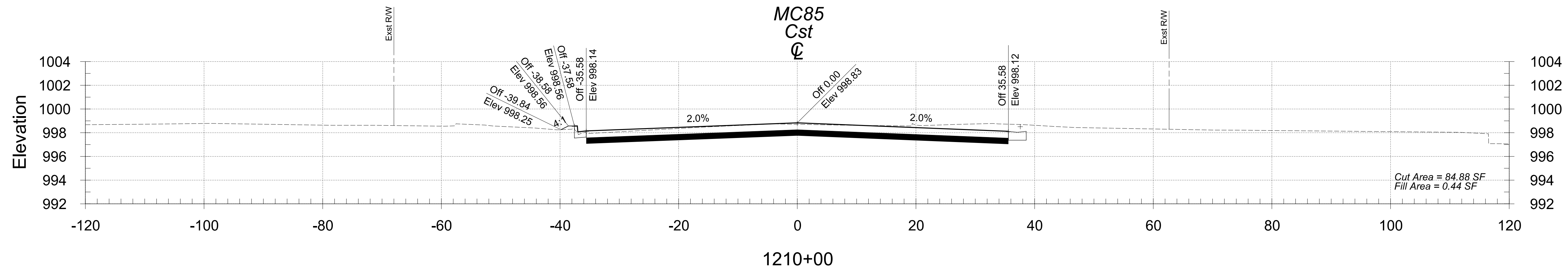
4:24:47 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



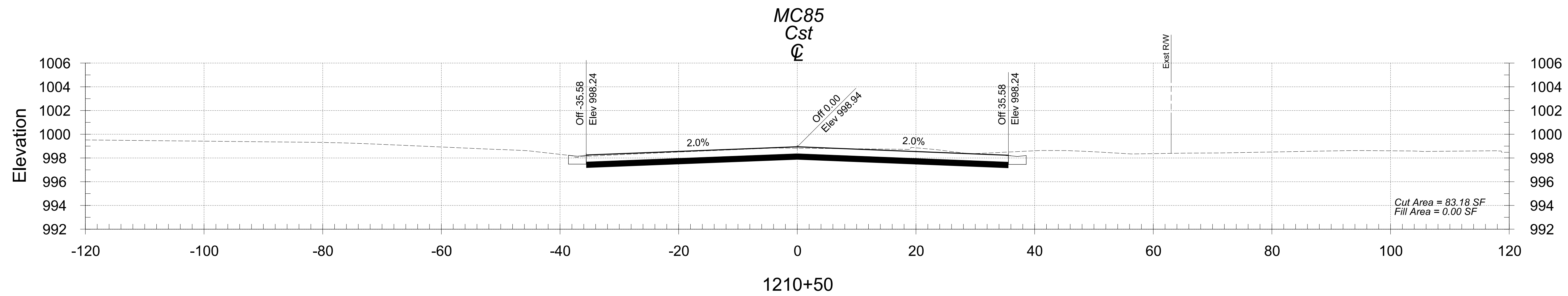
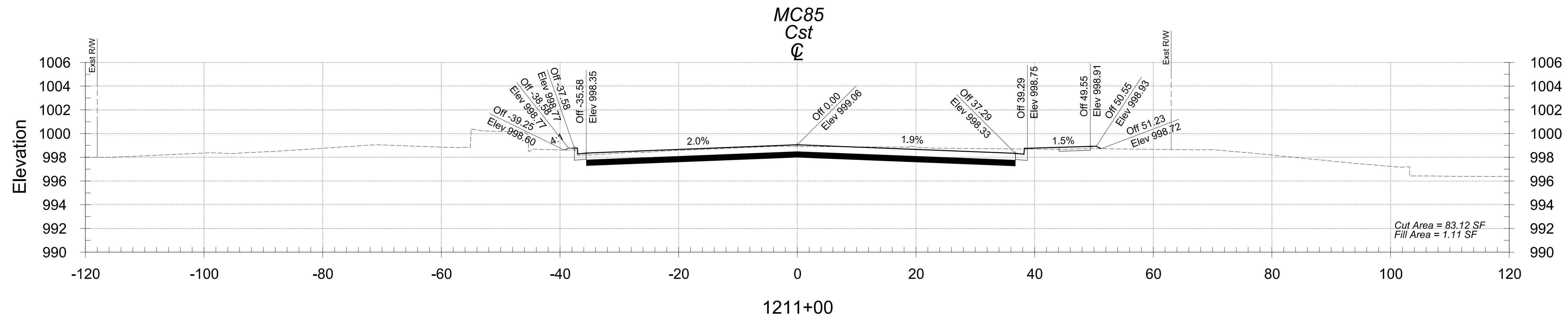
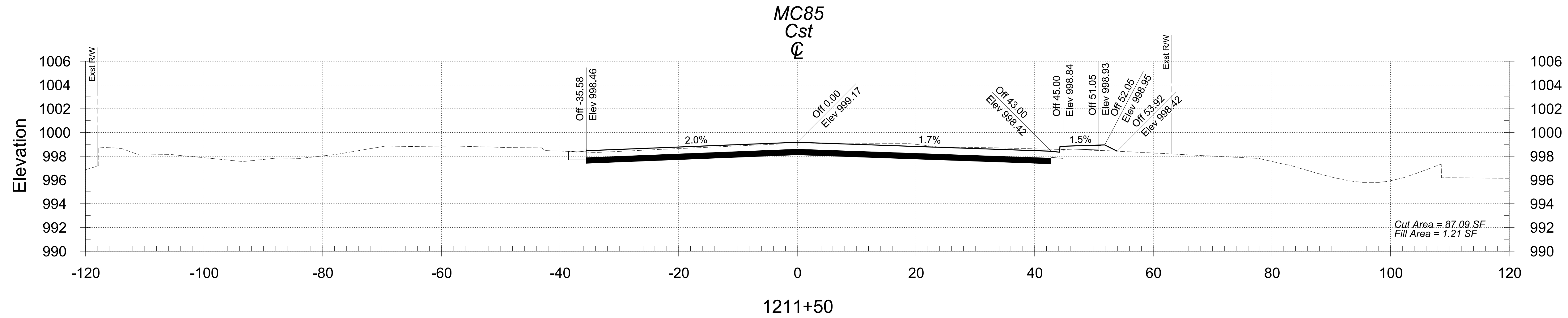
4:24:47 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



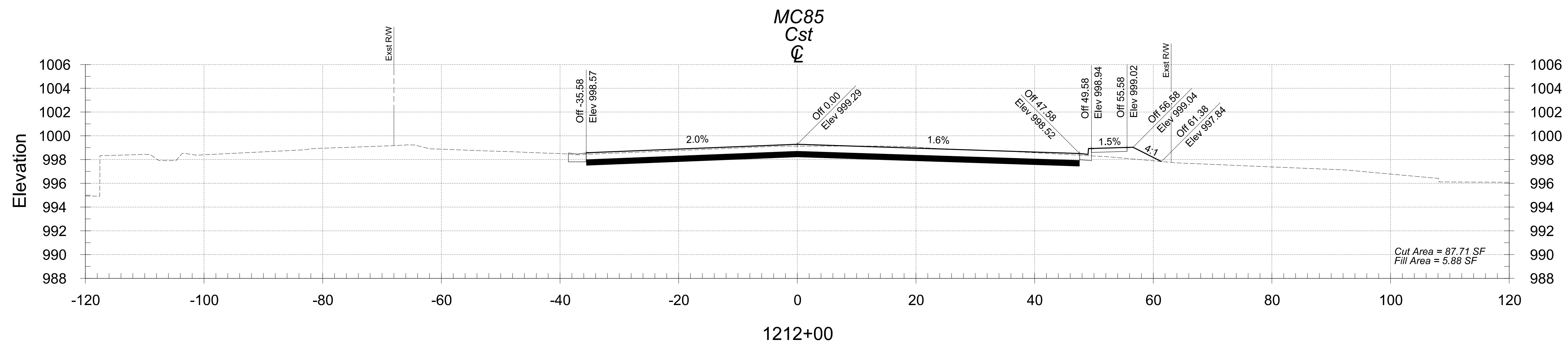
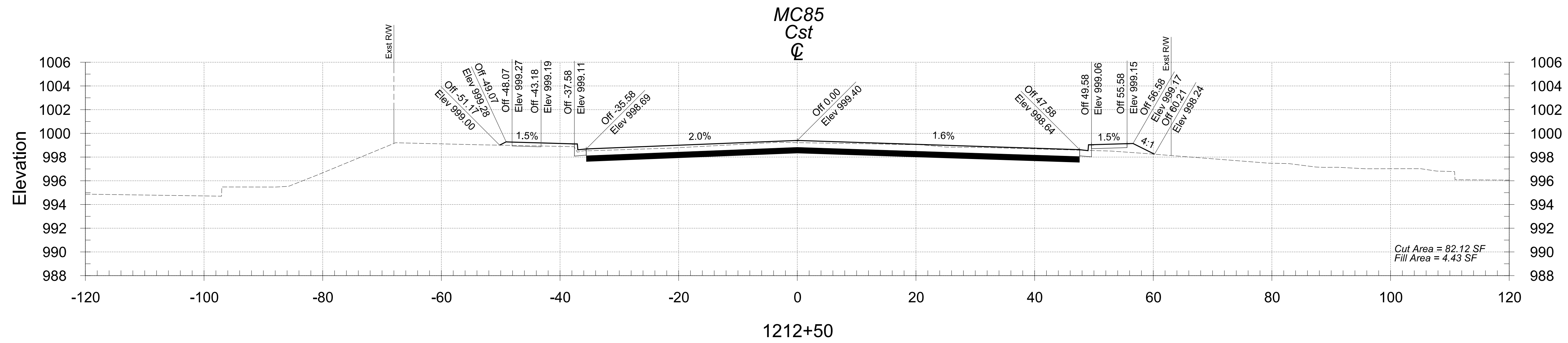
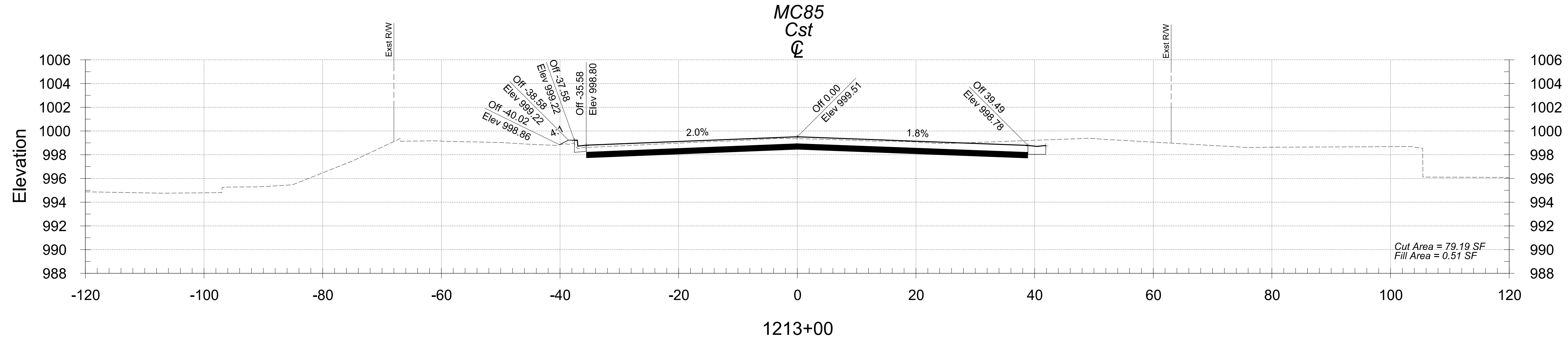
4:24:48 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:48 PM 6/21/2022

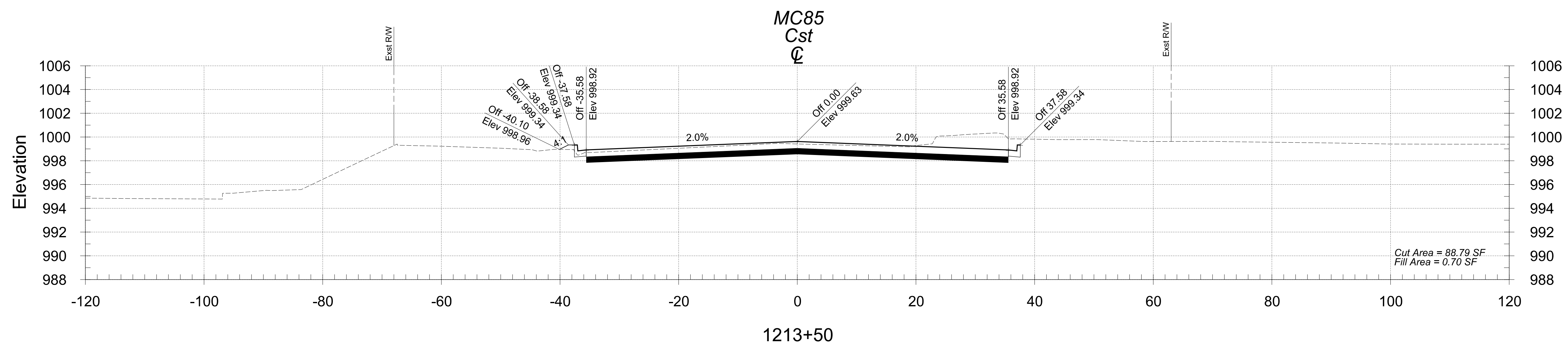
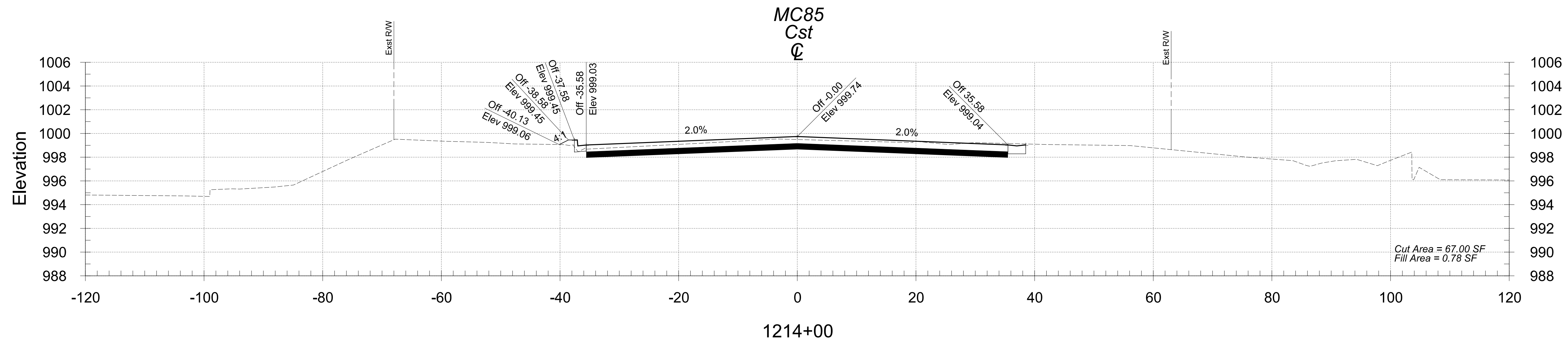
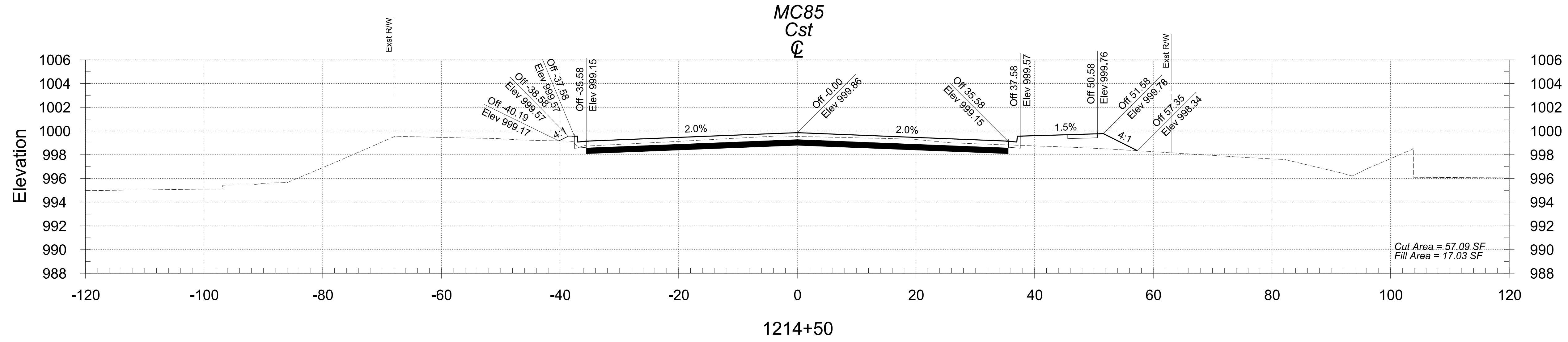
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	13	54	

4:24:48 PM 6/21/2022

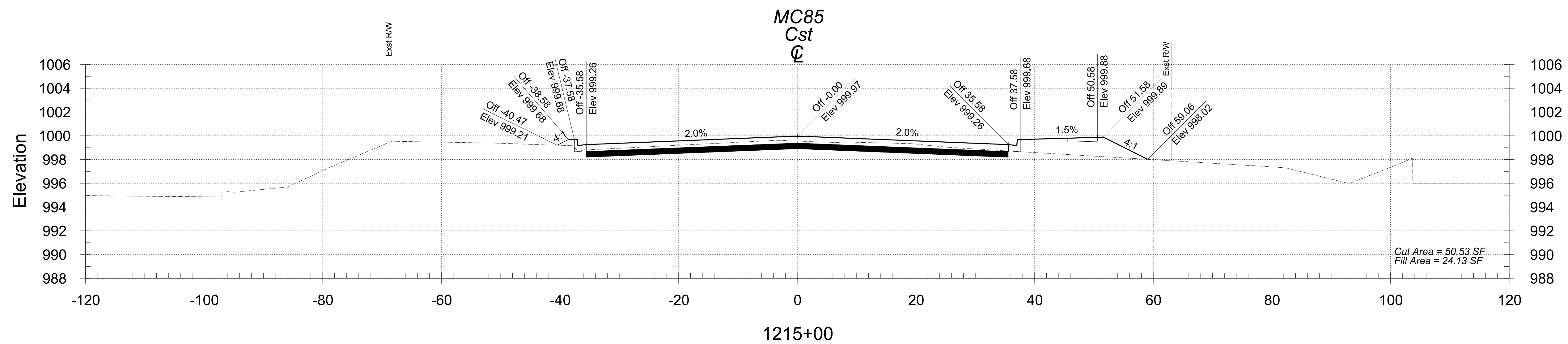
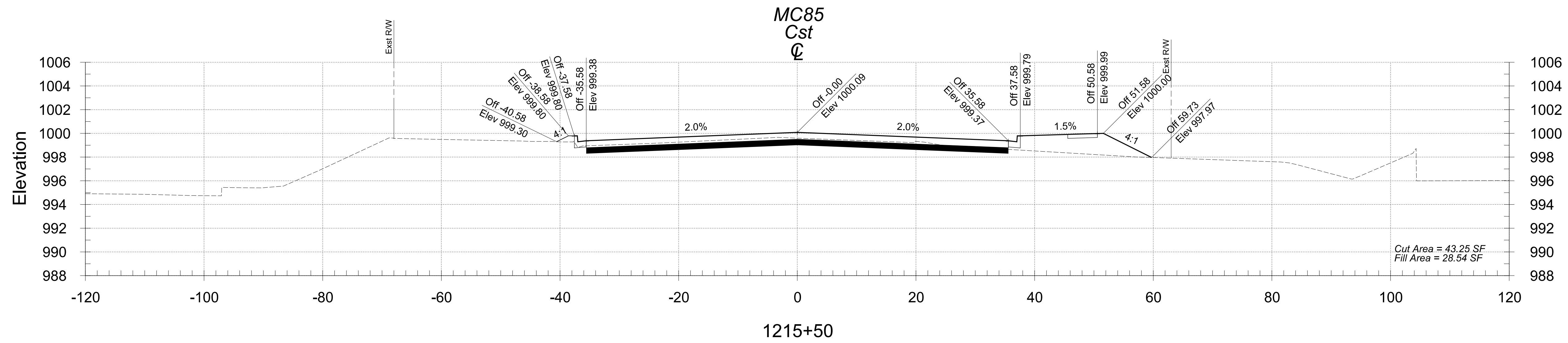
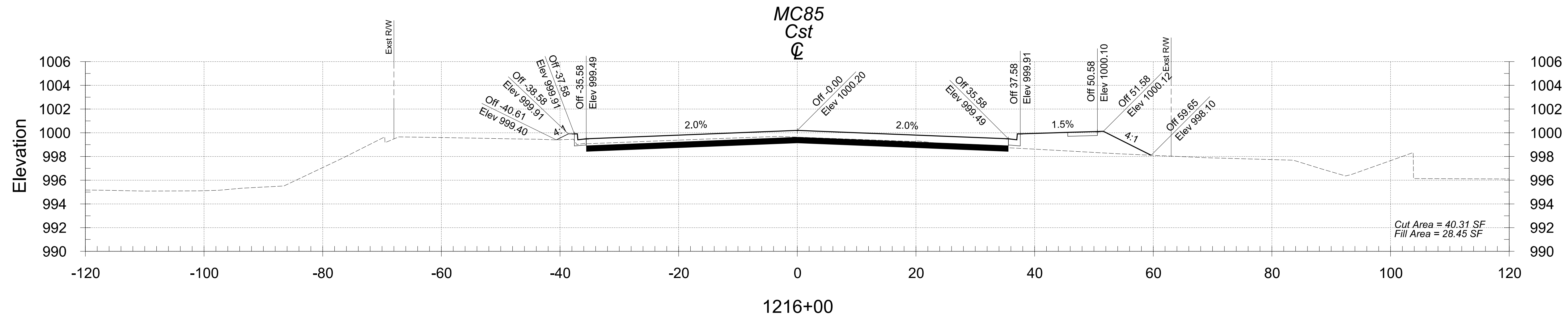
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	14	54	

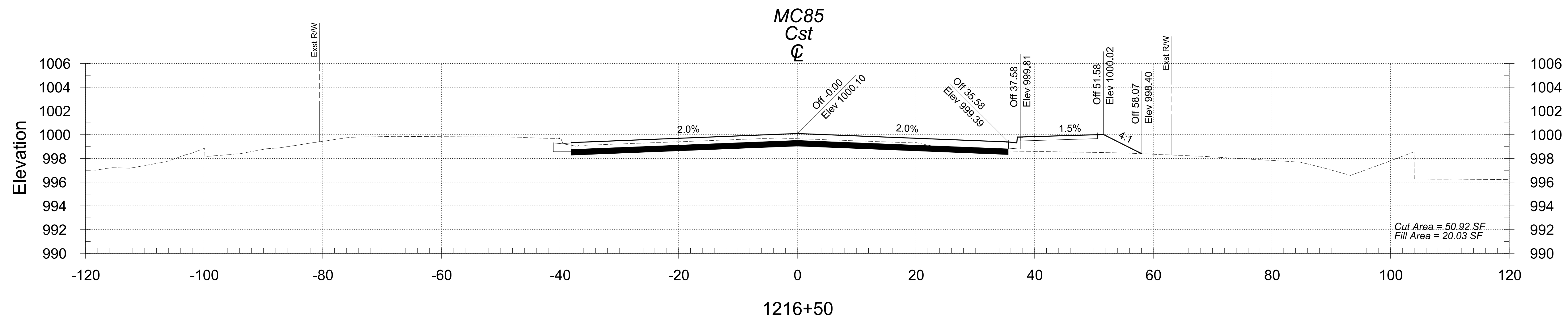
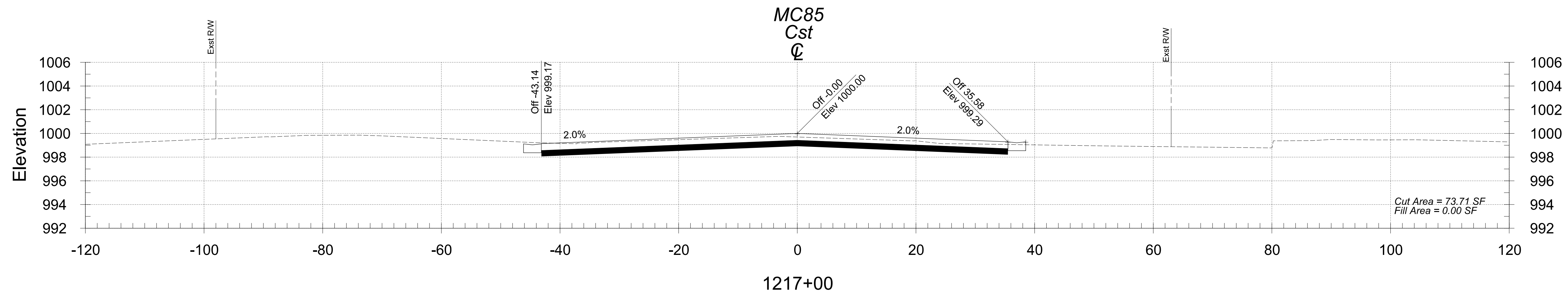
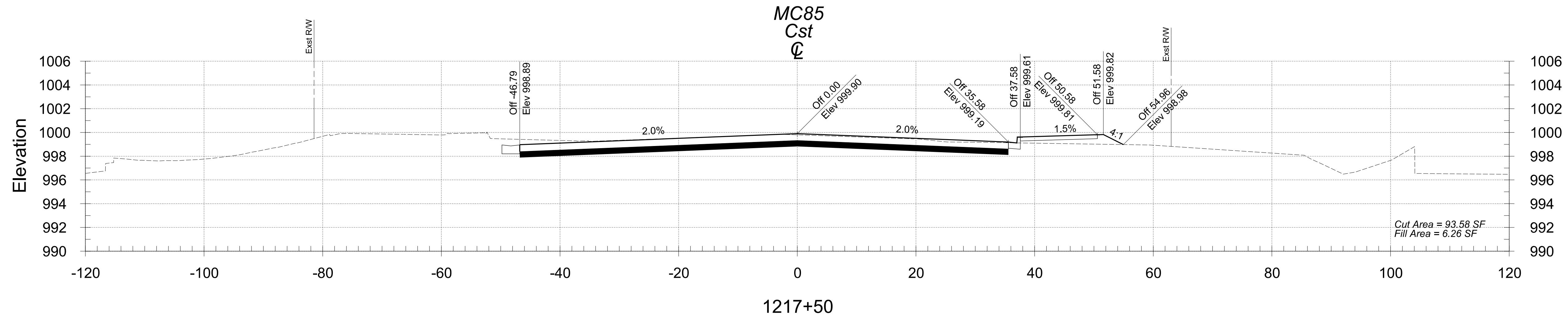
4:24:48 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



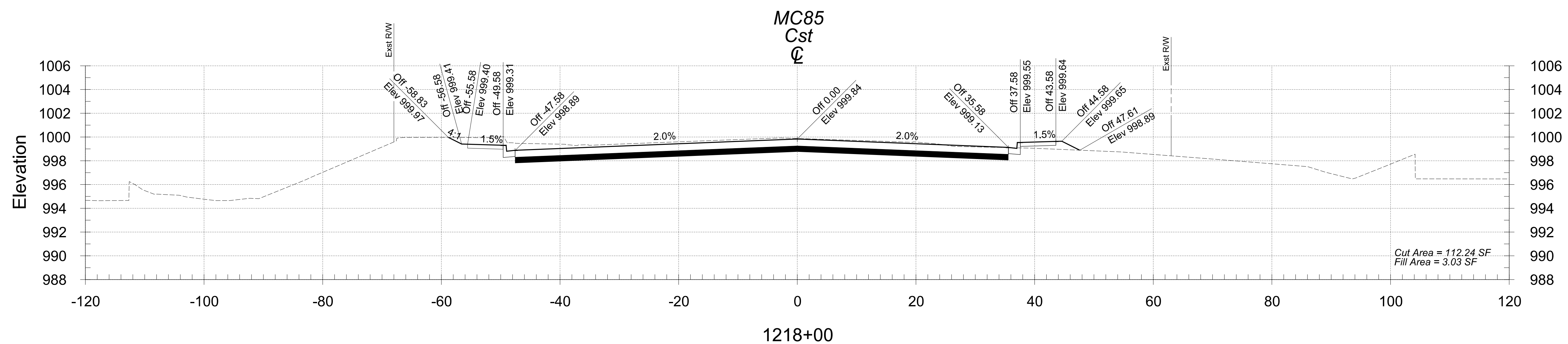
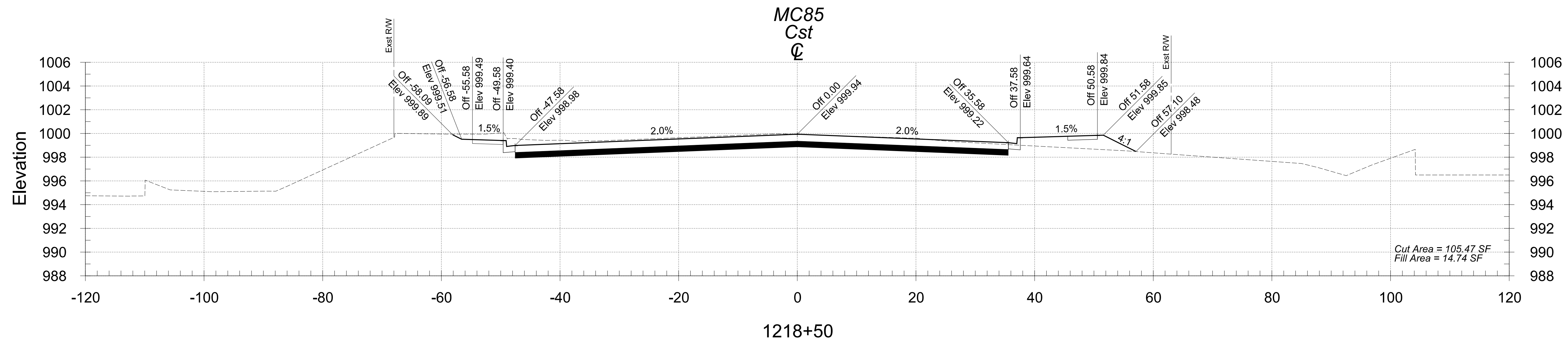
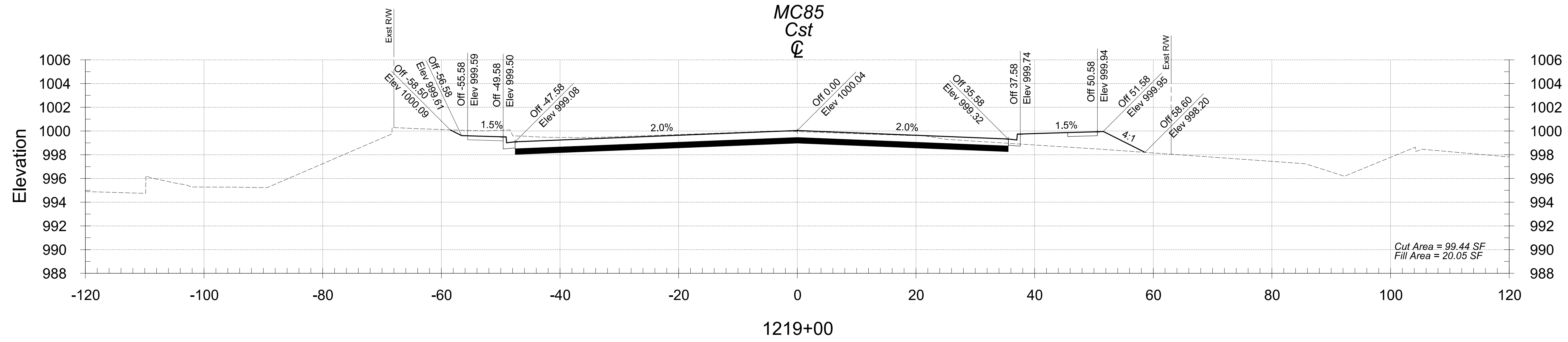
4:24:49 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:49 PM 6/21/2022

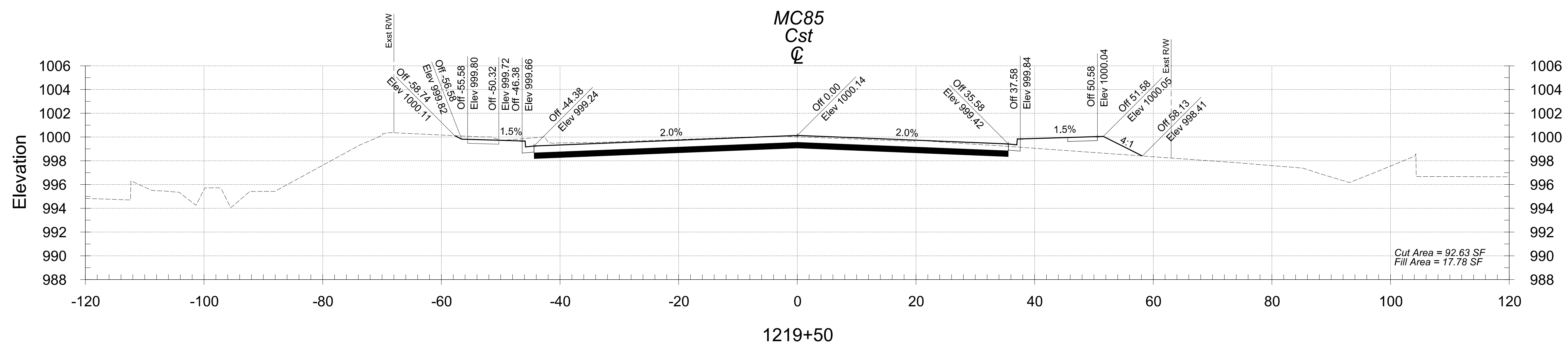
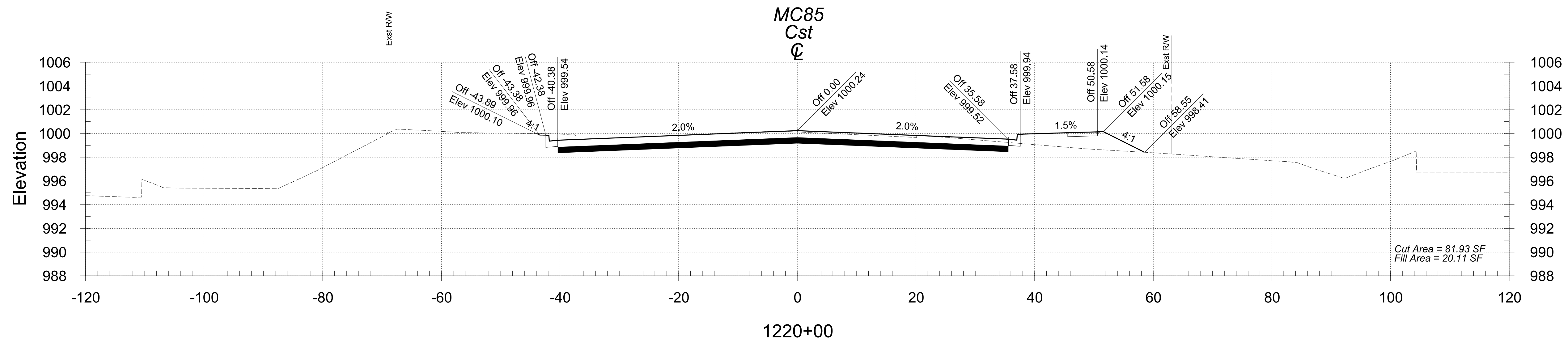
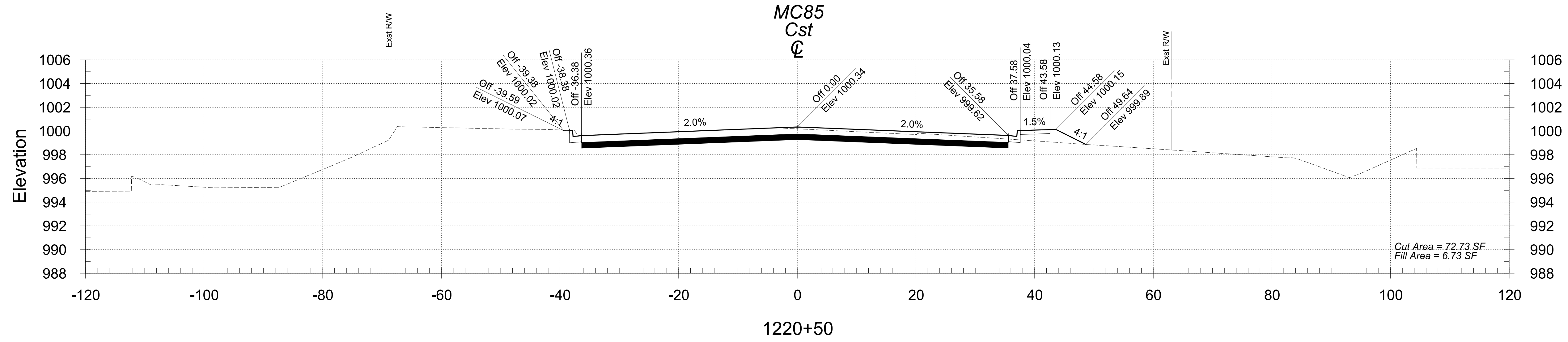
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn





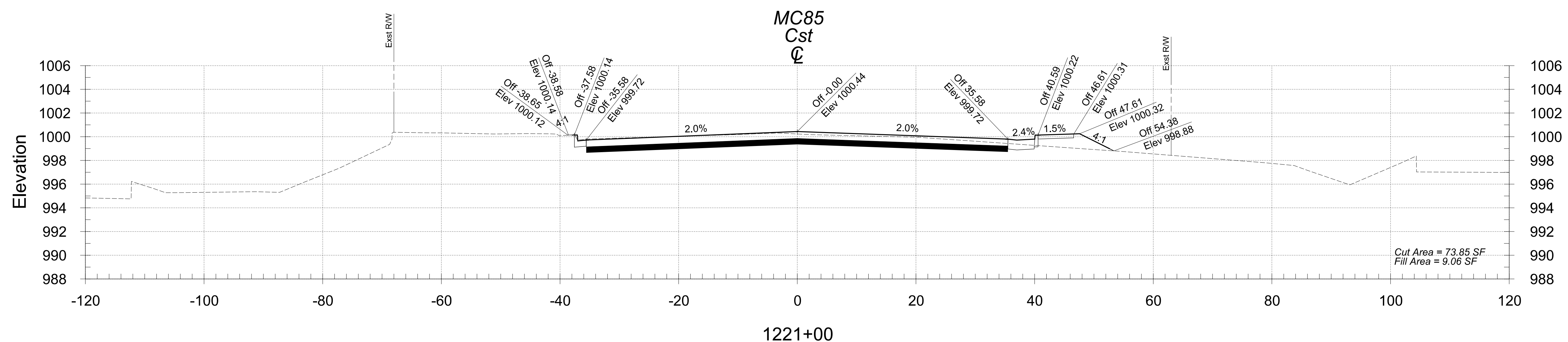
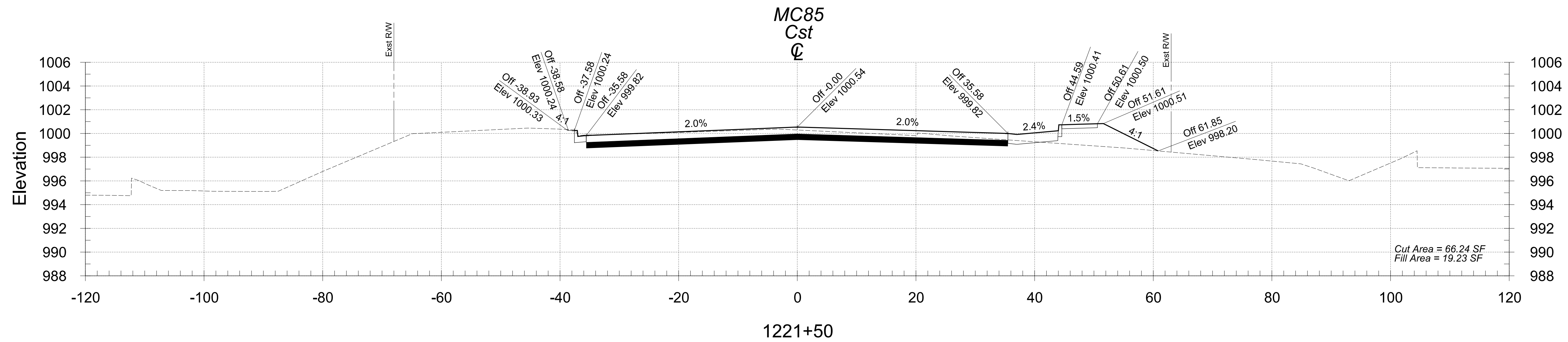
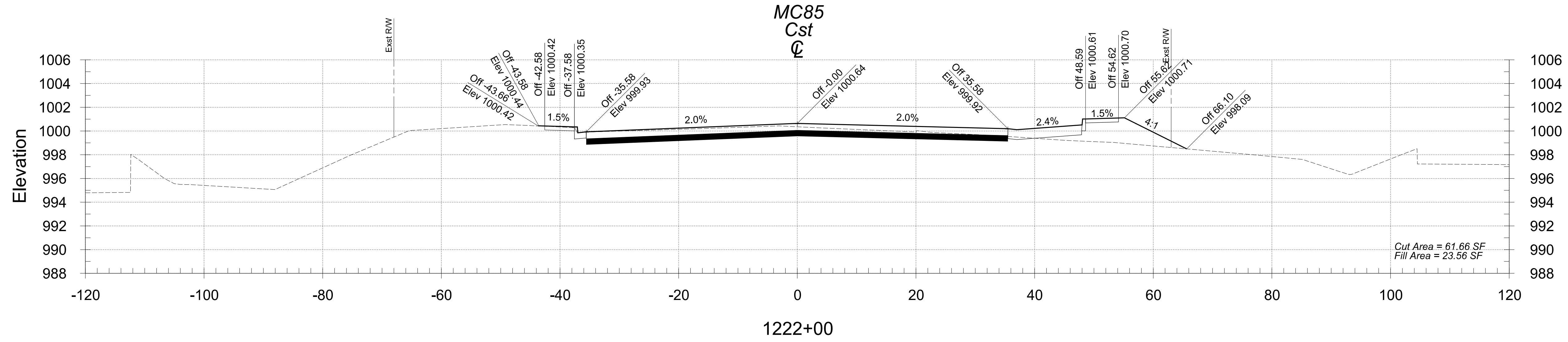
4:24:49 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



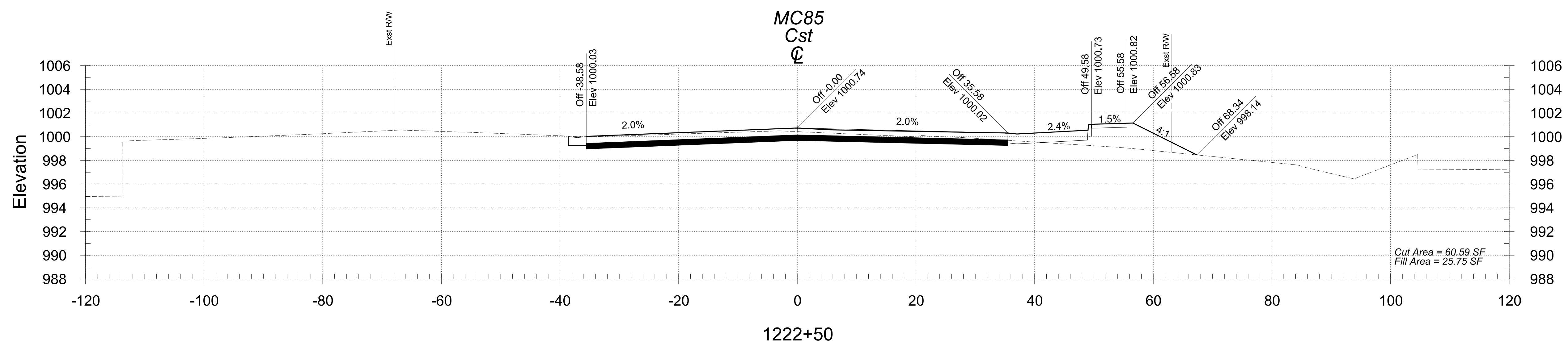
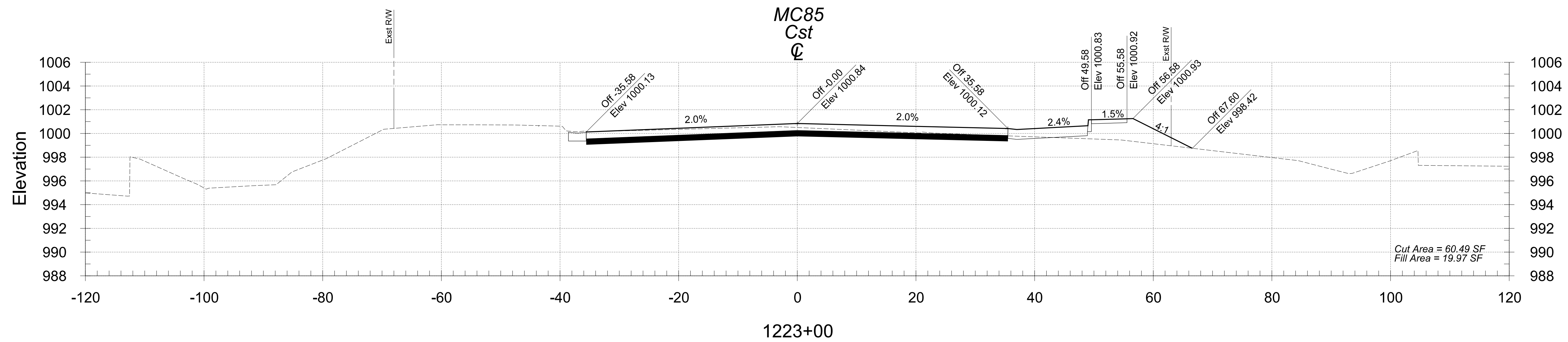
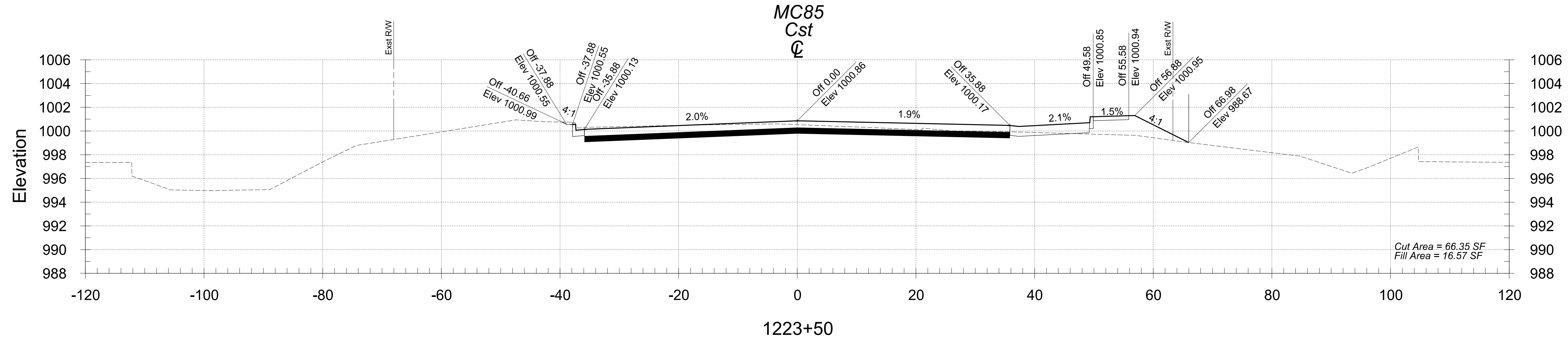
4:24:50 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



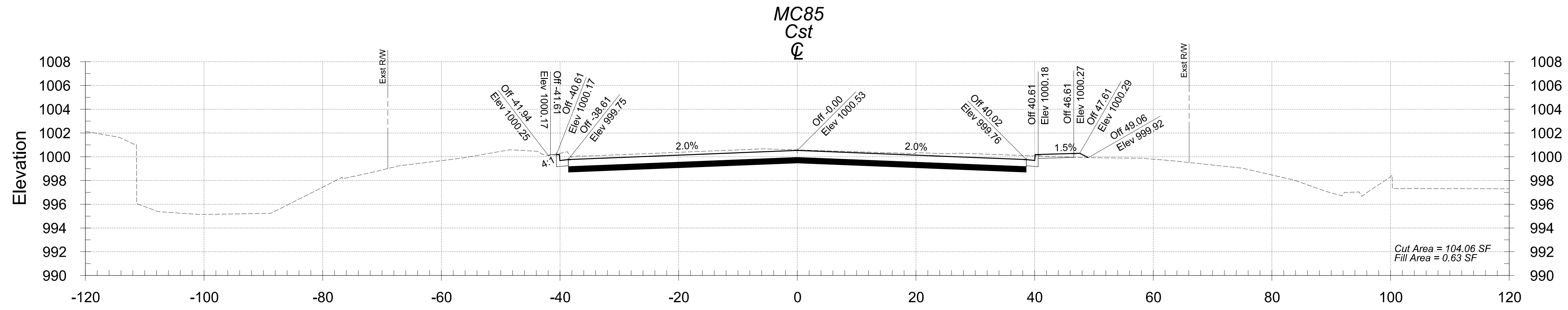
4:24:50 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn

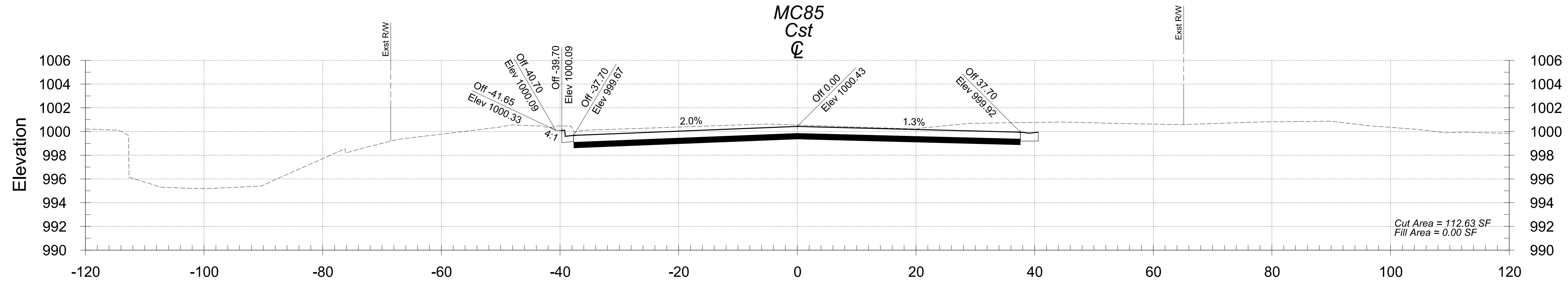


4:24:50 PM 6/21/2022

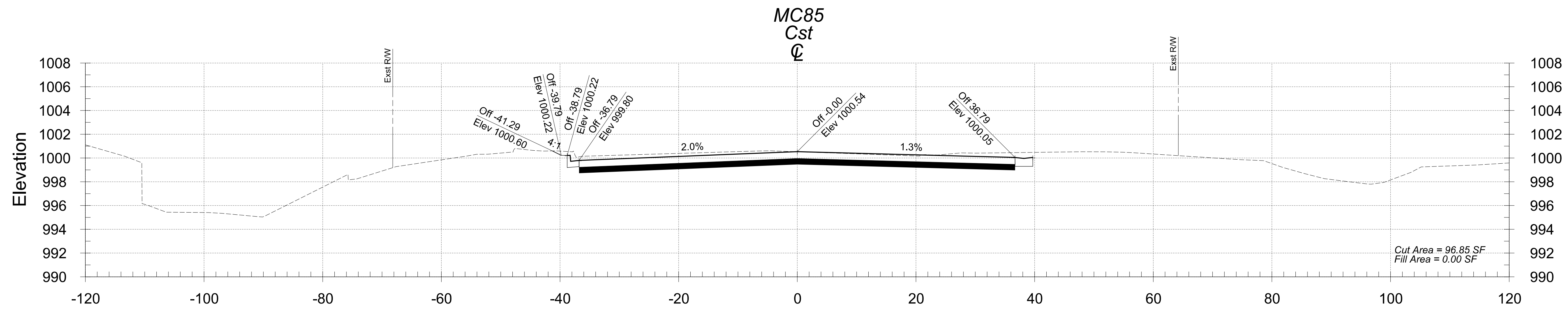
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



1225+00



1224+50

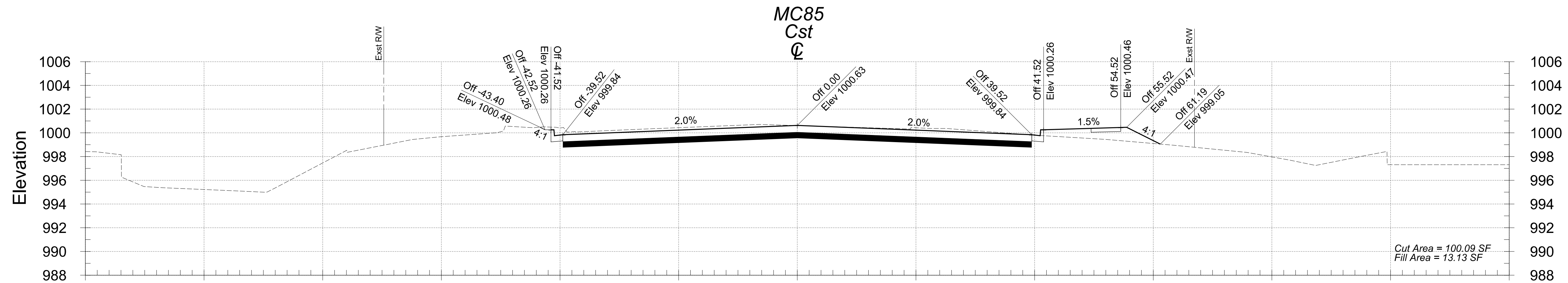
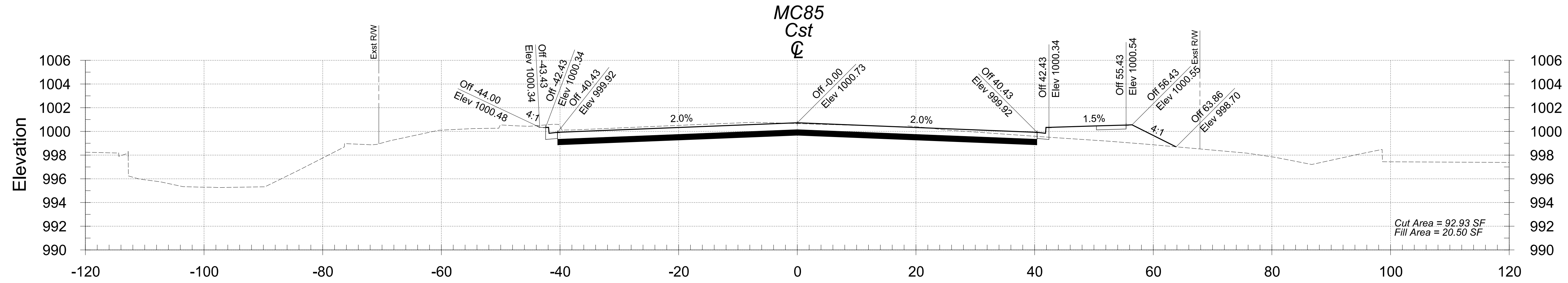
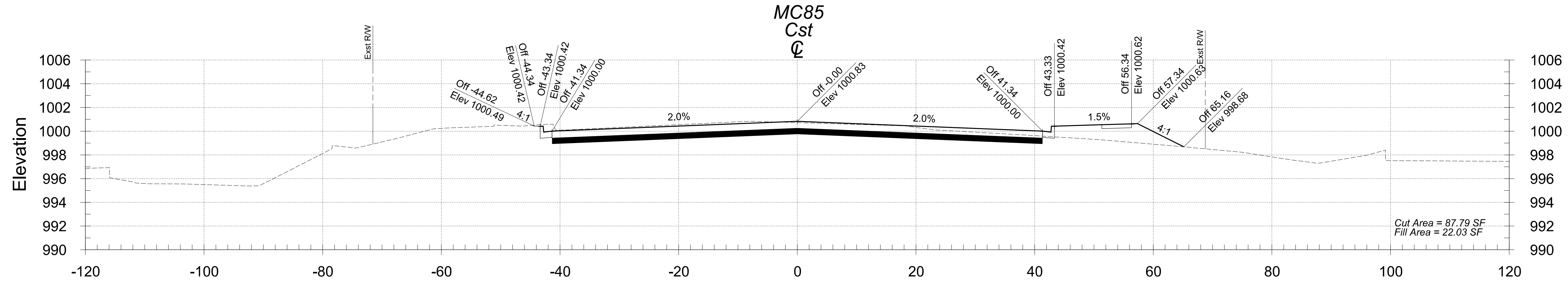


1224+00

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	21	54	

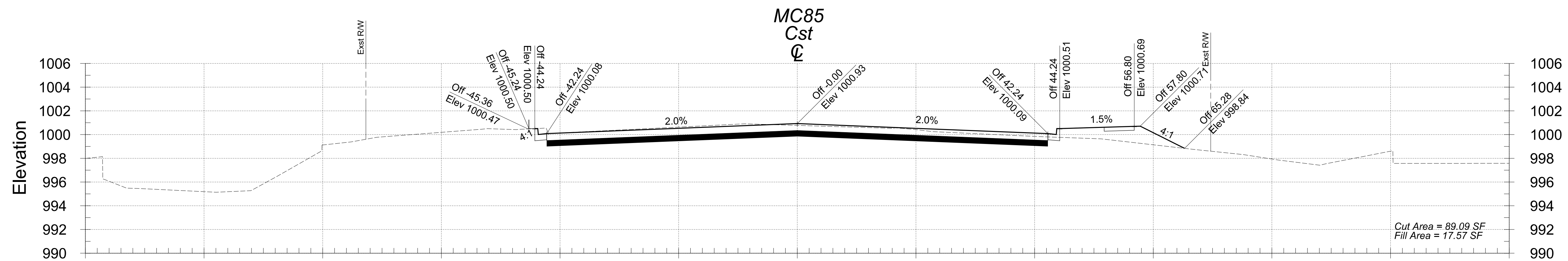
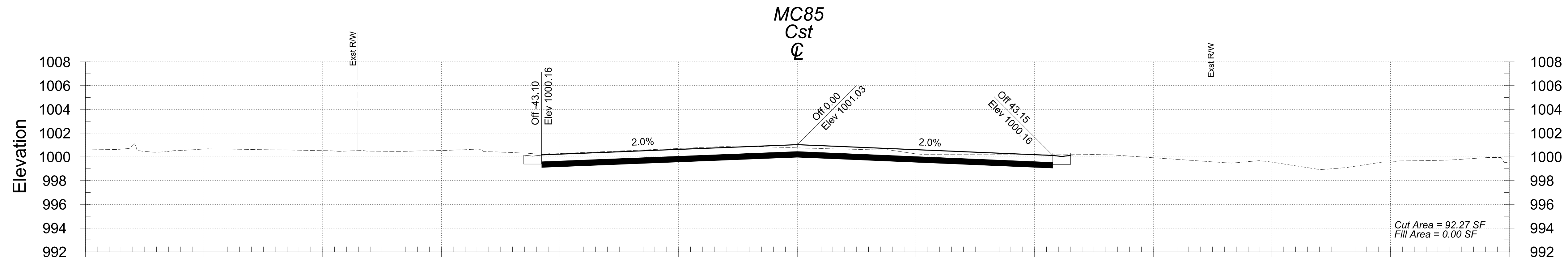
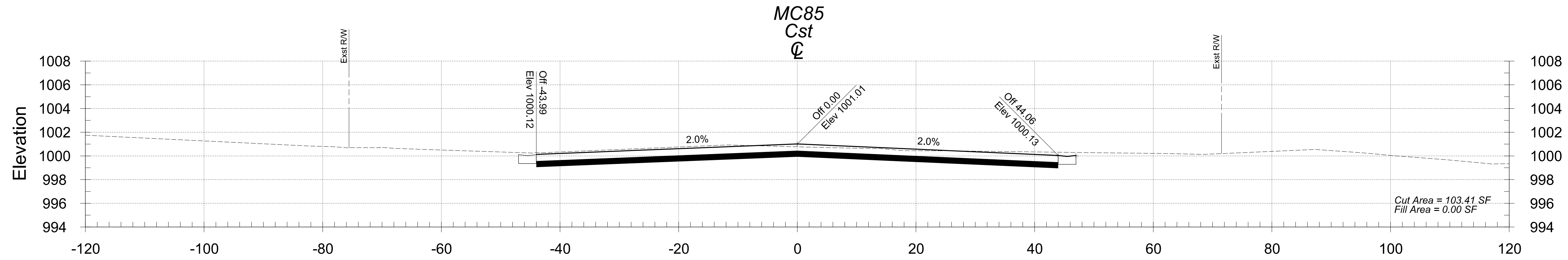
4:24:51 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



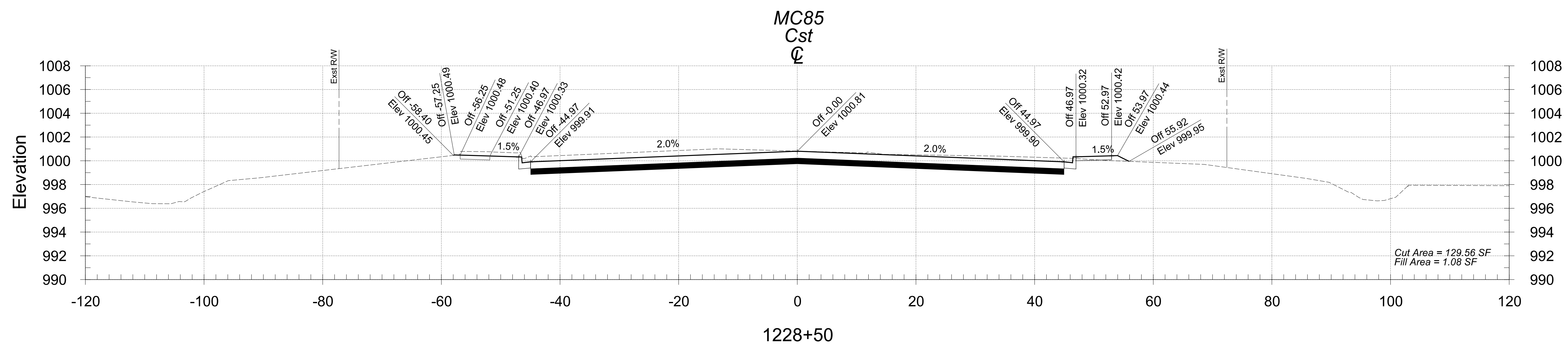
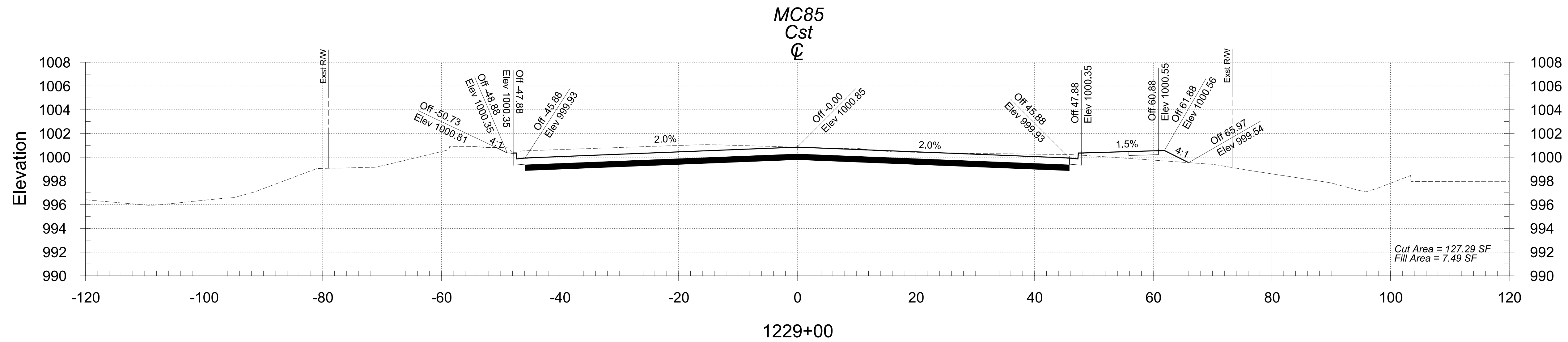
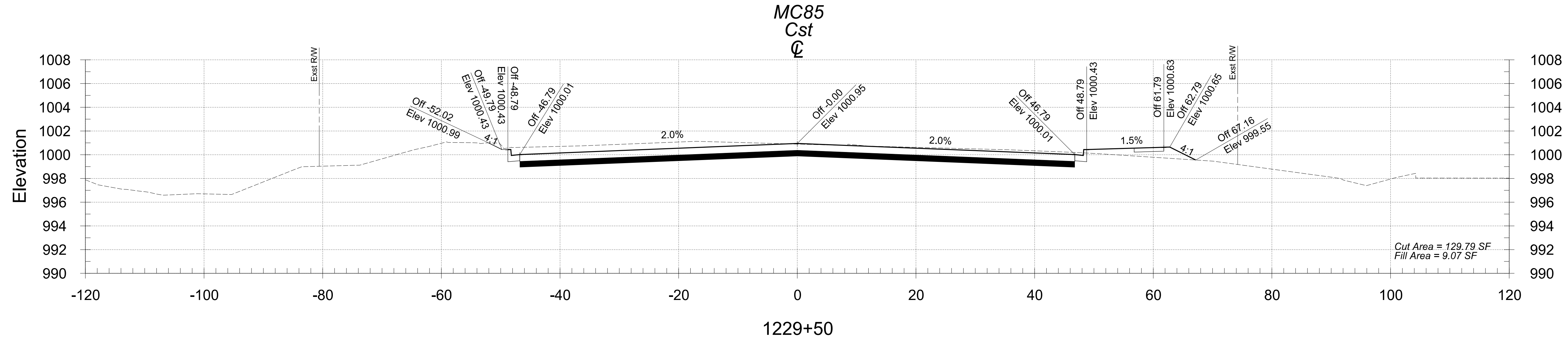
4:24:51 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



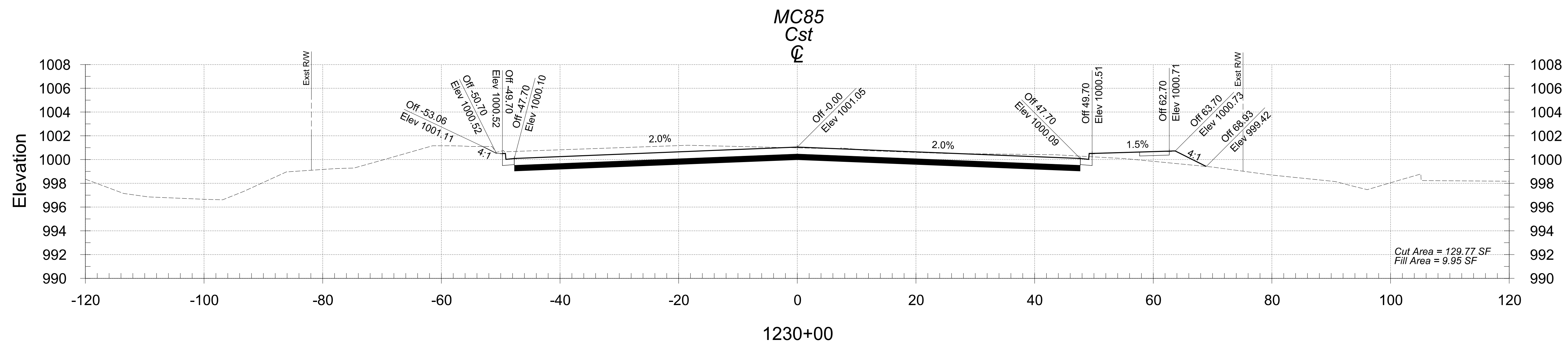
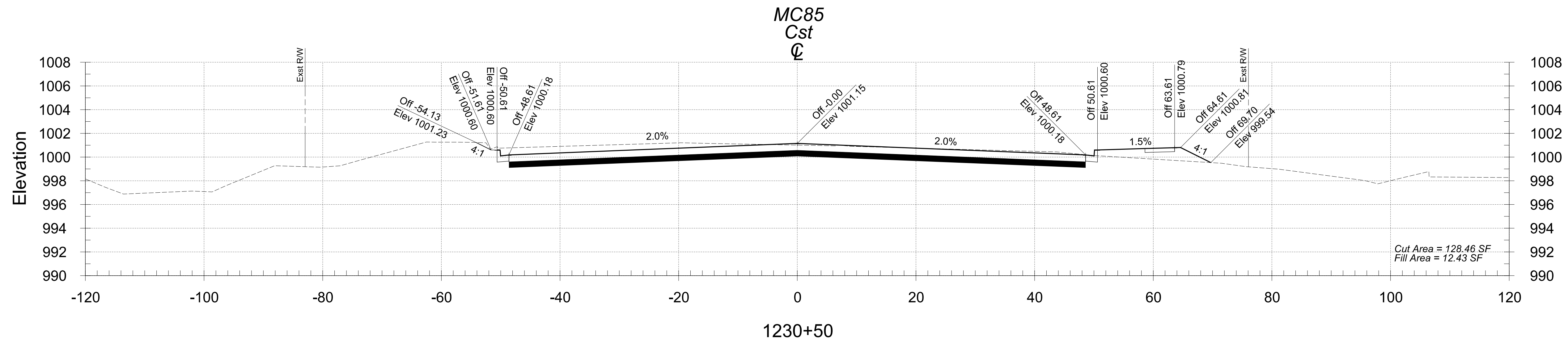
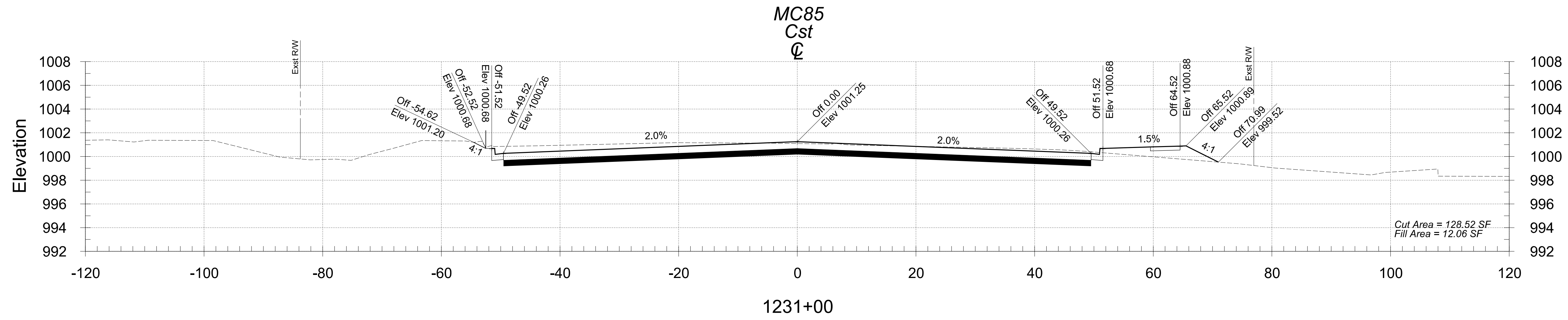
4:24:51 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:52 PM 6/21/2022

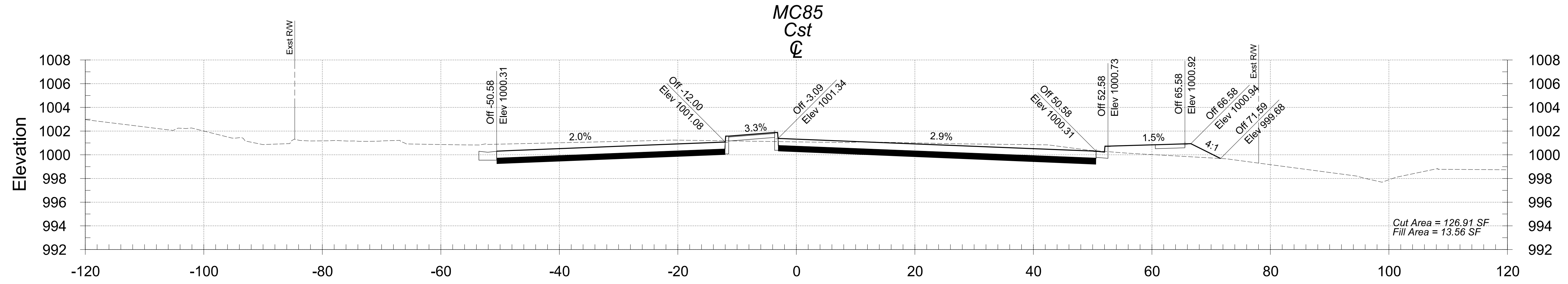
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



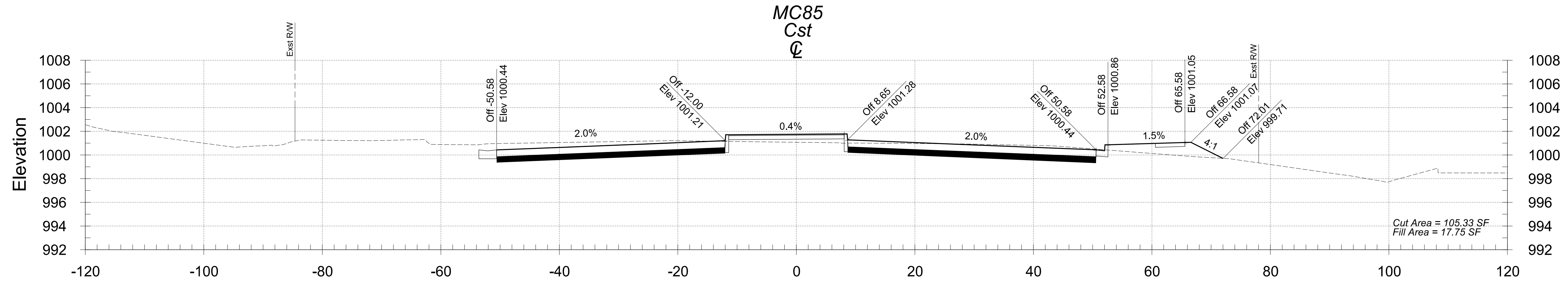


4:24:52 PM 6/21/2022

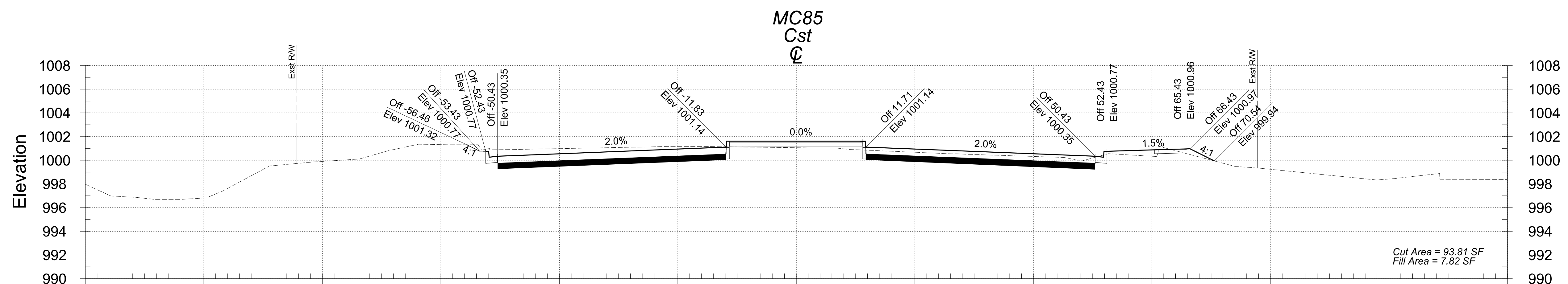
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



1232+50



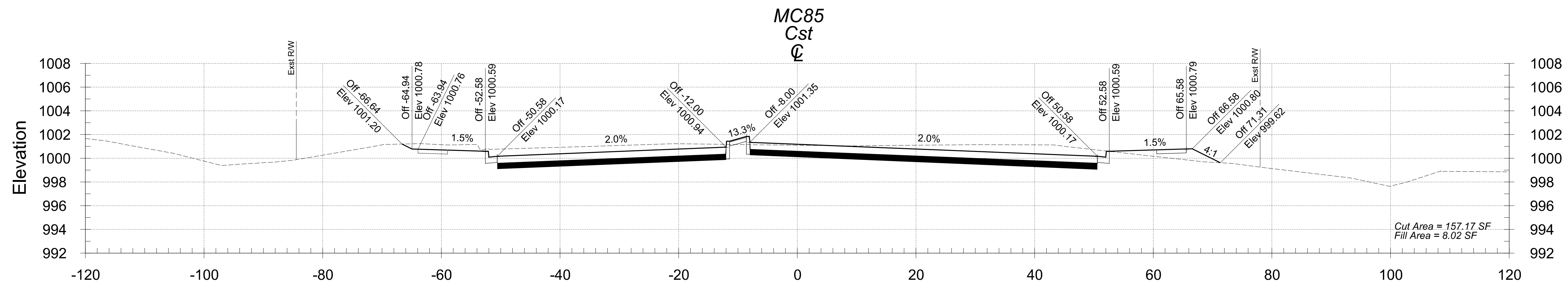
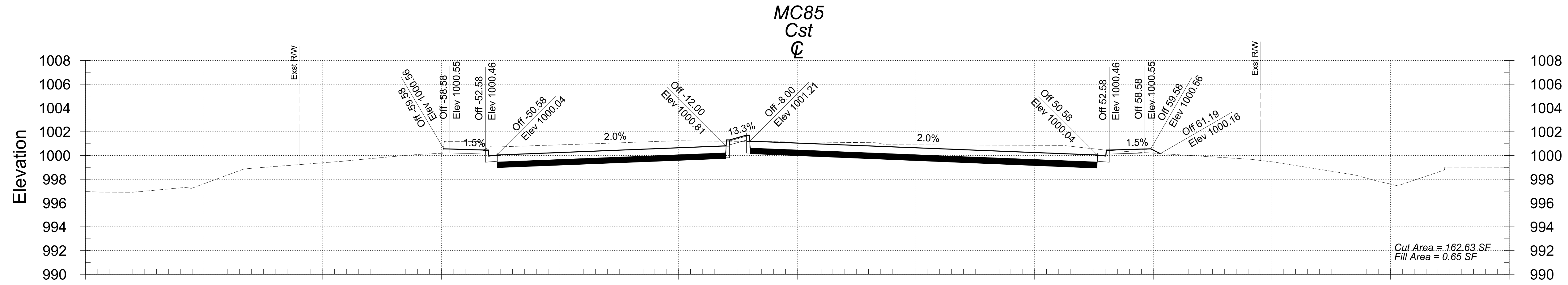
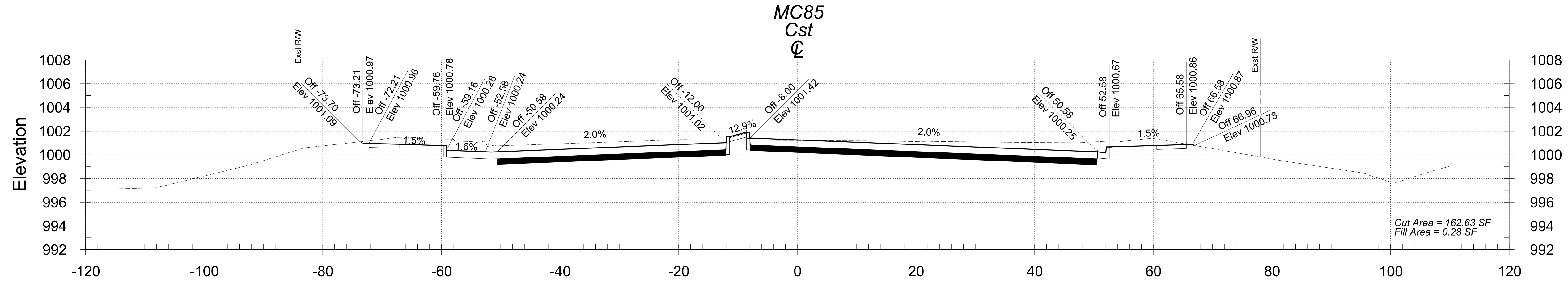
1232+00



1231+50

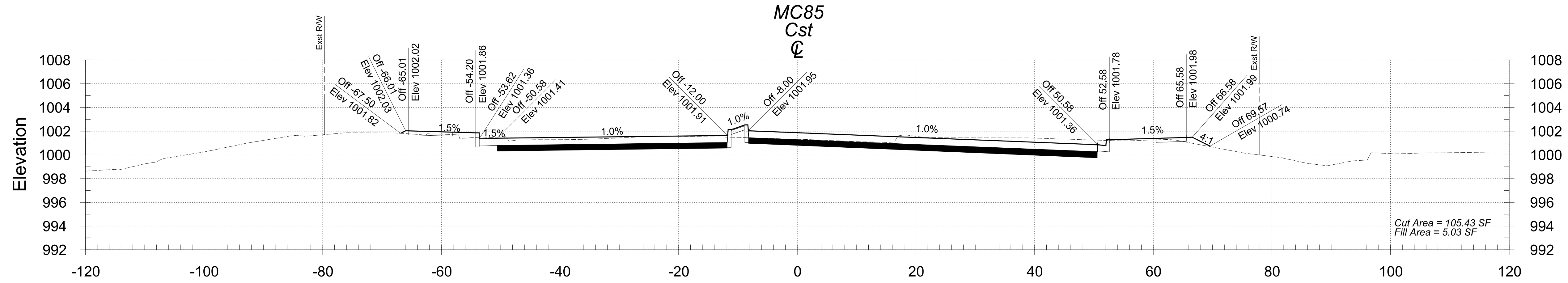
4:24:53 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn

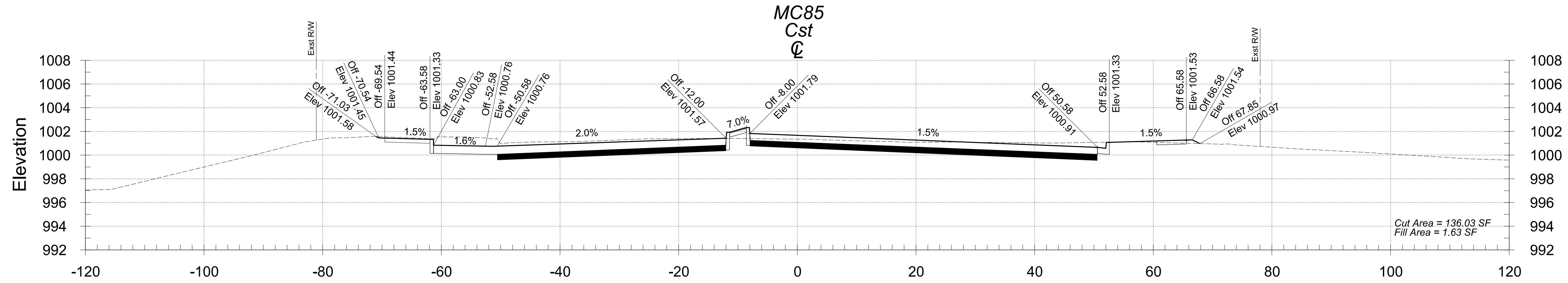


4:24:53 PM 6/21/2022

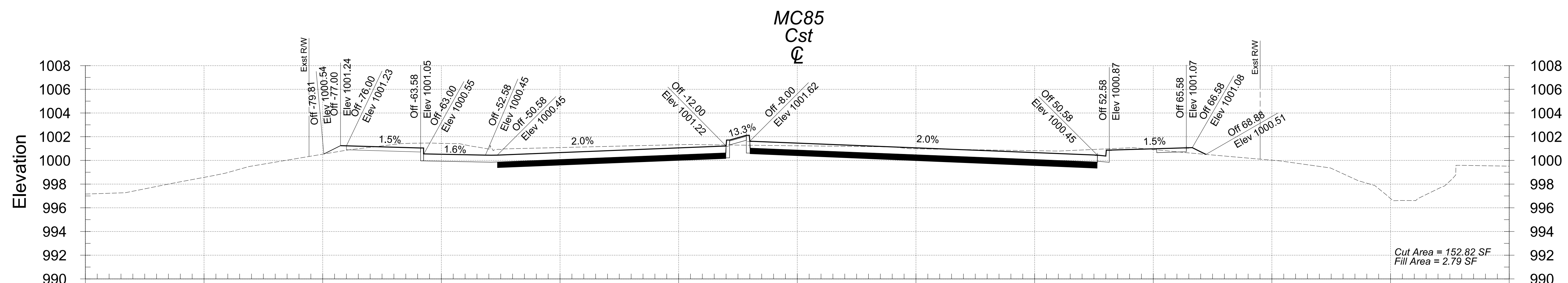
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



1235+49



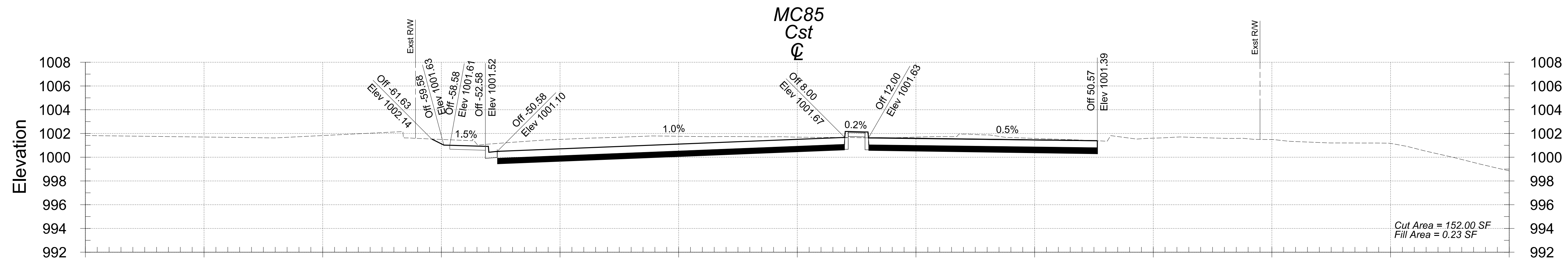
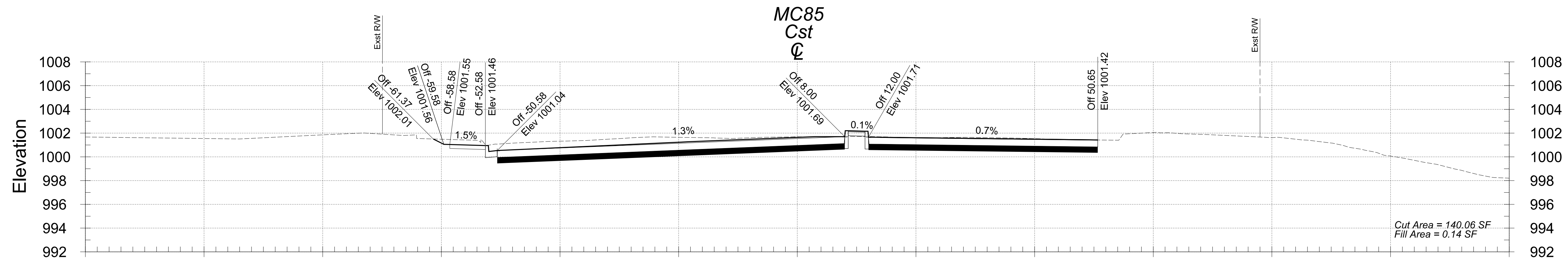
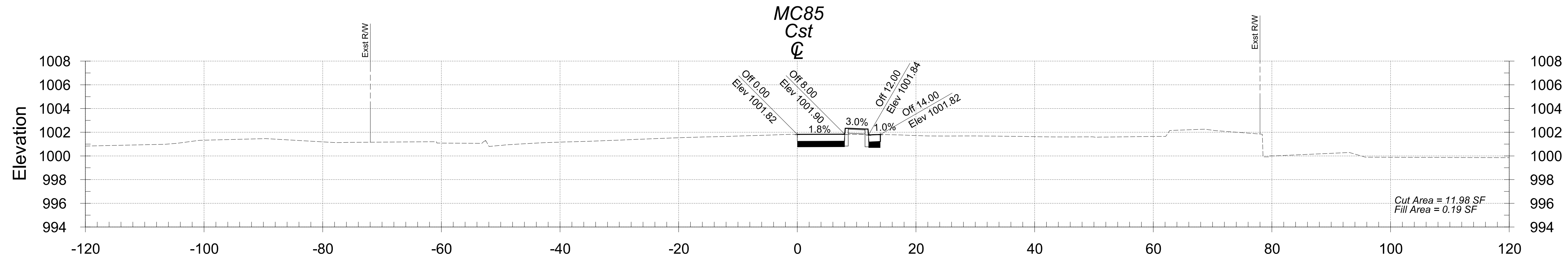
1235+00



1234+50

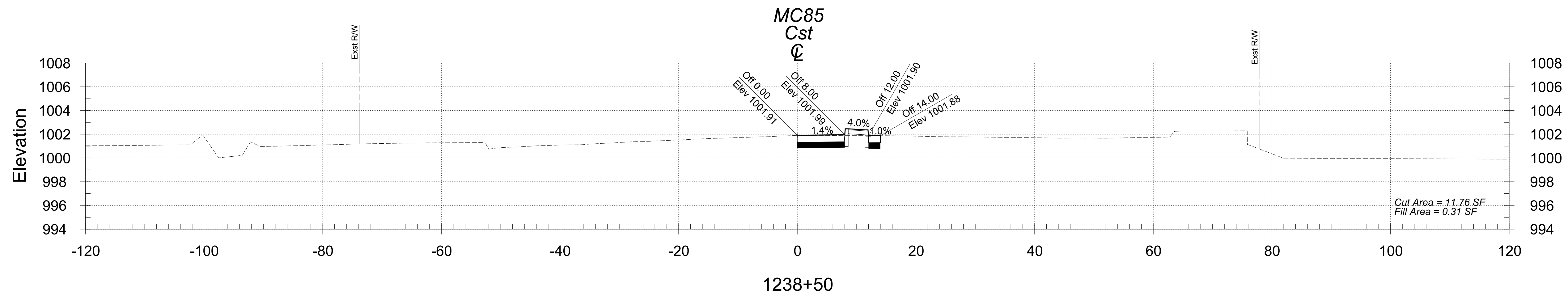
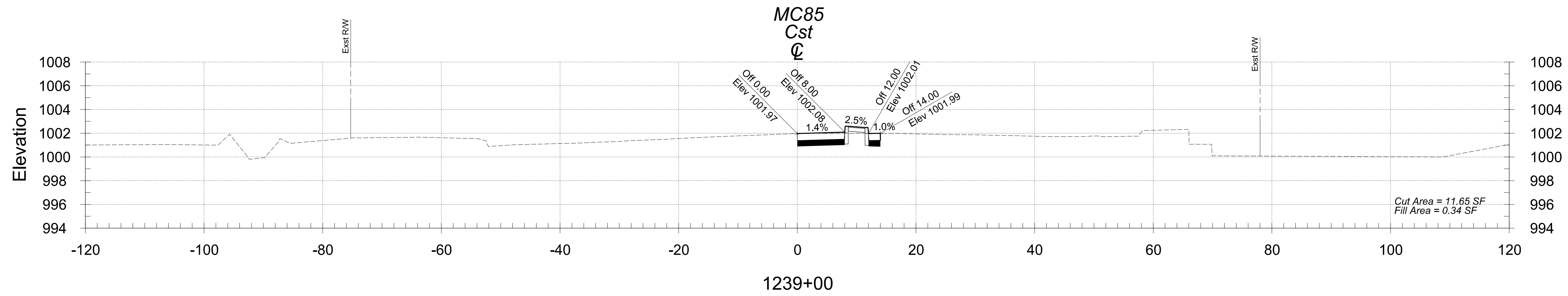
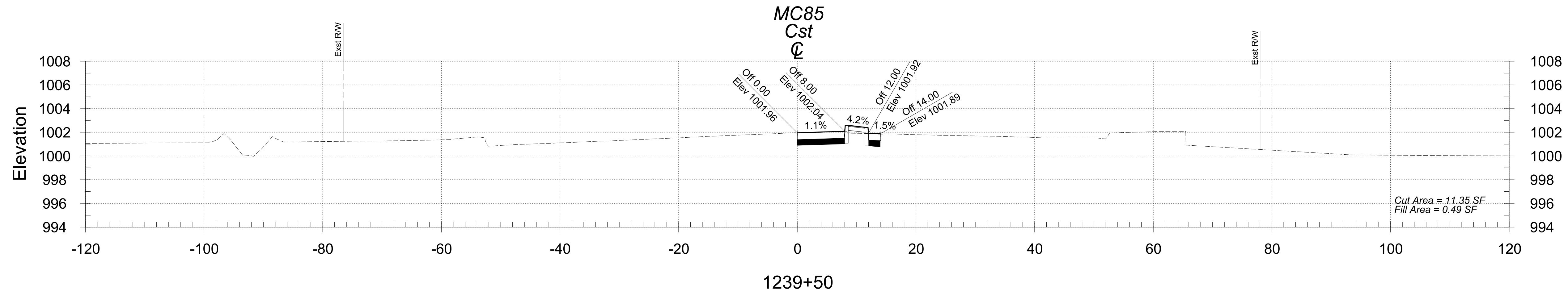
4:24:53 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



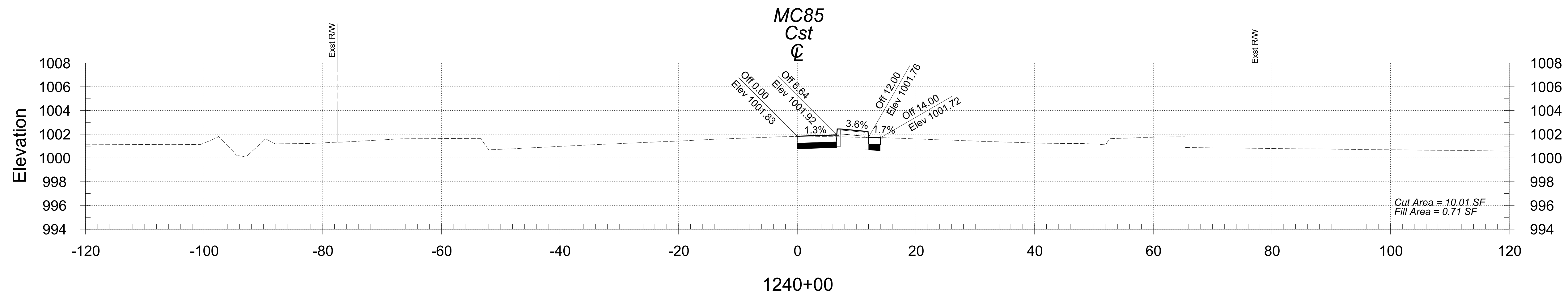
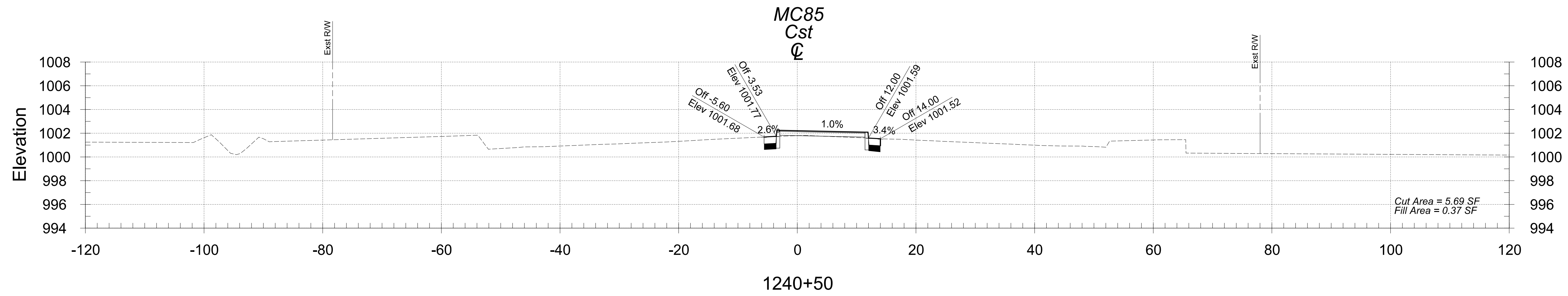
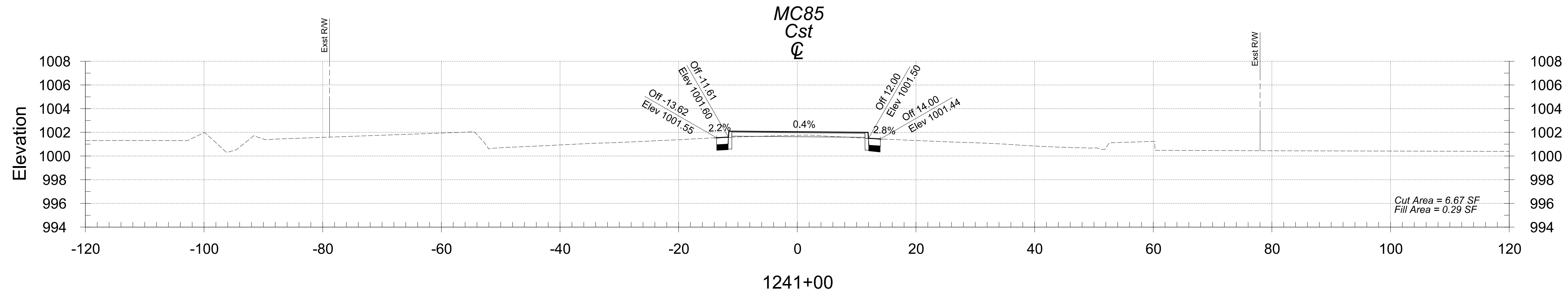
4:24:54 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:54 PM 6/21/2022

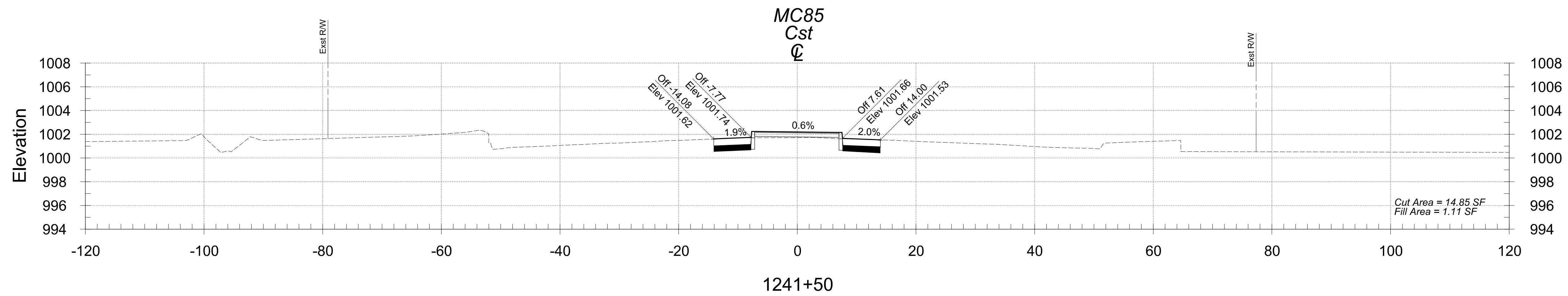
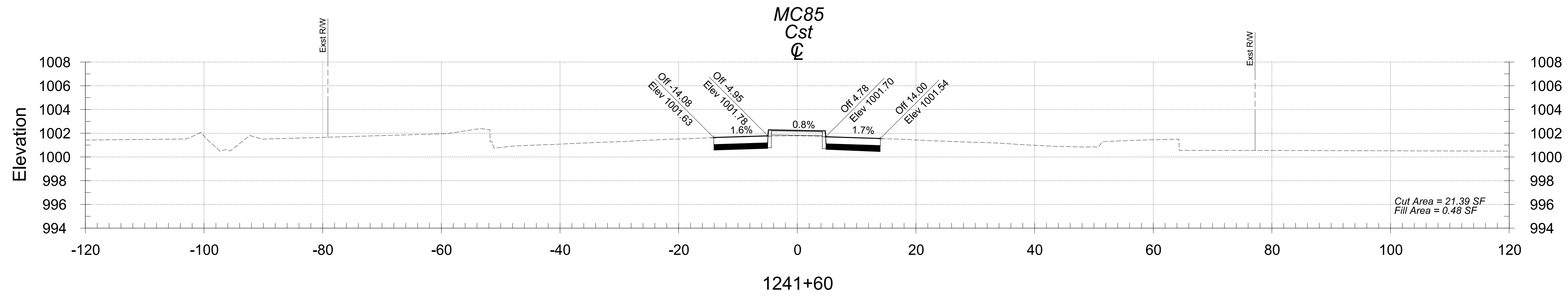
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	31	54	

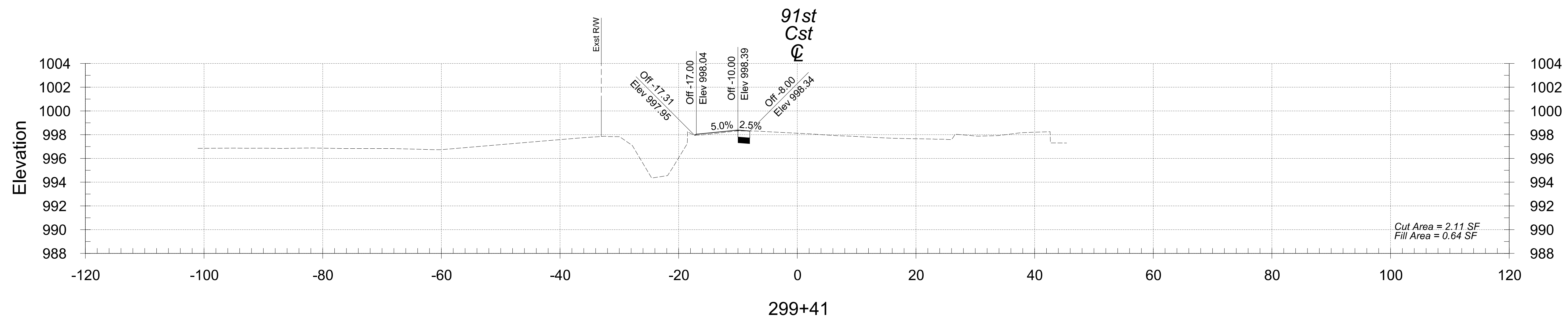
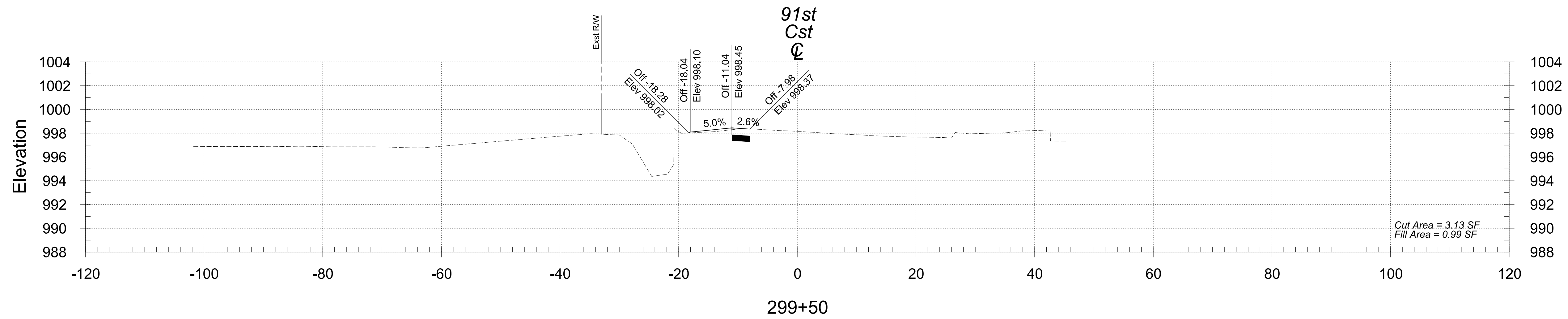
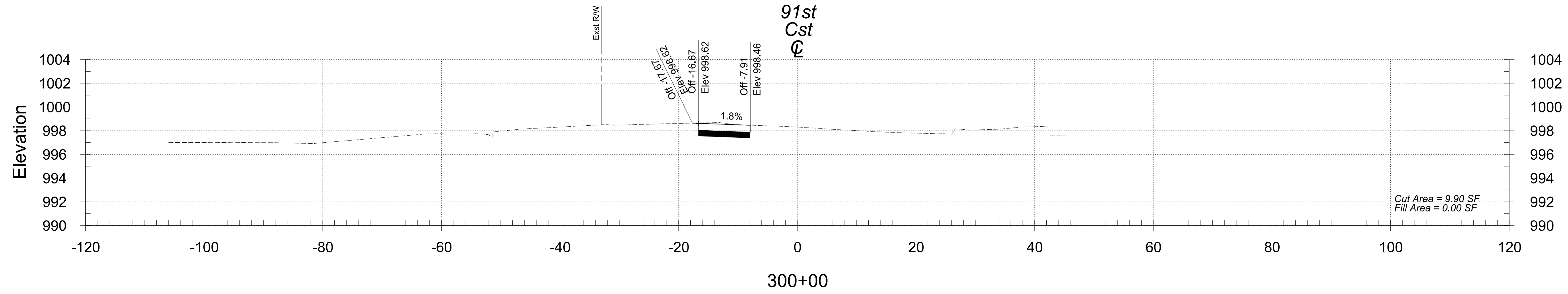
4:24:54 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:56 PM 6/21/2022

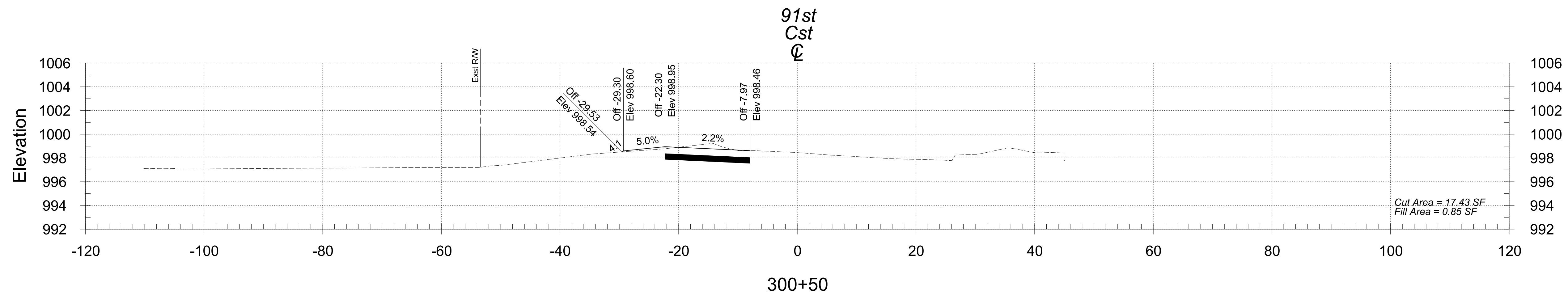
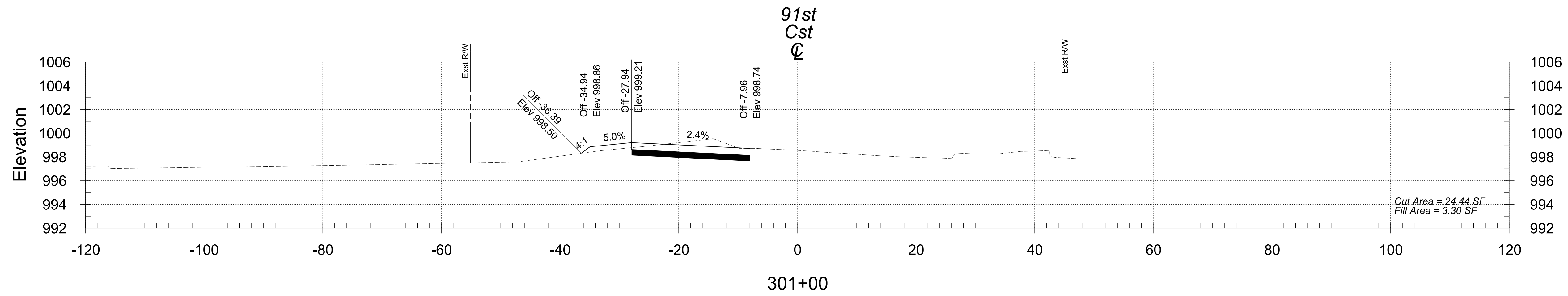
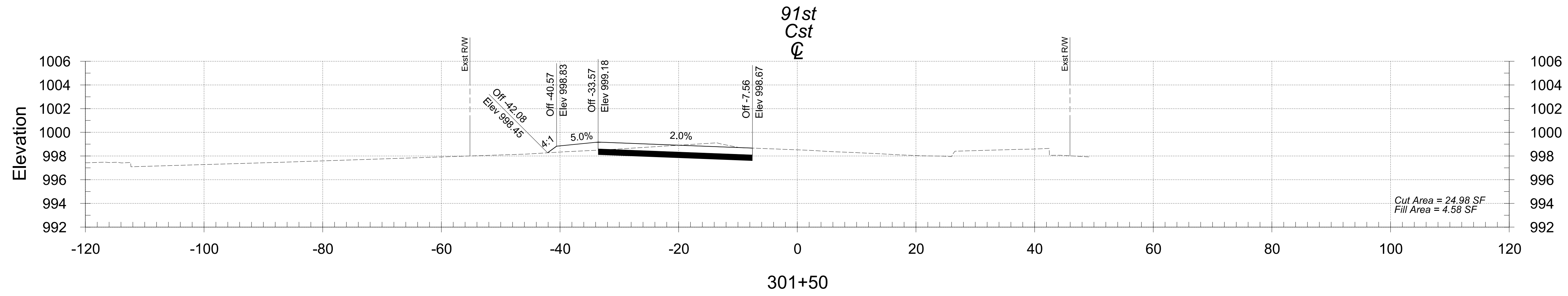
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn





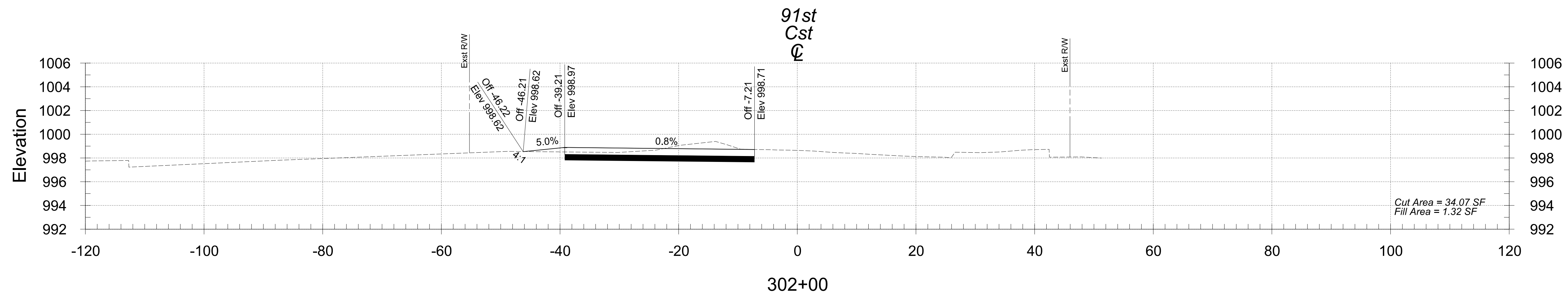
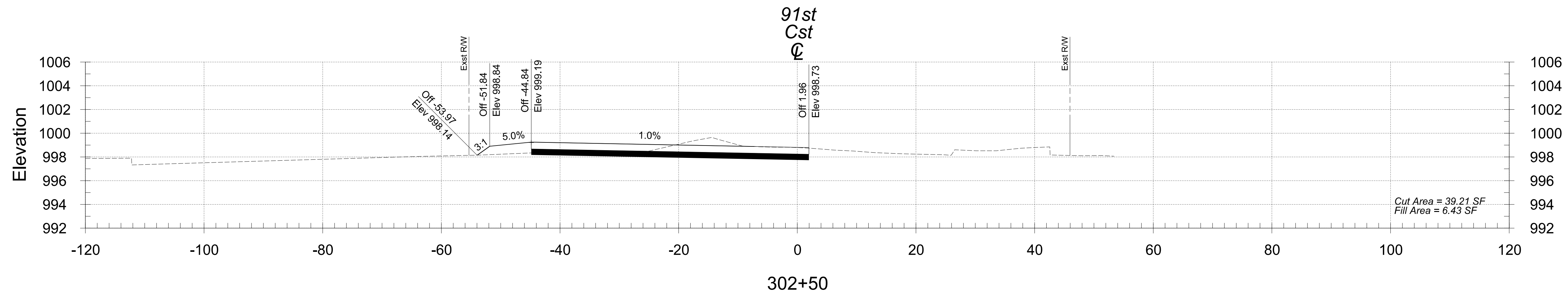
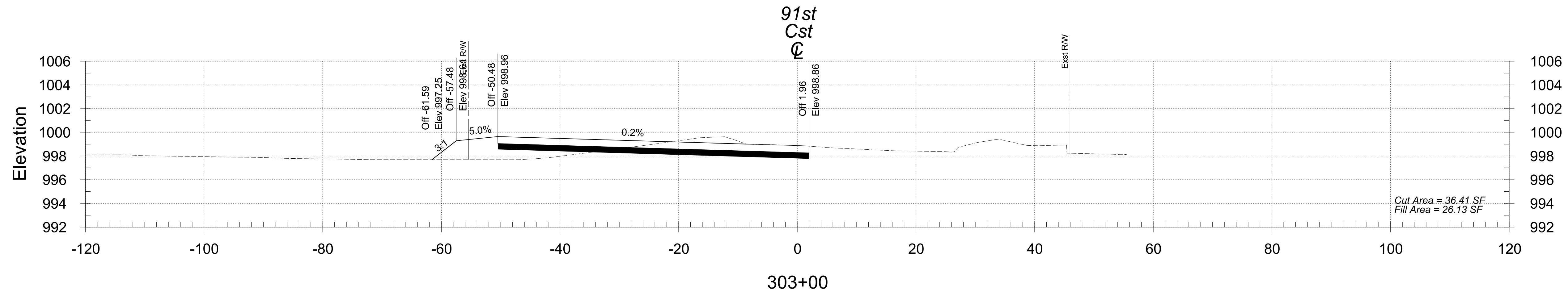
4:24:55 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



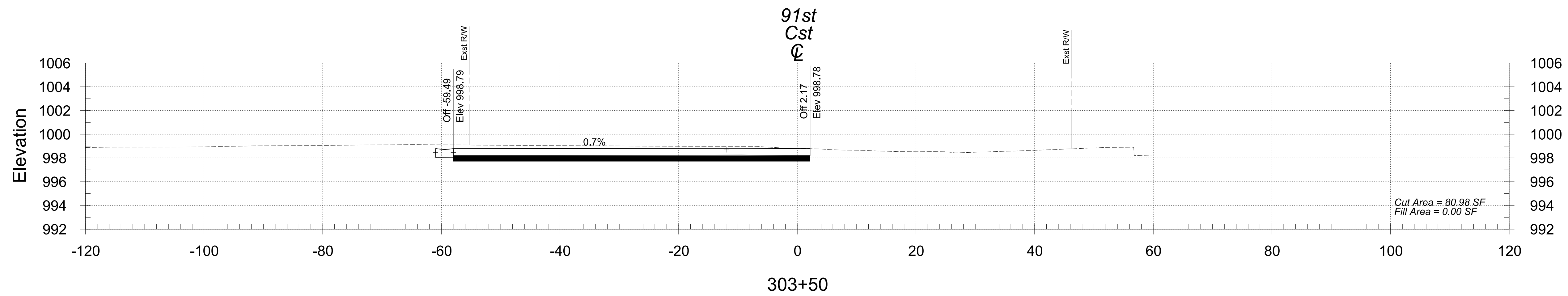
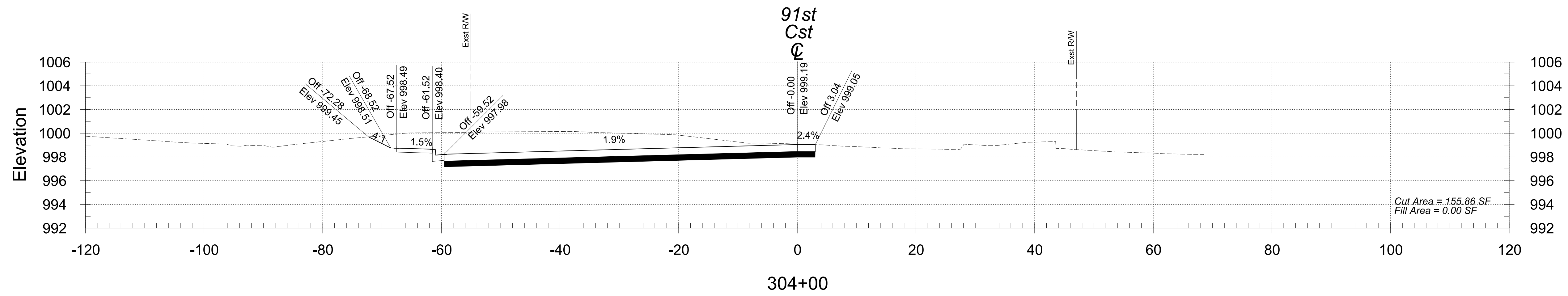
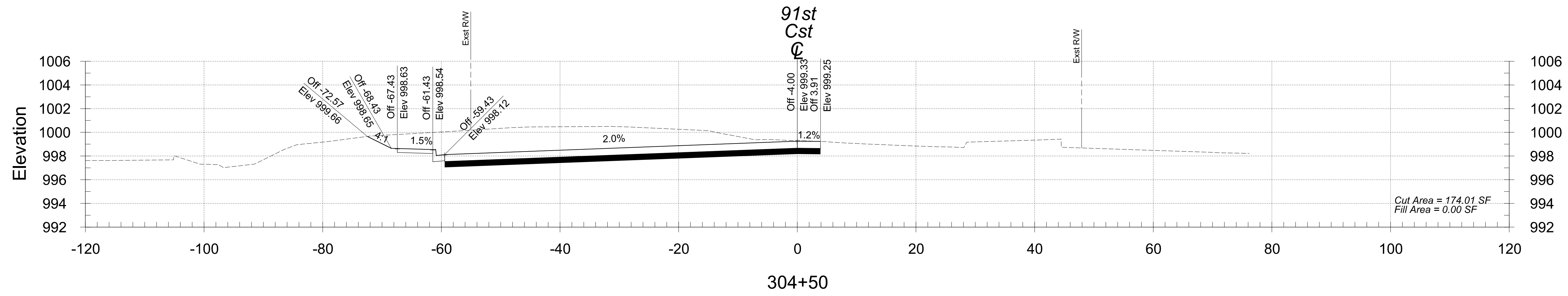
4:24:56 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:56 PM 6/21/2022

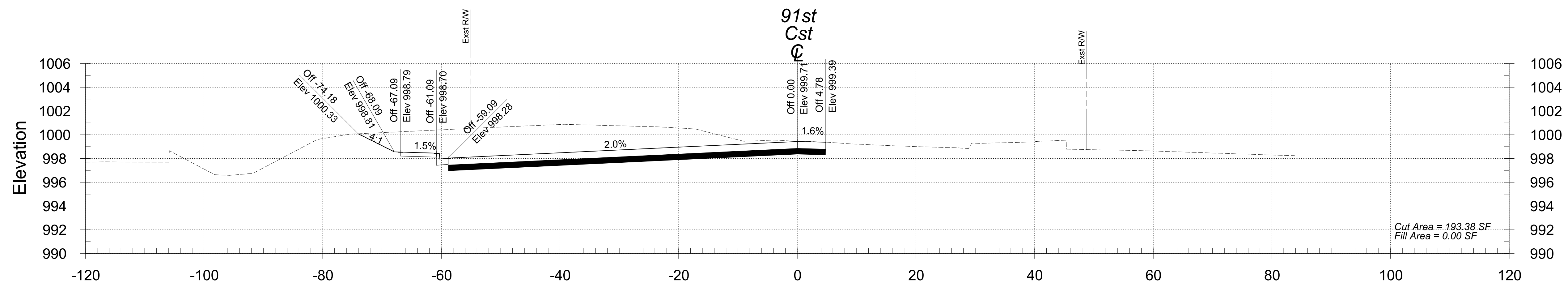
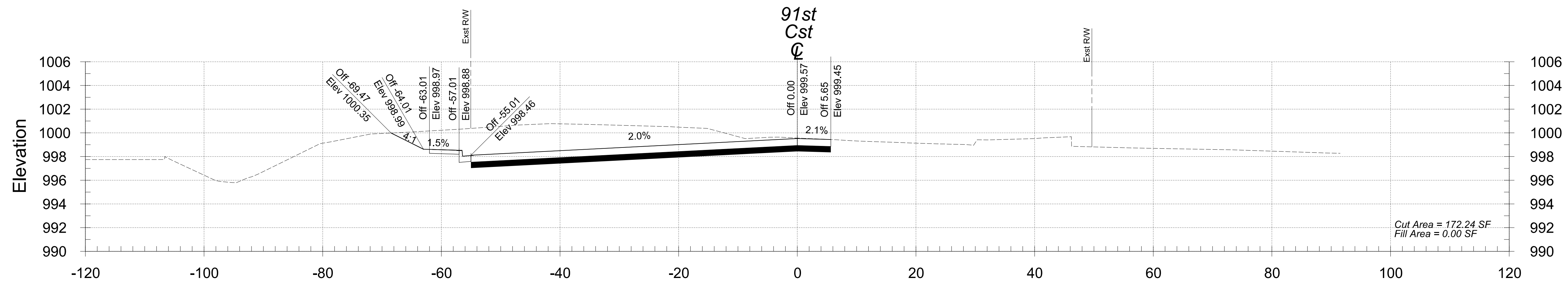
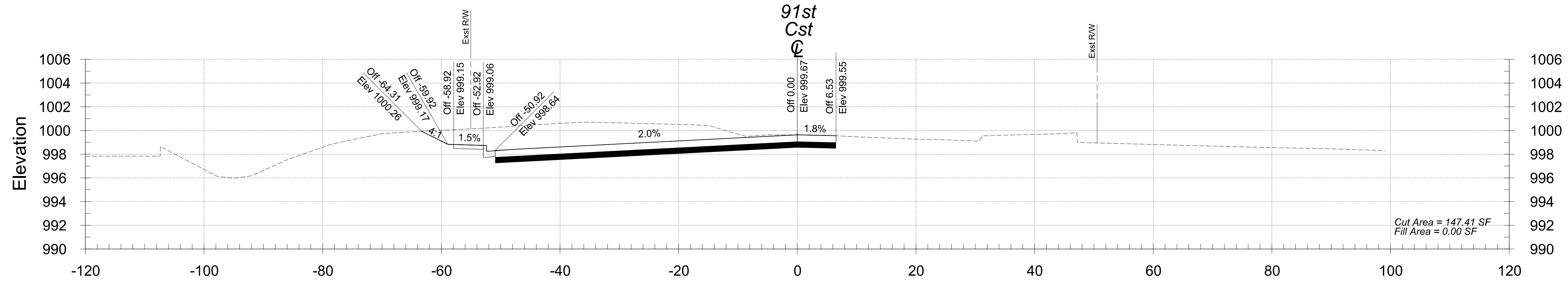
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	36	54	

4:24:56 PM 6/21/2022

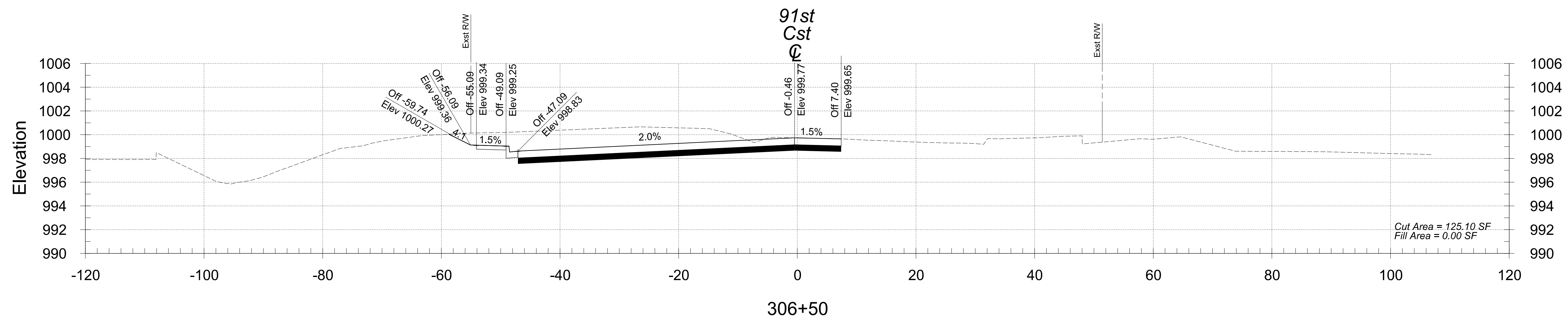
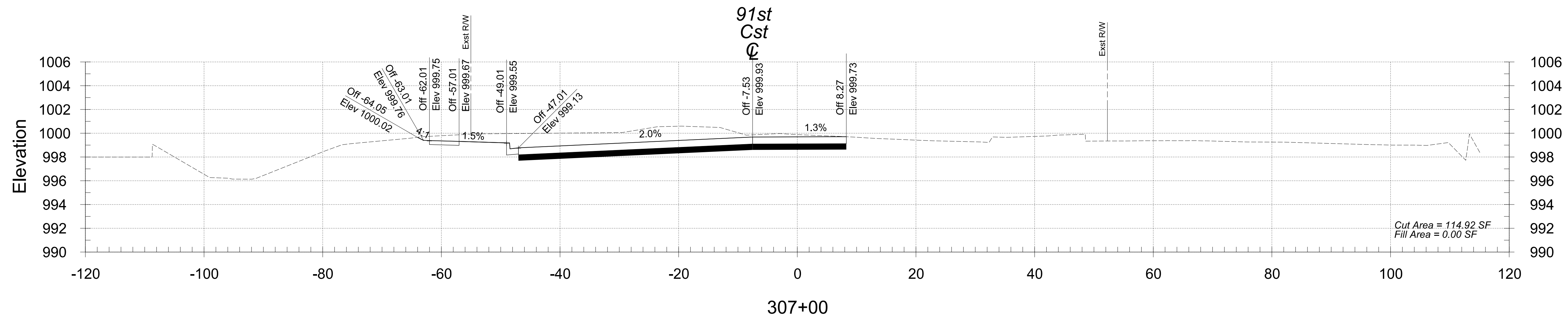
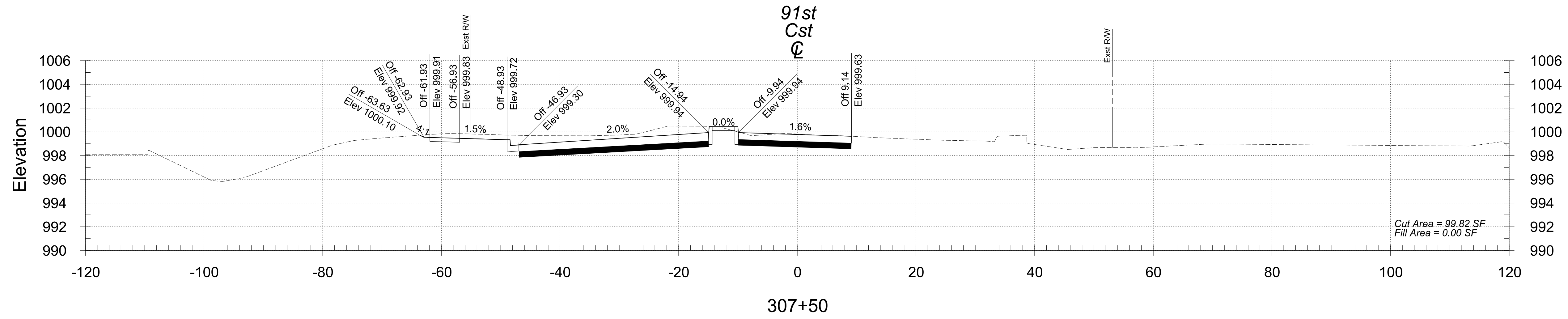
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	37	54	

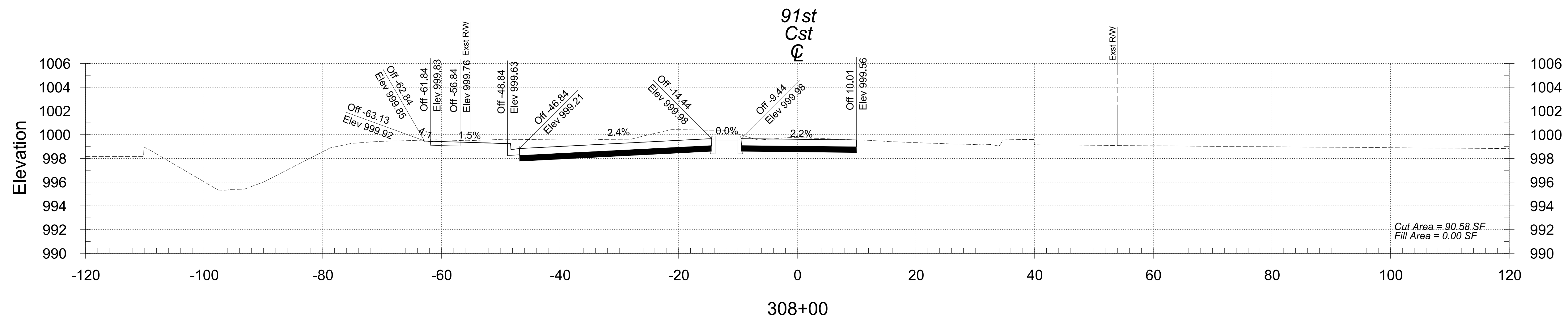
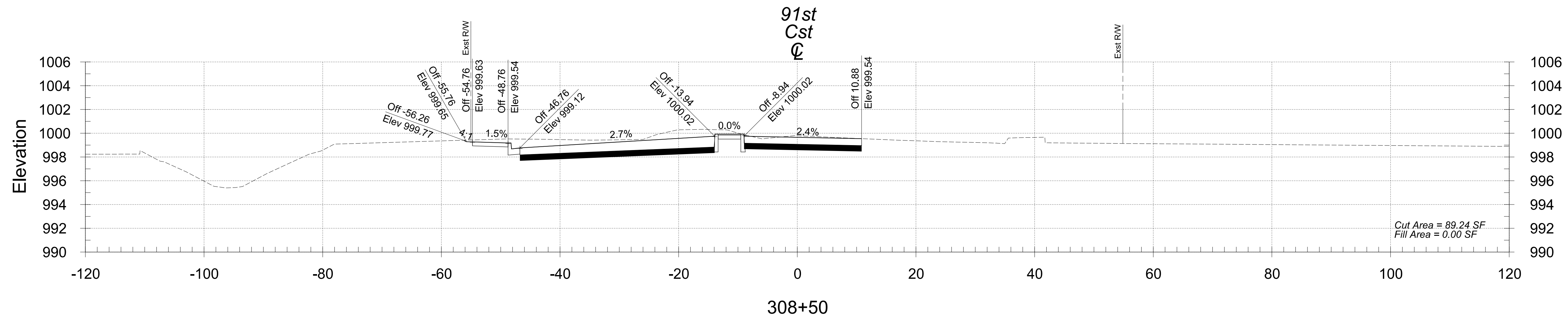
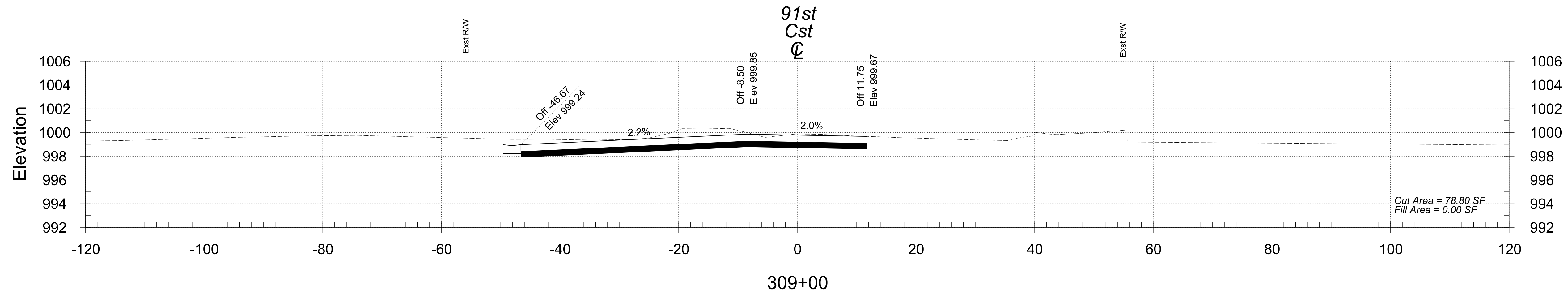
4:24:56 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



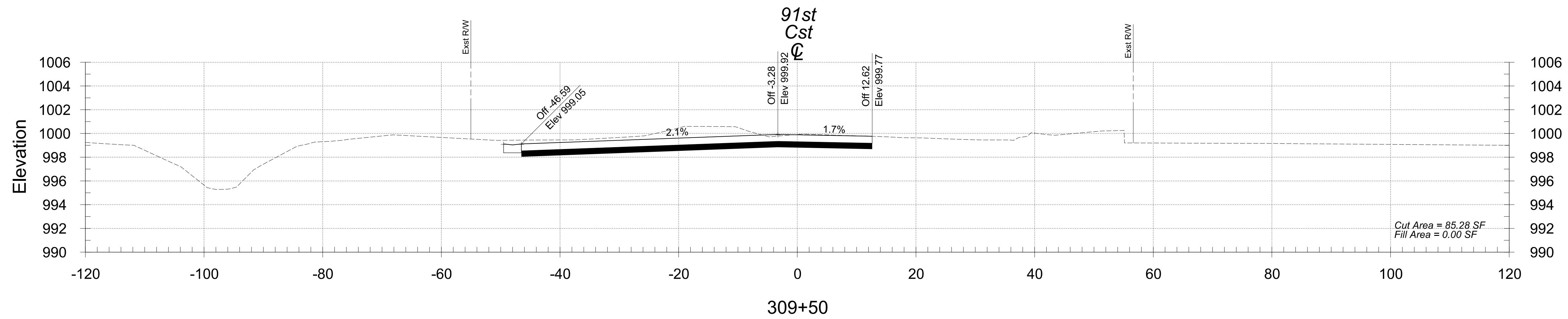
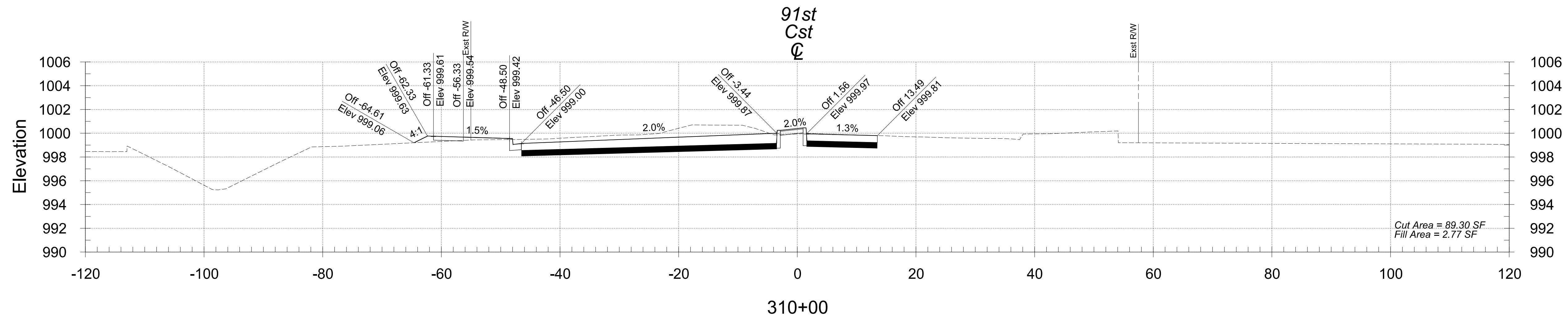
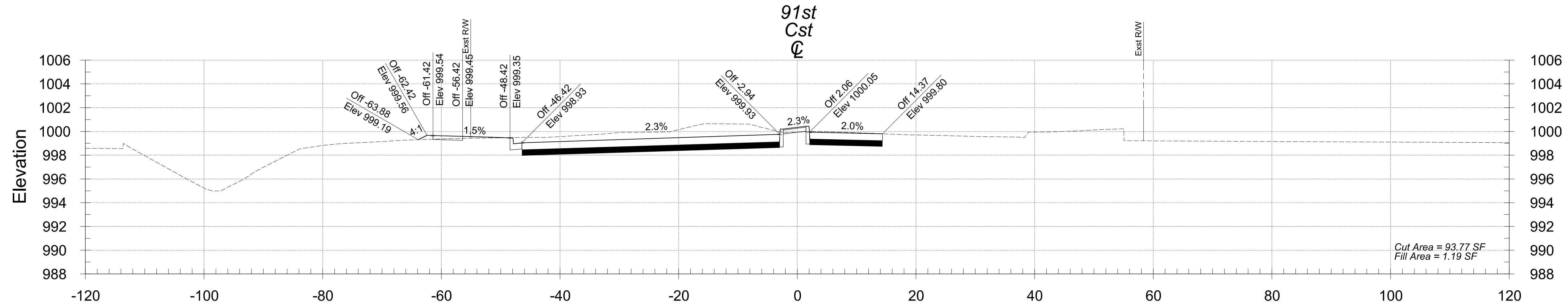
4:24:57 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



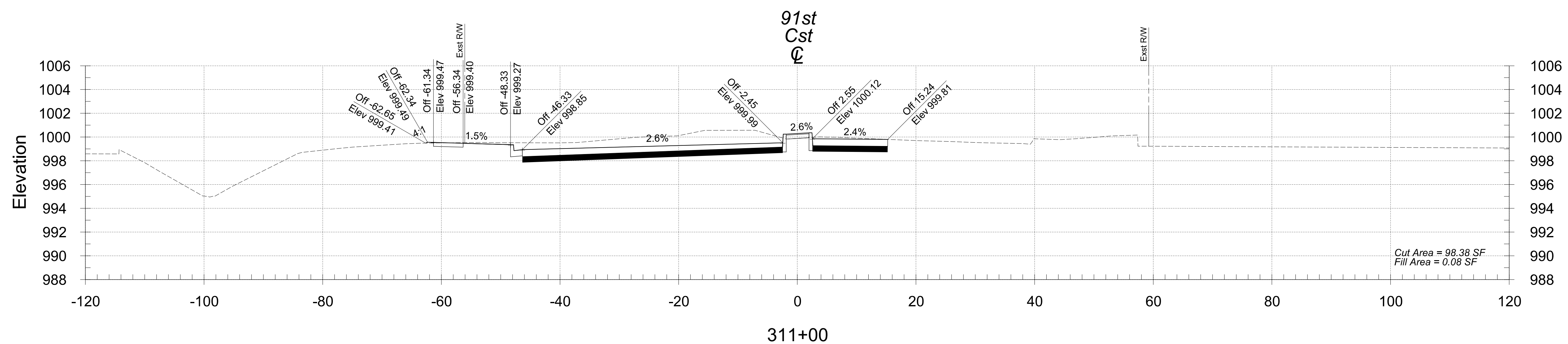
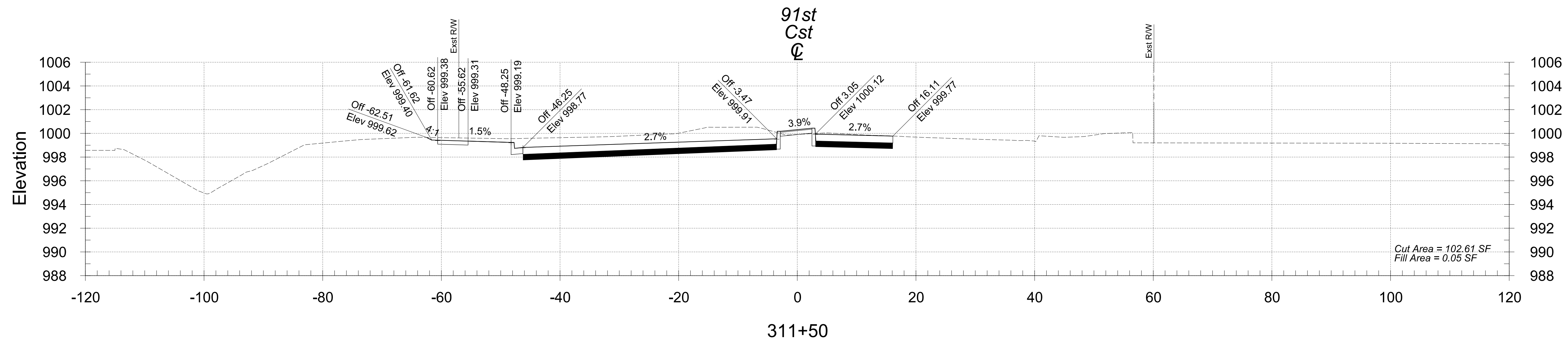
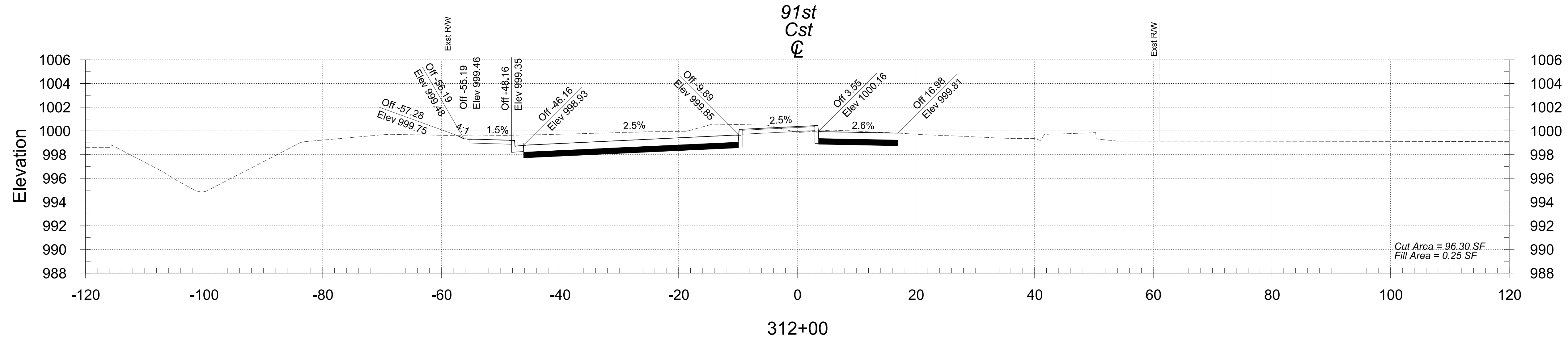
4:24:57 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:57 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn

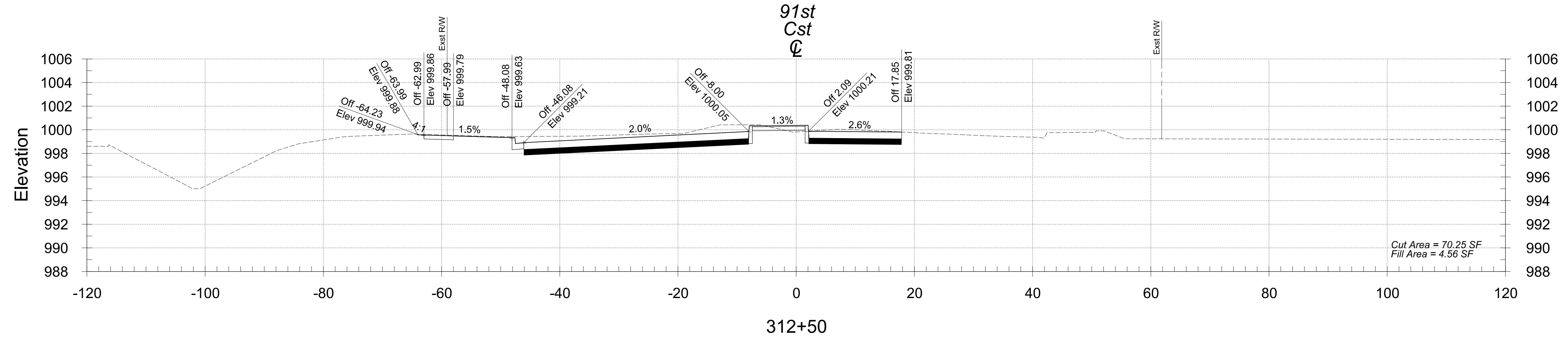
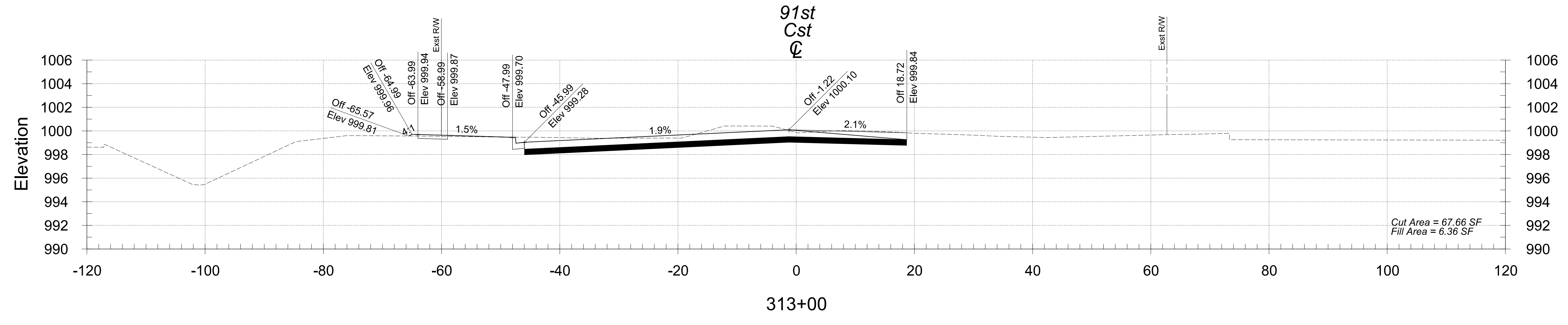
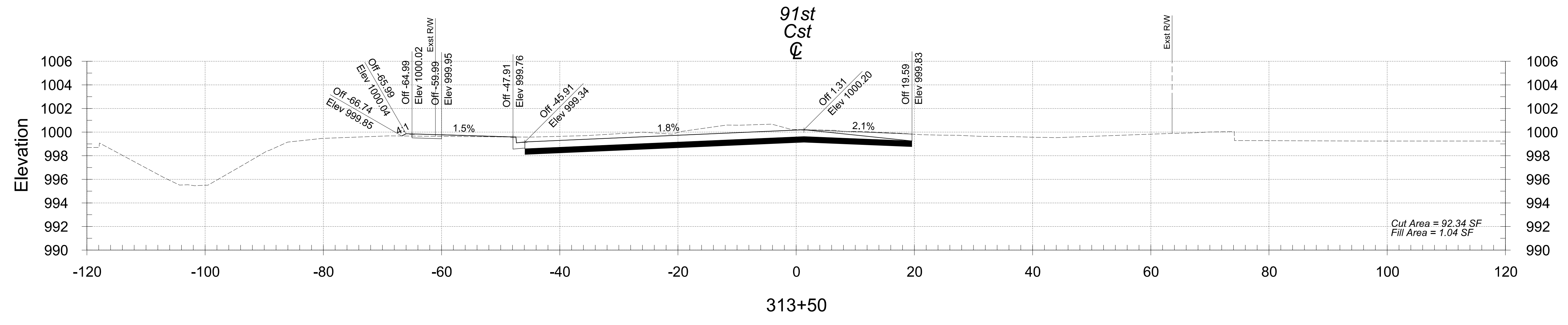




F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	41	54	

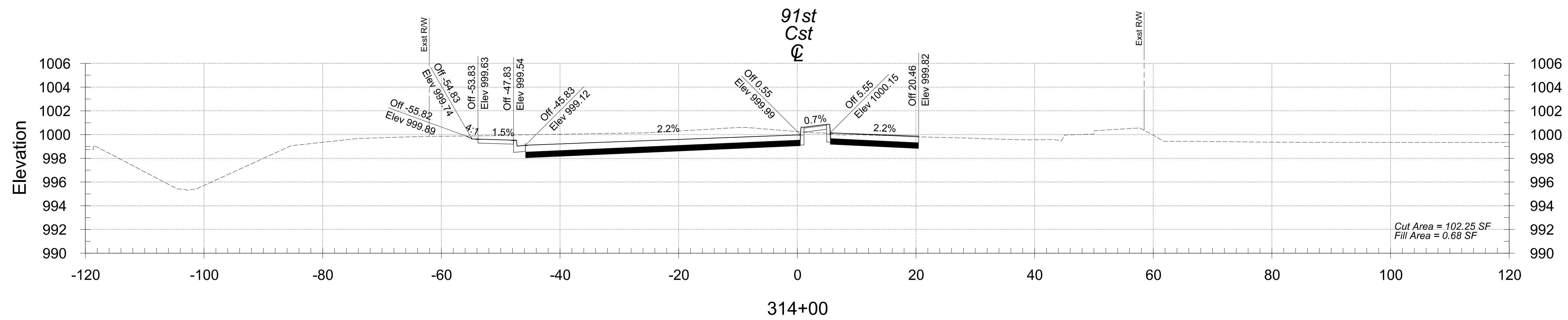
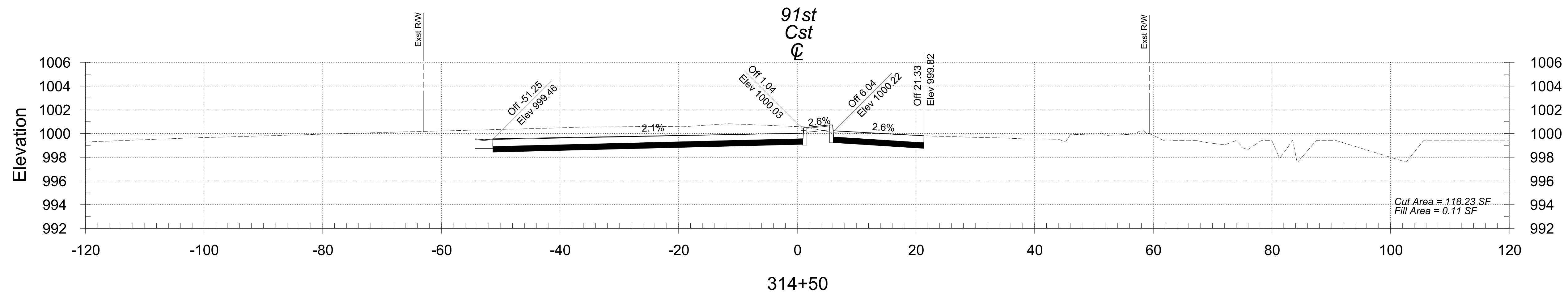
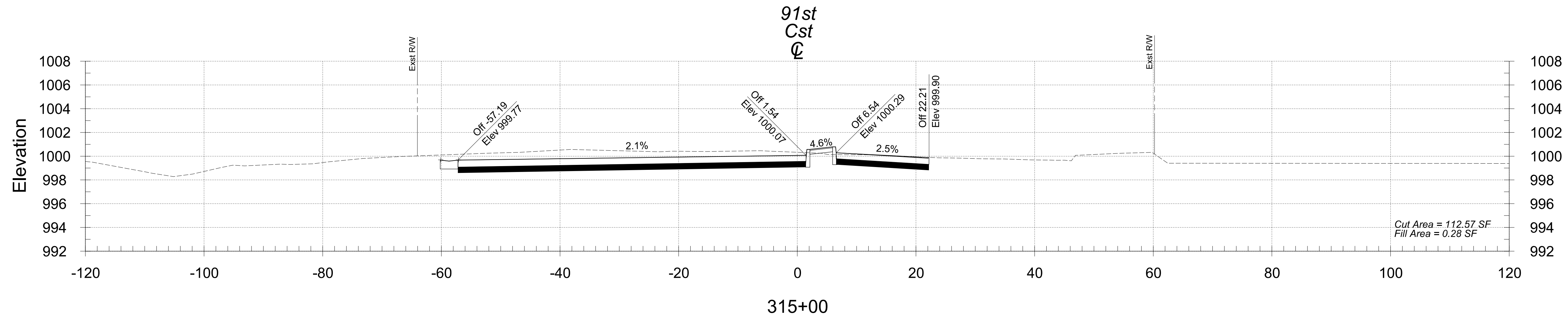
4:24:58 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:24:58 PM 6/21/2022

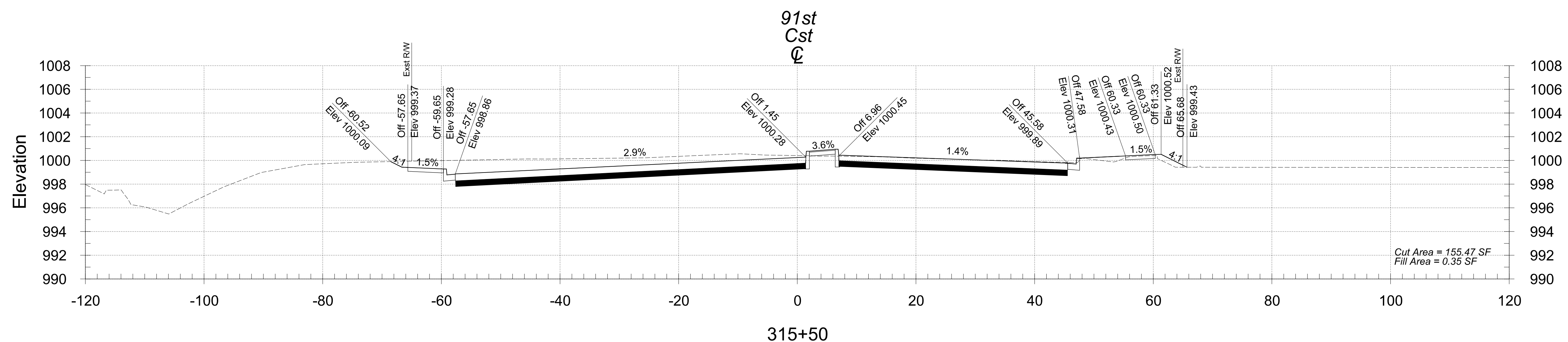
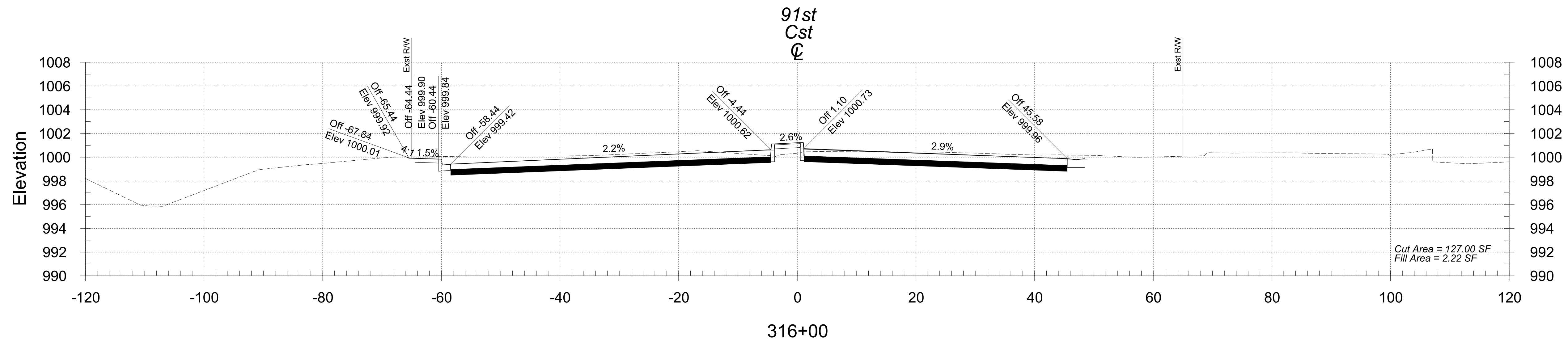
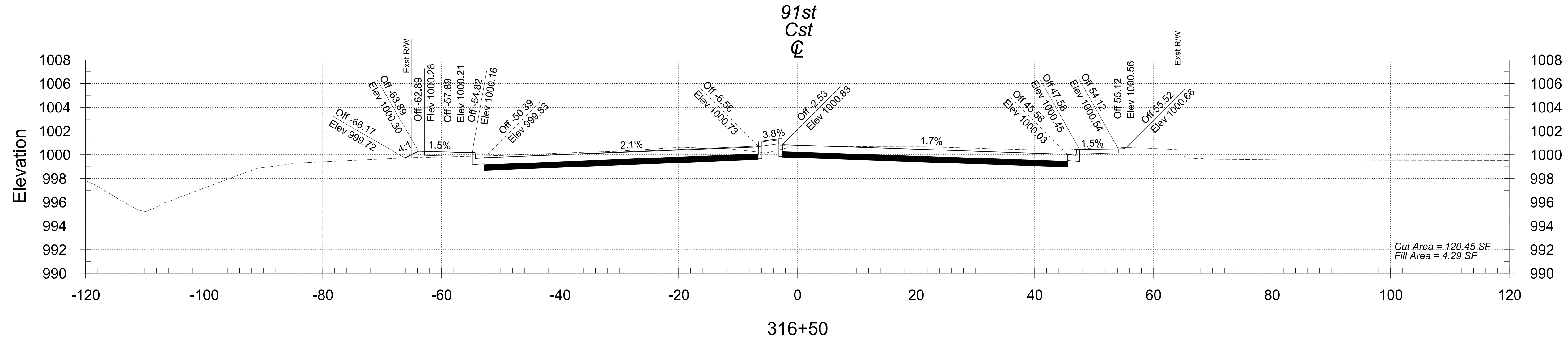
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	43	54	

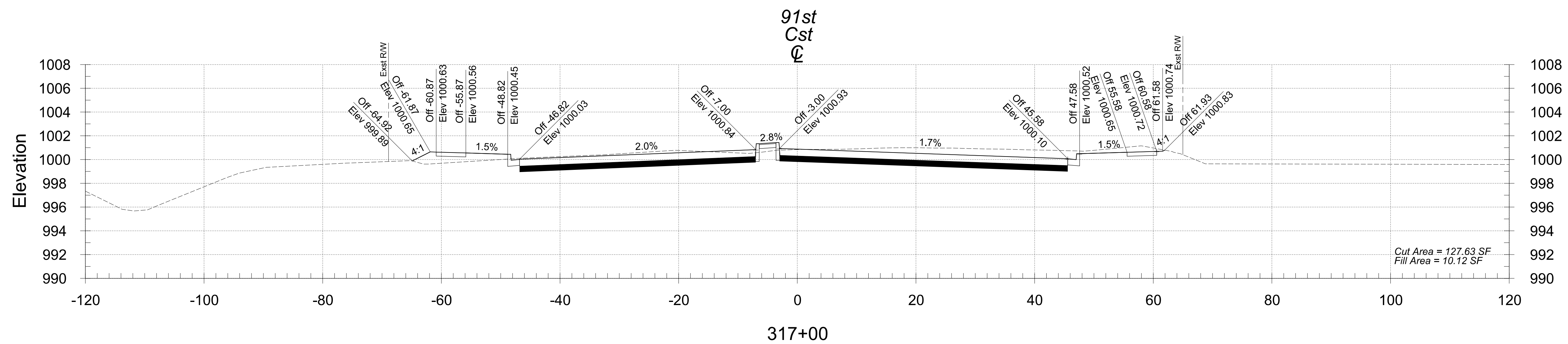
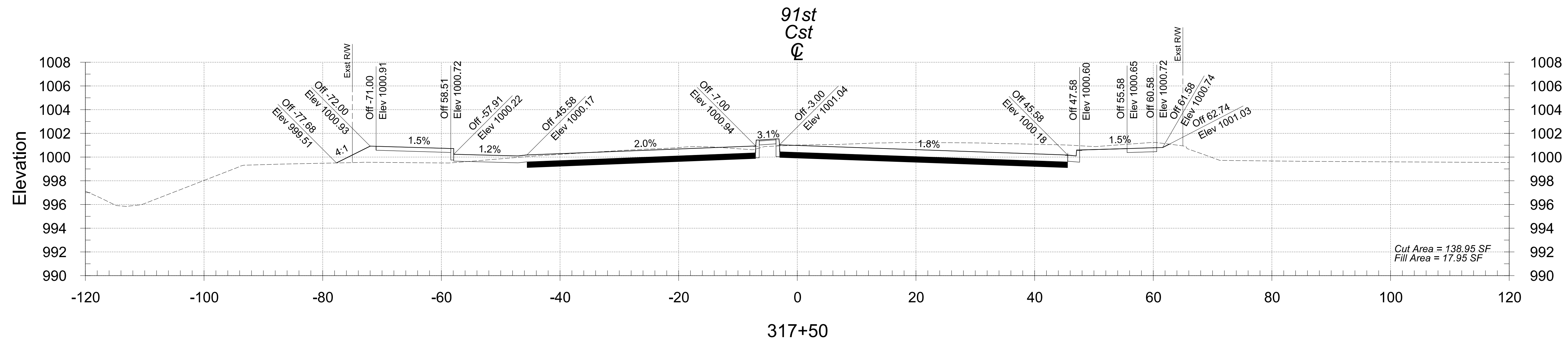
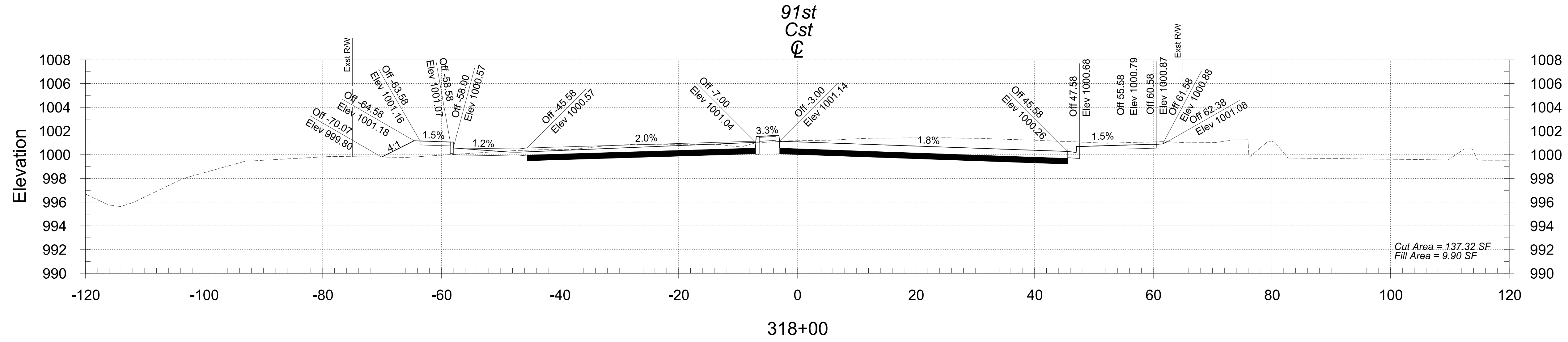
4:24:58 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



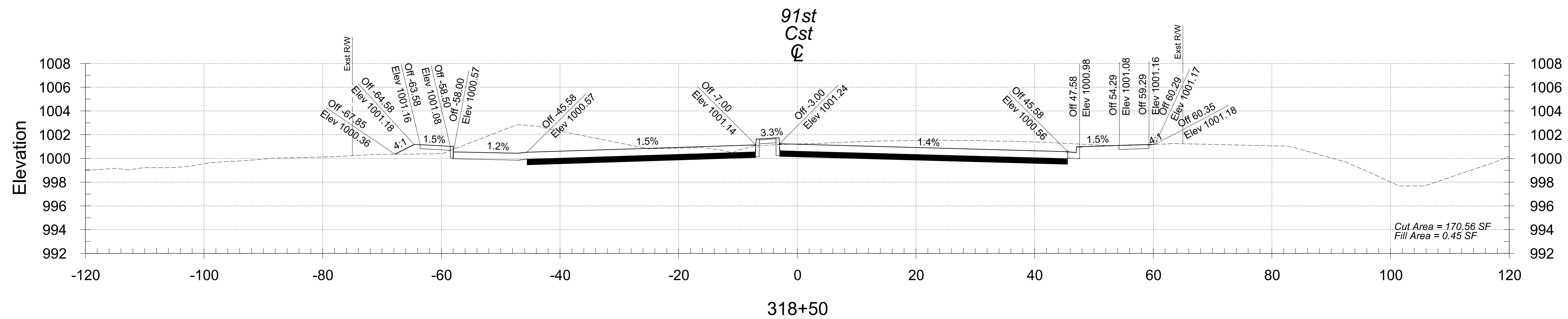
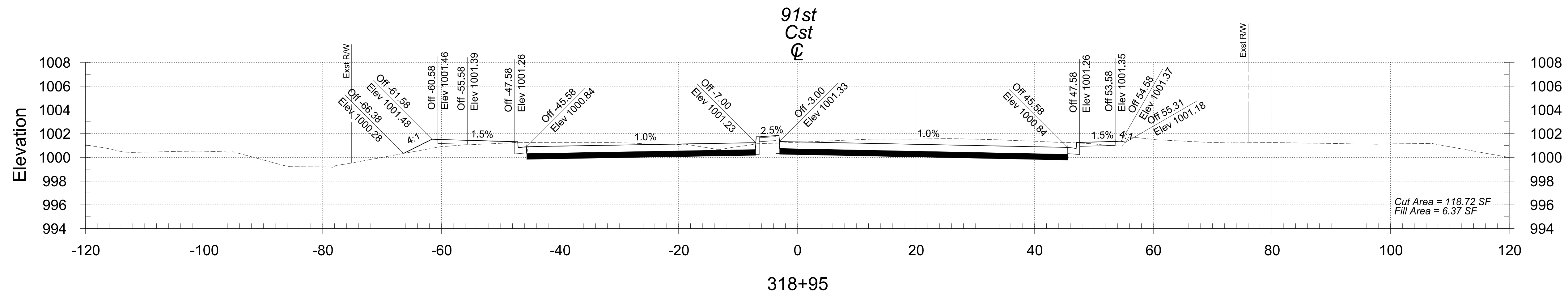
4:24:59 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



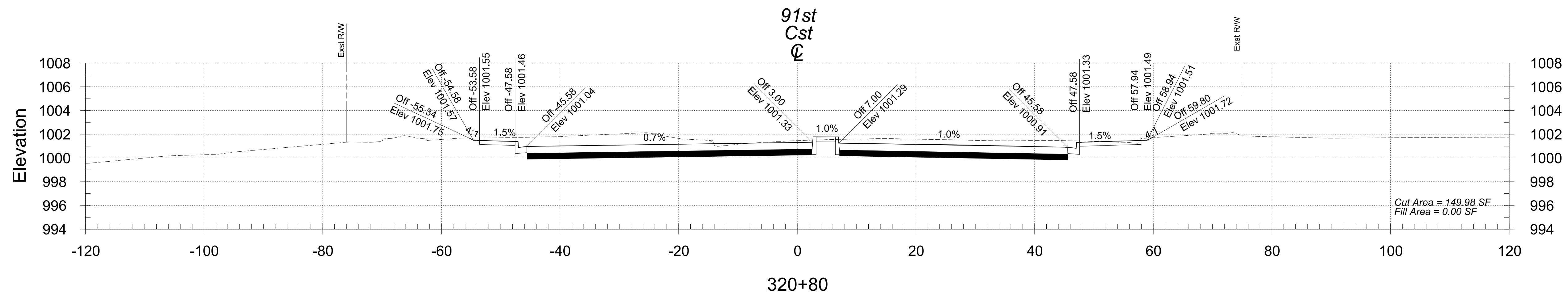
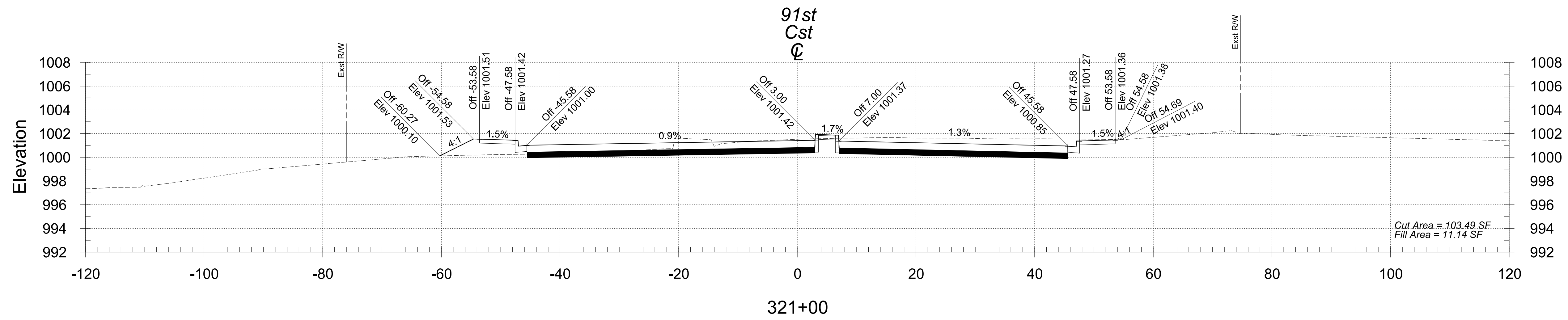
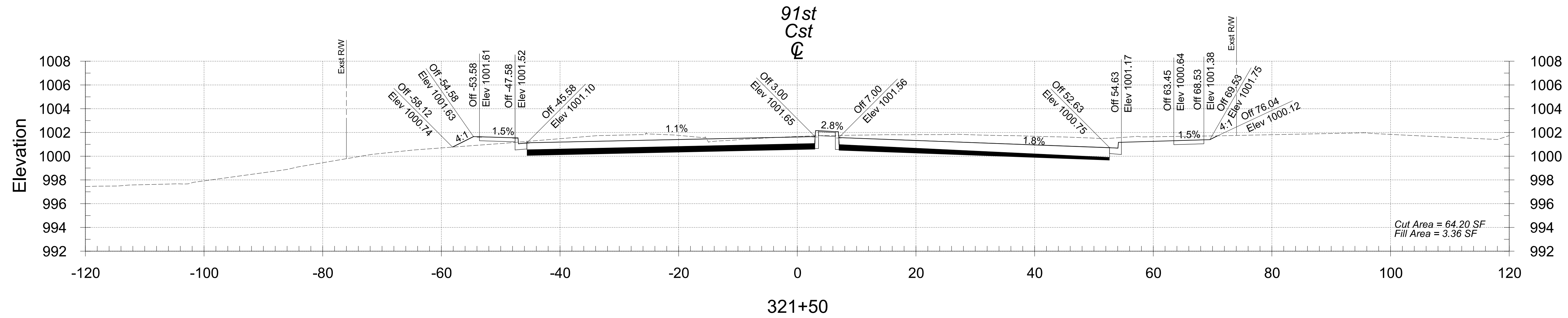
4:24:59 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



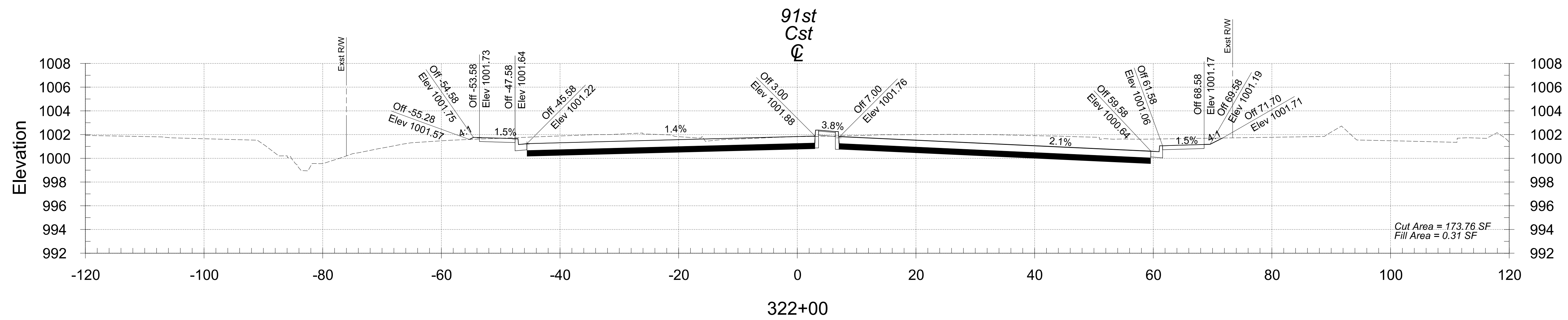
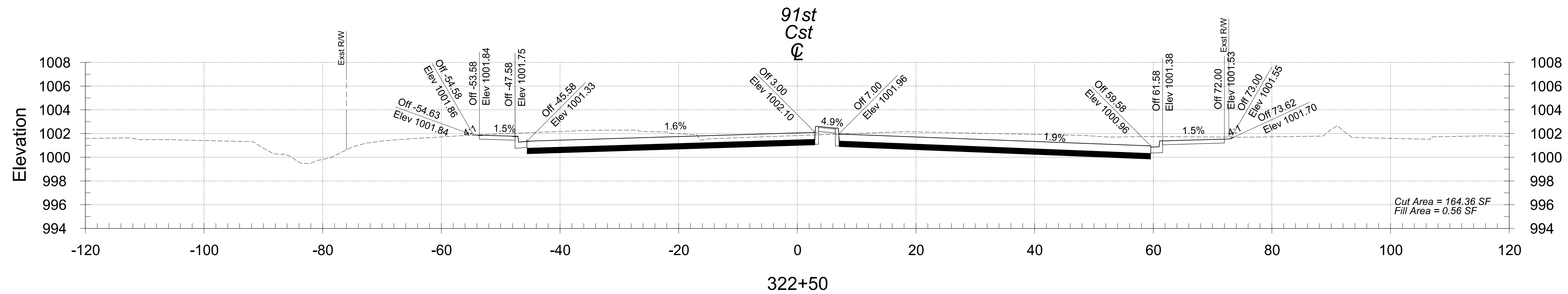
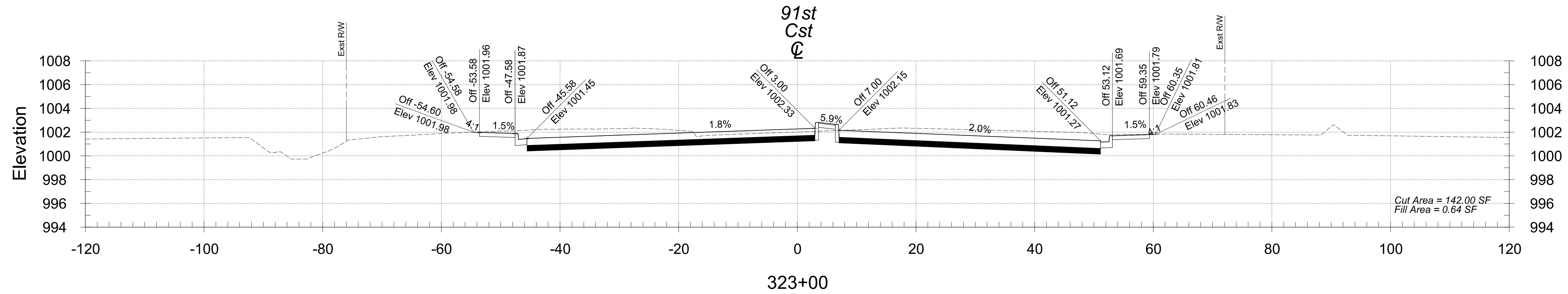
4:25:00 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



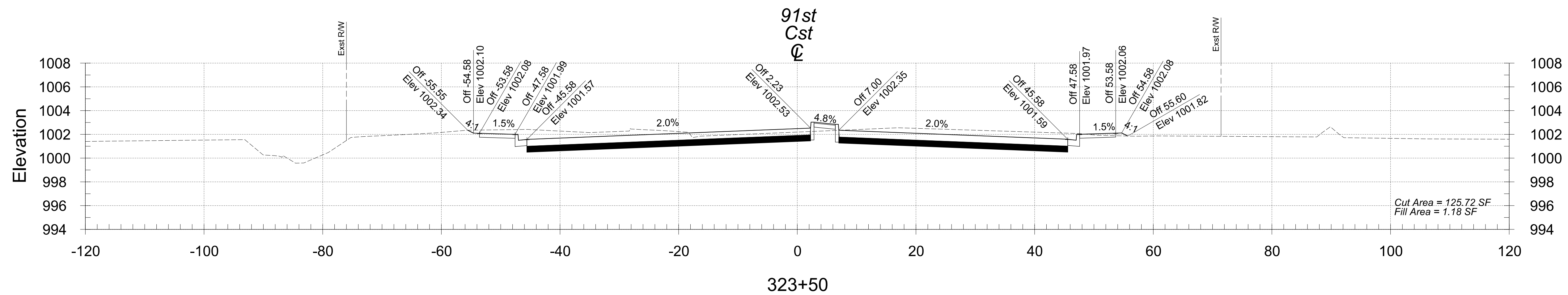
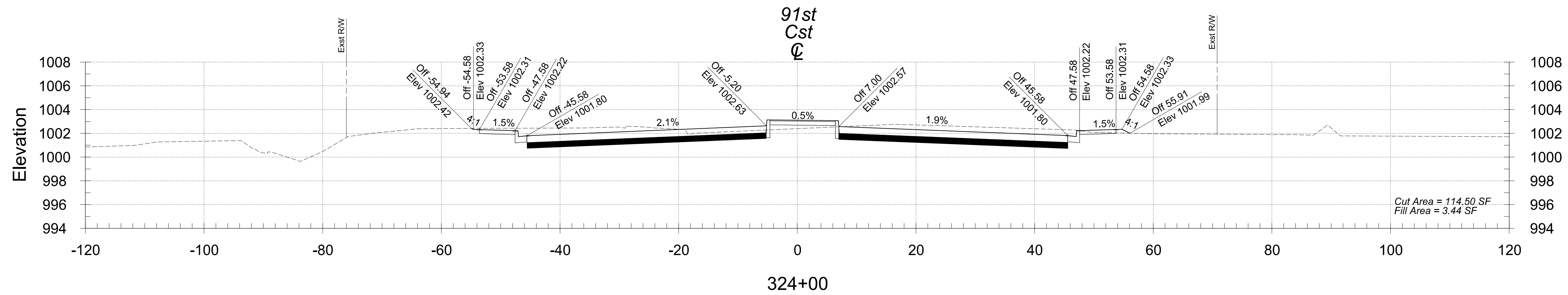
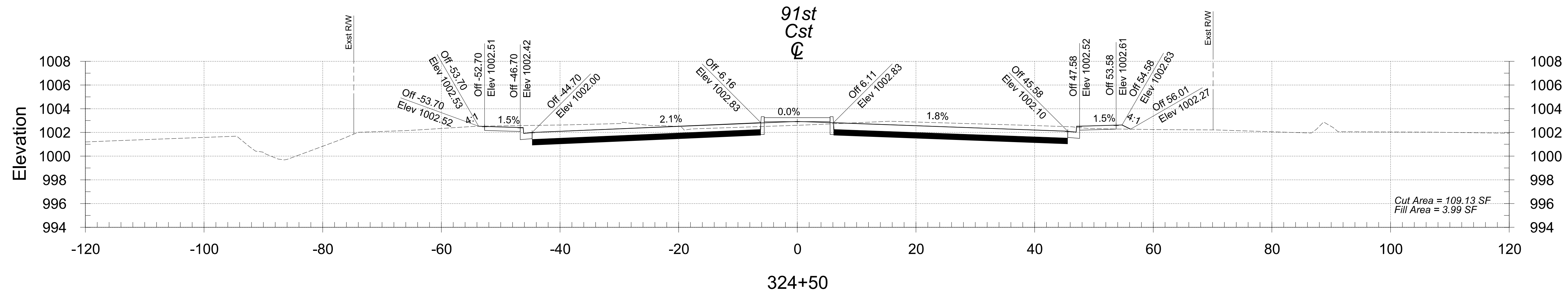
4:25:00 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:25:00 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn

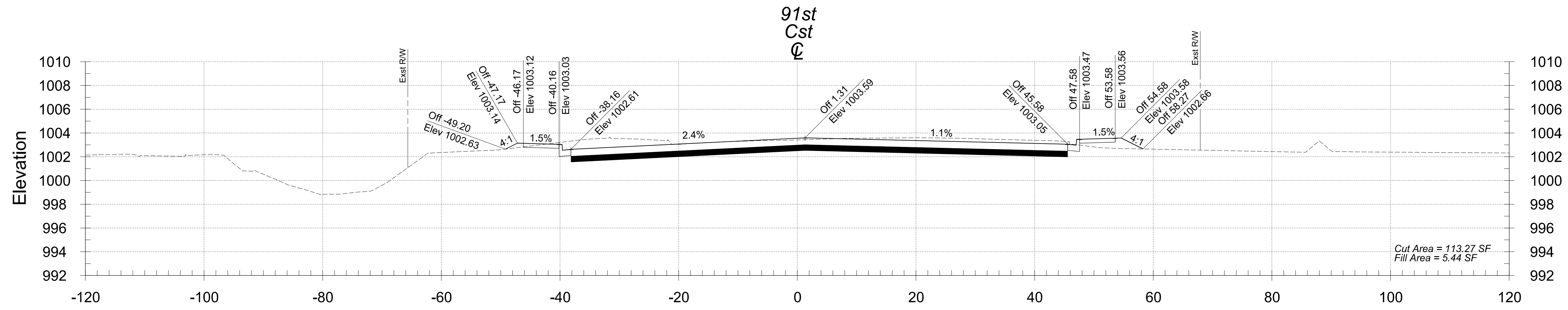




F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	49	54	

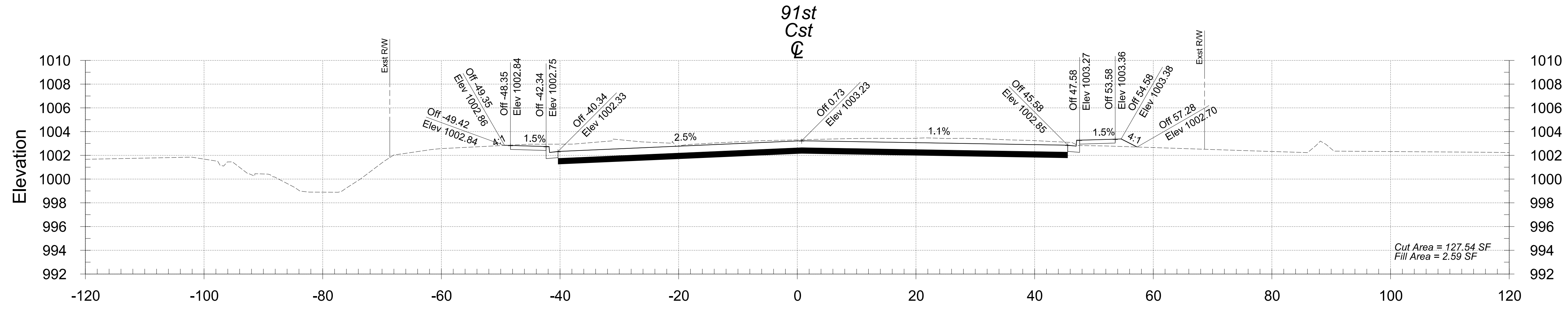
4:25:01 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



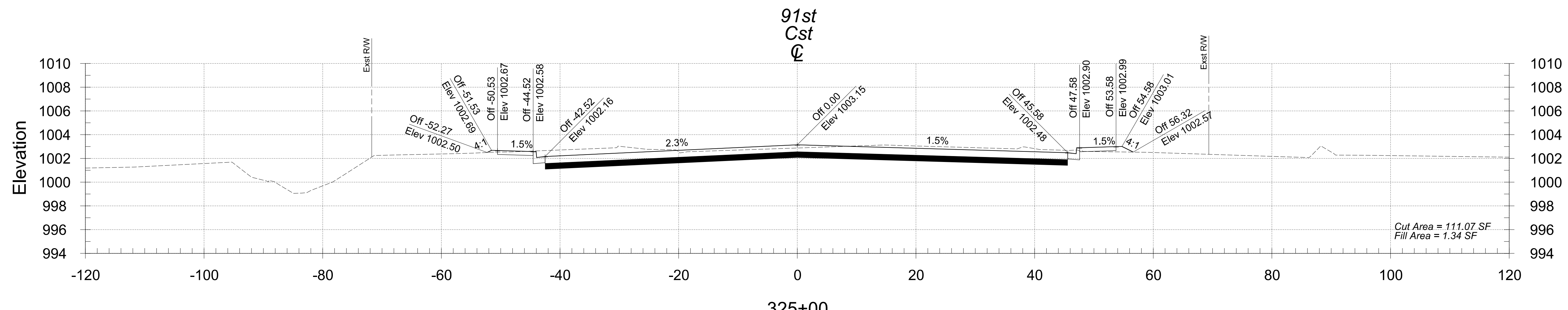
Cut Area = 113.27 SF  
 Fill Area = 5.44 SF

326+00



Cut Area = 127.54 SF  
 Fill Area = 2.59 SF

325+50

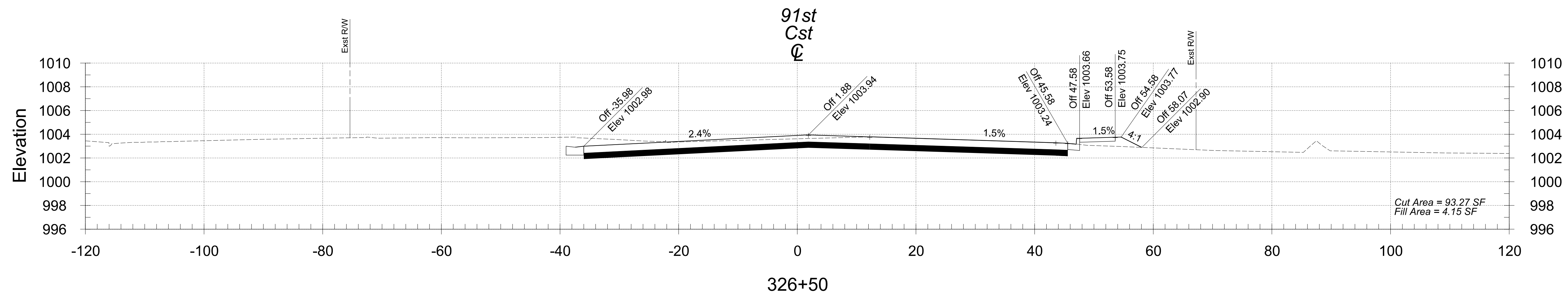
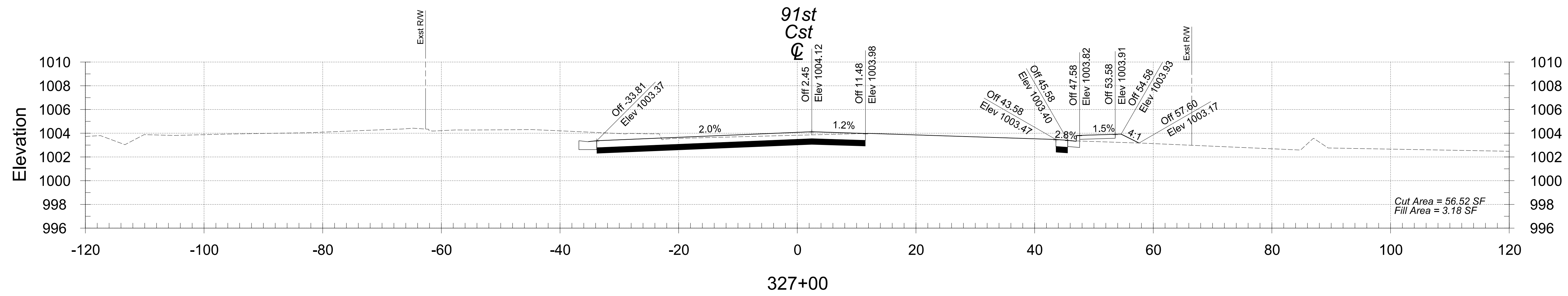
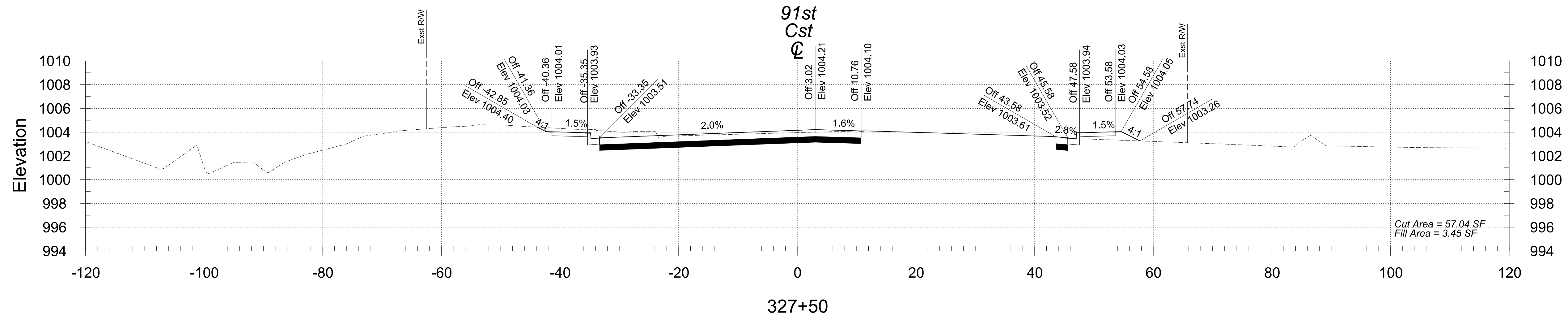


Cut Area = 111.07 SF  
 Fill Area = 1.34 SF

325+00

4:25:01 PM 6/21/2022

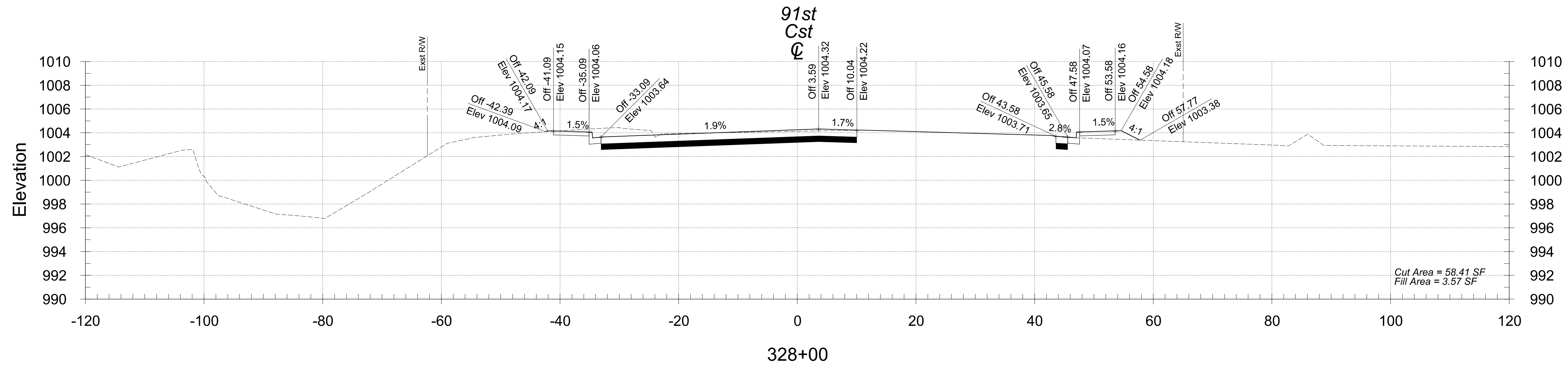
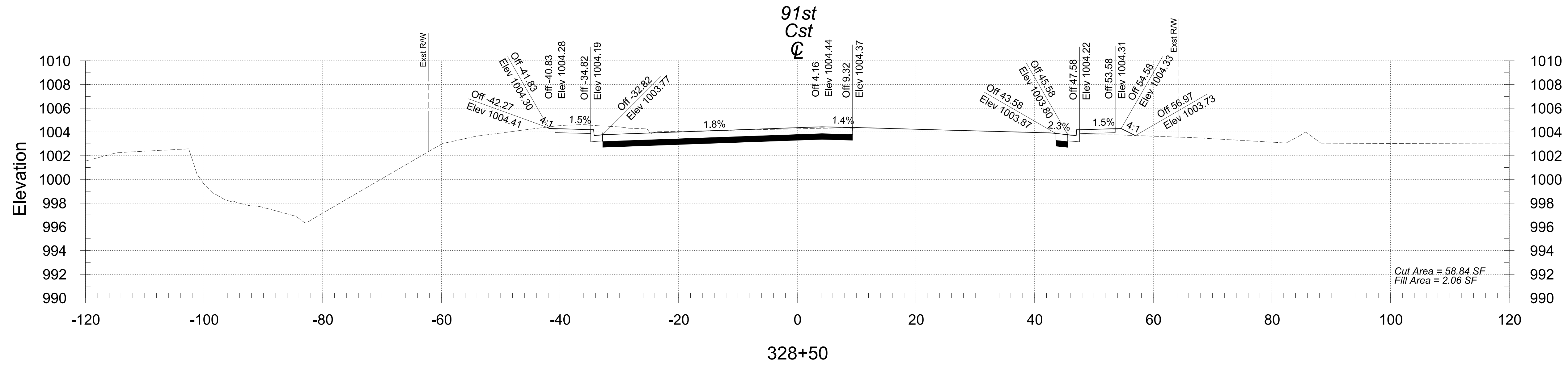
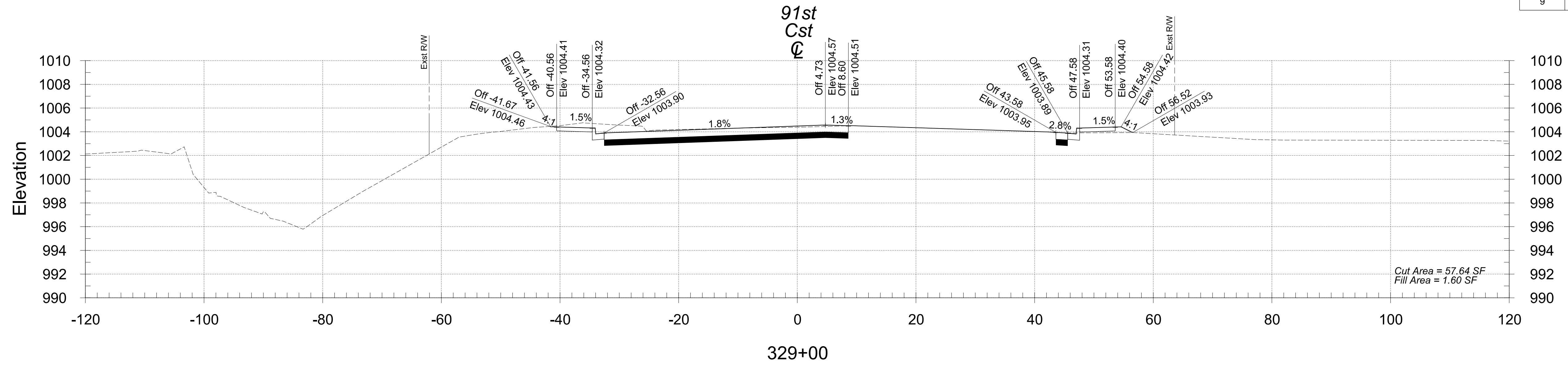
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	51	54	

4:25:01 PM 6/21/2022

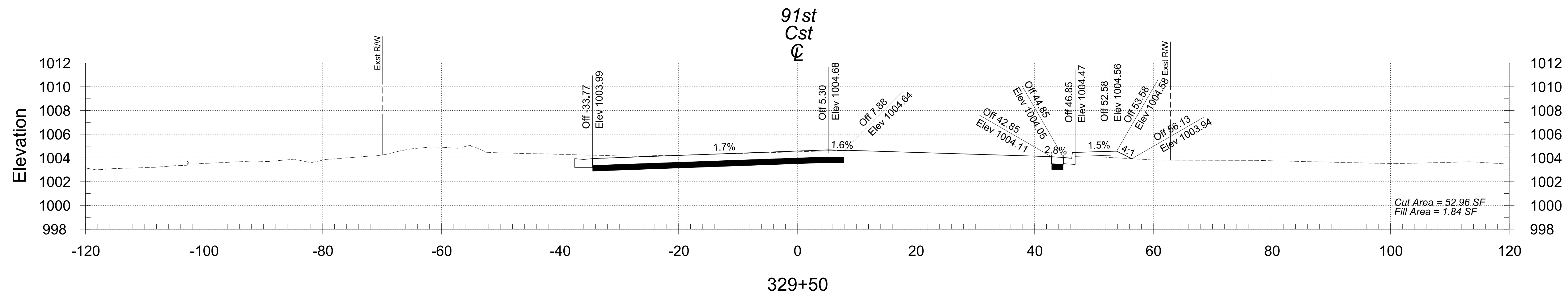
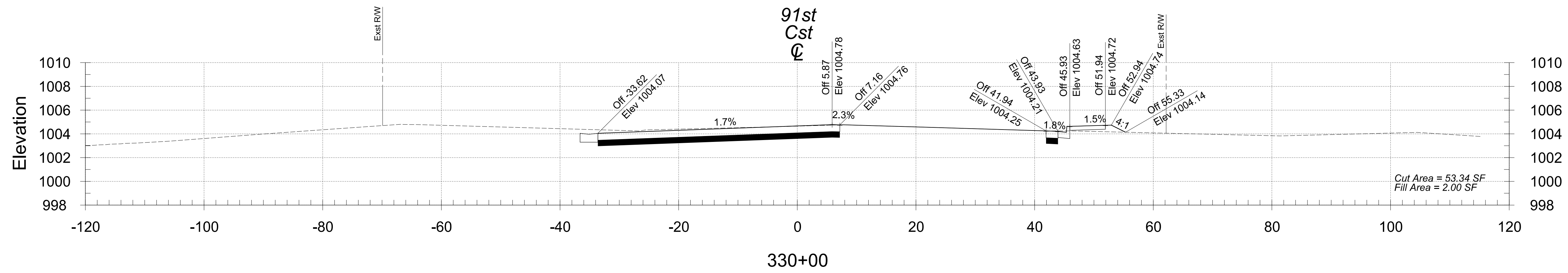
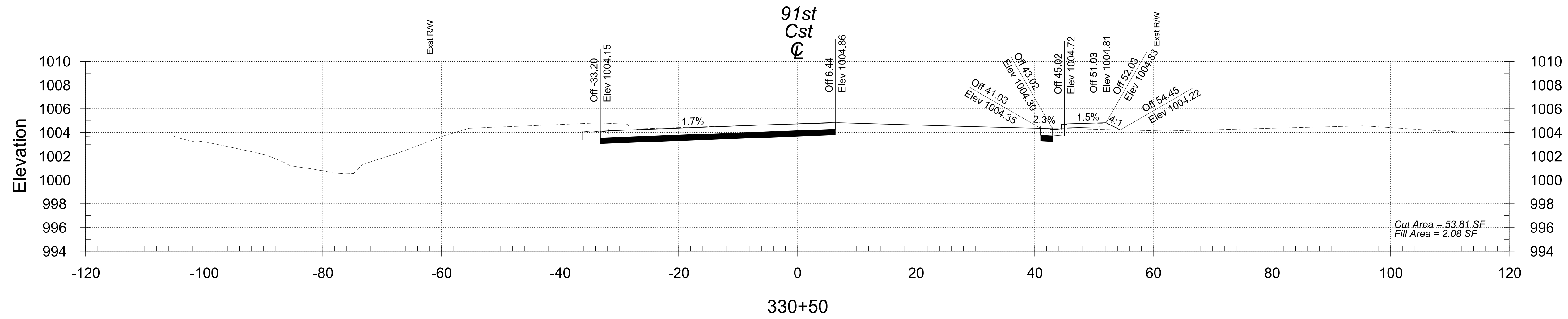
K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	52	54	

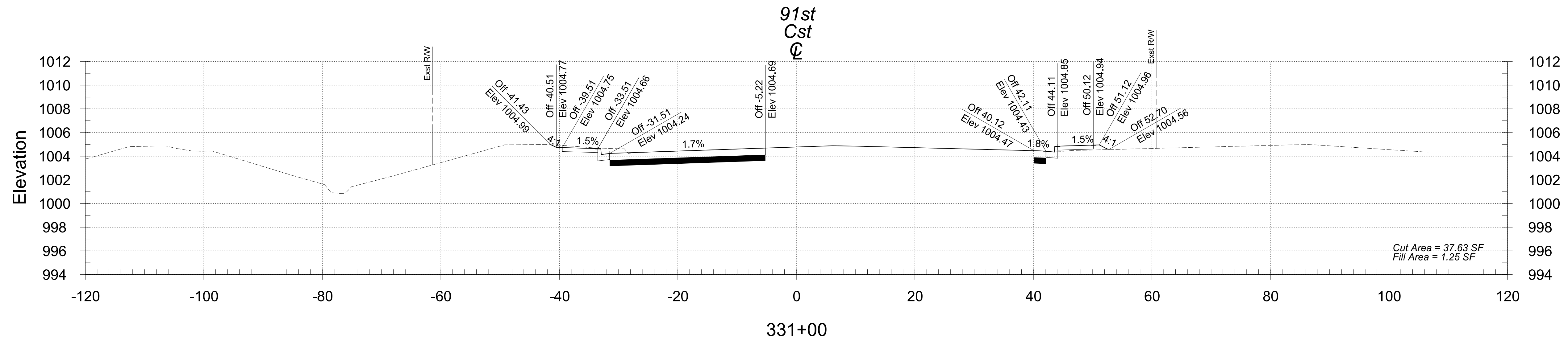
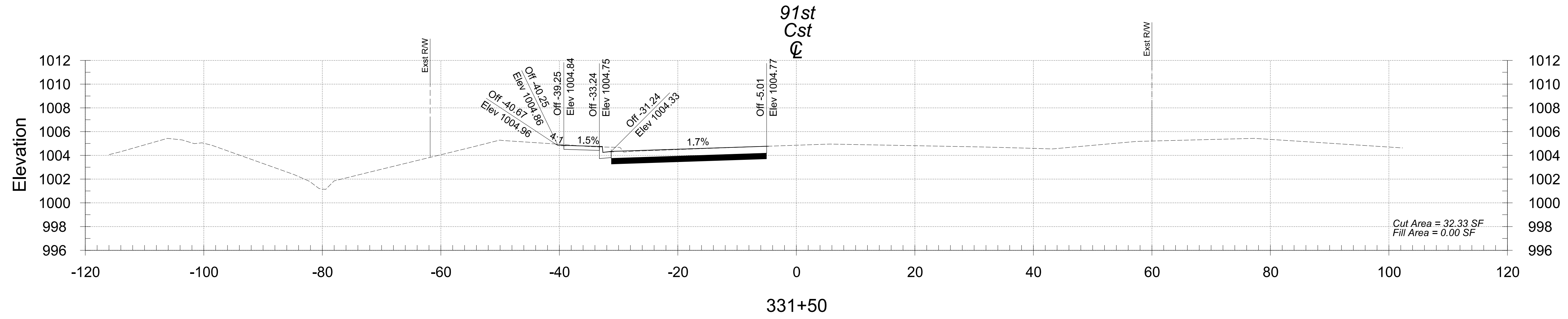
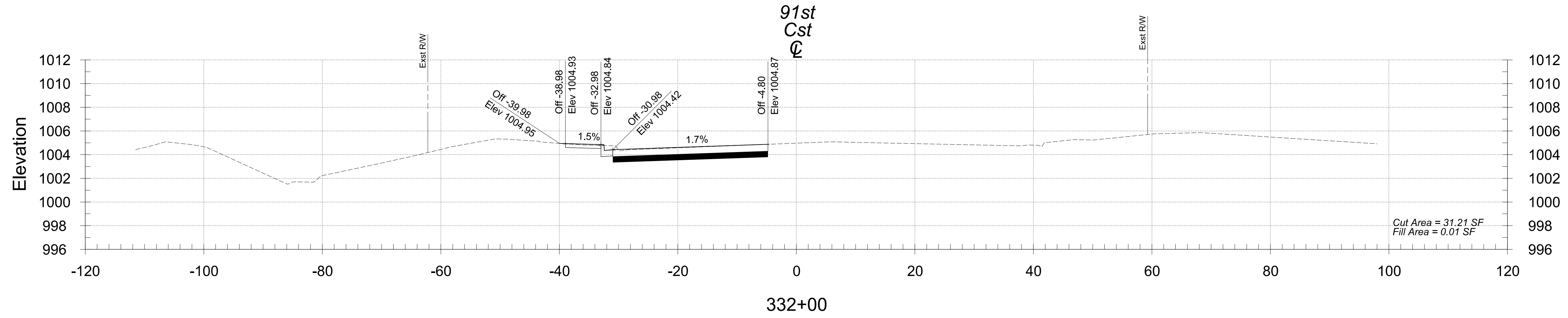
4:25:12 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



4:25:13 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Sealed\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn



F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DRAWING
9	AZ	TT0651	54	54	

4:25:13 PM 6/21/2022

K:\PHX\_Roadway\191850000-MC 85\Design\Roadway\TT0651\MPF\_Scaled\Earthwork\Sheets\TT0651\_Earthwork\_100%.dgn

