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PLANS OF PROPOSED IMPROVEMENT ON THE  
**PRIMARY ROAD SYSTEM**  
**STORY COUNTY**  
Preliminary Engineering  
610th Ave Interchange at Nevada

SCALES: As Noted

Refer to the Proposal Form for list of applicable specifications.

Value Engineering Saves. Refer to Article 1105.14 of the Specifications.



REVISIONS

TOTAL	319
PROJECT IDENTIFICATION NUMBER	13-85-030-010-01
PROJECT NUMBER	NHSX-030-5(321)--3H-85
R.O.W. PROJECT NUMBER	NHSN-030-5(248)--2R-85

### Earthwork Summary

Fill 334,000 CY  
Cut 147,600 CY  
Net 186,400 CY

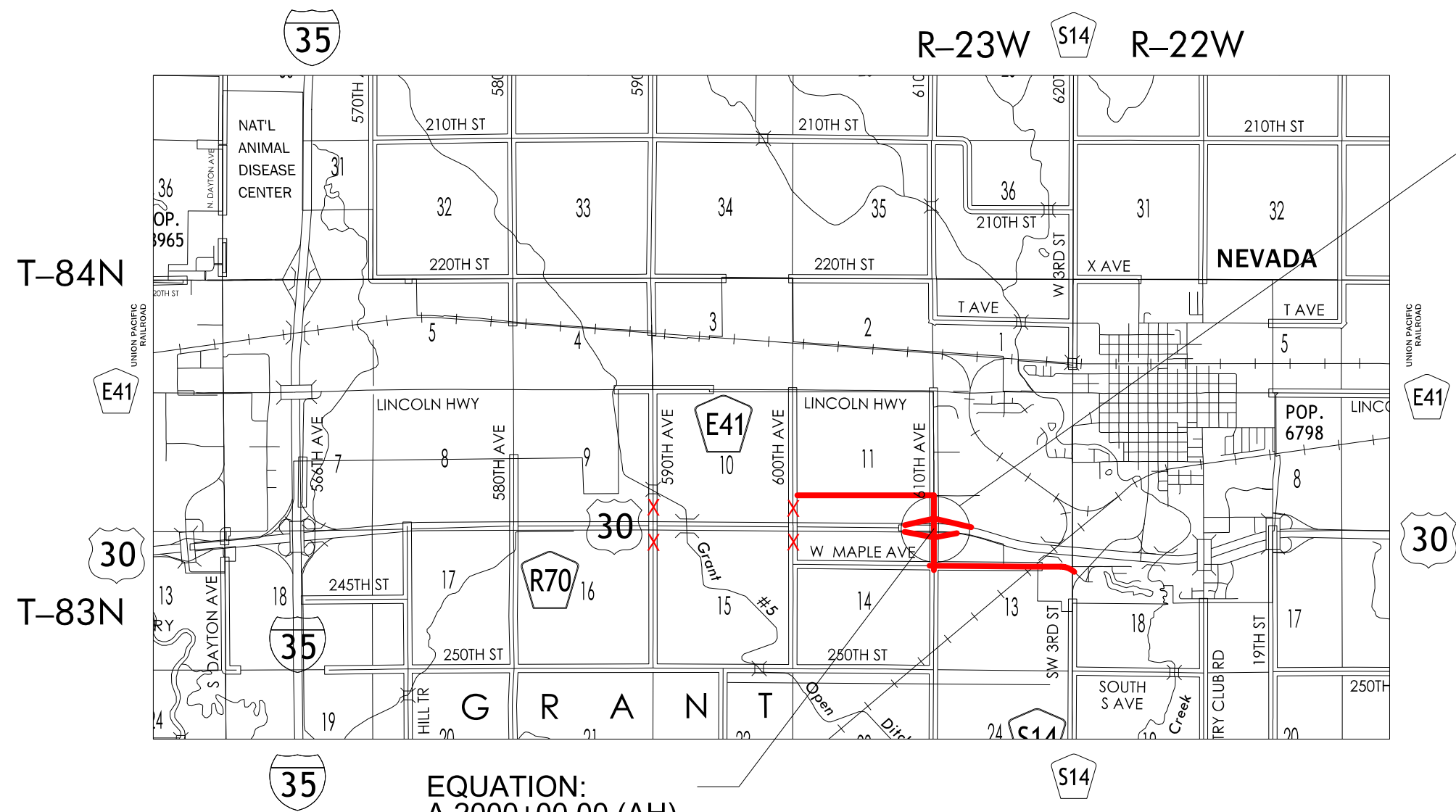
DESIGN DATA RURAL	
2028 AADT	18,329 V.P.D.
2048 AADT	23,129 V.P.D.
20 -- DHV	-- V.P.H.
TRUCKS	8-9 %
Total Design ESALs	--

INDEX OF SEALS			
SHEET NO.	NAME	TYPE	BID QUANTITY SHEETS
A.1	Kelly C. Bell	Primary Signature Block	X
X	X	X	X

# PRELIMINARY PLANS

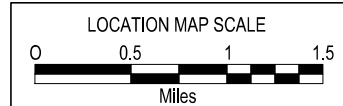
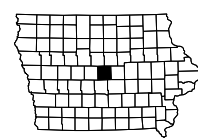
Subject to change by final design.

## D2 PLAN - July 26, 2023



PROPOSED BRIDGE  
Asset #: #####

EQUATION:  
A 2000+00.00 (AH)  
= 1607+14.67 (BK)





**Concept Statement--FINAL**  
 US 30 at 610<sup>th</sup>/Airport Road in Nevada  
 Story County, Iowa

Project Code: 13-85-030-010-01

Phase Numbers:

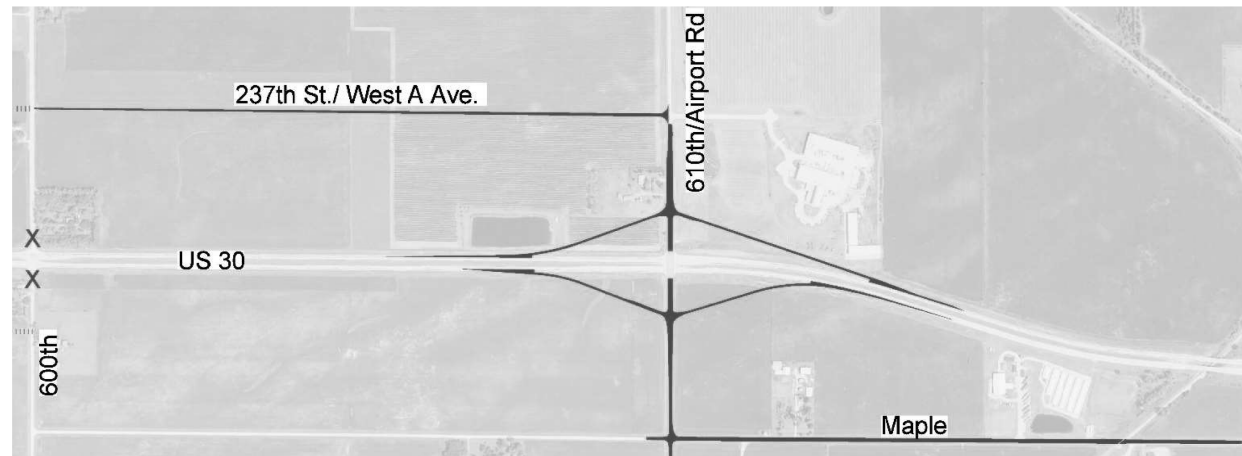
NHSX-030-5(321)—3H-85	(Preliminary Engineering)
NHSX-030-5(255)--3H-85	NHSX-030-5(251)--3H-85
NHSN-030-5(254)--2R-85	NHSX-030-5(250)--3H-85
NHSX-030-5(253)--3H-85	NHSX-030-5(249)--3H-85
NHSX-030-5(252)--3H-85	NHSN-030-5(248)--2R-85

Allison Smyth, PE  
 District 1 Office  
 Date: June 7, 2023

**I. PROJECT DESCRIPTION AND HISTORY**

**A. Project Description**

The project is the final project needed to extend the Interstate and Freeway access control on US 30 from the west side of Ames to east of Nevada. The current roadway is a 4-lane, rural facility with a divided median and has portions of Interstate and Freeway and expressway access control. Improvements include a new interchange near the existing intersection with 610<sup>th</sup> Avenue/Airport Road in Nevada, paving Maple Road on the south side of the interchange and paving a new backage road (237<sup>th</sup> Street/West A Avenue) on the north side of the interchange, closing at-grade accesses to US 30 at 590<sup>th</sup>, 600<sup>th</sup>, and 6<sup>th</sup> Street (in Nevada). A relocated private access for the Jensen acreage just east of 590<sup>th</sup> on the south side of US 30 is also required.



**B. Project History**

U.S. 30 from just west of I-35 (Skunk River) in Ames east to Nevada was constructed in 1964 as a two-lane highway with the intent for future expansion to four-lane highway. In 1988, the Iowa DOT's Transportation Commission identified U.S. 30 as part of the State's Commercial Industrial Network (CIN). As part of the CIN, segments of U.S. 30 in Iowa have been developed as four-lane expressways or freeway facilities with posted speed limits of 65 mph in rural areas. In 1991, the segment of U.S. 30 from I-35 east to the beginning of the existing four-lane segment in Nevada was improved to a four-lane expressway with limited at-grade access.

U.S. 30 from old U.S. 30 west of Ames to the I-35/ U.S. 30 interchange, is a full access control freeway facility with access provided at grade separated interchanges. U.S. 30 between the I-35 interchange and the city of Nevada is a four-lane expressway with limited at grade access including at-grade intersections at Sand Hill Trail, 580th Avenue, 590th Avenue, 600th Avenue, 610th Avenue, S14, and 6th Street. East of the Study Area, the next direct access to U.S. 30 is at the 19th Street interchange in the city of Nevada. Upon the completion of the new interchange at US 30 and 580<sup>th</sup> in 2024, at-grade accesses at Sand Hill Trail and 580<sup>th</sup> will be closed. Similarly, the completion of the County Road S14 bridge over US 30 in Nevada will close the at-grade intersection at S14.

The city of Nevada made several requests for funding for safety improvements to the U.S. 30 Corridor in Nevada. In 2009, the city proposed an interchange between County Road S-14 (S14) and 6th Street to replace the at-grade intersections at 610th Avenue/W18th Street, S14, and 6th Street. The request also proposed improvements to the local highway network which included the removal of two at-grade rail crossings on County Road S14 just north of U.S. 30, the addition of one at-grade crossing on a new proposed local road, and one improved crossing on Maple Avenue south of U.S. 30. Nevada's Request for Funding identified high speeds along U.S. 30 and a high number of conflict points at the S14 intersection as a basis for the proposed safety improvements.

Iowa DOT conducted a public information meeting (PIM) on March 7, 2013, prior to the initiation of the NEPA process. The meeting was held to inform the public about the proposed U.S. 30 project from the I-35 interchange in Ames to 11th Street in Nevada and to gather input and comments from the public.

A Public Hearing was held on October 15, 2015 to present the preferred alternative and take comments on the signed EA. The preferred alternative consisted of a diamond

interchange at 575<sup>th</sup> St. and a diamond interchange at 610<sup>th</sup> St. The preferred alternative had been developed in coordination with local officials but did not receive public acceptance at the public hearing. As a result of the significant dissatisfaction with the preferred alternatives presented, the City of Nevada and local stakeholders formed a task force to develop an alternative acceptable to the public. The task force alternatives included a par-clo A interchange at 580<sup>th</sup> Ave., a diamond interchange at 600<sup>th</sup> Ave. and a par-clo A-B at S-14/ E.6<sup>th</sup> St.

Subsequently, the project scale was reduced to address immediate concerns on the west end of the corridor and includes the interchange at 580<sup>th</sup> Ave. and local roadways necessary to allow the removal of all at-grade access between I-35 and 590<sup>th</sup> Ave. The east end of the original project will be handled as a totally separate project in the future.

In February of 2017, city officials met with District 1 personnel to discuss a grade separation at S14 due to ongoing safety issues at the intersection. Interchange alternatives at S14 and at 610<sup>th</sup> were discussed. Ultimately, the City of Nevada preferred the 610<sup>th</sup>/Airport Road interchange location over the new S14 bridge location. The Nevada City Council met on March 13, 2017, and formally supported the project to build an S14 bridge over US 30, which allowed the project to be added into the program once again. A PIM was held on June 15, 2021. The bridge and roadway connections will be built in 2023.

In 2022, the Department of Transportation included the interchange at 610<sup>th</sup> Avenue and US 30 in the 2023-2027 program, listing \$1,700,000 for Right Of Way in 2025 and \$7,500,000 and \$3,500,000 for grading and bridge work, respectively, in 2027.

#### C. Need for Project

The purpose and need for the project is to improve the level of safety and to improve traffic operations of U.S. 30 between west Ames and 19<sup>th</sup> Street in Nevada.

This Project will:

- Improve operational safety
- Improve system continuity
- Handle future traffic demand
- Address roadway deficiencies

#### D. Environmental Status

Existing environmental documents used in previous projects will be reviewed to determine what new information will be needed for this project.

#### E. Public Involvement Summary

The following is a summary of the public involvement activities that took place for the project.

March 7, 2013 – Public Information Meeting held to introduce two alternative layouts for interchanges at both the east and west ends of the corridor. The summary booklet is located at the following link:

[pw://projectwise.dot.int.lan:PWMain/Documents/Projects/8503001013/OLE/PublicInvolvement/2013\\_03\\_07\\_PIM/Summary/Summary\\_Booklet.pdf](pw://projectwise.dot.int.lan:PWMain/Documents/Projects/8503001013/OLE/PublicInvolvement/2013_03_07_PIM/Summary/Summary_Booklet.pdf)

June 2, 2015 - Public Hearing was held to discuss the preferred alternative as presented in the EA. Below is the link to the public hearing transcript:

[pw:\\projectwise.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2015\\_10\\_15\\_PH\\Summary\\PH\\_Transcript.pdf](pw:\\projectwise.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2015_10_15_PH\\Summary\\PH_Transcript.pdf)

December 5, 2017 - Public Information Meeting was held to discuss the preferred alternative as presented in the EA Addendum. The summary booklet is located at the following link:

[pw:\\projectwise.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2017\\_12\\_05\\_PIM\\Summary\\_Transcript\\PIM\\_Summary\\_Booklet.pdf](pw:\\projectwise.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2017_12_05_PIM\\Summary_Transcript\\PIM_Summary_Booklet.pdf)

October 24, 2019 – Public Information Meeting held to discuss the proposed US 30/580 Interchange. The summary booklet is located at the following link:

[pw:\\NTPwint1.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2019\\_10\\_24\\_PIM\\Summary\\_Transcript\\PIM\\_Summary\\_Booklet.pdf](pw:\\NTPwint1.dot.int.lan:PWMain\\Documents\\Projects\\8503001013\\OLE\\PublicInvolvement\\2019_10_24_PIM\\Summary_Transcript\\PIM_Summary_Booklet.pdf)

## II. EXISTING CONDITIONS

### A. Present Facility

The present facility is a four-lane divided highway with a rural cross section and approximately 50 ft wide depressed grass median. US 30 is a Primary Arterial and part of the National Highway System and Commercial-Industrial Network. The travelled way provides 12 ft PCC through lanes with paved shoulders (10 ft outside shoulder and 6 ft inside shoulder). The junction of I-35/U.S. 30 at the west end of the corridor was updated in 2019 to include a northbound to westbound flyover bridge. The remaining roadways between the I-35 interchange and 19<sup>th</sup> Street in Nevada are at-grade intersections with a stop condition on the side roads. There are also a few driveways and private entrances.

B. Traffic Estimates

The 2016 traffic forecast used for the US 30 and 580<sup>th</sup> Street interchange also included a forecast that included the 610<sup>th</sup> Street intersection. However, that forecast was based on an interchange at County Road S14 and closing 610<sup>th</sup> Street. Because of the change in location of the new interchange, a new forecast has been provided, and shows traffic volumes that vary from the original concepts at 580<sup>th</sup> and S14.

The estimate 2028 average daily traffic for the US 30 corridor is 18,329 vehicles per day (vpd), 8% trucks. The 2048 average daily traffic estimate for the Corridor is 23,129 vpd, 9% trucks.

Traffic on 610<sup>th</sup> Avenue north of US 30 is forecasted to grow from approximately 2,154 vpd to 2,718 vpd in year 2048. South of US 30, 610<sup>th</sup> is forecasted to carry 648 vpd in 2028 and 818 vpd in 2048.

C. Access Control

The corridor is currently managed as an expressway and municipal expressway.

D. Crash History

Over the 10-year period from 2012 to 2021, 22 crashes were recorded within the project limits. None of the crashes resulted in a fatality. One crash included serious injuries, four crashes with minor injuries, and 3 crashes with unknown injuries were also listed. The last fourteen crashes were recorded as property damage only.

Of the 22 crashes, 14% (3) were animal-related, and 9% (2) were related to winter driving conditions. 41% (9) of the crashes were recorded as intersection related. The collision diagram shows most crashes involve westbound traffic colliding with traffic crossing the westbound lanes to go north. The ICAT reports and Collision diagrams are available here:  
<pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\8503001013\Concept\D0Submittal\Support Docs\Crash Data>

III. ALTERNATIVE DEVELOPMENT

A. Traffic Estimates

The 2016 traffic forecast used for the US 30 and 580<sup>th</sup> Street interchange also included a forecast that included the 610<sup>th</sup> Street intersection. However, that forecast was based on an interchange at County Road S14 and closing 610<sup>th</sup> Street. Because of the change in location of the new interchange, a new forecast has been provided, and shows traffic volumes that vary from the original concepts at 580<sup>th</sup> and S14.

The estimate 2028 average daily traffic for the US 30 corridor is 18,329 vehicles per day (vpd), 8% trucks. The 2048 average daily traffic estimate for the Corridor is 23,129 vpd, 9% trucks.

Traffic on 610<sup>th</sup> Avenue north of US 30 is forecasted to grow from approximately 2,154 vpd to 2,718 vpd in year 2048. South of US 30, 610<sup>th</sup> is forecasted to carry 648 vpd in 2028 and 818 vpd in 2048.

The current traffic forecast can be accessed here:  
[pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\8503001013\Concept\D0Submittal\Support Docs\Traffic\2047S6a\\_2022.xlsx](pw:\\NTPwint1.dot.int.lan:PWMain\Documents\Projects\8503001013\Concept\D0Submittal\Support Docs\Traffic\2047S6a_2022.xlsx)

The older data, including a full report of traffic estimate information that was received in May 2013 may be found at:  
<pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\8503001013\OLE\Location\TrafficData>

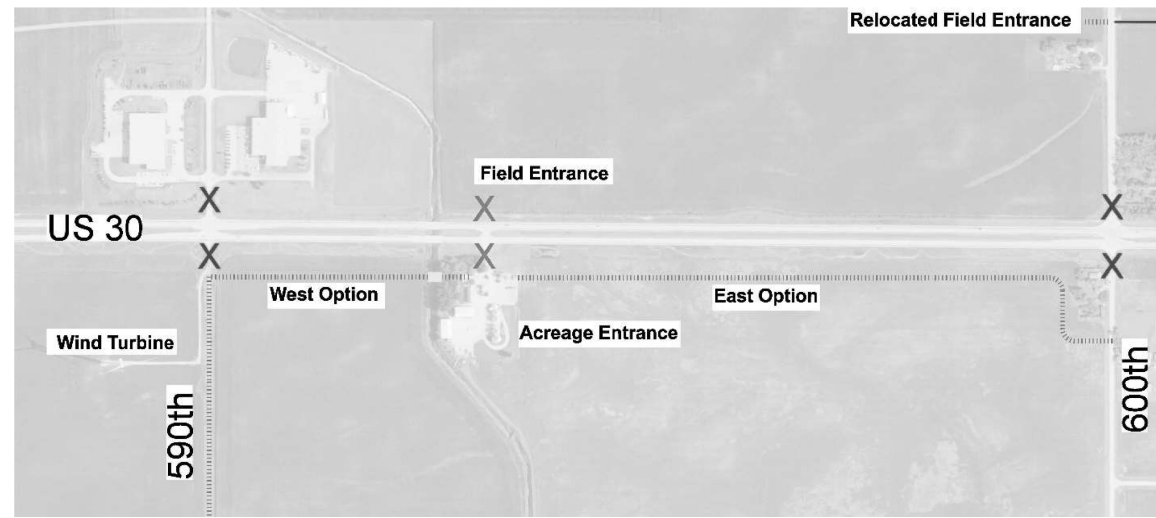
B. Access Control

Completion of this project will change the Access Control Category on US 30 from 580<sup>th</sup> east through 19<sup>th</sup> Street in Nevada to 'Interstate and Freeway' as defined in Iowa Administrative Rule 761-112.5(3)a. No at-grade accesses will be allowed.

This change will subsequently require utility relocations for all utilities that occupy state right-of-way longitudinally.

An acreage on the south side of US 30 just east of Grant Creek, a field on the north side of US 30 east of 590<sup>th</sup>, and a wind turbine and cell tower on the south side just west of 590<sup>th</sup> will all lose accesses to US 30 with this project. It is proposed to replace the existing field entrance opposite the new 237<sup>th</sup> Street on 600<sup>th</sup>. The wind turbine and cell tower do not currently have a legal access to US 30, and none will be provided with the project.

Three options were considered for the acreage south of US 30: an east option that would be construct a private entrance to 600<sup>th</sup> Avenue, based on the common ownership a public access road will not be considered; a total acquisition of the improved property, leaving only a field entrance off 600<sup>th</sup>; and a west option, which includes a reinforced concrete box culvert at Grant Creek and continues to 590<sup>th</sup>. The west option would require grading and granular resurfacing of 590<sup>th</sup> south to 250<sup>th</sup>, as it is currently maintained as a level "B" roadway. This would exceed the current limits covered by the NEPA documents. See following map.



Cost Estimates for the options:

**i. East Access – Total = \$575,000**

Accessway (3,500 ft long)  
 Grading: 0.66 mi @ \$267,000/mi = \$180,000  
 Rock Surface, 24 ft wide, \$30/ton = \$ 90,000  
 Culvert: 26 ft @ \$234/lf = \$6,100  
 25% Contingency = \$73,900  
 ROW = \$225,000 (Could be less if TE and not FT)

**ii. Total Acquisition – Total = \$612,000**

Acquisition and Relocation Cost of Acreage = \$360,000  
<https://beacon.schneidercorp.com/Application.aspx?AppID=165&LayerID=2145&PageTypeID=1&PageID=1110&KeyValue=1015100210>  
 Acquisition (Land and Buildings) and Relocation Cost = \$252,000  
<https://beacon.schneidercorp.com/Application.aspx?AppID=165&LayerID=2145&PageTypeID=1&PageID=1110&KeyValue=1015100210>

**iii. West Access (Not a Public Accessway – Need ingress/egress with property owner) – Total = \$1,192,500**

Accessway (6,200 ft long)  
 Grading: 1.17 mi @ \$267,000/mi = \$321,000  
 Rock Surface, 24 ft wide, \$30/ton = \$156,000  
 Bridge: 80'x30' CSS = \$486,000  
 25% Contingency = \$238,500

It is recommended to construct Option 1. Due to the large cost and complexities of option 3, and the concerns of Story County, that option was discarded.

C. Range of Alternatives

Design Criteria was consistent for all alternatives. Refer to the design criteria worksheet located at:

<pw:\NTPwint1.dot.int.lan:PWMain\Documents\Projects\8503001013\Concept\D0Submittal\Support Docs\Design Criteria\Design Criteria 610th Avenue>

The 610<sup>th</sup> bridge over US 30 is assumed to be a two-span pretensioned, prestressed concrete beam (PPCB) bridge accommodating a three-lane wide cross section (One lane in each direction and left turn lane).

610<sup>th</sup> Avenue will be constructed as a two-lane rural cross section outside of the interchange ramps. Within the interchange, a three-lane section will include one northbound lane, one southbound lane, and a center left turn lane. Maple Street and 237<sup>th</sup>/West A Avenue will be constructed as two-lane roadways with rural cross sections.

**Alternative 1**

This alternative proposes a new interchange at the intersection of US 30 and 610<sup>th</sup> Avenue in Nevada. The interchange would be a diamond interchange with 610<sup>th</sup> Avenue over US 30. 610<sup>th</sup> Avenue north of US 30 would be reconstructed with a wider cross section to accommodate truck traffic. South of US 30, 610<sup>th</sup> Avenue would be paved south to Maple Street, and Maple Street would be paved from 610<sup>th</sup> Avenue east to county route S14. The at-grade intersections at 590<sup>th</sup> Avenue and 600<sup>th</sup> Avenue west of the new interchange and 6<sup>th</sup> Street in Nevada would be permanently closed, and the connections severed.

**Alternative 2**

This alternative proposes a new interchange at the intersection of US 30 and 610<sup>th</sup> Avenue in Nevada. The interchange would be a diamond interchange with 610<sup>th</sup> Avenue over US 30. A new package connector road would be constructed with a rural cross section approximately 1,200 feet north of US 30 and run west from 610<sup>th</sup> Avenue to 600<sup>th</sup> Street. This new connection would provide interchange access to the traffic on 600<sup>th</sup> and aligns with the package road being built with the US 30 at 580<sup>th</sup> interchange (for future development--not with this project). South of US 30, 610<sup>th</sup> Avenue would be paved south to Maple Street, and Maple Street would be paved from 610<sup>th</sup> Avenue east to county route S14. The at-grade intersections at 590<sup>th</sup> Avenue and 600<sup>th</sup> Avenue west of the new interchange and 6<sup>th</sup> Street in Nevada would be permanently closed, and the connections severed.

IV. RECOMMENDED ALTERNATIVE

A. Preferred Alternative

After reviewing the reasonable alternatives, and in consideration of City of Nevada input, Iowa DOT has identified Alternative 2 as the Preferred Alternative.

This alternative is preferred because it meets the project purpose and need and the needs of the City of Nevada.

B. Interchange Operations Report (IOR)

An interchange operations report will be developed for this project and is scheduled for completion in November of 2023.

C. Cost Estimate

Project cost is estimated to be \$27,540,000 million:

US 30/610 <sup>th</sup> 4-Lane Interchange:	\$16,100,000	
Paving 610 <sup>th</sup> South to Maple (0.20 mi):	\$740,000	
Paving Maple from 610 <sup>th</sup> to S14 (0.95 mi):	\$3,300,000	
Grading and Paving 237 <sup>th</sup> Ave, 600 <sup>th</sup> to 610 <sup>th</sup> (1.0 mi):	\$7,400,000	(City Cost)
<b>Project Total:</b>	<b>\$27,540,000</b>	

A more detailed cost estimate will be developed after the D02 field exam.

D. Design Criteria

Below is the link to the design criteria:

<pw:\\projectwise.dot.int.lan:PWMain\Documents\Projects\8503001013\OLE\Location\LocationDesign\580th Rural DESIGN CRITERIA.pdf>

E. Staging/Construction Sequence

US 30 traffic will be maintained during construction. Some overnight closures may be required for bridge construction only. Short-term lane closures will be required at ramp tie-in locations.

Traffic on 610<sup>th</sup>/Airport Road will be detoured during the construction. The proposed detour for north of US 30 includes 600<sup>th</sup> Avenue and Lincoln Way. South of US 30, detoured traffic will use 600<sup>th</sup> to Maple Street.

F. Special Considerations

This project includes some known gas lines crossing under US 30 at 610<sup>th</sup>. The exact locations and disposition of the lines are unknown, and a SUE investigation is underway. The intention is to avoid and/or minimize impacts to the line as practical. Adjusting ditching, steepening the foreslopes and adding guardrail are all options to consider.

An existing granular roadway UP Railroad crossing (FRA Number: 876065N) will be paved with this project on Maple Street. Railroad agreement dates have been included in the schedule.

G. Project Status

This project is currently in the 2023-2027 five-year program. Anticipated lettings by program year:

Phase Number	Program Year	Letting Type
NHSN-030-5(248)--2R-85	2025	Right Of Way
ITS-030-5(299)--25-85	2026	ITS Infrastructure
ITS-030-5(301)--25-85	2027	ITS Integration
NHSX-030-5(250)--3H-85	2027	Bridge
NHSX-030-5(249)--3H-85	2027	Grading
ITS-030-5(300)--25-85	2028	ITS Infrastructure
NHSX-030-5(253)--3H-85	2028	Lighting
NHSX-030-5(252)--3H-85	2028	Traffic Signs
NHSX-030-5(251)--3H-85	2028	Paving
NHSN-030-5(254)--2R-85	2029	Erosion Control

Story County  
 NHSX-030-5(321)—3H-85  
 13-85-030-010-01

H. Project Management Team

Development on this project began and paused at various points in time. For that reason, participation on the Project Management Team (PMT) transitioned at different stages as staffing changed. The current PMT members are listed below.

**District 1**

Tony Gustafson  
 Allison Smyth  
 Ben Adey  
 Sean Passick  
 Andy Loonan  
 Scott Nixon

**LEB**

Angela Poole  
 Bryan Bradley  
 Marc Solberg  
 Deann Newell  
 Madeline Schmitt

**Road Design**

Kent Nicholson  
 Kevin Patel  
 Paul Flattery  
 Kelly Bell  
 Alex Kiebel

**Bridges & Structures**

Michael Nop  
 Jim Ellis

**Project Management**

Jeremy Vortherms

**Right of Way**

Nicole Cuva  
 Eric Wright

**Traffic and Safety**

Willy Sorenson  
 Jan Laaser-Webb  
 Leilah Armstrong

**Utilities**

Dana Blue

**Railroad**

Tami Quam

Story County  
 NHSX-030-5(321)—3H-85  
 13-85-030-010-01

I. Project Schedule:

Task Name	Description	Finish	Project Phase :
T01	Existing ROW, Property and Sections Lines in CADD	07/31/2015	NHSN-030-5(248)--2R-85
D01	Survey Plan and Photogrammetry (DTM)	06/05/2015	NHSX-030-5(249)--3H-85
U00	Preliminary Utility Review	01/08/2016	NHSX-030-5(249)--3H-85
D01	Survey Plan and Photogrammetry (DTM)	12/02/2022	NHSX-030-5(249)--3H-85
P05	Municipal/County Pre-Design Agreement	12/16/2022	NHSX-030-5(249)--3H-85
D02	Design Field Exam	06/02/2023	NHSX-030-5(249)--3H-85
F02	Interim Regulated Materials Review	07/14/2023	NHSX-030-5(249)--3H-85
RR01	Initial Railroad Concurrence Review	07/14/2023	NHSX-030-5(249)--3H-85
W01	Wetland Design Review	07/14/2023	NHSX-030-5(249)--3H-85
D03	Plans for Preliminary Bridge	08/04/2023	NHSX-030-5(249)--3H-85
U02	Project Notification to Utilities Drainage Design and Miscellaneous Layout to Office of Design	10/06/2023	NHSX-030-5(249)--3H-85
B02	Interchange Justification Report by District	11/03/2023	NHSX-030-5(249)--3H-85
IJR3	Access Control Validation	11/03/2023	NHSX-030-5(249)--3H-85
AC5	Identification of Soils Related ROW Issues	12/08/2023	NHSX-030-5(249)--3H-85
S02	Plans to Right Of Way	12/08/2023	NHSX-030-5(249)--3H-85
D05	Final Regulated Materials Review	01/12/2024	NHSX-030-5(249)--3H-85
F03	Right Of Way Layout	02/16/2024	NHSX-030-5(249)--3H-85
R01	Right Of Way Layout	05/10/2024	NHSN-030-5(248)--2R-85
RR02	Railroad Review of ROW Easement	06/14/2024	NHSX-030-5(249)--3H-85
P09	Public Information Meeting (PIM)	07/10/2024	NHSX-030-5(249)--3H-85
R00	Plot Plans and Summary Sheets to District	07/10/2024	NHSN-030-5(248)--2R-85
U03	1st Plan Submittal to Utilities	09/09/2024	NHSX-030-5(249)--3H-85
T02	Acquisition Plats and Legal Descriptions	10/04/2024	NHSN-030-5(248)--2R-85
RR03	Final Railroad Concurrence Point	11/15/2024	NHSX-030-5(249)--3H-85
R02	Right Of Way Appraisal	02/07/2025	NHSN-030-5(248)--2R-85
R03	Right Of Way Negotiation	06/06/2025	NHSN-030-5(248)--2R-85
W02	Wetland Field Work	06/16/2025	NHSX-030-5(249)--3H-85
W03	404 Permit Submittal	06/16/2025	NHSX-030-5(249)--3H-85
S03	Soils Design Complete	10/03/2025	NHSX-030-5(249)--3H-85
U04	2nd Plan Submittal to Utilities	11/06/2025	NHSX-030-5(249)--3H-85
R04	Right Of Way Acquisition	12/05/2025	NHSN-030-5(248)--2R-85
R05	Right Of Way Relocation	12/05/2025	NHSN-030-5(248)--2R-85
R10	ROW Clearance	12/05/2025	NHSX-030-5(249)--3H-85
W04	404 Permit Clearance	01/16/2026	NHSX-030-5(249)--3H-85
U06	Notice to Proceed to Utility	02/04/2026	NHSX-030-5(249)--3H-85
RR04	Railroad Agreement	03/06/2026	NHSX-030-5(249)--3H-85
ITS4	Final ITS Infrastructure Plans	11/04/2025	ITS-030-5(299)--25-85
L15	Letting-ITS Infrastructure	01/21/2026	ITS-030-5(299)--25-85

Story County  
 NHSX-030-5(321)—3H-85  
 13-85-030-010-01

C02	Construction Period (Field Work)	10/30/2026	ITS-030-5(299)--25-85
P08	Municipal/County Pre-Construction Agreement	03/20/2026	NHSX-030-5(249)--3H-85
DM5	Design Methods Turn-In	03/31/2026	NHSX-030-5(249)--3H-85
U07	Utility Bid Attachment	05/05/2026	NHSX-030-5(249)--3H-85
U10	Utility clearance	05/05/2026	NHSX-030-5(249)--3H-85
D06	Final Grade Plans	05/05/2026	NHSX-030-5(249)--3H-85
L01	Letting-Grade	07/21/2026	NHSX-030-5(249)--3H-85
C02	Construction Period (Field Work)	11/19/2027	NHSX-030-5(249)--3H-85
RR01	Initial Railroad Concurrence Review	07/14/2023	NHSX-030-5(250)--3H-85
B01	Bridges and Structures Layout	11/03/2023	NHSX-030-5(250)--3H-85
RR02	Railroad Review of ROW Easement	06/14/2024	NHSX-030-5(250)--3H-85
RR03	Final Railroad Concurrence Point	11/15/2024	NHSX-030-5(250)--3H-85
S04	Soils Submittal to Bridge	05/02/2025	NHSX-030-5(250)--3H-85
RR04	Railroad Agreement	03/06/2026	NHSX-030-5(250)--3H-85
D04	Design Plans for Bridge	03/24/2026	NHSX-030-5(250)--3H-85
B03	Final Bridge Plans	05/05/2026	NHSX-030-5(250)--3H-85
L05	Letting-Bridge and Culverts	07/21/2026	NHSX-030-5(250)--3H-85
C02	Construction Period (Field Work)	11/19/2027	NHSX-030-5(250)--3H-85
ITS5	Final ITS Integration Plans	04/06/2027	ITS-030-5(301)--25-85
L16	Letting-ITS Integration	06/15/2027	ITS-030-5(301)--25-85
C02	Construction Period (Field Work)	09/30/2027	ITS-030-5(301)--25-85
U07	Utility Bid Attachment	10/05/2027	NHSX-030-5(251)--3H-85
D07	Final Pave Plans	10/05/2027	NHSX-030-5(251)--3H-85
L02	Letting-Paving and Incidentals	12/21/2027	NHSX-030-5(251)--3H-85
C02	Construction Period (Field Work)	11/17/2028	NHSX-030-5(251)--3H-85
TD07	Preliminary Plan Turn-In	08/31/2027	NHSX-030-5(252)--3H-85
TD10	Final Signing Plans	10/05/2027	NHSX-030-5(252)--3H-85
L10	Letting-Traffic Signs	12/21/2027	NHSX-030-5(252)--3H-85
C02	Construction Period (Field Work)	11/17/2028	NHSX-030-5(252)--3H-85
TD07	Preliminary Plan Turn-In	08/31/2027	NHSX-030-5(253)--3H-85
TD11	Final Lighting Plans	10/05/2027	NHSX-030-5(253)--3H-85
L11	Letting-Lighting	12/21/2027	NHSX-030-5(253)--3H-85
C02	Construction Period (Field Work)	11/17/2028	NHSX-030-5(253)--3H-85
ITS4	Final ITS Infrastructure Plans	10/05/2027	ITS-030-5(300)--25-85
L15	Letting-ITS Infrastructure	12/21/2027	ITS-030-5(300)--25-85
C02	Construction Period (Field Work)	10/31/2028	ITS-030-5(300)--25-85
DM5	Design Methods Turn-In	08/29/2028	NHSN-030-5(254)--2R-85
E01	Final Erosion Plans	10/03/2028	NHSN-030-5(254)--2R-85
L06	Letting-Erosion Control	12/19/2028	NHSN-030-5(254)--2R-85
C02	Construction Period (Field Work)	06/29/2029	NHSN-030-5(254)--2R-85

Story County  
 NHSX-030-5(321)—3H-85  
 13-85-030-010-01

Cc:		
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S. Passick	P. Flattery	K. Bell
A. Kiebel	A. Poole	B. Bradley
D. Blue	L. Armstrong	T. Quam



<b>Roadway</b>	610th Ave		
<b>PIN Number</b>	13-85-030-010-01	<b>Submittal Date</b>	
<b>Project Number</b>	NHSX-030-5(249)--3H-85		<b>Approval Date</b>
<b>District</b>	District 1	<b>Assistant District Engineer</b>	Allison Smyth
<b>County</b>	Story	or	
<b>Route</b>	US 30/610th Ave	<b>Office Director</b>	
<b>Location</b>	At the intersection of 610th Ave		
<b>Work Type</b>	Grade and New		
<b>Segment Manager</b>			
<b>Designer</b>			

[Design Manual Section 1C-1](#)  
[Last Updated: 04-29-19](#)

### Rural Two-Lane Highways (Rural Arterials)

Design Element	Preferred	Acceptable	Project Values		
Design speed (mph)	60	50	55	GB Section 7.2.2	
Maximum superelevation rate (Refer to Section <a href="#">2A-2</a> )	6%	8%	6	GB page 7-6	
Design lane width (ft)	12	12	12	GB table 7-3	
Full depth paved width (ft)	12	12	14	--	
Right turn lane (ft)	12	10	12	GB section 9.7.1	
Climbing Lane (ft)	12	12	12	GB page 3-141	
Left turn lane (ft)	12	10	NOTE 1	GB section 9.7.1	
Pavement cross-slope (on tangent sections)	Through lanes	2%	1.5% minimum, 2% maximum	2	GB page 7-6
	Auxiliary and turn lanes	3%	3% maximum	3	GB page 7-15
	Crown break at centerline	4%	4% maximum	4	GB page 4-6
Shoulder cross-slope (on tangent sections)	4%	Shoulder cross-slope cannot be less than the adjacent lane, 6% max for paved or granular shoulders, 8% max for earth shoulders		4	GB Section 4.4.3
Curb type (Refer to Section <a href="#">3C-2</a> )	Design speed = 50 or 55 mph	6-inch sloped	6-inch standard	NA	
	Design speed ≥ 60 mph	4-inch sloped	6-inch sloped	NA	
Foreslope (For fill areas greater than 40 ft, contact the Soils Design Section for assistance)	Adjacent to shoulder	10:1 for 4' then 6:1	3:1	10:1 for 4' then 6:1	
	Beyond standard ditch depth and design clear zone	3.5:1	3:1	3.5:1	RDG section 3.3.2
	Curbed roadways	2%	not steeper than 3:1	NA	
Backslope (For cut areas greater than 25 feet, contact the Soils Design Section for assistance with backslope benches.)	3:1	2.5:1	3:1	3:1	GB Section 4.8.4
Transverse Slopes	w/ drainage structures	8:1	6:1	8:1	RDG Section 3.2.3
	w/o drainage structures	10:1	6:1	10:1	
Ditches (Refer to Section <a href="#">3G-1</a> )	Outside ditch (depth x width) (ft)	5 x 10	--	5 x 10	--
Bridge width—new*	Bridge length ≤ 200 ft	design lane widths + effective shoulder widths	design lane widths + effective shoulder widths	NOTE 2	
	Bridge length > 200 ft	design lane widths + effective shoulder widths	design lane width + 4' right and left of the design lane widths	NOTE 2	GB Section 7.2.5
Bridge width—existing*		design lane widths + no less than 2 ft left and right	design lane widths + 2 ft. offset left and right		
Vertical clearance (ft) (above lanes, shoulders and 25 feet left and right of the center of railroad tracks)	Over primary	16.5	16	16.5	GB Section 7.2.5
	Over non-primary	16.5 at interchange locations, 15 at all other locations	14	16.5	GB pages 5-9 and 6-8
	Over railroad	23.3	23.3	NA	--
	Sign trusses and pedestrian bridges	17.5	17	NA	GB section 7.2.5
Structural Capacity	Contact Office of Bridges and Structures		Contact Office of Bridges and Structures		--
Level of Service	B	B	B	B	GB section 7.2.2

\*FHWA notification via email is required if acceptable criteria is not met on the NHS system (No formal design exception is required)



Design year ADT =

55

**Effective Shoulder Width and Type for Two-Lane Highways**

[Design Manual Section 1C-1](#)  
[Last Updated: 04-29-19](#)

	Preferred (values shown in feet)		Acceptable (values shown in feet)			Project Values	
	Rural Roadways	Urban Roadways	Rural Roadways	Urban Roadways			
Turn lanes with shoulders	6	6	Turn lanes with shoulders	6	0	6	GB section 9.7.1
Turn lanes with curbs	6	See Section <a href="#">3C-2</a>	Turn lanes with curbs	6	0	NA	GB section 9.7.1 and 4.7.3
	Effective Shoulder Width	Paved Width		Effective Shoulder Width	Paved Width		
Climbing Lanes	6	4	Climbing Lanes	4	0	6	GB page 3-141
Two-Lane Highways	Effective Shoulder Width	Paved Width	Two-Lane Highways	Effective Shoulder Width	Paved Width		
Routes where bicycles are to be accommodated	10	10	Design year ADT > 2000 vpd	8	0*	10	GB table 7-3
On roadways approaching urban areas (due to increased bike traffic)	10	10					
On all curves with a superelevation rate of 7.0% or greater	10	10					
On roadways with design year ADT > 5000	10	6	Design year ADT between 400 - 2000 vpd	6	0*		
On all other NHS	10	6					
On non-NHS routes with design year ADT > 3000	10	6	Design year ADT < 400 vpd	4	0*		
On non-NHS routes with design year ADT < 3000	8	0*					

\*Requires safety edge-Refer to Section [3C-6](#)

Curbs should be located beyond the outer edge of the effective shoulder width in rural areas

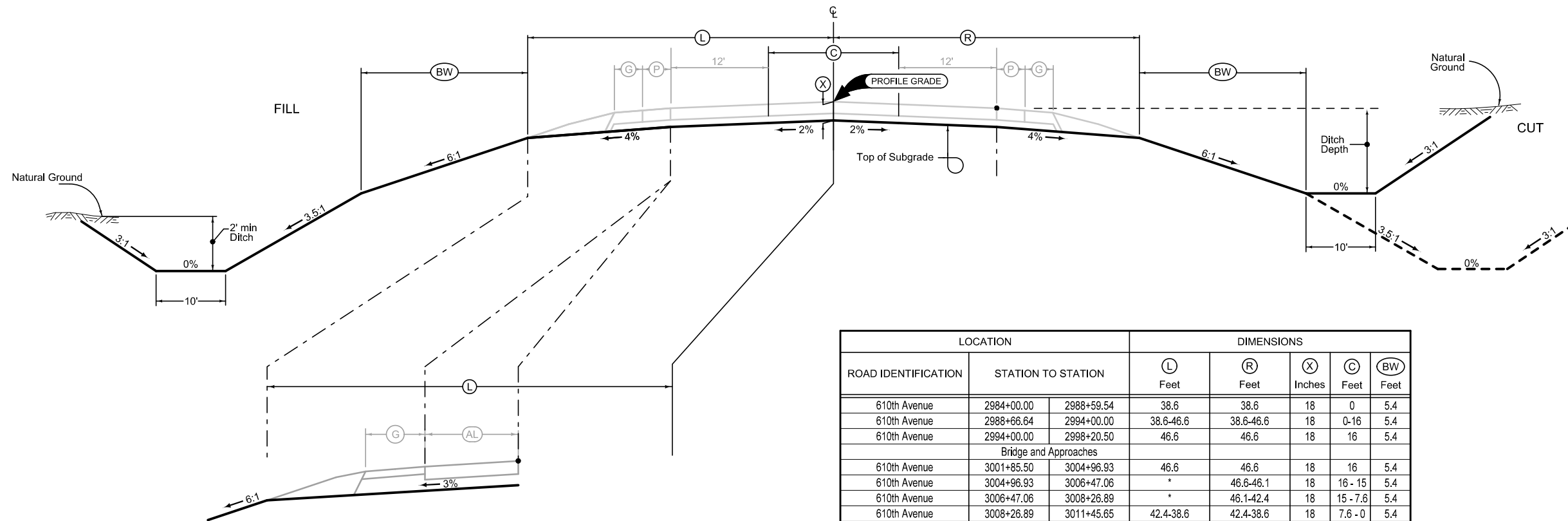
Refer to Section [3C-2](#) for curb offsets in urban areas

Notes:

1. Two way left turn lane = 14', else 12'. Painted Median Width = 4' (preferred) or 2' (acceptable)

2. Bridge width will be determined based on conceptual geometry of ramp terminal locations. (12+12+10+10 = 44) or (12+14+12+10+10 = 58)

Roadway Design Speed (mph) =		55		Design Criteria for High Speed Roadways													
<a href="#">Design Manual Section 1C-1</a> <a href="#">Last Updated: 04-29-19</a>																	
Design Element		Preferred Criteria						Acceptable Criteria						Project Values			
		Design Speed, mph						Design Speed, mph									
		50	55	60	65	70	75	50	55	60	65	70	75				
Stopping sight distance (ft) (Refer to Section <a href="#">6D-1</a> )		425	495	570	645	730	820	425	495	570	645	730	820	495	<a href="#">GB Table 3-1</a>		
Minimum horizontal curve radius (ft) (Refer to Sections <a href="#">2A-2</a> and <a href="#">2A-3</a> )	Method 5 superelevation and side friction distribution	e <sub>max</sub> = 6%		833	1060	1330	1660	2040	2500	833	1060	1330	1660	2040	2500	1060	<a href="#">GB Table 3-7</a>
		e <sub>max</sub> = 8%		--	--	--	--	--	--	--	758	960	1200	1480	1810	2210	NA
Minimum vertical curve length (ft) (Refer to Section <a href="#">2B-1</a> )		150	165	180	195	210	225	150	165	180	195	210	225	165	<a href="#">GB page 3-167</a>		
Minimum rate of vertical curvature (K) (Refer to Section <a href="#">2B-1</a> )	crest vertical curves		84	114	151	193	247	312	84	114	151	193	247	312	114	<a href="#">GB Table 3-35</a>	
	sag vertical curves	roadways without fixed-source lighting	96	115	136	157	181	206	96	115	136	157	181	206	115	<a href="#">GB Table 3-37</a>	
		roadways with fixed-source lighting	96	115	136	157	181	206	54	66	78	91	106	121	115	<a href="#">GB page 3-176</a>	
Minimum gradient (%) (Refer to Section <a href="#">2B-1</a> )		0.5						0.3% with a curb, 0.0% without a curb						0.5	<a href="#">GB page 3-130</a>		
Maximum gradient (%) (Refer to Section <a href="#">2B-1</a> )	Urban roadways		4		3				7	6	6	--	--	--	NA	<a href="#">GB Table 7-4a</a>	
	Rural roadways		4		3				5	5	4	4	4	4	4	4	<a href="#">GB Table 7-2</a>
	Interstates		4		3				5	5	4	4	4	4	4	4	<a href="#">IDG page 3</a>
Clear zone		See "Preferred Clear Zone" table in Section <a href="#">8A-2</a>						See "Acceptable Clear Zone" table in Section <a href="#">8A-2</a>						30			



LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION	L Feet	R Feet	X Inches	C Feet	BW Feet
610th Avenue	2984+00.00 - 2988+59.54	38.6	38.6	18	0	5.4
610th Avenue	2988+66.64 - 2994+00.00	38.6-46.6	38.6-46.6	18	0-16	5.4
610th Avenue	2994+00.00 - 2998+20.50	46.6	46.6	18	16	5.4
Bridge and Approaches						
610th Avenue	3001+85.50 - 3004+96.93	46.6	46.6	18	16	5.4
610th Avenue	3004+96.93 - 3006+47.06	*	46.6-46.1	18	16 - 15	5.4
610th Avenue	3006+47.06 - 3008+26.89	*	46.1-42.4	18	15 - 7.6	5.4
610th Avenue	3008+26.89 - 3011+45.65	42.4-38.6	42.4-38.6	18	7.6 - 0	5.4
610th Avenue	3011+45.65 - 3011+75.00	38.6	38.6	18	0	5.4

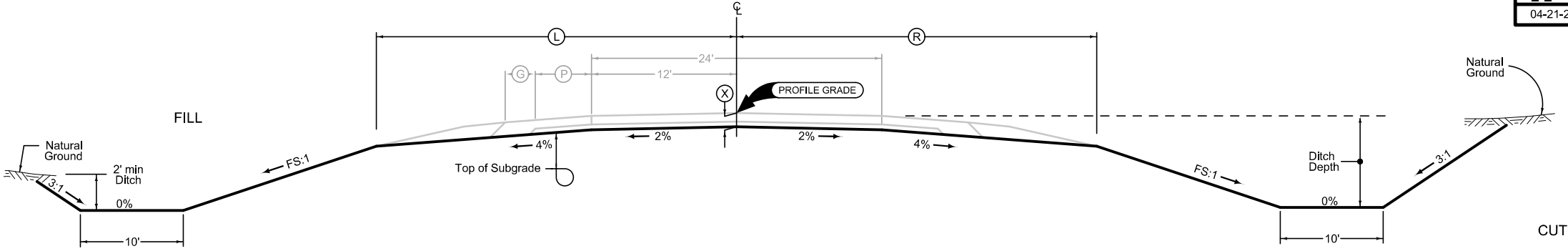
2 LANE GRADING (Barnroof Section)

Auxiliary Lane Grading

LOCATION		L Feet
ROAD IDENTIFICATION	STATION TO STATION	Feet
610th Avenue	3004+96.93 - 3006+47.06	58.6
	3006+47.06 - 3008+26.89	58.6-42.4

\* See Aux Lane

LOCATION		DIMENSIONS			
ROAD IDENTIFICATION	STATION TO STATION	L Feet	R Feet	X Inches	FS
West A Avenue	0+12.00 - 53+43.04	35.94	35.94	18	6
West Maple	4024+76.51 - 4026+64.51	35.94	35.94	18	6
Break for 610th Avenue					
West Maple	4026+88.51 - 4082+27.46	35.94	35.94	18	6

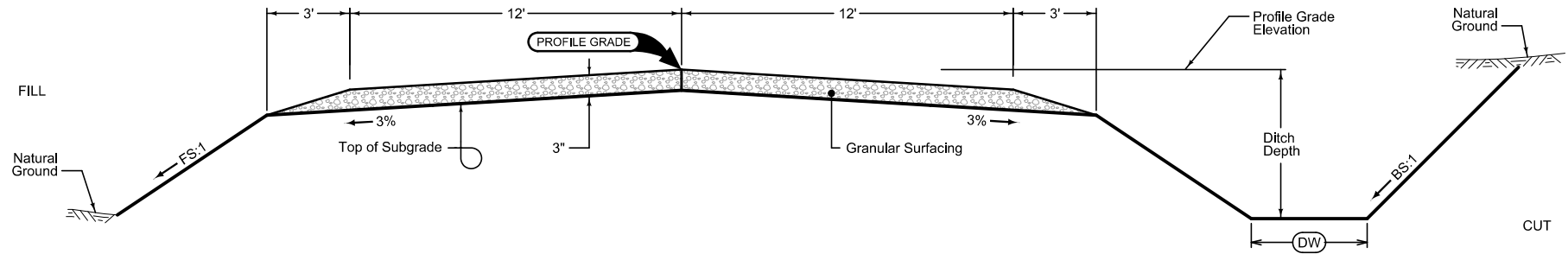


2 LANE GRADING

Normal section shown may be modified appropriately in areas of super-elevated curves or other locations specifically designated by the Engineer.  
See plan & profile sheets and cross sections for additional details of ditches and backslopes.

LOCATION		DIMENSIONS				
ROAD IDENTIFICATION	STATION TO STATION	FS	BS	DW Feet	Granular Surfacing Ton	
610th Avenue	2982+75.00 2984+00.00	3	3	10	xx	
TOTAL:					xx	

G\_2\_GradeGran  
10-17-17



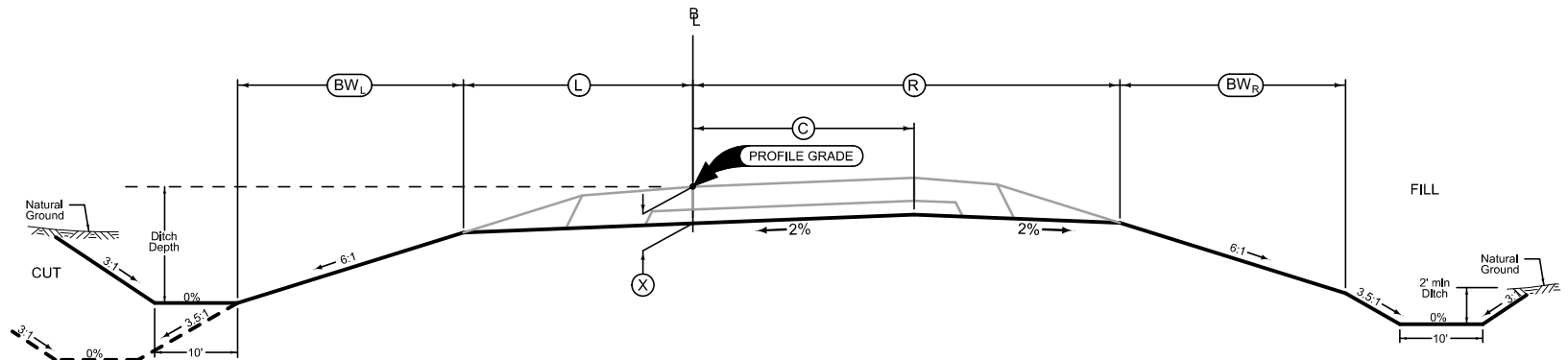
**GRADING AND GRANULAR SURFACING**

Normal section shown may be modified appropriately in areas of superelevated curves or other locations specifically designated by the Engineer.

See plan & profile sheets and cross sections for additional details of ditches and backslopes.

LOCATION			DIMENSIONS						
INTERCHANGE	RAMP/LOOP	STATION TO STATION	L Feet	R Feet	C Feet	X Inches	BW <sub>L</sub> Feet	BW <sub>R</sub> Feet	
610th Ave	A	1499+24.46 1516+75.00	32.6	18.6	16	22	18	17.5	
610th Ave	C	3595+53.66 3607+53.76	32.6	18.6	16	22	18	17.5	

G\_Ramp\_1

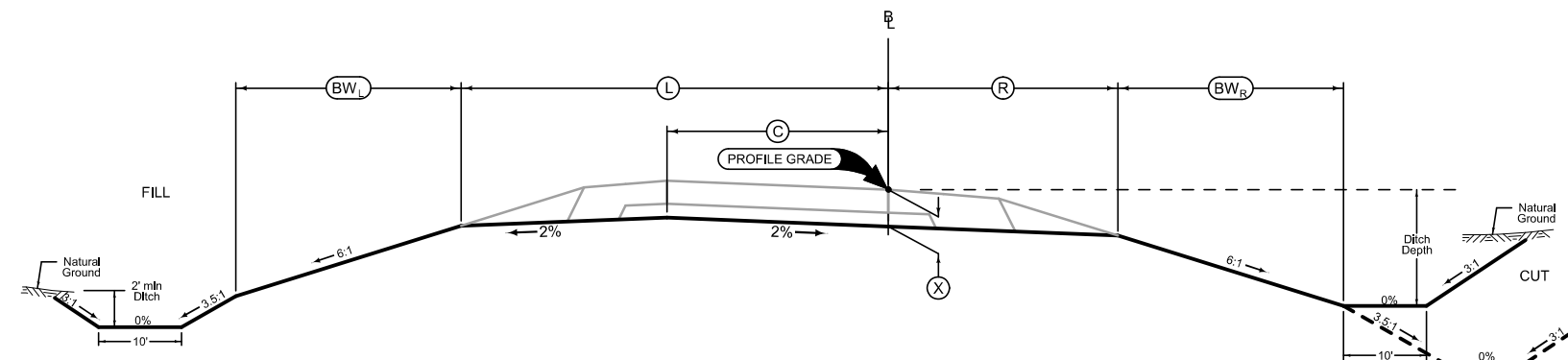


**RAMP GRADING**

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.

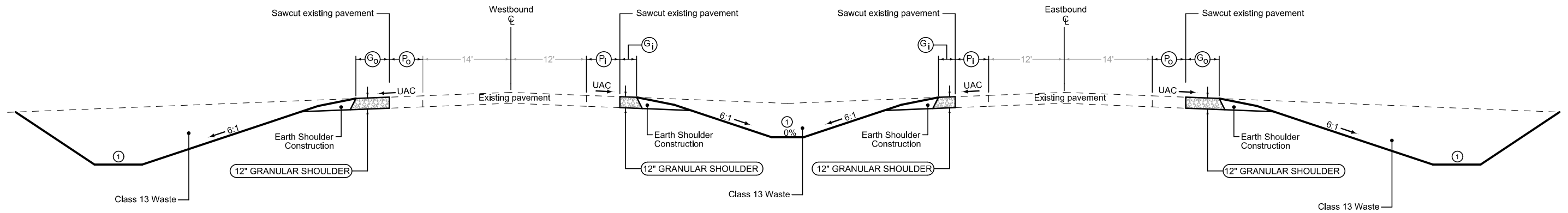
LOCATION			DIMENSIONS						
INTERCHANGE	RAMP	STATION TO STATION	L Feet	R Feet	C Feet	X Inches	BW <sub>L</sub> Feet	BW <sub>R</sub> Feet	
610th Ave	B	2594+75.00 2607+56.28	32.6	18.6	16	22	18	17.5	
610th Ave	D	4500+11.53 4512+23.44	32.6	18.6	16	22	18	17.5	

G\_Ramp\_2



**RAMP GRADING**

Normal sections shown may be appropriately modified for areas specifically designated by the Engineer such as intersections or superelevated curves.



**Combination Shoulder**

4_C_10-19-10					
Direction of Travel	BEGIN STATION	END STATION	P <sub>0</sub> Feet	G <sub>0</sub> Feet	
WB	1499+81.68	1501+40.75	4	4	
WB	1582+75.00	1595+55.00	4	4	
WB	A 2016+75.00	A 2023+25.00	4	4	

**Combination Shoulder**

4_C_10-19-10					
Direction of Travel	BEGIN STATION	END STATION	P <sub>1</sub> Feet	G <sub>1</sub> Feet	
EB	1497+04.61	1501+98.80	4	2	
EB	1550+50.39	1554+56.38	4	2	
EB	1599+38.13	A 2000+86.26	4	2	
WB	1499+84.67	1503+64.44	4	2	
WB	1552+88.99	1556+69.70	4	2	
WB	1605+25.00	A 2003+85.00	4	2	

**Combination Shoulder**

4_C_10-19-10					
Direction of Travel	BEGIN STATION	END STATION	P <sub>0</sub> Feet	G <sub>0</sub> Feet	
EB	1588+25.00	1594+75.00	4	4	
EB	1604+34.14	A 2000+88.59	4	4	
EB	A 2012+18.64	A 2025+45.08	4	4	

Notes:  
 ① Shape ditch to drain.

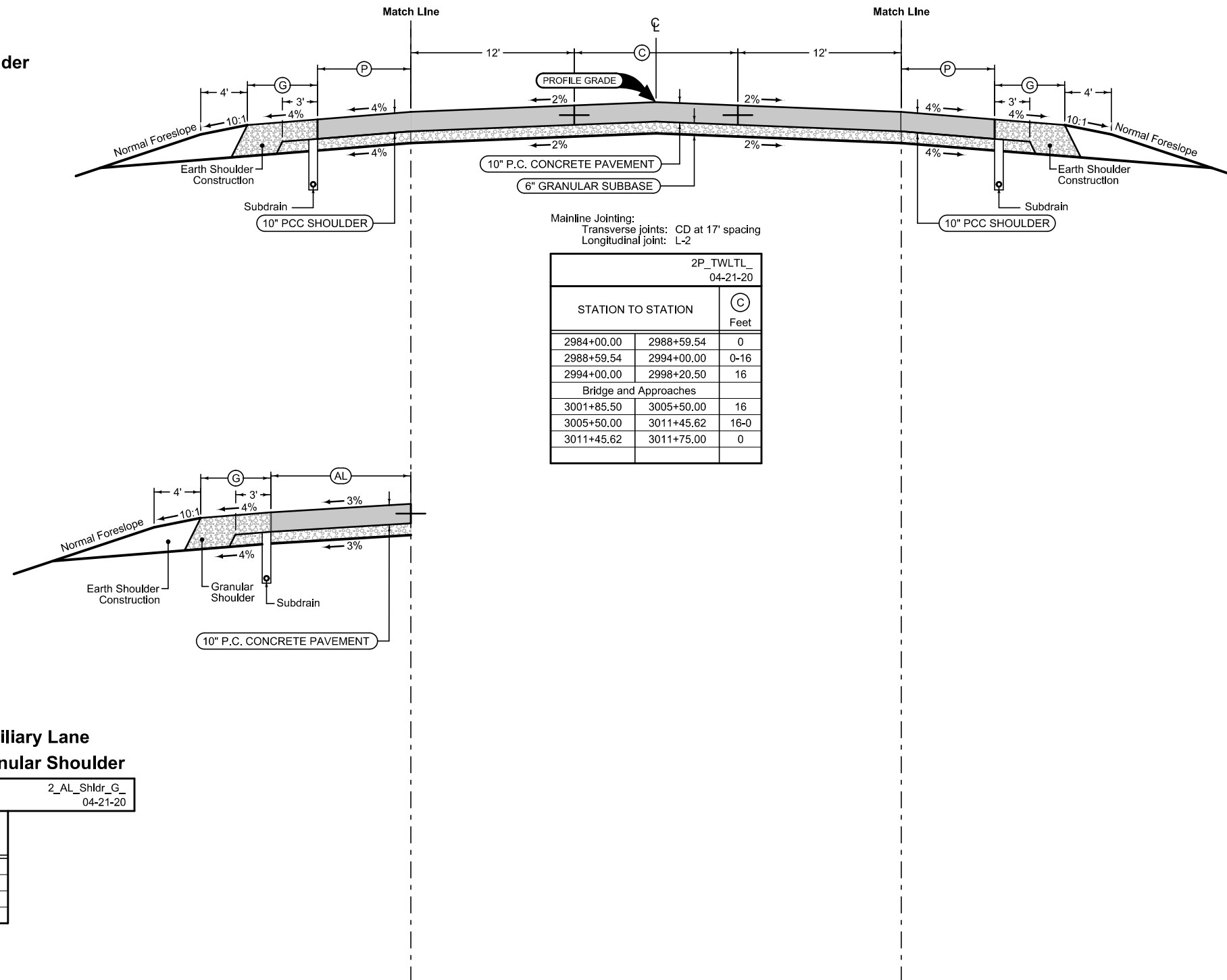
See Tab 112-9 for shoulder quantities.

**US 30**

### Full Depth PCC Combination Shoulder

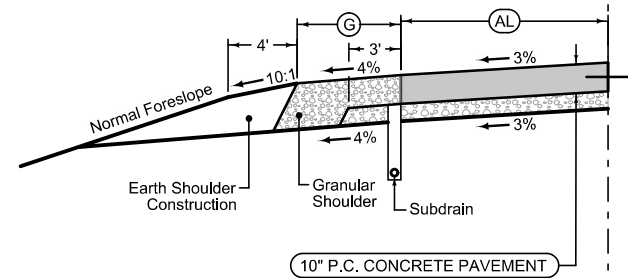
Shoulder Jointing:  
 Longitudinal joint: BT-2, L-2 or KT-2  
 Transverse joints: C at 17' spacing

2_C_FullPCC_04-20-21			
STATION TO STATION	(P) Feet	(G) Feet	
2984+00.00	2998+20.50	6	4
Bridge and Approaches			
3001+85.50	3004+96.93	6	4
3008+26.89	3011+75.00	6	4



Mainline Jointing:  
 Transverse joints: CD at 17' spacing  
 Longitudinal joint: L-2

2P_TWLT_04-21-20		
STATION TO STATION	(C) Feet	
2984+00.00	2988+59.54	0
2988+59.54	2994+00.00	0-16
2994+00.00	2998+20.50	16
Bridge and Approaches		
3001+85.50	3005+50.00	16
3005+50.00	3011+45.62	16-0
3011+45.62	3011+75.00	0



### Auxiliary Lane

Longitudinal joint: L or KT  
 Transverse joint: Match Mainline

2_AuxLane_PCC_10-18-16			
STATION TO STATION	(AL) Feet	(G) Feet	
3004+96.93	3006+47.06	12	6
3006+47.06	3007+37.04	12-6	6
3007+37.04	3008+26.89	6	4

### Auxiliary Lane

### Granular Shoulder

2\_AL\_Shldr\_G\_04-21-20

### Full Depth PCC Combination Shoulder

Shoulder Jointing:  
 Longitudinal joint: BT-2, L-2 or KT-2  
 Transverse joints: C at 17' spacing

2_C_FullPCC_04-20-21			
STATION TO STATION	(P) Feet	(G) Feet	
2984+00.00	2998+20.50	6	4
Bridge and Approaches			
3001+85.50	3011+75.00	6	4

See Tab 100-24 for pavement quantities.

See Tab 112-9 for shoulder quantities.

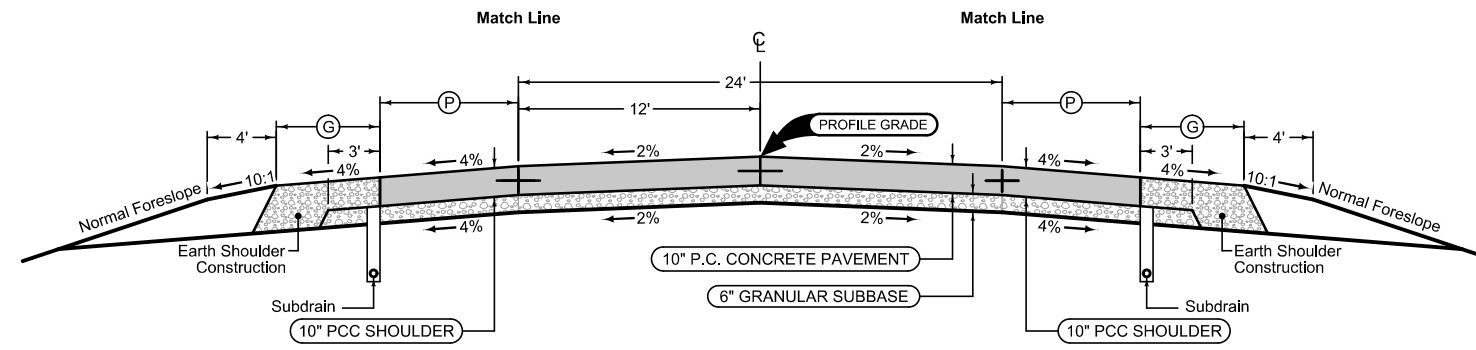
## 610th Avenue

**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: BT-2, L-2 or KT-2  
 Transverse joints: C at 17' spacing

4\_C\_FullPCC\_04-20-21

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
West A Avenue	WB	0+12.00	53+43.04	6	4
West Maple	WB	4024+76.51	4082+27.46	6	4



**Full Depth PCC Combination Shoulder**

Shoulder Jointing:  
 Longitudinal joint: BT-2, L-2 or KT-2  
 Transverse joints: C at 17' spacing

4\_C\_FullPCC\_04-20-21

ROAD IDENTIFICATION	Direction of Travel	BEGIN STATION	END STATION	(P) Feet	(G) Feet
West A Avenue	EB	0+12.00	53+43.04	6	4
West Maple	EB	4024+76.51	4082+27.46	6	4

Mainline Jointing:  
 Transverse joints: CD at 17' spacing  
 Longitudinal joint: L-2

2P\_04-21-20

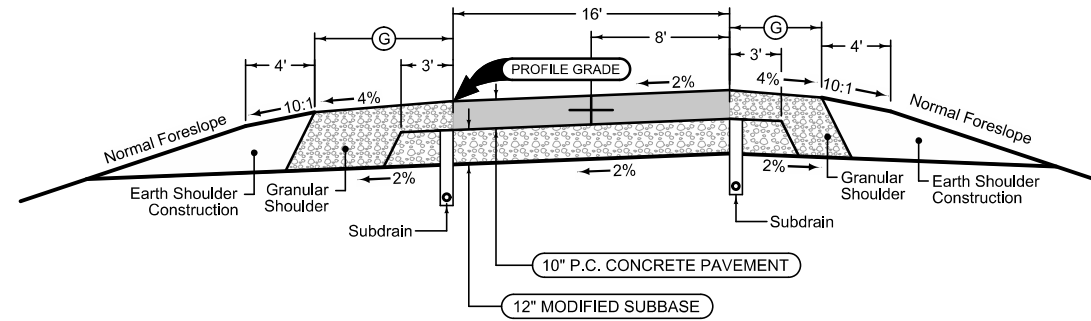
ROAD IDENTIFICATION	STATION TO STATION	
West A Avenue	0+12.00	53+43.04
West Maple	4024+76.51	4082+27.46

See Tab 100-24 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**West A Avenue and West Maple**

**Granular Shoulder**

		2_G_
		10-21-14
STATION TO STATION		Ⓞ
		Feet
1499+24.46	1516+75.00	6



**Granular Shoulder**

		2_G_
		10-21-14
STATION TO STATION		Ⓞ
		Feet
1499+24.46	1516+75.00	4

Ramp Jointing:  
 Transverse joints: CD at 15' spacing.  
 Longitudinal joints: L-2

1RP_	
10-17-17	
BEGIN STATION	END STATION
1499+24.46	1516+75.00

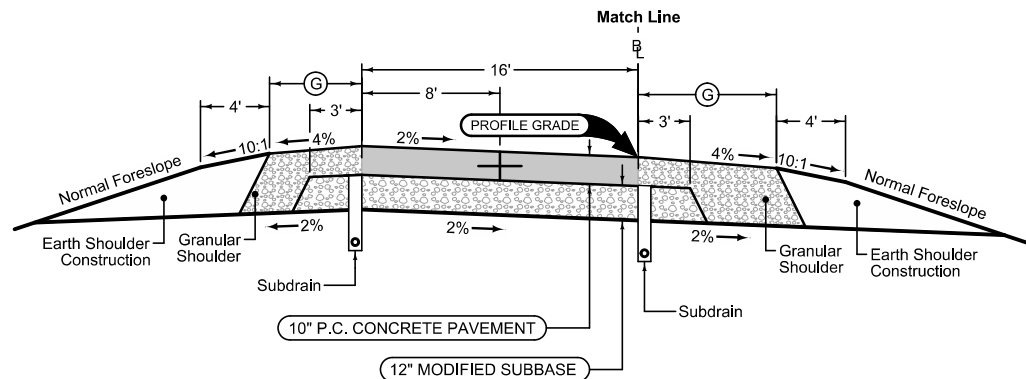
See Tab 100-24 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 30/610th Avenue  
 Ramp A**



**Granular Shoulder**

2_G_		
10-21-14		
STATION TO STATION		Ⓞ
		Feet
2594+75.00	2607+56.28	4



**Granular Shoulder**

2_G_		
10-21-14		
STATION TO STATION		Ⓞ
		Feet
2594+75.00	2607+56.28	6

Ramp Jointing:  
 Transverse joints: CD at 15' spacing.  
 Longitudinal joints: L-2

1RP_	
10-17-17	
BEGIN STATION	END STATION
2594+75.00	2607+56.28

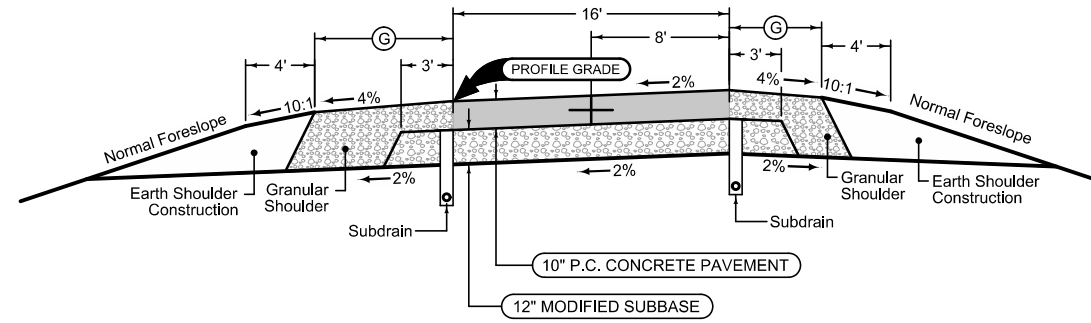
See Tab 100-24 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 30/610th Avenue  
 Ramp B**

**Full Depth PCC Shoulder**

Shoulder Jointing:  
 Longitudinal joint: L-2 or KT-2  
 Transverse joints: C at 15' spacing

2_P_FullPCC_10-19-10		
STATION TO STATION		(P) Feet
3595+53.66	3607+53.81	6



Ramp Jointing:  
 Transverse joints: CD at 15' spacing.  
 Longitudinal joints: L-2

1RP_10-17-17	
BEGIN STATION	END STATION
3595+53.66	3607+53.81

**Full Depth PCC Shoulder**

Shoulder Jointing:  
 Longitudinal joint: L-2 or KT-2  
 Transverse joints: C at 15' spacing

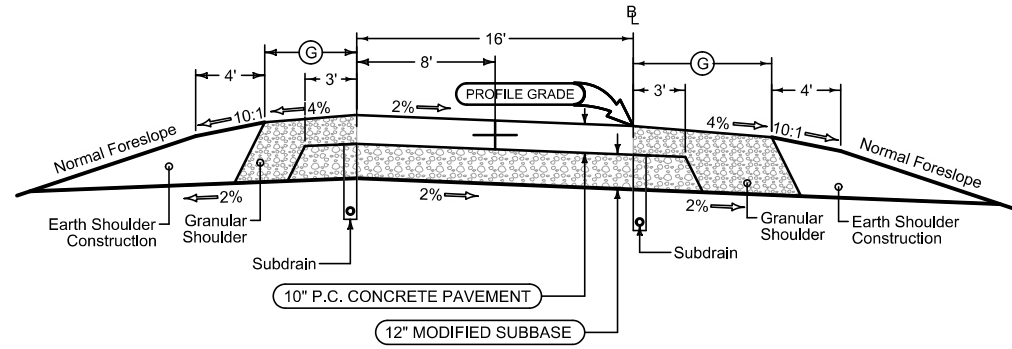
2_P_FullPCC_10-19-10		
STATION TO STATION		(P) Feet
3595+53.66	3607+53.81	4

See Tab 100-24 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 30/610th Avenue  
 Ramp C**

**Granular Shoulder**

2_G_		
10-21-14		
STATION TO STATION		Ⓞ
		Feet
4500+13.53	4512+23.44	4



**Granular Shoulder**

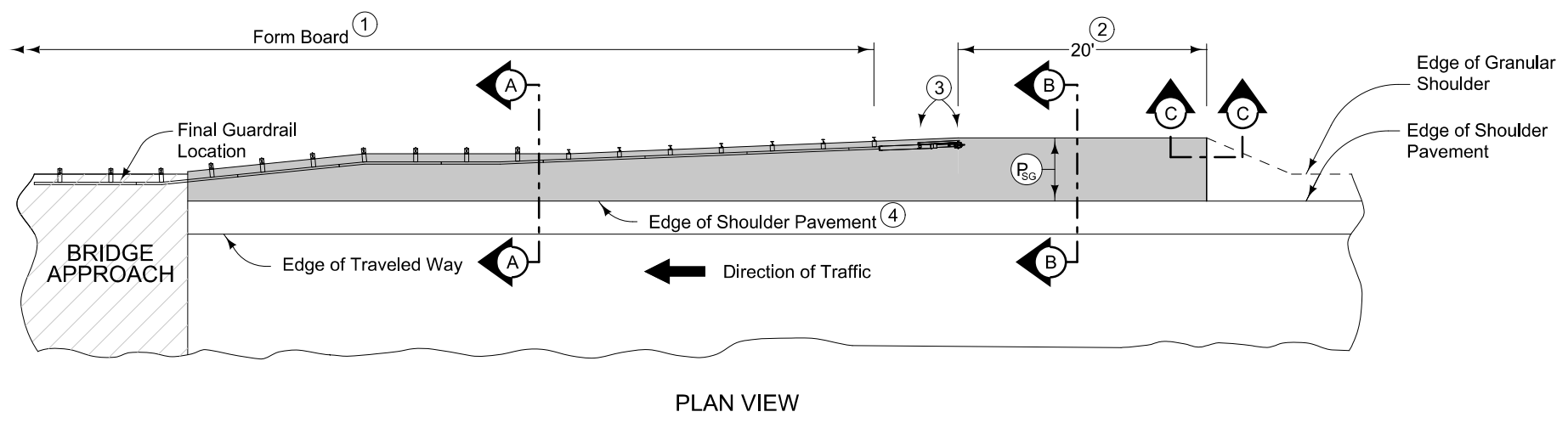
2_G_		
10-21-14		
STATION TO STATION		Ⓞ
		Feet
4500+13.53	4512+23.44	6

Ramp Jointing:  
 Transverse joints: CD at 15' spacing.  
 Longitudinal joints: L-2

1RP_	
10-17-17	
BEGIN STATION	END STATION
4500+13.53	4512+23.44

See Tab 100-24 for pavement quantities.  
 See Tab 112-9 for shoulder quantities.

**US 30/610th Avenue  
 Ramp D**

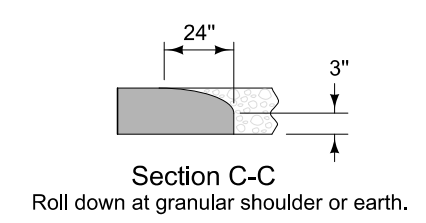
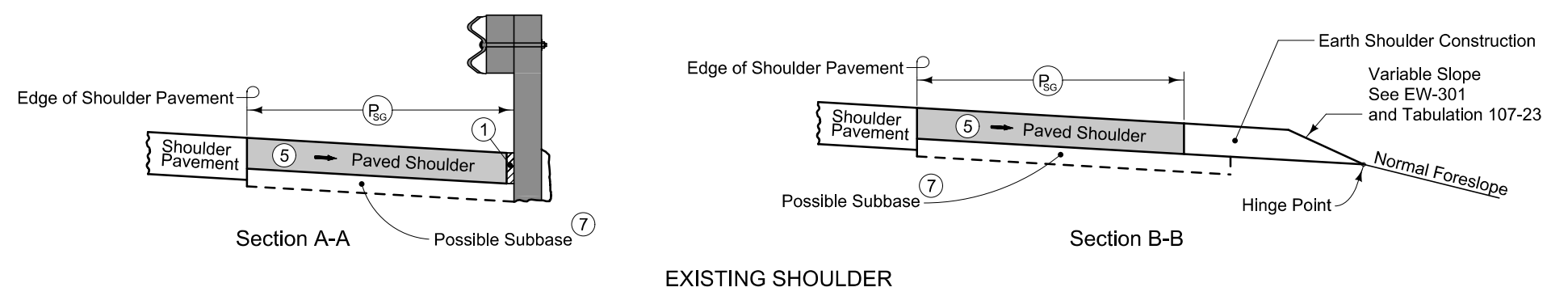
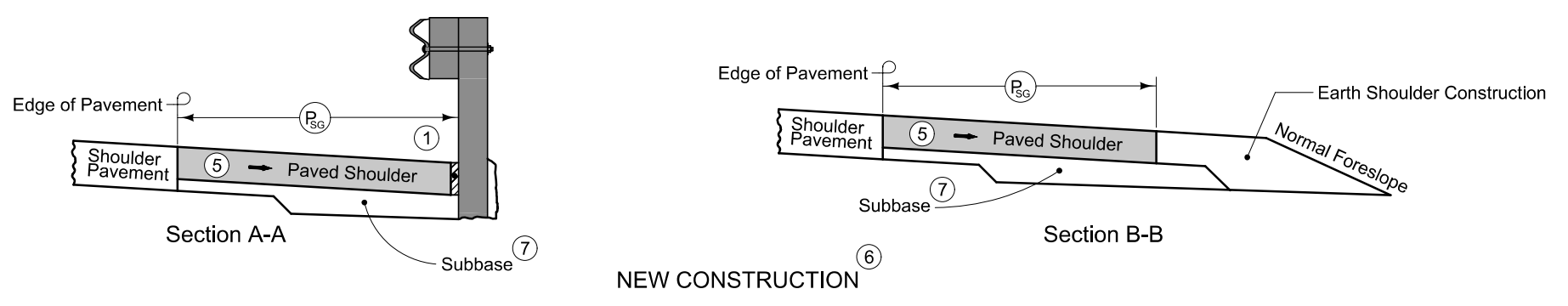


8" PCC Paved Shoulder at guardrail with the following jointing layout:

Match mainline pavement joint spacing. When mainline pavement is 8" or greater in thickness, place additional transverse 'C' joints in shoulder at mid-panel of the mainline pavement. Place longitudinal 'C' joint at P/2 from edge of mainline pavement when P is greater than 10' wide. Terminate longitudinal joint at transverse joint less than 10' in length.

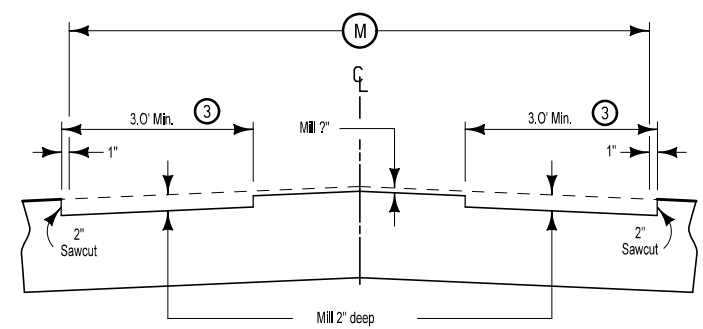
Refer to Tabulation 112-9 for shoulder quantities.

- ① When guardrail posts are installed prior to construction of PCC paved shoulder, fasten form board to the face of guardrail posts for the length shown.
- ② Continue paved shoulder 20 feet beyond the center of the first post.
- ③ Shoulder may be notched for first 2 posts or post sleeves may be installed through pavement. Do not drive posts through pavement.
- ④ 'KT' joint (per PV-101) for PCC shoulder.
- ⑤ Match shoulder slope.
- ⑥ The Contractor has the option to pave the paved shoulder at guardrail and the partial width paved shoulder as one operation.
- ⑦ Refer to other details in the plan.

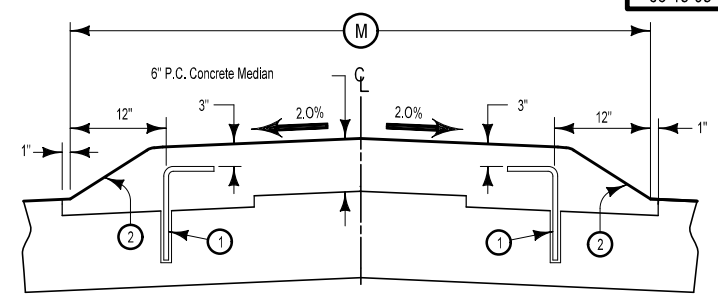


PAVED SHOULDER AT GUARDRAIL  
(ADJACENT TO PARTIAL WIDTH PAVED SHOULDER)

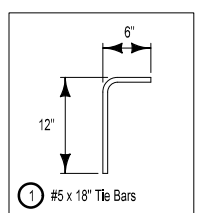
6150  
06-15-93



Details of Milling



Details of Median Placement

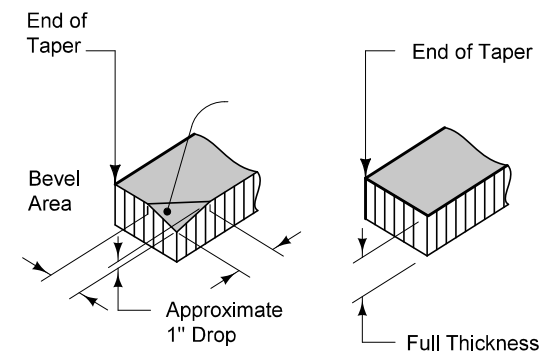


- ② 6" Sloped Curb
- ③ The contractor has the option to mill 2" across the total width of 'M'.

DOWELED MEDIAN WITH SLOPED CURB

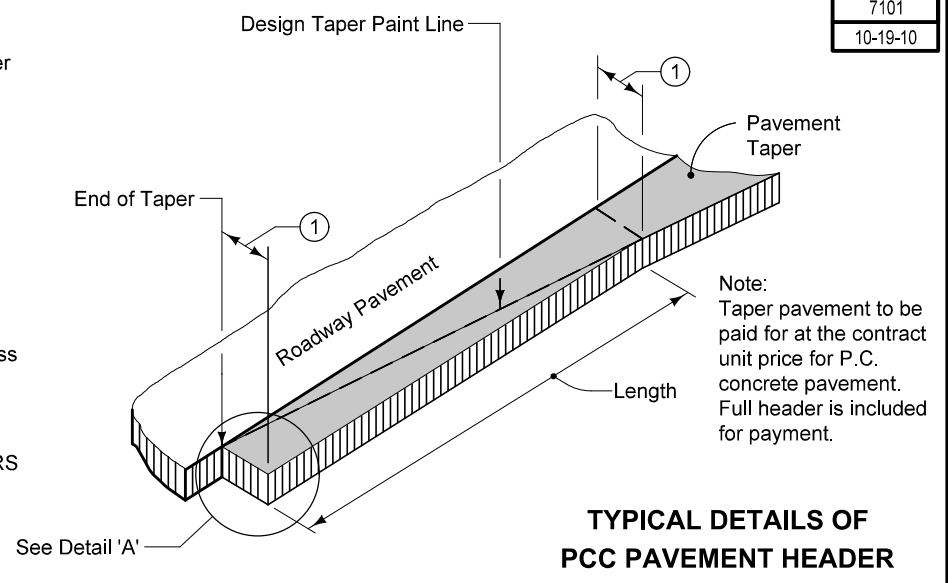
Notes:  
This section may be appropriately modified in areas specifically designated by the Engineer.  
Use 'C' joints in the doweled median and match the location of all transverse and longitudinal joints to the joints in the existing pavement.  
Place tie bars at 24" C-C longitudinal spacing between joints in existing pavement.  
Drill 1/4" holes for tie bars and epoxy to new pavement. See Tabulation 112-5 for additional details. Epoxy material shall be as specified in Materials IM491.11, appendix C.

7101  
10-19-10



DETAIL 'A' FOR GRANULAR SHOULDERS  
DETAIL 'A' FOR PAVED SHOULDERS

① Normal width is 2'-0". Construct 4'-0" width when butting into 4' wide HMA shoulders (See Typical 7154A).



TYPICAL DETAILS OF PCC PAVEMENT HEADER

### SURVEY SYMBOLS

- Interstate Highway Symbol
- U.S. Highway Symbol
- Iowa Highway Symbol
- County Road Highway Symbol
- Evergreen Tree
- Deciduous Tree
- Fruit Tree
- Shrub (Bushes)
- Timber
- Hedge
- Stump
- Swamp
- Rock Outcrop
- Broken Concrete
- Revetment (Rip Rap)
- Cemetery
- Grave
- Cave
- Sink Hole
- Board Fence
- Chain Link or Security Fence
- Wire Fence
- Terrace
- Earth Dam or Dike (Existing)
- Tile Outlet
- Edge of Water
- Existing Drainage
- Right of Way Rail or Lot Corner
- Concrete Monument
- Well
- Windmill
- Beehive Intake
- Existing Intake
- Existing Utility Access (Manhole)
- Fire Hydrant
- Water Hydrant (Rural)
- Septic Tank
- Cistern
- L.P. Gas Tank (No Footing)
- Underground Storage Tank
- Latrine
- Satellite TV Dish
- Water Hook Up
- Radio Tower
- Tower Anchor
- Guardrail (Beam or Cable)
- Guard Post (one or two)
- Guard Post (over two)
- Filler Pipe
- Gas Valve
- Water Valve
- Speed Limit Sign
- Mile Marker Post
- SIGN Sign
- TCB Traffic Signal Control Box
- RRB Rail Road Signal Control Box
- TSB Telephone Switch Box
- EB Electric Box

### UTILITY LEGEND

Sub-Surface Utility Mapping Quality Level is in accordance with C/ASCE 38-02 Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data.

Remark Abbreviations  
 QLA Quality Level A Highest guideline quality level  
 QLD Quality Level D Lowest guideline quality level

- Alliant
- E2 Alliant
- F02 Colo Telephone Co. - Quality D
- F06 ICN - Quality D
- F07 Windstream - Quality D
- F09 Centurylink - Quality D
- F010 AT&T Transmission - Quality D
- W Iowa Regional Utility Association - Quality D
- G Alliant - Quality D
- TV Mediacom - Quality D
- E1(B) EL1B, Consumers Energy - Quality B
- E2(B) EL2B, City of Nevada - Quality B
- F0(B) FO1B, WITel - Quality B
- F02(B) FO2B, Verizon/MCI - Quality B
- F03(B) FO3B, Iowa Communication Network - Quality B
- F04(B) FO4B, Colo Telephone - Quality B
- F05(B) FO5B, Windstream - Quality B
- G(B) GL1B, Alliant Energy - Quality B
- G2(B) GH2B, Magellan - Quality B
- G3(B) GH3B, Flint Hills Resources - Quality B
- T TL1D, Century Link-Lumen - Quality D
- W WL1D, Iowa Regional Utilities Association - Quality D

### PLAN VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(2)		Existing Topographic Features and Labels
Blue	(1)		Proposed Alignment, Stationing, Tic Marks, and Alignment Annotation
Magenta	(5)		Existing Utilities
SHADING		Design Color No.	
Lavender	(9)		Temporary Pavement Shading
Yellow	(4)		Proposed Pavement Shading
Orange	(6)		Proposed Granular Shading
Orange	(70)		Proposed Shoulder Granular Shading
Yellow	(68)		Proposed Shoulder Paved Full Depth Shading
Yellow	(132)		Proposed Shoulder Paved Partial Depth Shading
Gray, Dark	(112)		Proposed Grade and Pave Shading "In conjunction with a paving project"
Brown, Light	(236)		Grading Shading
Orange, Light	(134)		Proposed Granular Entrance Shading
Yellow	(220)		Proposed Paved Entrance Shading
Tan	(8)		Proposed Sidewalk Shading
Blue, Light	(230)		Proposed Sidewalk Landing Shading
Pink	(11)		Proposed Sidewalk Ramp Shading
Green, Light	(225)		Existing Pavement Shading
Red	(3)		Proposed Structure Shading
Red	(3)		Delineates Restricted Areas

### PROFILE VIEW COLOR LEGEND OF PLAN AND PROFILE SHEETS

LINEWORK		Design Color No.	
Green	(10)		Existing Ground Line Profile
Blue	(1)		Proposed Profile and Annotation
Magenta	(5)		Existing Utilities
Blue, Light	(230)		Proposed Ditch Grades, Left
Black	(0)		Proposed Ditch Grades, Median
Rust	(14)		Proposed Ditch Grades, Right

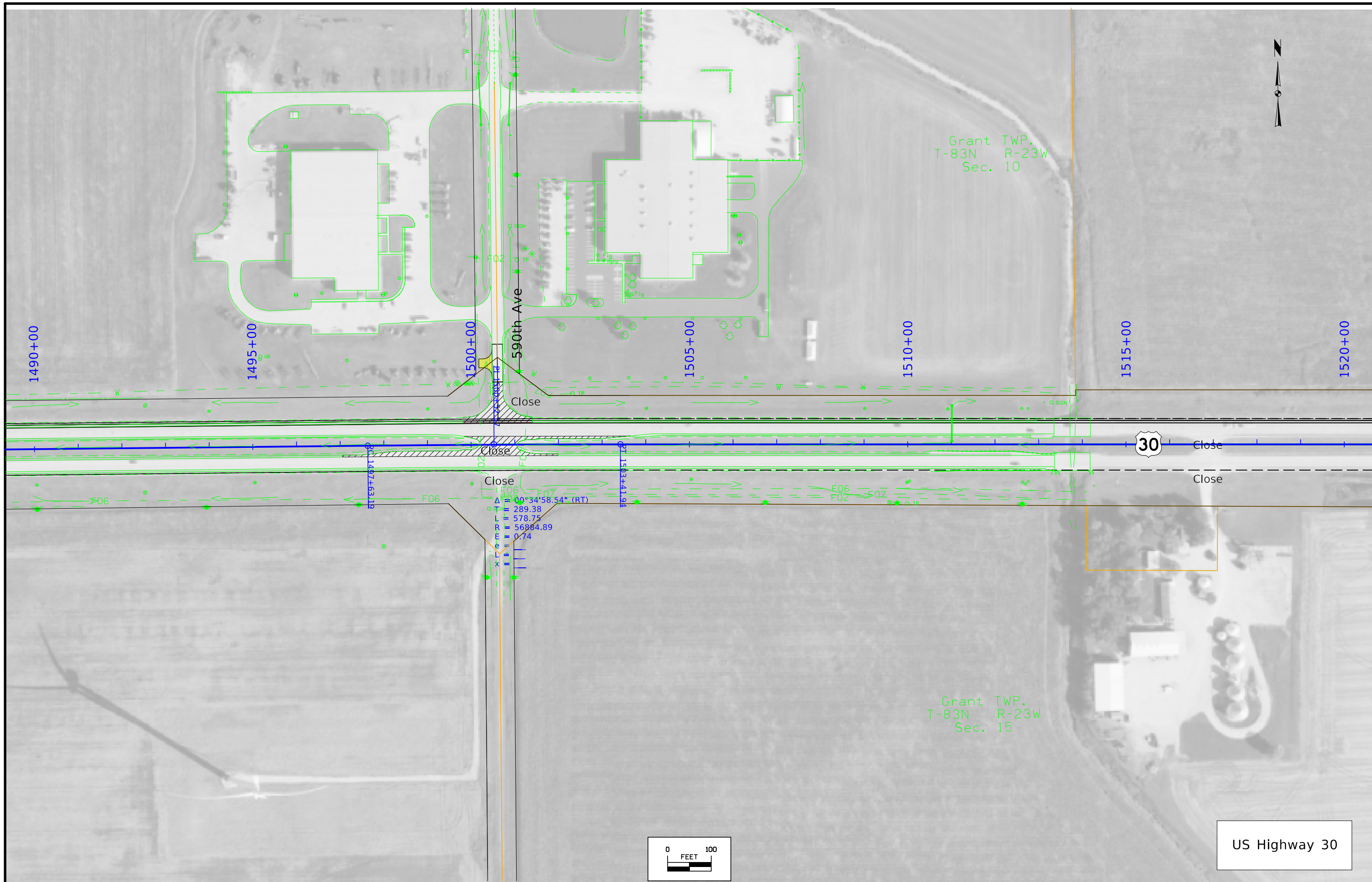
- Reference Point
- Station
- Section Corner
- Ground Line Intercept
- Saw Cut
- Guardrail
- Trench Drain
- HighTension Cable Guardrail
- Sheet Pile
- Pavement Removal
- Clearing & Grubbing Area

### RIGHT-OF-WAY LEGEND

- Proposed Right-of-Way
- Existing Right of Way
- Existing and Proposed Right-of-Way
- Easement and Existing Right-of-Way
- Easement (Temporary)
- Easement
- Access Control
- Property Line

## PLAN AND PROFILE LEGEND AND SYMBOL INFORMATION SHEET

(COVERS SHEET SERIES D, E, F, & K)





Grant TWP.  
T-83N R-23W  
Sec. 10

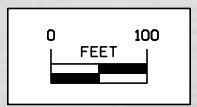
1520+00 1525+00 1530+00 1535+00 1540+00 1545+00 1550+00

Sta. 1550+00  
D.A. =

Sta. 1550+00  
24" X 154"  
D.A. = 12'



Grant TWP.  
T-83N R-23W  
Sec. 15



US Highway 30



Grant TWP.  
T-83N R-23W  
Sec. 11

Sect. No. 11



600th Ave

UAC  
15' X 29' C.M.P.

1550+00 1555+00 1560+00 1565+00 1570+00 1575+00 1580+00

Sta. 1553+93.90, 111.4 Lt.  
24" X 64' C.M.P.  
D.A. = 9 ACRES F

UAC  
Sta. 1553+93.90, 111.4 Lt.  
24" X 64' C.M.P.  
D.A. = 9 ACRES F

30

Sta. 1550+85.63  
24" X 154' Conc Pipe  
D.A. = 12 ACRES F

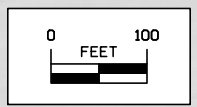
Sta. 1557+03.94, 11.10 Lt.  
18" X 64' Conc Pipe  
D.A. = Median Only - F

Sta. 1550+85.63  
24" X 154' Conc Pipe  
D.A. = 12 ACRES F

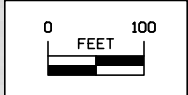
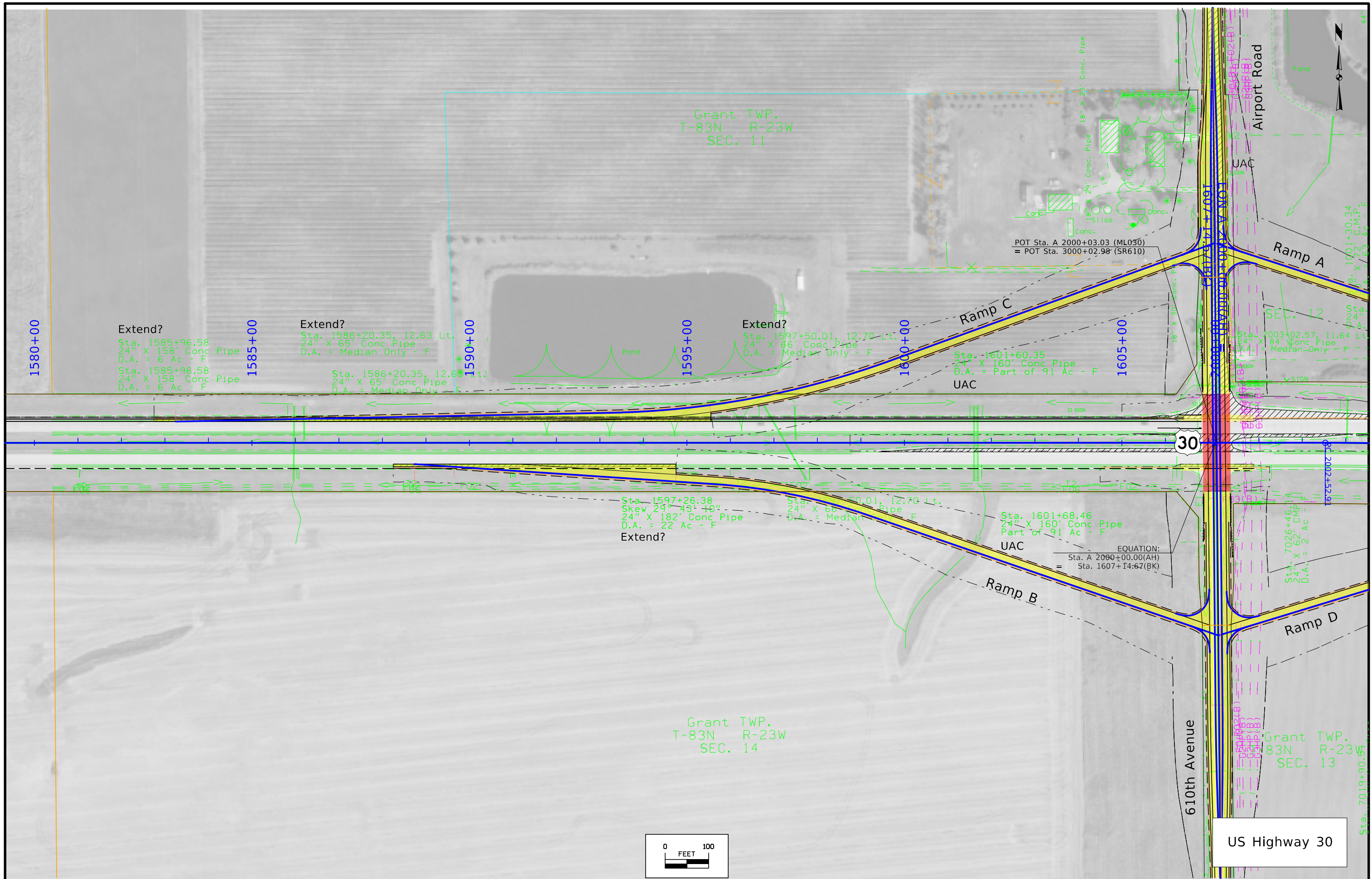
600th Ave

Grant TWP.  
T-83N R-23W  
Sec. 14

Sect. No. 14



US Highway 30



US Highway 30

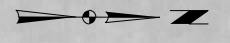
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7/19/2023	mjack	Flattery\Bell\Kiebel		NHSX-030-5(321)--3H-85	D.5

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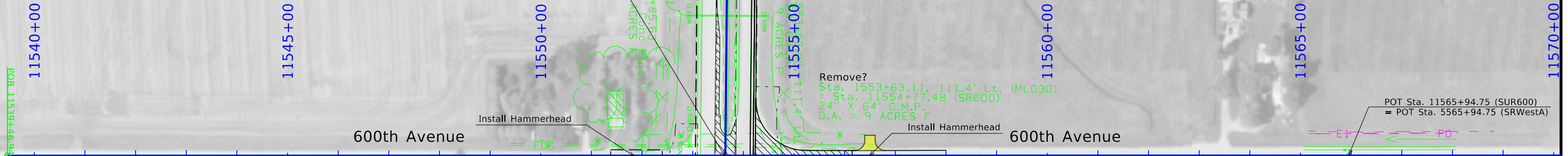


FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER D.6
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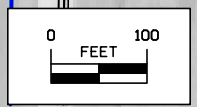
Grant TWP.  
T-83N R-23W  
Sec. 15

Grant TWP.  
T-83N R-23W  
Sec. 10



Grant TWP.  
T-83N R-23W  
Sec. 14

Grant TWP.  
T-83N R-23W  
Sec. 11

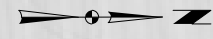


600th Avenue  
(For Information Only)



Grant TWP.  
T-83N R-23W  
SEC. 14

Grant TWP.  
T-83N R-23W  
SEC. 14



2975+00

2980+00

2985+00

2990+00

2995+00

3000+00

Sta. 2982+75.00 (SR610)  
Begin Construction

POT Sta. 2985+68.05 (SR610)  
= POT Sta. 4026+76.51 (SRMAPLE)

POT Sta. 2995+60.04 (SR610)  
= POT Sta. 2607+77.49 (RMP610B)  
= POT Sta. 4499+90.70 (RMP610D)

Remove  
Sta. 1001+30.34 (SURAIRP)  
Sta. 3001+33.31 (SR610)  
X 72' C.M.P.  
= 63 Ac - F

610th Avenue

610th Avenue

18" X 30" Conc. Pipe

F02(B)  
G2HP(B)  
G3HP(B)

G50(B)  
G2HP(B)  
G3HP(B)

G15(B)  
G2HP(B)  
G3HP(B)

Remove  
Sta. 7019+90.51 (SUR610THAVE)  
= Sta. 2997+47.97 (SR610)  
24" X 37' Conc Pipe  
D.A. = 28 Ac - F

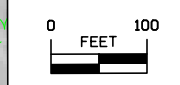
Remove  
Sta. 7026+46.14 (SUR610THAVE)  
= Sta. 2999+03.58 (SR610)  
24" X 62' CMP  
D.A. = 2 Ac - F

POT Sta. 3000+03.03 (SR610)  
= POT Sta. A 2000+03.03 (ML030)

15" X 30" Conc. Pipe

Grant TWP.  
T-83N R-23W  
SEC. 13

Grant TWP.  
T-83N R-23W  
SEC. 13



610th Avenue



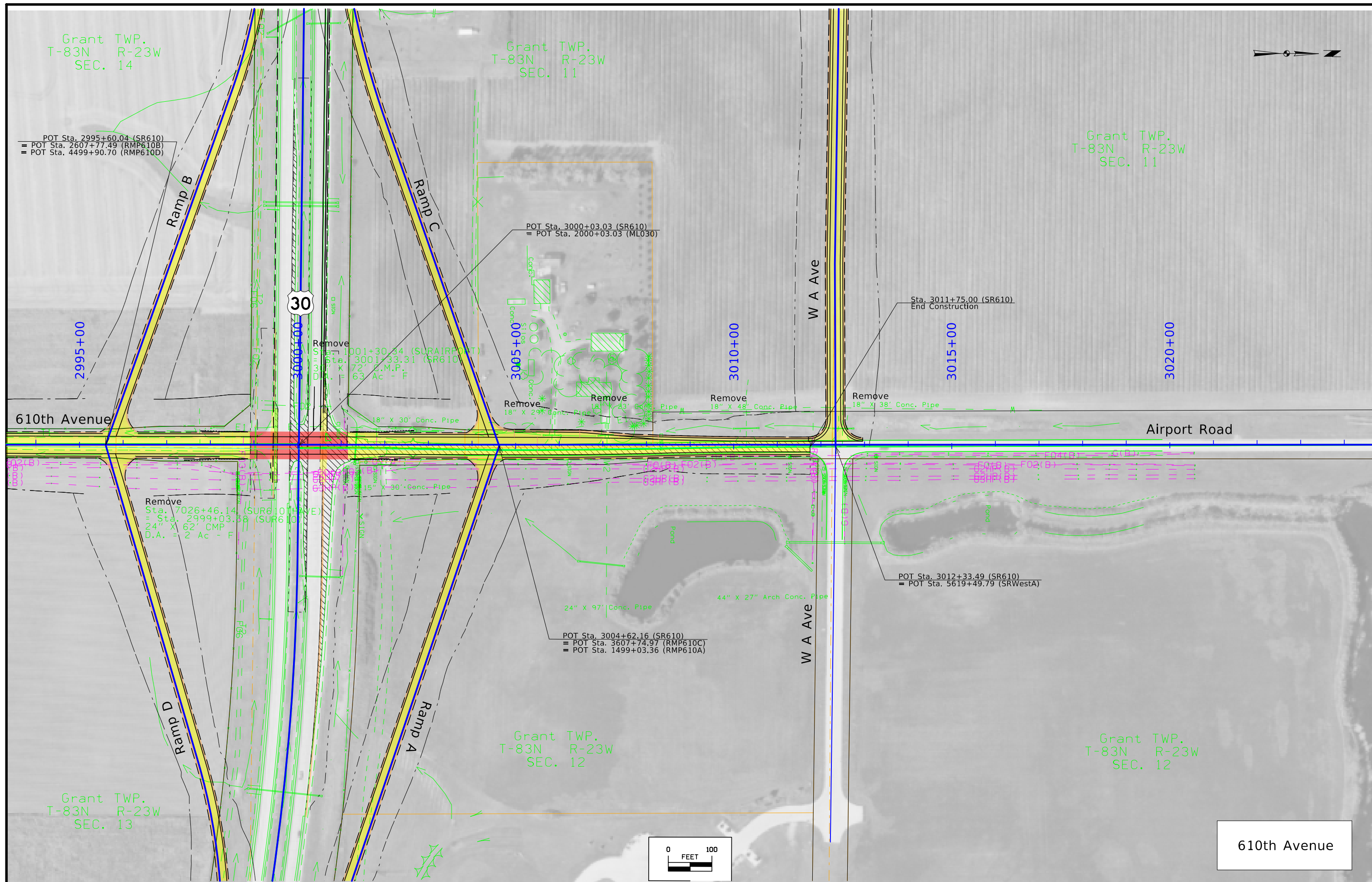
Tie-In  
Sta. 2982+75.00  
Elev. 977.82sf

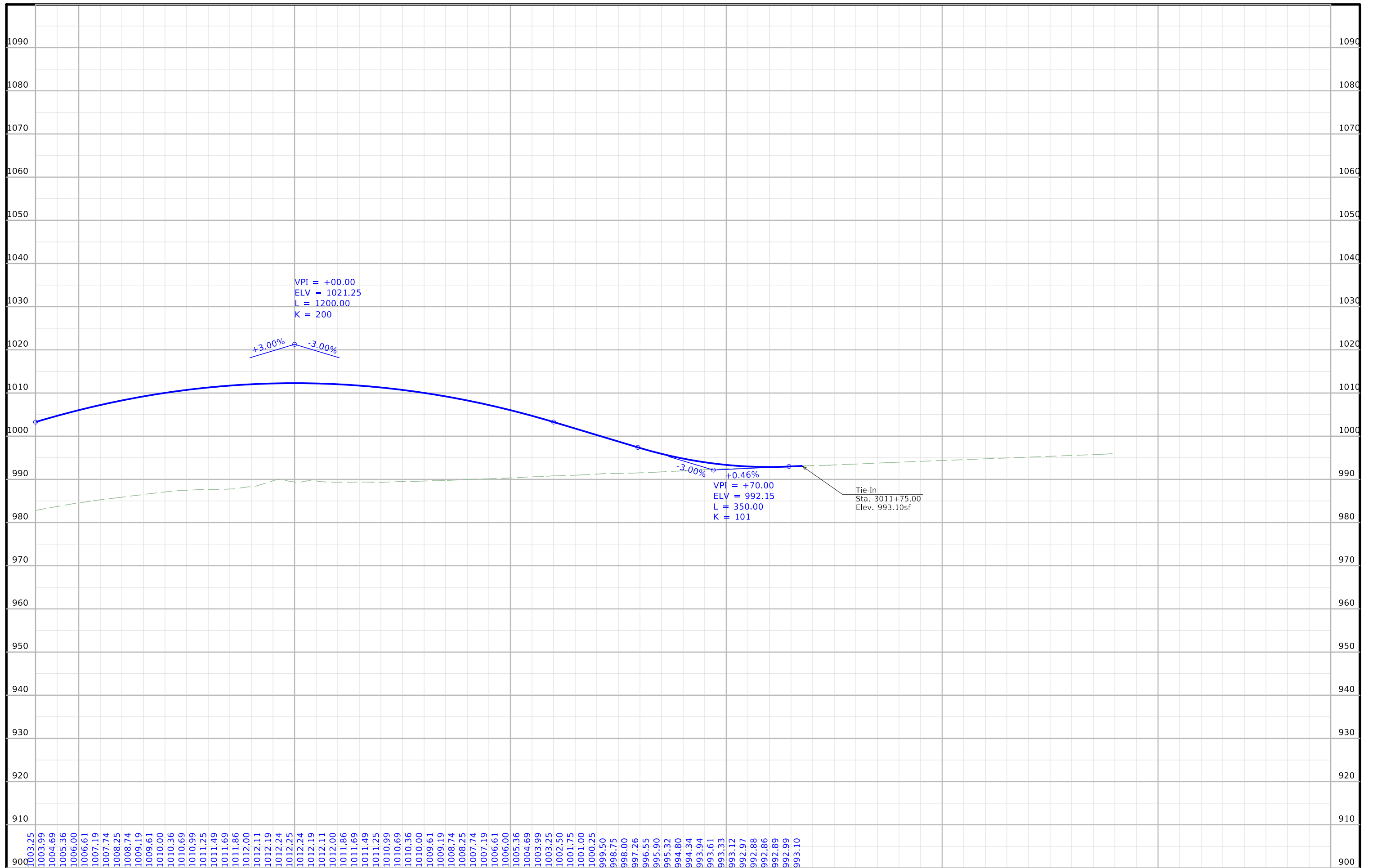
+0.15%  
VPI = +50.00  
ELV = 977.93  
L = 149.99  
K = 97

+1.70%  
VPI = +25.00  
ELV = 986.00  
L = 150.00  
K = 115

VPI = +00.00  
ELV = 1021.25  
L = 1200.00  
K = 200

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER E.3
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FILE NO.	ENGLISH	DESIGN TEAM	Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER	NHSX-030-5(321)--3H-85	SHEET NUMBER	E.5
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Grant TWP.  
T-83N R-23W  
Sec. 11



11575+00

11570+00

11565+00

11560+00

Sta. 5566+06.75 (SRWestA)  
Begin Construction

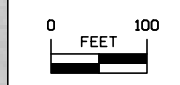
POT Sta. 5565+94.75 (SRWestA)  
= POT Sta. 11565+94.75 (SUR600)

600th Avenue

West A Avenue

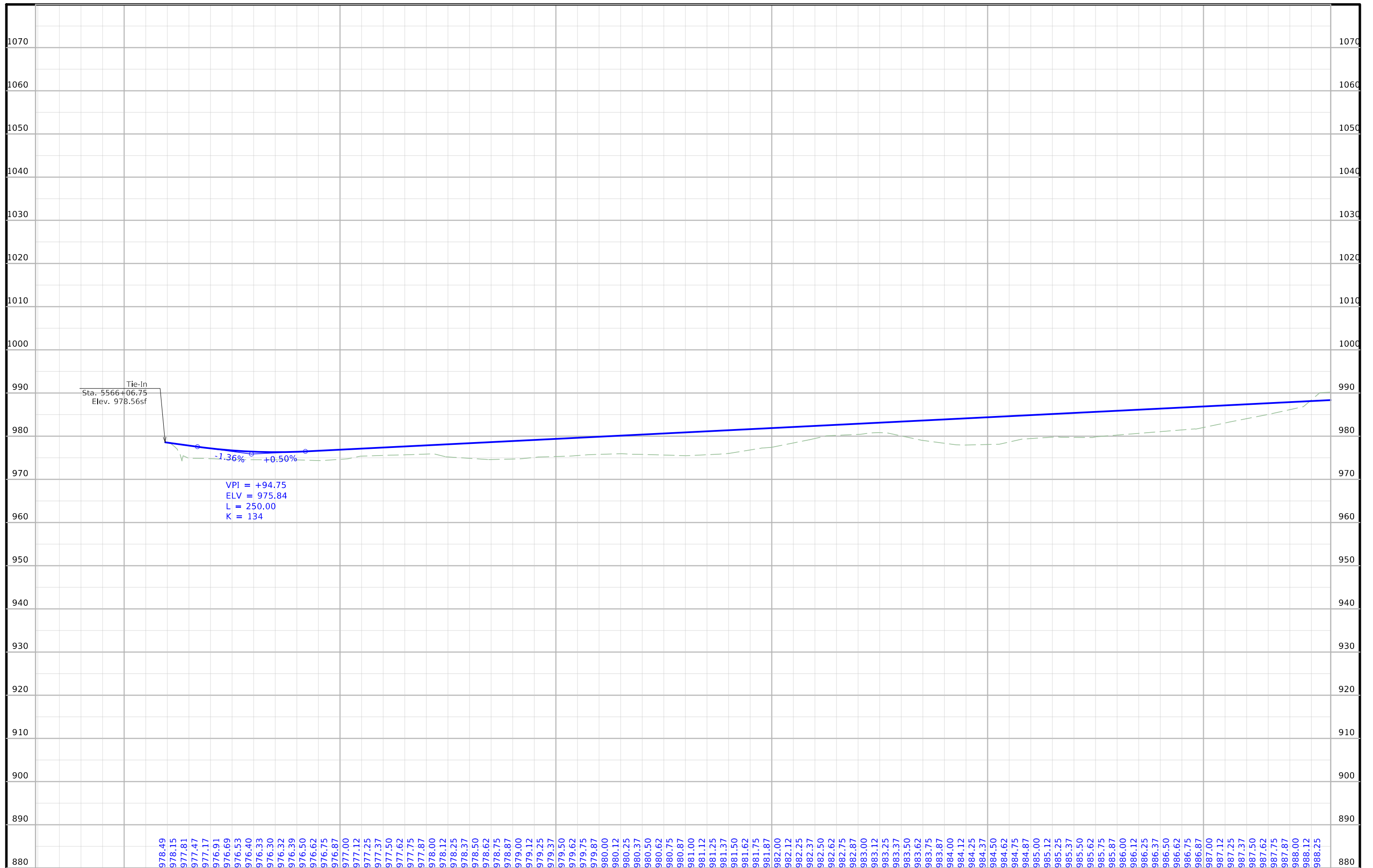
Sect. No. 11

15' X 29' D.M.P.



West A Avenue

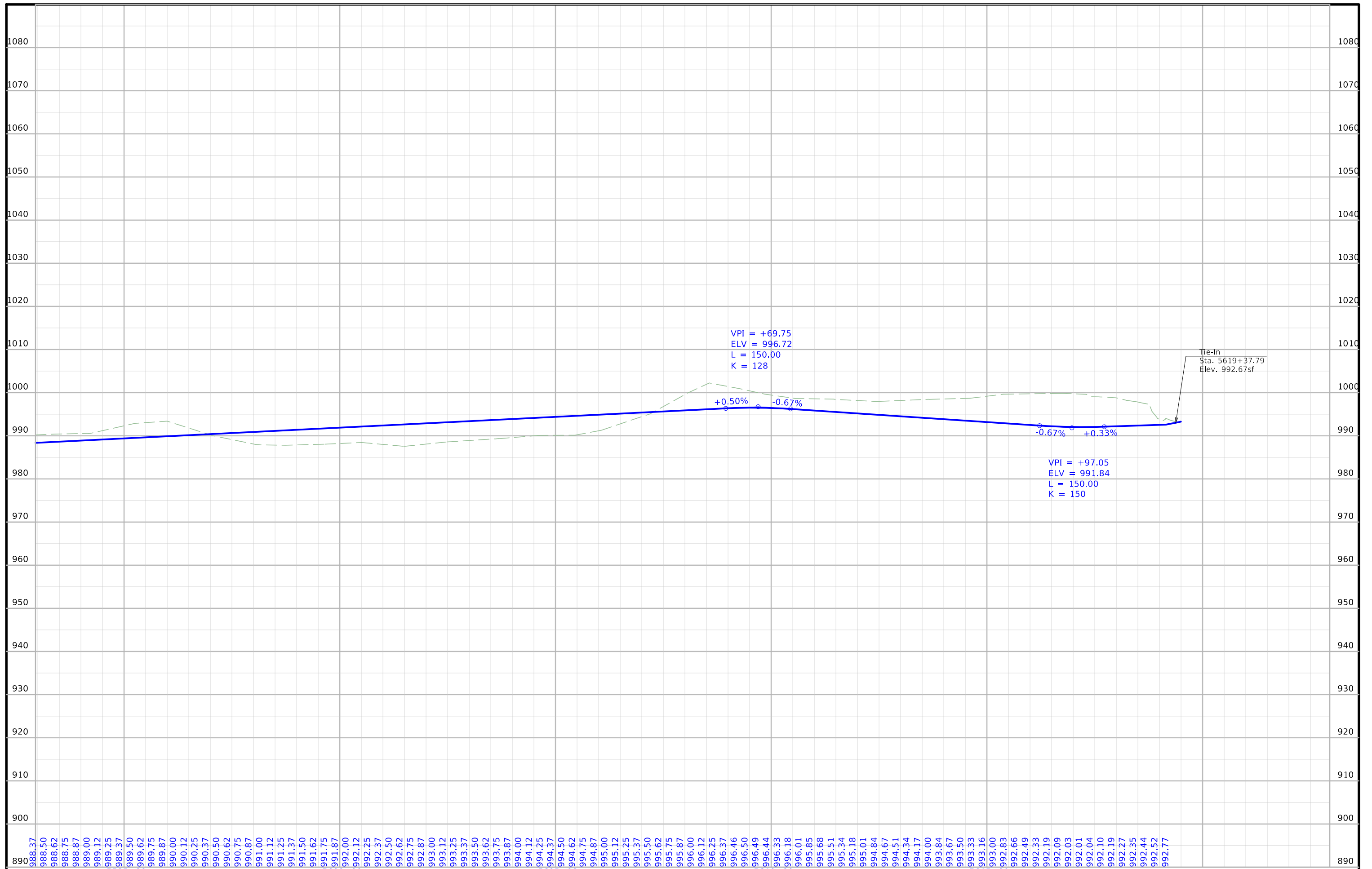
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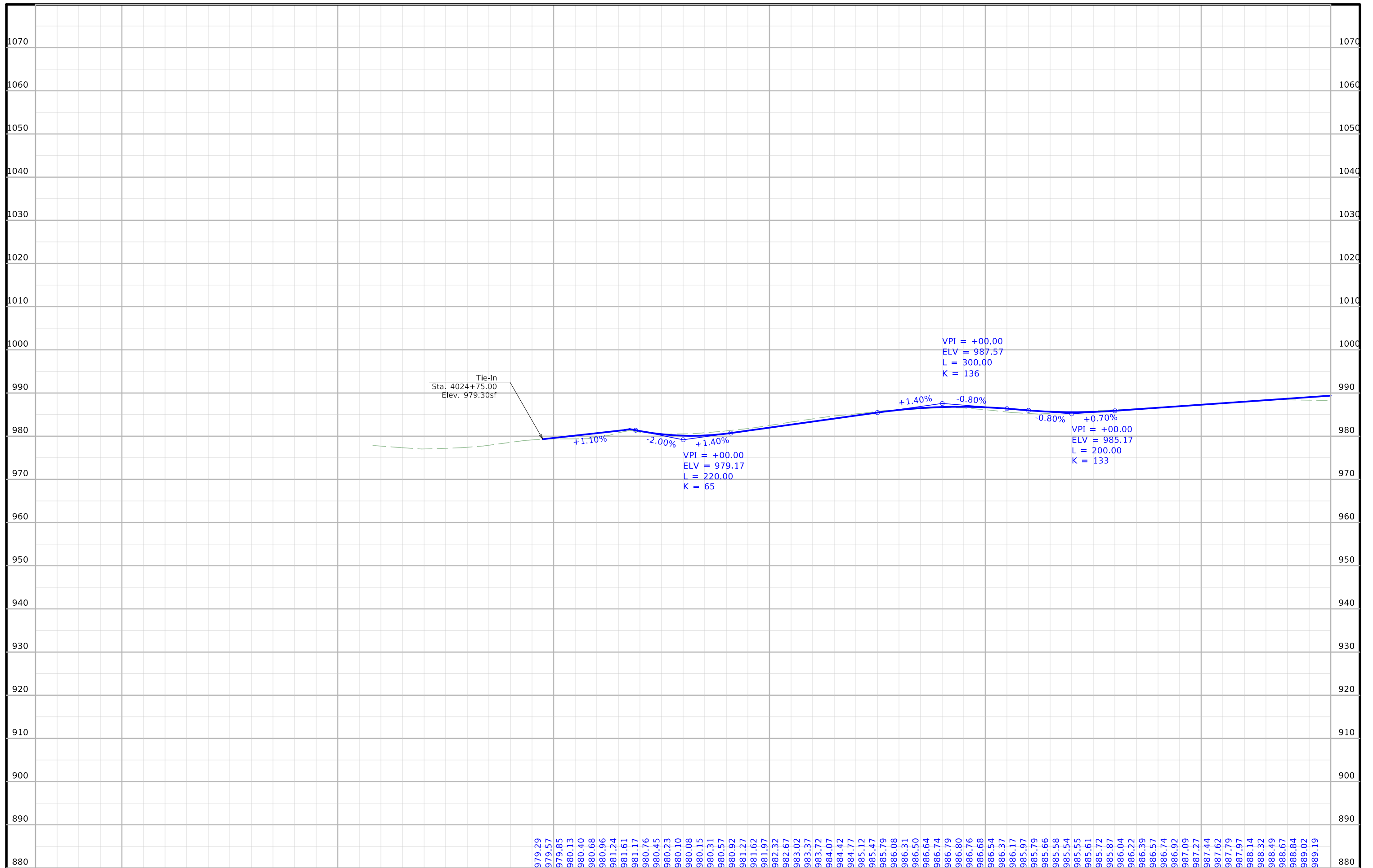


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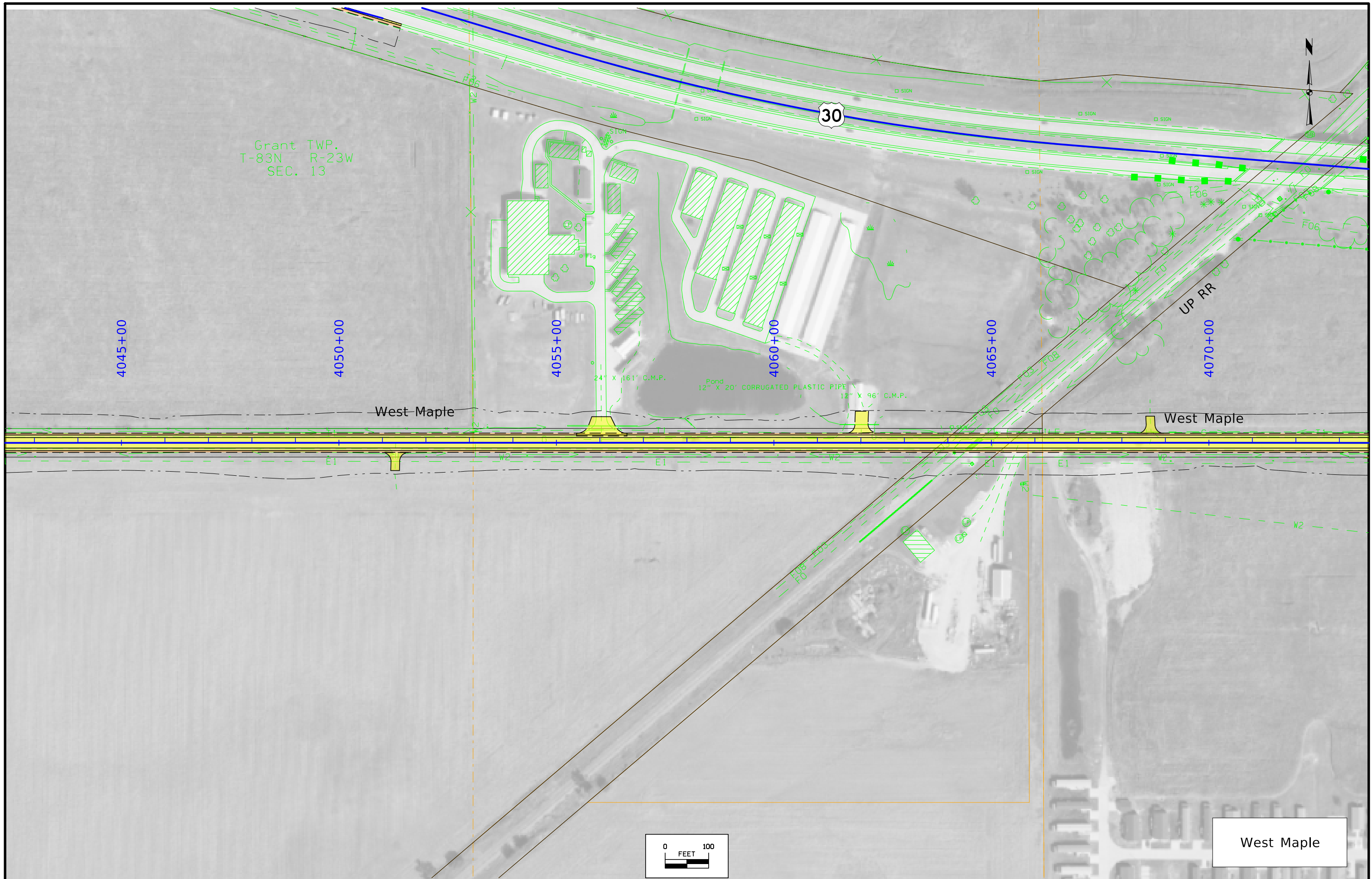
FILE NO.	ENGLISH	DESIGN TEAM	STORY COUNTY	PROJECT NUMBER	SHEET NUMBER
		Flattery\Bell\Kiebel		NHSX-030-5(321)--3H-85	E.9



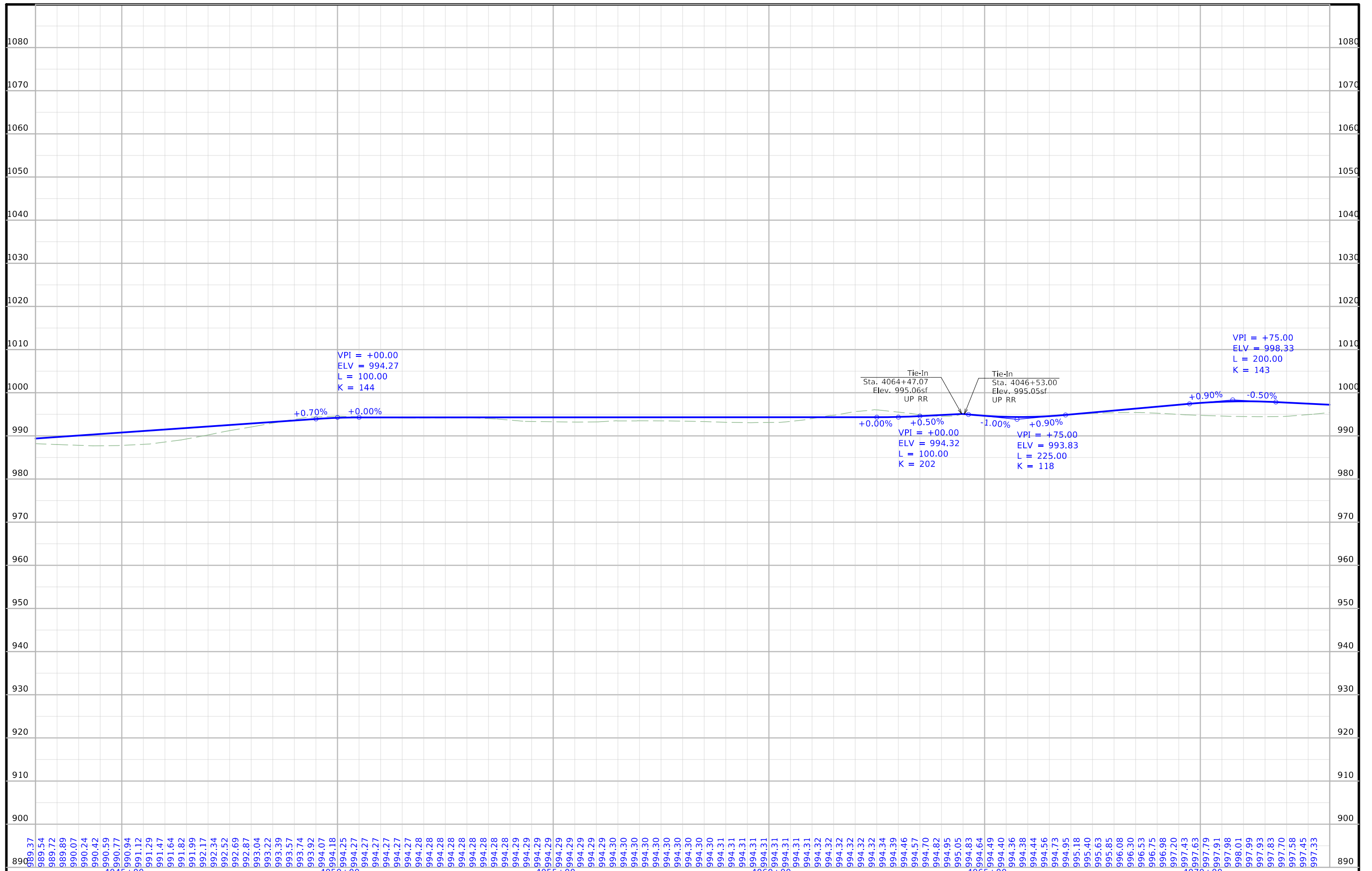


FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER E.11
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FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER E.12
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FILE NO.	ENGLISH	DESIGN TEAM	STORY COUNTY	PROJECT NUMBER	SHEET NUMBER
899.37-997.33		Flattery\Bell\Kiebel		NHSX-030-5(321)--3H-85	E.13





Grant TWP.  
T-83N R-23W  
SEC. 13

Sta. 2069+71.23, 10.08 Rt.  
24" X 69' Conc Pipe  
D.A. = Median Only -

Sta. 4090+73.33  
Skew 16° 53' 56"  
30" X 57' Conc Pipe  
D.A. = Part of 202 Ac - F

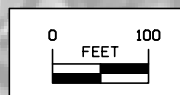
Sta. 4090+65.31  
Skew 16° 31' 24"  
30" X 56' Conc Pipe  
D.A. = Part of 202 Ac - F  
Sta. 4090+69.31  
Skew 17° 21' 08"  
30" X 55' Conc Pipe  
D.A. = Part of 202 Ac - F

PI Sta 4077+77.68  
Δ = 42° 04' 10" (RT)  
D = 07° 29' 23"  
T = 294.19'  
L = 561.70'  
R = 763.00'  
E = 54.62'

Sta. 4082+27.56 (SRMAPLE)  
End Construction

PI Sta 4086+14.02  
Δ = 42° 38' 31" (LT)  
D = 19° 05' 55"  
T = 117.09'  
L = 223.27'  
R = 300.00'  
E = 22.04'

Grant TWP.  
T-83N R-22W  
SEC. 18

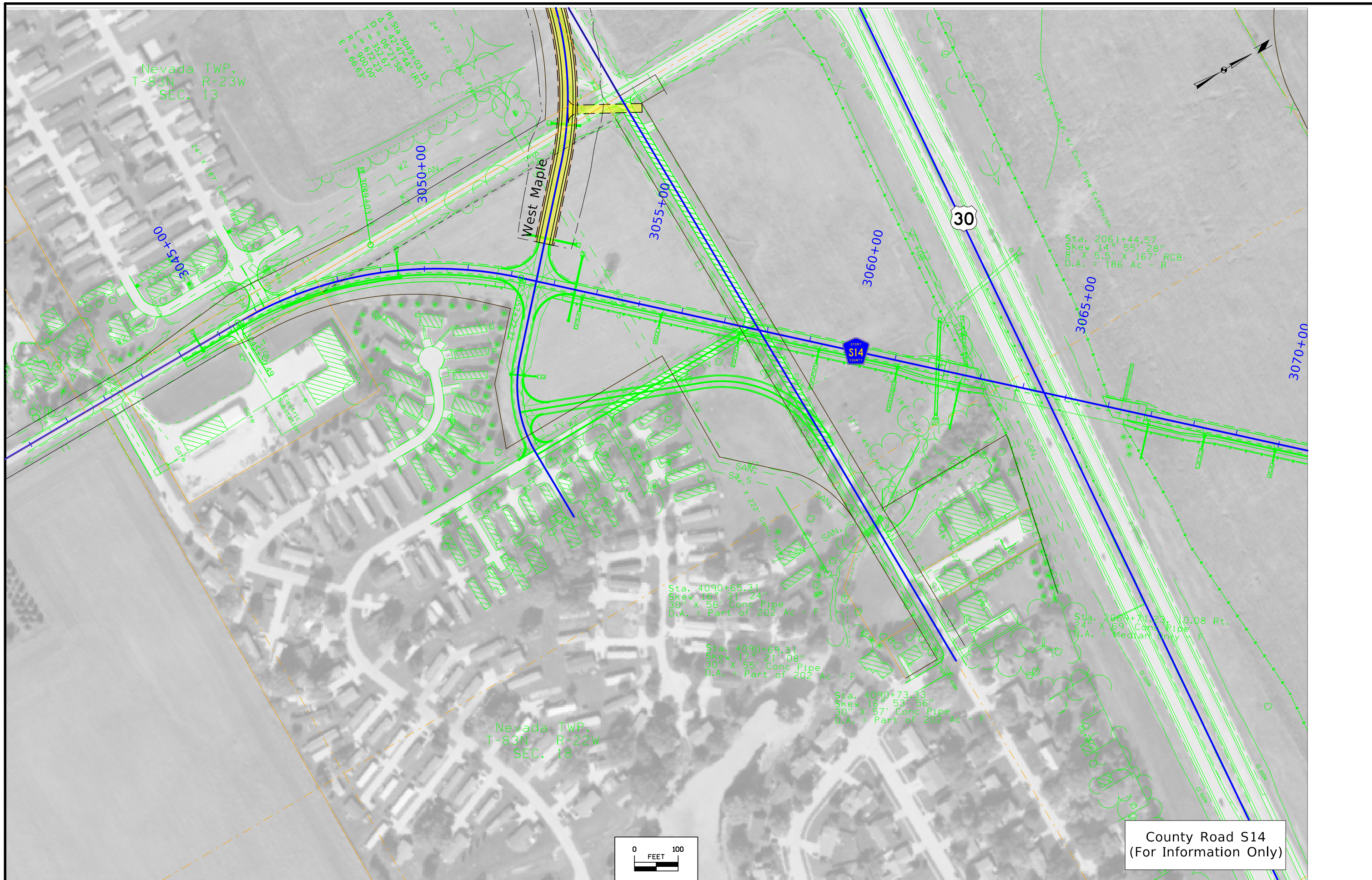


West Maple



FILE NO.	ENGLISH	DESIGN TEAM	STORY COUNTY	PROJECT NUMBER	SHEET NUMBER
		Flattery\Bell\Kiebel		NHSX-030-5(321)--3H-85	E.15

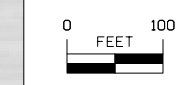
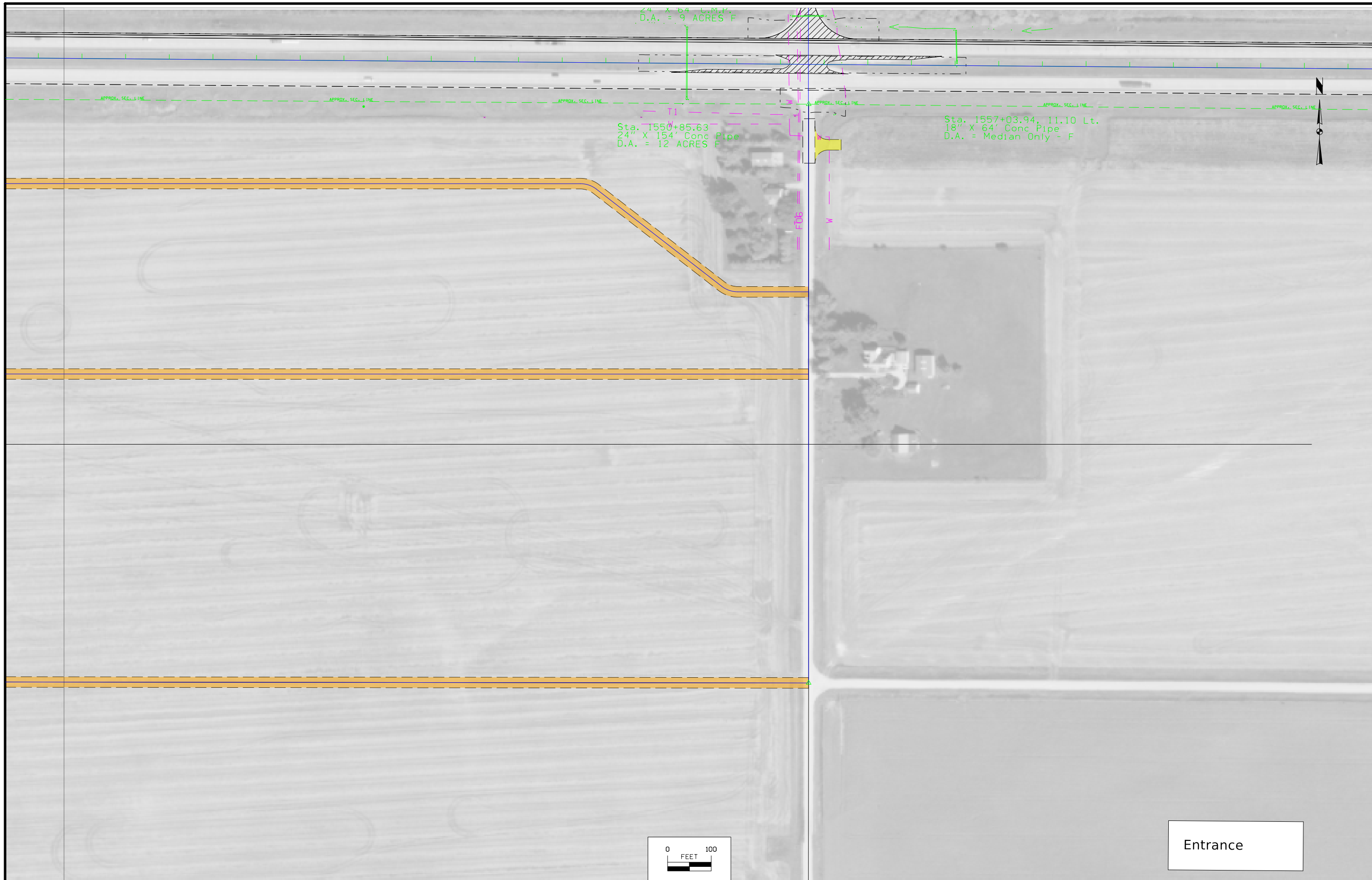




County Road S14  
(For Information Only)







Entrance

## Survey Information

Story County  
NHXS-030-5(258)—3H-85  
0.5 mi E of I-35 to E of 590th Ave,  
including New Interchange at 580th Ave  
PIN 13-85-030-010-02  
Sap-0827.3

### General Information

Measurement units for this survey are US survey feet. This survey is for proposed Hwy.improvements from 0.5 mi E of I-35 to E of 590th Ave, including new interchange at 580th Ave. Project datum and control information is provided by Design Survey Office. This project is a partial DTM survey and is supplemented with Photo and lidar control.

### Vertical Control

The vertical datum is NAVD88. Vertical Control was established on 4 monuments designated as points FENO 1, FENO 2, FENO 3, AND FENO 4. These monuments are stable and are expected to hold vertical reasonably well. Datum was transferred from Iowa RTN reference stations to the projects monuments by using concurrent 6 hour static measurements and post processing connecting vectors. Geoid 12 B was used in processing. This survey observed 2 GPS points, G102 and G103 from Project # NHSX-030-5(249)--3H-85 to validate the reference station height used in computation of project heights. The survey heights determined at the 2 GPS points validate the NAVD 88 height used for this survey and the positions of the project control monuments within acceptable tolerance.

### Horizontal Control

The project coordinate system for this survey is Iowa State Plane North Zone (U.S. Survey Feet). This survey control is relative to IaRTN reference stations. IaRTN Reference Station coordinates are relative to the National Reference Station network datum: NAD83 (2011) for Epoch 2010.00. Coordinates were determined by by using concurrent 6 hour static measurements and post processing connecting vectors.

### Alignment Information

#### **US Hwy. 30**

The horizontal alignment for US Hwy. 30 is a copy of the alignment for SAP 746.1 (Project # IM-035-4(182)112--13-85, Project directory # 8503502011) and was modified to extend the alignment to the east. Survey stationing was equated to the plan at PI STA 1164+91.71 IMF-035-4(182)112—13-85 and run ahead without equation throughout the survey.

Survey stationing relates to as built plan stationing as follows:

PI Sta. 1164+91.71 Project No. IMF-035-4(182)112—13-85  
= Survey PI Sta. 1164+91.71  
= PI Sta. 1166+14.70 FN-30-5(22)—21-85

PI Sta. 1410+12.31 As-built Plans Project No. F-30-5(80)--20-85  
= Survey PI Sta. 1410+12.36

PI Sta. 1500+62.70 As-built Plans Project No. F-30-5(80)--20-85  
= Survey PI STA 1500+62.73  
= CP Sta. 1500+63.05 Project # NHSX-030-5(249)--3H-85

#### **241ST**

SUR241ST2.xml

The alignment for 241st St., SUR241ST2.xml is from IDOT OLE Dept.

PS241ST2.xml

This alignment PS241ST2.xml is a copy of the alignment named SUR241ST2.xml from OLE Dept. Preliminary Survey modified the copied alignment. This alignment was modified east of the intersection of 241st St. & Sand Hill Trail to fit the centerline of existing 241st St.

#### **newroad2**

SURnewroad2.xml

The alignment for newroad2 (SURnewroad2.xml) is from IDOT OLE Dept.

PSnewroad2.xml

This alignment PSnewroad2.xml is a copy of the alignment named SURnewroad2.xml from OLE Dept. Preliminary Survey modified the copied alignment. This alignment was extended east and to fit centerline of the existing frontage road.

#### **580th Ave.**

SURSR580th.xml

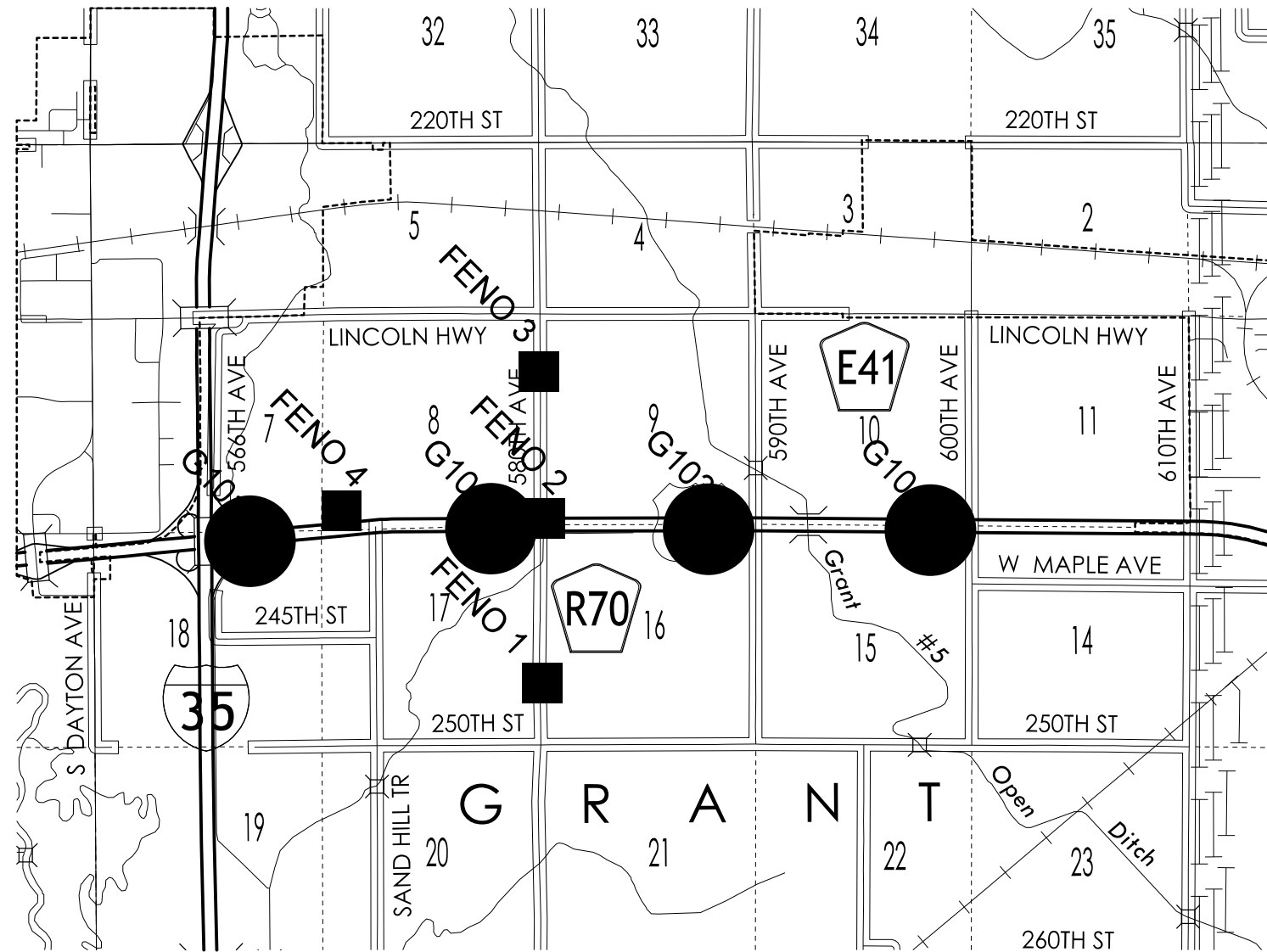
The horizontal alignment for 580th Ave. (SURSR580th.xml) is from IDOT OLE Dept.

PSSR580th.xml

This alignment PSSR580th.xml is a copy of the alignment named SURSR580th.xml from OLE Dept. Preliminary Survey modified the copied alignment. The copied alignment was extended to the south and north of the OLE alignment to fit the centerline of 580th Ave.

### CONTROL POINT VICINITY MAP

This map is a guide to the vicinity of the primary project control points  
 Primary control is for use with RTK base stations and for RTN validation.  
 Future surveys will use primary project control to establish temporary  
 control as needed for construction or other surveying applications.



HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

State Plane North

Coordinate listing from next sheet will be used with laRTN for monument  
 recovery. No other reference ties are given.

# HORIZONTAL AND VERTICAL PROJECT CONTROL COORDINATE LISTING

HORIZ. DATUM: NAD83(2011) EPOCH 2010.00

VERT. DATUM: NAVD88

State Plane North

Point Name	Northing	Easting	Elevation	Feature Definition	Description
FENO 1	3462404.325	4910183.708	945.643	FENO	SET FENO MONU .73 MI S OF INTERS. E.BOUND US HWY 30 & 580TH AVE_53' E. OF CL 580TH AVE_140' N. OF POWER POLE_13.5' S. OF OUTLET CMP APRON
FENO 2	3466436.682	4910251.068	955.288	FENO	SET FENO MONU 158' NE INTERS. W.BOUND HWY 30 & 580TH AVE_104' N. W.BOUND HWY 30_106' E. OF 580TH AVE_22.5' SW OF FENCE_43' W. OF ROW RAIL
FENO 3	3470047.967	4910109.599	974.044	FENO	SET FENO MONU .71 MI N OF INTERS. W.BOUND US HWY 30 & 580TH AVE_71' W. OF CL 580TH AVE_63' N. OF CL FIELD ENT._84' N. OF TEL. PED.
FENO 4	3466634.259	4905258.236	938.478	FENO	SET FENO MONU .64 MI E OF INTERS. N.BOUND I-35 & US HWY 30_429' N. OF W.BOUND HWY 30_103' E. OF E. EDGE CONC SLAB RADIO TOWER_85' S. OF SE COR. CONC ENTRANCE
G101	3465880.935	4903018.607	912.725	CP	FD DISK IN CONC SLAB_STAMPED GSVS 101 2013_1073' E. OF INTERS. N.B. I-35 & EB HWY 30_23.6' S. OF S. EDGE OF AC SH EB HWY 30_63.4' NW OF N. EDGE CONC SLAB RAMP_58' E. OF MERGE SIGN
G102	3466190.655	4908935.983	958.027	CP	ROD IN CONC ENCASEMENT WITH LID .23 MI W OF 580TH AVE_131' NW OF 16" INTAKE_15.3' S. OF S.SLAB E.BOUND HWY 30
G103	3466177.630	4914276.103	958.208	CP	FD DISK IN CONC SLAB_STAMPED GSVS 103 2013_78 MI E. OF 580TH AVE_62' S. S. SLAB E. BOUND HWY 30
G104	3466155.730	4919721.911	961.673	CP	FD DISK IN CONC SLAB_STAMPED GSVS 104 2013_1018' W. INTERS. N.B. I-35 & E.B. HWY 30_49.3' S. OF S EDGE AC SH EB HWY 30_77' SW OF STA. STAMP 1544_139' E OF POWER POLE



**SUPERELEVATION DATA**

See PV-300 Series

Road Identification	Circular Curve or Spiral Curve Name	Radius FT	Superelevation Data			Standard Road Plan	Section A-A	Section B-B	Section C-C	Section D-D	Section E-E	Section F-F	Case A	Case B	Case C	Case S	Case T	Case U	Remarks
			e	L	x														
			%	FT	FT														
610th/Airport Rd Interchange:																			
Ramp B		1330	6.0	186	62	PV-303	2595+30.80 2599+87.62		2595+68.00 2599+19.42	2596+23.80 2598+63.62					2595+61.80 2599+25.62	2595+61.80 2599+25.62			Adjusted for 3% Normal Slope
Ramp C		2000	5.4	168	62	PV-303													
Ramp D		1330	5.4	151	56	PV-303	3600+36.25 4506+99.60		3599+80.65 4507+49.30	3599+30.25 4507+94.60					3599+73.81 4507+55.45	3599+73.81 4507+55.45			

108-23A  
08-01-08

**TRAFFIC CONTROL PLAN**

1. Traffic on U.S. Highway 30 shall be maintained at all times except as noted in Note 3.
2. Traffic on 610th/Airport Road shall be maintained at all times via off-site detour.
3. Temporary nighttime road closures (TC-251/TC-451) will only be allowed for setting beams and overhead signs/trusses.

111-01  
04-17-12

**COORDINATED OPERATIONS**

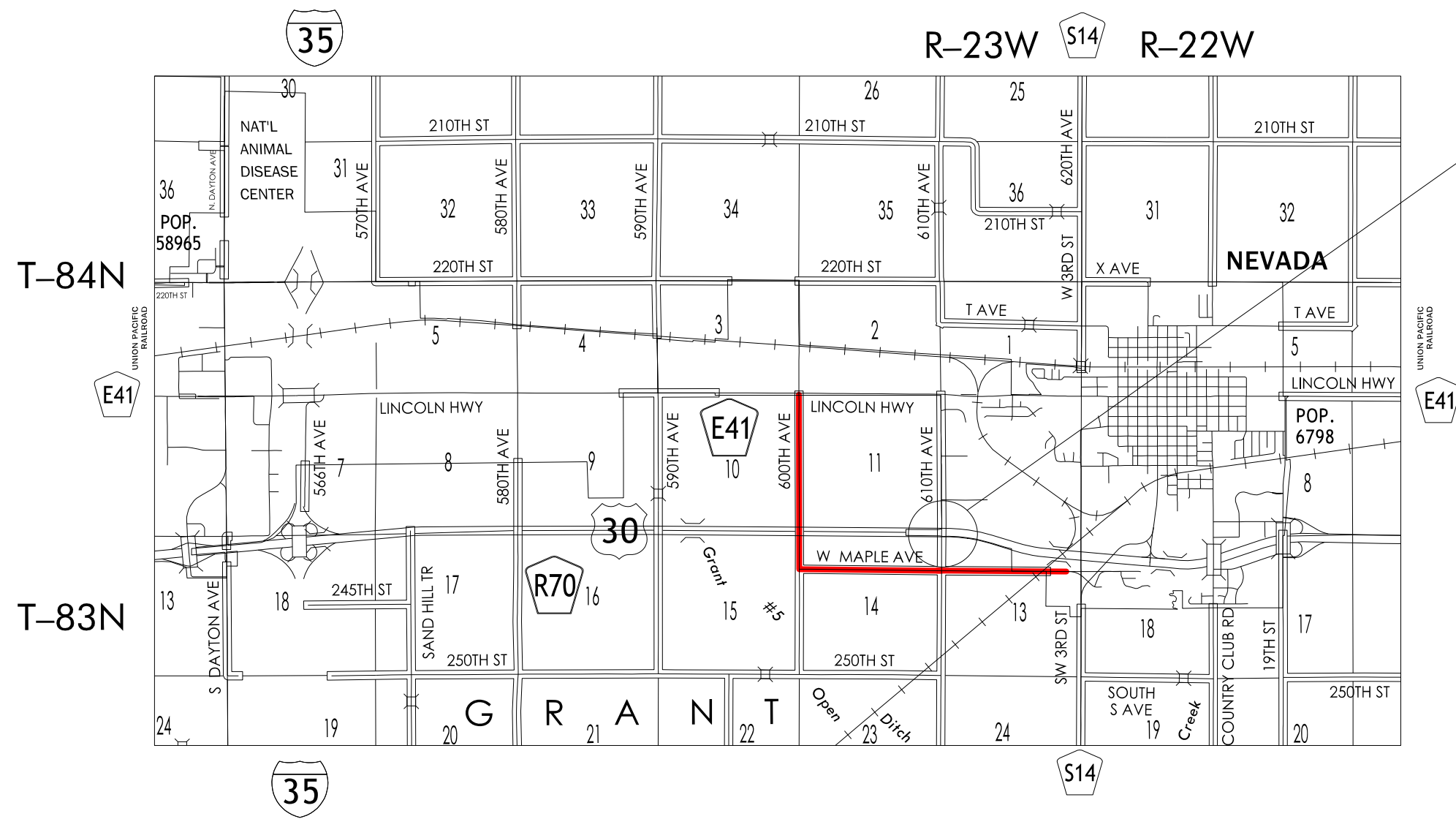
Other work in progress during the same period of time will include the construction of the projects listed. Coordinate operations with those of other contractors working within the same area.

Project	Type of Work
None provided.	

108-25  
10-21-14


**511 TRAVEL RESTRICTIONS**

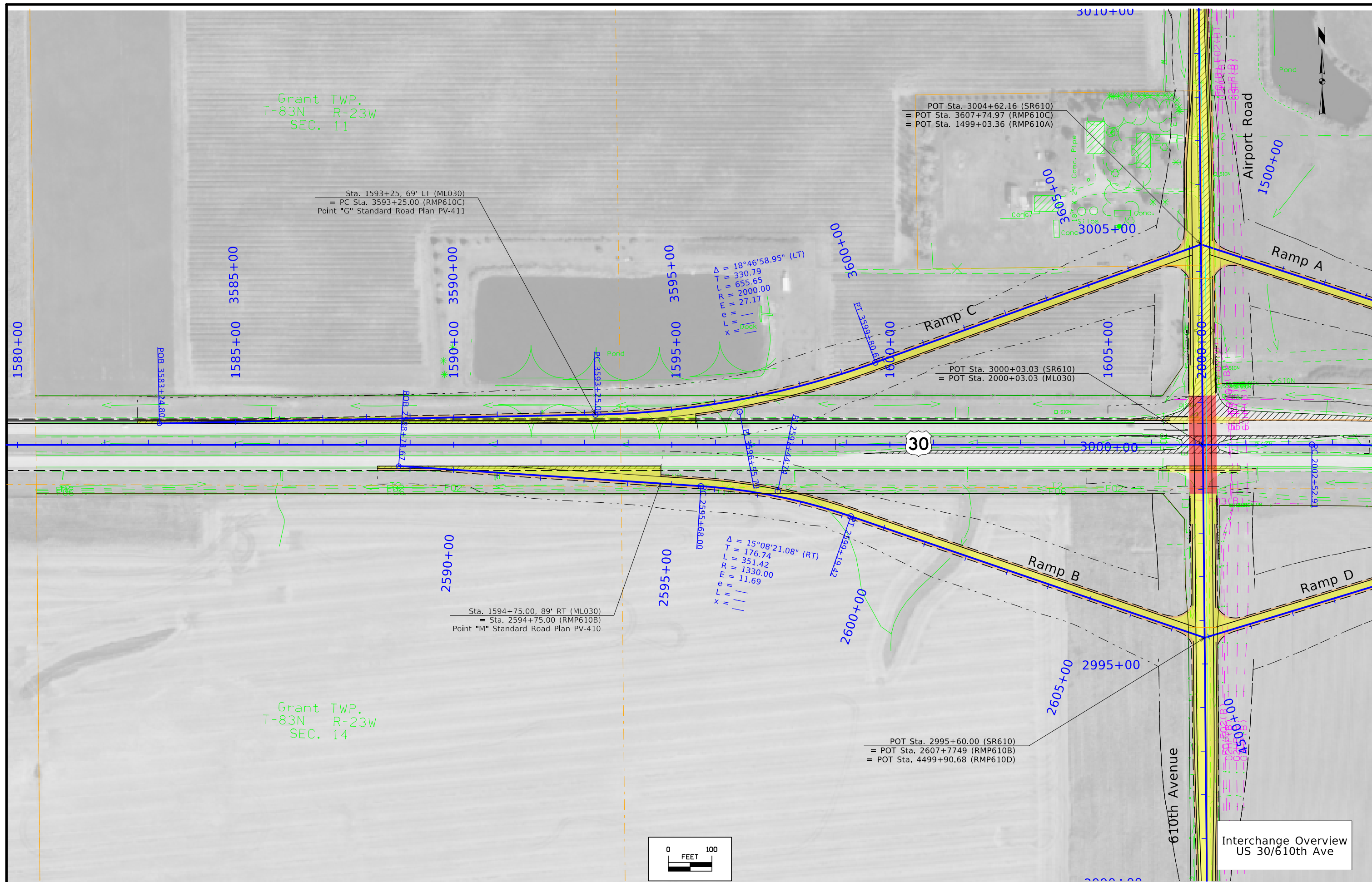
Route	Direction	County	Location Description	Feature Crossed	Object Type	Maint. Bridge No., Structure ID, or FHWA No.	Type of Restriction	Existing Measurement	Construction Measurement	Construction Measurement as Signed	Projected As Built Measurement	Remarks
			No Restrictions Expected.									

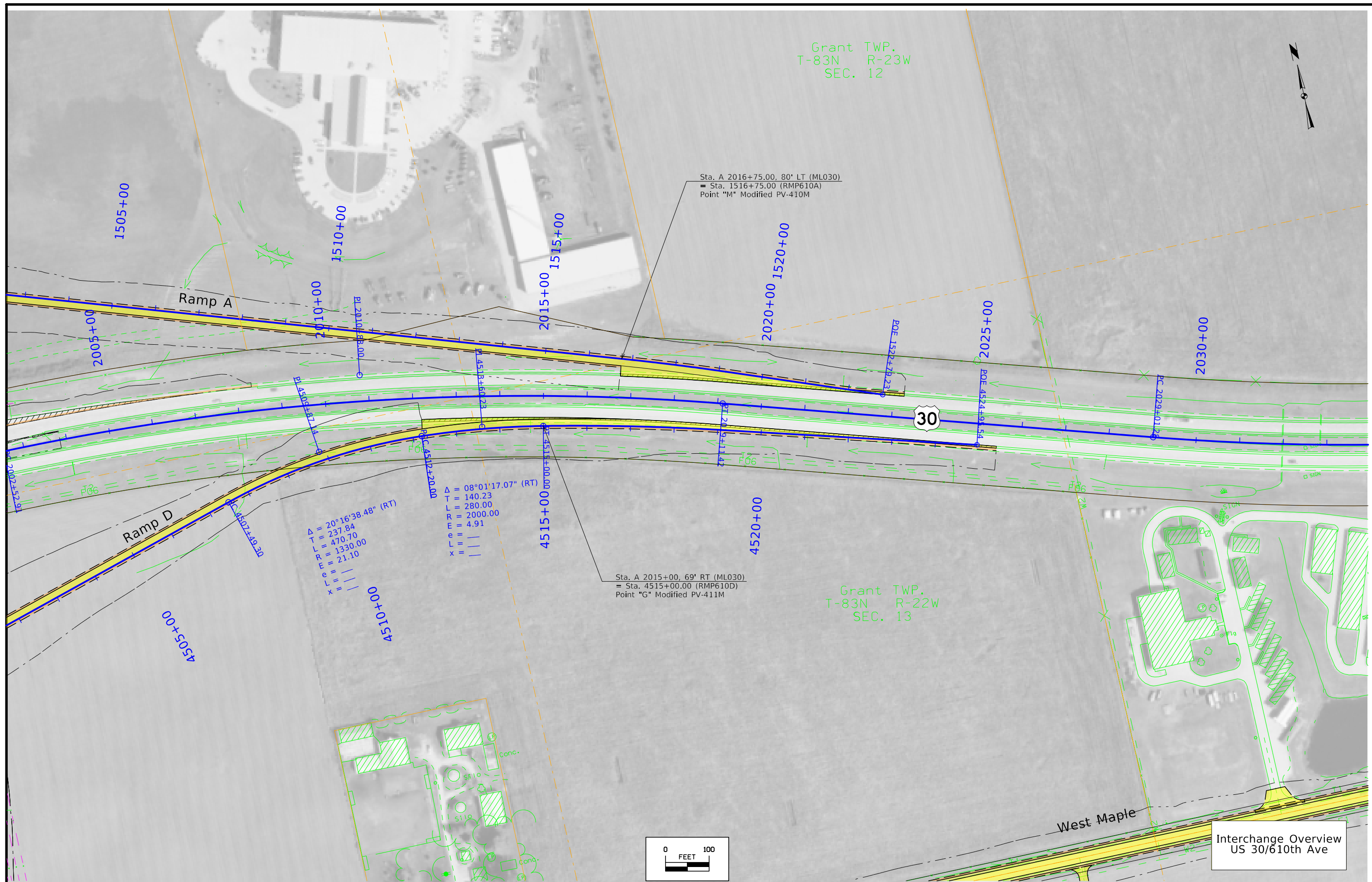


PROPOSED BRIDGE  
Asset #: #####

STORY COUNTY DETOUR

LEGEND	
CONCEPT DETOUR ROUTE	
STORY COUNTY TRAFFIC CONTROL	





Grant TWP.  
T-83N R-23W  
SEC. 12

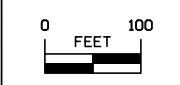
Sta. A 2016+75.00, 80' LT (ML030)  
= Sta. 1516+75.00 (RMP610A)  
Point "M" Modified PV-410M

Sta. A 2015+00, 69' RT (ML030)  
= Sta. 4515+00.00 (RMP610D)  
Point "G" Modified PV-411M

Grant TWP.  
T-83N R-22W  
SEC. 13

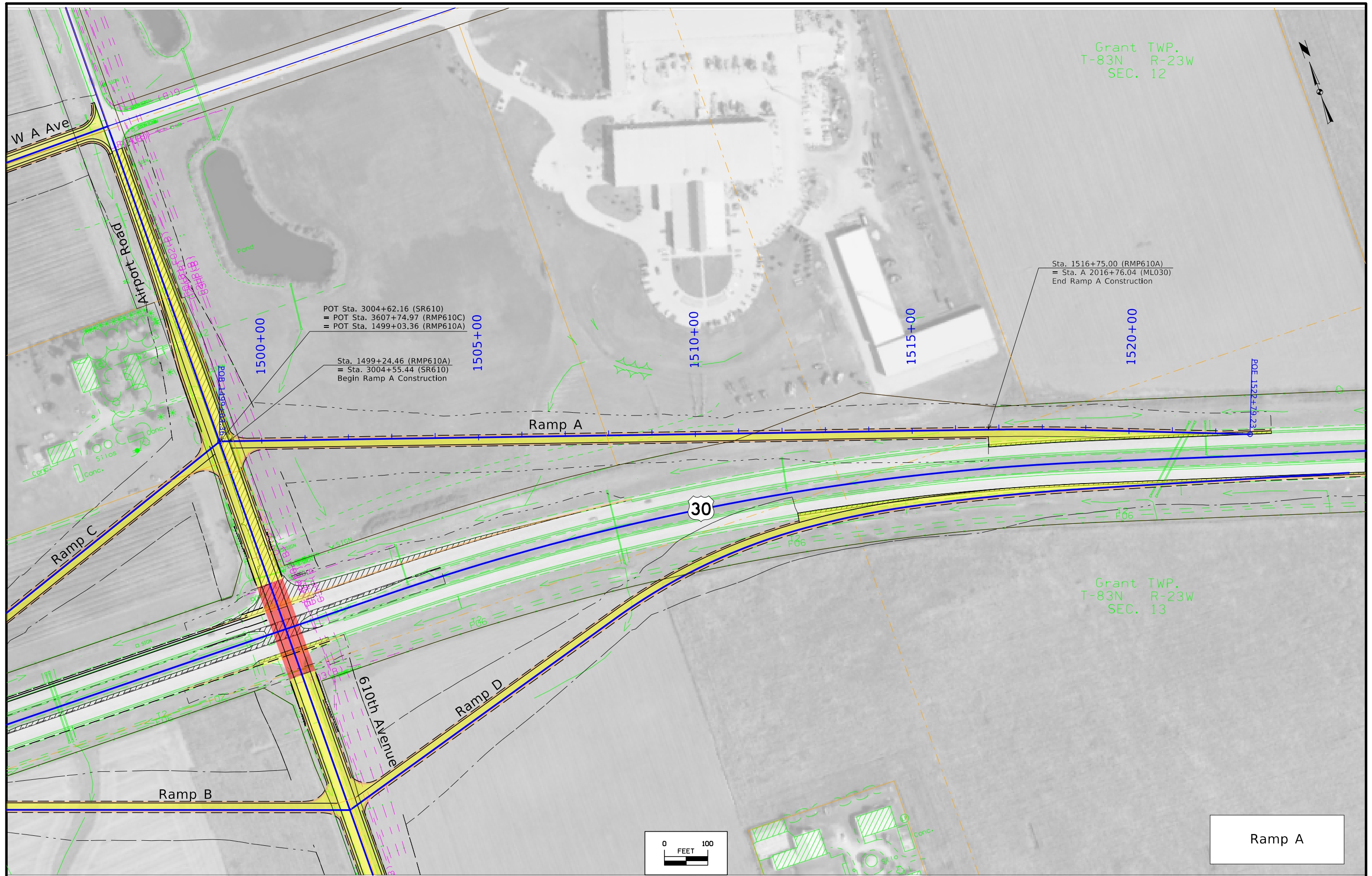
Δ = 20°16'38.48" (RT)  
T = 237.84  
L = 470.70  
R = 1330.00  
E = 21.10  
e = —  
L = —  
x = —

Δ = 08°01'17.07" (RT)  
T = 140.23  
L = 280.00  
R = 2000.00  
E = 4.91  
e = —  
L = —  
x = —



Interchange Overview  
US 30/610th Ave





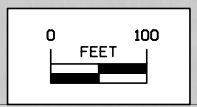
Grant TWP.  
T-83N R-23W  
SEC. 12

Sta. 1516+75.00 (RMP610A)  
= Sta. A 2016+76.04 (ML030)  
End Ramp A Construction

POT Sta. 3004+62.16 (SR610)  
= POT Sta. 3607+74.97 (RMP610C)  
= POT Sta. 1499+03.36 (RMP610A)

Sta. 1499+24.46 (RMP610A)  
= Sta. 3004+55.44 (SR610)  
Begin Ramp A Construction

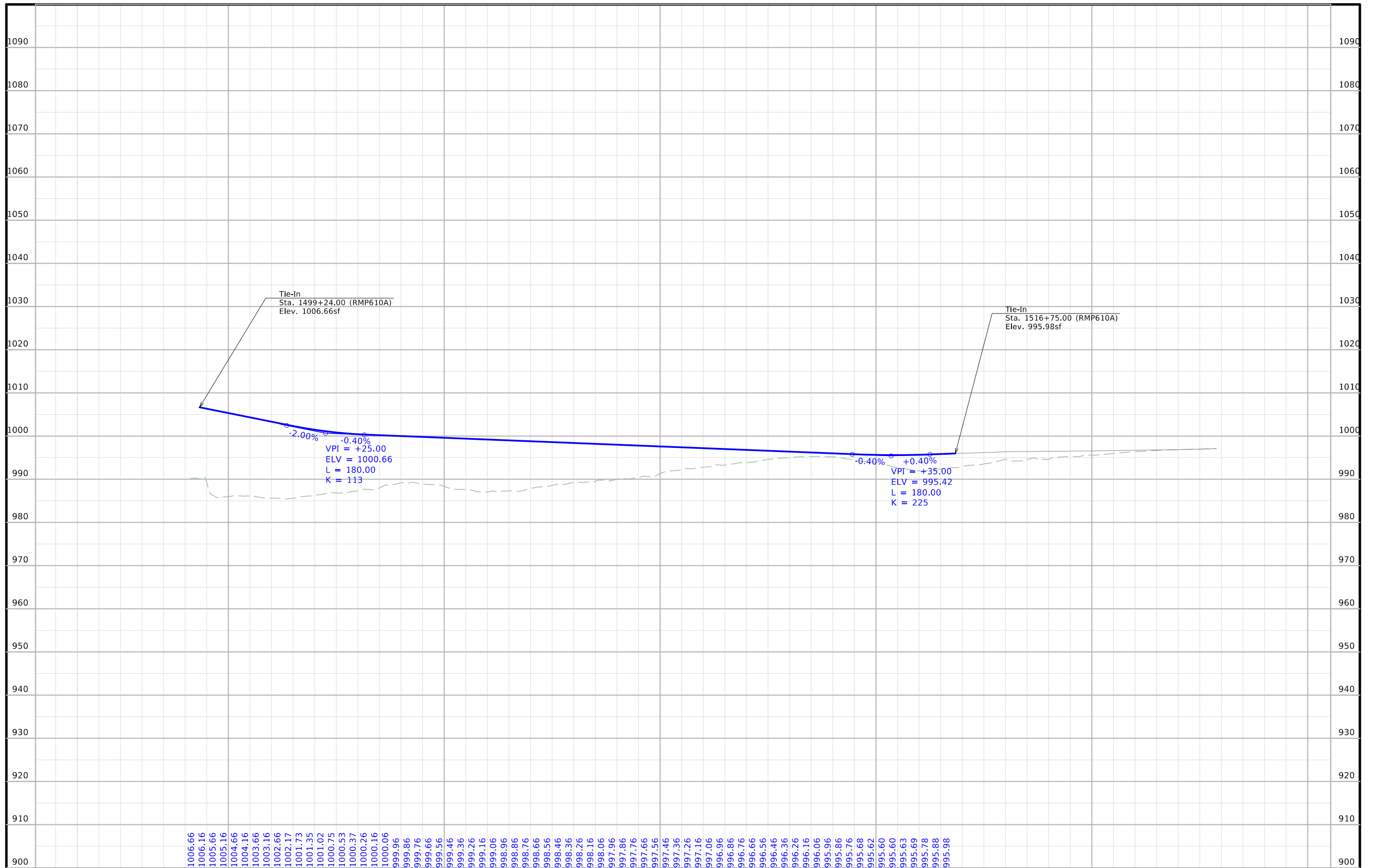
Grant TWP.  
T-83N R-23W  
SEC. 13



Ramp A

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER K.3
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Tie-In  
Sta. 1499+24.00 (RMP610A)  
Elev. 1006.66sf

Tie-In  
Sta. 1516+75.00 (RMP610A)  
Elev. 995.98sf

-2.00%  
-0.40%  
VPI = +25.00  
ELV = 1000.66  
L = 180.00  
K = 113

-0.40%  
+0.40%  
VPI = +35.00  
ELV = 995.42  
L = 180.00  
K = 225

1006.66  
1006.16  
1005.66  
1005.16  
1004.66  
1004.16  
1003.66  
1003.16  
1002.66  
1002.17  
1001.73  
1001.35  
1001.02  
1000.75  
1000.53  
1000.37  
1000.26  
1000.16  
1000.06  
999.96  
999.86  
999.76  
999.66  
999.56  
999.46  
999.36  
999.26  
999.16  
999.06  
998.96  
998.86  
998.76  
998.66  
998.56  
998.46  
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998.06  
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997.46  
997.36  
997.26  
997.16  
997.06  
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995.86  
995.76  
995.68  
995.62  
995.60  
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995.69  
995.78  
995.88  
995.98

1500+00

1505+00

1510+00

1515+00

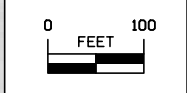
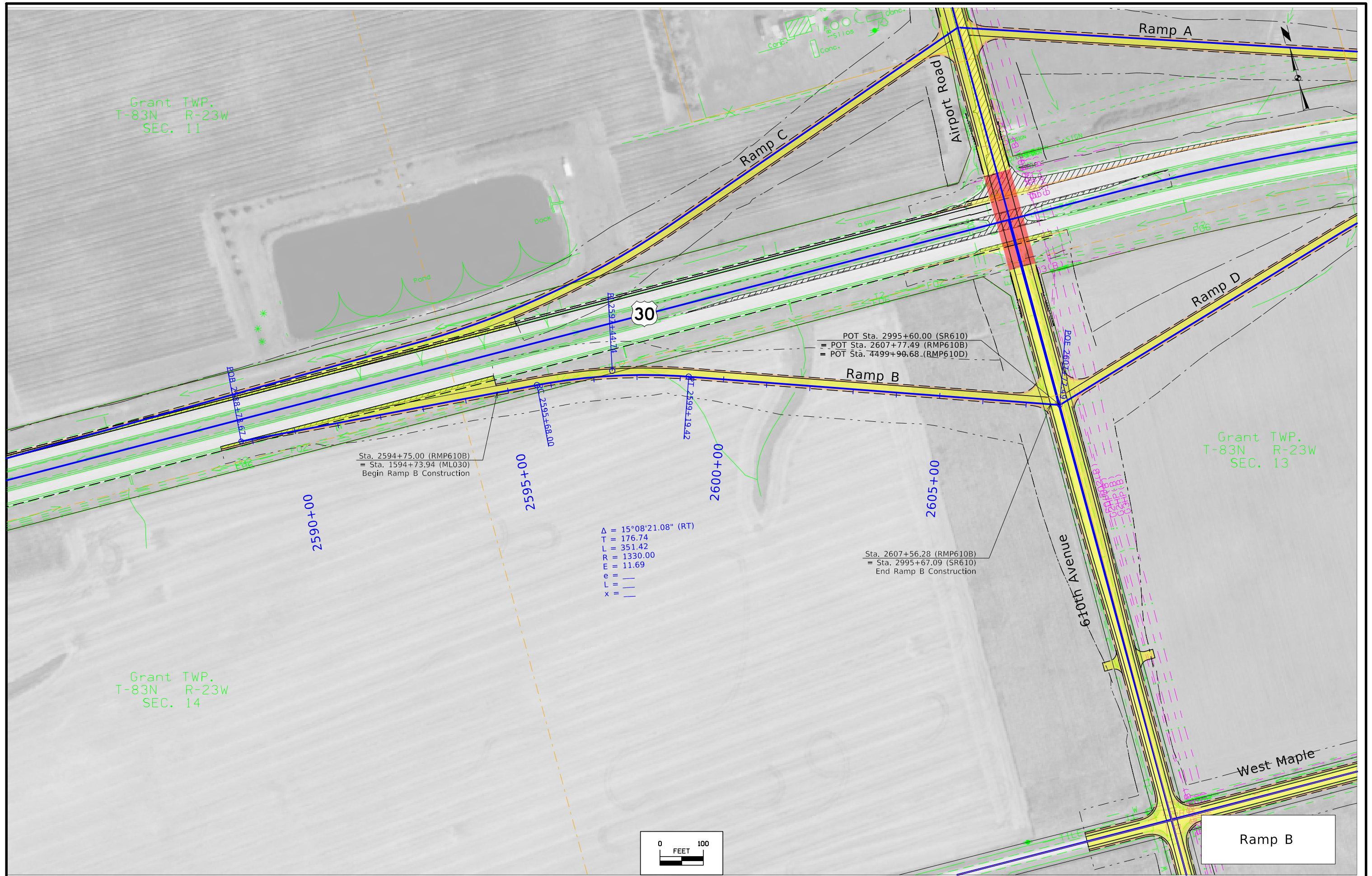
1520+00

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER K.4
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Grant TWP.  
T-83N R-23W  
SEC. 11

Grant TWP.  
T-83N R-23W  
SEC. 13

Grant TWP.  
T-83N R-23W  
SEC. 14

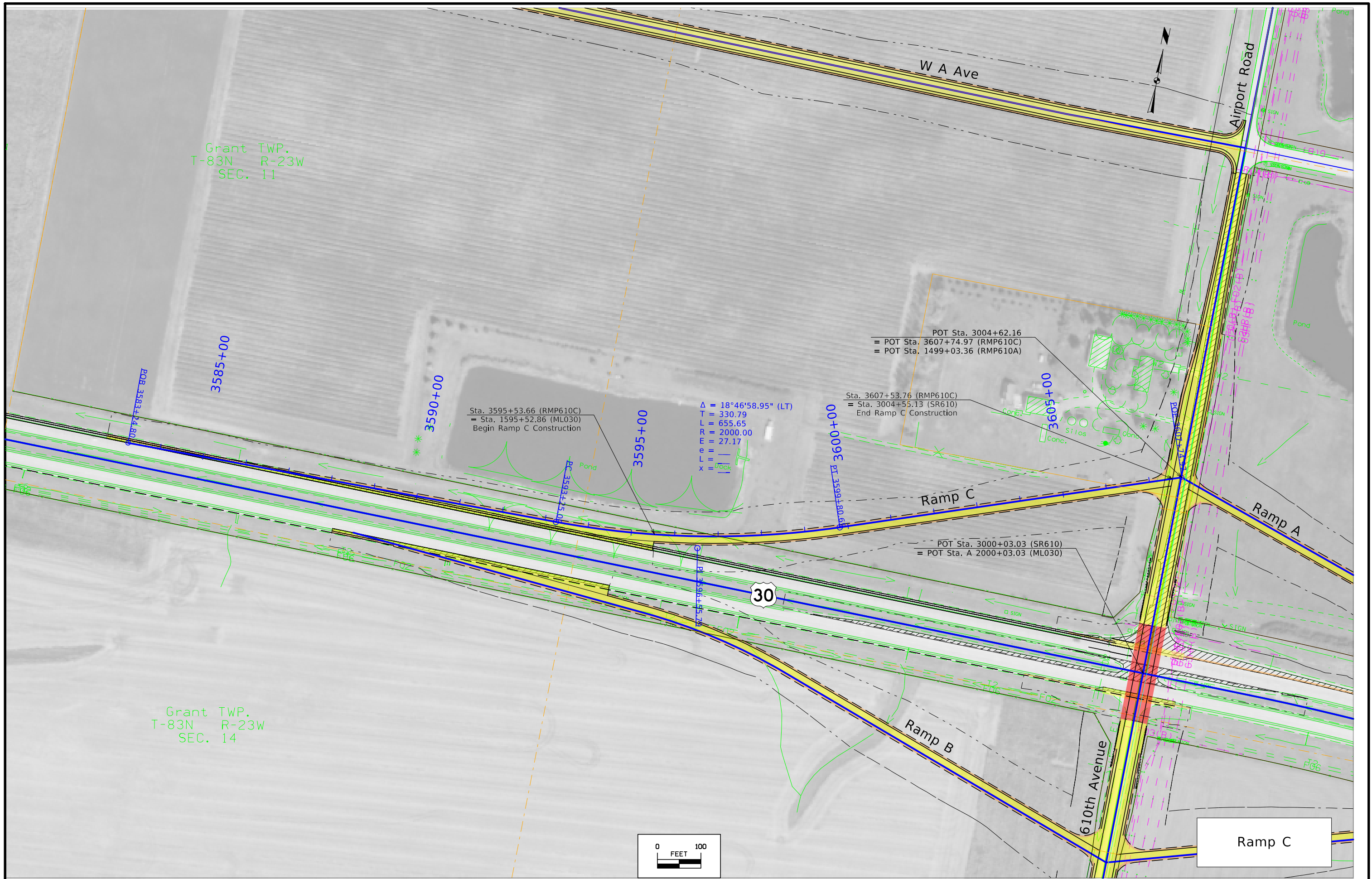


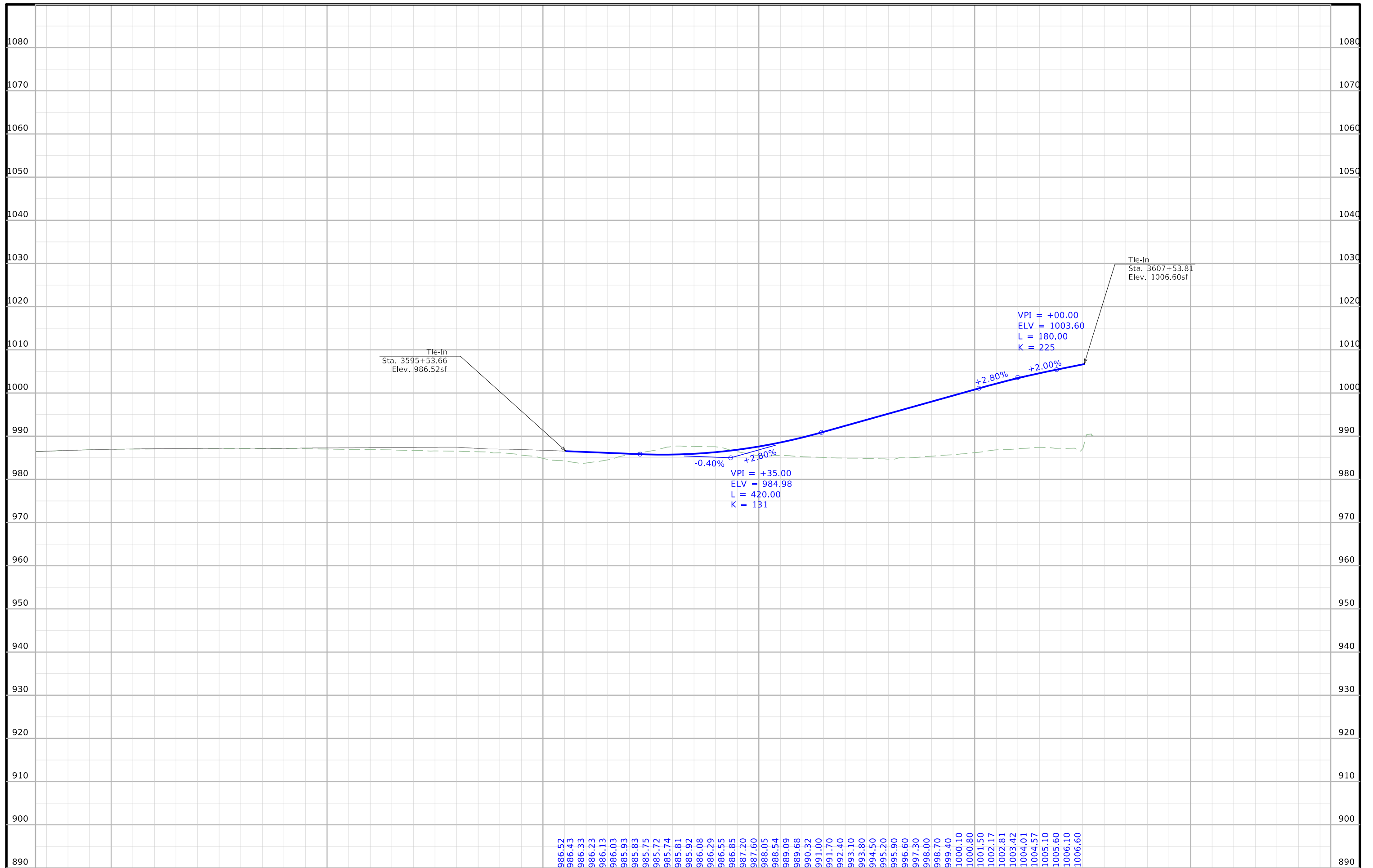
Ramp B



FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER K.6
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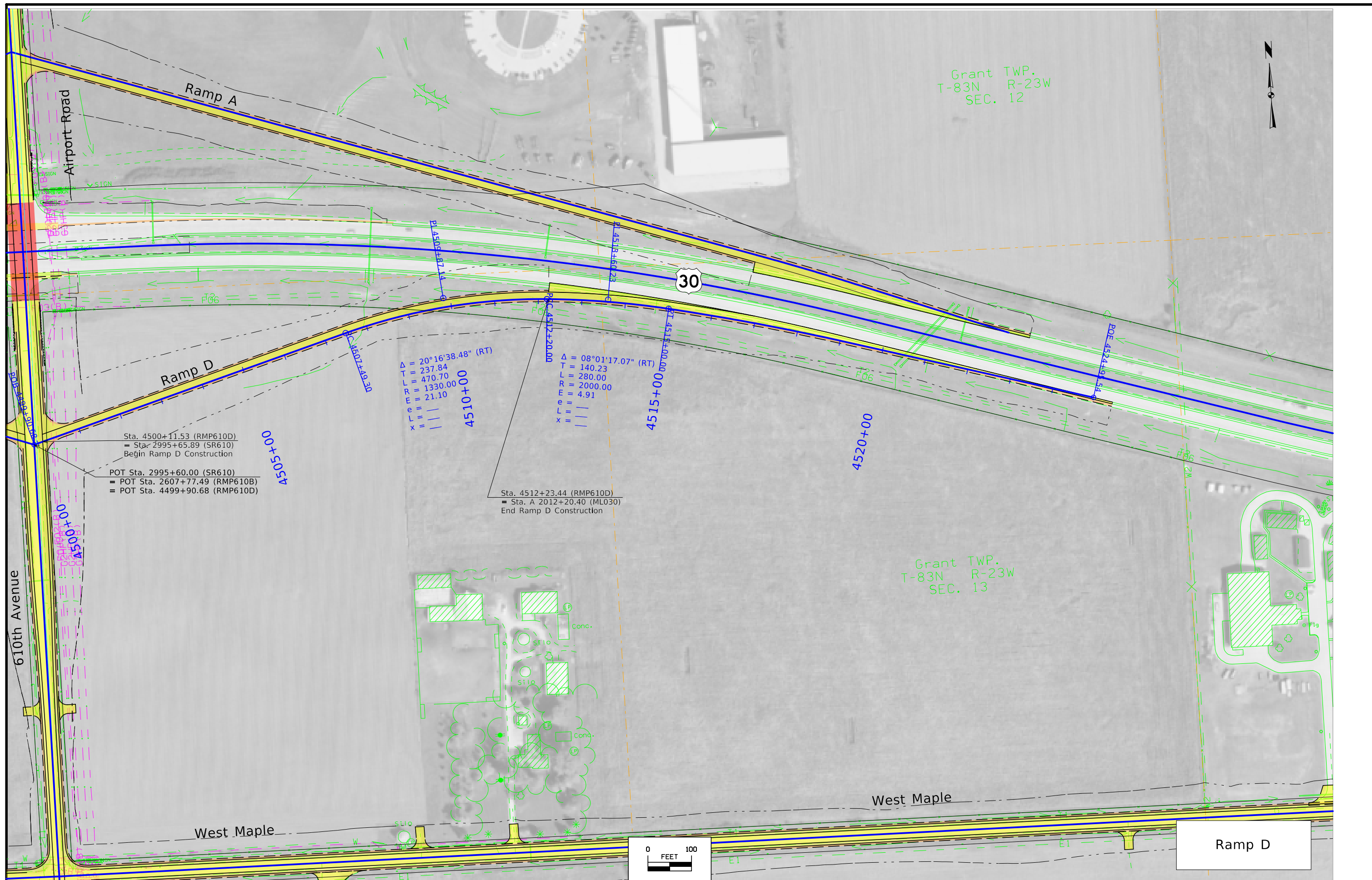




986.52  
 986.43  
 986.33  
 986.23  
 986.13  
 986.03  
 985.93  
 985.83  
 985.75  
 985.72  
 985.74  
 985.81  
 985.92  
 986.08  
 986.29  
 986.55  
 986.85  
 987.20  
 987.60  
 988.05  
 988.54  
 989.09  
 989.68  
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 1005.10  
 1005.60  
 1006.10  
 1006.60

FILE NO.	ENGLISH	DESIGN TEAM Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER NHSX-030-5(321)--3H-85	SHEET NUMBER K.8
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Grant TWP.  
T-83N R-23W  
SEC. 12

Grant TWP.  
T-83N R-23W  
SEC. 13

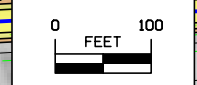
Sta. 4500+11.53 (RMP610D)  
= Sta. 2995+65.89 (SR610)  
Begin Ramp D Construction

POT Sta. 2995+60.00 (SR610)  
= POT Sta. 2607+77.49 (RMP610B)  
= POT Sta. 4499+90.68 (RMP610D)

$\Delta = 20^{\circ}16'38.48''$  (RT)  
T = 237.84  
L = 470.70  
R = 1330.00  
E = 21.10  
e = —  
L = —  
x = —

Sta. 4512+23.44 (RMP610D)  
= Sta. A 2012+20.40 (ML030)  
End Ramp D Construction

$\Delta = 08^{\circ}01'17.07''$  (RT)  
T = 140.23  
L = 280.00  
R = 2000.00  
E = 4.91  
e = —  
L = —  
x = —



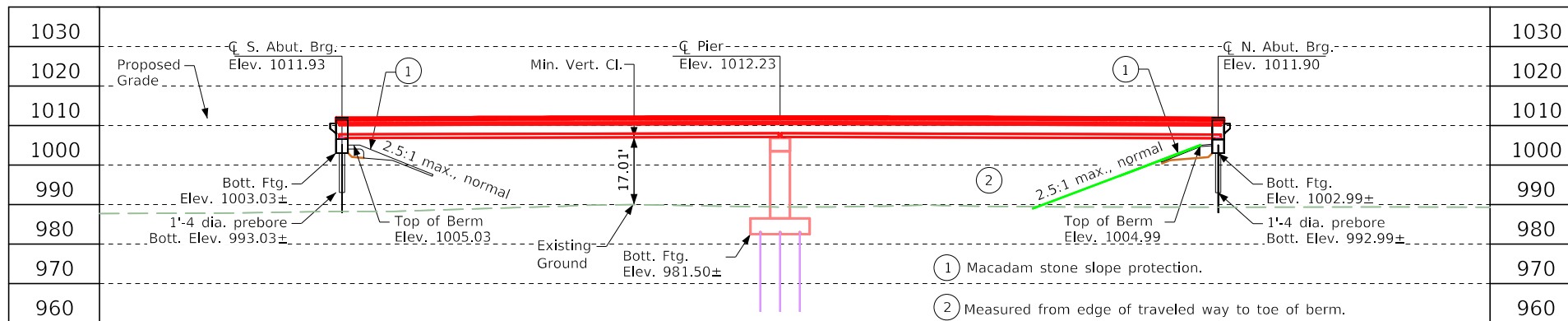
Ramp D



1007.14  
 1006.87  
 1006.37  
 1005.86  
 1005.36  
 1004.86  
 1004.35  
 1003.85  
 1003.35  
 1002.84  
 1002.34  
 1001.84  
 1001.33  
 1000.83  
 1000.33  
 999.82  
 999.32  
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 998.31  
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 991.00  
 991.23  
 991.44

FILE NO.	ENGLISH	DESIGN TEAM	Flattery\Bell\Kiebel	STORY COUNTY	PROJECT NUMBER	NHSX-030-5(321)--3H-85	SHEET NUMBER	K.10
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Control Point:



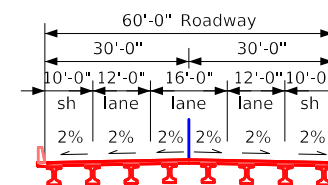
g1 = 3.000%      g2 = -3.000%

VPI Sta. = 3000+00.000      VC = 1200.000'  
VPI Elev. = 1021.255

### Proposed Profile Grade 610th Avenue

### Minimum Vertical Clearance

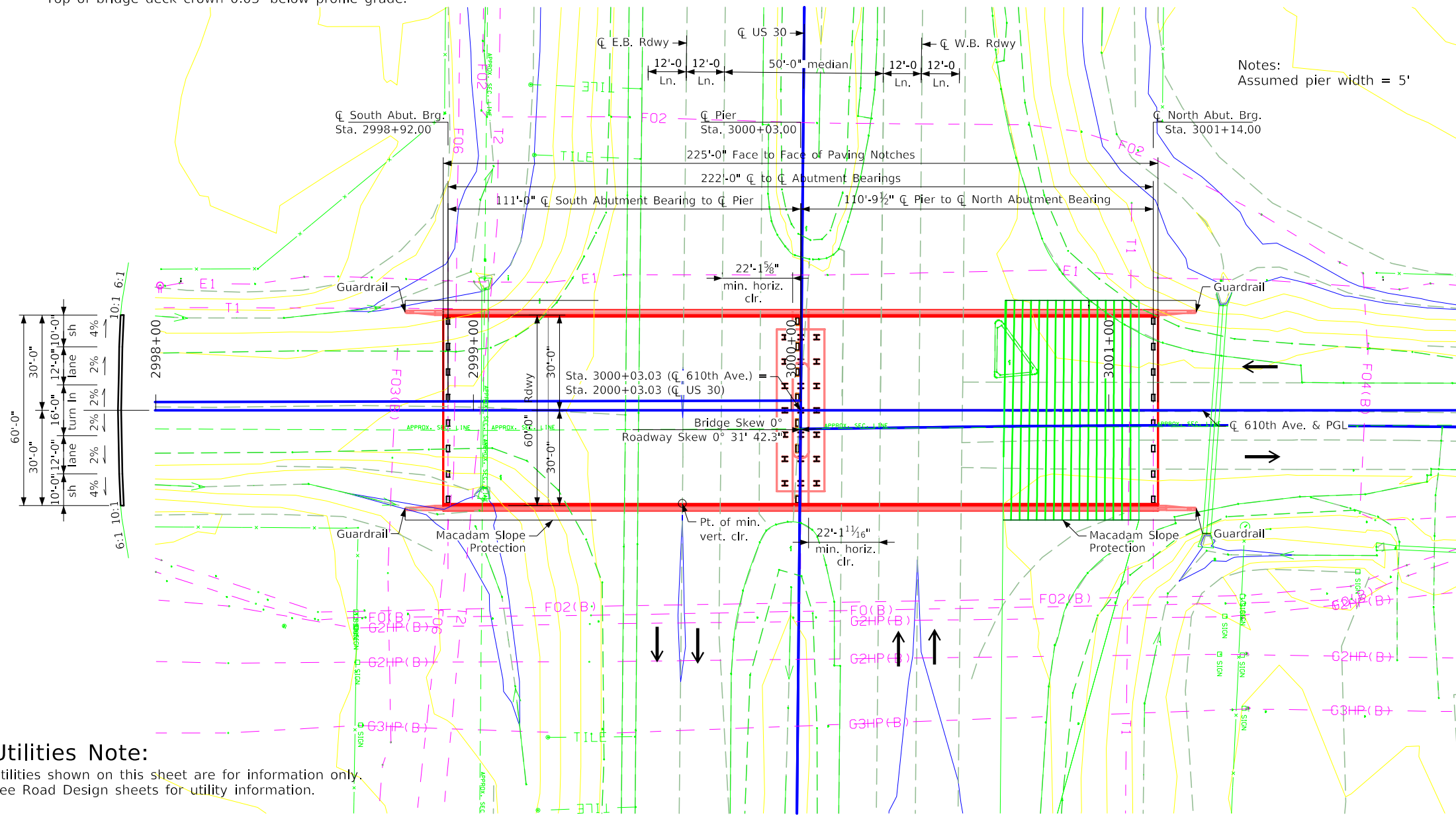
Overhead Station = 2999+65.76, 29.33' Rt.  
Overhead Elevation = 1011.64  
Depth of Superstructure = 4.63'  
Underpass Station = ?, 42.00' Rt.  
Underpass Elevation = 990.00  
Minimum Vertical Clearance = 17.01'



Typical Bridge Section

Note:  
Top of bridge deck crown 0.03' below profile grade.

### Longitudinal Section Along $\bar{C}$ Approach Roadway



### Traffic Estimate

2028 AADT	18,329 V.P.D.
2048 AADT	23,129 V.P.D.
20?? DHV	?? V.P.H.
TRUCKS	8-9 %
Total	???
Design ESALs	???

### Location

610th Avenue over U.S. 30  
In City of Nevada  
T-83N R-23W  
Section 11/12  
?? Township  
Story County  
FHWA No. ??  
Latitude ??,123456°  
Longitude -??,123456°

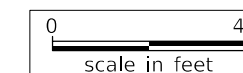
PRELIMINARY

Design For 0 Degree Skew  
**222'-0 x 60'-0 Pretensioned  
Prestressed Concrete Beam Bridge**  
2 @ 111'-0 End Spans      Interior Span

STA. 3000+03.00 (610th Avenue)      Turn-In Date: June 2023

**Story County**  
IOWA DEPARTMENT OF TRANSPORTATION  
Design No. DDDD      Design Sheet No. 1 of 1      FHWA No. FFFFFF

### Situation Plan



### Utilities Note:

Utilities shown on this sheet are for information only.  
See Road Design sheets for utility information.

### General Utility Symbols:

- E - Electric Line
- G - Gas Line
- SAN - Sanitary Sewer
- T - Telephone Line
- W - Water Line
- FO - Fiber Optic Line
- GHP - Gas High Pressure
- ST S - Storm Sewer
- TV - TV

### CROSS SECTION VIEW COLOR LEGEND

Design Color No.	Feature	Design Color No.	Feature
<b>Aggregate</b>			
(64)	Choke Stone	(112)	Noise Wall
(42)	Engineering Fabric	(112)	Noise Wall Footing
(8)	Flooded Backfill	(112)	Retaining Wall Back
(92)	Macadam Stone	(112)	Retaining Wall Back Excavate
(20)	Modified	(112)	Retaining Wall Face
(12)	Plowing Shaping	(112)	Retaining Wall Front Excavate
(14)	Porous Backfill	(112)	Retaining Wall Front Footing
(8)	Revetment Class A	(112)	Retaining Wall MSE Gutter
(6)	Revetment Class B	(112)	Retaining Wall Reinforced Earth
(62)	Revetment Class C	<b>Grading</b>	
(188)	Revetment Class D	(8)	Behind Curb Cut
(28)	Revetment Class E	(6)	Granular
(12)	Shoulder Special Backfill	(13)	Granular Back Fill
(12)	Special Backfill	(48)	Rock Undercut
(20)	Subbase	(8)	Shoulder Earth Fill
(20)	Subbase Lower	(2)	Side Slopes
(20)	Subbase Upper	(226)	Side Slopes Dressing
(118)	Subgrade Treatment	<b>Substrata</b>	
<b>Asphalt</b>			
(207)	HMA Base Course	(128)	Boulder Substrata
(207)	HMA Interim Course	(48)	Broken Weathered Substrata
(207)	HMA Surface Course	(3)	Core Out Substrata
<b>Concrete</b>			
(0)	Barrier Concrete	(203)	Existing Pavement Substrata
(0)	Barrier Concrete Footing	(6)	Loam Substrata
(0)	Curb Gutter	(80)	Rock Substrata
(48)	Flowable Mortar	(4)	Select Sand Substrata
(0)	Median Concrete	(3)	Shale Substrata
(0)	PCC Pavement	(10)	Topsoil Substrata
(0)	Sidewalk	<b>Unsuitable / Waste</b>	
<b>Shoulder</b>			
(209)	Shoulder HMA	(3)	Unsuitable Type A
(0)	Shoulder PCC	(13)	Unsuitable Type B
(6)	Shoulder Granular	(11)	Unsuitable Type C
(6)	Shoulder Granular	(3)	Waste
<b>Existing</b>			
(0)	Existing Pavement		

**NOTES:**

Text

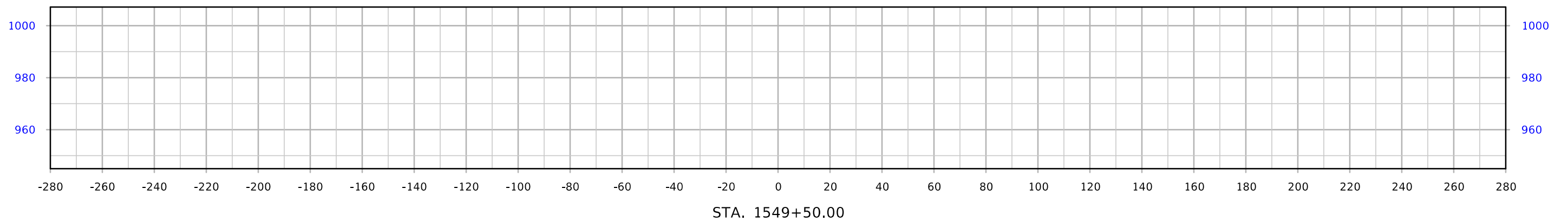
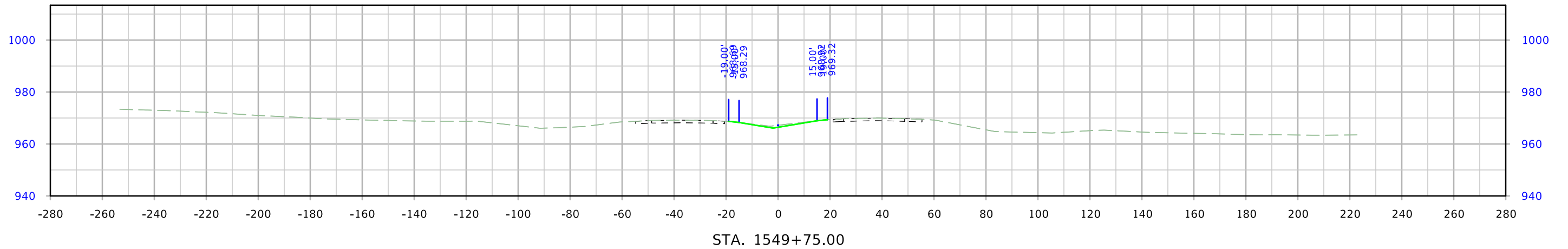
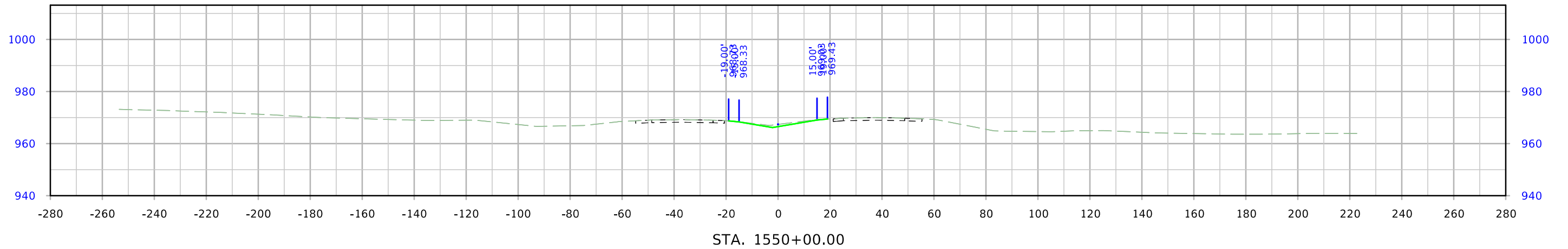
**NOTES:**

Text

## CROSS SECTIONS LEGEND AND INFORMATION SHEET

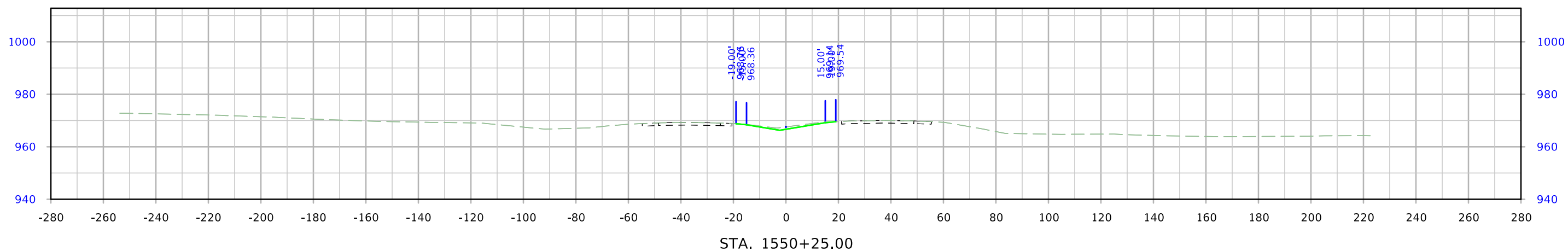
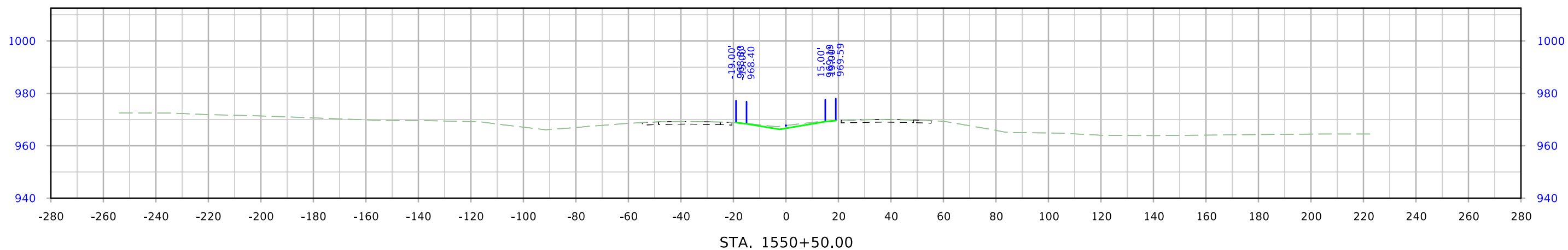
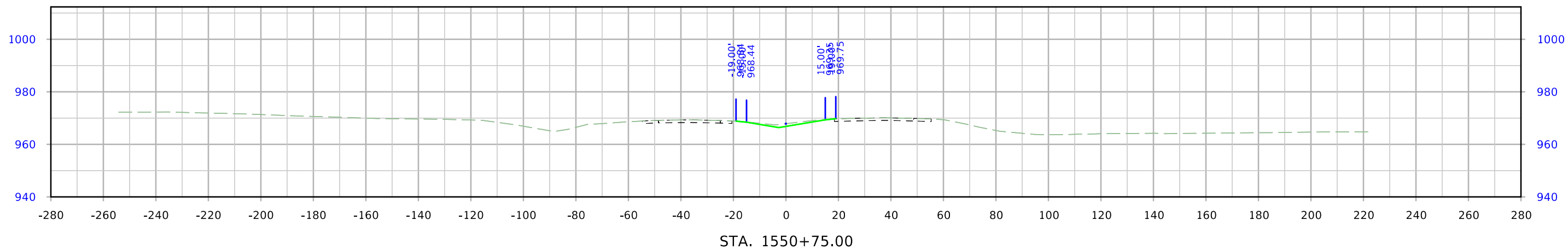
(COVERS SHEET SERIES W, X, Y, & Z)

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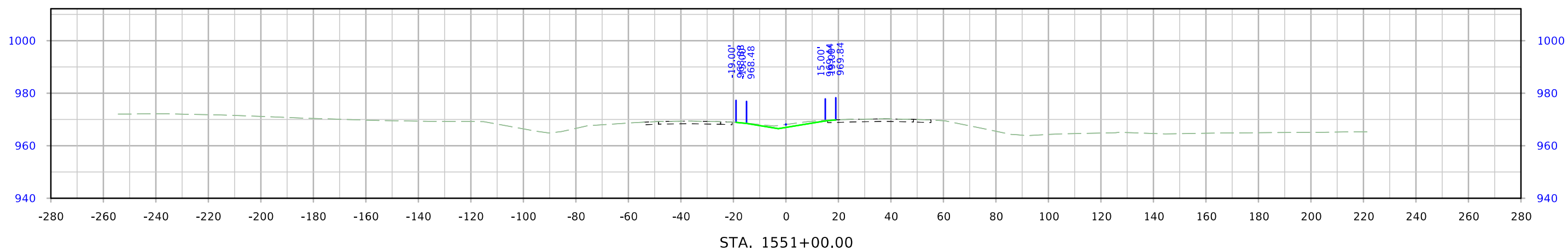
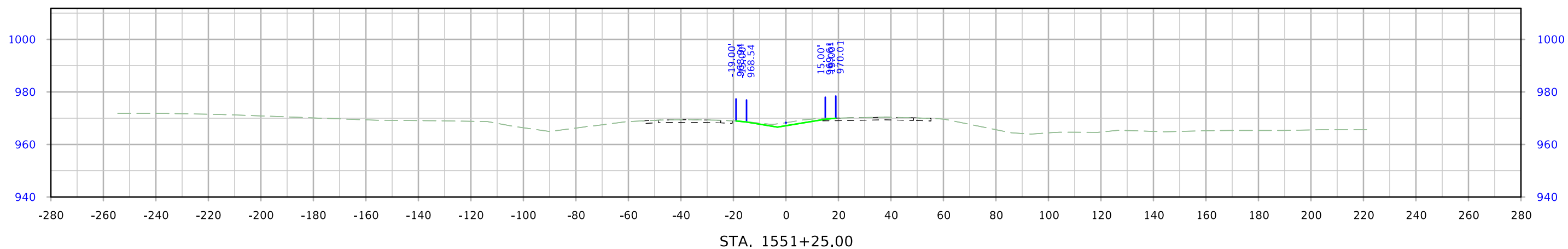
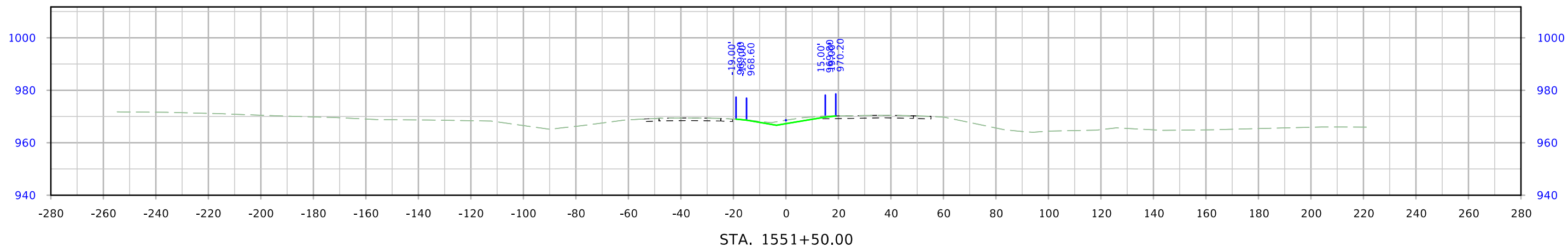




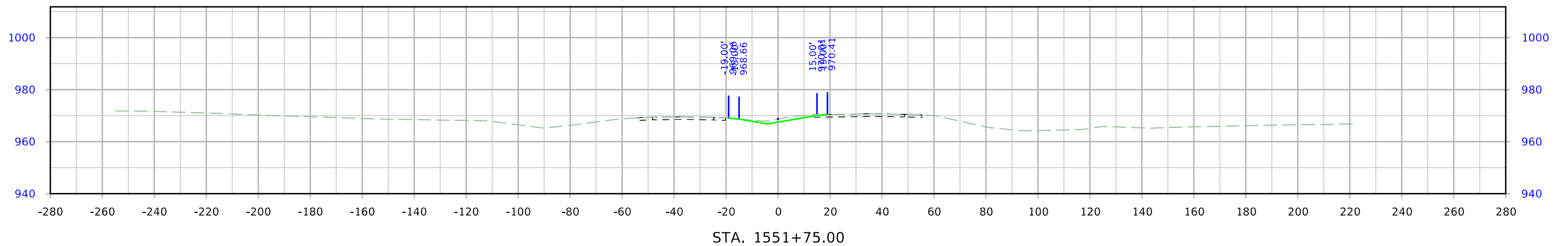
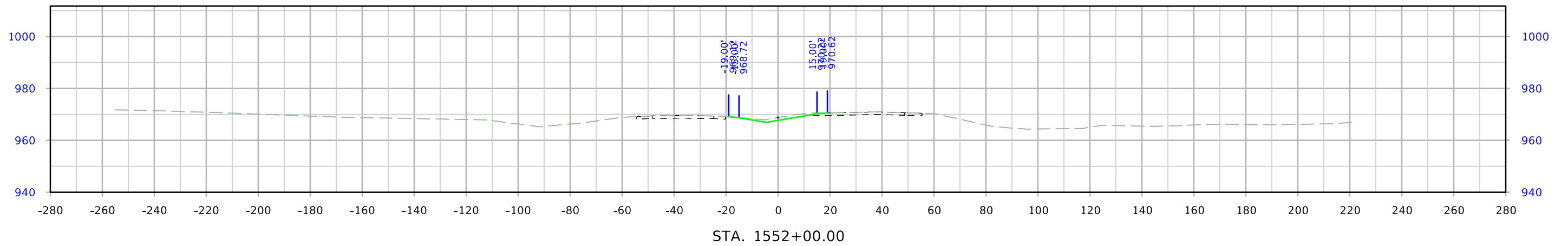
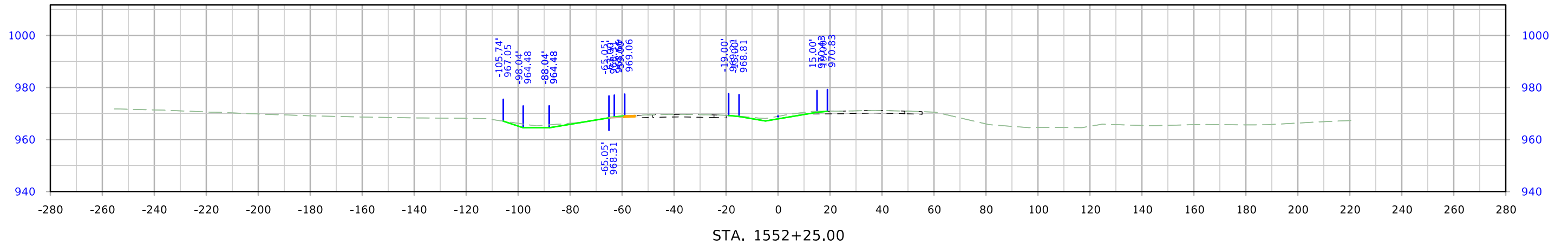
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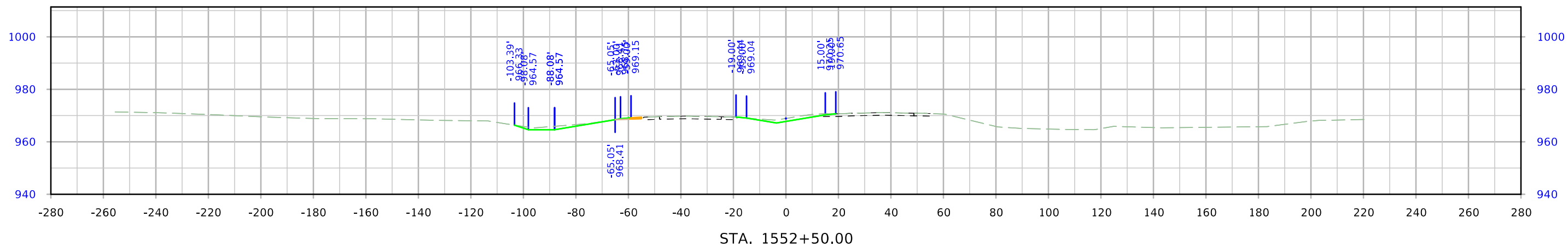
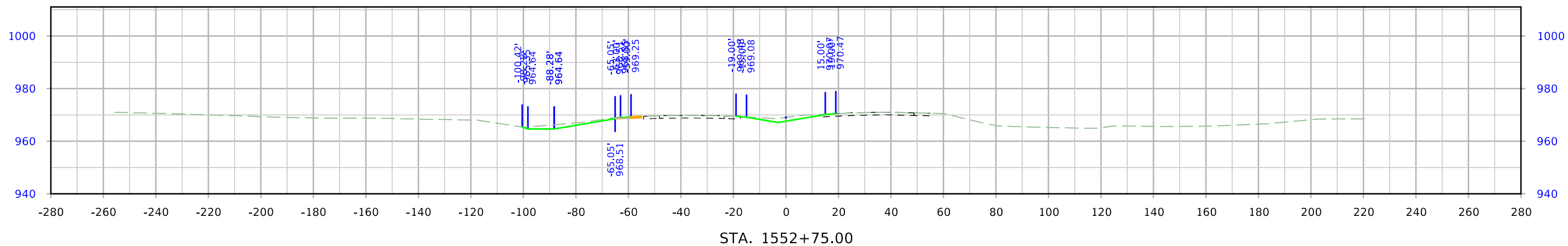
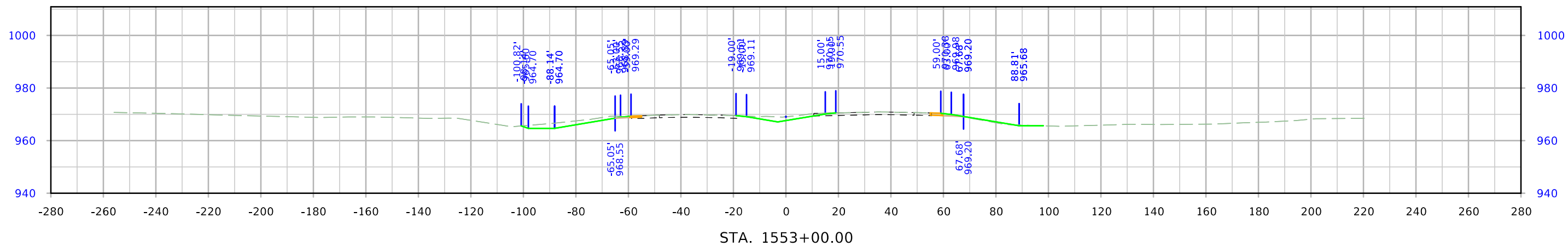
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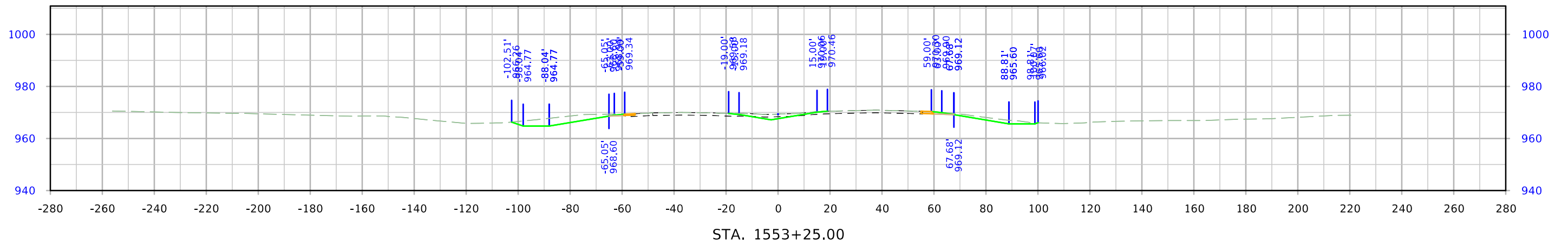
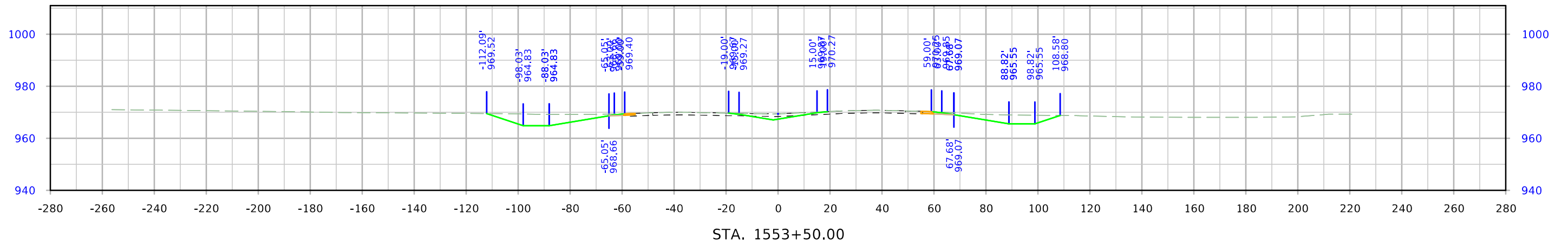
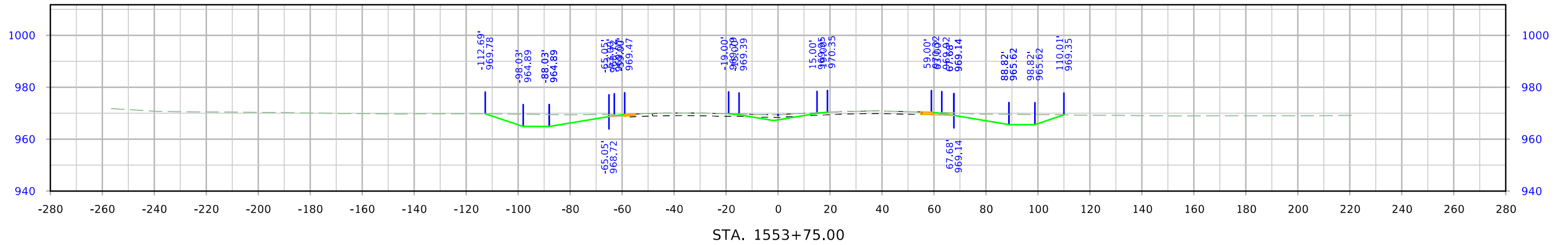
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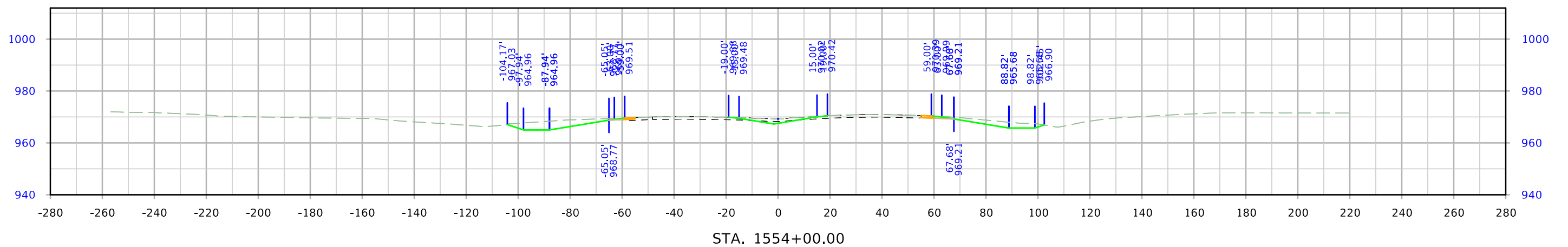
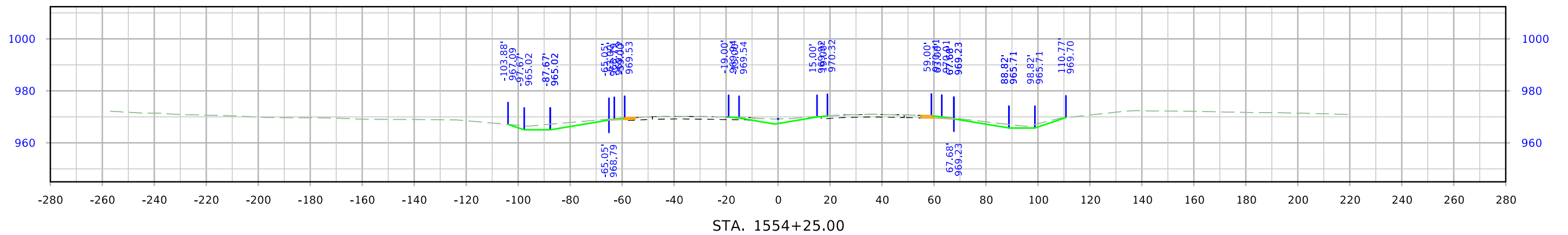
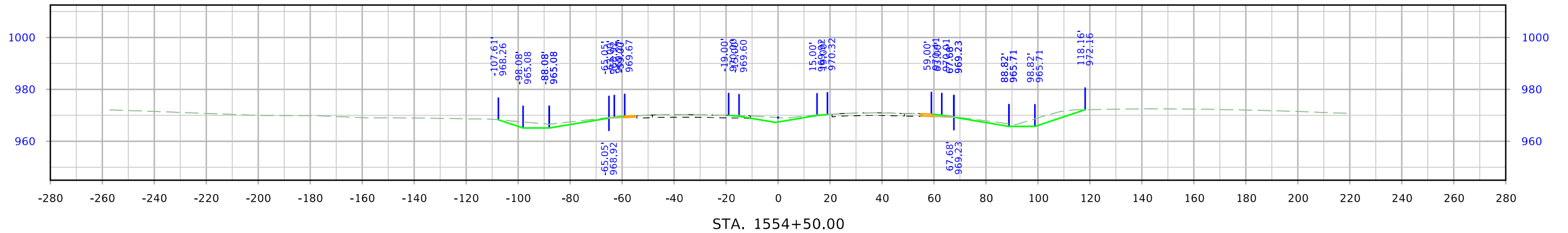


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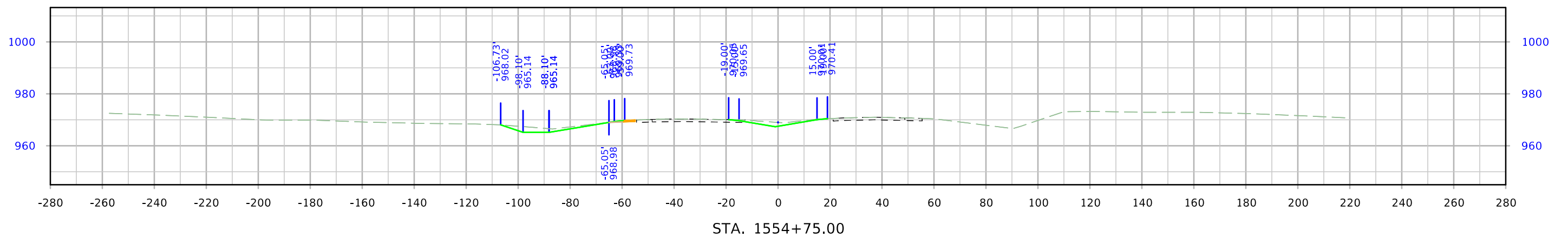
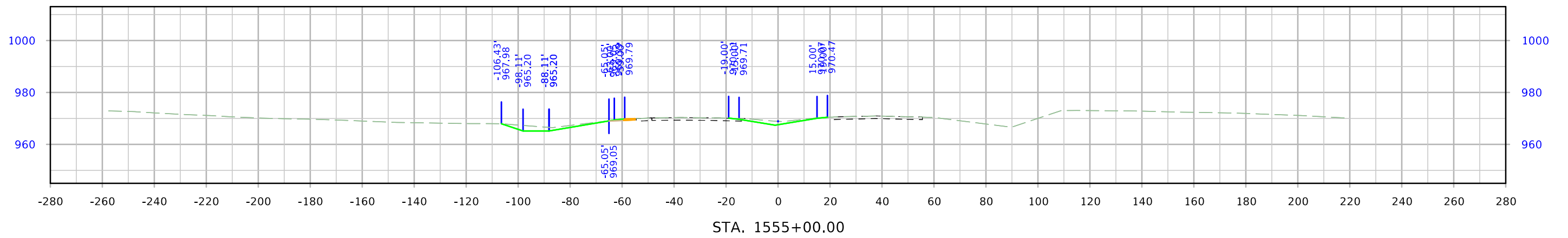
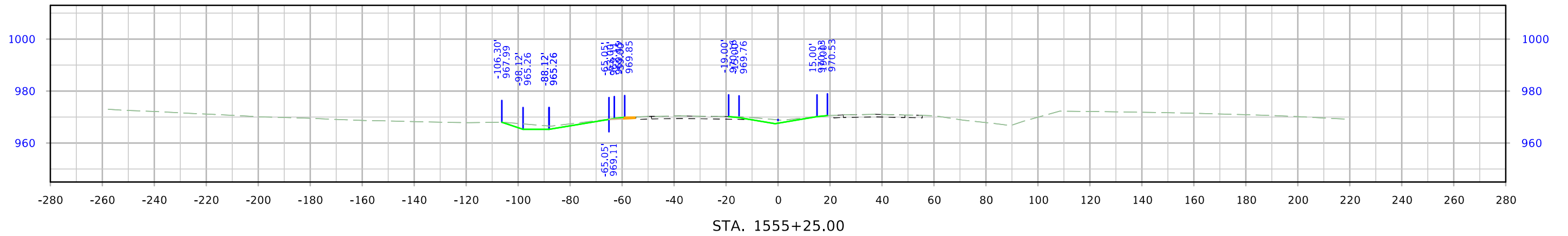




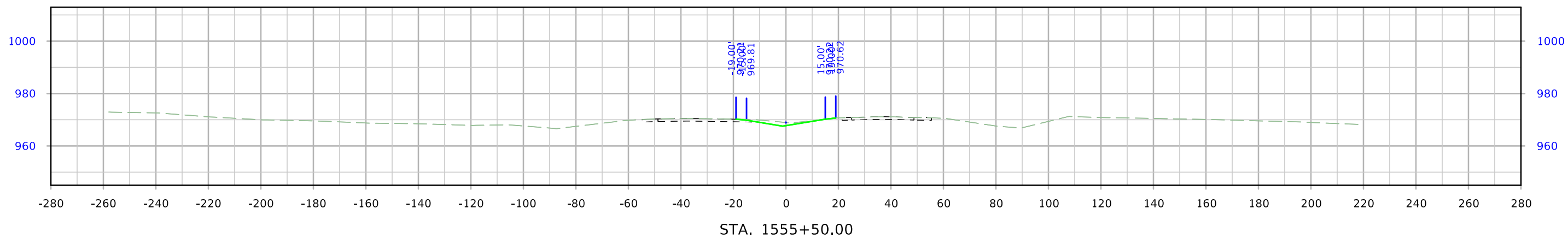
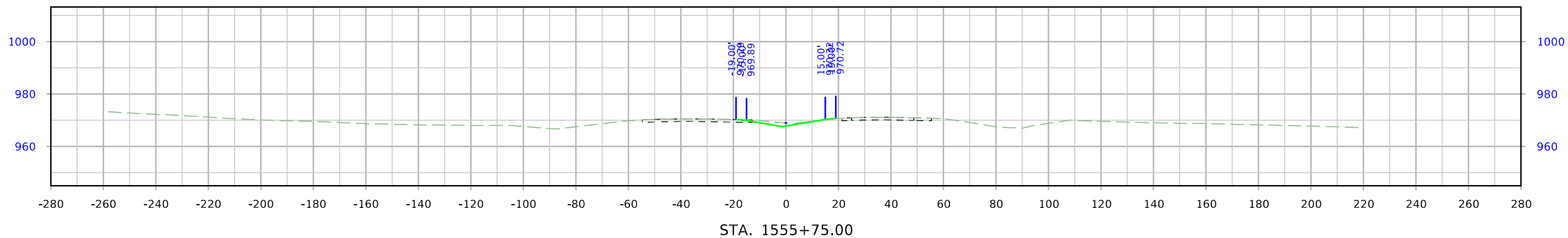
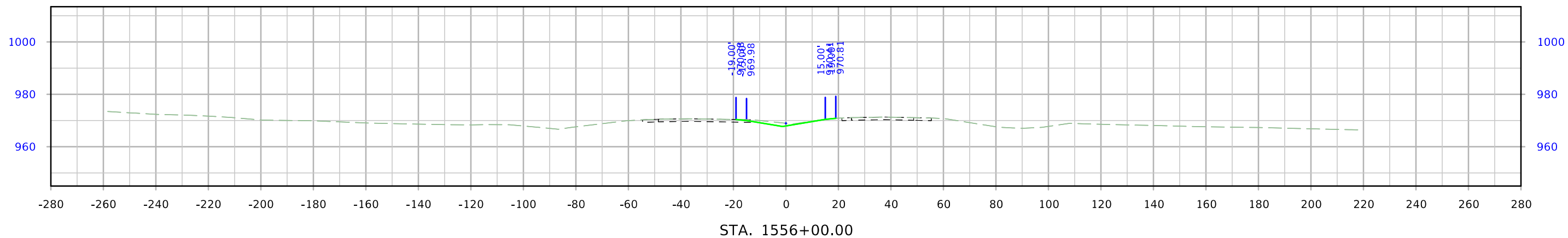
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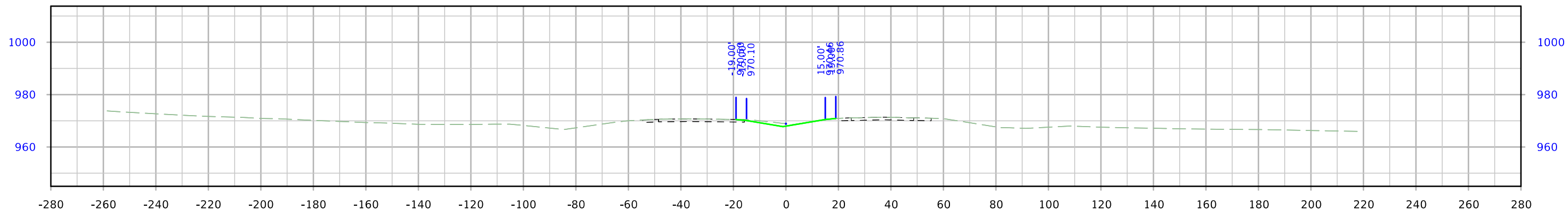
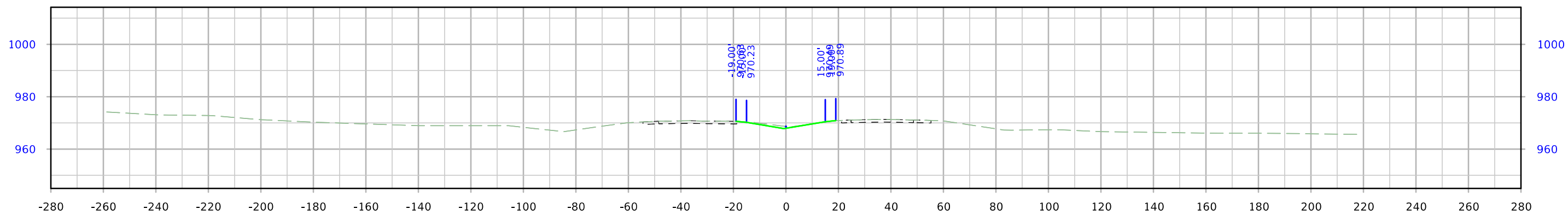
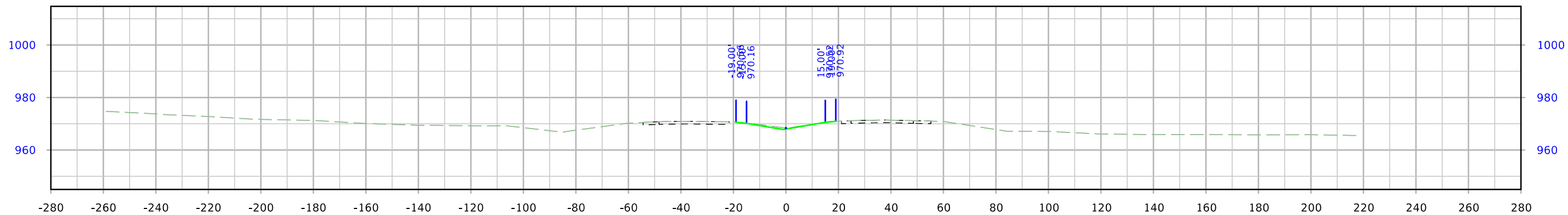
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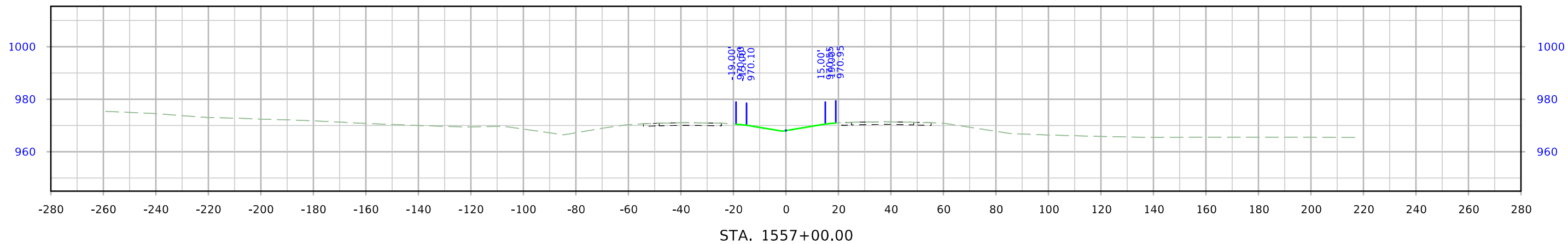
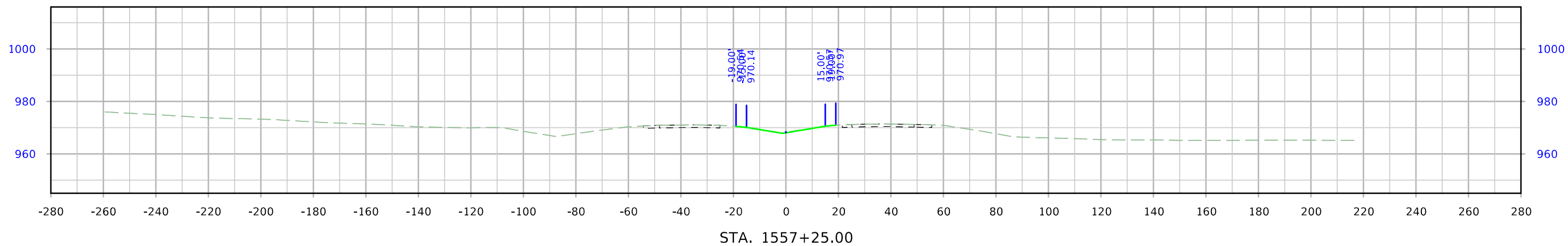
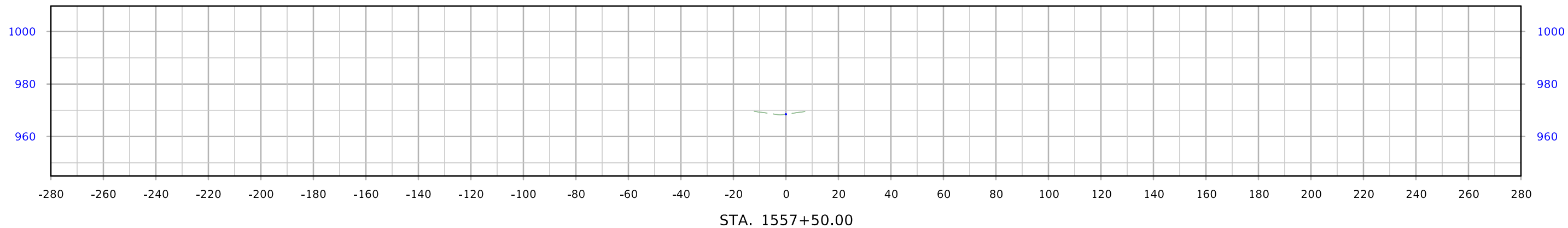
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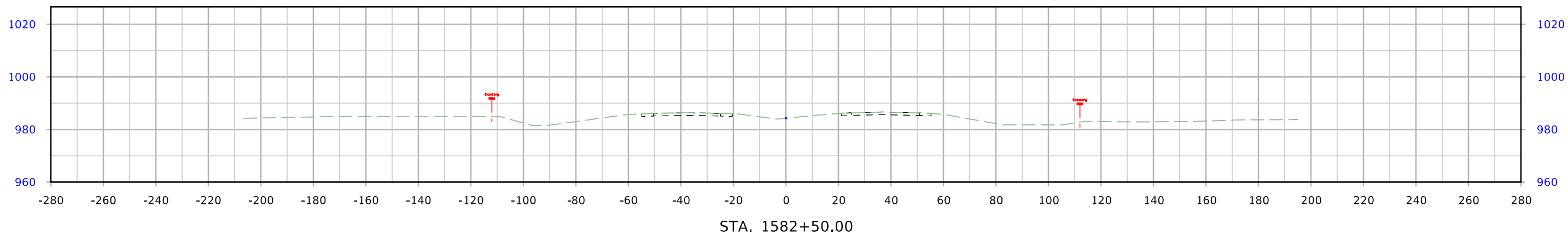
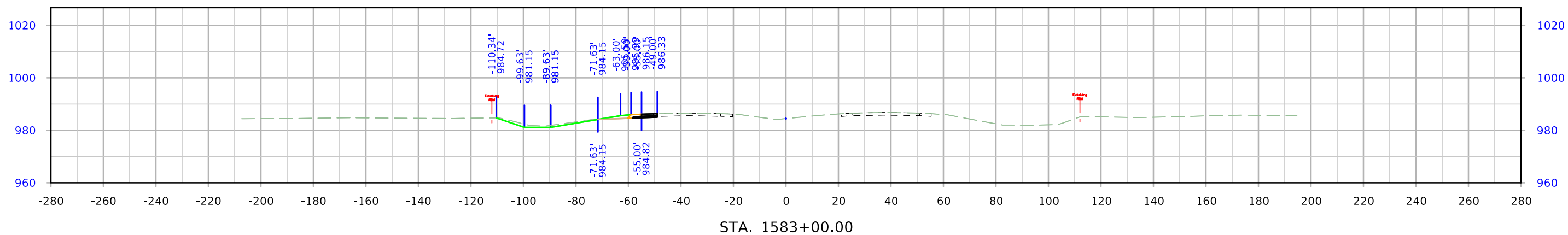
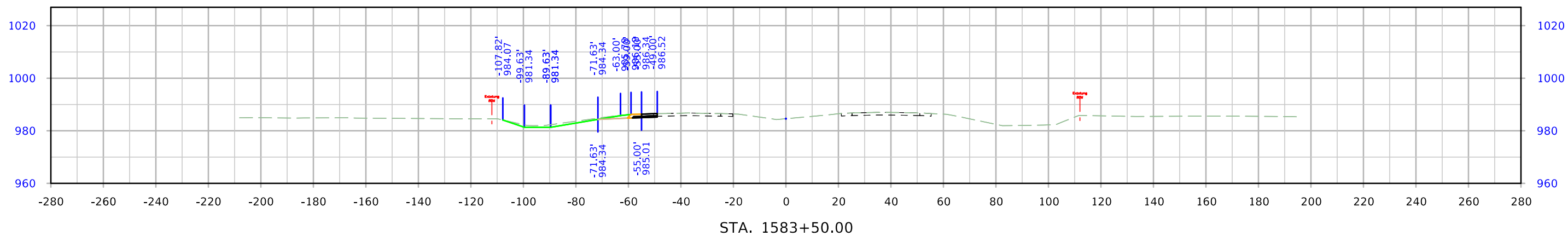


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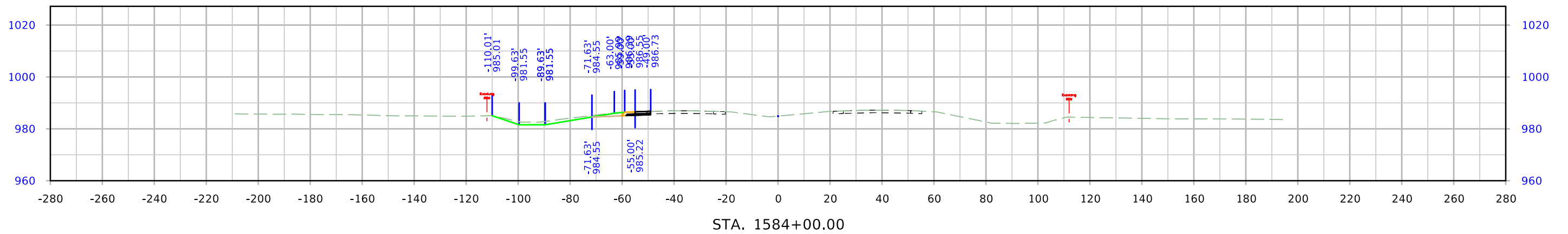
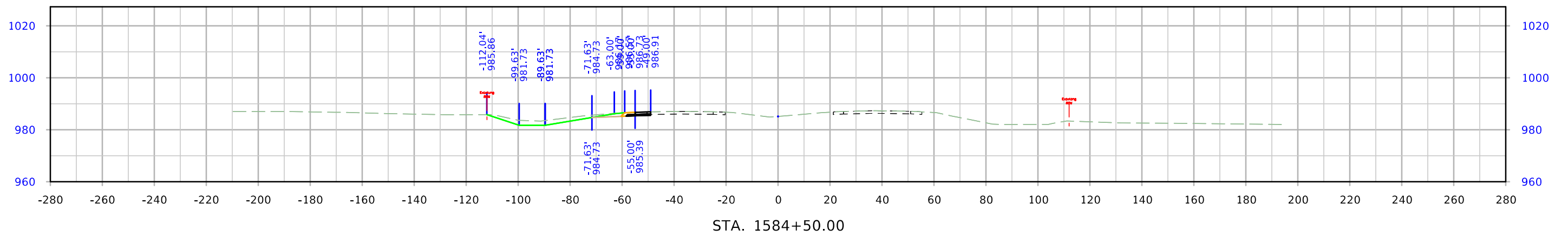
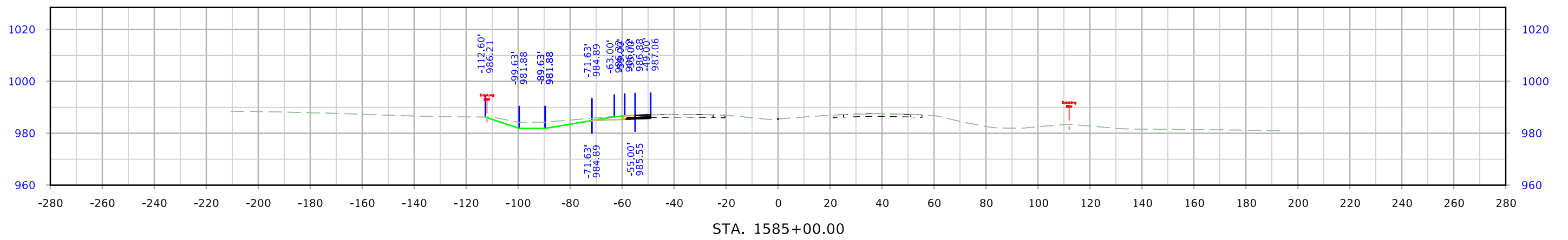




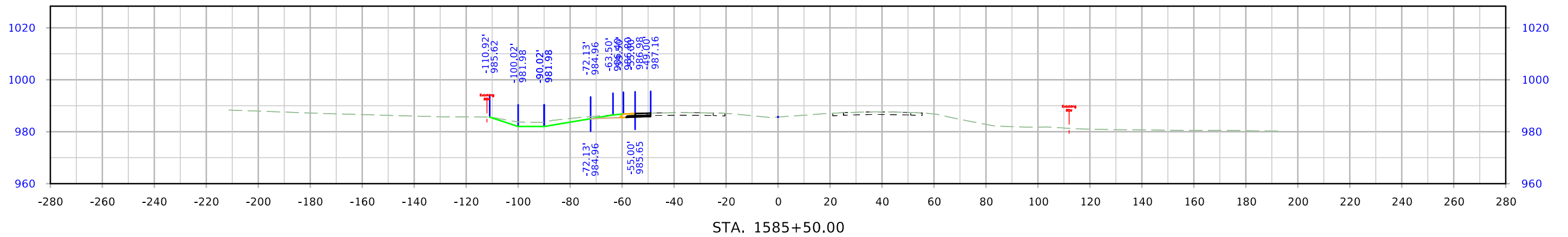
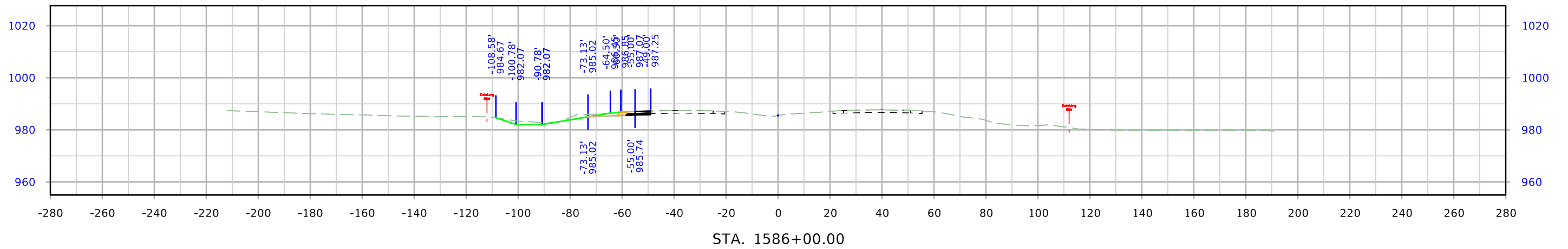
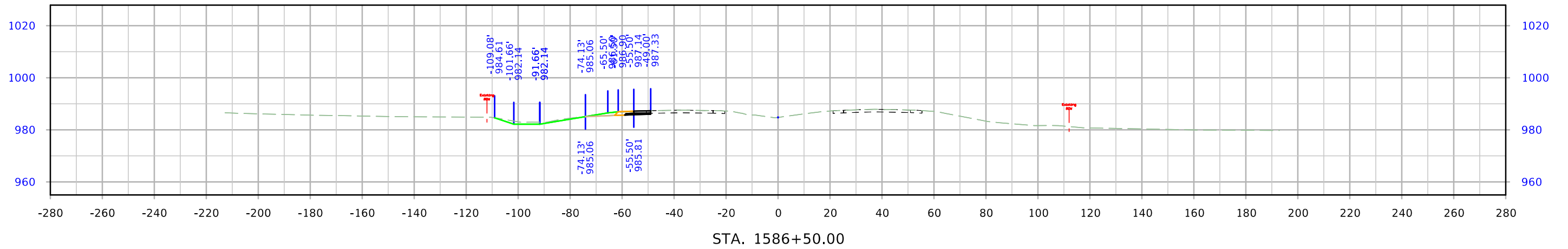
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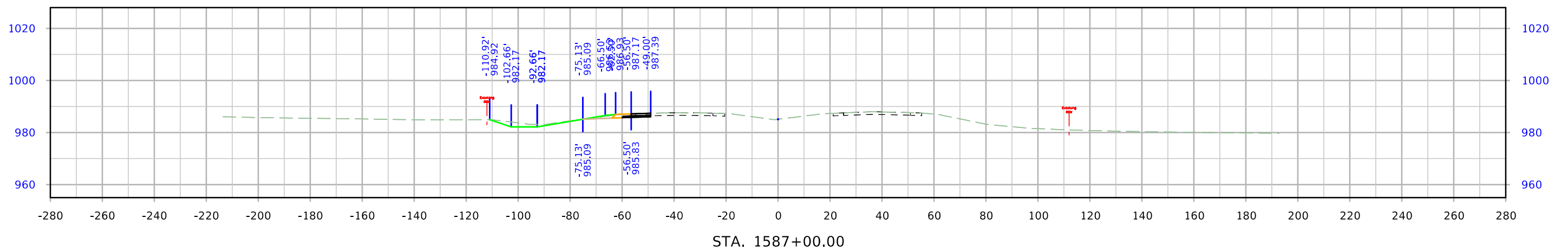
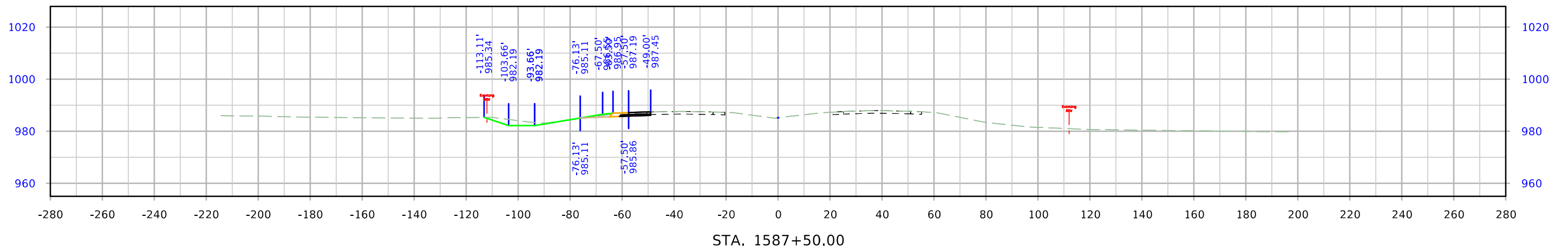
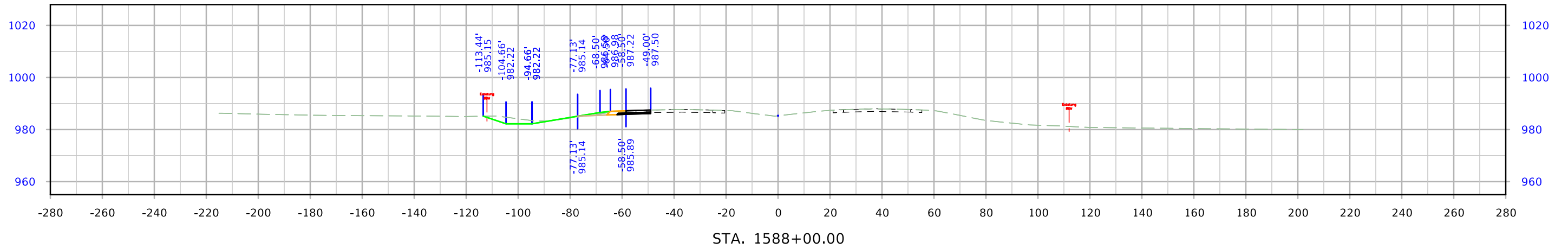
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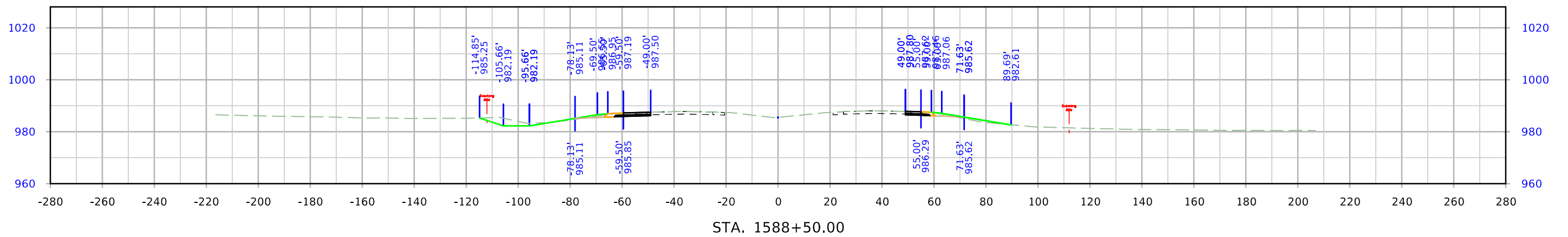
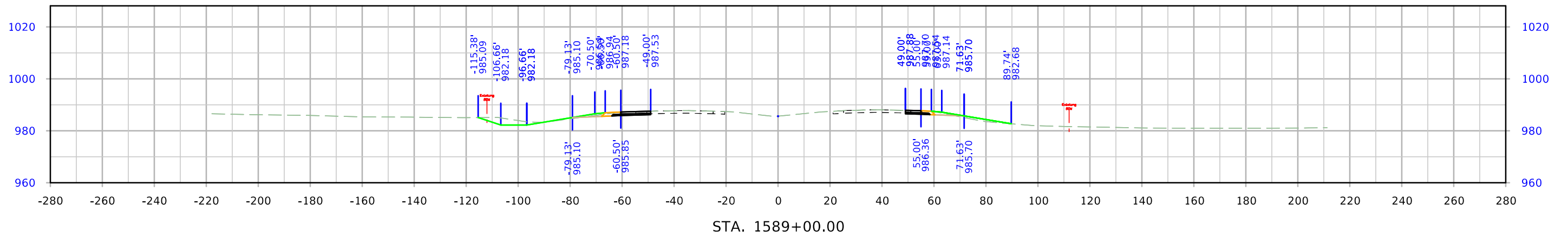
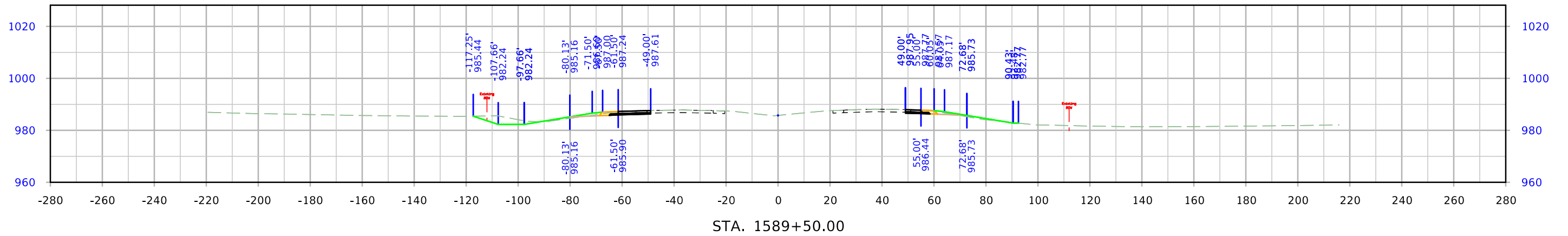
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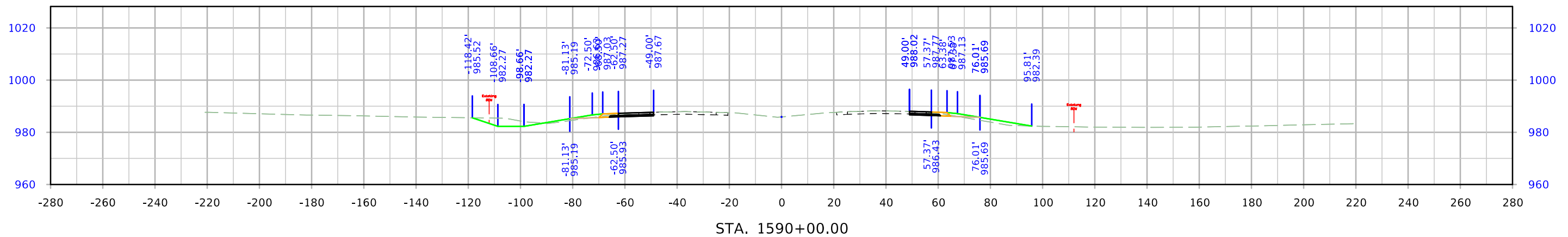
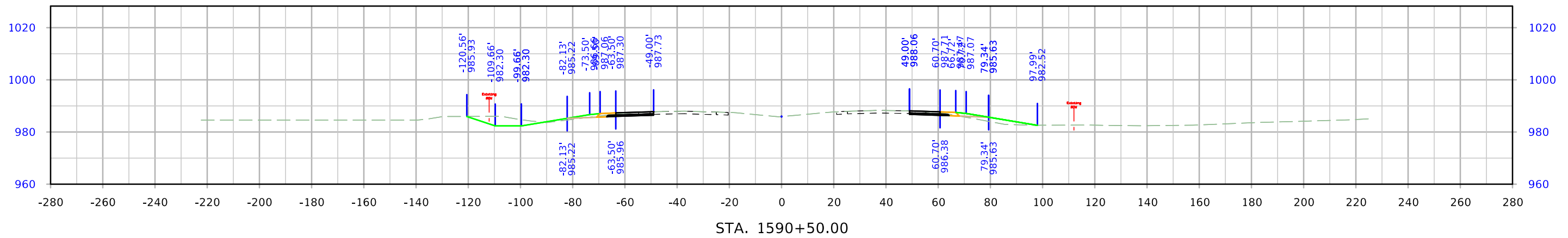
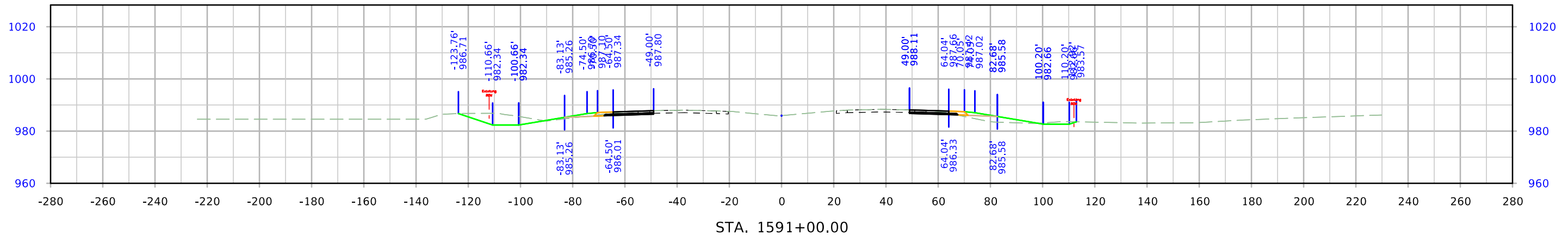
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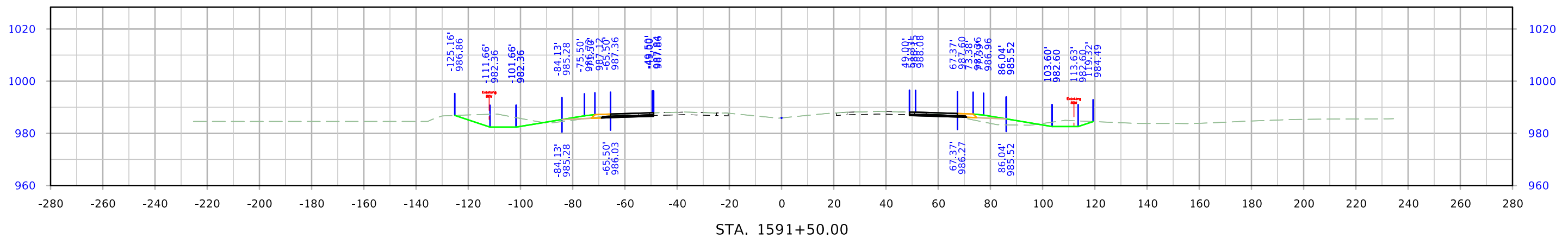
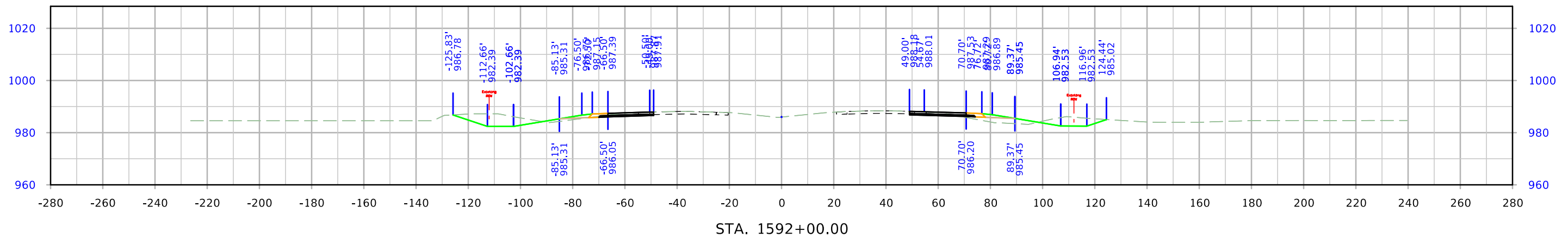
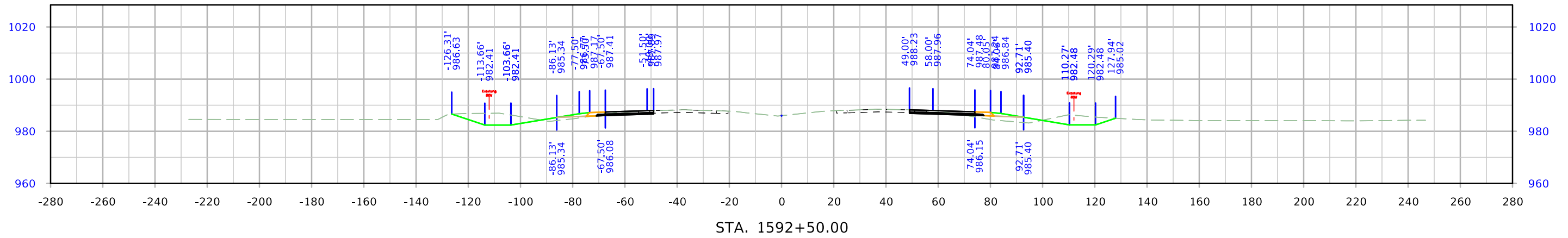


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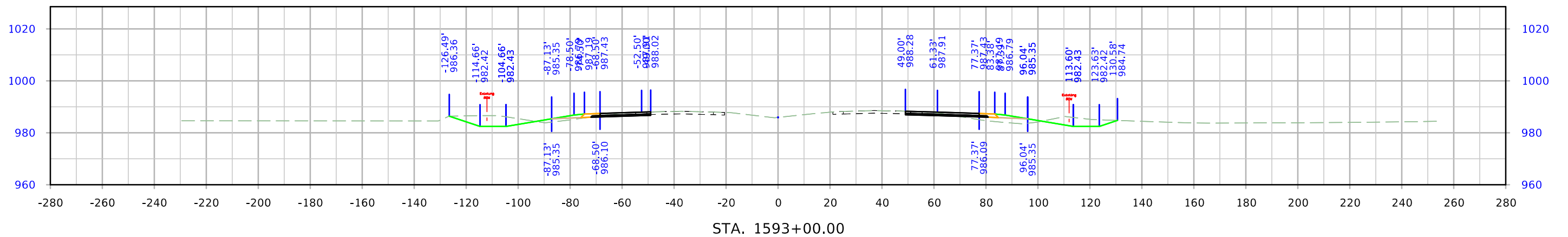
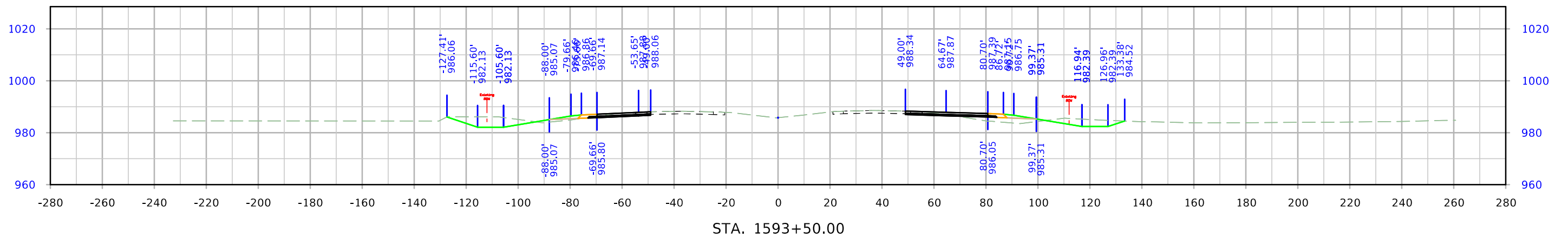
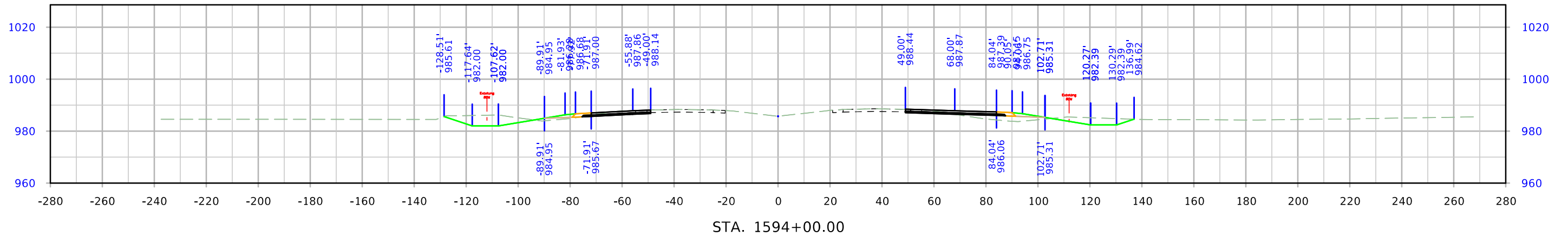




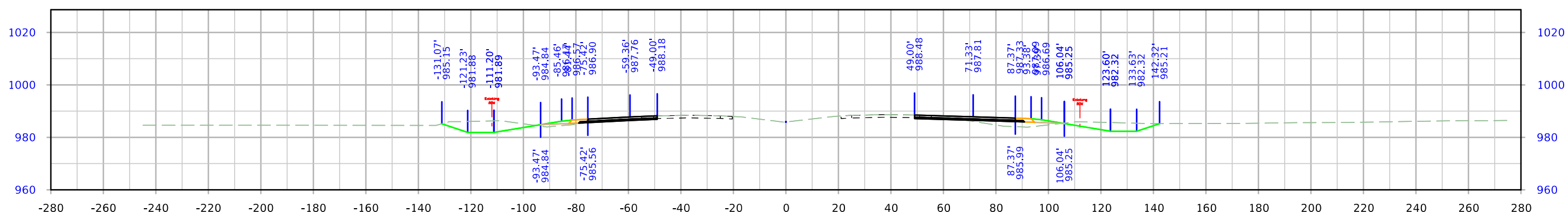
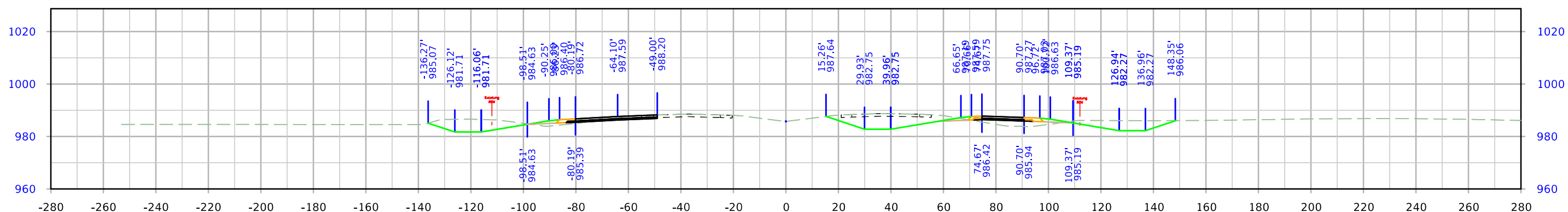
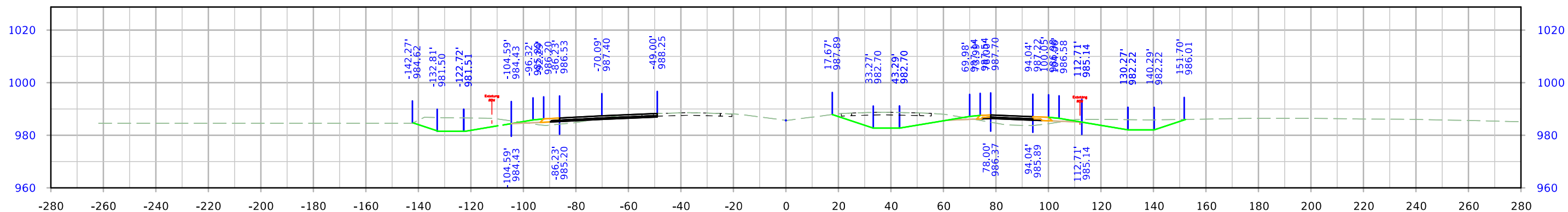
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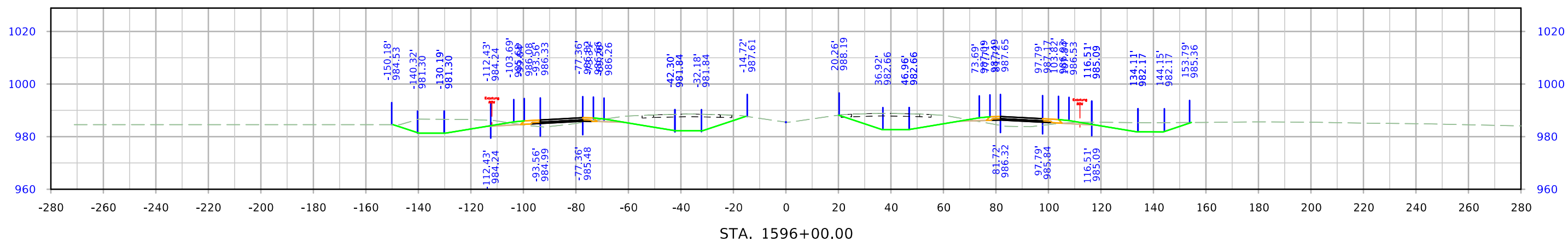
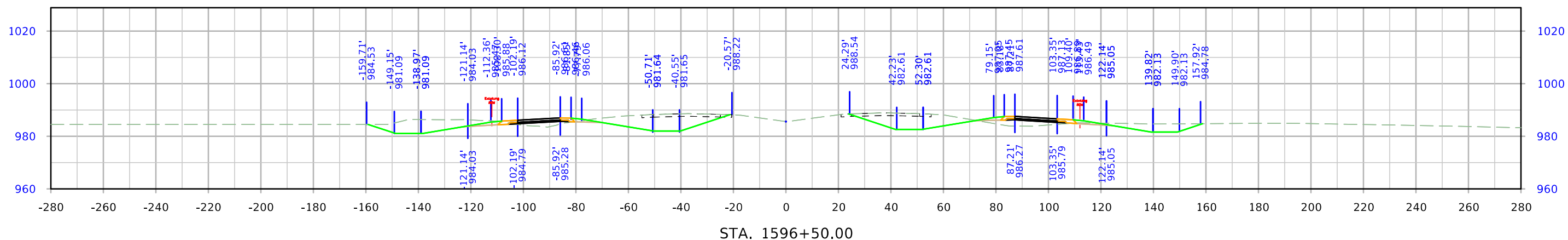
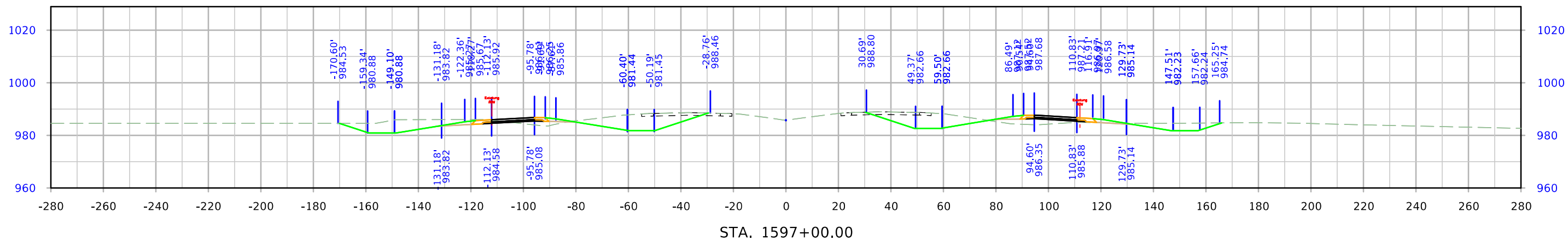
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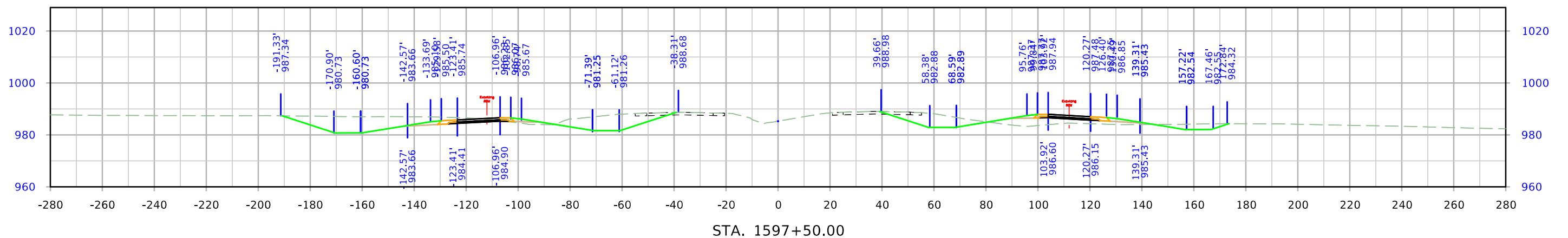
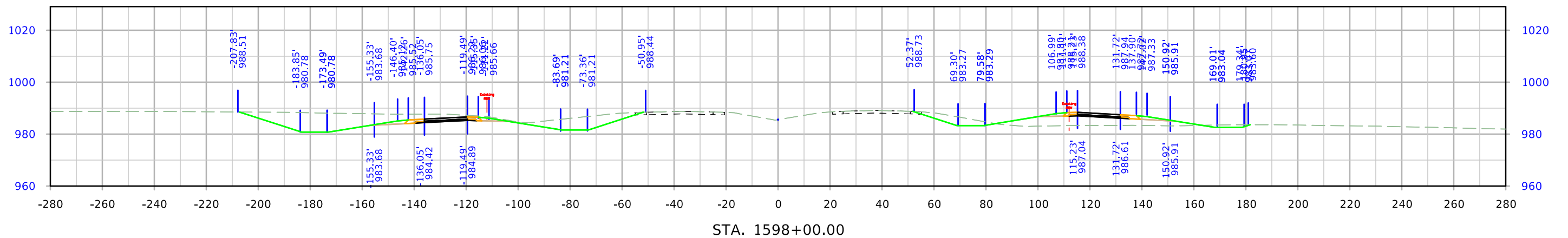
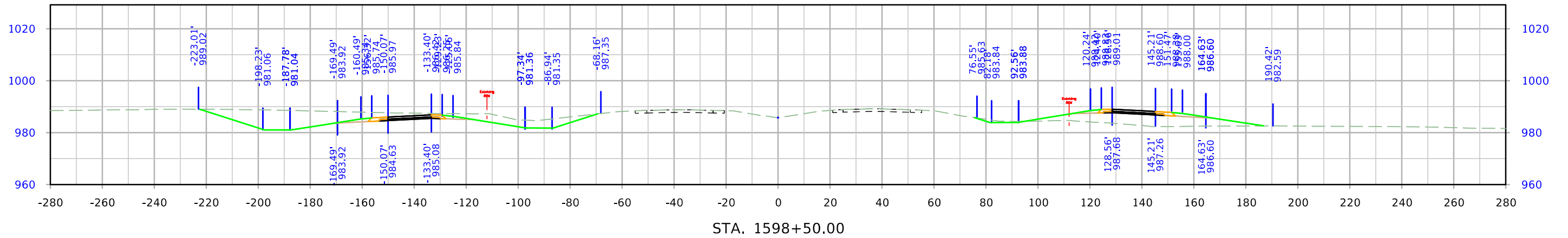
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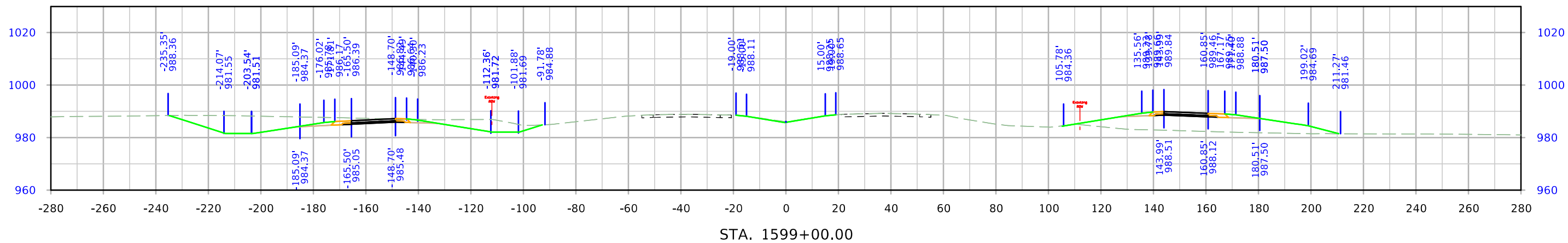
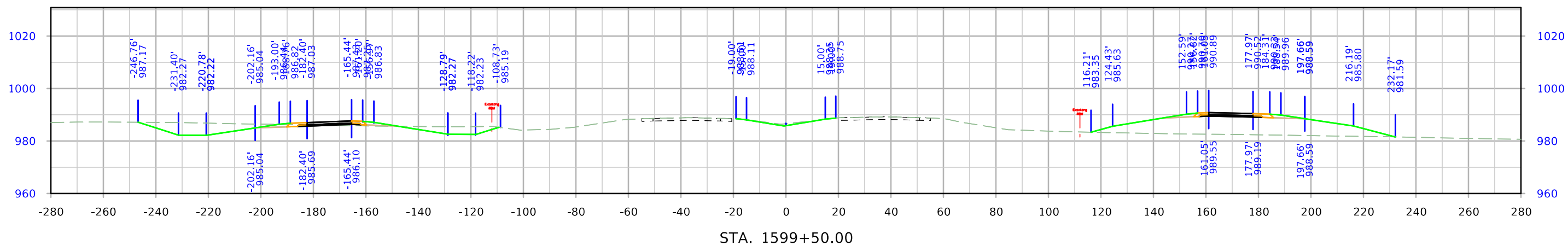
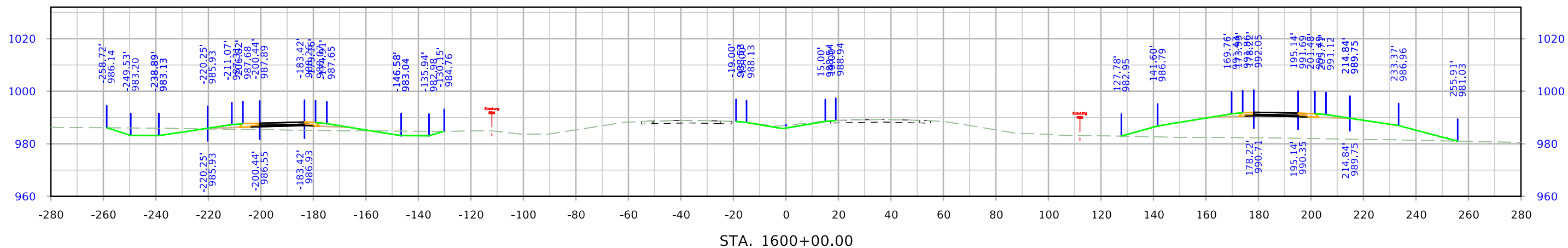
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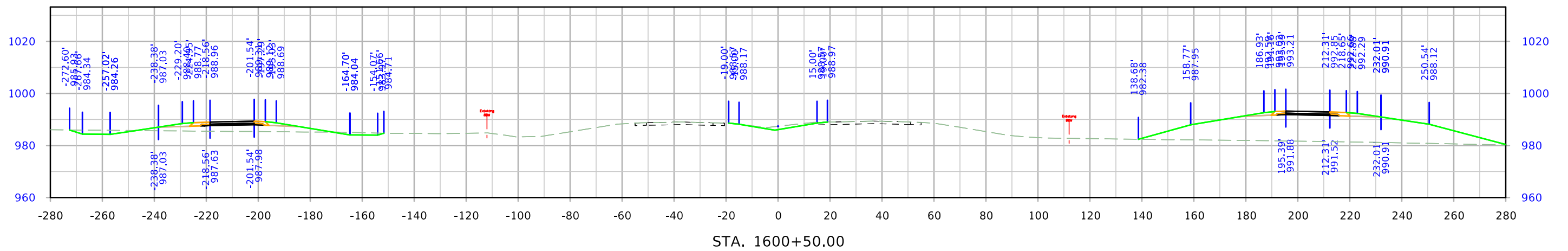
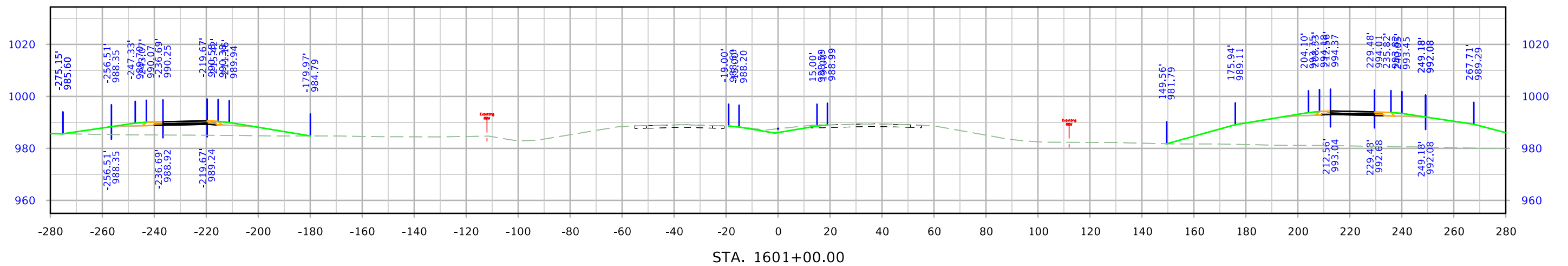
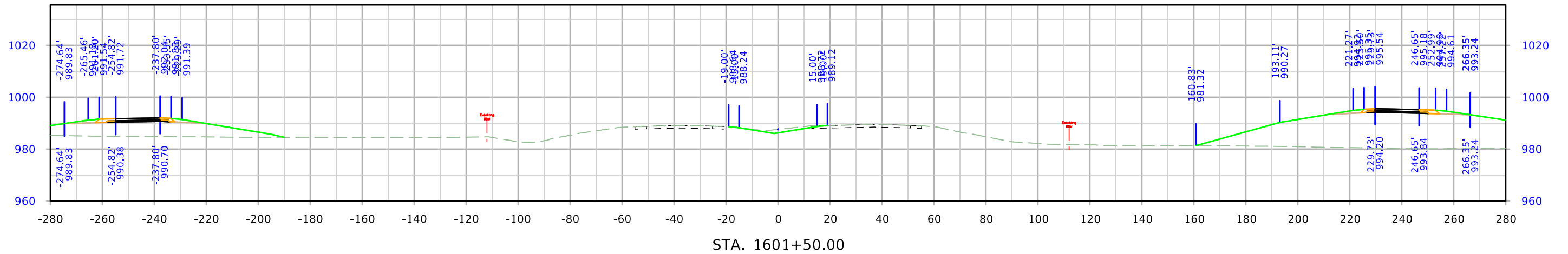


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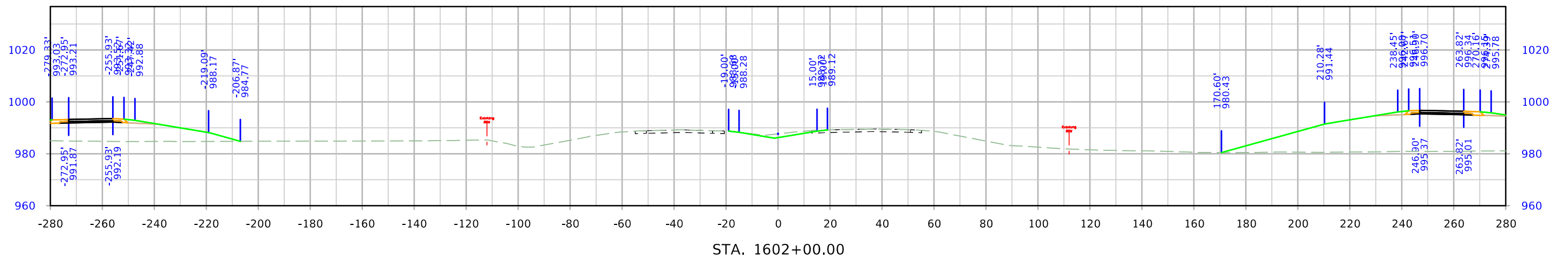
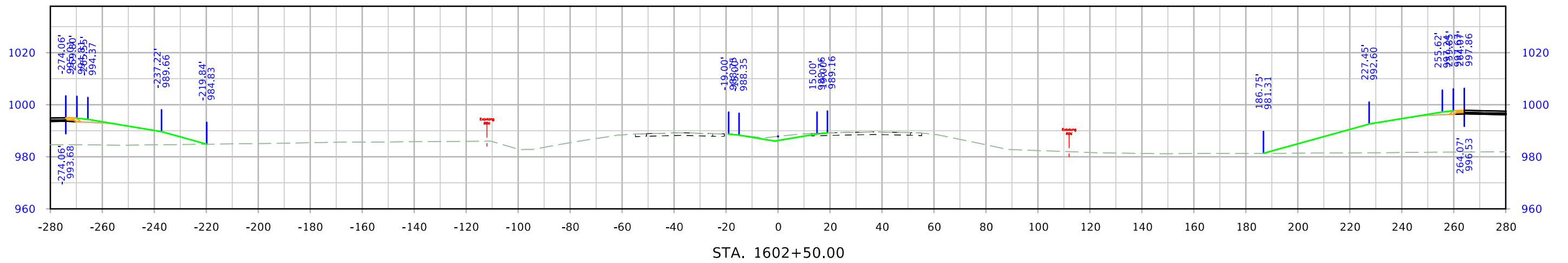
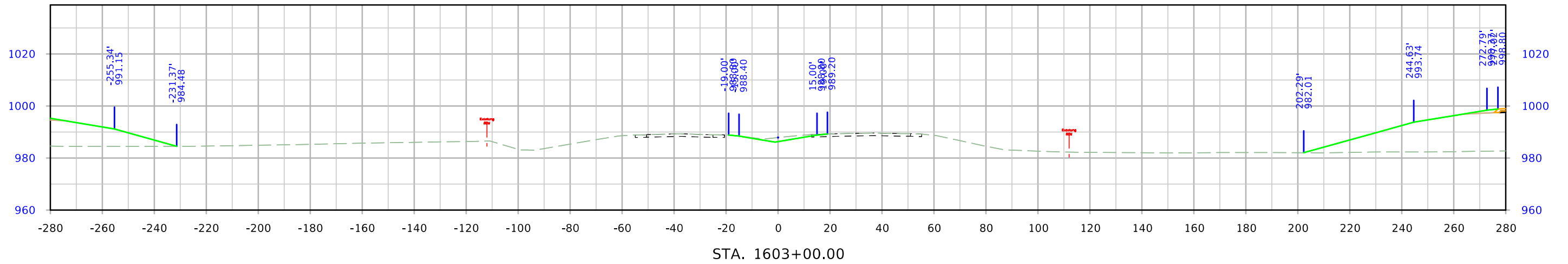




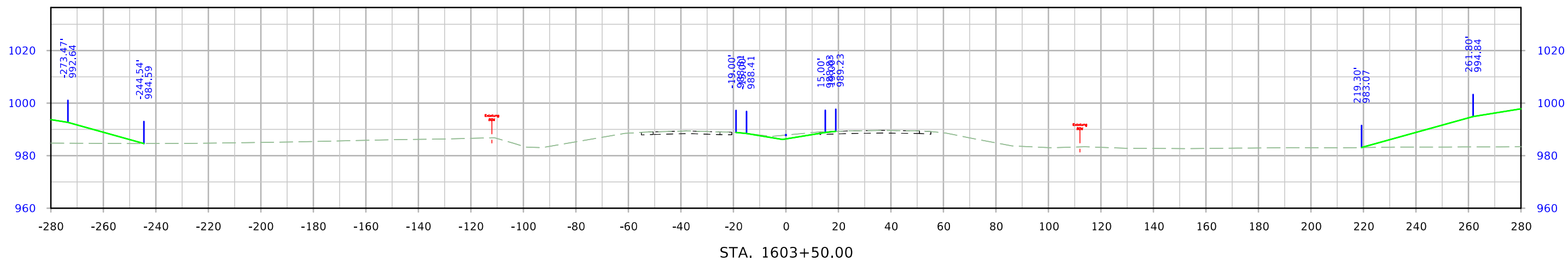
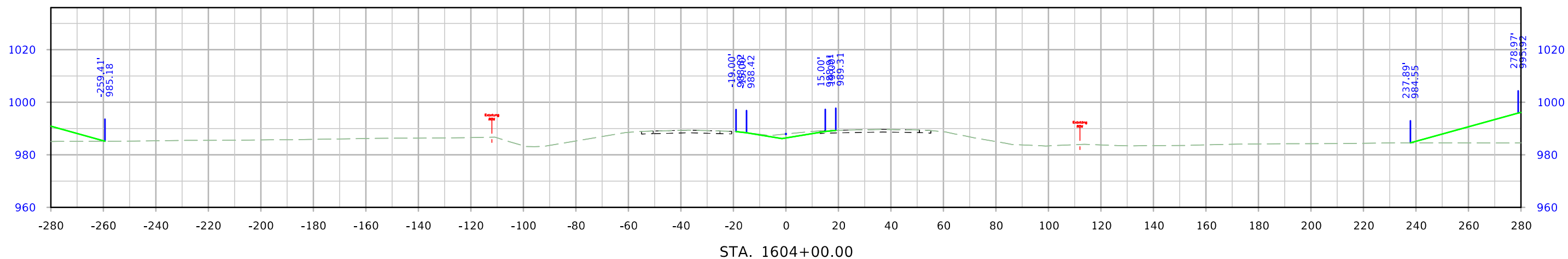
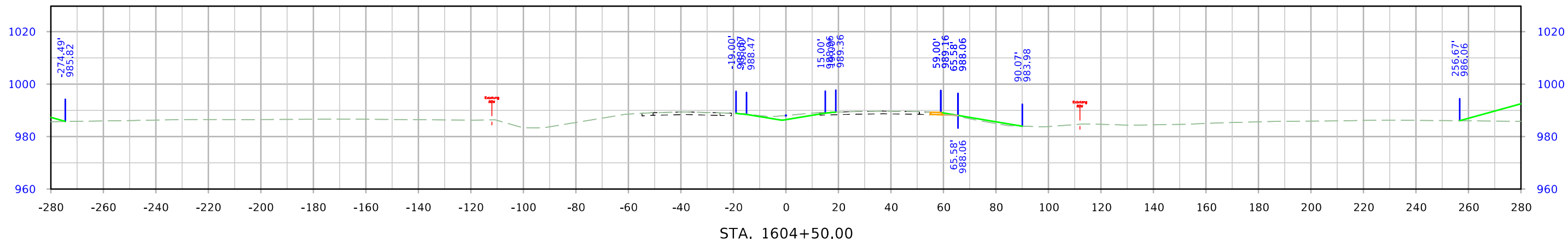
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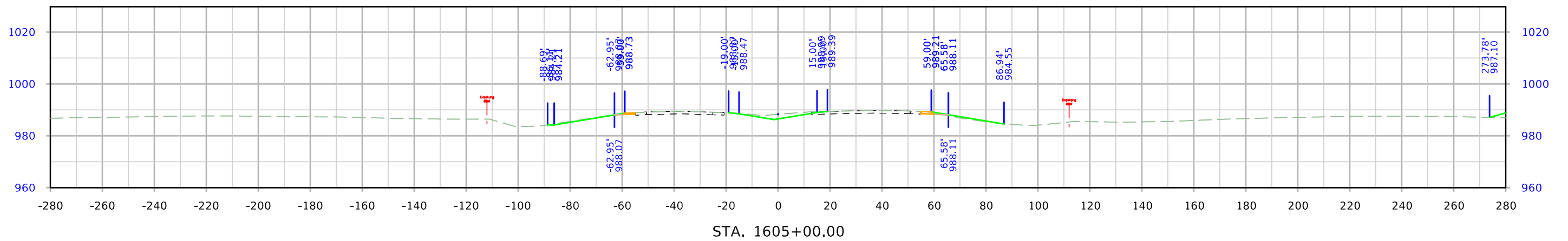
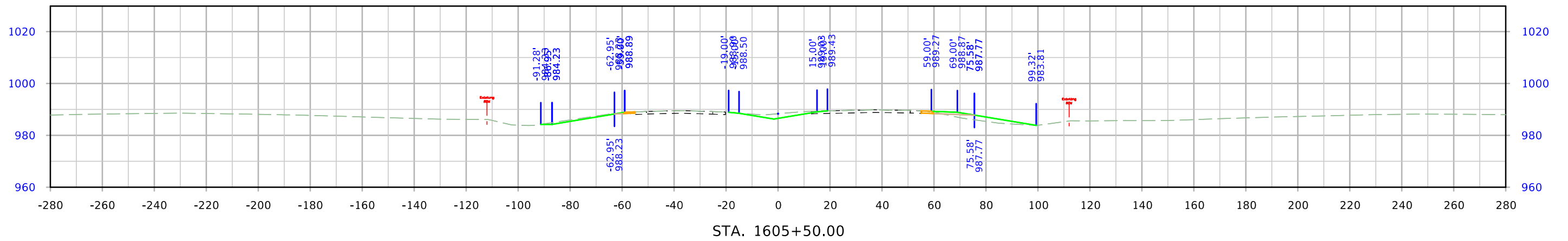
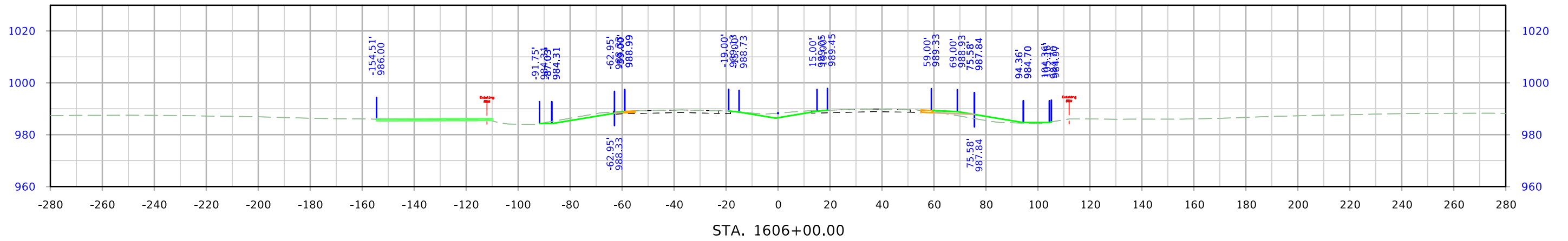
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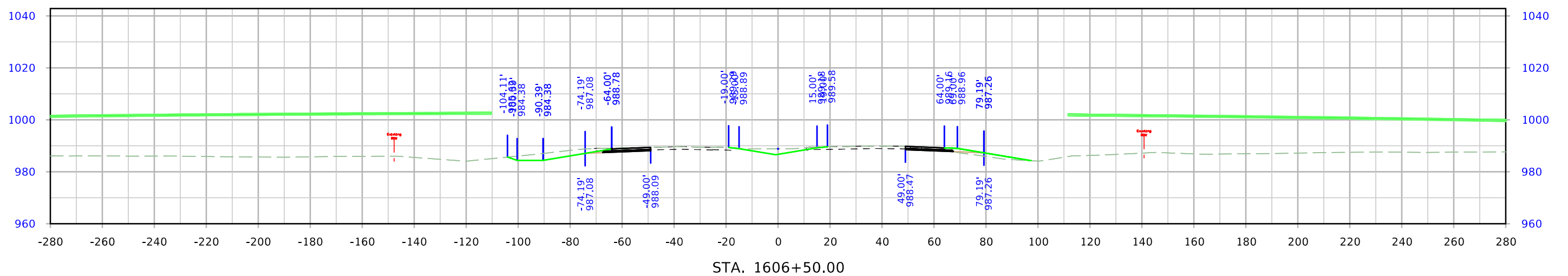
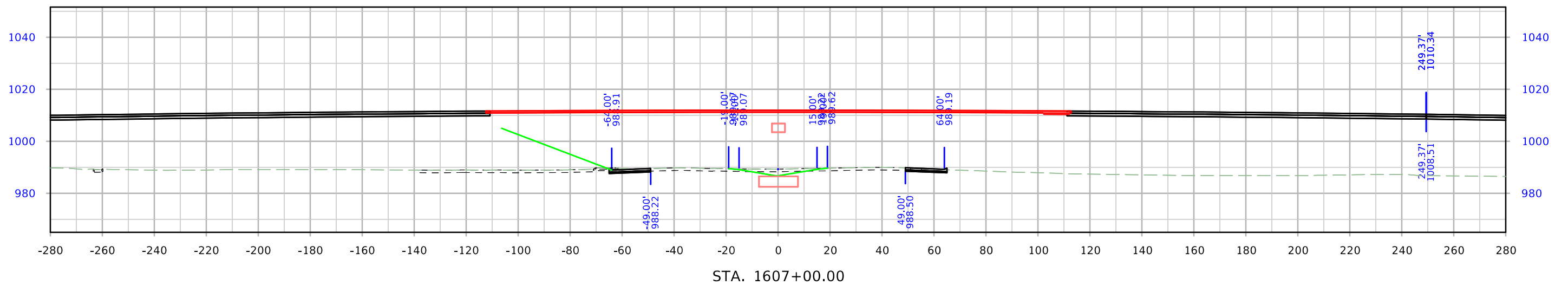
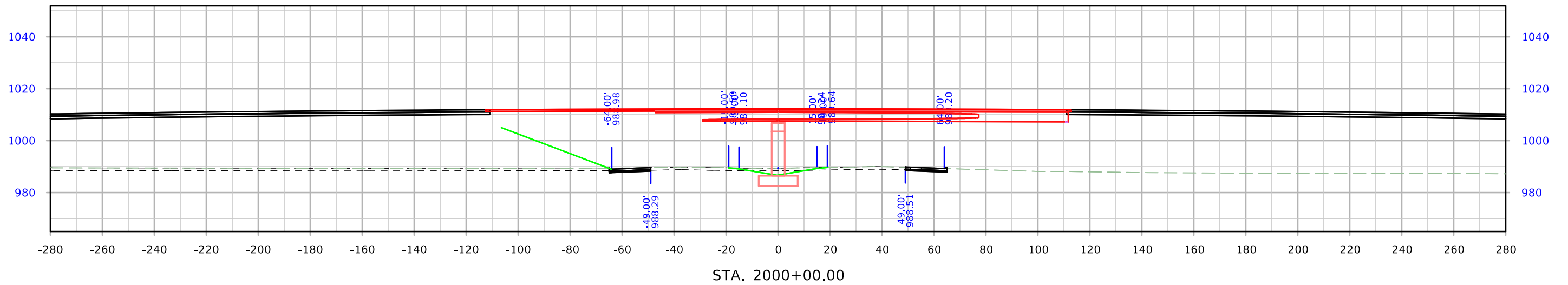
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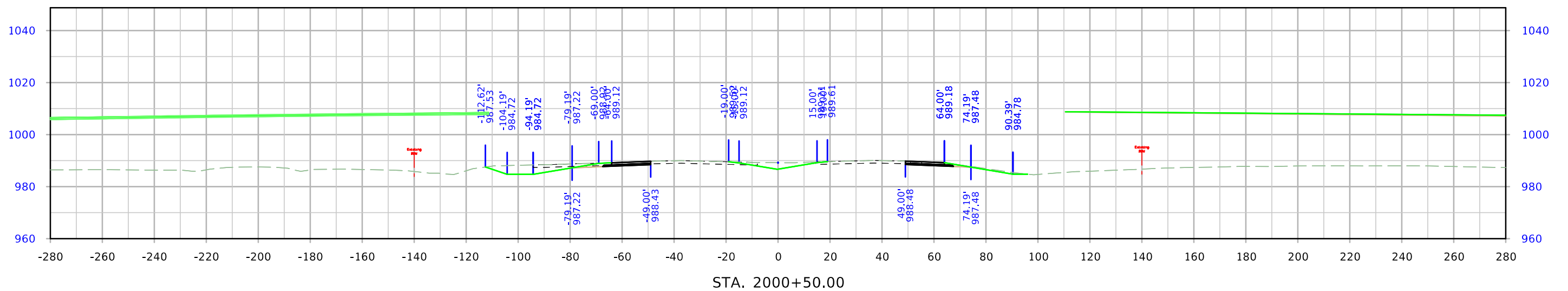
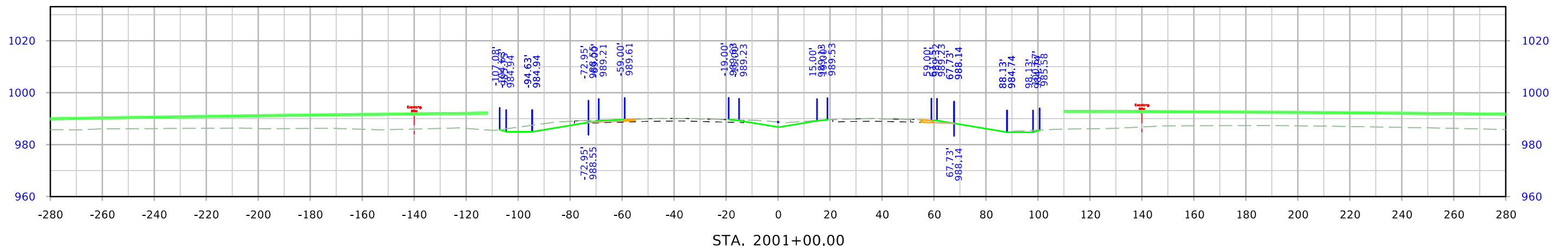
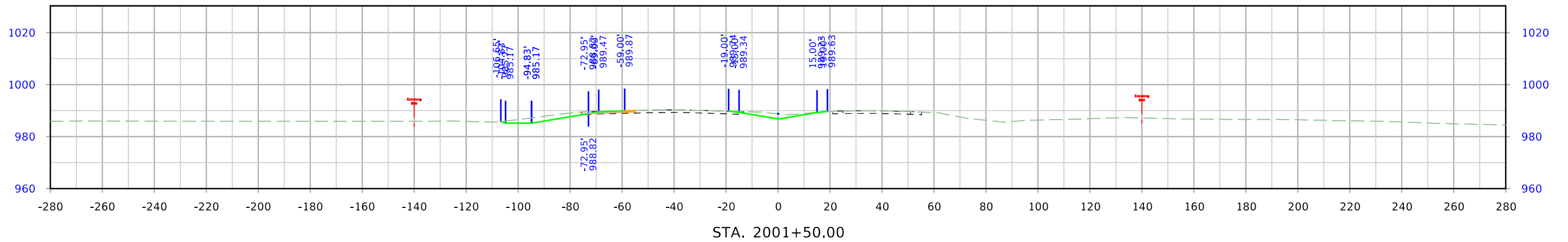
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# US 30

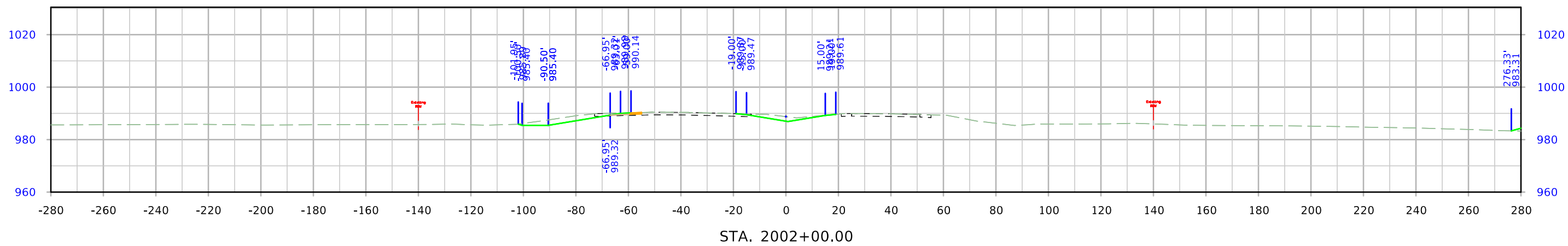
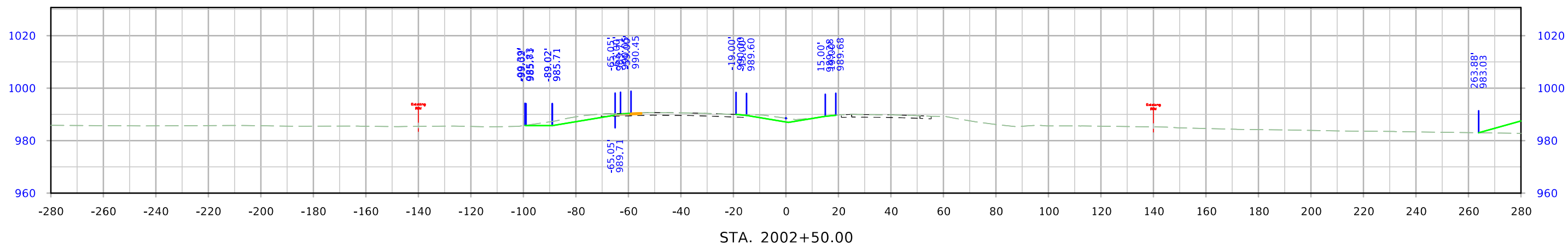
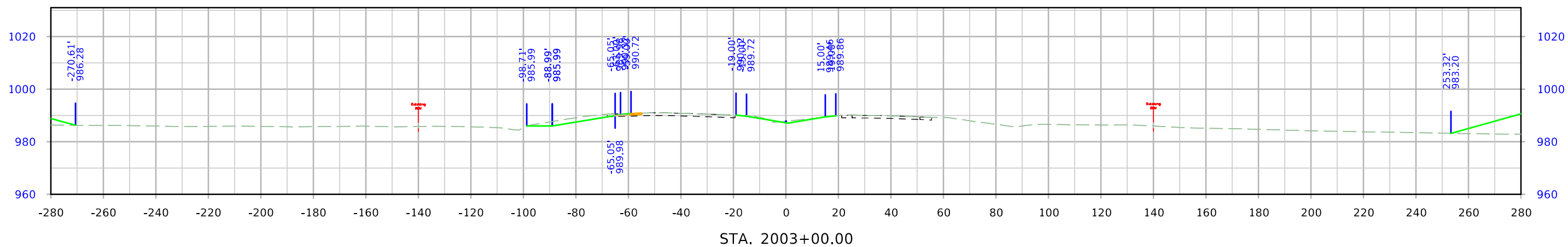


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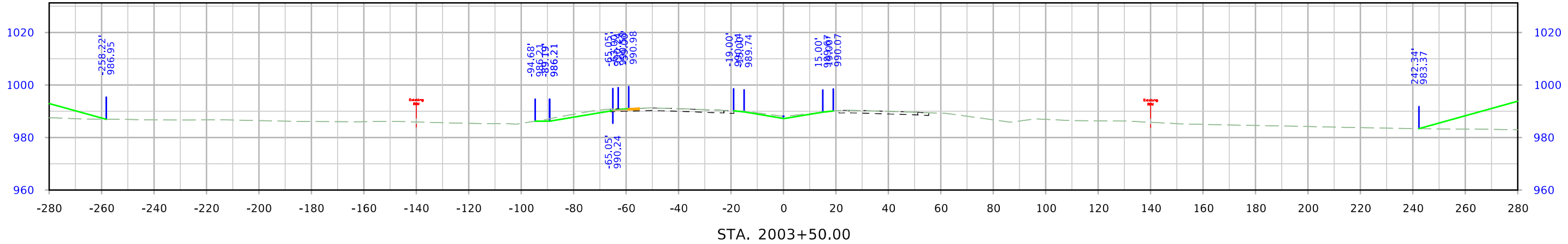
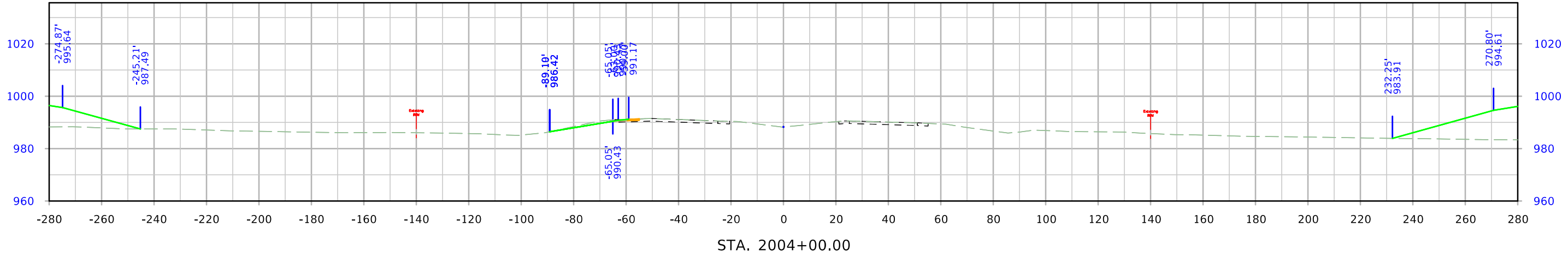
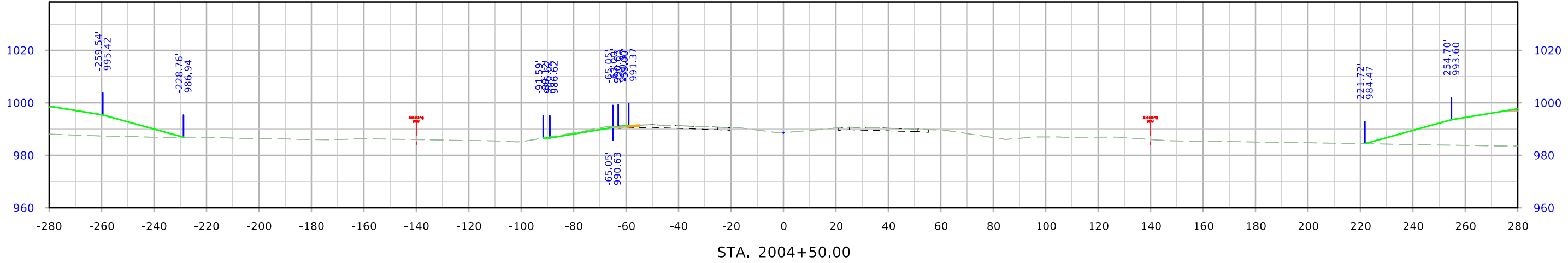




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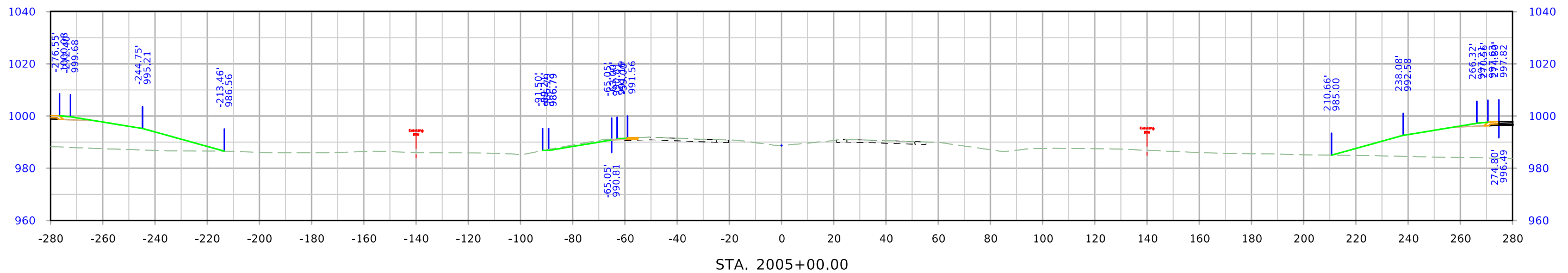
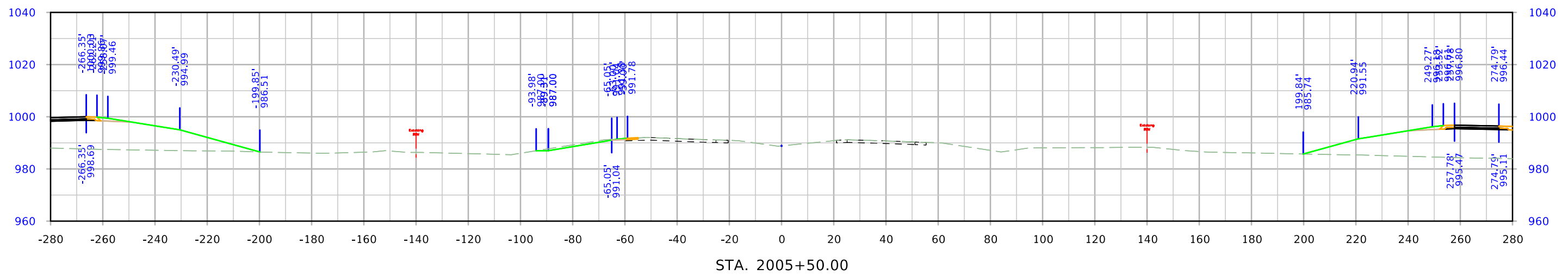
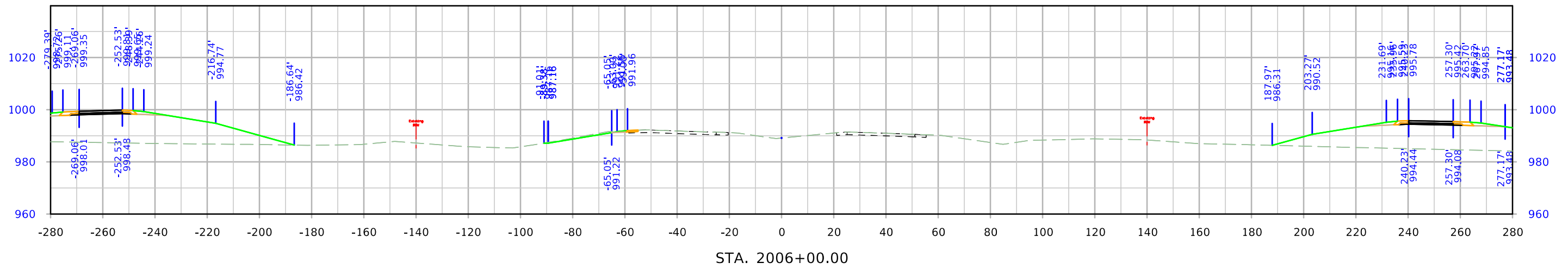


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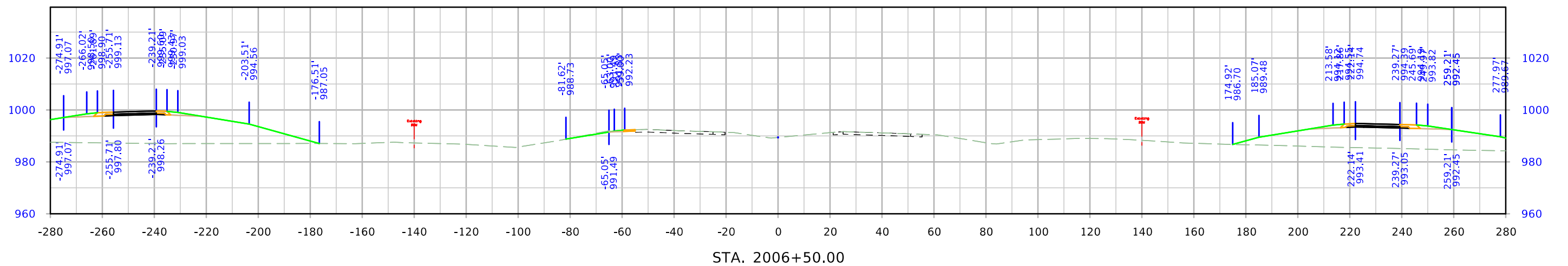
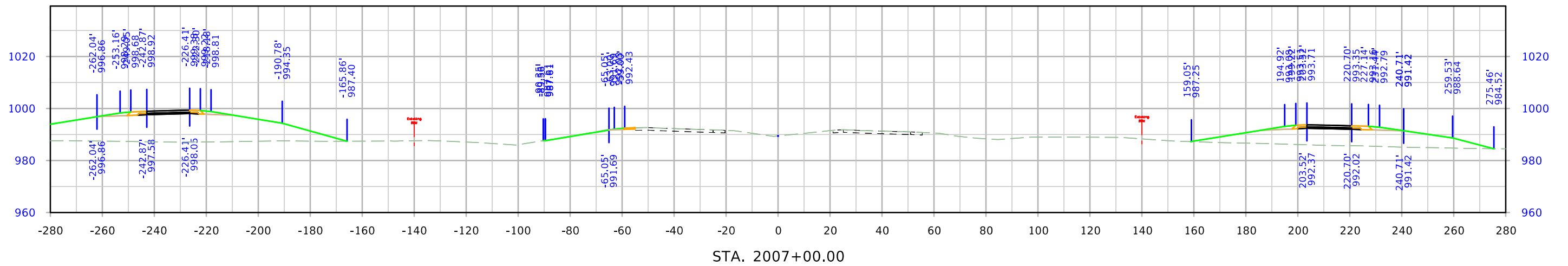
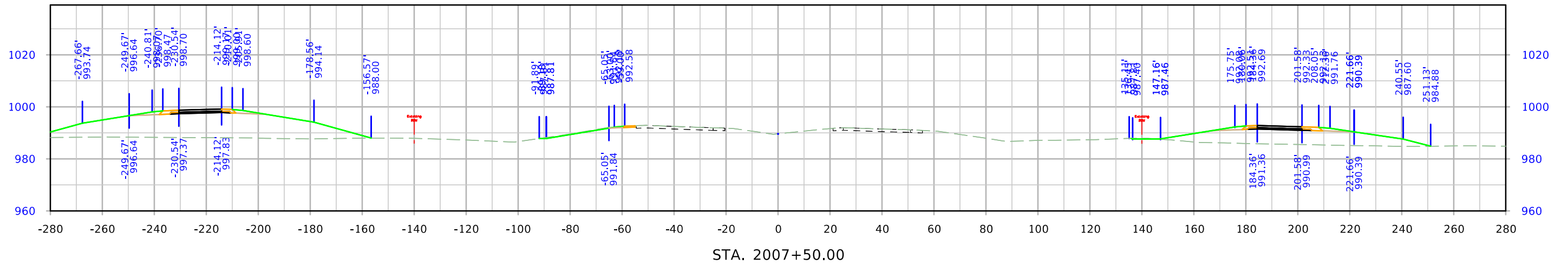


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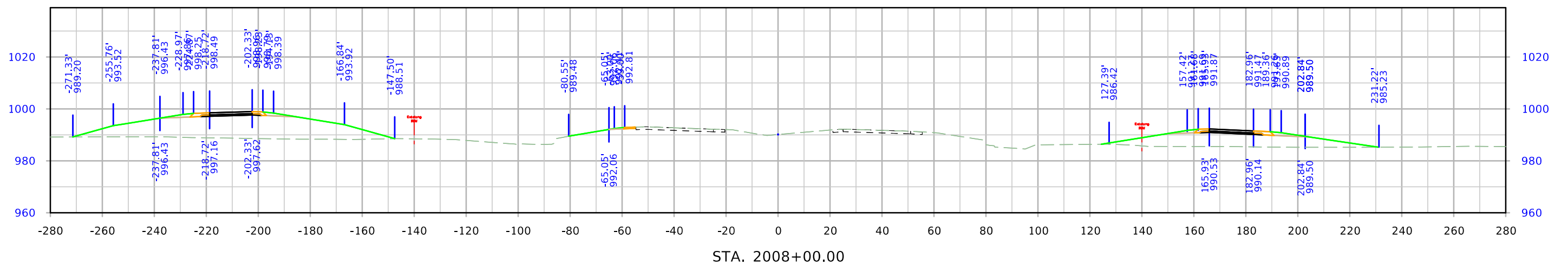
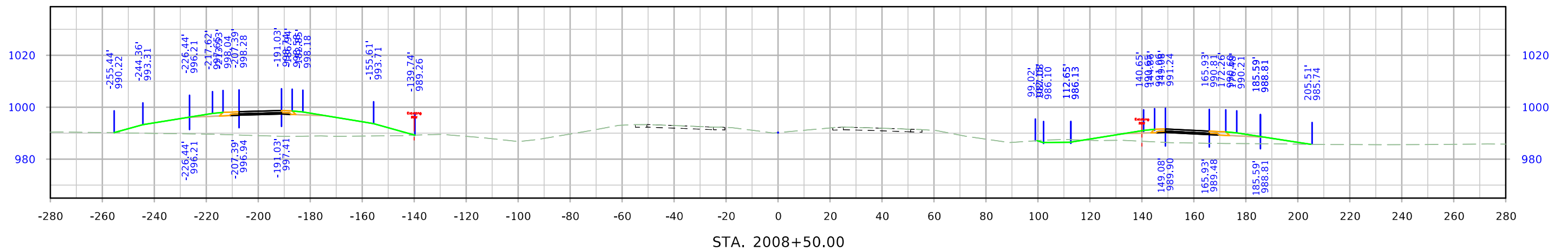
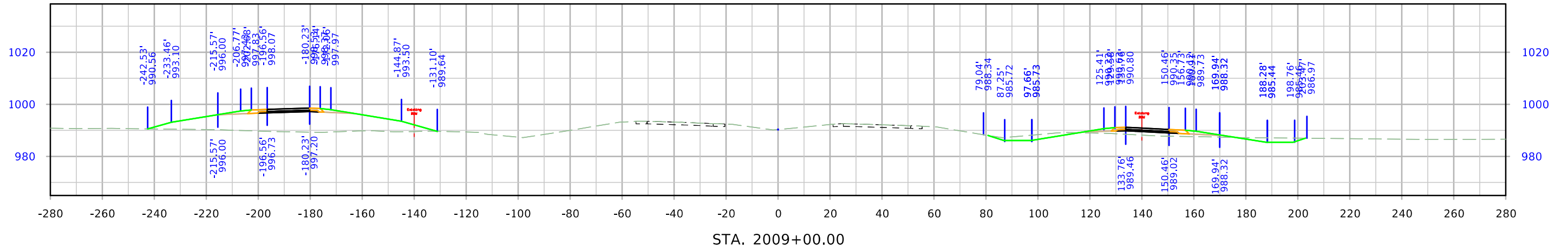
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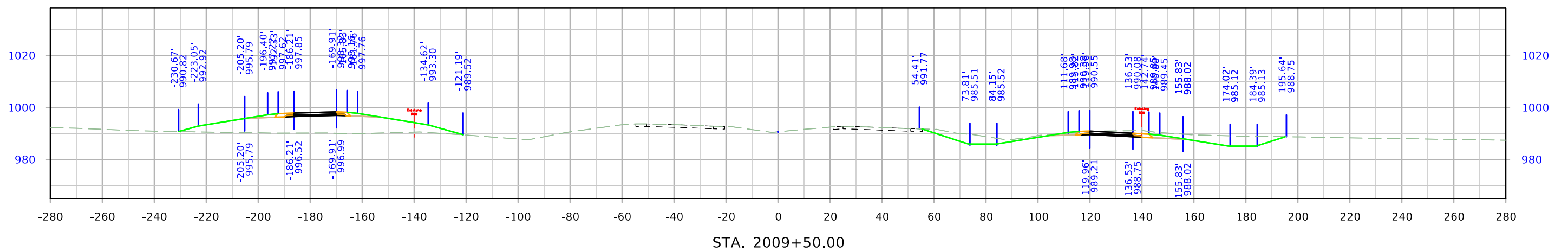
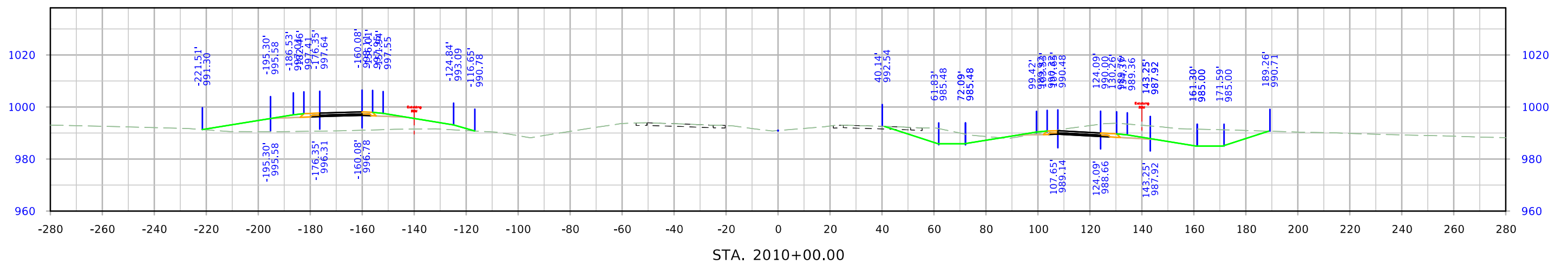
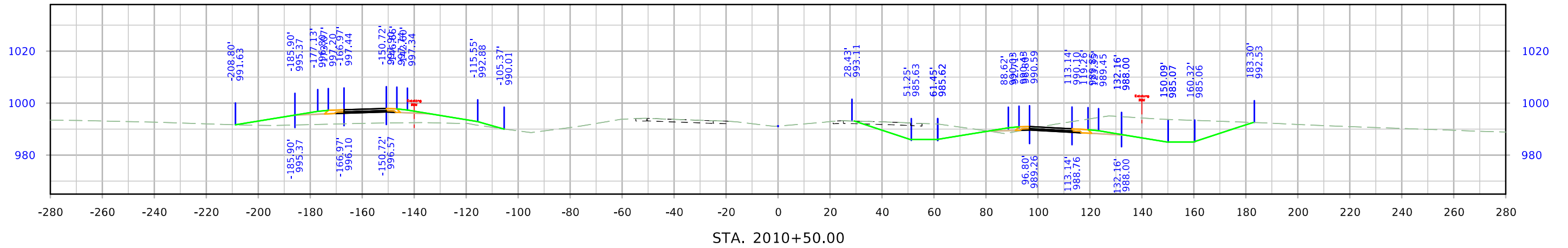
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# US 30

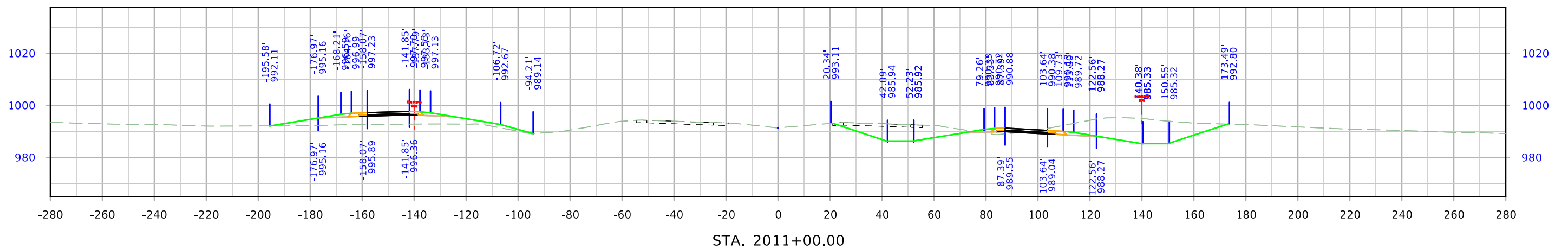
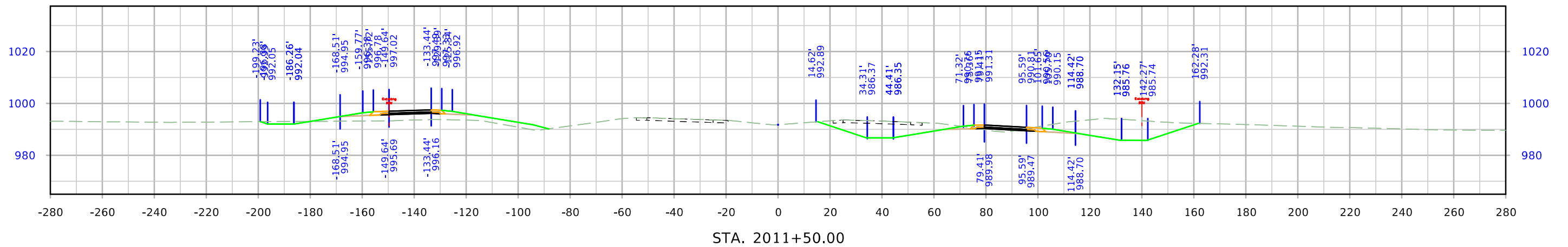
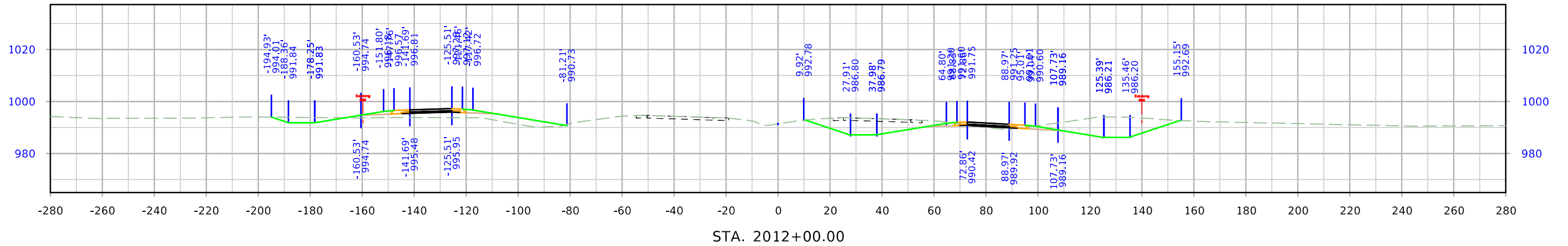


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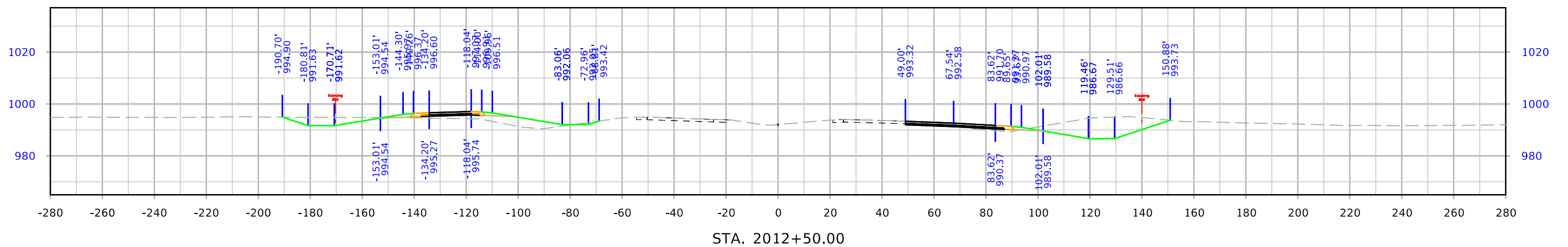
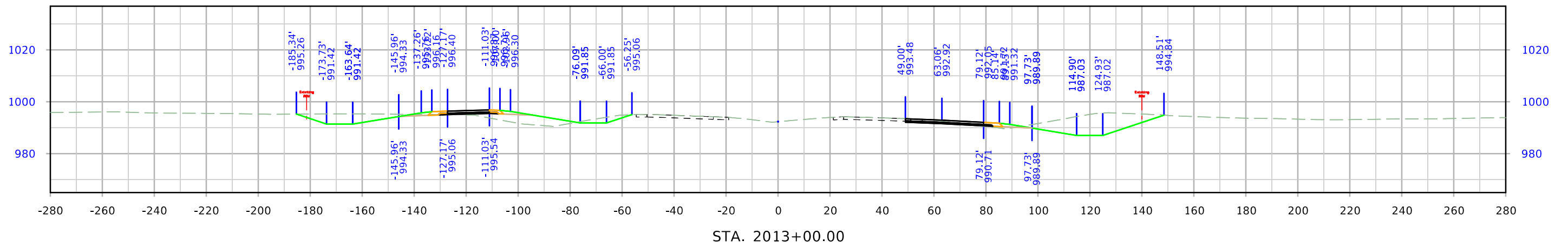
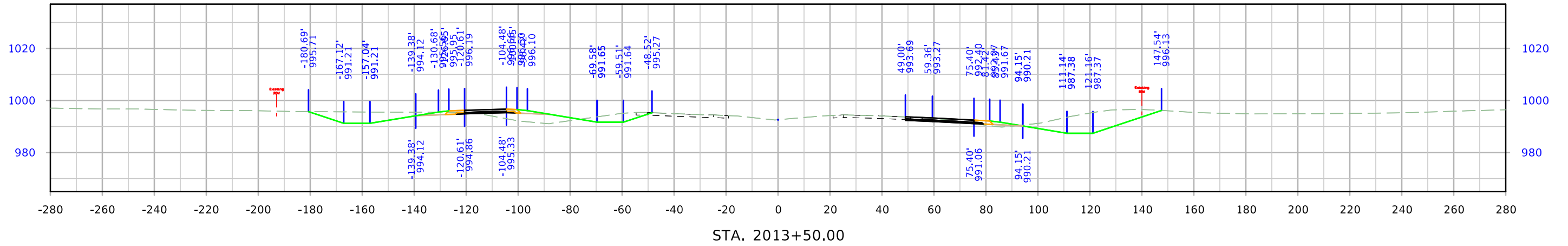




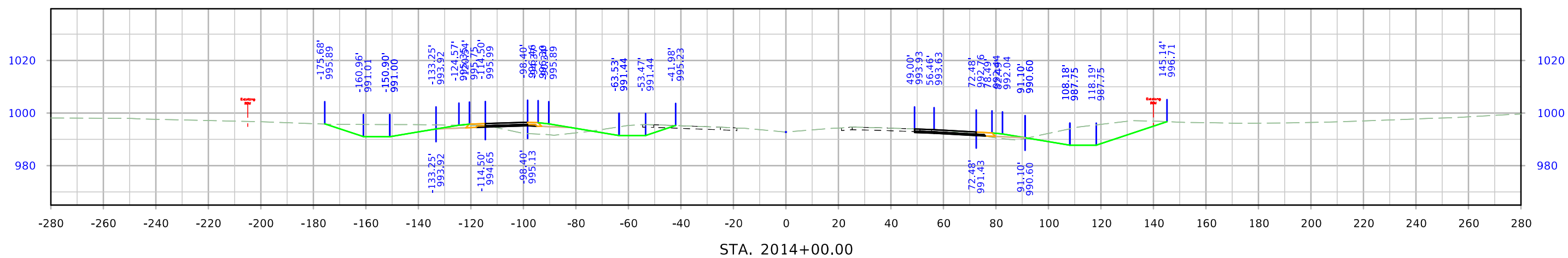
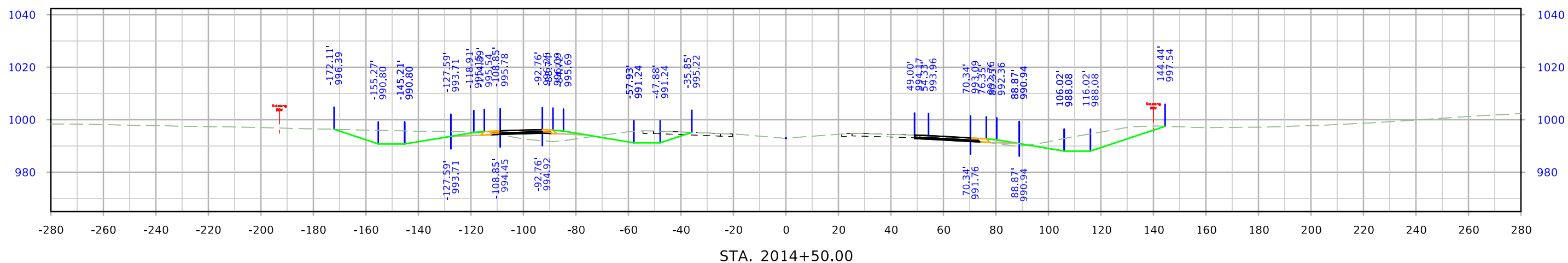
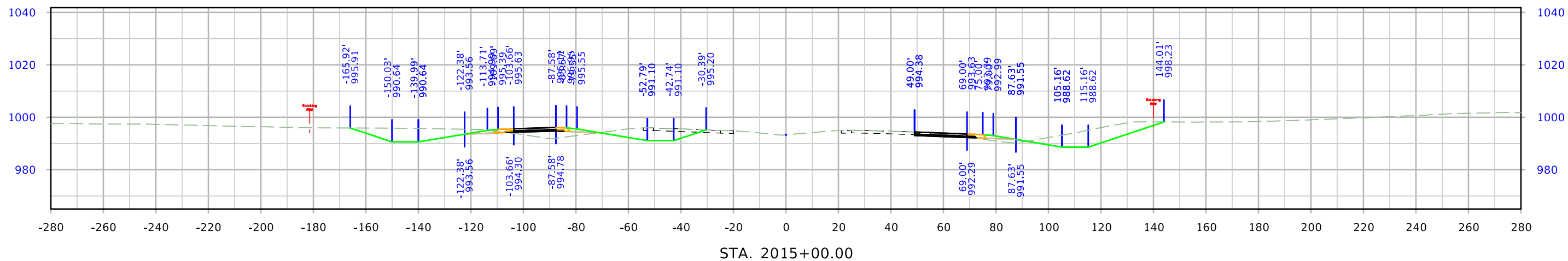
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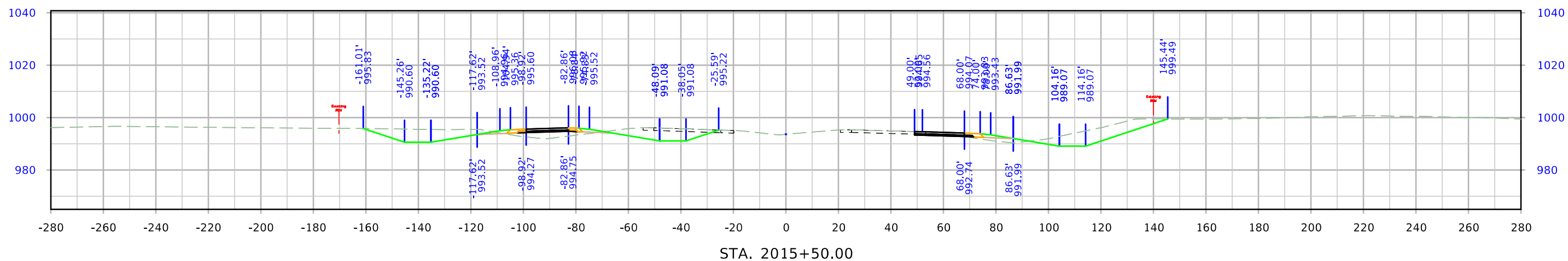
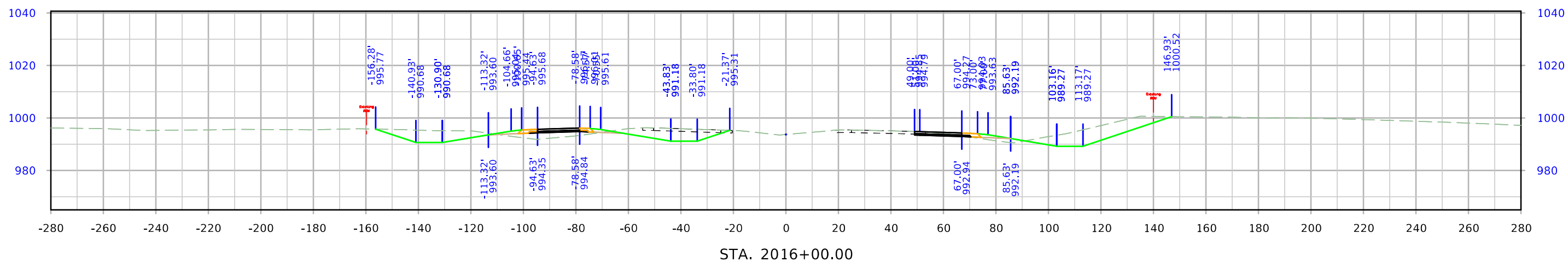
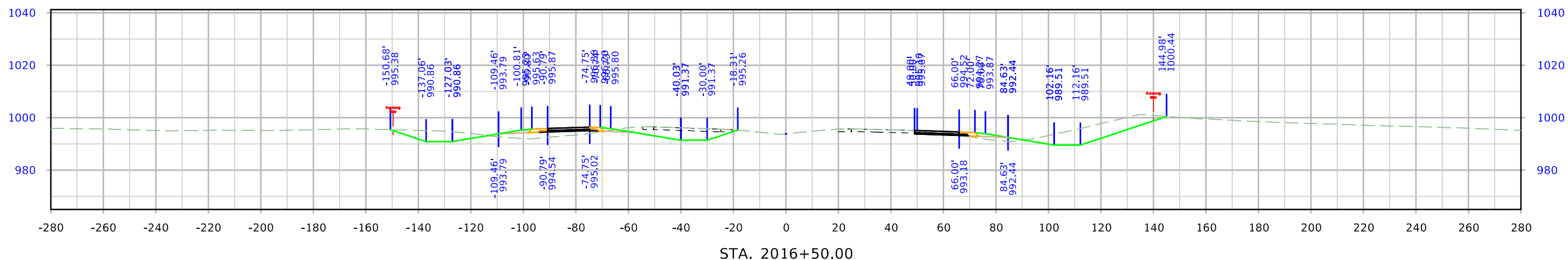
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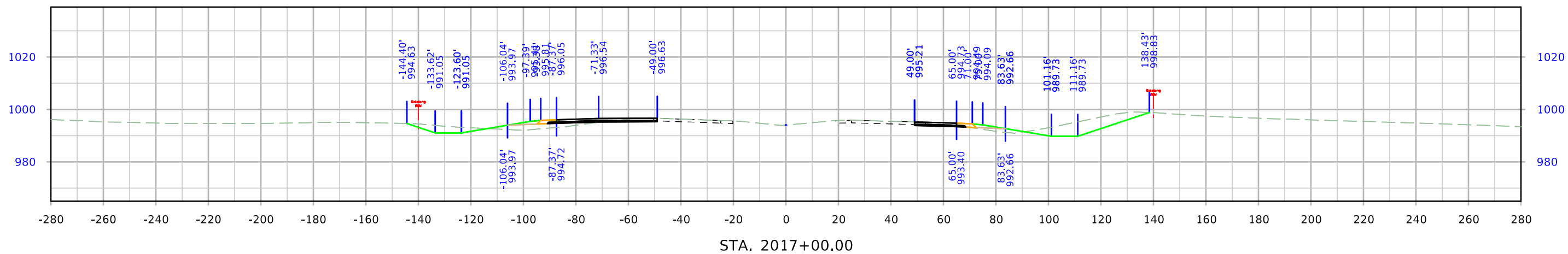
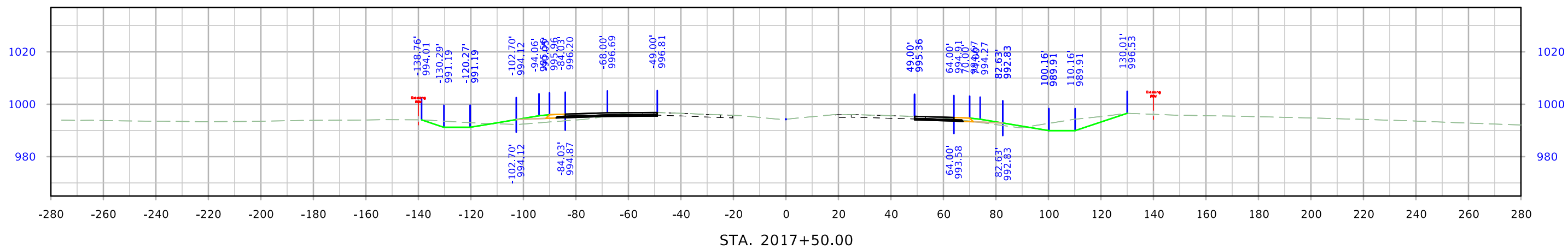
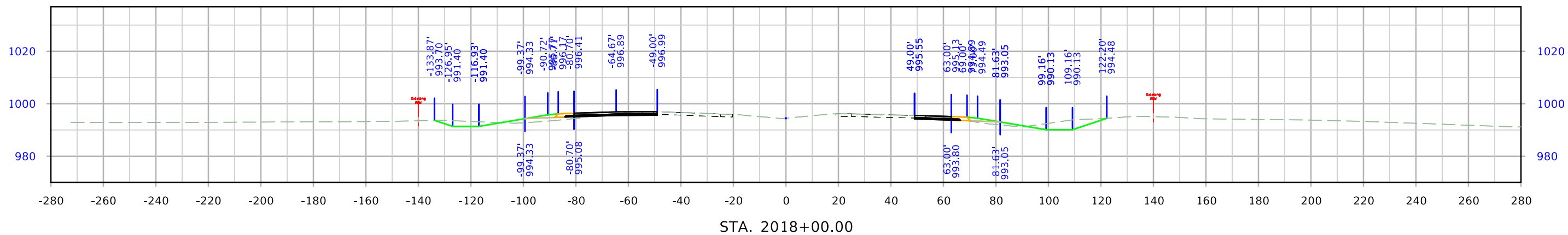
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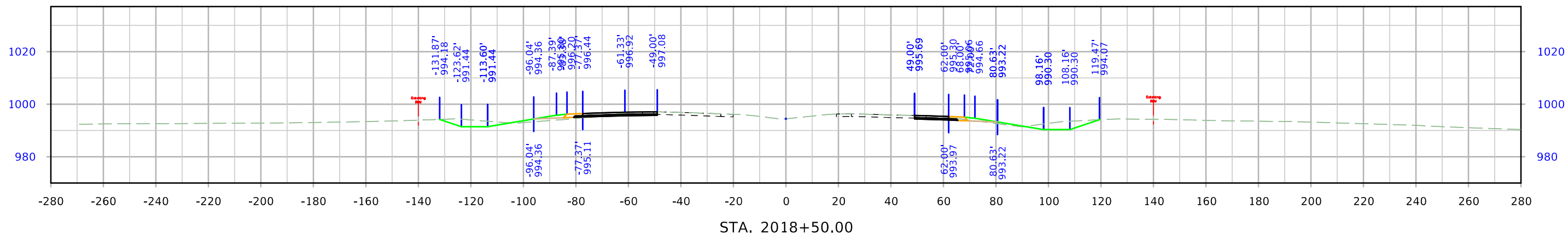
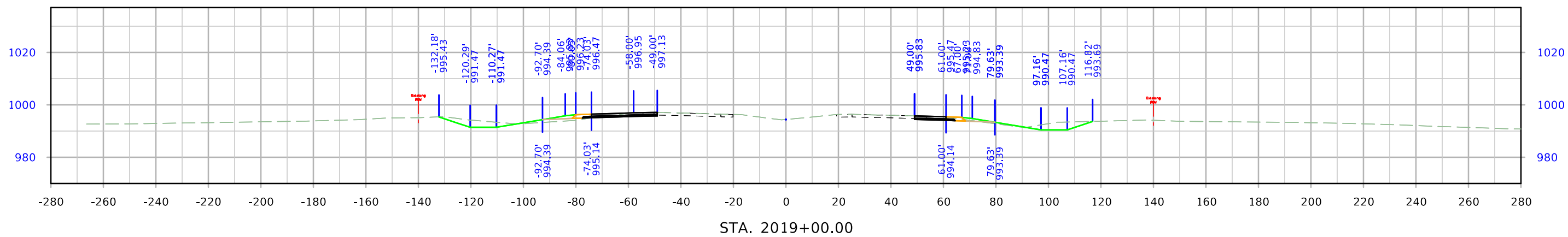
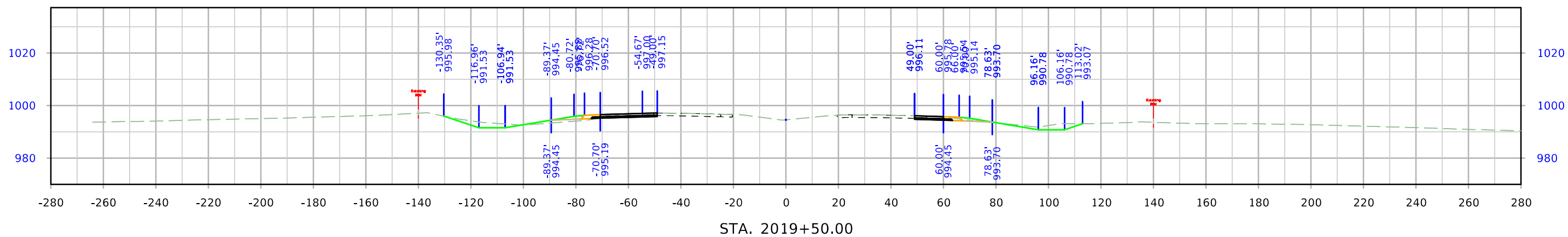
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# US 30

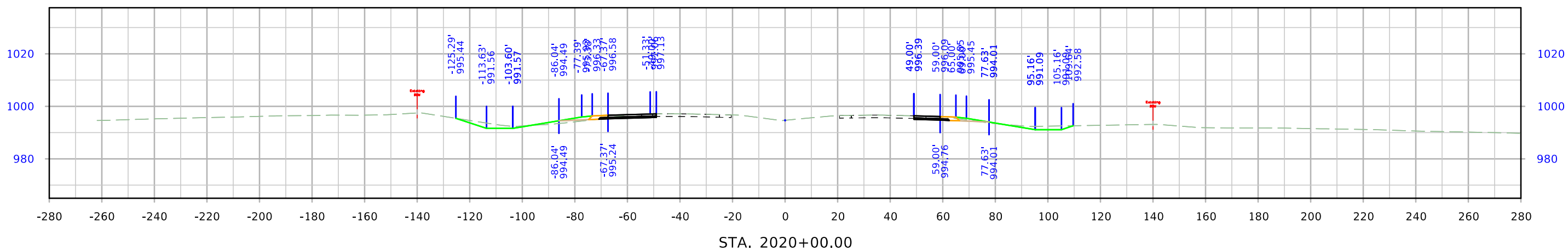
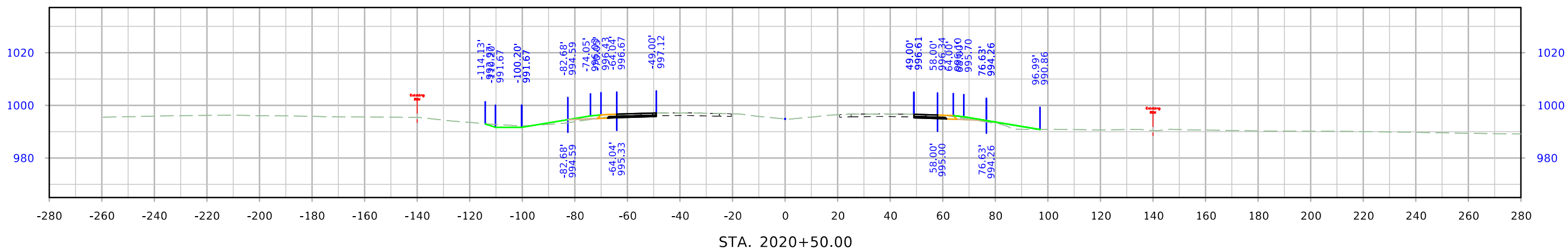
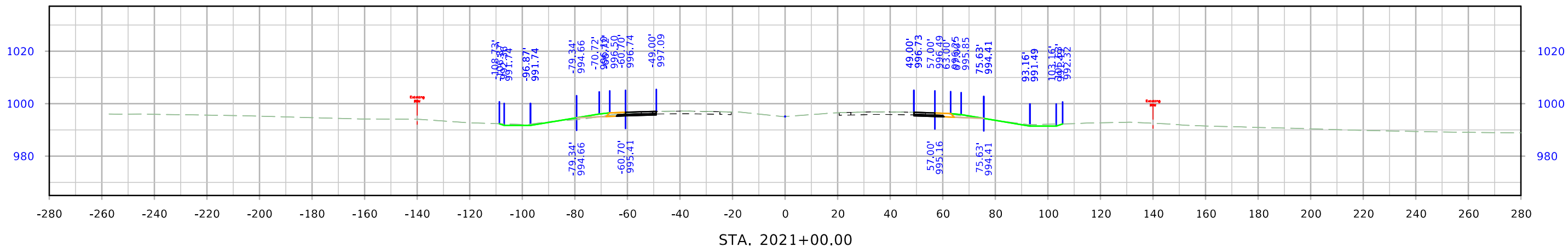


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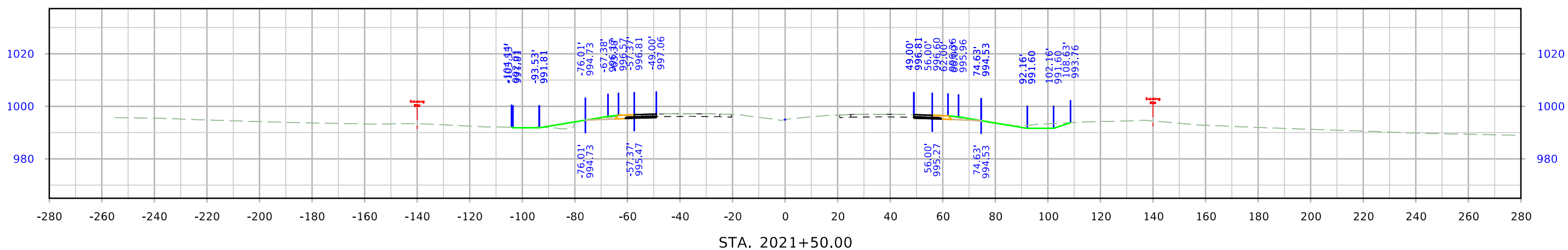
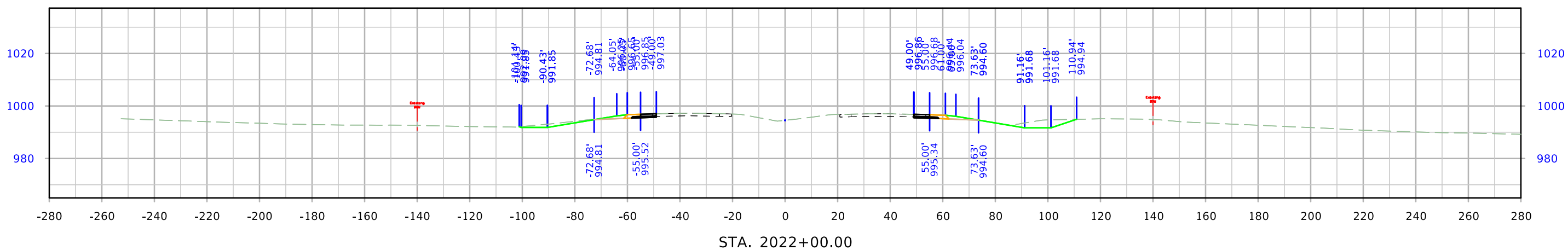
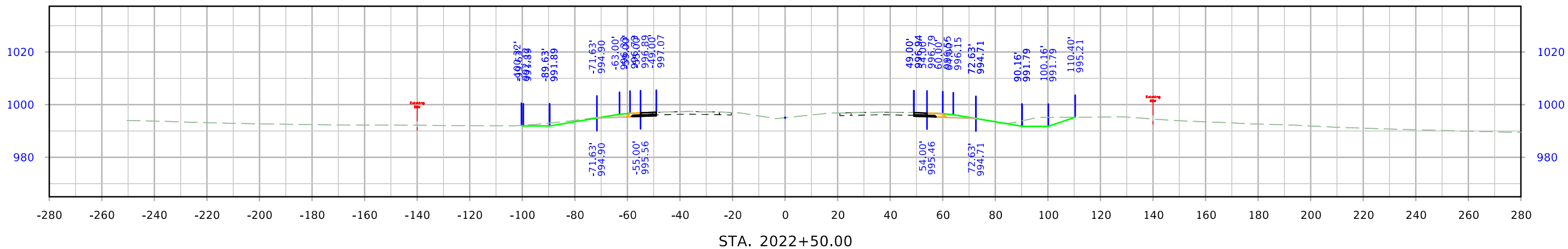




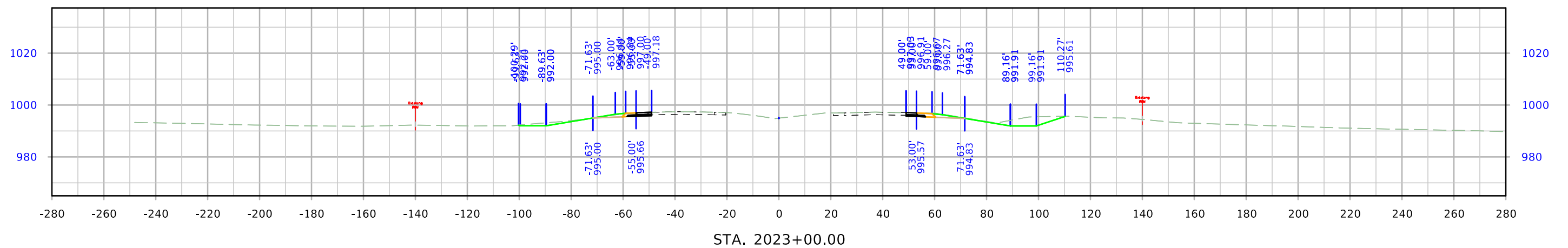
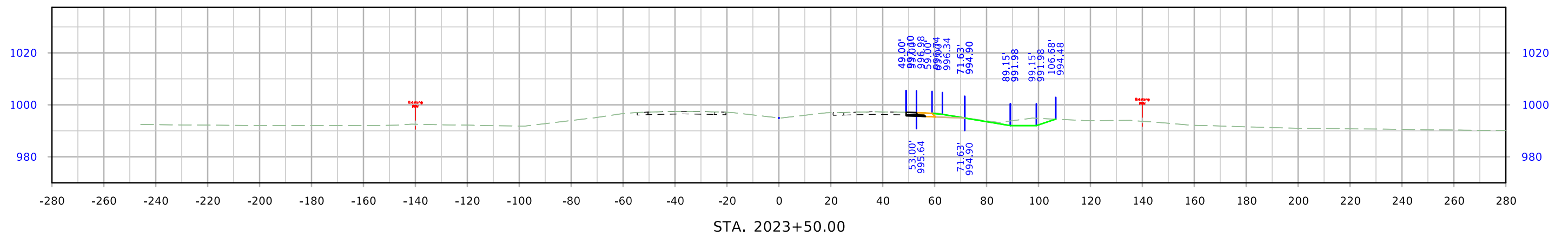
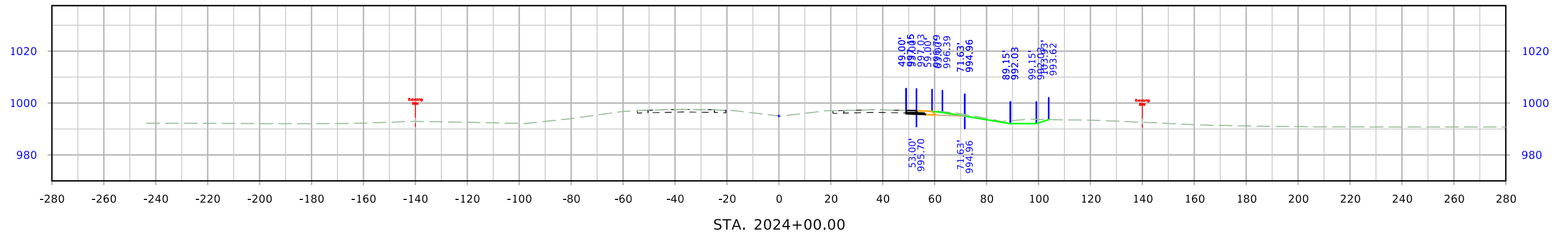
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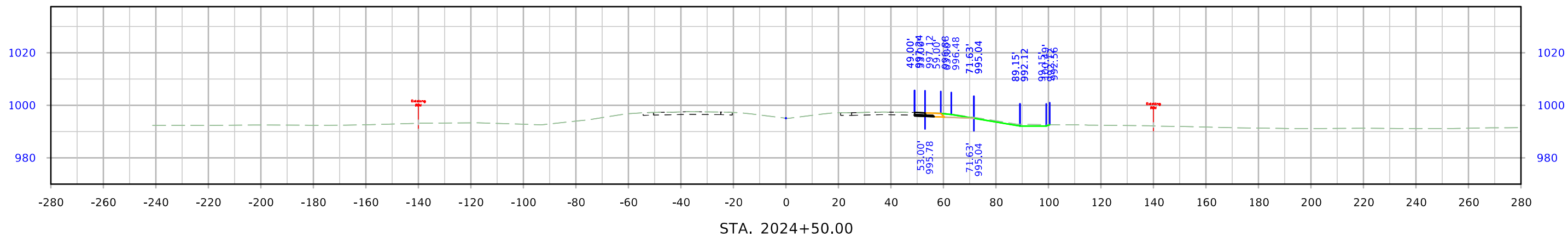
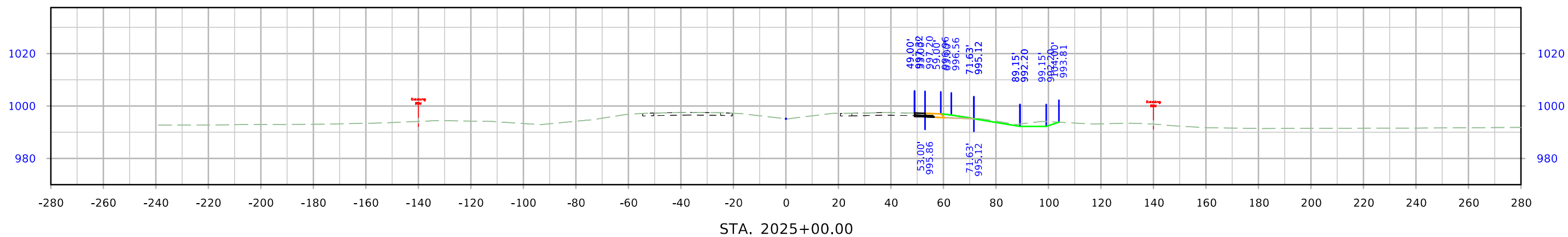
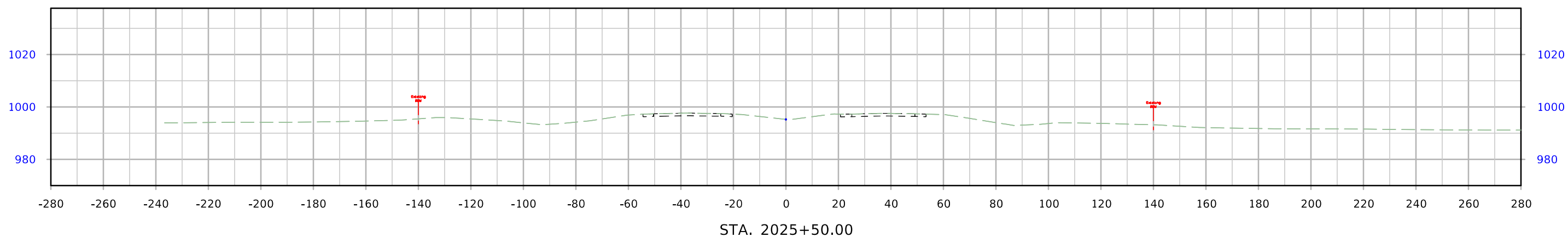
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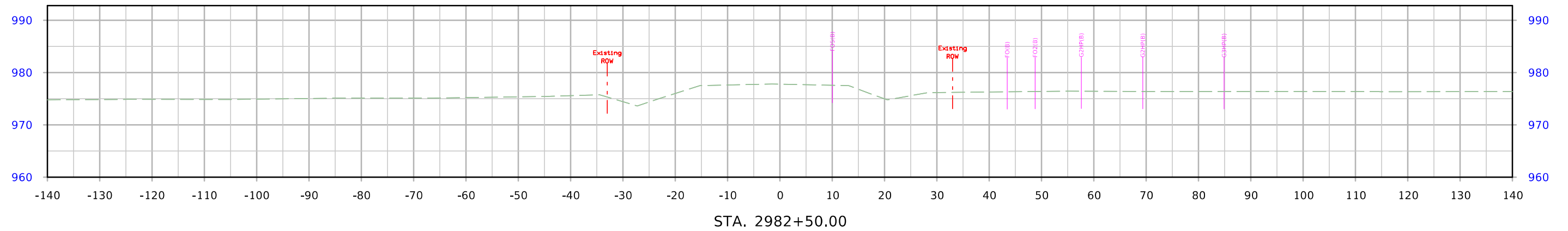
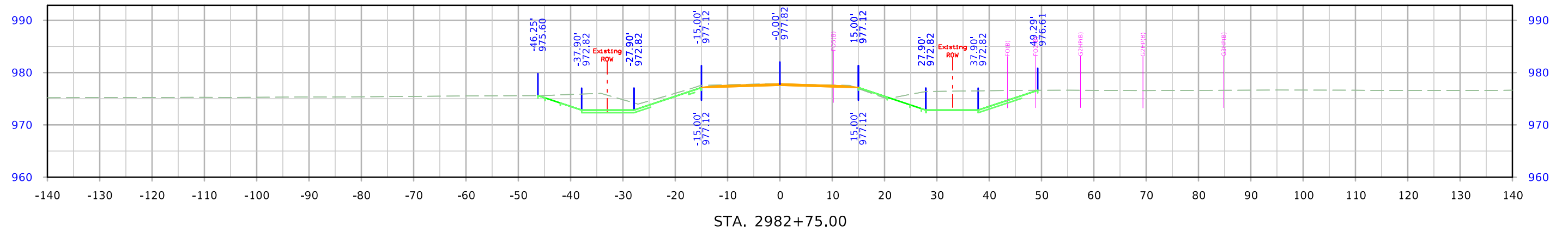
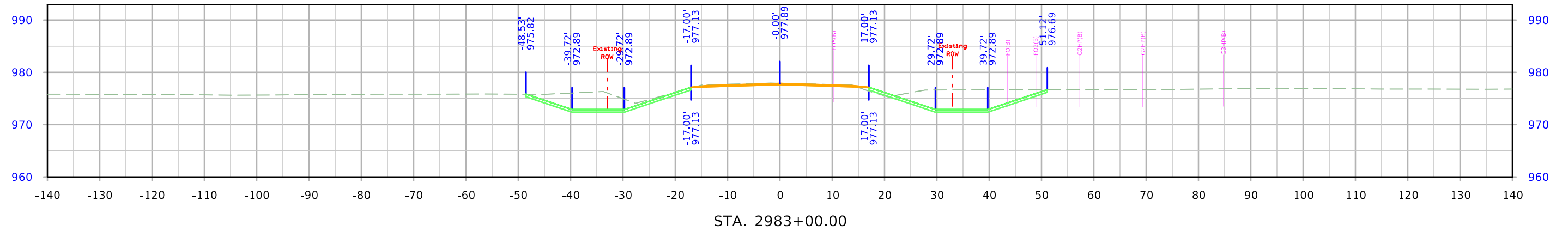
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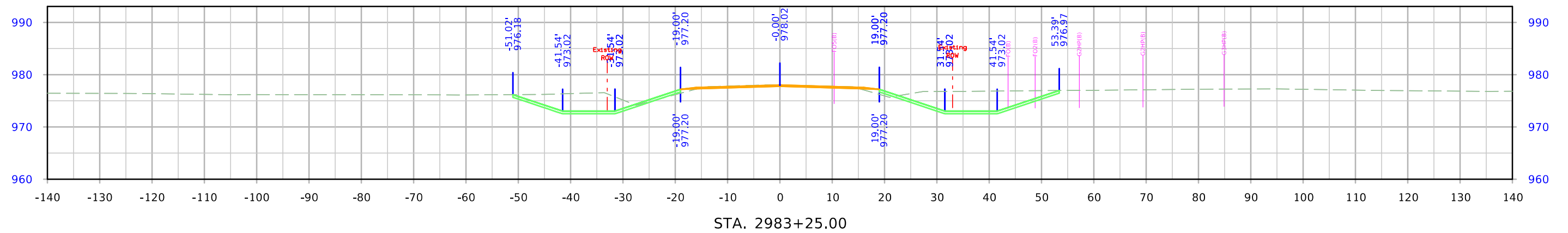
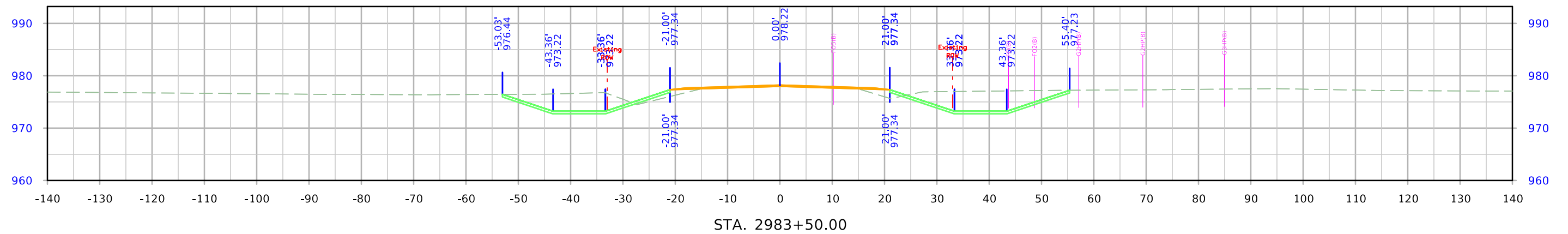
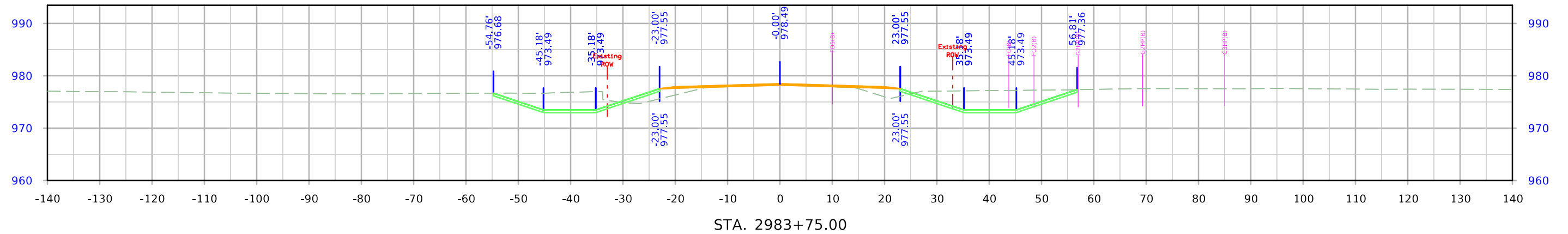
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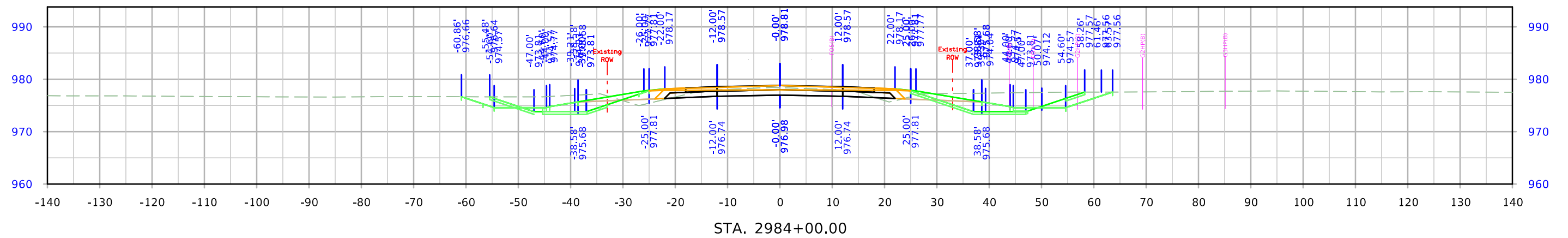
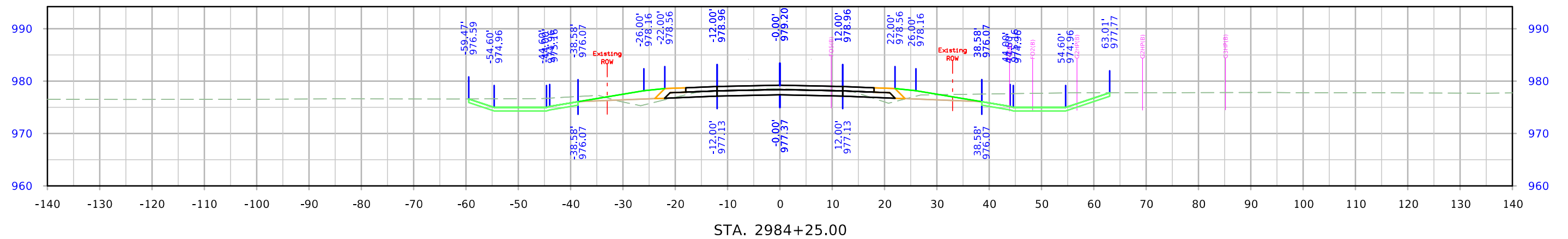
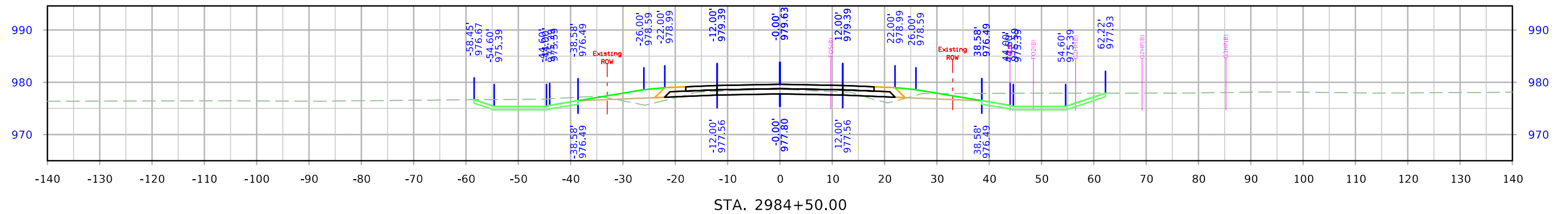
# 610th Ave



# 610th Ave

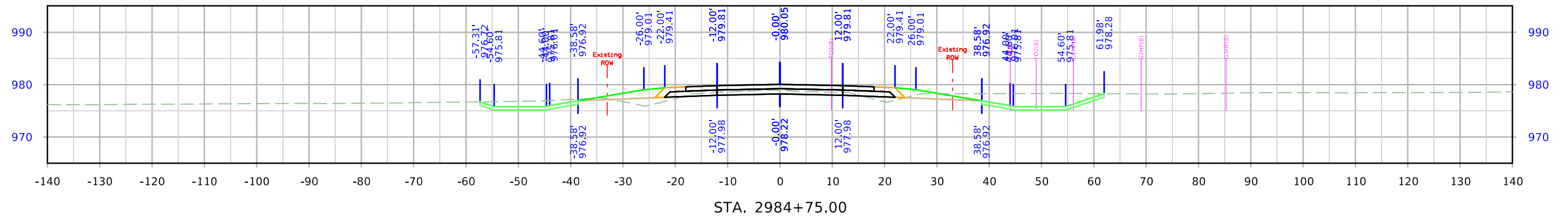
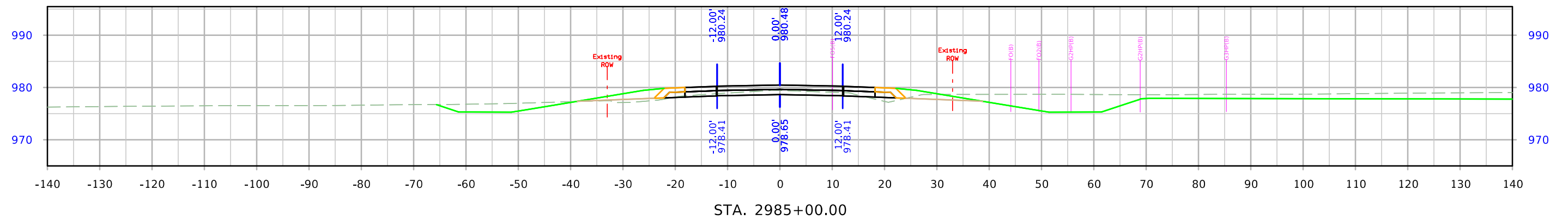
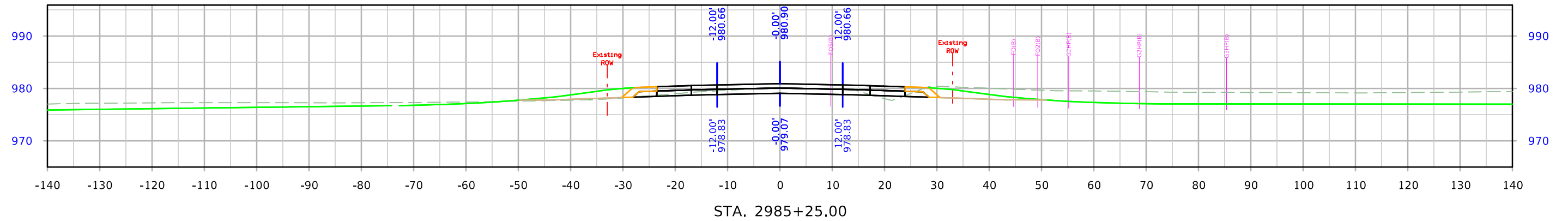


# 610th Ave

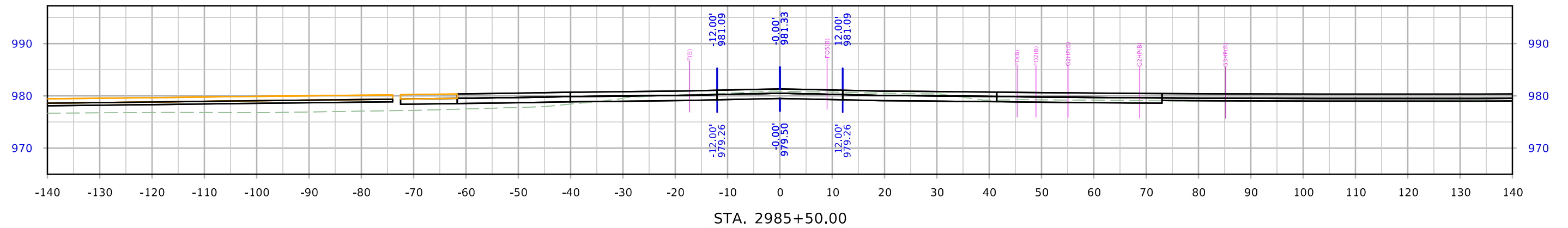
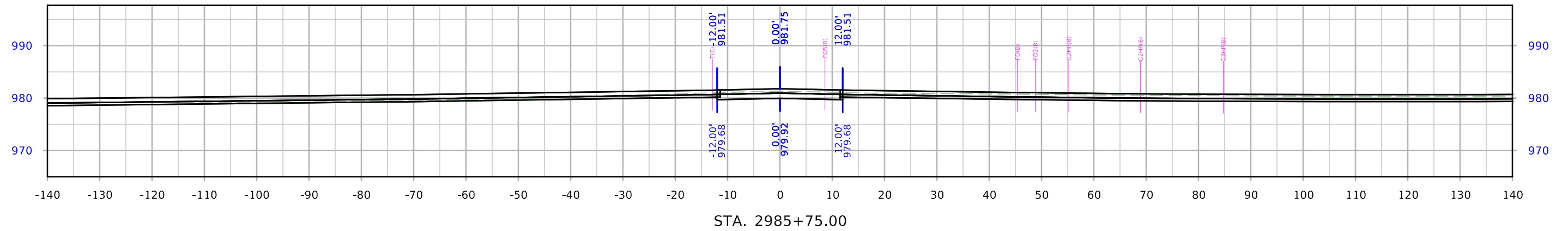
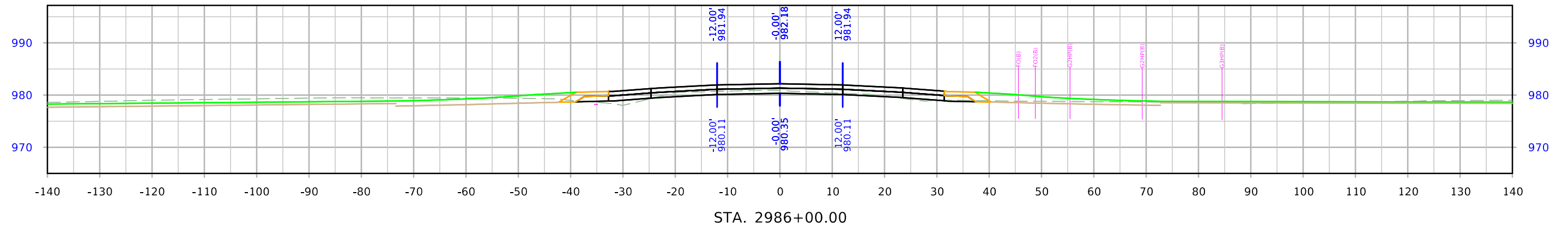




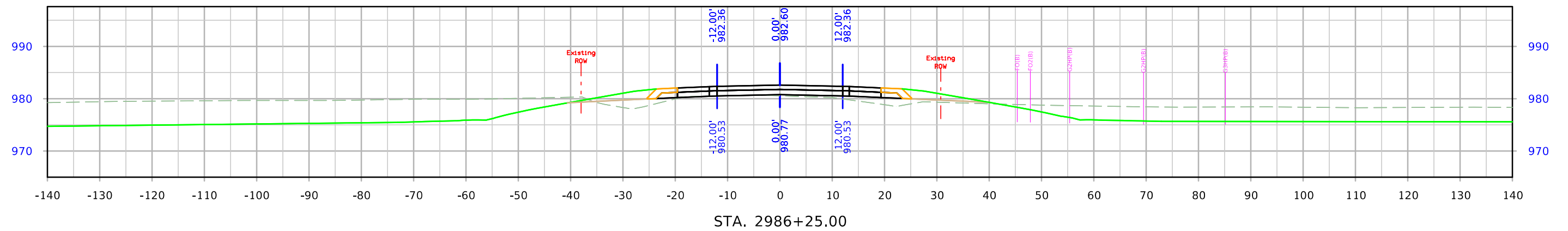
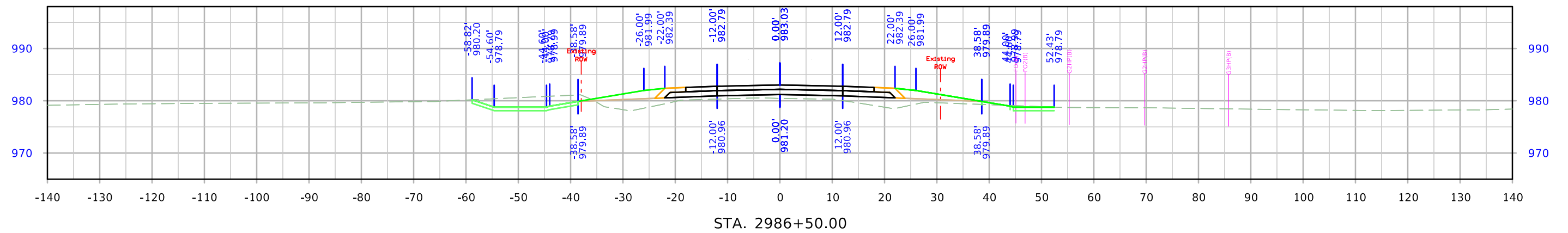
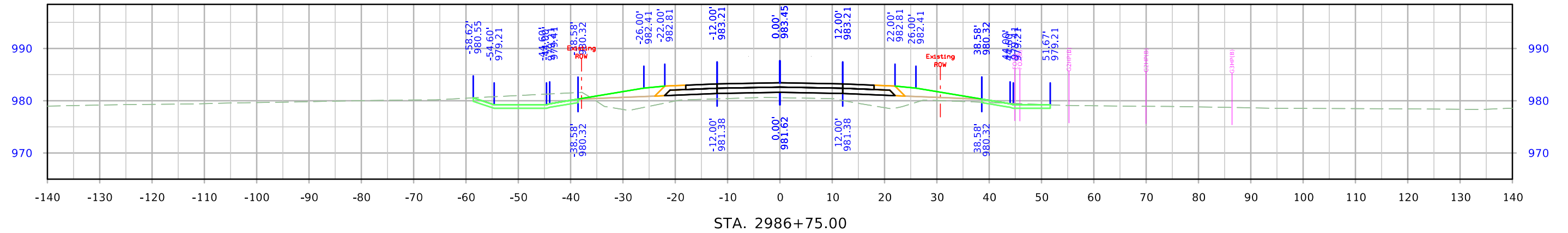
# 610th Ave



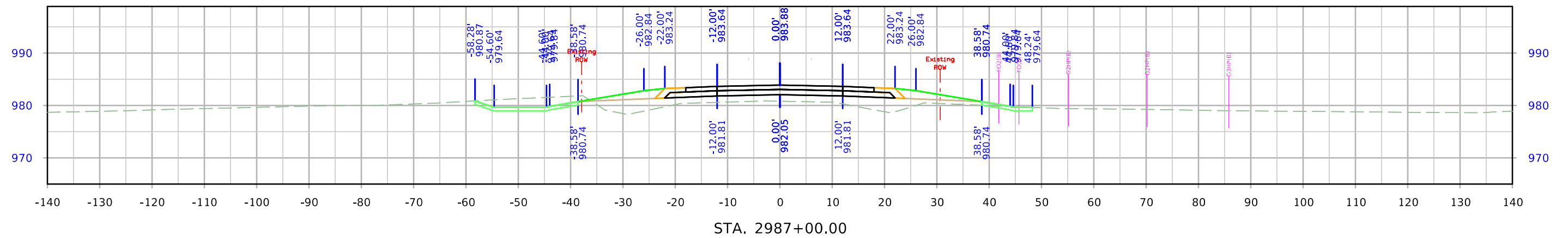
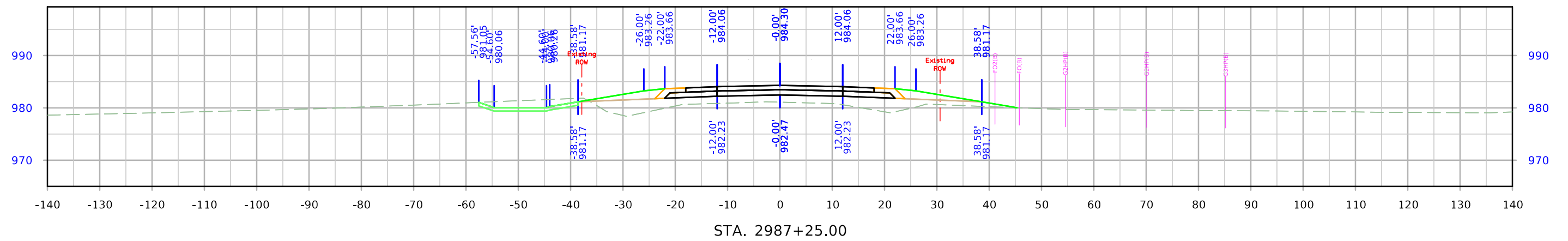
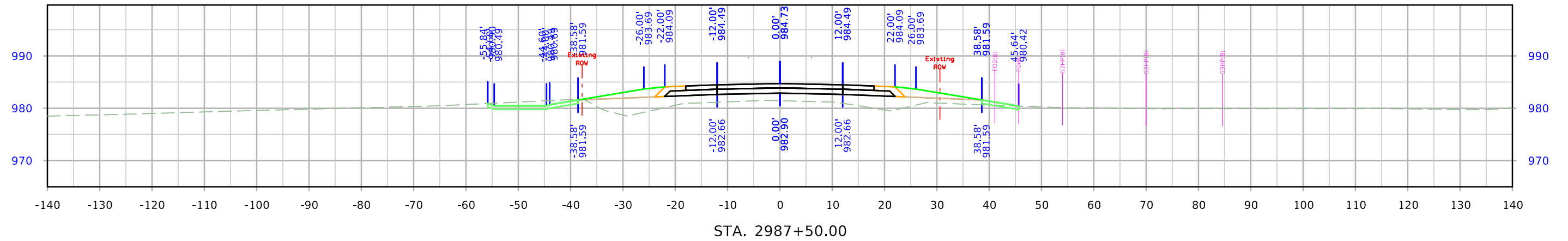
# 610th Ave



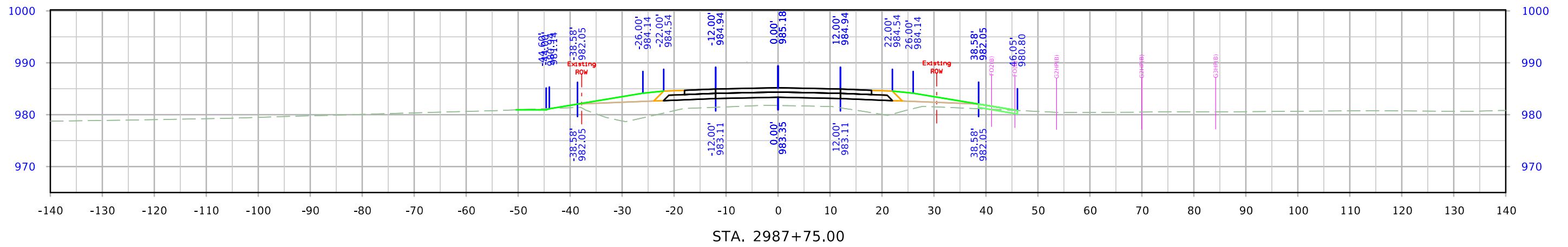
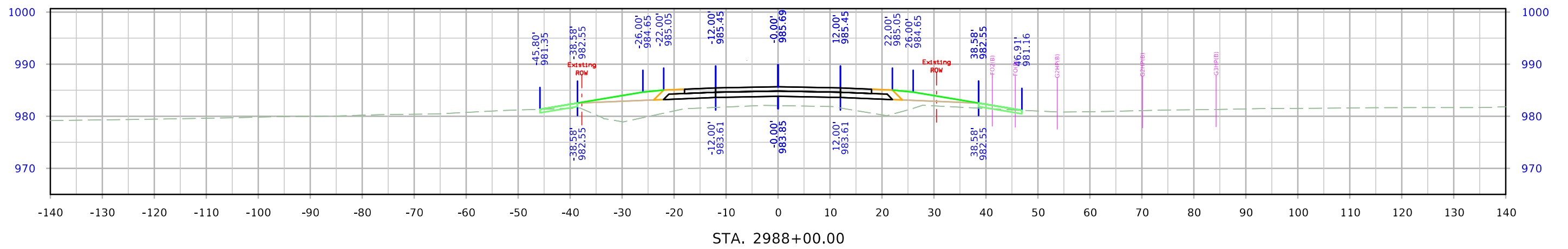
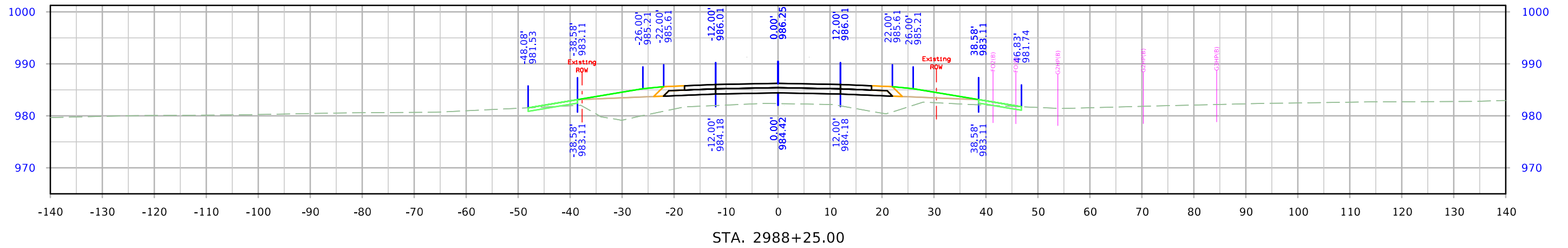
# 610th Ave



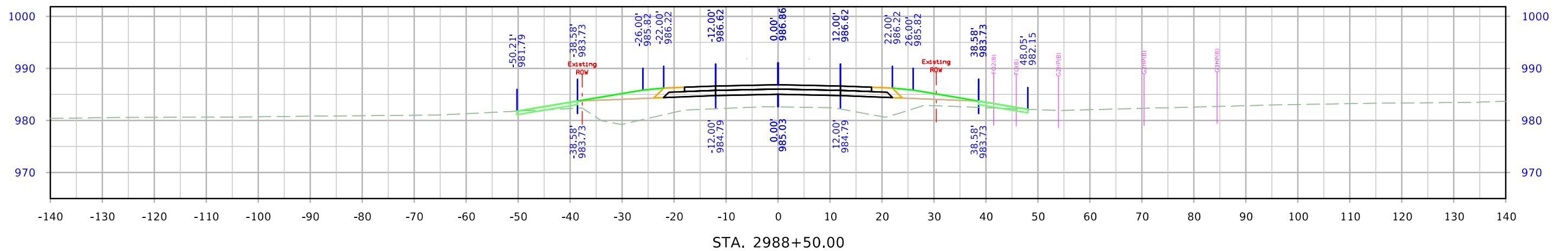
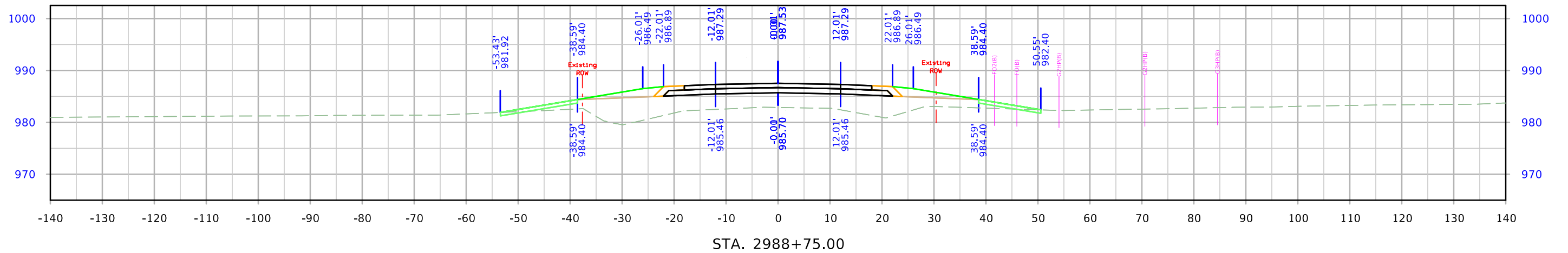
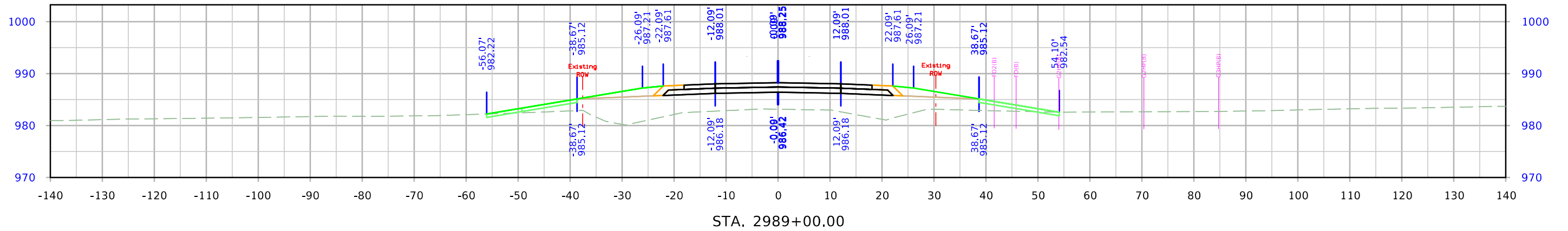
# 610th Ave



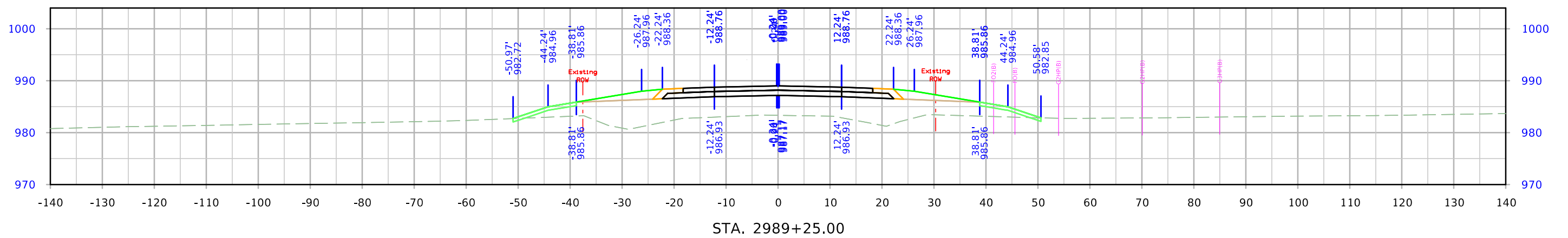
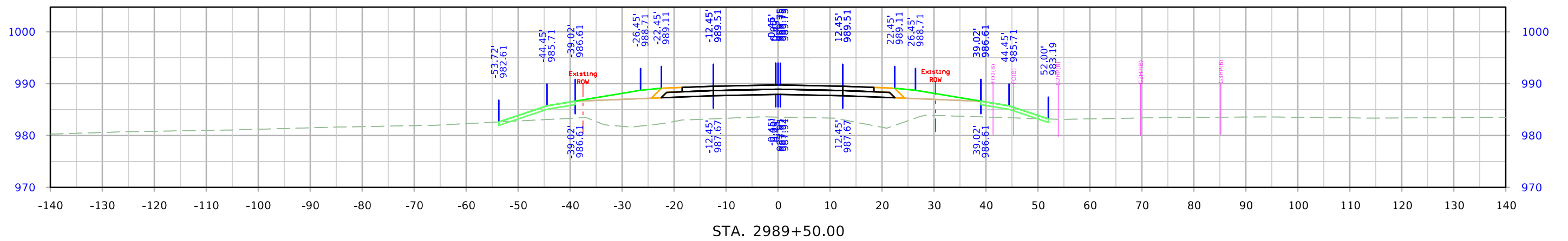
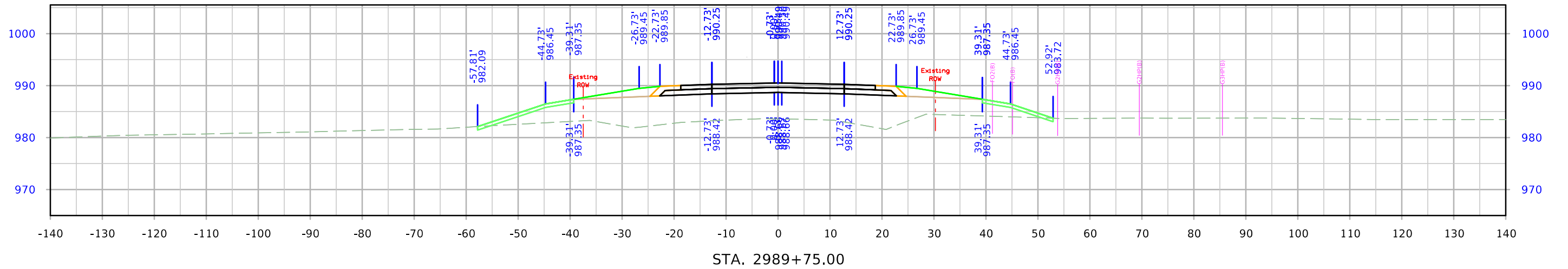
# 610th Ave



# 610th Ave

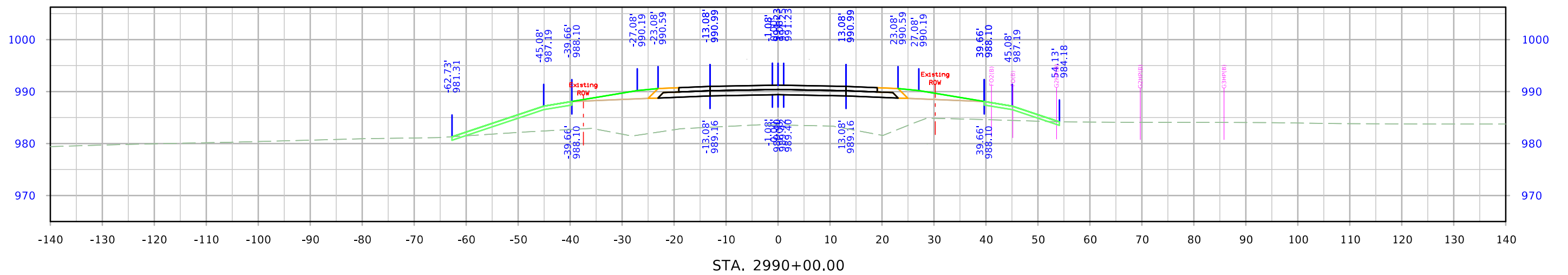
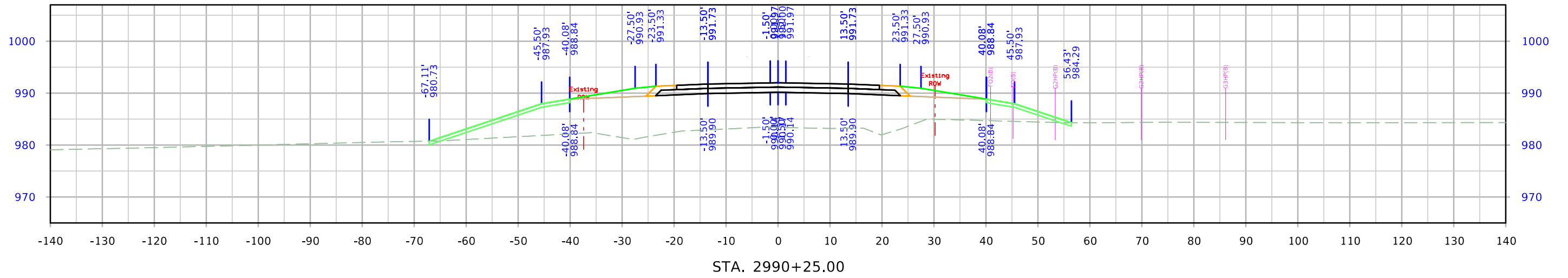
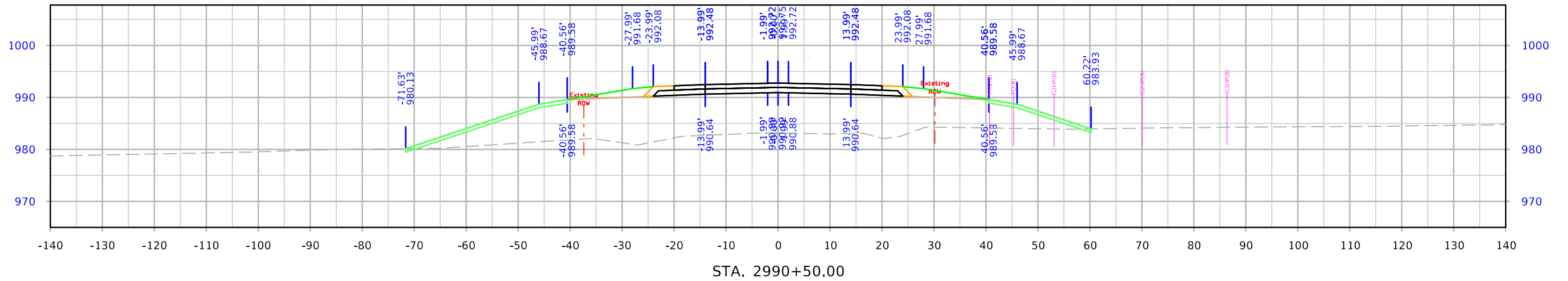


# 610th Ave

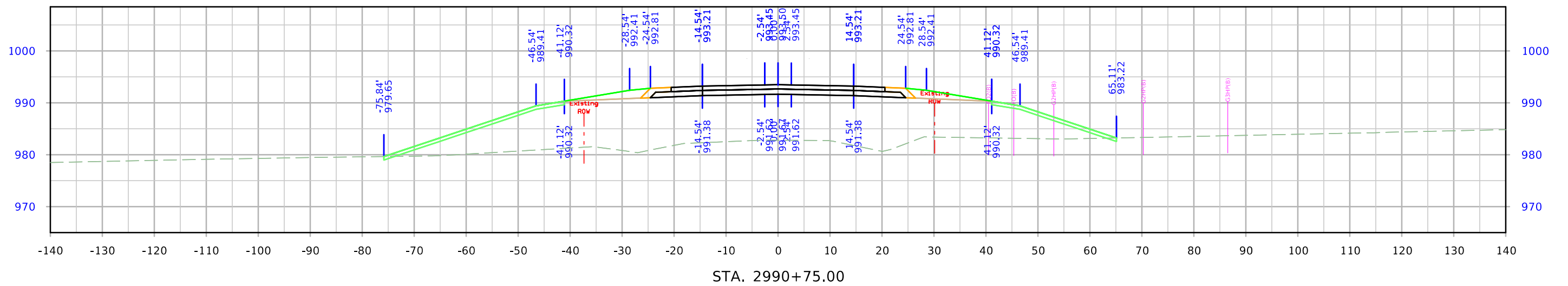
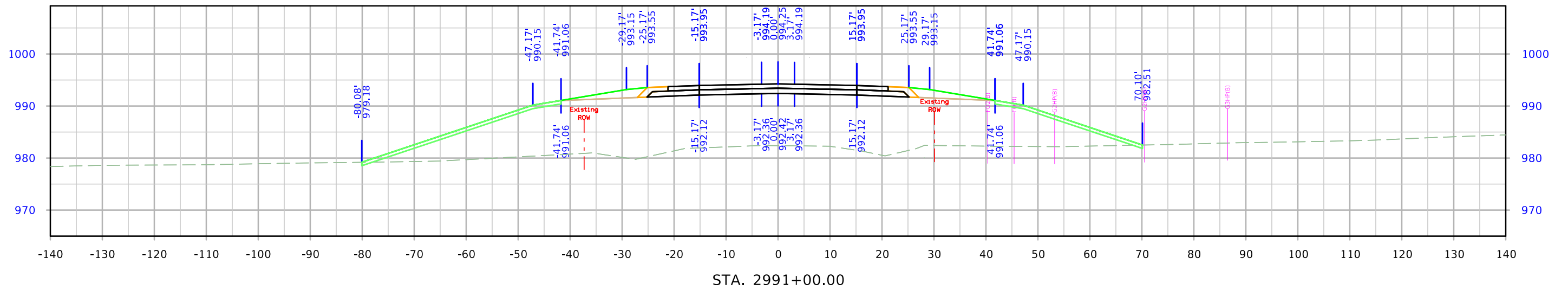
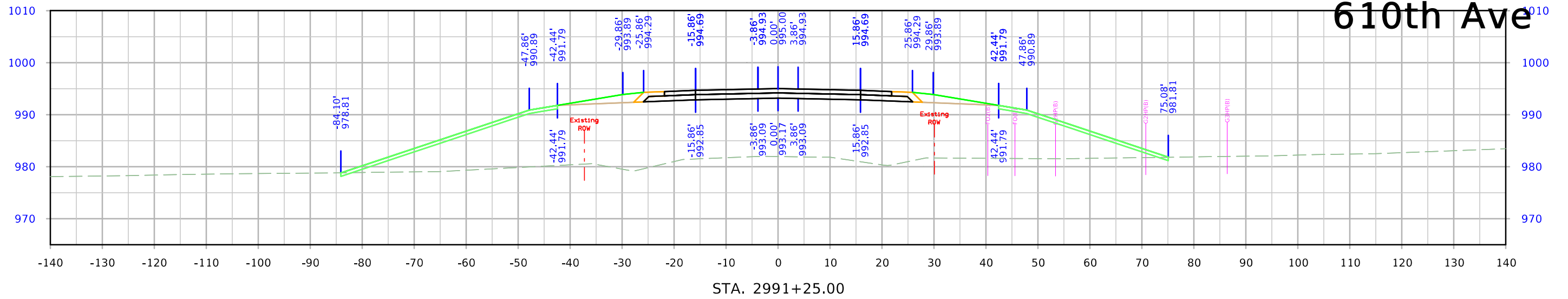




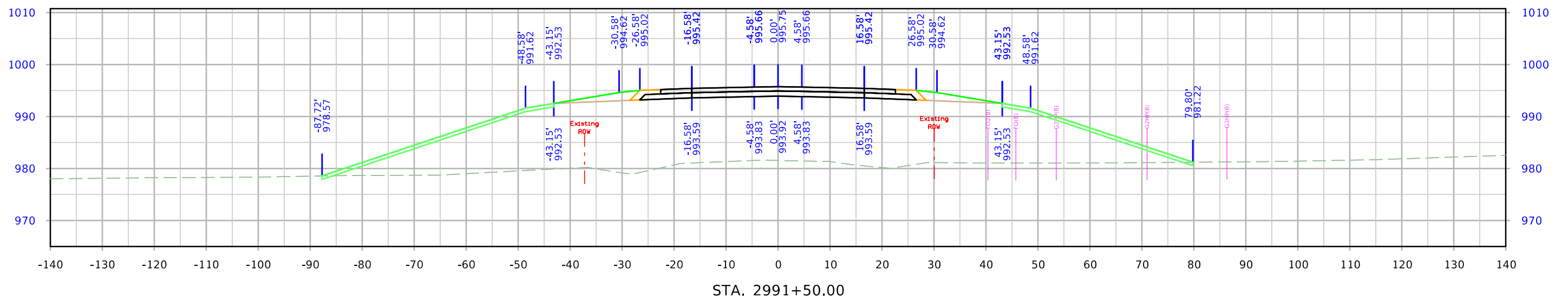
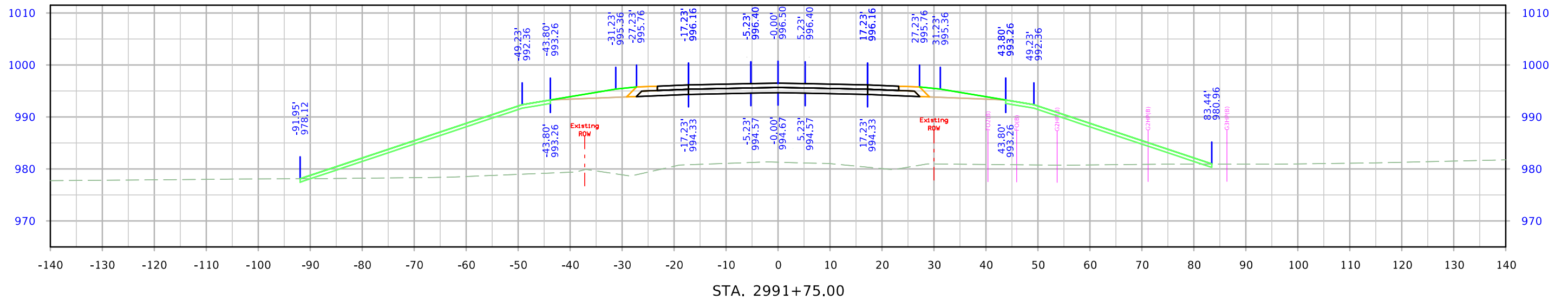
# 610th Ave



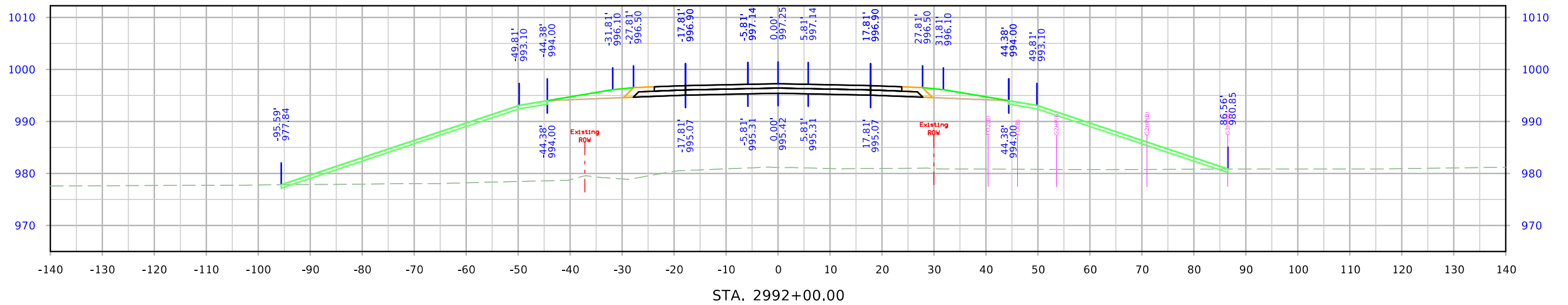
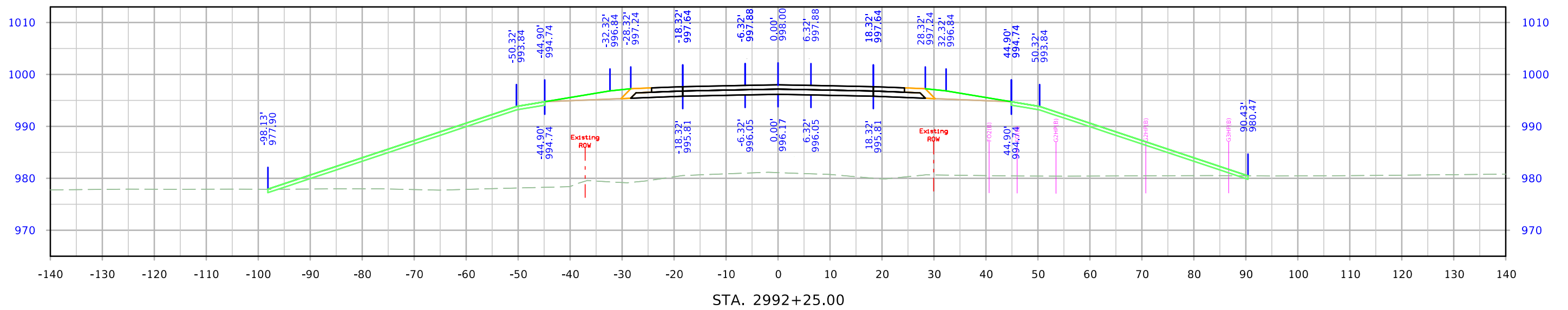
# 610th Ave



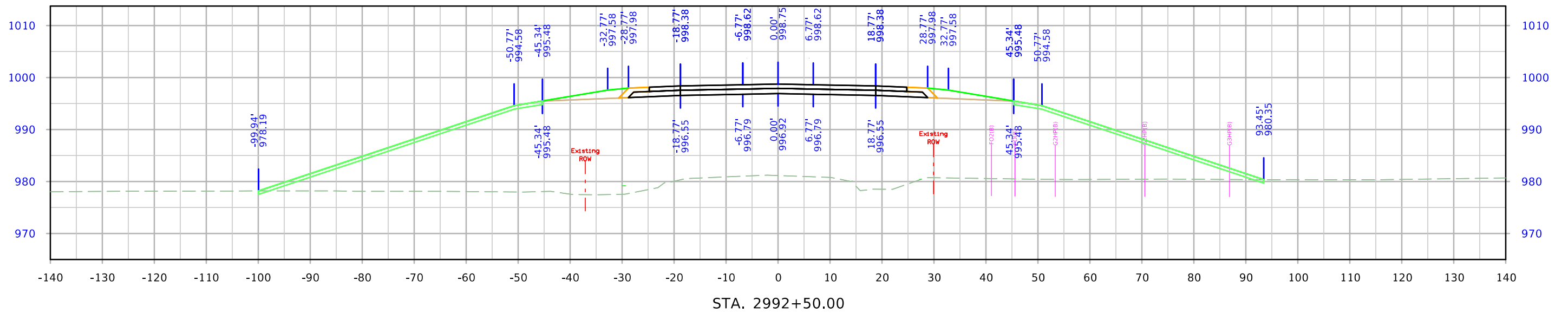
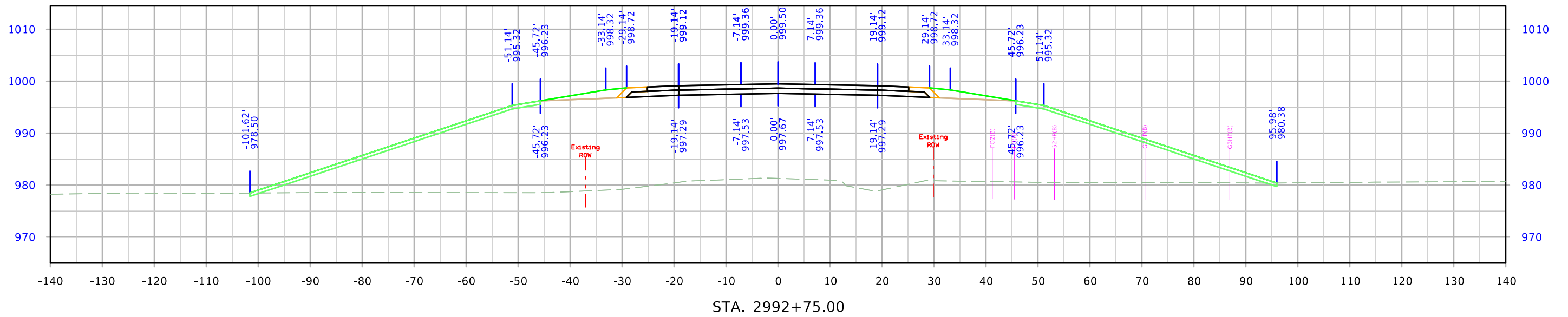
# 610th Ave



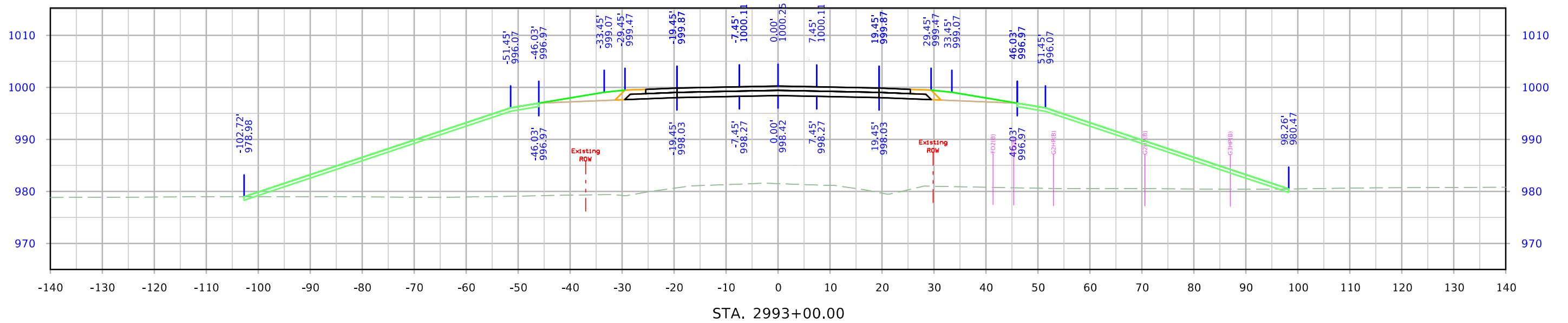
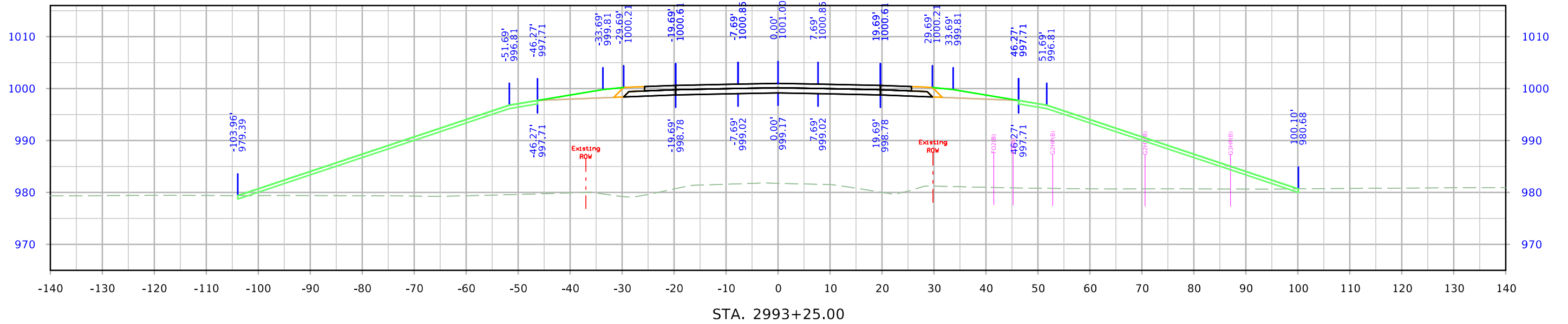
# 610th Ave



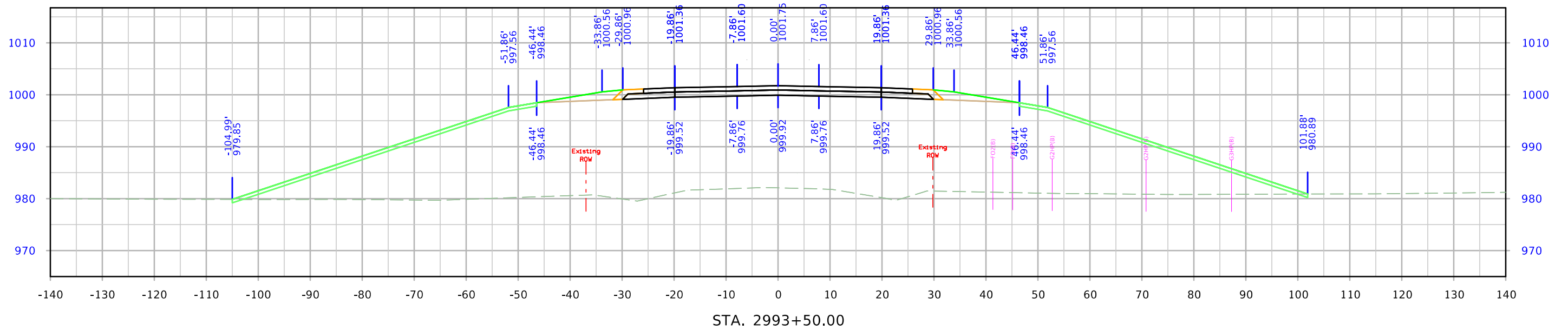
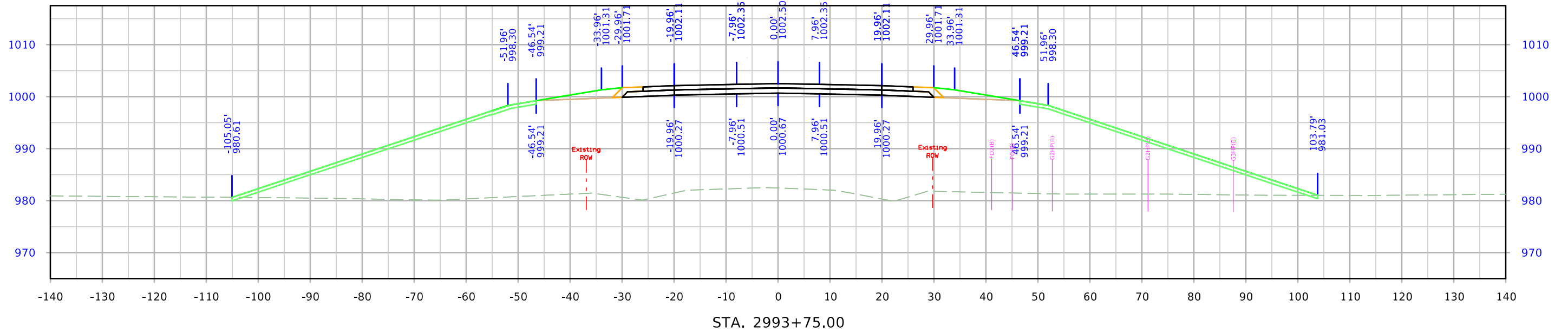
# 610th Ave



# 610th Ave

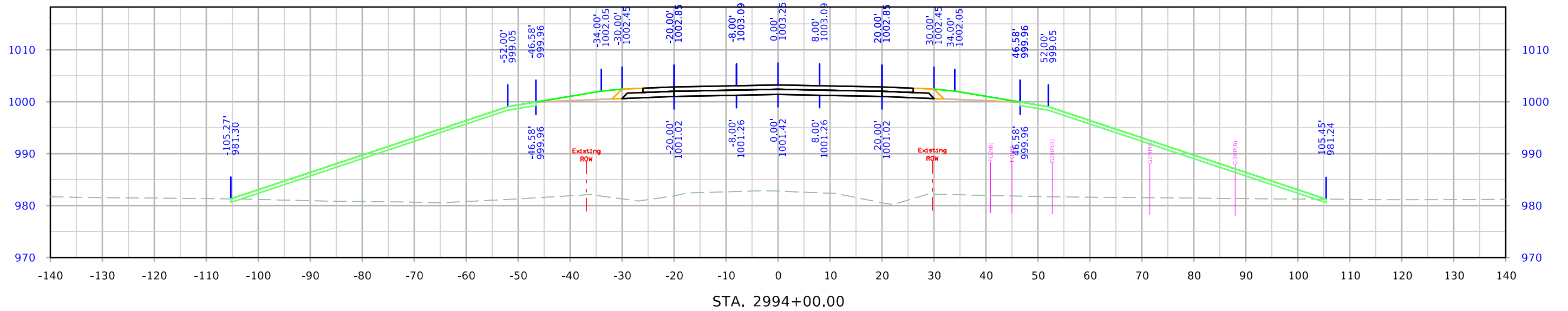
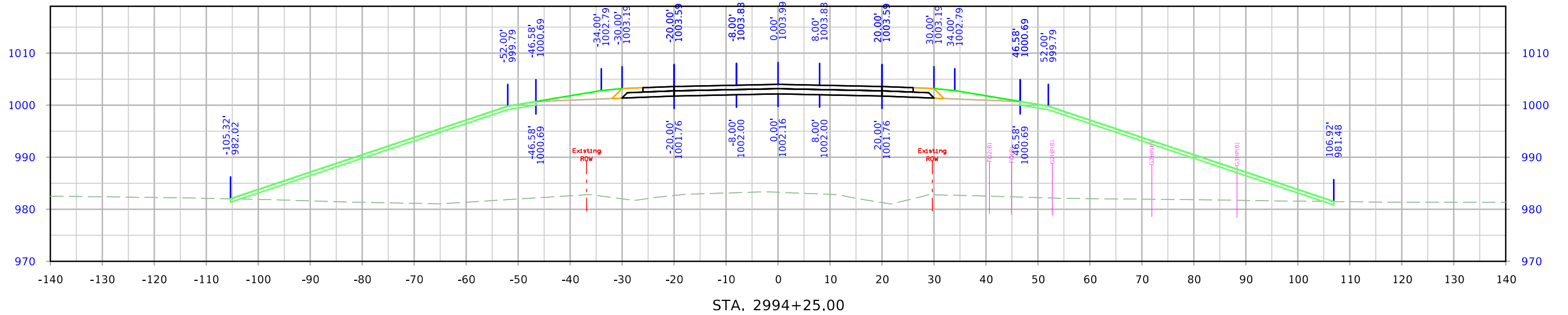


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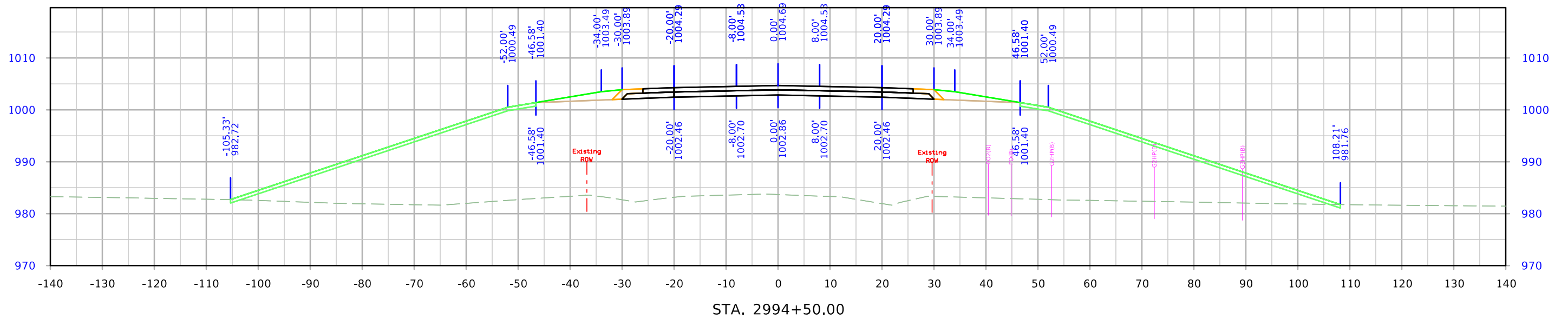
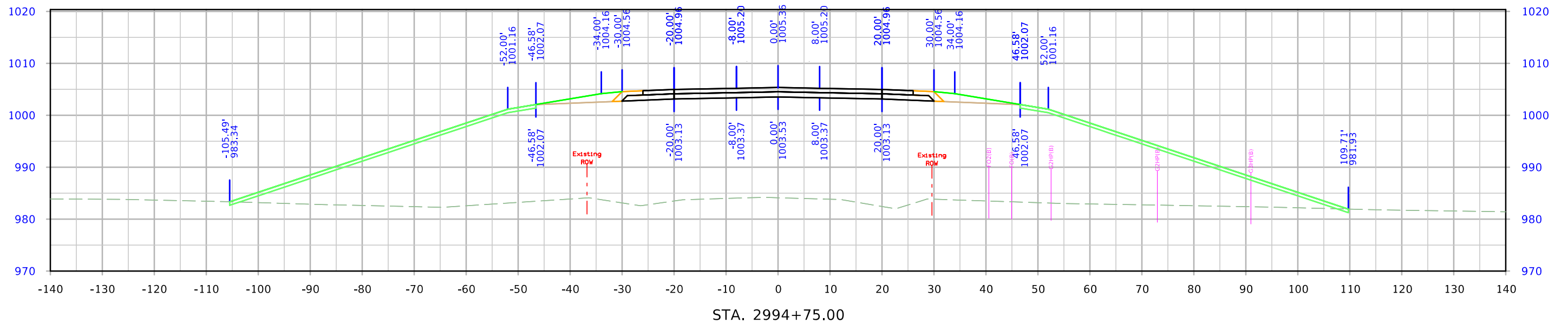




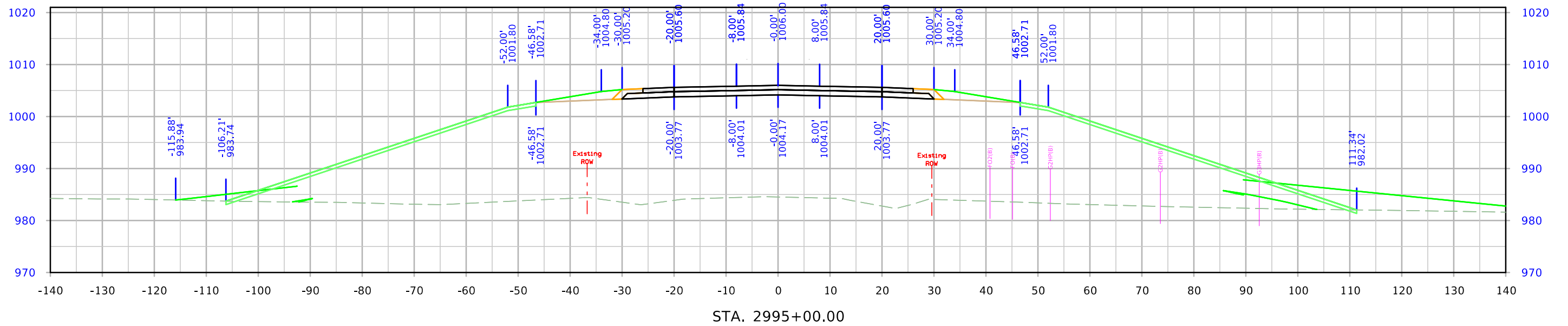
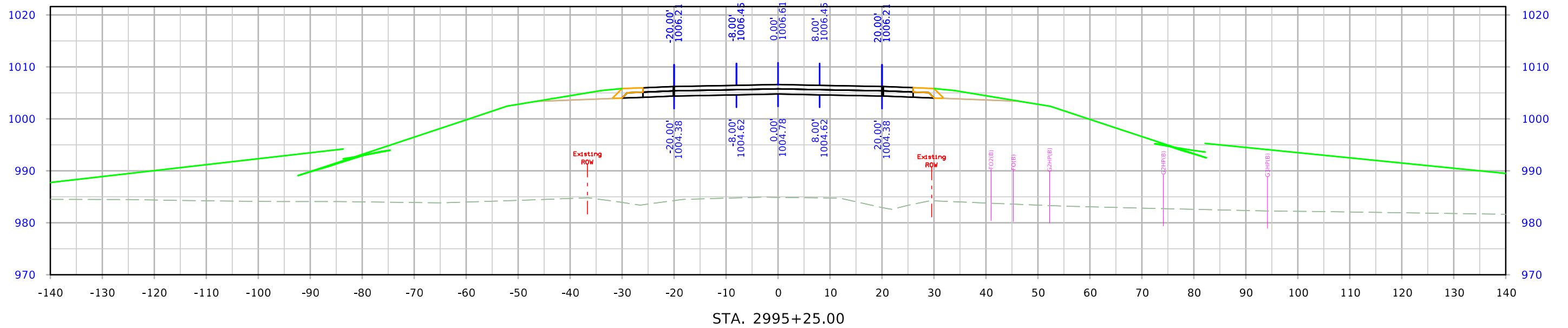
# 610th Ave



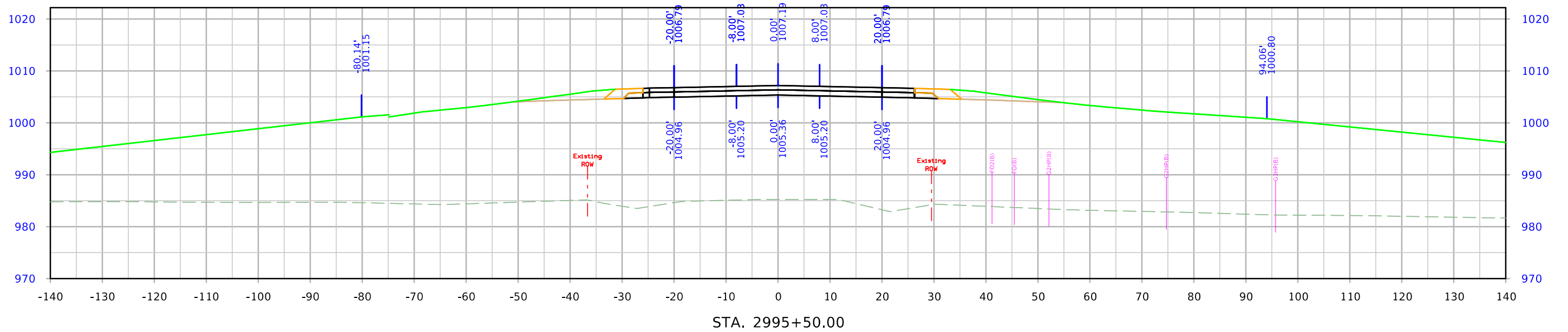
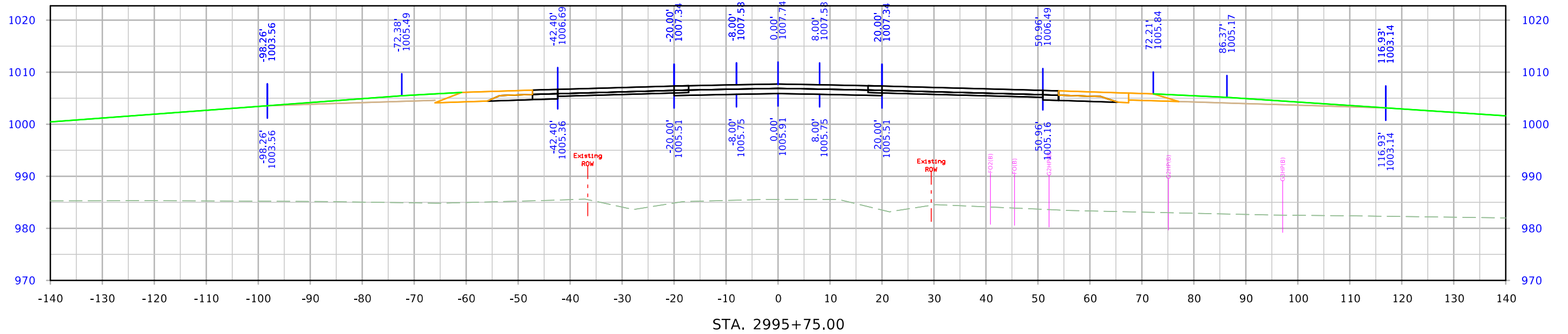
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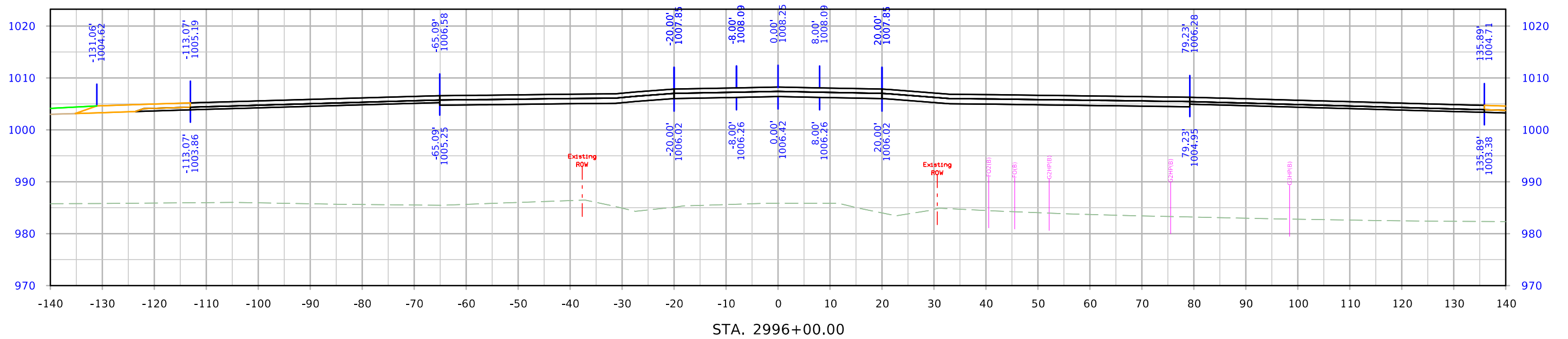
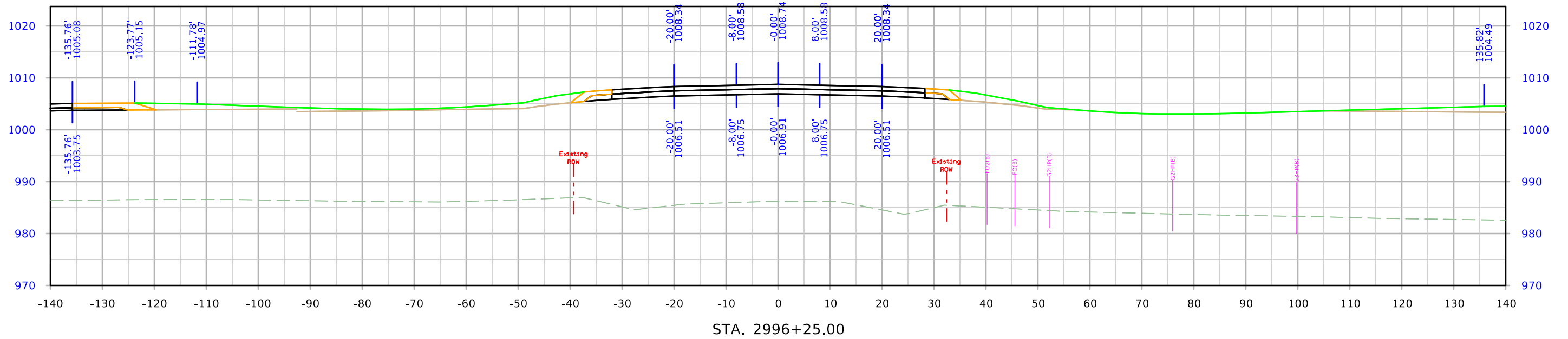
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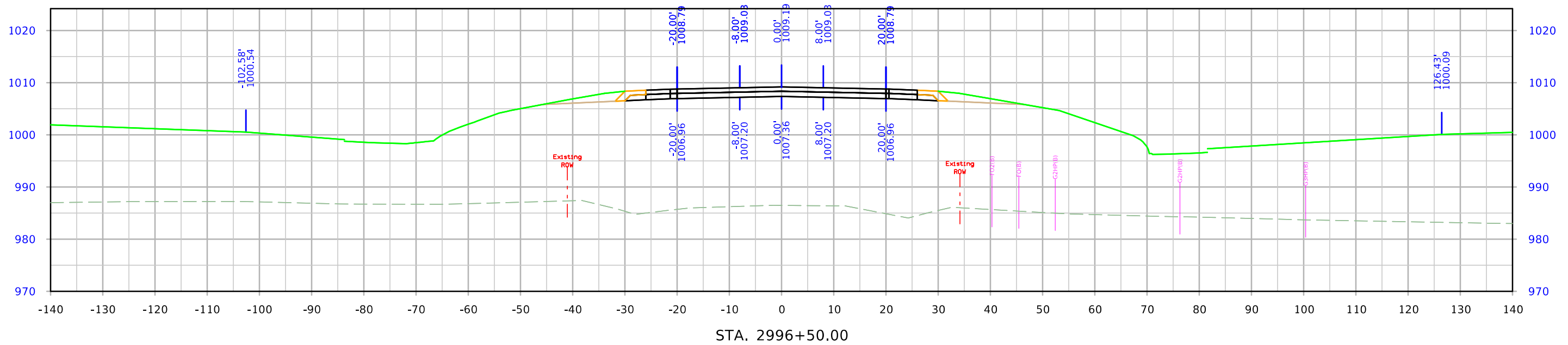
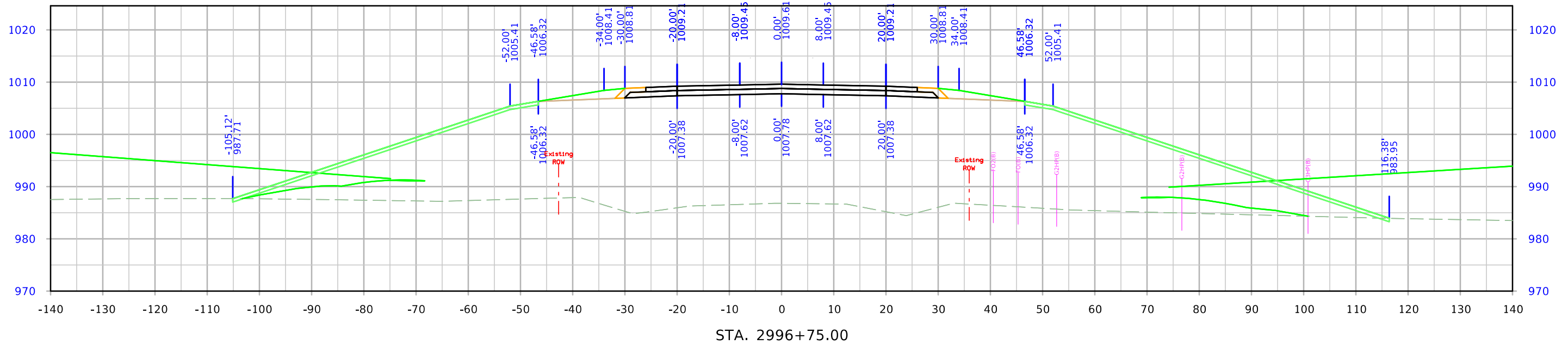
# 610th Ave



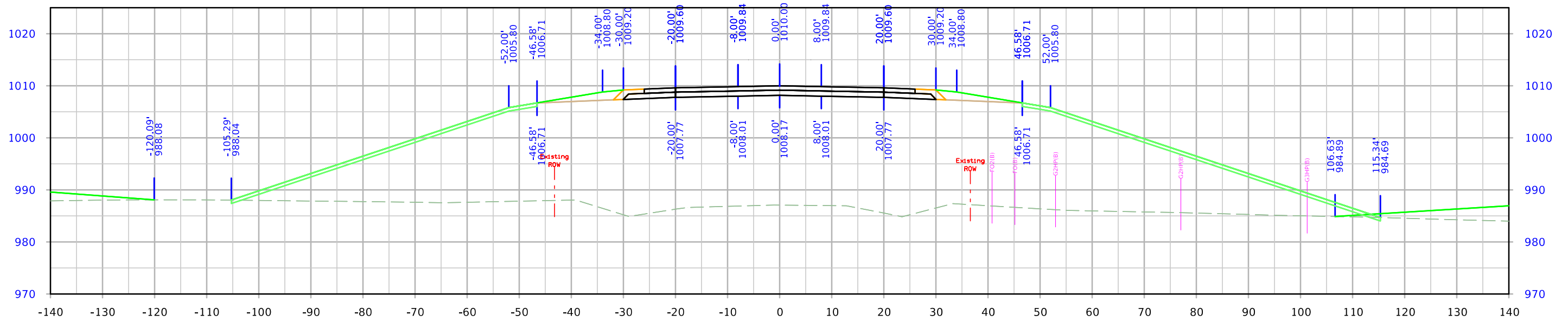
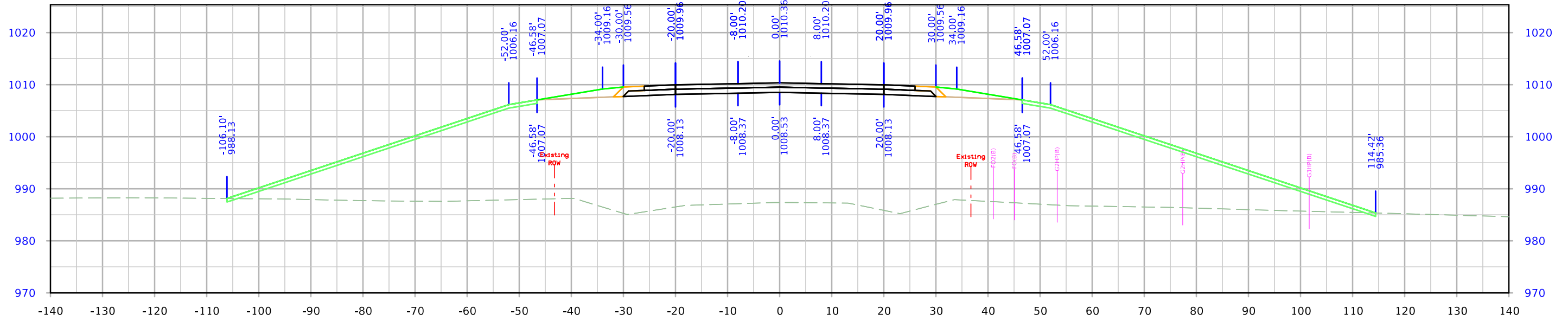
# 610th Ave



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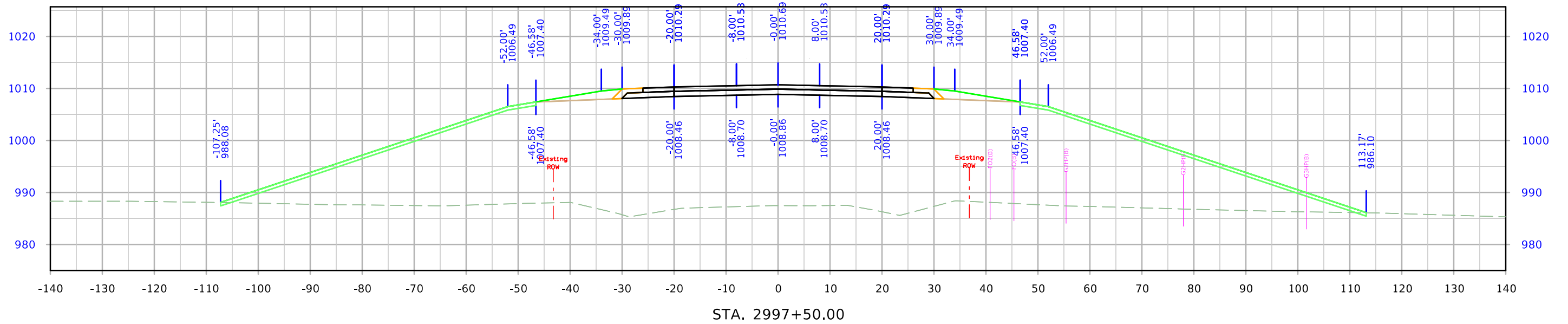
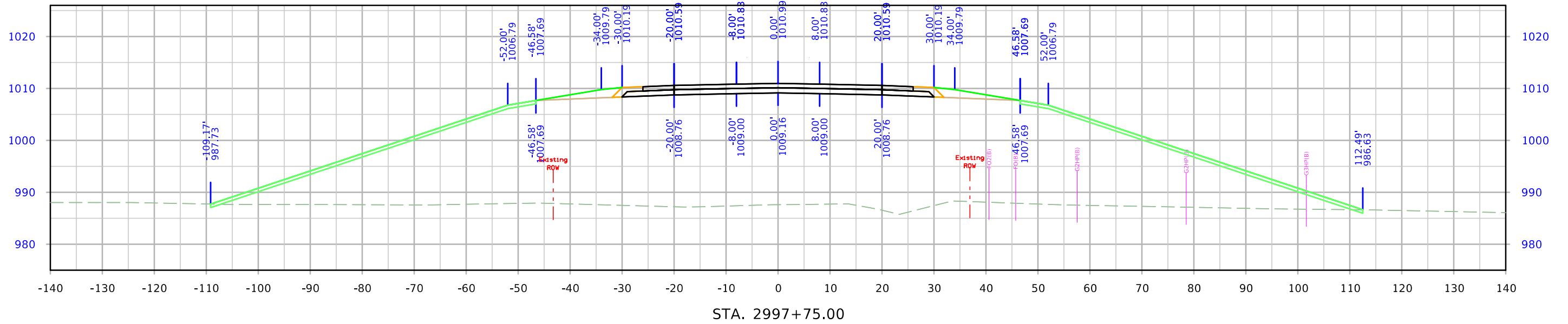


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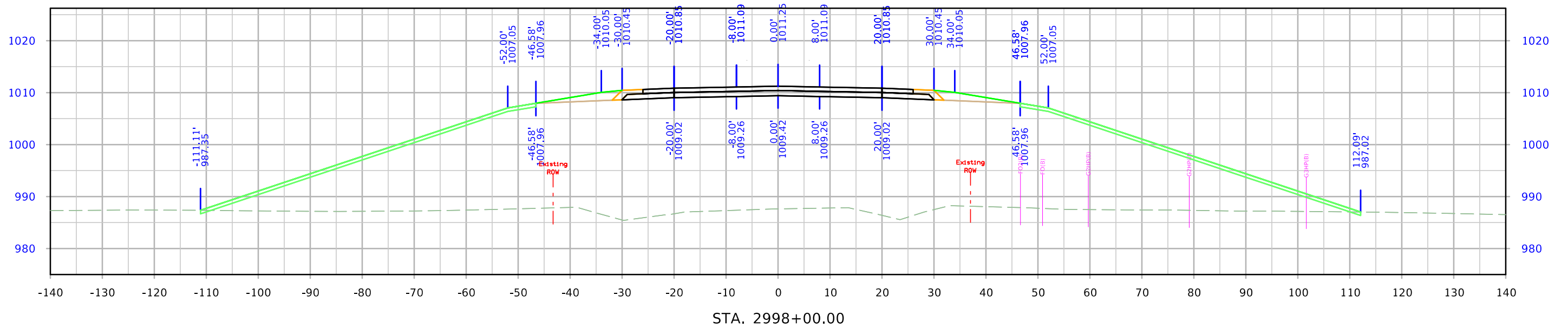
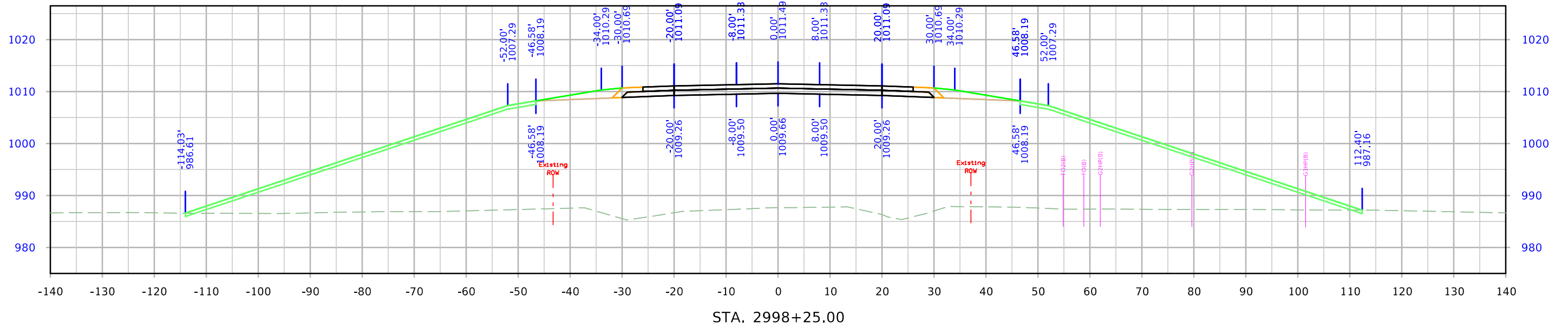




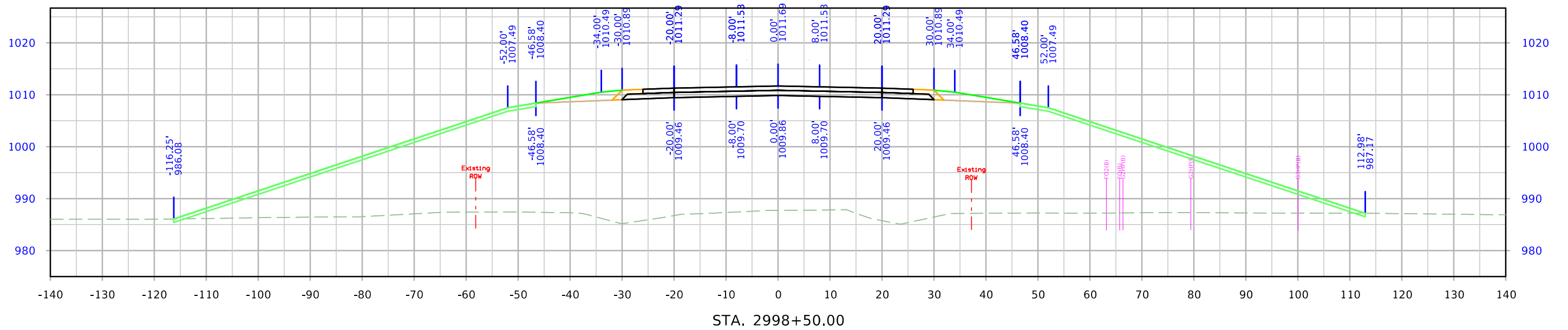
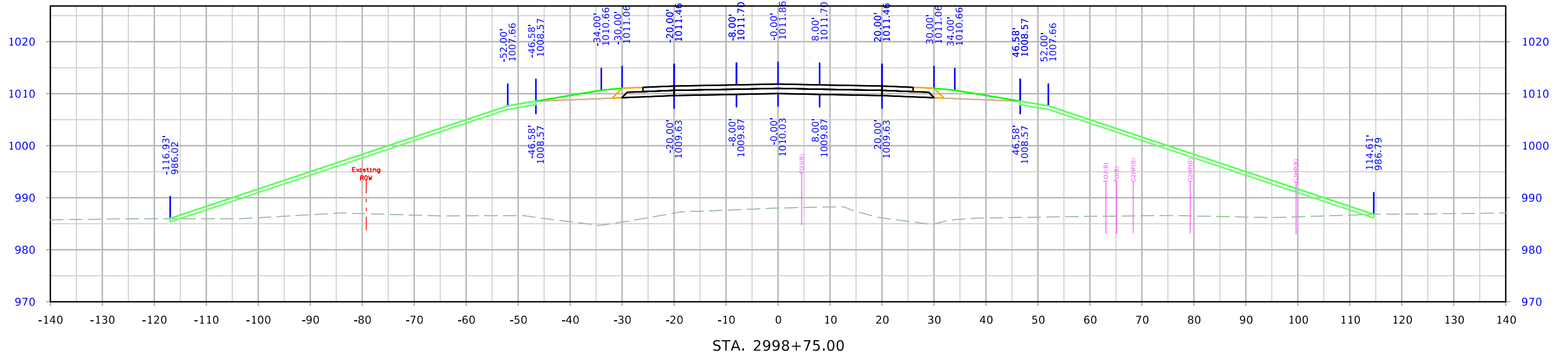
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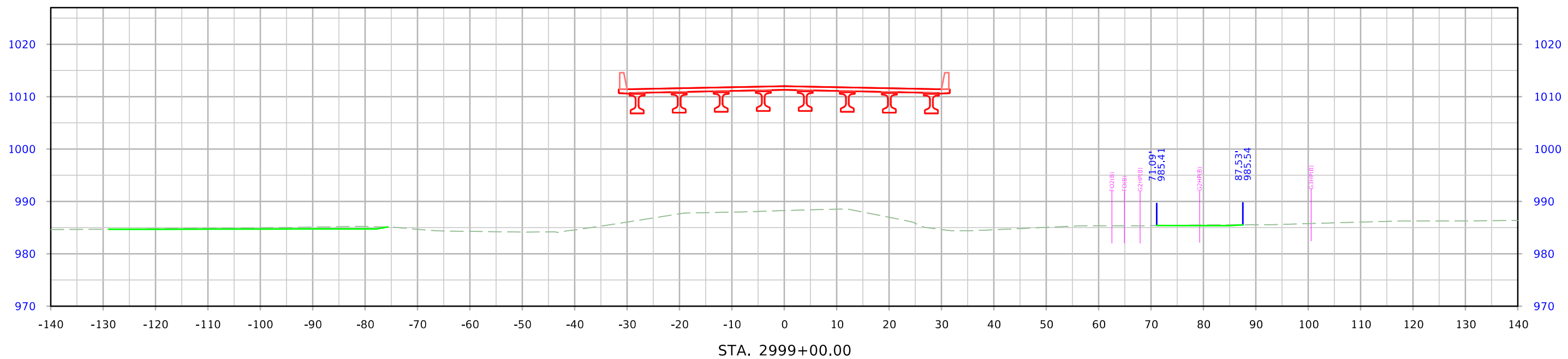
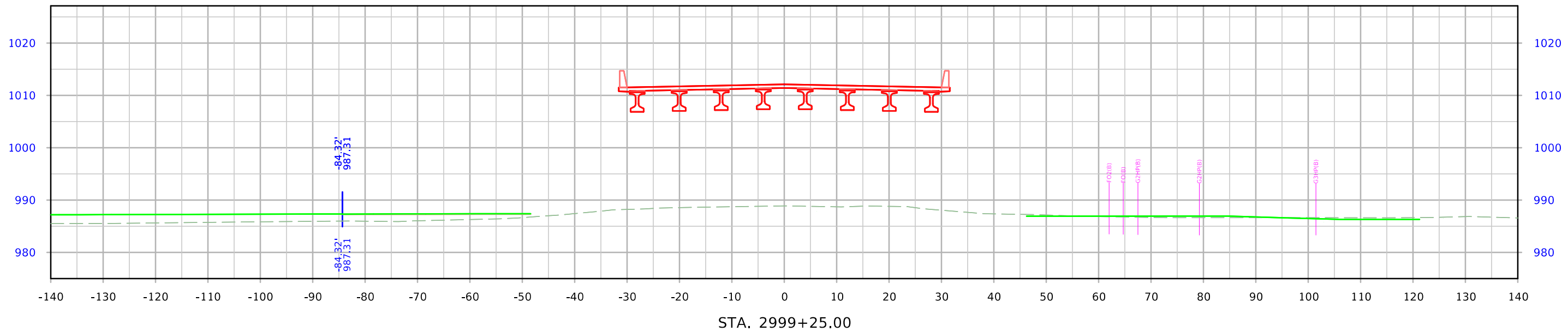
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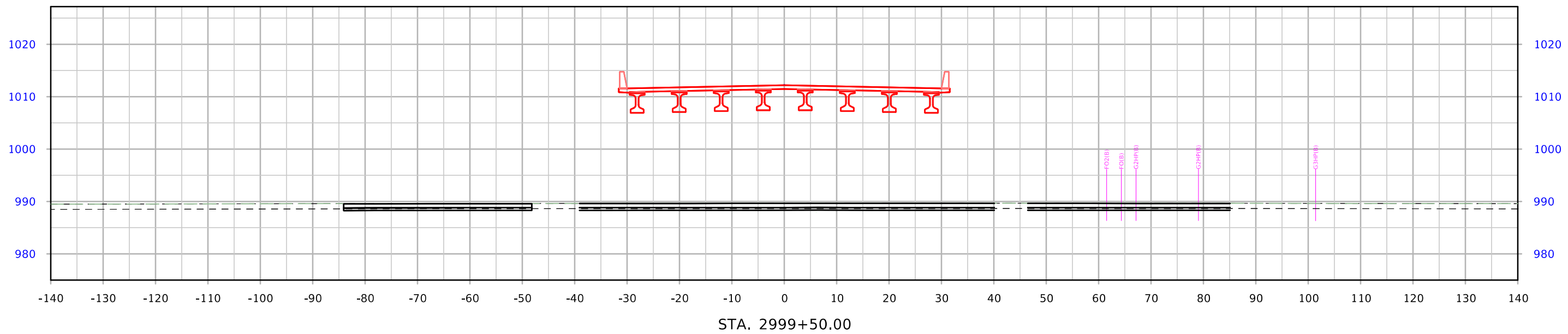
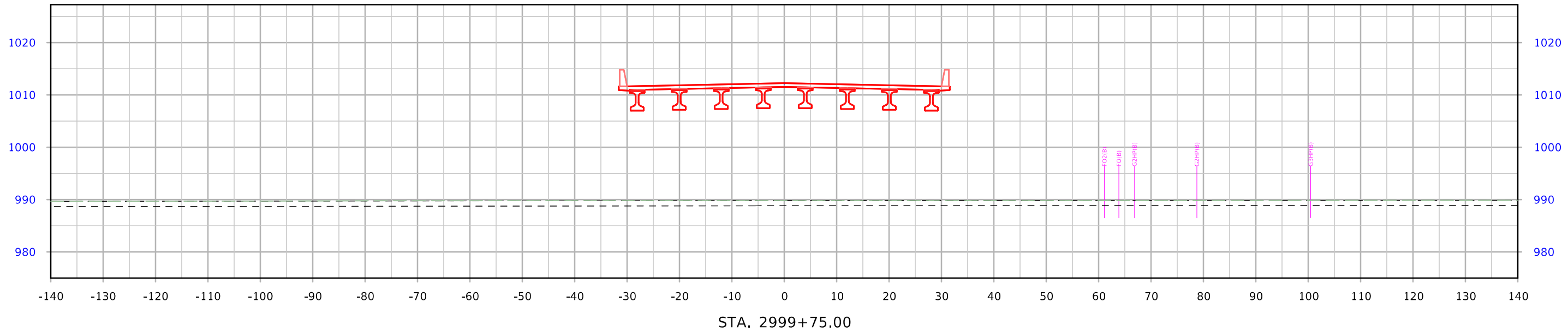
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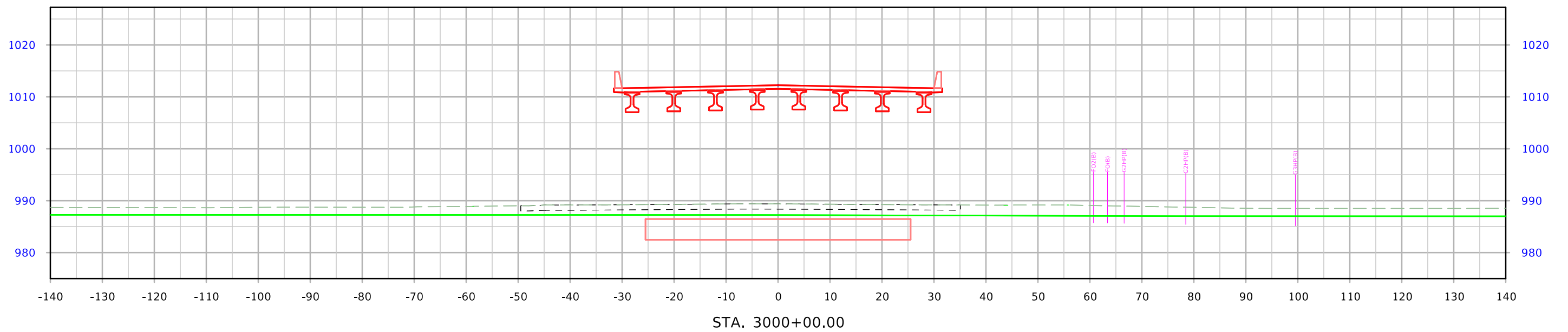
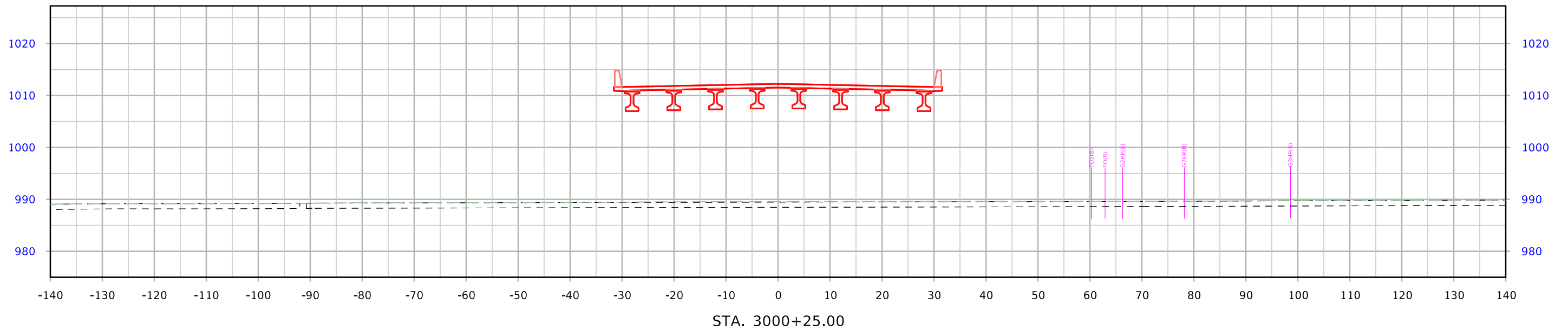
# 610th Ave



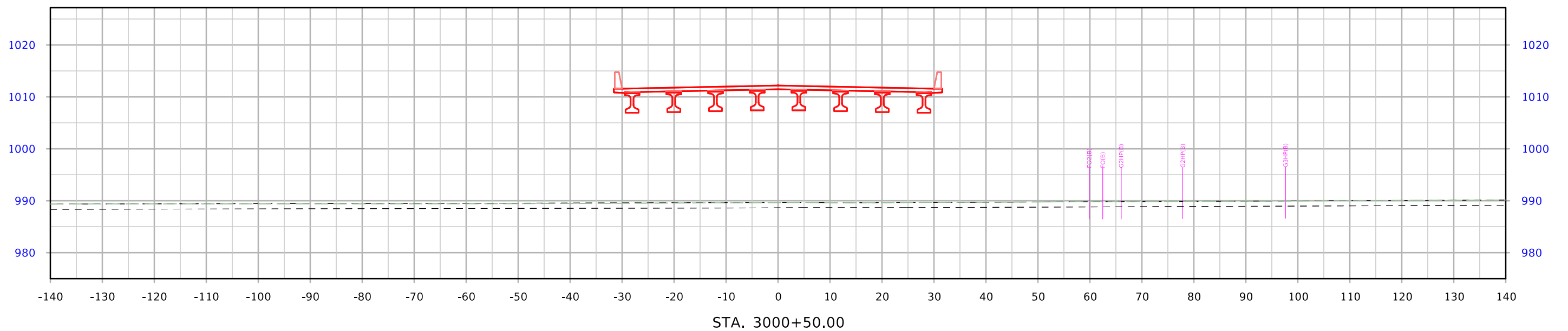
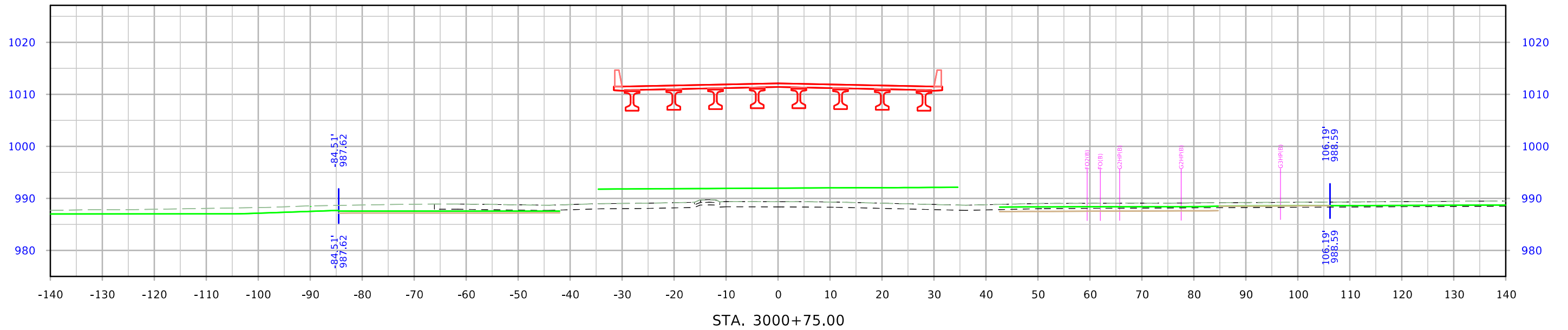
# 610th Ave



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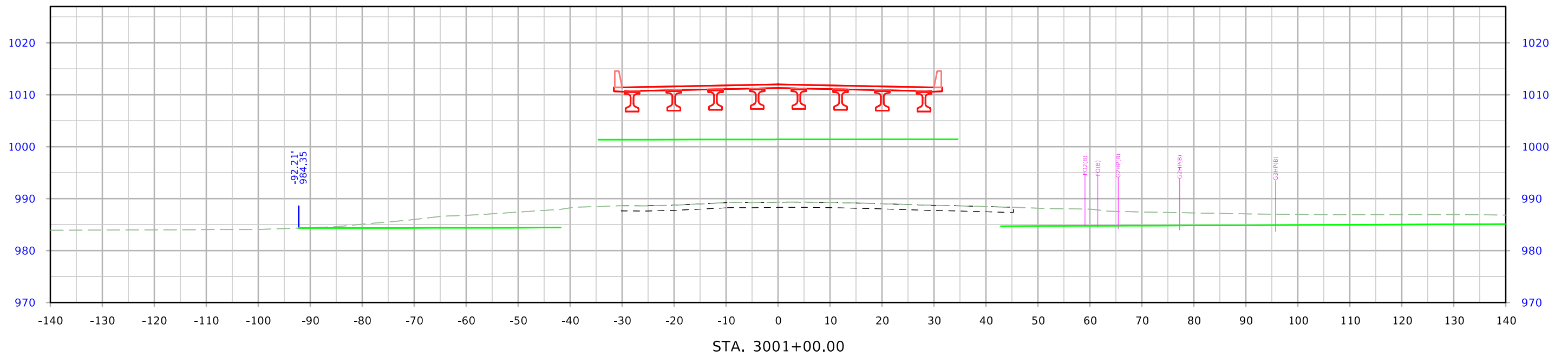
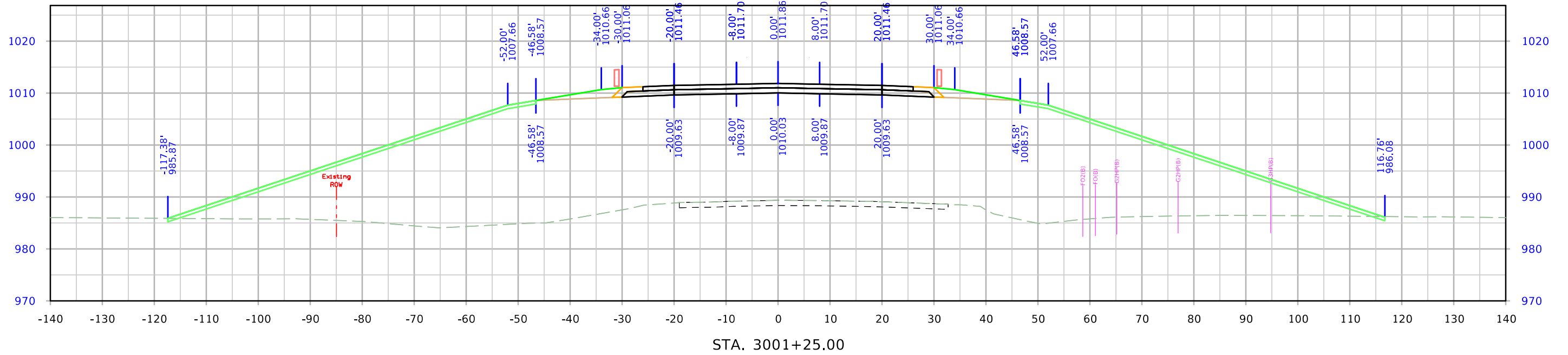


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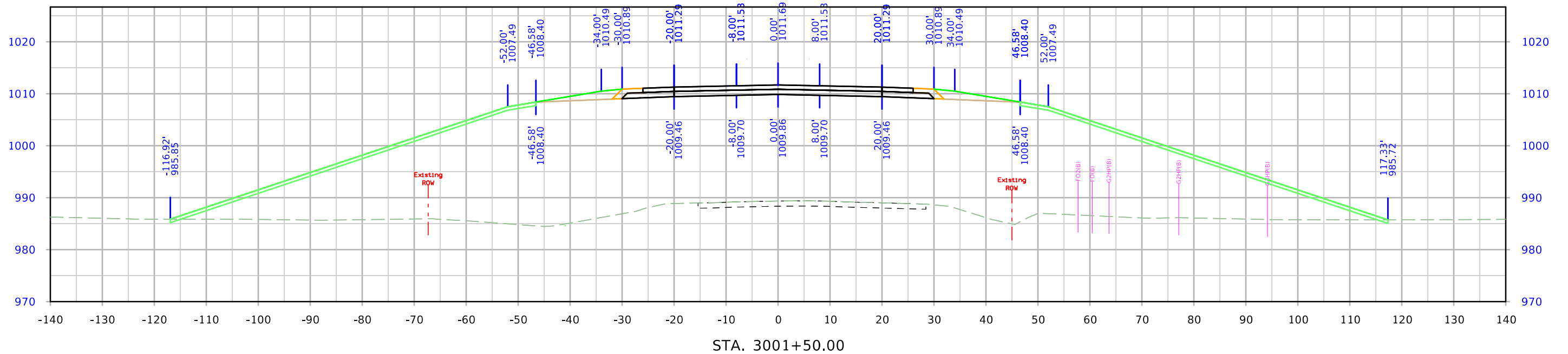
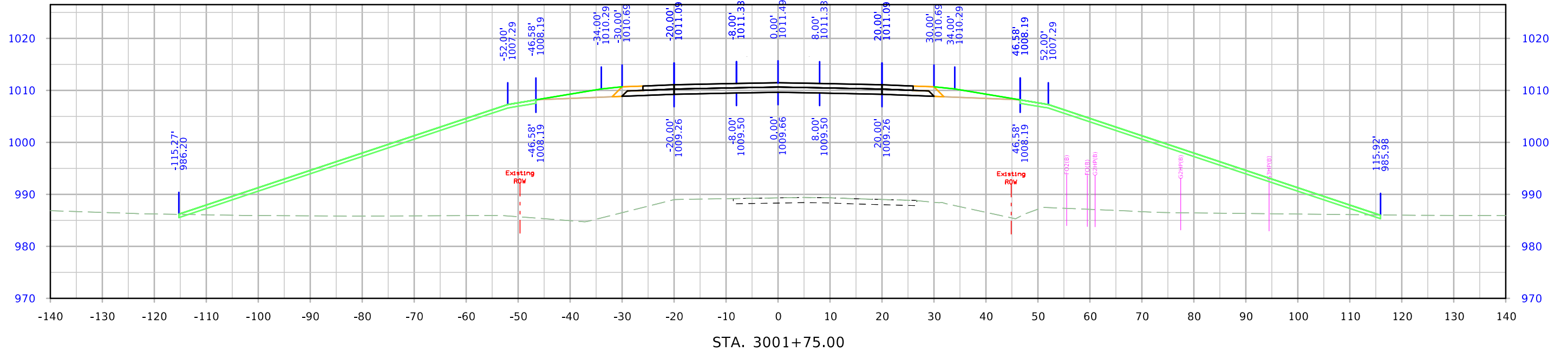




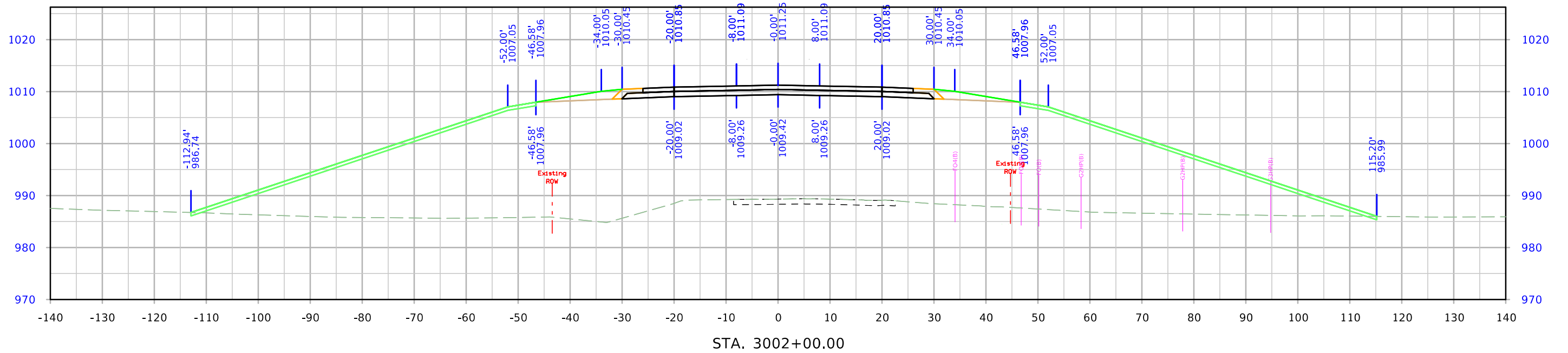
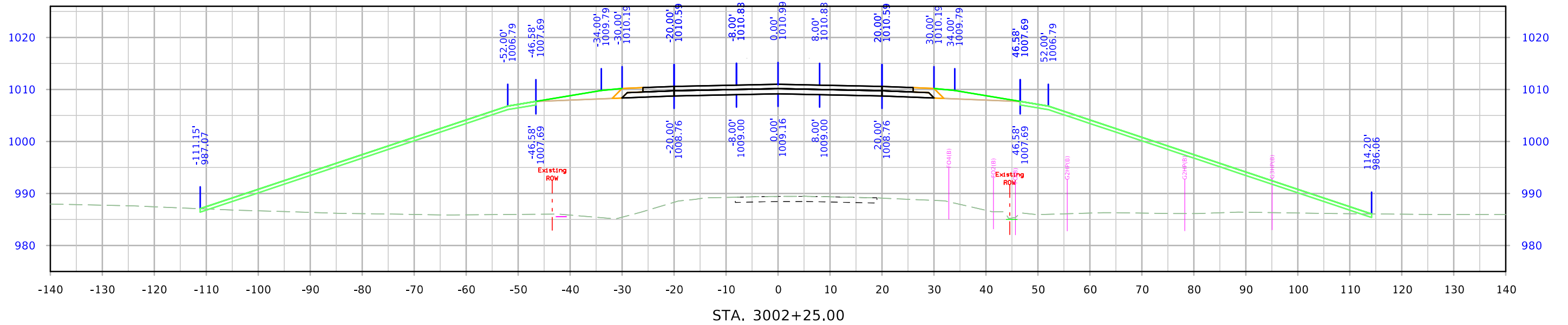
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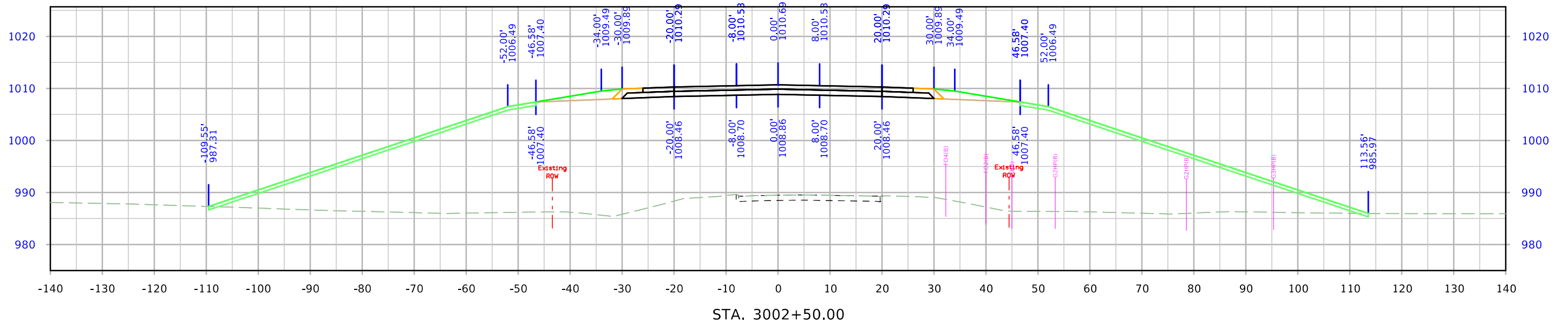
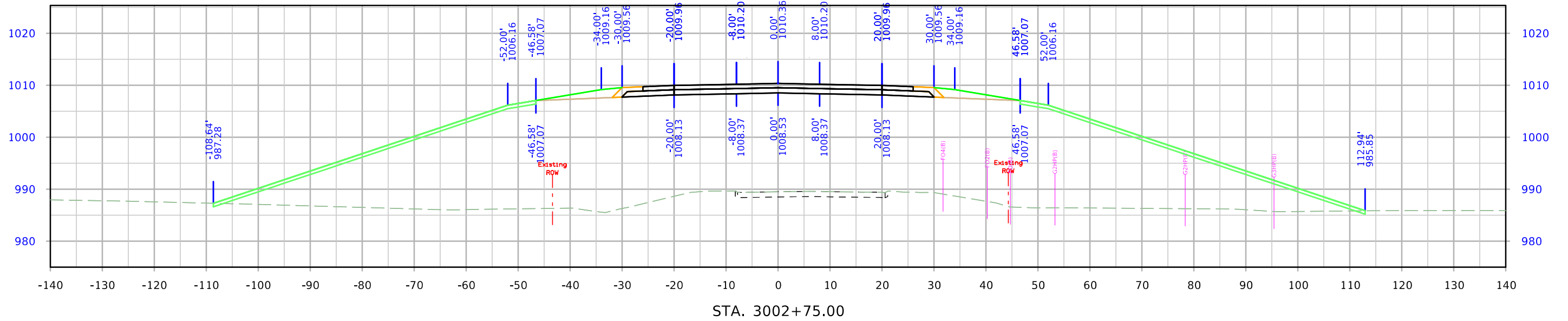
# 610th Ave



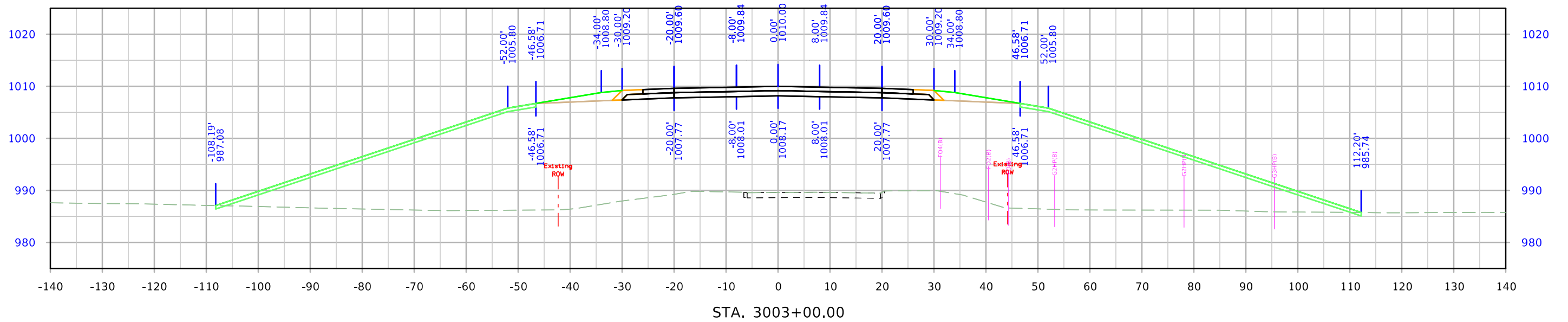
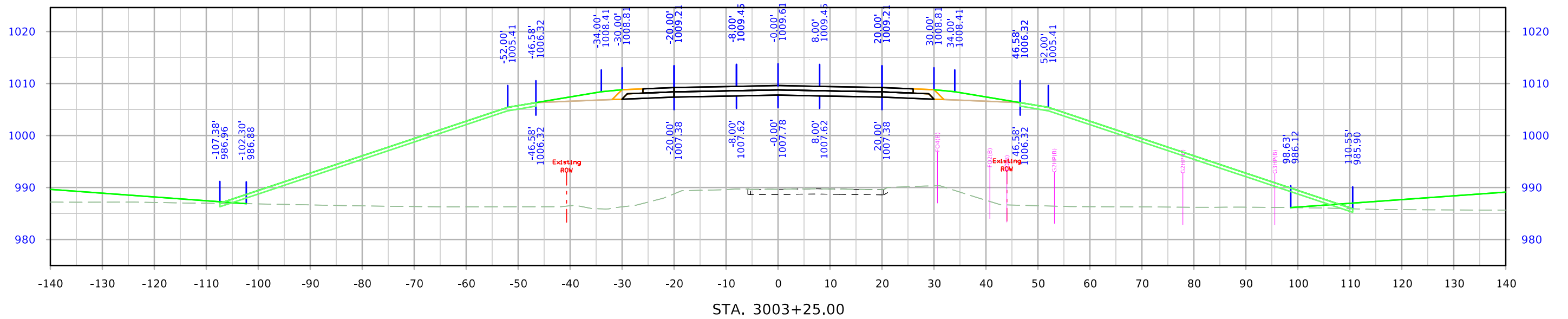
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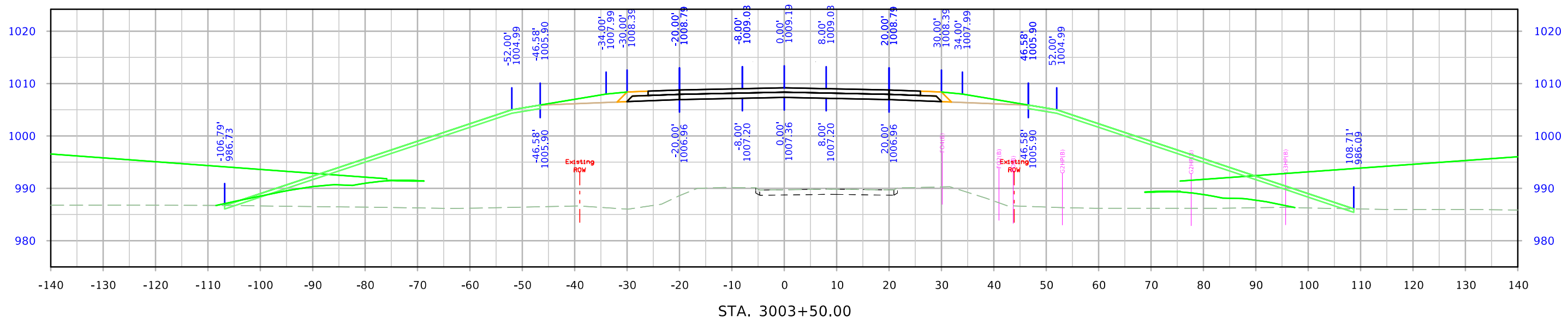
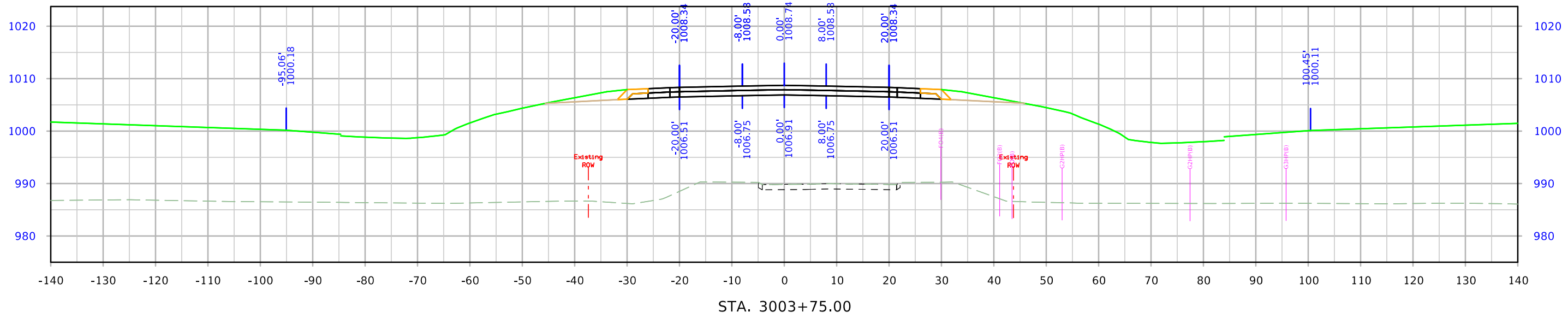
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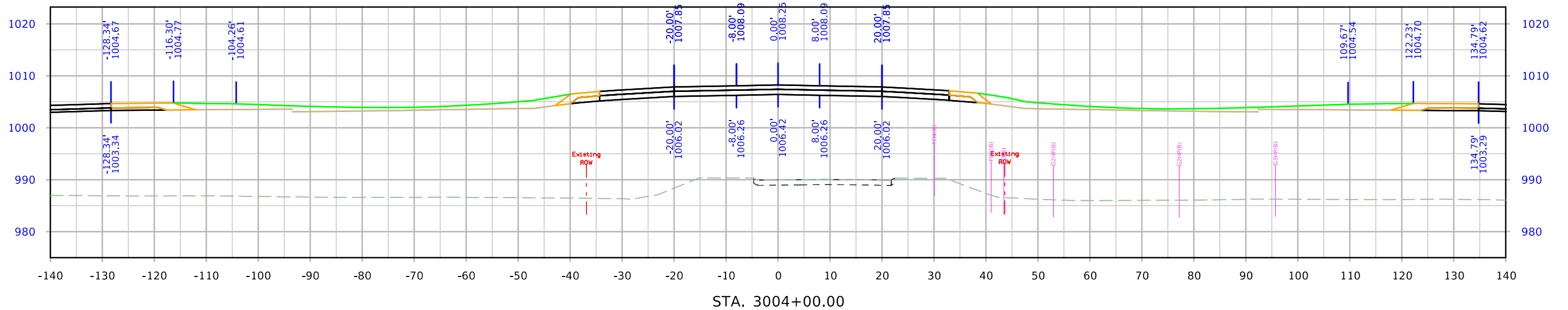
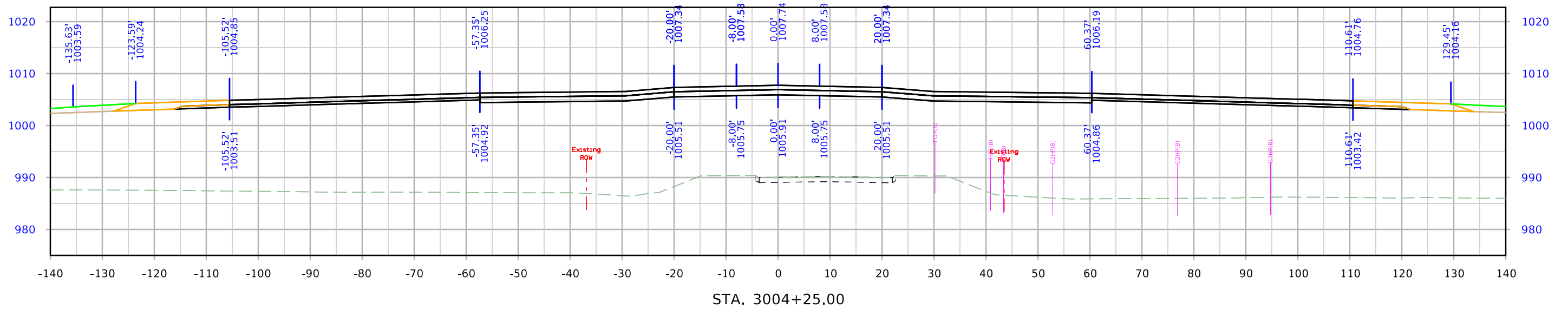
# 610th Ave



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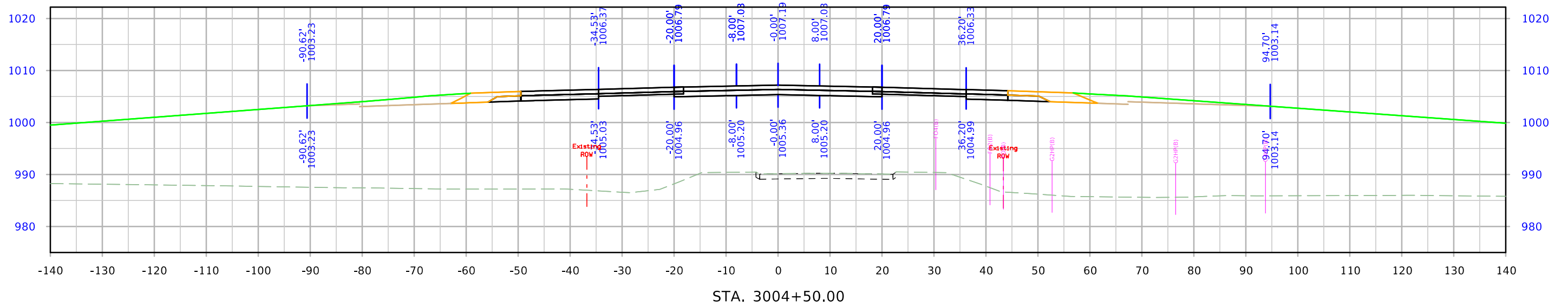
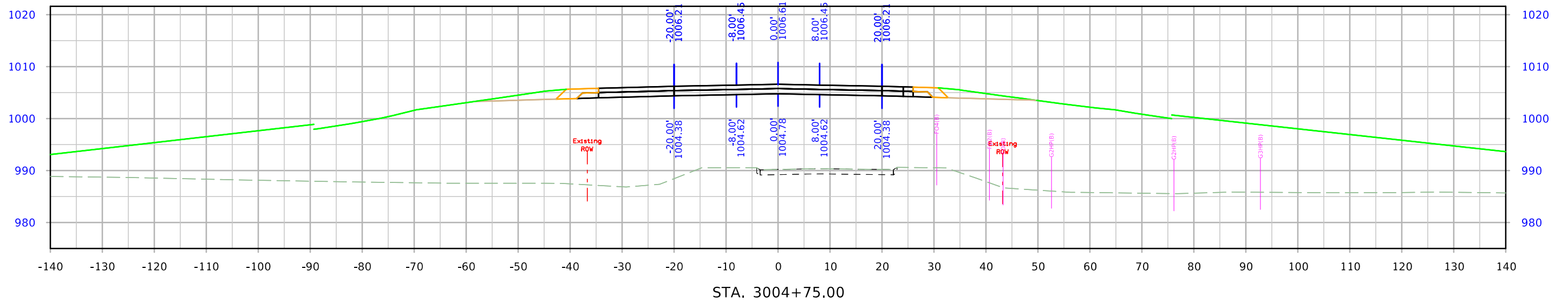


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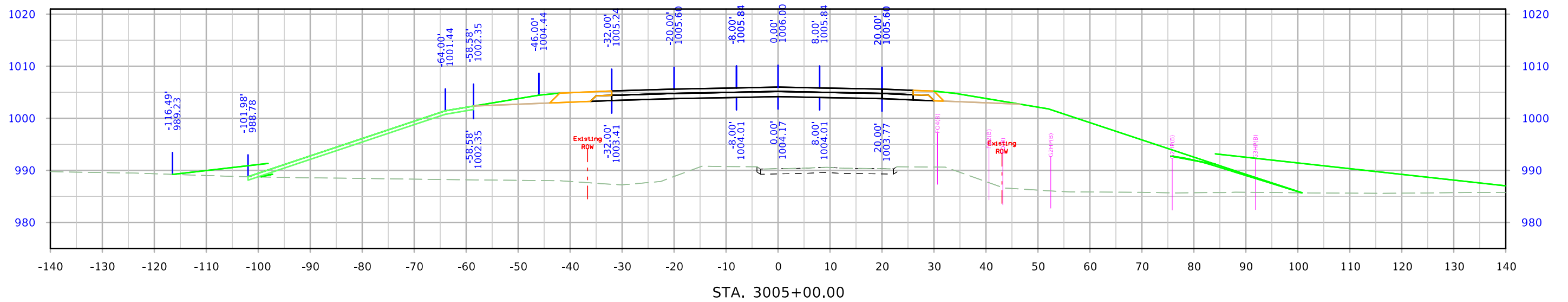
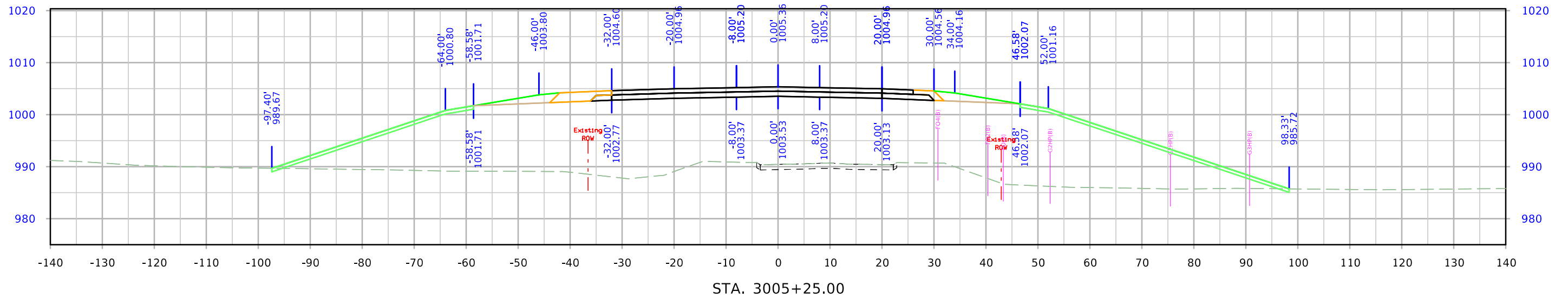




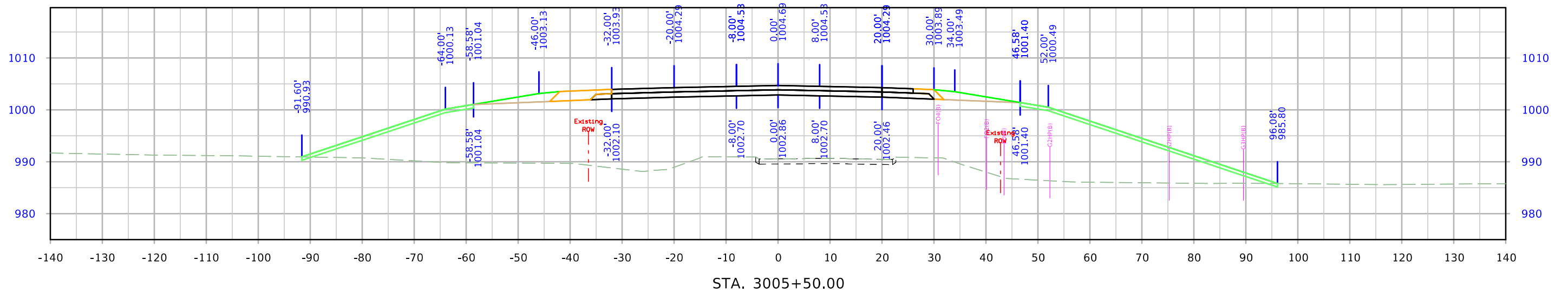
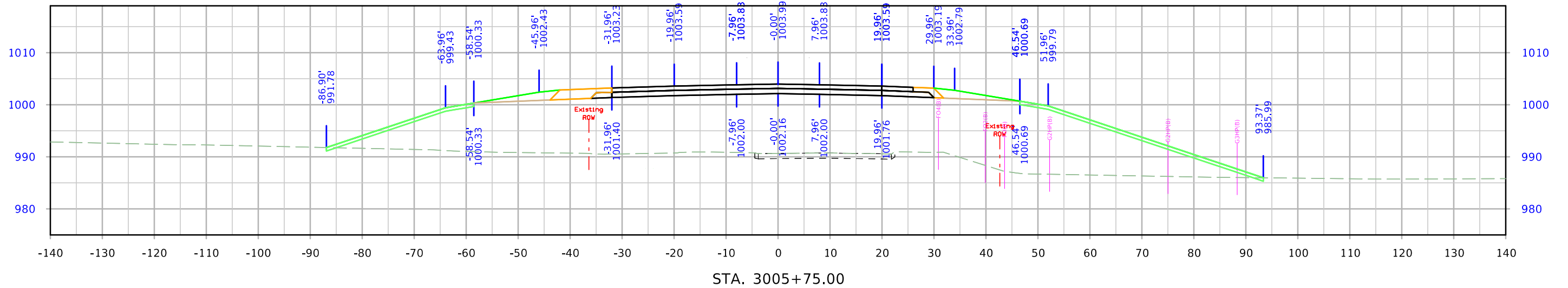
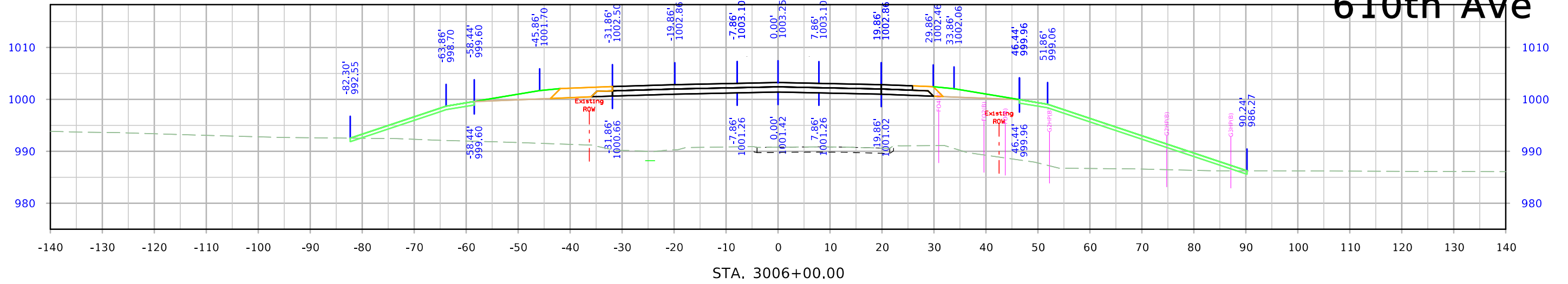
# 610th Ave



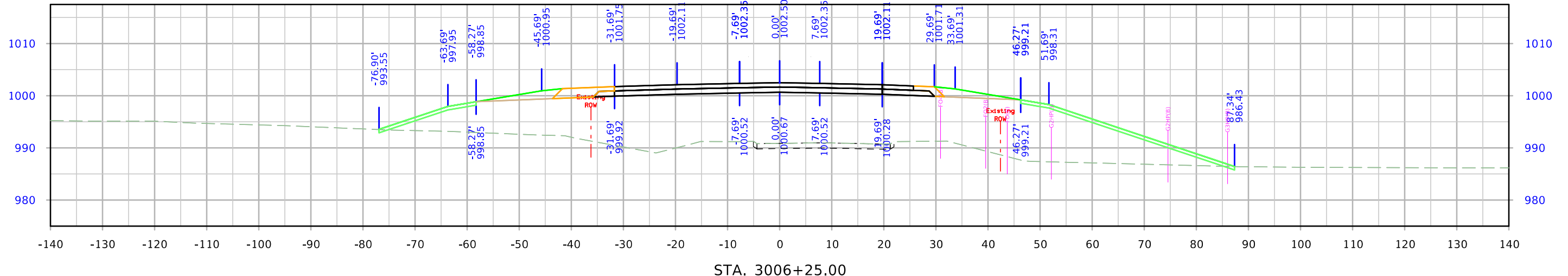
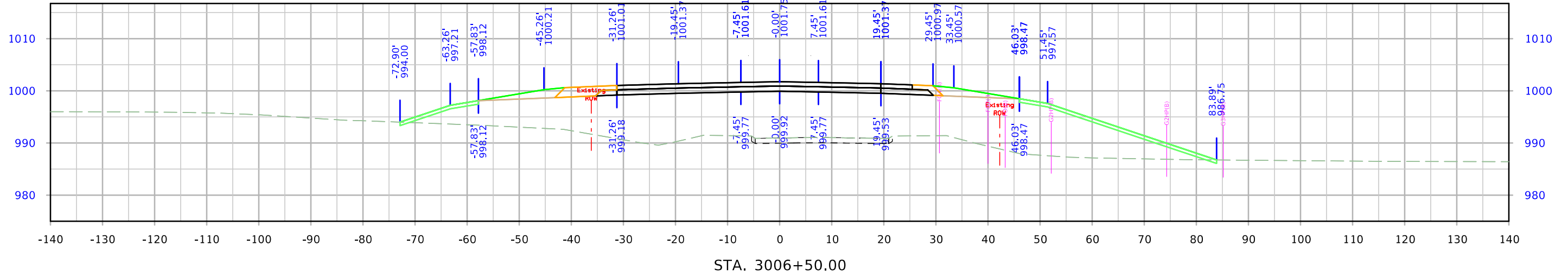
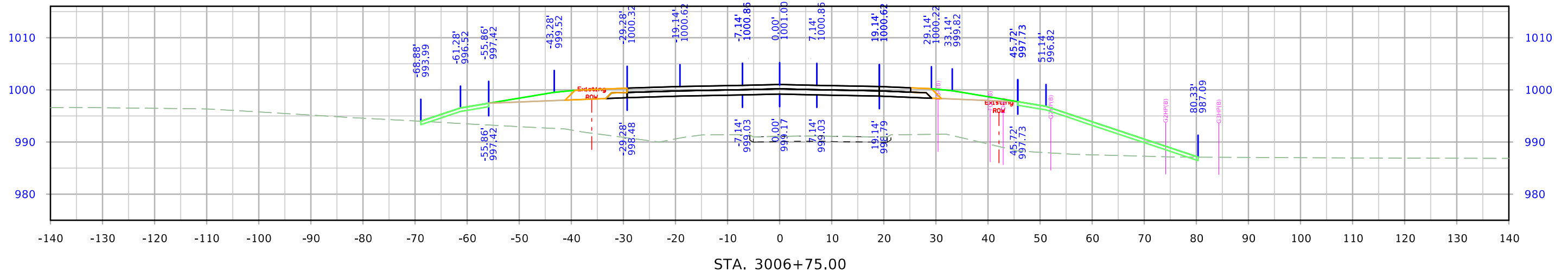
# 610th Ave



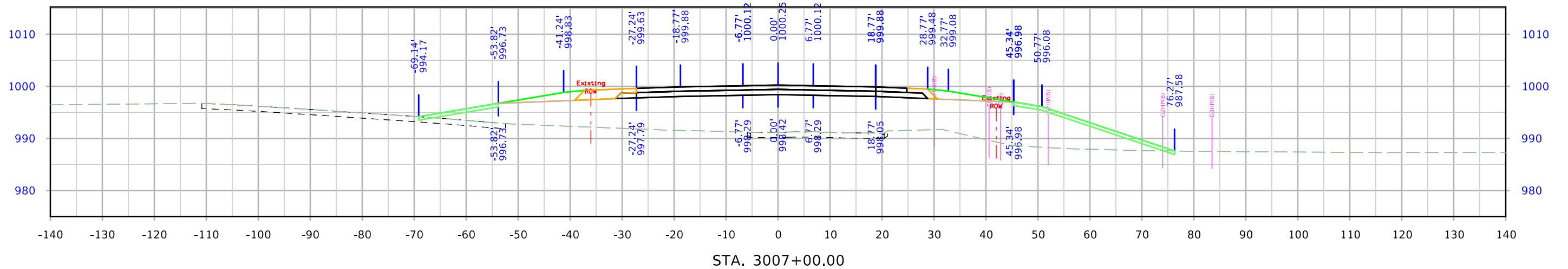
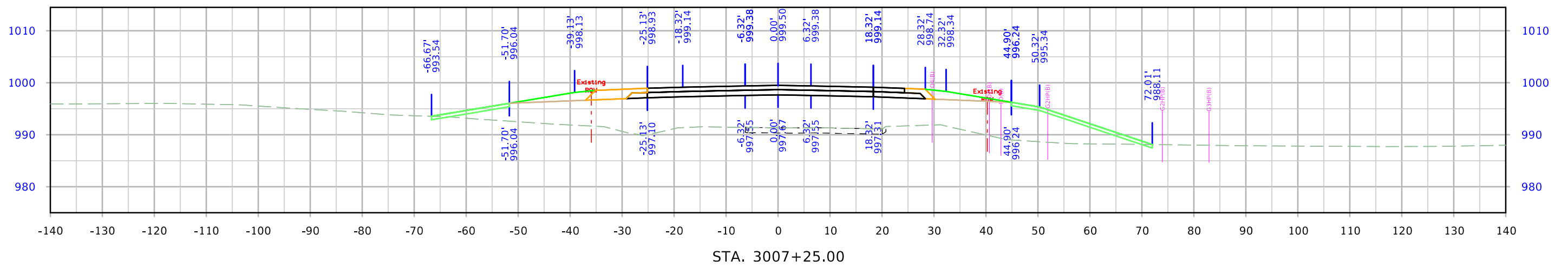
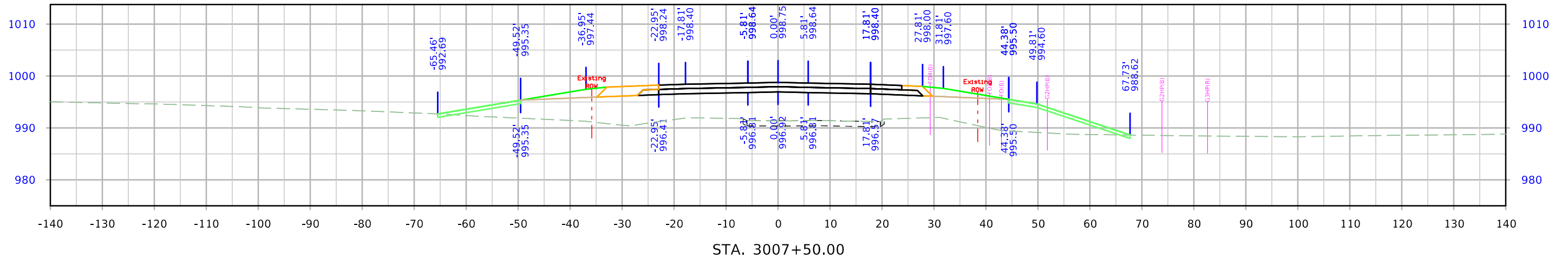
# 610th Ave



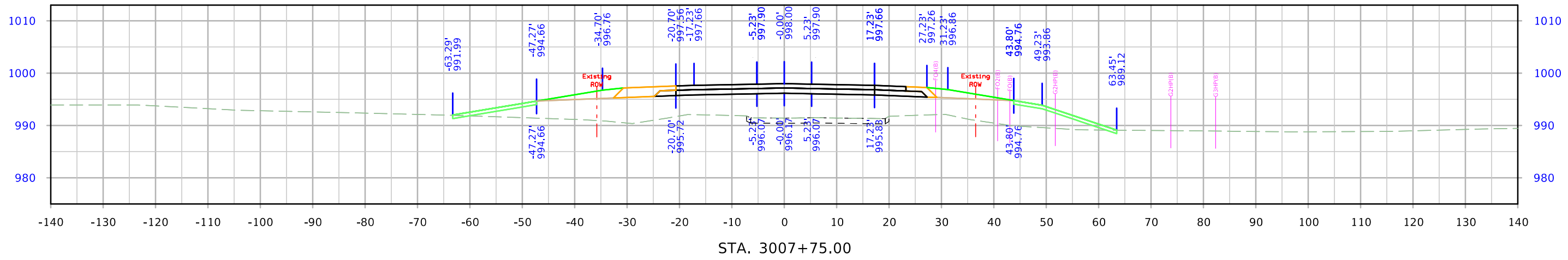
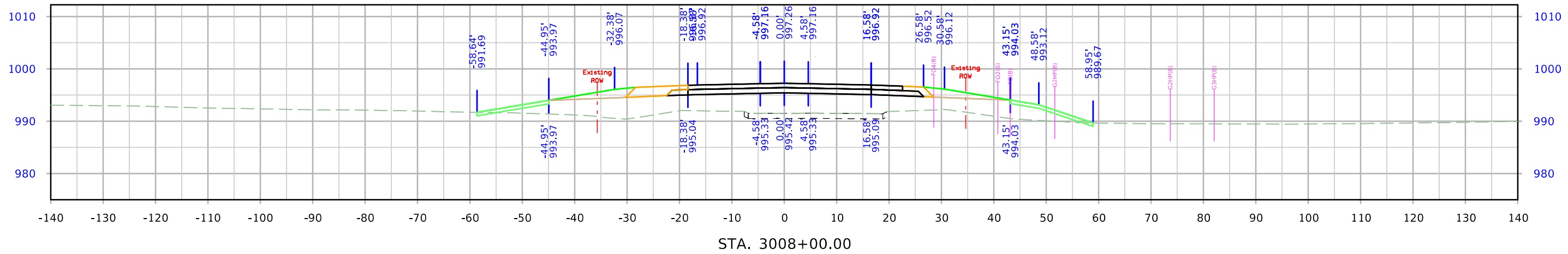
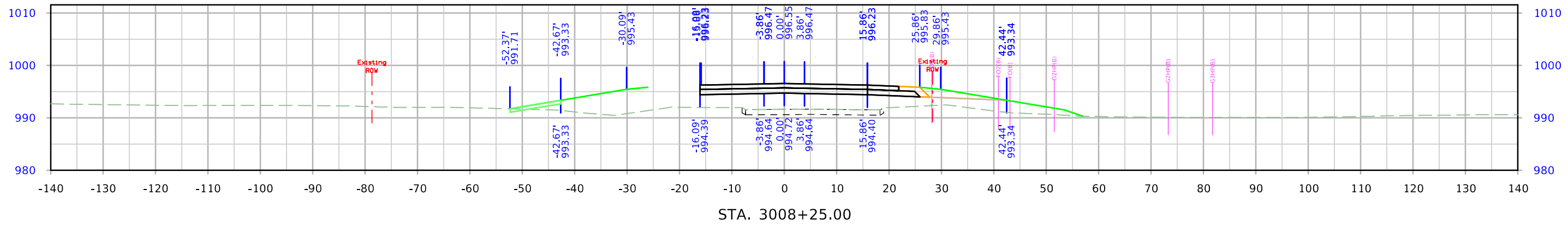
# 610th Ave



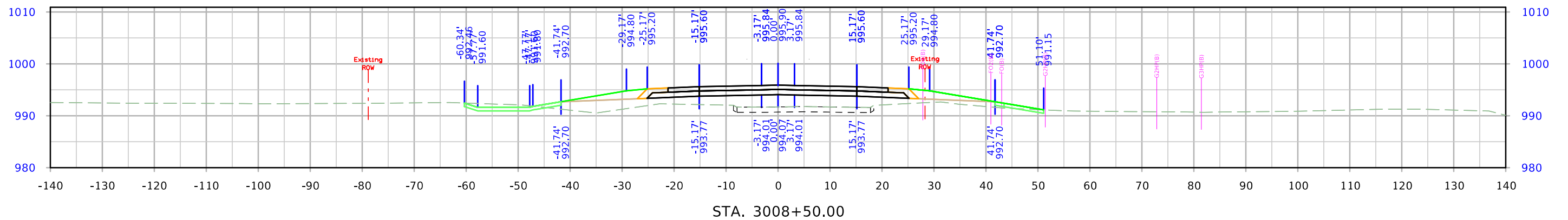
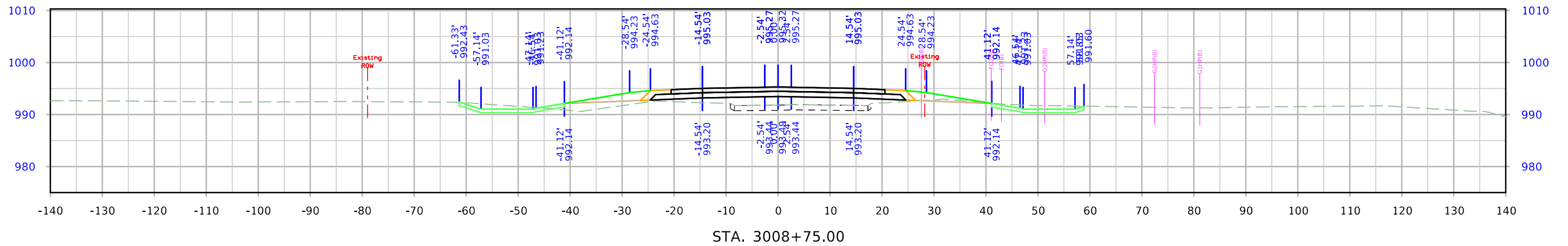
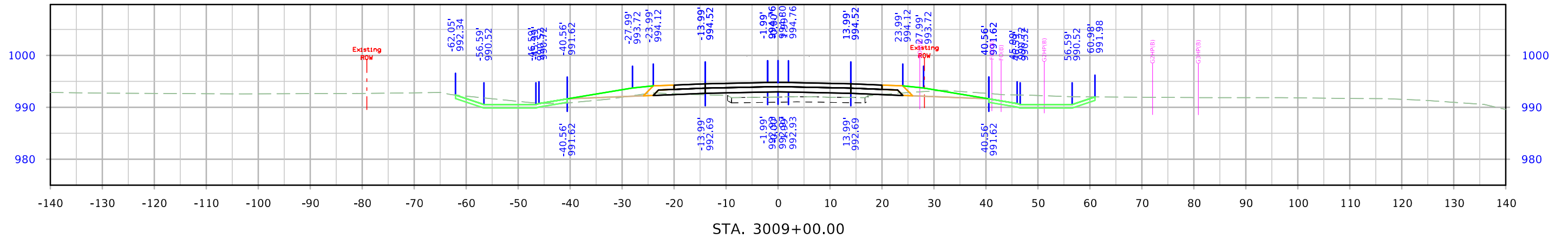
# 610th Ave



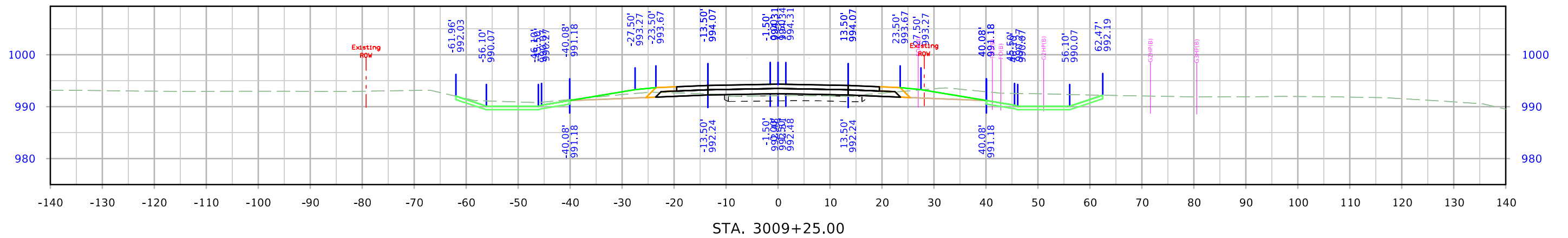
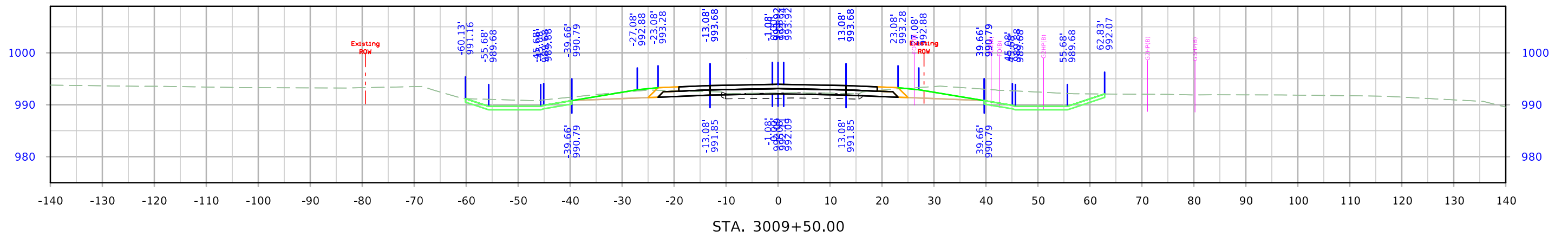
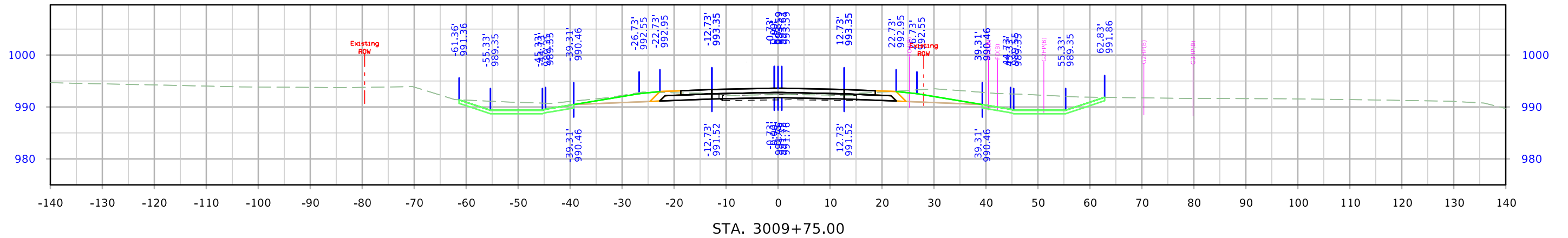
# 610th Ave



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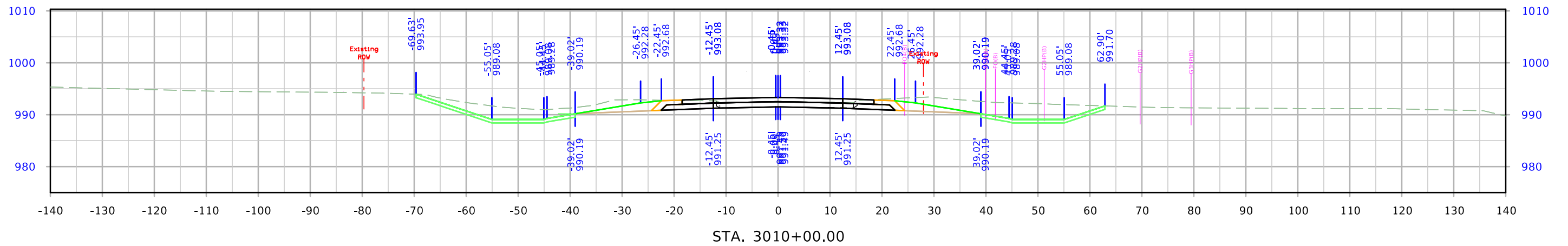
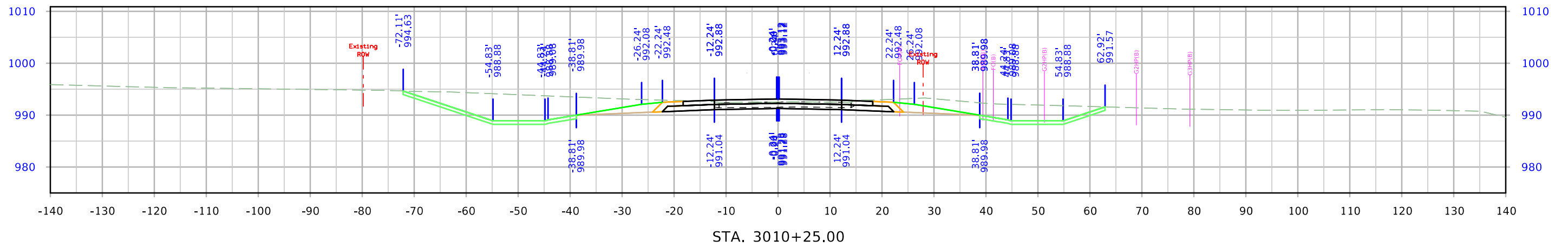
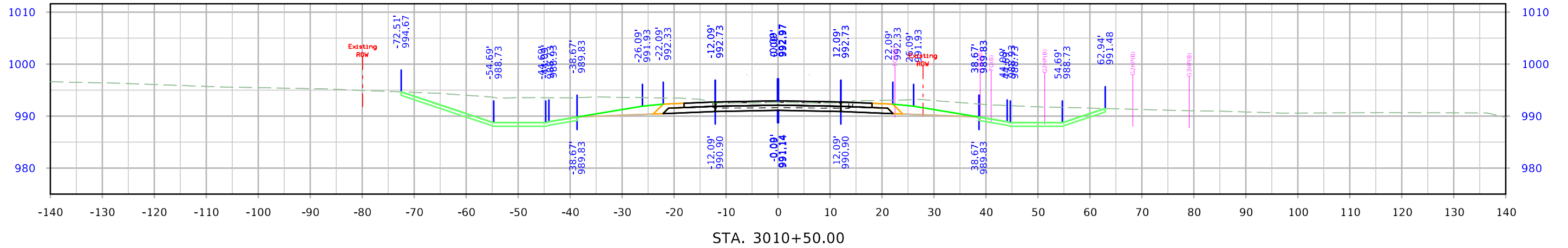


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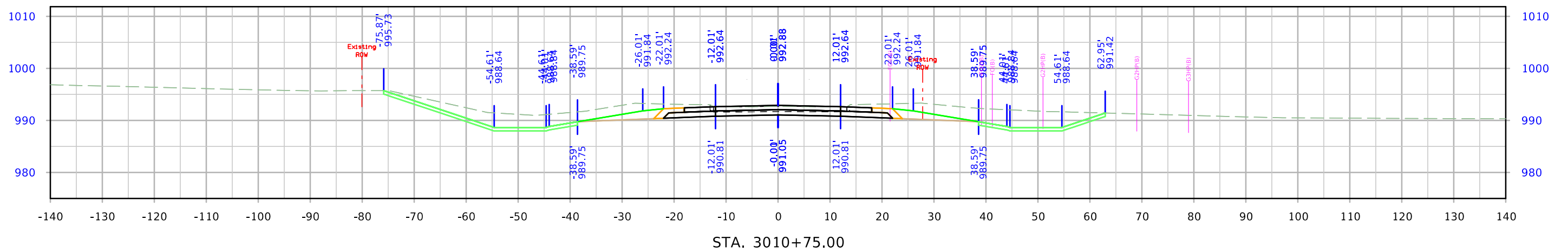
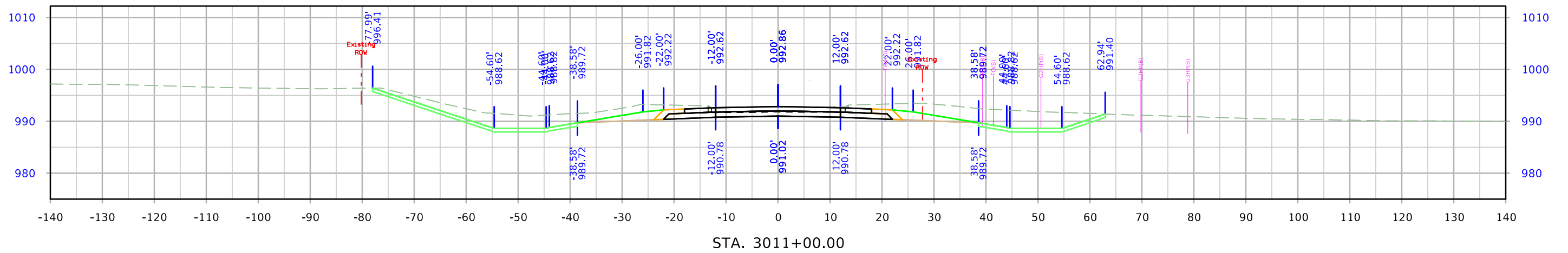
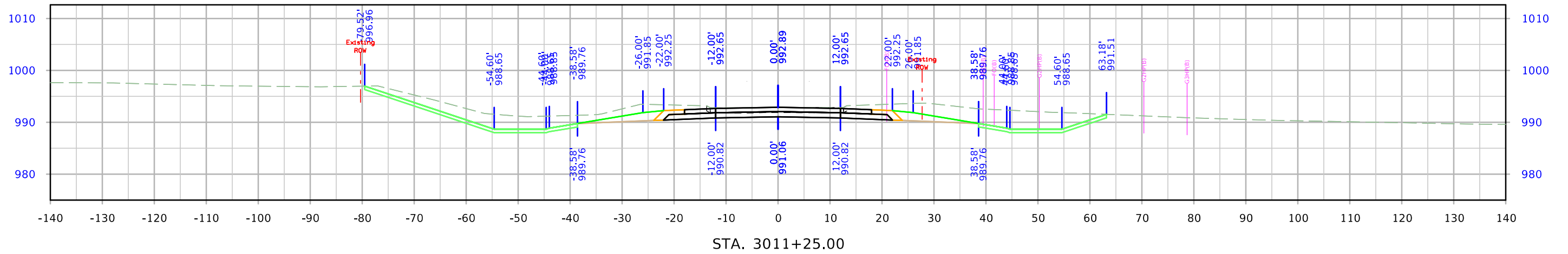




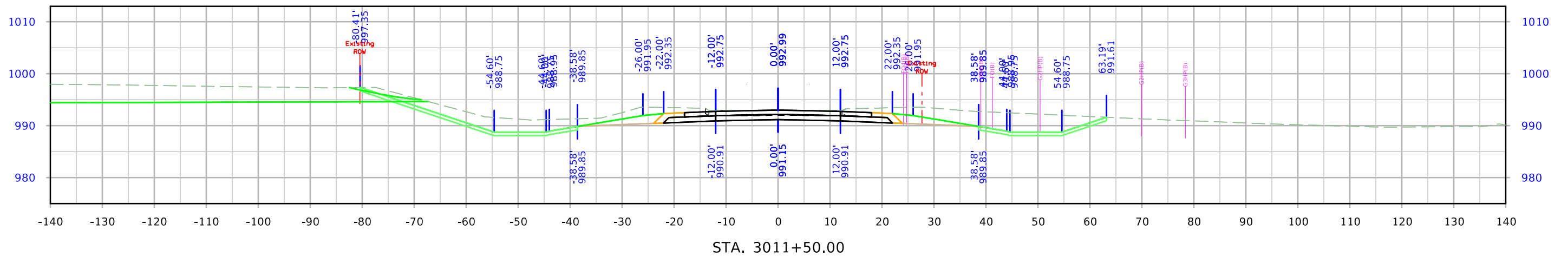
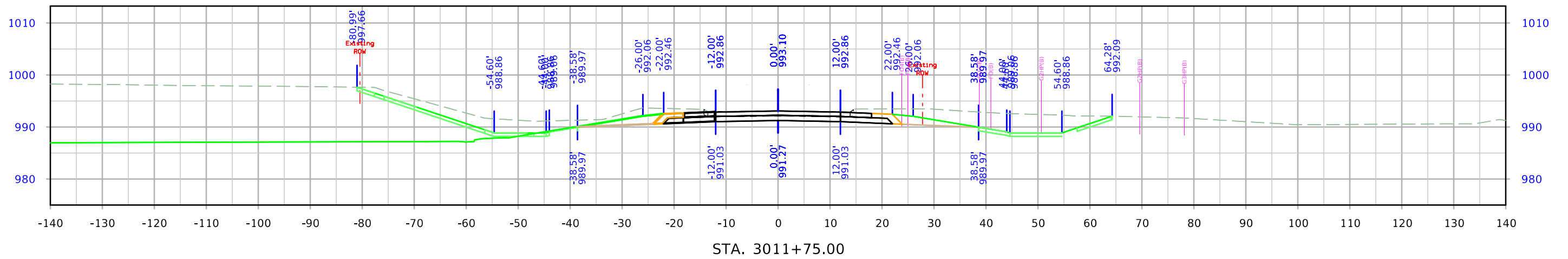
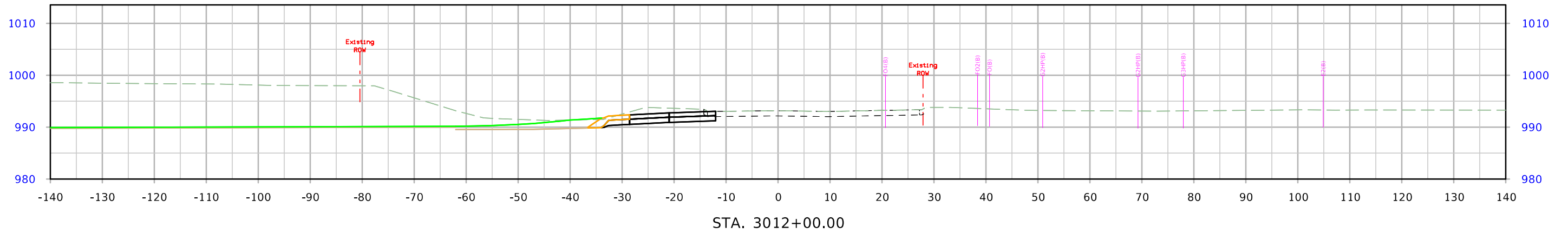
# 610th Ave



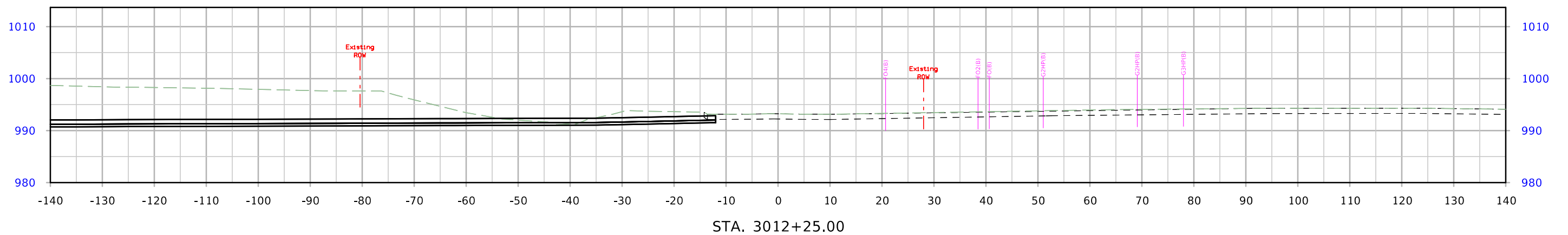
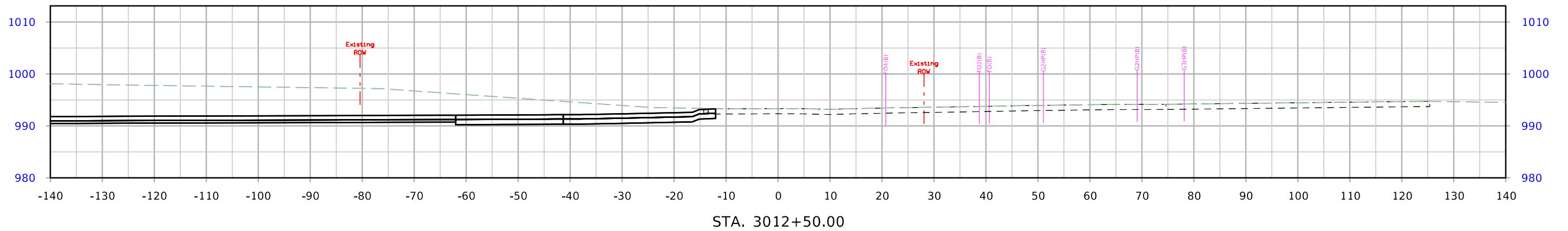
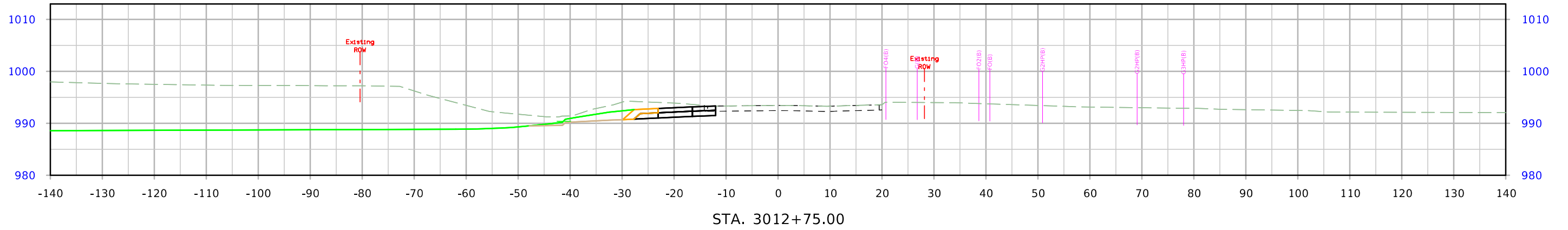
# 610th Ave



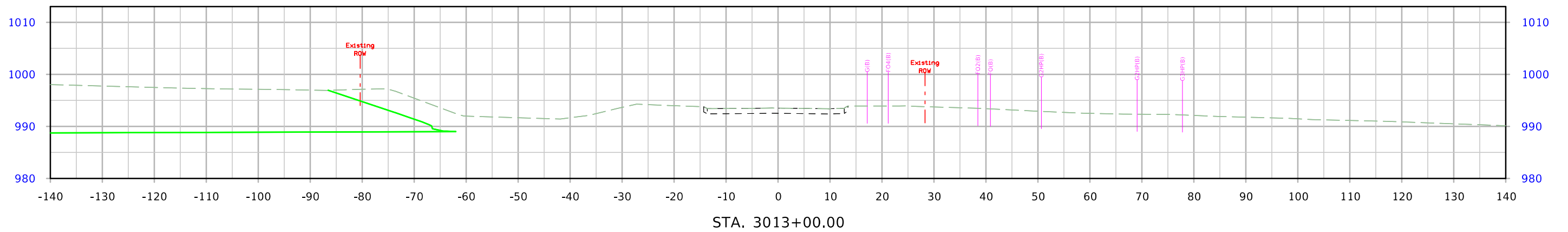
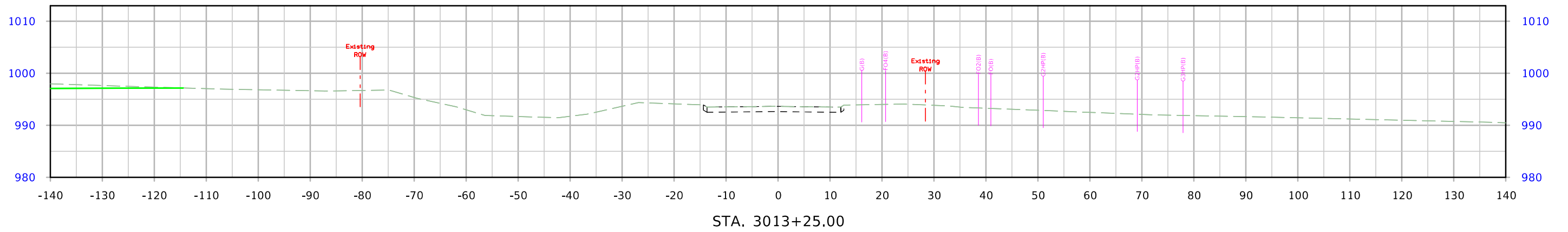
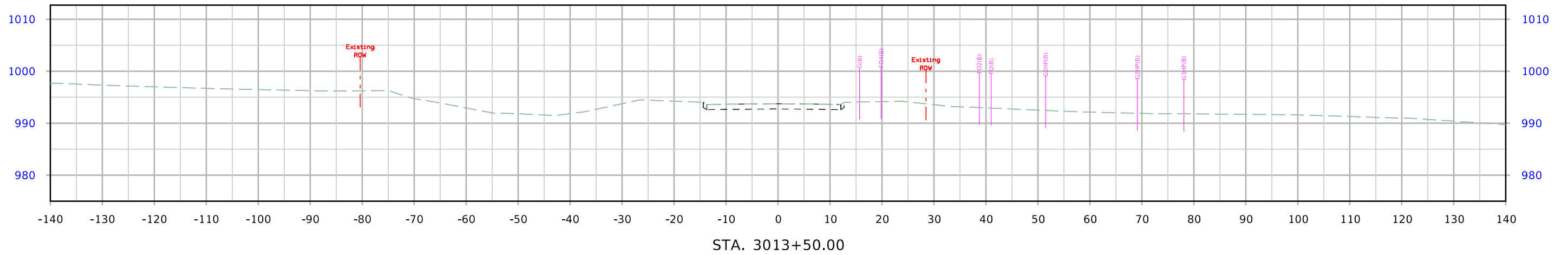
# 610th Ave



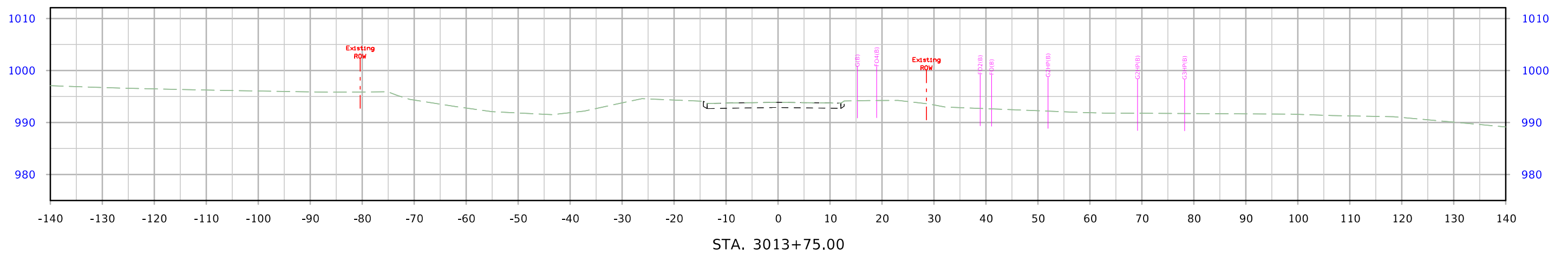
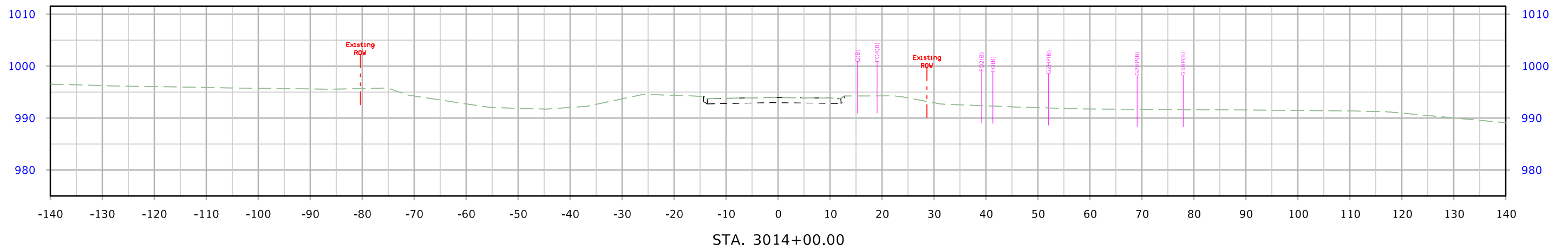
# 610th Ave



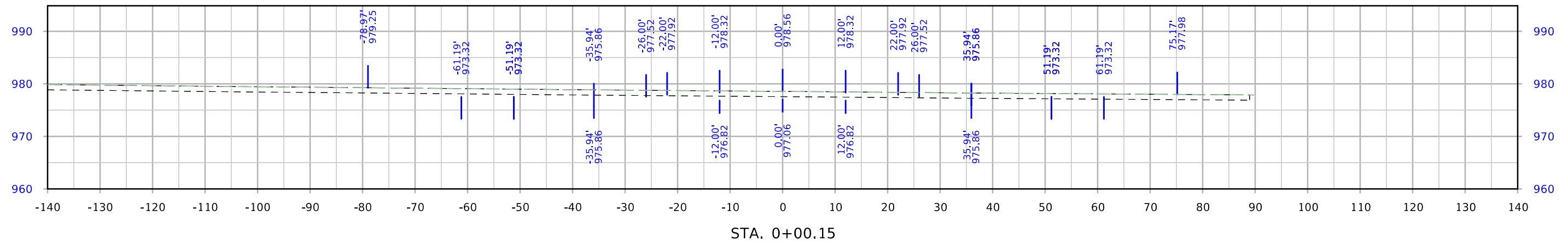
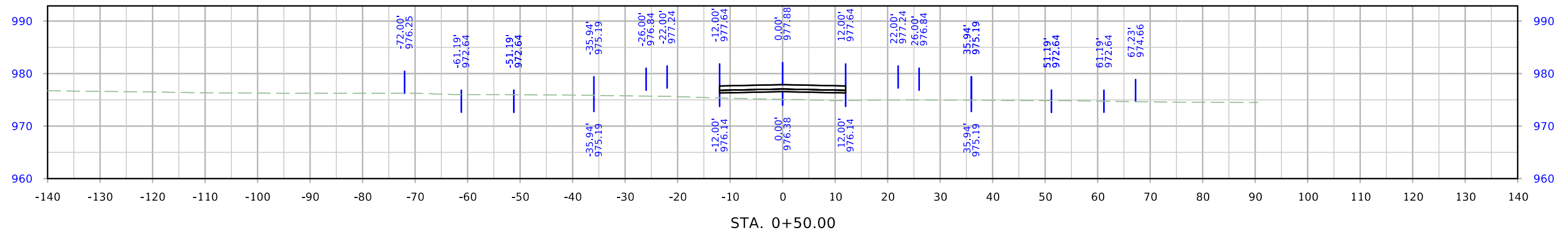
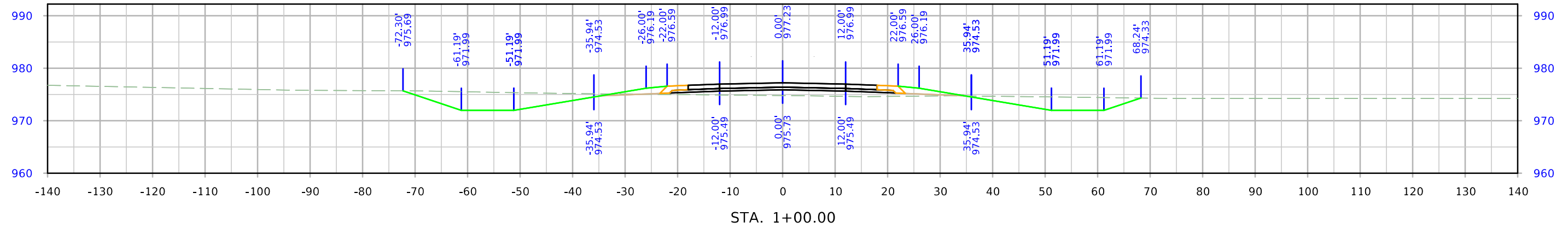
# 610th Ave



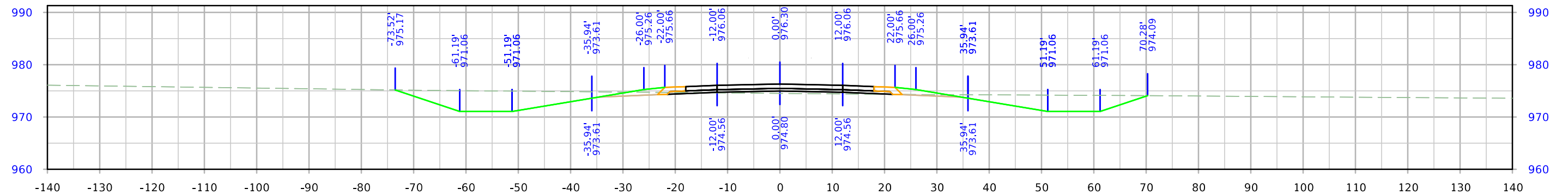
# 610th Ave



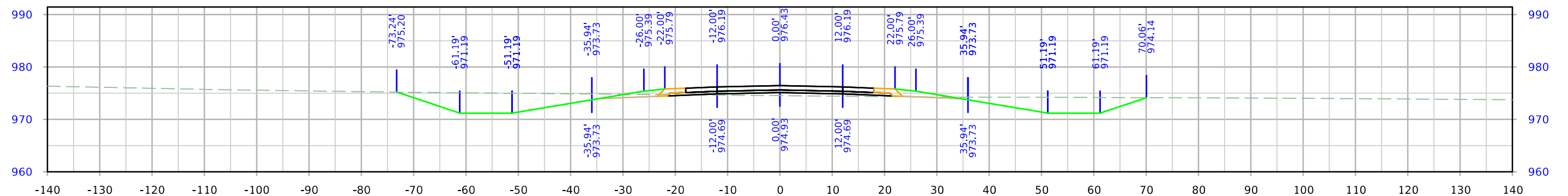
# West A Ave



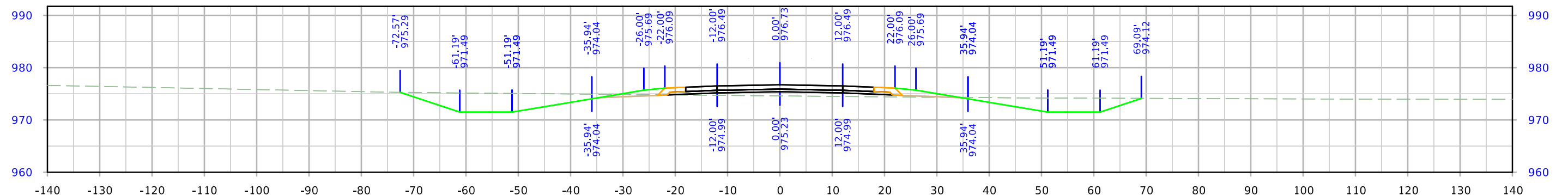
# West A Ave



STA. 2+50.00



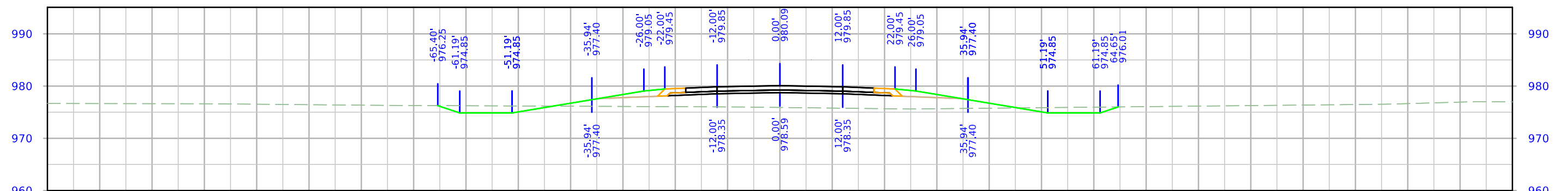
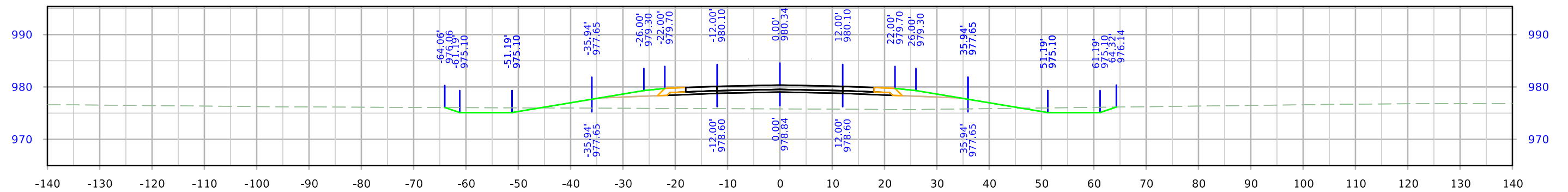
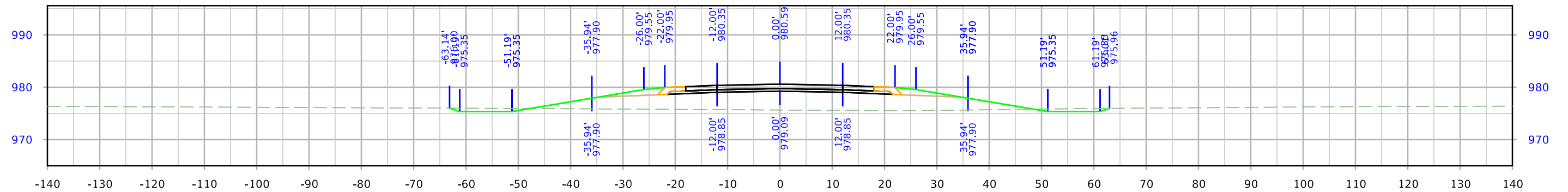
STA. 2+00.00



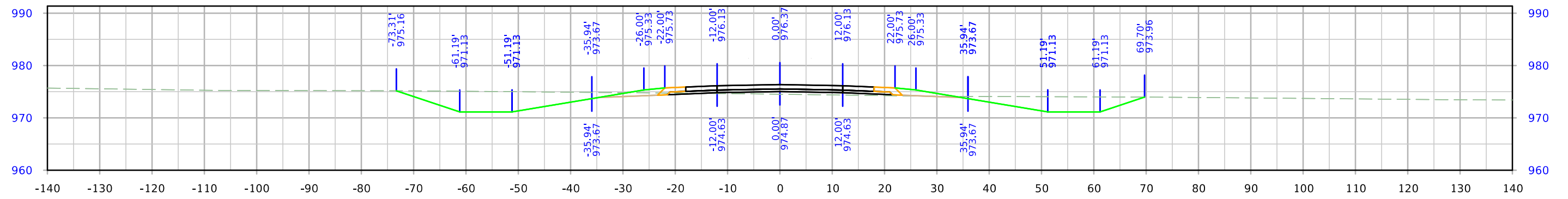
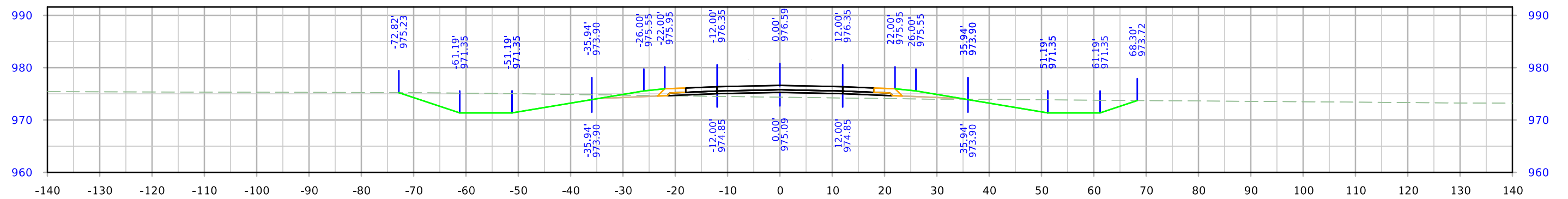
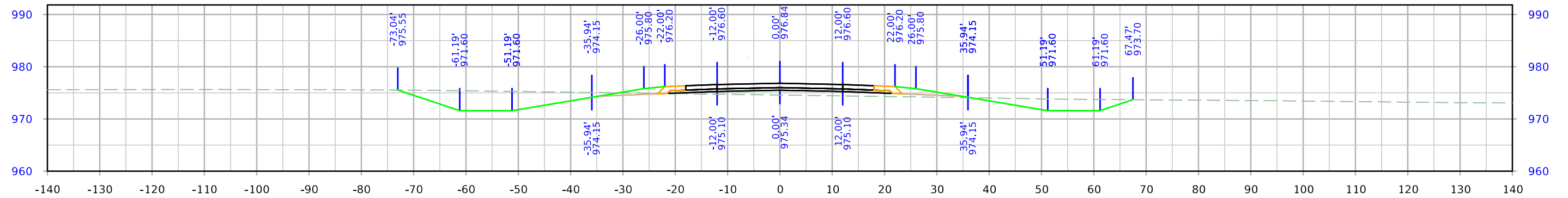
STA. 1+50.00



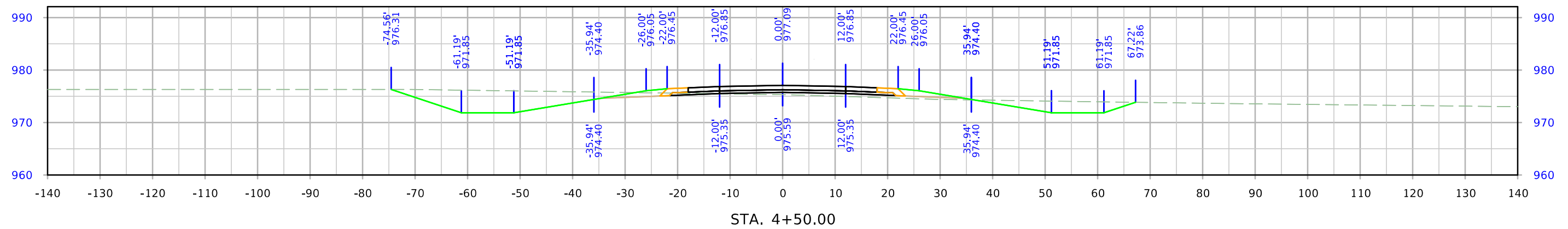
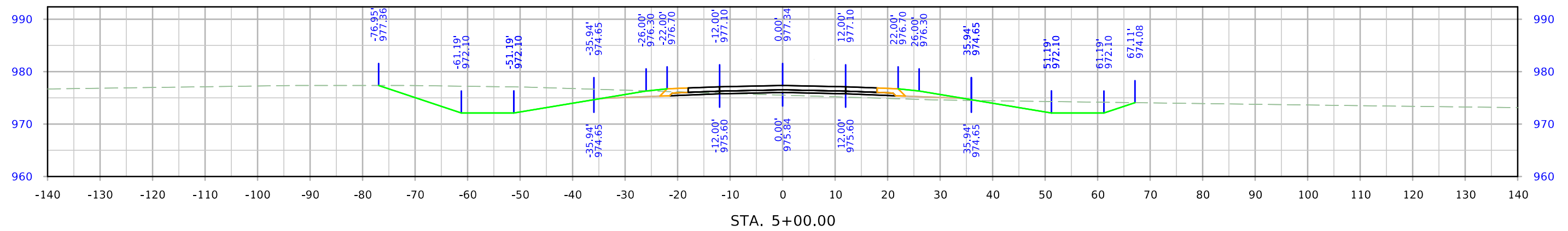
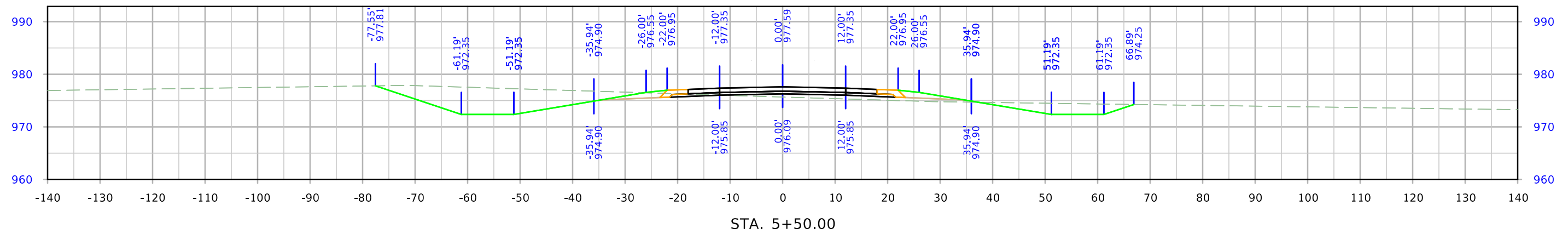
# West A Ave



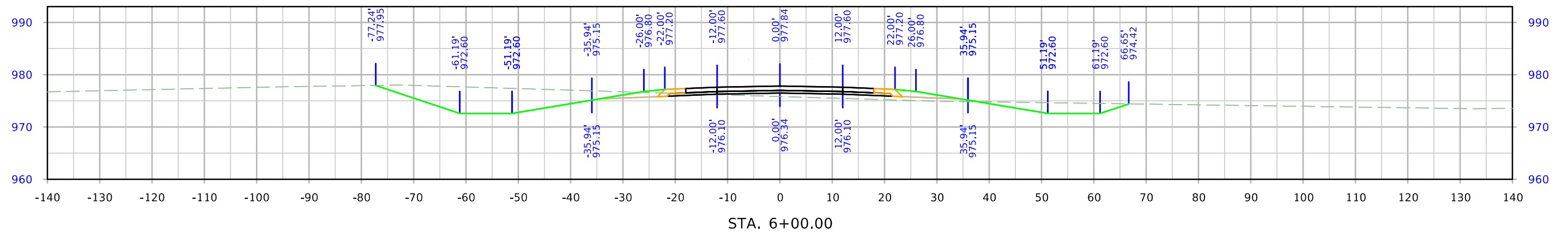
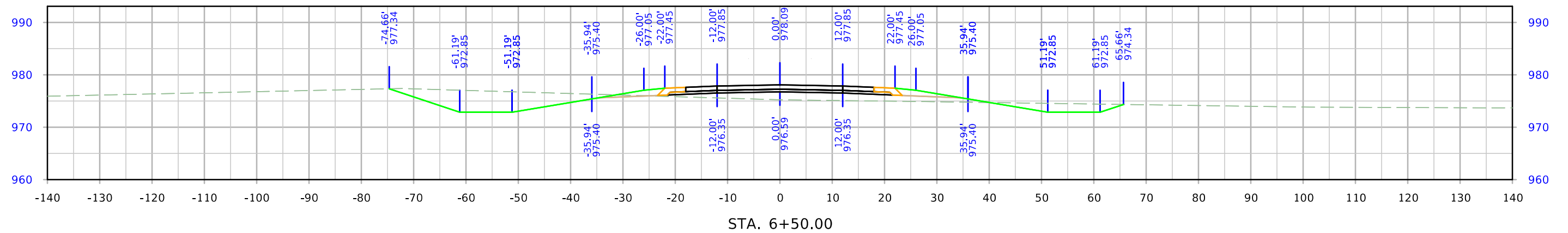
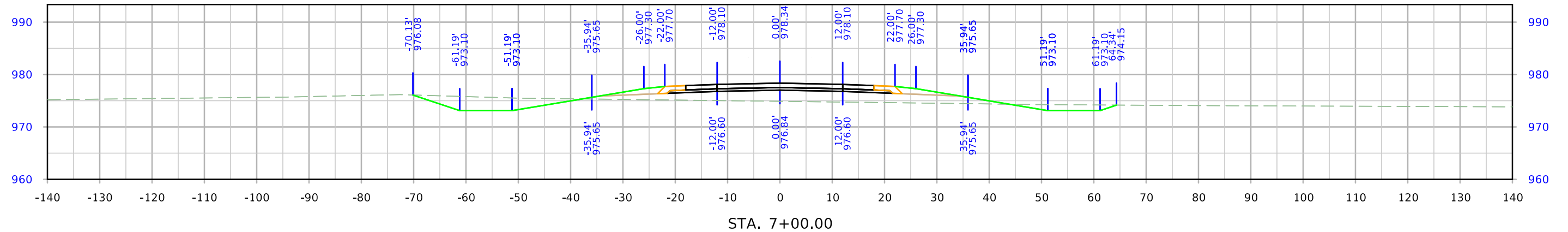
# West A Ave



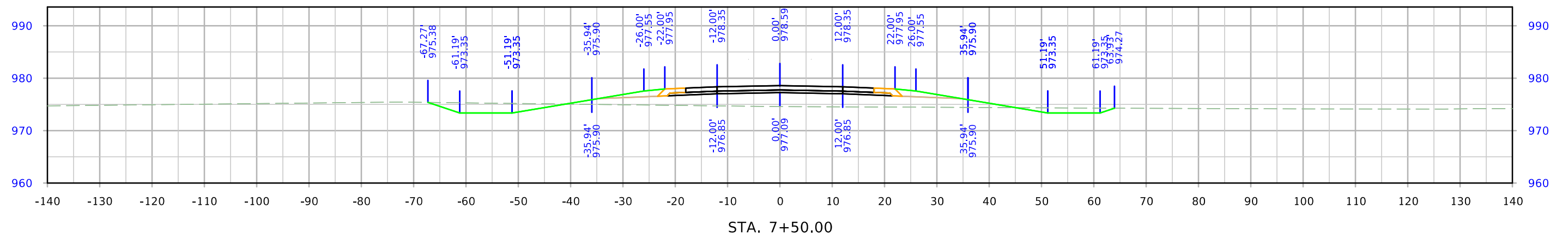
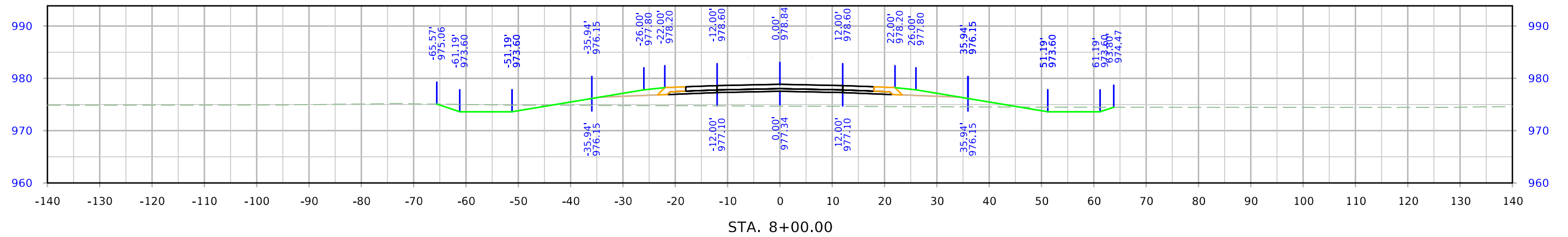
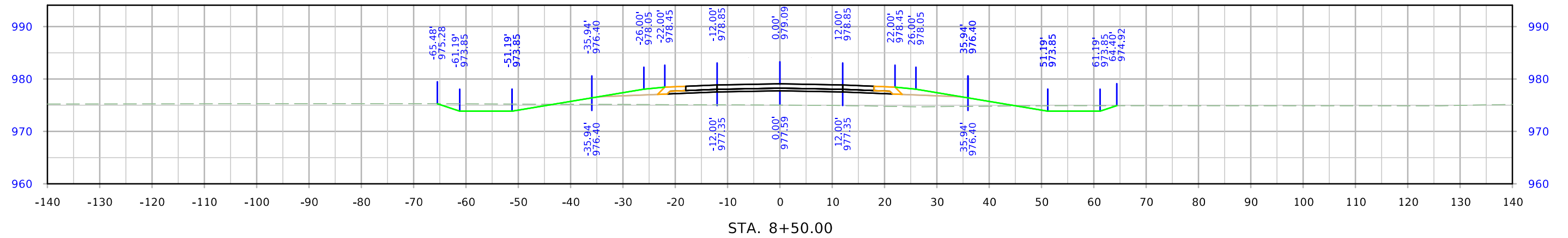
# West A Ave



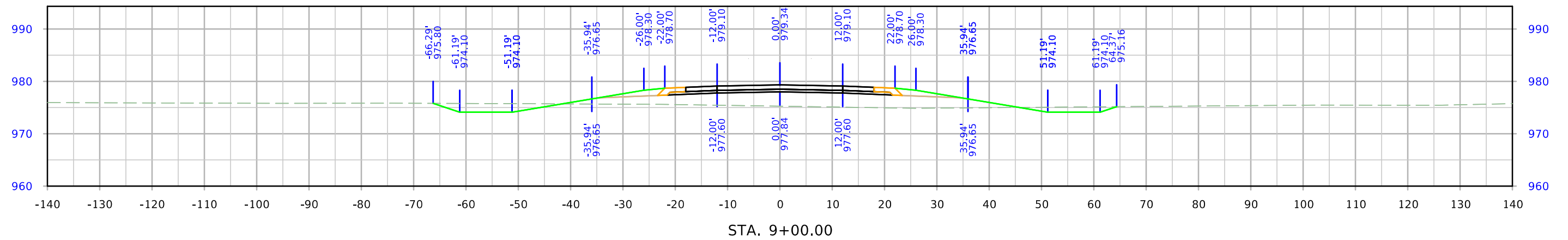
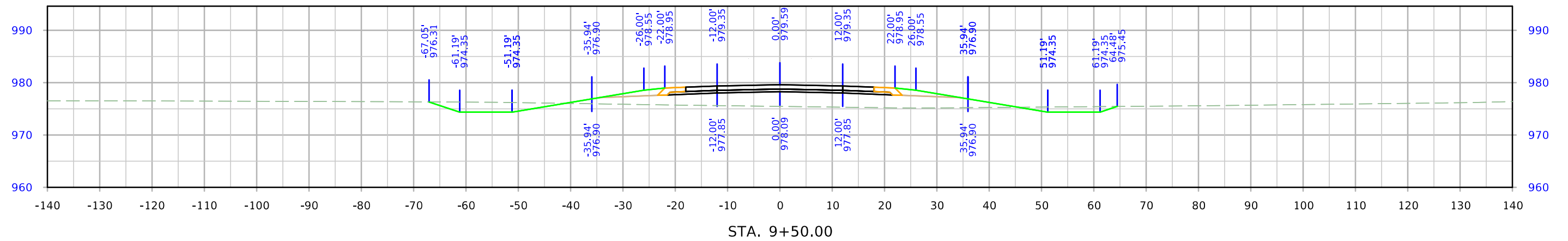
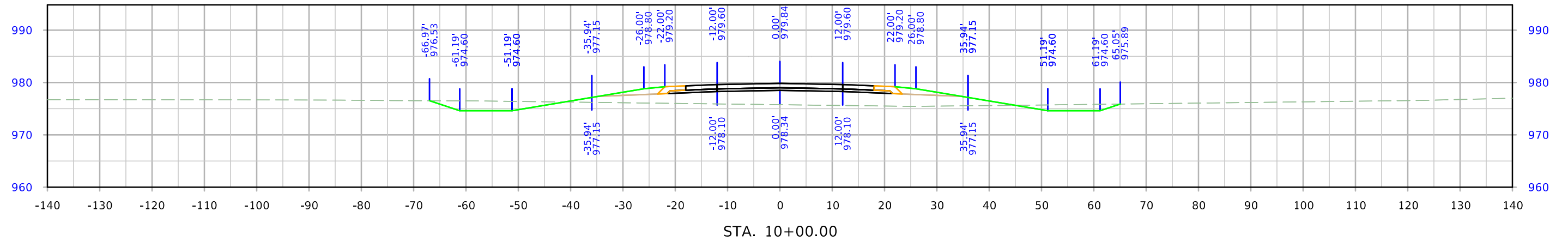
# West A Ave



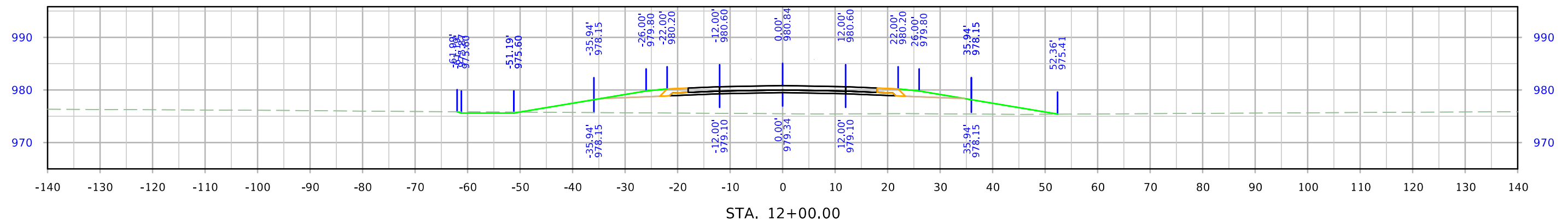
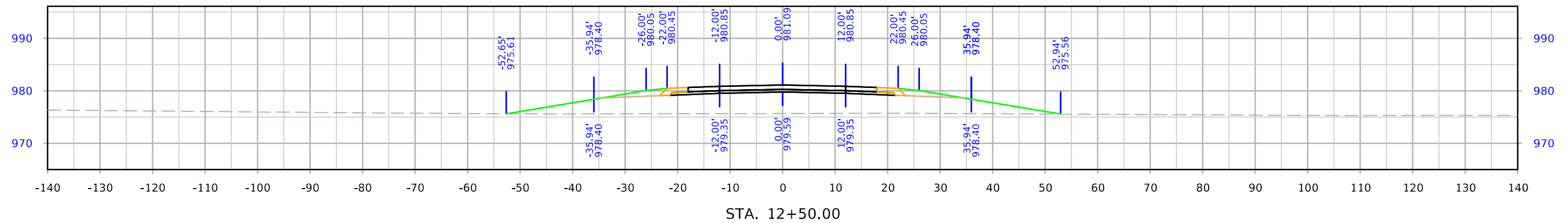
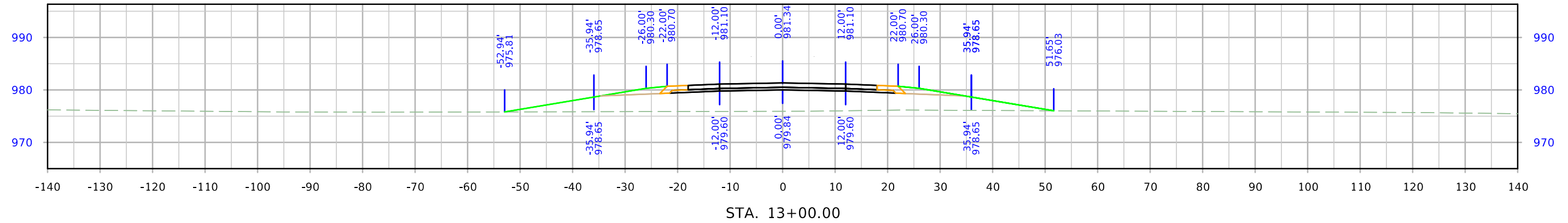
# West A Ave



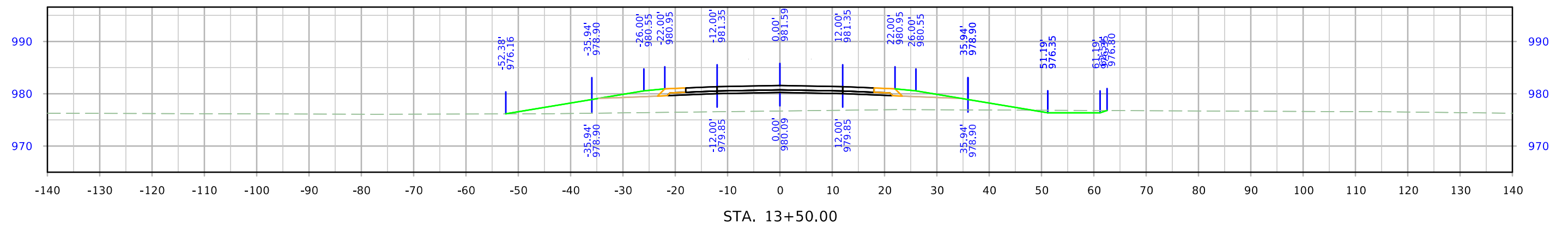
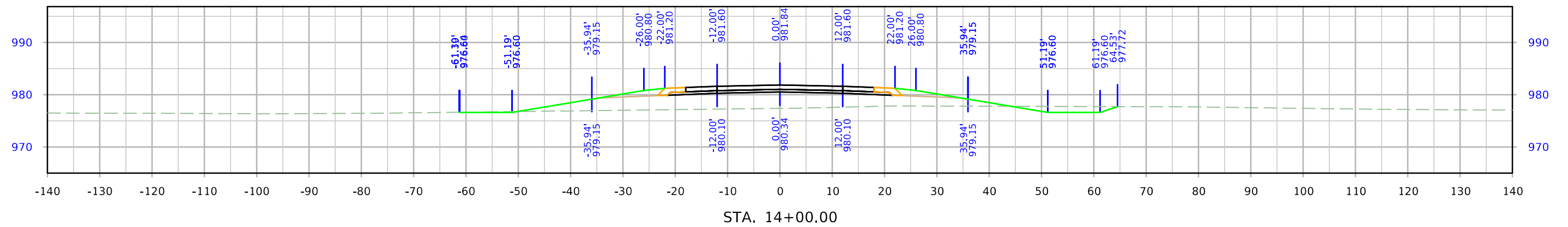
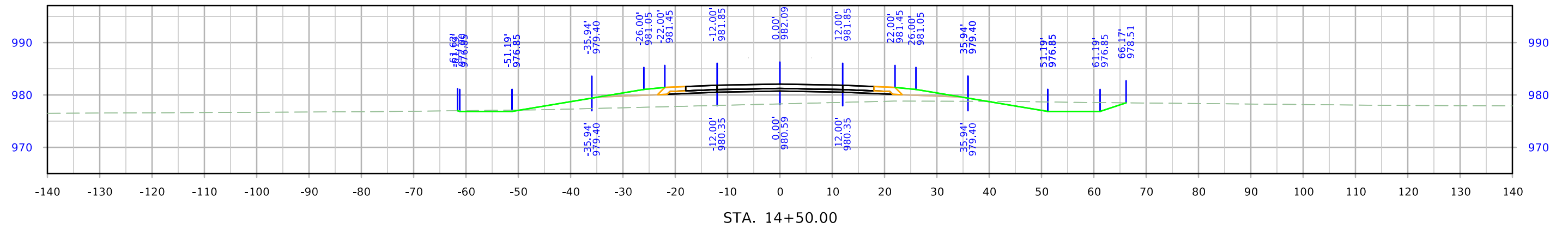
# West A Ave



# West A Ave

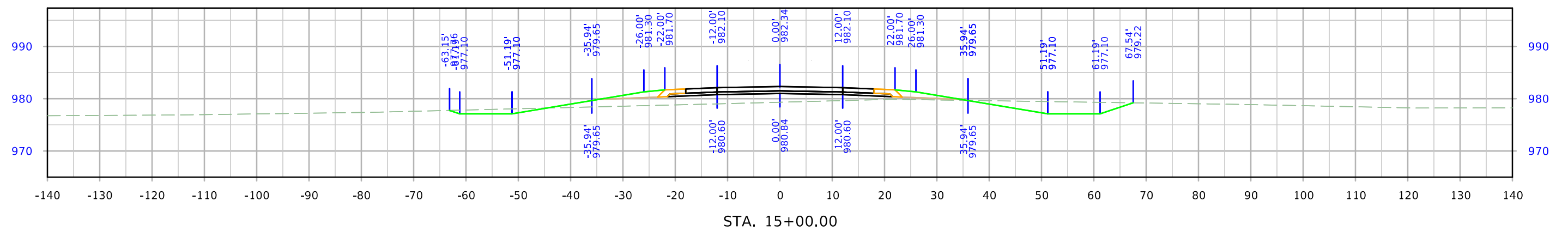
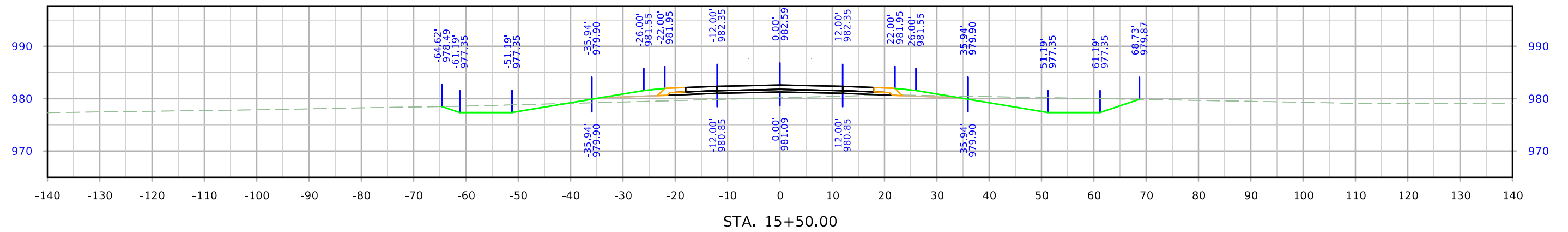
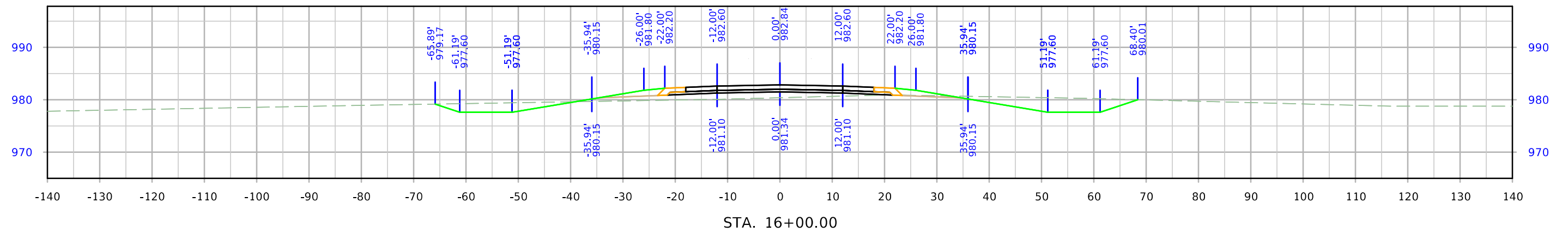


# West A Ave

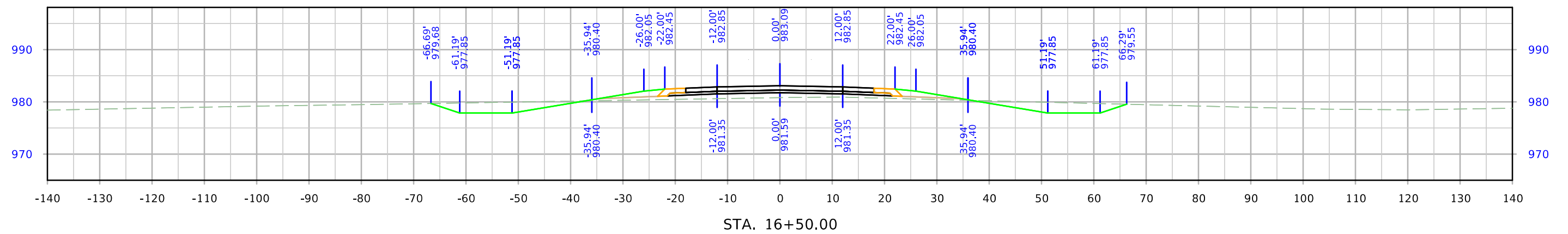
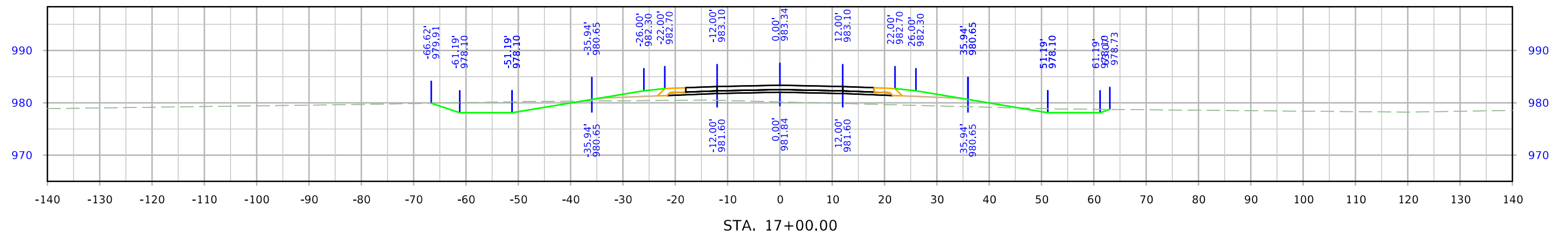
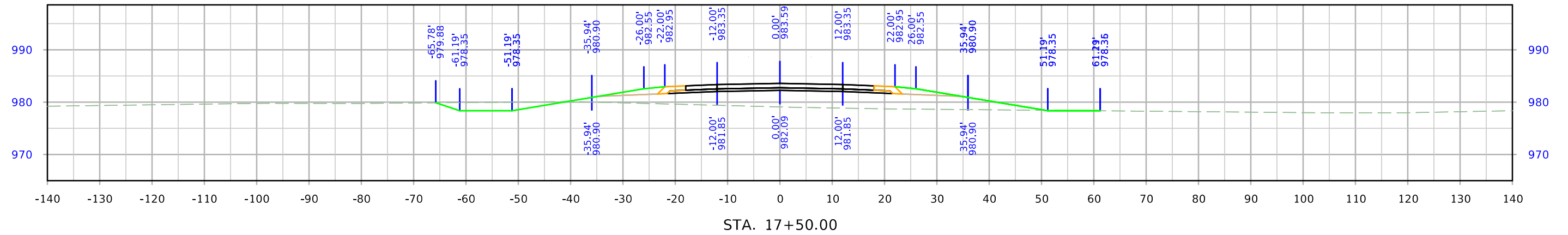




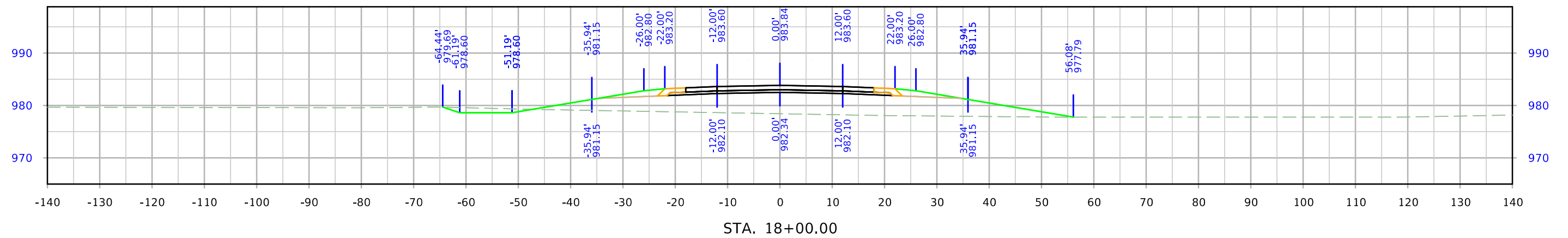
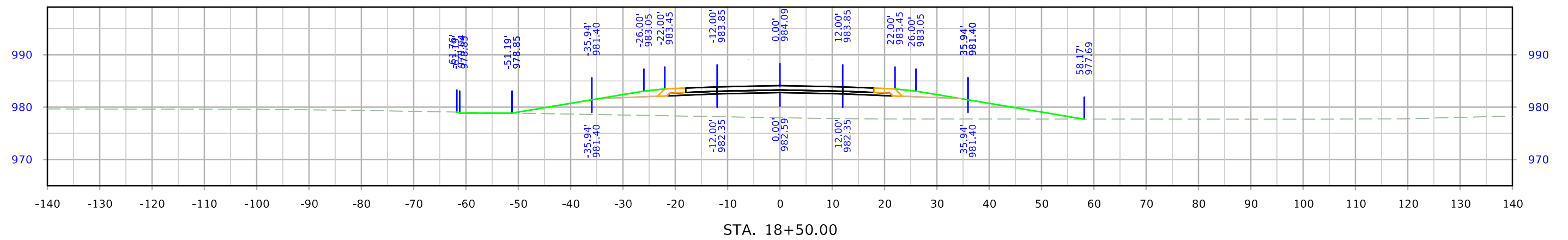
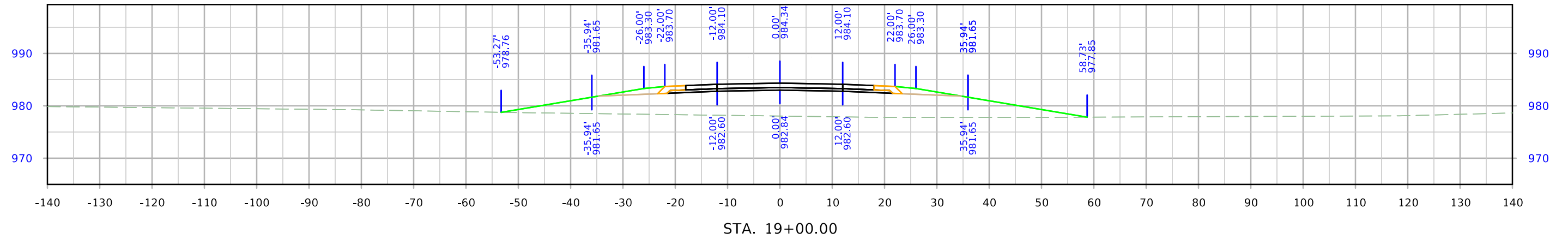
# West A Ave



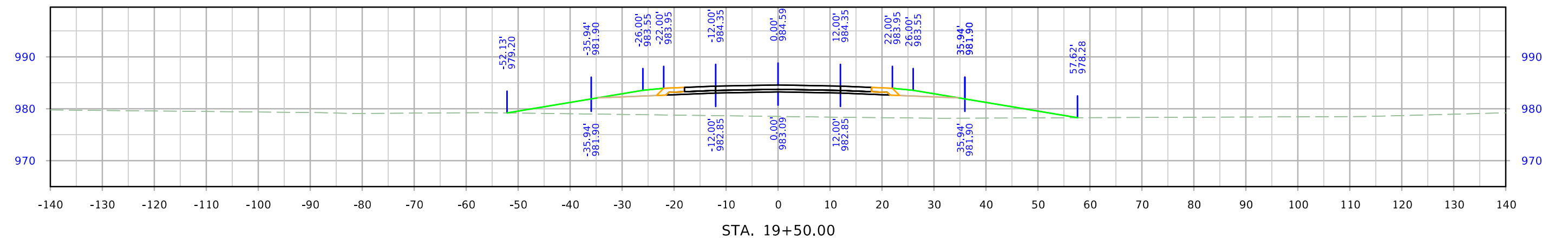
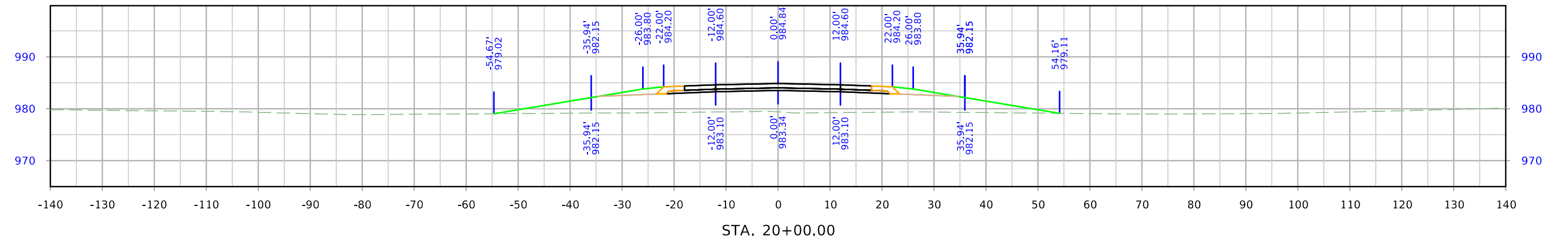
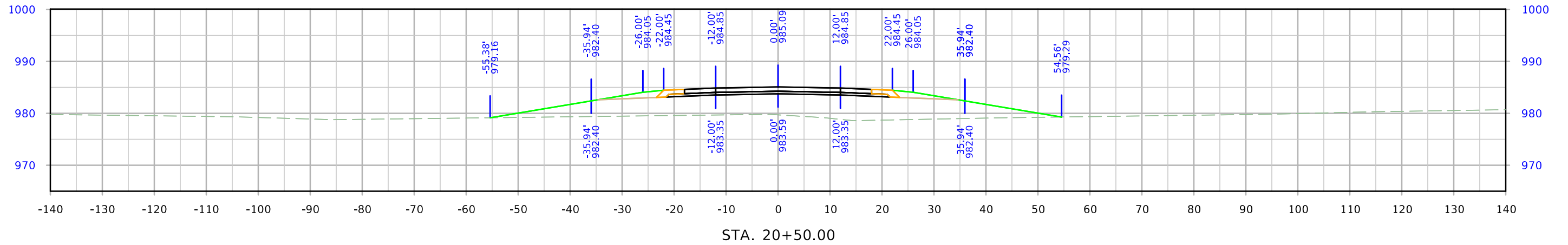
# West A Ave



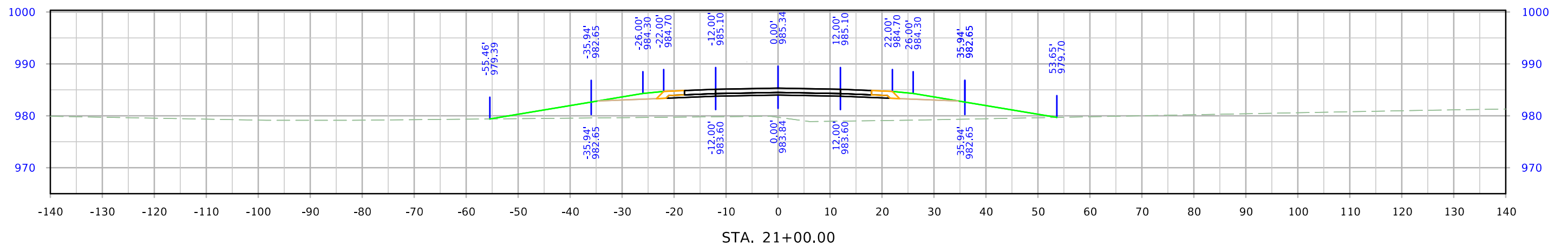
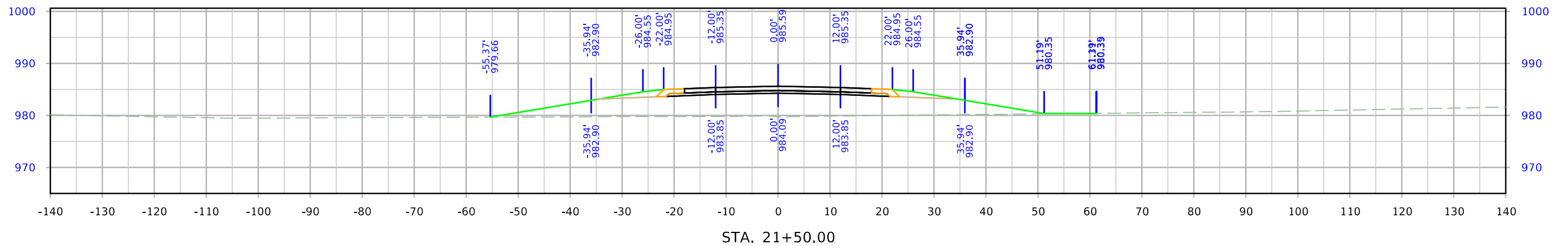
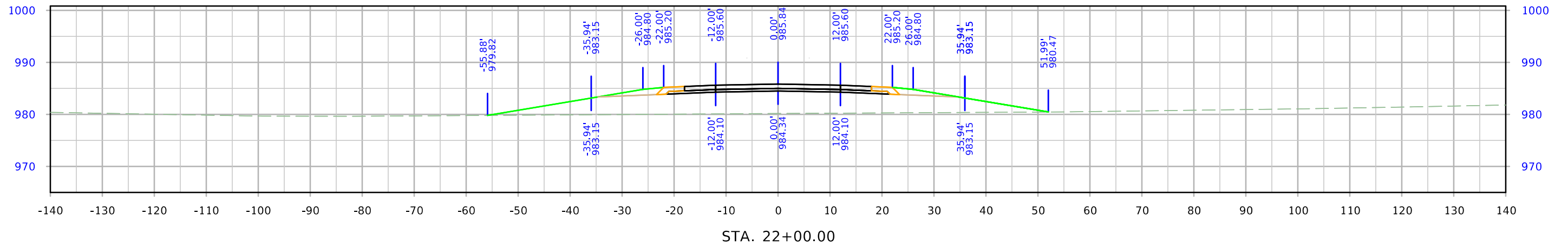
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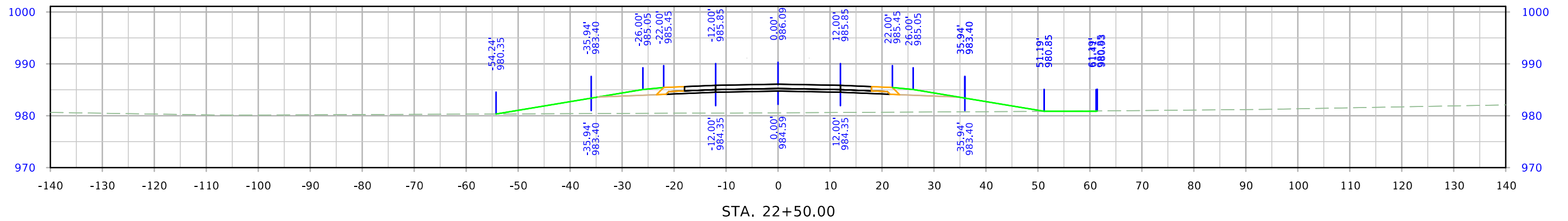
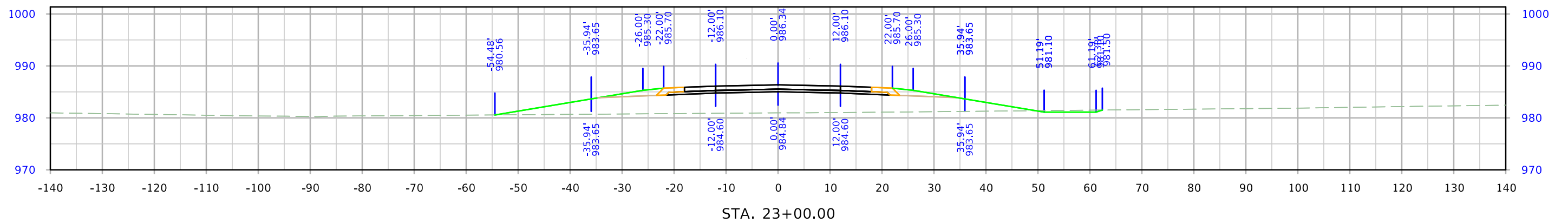
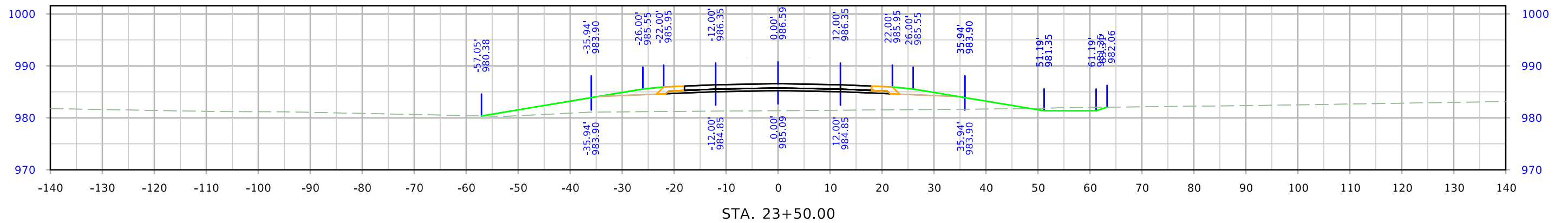
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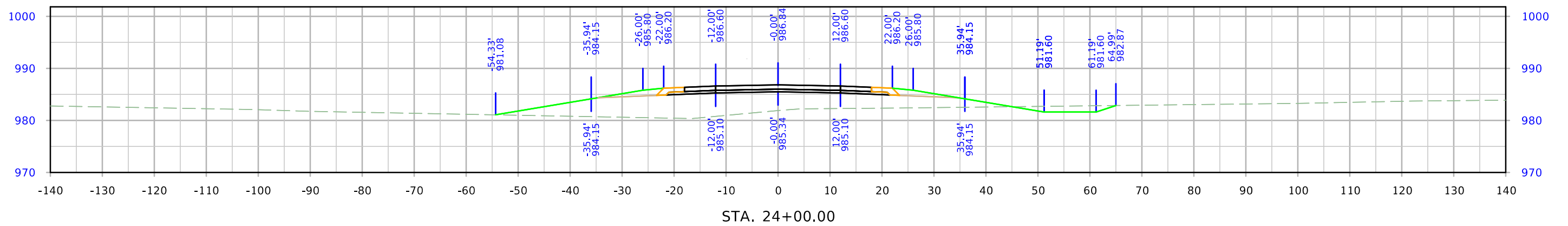
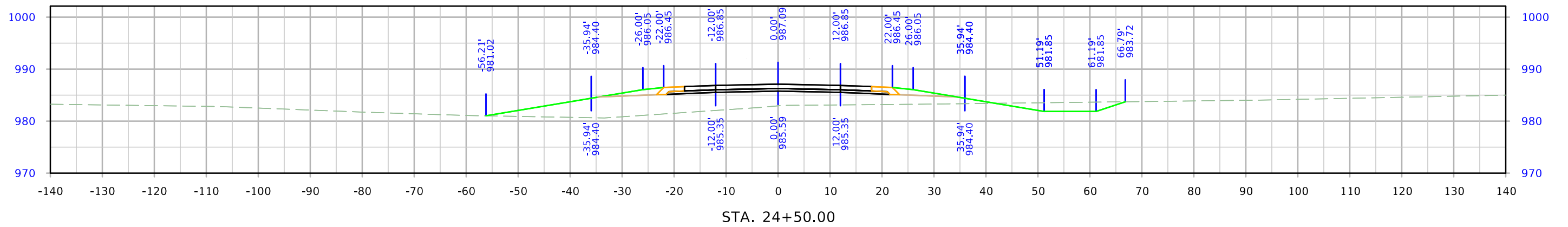
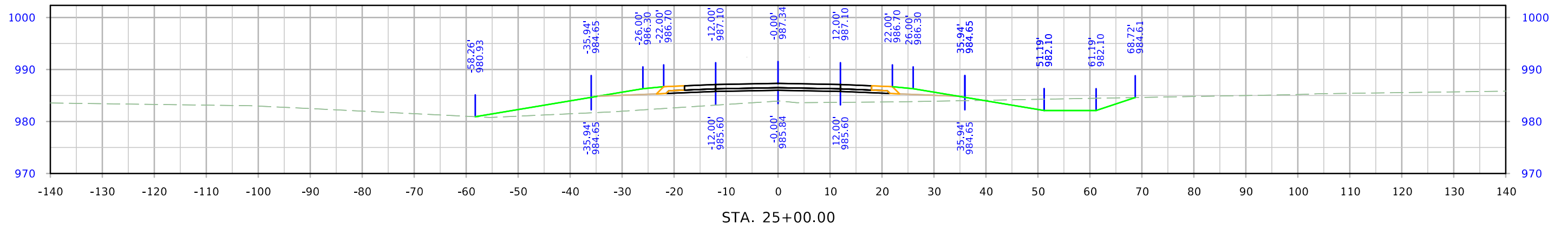
# West A Ave



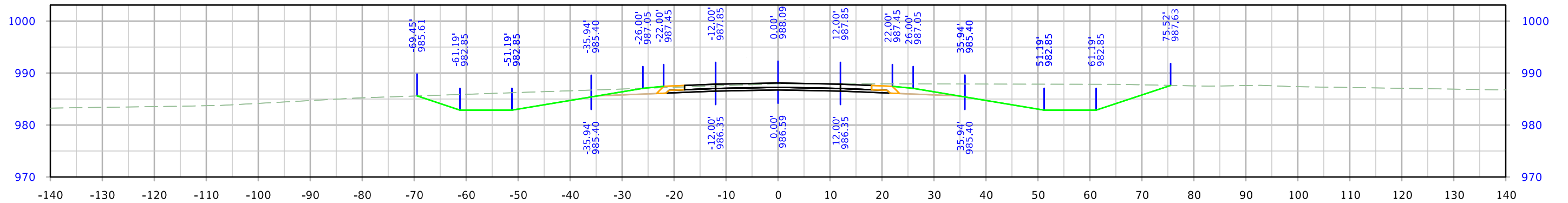
# West A Ave



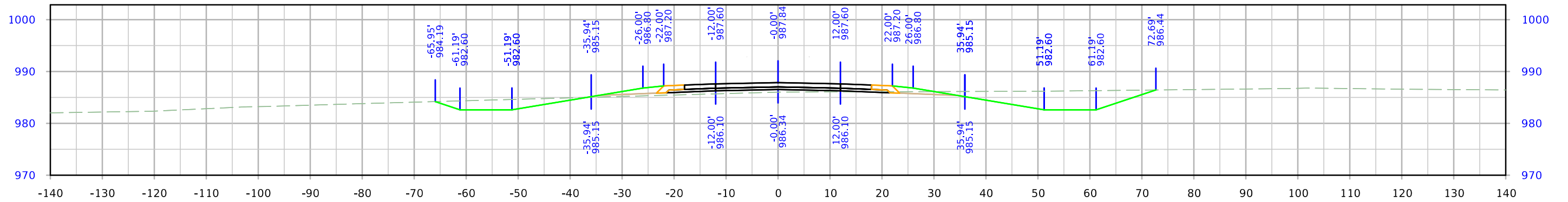
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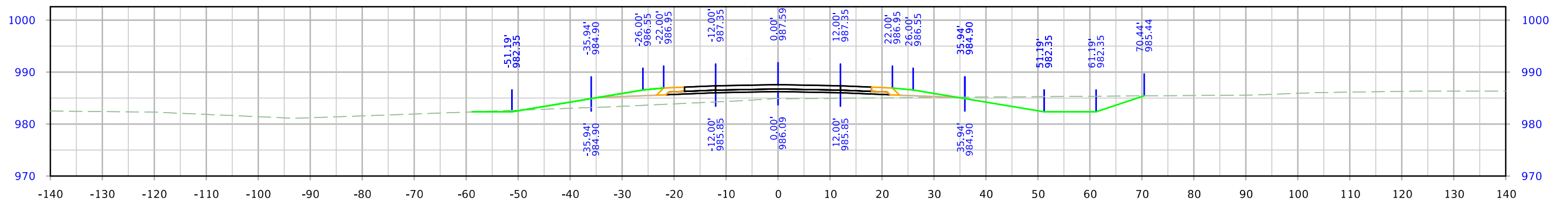
# West A Ave



STA. 26+50.00



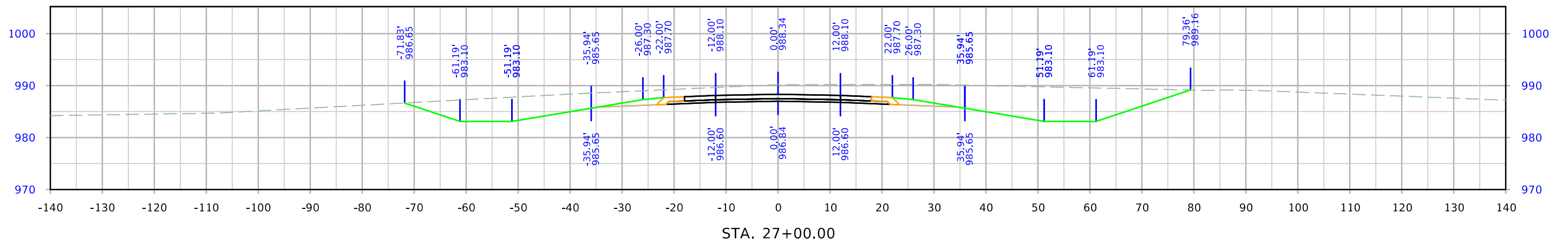
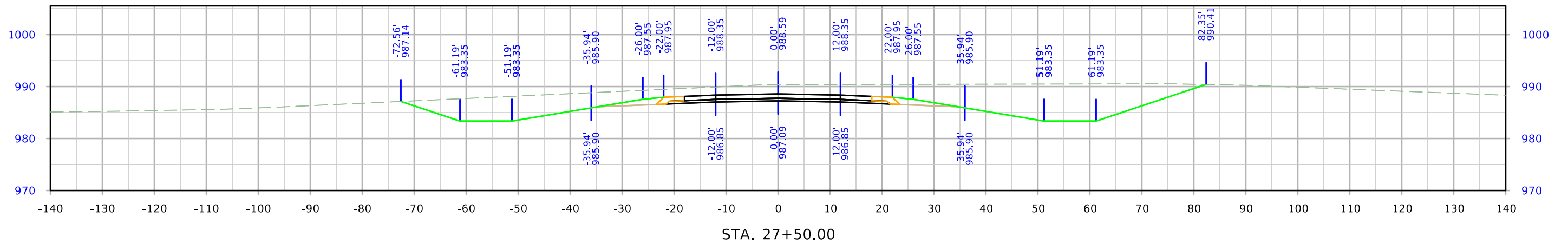
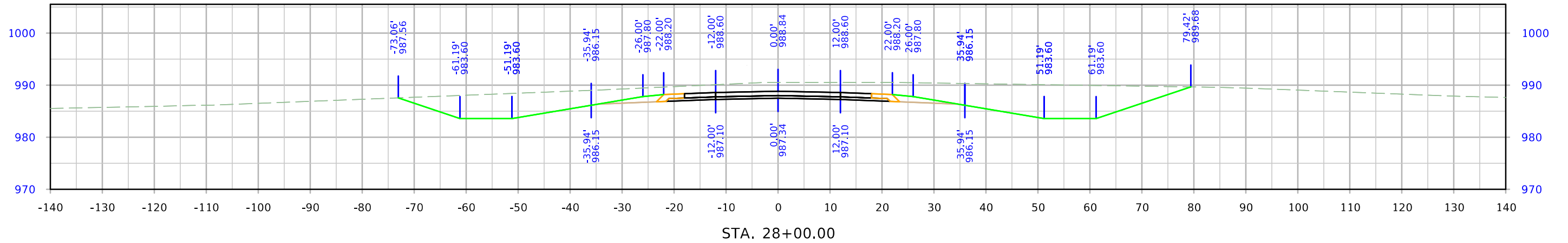
STA. 26+00.00



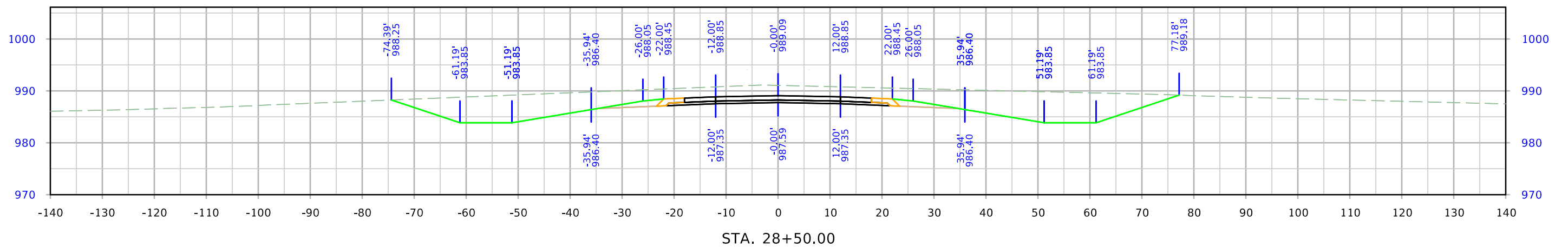
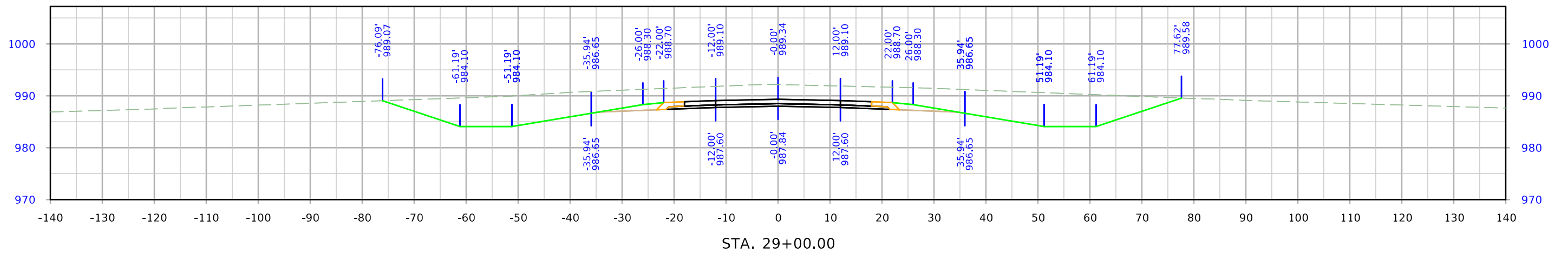
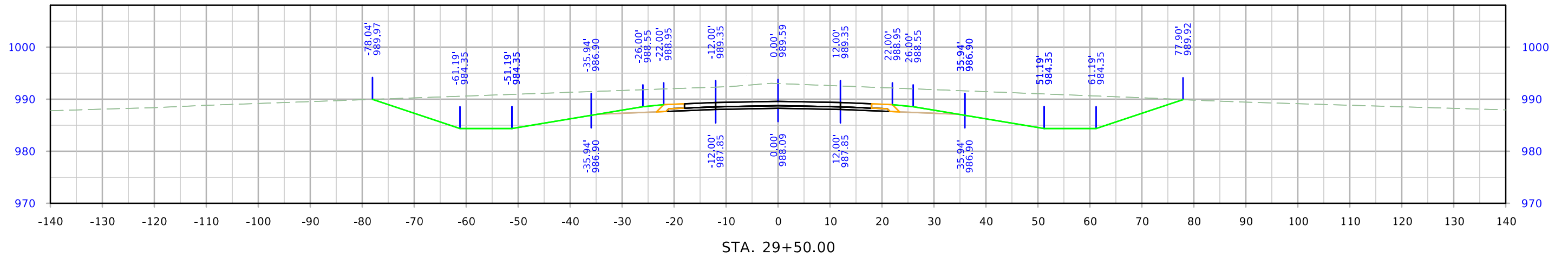
STA. 25+50.00



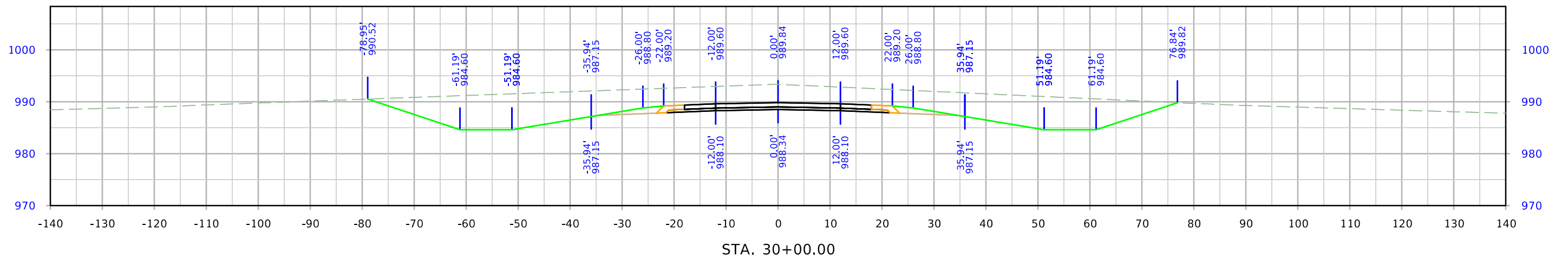
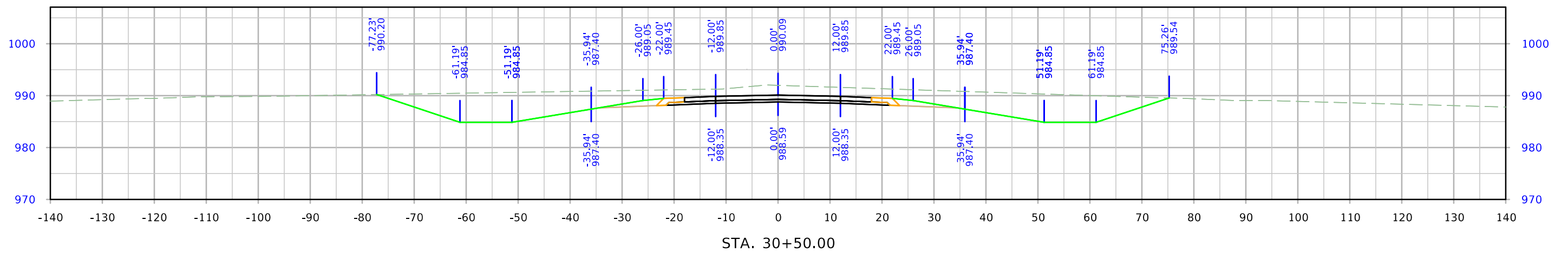
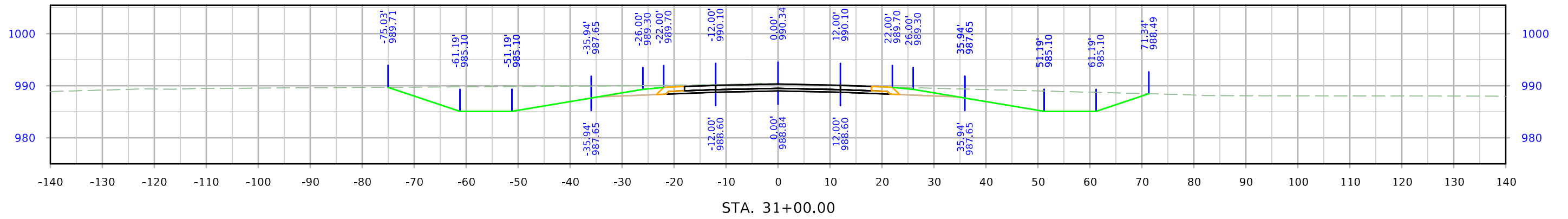
# West A Ave



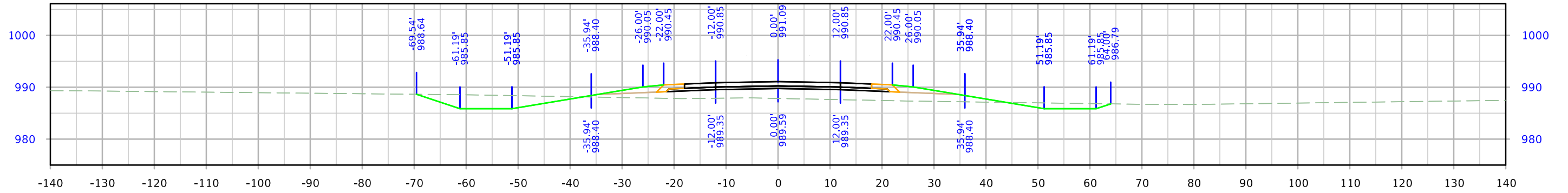
# West A Ave



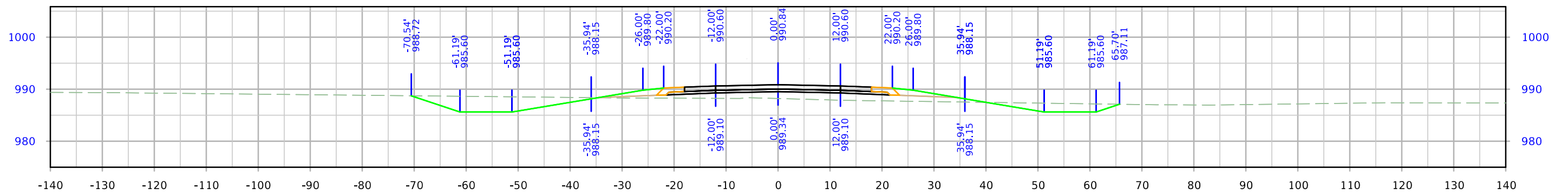
# West A Ave



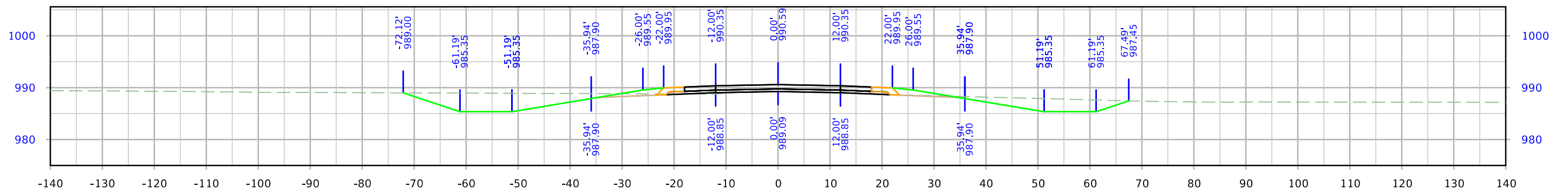
# West A Ave



STA. 32+50.00

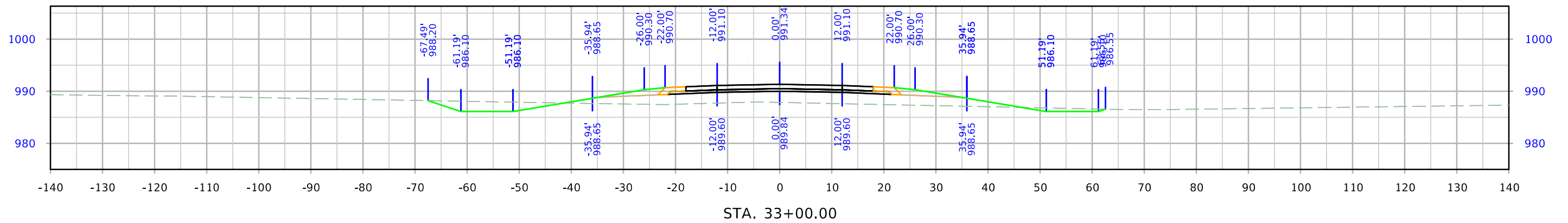
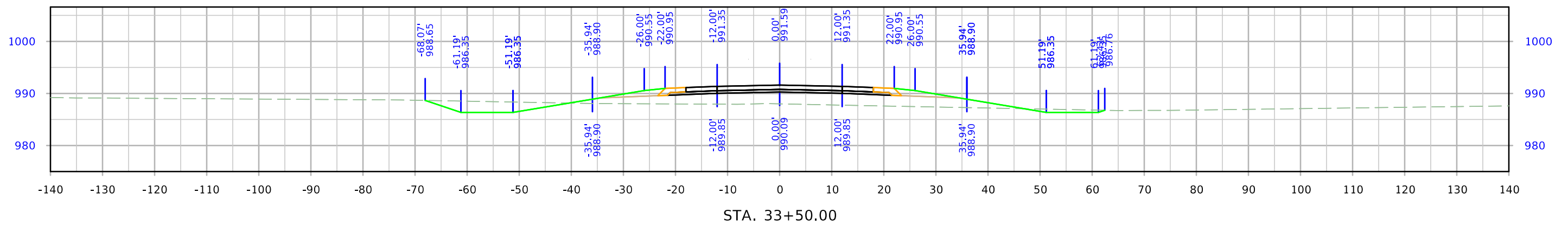
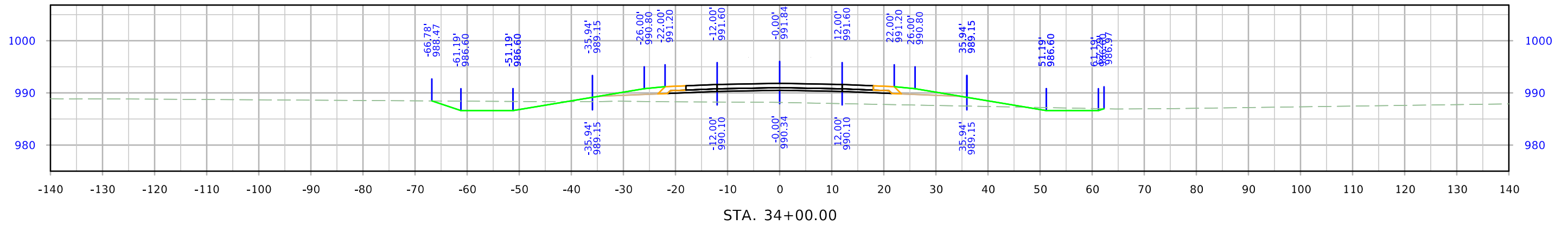


STA. 32+00.00

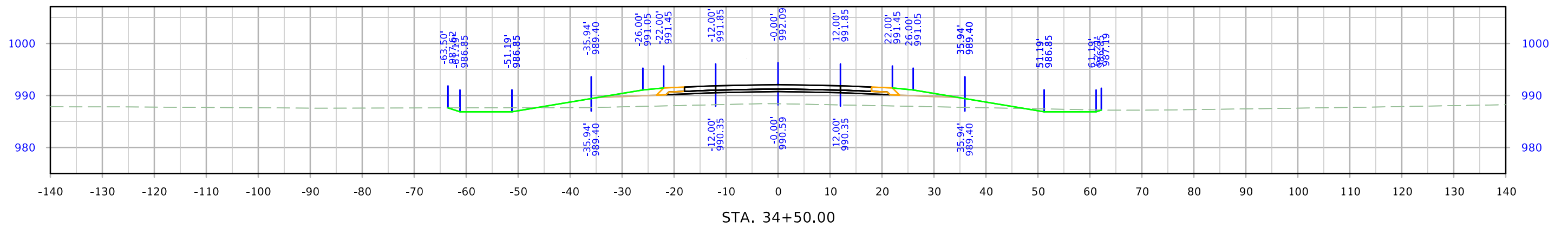
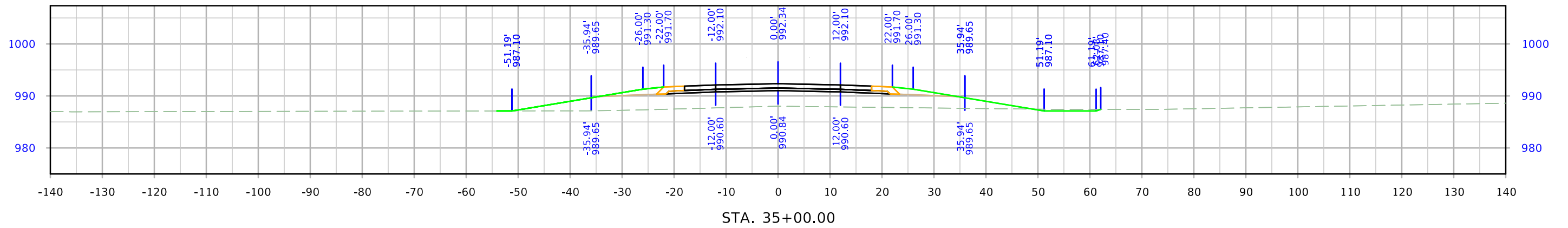
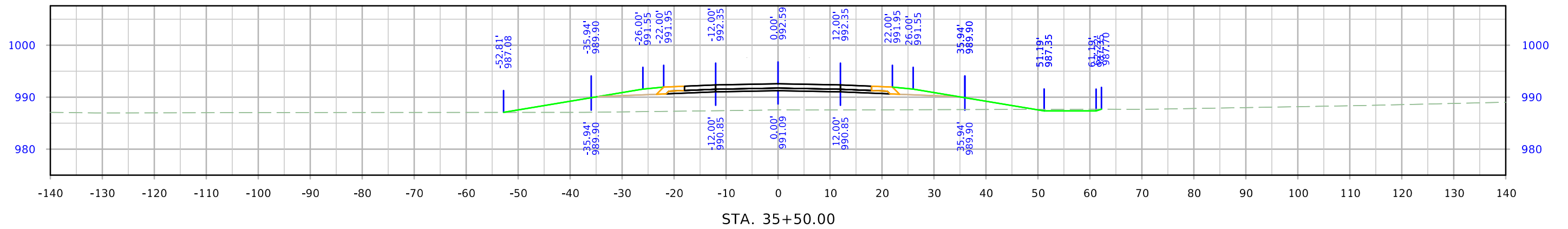


STA. 31+50.00

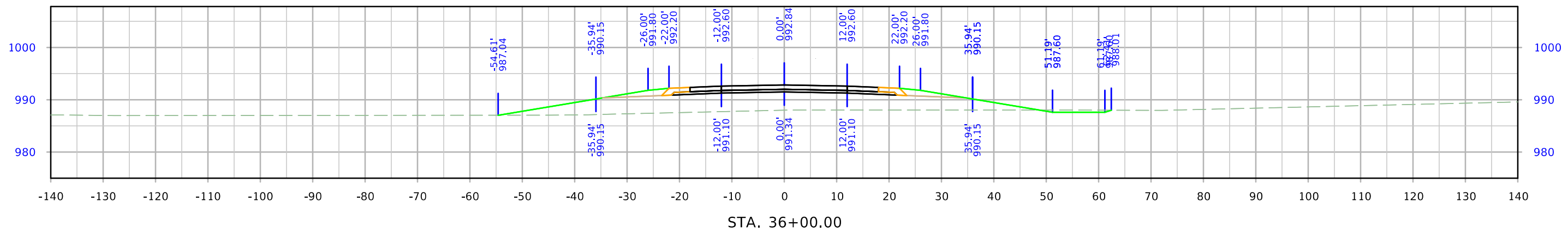
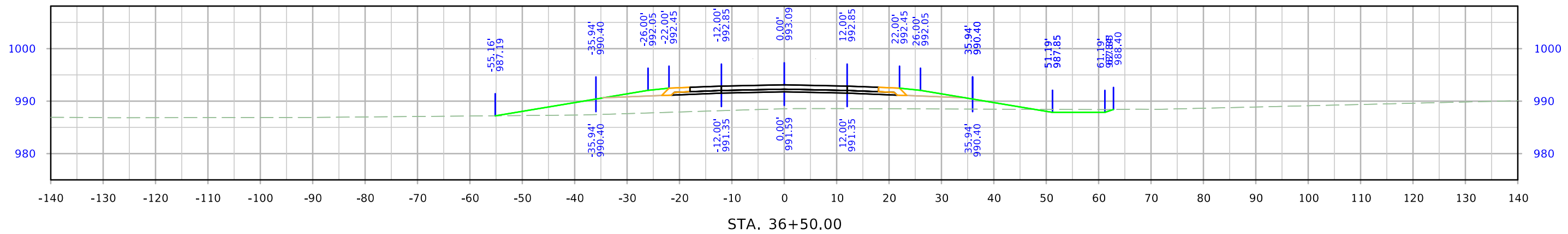
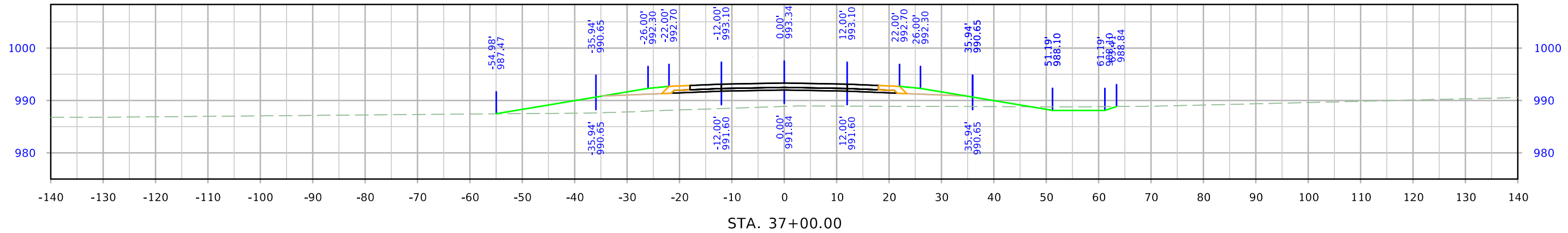
# West A Ave



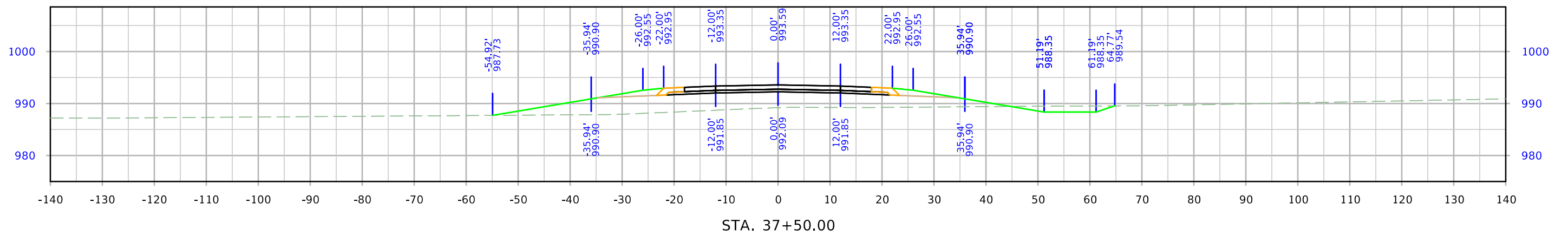
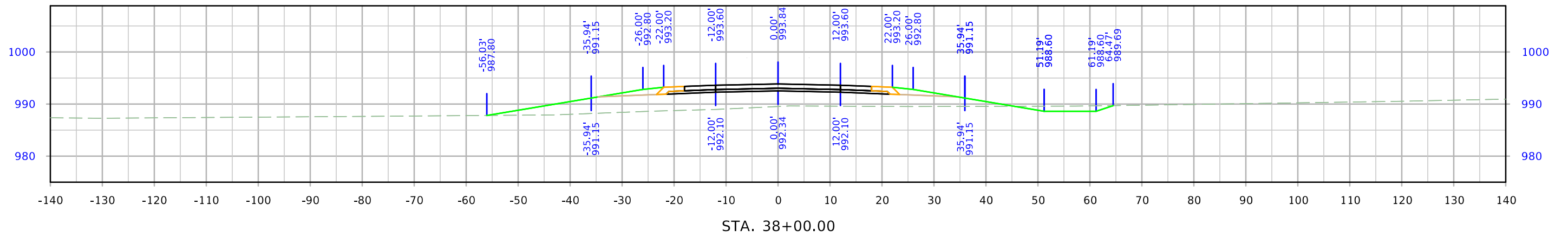
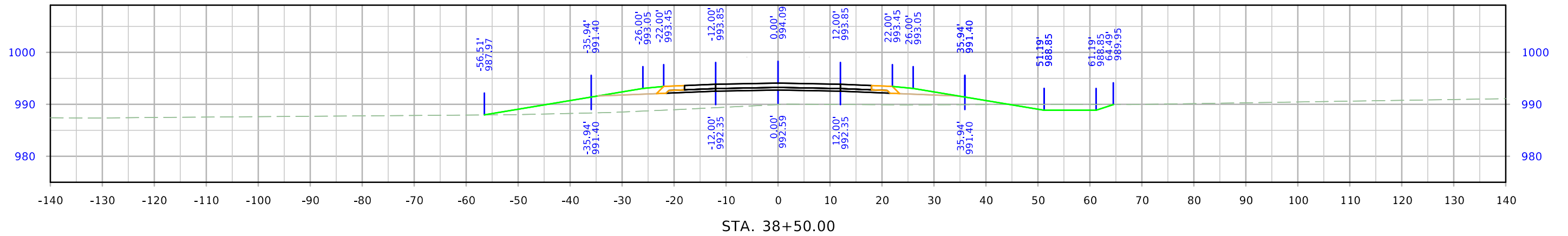
# West A Ave



# West A Ave

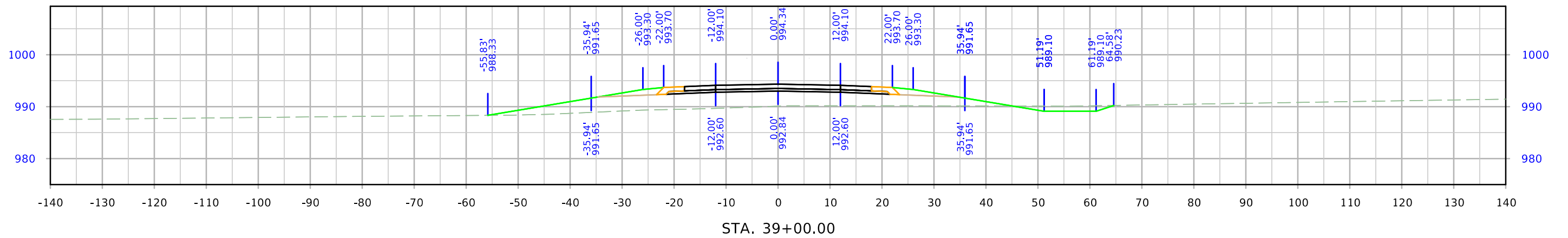
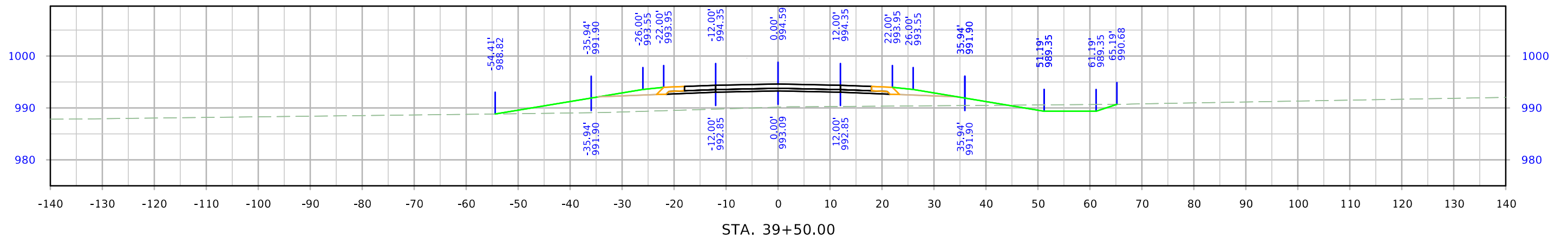
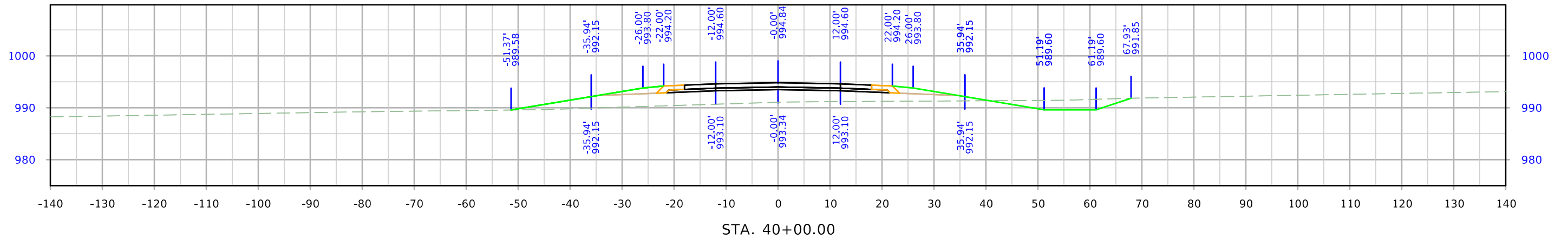


# West A Ave

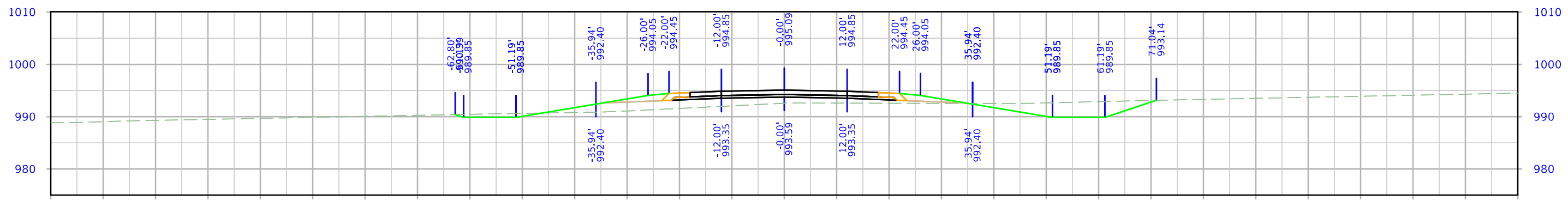
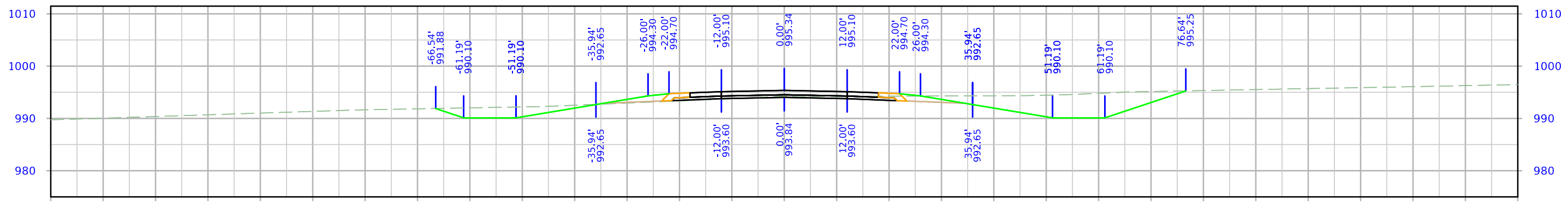
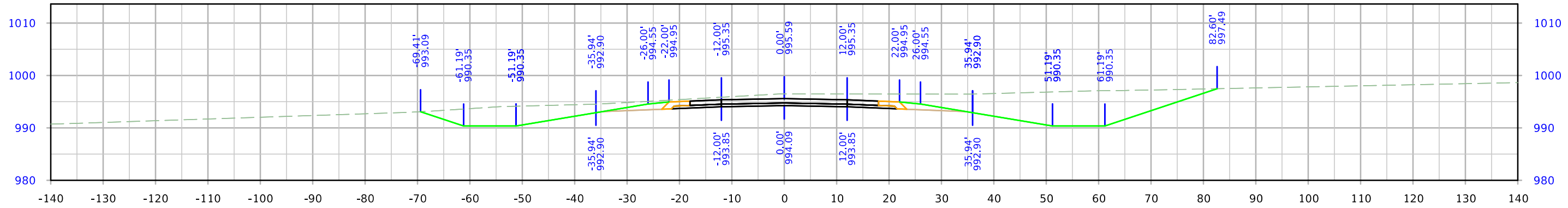




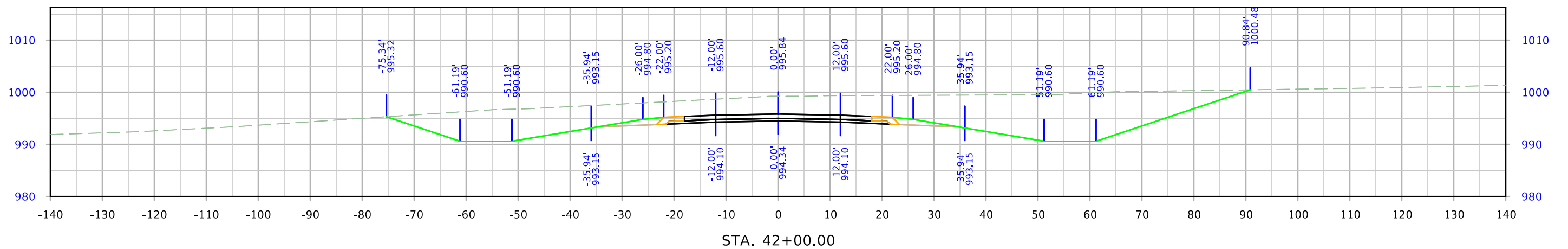
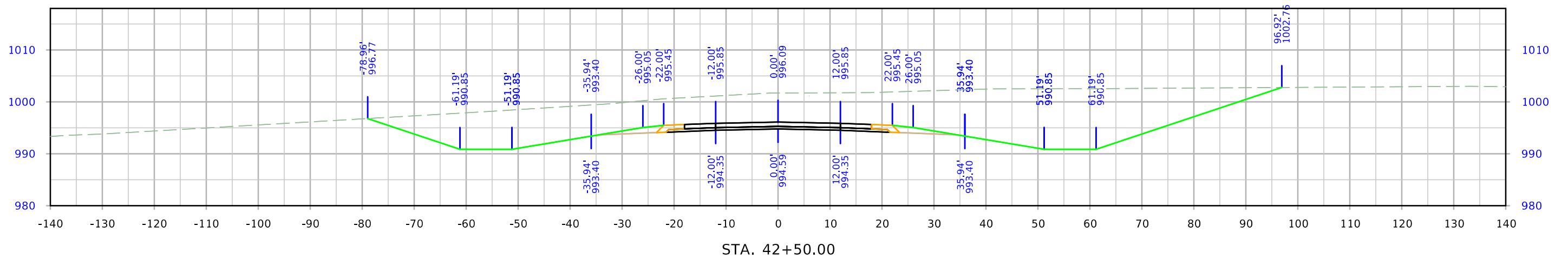
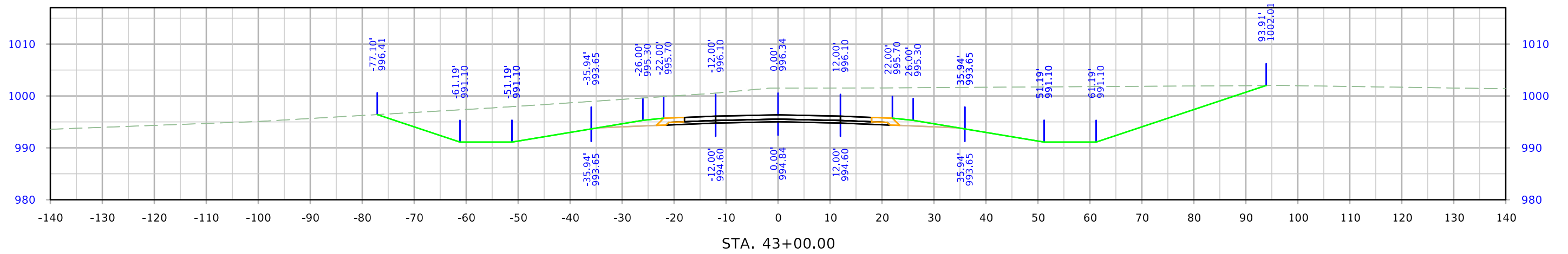
# West A Ave



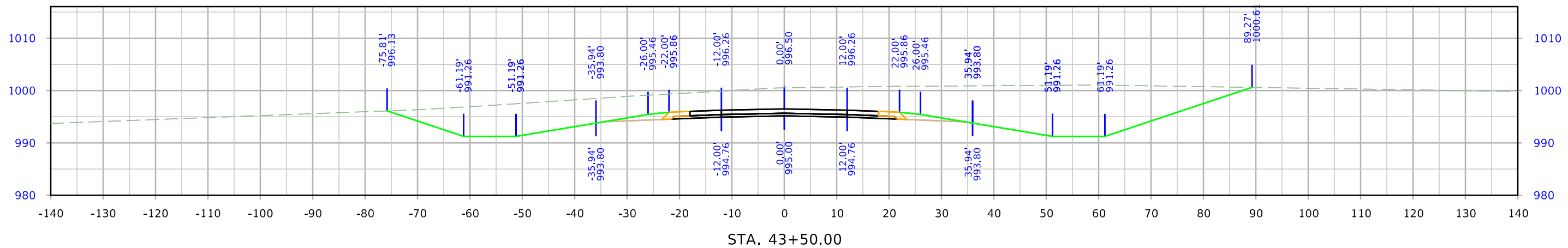
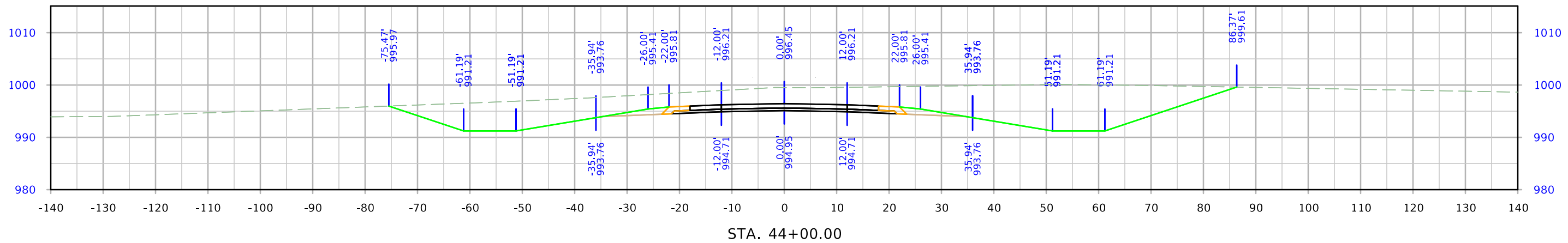
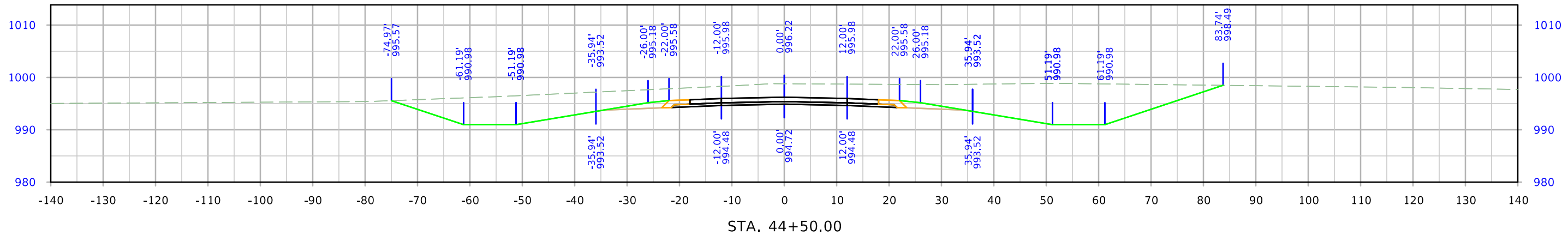
# West A Ave



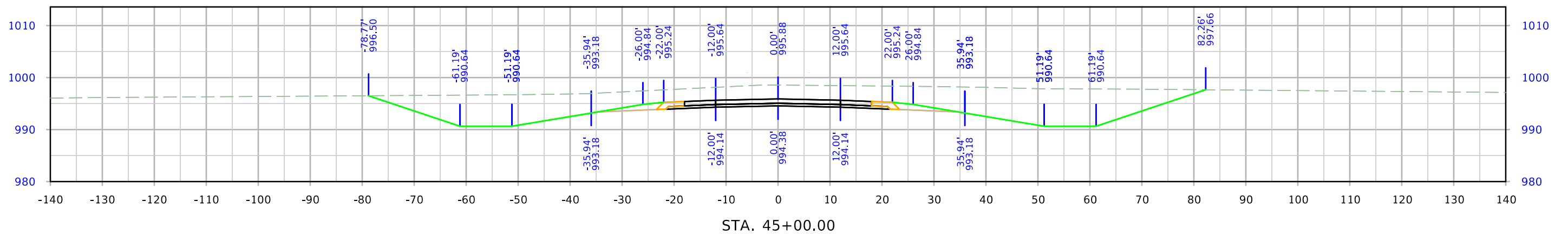
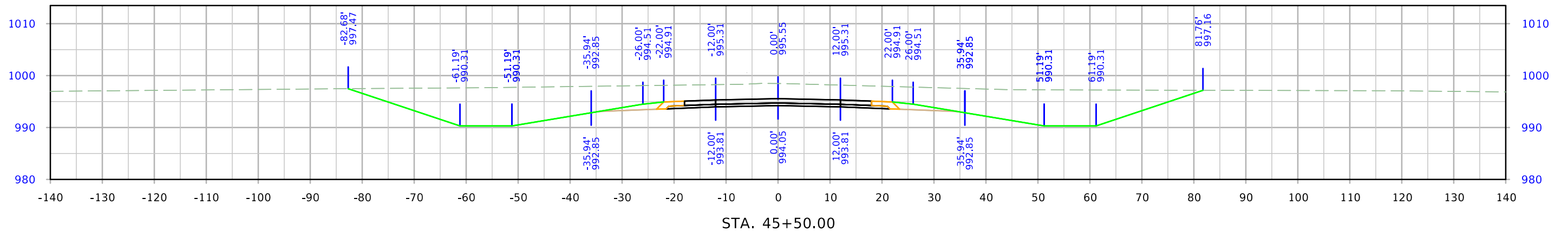
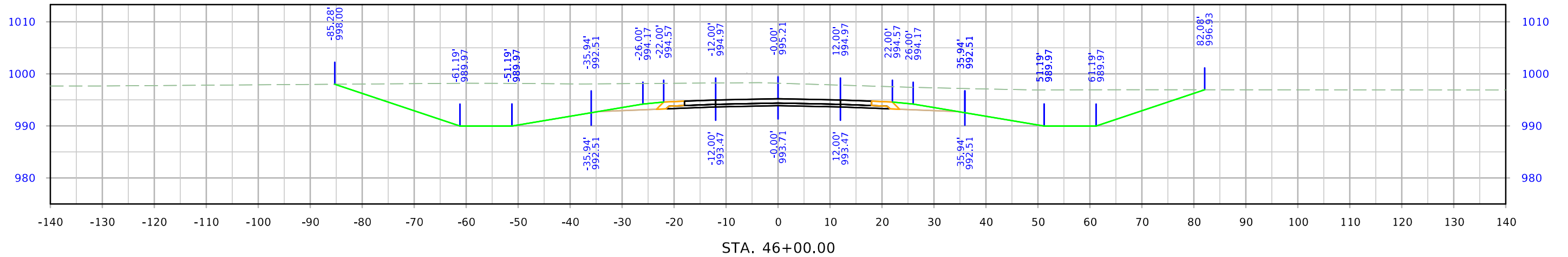
# West A Ave



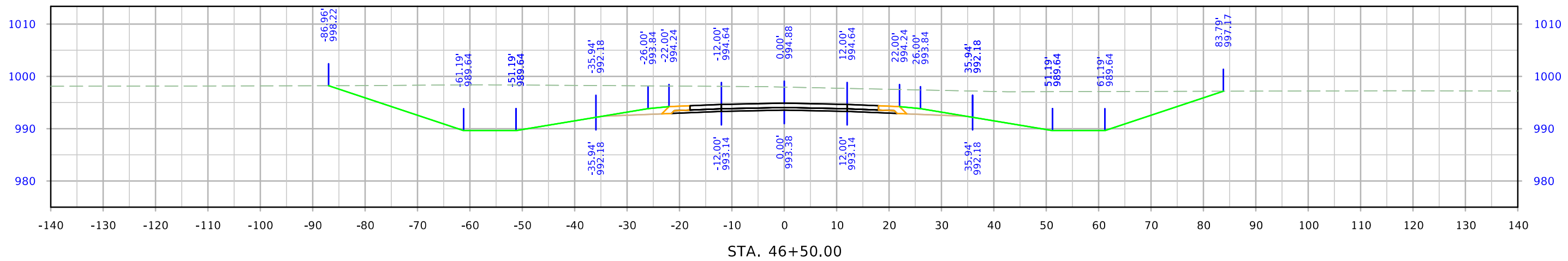
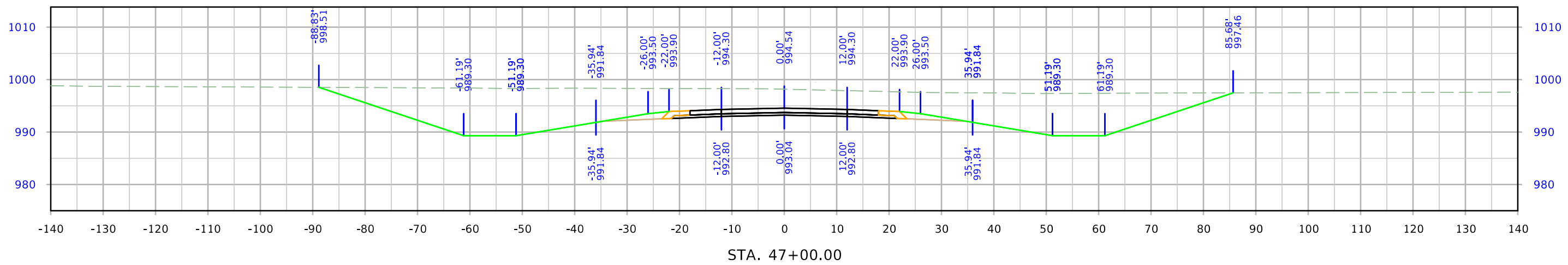
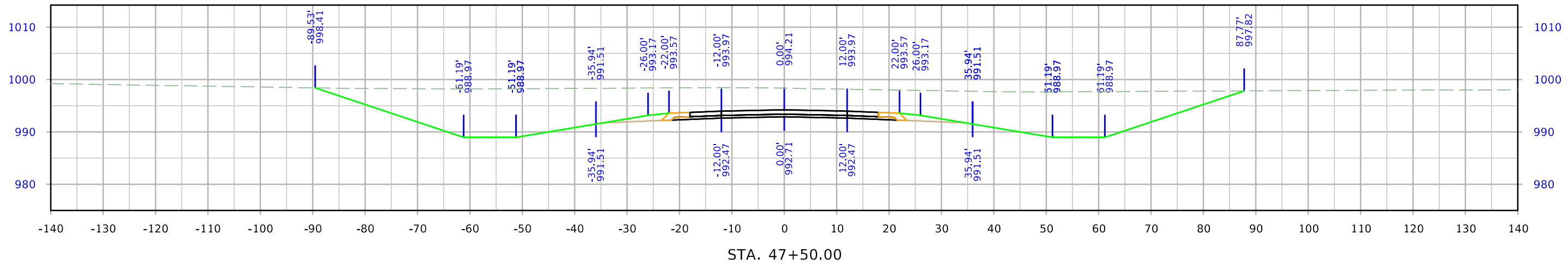
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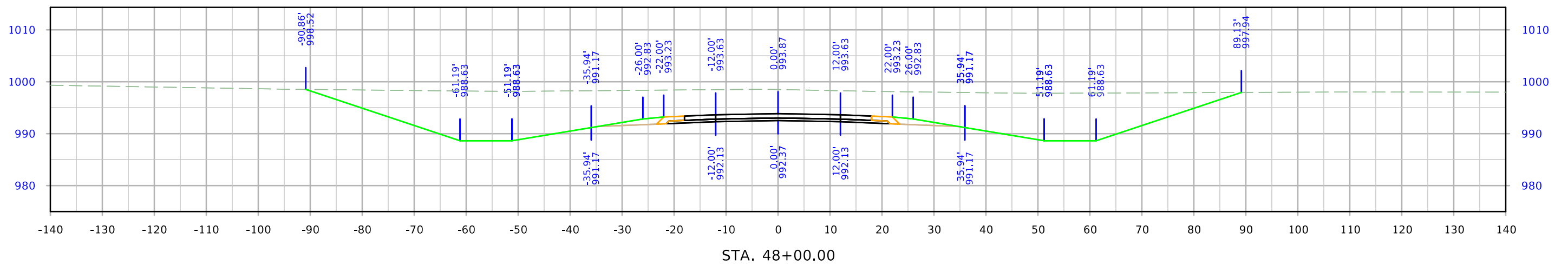
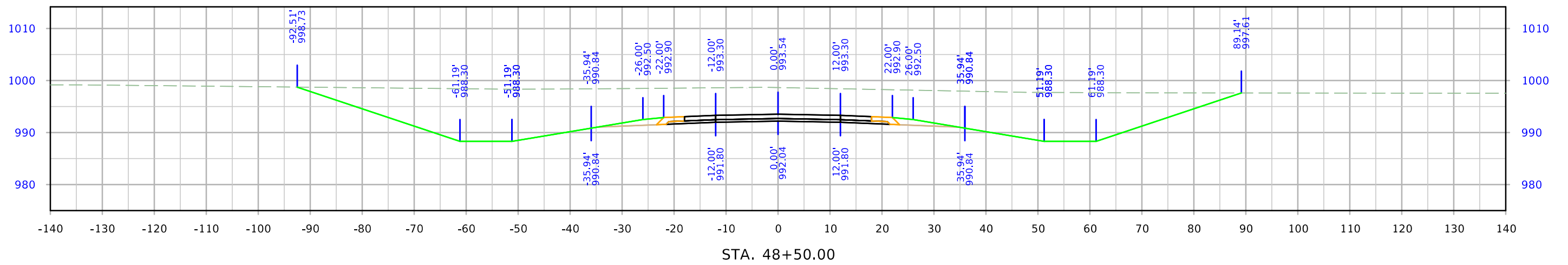
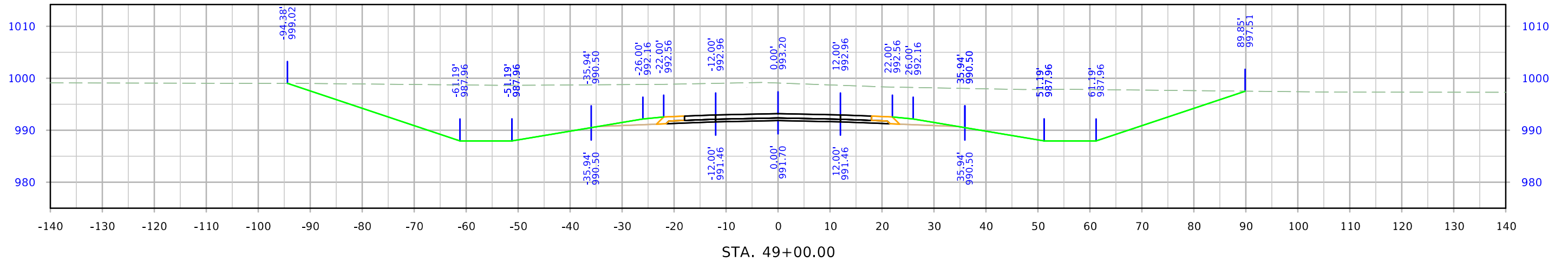
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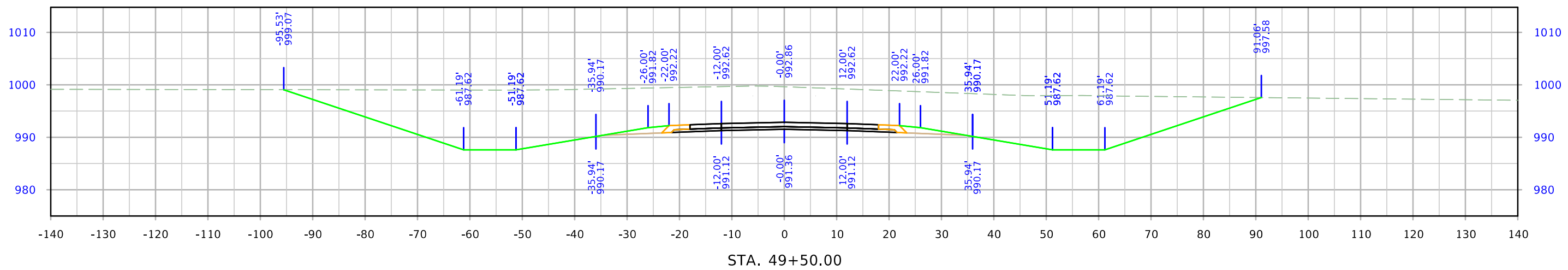
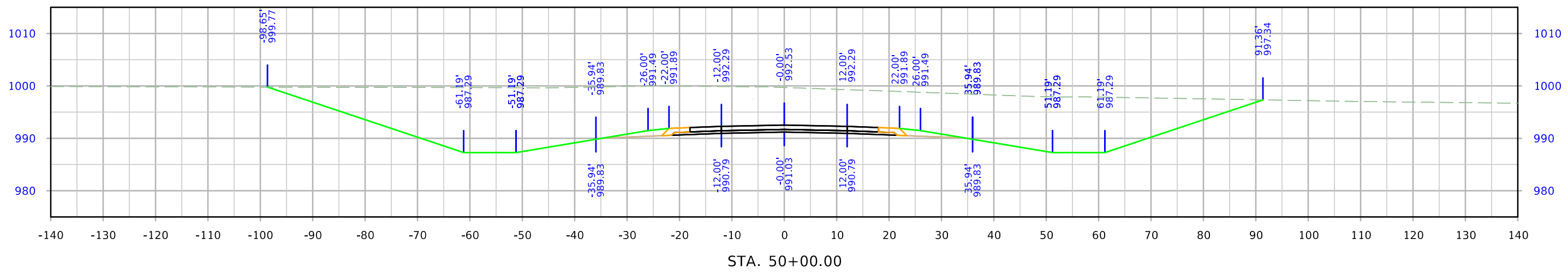
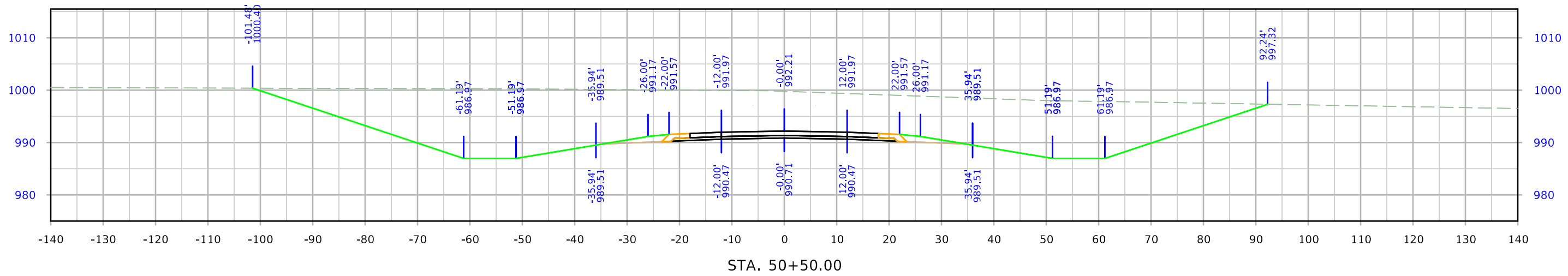
# West A Ave



# West A Ave

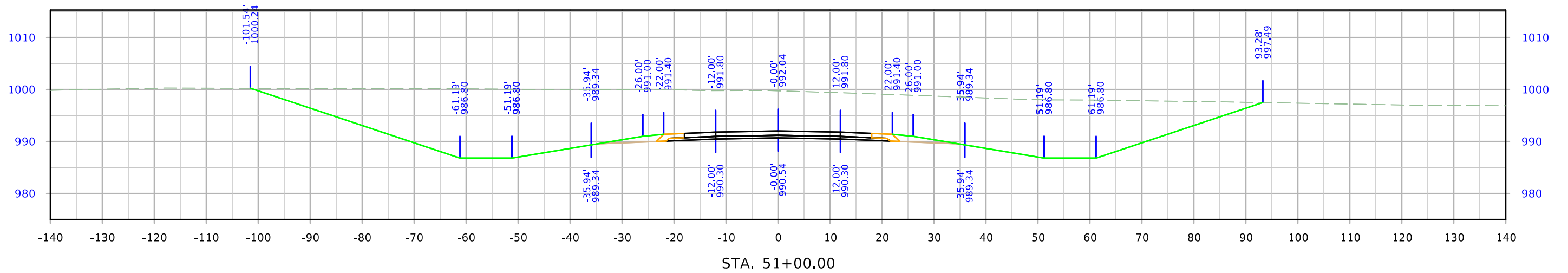
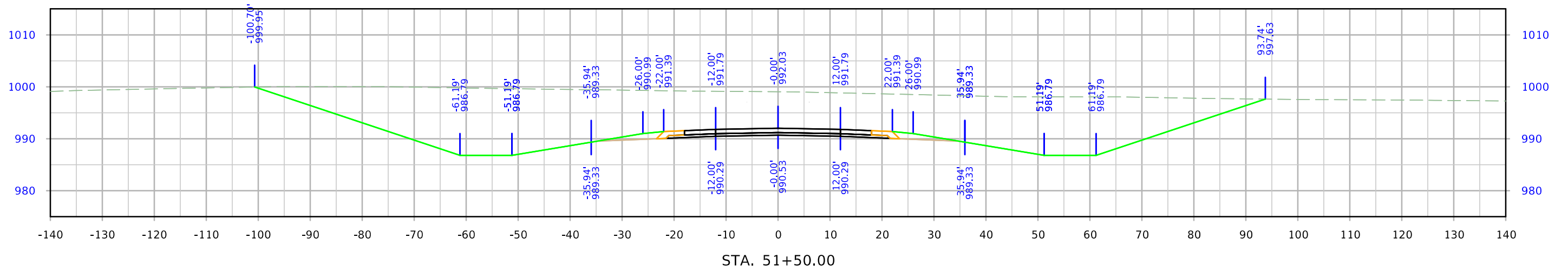
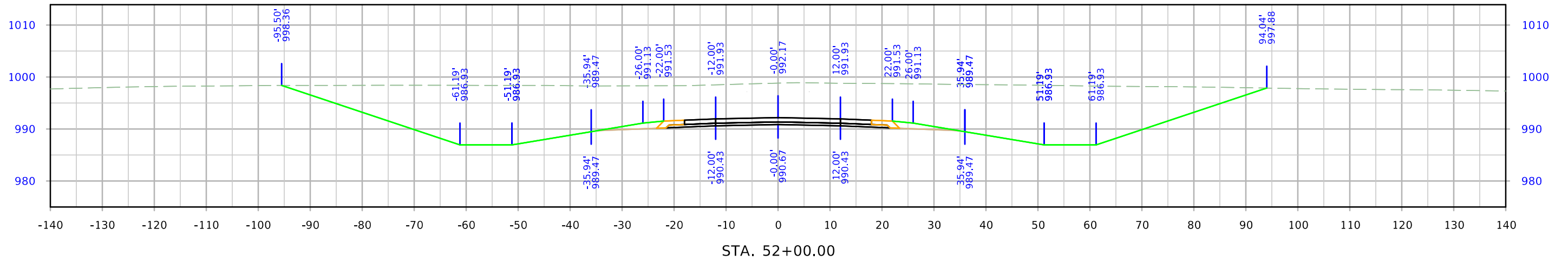


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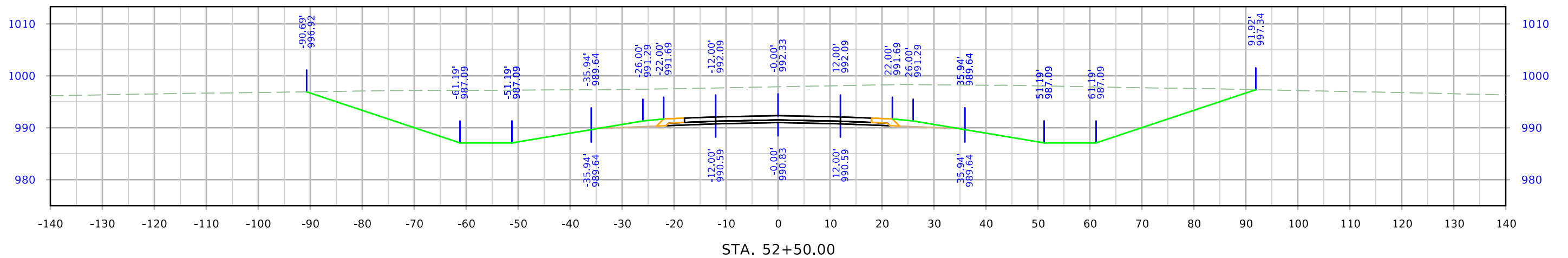
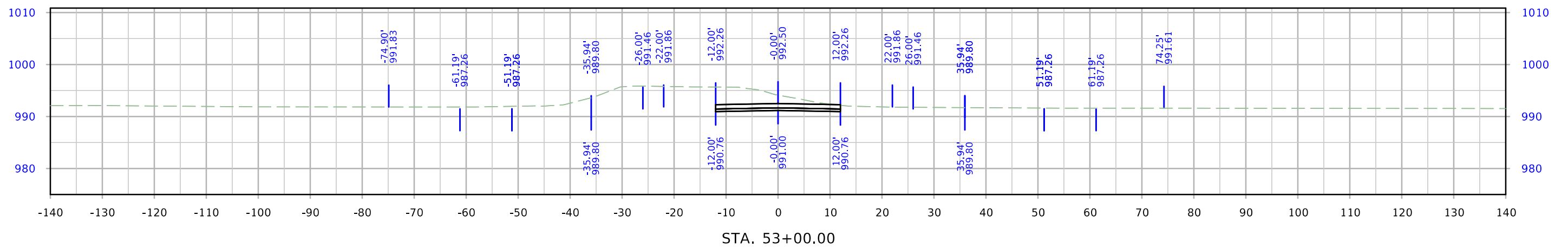
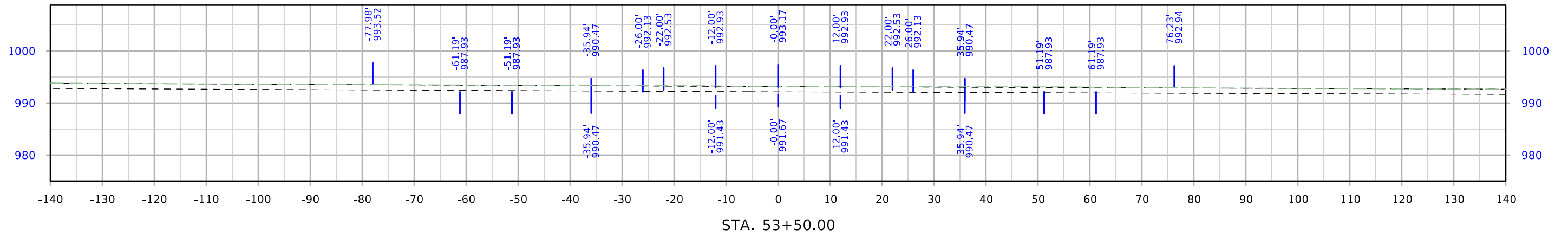




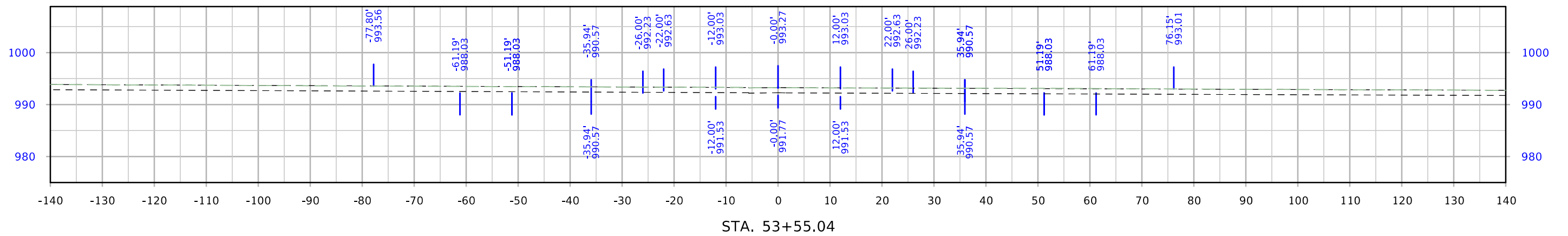
# West A Ave



# West A Ave

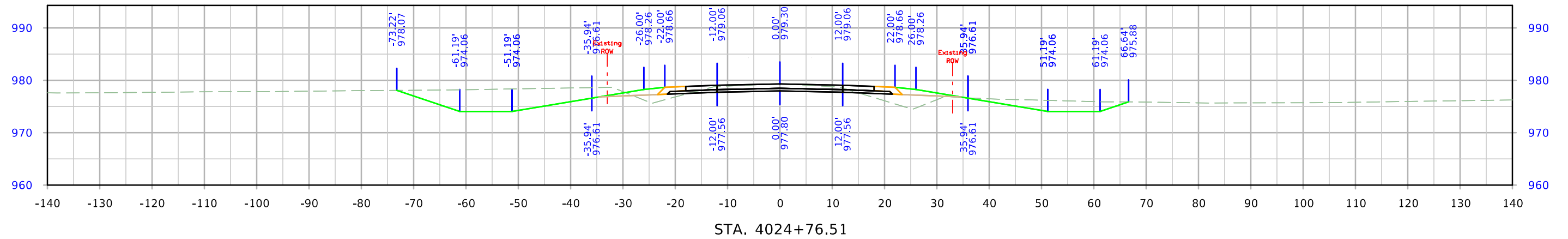
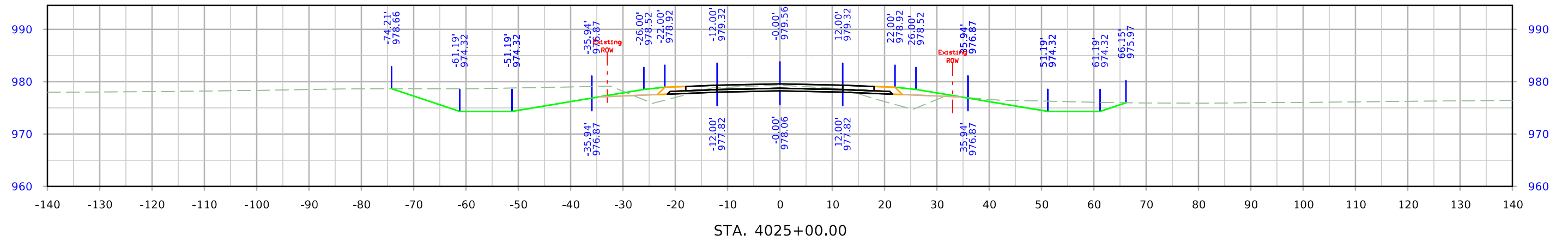
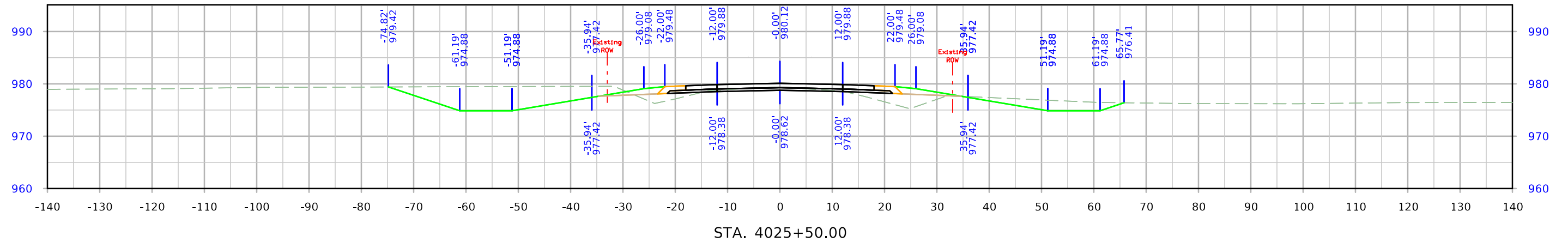


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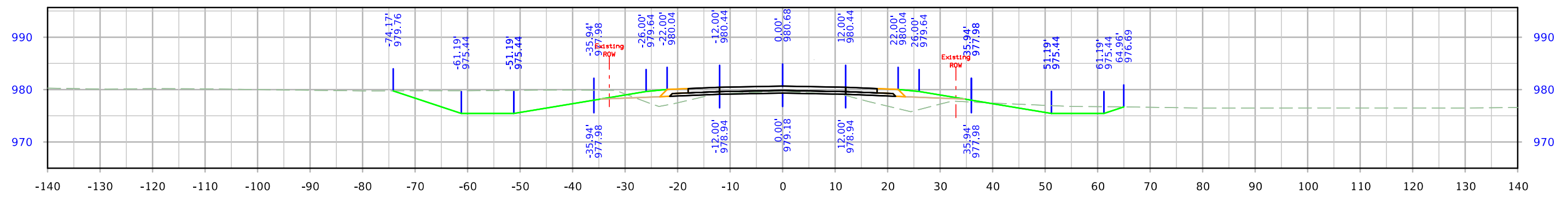
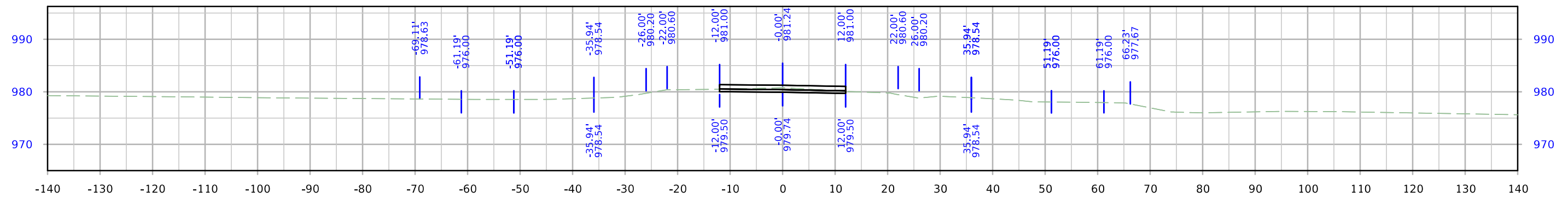
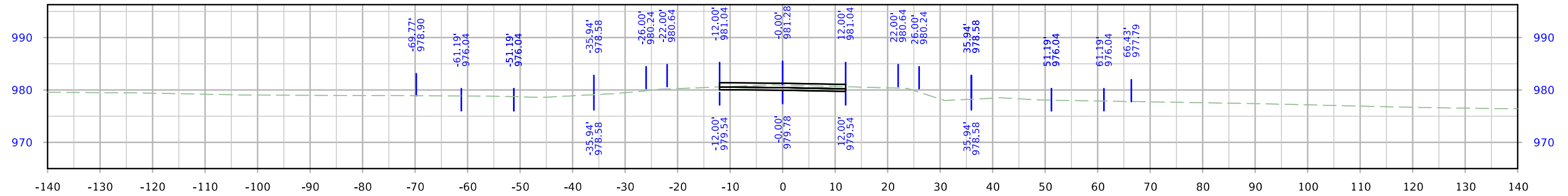


STA. 53+55.04

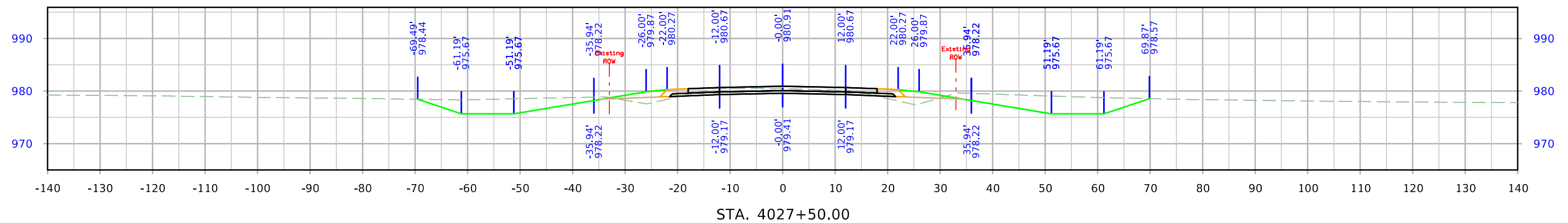
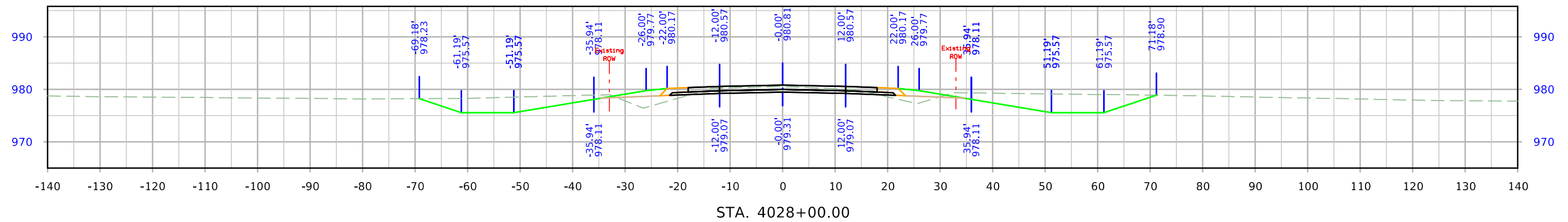
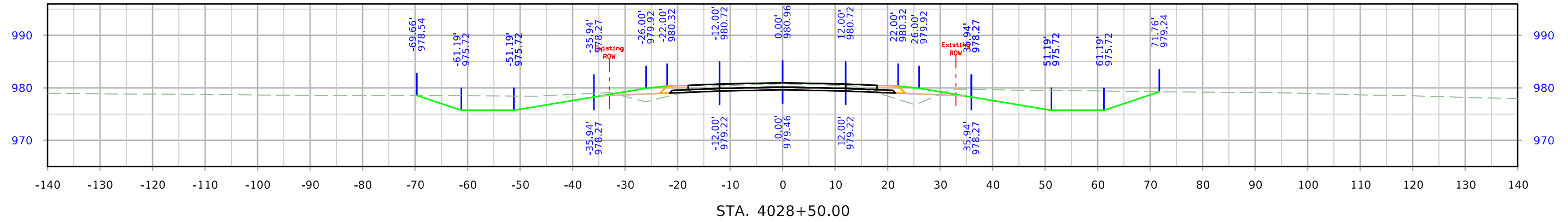
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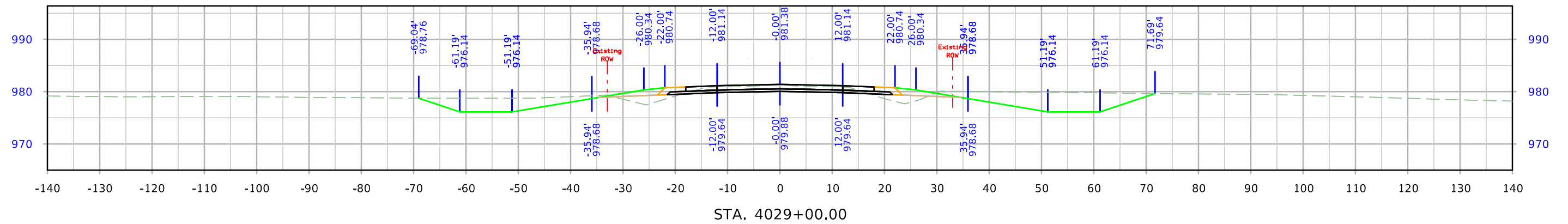
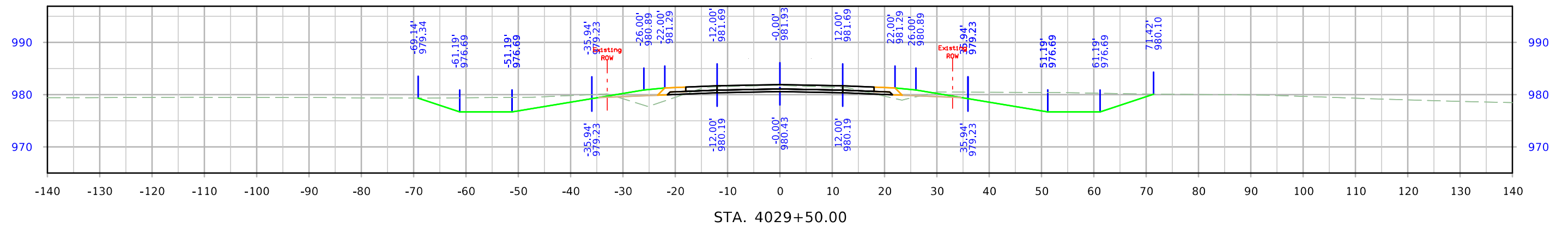
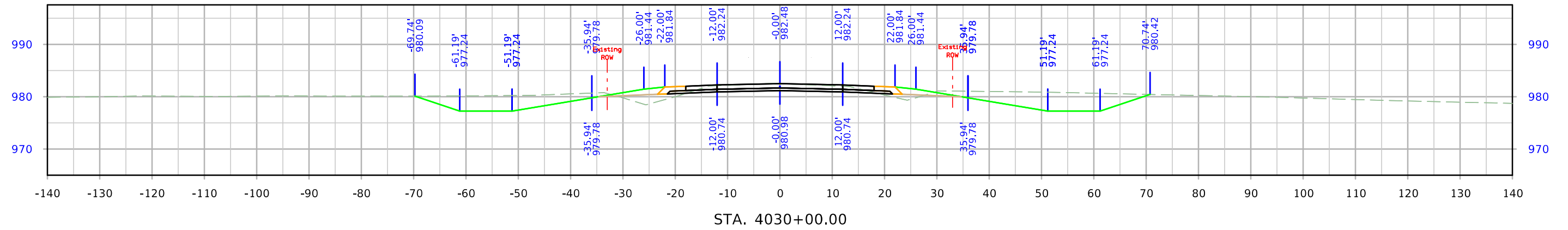
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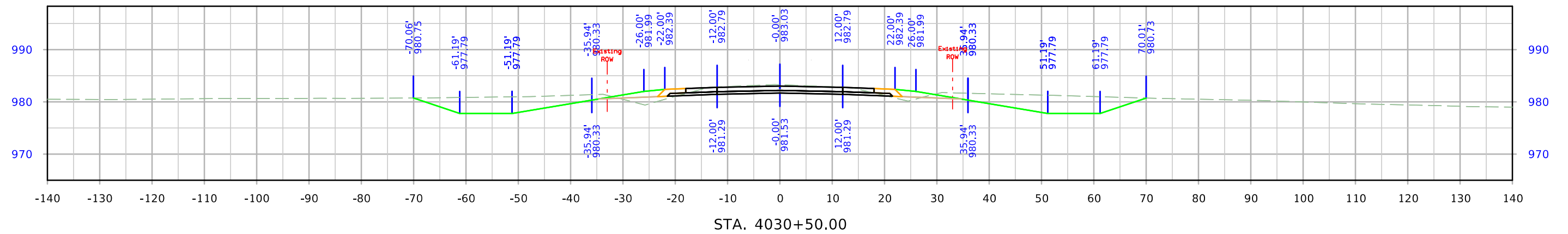
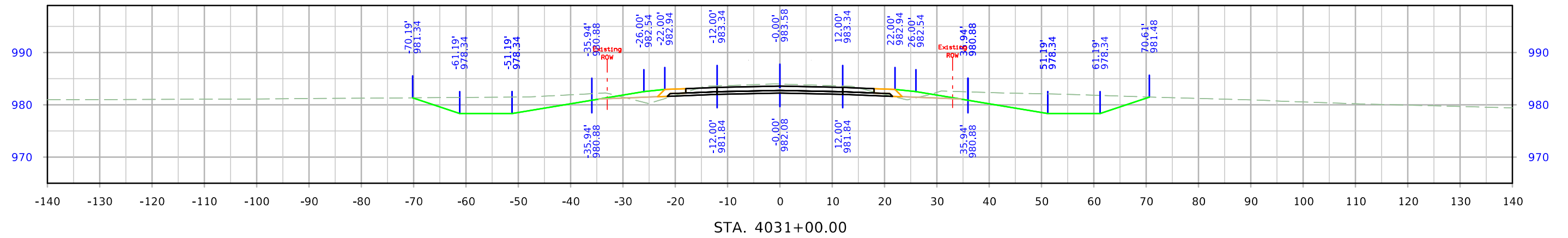
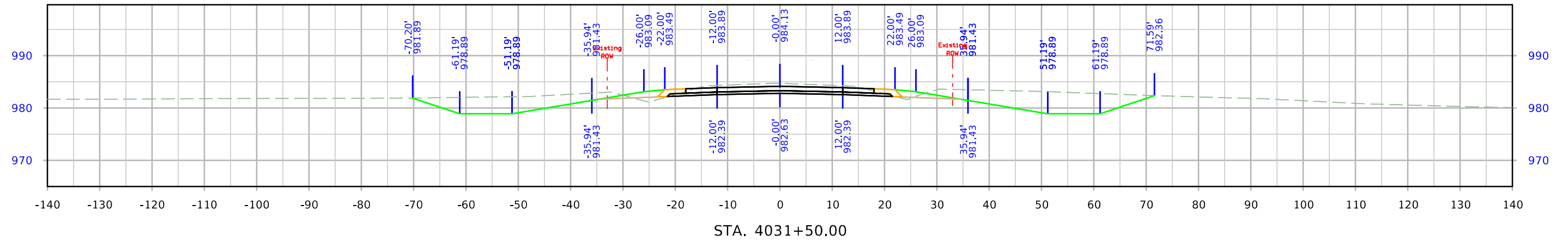
# West Maple



# West Maple

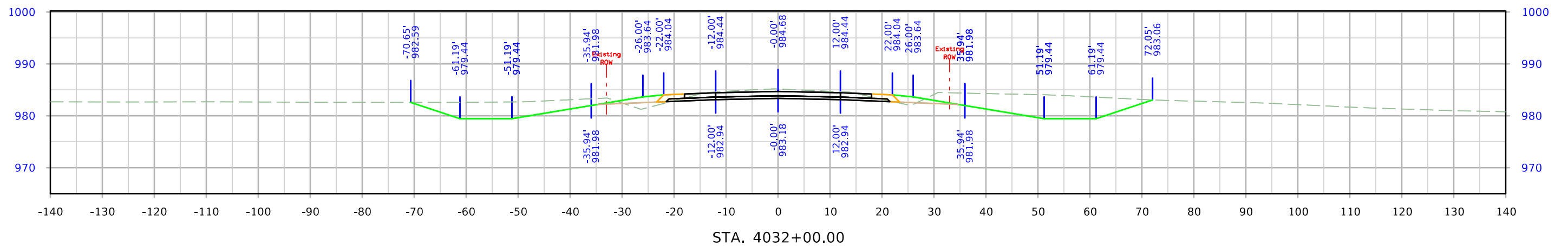
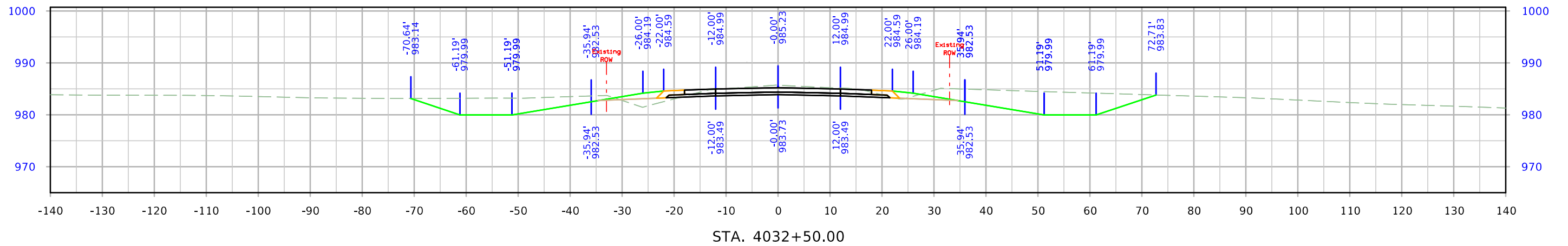
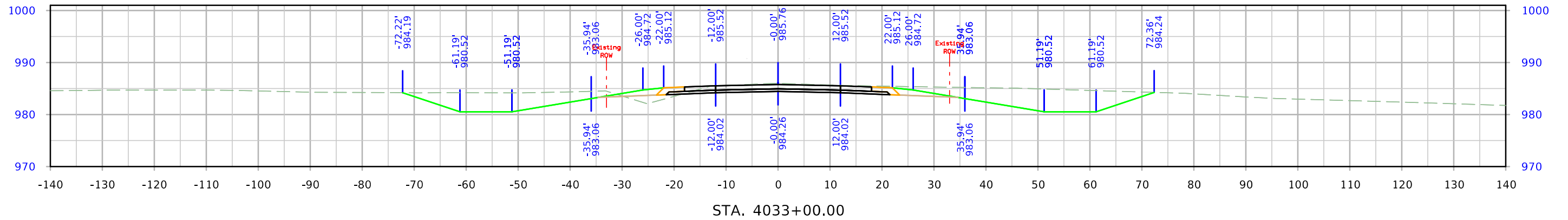


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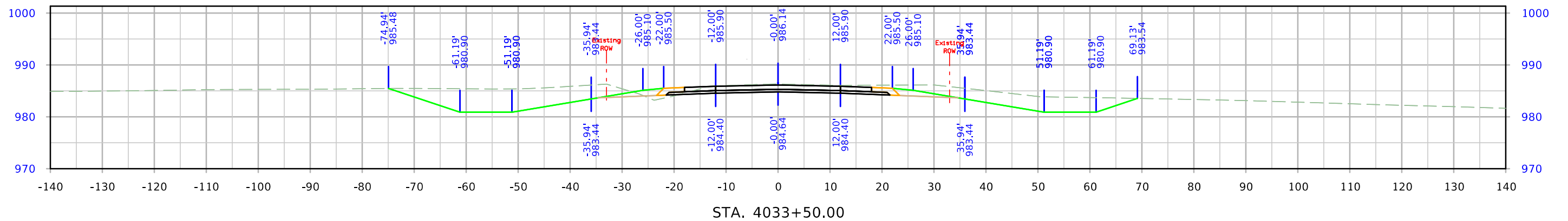
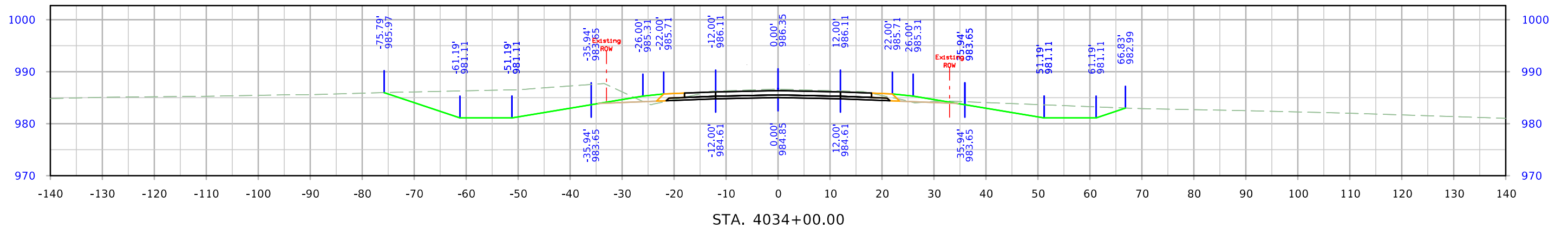
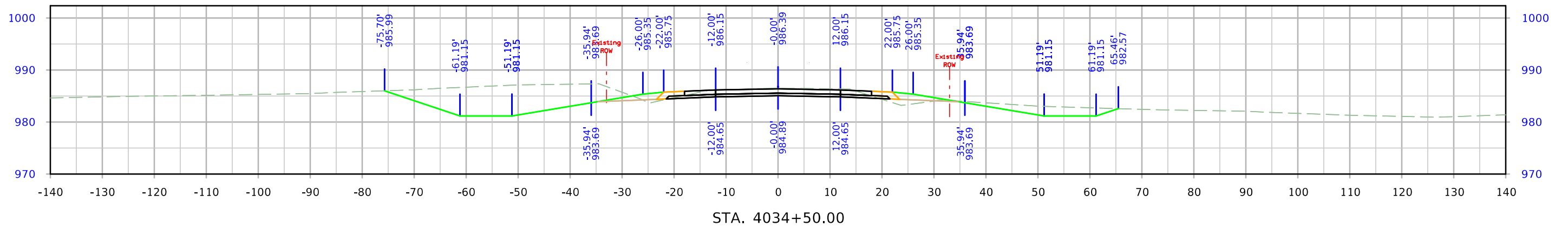




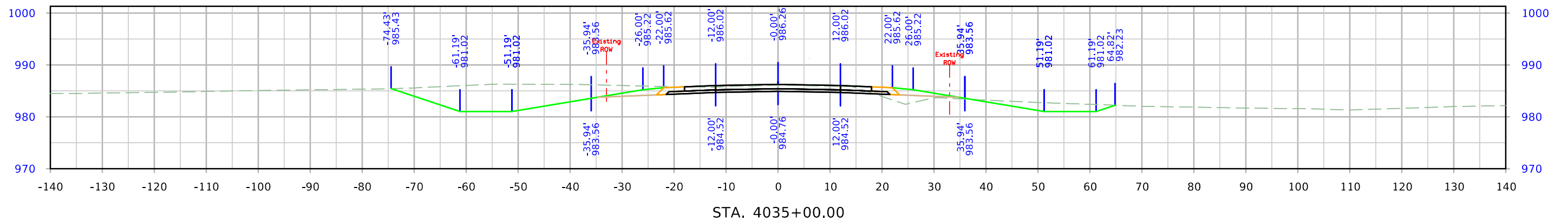
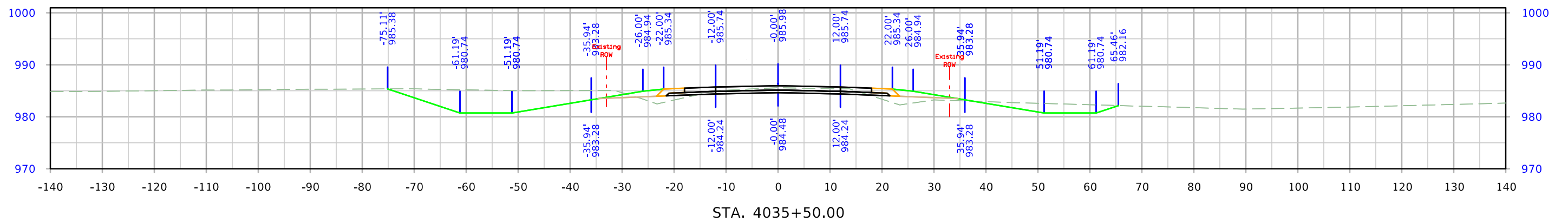
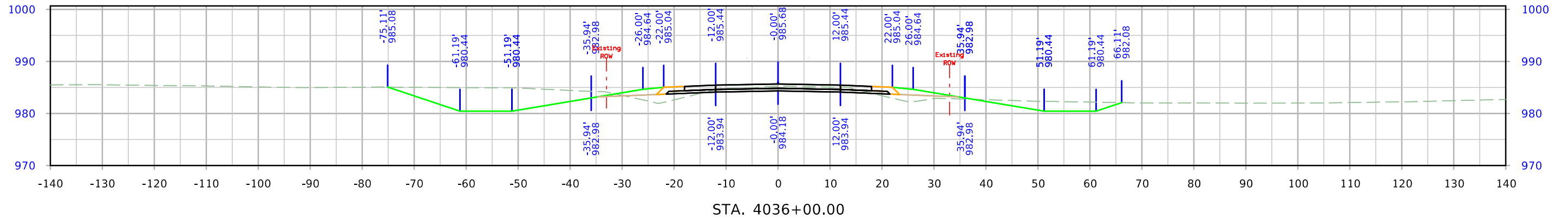
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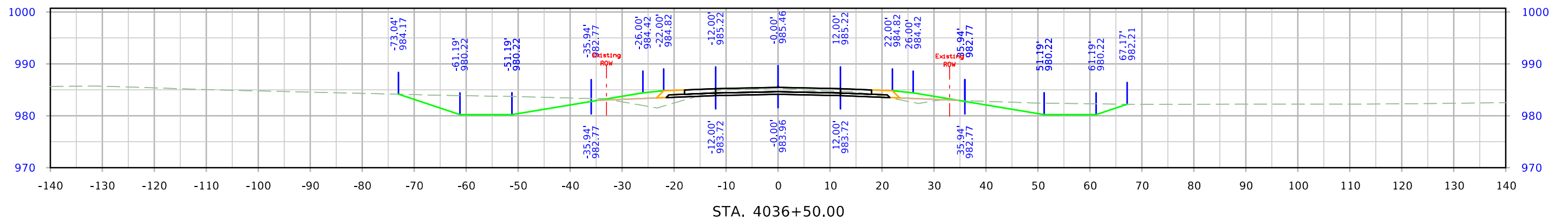
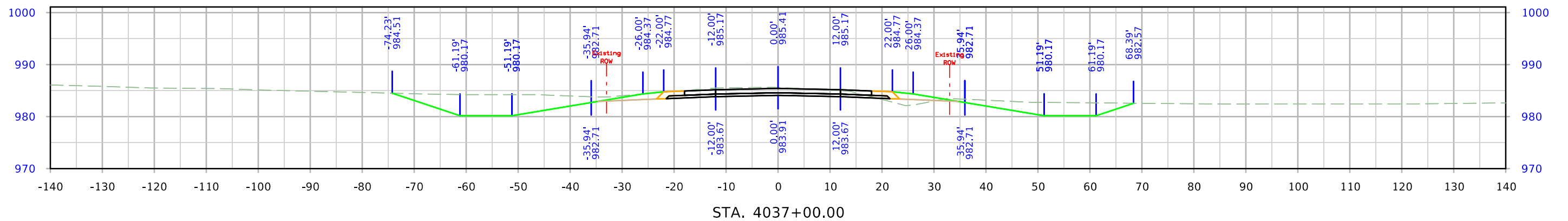
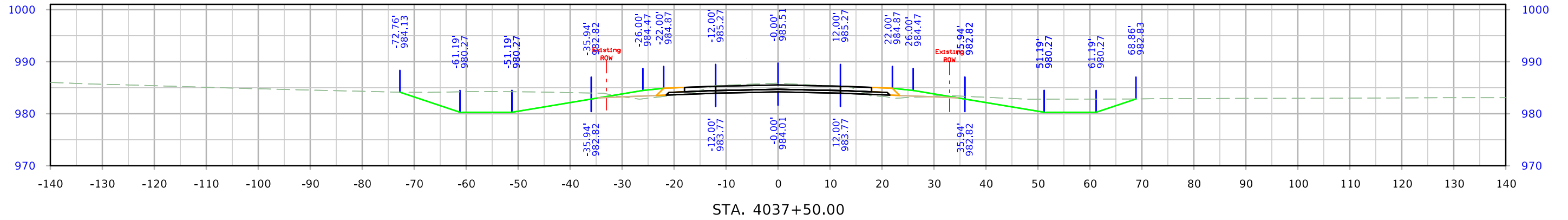
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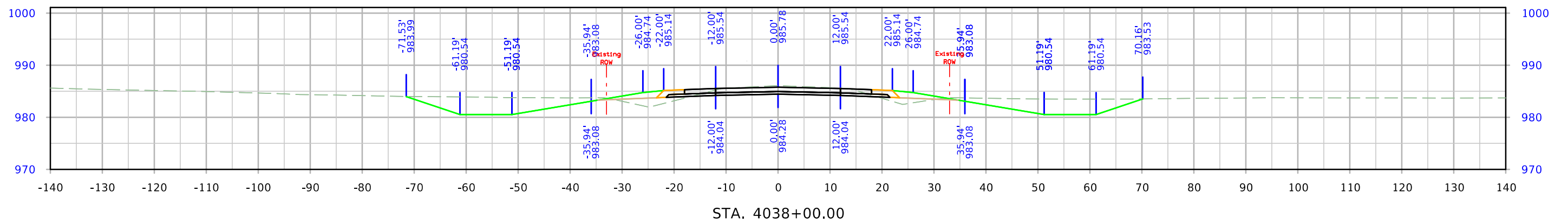
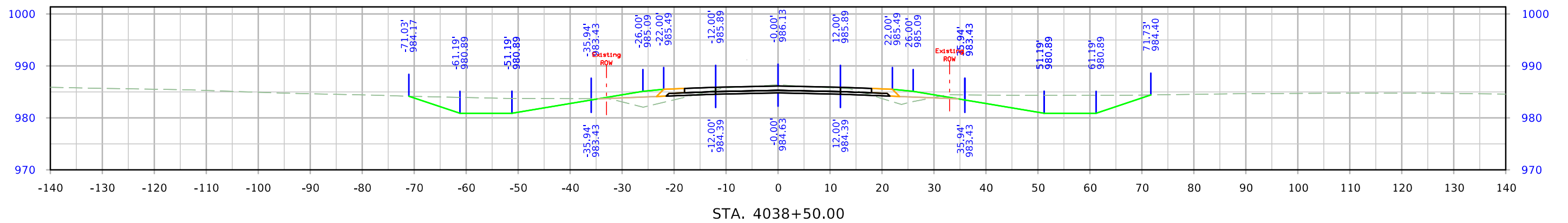
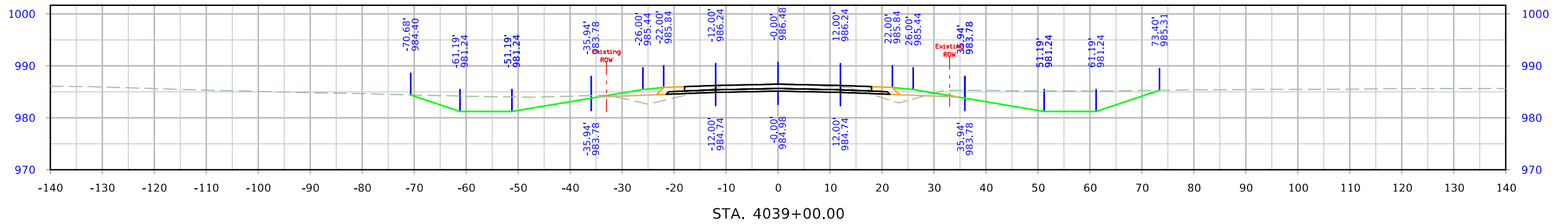
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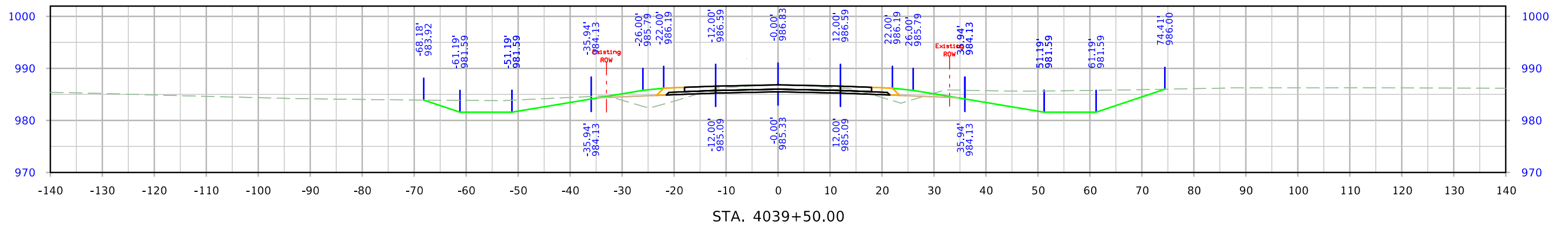
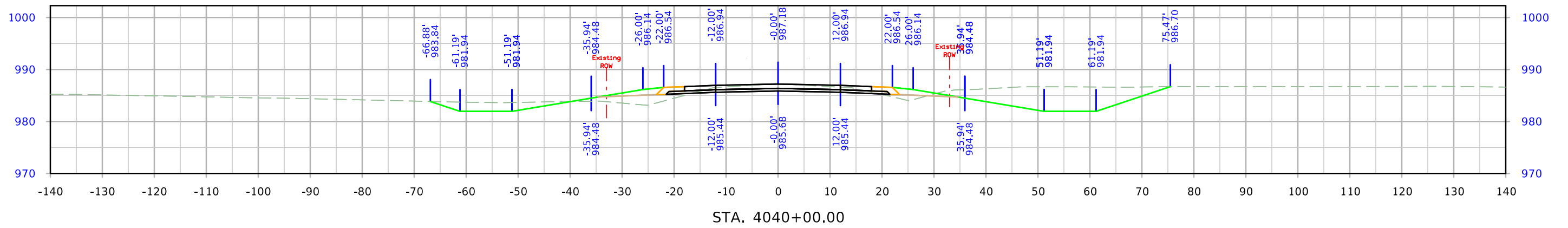
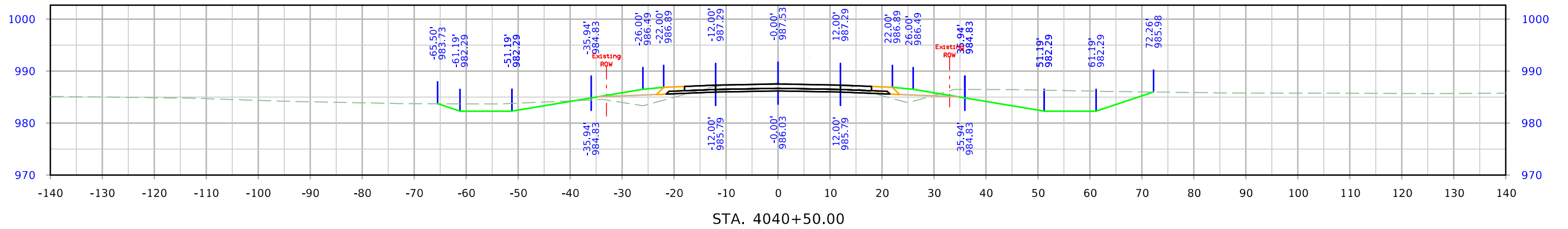
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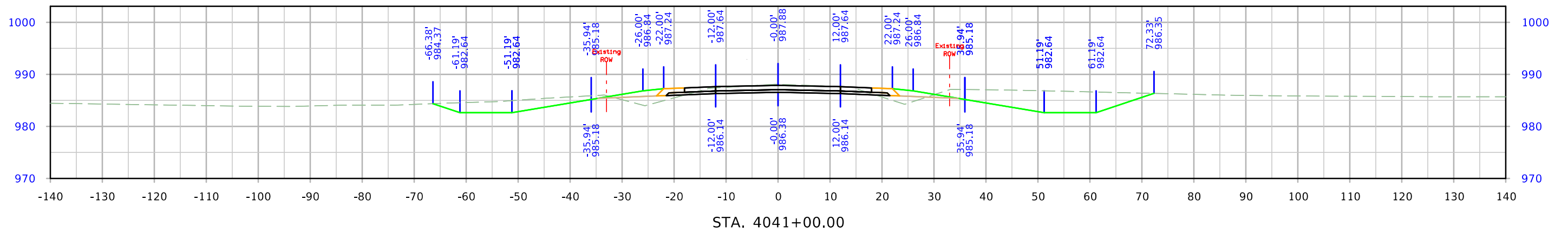
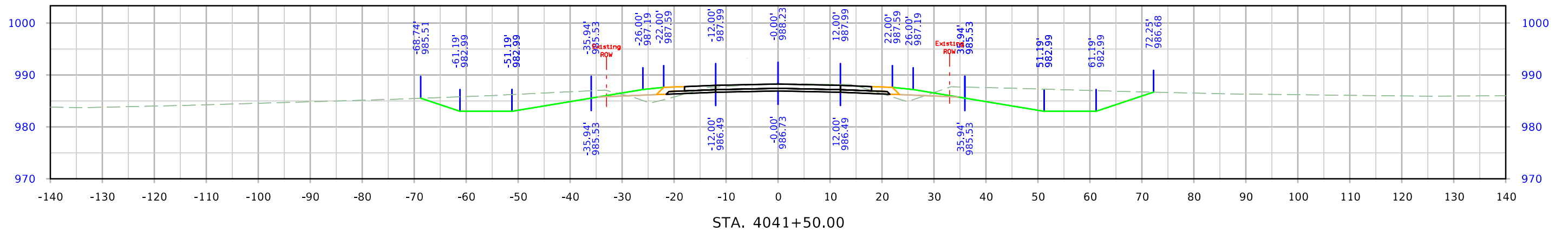
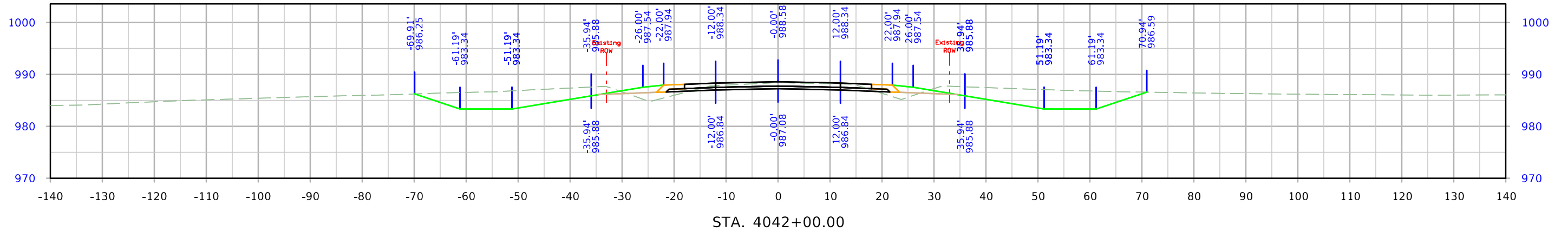
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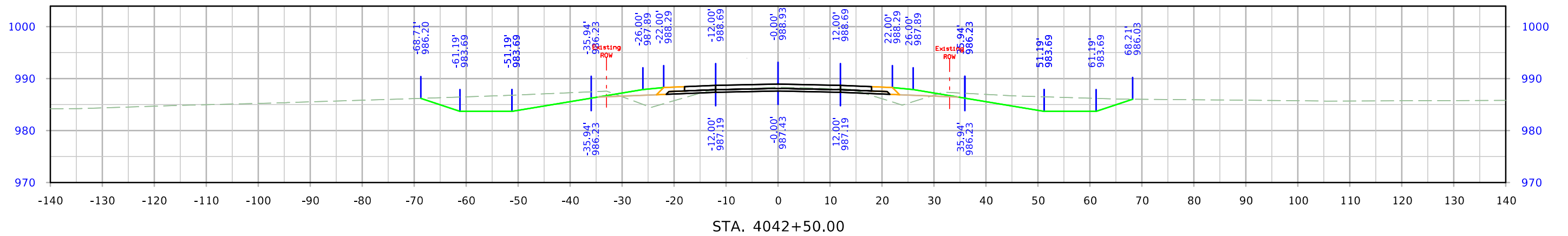
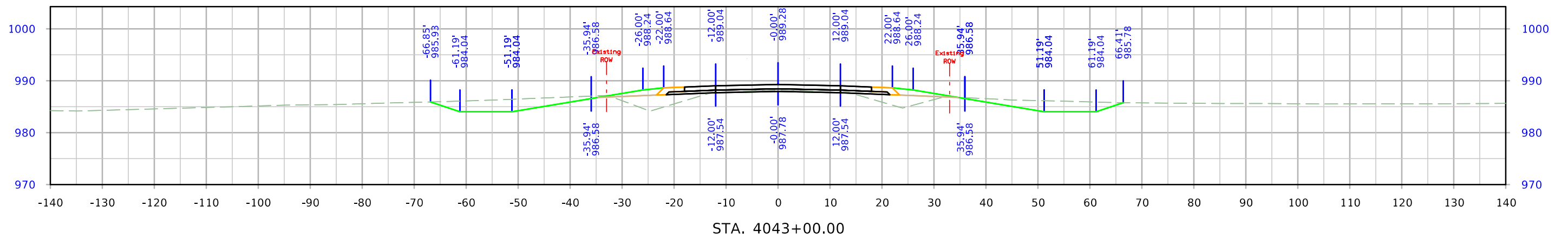
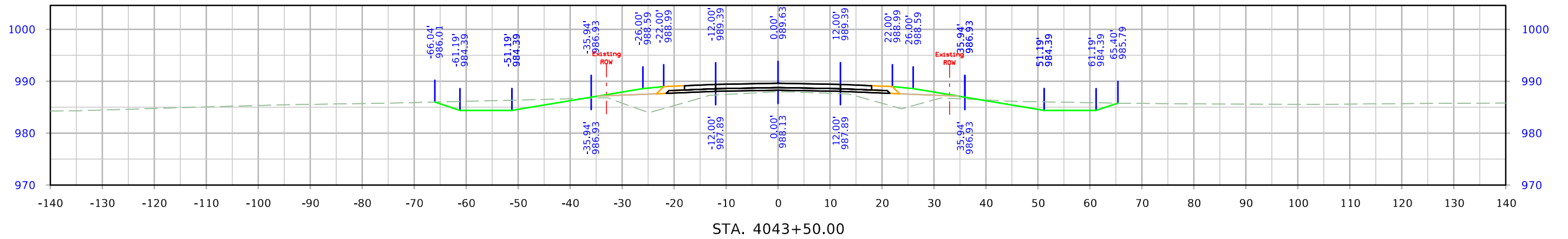
# West Maple



# West Maple

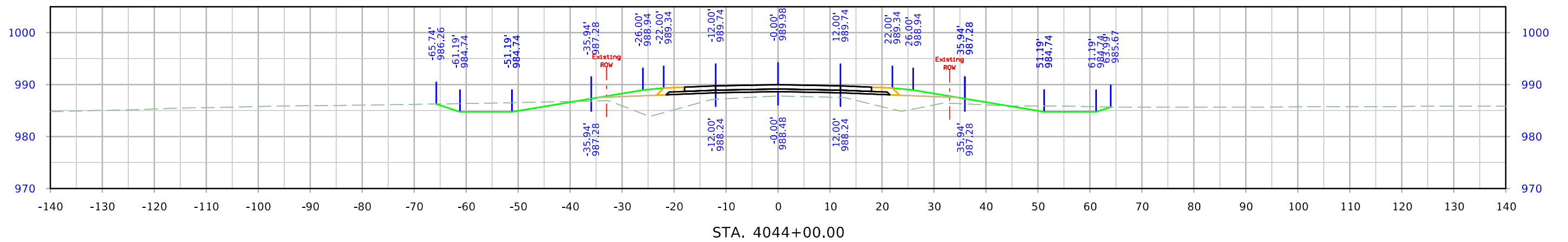
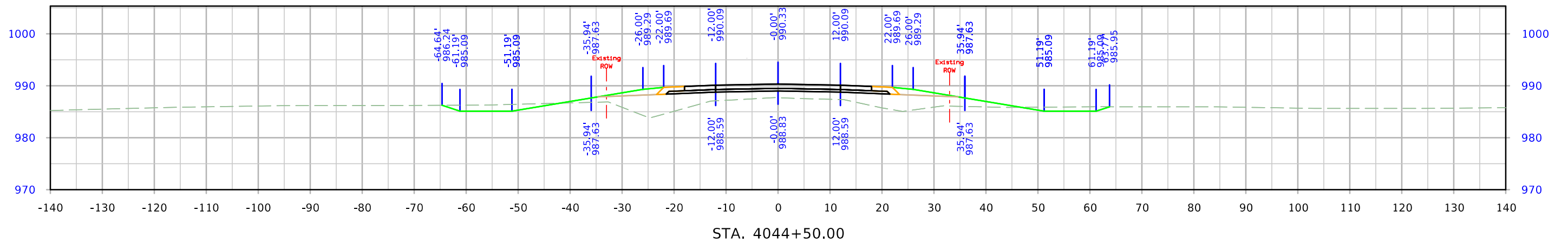
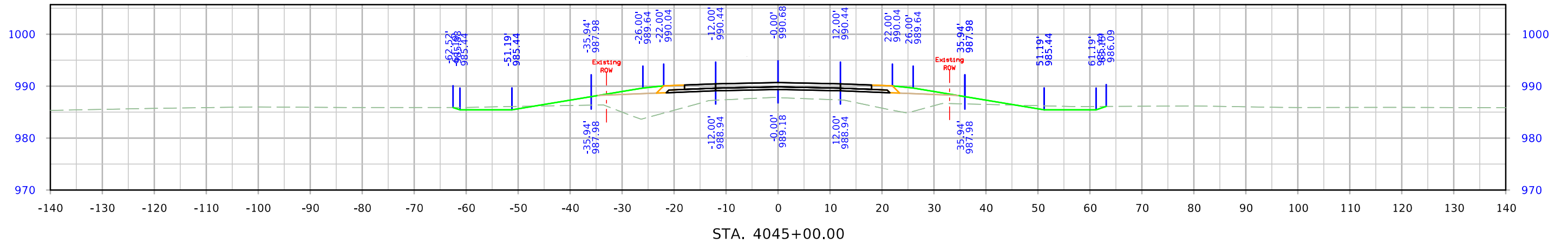


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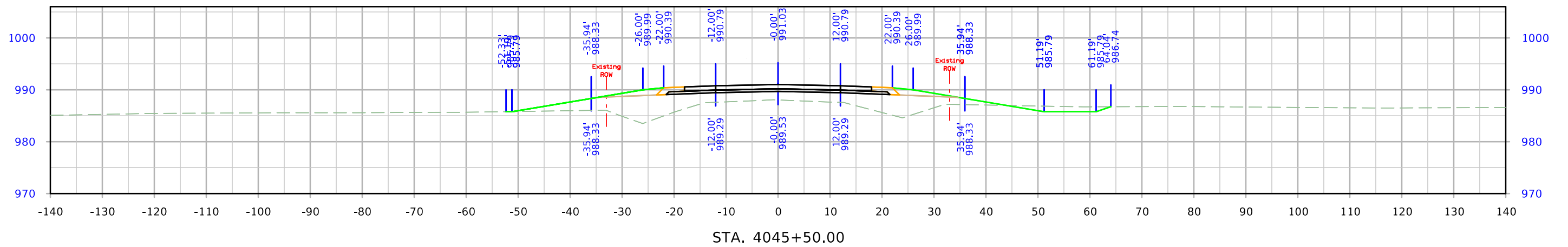
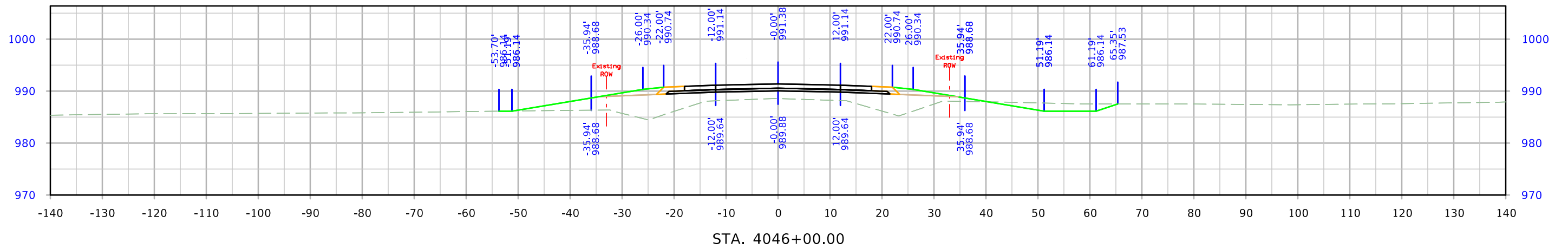
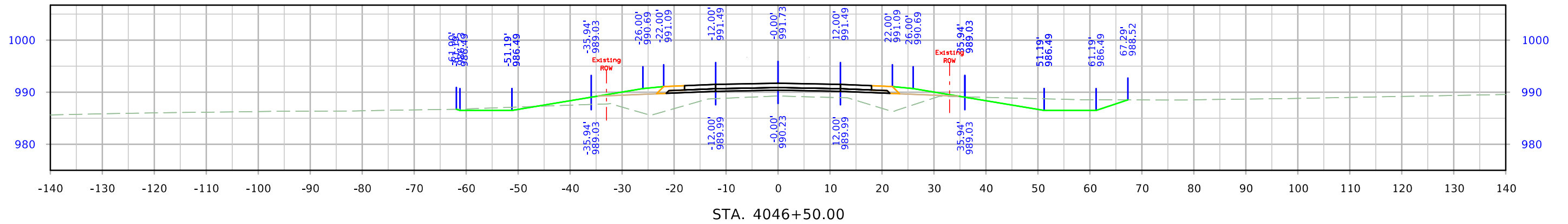




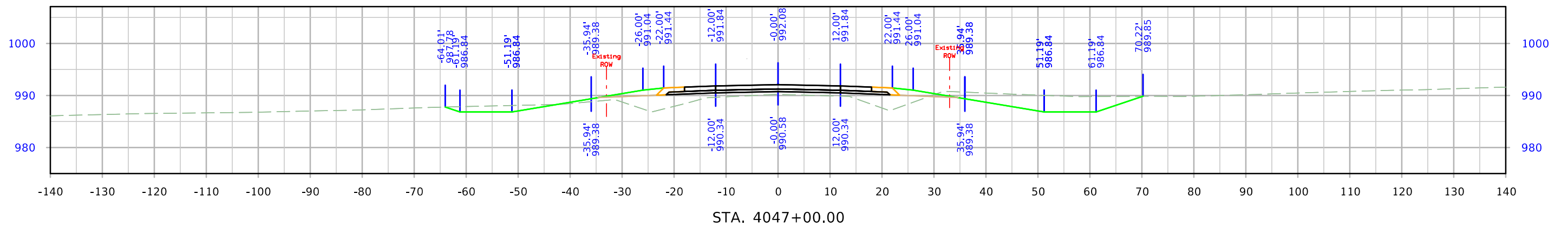
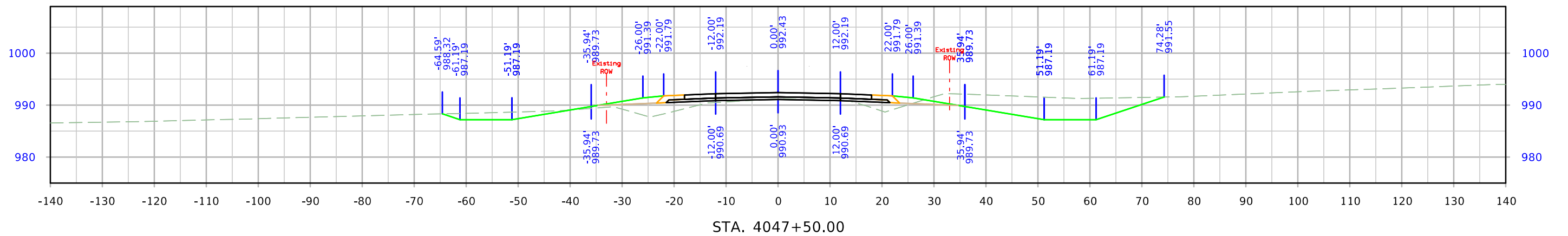
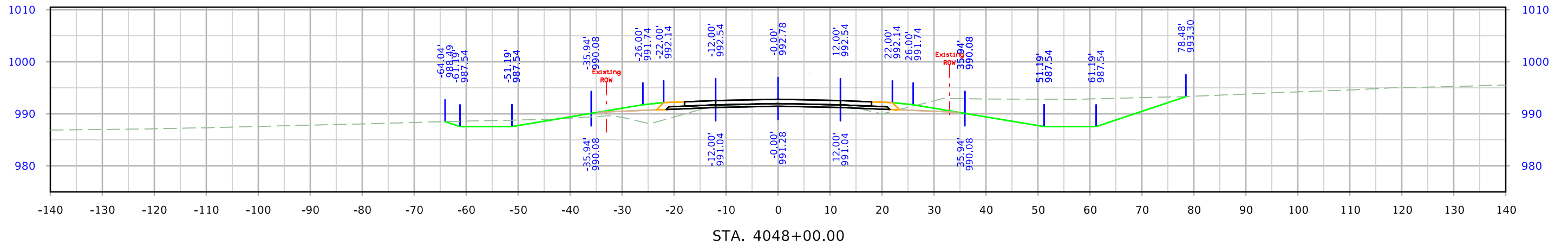
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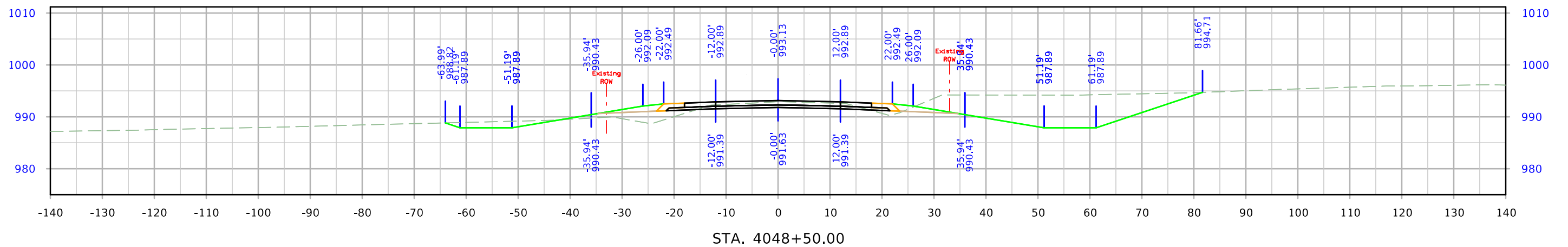
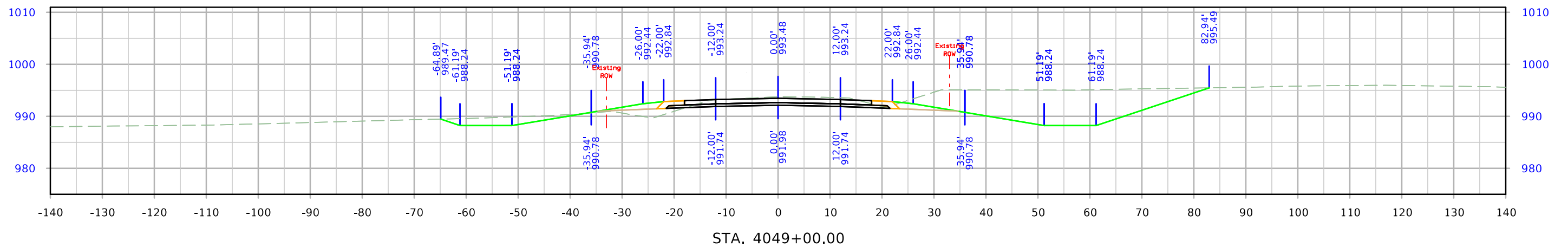
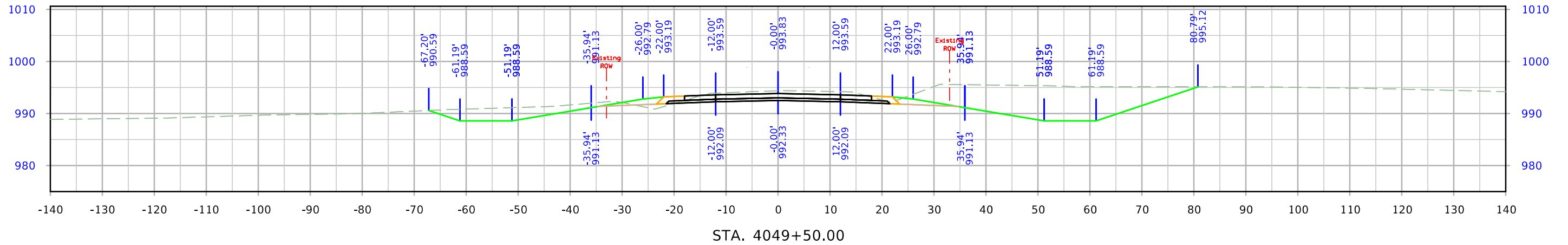
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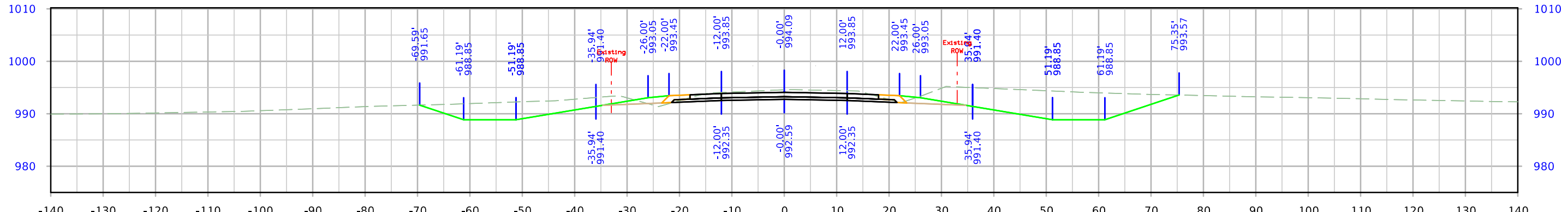
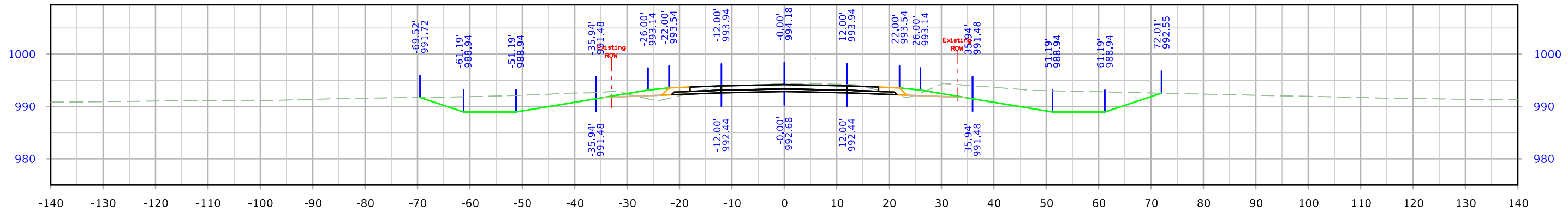
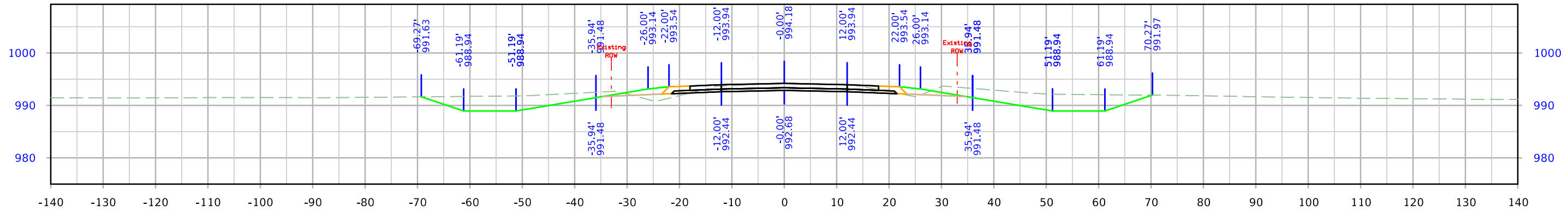
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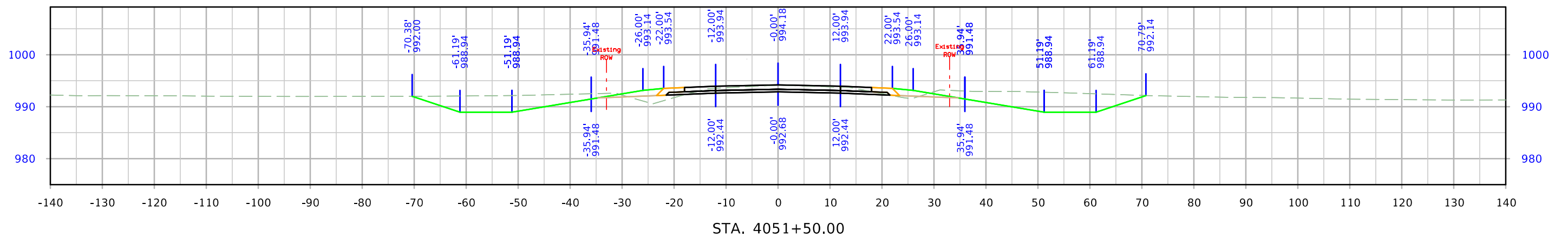
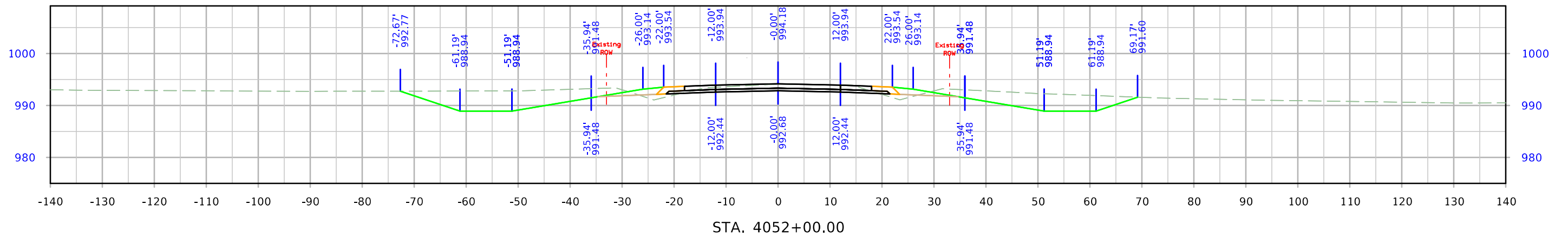
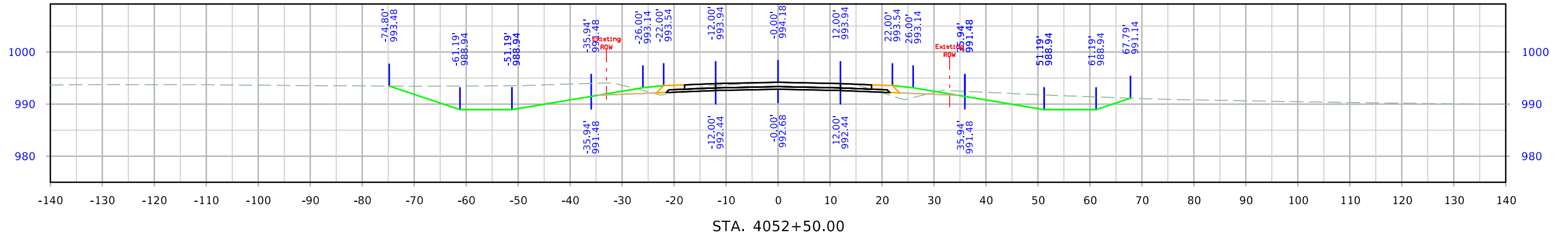
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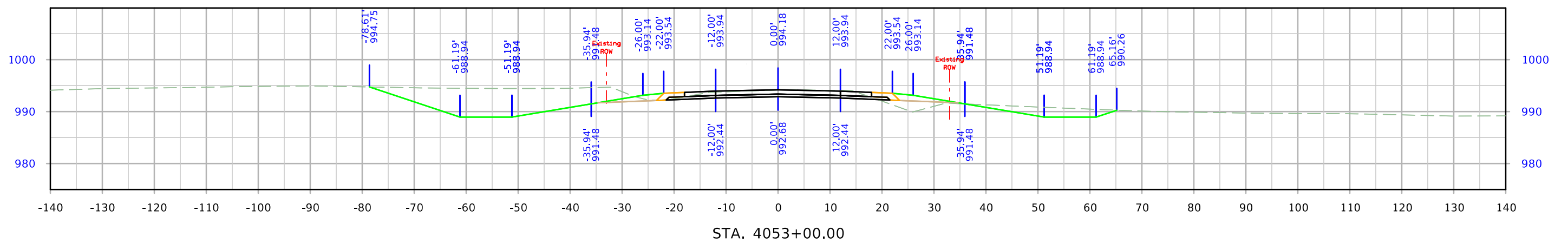
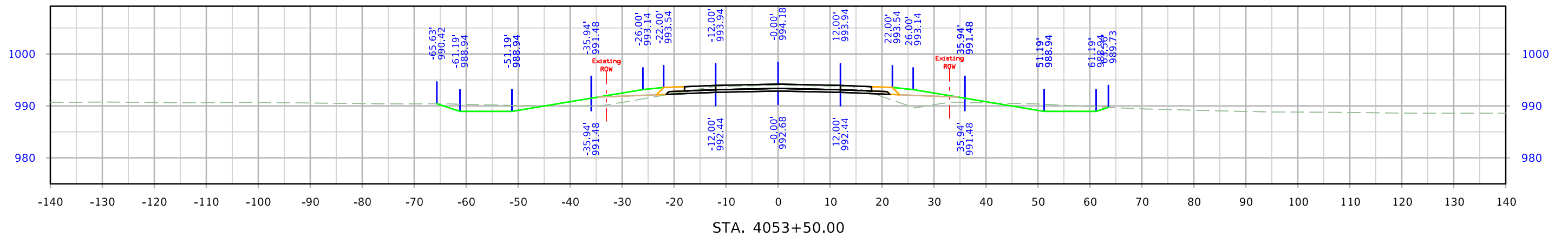
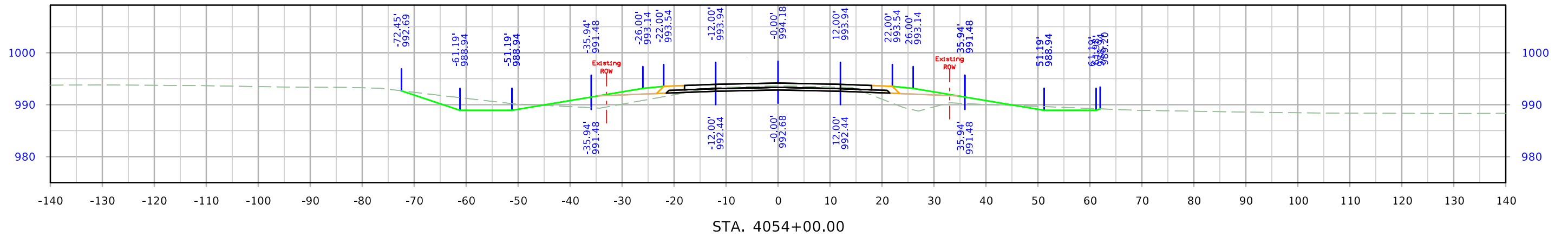
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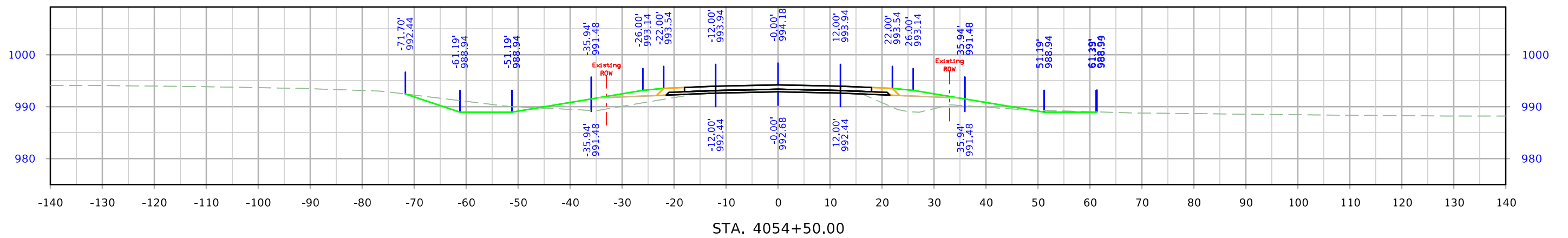
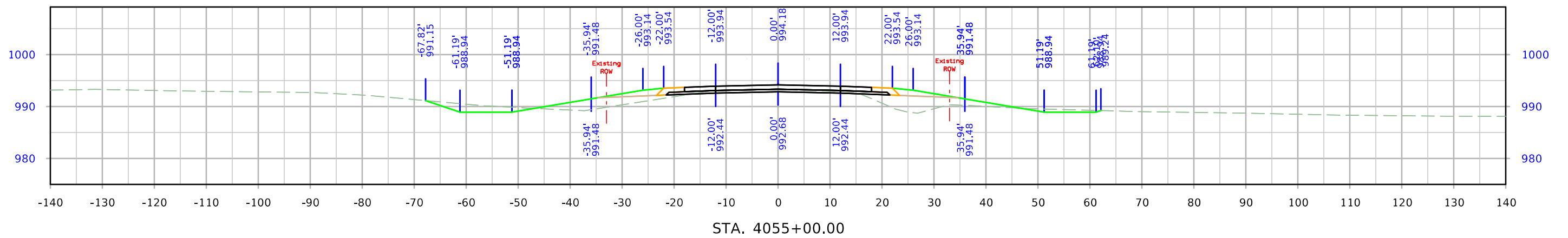
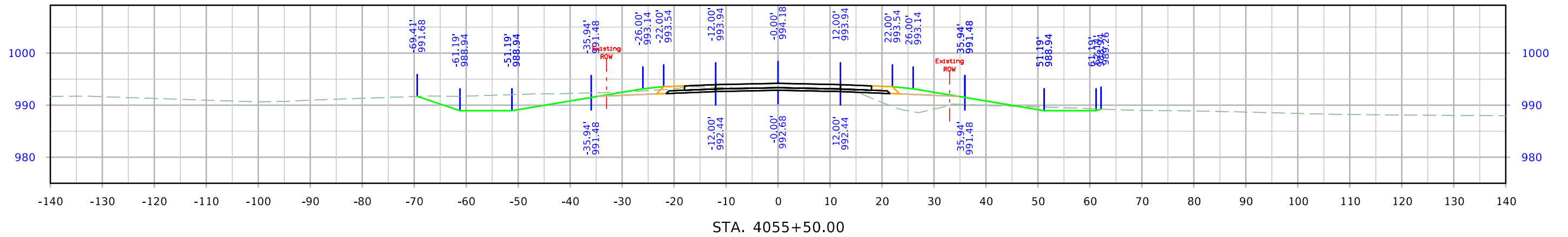
# West Maple



# West Maple

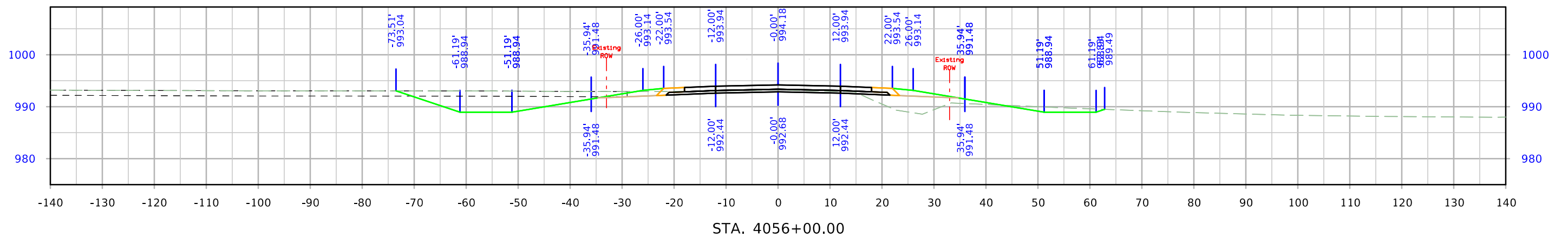
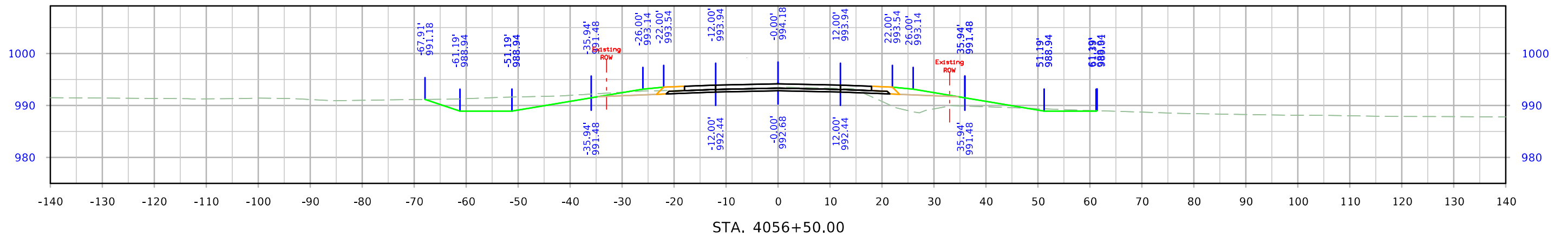
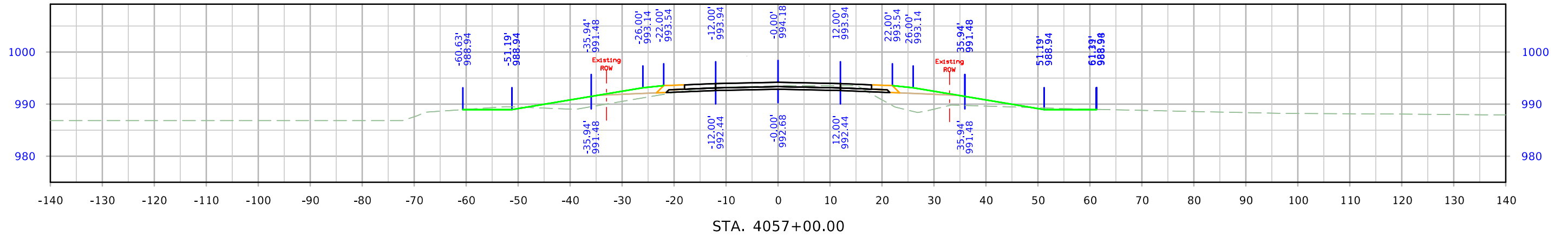


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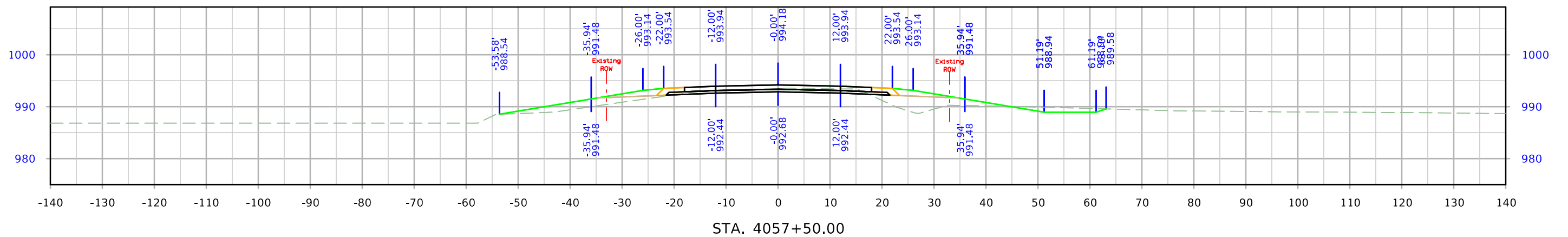
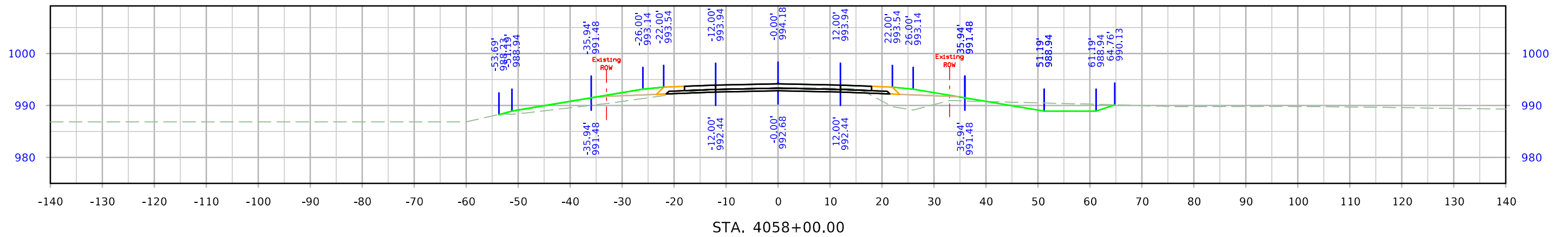
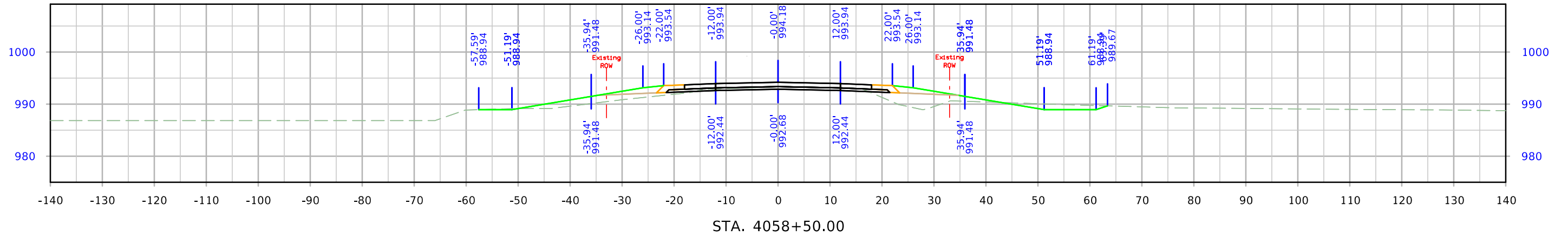




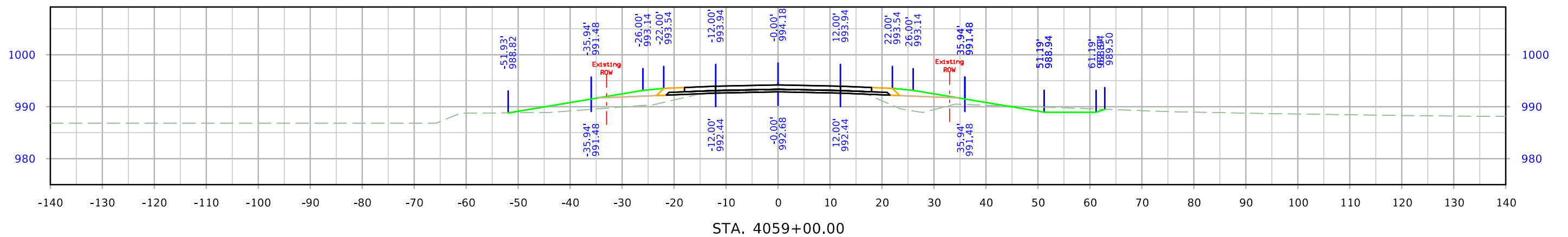
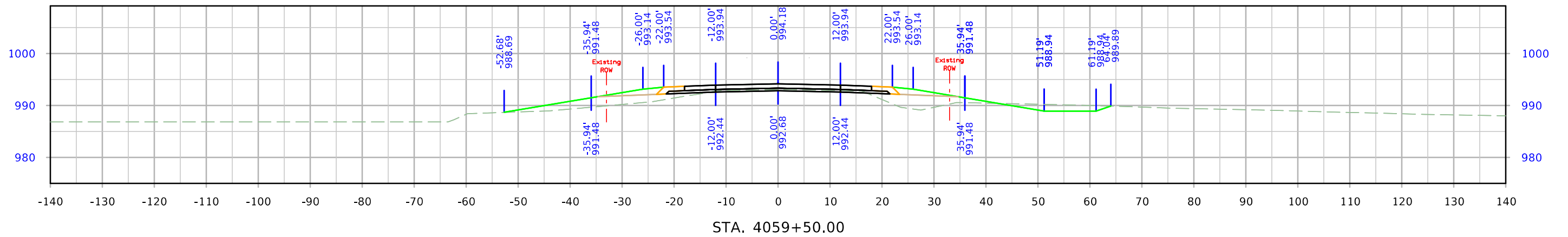
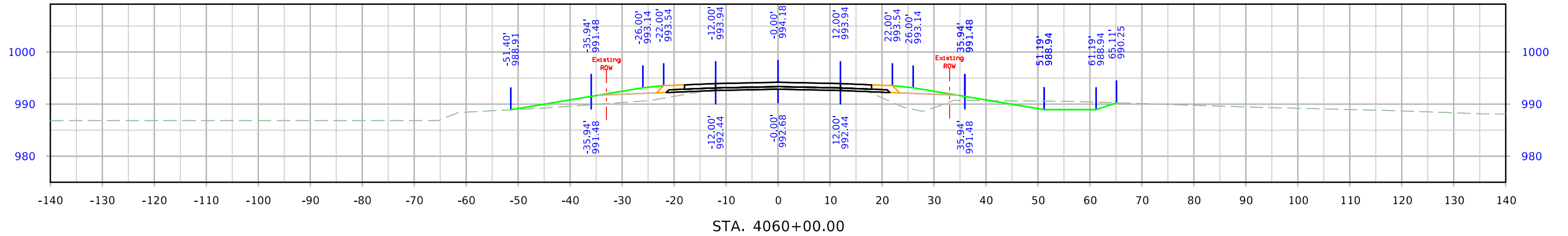
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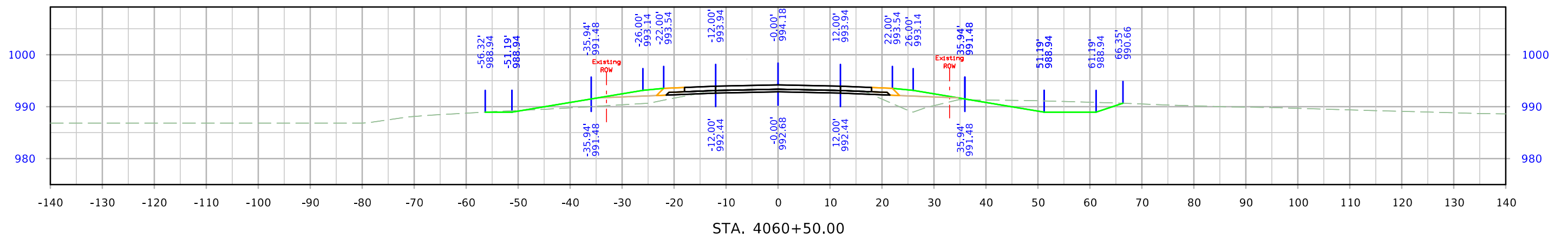
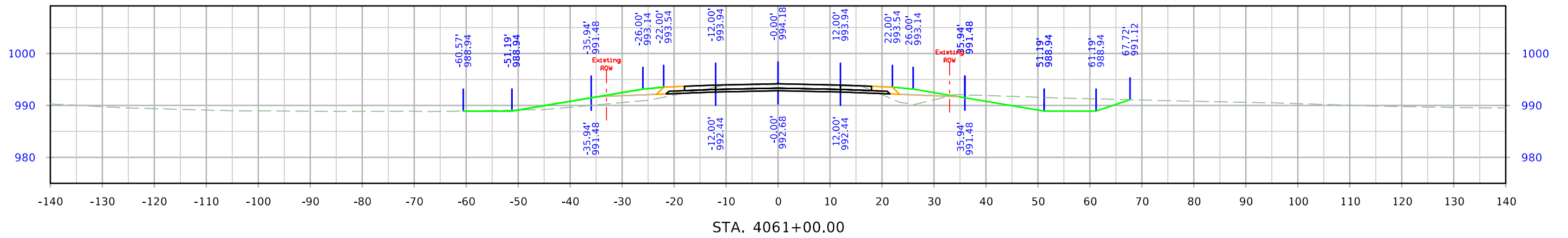
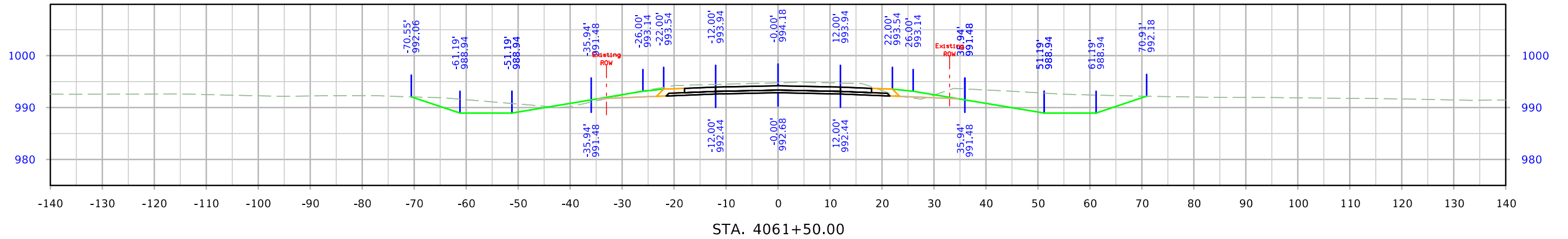
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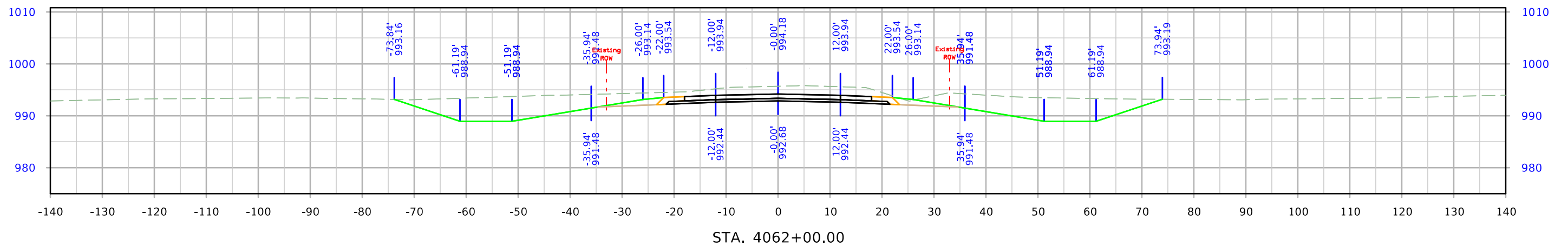
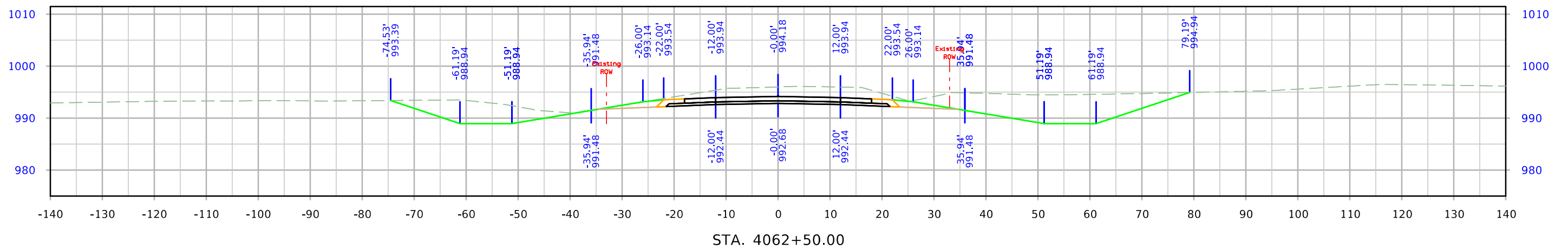
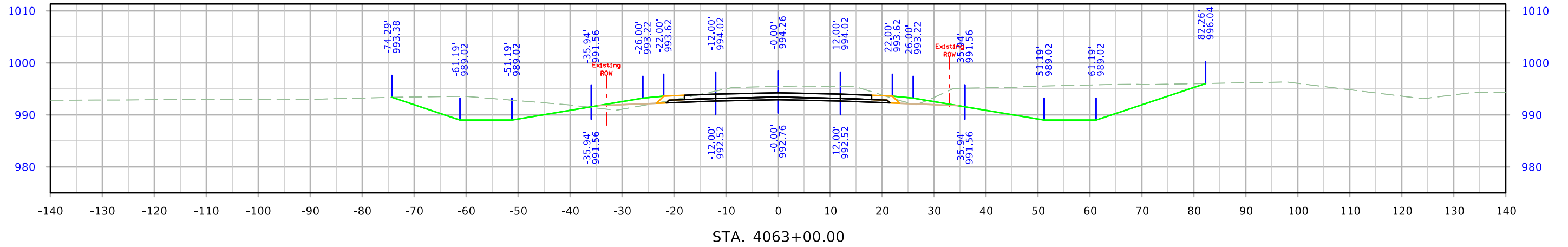
# West Maple



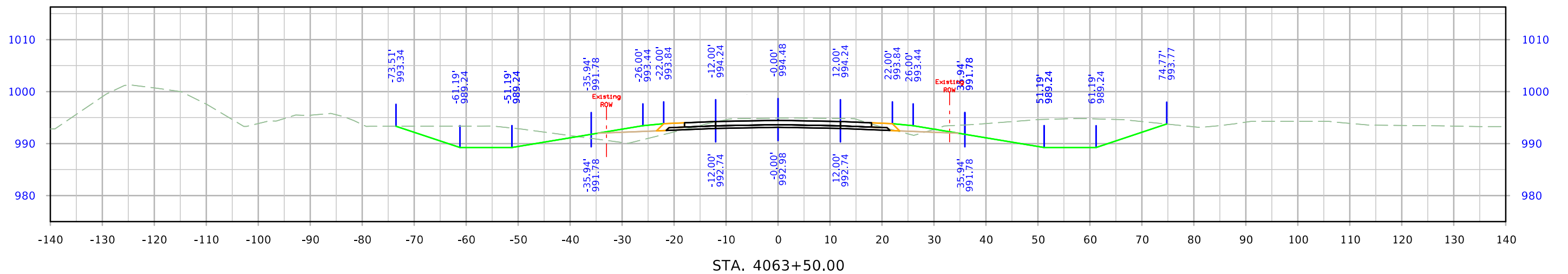
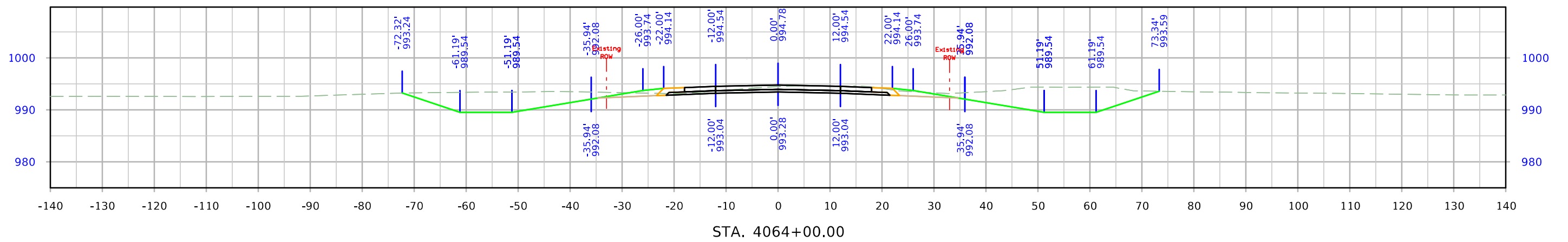
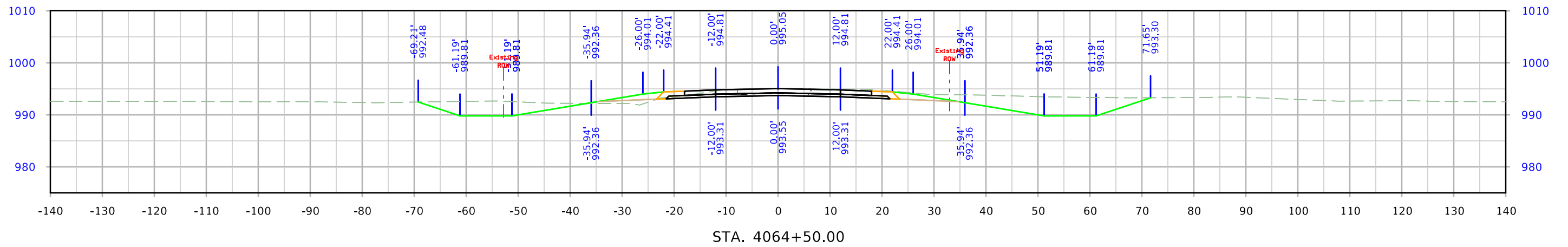
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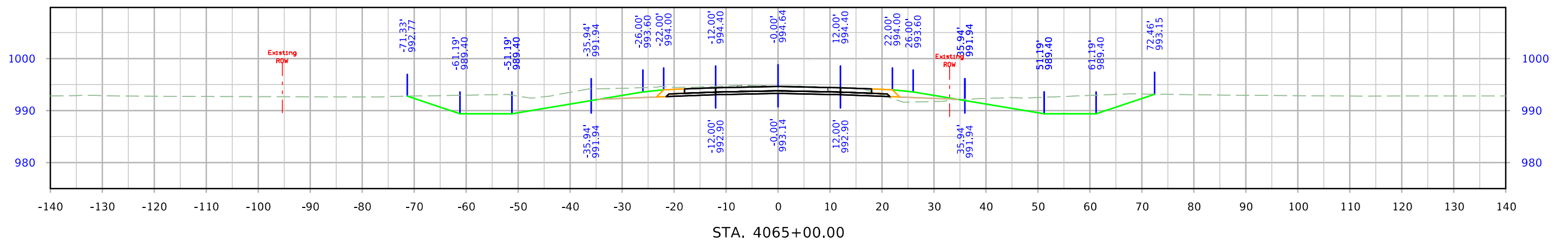
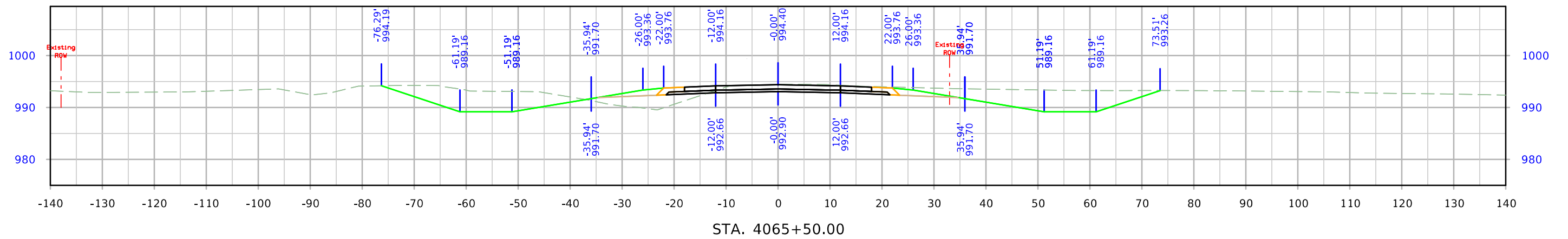
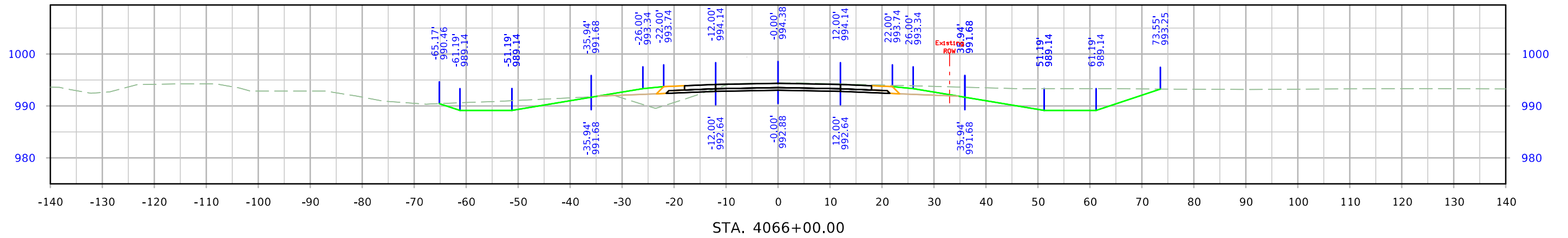
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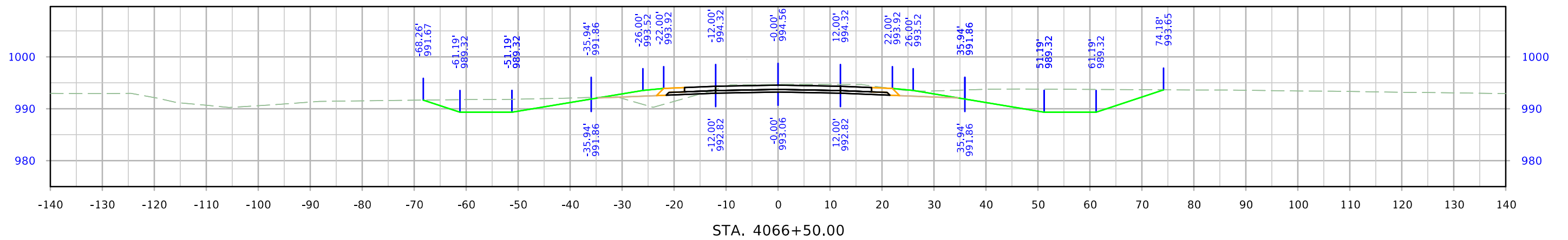
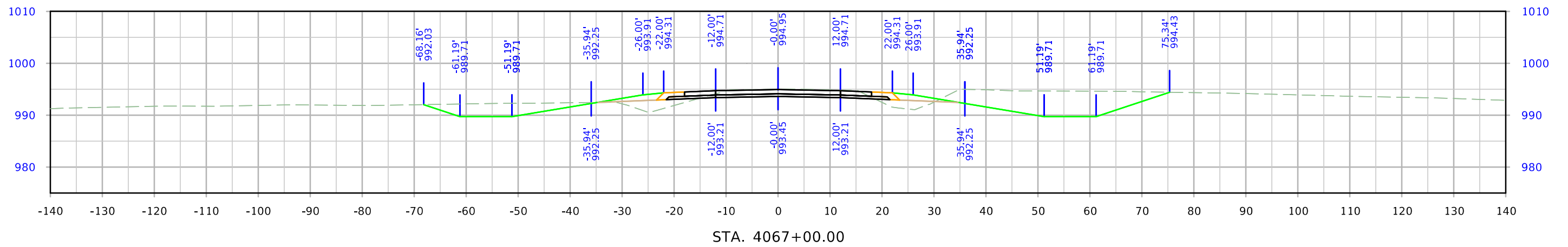
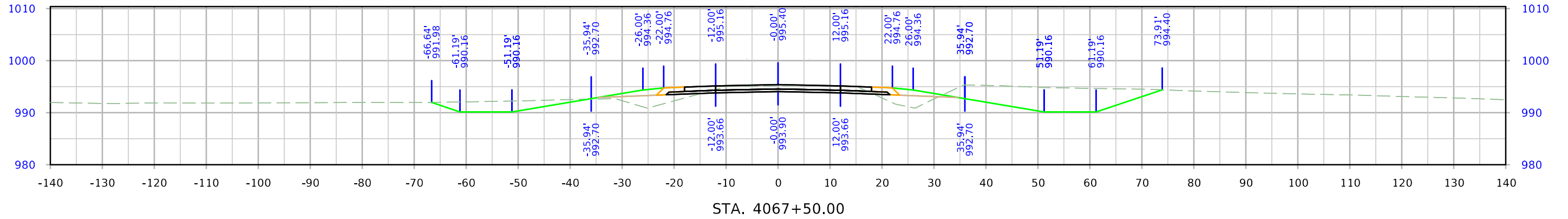
# West Maple



# West Maple

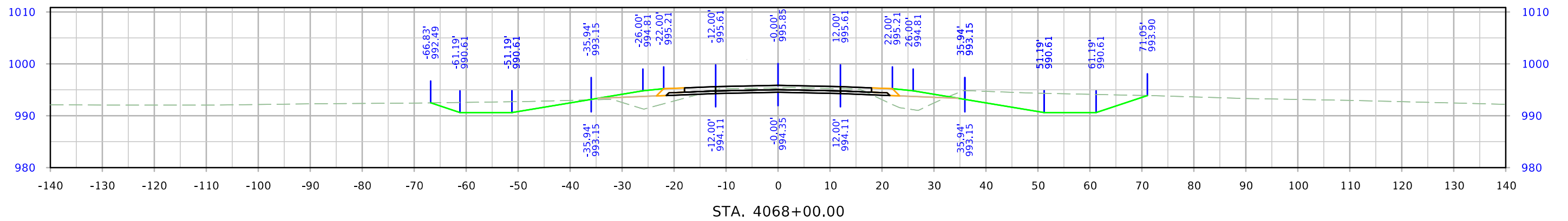
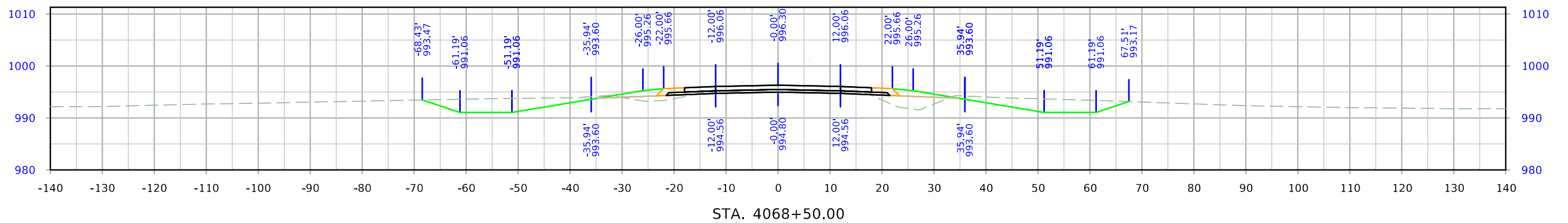
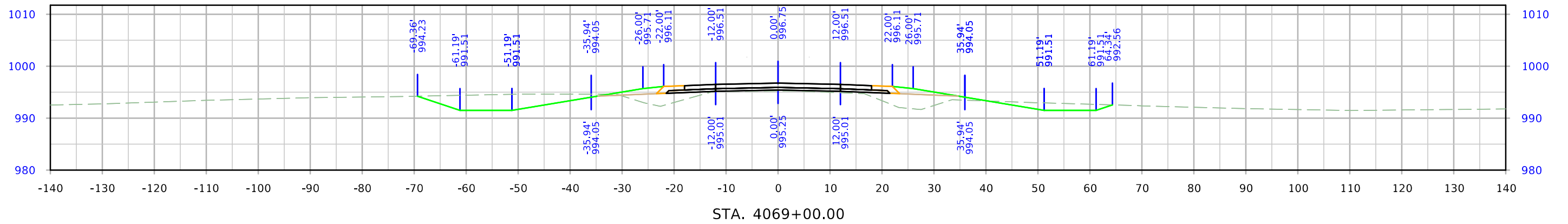


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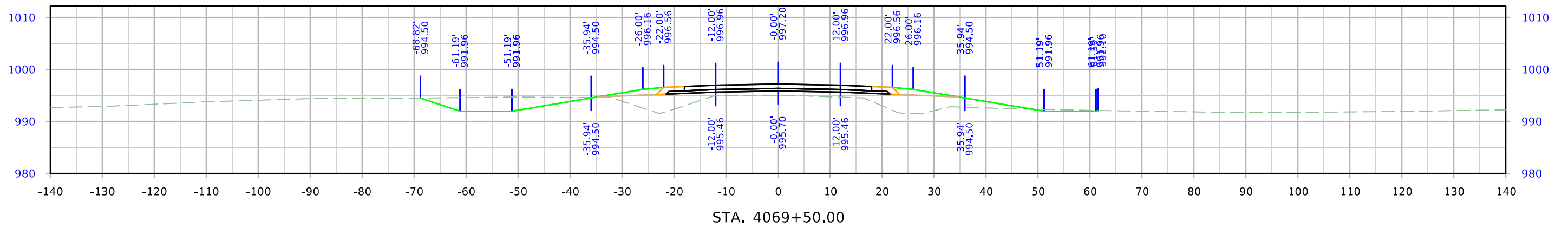
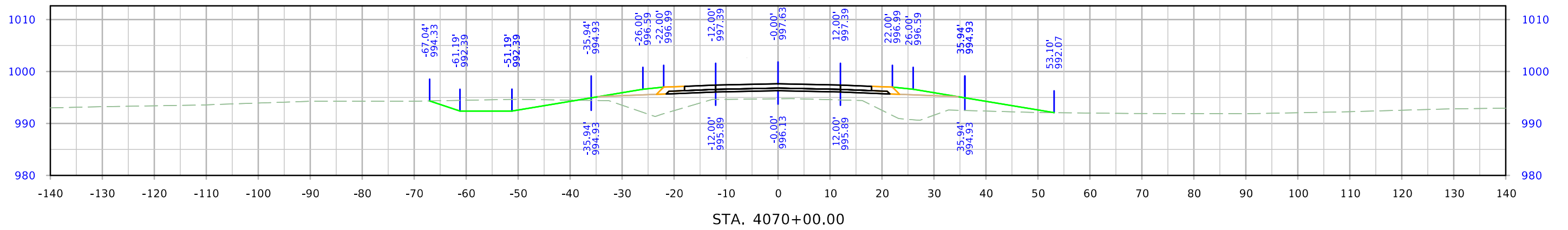
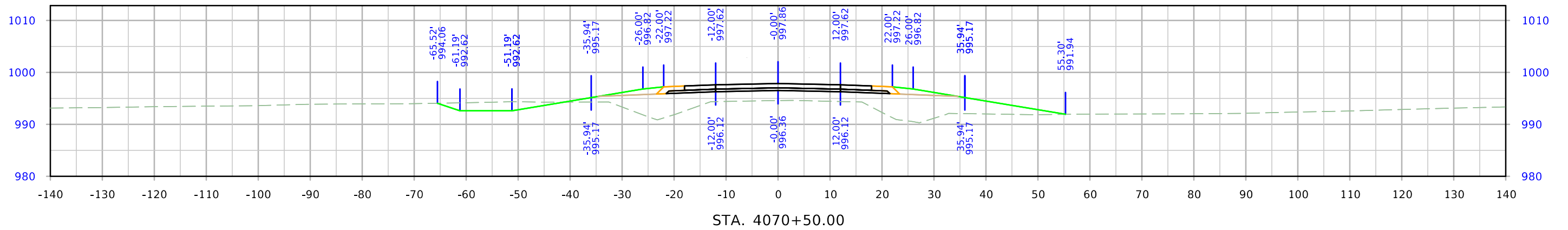




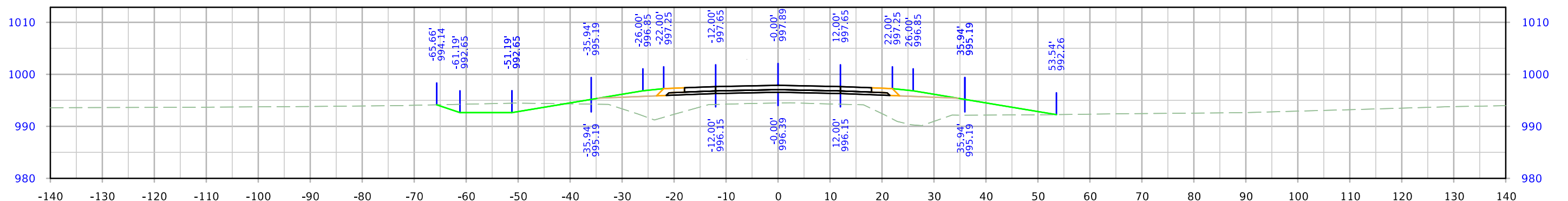
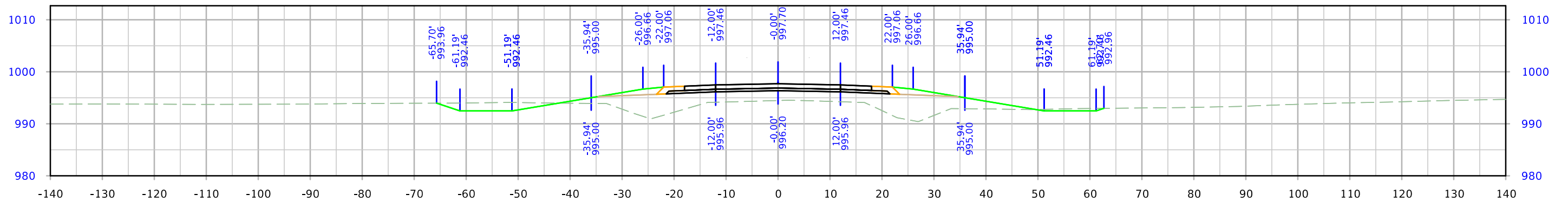
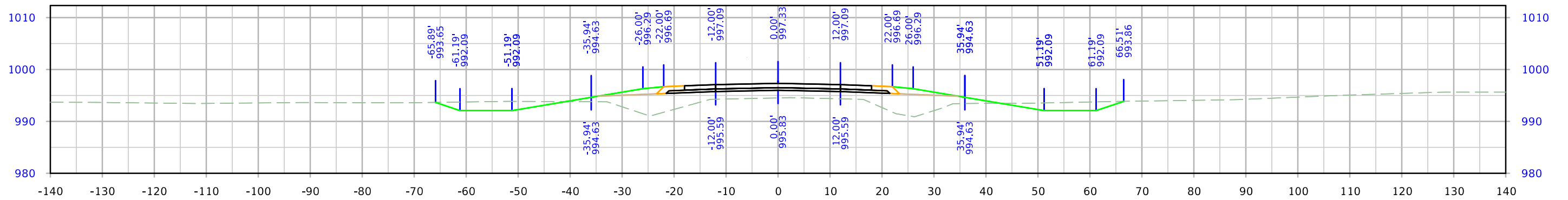
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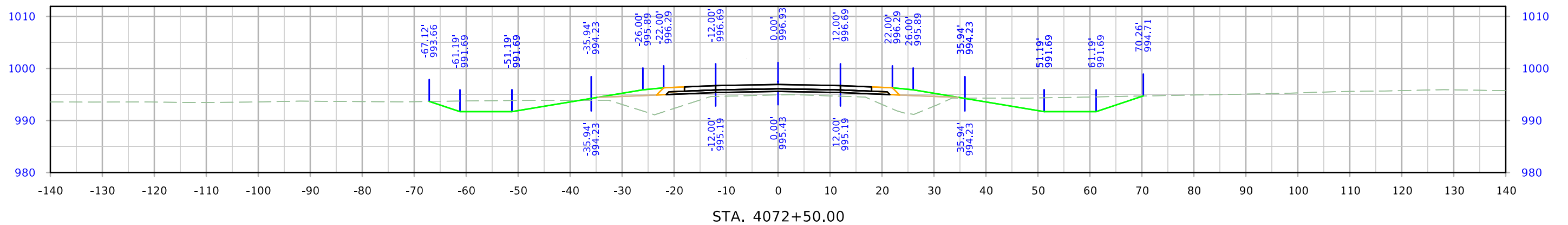
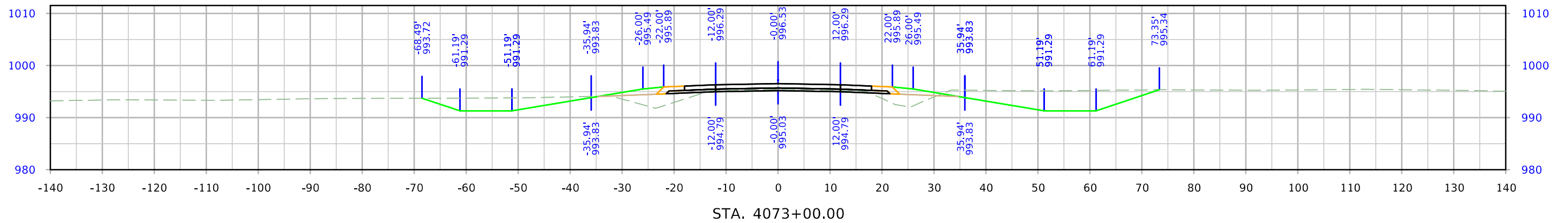
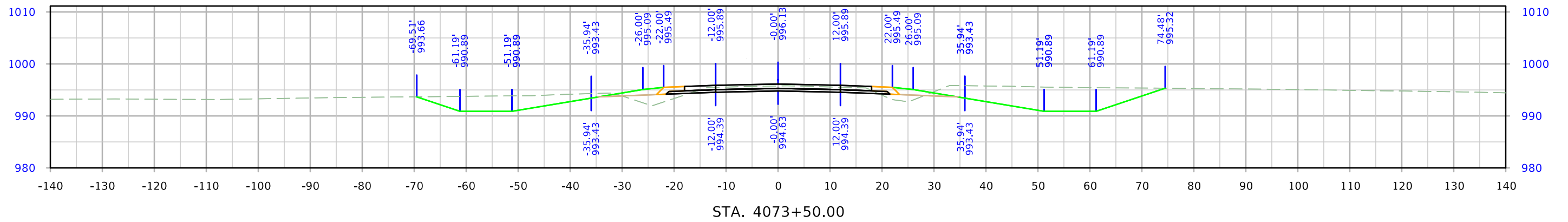
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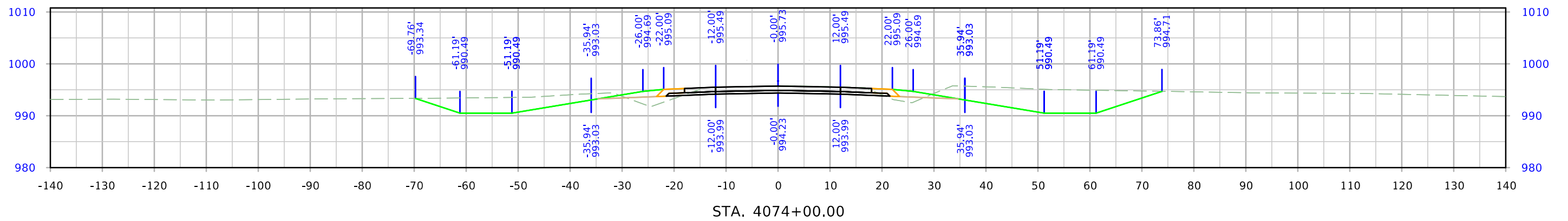
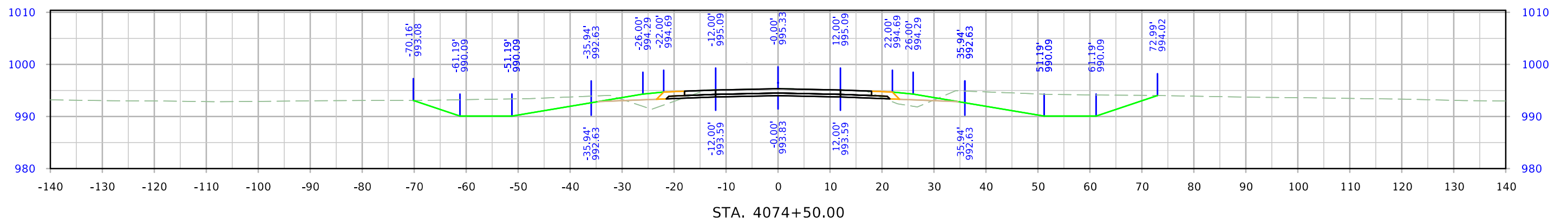
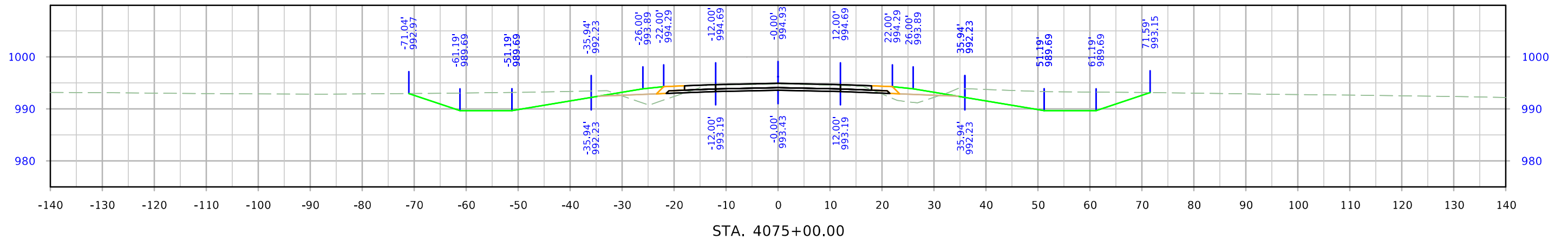
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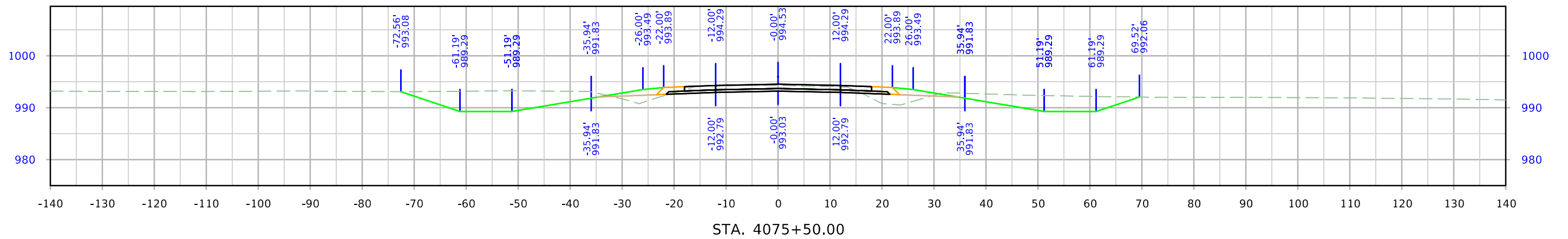
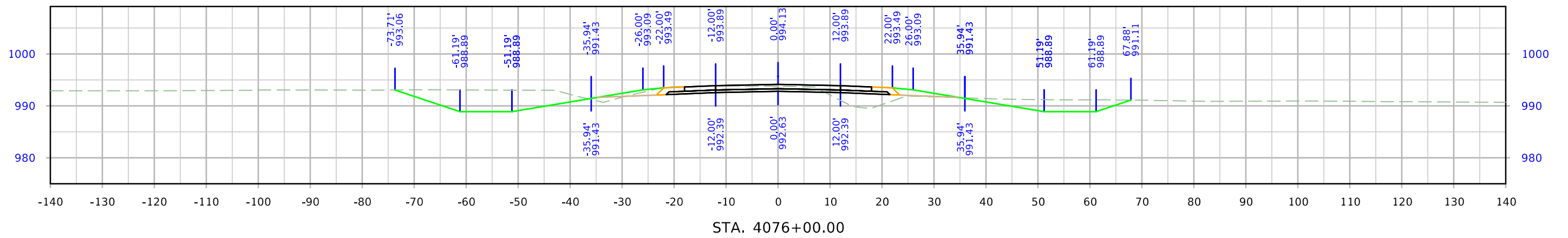
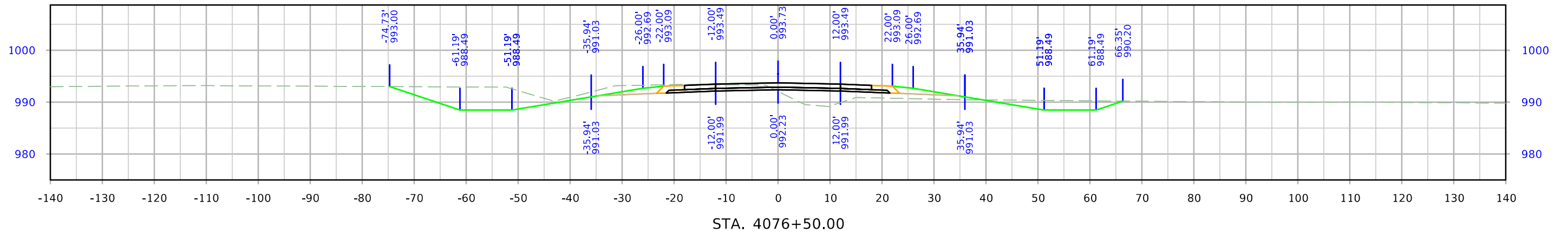
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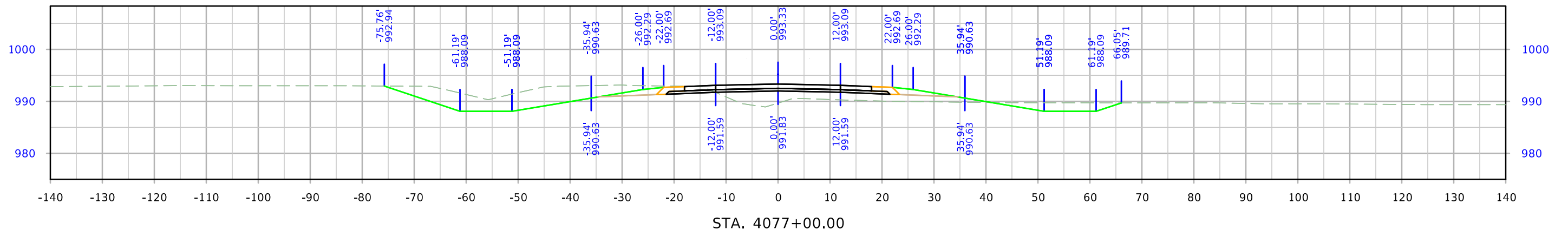
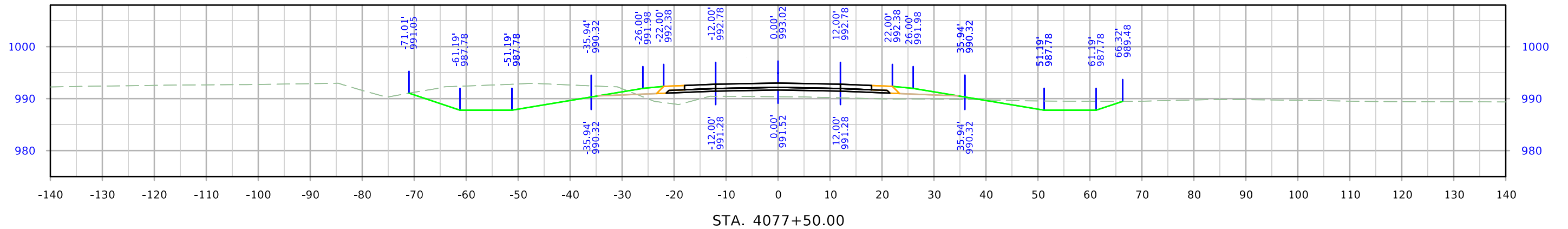
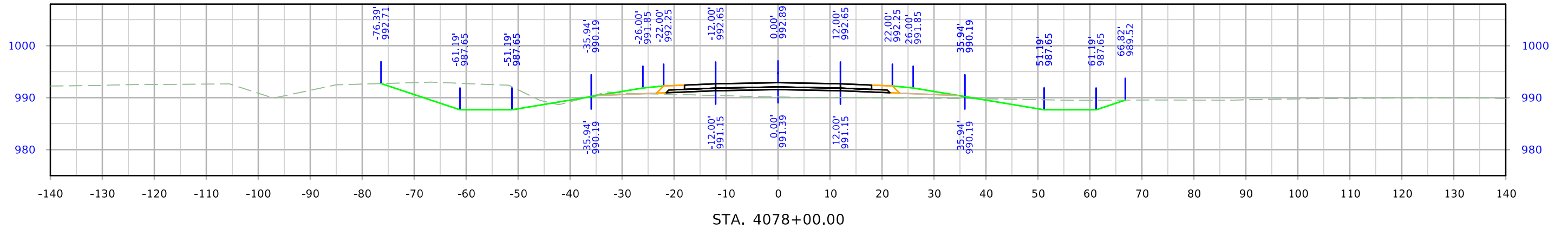
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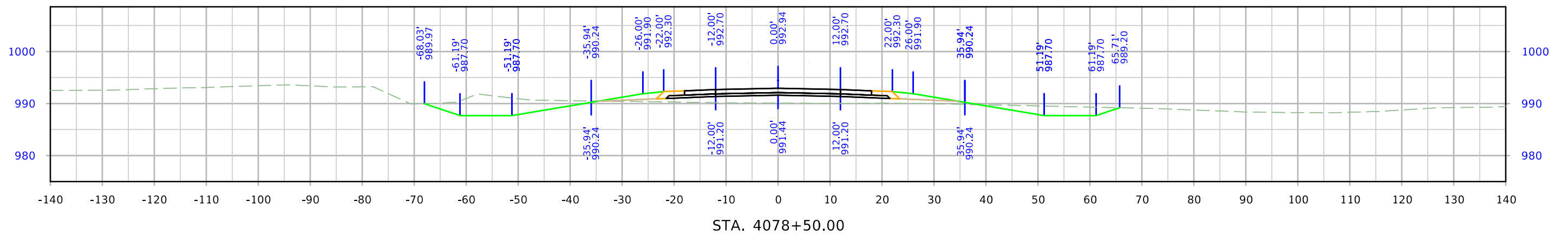
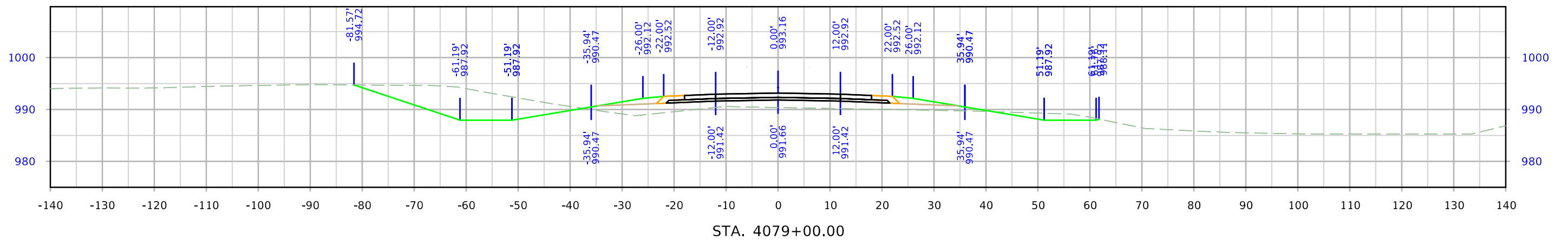
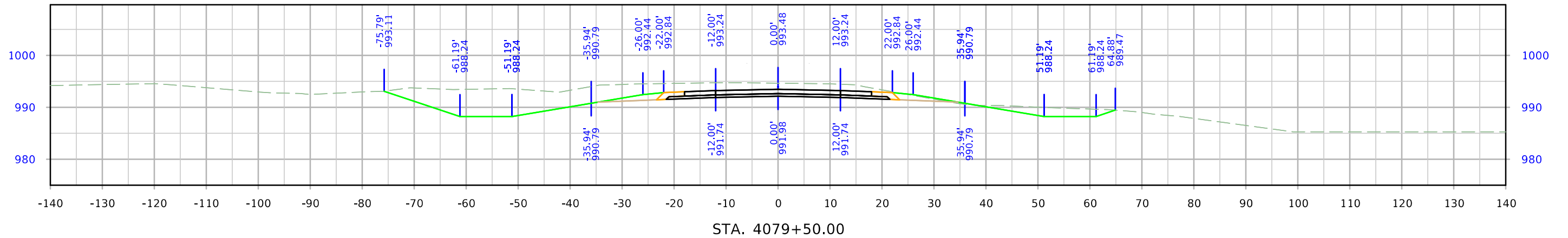
# West Maple



# West Maple

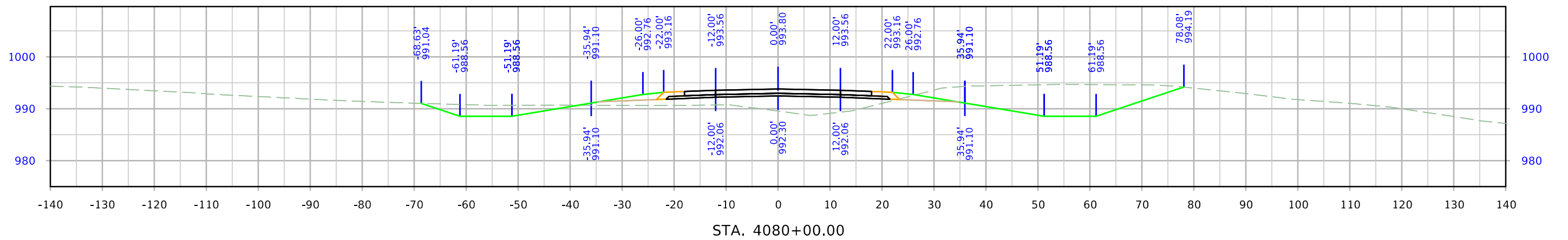
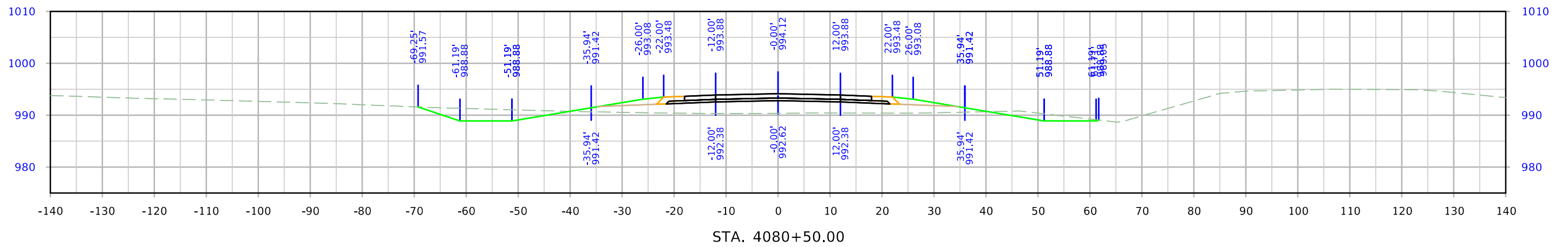
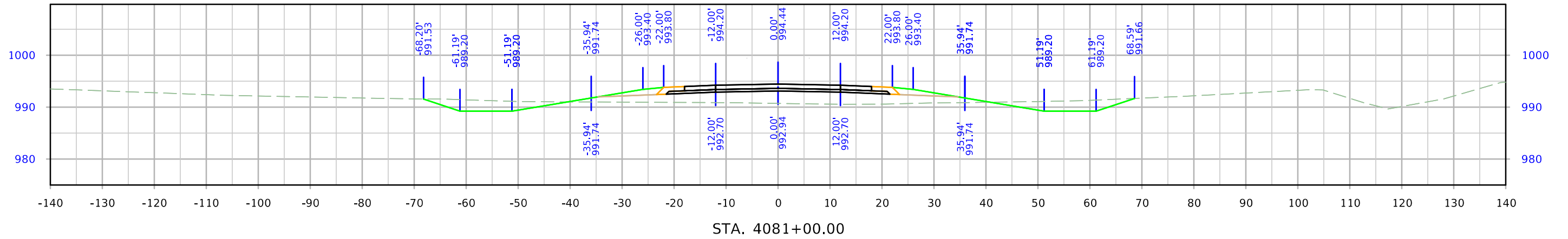


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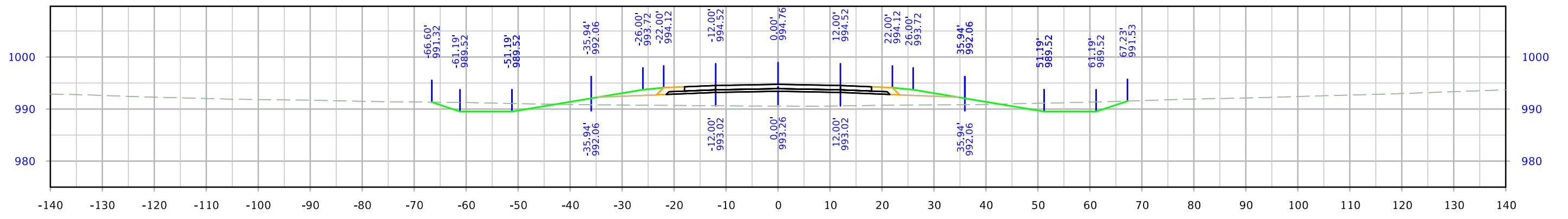
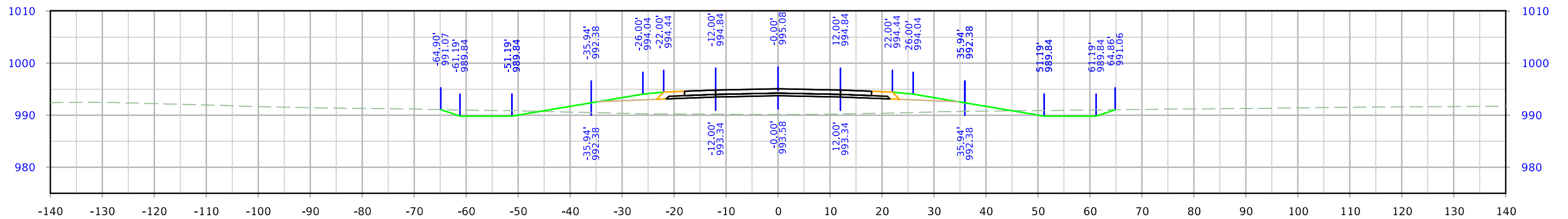
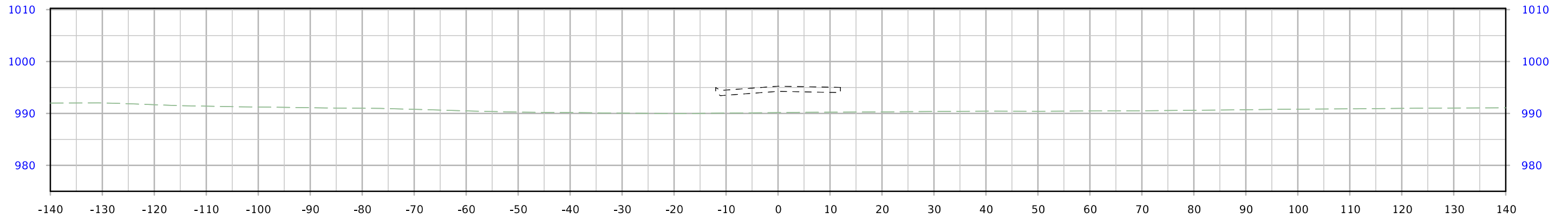




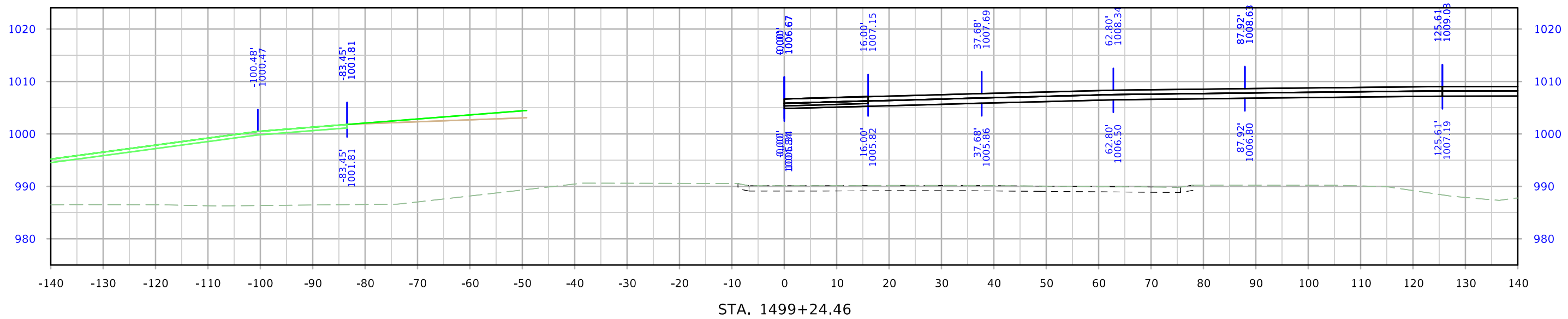
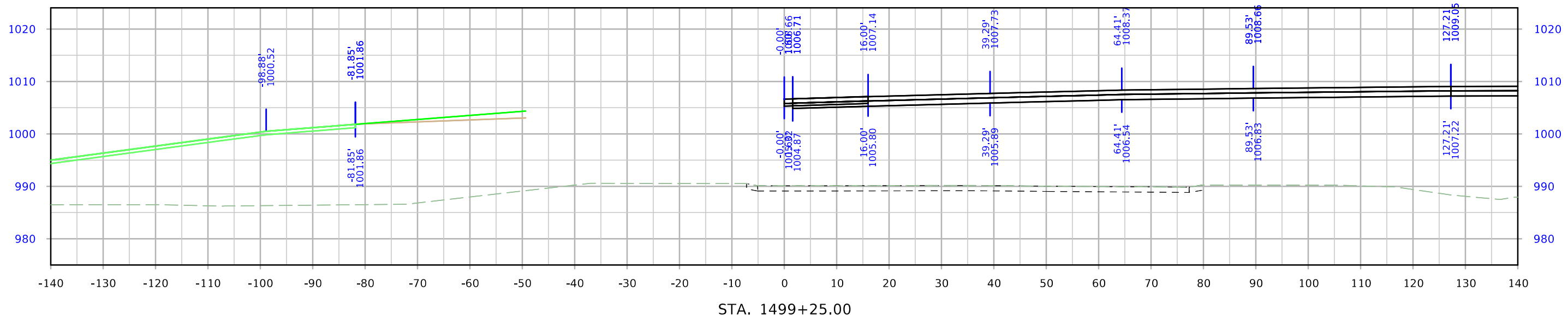
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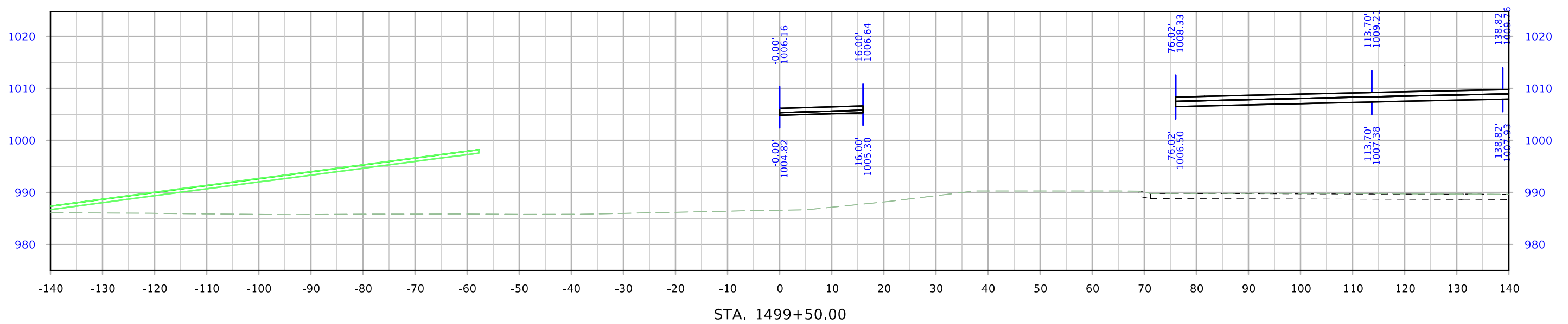
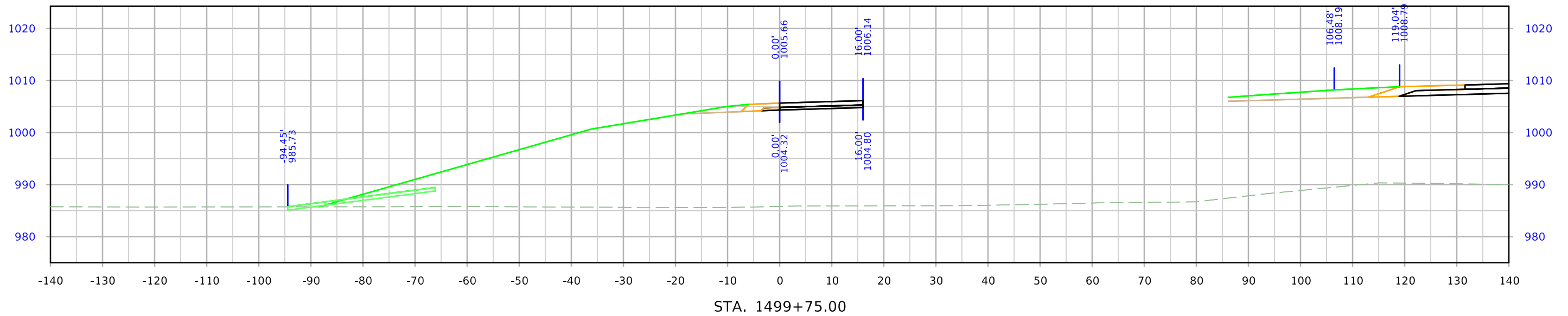
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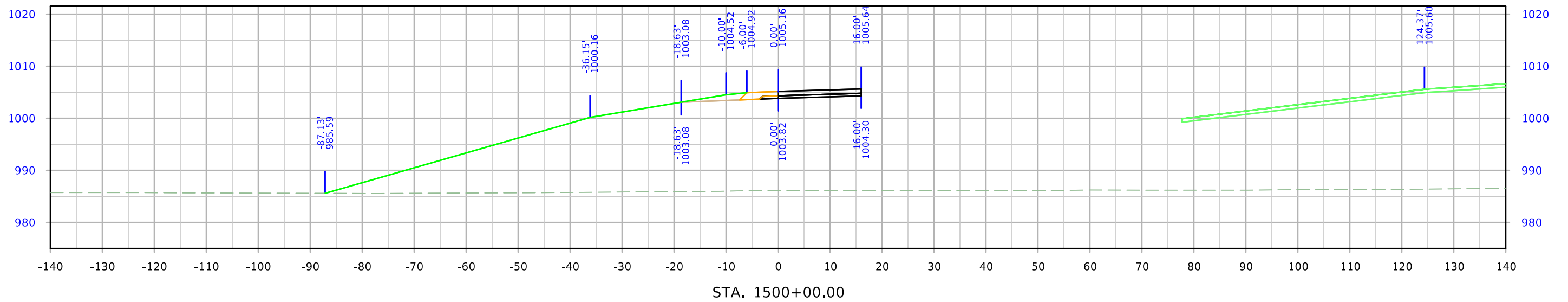
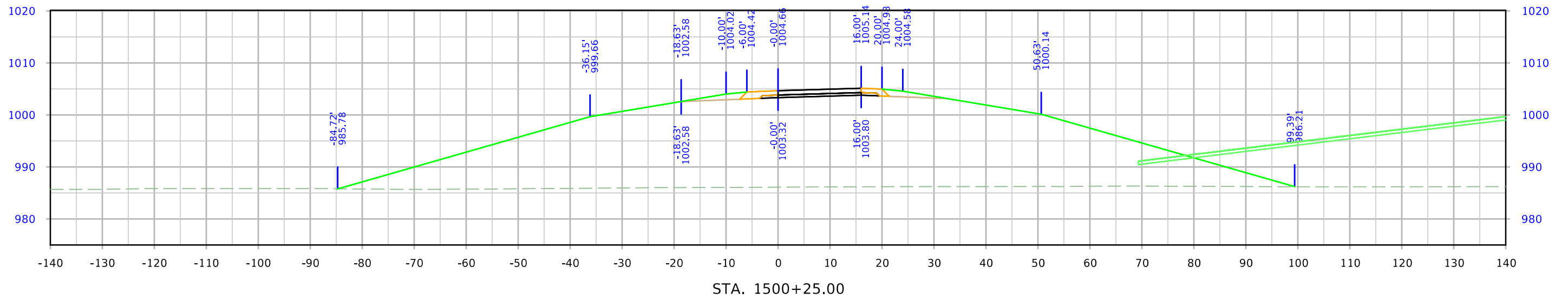
# 610th Ramp A



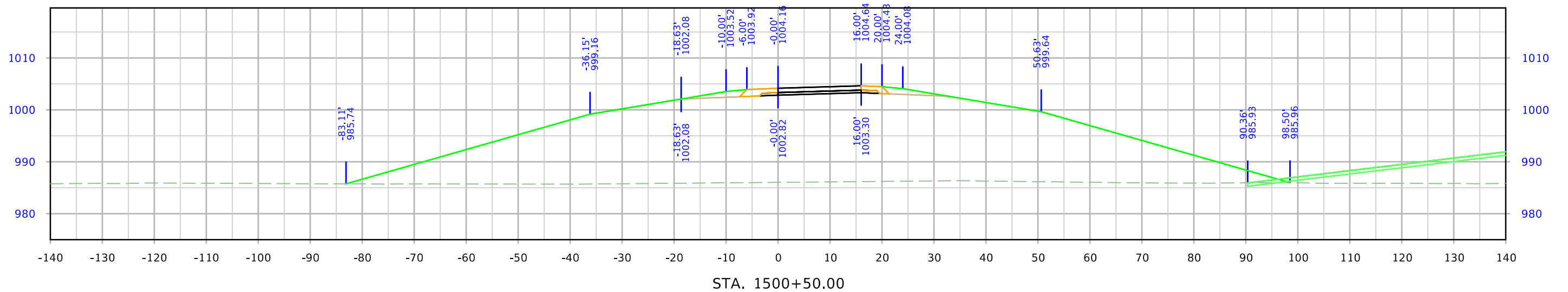
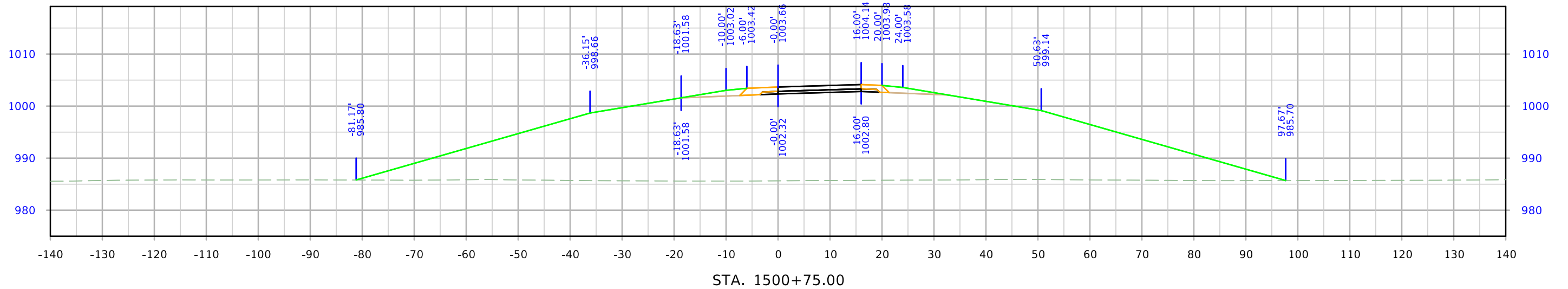
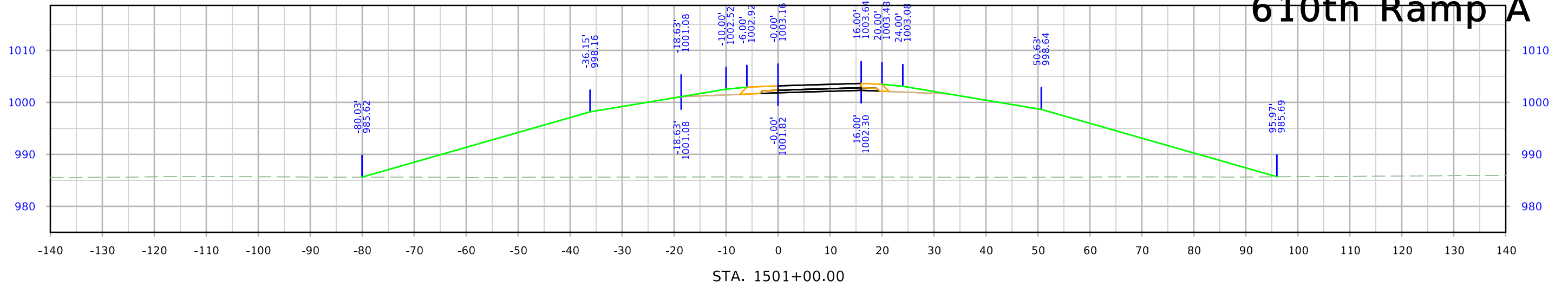
# 610th Ramp A



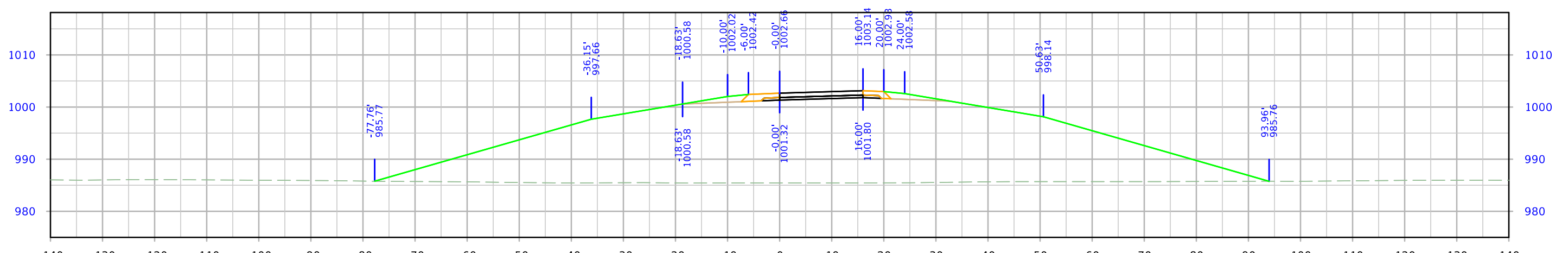
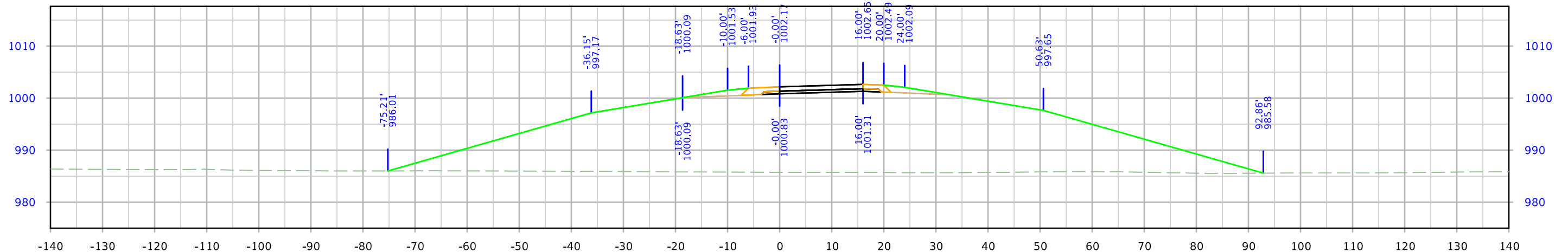
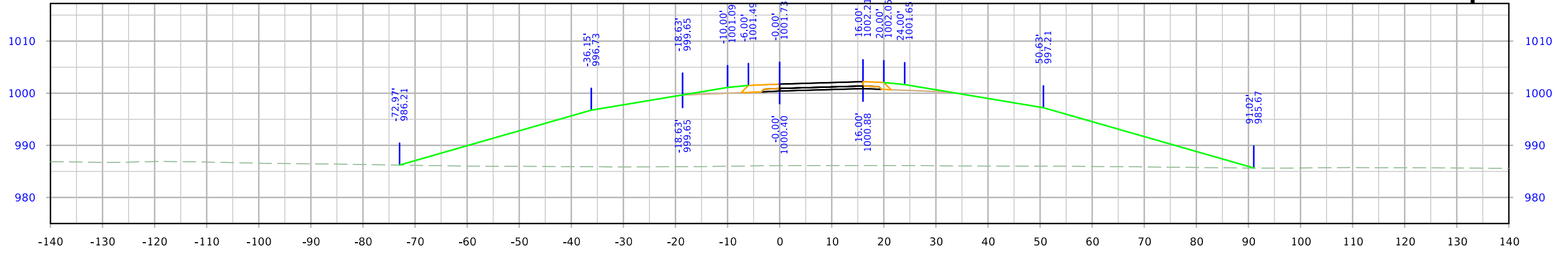
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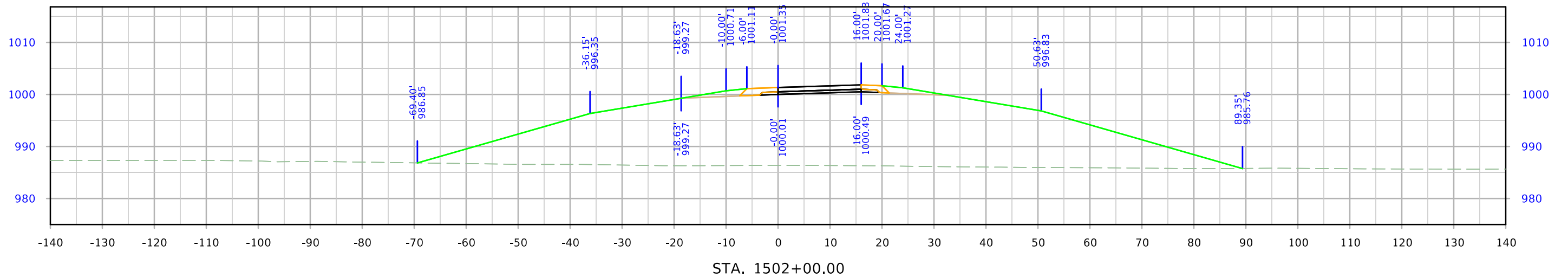
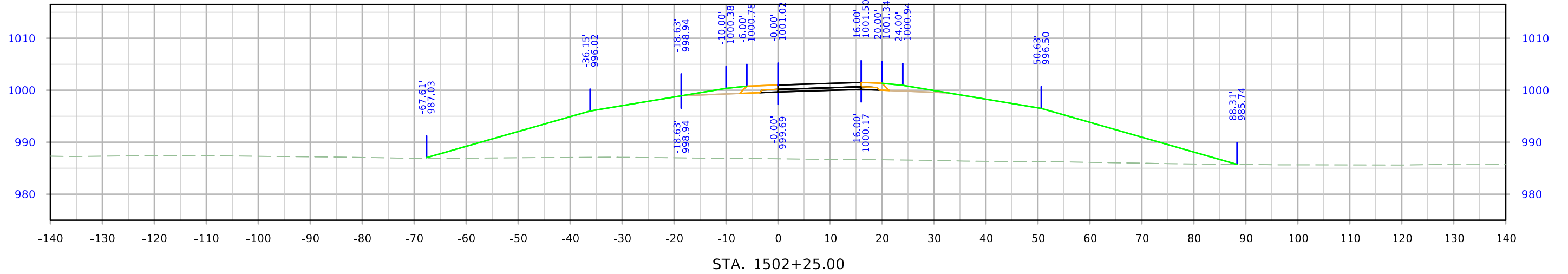
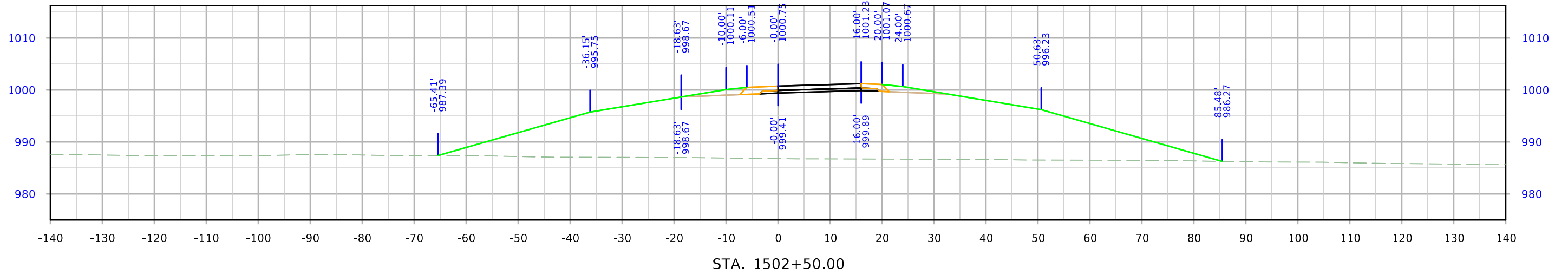
# 610th Ramp A



# 610th Ramp A

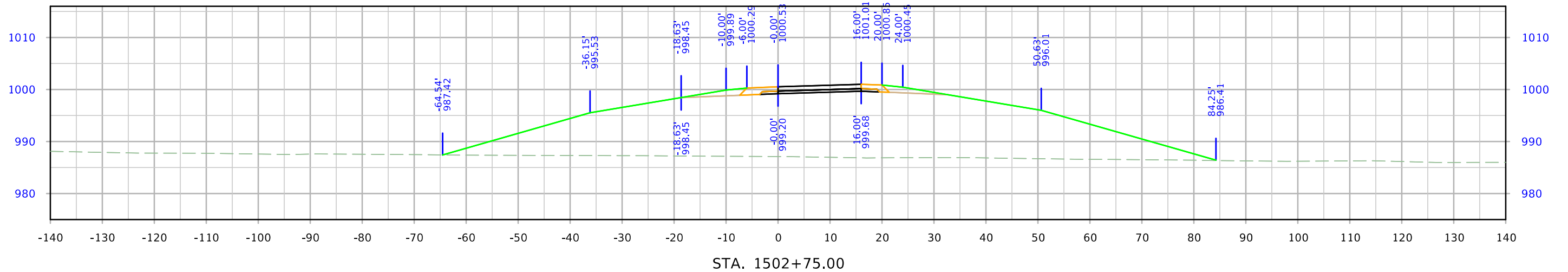
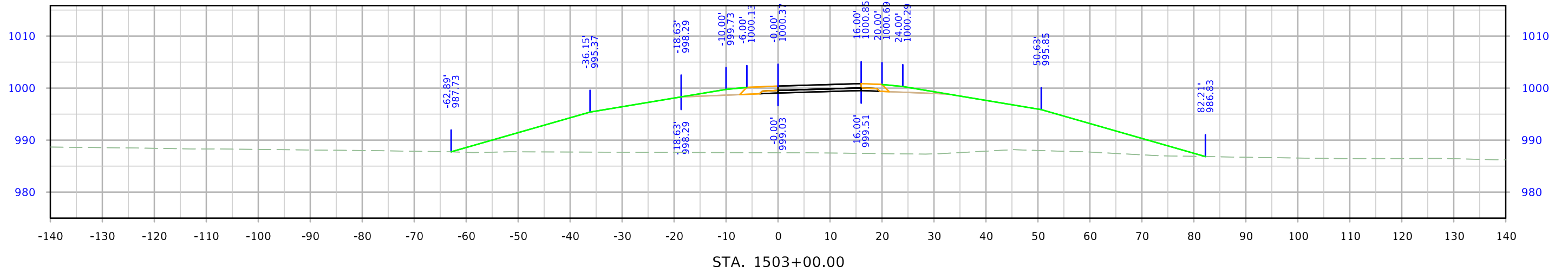
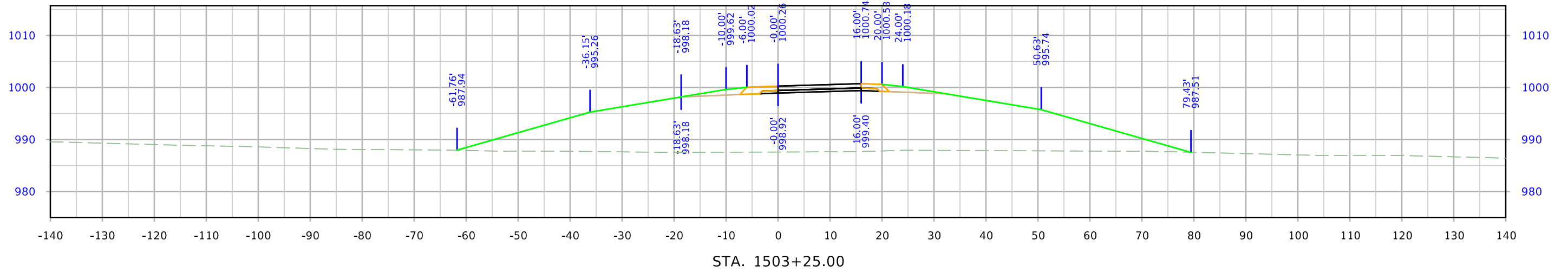


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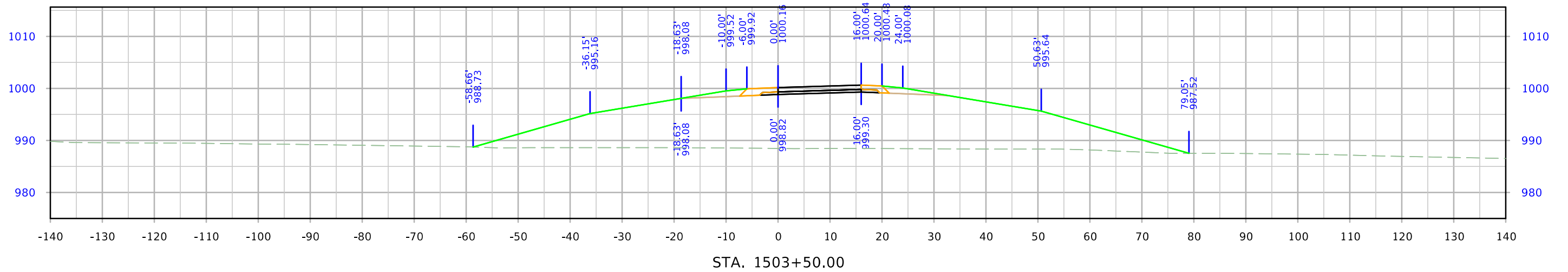
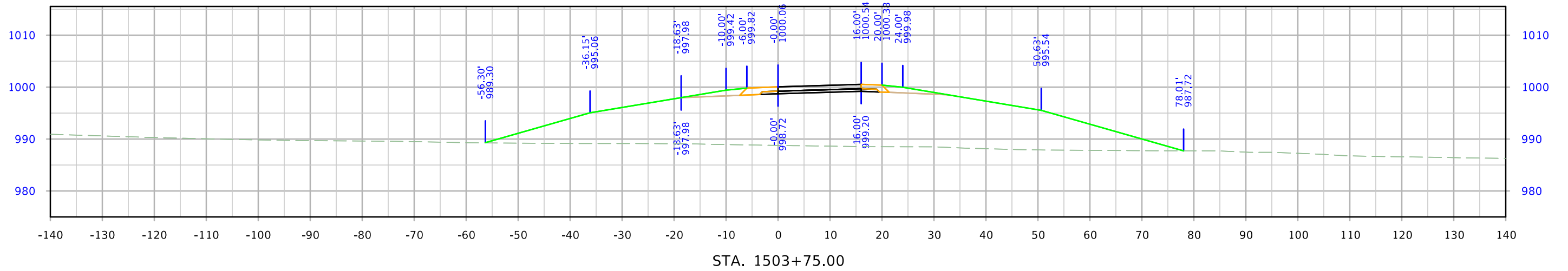
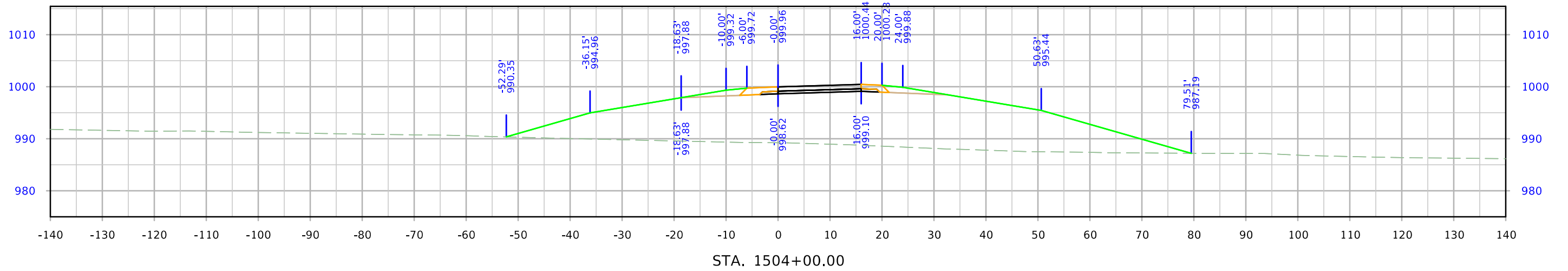




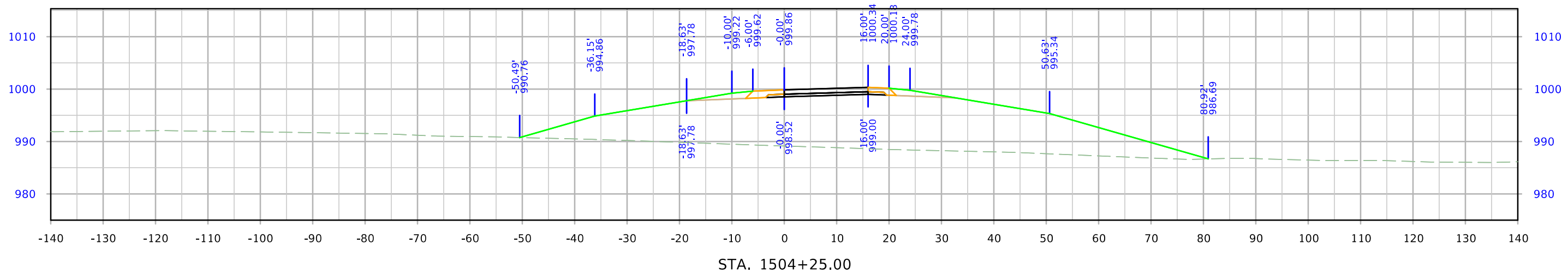
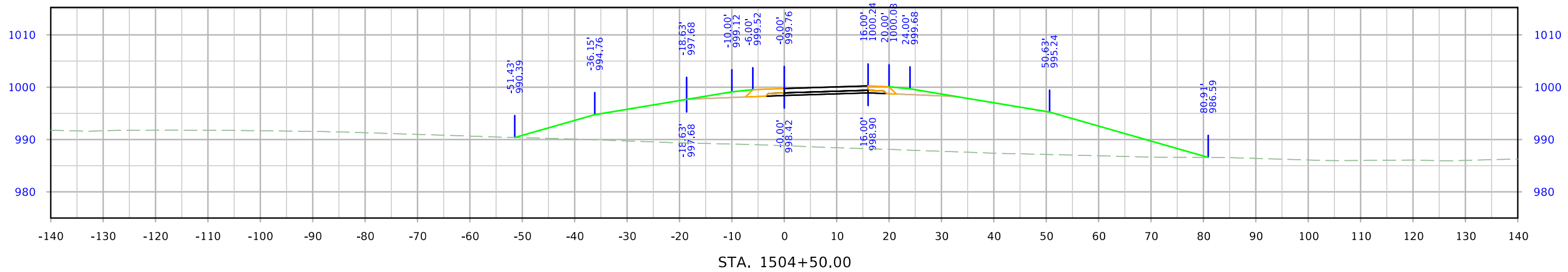
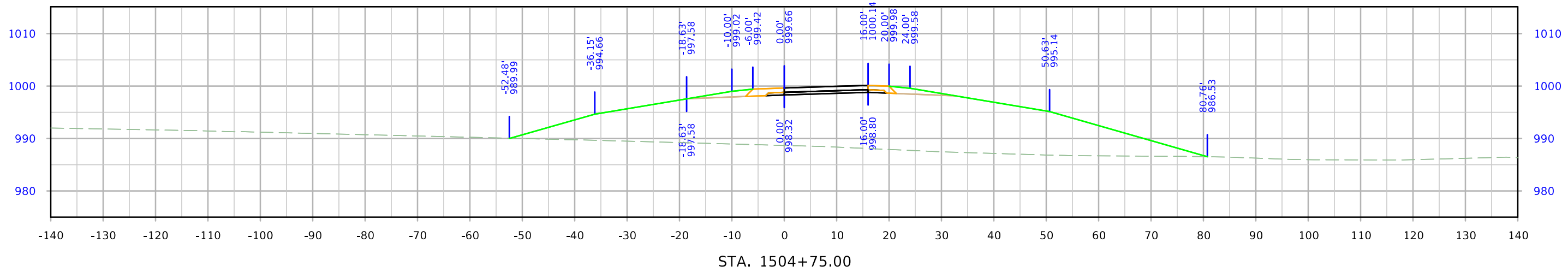
# 610th Ramp A



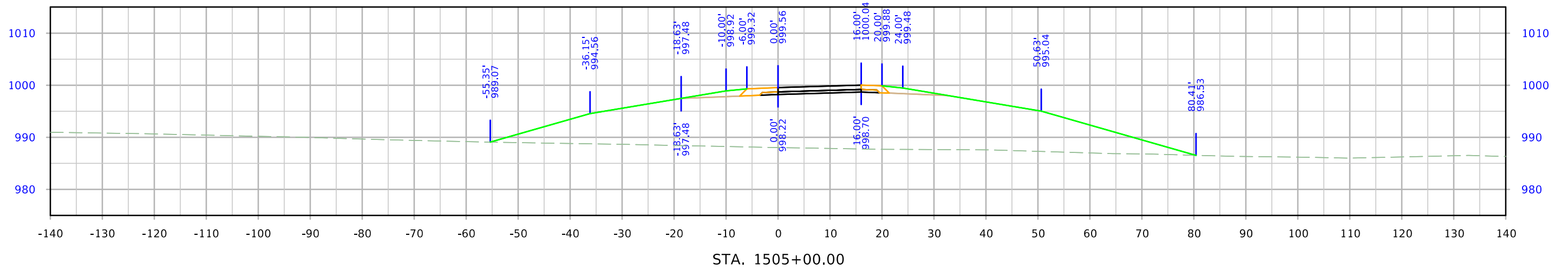
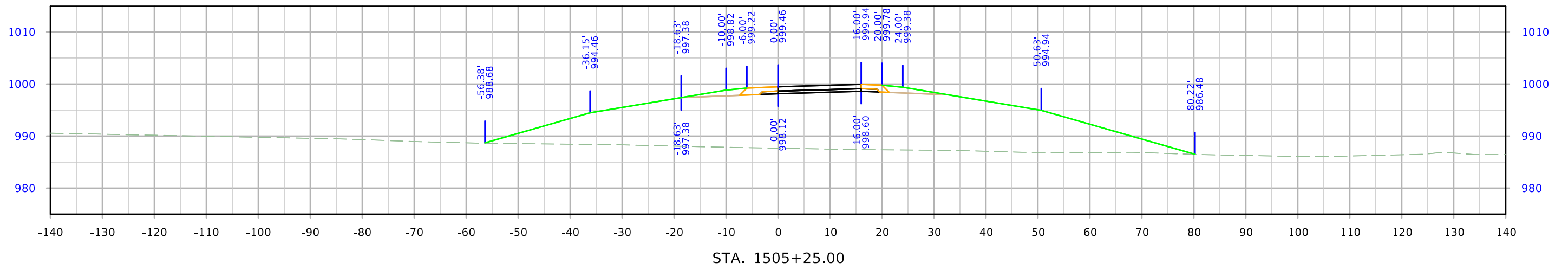
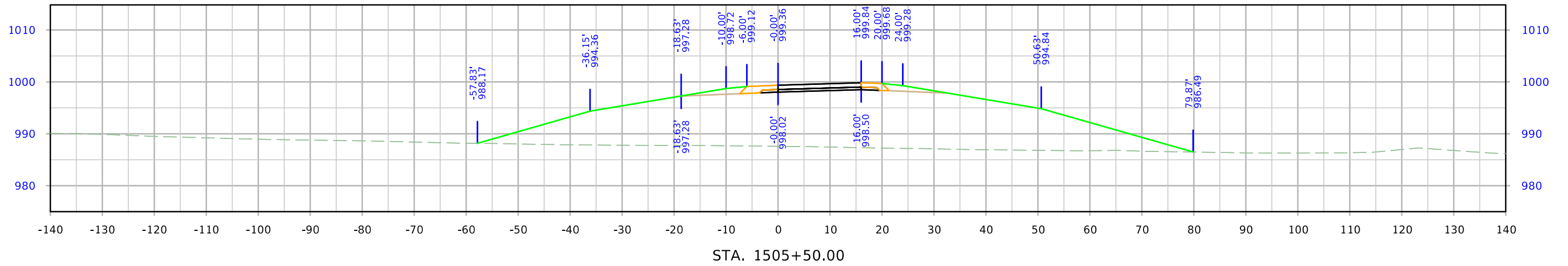
# 610th Ramp A



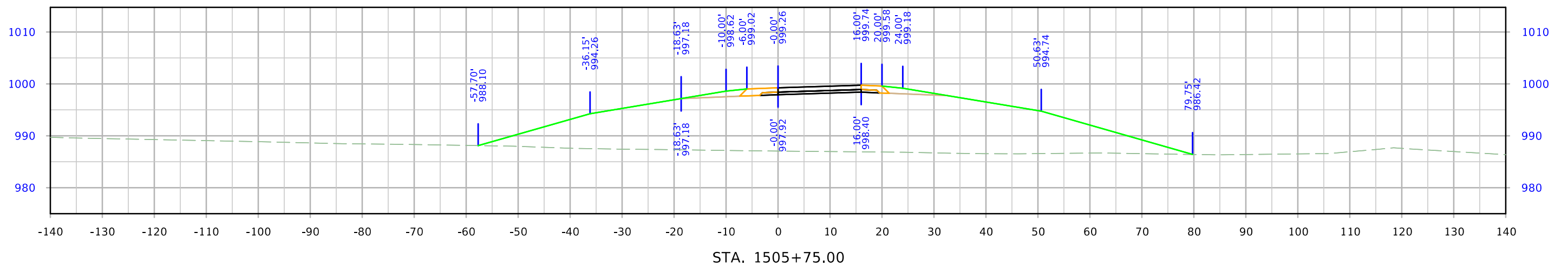
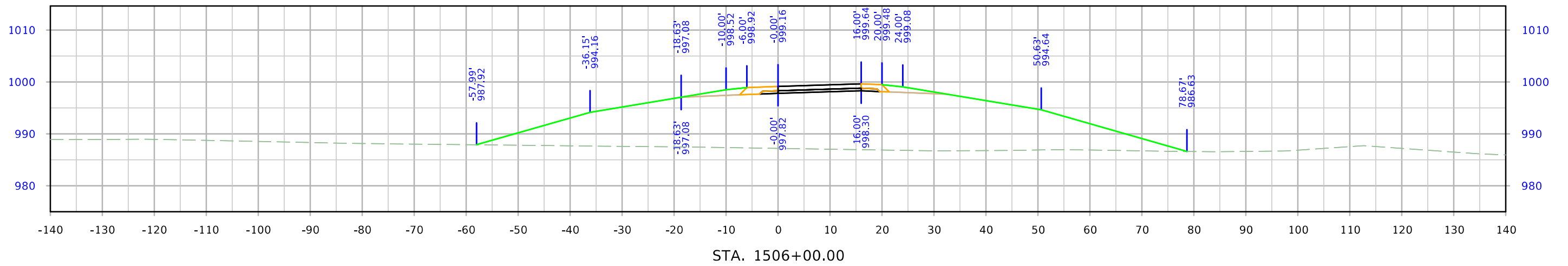
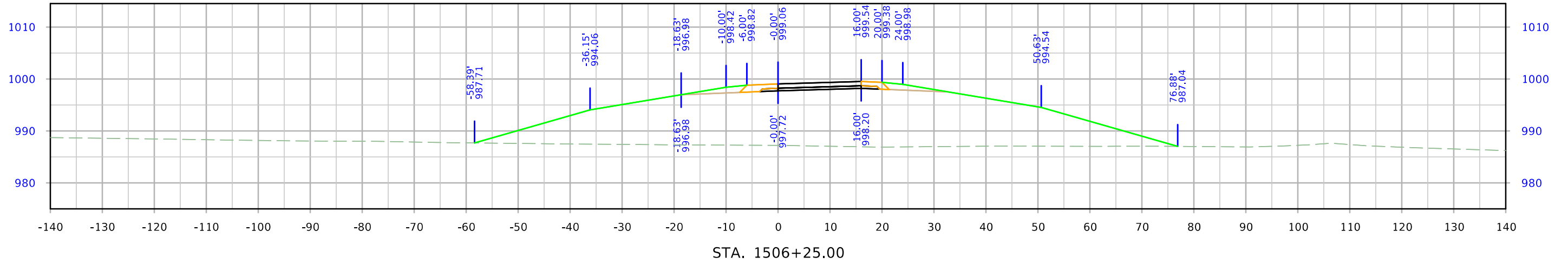
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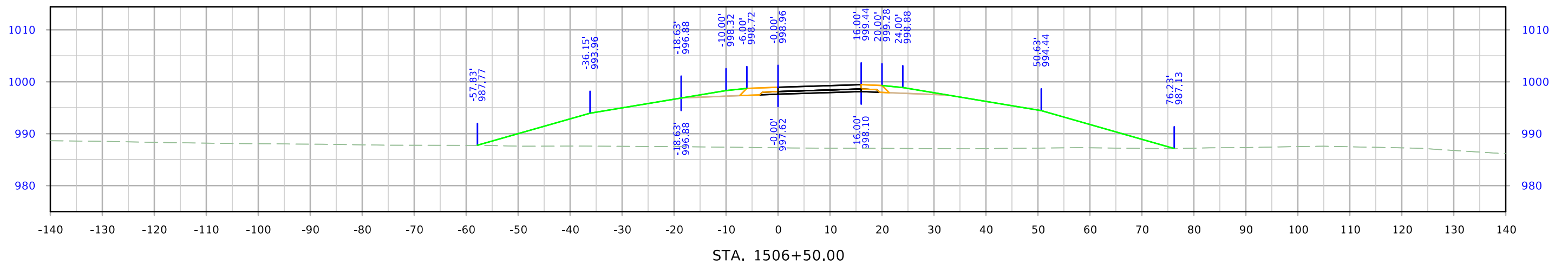
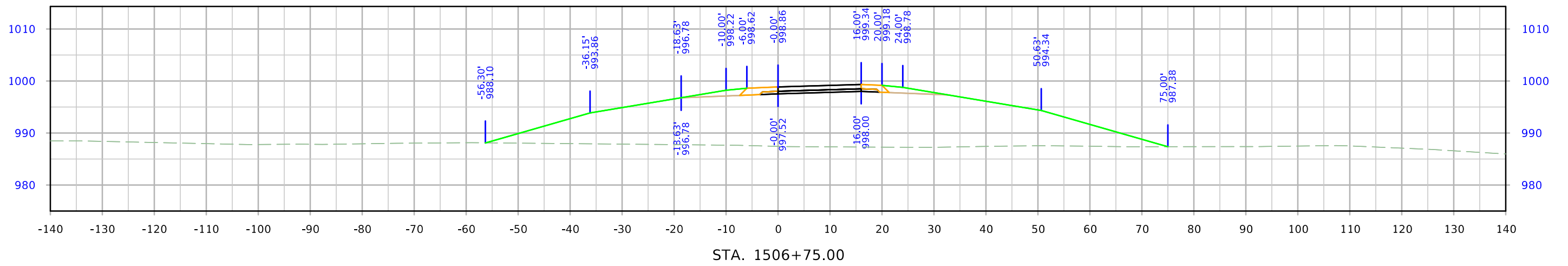
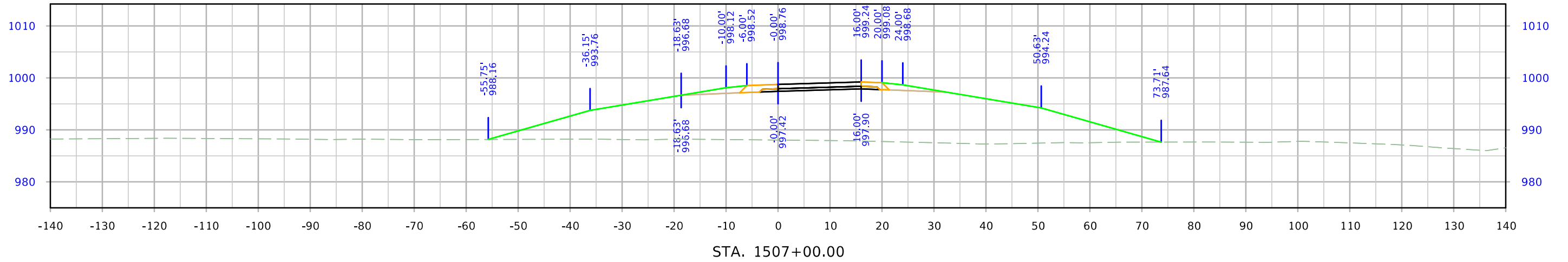
# 610th Ramp A



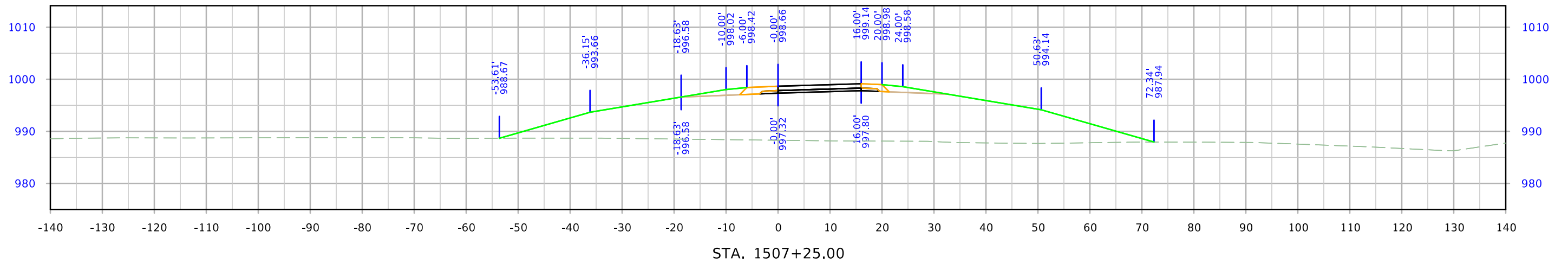
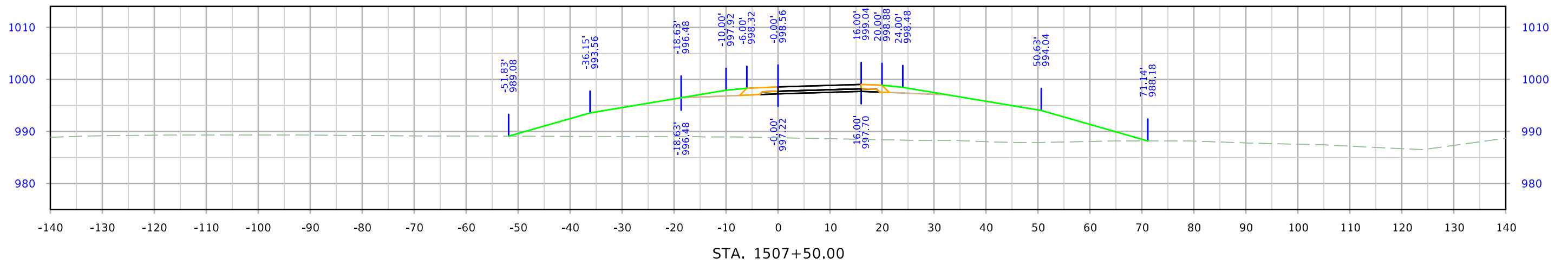
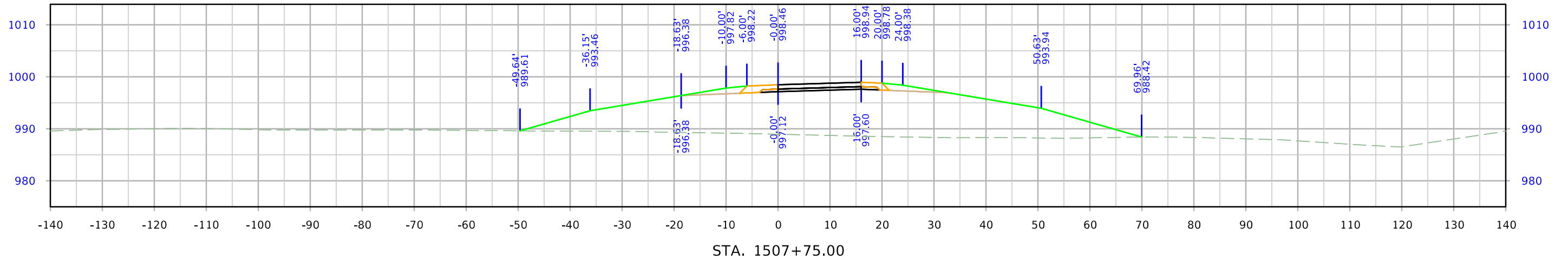
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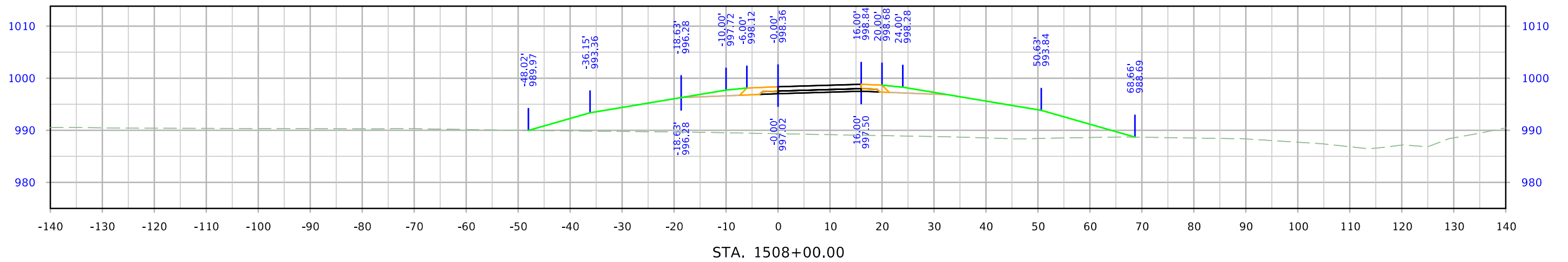
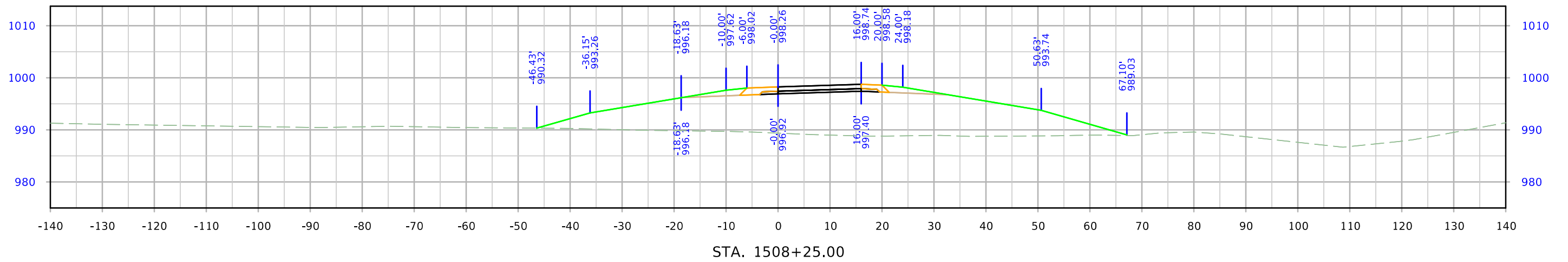
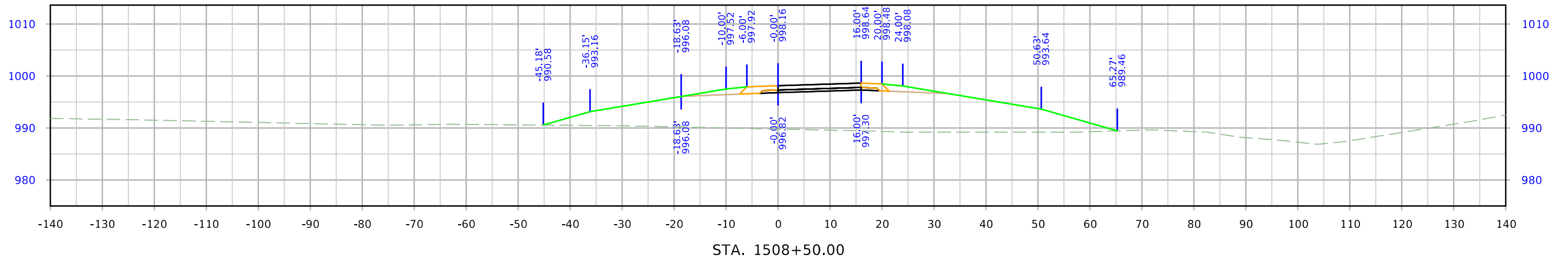
# 610th Ramp A



# 610th Ramp A

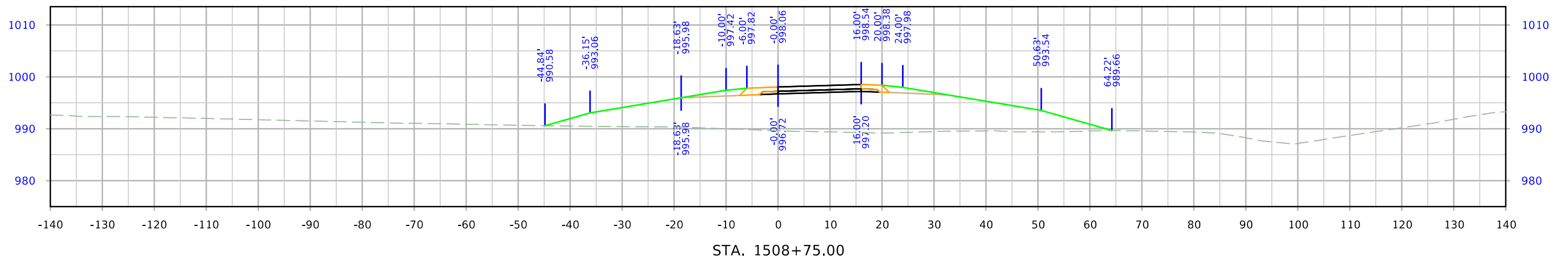
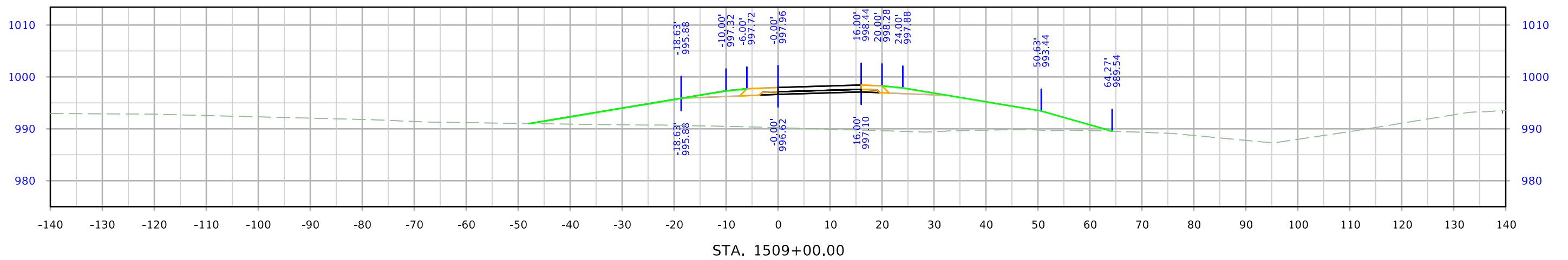
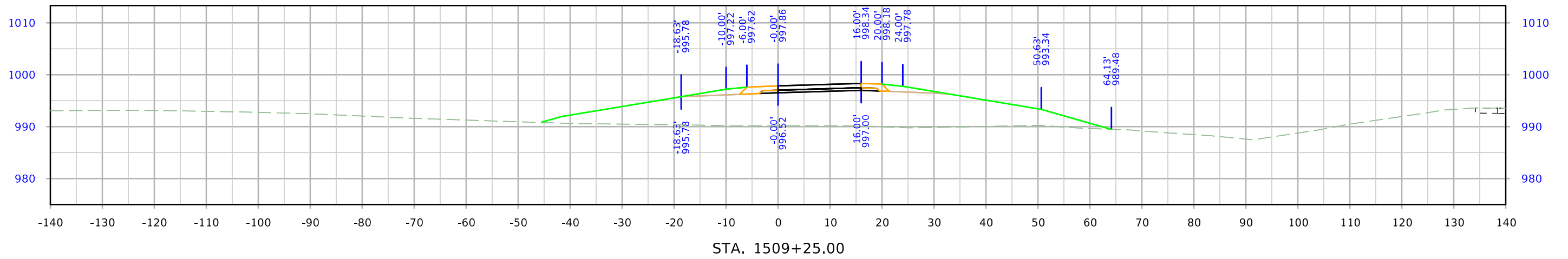


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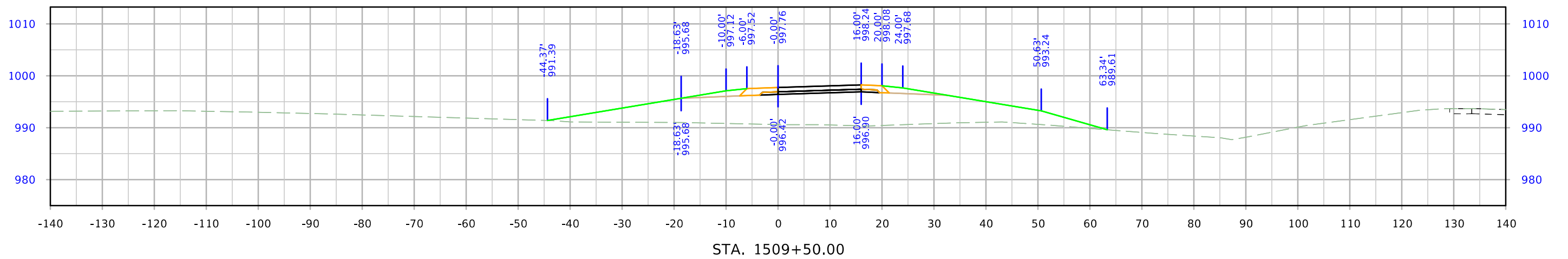
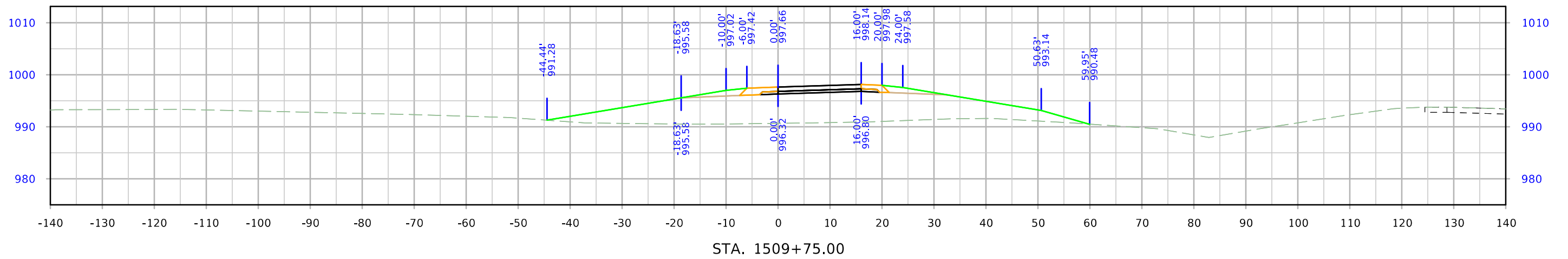
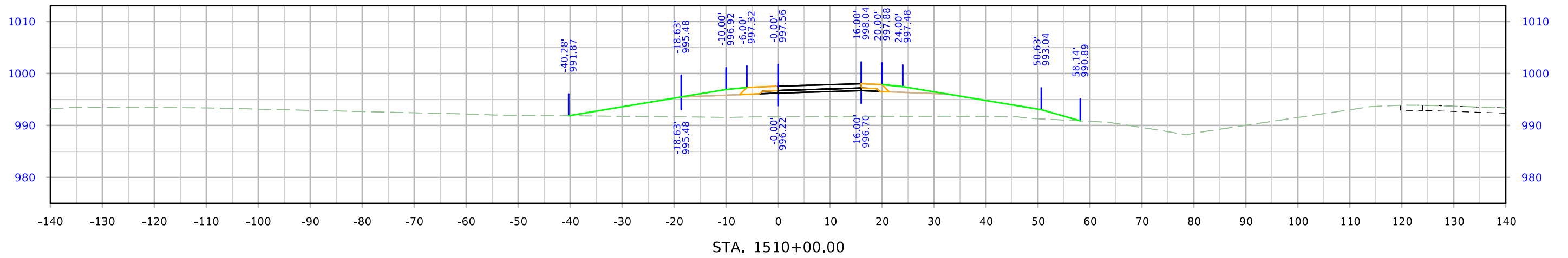




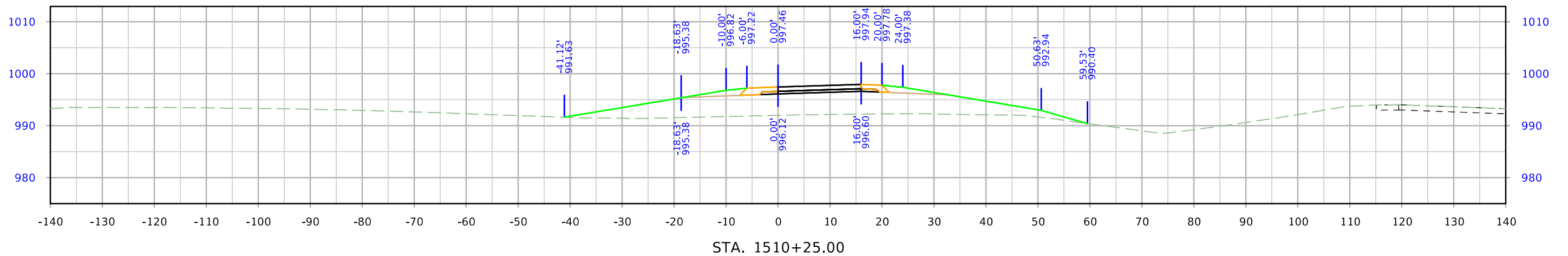
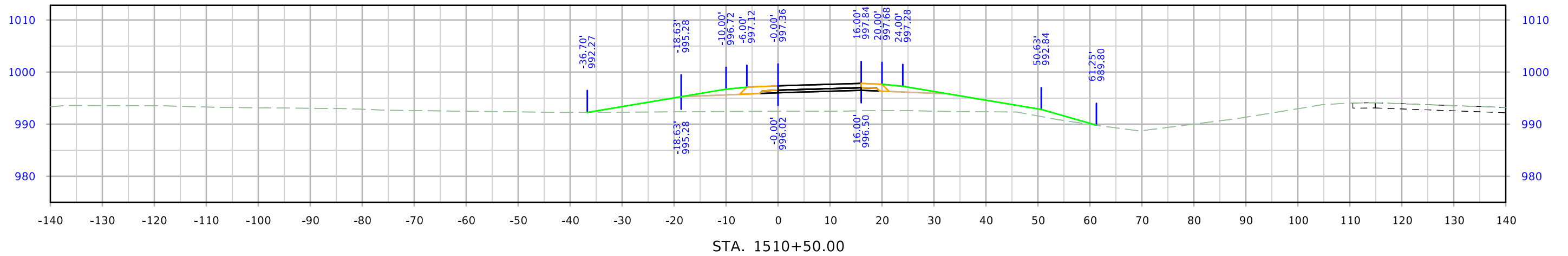
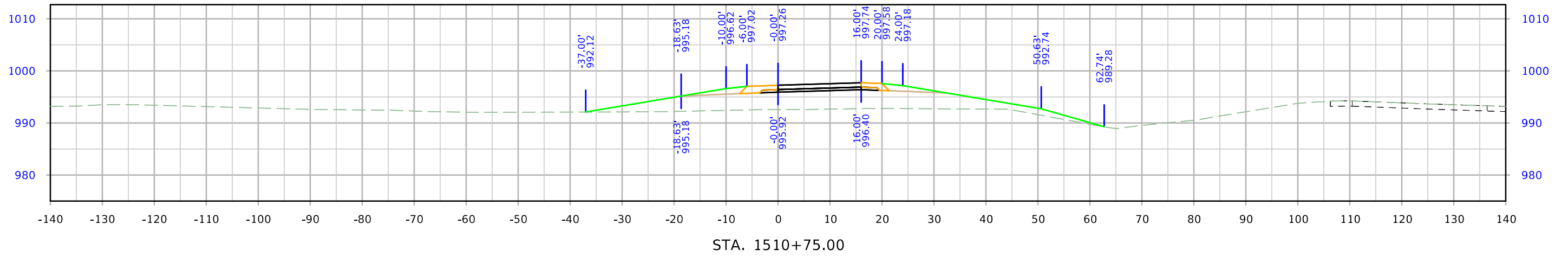
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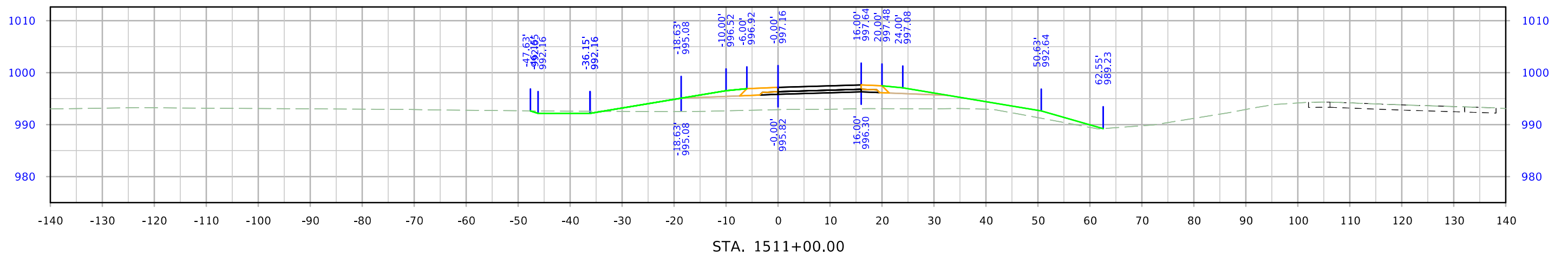
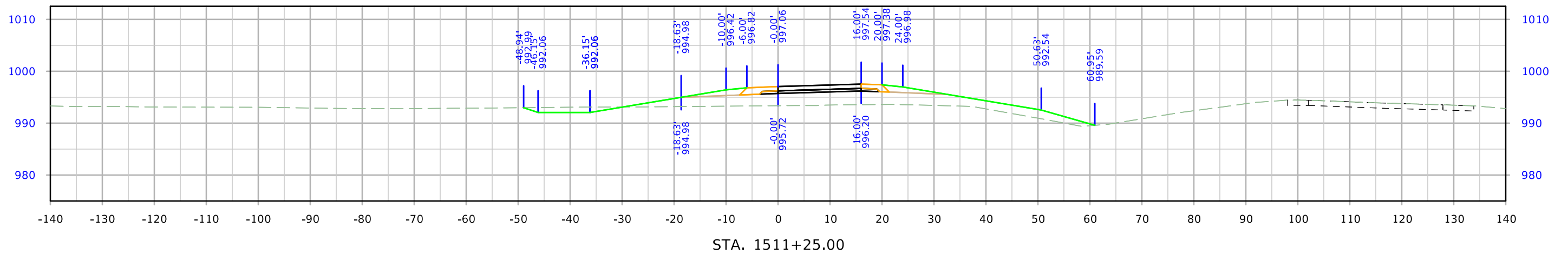
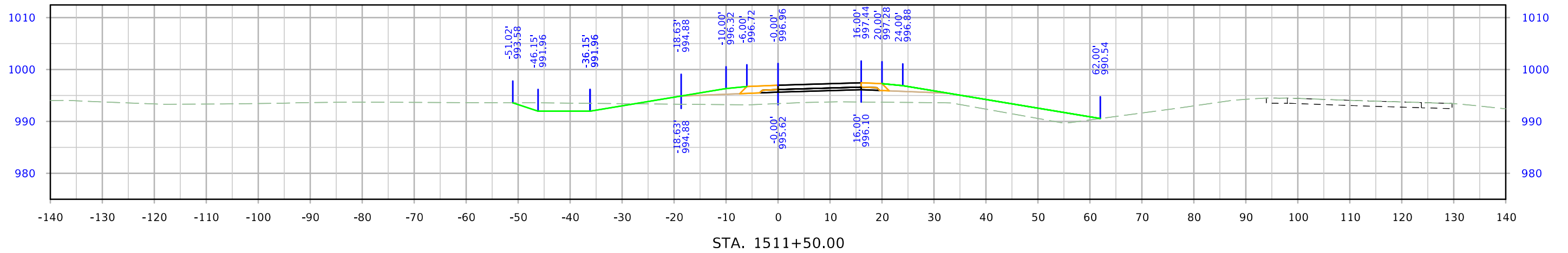
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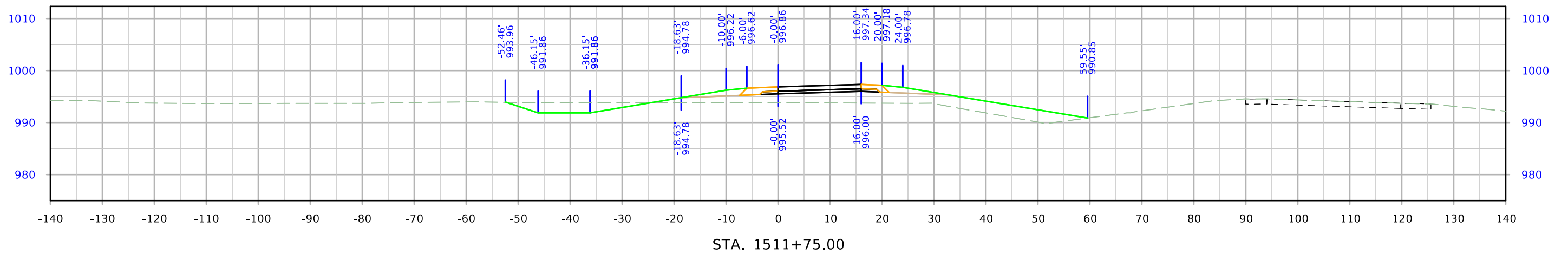
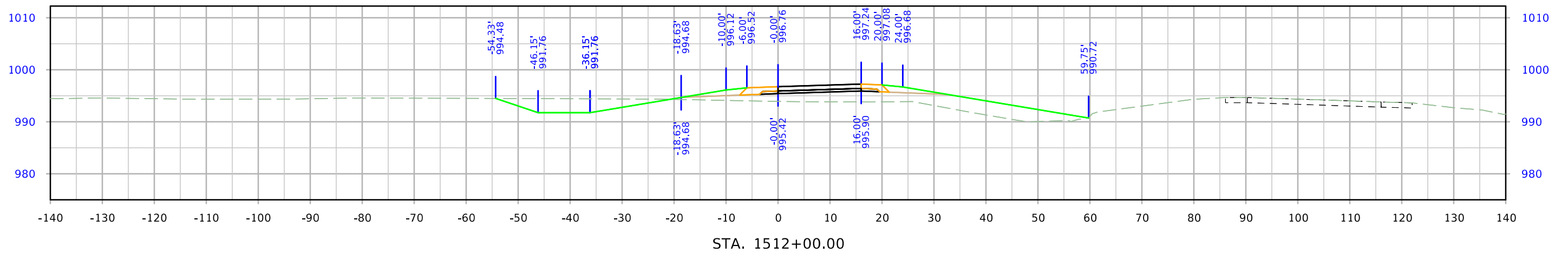
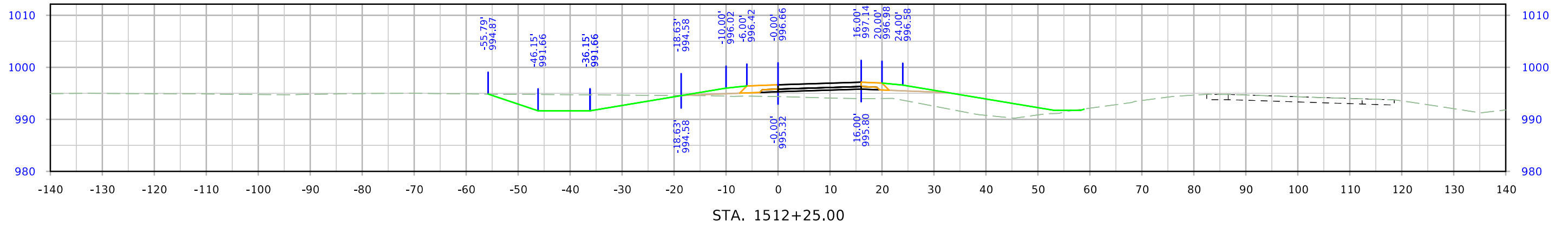
# 610th Ramp A



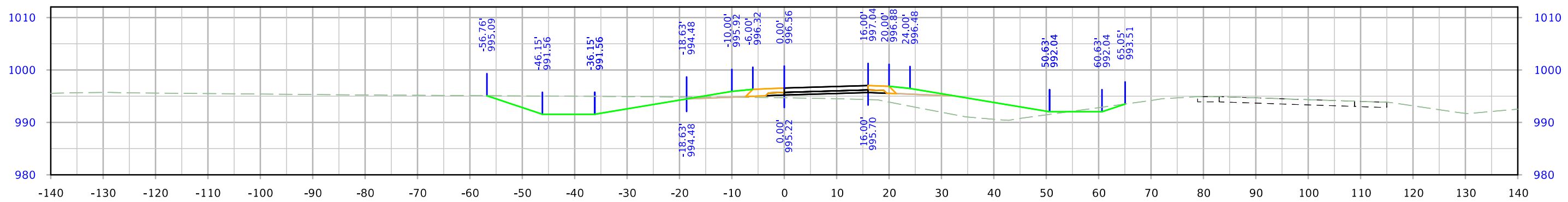
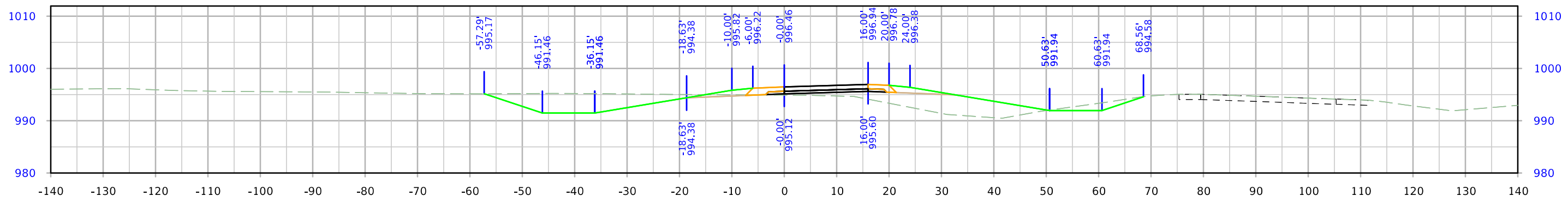
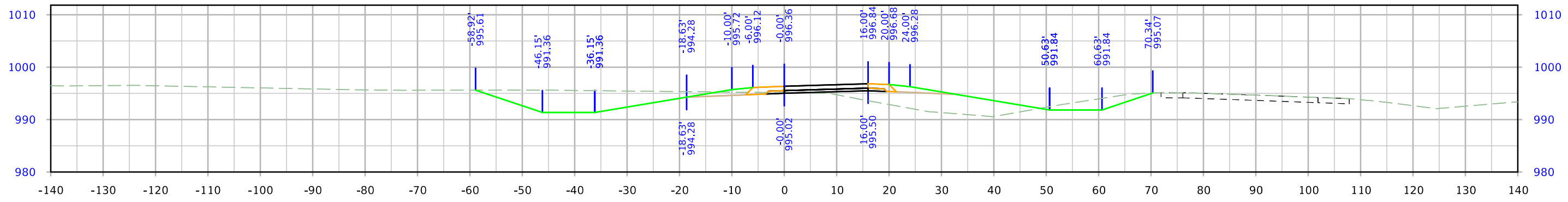
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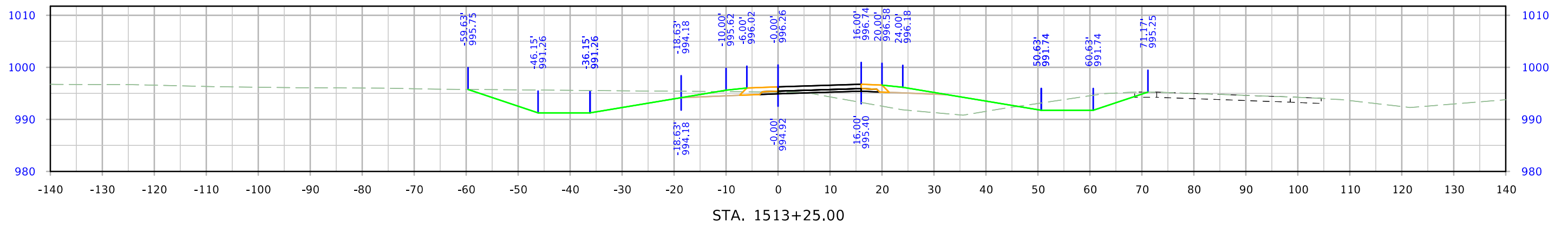
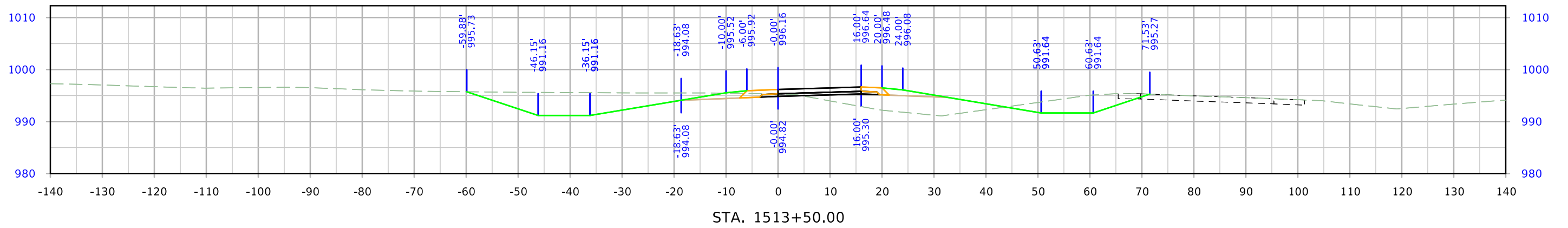
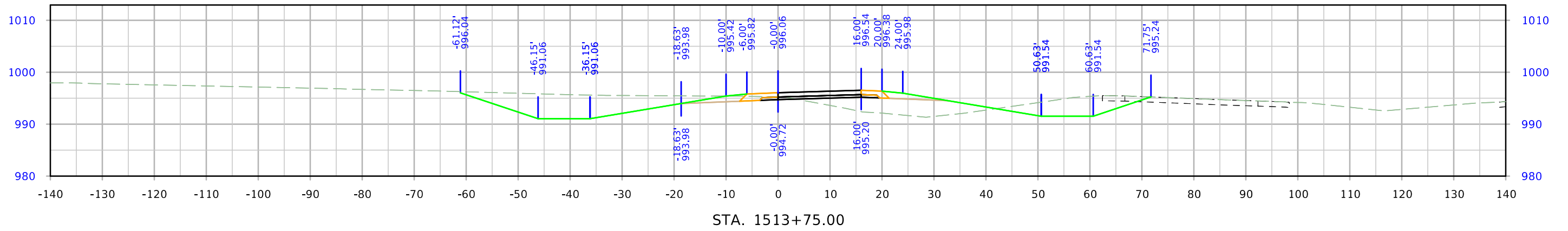
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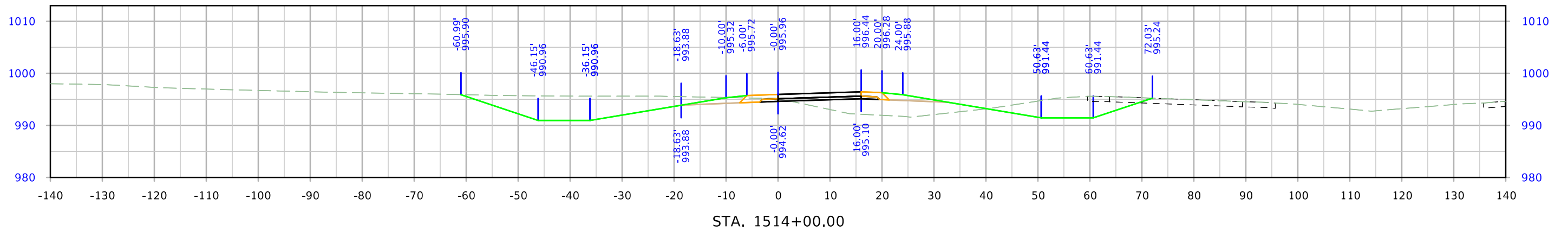
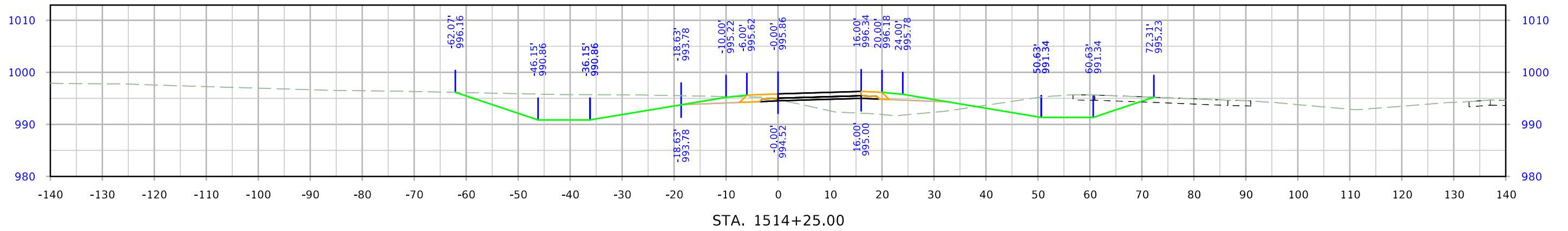
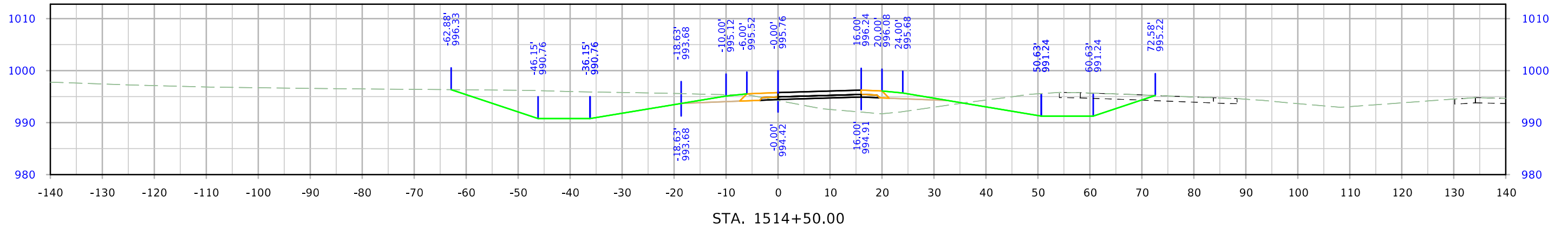
# 610th Ramp A



# 610th Ramp A

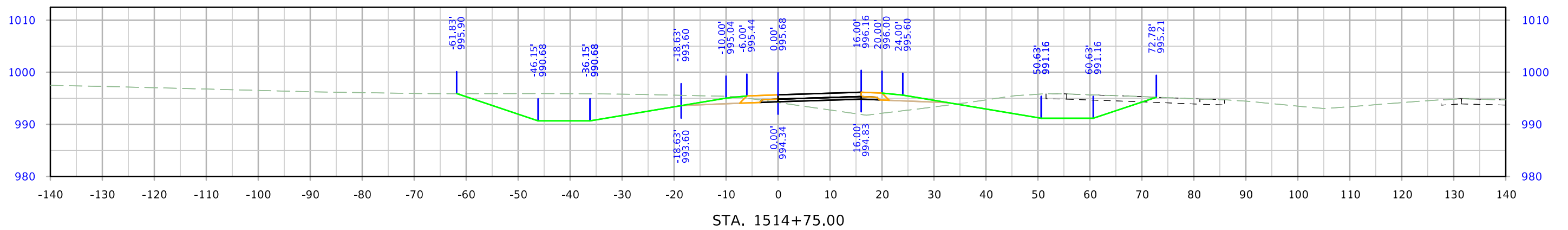
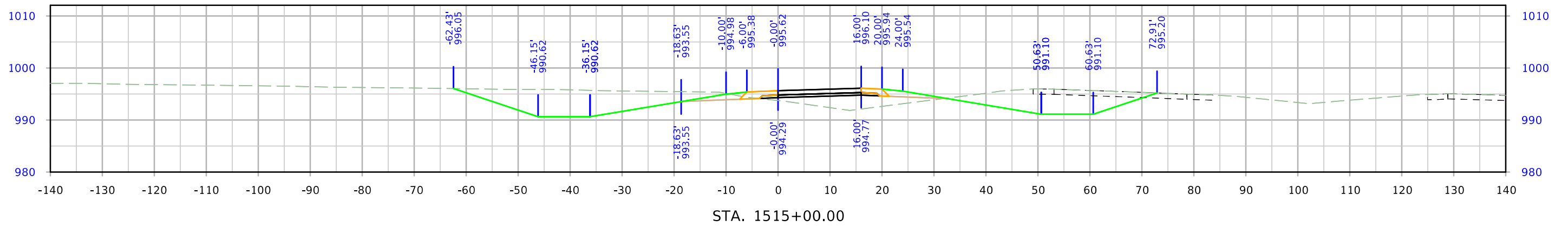
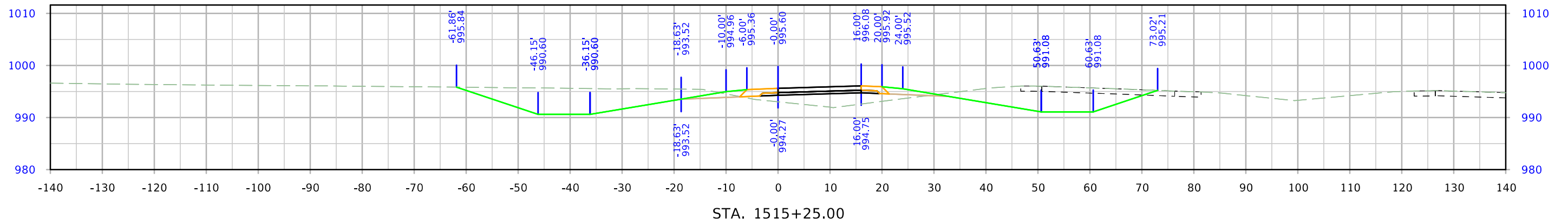


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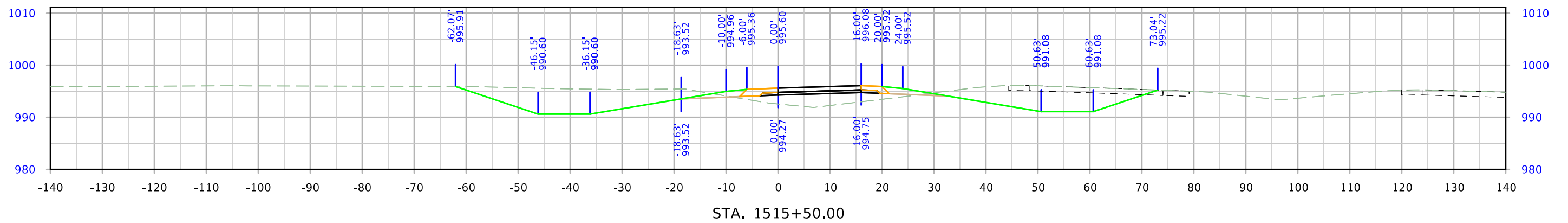
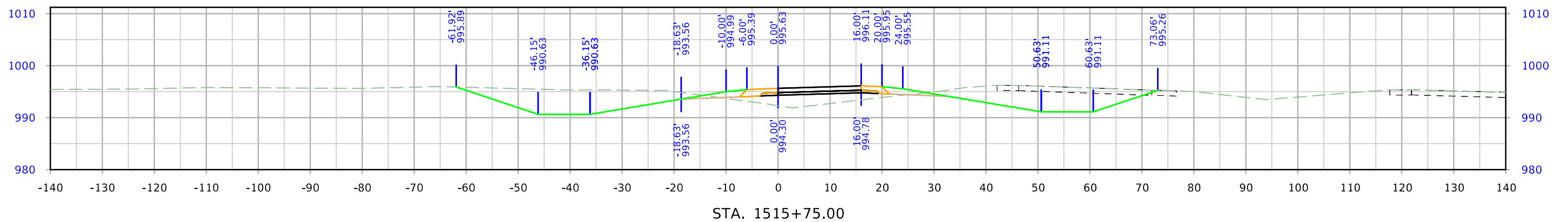
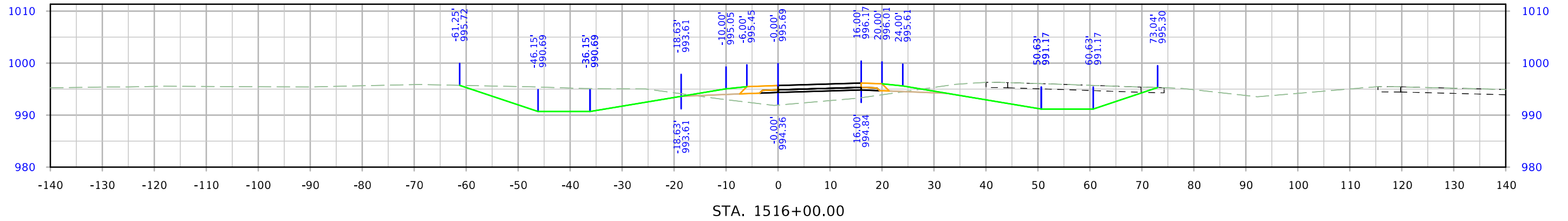




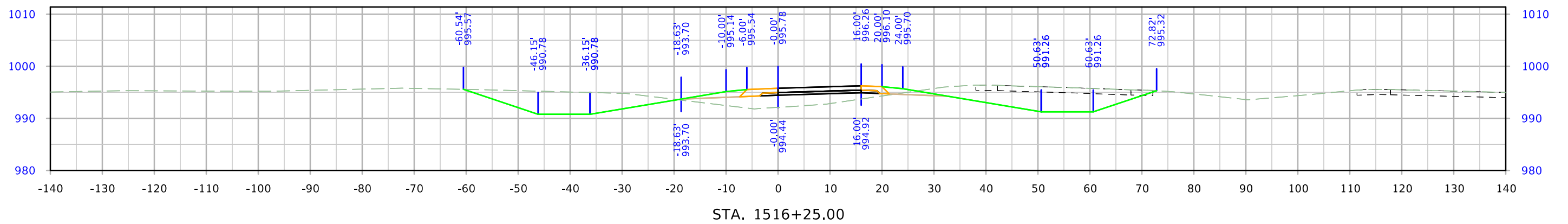
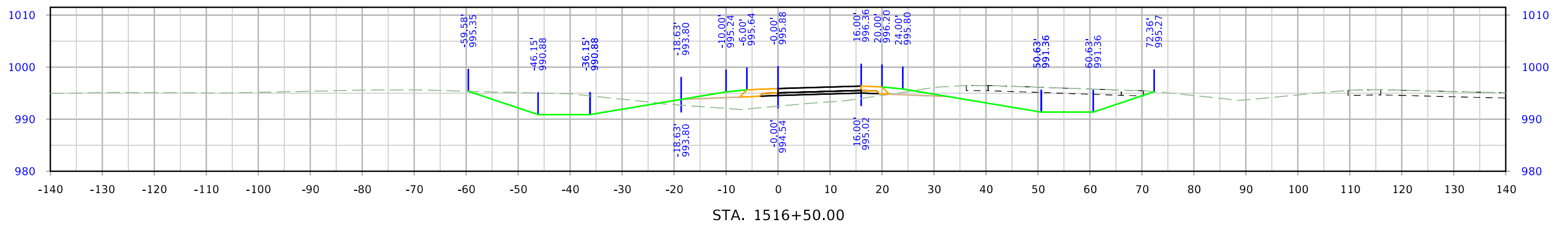
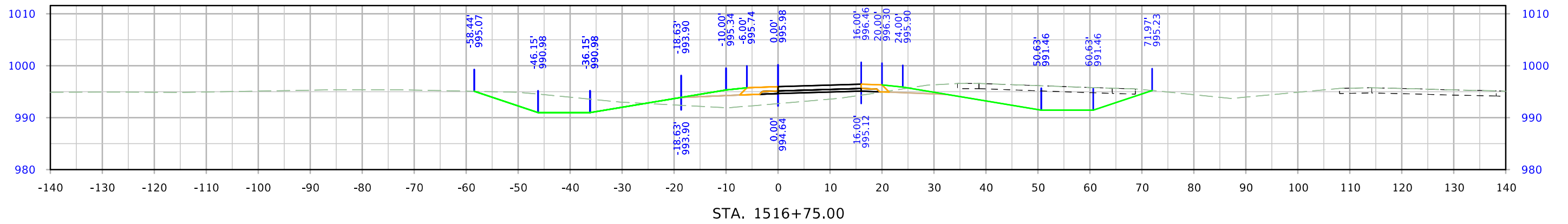
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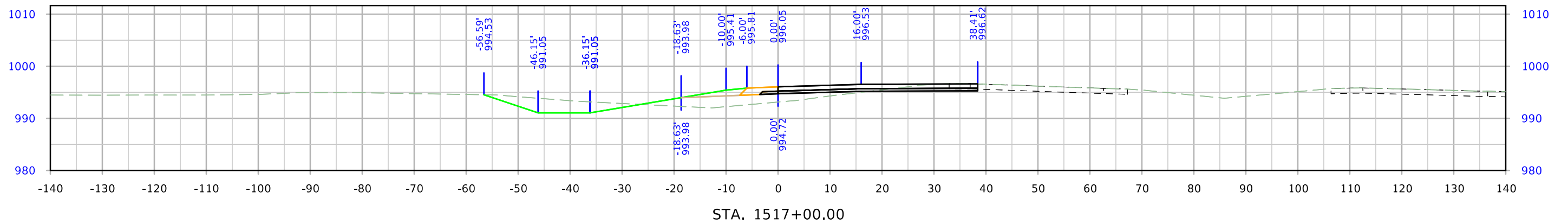
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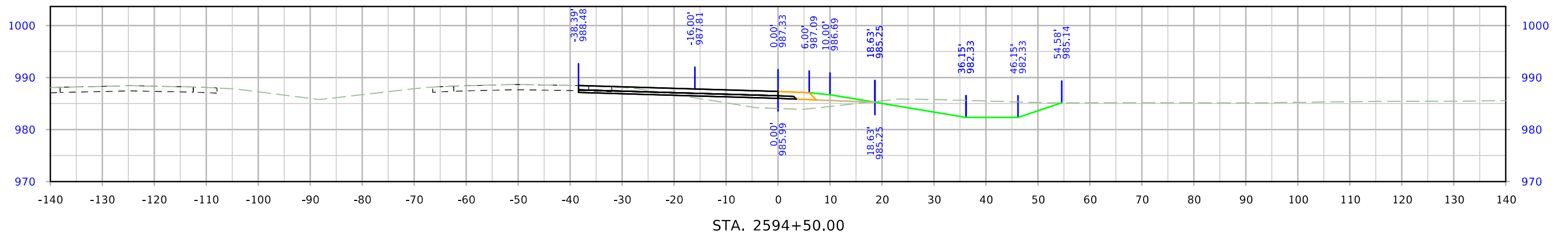
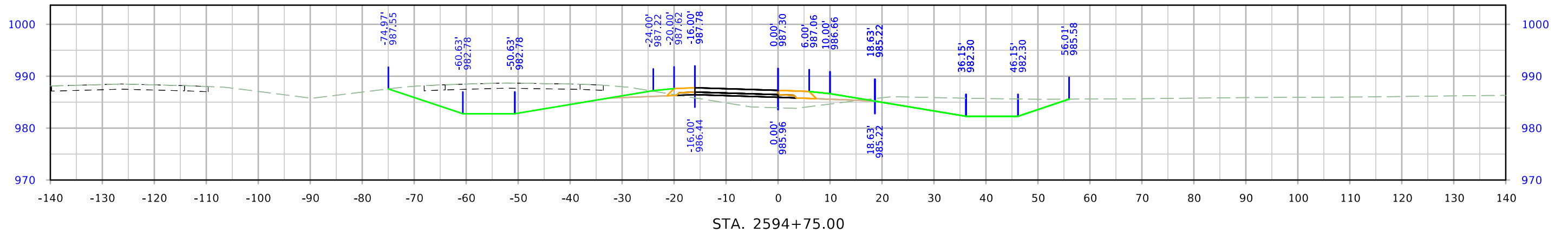
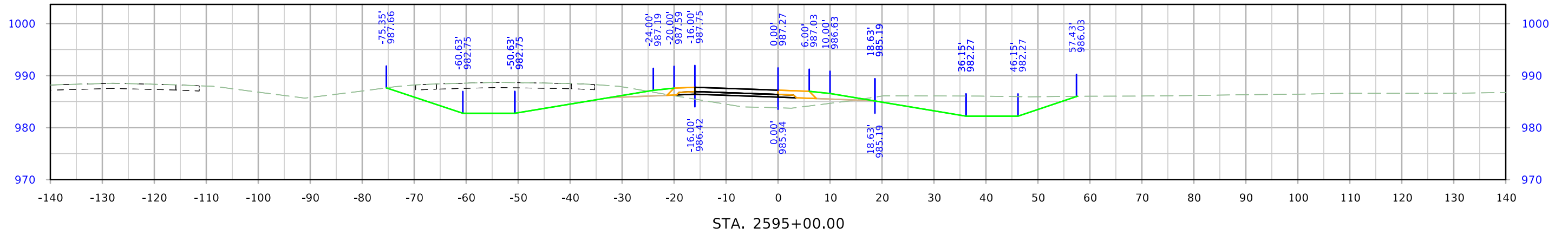
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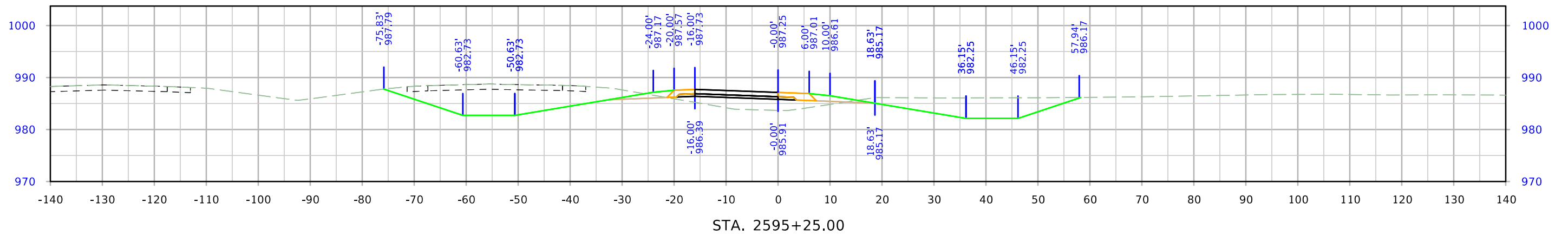
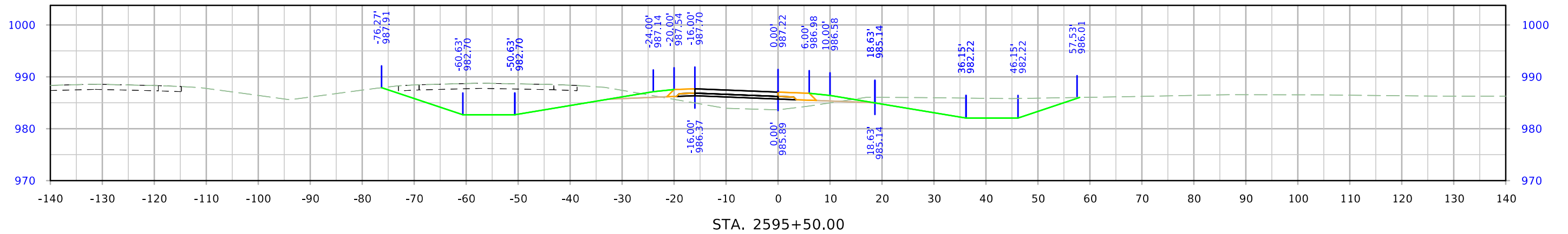
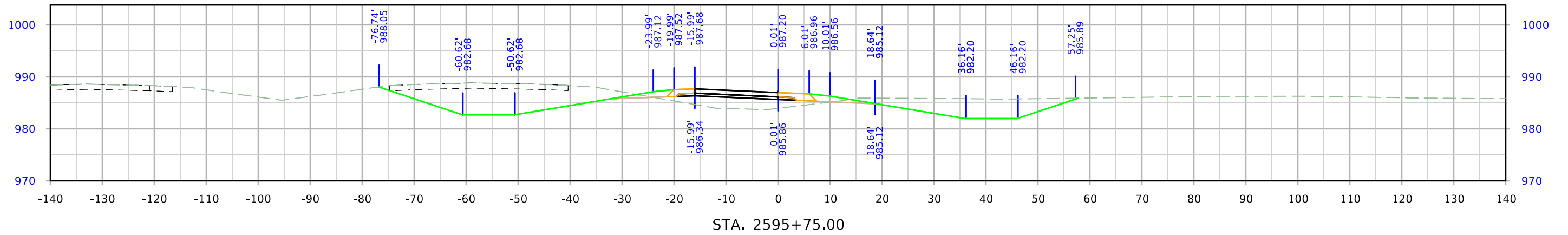
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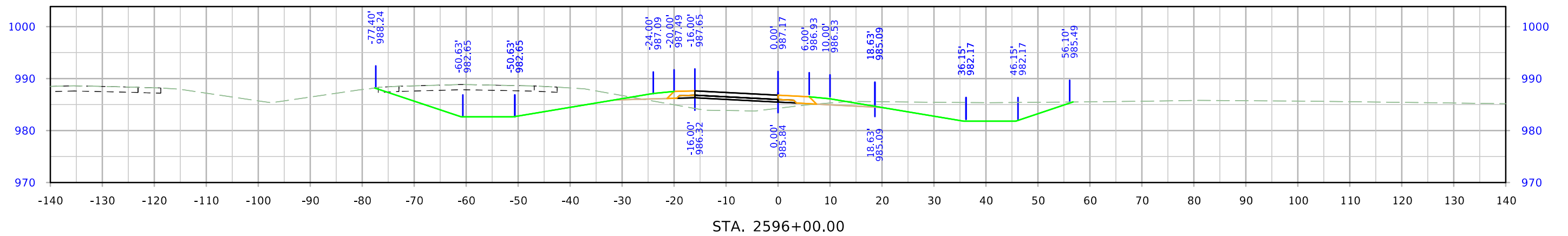
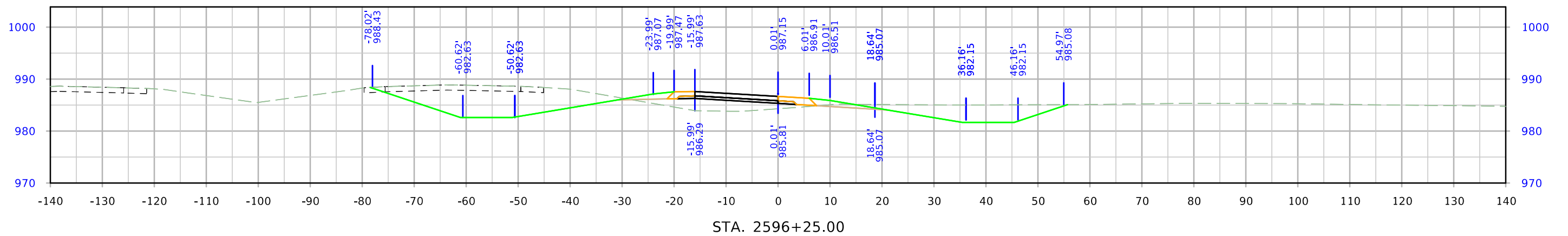
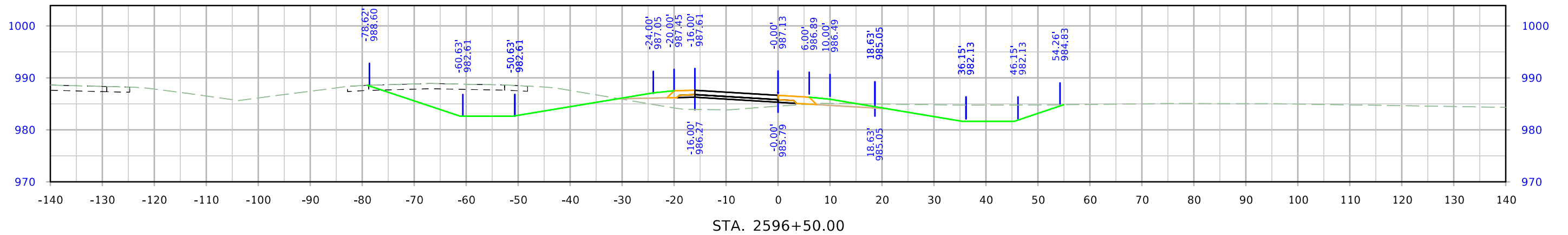
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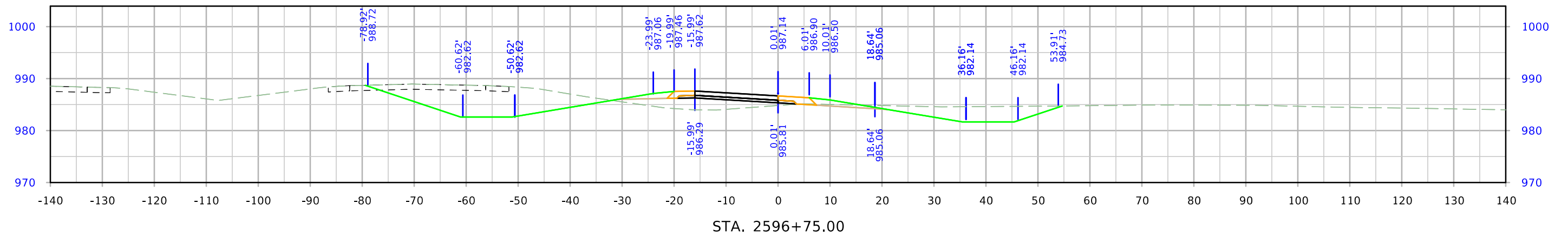
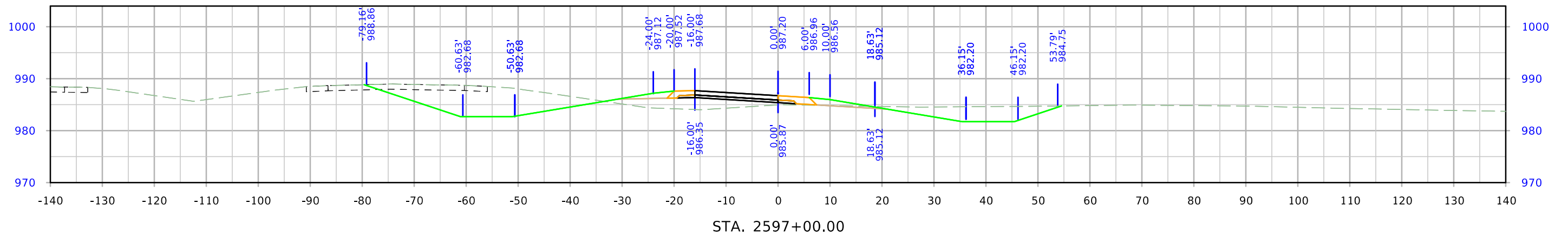
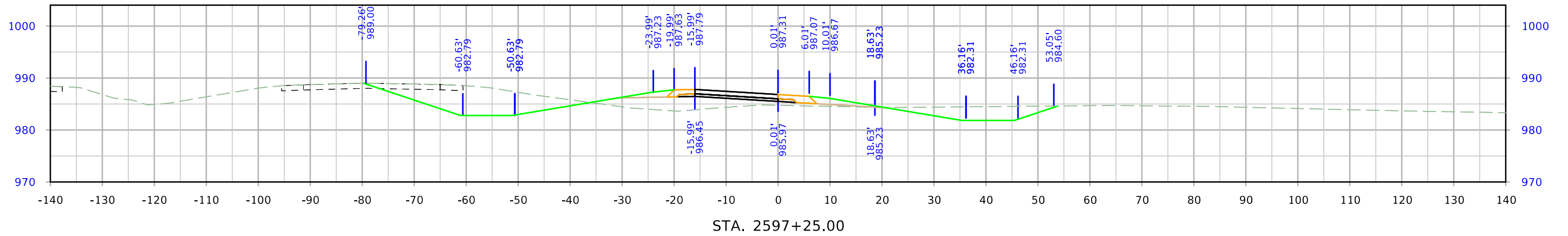
# 610th Ramp B



# 610th Ramp B

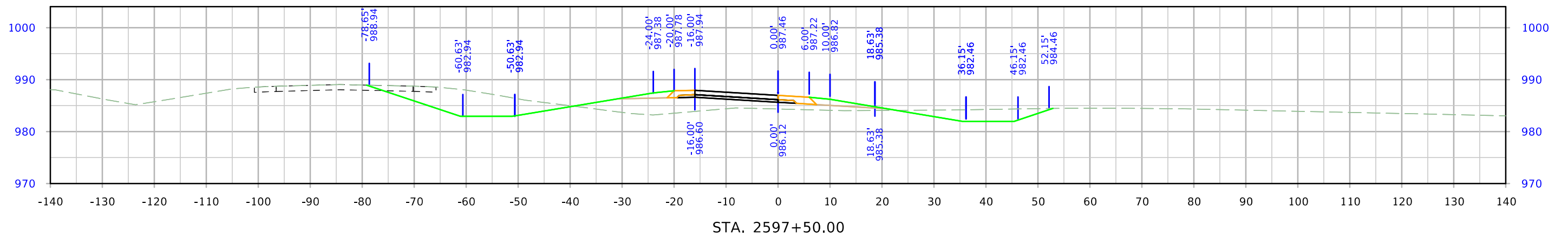
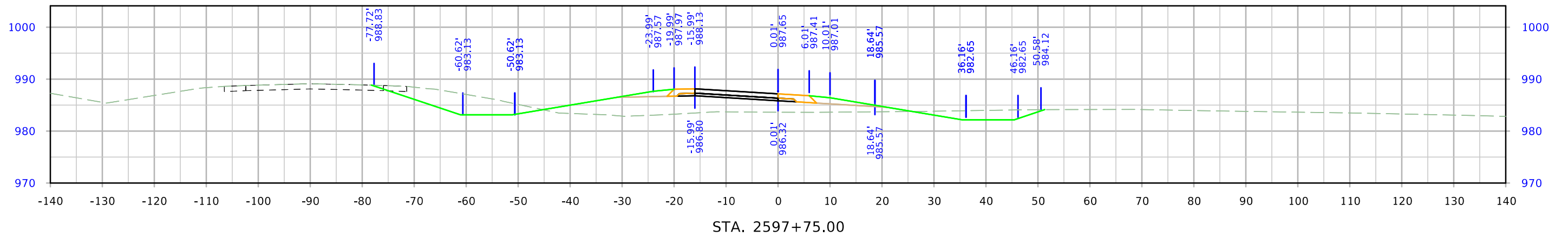
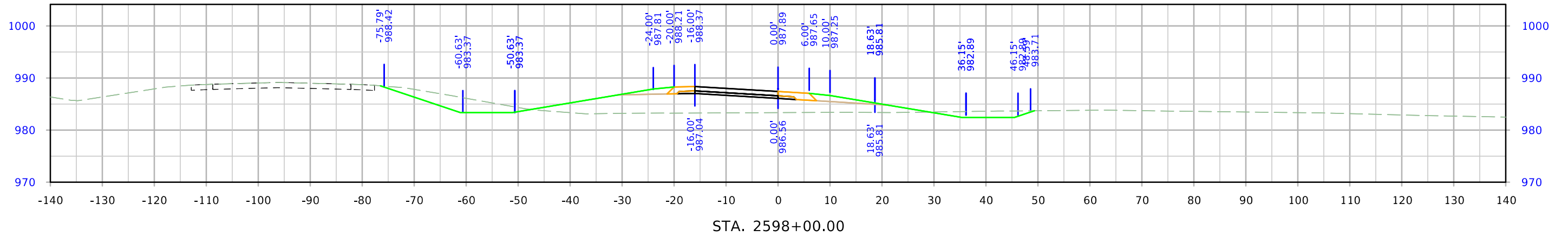


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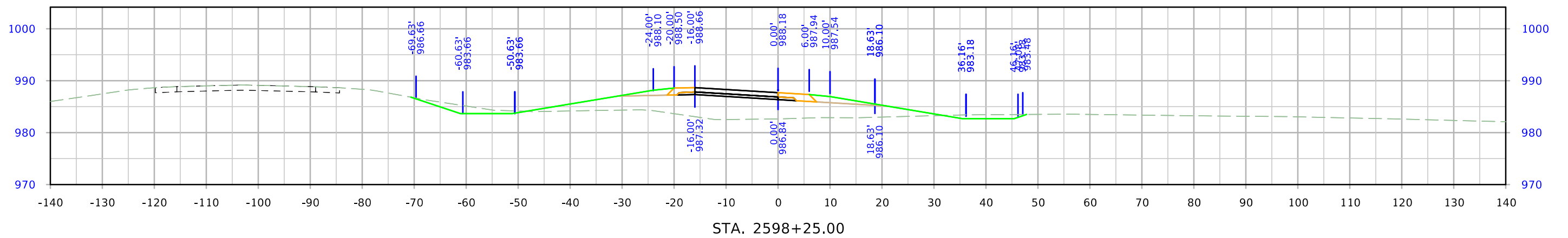
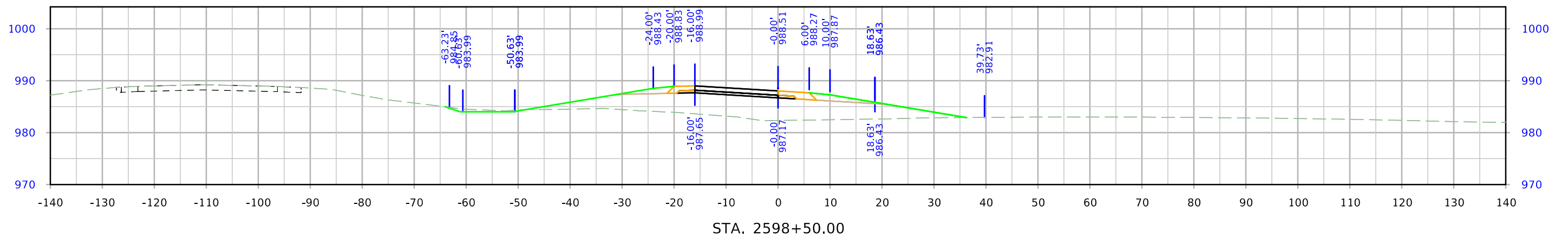
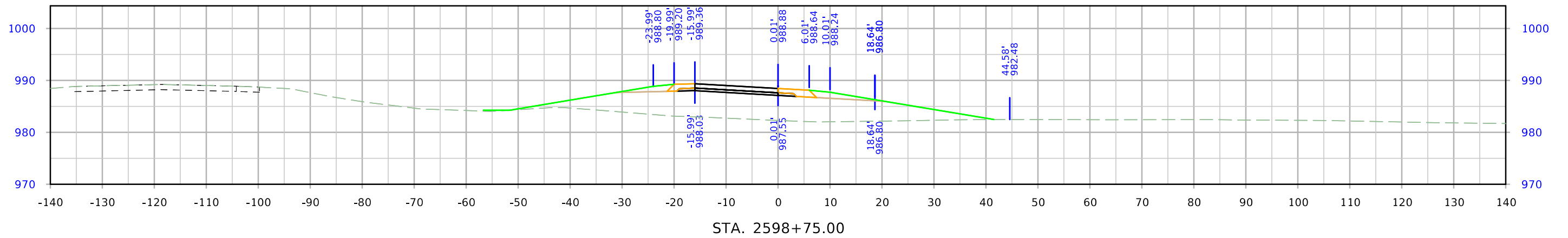




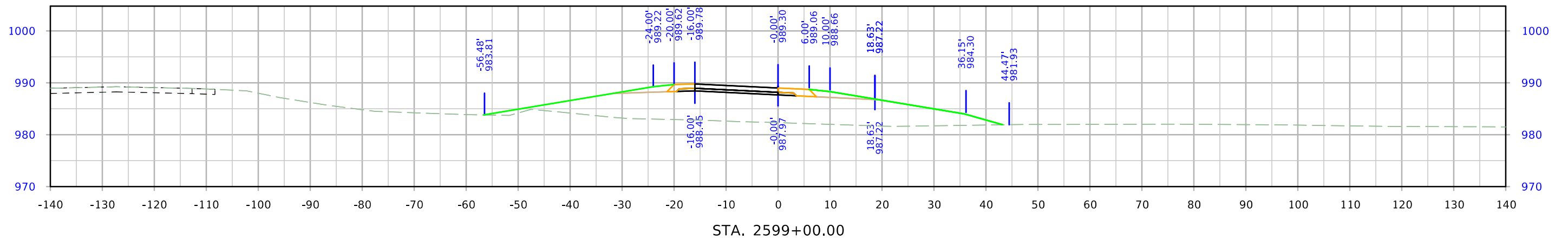
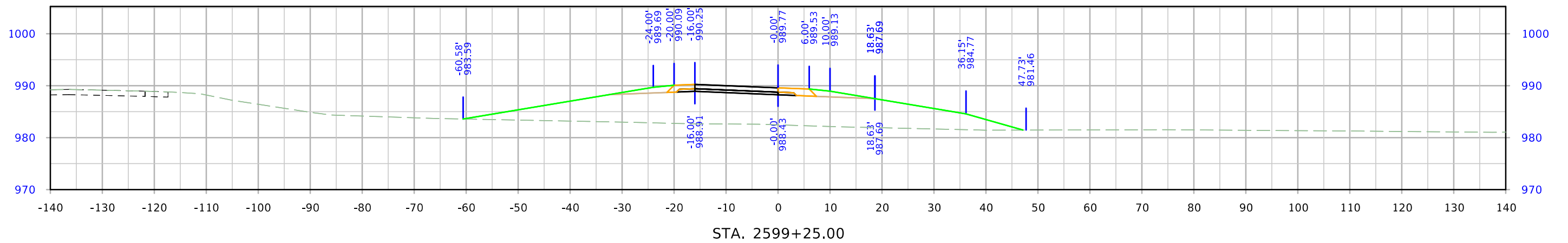
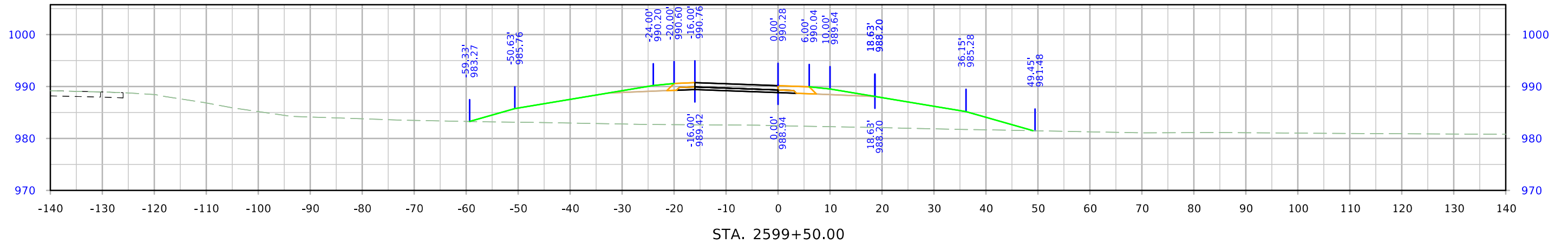
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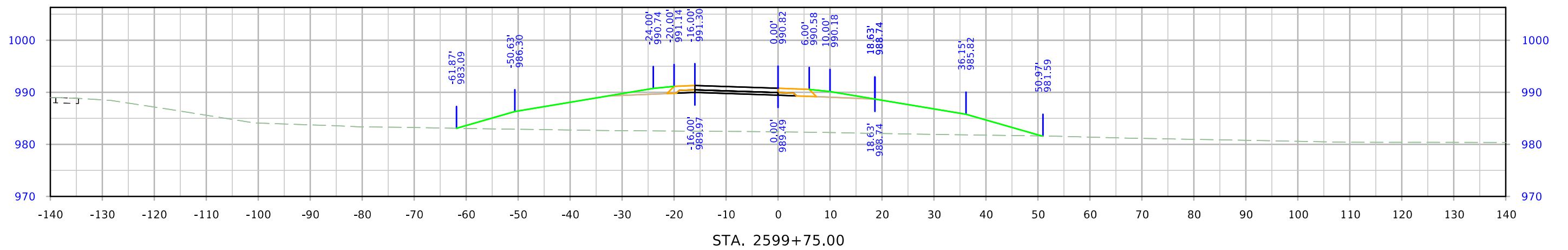
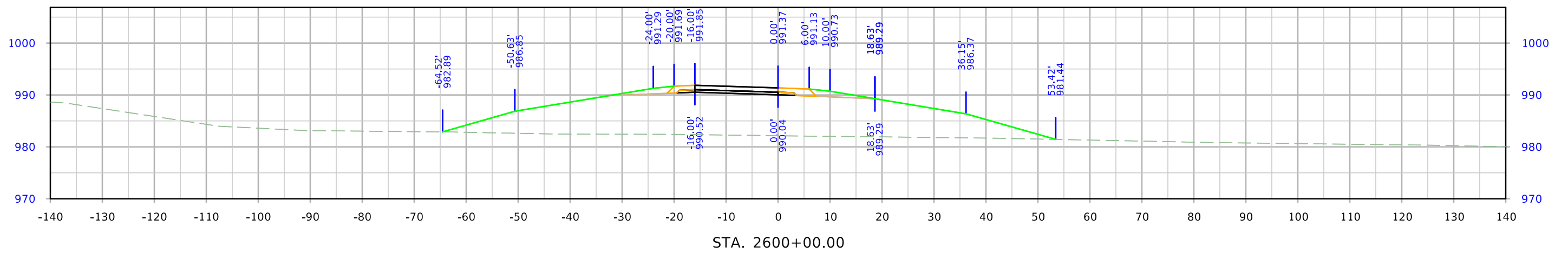
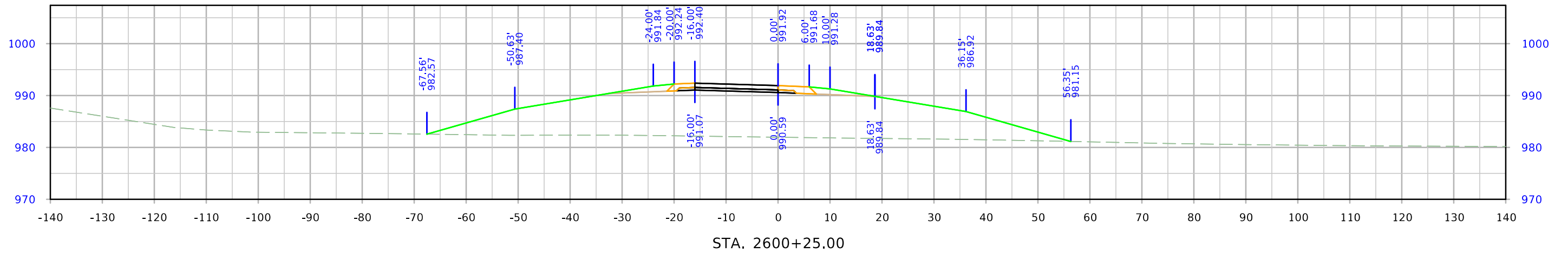
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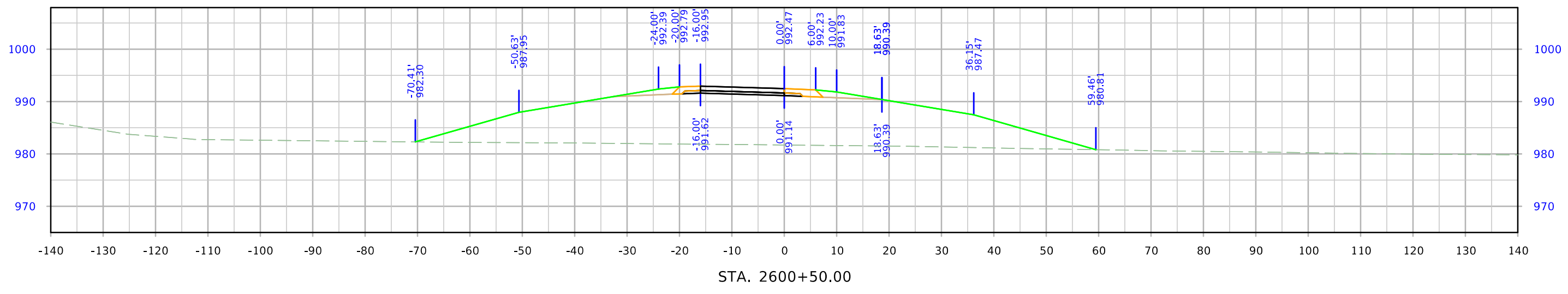
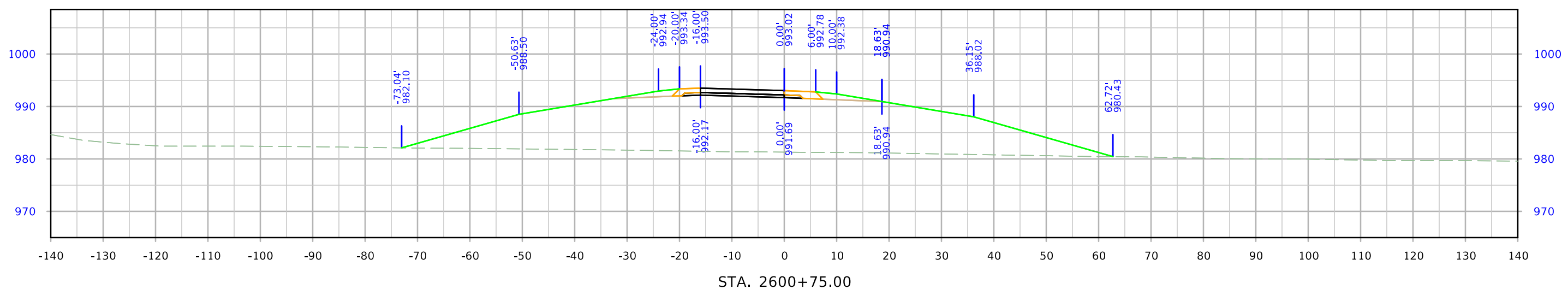
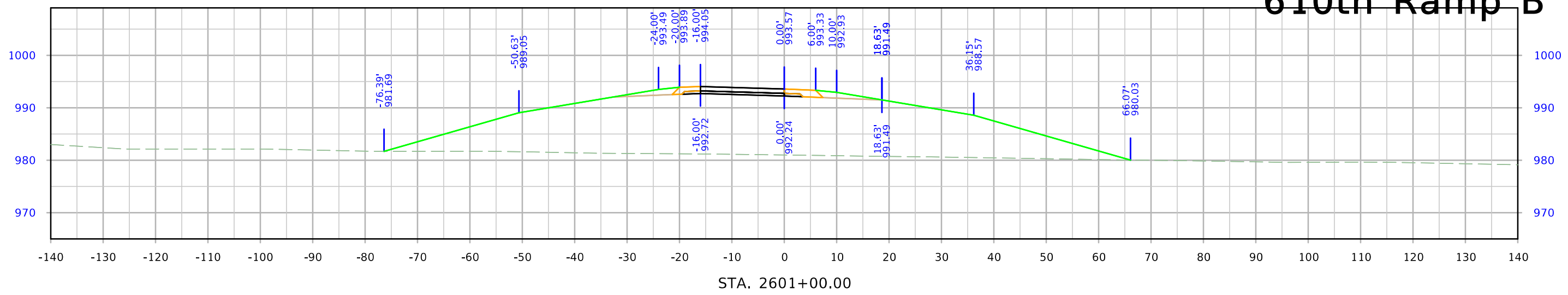
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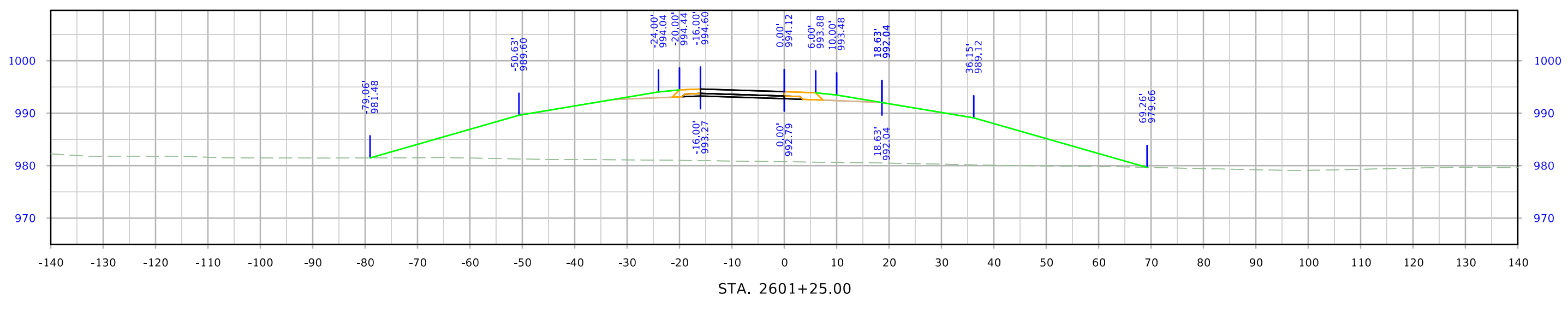
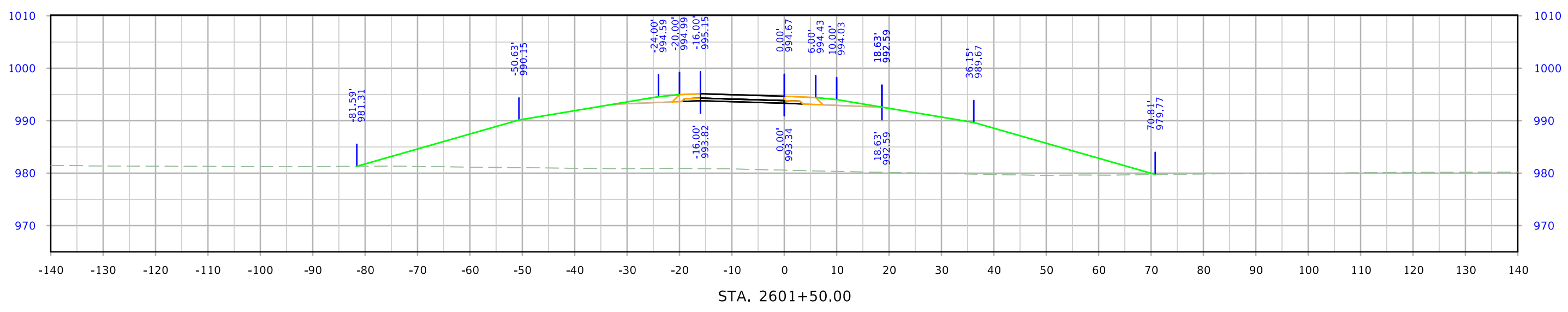
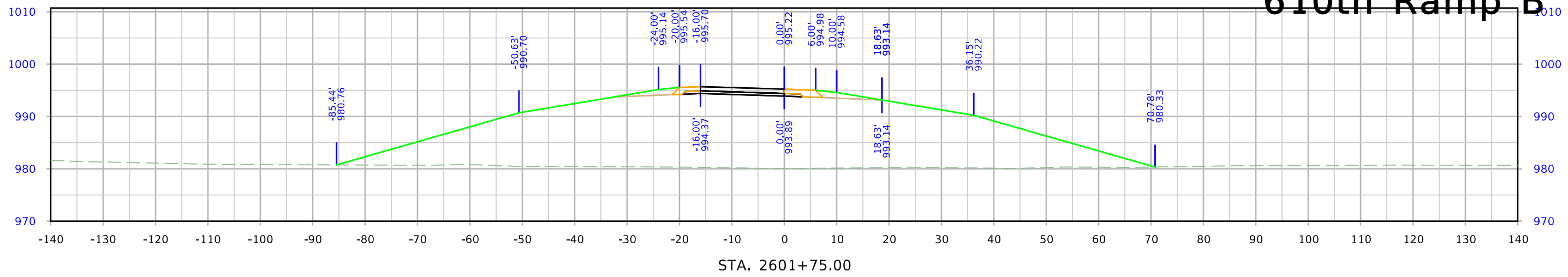
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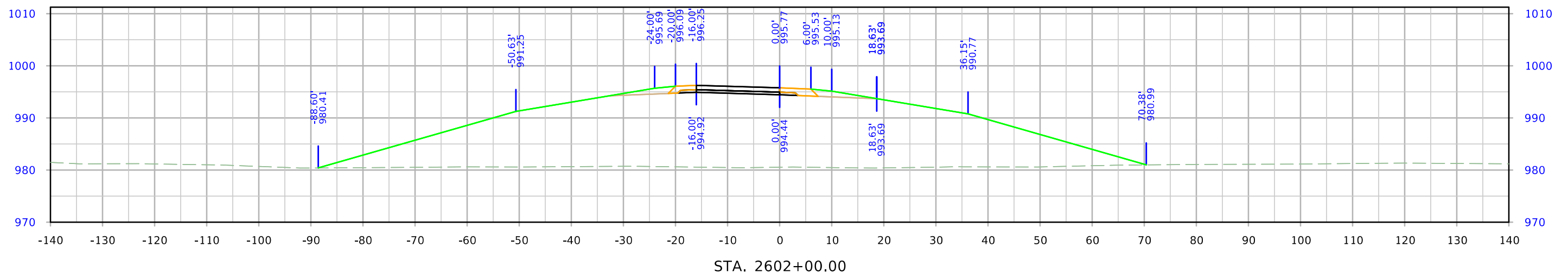
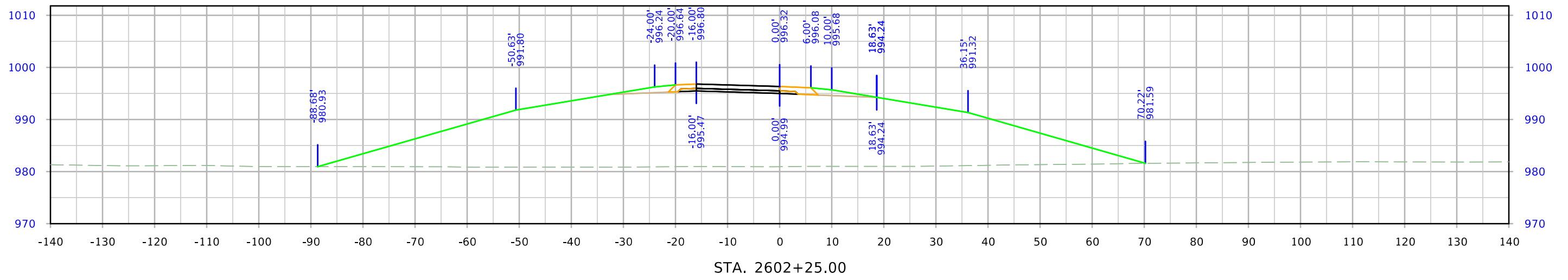
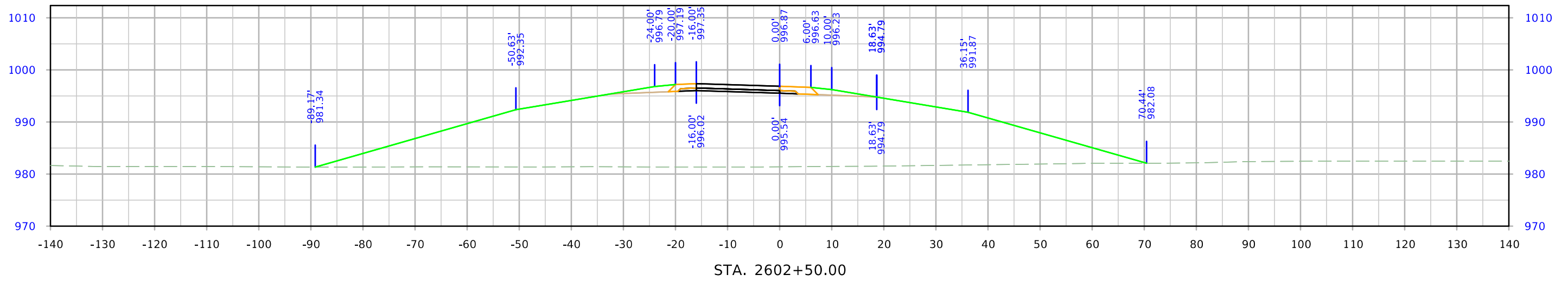
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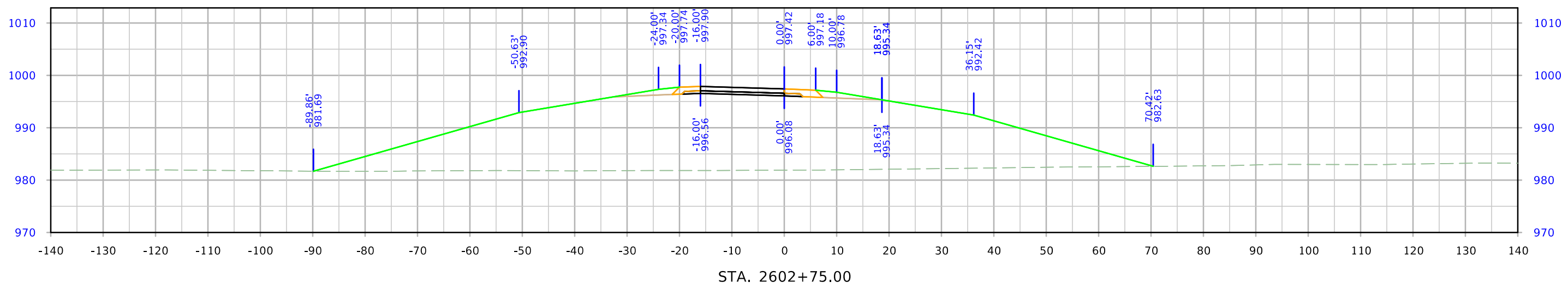
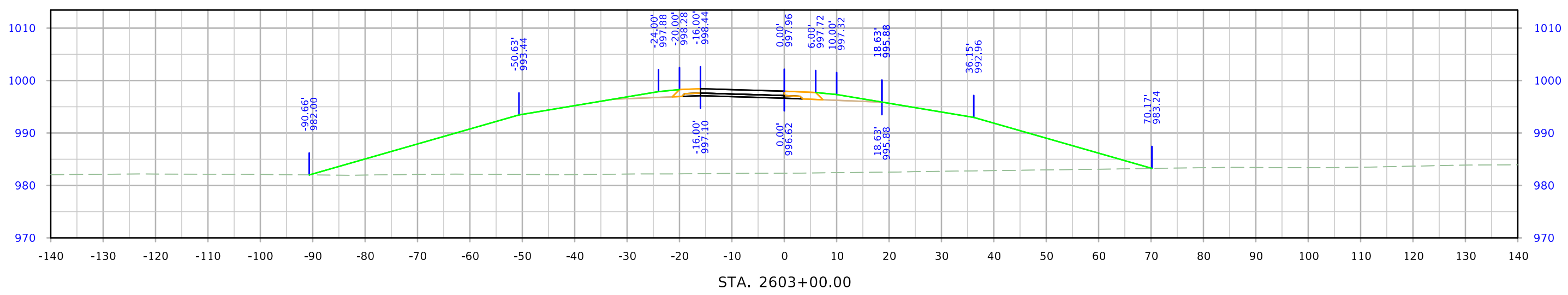
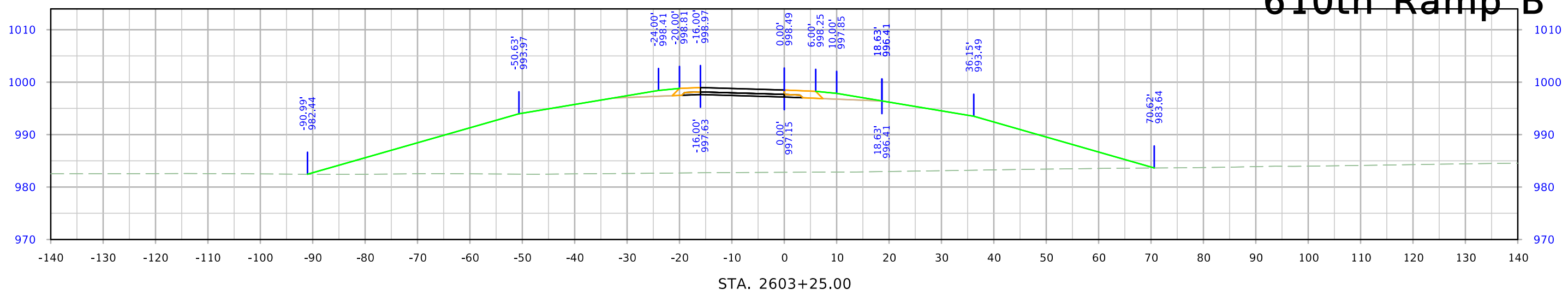
# 610th Ramp B



# 610th Ramp B

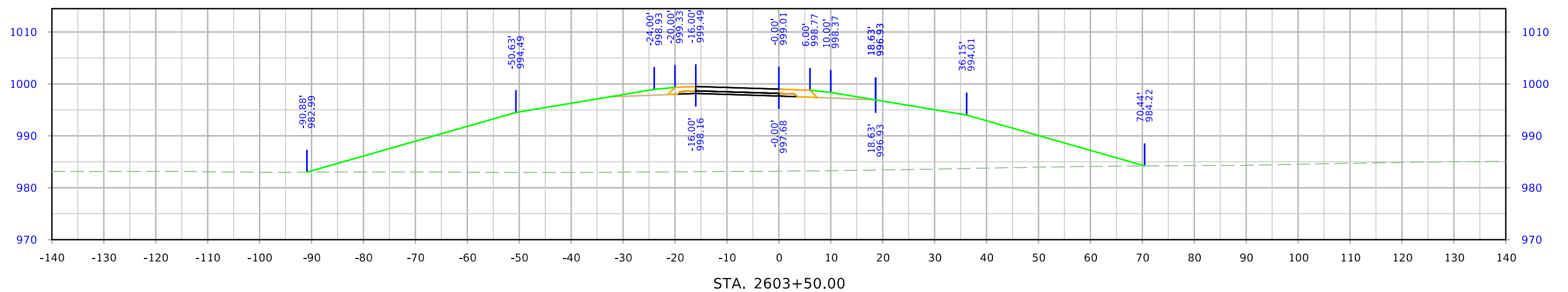
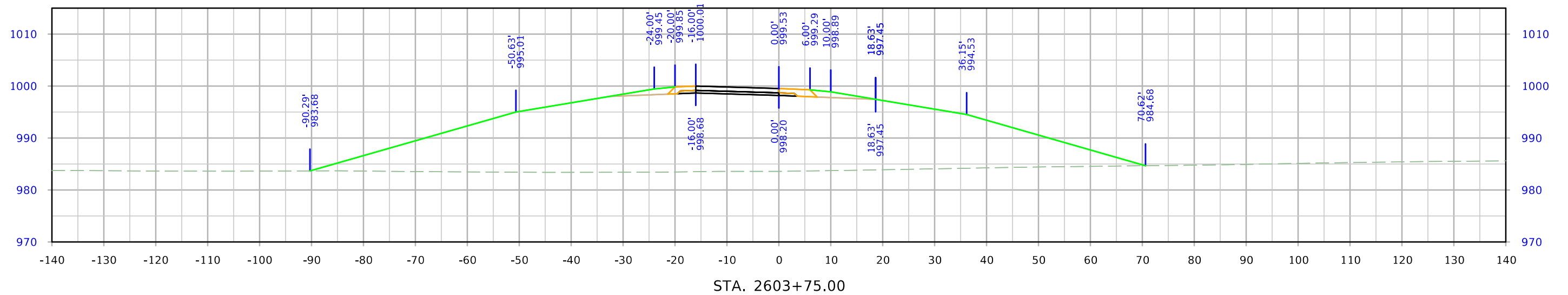


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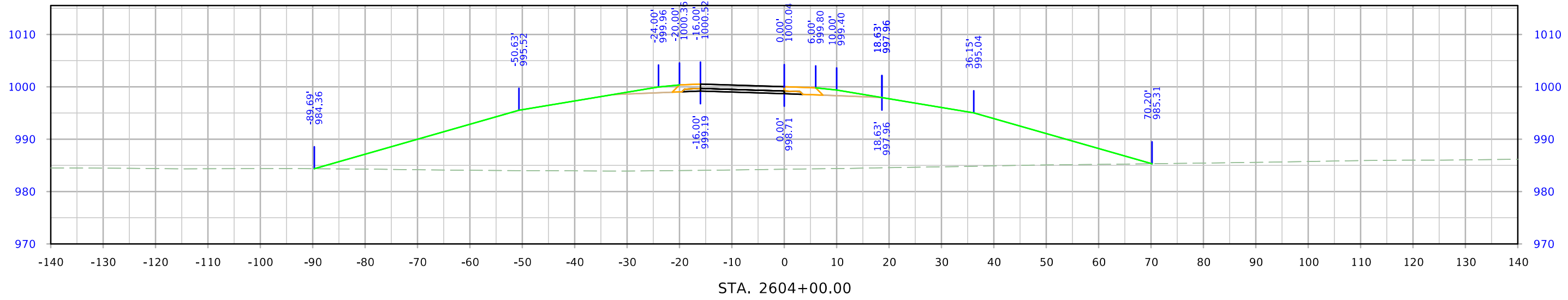
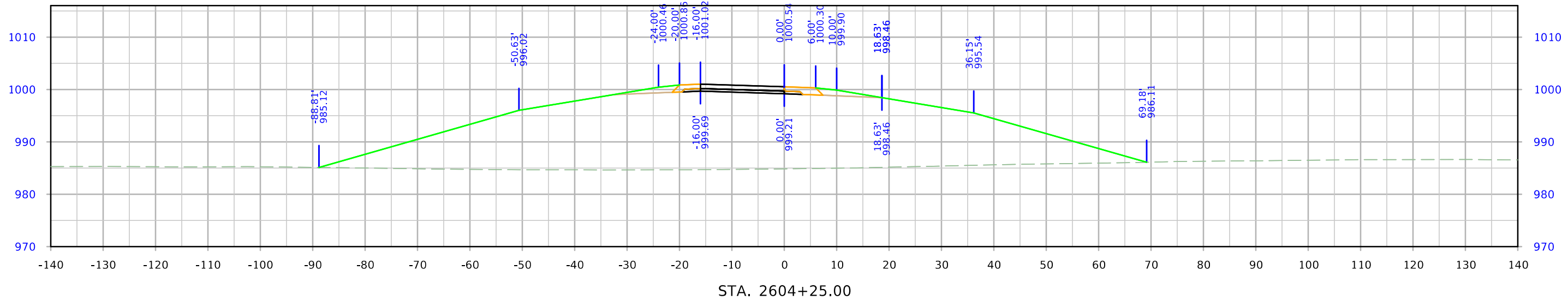
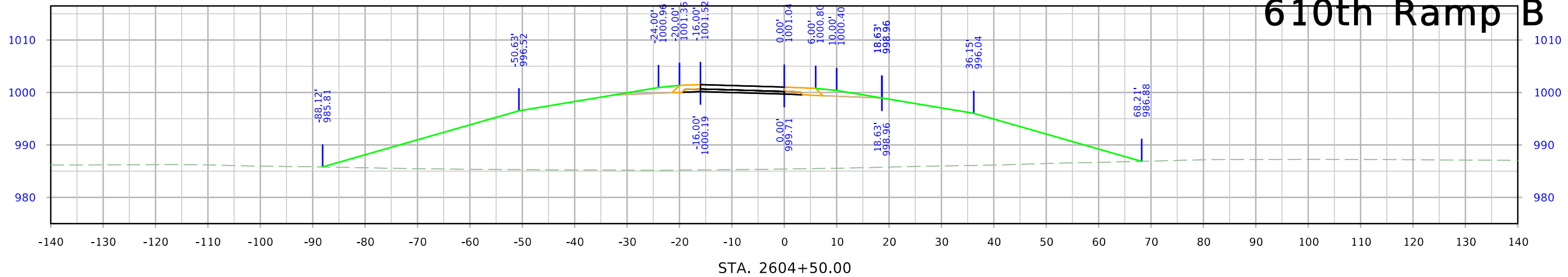




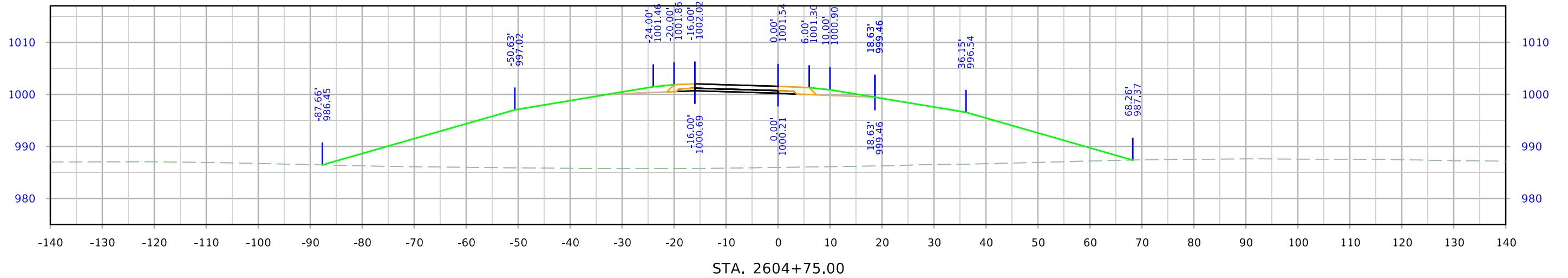
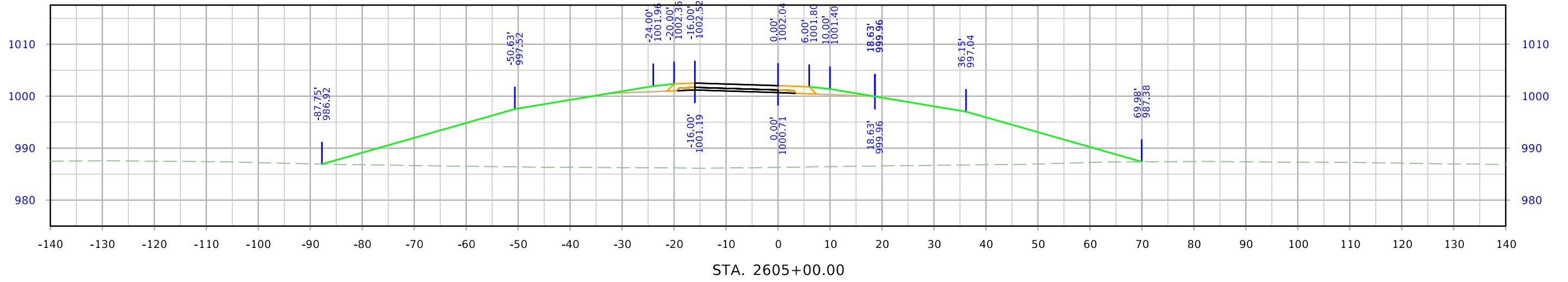
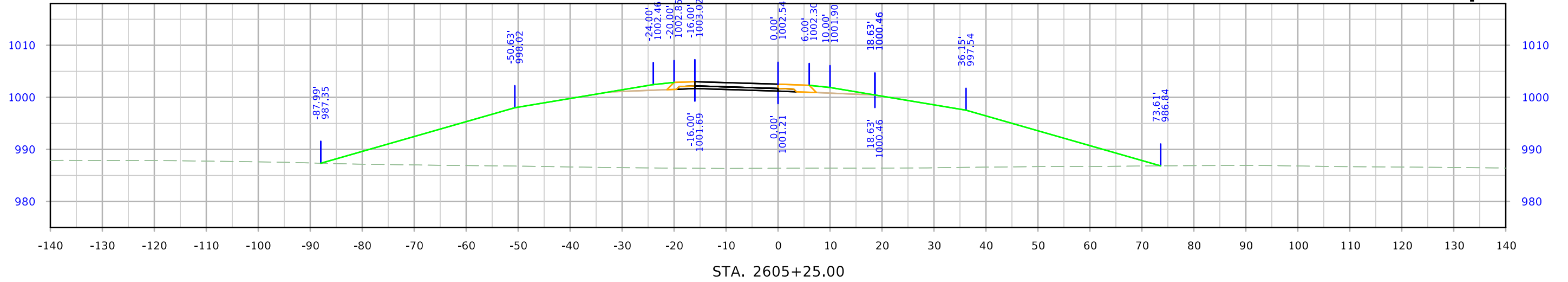
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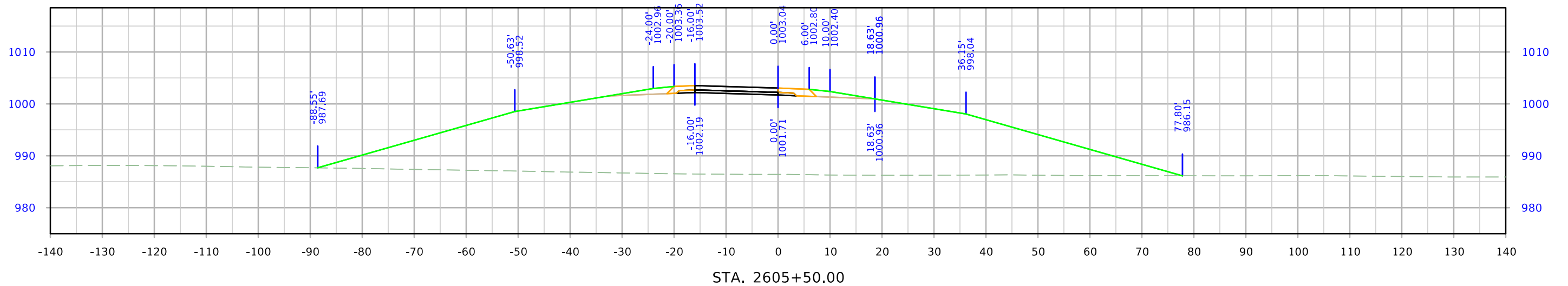
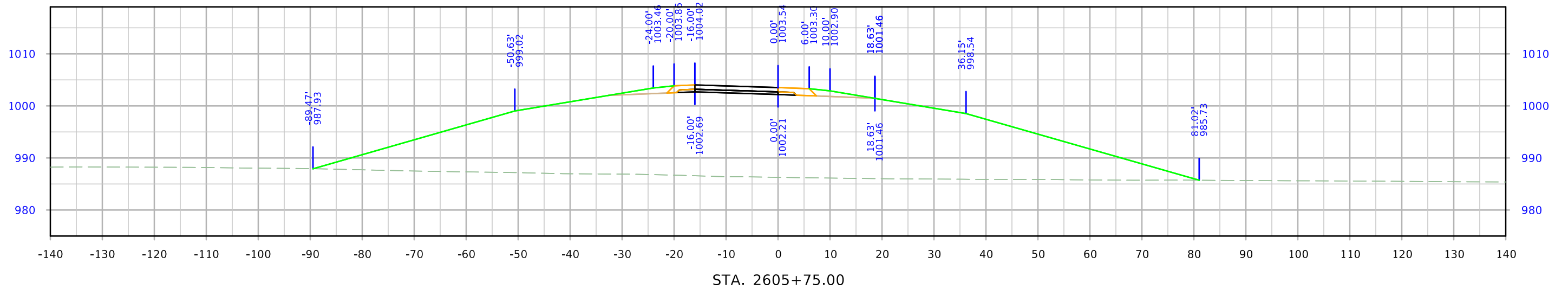
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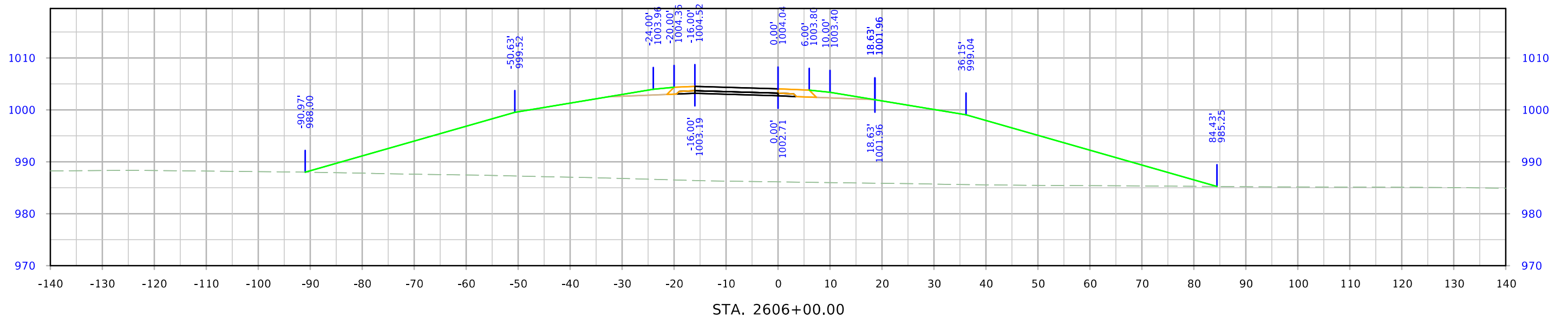
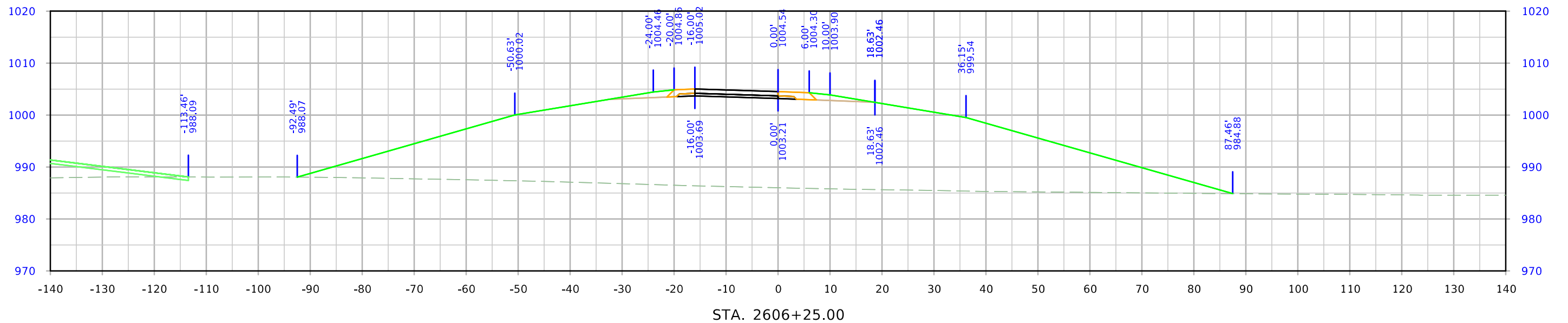
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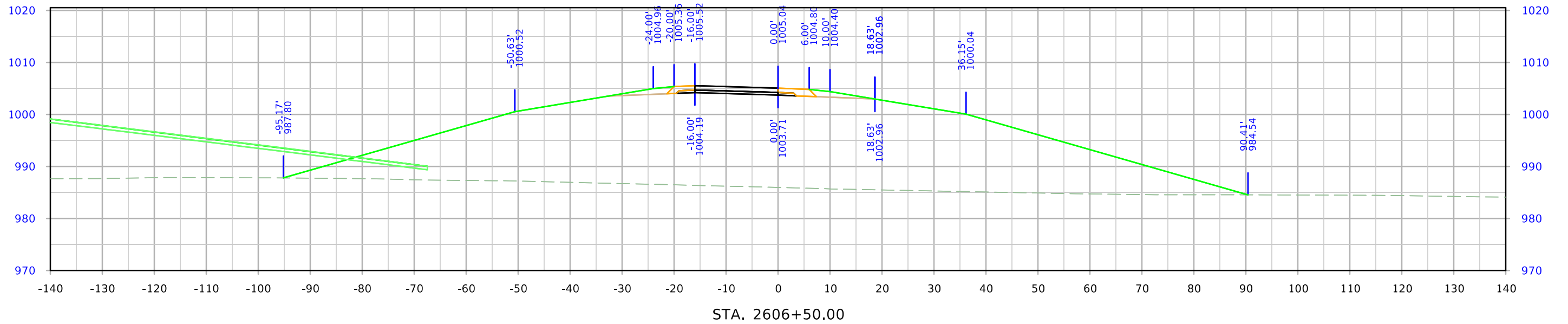
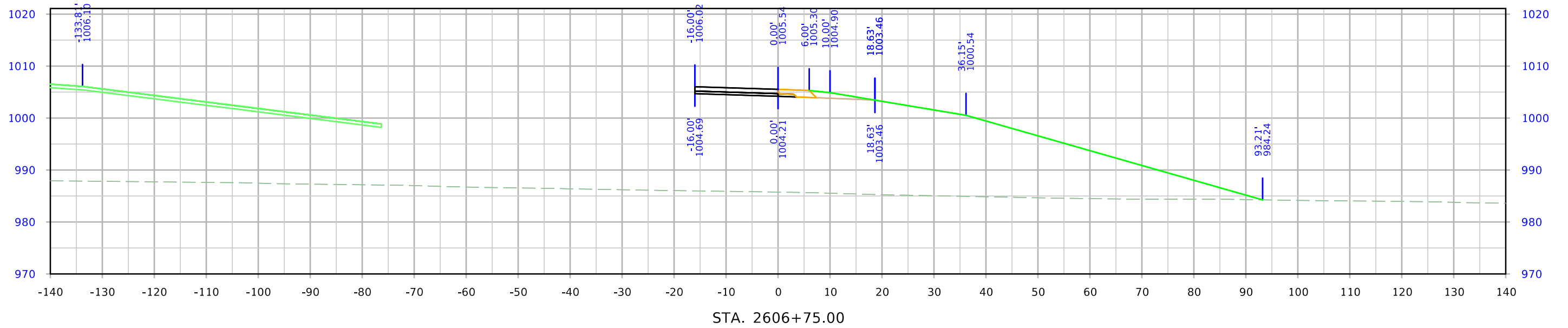
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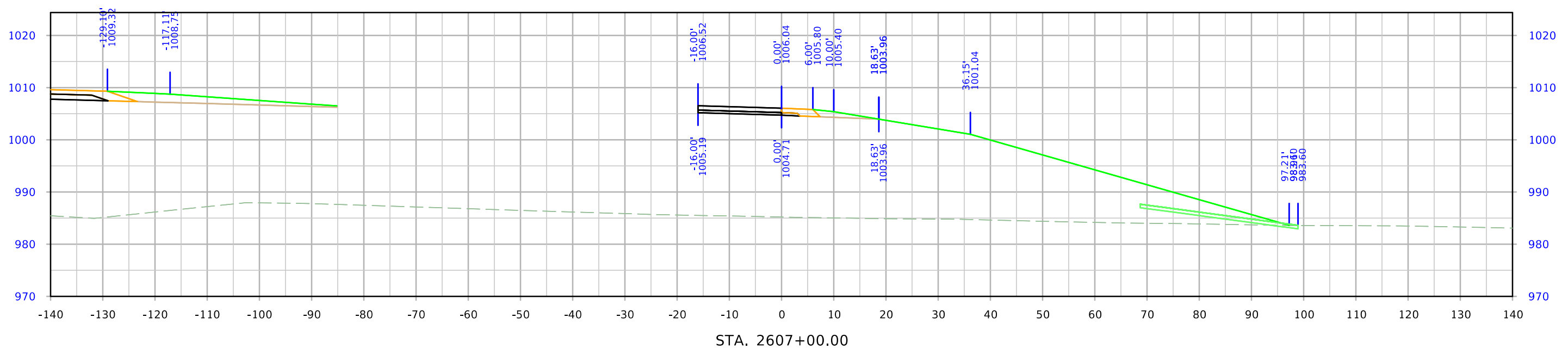
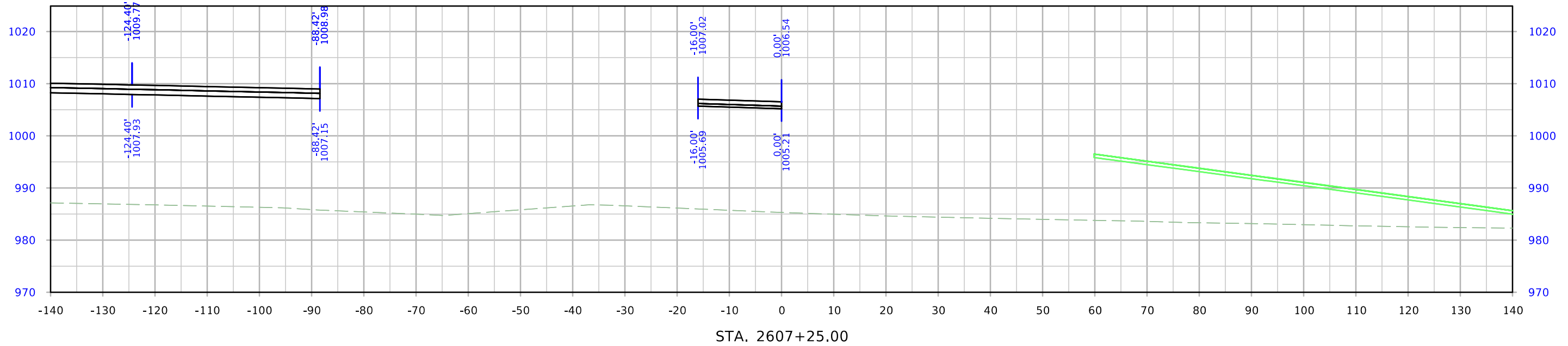
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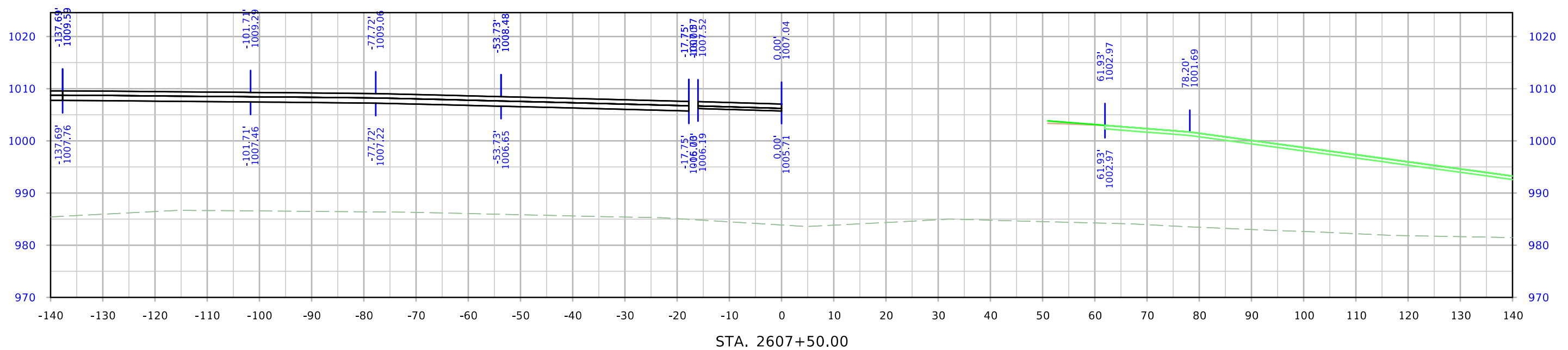
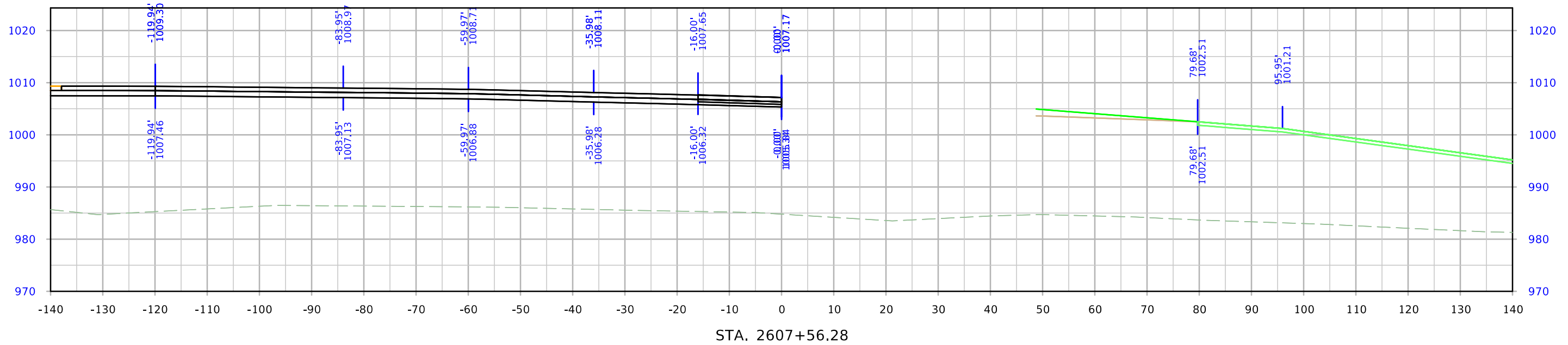
# 610th Ramp B



# 610th Ramp B

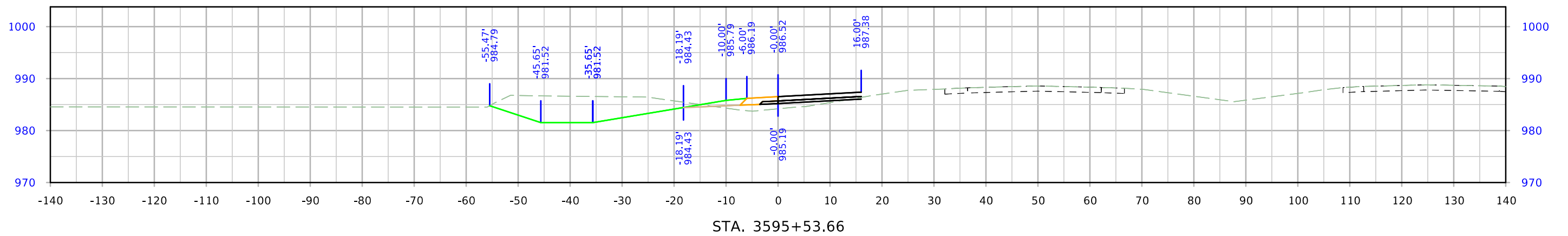
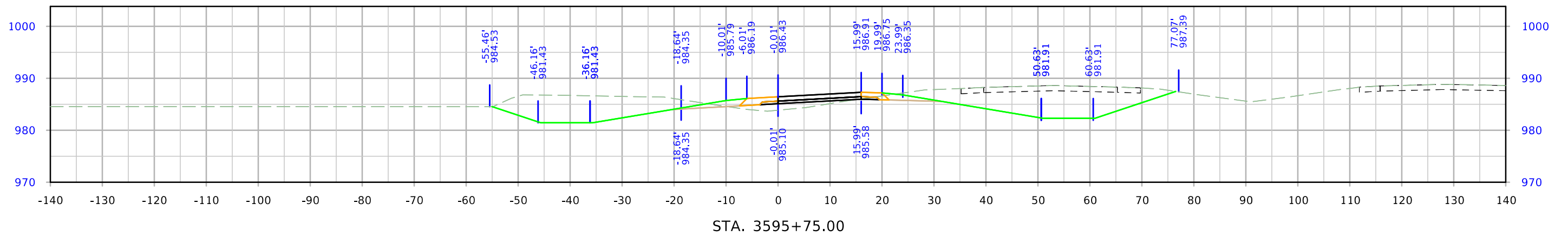
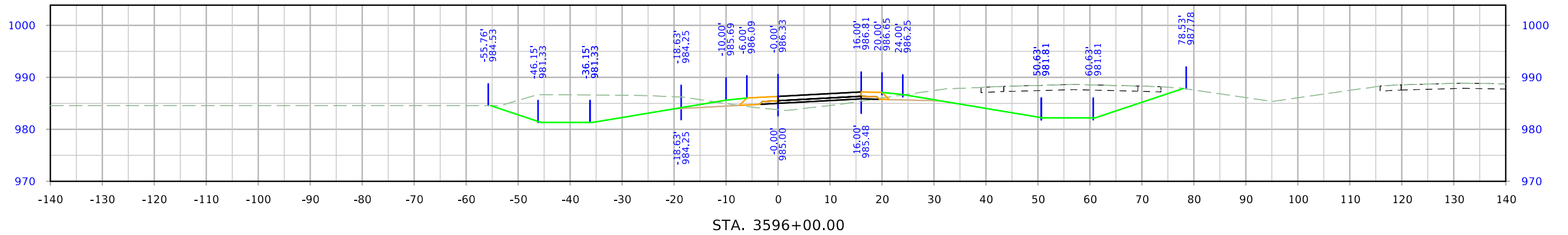


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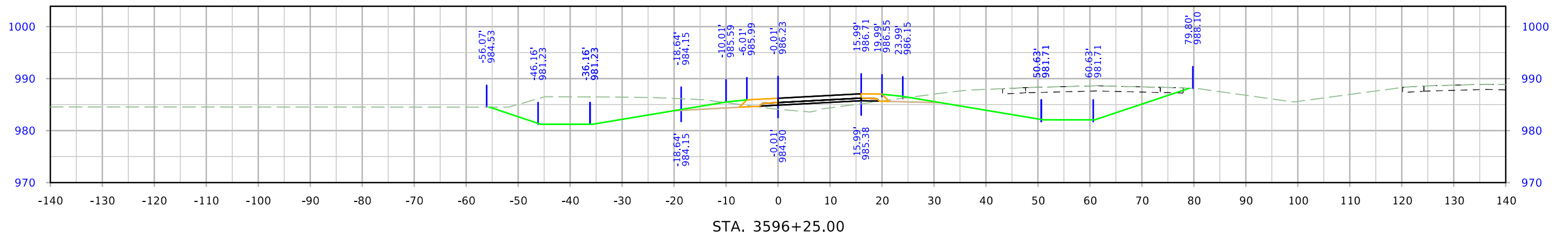
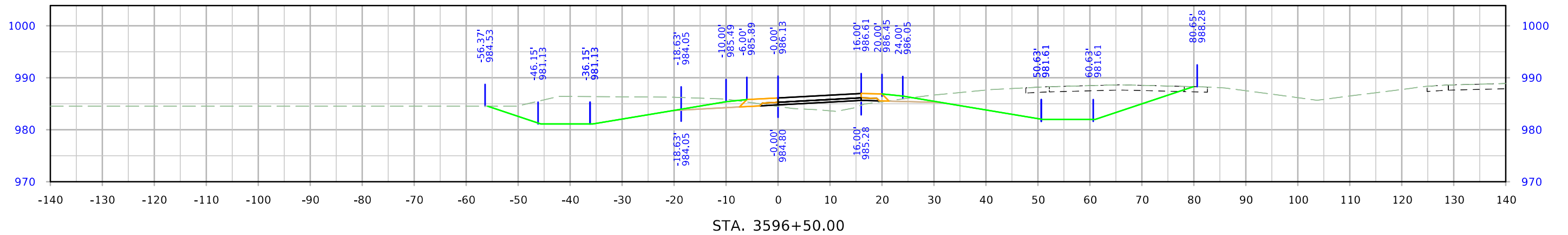
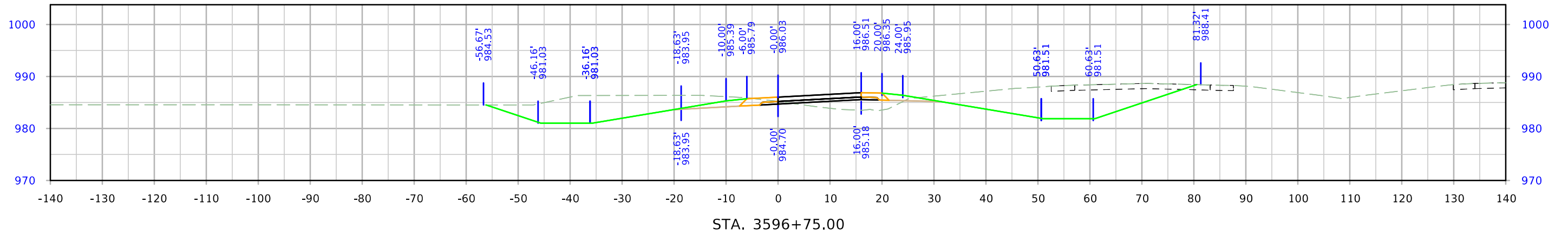




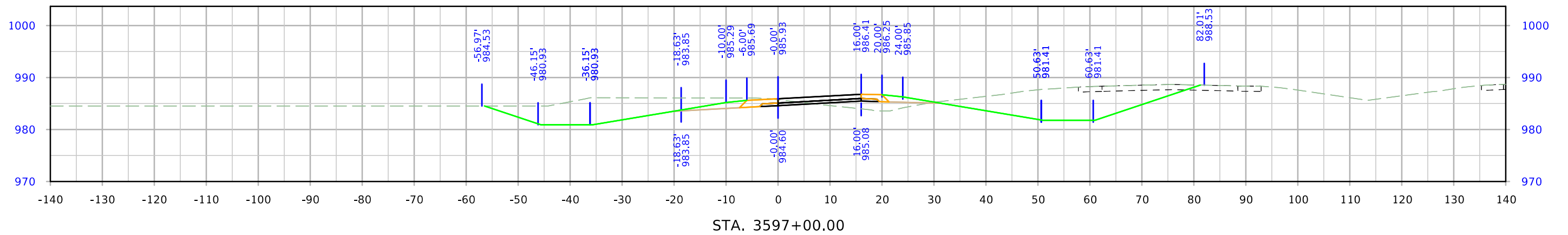
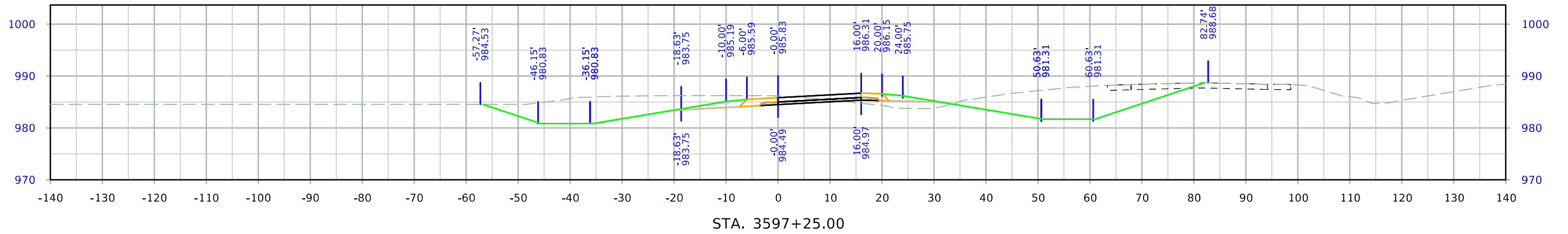
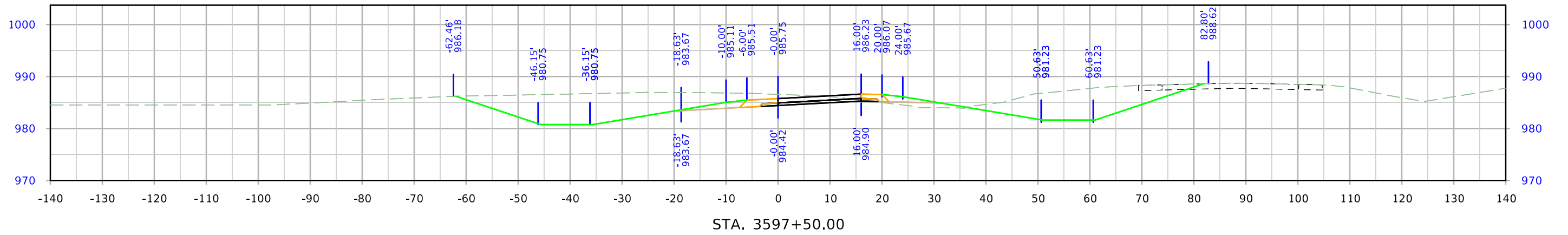
# 610th Ramp C



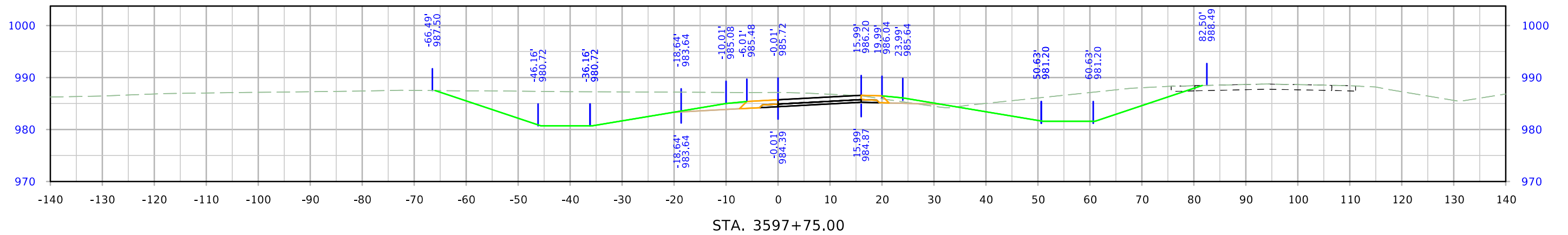
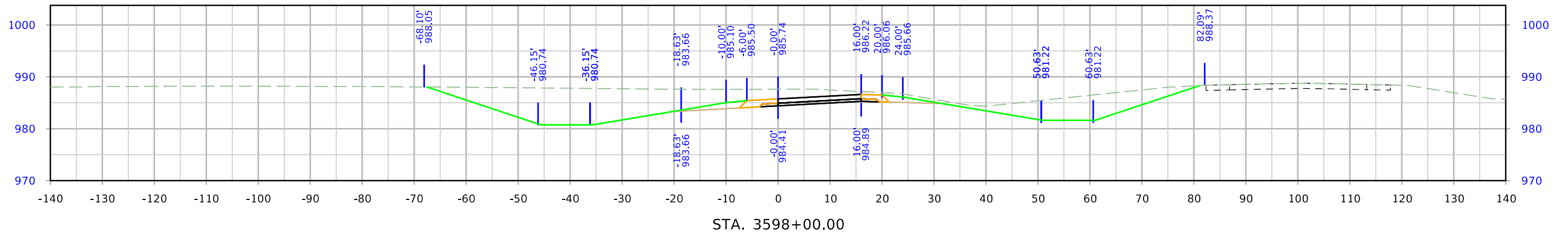
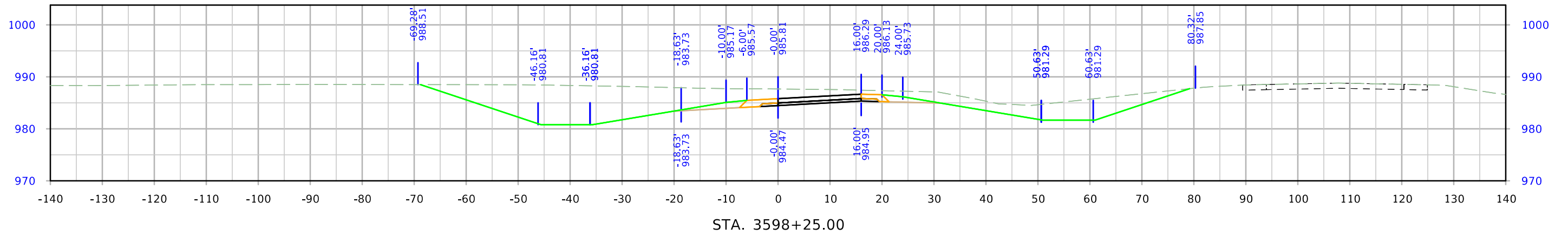
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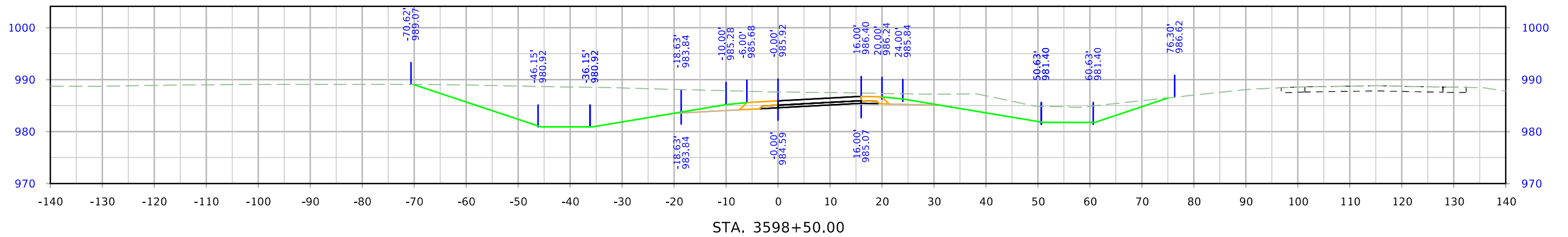
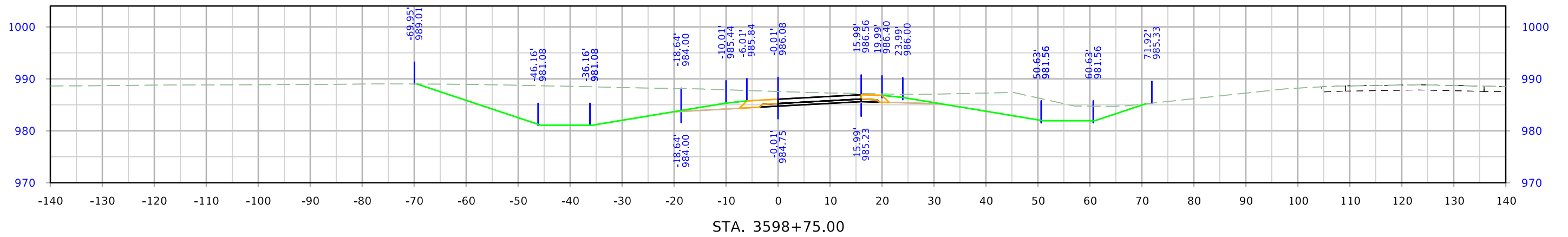
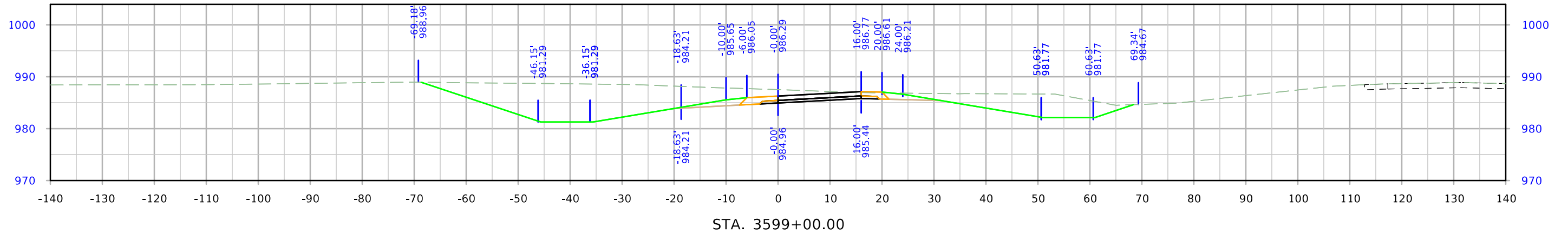
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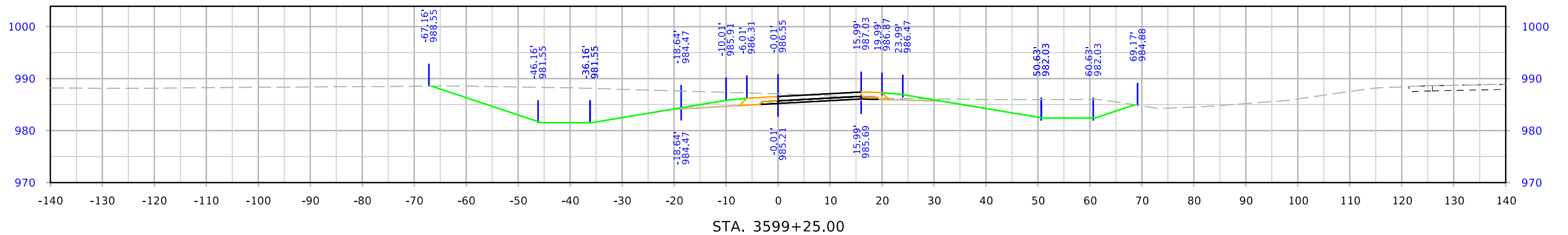
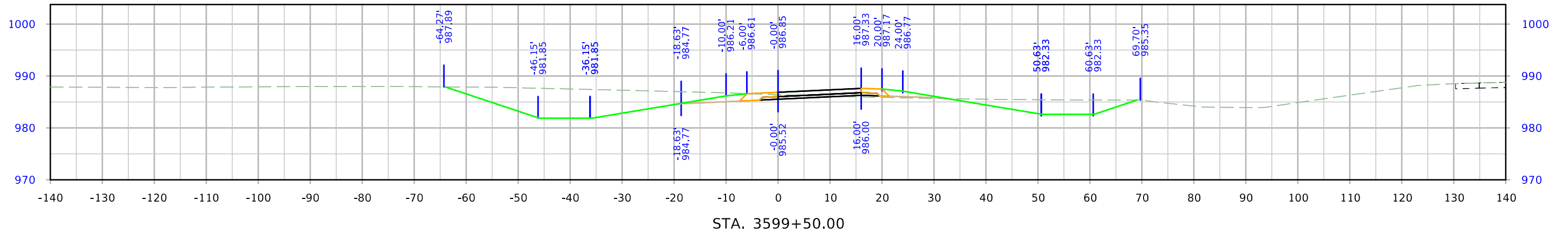
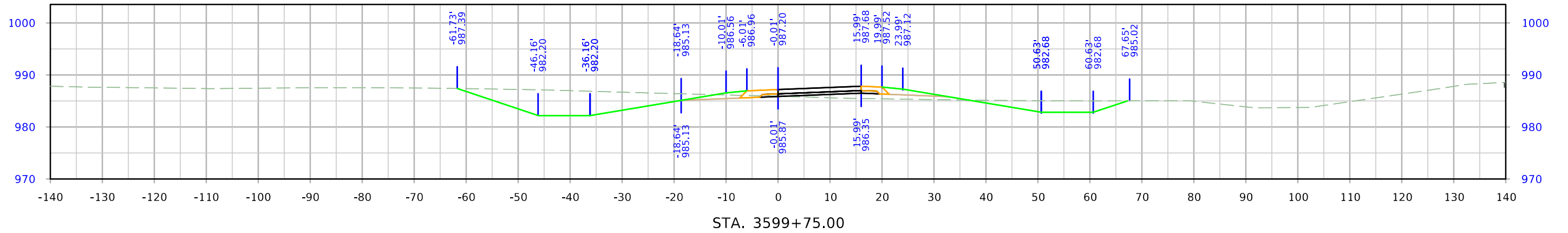
# 610th Ramp C



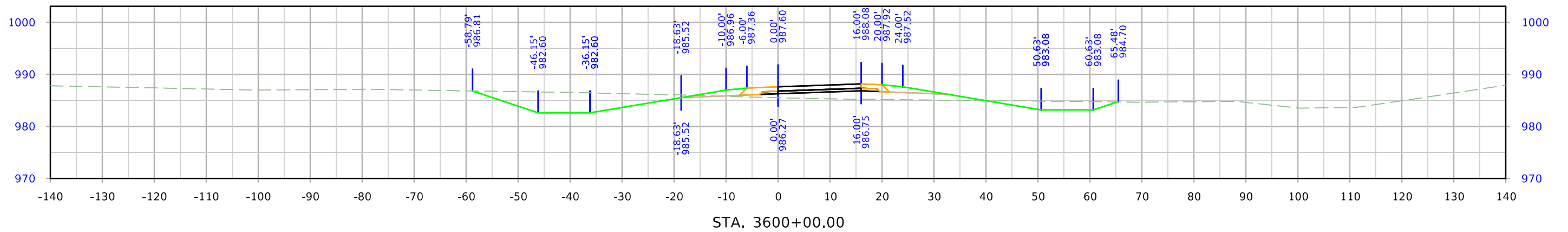
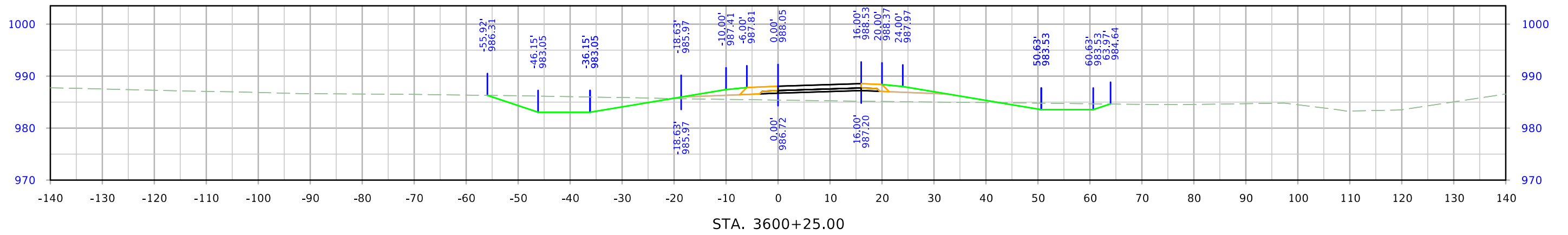
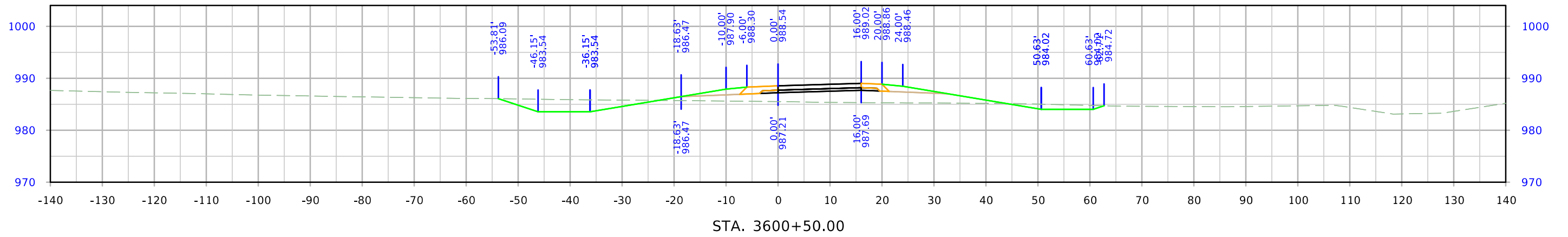
# 610th Ramp C



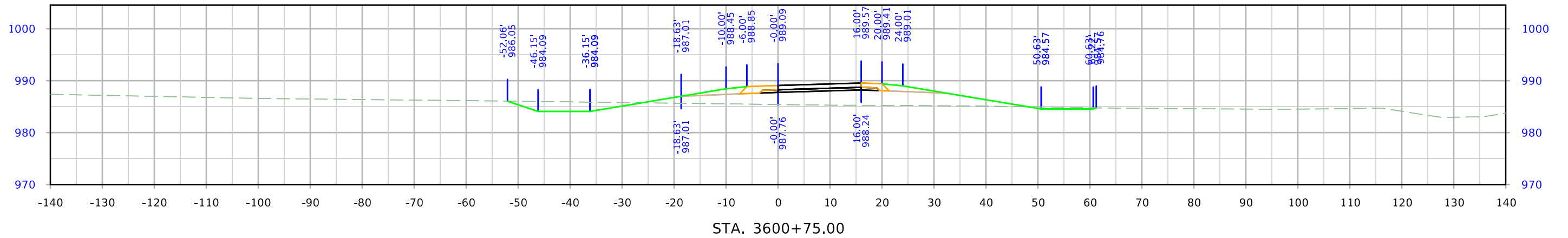
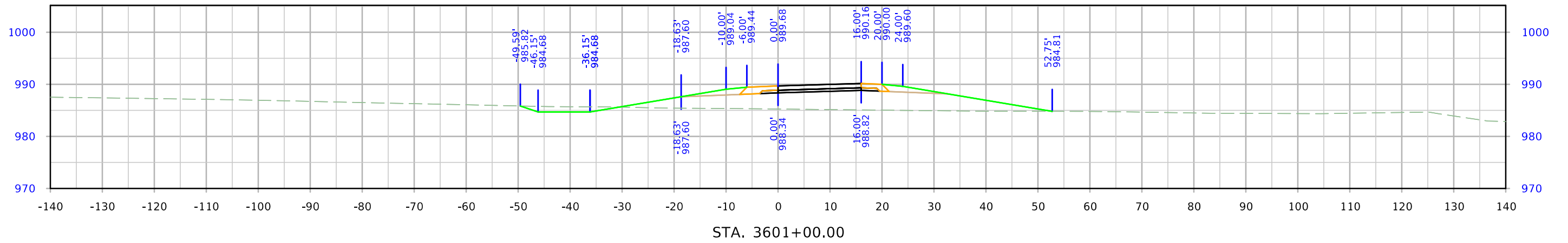
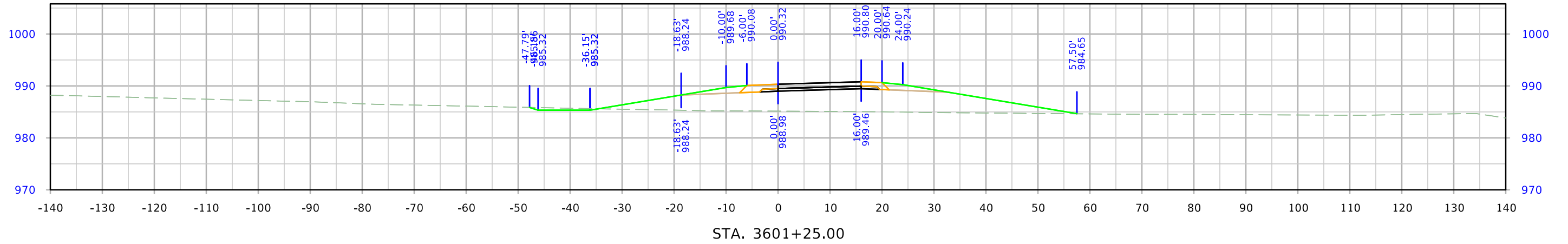
# 610th Ramp C



# 610th Ramp C

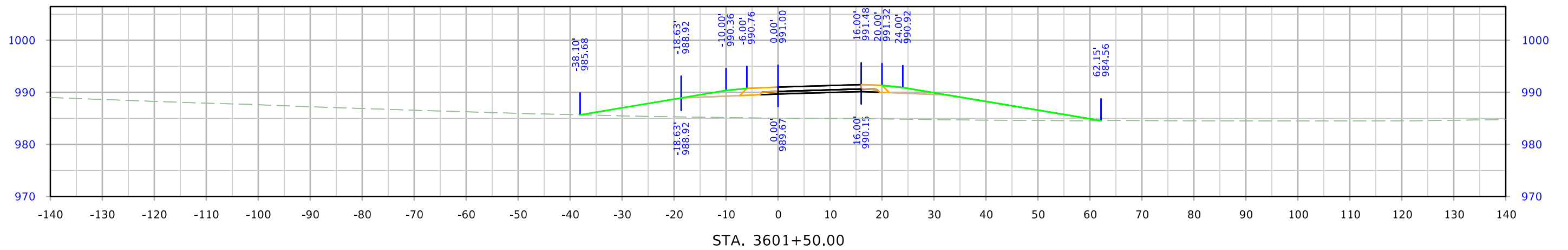
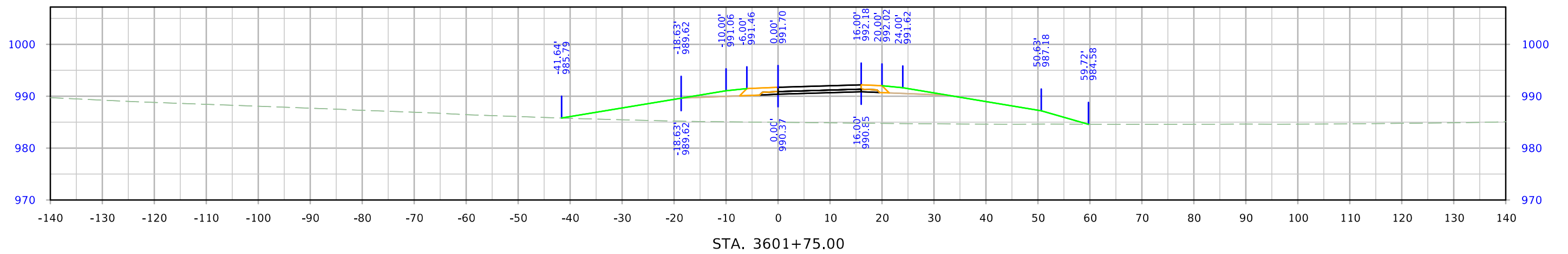
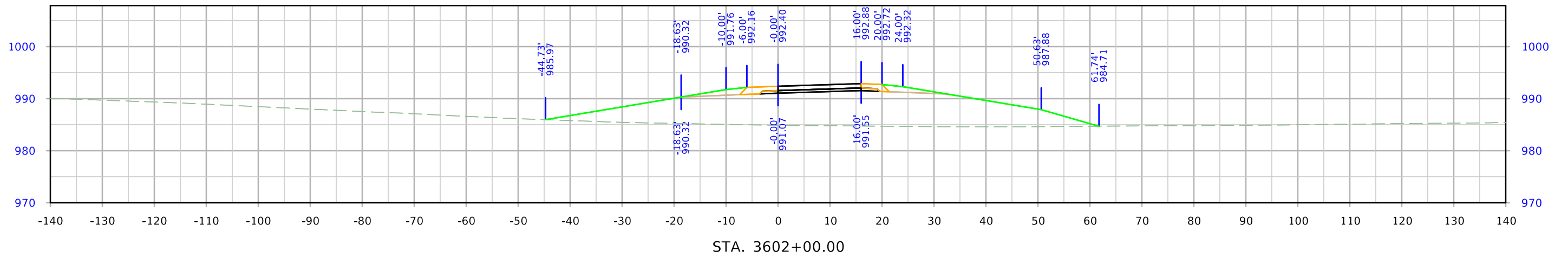


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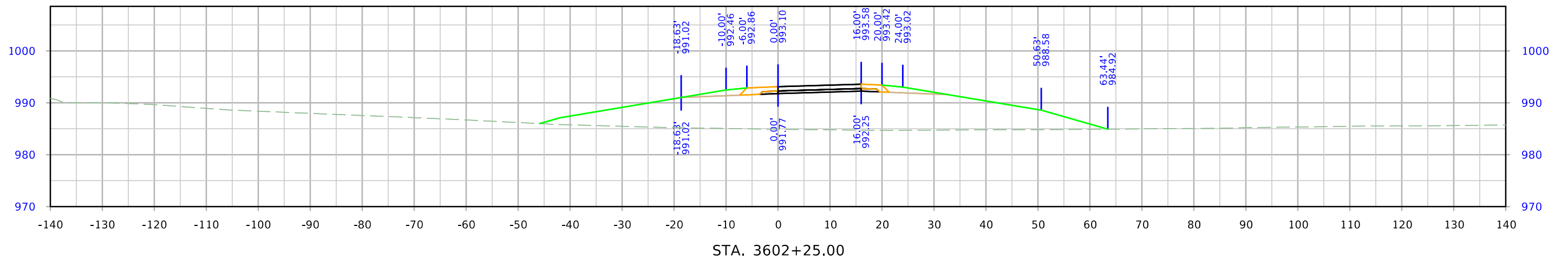
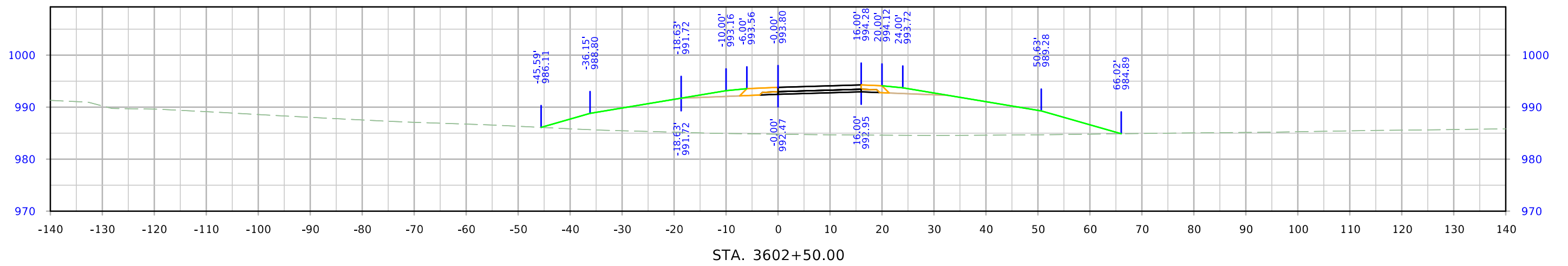
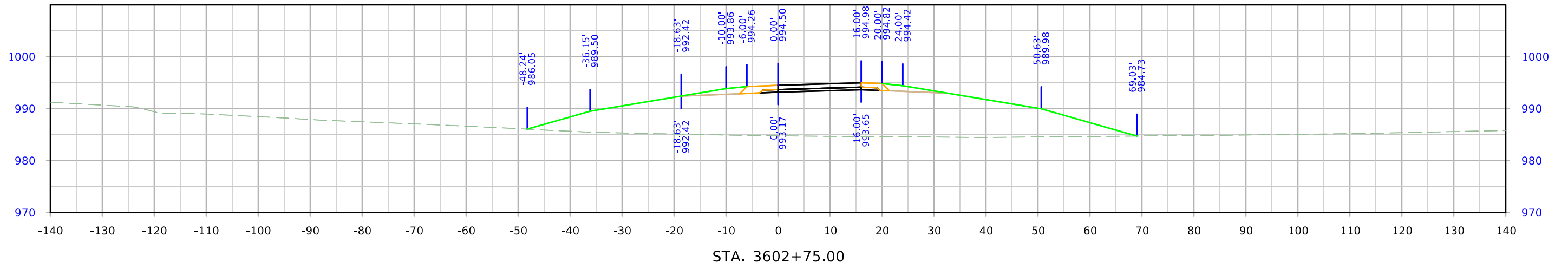




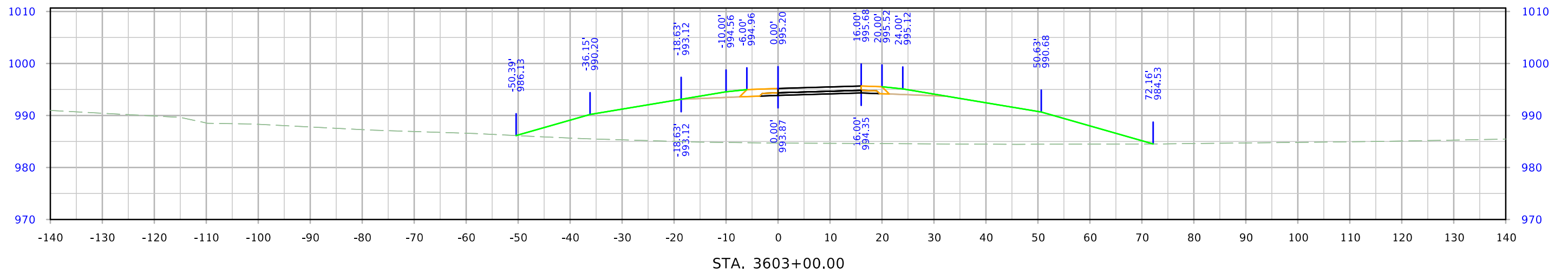
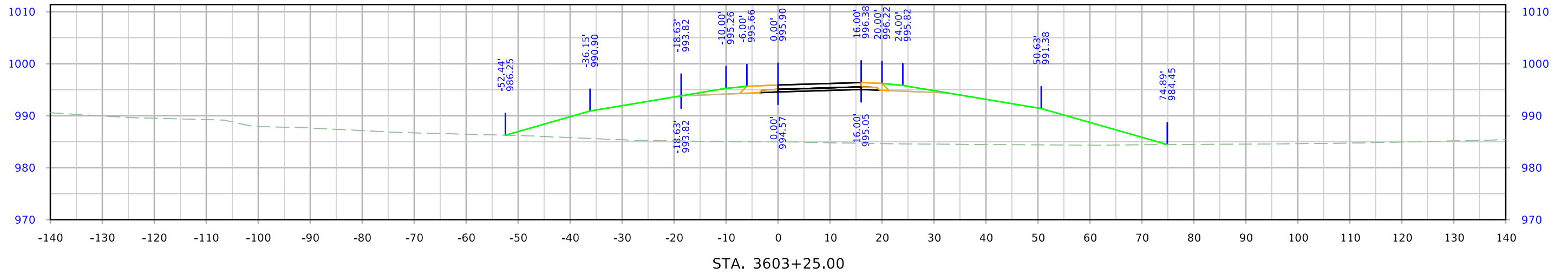
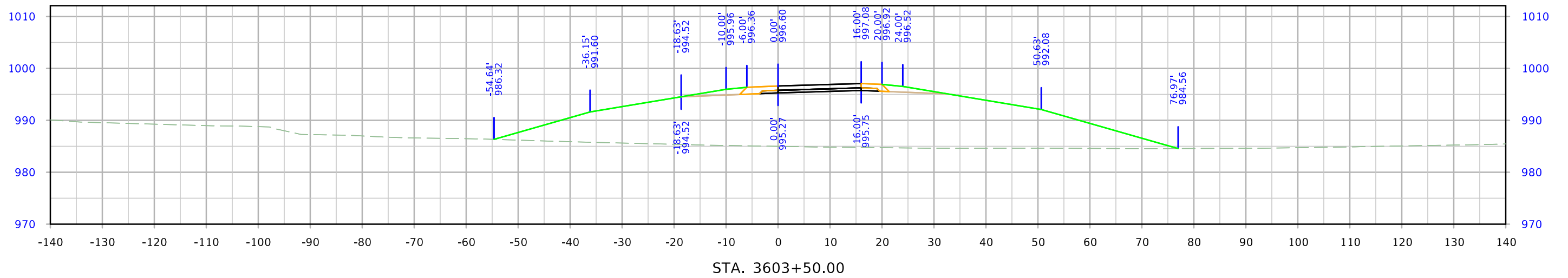
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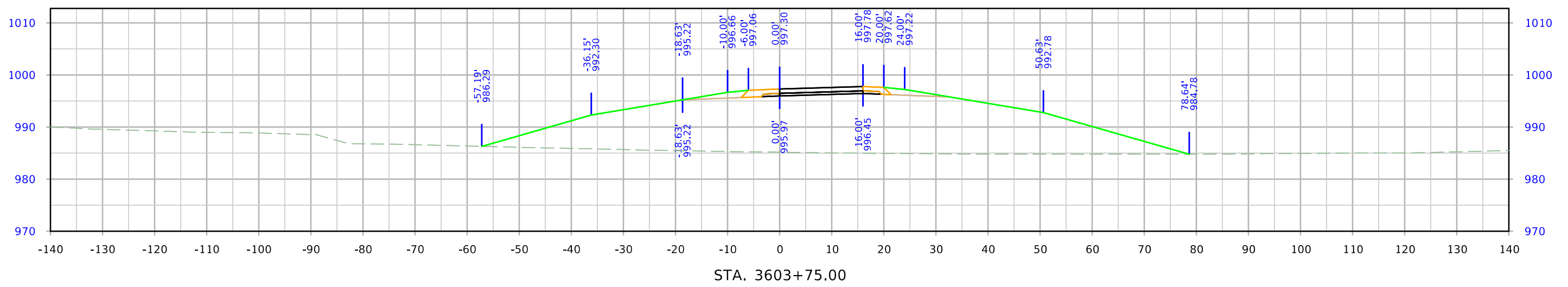
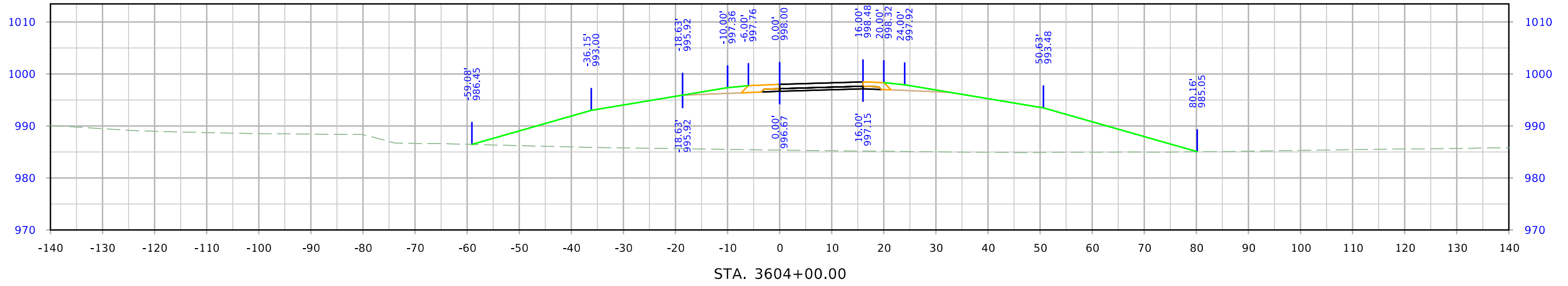
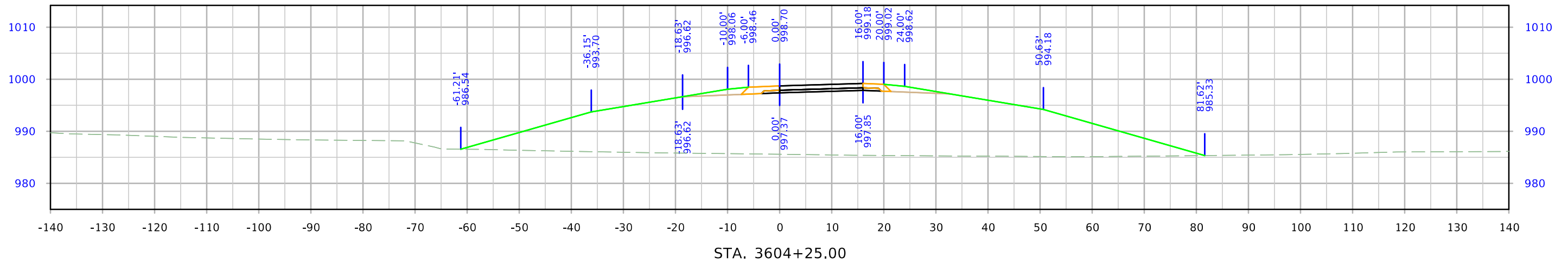
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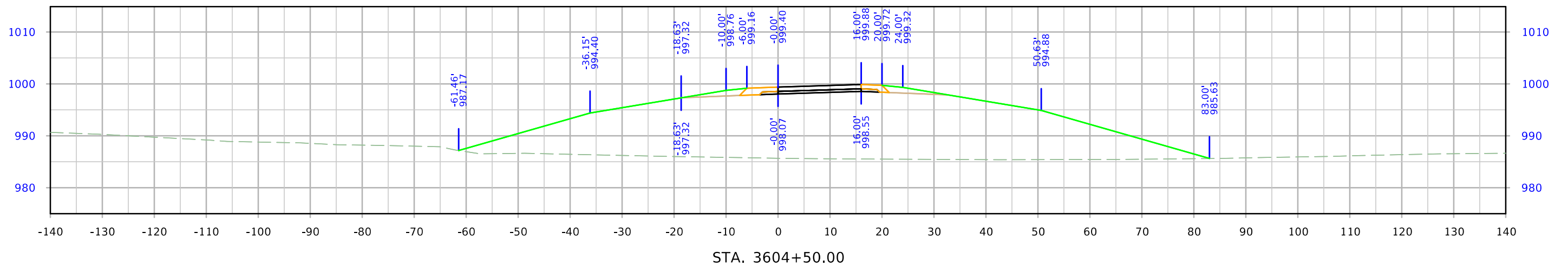
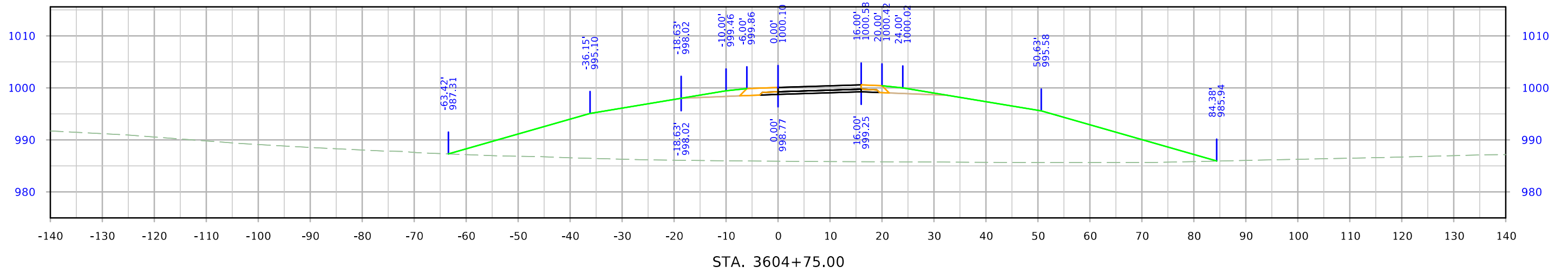
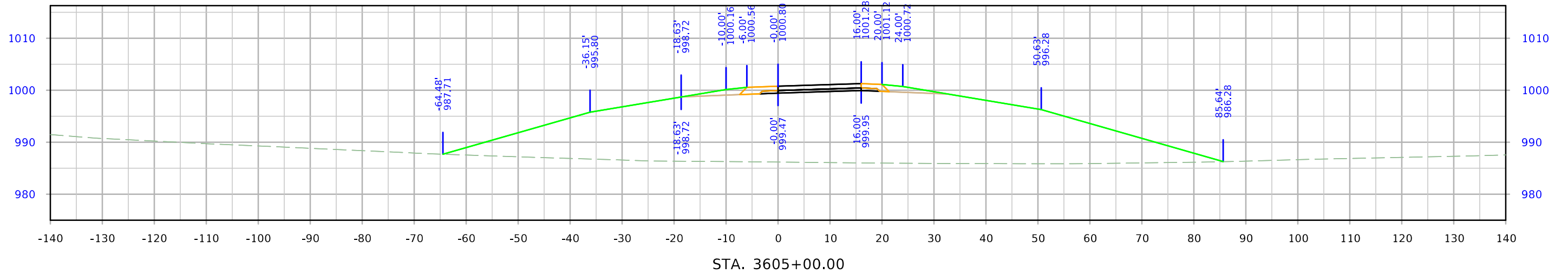
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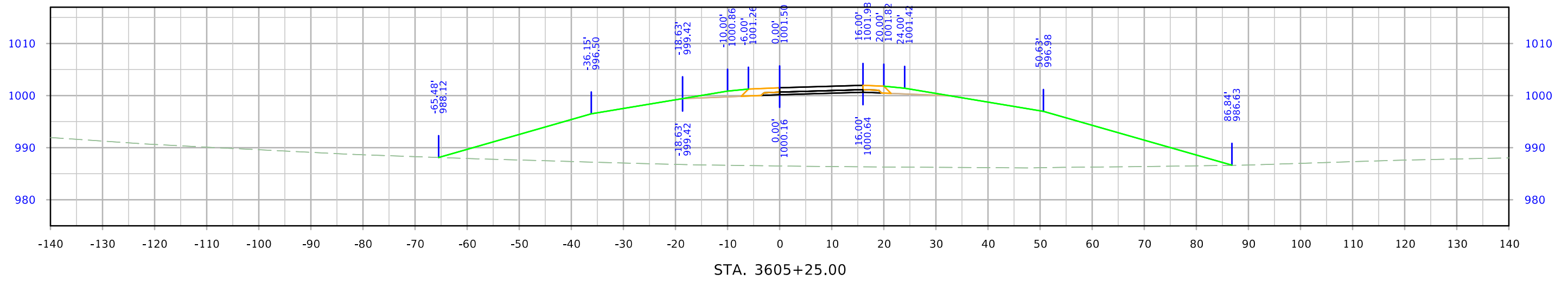
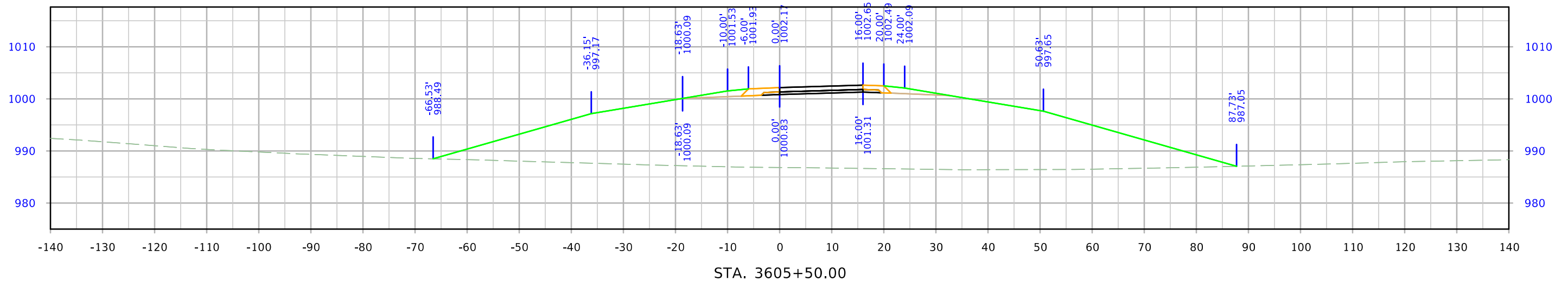
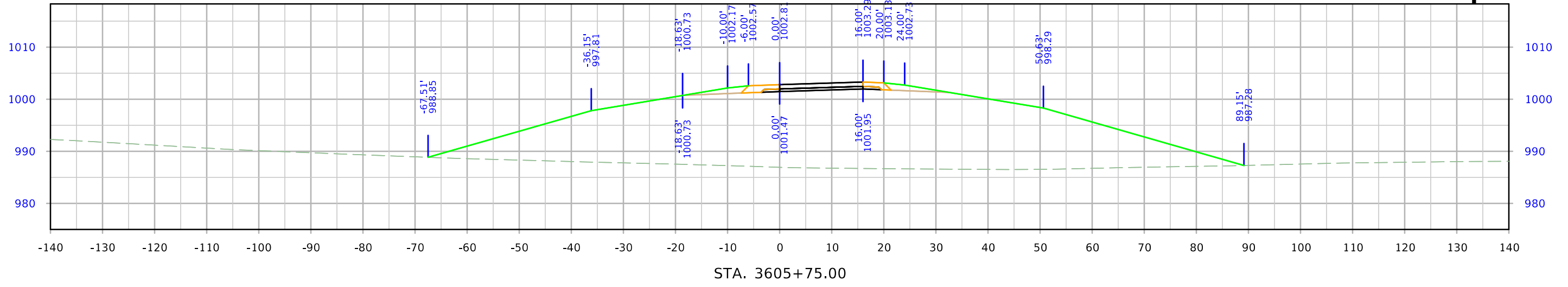
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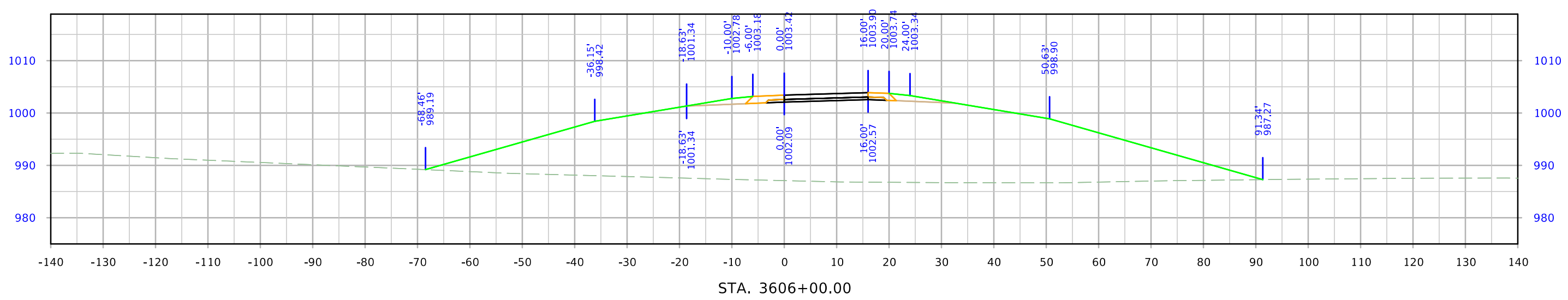
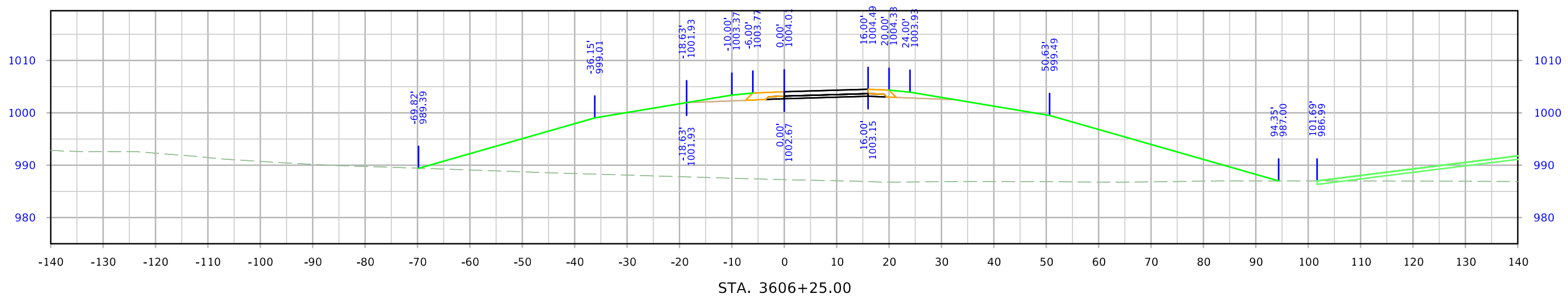
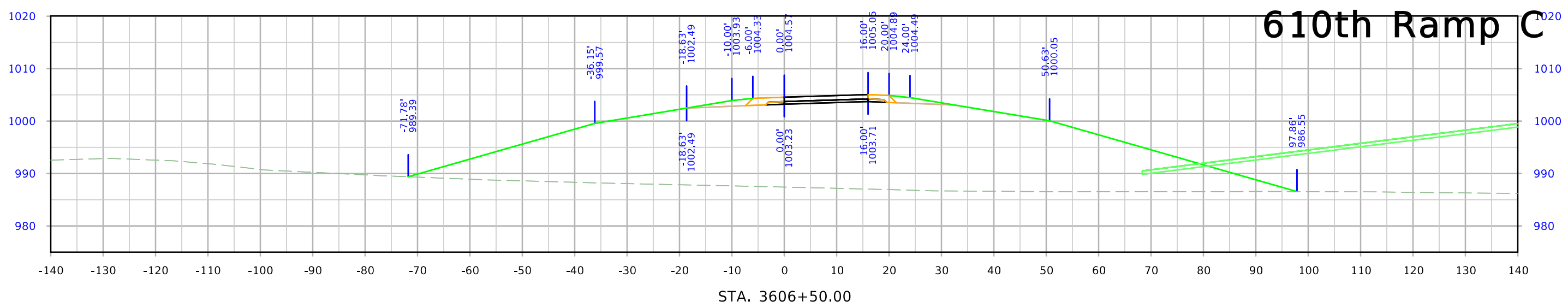
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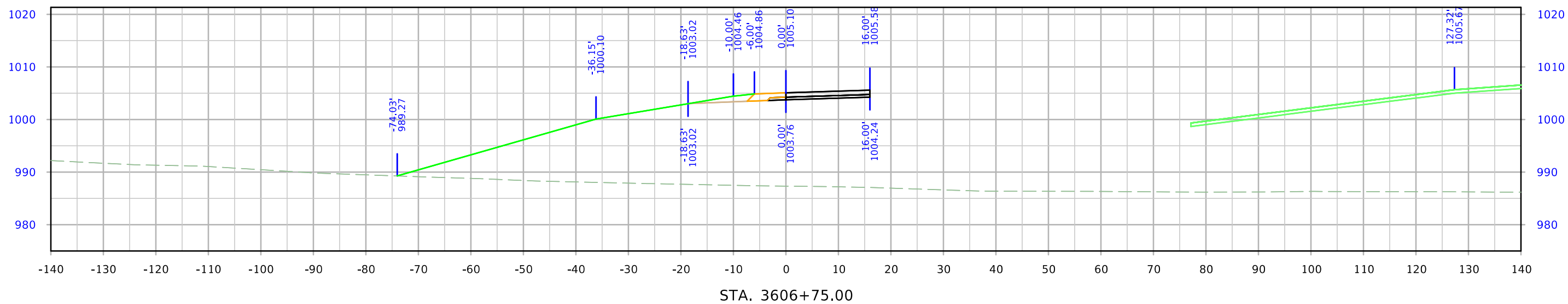
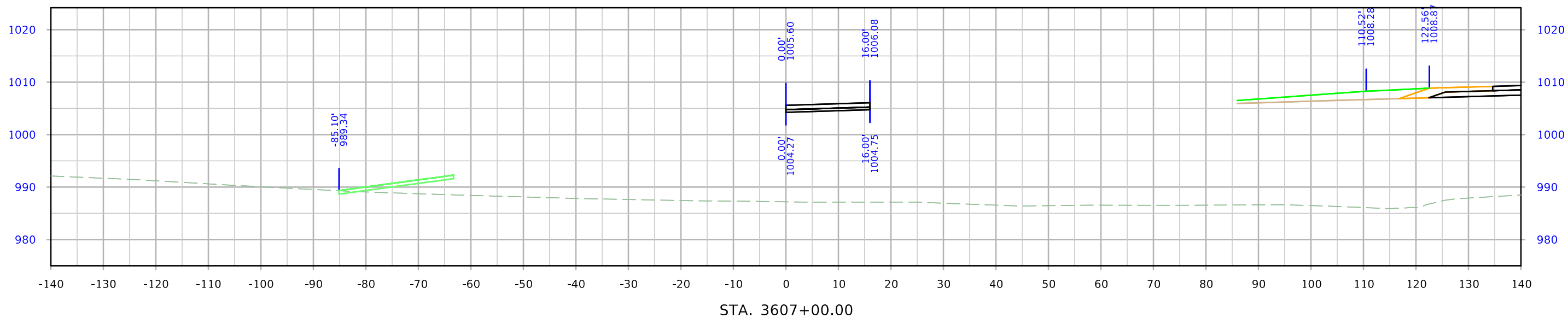
# 610th Ramp C



# 610th Ramp C

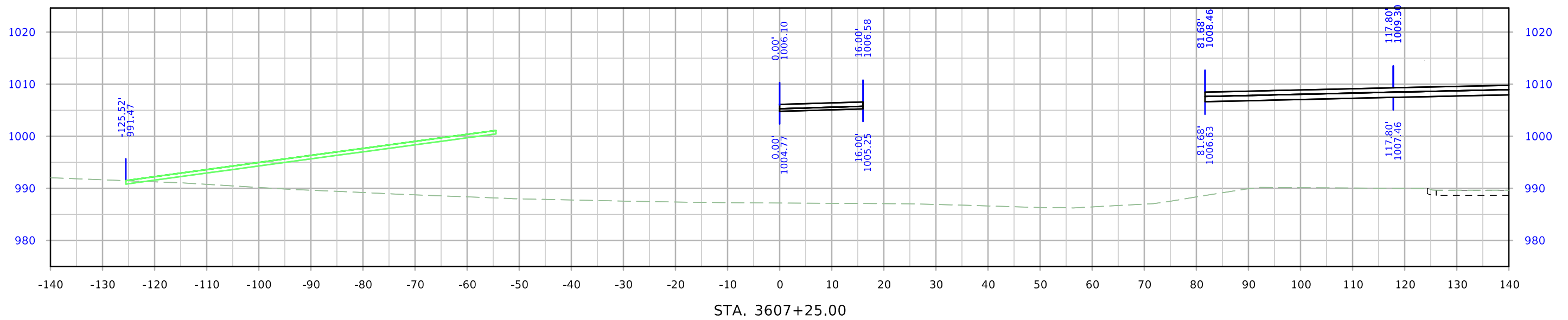
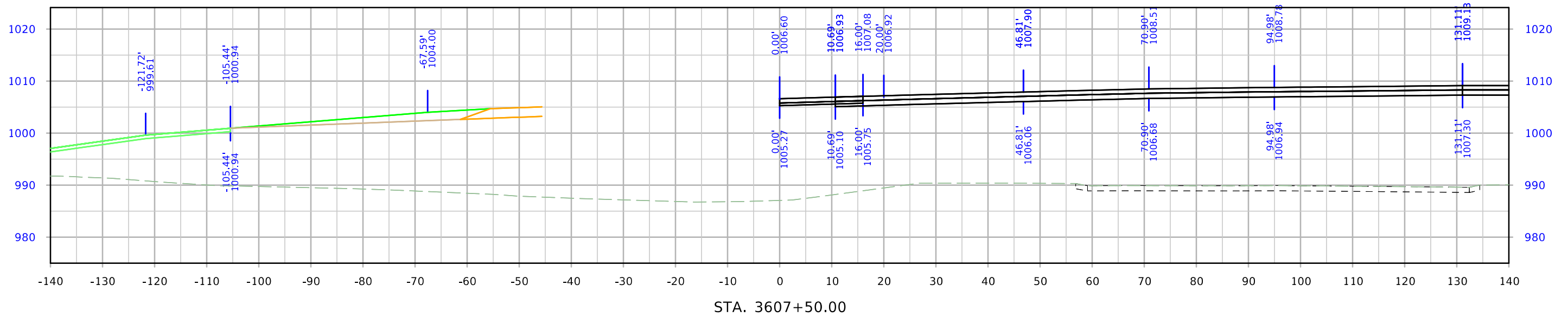


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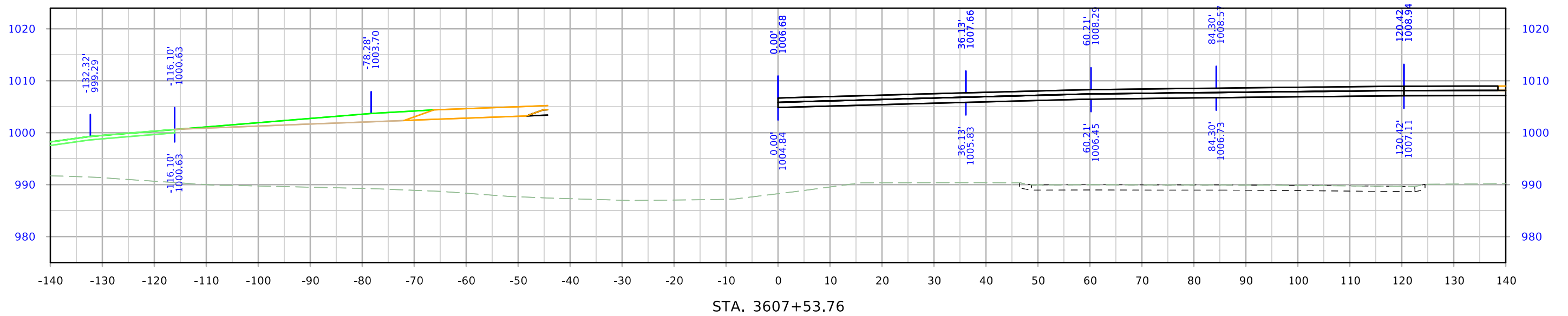




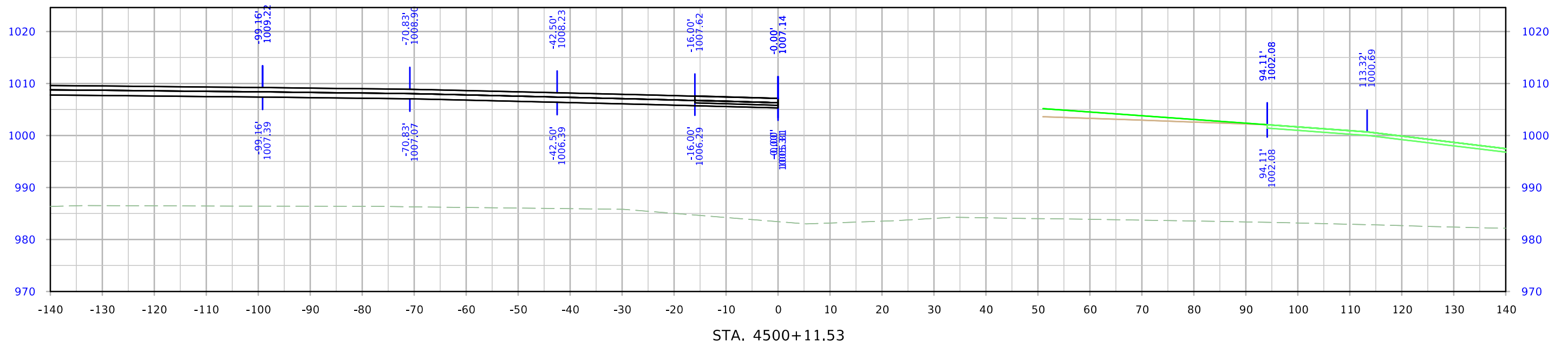
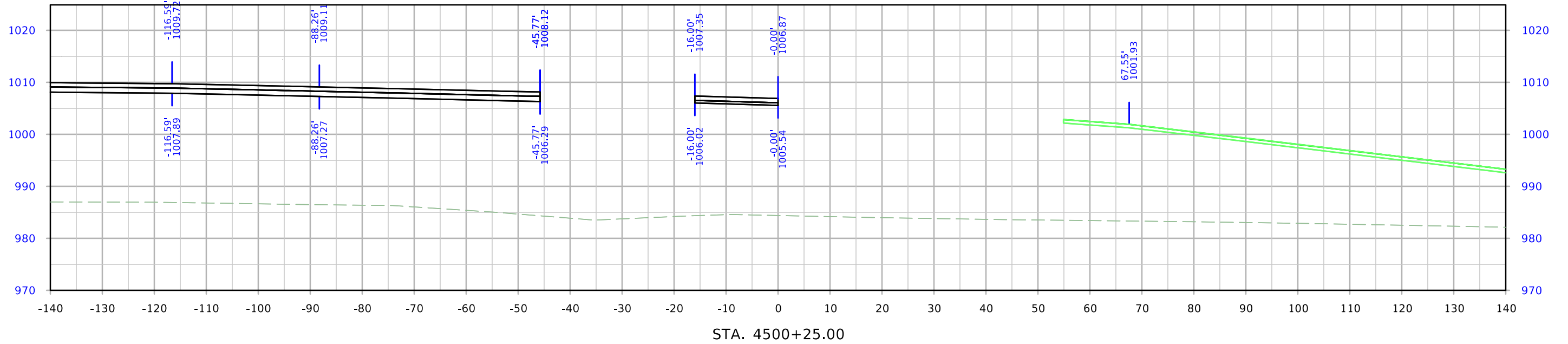
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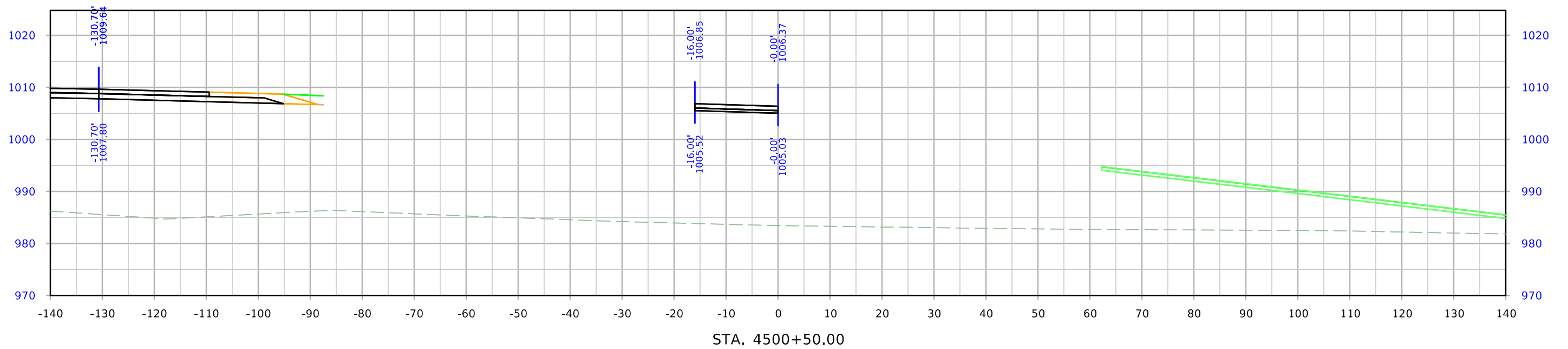
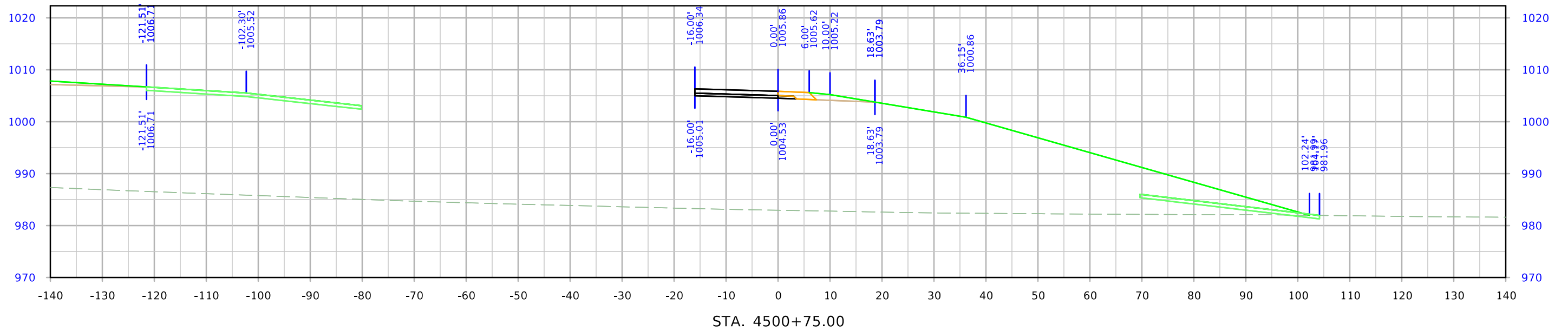
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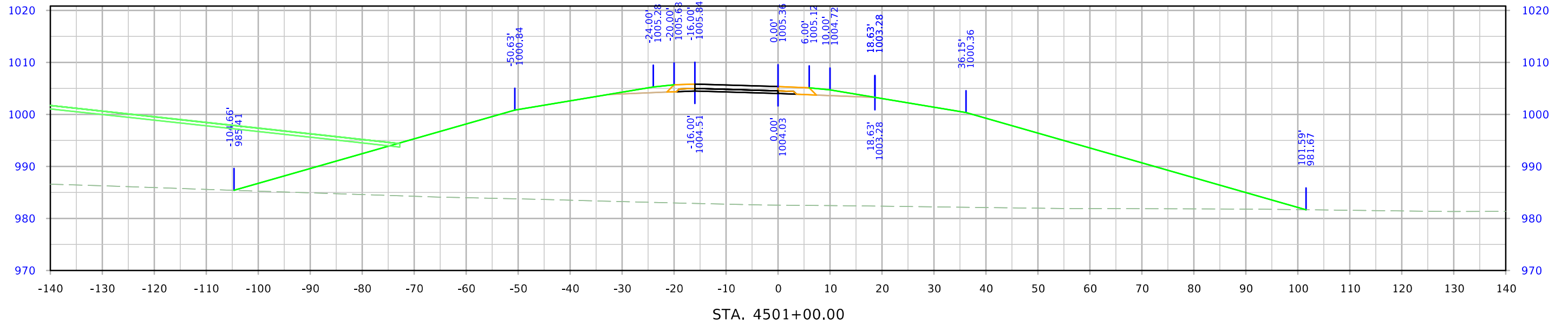
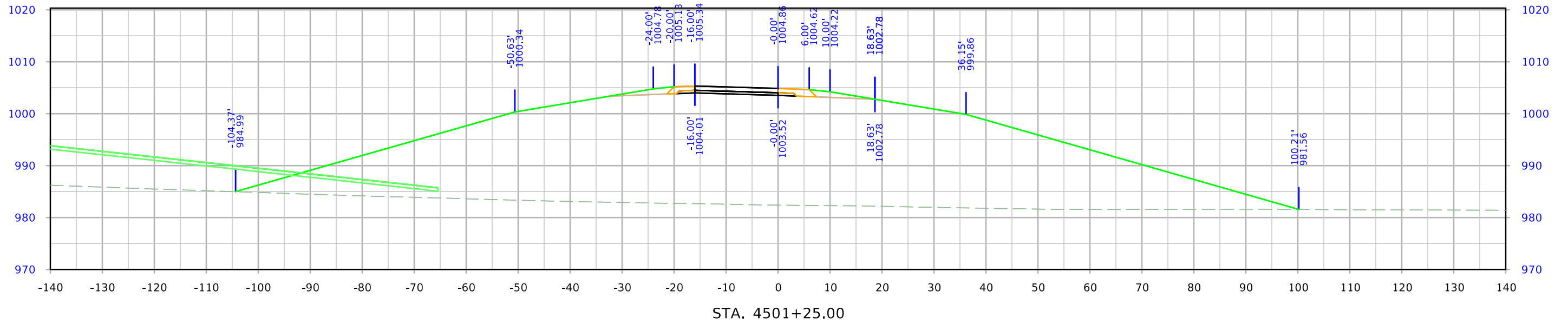
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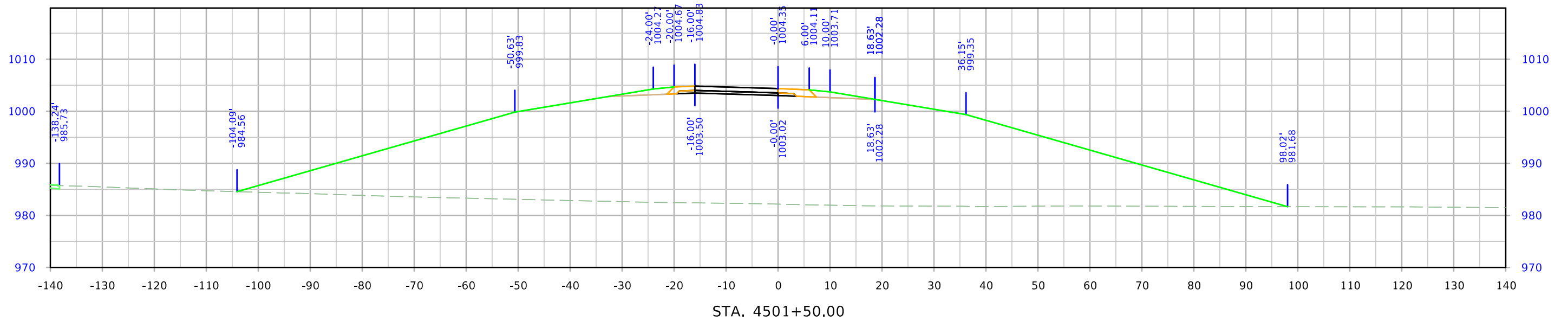
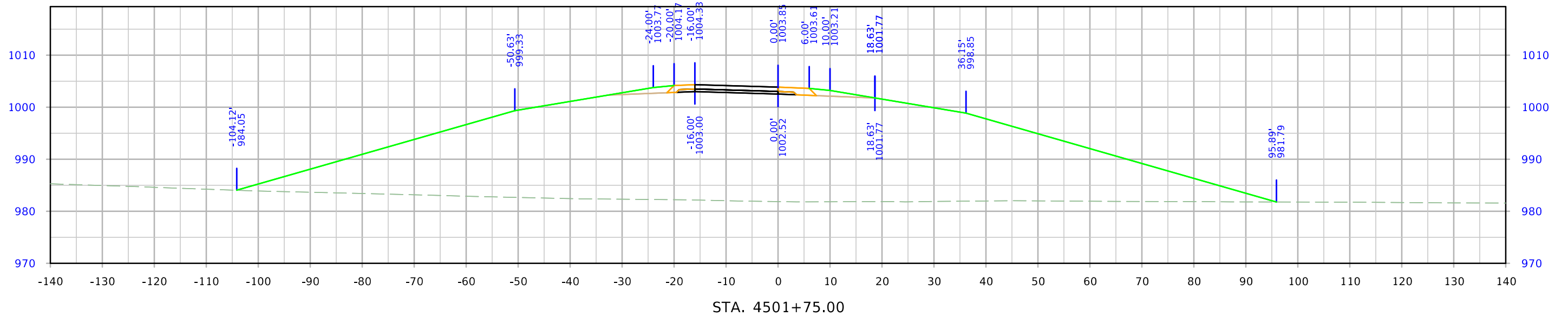
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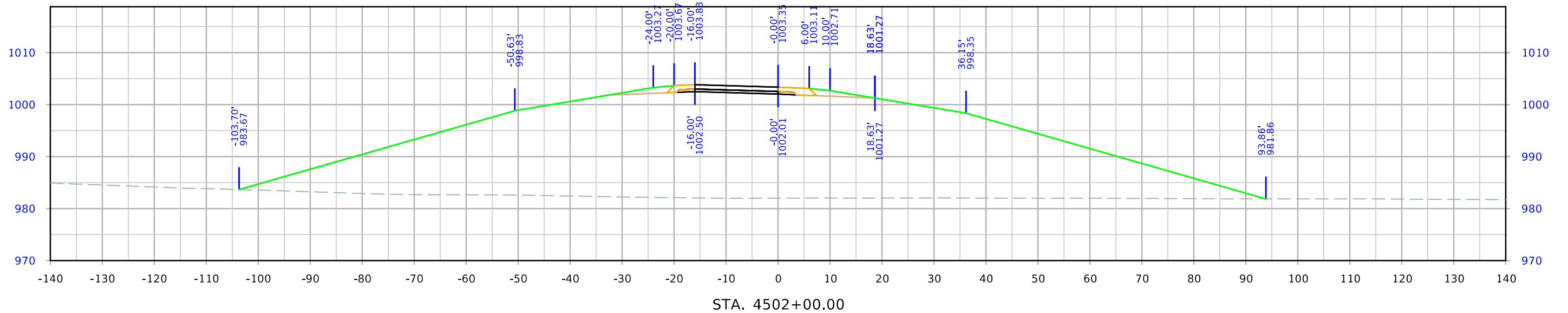
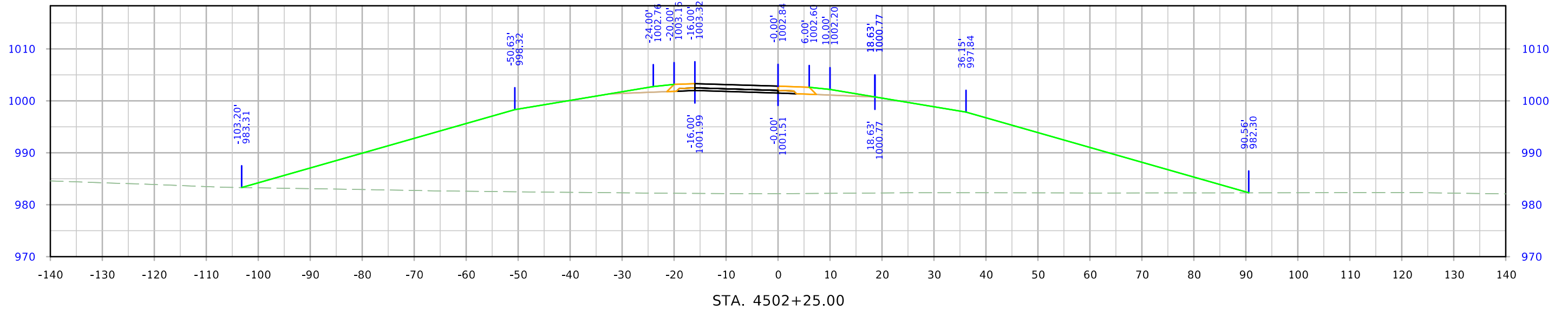
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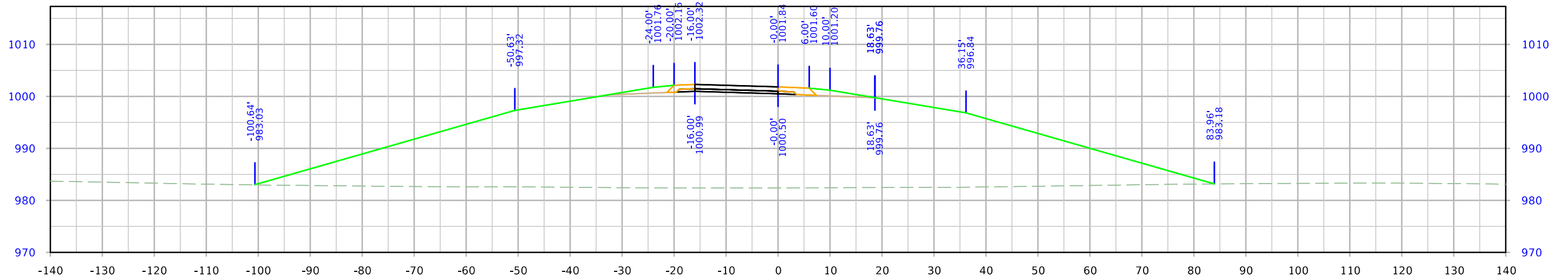
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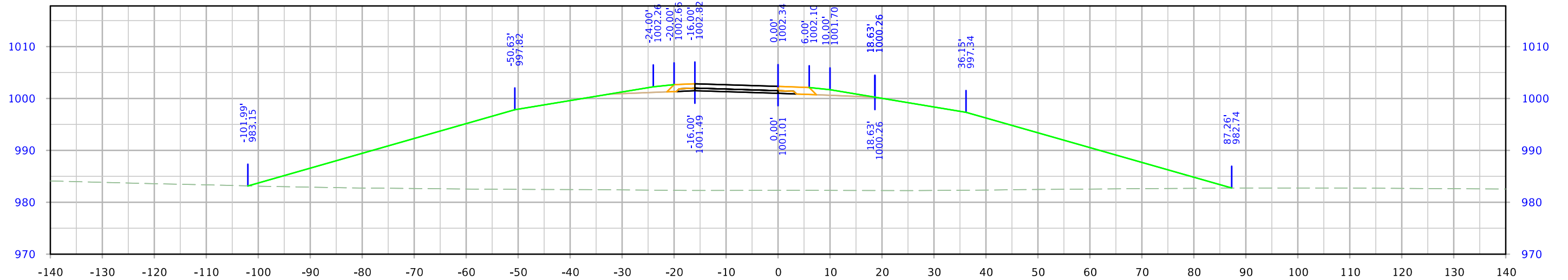
# 610th Ramp D



# 610th Ramp D



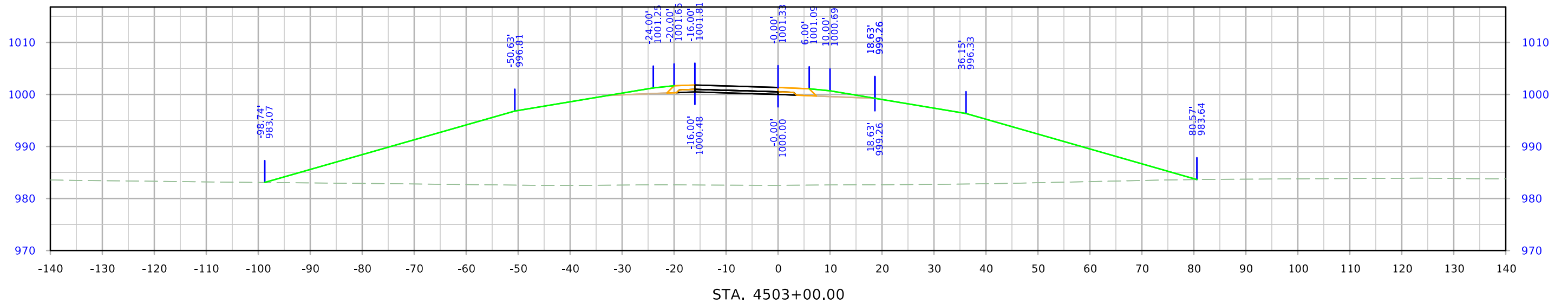
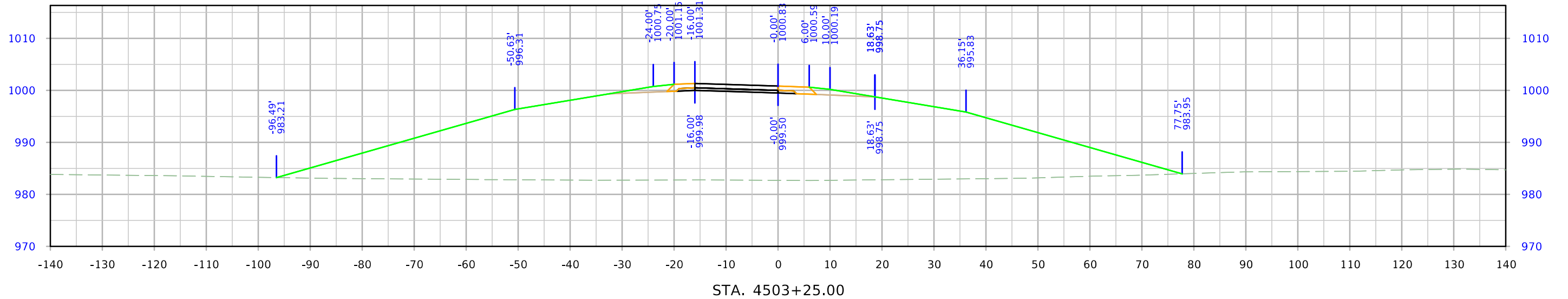
STA. 4502+75.00



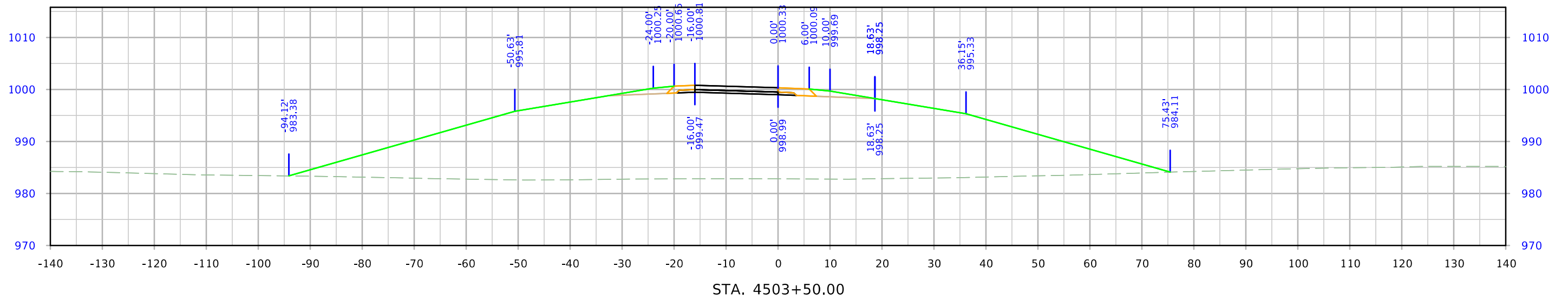
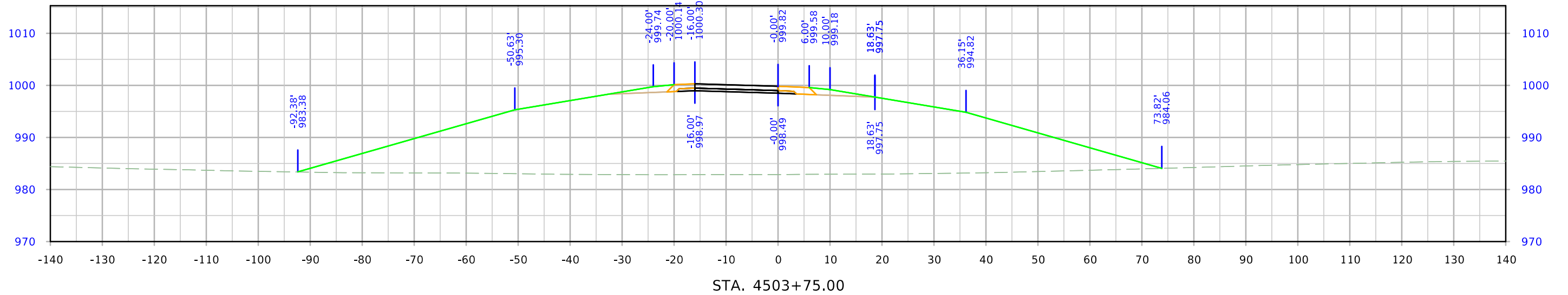
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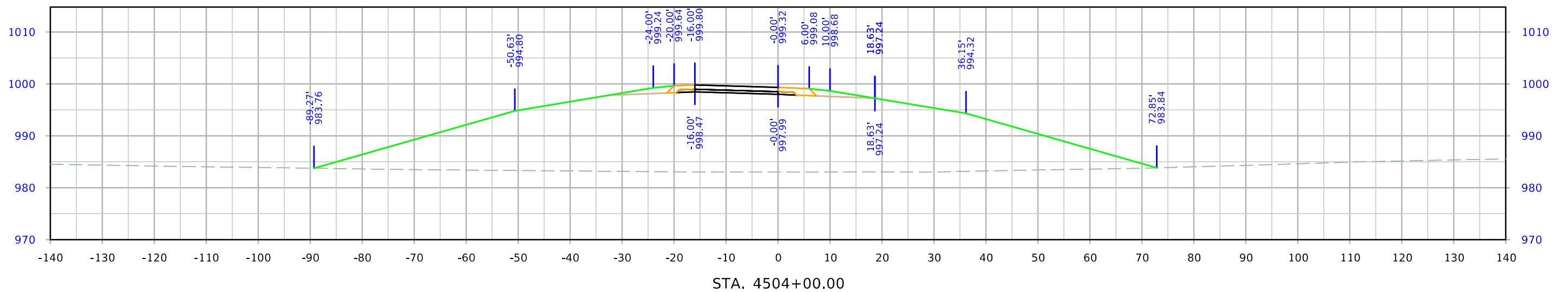
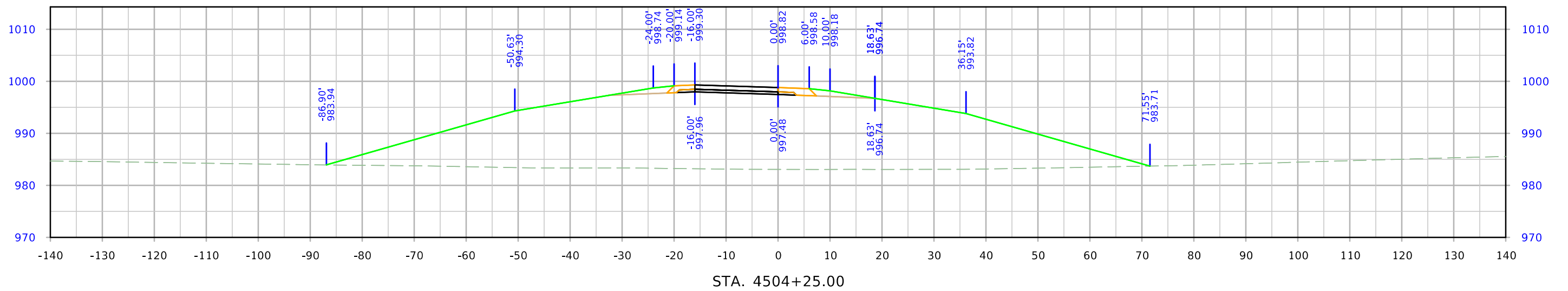
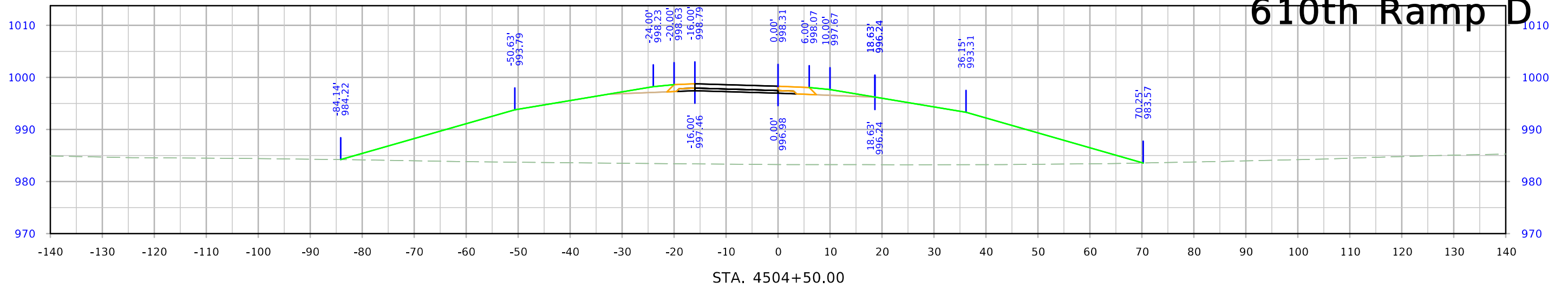
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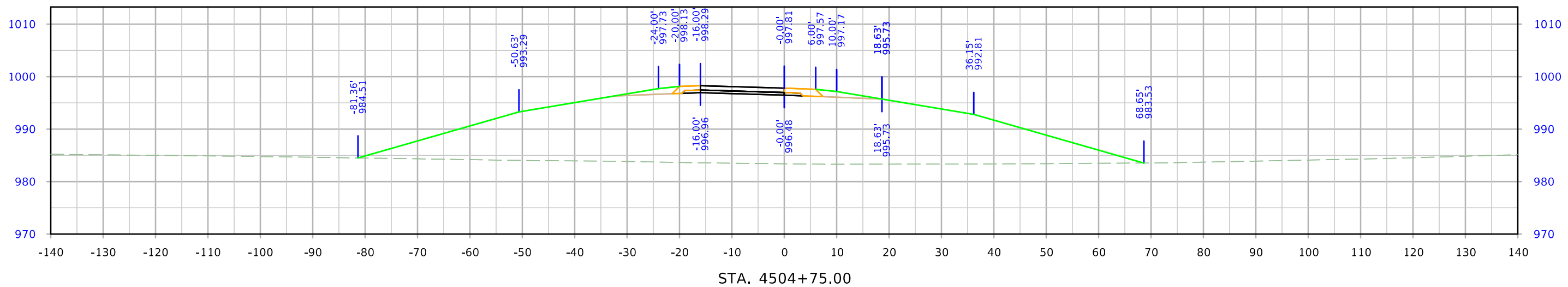
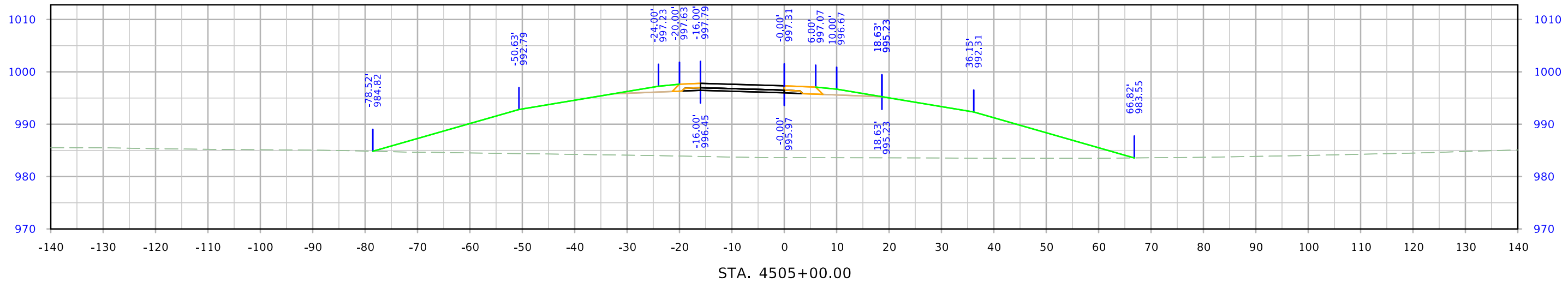
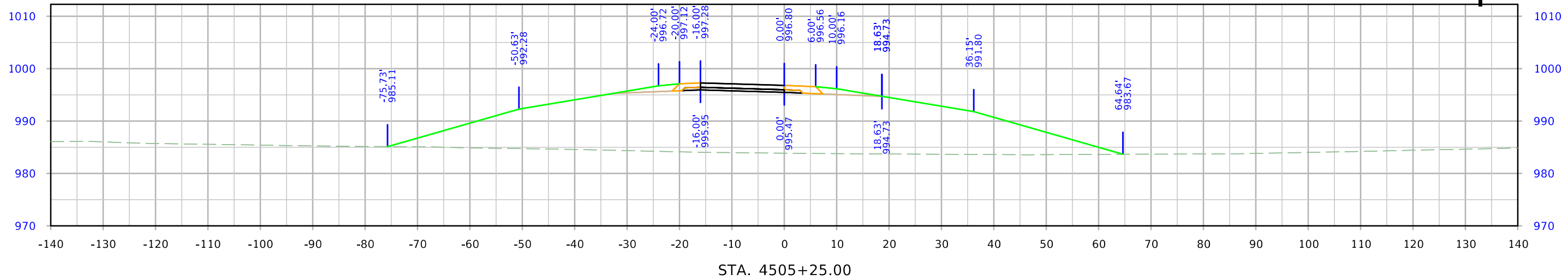
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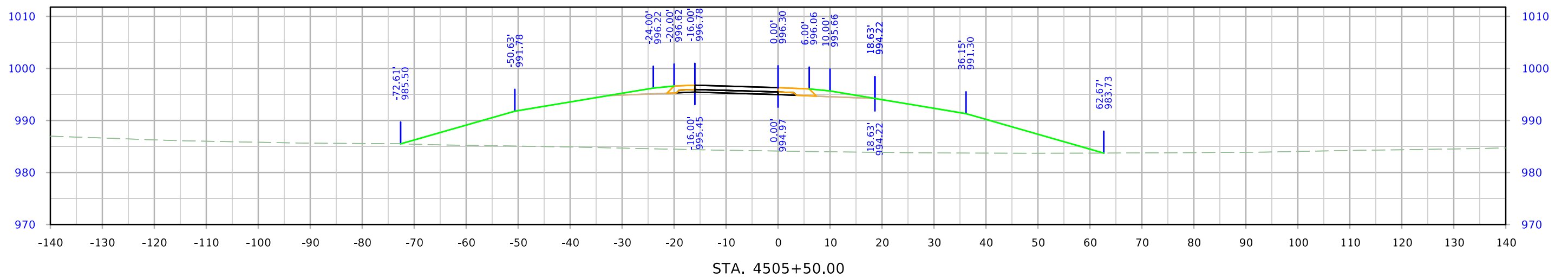
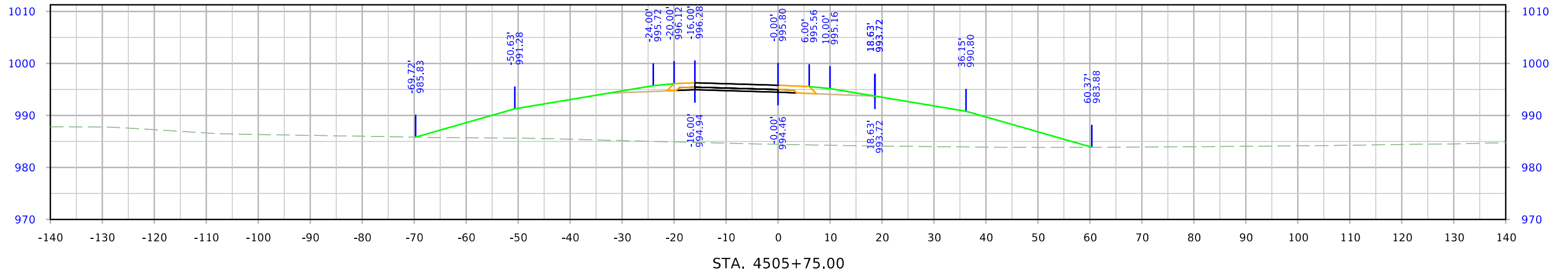
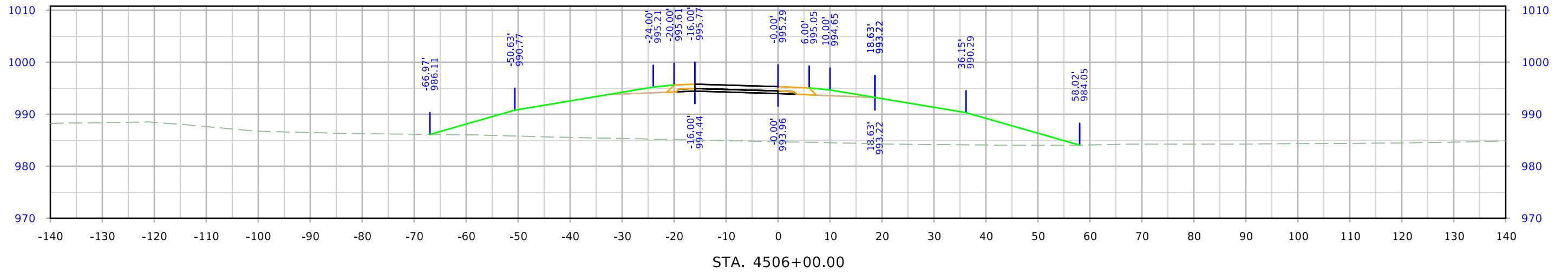
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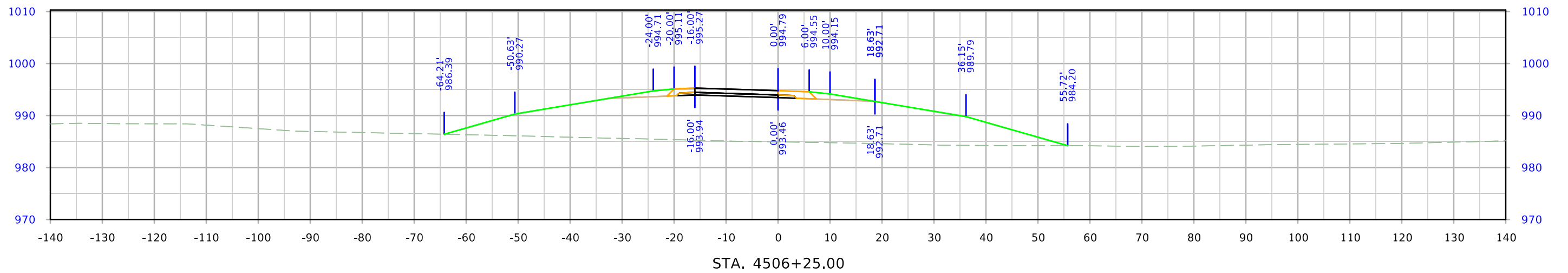
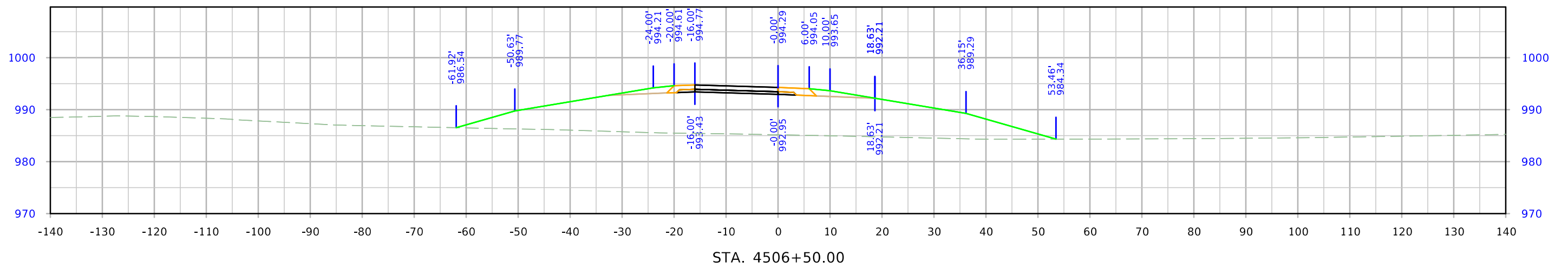
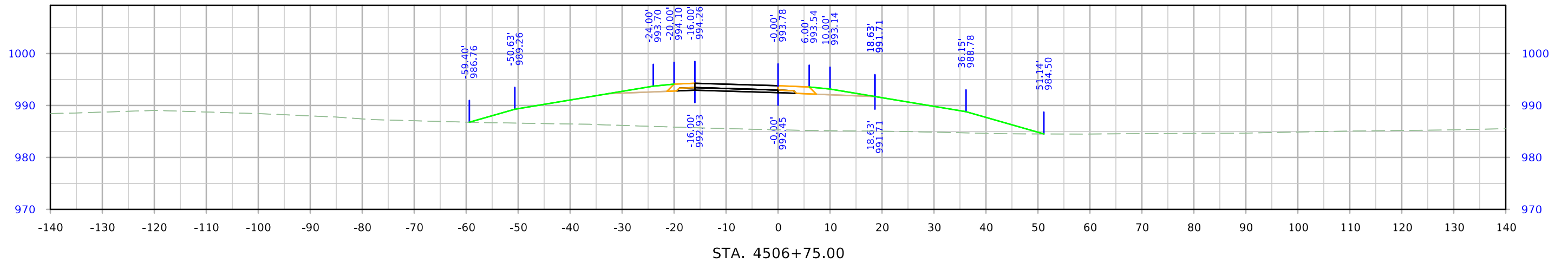
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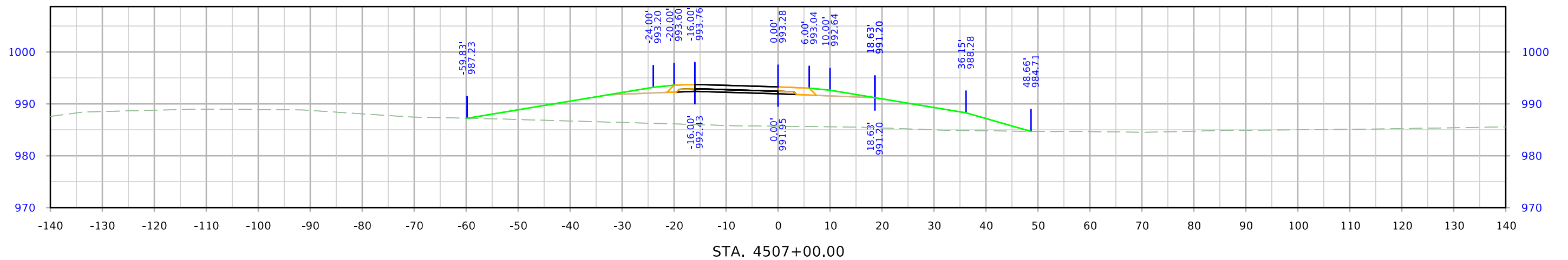
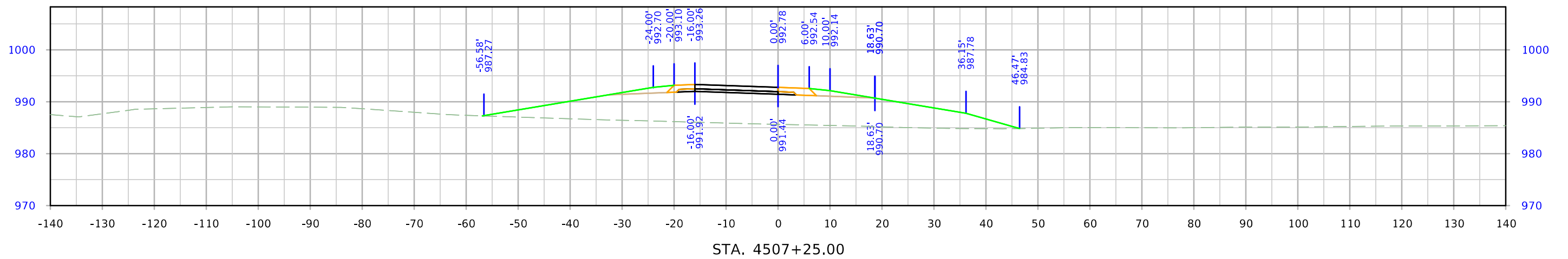
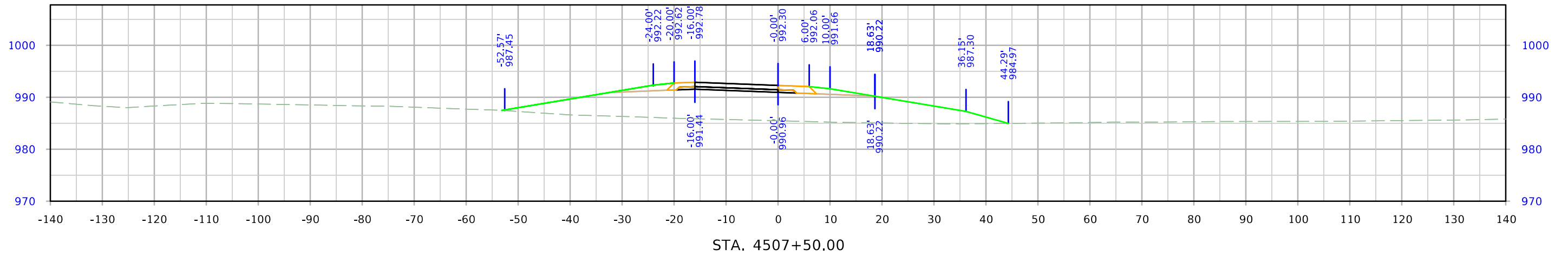
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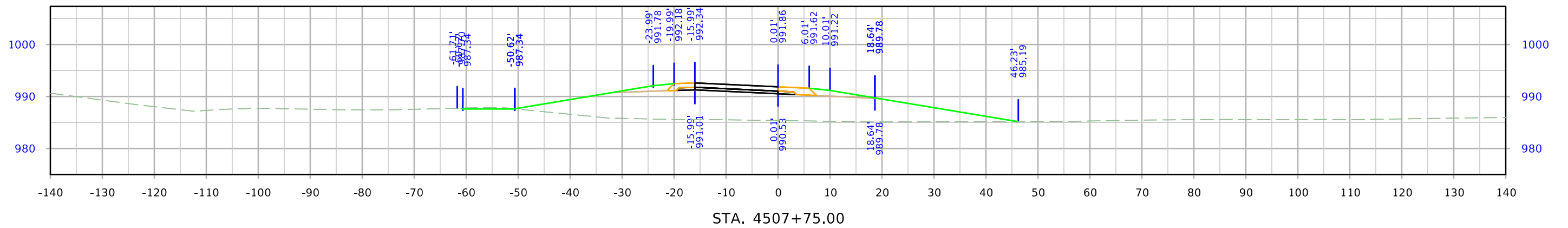
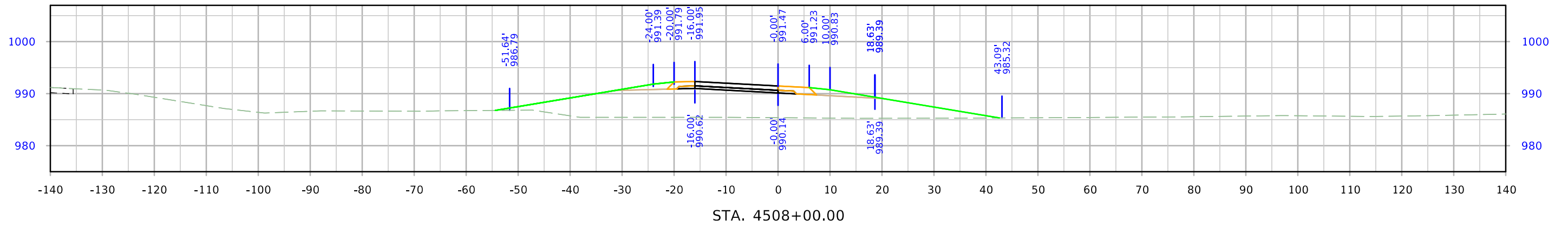
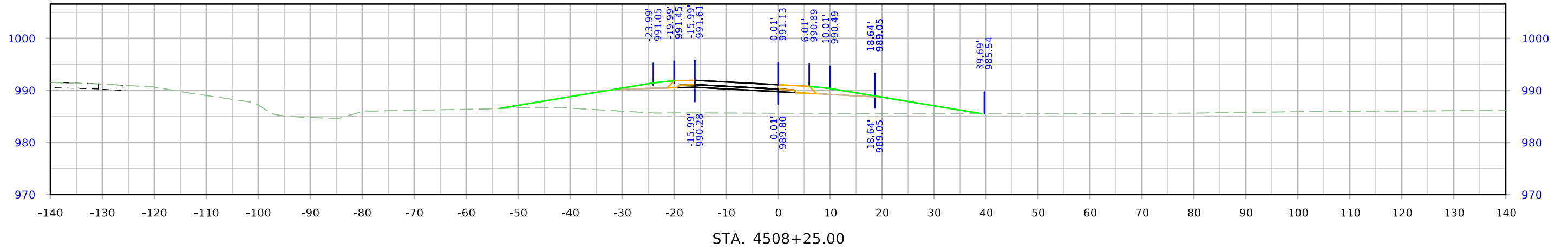
# 610th Ramp D



# 610th Ramp D

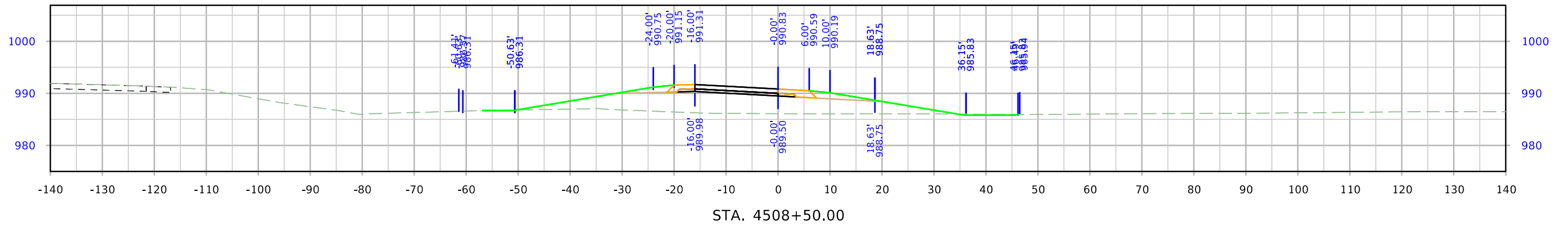
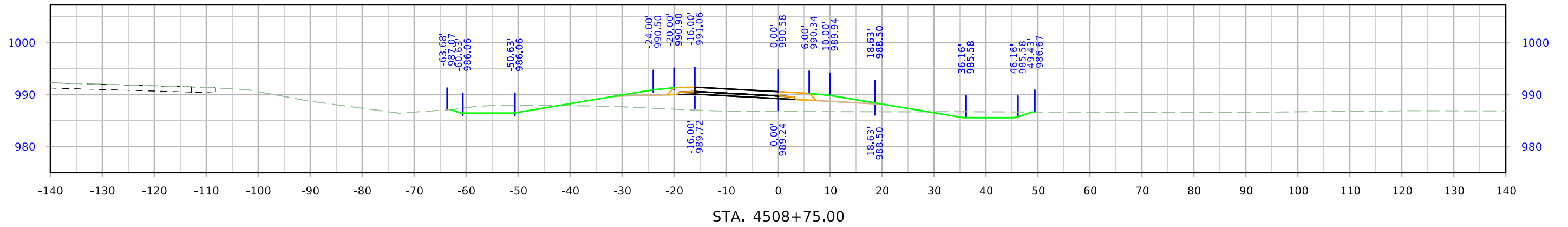
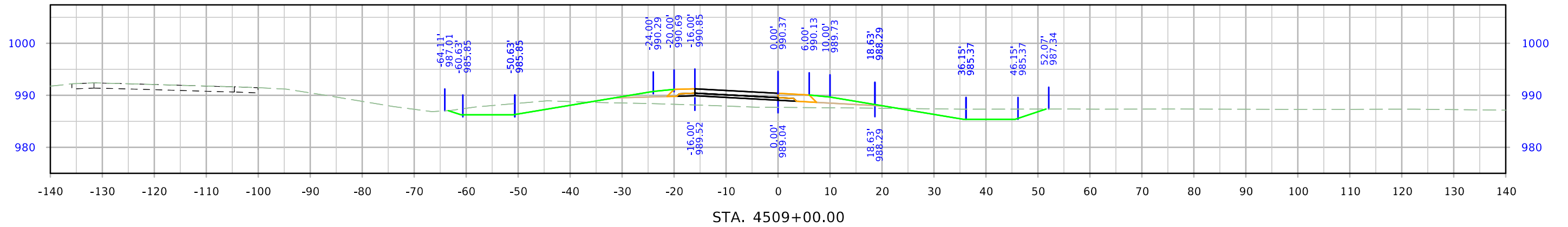


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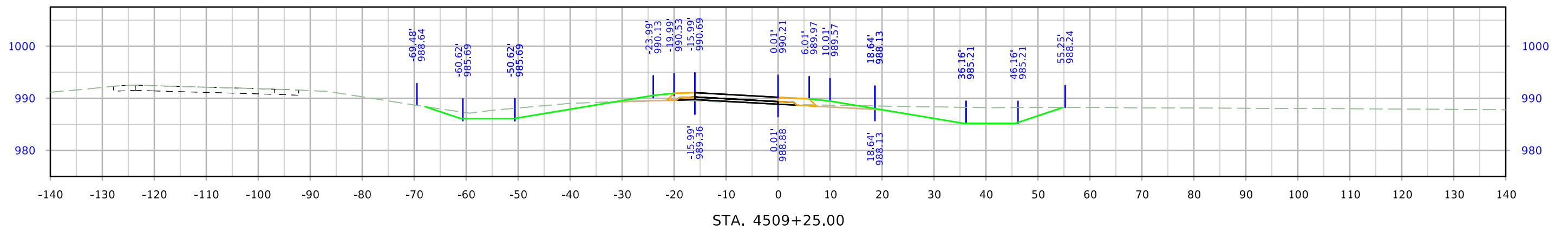
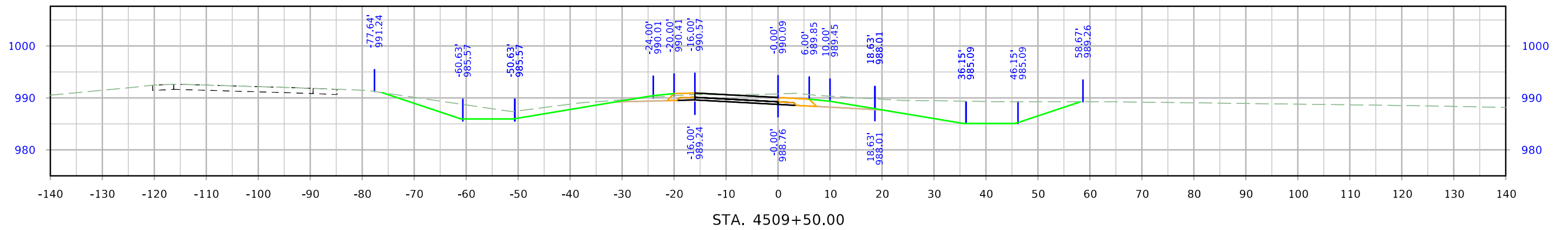
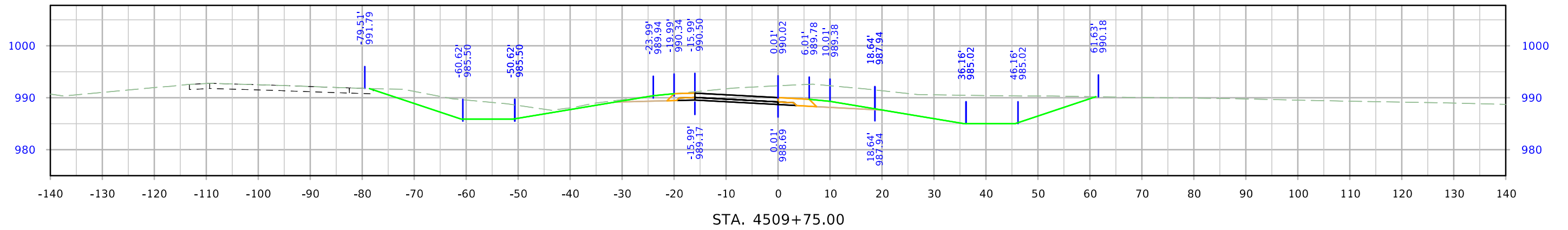




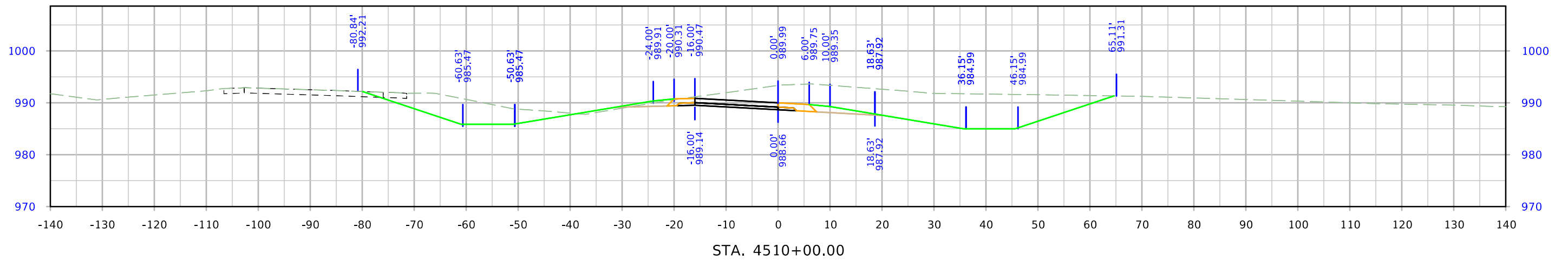
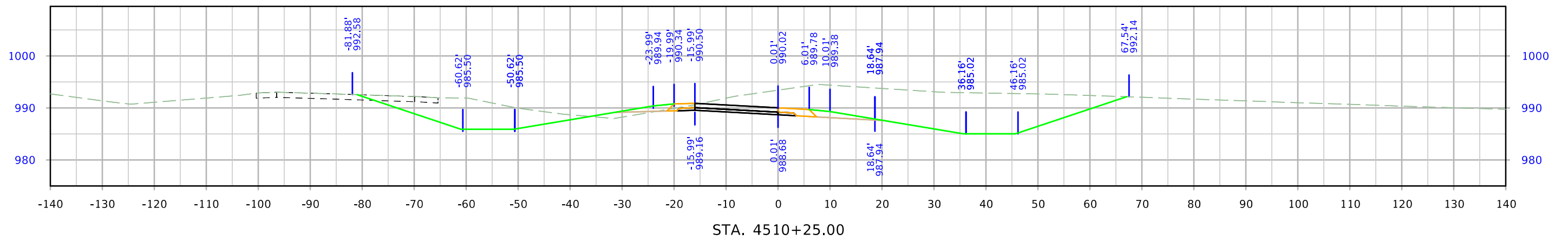
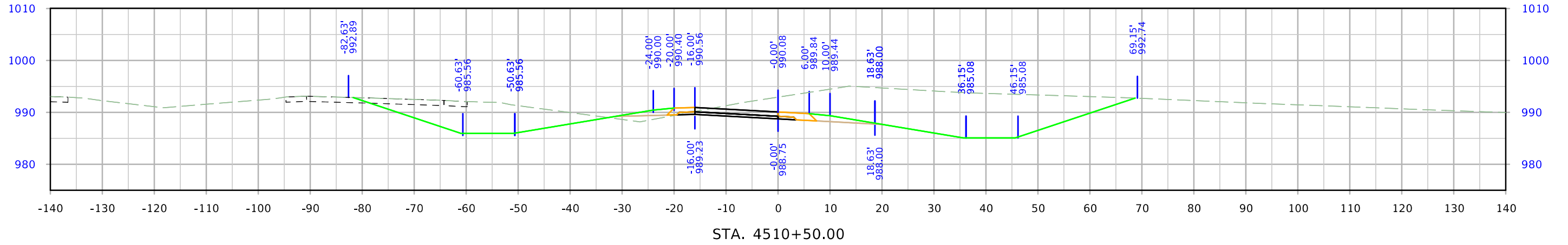
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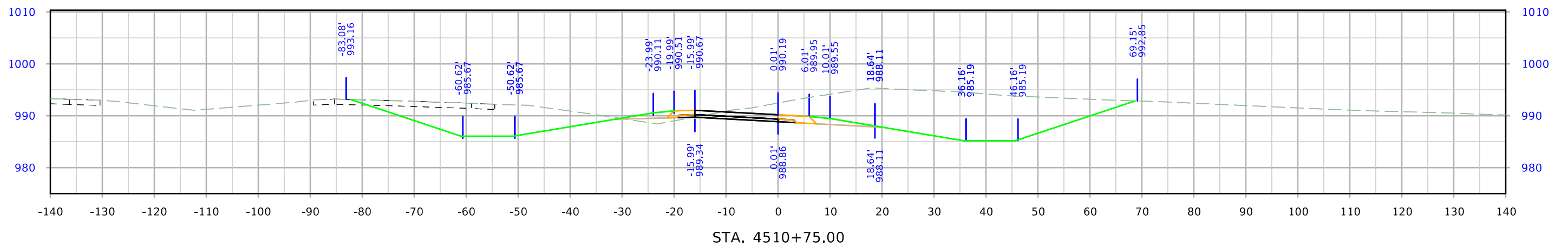
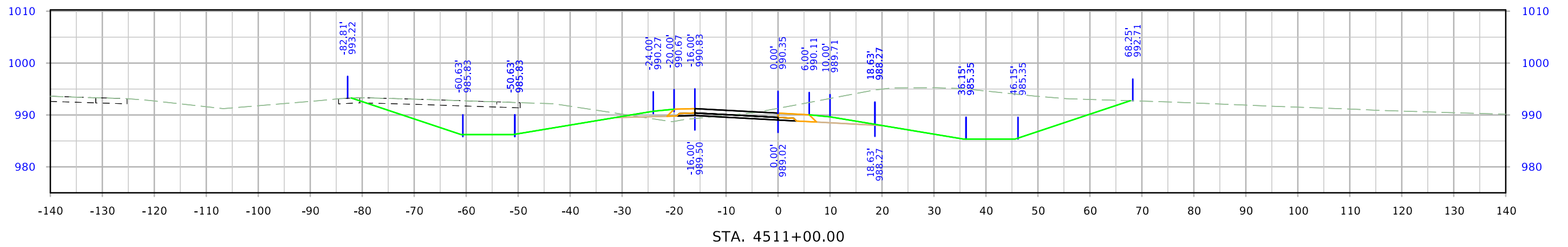
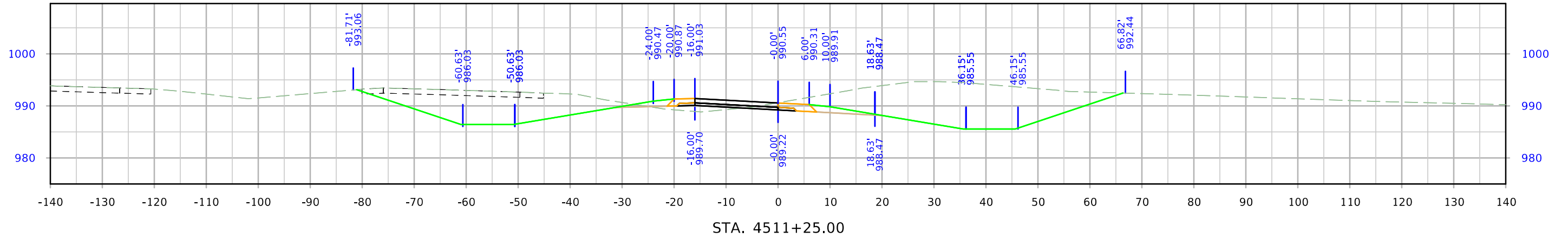
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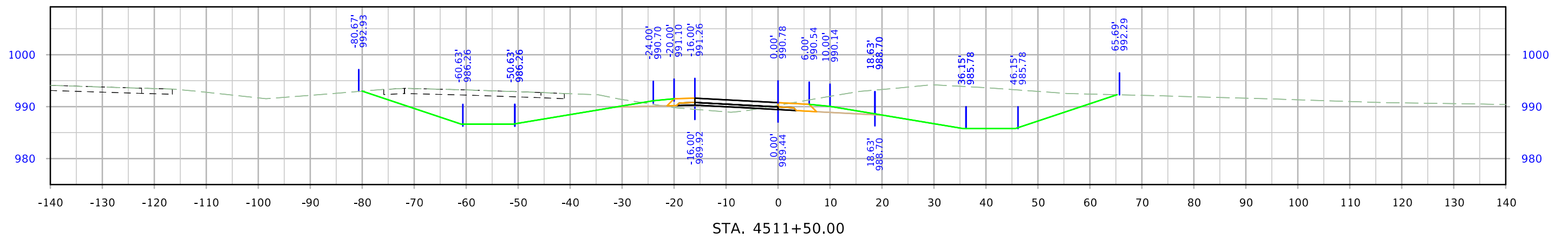
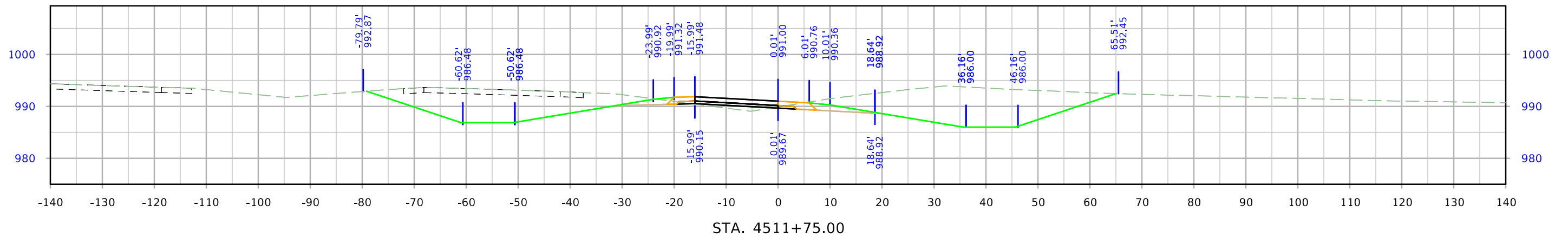
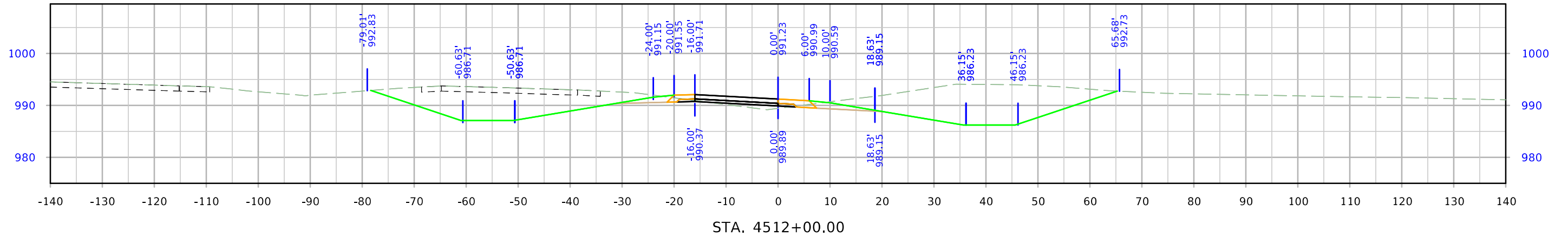
# 610th Ramp D



# 610th Ramp D



# 610th Ramp D



# 610th Ramp D

