

**ALBERTA TRANSPORTATION AND
ECONOMIC CORRIDORS GRMP
PEACE REGION – (PEACE RIVER DISTRICT)
INSTRUMENTATION MONITORING - SPRING 2024**



Site Number	Location	Name	Hwy	km
PH061	Station 36+180 to 37+130	Peace River East Hill Site #4	2:60	37.13
Legal Description:		UTM Co-ordinates		
14-29-83-21 W5		11U E 482528	N	6231976

Current Monitoring:	20-May-2024	Previous Monitoring	13-Jun-2023
Instruments Read By:	Mr. Niraj Regmi, G.I.T and Mr. Nixon Mationg, of Thurber		

Instruments Read During This Site Visit			
Slope Inclinerometers (SIs): SI-06 SI-99 SI-105	Pneumatic Piezometers (PN): N/A	Vibration Wire Piezometers (VW): N/A	Standpipe Piezometers (SP): N/A
Load Cell (LC): N/A	Strain Gauges: N/A	SAA's: N/A	Others:

Readout Equipment Used			
Slope Inclinerometers: RST Digital Inclinerometer probe with 2 ft wheelbases and RST pocket readout.	Pneumatic Piezometers:	Vibration Wire Piezometers:	Standpipe Piezometers:
Load Cell:	Strain Gauges:	SAA's:	Others:
Note:			

Discussion	
Zones of New Movement:	None
Interpretation of Monitoring Results:	SI-06, SI-99 and SI-105 continued to show no discernible movement patterns.
Future Work:	The instruments should be read again during the spring of 2025 reading program.
Instrumentation Repairs:	No instrument repairs are required at this time.
Additional Comments:	The stickup for SI-99 was repaired during the spring 2024 readings. Consideration could be given to reducing reading frequency to spring biennial readings as all three slope indicators have shown little movement and no obvious shear zone since they were installed.

Attachments:	<ul style="list-style-type: none"> ▪ Table PH061-1 Spring 2024 – Peace River East Hill Site #4 Slope Inclinerometer Reading Summary ▪ APPENDIX A - PH061-1 SPRING 2024 <ul style="list-style-type: none"> □ Field Inspector's Report □ Site Plan Showing Approximate Instrument Locations (Drawing No. 32121-PH061) □ SI Reading Plots
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We trust this report meets your requirements at present. If you have any questions, please contact the undersigned at your convenience.

Yours very truly,
Thurber Engineering Ltd.
Roger Skirrow, M.Sc., P. Eng.
Senior Geotechnical Engineer

Lucas Green, P.Eng.
Geotechnical Engineer

Table PH060-1: Spring 2023 – Peace River East Hill Site # 4 Slope Inclinometer Instrumentation Reading Summary

Date Monitored: May 20, 2024

INSTRUMENT #	DATE INITIALIZED	TOTAL CUMULATIVE RESULTANT MOVEMENT AT NOTED DEPTH SINCE INITIAL READING (mm)	MAXIMUM RATE OF MOVEMENT (mm/yr)	CURRENT STATUS	DATE OF PREVIOUS READING	INCREMENTAL MOVEMENT SINCE PREVIOUS READING (mm)	CURRENT RATE OF MOVEMENT (mm/yr)	CHANGE IN RATE OF MOVEMENT SINCE PREVIOUS READING (mm/yr)
SI-06	Jul. 22, 1996	No discernible movement	N/A	Operational	June 13, 2023	N/A	N/A	N/A
SI-99	Oct. 11, 1996	No discernible movement	N/A	Operational	June 13, 2023	N/A	N/A	N/A
SI-105	Oct. 11, 1996	No discernible movement	N/A	Operational	June 13, 2023	N/A	N/A	N/A

Drawing 32121-PH061 in Appendix A provides a sketch of the approximate location of the monitoring instrumentation for this site.



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- a) Nature and Exactness of Soil and Contaminant Description: Classification and identification of soils, rocks, geological units, contaminant materials and quantities have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature. Comprehensive sampling and testing programs implemented with the appropriate equipment by experienced personnel may fail to locate some conditions. All investigations utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarizing such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and the Client and all other persons making use of such documents or records with our express written consent should be aware of this risk and the Report is delivered subject to the express condition that such risk is accepted by the Client and such other persons. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. If special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.
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THURBER ENGINEERING LTD.

**ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS GRMP (CON0022164)
PEACE REGION (PEACE RIVER DISTRICT)
INSTRUMENTATION MONITORING RESULTS**

SPRING 2024

**APPENDIX A
DATA PRESENTATION**

**SITE PH061: HWY 2:60, PEACE RIVER EAST HILL
(SITE # 4, STATION 36+180 to 37+130)**

**ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS
PEACE REGION (PEACE RIVER DISTRICT)
INSTRUMENTATION MONITORING FIELD SUMMARY (PH061)
SPRING 2024**

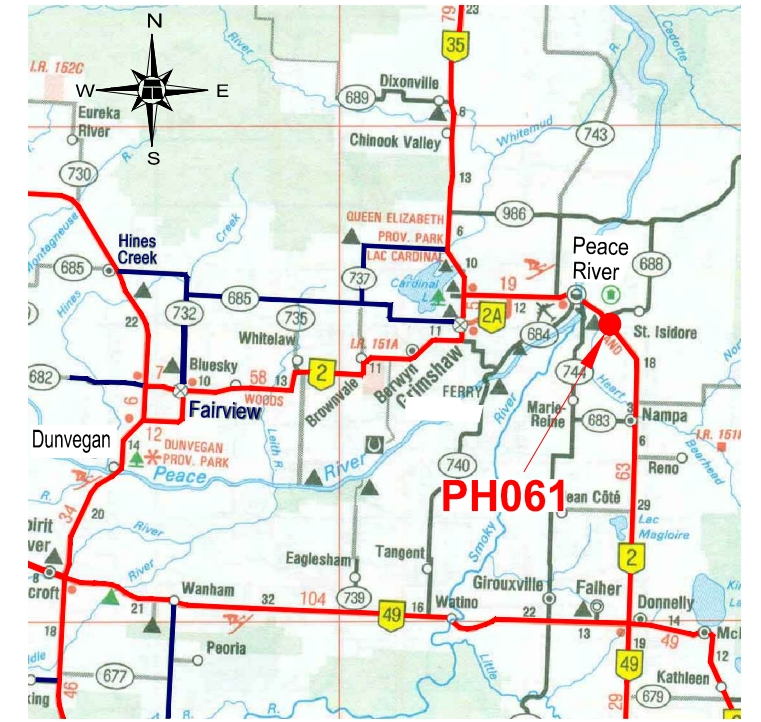
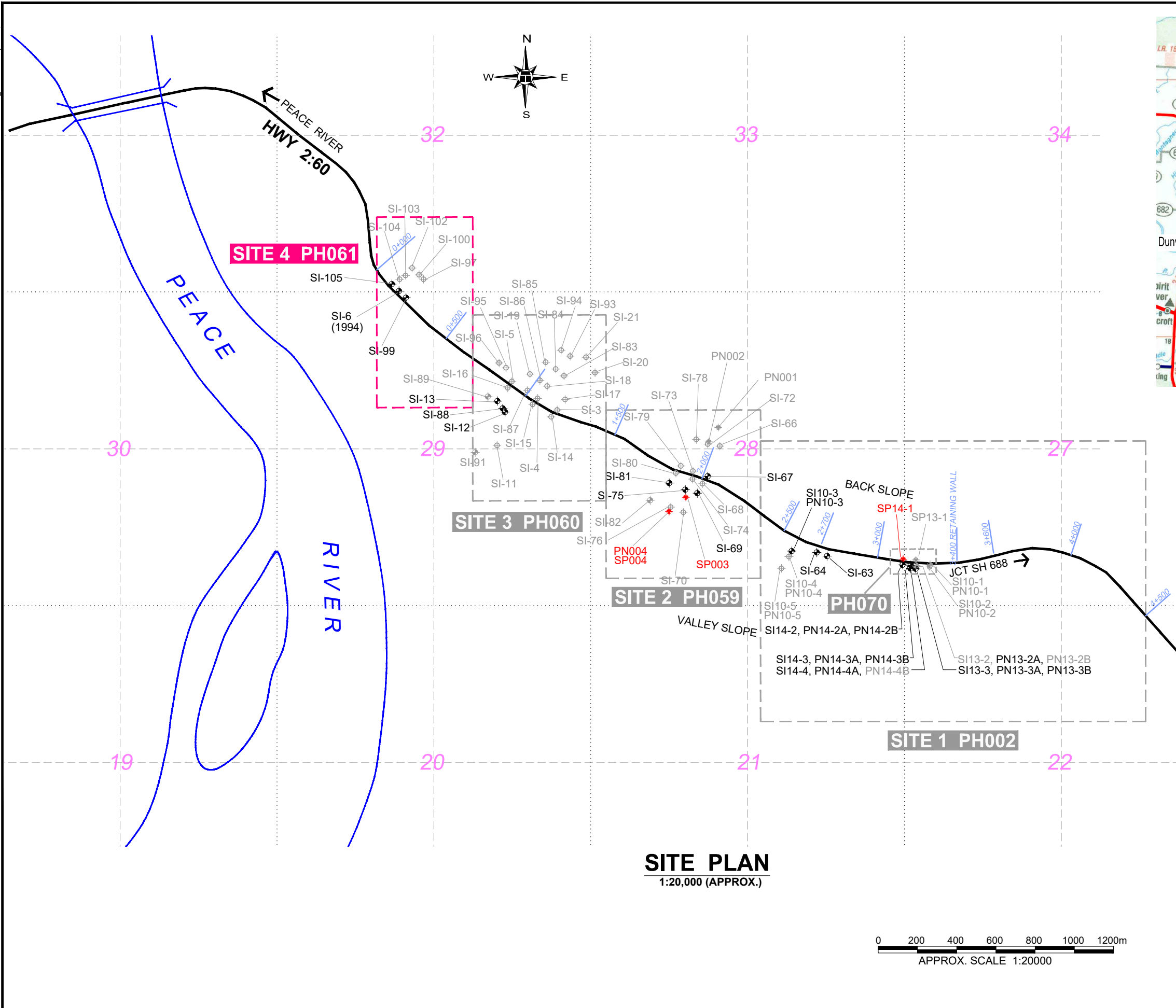
Location: Peace River East Hill (HWY 2:60 C1 37.132) File Number: 32121 Probe: RST Set 5R & 8R Cable: RST Set 5R & 8R	Readout: Casing: 3.34" Temp: 16 Read by: NKR/NRM
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SLOPE INCLINOMETER (SI) READINGS

Site#	SI#	GPS Location (UTM 11)		Date	Stickup (m)	Depth from top of casing (ft)	Magn. North A+ Groove	Current Bottom Depth Readings				Probe/ Reel #	Size (")	Remarks
		Easting (m)	Northing (m)					A+	A-	B+	B-			
4	SI-06	482528.32	6231975.73	20-May-24	0.34	68 to 2	345	346	358	-658	651	8R/8R	3.34	
	SI-99	482551.99	6231957.04	20-May-24	0.84	98 to 2	204	356	-340	565	-568	8R/8R	3.34	**
	SI-105	482502.57	6231999.98	20-May-24	0.8	132 to 2	239	575	-568	554	-563	5R/5R	3.34	

DAILY INSPECTOR REPORT

**Hard to pull at 19.0ft. <u>SI-99 stickup repaired during spring of 2024 readings.</u>



SITE MAP
NOT TO SCALE

LEGEND :

- SLOPE INCLINOMETER (currently using)
- SP STANDPIPE PIEZOMETER
- PN PNEUMATIC PIEZOMETER
- SLOPE INCLINOMETER (not in use)
- PNEUMATIC PIEZOMETER (not in use)

SITE PLAN
1:20,000 (APPROX.)



PEACE REGION (PEACE RIVER DISTRICT)

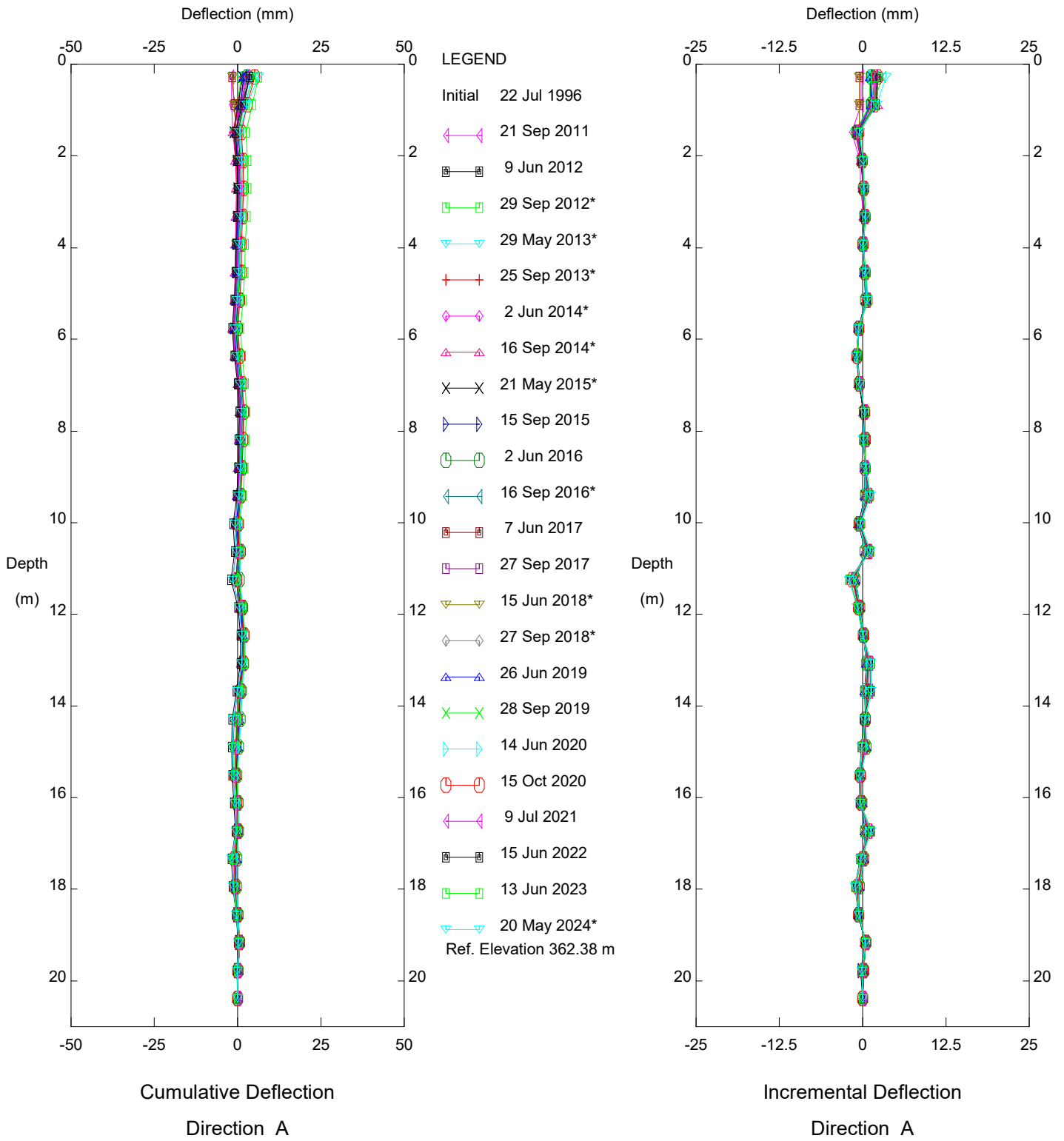
PH061: PEACE RIVER EAST HILL SITE #4
(STA. 0+000 TO 0+950)
INSTRUMENT LOCATIONS

DWG No. 32121-PH061

DRAWN BY	ML
DESIGNED BY	BWN
APPROVED BY	DWP
SCALE	APPROX 1:20000
DATE	SEPTEMBER 2021
FILE No.	32121

THURBER ENGINEERING LTD.

Thurber Engineering Ltd.

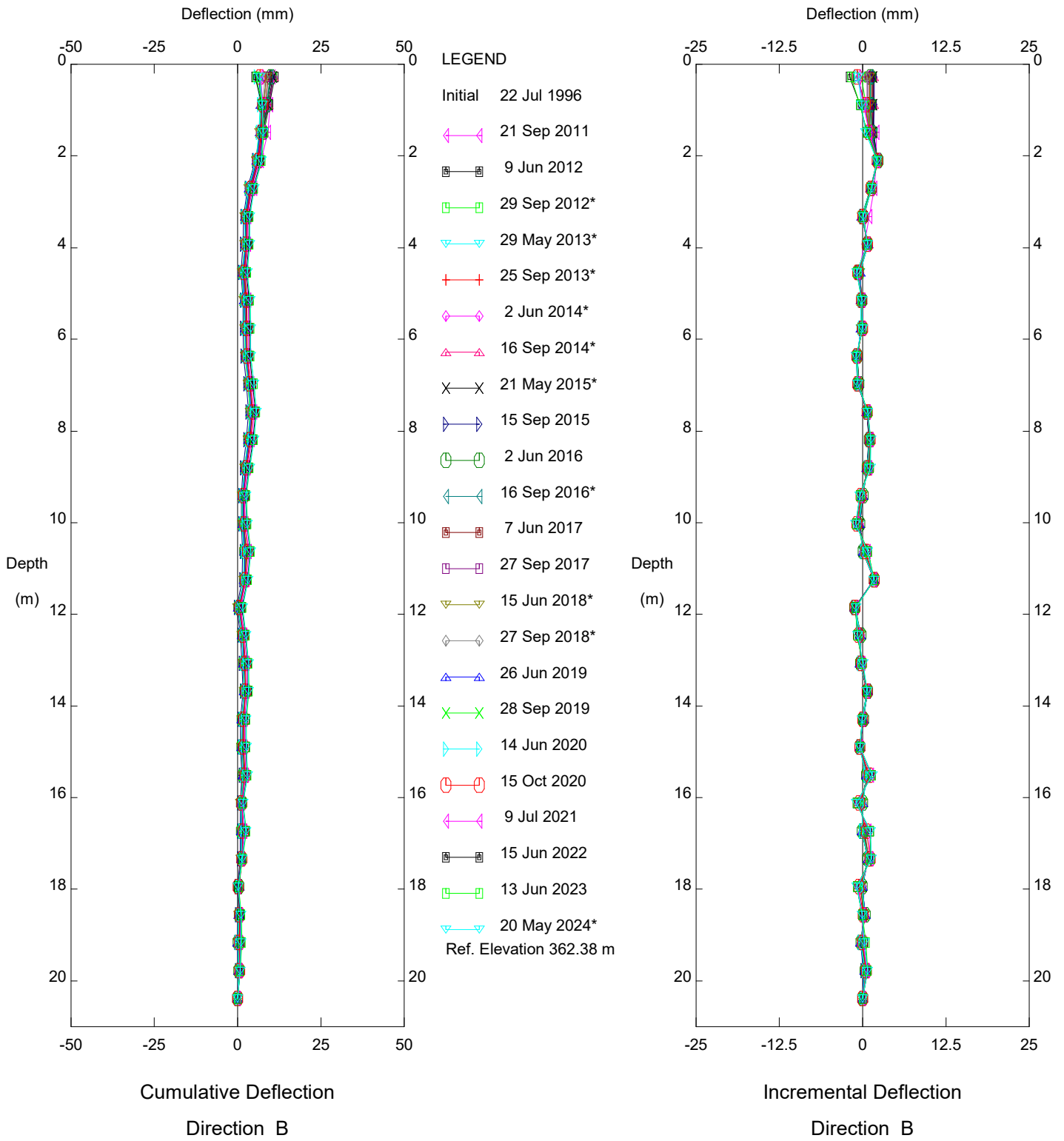


(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-06

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.

Thurber Engineering Ltd.

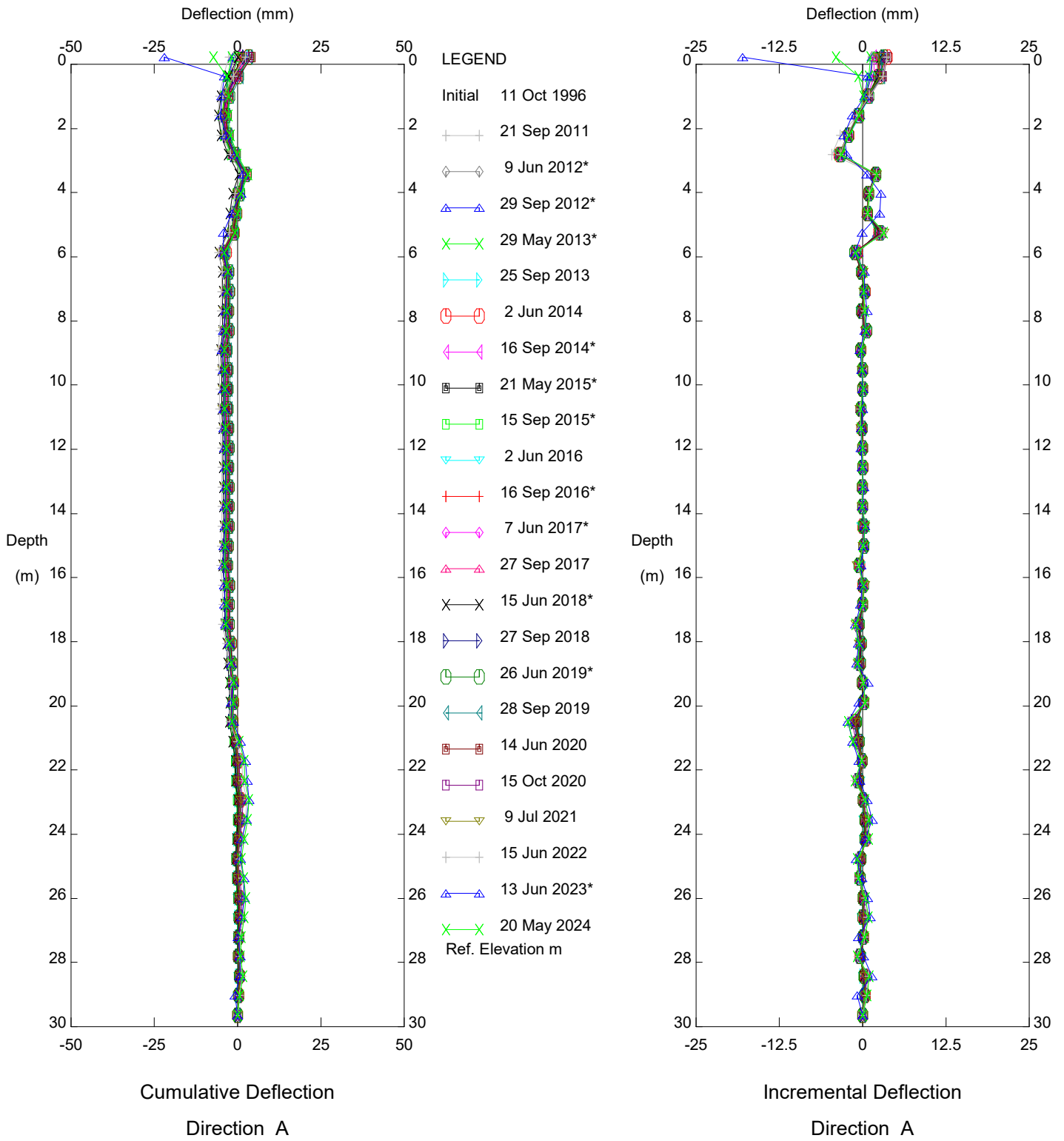


(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-06

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.

Thurber Engineering Ltd.

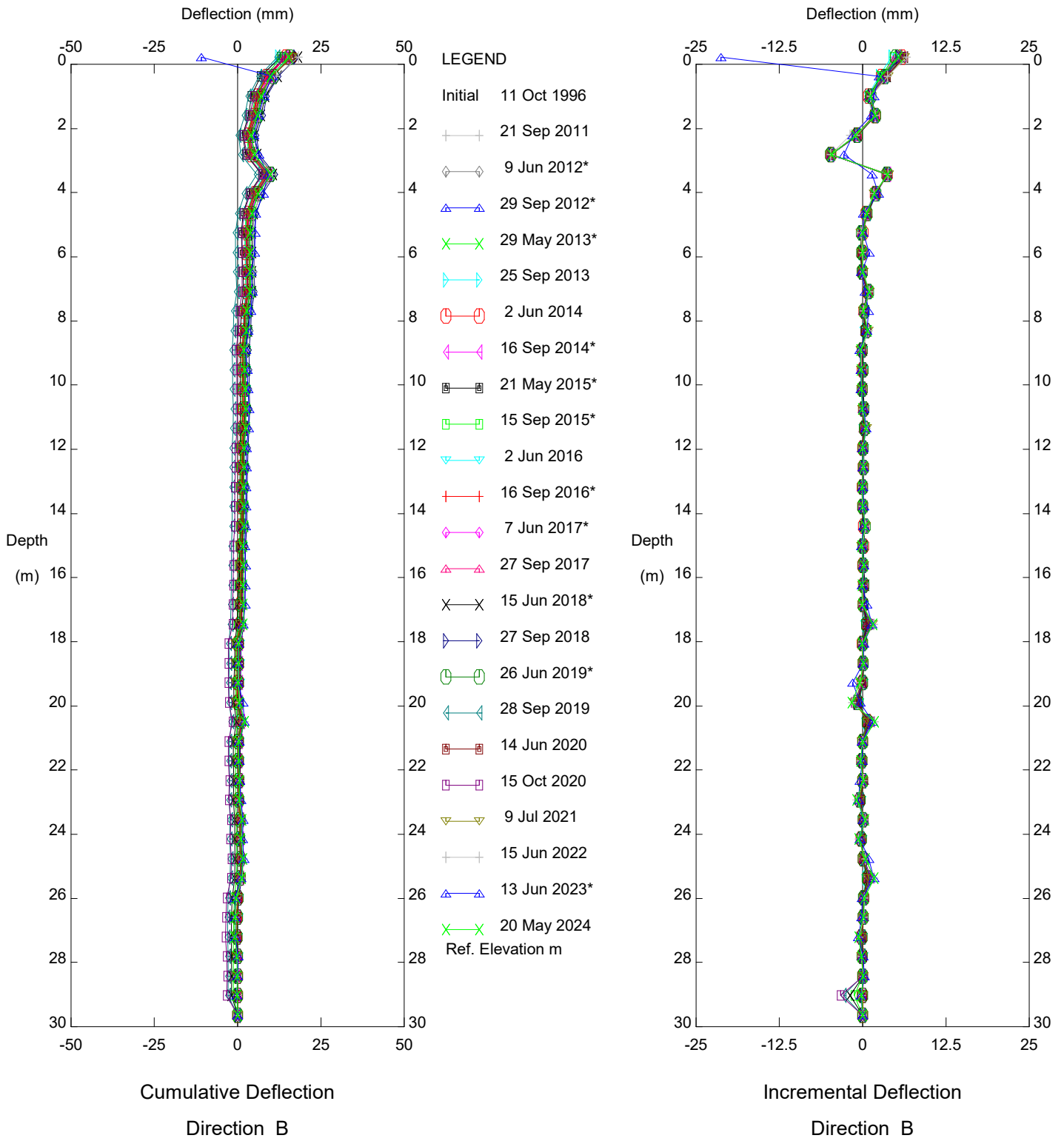


(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-99

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.

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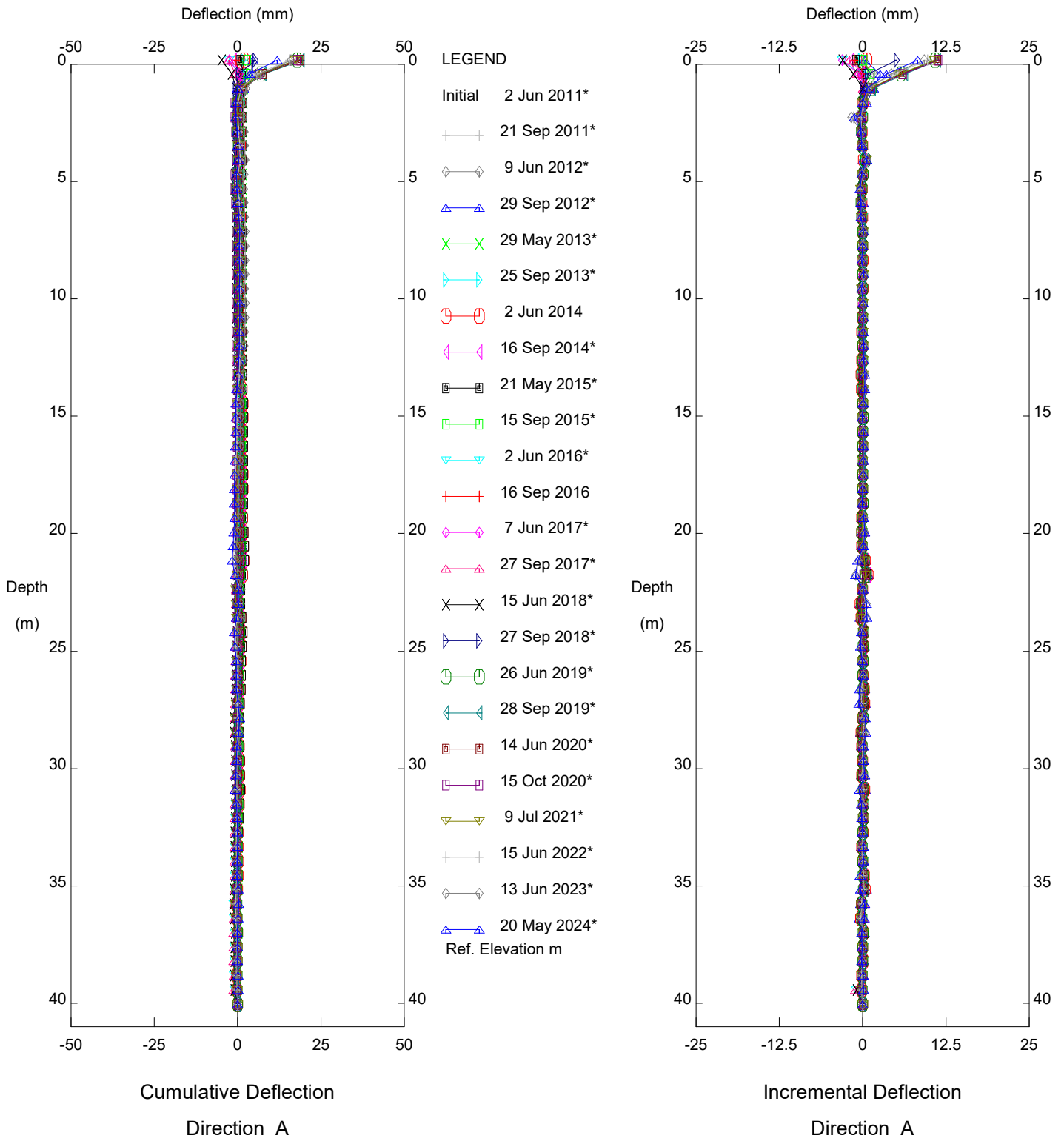


(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-99

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.

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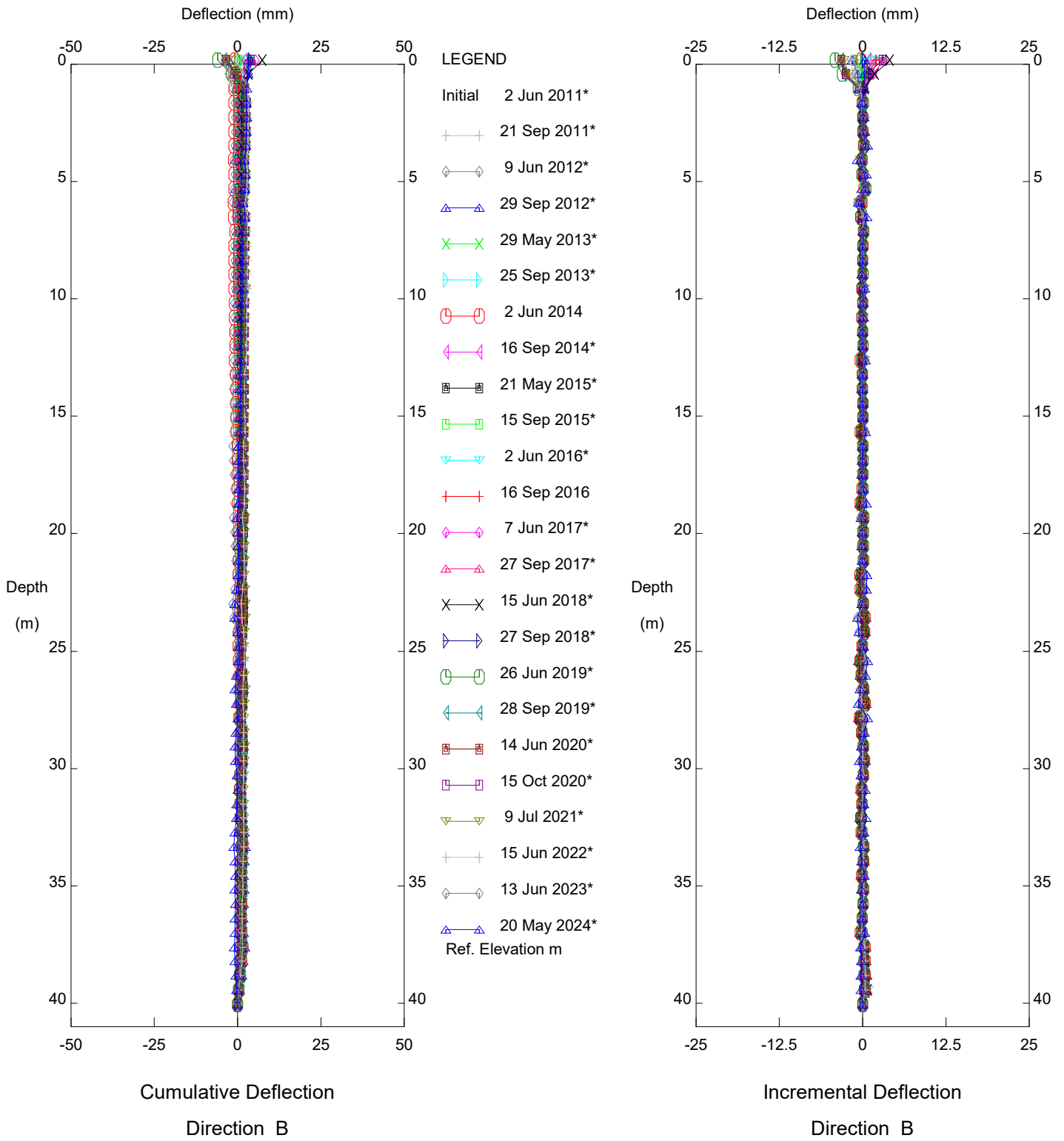


(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-105

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.

Thurber Engineering Ltd.



(PH061) PEACE RIVER EAST HILL -SITE 4, Inclinometer SI-105

Alberta Transportation

Sets marked * include zero shift and/or rotation corrections.