

Project file data		Coordinate System	
Name:		Name:	World wide/UTM
Size:		Zone:	44 North
Modified:		Datum:	WGS 1984
Time zone:		Global reference datum:	WGS 1984
Reference number:		Global reference epoch:	
Description:		Geoid:	EGM96 (Global)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec.	V. Prec.	Geodetic	Ellipsoid	ΔHeight
SOI BASE --- BLB-A (B1)	SOI BASE	BLB-A	Fixed	0.0104	0.0491	148°40'30.8"	4.9723	-62.0632

### Acceptance Summary

Processed	Passed	Flag	Fail
1	1	0	0

### SOI BASE - BLB-A (05:33:07-06:19:20) (S1)

Baseline observation:	SOI BASE --- BLB-A (B1)
Processed:	28-07-2025 08:15:09
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0104 m
Vertical precision:	0.0491 m
RMS:	0.0381 m
Maximum PDOP:	3.319
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	26-07-2025 05:33:10 (GPS Time)
Processing stop time:	26-07-2025 06:19:20 (GPS Time)
Processing duration:	00:46:10
Processing interval:	10 seconds
Processing mode:	Uncombined Mode

### Vector Components (Mark to Mark)

From:		SOI BASE			
		Grid		Local	
Easting	474362.487 m	Latitude	N24°56'02.73500"	Latitude	N24°56'02.73500"
Northing	2757673.948 m	Longitude	E80°44'45.85900"	Longitude	E80°44'45.85900"
Elevation	373.549 m	Height	313.852 m	Height	313.852 m

To:		BLB-A			
		Grid		Local	
Easting	474365.063 m	Latitude	N24°56'02.59696"	Latitude	N24°56'02.59696"
Northing	2757669.697 m	Longitude	E80°44'45.95114"	Longitude	E80°44'45.95114"
Elevation	311.486 m	Height	251.789 m	Height	251.789 m

Vector					
ΔEasting	2.5761 m	NS Fwd Azimuth	148°40'30.8"	ΔX	-11.3137 m

$\Delta$ Northing	-4.2507 m	Ellipsoid Dist.	4.9723 m	$\Delta Y$	-53.3629 m
$\Delta$ Elevation	-62.063 m	$\Delta$ Height	-62.0632 m	$\Delta Z$	-30.0161 m

#### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.0065 m	$\sigma$ NS fwd Azimuth	0°05'00.9"	$\sigma$ $\Delta X$	0.0096 m
$\sigma$ $\Delta$ Northing	0.0065 m	$\sigma$ Ellipsoid Dist.	0.0057 m	$\sigma$ $\Delta Y$	0.0451 m
$\sigma$ $\Delta$ Elevation	0.0491 m	$\sigma$ $\Delta$ Height	0.0491 m	$\sigma$ $\Delta Z$	0.0193 m

#### Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0000918494		
Y	0.0003142637	0.0020350264	
Z	0.0001162336	0.0008223159	0.0003732025

#### Occupations

	From	To
Point ID:	SOI BASE	BLB-A
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Tri	C:\Users\LENOVO\Dropbox\PC\Documents\Tri
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.0000 m	1.9820 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

Project file data		Coordinate System	
Name:		Name:	World wide/UTM
Size:		Zone:	44 North
Modified:		Datum:	WGS 1984
Time zone:		Global reference datum:	WGS 1984
Reference number:		Global reference epoch:	
Description:		Geoid:	EGM96 (Global)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec.	V. Prec.	Geodetic	Ellipsoid	ΔHeight
SOI BASE --- BLB-D (B1)	SOI BASE	BLB-D	Fixed	0.0130	0.0356	359°04'28.3"	64330.4813	13.8664
SOI BASE --- BLB-C (B2)	SOI BASE	BLB-C	Fixed	0.0158	0.0397	358°32'54.8"	65346.3215	33.1735

### Acceptance Summary

Processed	Passed	Flag	Fail
2	2	0	0

### SOI BASE - BLB-D (06:18:55-07:04:59) (S1)

Baseline observation:	SOI BASE --- BLB-D (B1)
Processed:	28-07-2025 08:41:29
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0130 m
Vertical precision:	0.0356 m
RMS:	0.0175 m
Maximum PDOP:	1.675
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	27-07-2025 06:19:00 (GPS Time)
Processing stop time:	27-07-2025 07:04:50 (GPS Time)
Processing duration:	00:45:50
Processing interval:	10 seconds
Processing mode:	Wide Lane Mode

### Vector Components (Mark to Mark)

From:	SOI BASE				
Grid		Local		Global	
Easting	477399.916 m	Latitude	N24°21'58.64523"	Latitude	N24°21'58.64523"
Northing	2694799.080 m	Longitude	E80°46'37.79857"	Longitude	E80°46'37.79857"
Elevation	329.301 m	Height	270.288 m	Height	270.288 m

To:	BLB-D				
Grid		Local		Global	
Easting	476465.601 m	Latitude	N24°56'49.13876"	Latitude	N24°56'49.13876"
Northing	2759097.464 m	Longitude	E80°46'00.76082"	Longitude	E80°46'00.76082"
Elevation	343.899 m	Height	284.154 m	Height	284.154 m

<b>Vector</b>					
<b>ΔEasting</b>	-934.3156 m	<b>NS Fwd Azimuth</b>	359°04'28.3"	<b>ΔX</b>	-3273.2865 m
<b>ΔNorthing</b>	64298.3841 m	<b>Ellipsoid Dist.</b>	64330.4813 m	<b>ΔY</b>	-26642.1776 m
<b>ΔElevation</b>	14.598 m	<b>ΔHeight</b>	13.8664 m	<b>ΔZ</b>	58465.5206 m

#### Standard Errors

<b>Vector errors:</b>					
<b>σ ΔEasting</b>	0.0060 m	<b>σ NS fwd Azimuth</b>	0°00'00.0"	<b>σ ΔX</b>	0.0089 m
<b>σ ΔNorthing</b>	0.0091 m	<b>σ Ellipsoid Dist.</b>	0.0091 m	<b>σ ΔY</b>	0.0321 m
<b>σ ΔElevation</b>	0.0356 m	<b>σ ΔHeight</b>	0.0356 m	<b>σ ΔZ</b>	0.0166 m

#### Aposteriori Covariance Matrix (Meter²)

	<b>X</b>	<b>Y</b>	<b>Z</b>
<b>X</b>	0.0000787399		
<b>Y</b>	0.0002108785	0.0010330339	
<b>Z</b>	0.0000982236	0.0004271441	0.0002758803

#### Occupations

	<b>From</b>	<b>To</b>
<b>Point ID:</b>	SOI BASE	BLB-D
<b>Data file:</b>	C:\Users\LENOVO\Dropbox\PC\Documents\Tri	C:\Users\LENOVO\Dropbox\PC\Documents\Tri
<b>Receiver type:</b>	Alloy	Catalyst DA2
<b>Receiver serial number:</b>	6114R40094	6504100164
<b>Antenna type:</b>	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
<b>Antenna serial number:</b>	-----	04100164
<b>Antenna height (measured):</b>	0.0000 m	1.9820 m
<b>Antenna method:</b>	Bottom of antenna mount	Bottom of antenna mount

# SOI BASE - BLB-C (03:43:31-04:29:32) (S2)

Baseline observation:	SOI BASE --- BLB-C (B2)
Processed:	28-07-2025 08:41:29
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0158 m
Vertical precision:	0.0397 m
RMS:	0.0189 m
Maximum PDOP:	1.500
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	27-07-2025 03:43:40 (GPS Time)
Processing stop time:	27-07-2025 04:29:30 (GPS Time)
Processing duration:	00:45:50
Processing interval:	10 seconds
Processing mode:	Wide Lane Mode

## Vector Components (Mark to Mark)

From:	SOI BASE				
	Grid		Local		Global
Easting	477399.916 m	Latitude	N24°21'58.64523"	Latitude	N24°21'58.64523"
Northing	2694799.080 m	Longitude	E80°46'37.79857"	Longitude	E80°46'37.79857"
Elevation	329.301 m	Height	270.288 m	Height	270.288 m

To:	BLB-C				
	Grid		Local		Global
Easting	475851.349 m	Latitude	N24°57'21.74209"	Latitude	N24°57'21.74209"
Northing	2760101.346 m	Longitude	E80°45'38.79364"	Longitude	E80°45'38.79364"
Elevation	363.226 m	Height	303.461 m	Height	303.461 m

Vector					
ΔEasting	-1548.5672 m	NS Fwd Azimuth	358°32'54.8"	ΔX	-2730.1290 m
ΔNorthing	65302.2654 m	Ellipsoid Dist.	65346.3215 m	ΔY	-27141.5492 m
ΔElevation	33.925 m	ΔHeight	33.1735 m	ΔZ	59383.2793 m

## Standard Errors

Vector errors:					
σ ΔEasting	0.0083 m	σ NS fwd Azimuth	0°00'00.0"	σ ΔX	0.0110 m
σ ΔNorthing	0.0111 m	σ Ellipsoid Dist.	0.0112 m	σ ΔY	0.0342 m
σ ΔElevation	0.0397 m	σ ΔHeight	0.0397 m	σ ΔZ	0.0220 m

## Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0001210968		
Y	0.0002493153	0.0011671652	
Z	0.0001392964	0.0006309696	0.0004841046

## Occupations

	From	To
Point ID:	SOI BASE	BLB-C
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Tri	C:\Users\LENOVO\Dropbox\PC\Documents\Tri
Receiver type:	Alloy	Catalyst DA2

<b>Receiver serial number:</b>	6114R40094	6504100164
<b>Antenna type:</b>	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
<b>Antenna serial number:</b>	-----	04100164
<b>Antenna height (measured):</b>	0.0000 m	1.9820 m
<b>Antenna method:</b>	Bottom of antenna mount	Bottom of antenna mount

Project file data		Coordinate System	
Name:		Name:	World wide/UTM
Size:		Zone:	44 North
Modified:		Datum:	WGS 1984
Time zone:		Global reference datum:	WGS 1984
Reference number:		Global reference epoch:	
Description:		Geoid:	EGM96 (Global)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec.	V. Prec.	Geodetic	Ellipsoid	ΔHeight
V740 --- BLB-E (B1)	V740	BLB-E	Fixed	0.0202	0.0477	183°07'37.5"	4.8267	-59.7053
V740 --- BLB-F (B2)	V740	BLB-F	Fixed	0.0116	0.0420	217°30'43.5"	1854.6490	-32.6743

### Acceptance Summary

Processed	Passed	Flag		Fail	
2	2	0		0	

### V740 - BLB-E (06:04:08-06:51:55) (S1)

Baseline observation:	V740 --- BLB-E (B1)
Processed:	26-07-2025 07:55:34
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0202 m
Vertical precision:	0.0477 m
RMS:	0.0391 m
Maximum PDOP:	3.359
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	25-07-2025 06:04:10 (GPS Time)
Processing stop time:	25-07-2025 06:51:50 (GPS Time)
Processing duration:	00:47:40
Processing interval:	10 seconds
Processing mode:	Uncombined Mode

### Vector Components (Mark to Mark)

From:		V740			
Grid		Local		Global	
Easting	477254.448 m	Latitude	N24°56'49.20400"	Latitude	N24°56'49.20400"
Northing	2759098.140 m	Longitude	E80°46'28.89100"	Longitude	E80°46'28.89100"
Elevation	362.299 m	Height	302.550 m	Height	302.550 m

To:		BLB-E			
Grid		Local		Global	
Easting	477254.177 m	Latitude	N24°56'49.04737"	Latitude	N24°56'49.04737"
Northing	2759093.323 m	Longitude	E80°46'28.88162"	Longitude	E80°46'28.88162"
Elevation	302.594 m	Height	242.845 m	Height	242.845 m

Vector					
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$\Delta$ Easting	-0.2712 m	NS Fwd Azimuth	183°07'37.5"	$\Delta$ X	-8.0929 m
$\Delta$ Northing	-4.8171 m	Ellipsoid Dist.	4.8267 m	$\Delta$ Y	-51.4701 m
$\Delta$ Elevation	-59.705 m	$\Delta$ Height	-59.7053 m	$\Delta$ Z	-29.5525 m

#### Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.0130 m	$\sigma$ NS fwd Azimuth	0°09'02.3"	$\sigma$ $\Delta$ X	0.0191 m
$\sigma$ $\Delta$ Northing	0.0074 m	$\sigma$ Ellipsoid Dist.	0.0079 m	$\sigma$ $\Delta$ Y	0.0430 m
$\sigma$ $\Delta$ Elevation	0.0477 m	$\sigma$ $\Delta$ Height	0.0477 m	$\sigma$ $\Delta$ Z	0.0170 m

#### Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0003637949		
Y	0.0007345711	0.0018474992	
Z	0.0002472165	0.0006837989	0.0002887789

#### Occupations

	From	To
Point ID:	V740	BLB-E
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Tri	C:\Users\LENOVO\Dropbox\PC\Documents\Tri
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	*****	04100164
Antenna height (measured):	0.0000 m	1.9820 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount



# V740 - BLB-F (04:19:34-05:05:39) (S2)

Baseline observation:	V740 --- BLB-F (B2)
Processed:	26-07-2025 07:55:34
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0116 m
Vertical precision:	0.0420 m
RMS:	0.0369 m
Maximum PDOP:	1.901
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	25-07-2025 04:19:40 (GPS Time)
Processing stop time:	25-07-2025 05:05:30 (GPS Time)
Processing duration:	00:45:50
Processing interval:	10 seconds
Processing mode:	Uncombined Mode

## Vector Components (Mark to Mark)

From:	V740
Grid	
Easting	477254.448 m
Northing	2759098.140 m
Elevation	362.299 m
Local	
Latitude	N24°56'49.20400"
Longitude	E80°46'28.89100"
Height	302.550 m
Global	
Latitude	N24°56'49.20400"
Longitude	E80°46'28.89100"
Height	302.550 m

To:	BLB-F
Grid	
Easting	476123.106 m
Northing	2757629.439 m
Elevation	329.583 m
Local	
Latitude	N24°56'01.39119"
Longitude	E80°45'48.63863"
Height	269.876 m
Global	
Latitude	N24°56'01.39119"
Longitude	E80°45'48.63863"
Height	269.876 m

Vector					
ΔEasting	-1131.3420 m	NS Fwd Azimuth	217°30'43.5"	ΔX	1209.4816 m
ΔNorthing	-1468.7012 m	Ellipsoid Dist.	1854.6490 m	ΔY	401.9567 m
ΔElevation	-32.716 m	ΔHeight	-32.6743 m	ΔZ	-1347.8447 m

## Standard Errors

Vector errors:					
σ ΔEasting	0.0060 m	σ NS fwd Azimuth	0°00'00.8"	σ ΔX	0.0094 m
σ ΔNorthing	0.0079 m	σ Ellipsoid Dist.	0.0063 m	σ ΔY	0.0356 m
σ ΔElevation	0.0420 m	σ ΔHeight	0.0420 m	σ ΔZ	0.0225 m

## Aposteriori Covariance Matrix (Meter²)

	X	Y	Z
X	0.0000889353		
Y	0.0002639598	0.0012679058	
Z	0.0001672177	0.0007545282	0.0005071904

## Occupations

	From	To
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Point ID:	V740	BLB-F
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Tri	C:\Users\LENOVO\Dropbox\PC\Documents\Tri
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.0000 m	1.9820 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount



Project file data		Coordinate System	
Name:		Name:	UTM
Size:		Datum:	WGS 1984
Modified:	22-03-2018 14:34:52 (UTC:-6)	Zone:	44 North (81E)
Time zone:	Mountain Standard Time	Geoid:	EGM96 (Global)
Reference number:		Vertical datum:	
Description:		Calibrated site:	
Comment 1:			
Comment 2:			
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec. (Meter)	V. Prec. (Meter)	Geodetic Az.	Ellipsoid Dist. (Meter)	ΔHeight (Meter)
SOI BASE --- MJHR-05 (B1)	SOI BASE	MJHR-05	Fixed	0.043	0.092	161°27'23"	1.212	-61.483
SOI BASE --- BLB-B (B2)	SOI BASE	BLB-B	Fixed	0.008	0.052	323°17'25"	509.252	-54.838

### Acceptance Summary

Processed	Passed	Flag		Fail	
2	2	0		0	

# SOI BASE - MJHR-05 (06:45:31-07:00:43) (S1)

Baseline observation:	SOI BASE --- MJHR-05 (B1)
Processed:	30-07-2025 05:18:27
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.043 m
Vertical precision:	0.092 m
RMS:	0.025 m
Maximum PDOP:	1.945
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	29-07-2025 06:45:31 (GPS Time)
Processing stop time:	29-07-2025 07:00:43 (GPS Time)
Processing duration:	00:15:12
Processing interval:	1 second

## Vector Components (Mark to Mark)

From:	SOI BASE				
Grid		Local		Global	
Easting	474676.088 m	Latitude	N24°57'08.32800"	Latitude	N24°57'08.32800"
Northing	2759690.875 m	Longitude	E80°44'56.90800"	Longitude	E80°44'56.90800"
Elevation	427.554 m	Height	367.807 m	Height	367.807 m

To:	MJHR-05				
Grid		Local		Global	
Easting	474676.471 m	Latitude	N24°57'08.29065"	Latitude	N24°57'08.29065"
Northing	2759689.726 m	Longitude	E80°44'56.92174"	Longitude	E80°44'56.92174"
Elevation	366.071 m	Height	306.324 m	Height	306.324 m

Vector					
ΔEasting	0.383 m	NS Fwd Azimuth	161°27'23"	ΔX	-9.264 m
ΔNorthing	-1.149 m	Ellipsoid Dist.	1.212 m	ΔY	-54.478 m
ΔElevation	-61.483 m	ΔHeight	-61.483 m	ΔZ	-26.979 m

## Standard Errors

Vector errors:					
σ ΔEasting	0.008 m	σ NS fwd Azimuth	0°08'41"	σ ΔX	0.014 m
σ ΔNorthing	0.016 m	σ Ellipsoid Dist.	0.017 m	σ ΔY	0.034 m
σ ΔElevation	0.047 m	σ ΔHeight	0.047 m	σ ΔZ	0.034 m



**Aposteriori Covariance Matrix (Meter<sup>2</sup>)**

	X	Y	Z
X	0.0001980269		
Y	0.0004783267	0.0011554840	
Z	0.0004764624	0.0011509621	0.0011464892

**Occupations**

	From	To
Point ID:	SOI BASE	MJHR-05
Data file:	C:\Users\user\Documents\Trimble Business Center\Unnamed\V126210F.25o	C:\Users\user\Documents\Trimble Business Center\Unnamed\VPZ0E2101.t02
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.000 m	1.982 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

### Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.050 m + 1.000 ppm	0.100 m + 1.000 ppm
Vertical Precision >	0.100 m + 1.000 ppm	0.200 m + 1.000 ppm

### SOI BASE - BLB-B (05:29:38-06:16:40) (S2)

Baseline observation:	SOI BASE --- BLB-B (B2)
Processed:	30-07-2025 05:18:23
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.008 m
Vertical precision:	0.052 m
RMS:	0.029 m
Maximum PDOP:	2.154
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	29-07-2025 05:29:40 (GPS Time)
Processing stop time:	29-07-2025 06:16:40 (GPS Time)
Processing duration:	00:47:00
Processing interval:	20 seconds

### Vector Components (Mark to Mark)

From:	SOI BASE				
	Grid		Local		Global
Easting	474676.088 m	Latitude	N24°57'08.32800"	Latitude	N24°57'08.32800"
Northing	2759690.875 m	Longitude	E80°44'56.90800"	Longitude	E80°44'56.90800"
Elevation	427.554 m	Height	367.807 m	Height	367.807 m

To:	BLB-B				
	Grid		Local		Global
Easting	474372.551 m	Latitude	N24°57'21.59582"	Latitude	N24°57'21.59582"
Northing	2760099.531 m	Longitude	E80°44'46.05622"	Longitude	E80°44'46.05622"
Elevation	372.723 m	Height	312.969 m	Height	312.969 m

Vector					
ΔEasting	-303.537 m	NS Fwd Azimuth	323°17'25"	ΔX	264.782 m
ΔNorthing	408.656 m	Ellipsoid Dist.	509.252 m	ΔY	-268.026 m
ΔElevation	-54.830 m	ΔHeight	-54.838 m	ΔZ	347.023 m

## Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.003 m	$\sigma$ NS fwd Azimuth	0°00'01"	$\sigma \Delta$ X	0.005 m
$\sigma \Delta$ Northing	0.003 m	$\sigma$ Ellipsoid Dist.	0.003 m	$\sigma \Delta$ Y	0.024 m
$\sigma \Delta$ Elevation	0.027 m	$\sigma \Delta$ Height	0.027 m	$\sigma \Delta$ Z	0.011 m

## Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0000242263		
Y	0.0000909697	0.0005850039	
Z	0.0000391293	0.0002560748	0.0001251522

## Occupations

	From	To
Point ID:	SOI BASE	BLB-B
Data file:	C:\Users\user\Documents\Trimble Business Center\Unnamed\V126210F.25o	C:\Users\user\Documents\Trimble Business Center\Unnamed\PZ0E2100.t02
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.000 m	2.000 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount



Project file data		Coordinate System	
Name:		Name:	UTM
Size:		Datum:	WGS 1984
Modified:	22-03-2018 14:34:52 (UTC:-6)	Zone:	44 North (81E)
Time zone:	Mountain Standard Time	Geoid:	EGM96 (Global)
Reference number:		Vertical datum:	
Description:		Calibrated site:	
Comment 1:			
Comment 2:			
Comment 3:			

## Baseline Processing Report

### Processing Summary


Observation	From	To	Solution Type	H. Prec. (Meter)	V. Prec. (Meter)	Geodetic Az.	Ellipsoid Dist. (Meter)	ΔHeight (Meter)
SOI BASE --- MJHR-02 (B1)	SOI BASE	MJHR-02	Fixed	0.088	0.068	224°47'15"	772.050	11.558
SOI BASE --- MJHR-01 (B2)	SOI BASE	MJHR-01	Fixed	0.007	0.009	228°57'02"	1.410	0.230

### Acceptance Summary

Processed	Passed	Flag		Fail	
2	1	1		0	



# SOI BASE - MJHR-02 (05:34:57-05:51:02) (S1)

Baseline observation:	 SOI BASE --- MJHR-02 (B1)
Processed:	29-07-2025 11:43:04
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.088 m
Vertical precision:	0.068 m
RMS:	0.021 m
Maximum PDOP:	1.714
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	28-07-2025 05:34:57 (GPS Time)
Processing stop time:	28-07-2025 05:51:02 (GPS Time)
Processing duration:	00:16:05
Processing interval:	1 second

## Vector Components (Mark to Mark)

From:		SOI BASE			
Grid		Local		Global	
Easting	476175.601 m	Latitude	N24°56'41.49400"	Latitude	N24°56'41.49400"
Northing	2758862.828 m	Longitude	E80°45'50.43400"	Longitude	E80°45'50.43400"
Elevation	323.329 m	Height	263.592 m	Height	263.592 m

To:	MJHR-02				
Grid		Local		Global	
Easting	475630.970 m	Latitude	N24°56'23.68597"	Latitude	N24°56'23.68597"
Northing	2758316.045 m	Longitude	E80°45'31.04750"	Longitude	E80°45'31.04750"
Elevation	334.870 m	Height	275.149 m	Height	275.149 m

Vector					
ΔEasting	-544.631 m	NS Fwd Azimuth	224°47'15"	ΔX	575.633 m
ΔNorthing	-546.782 m	Ellipsoid Dist.	772.050 m	ΔY	151.109 m
ΔElevation	11.541 m	ΔHeight	11.558 m	ΔZ	-491.994 m

## Standard Errors

Vector errors:					
$\sigma$ $\Delta$ Easting	0.036 m	$\sigma$ NS fwd Azimuth	0°00'07"	$\sigma$ $\Delta$ X	0.032 m
$\sigma$ $\Delta$ Northing	0.005 m	$\sigma$ Ellipsoid Dist.	0.023 m	$\sigma$ $\Delta$ Y	0.037 m
$\sigma$ $\Delta$ Elevation	0.035 m	$\sigma$ $\Delta$ Height	0.035 m	$\sigma$ $\Delta$ Z	0.011 m



**Aposteriori Covariance Matrix (Meter<sup>2</sup>)**

	X	Y	Z
X	0.0010336924		
Y	-0.0007208248	0.0013508273	
Z	-0.0001408377	0.0003809783	0.0001154803

**Occupations**

	From	To
Point ID:	SOI BASE	MJHR-02
Data file:	C:\Users\user\Documents\Trimble Business Center\Unnamed\V052209C.25o	C:\Users\user\Documents\Trimble Business Center\Unnamed\VPZ0E2091.t02
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.000 m	1.982 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount

### Acceptance Criteria

Vector Component	Flag 	Fail 
Horizontal Precision >	0.050 m + 1.000 ppm	0.100 m + 1.000 ppm
Vertical Precision >	0.100 m + 1.000 ppm	0.200 m + 1.000 ppm

### SOI BASE - MJHR-01 (04:22:11-04:40:58) (S2)

Baseline observation:	SOI BASE --- MJHR-01 (B2)
Processed:	29-07-2025 11:43:01
Solution type:	Fixed
Frequency used:	Dual Frequency (L1, L2)
Horizontal precision:	0.007 m
Vertical precision:	0.009 m
RMS:	0.033 m
Maximum PDOP:	1.573
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	28-07-2025 04:22:11 (GPS Time)
Processing stop time:	28-07-2025 04:40:58 (GPS Time)
Processing duration:	00:18:47
Processing interval:	1 second

### Vector Components (Mark to Mark)

From:		SOI BASE			
Grid		Local		Global	
Easting	476175.601 m	Latitude	N24°56'41.49400"	Latitude	N24°56'41.49400"
Northing	2758862.828 m	Longitude	E80°45'50.43400"	Longitude	E80°45'50.43400"
Elevation	323.329 m	Height	263.592 m	Height	263.592 m

To:		MJHR-01			
Grid		Local		Global	
Easting	476174.536 m	Latitude	N24°56'41.46391"	Latitude	N24°56'41.46391"
Northing	2758861.904 m	Longitude	E80°45'50.39610"	Longitude	E80°45'50.39610"
Elevation	323.559 m	Height	263.822 m	Height	263.822 m

Vector					
ΔEasting	-1.064 m	NS Fwd Azimuth	228°57'02"	ΔX	1.146 m
ΔNorthing	-0.924 m	Ellipsoid Dist.	1.410 m	ΔY	0.421 m
ΔElevation	0.230 m	ΔHeight	0.230 m	ΔZ	-0.743 m

## Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.002 m	$\sigma$ NS fwd Azimuth	0°06'13"	$\sigma \Delta$ X	0.002 m
$\sigma \Delta$ Northing	0.003 m	$\sigma$ Ellipsoid Dist.	0.002 m	$\sigma \Delta$ Y	0.004 m
$\sigma \Delta$ Elevation	0.005 m	$\sigma \Delta$ Height	0.005 m	$\sigma \Delta$ Z	0.004 m

## Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0000049548		
Y	0.0000024660	0.0000156072	
Z	0.0000023443	0.0000094123	0.0000142874

## Occupations

	From	To
Point ID:	SOI BASE	MJHR-01
Data file:	C:\Users\user\Documents\Trimble Business Center\Unnamed\V052209C.25o	C:\Users\user\Documents\Trimble Business Center\Unnamed\PZ0E2090.t02
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6050R40056	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.000 m	1.982 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount



Project file data		Coordinate System	
Name:		Name:	World wide/UTM
Size:		Zone:	44 North
Modified:		Datum:	WGS 1984
Time zone:		Global reference datum:	WGS 1984
Reference number:		Global reference epoch:	
Description:		Geoid:	EGM96 (Global)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec. (Meter)	V. Prec. (Meter)	Geodetic Az.	Ellipsoid Dist. (Meter)	ΔHeight (Meter)
BASE --- MJHR-03A (B1)	BASE	MJHR-03A	Fixed	0.0506	0.0332	357°36'31.0"	63202.4196	4.0264

### Acceptance Summary

Processed	Passed	Flag		Fail	
1	1	0		0	

# BASE - MJHR-03A (04:42:35-04:59:59) (S1)

Baseline observation:	BASE --- MJHR-03A (B1)
Processed:	01-08-2025 05:28:55
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0506 m
Vertical precision:	0.0332 m
RMS:	0.0201 m
Maximum PDOP:	1.415
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	30-07-2025 04:42:35 (GPS Time)
Processing stop time:	30-07-2025 04:59:59 (GPS Time)
Processing duration:	00:17:24
Processing interval:	1 second
Processing mode:	Wide Lane Mode

## Vector Components (Mark to Mark)

From:	BASE				
Grid		Local		Global	
Easting	477399.916 m	Latitude	N24°21'58.64523"	Latitude	N24°21'58.64523"
Northing	2694799.080 m	Longitude	E80°46'37.79857"	Longitude	E80°46'37.79857"
Elevation	329.301 m	Height	270.288 m	Height	270.288 m

To:	MJHR-03A				
Grid		Local		Global	
Easting	474866.255 m	Latitude	N24°56'10.95475"	Latitude	N24°56'10.95475"
Northing	2757925.839 m	Longitude	E80°45'03.80496"	Longitude	E80°45'03.80496"
Elevation	334.021 m	Height	274.314 m	Height	274.314 m

Vector					
ΔEasting	-2533.6609 m	NS Fwd Azimuth	357°36'31.0"	ΔX	-1617.9283 m
ΔNorthing	63126.7585 m	Ellipsoid Dist.	63202.4196 m	ΔY	-26418.5470 m
ΔElevation	4.720 m	ΔHeight	4.0264 m	ΔZ	57395.9781 m

## Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.0185 m	$\sigma$ NS fwd Azimuth	0°00'00.1"	$\sigma \Delta$ X	0.0197 m
$\sigma \Delta$ Northing	0.0358 m	$\sigma$ Ellipsoid Dist.	0.0358 m	$\sigma \Delta$ Y	0.0305 m
$\sigma \Delta$ Elevation	0.0332 m	$\sigma \Delta$ Height	0.0332 m	$\sigma \Delta$ Z	0.0375 m

## Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0003874198		
Y	0.0001859883	0.0009305681	
Z	0.0000934266	0.0000543529	0.0014047100

## Occupations

	From	To
Point ID:	<a href="#">BASE</a>	<a href="#">MJHR-03A</a>
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Trimble Business Center\Unnamed (20)\UNCH211E00.25o	C:\Users\LENOVO\Dropbox\PC\Documents\Trimble Business Center\Unnamed (20)\PZ0E2110.t04
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6114R40094	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.0000 m	1.9820 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount



Project file data		Coordinate System	
Name:		Name:	World wide/UTM
Size:		Zone:	44 North
Modified:		Datum:	WGS 1984
Time zone:		Global reference datum:	WGS 1984
Reference number:		Global reference epoch:	
Description:		Geoid:	EGM96 (Global)
Comment 1:		Vertical datum:	
Comment 2:		Calibrated site:	
Comment 3:			

## Baseline Processing Report

### Processing Summary

Observation	From	To	Solution Type	H. Prec. (Meter)	V. Prec. (Meter)	Geodetic Az.	Ellipsoid Dist. (Meter)	ΔHeight (Meter)
BASE SOI --- MJHR-04 (B1)	BASE SOI	MJHR-04	Fixed	0.0132	0.0249	358°29'57. 4"	64683.927 5	26.2880

### Acceptance Summary

Processed	Passed	Flag		Fail	
1	1	0		0	



# BASE SOI - MJHR-04 (05:50:04-06:11:07) (S1)

Baseline observation:	BASE SOI --- MJHR-04 (B1)
Processed:	05-08-2025 04:26:55
Solution type:	Fixed
Frequency used:	Multiple Frequencies
Horizontal precision:	0.0132 m
Vertical precision:	0.0249 m
RMS:	0.0178 m
Maximum PDOP:	1.491
Ephemeris used:	Broadcast
Antenna model:	NGS Absolute
Processing start time:	01-08-2025 05:50:10 (GPS Time)
Processing stop time:	01-08-2025 06:11:00 (GPS Time)
Processing duration:	00:20:50
Processing interval:	10 seconds
Processing mode:	Wide Lane Mode

## Vector Components (Mark to Mark)

From:	BASE SOI				
Grid		Local		Global	
Easting	477399.916 m	Latitude	N24°21'58.64523"	Latitude	N24°21'58.64523"
Northing	2694799.080 m	Longitude	E80°46'37.79857"	Longitude	E80°46'37.79857"
Elevation	329.301 m	Height	270.288 m	Height	270.288 m

To:	MJHR-04				
Grid		Local		Global	
Easting	475811.439 m	Latitude	N24°57'00.17504"	Latitude	N24°57'00.17504"
Northing	2759438.056 m	Longitude	E80°45'37.41209"	Longitude	E80°45'37.41209"
Elevation	356.324 m	Height	296.576 m	Height	296.576 m

Vector					
ΔEasting	-1588.4770 m	NS Fwd Azimuth	358°29'57.4"	ΔX	-2647.9234 m
ΔNorthing	64638.9762 m	Ellipsoid Dist.	64683.9275 m	ΔY	-26877.5884 m
ΔElevation	27.024 m	ΔHeight	26.2880 m	ΔZ	58778.6731 m

## Standard Errors

Vector errors:					
$\sigma \Delta$ Easting	0.0089 m	$\sigma$ NS fwd Azimuth	0°00'00.0"	$\sigma \Delta$ X	0.0103 m
$\sigma \Delta$ Northing	0.0089 m	$\sigma$ Ellipsoid Dist.	0.0089 m	$\sigma \Delta$ Y	0.0238 m
$\sigma \Delta$ Elevation	0.0249 m	$\sigma \Delta$ Height	0.0249 m	$\sigma \Delta$ Z	0.0104 m

## Aposteriori Covariance Matrix (Meter<sup>2</sup>)

	X	Y	Z
X	0.0001062878		
Y	0.0001251679	0.0005663917	
Z	0.0000357379	0.0001424857	0.0001071512

## Occupations

	From	To
Point ID:	BASE SOI	MJHR-04
Data file:	C:\Users\LENOVO\Dropbox\PC\Documents\Trimble Business Center\Unnamed (20)\UNCH213F00.25o	C:\Users\LENOVO\Dropbox\PC\Documents\Trimble Business Center\Unnamed (20)\PZ0E2130.t04
Receiver type:	Alloy	Catalyst DA2
Receiver serial number:	6114R40094	6504100164
Antenna type:	GNSS-Ti Choke Ring v2 w/SCIS Dome	DA2
Antenna serial number:	-----	04100164
Antenna height (measured):	0.0000 m	1.9820 m
Antenna method:	Bottom of antenna mount	Bottom of antenna mount