

L Detector Layout Update

Layers

All layers

Change visibility

1

256

Cryo-shield

E1-HF

E1-HF Auxiliary

E1-HF-FC

E1-LF

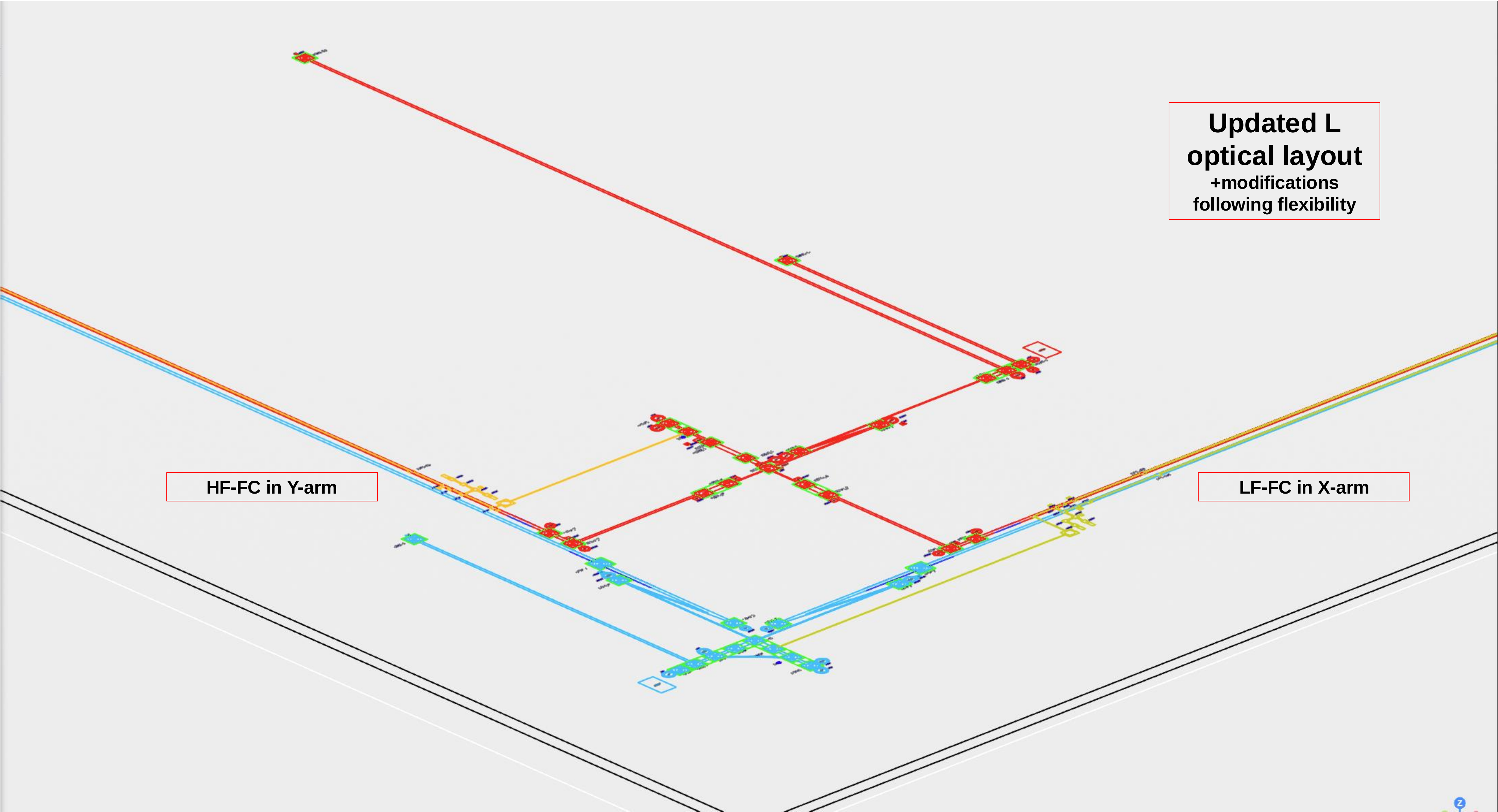
E1-LF Auxiliary

E1-LF-FC

Scaffolding

Text

Tunnel



Models

Everything in project

Archived

L

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

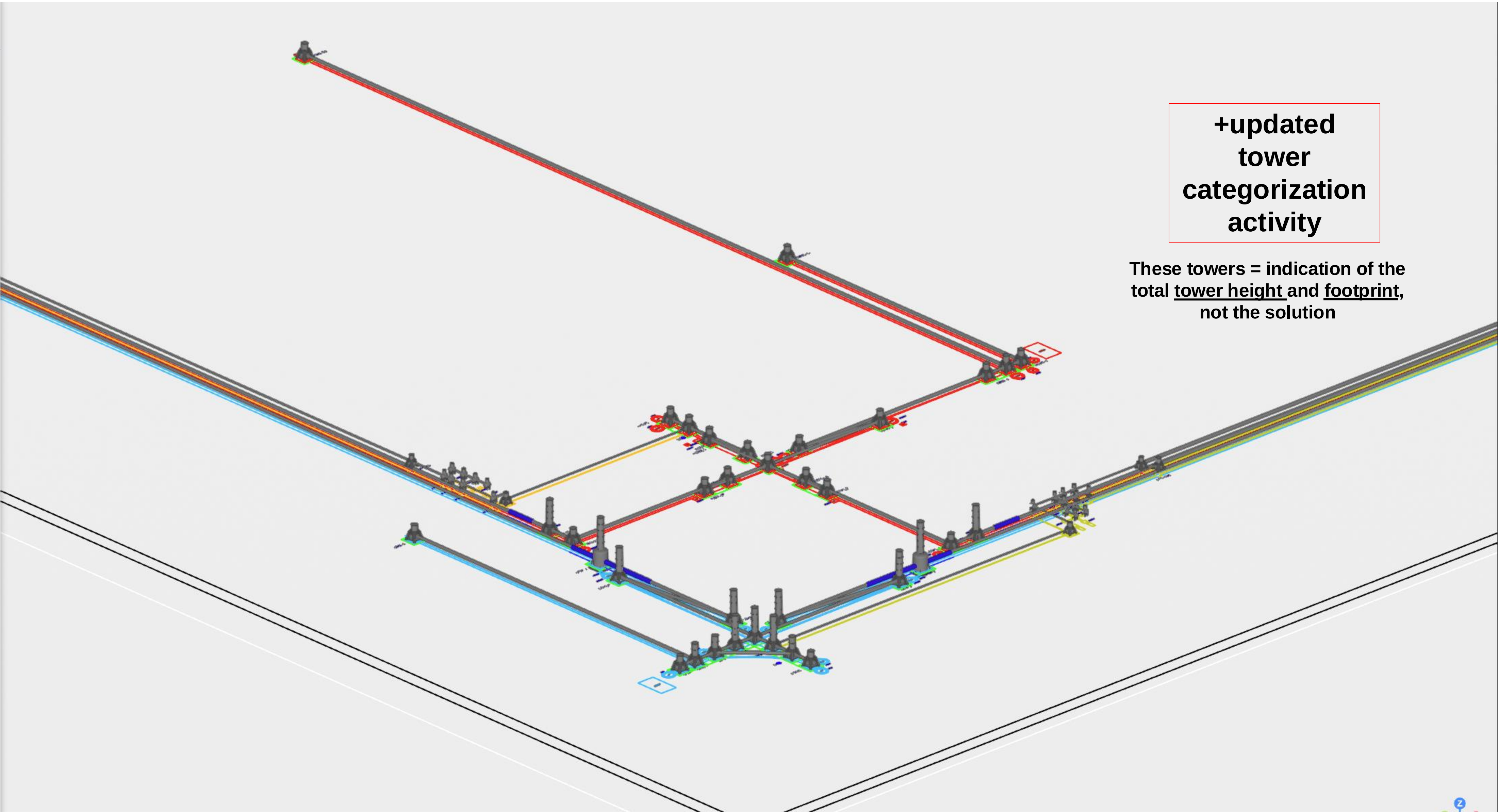
2025-02-23 (Rhino only) ET ...

2025-02-23 ET L Detector L...

2025-02-23 ET L Detector L...

Triangle

Trimble Connect quick guideli...



**+updated
tower
categorization
activity**

These towers = indication of the
total tower height and footprint,
not the solution

Models

Everything in project

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L

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

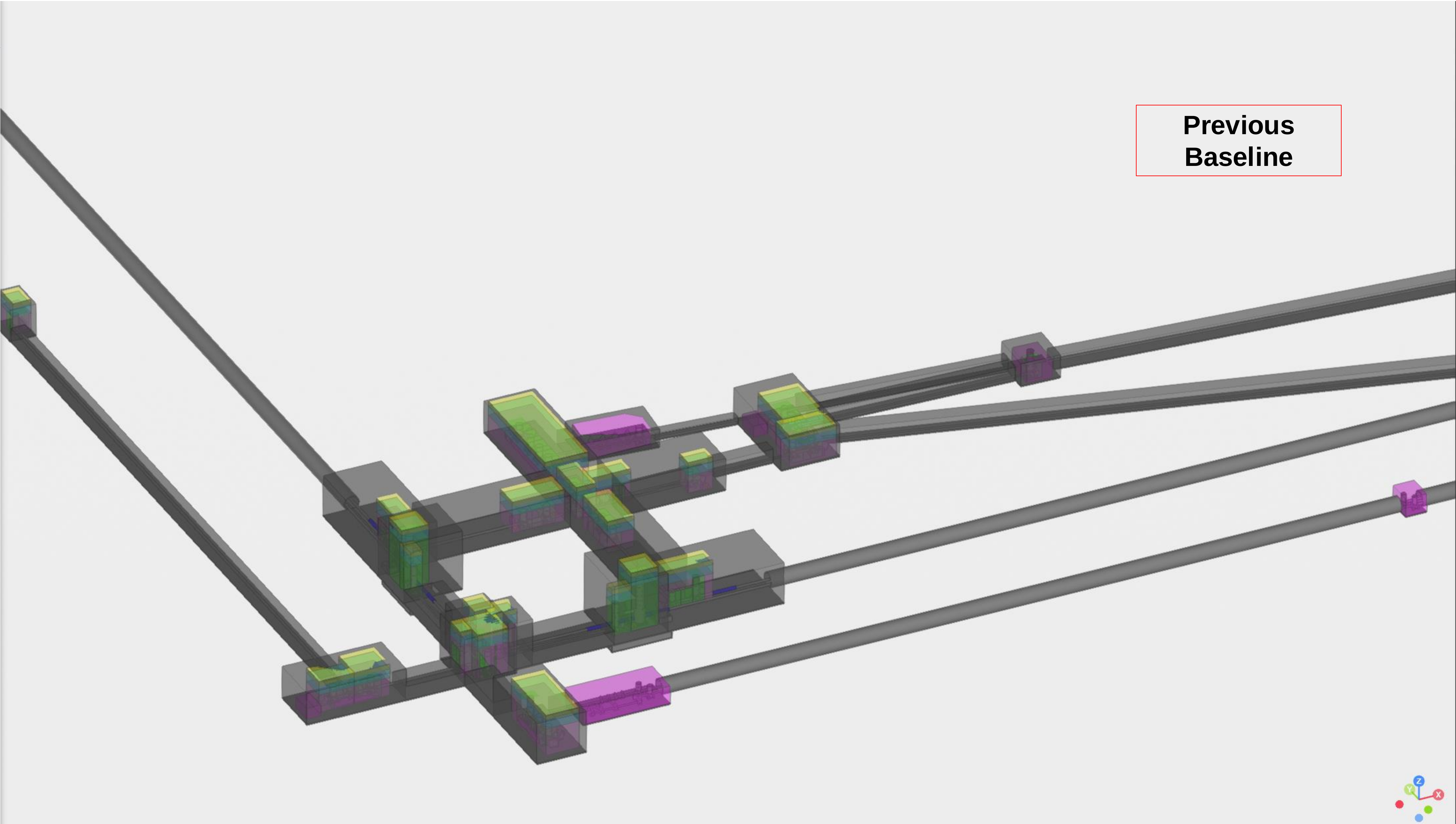
2025-02-23 (Rhino only) ET ...

2025-02-23 ET L Detector L...

2025-02-23 ET L Detector L...

Triangle

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Previous
Baseline



Models

Everything in project

Archived

L

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2024-12-03 ET L Detector L...

2025-02-23 (Rhino only) ET ...

2025-02-23 ET L Detector L...

2025-02-23 ET L Detector L...

Triangle

Trimble Connect quick guideli...

Updated L
Detector
Layout



Updated Detector Layout (1st in person meeting) vs previous baseline - Caverns

Update (2025-02-23 ET L Detector Layout (ETO Task Force 1st in-person meeting update))								Previous Baseline (2024-12-03 ET L Detector Layout (quasi-Delta))						
Cavern	Detector Layout Block Dimmensions				Est. Excav. Vol. (m3)	Note	Vol. Difference (m3)	Cavern	Detector Layout Block Dimmensions				Est. Excav. Vol. (m3)	Note
	Height (m)	Width (m)	Length (m)	Detector Layout (m3)					Height (m)	Width (m)	Length (m)	Detector Layout (m3)		
A1	20.5	28	30	17,220.00	18,916.33		0.00	A1	20.5	28	30	17,220.00	18,916.33	
A2	14	21	34.172	10,046.57	11,247.87		-5130.14	A2	18	21	39.172	14,807.02	16,378.00	
A3	14	22	37.171	11,448.67	12,759.36		-1667.50	A3	14	22	42.171	12,988.67	14,426.86	
A4_1	23.2	27.5	22.671	15,836.06	17,675.91	6m BA CR	-2585.49	A4_1	27.2	27.328	22.671	18,223.80	20,261.39	6m BA CR
A4_2	18	27.5	45.745	22,643.78	24,682.97		-1685.27	A4_2	18	27.328	49.245	24,223.81	26,368.23	
A5_1	23.2	25	22.671	14,521.14	16,270.07	6m BA CR	-2461.78	A5_1	27.2	25	22.671	16,788.24	18,731.85	6m BA CR
A5_2	18	25	45.957	20,680.65	22,619.65		-1581.53	A5_2	18	25	49.245	22,160.25	24,201.18	
LF-FC_1	8	27.5	18.5	4,070.00	4,760.54		6494.54	LF-FC	8	16	37	4,736.00	5,512.33	
LF-FC_2	8	16	49	6,272.00	7,246.33									
B1	8	11.9	125.081	11,907.71	13,840.65		-30828.15	B1	14	21.5	135.828	40,884.23	44,668.80	
B2	8	11.9	58.836	5,601.19	6,576.88		-12025.21	B2	14	21	57.226	16,824.44	18,602.09	
B3	8	16.952	51.99	7,050.68	8,108.45		-6989.19	B3	14	22.093	44	13,609.29	15,097.64	
G	8	20	40	6,400.00	7,345.17		-8964.76	G	14	25	42.174	14,760.90	16,309.93	
H	8	15	20	2,400.00	2,876.00		-709.65	H	10	16.672	18.204	3,034.97	3,585.65	
HF-FC_1	8	18	32	4,608.00	5,353.50		2839.97	HF-FC	8	18	32	4,608.00	5,353.50	
HF-FC_2	8	15.522	19.075	2,368.66	2,839.97									
C1	8	15	18	2,160.00	2,604.00		-5560.17	C1	12	20	30	7,200.00	8,164.17	
C_X	6	15	22.8	2,052.00	2,495.20		0.00	C_X	6	15	22.8	2,052.00	2,495.20	
D_X	23.2	21.25	21.572	11,609.46	13,132.90	6m BA CR	-2165.55	D_X	27.2	21.5	21.572	13,589.77	15,298.45	6m BA CR
E_X	18	25	30	13,500.00	14,944.33		0.00	E_X	18	25	30	13,500.00	14,944.33	
F_X	6	16	41.672	4,000.51	4,736.59		0.00	F_X	6	16	41.672	4,000.51	4,736.59	
C_Y	6	15	22.8	2,052.00	2,495.20		0.00	C_Y	6	15	22.8	2,052.00	2,495.20	
D_Y	23.2	21.25	21.572	11,609.46	13,132.90	6m BA CR	-2165.55	D_Y	27.2	21.5	21.572	13,589.77	15,298.45	6m BA CR
E_Y	18	25	30	13,500.00	14,944.33		0.00	E_Y	18	25	30	13,500.00	14,944.33	
F_Y	6	16	41.672	4,000.51	4,736.59		0.00	F_Y	6	16	41.672	4,000.51	4,736.59	
I	10	11	20	2,200.00	2,660.67		-5974.67	I	10	19	40	7,600.00	8,635.33	
J	14	11	15.246	2,347.88	2,841.47		4.87	J	14	11	15.218	2,343.57	2,836.60	
K	8	14	27	3,024.00	3,588.67		1381.00	K	8	11	20.5	1,804.00	2,207.67	
Vol (1L)				235,130.91	265,432.50		-79,774.22	Vol (1L)				310,101.75	345,206.72	

Impact of shrinking HF

*Still many unsolved issues in this layout! Scaffolding, cleanrooms, aux. benches, logistics, etc. Could lead to larger volumes needed

Updated Detector Layout (1st in person meeting) vs previous baseline - Tunnels

Update (2025-02-23 ET L Detector Layout (ETO Task Force 1st in-person meeting update))									Previous Baseline (2024-12-03 ET L Detector Layout (quasi-Delta))								
Tunnel	Detector Layout Block Dimensions					Est. Excav. Vol. (m3)	Note	Vol. Difference (m3)	Tunnel	Detector Layout Block Dimensions					Est. Excav. Vol. (m3)	Note	
	Height (m)	Width (m)	Length (m)	Inner Diameter (m)	Detector Layout (m3)					Height (m)	Width (m)	Length (m)	Inner Diameter (m)	Detector Layout (m3)			
T-A2	6	12.079	0.0	-	0.00	0.00		-2135.06	T-A2	6	12.079	25.0	-	1,811.85	2,135.06		
T-A3	6	12.078	0.0	-	0.00	0.00		-2134.90	T-A3	6	12.078	25.0	-	1,811.70	2,134.90		
T-A4	6	19	34.8	-	3,970.51	4,551.84		0.00	T-A4	6	19	34.8	-	3,970.51	4,551.84		
T-A5	6	16.5	36.8	-	3,646.07	4,207.45		0.00	T-A5	6	16.5	36.8	-	3,646.07	4,207.45		
T-B	6	6	25.2	-	906.59	1,148.23		0.00	T-B	6	6	25.2	-	906.59	1,148.23		
T-C	6	10	81.4	-	4,881.96	5,824.34		-6969.52	T-C	6	6	281.1	-	10,120.72	12,793.86		
T-D	6	8	182.0	-	8,736.00	10,651.27		6772.08	T-D	6	6	85.2	-	3,067.34	3,879.18		
T-E	3	2	58.9	-	353.56	618.99		20.00	T-E	3	4	34.2	-	410.00	598.99		
T-F	6	4	0.0	-	0.00	0.00		-2783.94	T-F	6	4	85.6	-	2,055.05	2,783.94		
T-G	6	6	0.0	-	0.00	0.00		-37654.74	T-G	6	6	827.5	-	29,790.86	37,654.74		
T-H_X	6	12.8	16.8	-	1,286.40	1,513.40		0.00	T-H_X	6	12.8	16.8	-	1,286.40	1,513.40		
T-H_Y	6	12.8	16.8	-	1,286.40	1,513.40		0.00	T-H_Y	6	12.8	16.8	-	1,286.40	1,513.40		
T-J	6	6	282.3	-	10,163.81	12,848.32		0.00	T-J	6	6	282.3	-	10,163.81	12,848.32		
T-LFFC	-	-	0.0	6.5	0.00	0.00	TBM	-276007.83	T-LFFC	-	-	4980.5	6.5	165,268.29	276,007.83	TBM	
T-TBM_X1	-	-	4969.8	6.5	164,912.30	275,413.31	TBM	19459.30	T-TBM_X1	-	-	338.8	6	9,578.55	16,605.49	TBM	
T-TBM_X2	-	-	9849.3	6	278,482.72	482,780.74	TBM		T-TBM_X2	-	-	833.3	6	23,560.47	40,844.68	TBM	
T-TBM_X3	-	-	0.0	6	0.00	0.00	TBM		T-TBM_X3	-	-	13899.0	6	392,985.81	681,284.58	TBM	
T-TBM_Y1	-	-	968.3	6.5	32,130.50	53,659.84	TBM	2634.20	T-TBM_Y	-	-	14910.1	6	421,572.66	730,843.06	TBM	
T-TBM_Y2	-	-	13869.1	6	392,139.51	679,817.42	TBM										
				Vol/ (1L)	510,756.82	854,731.11		-298,800.41					Vol/ (1L)	1,083,293.09	1,833,348.94		

Impact of moving HF-FC into Y-arm tunnel

Impact of moving LF-FC into X-arm tunnel

Total reduction of excavation volume
= **-378,574.00 m³**
(-17.38%)



***Still many unsolved issues in this layout!**
Scaffolding, cleanrooms, aux. benches, logistics, etc. Could lead to larger volumes