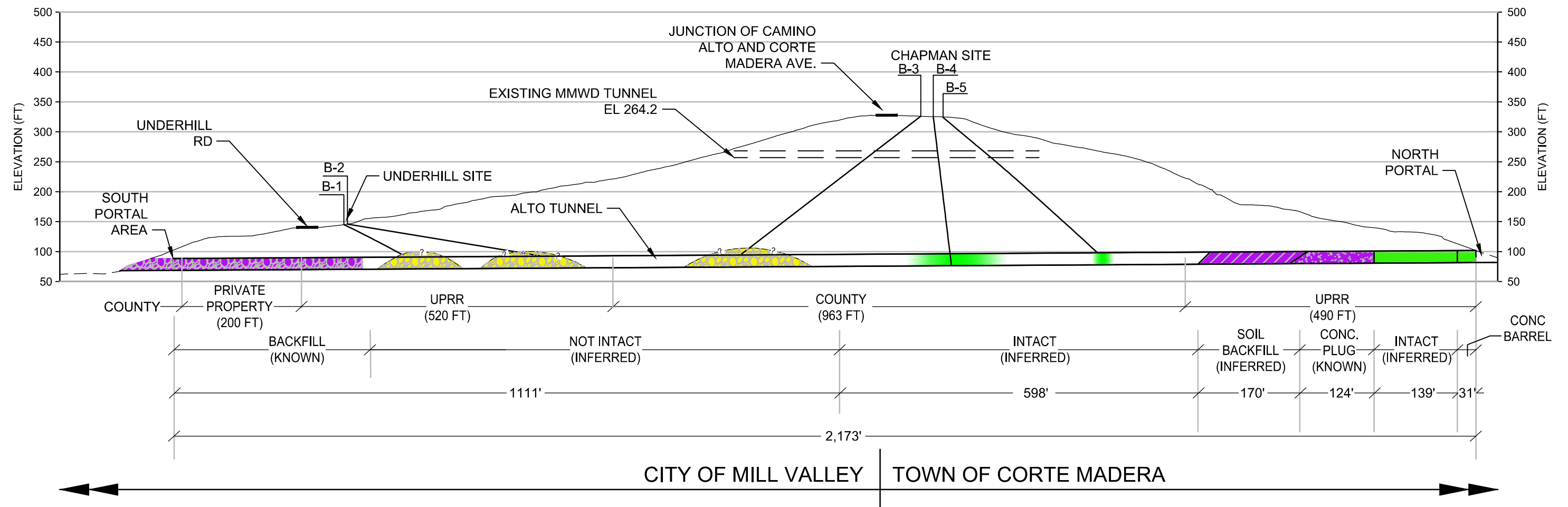
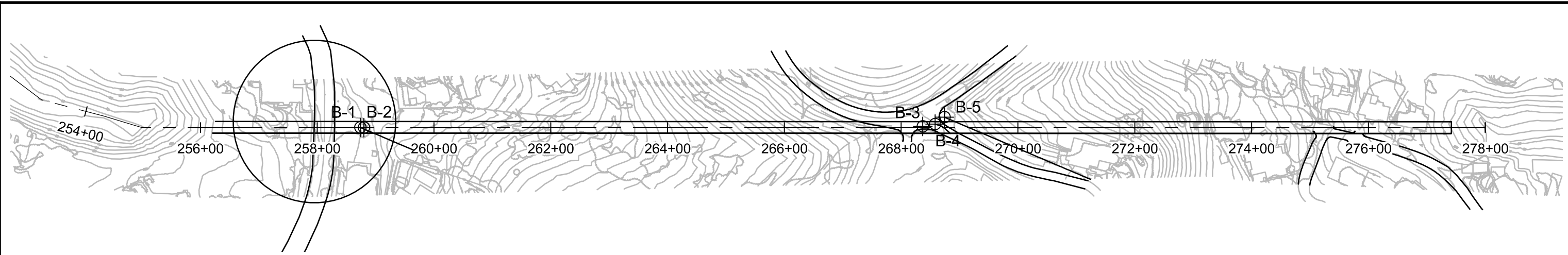


## **Appendix B. Tunnel Reconstruction and Permanent Closure Figures**

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**LEGEND**

- NOT INTACT (INFERRED)
- INTACT (KNOWN AND INFERRED)
- CONCRETE / SOIL BACKFILL (KNOWN AND INFERRED)

NOTE: DISTANCES MEASURED AT CENTERLINE OF TUNNEL.

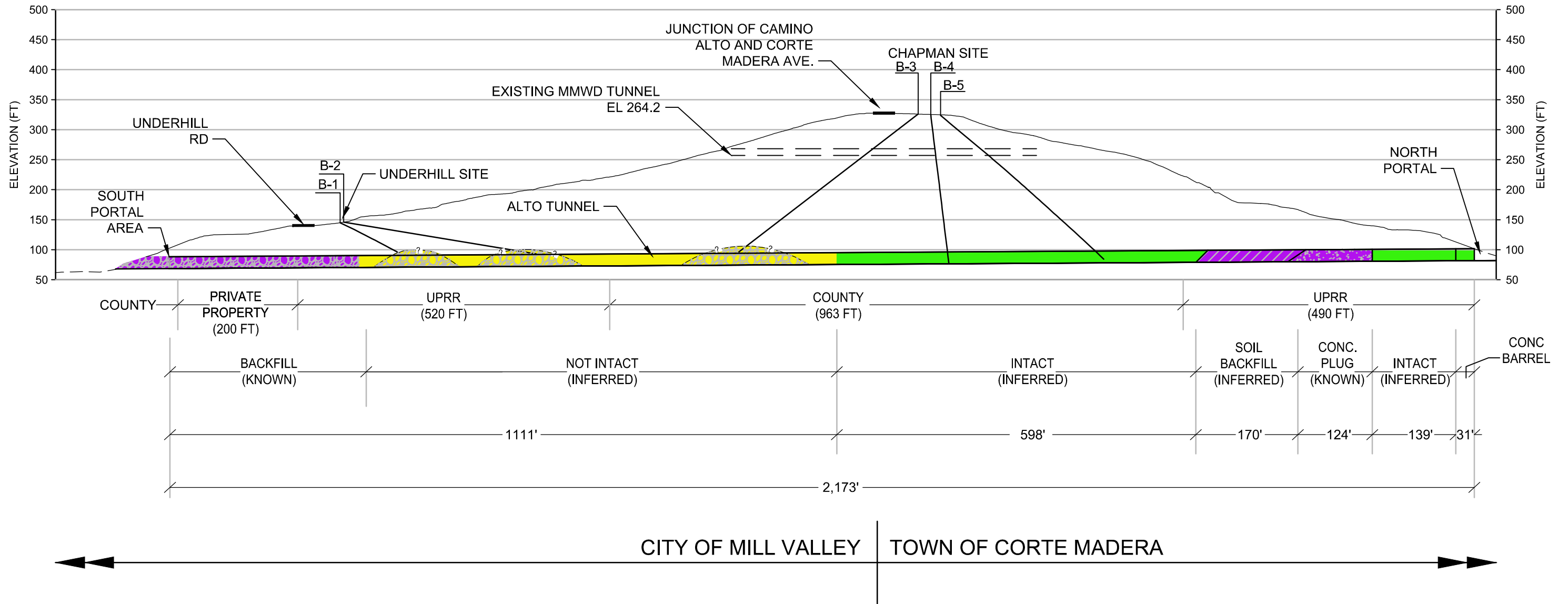
PROJECT # 5581.0



ALTO TUNNEL INVESTIGATION  
MARIN COUNTY, CALIFORNIA

KNOWN AND INFERRED CONDITIONS

DATE  
SEPT  
2017  
FIGURE  
B-1



**LEGEND**

- NOT INTACT (INFERRED)
- INTACT (KNOWN AND INFERRED)
- CONCRETE / SOIL BACKFILL (KNOWN AND INFERRED)

NOTE: DISTANCES MEASURED AT CENTERLINE OF TUNNEL.

**REPAIR ASSUMPTIONS**

BEGIN STA	END STA	REPAIR SECTION	REPAIR TYPE
255+89	258+50	COLLAPSED AND BACKFILLED TUNNEL SECTION	TYPE 4 - 25% TYPE 5 - 75%
258+50	267+00	INFERRED NOT INTACT TUNNEL SECTION	TYPE 4 - 50% TYPE 5 - 50%
267+00	274+68	UN-COMPACTED FILL AND INTACT TUNNEL SECTION	TYPE 3
274+68	275+92	CONCRETE PLUG SECTION	TYPE 2
275+92	277+62	NORTH PORTAL BARREL AND GUNITE OVER TIMBER / STEEL SETS	TYPE 1

PROJECT # 5581.0



ALTO TUNNEL INVESTIGATION  
MARIN COUNTY, CALIFORNIA

BASE CASE COST ESTIMATE - INTEPRETED CONDITIONS

DATE  
SEPT  
2017  
FIGURE  
B-2