

Union Pacific Railroad

GUIDELINES FOR ABANDONMENT
OF SUBSURFACE UTILITY STRUCTURES



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1-800-336-9193

Contents

1. Introduction	2
A. Purpose	2
2. Abandonment Procedures	2
A. Hazardous material testing & notification	2
B. Removal	2
C. Abandon in-place	3
3. Excavation Requirements	3
A. Shoring Design	3
B. Track and Ground Monitoring	3
C. Excavation Safety	3
4. Glossary	4

1. Introduction

A. Purpose

1. The purpose of these Guidelines is to inform 3rd party Applicants, Contractors and others outside of the Railroad of the requirements and standards for the abandonment of subsurface utility structures such as pipelines and other similar structures.
2. This document governs at all locations where the Railroad operates, regardless of track ownership or track status, either active or out of service.

2. Abandonment Procedures

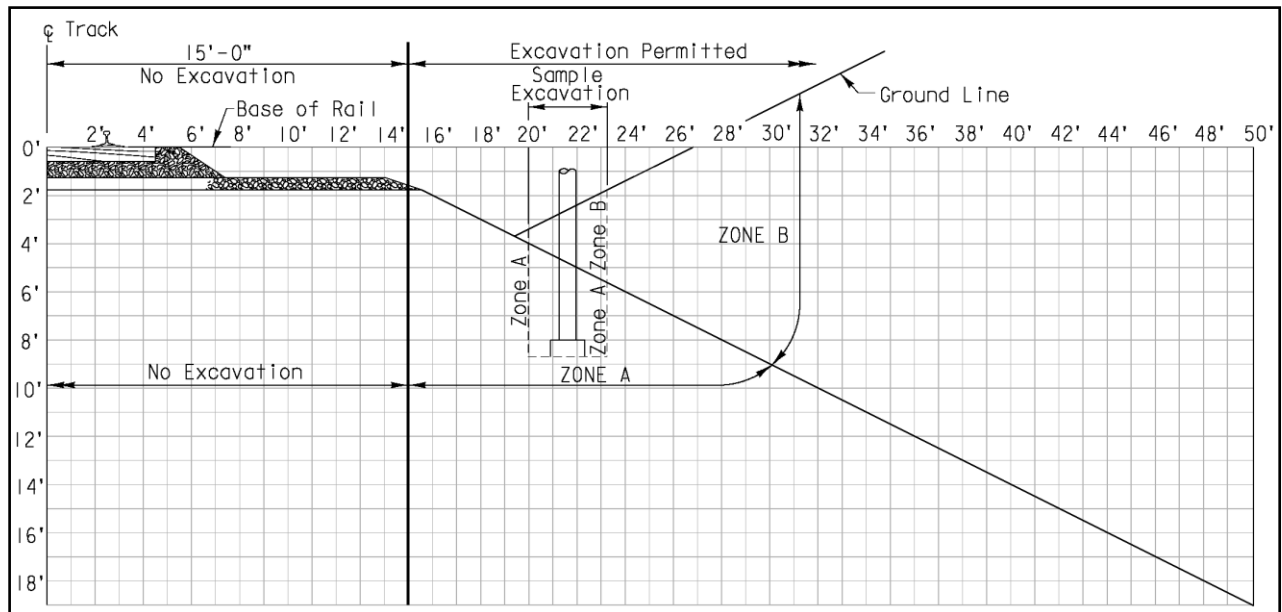
A. Hazardous material testing & notification

1. Prior to either removal or abandon in-place of existing Facilities, testing for ACM, PACM, LBP and PCBs shall be completed and the results reported to the Railroad.
 - i. ACM or PACM – Asbestos Containing Materials or Presumed Asbestos Containing Materials
 - ii. LBP – Lead Based Paint
 - iii. PCBs – PolyChlorinated Biphenyls
2. Testing results shall be emailed to asbestosawareness@up.com (file size limit / email is 10mb) with one of the following subject lines:
 - i. Reporting – Test Results
 - ii. Action Required – Priority Project
 - iii. Action Required – Request for Information/Question
3. The Railroad may require removal or consider abandon in-place of the existing Facilities upon review of the testing results.

B. Removal

1. At the time of abandonment, Facilities within Zone B shall be removed and at the cost of the owner. See [Figure 2-1](#) for Zone identification.
2. Regarding [Figure 2-1](#) the following additional Zone requirements apply.
 - i. Zone A –
 - a. Designed shoring systems are required per [Section 3A](#).
 - b. Track & ground monitoring is required per [Section 3B](#).
 - ii. Zone B – Sloped or stepped excavations are acceptable.

Figure 2-1



C. Abandon in-place

1. The Facility shall be filled with CLSM (Controlled Low-Strength Material). This process is designed to help avoid future subsidence as the line deteriorates after abandonment. The use of low strength CLSM also allows the future removal of CLSM at a later date if deemed necessary.
2. CLSM Design
 - i. The CLSM material shall have an unconfined compressive strength 300psi. This provides strength while allowing future removal if necessary.
 - ii. The mixture shall consist of water, Portland cement, fly ash, and sound fine or coarse aggregate or both.
 - iii. The mix design shall allow adequate flowability without segregation of aggregates.
 - iv. Hardening time is of prime importance and CLSM should develop 50psi in about one hour.
 - v. The maximum layer of thickness for CLSM shall be 3 feet.
 - vi. Additional layers shall not be placed until the CLSM has lost sufficient moisture.
 - vii. For pipelines or structures with a depth greater than 3 feet, CLSM shall be placed in lifts.
 - viii. Contractor should verify no voids will be present after filling the structure.
 - ix. Access to fill pipelines shall be from off the UPRR right-of-way if possible. If excavation is required for the fill procedure, excavations shall meet requirements in [Section 3](#).

3. Excavation Requirements

A. Shoring Design

1. For temporary earth retention design requirements on the Right-of-Way, see the Railroad Guidelines for Temporary Shoring. http://www.up.com/real_estate/roadxing/industry/index.htm

B. Track and Ground Monitoring

1. See the Railroad Guidelines for Track & Ground Monitoring. https://www.up.com/real_estate/index.htm

C. Excavation Safety

1. Guardrails
 - i. Guardrails shall be provided to surround unattended excavations on Railroad Right-of-Way per OSHA Standard Number 1926.502 as follows:
 - a. The guardrail height shall be at least 42 inches above the walking surface.
 - b. The smallest dimension for openings in the guardrail shall be no greater than 19 inches.
 - c. Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge of the guardrail.

4. Glossary

Applicant: Any party proposing to install a new, and/or abandon existing, pipelines or Wirelines on Railroad right-of-way or other Railroad operating location, regardless of track being active or out of service. This includes any contractor, employee or consultant hired by said party.

Call Before You Dig: A Union Pacific Railroad 24-hr by 7-day communication center to assist in protecting, documenting and notifying callers of other utilities installed within the Railroad right-of-way.

1-800-336-9193

Crossing: Refers to a Utility which is crossing the Railroad track(s).

Carrier Pipe: Pipe used to transport the product.

Casing Pipe: Pipe through which the carrier pipe is installed.

Cover: Distance from either the base of rail or finished grade to the top of Pipeline or Wireline.

Encroachment: Utilities on Railroad right-of-way which are generally oriented parallel with Railroad right-of-way and/or track.

Centerline of Track: An imaginary line, that runs down the center of the two rails of a track.

Construction Documents: Design plans and calculations, project and/or standard specifications, geotechnical report and drainage report.

Construction Window: A timeframe in which construction or maintenance can be performed by the Contractor with the required presence of a Flagman.

Contractor: The individual, partnership, corporation or joint venture and all principals and representatives (including Applicant's subcontractors) with whom the contract is made by the Applicant for the construction of the Grade Separation Project.

Facility: Refers to the Applicant's pipeline, wireline, poles, manholes, handholes, splice boxes, storage tanks and other such structures which exist as part of the Applicant's infrastructure.

Flagman (Flagging): A qualified employee of the Railroad providing protection to and from Railroad operations per Railroad requirements.

Guidelines: Information contained in this document.

Industry Track: A secondary track designed to allow access to industries along the main track.

Main Track: A principle track, designated by Timetable or special instructions, upon which train movements are generally authorized and controlled by the train dispatcher. Main Track must not be occupied without proper authority.

Railroad Load: Cooper E-80 loading.

Railroad: Refers to Union Pacific Railroad.

Railroad Manager of Track Maintenance (MTM): Railroad representative responsible for maintenance of the track and supporting subgrade.

Right-of-Entry Agreement: An agreement between the Railroad and an Applicant or a Contractor allowing access to Railroad property.

Right-of-Way: The private property limits owned by the Railroad.

Tracks: The rails, ties and ballast and roadbed that compose the traveling surface used by trains.

Utility: Refers to a pipeline or wireline.

Wireline: Refers to electric power and communication utility systems including, but not limited to, all associated conductors, cables, support structures, and equipment.