

Estimating Utility Locates in BEAD

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Overview

The Broadband Equity, Access, and Deployment (BEAD) program will fund buried (underground) fiber to unserved and underserved locations. Before trenching or boring, law requires the excavator to file an 811 “locate” request; the one-call center transmits that request to every facility operator with underground infrastructure in the work area, and each sends a locator to mark its lines.

This report estimates the national number of **locate tickets** (dig requests) and resulting **facility-locates** (operator notifications) generated by BEAD buried construction.

BEAD buried fiber totals 271,782 route-miles (57.5% of BEAD fiber miles). At base-case assumptions, this generates about 1.4 million locate tickets and about 8.1 million utility facility-locates.

Model

Locate volume is estimated in two components:

- **Route** tickets, filed along the buried route, scale with buried route-miles.
- **Drop** tickets, filed for the buried service connection to each premise, scale with buried premises.

Each ticket fans out to multiple facility operators (the transmissions-per-ticket ratio), so facility-locates exceed tickets. The calculation is:

$$\begin{aligned}
 \text{route locates} &= \text{buried miles} \times \text{tickets/mile} \times \text{route fan-out} \\
 \text{drop locates} &= \text{buried premises} \times \text{drop tickets/premise} \times \text{drop fan-out} \\
 \text{total} &= \text{route} + \text{drop}
 \end{aligned}$$

Table 1. Denominators, from BEAD Final Proposal project and location data.

Denominator	Value
Buried fiber route-miles	271,782
Buried-drop premises (wireline × buried share)	1,418,967
BEAD projects	5,806

Estimated Locates

Table 2. Estimated BEAD-driven locate tickets and utility facility-locates, national.

	Low	Base	High
Route tickets	271,782	380,495	815,346
Drop tickets	709,484	993,277	1,418,967
Total tickets	981,266	1,373,772	2,234,313
Route facility-locates	1,630,692	2,663,464	8,153,460
Drop facility-locates	2,837,934	5,463,023	9,223,286
Total facility-locates	4,468,626	8,126,487	17,376,746

Base case: about 1.4 million tickets and 8.1 million facility-locates, of which the drop component is 67.2%.

Assumptions

Table 3. Planning assumptions and evidence basis.

Assumption	Base	Range	Basis
Route tickets/mile	1.4	1–3	One-call footage caps [1], [2], [3] and ~15–25-day ticket life [4]; renewals [5]
Route fan-out	7	6–10	At or above the national 6.09 transmissions/ticket mean [6]
Drop tickets/premise	0.7	0.5–1	~1 locate per buried drop, less bundling [1], [7]
Drop fan-out	5.5	4–6.5	At or below the national mean, which is dominated by small single-premise tickets [6]

The transmissions-per-ticket fan-out is anchored by three independent primary sources: 6.09 nationally [6], 5.79 in North Carolina (a one-call center that describes it as “roughly 6:1”) [8], and 5.43 in Texas [9].

Data and Definitions

Definitions. A *ticket* is one 811 locate request. A *facility-locate* (or transmission) is one operator notified by that ticket; a single ticket produces several. Counts are notification events: a ticket that notifies five operators counts as five facility-locates.

Data sources. Buried route-miles and premise counts are from the BEAD Final Proposal project and location data as of 2026-08-27 (a mix of draft, submitted, and approved state final proposals). Buried-drop premises are fiber and cable locations; satellite and fixed-wireless locations have no buried drop. Fan-out is from the CGA DIRT program; ticket-generation rules are from state one-call statutes and center policies.

Scope. Estimates are national only: the assumptions are national or multi-state averages, so per-state figures would imply precision the inputs do not support. Excavation damages are out of scope. Private, behind-the-meter utilities are excluded, matching the 811 system boundary.

Data quality. A few states report zero buried mileage (VA, DC, AS) or all-aerial plant (KY) in this data cut, so the national total is mildly understated.

Sources

- [1] Georgia 811, "Locate Request Size Policy." [Online]. Available: <https://georgia811.com/locate-request-size-policy/>
- [2] Sunshine 811 (Florida), "Ticket Types." [Online]. Available: <https://sunshine811.com/ticket-types>
- [3] MISS DIG 811 (Michigan), "Scope of Work Guidelines." [Online]. Available: <https://www.missdig811.org/>
- [4] Various state 811 centers, "Ticket validity periods (state one-call FAQs)." [Online]. Available: <https://al811.com/life-of-ticket/>
- [5] Underground Service Alert (DigAlert), "811 Notification Center Update." [Online]. Available: <https://digalert.org/>
- [6] Common Ground Alliance, "2024 DIRT Report: Analysis and Recommendations," technical report, 2025. [Online]. Available: <https://dirt.commongroundalliance.com/>
- [7] Colorado 811, "Residential locate request rules." [Online]. Available: <https://www.colorado811.org/residential-digging/residential-requests>
- [8] North Carolina 811, Inc., "2021 Annual Report," technical report, 2022. [Online]. Available: <https://nc811.org/>
- [9] Texas811, "Texas811 Member Packet." [Online]. Available: <https://texas811.org/>