Texas Department of Transportation

Joint Duct Bank Guidance

Summary of joint duct bank considerations

Broadband Program, ITD & ROW Division

Utility Portfolio, ROW Division

Contents

Overview

Abstract

The Joint Duct Bank program is designed to support expedited installation of broadband facilities within TxDOT right of way. The program is meant to provide better right of way management while supporting future broadband and utility installations. This guide provides a broad framework for use of joint duct banks in District projects. Standards and specifications were developed for the Joint Duct Bank Program based on input from TxDOT and the telecom industry. Specific questions regarding joint duct bank implementation should be directed to the TxDOT broadband program (broadband@txdot.gov).

Purpose

The guidelines listed below represent a broad framework for the use of the Joint Duct Bank Standard for Districts on TxDOT projects. Fully engineered PS&E plans for joint duct bank installation will need to be prepared on an individual project basis to accommodate existing and proposed features.

Definitions

Conduit: PVC or H.D.P.E. piping material that will be used to house telephone cables. The words "conduit," "duct", “inner duct” and “piping” may be used interchangeably in this guide.

Joint Duct Bank: Groups of conduits arranged in tiers and encased as specified on the plans.

Access Point: Manholes or Handholes

Encasement: Steel or H.D.P.E. piping material that will be used to house a joint duct bank. The words "Encasement" and "Casing Pipe" may be used interchangeably in this guide.

Initial Coordination

a. Coordination efforts for the Joint Duct Bank need to begin early in project planning.
b. The TxDOT Project Manager (PM) needs to meet with the ROW PM to determine funding.
c. TxDOT/Consultant Utility Coordinator (UC) to meet with utility owners to collate information for Joint Duct Bank.
d. UC to determine the number of ducts, any betterments, etc.
e. TxDOT PM needs to meet with TxDOT UC to finalize the number of ducts.
f. If the need for a joint duct bank is substantiated – ROW CSJ is requested.

Standard Configurations

Detailed drawings with standard configurations for trench, bore and access points can be found in the Traffic Standards documentation for Joint Duct Bank (PDF DGN).

Installations

Evaluation of Conduit Needs

a. Items to consider before choosing the duct trench size and configuration on typical relocation projects:
    i. The number of existing telecoms on the project, including proposed telecom installations that are planned within the project timeline.

ii. Number and size of existing conduits/inner ducts for each telecom.
iii. Any direct buried cable that will need to be incorporated into the Joint Duct Bank.
iv. Any anticipated betterments (in terms of additional conduits or inner ducts).
v. Allow space for spare conduits for existing telecoms as mandated by TAC rule §21.40.
vi. Allow for empty conduits to account for future growth/telecom installations in the area.

b. On new/greenfield projects, choose the duct trench size and configuration based on the expected number of telecoms in the area.
c. TxDOT Broadband program can serve as a resource for estimating future growth/telecom installations in the area.

Typical Relocation on Highway Projects

a. The district will choose the relevant standard-based guidelines listed above and will install the Joint Duct Bank to provide pathways for underground telecom.
b. Joint Duct Bank Installation includes access points for joint bid telecoms.
c. Items to consider for access point installation:
    i. Check with existing telecoms for their existing access/slice point locations.
    ii. Check with telecoms what the minimum standard spacing needs are between each access point.
    iii. Check with telecoms if they are acceptable to using the standard access points or if they will provide their own.

iv. Determine if relocating telecoms will have their access points in line with the duct bank or offset from it (dependent on space available within the ROW).
v. Check with telecoms for any service tie-in locations along the route where additional access points would be needed.

d. The district will inform telecom companies once the joint duct bank installation work is completed and assign pathways to allow for cable/fiber installation.
e. Any empty conduits placed for future use will be placed in the top right corner of the duct bank.

New Installation for Future Use

a. The department will construct the joint duct bank by choosing the standard based on the expected number of telecoms in the area.
b. The district will be responsible for installing access points at the typical spacing shown on the standard.
c. Future service access points would be the responsibility of telecoms.

Boring

The type and configuration of bore to be utilized on the project are to be determined in the fully engineered PS&E plans for joint duct bank installation.

Bridge Attachment

a. Bridge Attachment is meant to be used as a last-ditch option.
b. Before the detailed design, the Bridge Attachment request needs to be approved through the bridge division.
c. Once the Bridge attachment is approved, go-bys can be used while attaching telecom conduits to the bridge.

Asset Tracking

Conduit Path Tracking (Permitting)

For tracking during permitting, the conduits are numbered starting from the bottom left one, and the inner ducts are identified with alphabets starting from the bottom left. Inner Duct pathways are identified by using the alphanumeric combination. Example: 4A represents the bottom left 1.25” inner duct within conduit 4.

Conduit Path Tracking (Onsite)

For onsite tracking, utility owners will tag assigned ducts and inner ducts at all access points.

Manhole Tracking (Permitting)

For tracking during permitting, the manholes are numbered in series based on the district of installation using the District Abbreviation, MH, and 5 digits. Example: 1st Manhole installed in Dallas District is tracked as DALLMH00001. The 23rd manhole installed in Austin District is tracked as AUSMH00023.

Relocation Project

All utilities installing their facilities through a joint duct bank will need to submit for a permit through the RUILS system with their assigned conduit path.

Future Installation

For any proposed UG telecom installation request through RULIS, the department will direct the Utility Owner to use the joint duct bank and provide an assignment for the utility’s use.

Maintenance

Joint duct maintenance policies and procedures are currently in development (as of March 2026). Contact broadband@txdot.gov for more information or to provide input.

References

Underground utility code

Texas Administrative Code Title 43 §21.40

Joint Duct Standard Detail

https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/standard/traffic/JDB-25.pdf

Joint Duct Specification

Original statewide specification (2014 spec book): https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2014/spec/ss6526.pdf

Current specification (2024 spec book):

Special Spec: https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2024/spec/ss6151.pdf

Provision to Special Spec: https://ftp.dot.state.tx.us/pub/txdot-info/cmd/cserve/specs/2024/prov/s6151001.pdf

FAQs

- Is joint duct bank to be used only on fully reimbursable projects?

    - A: No. The joint duct bank can be used on all TxDOT projects including fully reimbursable relocation projects, partial/non-reimbursable relocation projects, and greenfield projects.
- Who pays for the construction of the joint duct bank?
    - A: For all projects where the utility is fully reimbursable and on new installation projects, the department will pay for both materials and installation through the construction funds less any betterments.
- Can TxDOT pay for the costs to construct the duct bank on non-reimbursable projects?
    - A: Yes. It will be considered a construction cost.
- Who pays for the maintenance of the joint duct bank?
    - A: Joint duct maintenance policies and procedures are currently in development (as of March 2026). Contact broadband@txdot.gov for more information or to provide input.
- Can a joint duct bank be built using a ROW contract similar to the demolition contracts?
    - A: No. The joint duct bank will need to be included/phased with the construction project.
- How will utilities reserve space in the duct for future expansion? Is there a utility hierarchy or preference?
    - A: For greenfield projects, duct allocation is based on immediate project demands, and there is no formal mechanism to reserve duct space for future expansion. Planning efforts do, however, aim to reasonably account for expected growth over time. For relocation projects, Based on conflict hierarchy. Existing utilities in the corridor would have first preference. If they were to choose to reserve ducts - it would be a betterment.
- How will a service pedestal placement be in relation to the duct?
    - A: The detail sheet addresses where the handholes/pedestals need to be placed.

- If not in a duct, will the utility be allowed to place in ROW in the future outside of the duct?
    - A: If there is space in the duct bank, the utility is expected to go inside the duct bank. If a utility needs to go outside - an exception needs to be sought.
- Who controls alignments, crossing, etc. (i.e. preference in getting into duct)?
    - A: TxDOT controls the alignments and crossing. Alignment would be dictated by project needs i.e. drainage/environmental etc., If a utility is forced to cross the highway due to Joint Duct Bank needing to be on one side of the roadway – it could potentially be treated as forced Betterment.
- Will TXDOT be leasing conduit?
    - A: TxDOT will lease conduit per Texas Transportation Code §202.052, §202.092, and Texas Administrative Code Title 43 §§21.600–21.606. A joint duct master lease agreement is currently under development (as of March 2026). Contact broadband@txdot.gov for more information or to provide input.