



TOWARDEX
Your network success story.



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34 THIRD AVENUE

Updates to TOWARDEX Services in 1 Summer Street

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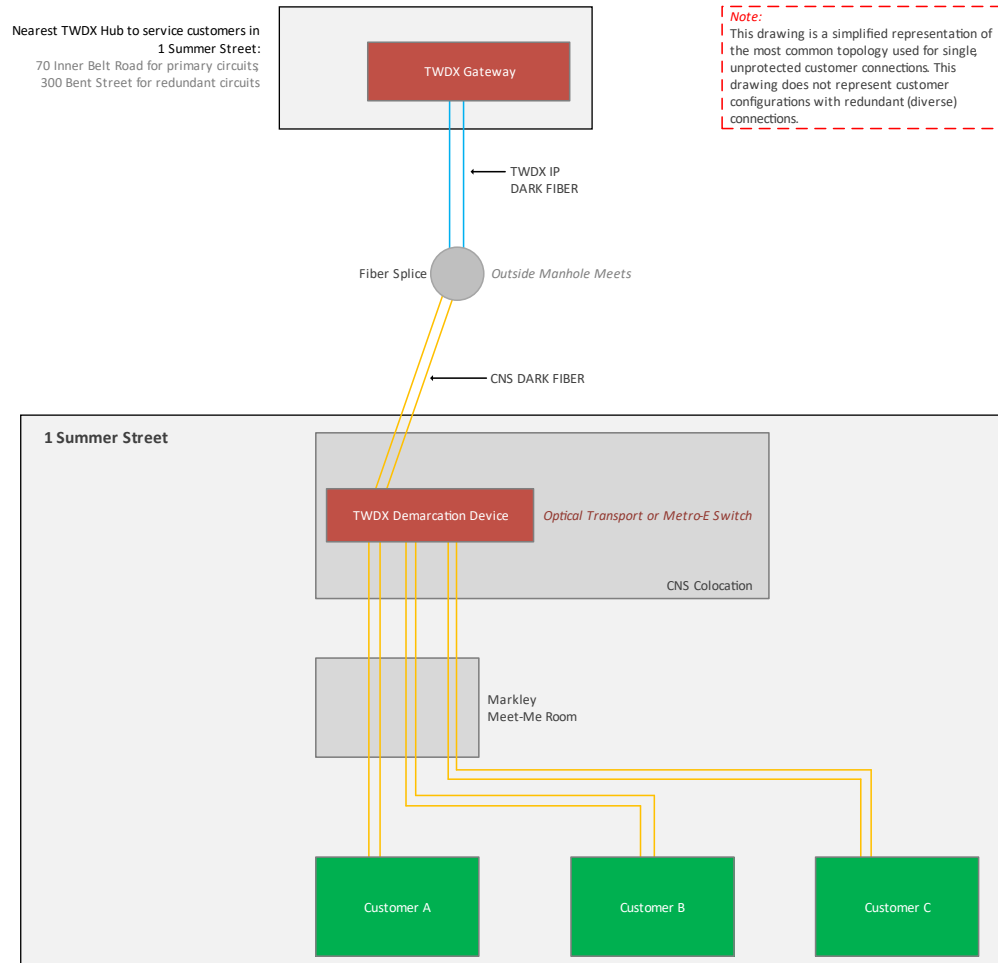
Overview

Over the next few months, TOWARDEX (simply referred to as 'TWDX') will implement a scheduled maintenance activity to migrate your service in 1 Summer Street to a new **Dark Fiber-based Architecture**.

These improvements will streamline and simplify our operating costs to continue providing you exceptional services in 1 Summer Street, improve reliability, and offer significantly easier bandwidth upgrade options at market leading rates for our customers. We're able to do this by utilizing a vast inventory of dark fiber to individually power every customer circuit at this location.

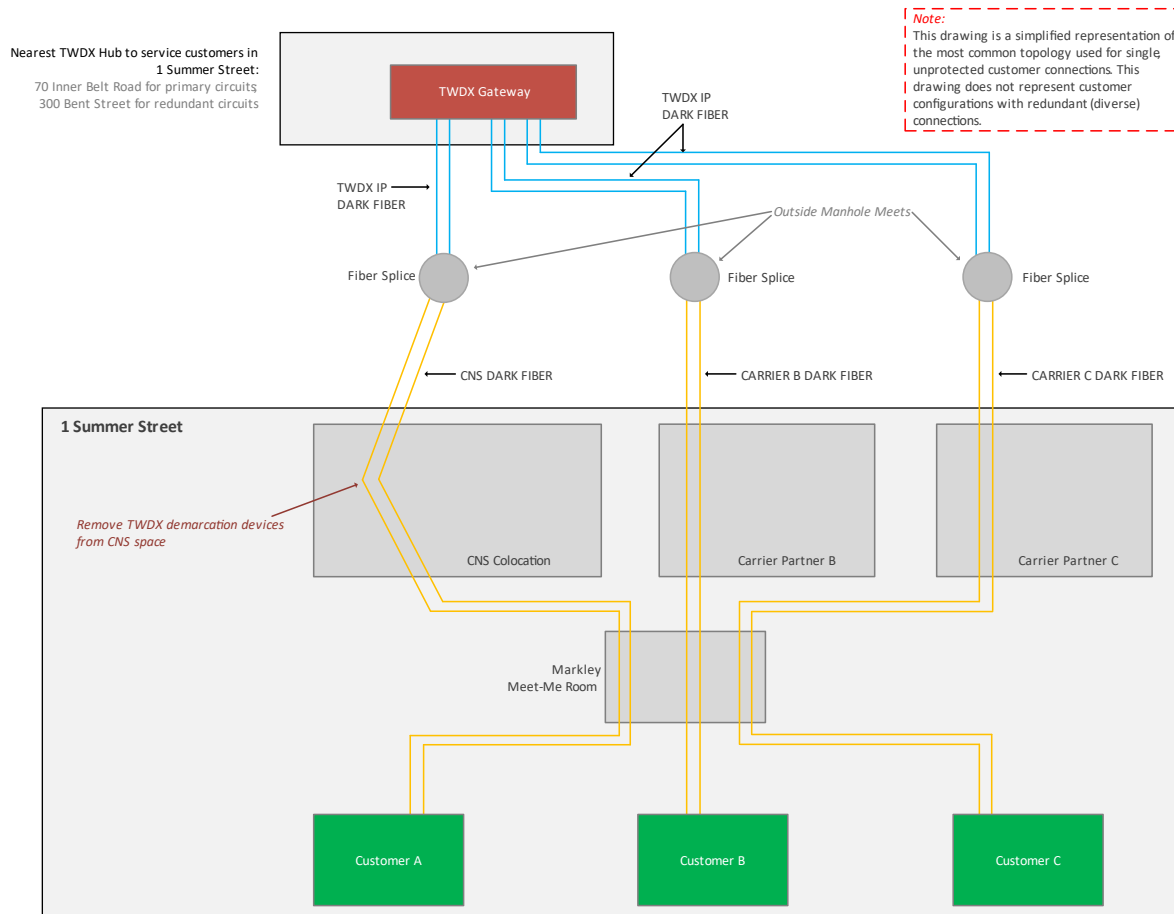
Old Service Delivery Model at 1 Summer Street

For most customers who had services in 1 Summer St. installed prior to 2021, your connection is plugged into a demarcation device located in CNS colocation space in the building. The demarcation device multiplexes (for circuit transport) or aggregates (for packet transport) several customer connections into uplinks heading to our hubs.



New Dark Fiber-based Architecture at 1 Summer Street

For new installs since 2021, your service is delivered entirely through a pair of dark fiber which connects directly into TWDX hub facilities, eliminating demarcation devices in 1 Summer St.



What to Expect for Customers on Old Service Delivery Model

TWDX will schedule a night-time maintenance window to cut over your services to the new **Dark Fiber-based Architecture**. For most customers, no action is required on your part.

During the maintenance, your existing circuit will be disconnected from the legacy demarcation device. CNS, who provides colocation services to TWDX for hosting our demarcation devices in the building, will then re-patch your connection over to CNS dark fiber which is provided to TWDX for each service. We expect cut-over maintenance to be a one-time event, with average service impact to be between 15 to 30 minutes in most cases.

For customers with redundant circuits, two maintenance events will be scheduled, one for each circuit, so that high availability can be maintained throughout the migration.

Over the next few months, you will receive email communication from our Change Management providing you with the details and scheduled time window of the maintenance. No configuration changes, special setup, or equipment is required. The maintenance activity is designed to be transparent and minimally invasive for our customers.

Frequently Asked Questions

Q: Dark fiber!? Don't I need a specialized equipment or expertise for this to work?

No. These fibers are short distances (5 to 9 km), where standard Single Mode Fiber (SMF, 1310nm) SFP or optics you're already using today will perfectly handle without any issues. Because of the short distance of these fibers, think of them as 'campus cross connects'— these are basically extending the length of the same in-building fiber cross connect you already have coming into us. If you're connecting to us using a fiber cross connect via the Markley Meet-Me Room, then there is no specialized equipment or any changes required on your end.

Q: Don't I need to change cross connects?

No. In addition to multiple carriers partnering with TWDX, we've also leased bulk quantity of dark fiber from CNS as well. This will allow each customer connection sitting in our demarcation device to be removed and simply be re-patched onto CNS dark fiber in their same space. This means that customers do not need to make any changes to their cross connects, and their existing connections will continue to be utilized unchanged.

Q: The LOA I received for my service does not say CNS or Cambridge Network Solutions. What gives?

If your CFA-LOA was issued by a provider other than CNS, that means you're already running on our new Dark Fiber-based Architecture implemented since 2021, therefore, no changes to your service will be required—you're already all set!

TWDX leases large quantities of dark fiber (between 24 to 144 strands) from multiple partnering carriers, including CNS, to ensure that we can continue providing services to our customers in 1 Summer St. As such, several customers have received LOAs for TWDX services that are from carriers other than CNS. These fiber leases are obtained via various forms of commercial arrangements, including term leases, Indefeasible Rights of Use (IRU) agreements, Fiber Optic Exchange, Joint Trench and Joint Network Facilities Agreements. These bulk fiber exchanges with numerous partner carriers allow us to seamlessly connect 1 Summer St. to TWDX backbone at multiple manholes, maximizing route diversity and service resiliency.

Frequently Asked Questions (cont'd)

Q: With this change, am I going to get the same quality and peering mix that I currently have from TWDX IP?

Yes, absolutely! TWDX IP does not “peer” or interconnect with networks from 1 Summer St.—TWDX IP began pulling out its peering routers in the building since 2017, and all of our peering partners and upstream transit providers are required to deliver to our peering sites at 300 Bent Street and 70 Inner Belt Road.

Even in the old service delivery model, the equipment we have inside CNS space is strictly functioning as a demarcation device for your service— you’re already being backhauled to our hub sites outside of 1 Summer today. The only difference now is that we’re eliminating the demarcation device altogether, simplifying our service delivery model.

Q: Do I need to change / renumber IP addresses?

No, absolutely not! No configuration changes are required. We’re simply re-patching your physical connection so that instead of going through a demarcation device, it is now patched directly to dark fiber leading to our gateway.

Q: I am a network who has a grandfathered free connection into [MASS IX](#) from 1 Summer St. Now that you’re moving to dark fiber architecture, this must be costing you. Do I have to start paying you for IX ports?

Generally speaking, TWDX (including MASS IX) greatly values its relationships and prefers to continue honoring and grandfathering existing arrangements for as long as they’re commercially feasible to do so. We would say that if you’re actively using your IX port and doing sizeable traffic on it, we’d be more amenable to continue subsidizing your presence on the IX. However, if you’re looking to upgrade or add new ports that are outside of our existing arrangement, or have a free port and you’re not doing any traffic on it, then we’ll likely need to have a conversation. We continue to encourage our CDN and network partners to install their peering routers at numerous data centers where MASS IX is natively present at, which you can find them on the exchange’s PeeringDB page here: <https://www.peeringdb.com/ix/1086>

Frequently Asked Questions (cont'd)

Q: I currently use Bidi, CWDM or DWDM to receive multiple services from TWDX via one cross connect, which saves me lot of money on cross connect fees. Can this setup be maintained, or will this become an issue?

Not a problem at all. As we require customers to utilize minimum of 40km optics for WDM filter applications, even with the dark fiber architecture, attenuation is expected to be well within acceptable budget margins for your service to operate unaffected. For Bidi optics—even 10km Bidi optics will sufficiently clear the all-new glass, low-attenuation dark fiber span without any issues.

Q: I'd like to upgrade my IP transit to a 100GE port. Will this new change make that upgrade easier?

Absolutely. Please reach out to us to discuss logistics. Since we're now burning a dark fiber pair for every customer out of 1 Summer Street, replacing your service to 100GE is so much easier—it will be just a matter of provisioning you a new port and cutting over your connection at our hub facility, and you doing the same at your side. As such, this means that we can now deliver 100GE ports much easier and cheaper than before.