Development Services

From Concept to Construction

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APPEAL SUMMARY

Status: Decision Rendered

Appeal ID: 23806	**Project Address:** 7000 NE Airport Way
Hearing Date: 6/10/20	**Appellant Name:** Tom Jaleski
Case No.: B-014	**Appellant Phone:** 9712385266
Appeal Type: Building	**Plans Examiner/Inspector:** David Bartley
Project Type: commercial	**Stories:** 1 **Occupancy:** A-3 **Construction Type:** I-A
Building/Business Name: PDX Airport	**Fire Sprinklers:** Yes - Throughout
Appeal Involves: Erection of a new structure	**LUR or Permit Application No.:**
Plan Submitted Option: pdf [File 1] [File 2]	**Proposed use:** Airport concourse

APPEAL INFORMATION SHEET

Appeal item 1

Code Section	3103.1
Requires	3103.1 General: The provisions of Sections 3103.1 through 3103.4 shall apply to structures erected for a period of less than 180 days.
Code Modification or Alternate Requested	Bypass structures connecting the concourses to the existing access and exit of PDX during the construction of the new terminal core will be allowed to be temporary structures for a time period of five (5) years.
Proposed Design	As part of the phased expansion of Portland International Airport (PDX), two junctions (“nodes”) will be demolished for reconfiguration. These nodes provide access to the northern and southern concourse areas from both ends of the central terminal building (“core”). In order to continue to provide access to the concourses while the nodes are unavailable, temporary bypass corridors will be created. These bypasses will be deployed over three phases from 2021 through 2025, and will remain in service for approximately 44 months. To create the northern and south bypasses, the concourse connector, which currently connects the northern and south concourses allowing post-security circulation between the concourses, will be split in two and relocated outside the north and south node. The northern bypass will be constructed in two phases linking first into the north node and after about two and a half years, extended to link to Gate E1. The exterior-facing side of each connector half will continue to face the airstrip in its new location, and the open face of the connectors, from where they will be detached from the core, will be enclosed with new wall infill. The open ends of the connectors will be attached to the concourses by new “links”. The proposed design is for the bypass structures to be considered temporary structures per OSSC 3103 for a period of up to five (5) years, in excess of the 180 day limit that OSSC 3103 requires as a limit. All other requirements of OSSC 3103 will apply to the structures – they will meet structural

	strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements in full per the requirements of 3103.1.1. The relocated structure will continue to use the existing HVAC equipment in place as the connector. New infill material will be built to current energy code requirements; existing structure will remain as is. A permit will be required at the end of the 5 year time period to remove the structures and put the conditions back to original conditions.
Reason for alternative	The intent of OSSC 3103 is to provide a basis for allowing the bypass structures to be in place for a limited time that limits the potential impact on life safety of the occupants. The request for this appeal is to address the extension of time from 180 days to 5 years for the structures. All requirements of OSSC 3103 will apply to the structures – they will meet structural strength, fire safety, means of egress, accessibility, light, ventilation, and sanitary requirements in full per the requirements of 3103.1.1. The existing structure of the bypasses and HVAC equipment will remain in place; new infill will be built to current energy code. The structure of the bypasses must be approved by the structural plan reviewer for the City of Portland for the 5 year time period of the structure. A new permit will be required at the end of the 5 year time period or when the temporary structures are removed, to return the conditions to the same as they occurred prior to the installation of the temporary structures.

Appeal item 2

Code Section	Table 602, footnote d
Requires	d: The fire-resistance rating of an exterior wall is determined based on the fire separation distance of the exterior wall and the story in which the wall is located.
Code Modification or Alternate Requested	Appeal to not require a fire rating at exterior walls of temporary concourse bypasses located adjacent to, but above, nearby trash collection structures on the basis of footnote d of Table 602.
Proposed Design	As part of the phased expansion of Portland International Airport (PDX), two junctions (“nodes”) will be demolished for reconfiguration. These nodes provide access to the northern and southern concourse areas from both ends of the central terminal building (“core”). In order to continue to provide access to the concourses while the nodes are unavailable, temporary bypass corridors will be created at the north and south ends of the core. These bypasses will be deployed over three phases from 2021 through 2025, and will remain in service for approximately 46 months. The bypasses will be Type I-A construction, occupancy group A for concourses, sprinklered, and supported from below to be even with the enplaning level of the airport, approximately 10’ above grade. Concurrent with the node reconfiguration, select operations in the terminal will be relocated on a temporary basis. Adjacent to both the bypass corridors, trash handling structures filed under a separate permit will be built on the service apron, one each at the north and south ends of the core. These structures will serve to collect trash from the terminal for transport to dispatch facilities elsewhere at the airport. Both trash structures will be Type II-B construction, occupancy group U, unsprinklered, and one story on grade. They will be constructed of noncombustible materials – corrugated metal sheet roofing supported by a structural steel frame enclosed on three sides by chain link fencing. Trash inside the structures will be either noncombustible (glass) contained in a compactor (landfill and recycling), or in an approved storage container (food waste and cooking grease). The proposed design is for the exterior walls of the bypass structures to be non-rated, including the surface of the façade adjacent to, but above, the trash structure based on fire separation distance of the bypass on the enplaning level and the trash enclosure on the deplaning level.
Reason for alternative	Table 602 establishes minimum fire-resistance ratings for exterior walls based on fire separation distance, construction type (and associated fuel load), and occupancy class. The intent is to

protect structures adjacent to one another from ignition by radiative heat transmission in the event that one of the structures catches fire. Footnote d provides a clarification that when buildings have facades with staggered vertical surfaces, the façade surface is considered on an individual level at each floor of the building. This recognizes that the largest heat transfer is along a direct horizontal path to an adjacent surface, and that this exposure diminishes with the square of the distance at a given measurement moves towards vertical.

In this situation, the exterior walls of the bypasses and trash structures are 17'-0" or more away from each other, and offset by one story. There is minimal surface area where efficient heat transfer can take place – there is 5'-7" (diagram A) or 4'-11" (diagram B) vertically where the bottom of the bypass overlaps the top of the trash structure vertically, and the majority of that is between the vertical face of the bypass façade and the low-slope roof of the trash structure. The potential for horizontal heat transfer is negligible.

Additionally, the risk of a fire breaking out in either structure as well as the relative intensity of such a fire is very low. Concourses are considered to have low fuel loads, and the bypass structure itself is noncombustible material. The trash structure, although a lower construction type, will similarly be noncombustible construction, and any significant quantities of combustibles are required to be stored in approved containers. The bypasses will also be sprinkler-protected inside, and outside below the bypass.

Both the proposed bypass structures and the permitted trash enclosures present low risk to each other in terms of potential fires in either building, and any associated heat transfer from one building to the other in the event of a fire. The low area of common overlap, vertically, between the buildings presents very little opportunity for either building to meaningfully endanger the other, and the one-story displacement of the buildings from each other provides additional separation in terms of vertical exposure. In this manner, the design meets the intent of the code without rating the exterior wall of the bypass structures.

APPEAL DECISION

1. Determination of North and South bypass structures as "temporary": Granted provided the structures are removed by 06-30-2025.

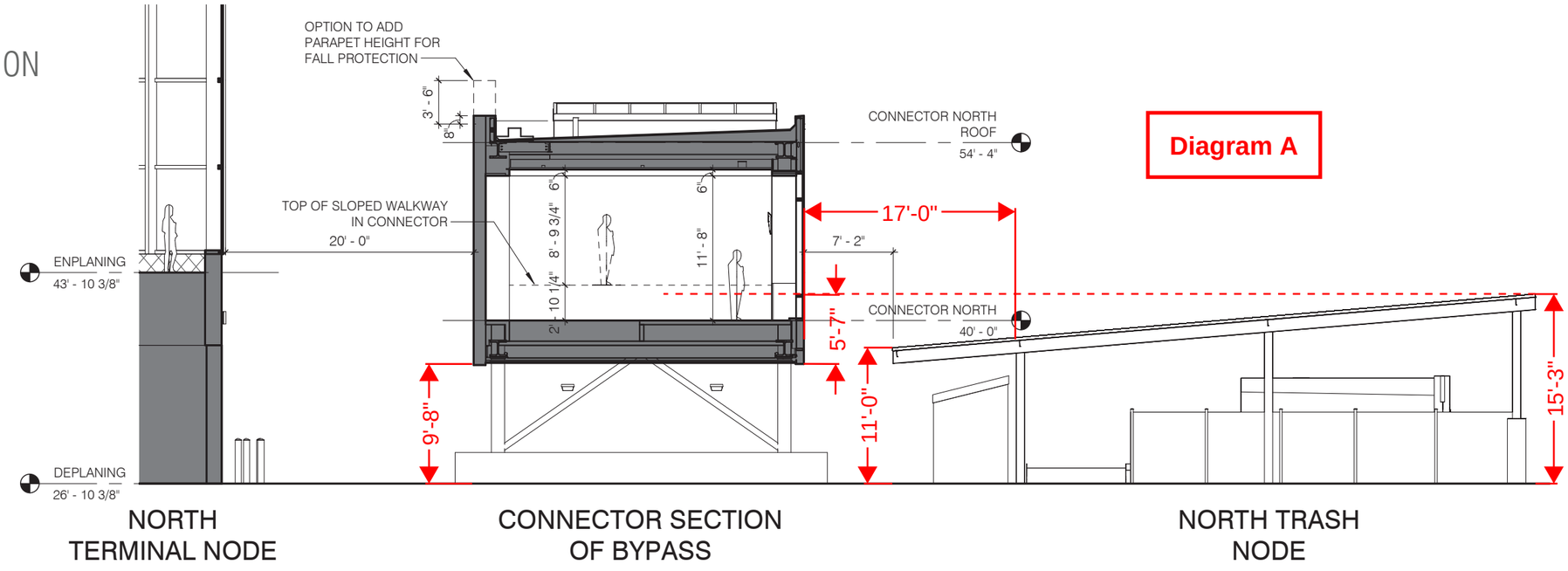
2a.Omission of fire rating at exterior walls of temporary North bypass structure: Granted provided the openings adjacent to the trash enclosure are protected on the interior side with additional sprinkler heads installed per NFPA 13 on a separate permit through the Fire Marshal's office.
2b. Omission of fire rating at exterior walls of temporary South bypass structure: Granted as proposed.

Appellant may contact John Butler (503 823-7339) or e-mail at John.Butler@portlandoregon.gov with questions.

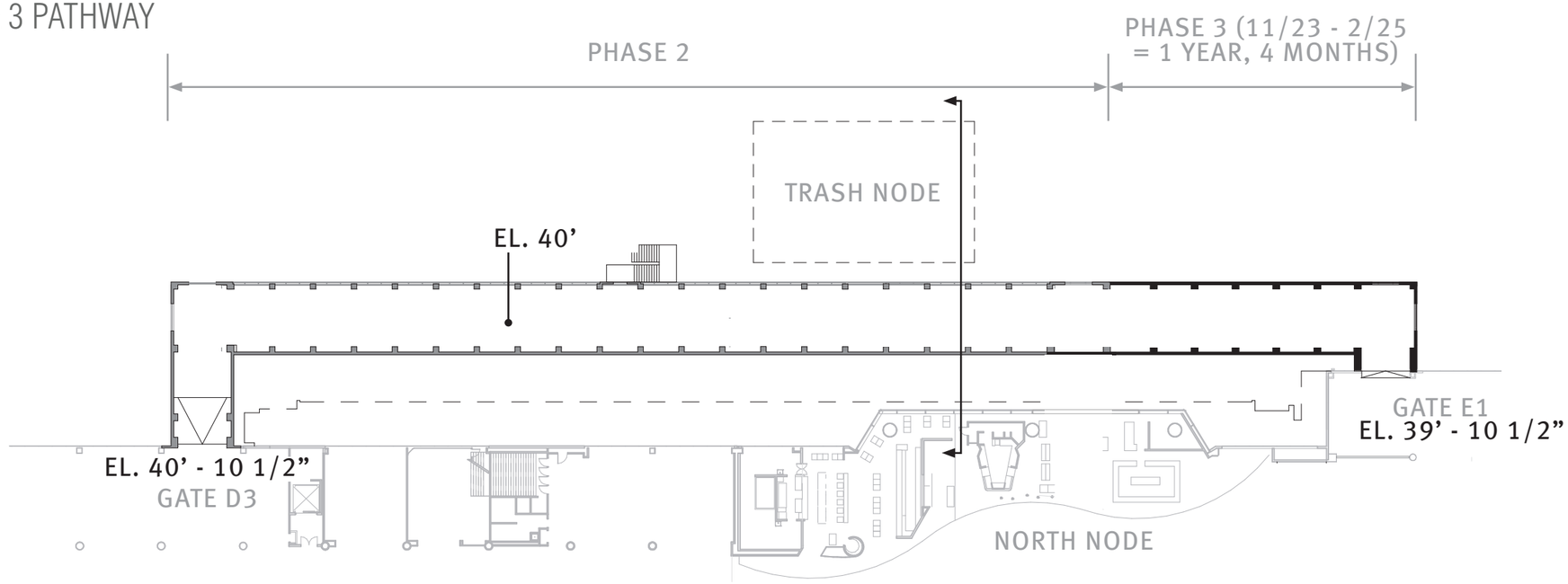
The Administrative Appeal Board finds with the conditions noted, that the information submitted by the appellant demonstrates that the approved modifications or alternate methods are consistent with the intent of the code; do not lessen health, safety, accessibility, life, fire safety or structural requirements; and that special conditions unique to this project make strict application of those code sections impractical.

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.

NORTH BYPASS SECTION



NORTH BYPASS PHASE 3 PATHWAY

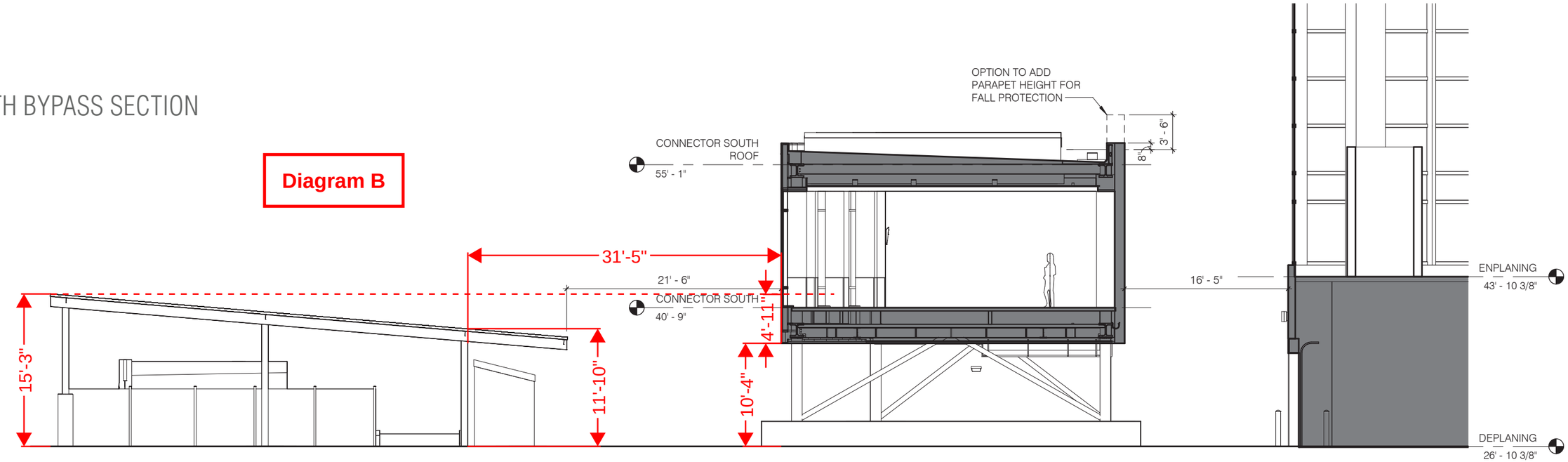


PDX TCORE BYPASS PASSENGER EXPERIENCE

Hennebery Eddy
Architects

SOUTH BYPASS SECTION

Diagram B

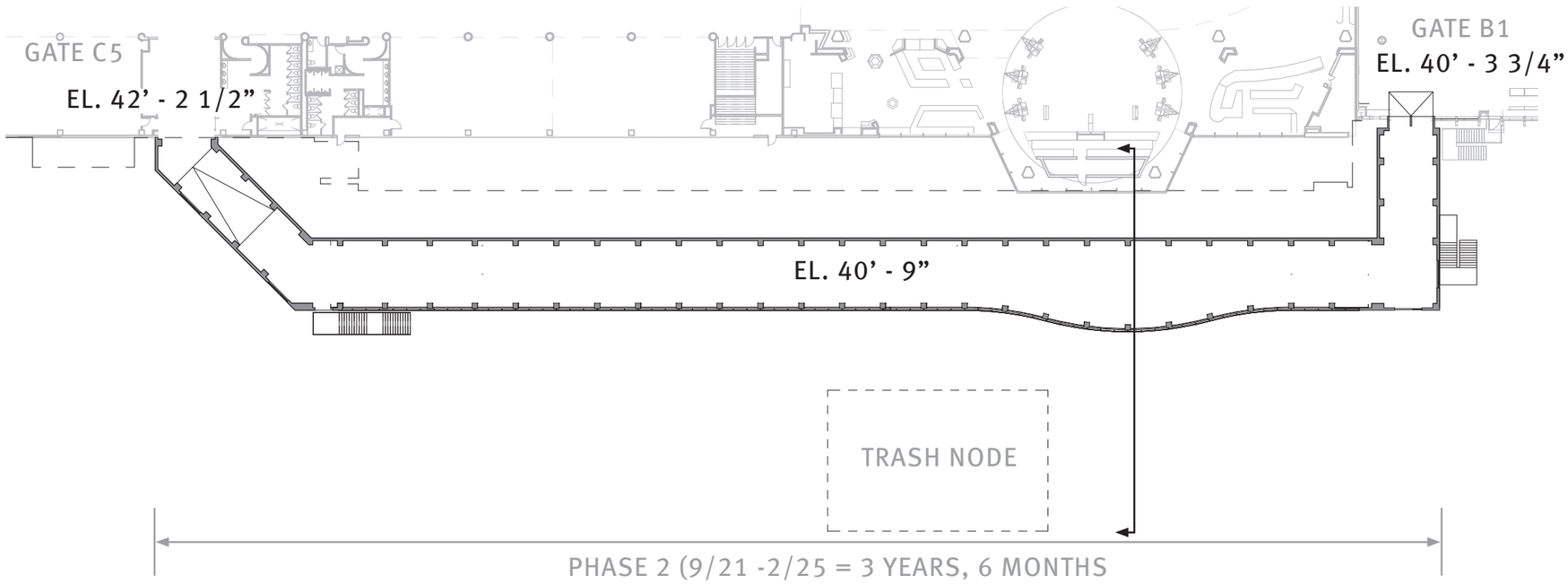


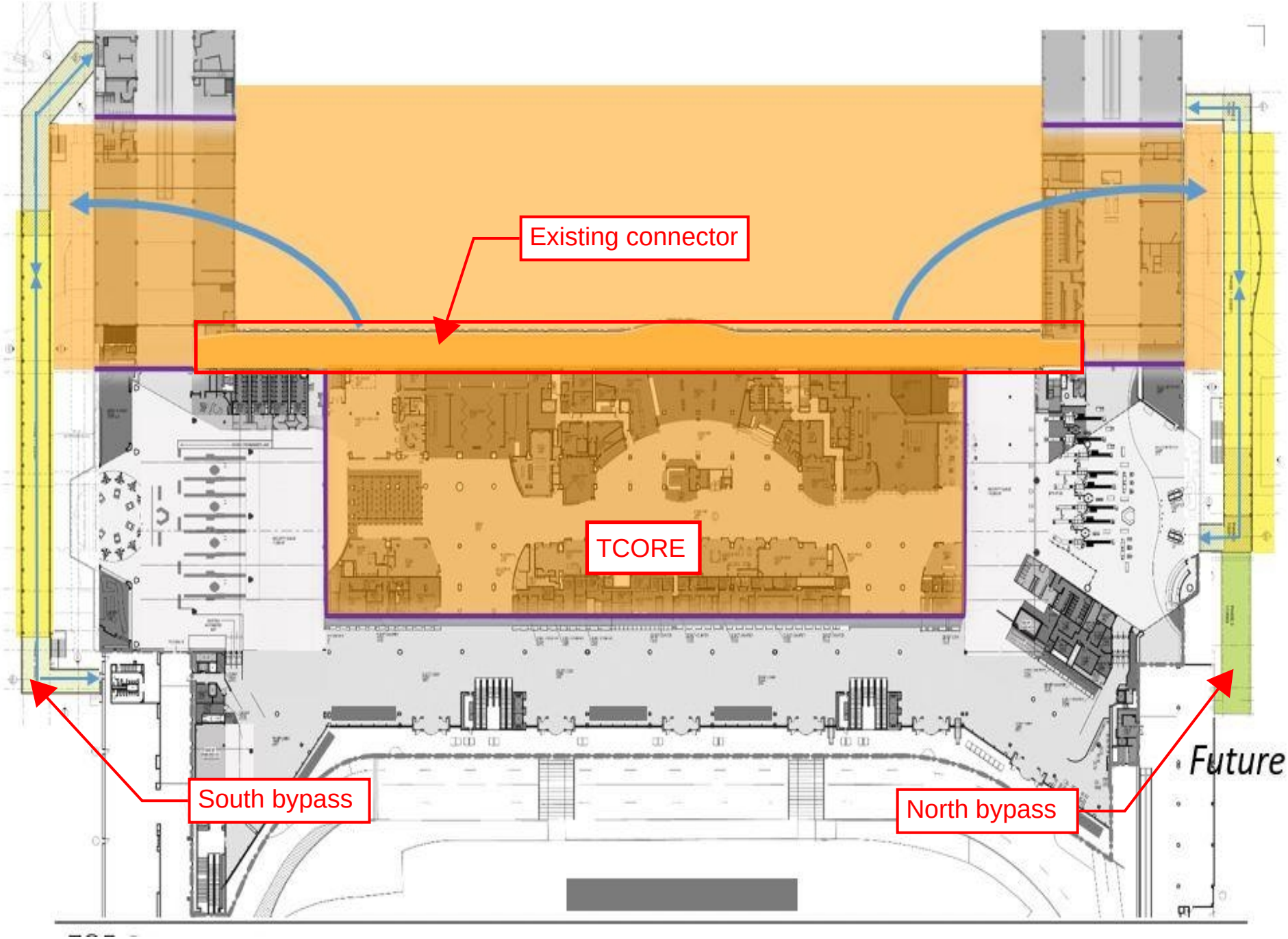
SOUTH TRASH NODE

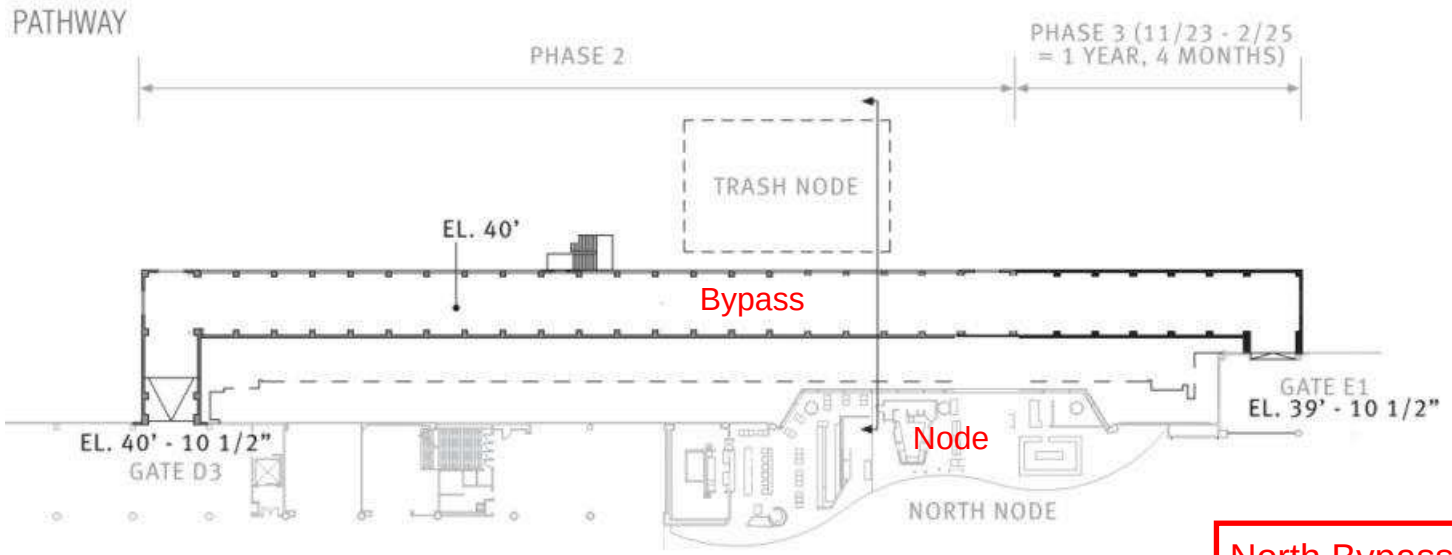
CONNECTOR SECTION OF BYPASS

SOUTH TERMINAL NODE

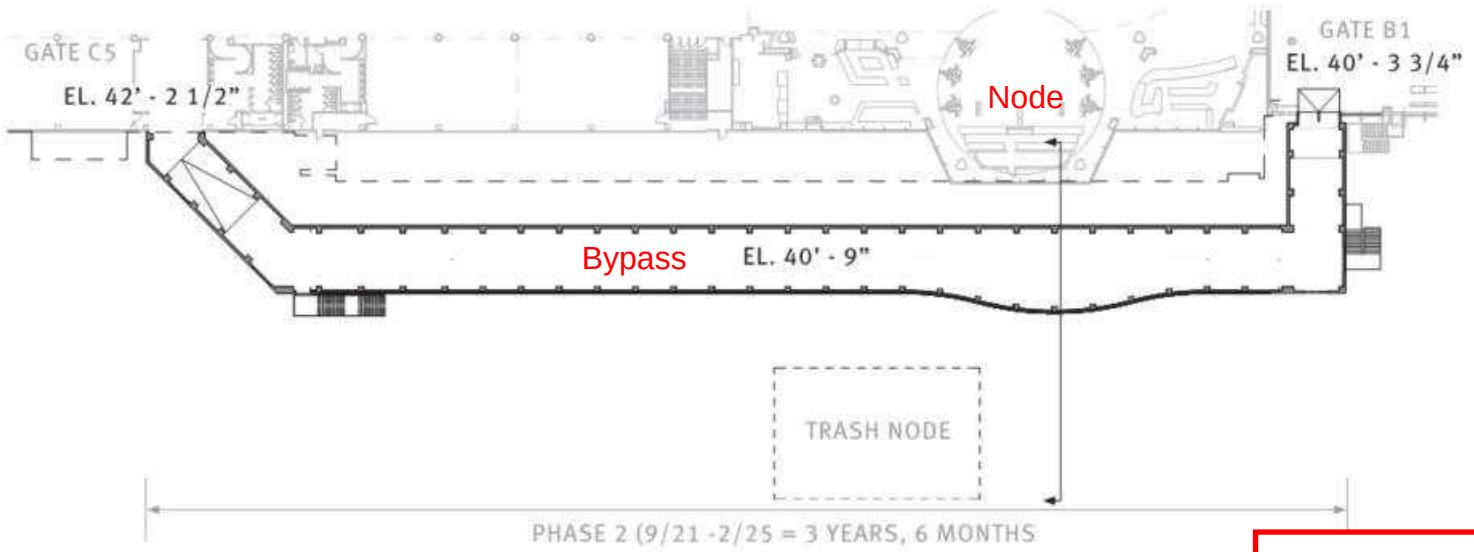
SOUTH BYPASS




Existing connector
TCORE
South bypass
North bypass
Future



North Bypass Plan



South Bypass Plan