



FINAL REPORT

Downtown Berkeley BART Station Design Concept and Modernization Plan

April 2017



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Downtown Berkeley BART Station

Design Concept & Modernization Plan Final Report

This conceptual design plan documents a comprehensive effort to modernize and re-envision the Downtown Berkeley Bay Area Rapid Transit (BART) Station.

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Executive Summary

1



South Paid Area
Photograph taken by AECOM in 2016

1. Executive Summary

This conceptual design plan documents a comprehensive strategy to modernize and re-envision the Downtown Berkeley Bay Area Rapid Transit (BART) Station, which opened in 1973.

BART is currently conducting a Station Modernization Program that invests resources into existing stations and surrounding areas to serve increased transit ridership throughout the day and enhance the quality of life around stations. In combination with BART's collaborative station area planning work and Transit Oriented Development (TOD) program, these station improvements will help make Plan Bay Area, the San Francisco Bay's long-range integrated transportation and land use/housing strategy, a reality. The Station Modernization Program will improve the look, feel, and usability of BART stations for riders, as well as enhance the safety and comfort of the work environment for BART employees. The program addresses all aspects of the stations, including buildings, escalators and elevators, circulation and signage, plazas and waiting areas, climate control and ventilation, lighting and ambient environment, and other station equipment.

The Downtown Berkeley BART Station has been identified as one of the BART system's "gateway stations," and is a high priority for modernization and funding. The Downtown Berkeley BART Station Design Concept and Modernization Plan (Plan) has been prepared to assess the station's needs and to identify and prioritize opportunities for improving the station. It establishes a comprehensive vision for updating the functionality and look and feel of the station to benefit BART customers and the surrounding Downtown Berkeley community. The projects presented in this plan are intended to guide BART's approach to renovations and use of funding at the station.

The project team undertook a methodical process to develop the station's modernization design concept. Station walk-

throughs and workshops were conducted with BART staff and stakeholder organizations to identify issues of interest or concern in the existing station. An in-station public outreach event and accompanying survey provided the public with an opportunity to provide input as well. Based on this initial analysis the project team developed a preliminary list of proposed improvement projects, and design alternatives for architectural elements of the station. These alternatives were the subject of further workshops with BART staff and stakeholders, to refine the options into a preferred alternative for the design concept. The project team then conducted a second public-outreach event and survey to validate the elements of the preferred design concept and enable further refinements. The results of this methodical and inclusive approach are documented in this Plan. **Appendix A** includes a list of the supporting documents prepared during the project, in support of development of this Plan.

1.1 Assessment and Needs

BART strives to ensure its customers enjoy a pleasant, high-quality experience throughout its system. While the Downtown Berkeley BART Station functions well, specific concerns and opportunities for improvement were identified. The station's age and heavy use has led to elements of the station's systems and infrastructure being due for updates and repair. This includes some systems supporting BART operations, as well as elements of the station environment such as platform edges and stair treads.

Significant development in the neighborhood and the renovations of the street-level station plaza and adjoining Shattuck Avenue all provide an impetus to modernize the station. Stakeholders provided consistent input that they want improvements that will "refresh" the station, creating a brighter and more functional environment that reflects the Berkeley community, while retaining the station's unique architectural elements.

Although the station has sufficient capacity to accommodate current and projected ridership levels, vertical circulation between the street and the two station levels can be inconvenient, especially for customers with limited mobility. Existing elevators are undersized, and could be better located within the station. Additional escalators would

facilitate bi-directional travel between the concourse and platform. Access could be further improved through additional infrastructure to support the transport and storage of bicycles in the station.

The station design and systems could better support the accessibility needs of BART customers. In addition to the vertical circulation issues already identified, improvements are needed to signage, public address systems, and other infrastructure elements to bring the station into full Americans with Disabilities Act (ADA) compliance.

Opportunities for improvements related to environmental safety and security were also identified. Fare evasion is an ongoing issue at the station, due to low fare barriers and unattended platform access points at the platform elevator and south paid area. Isolated locations, poor sightlines, and dim lighting in some areas create a security concern. Asbestos abatement is only partially completed, and may be required to enable other station improvements involving construction activity.

1.2 Design Concept

The design concept presented in this Plan is based on a set of station-specific goals developed to support BART's Station Modernization Program's stated objectives, and to address the interests and concerns identified during the project. The project goals were as follows:

- Enhance Downtown Berkeley BART Station as a gateway to the City of Berkeley and the University of California Berkeley (UCB) campus.
- Modernize and refresh the station to bring it into the 21st century.
- Ensure that the station design reflects BART's sustainability goals.
- Enhance access and connections between the station and Downtown Berkeley neighborhood.

- Improve the station's function, safety, capacity and appearance.
- Incorporate art and community identity into the station.
- Add station amenities to improve customer experience.

The project team developed a design concept and list of projects that target four categories of improvements: system and facility upgrades (state of good repair); safety and security; access and circulation; and placemaking, aesthetics and customer experience. These are addressed through a series of station-wide improvements, such as new wall and ceiling treatments, an upgraded lighting system, and the integration of public art elements. A further series of site-specific projects, such as replacement of the two station elevators and reopening the station restrooms, are intended to fix specific issues that exist within the station.

The projects presented in this Plan reflect input provided by BART staff, community stakeholders, and the public. The result is a plan that responds to the specific needs and opportunities at the station and of the community, with a set of projects that will enable the Downtown Berkeley BART Station's successful operation long into the future. The full list of projects is provided in **Appendix D**.

Create Place, Connect to Community, Make Transit Work



System (state of good repair) and facility upgrades



Safety and security



Access and circulation



Placemaking, aesthetics, and customer experience

Figure 1-1: Concourse - South



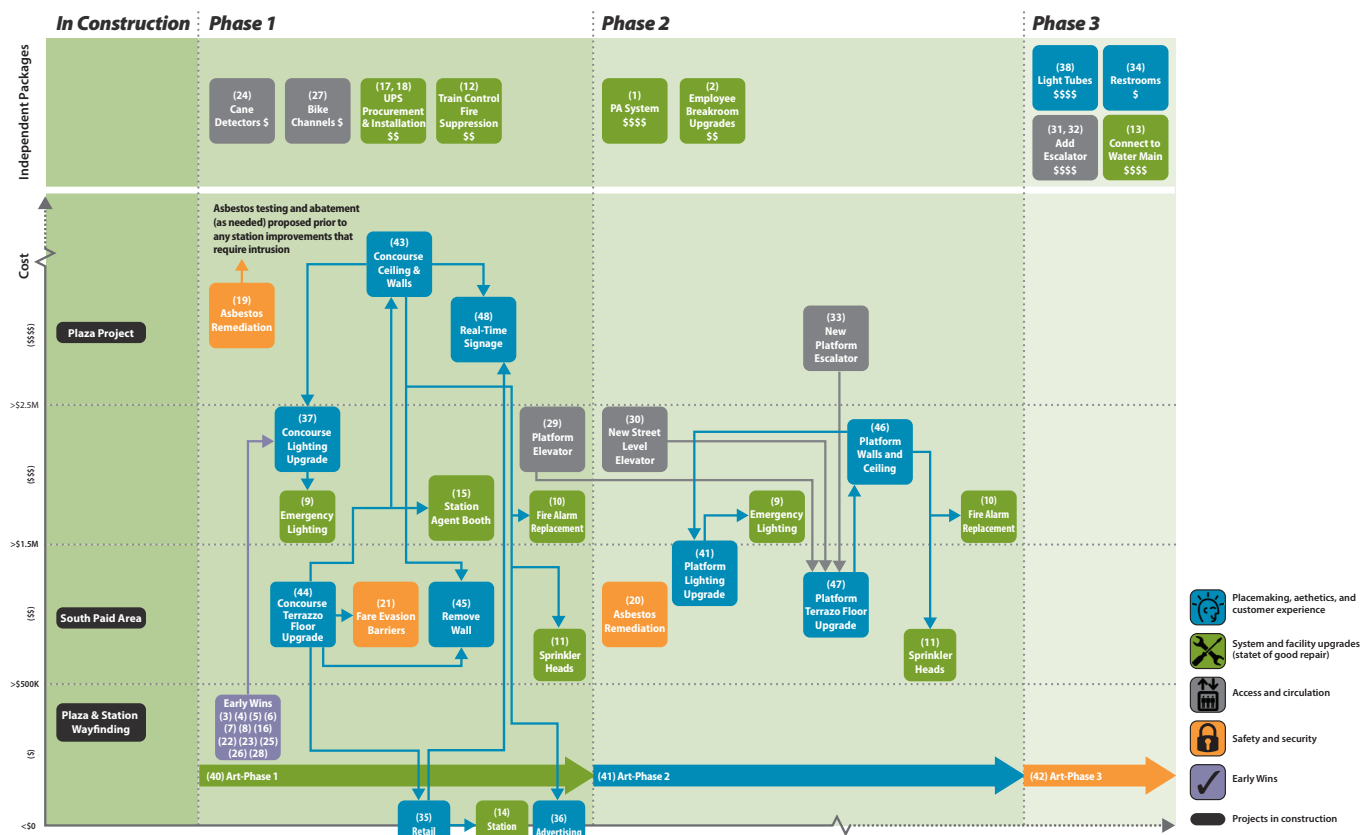
1.3 Implementation

This Plan includes a proposed implementation framework and schedule for the improvement projects included in the design concept. This provides a realistic roadmap for how to complete the projects, given budgeting and schedule constraints.

Each project was assessed to determine its relative priority to BART, stakeholders, and the public; ease of implementation; benefits to the station and the BART system; approximate cost; and interdependencies with other

projects. The projects were then grouped into three phases, based on the listed factors and the anticipated funding streams for station improvements. **Figure 1-2** provides a general summary of cost, timing and sequencing for the three phases encompassing the projects included in the concept plan. This constitutes a long-term vision for the station, and can be used as guidance for the selection and implementation of individual projects as opportunities arise to do so. BART will continue to refine the project list based on evolving conditions at the station and in Downtown Berkeley.

Figure 1-2: Downtown Berkeley Station Implementation Plan



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Project Goals, Process & Vision

2



Bicycle Parking at North End of Concourse
Photograph taken by AECOM in 2016

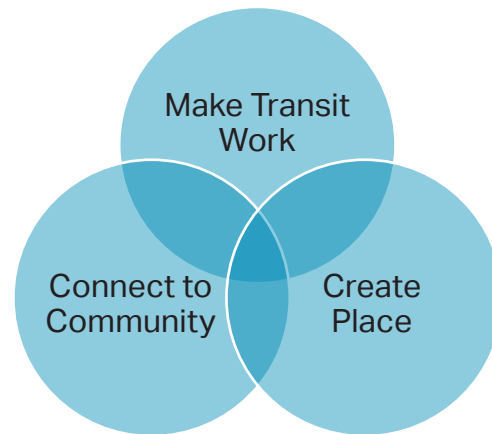
2. Project Goals, Process & Vision

This Plan presents a recommended conceptual design for the modernization of the Downtown Berkeley BART Station, intended to guide BART’s approach to renovations and use of funding at the station. The vision for this design was guided by a set of system-wide and station-specific priorities and goals. The system-wide goals are part of BART’s Station Modernization Program, which is a systematic approach to investing resources and efforts into the existing core stations and surrounding areas. The station-specific goals were developed through an extensive outreach process with BART staff, community stakeholders and the public.

2.1 Station Modernization Program & Goals

BART has the following overarching goals for station modernization studies: Make Transit Work, Connect to Community, and Create Place. These goals and their supporting objectives were presented to the BART Board of Directors in spring 2014. The relationship of these goals is illustrated conceptually in **Figure 2-1**.

Figure 2-1: Station Modernization Goals



The goals are articulated below and supported by objectives and measurable actions that can be taken in an effort to achieve the goals.

2.1.1 Make Transit Work

Ensure the BART system is reliable and has the capacity to meet customer and employee needs.

- Maintain reliability: Protect investment in existing system through systematic replacement of aging components and infrastructure, with an emphasis on positive customer experience.
- Increase station capacity: Optimize the BART system's ability to meet projected ridership increases by increasing BART's capacity to carry customers.
- Improve employee environment: Ensure that the BART workforce has the tools and space that they need to support a healthy, safe, and productive workplace.
- Advance sustainability: Reduce BART's environmental footprint through implementation of sustainable and cost-effective techniques such as conserving resources, lowering greenhouse gas emissions, and reducing maintenance costs.

2.1.2 Connect to Community

Improve the connectivity to and within BART stations and connect to the community by responding to their priorities. Ensure BART investments align with regional goals and future growth, and are equitable.

- Connect BART: Maximize connectivity and facilitate multi-modal access to stations and within station areas, including transit, walking and biking.
- Expand universal design: Improve universal design of BART stations and access to stations to provide access for all in accordance with the ADA.
- Incorporate community input: Respond to the community and customer input regarding which improvements are perceived as most important.

2.1.3 Create Place

Encourage the BART station to integrate into the surrounding community and contribute to the community's livability, safety and vitality.

- Enhance customer experience: Contribute to beautification, comfort, and placemaking (e.g., art, architecture, ambience) to enhance livability and vitality at stations, and to support regional goals.
- Ensure safety and security: Enhance customer and system, real and perceived safety and security.
- Leverage partnerships: Protect the investment in rail transit through strategic partnerships and leveraging outside funding to match BART investments.

The BART modernization goals and objectives were used to guide the development of more specific project goals for the Downtown Berkeley Station.

2.2 Stakeholder & Community Process

The project team solicited input from stakeholders and the surrounding community at different points in the project, to develop a set of targeted, station-specific goals and to later refine the preferred design concept. Details of this process, and the results, are discussed below.

2.2.1 Community Stakeholders

The stakeholders were invited to participate in a series of workshop sessions, held at key stages in the development of the conceptual design for the station modernization. Through facilitated discussions in the initial sessions,

participants helped to identify and prioritize needs and opportunities at the station, and to establish corresponding goals for the station's modernization plan, presented below. Later sessions focused on identifying and prioritizing station improvements and design elements to address the defined goals. The results of these sessions were used to help refine the conceptual design presented in this Plan. Stakeholders that participated in the process include the following agencies and organizations:

- City of Berkeley
- Alameda–Contra Costa Transit District (AC Transit)
- Berkeley Art Museum/Pacific Film Archive
- Berkeley Arts District
- Berkeley Chamber of Commerce
- Berkeley City College
- Berkeley Design Advocates
- Bike East Bay
- Downtown Berkeley Association
- Livable Berkeley
- University of California, Berkeley (UCB)

2.2.2 Community Input

BART engaged the larger Berkeley community by sharing the proposed improvements and solicited input by asking for feedback on, and prioritization of, the recommended projects. BART developed a project website (www.bart.gov/about/planning/downtown-berkeley) to publicize the project information, and held two public outreach events. The first outreach event was held early in the planning process, to present findings from the station assessment and preliminary ideas for potential improvements at the station. The second outreach event was held toward the end of the design process, to present the preferred design concept for the station modernization. During these events held at the Downtown Berkeley BART Station, project staff members were on hand to present the proposed improvements and answer questions. Customers were asked to either fill out an online or paper survey to help prioritize what issues and improvements they thought were most important.

The first in-station events were held on September 30, 2015 from 4-7 pm, and on October 1, 2015 from 7-10 am. Between in-station and online surveys, 1,031 customers completed surveys and provided 357 comments. The results of this input are provided in **Appendix B**. The results from the first survey emphasize that customers are focused on improvements that target station functionality,

cleanliness and a pleasant environment, and environmental sustainability.

The second set of in-station events was held on September 20, 2016 from 4-7 pm, and on September 21, 2016 from 7-10 am. Between in-station and online surveys, 556 customers completed surveys and provided 163 comments. The results of this input are provided in **Appendix C**. The findings from this survey indicate that customers want to prioritize upgraded train information, improved lighting in the station, and better access to and from the station.

Chapter 4 includes the design concept resulting from the analysis and stakeholder and public input.

2.3 Project Goals & Community Priorities

Based on input from BART and community stakeholders, and the public on the issues and opportunities at the Downtown Berkeley BART Station, the project team developed a specific set of goals for this Plan:

These goals were designed to represent the collective priorities for the project, and guided the design process that led to the specific design objectives, concepts and projects presented in this Plan.

- Enhance Downtown Berkeley BART Station as a gateway to the City of Berkeley and the UC Berkeley campus.
- Modernize and refresh the station to bring it into the 21st century.
- Ensure that the station design reflects BART's sustainability goals.
- Enhance access and connections between the station and Downtown Berkeley neighborhood.
- Improve the station's function, safety, capacity and appearance.
- Incorporate art and community identity into the station.
- Add station amenities to improve customer experience.

BETTER STATIONS.

DOWNTOWN BERKELEY EXISTING CONDITIONS

Access

- Opportunity to improve how space is used in station
- Crowding in center of station
- No platform access at south end of station
- Elevator is too small/awkward to access
- Escalator access only at center of station
- Bicycle access could be improved

Safety & Security

- Lighting
- Poor visibility/lines of sight
- Remote or inactive areas sometimes feel unsafe

Amenities

- Opportunity to improve comfort and function of station
- Public restrooms currently closed
- Opportunity for more retail on concourse level

Sustainability

- Improve efficiency (i.e., lighting)
- Resource conservation

Let us know your thoughts - please fill out a survey.

BETTER STATIONS.

DOWNTOWN BERKELEY CREATING PLACE

Modernize the station to integrate art and reflect community identity.

- Use art and design elements to improve the function of the station
- Enliven the space
- Strengthen station identity
- Reflect unique community
- Consider opportunities for temporary, interactive, or performance art
- Incorporate innovative design elements
- Create links to local culture and institutions

Share your thoughts here

Let us know your thoughts - please fill out a survey.

BETTER BART. BETTER STATIONS.

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN DESIGN CONCEPT

New design will "refresh" the station, integrate with the new plaza design and hide utilities. The pattern, materials and color will be designed by BART with customer input. These images show what the station may look like.

September 2016

BART asked customers to share their thoughts on project goals and opportunities for improving access and circulation, safety and security, amenities, sustainability, and integrating art and reflecting community identity.



At the second set of public outreach events BART asked customers to provide feedback on phasing and implementation of station improvements.

Project Context and Existing Conditions

3



Existing Conditions of Concourse Level
Photograph taken by AECOM in 2016

3. Project Context and Existing Conditions

Downtown Berkeley BART Station is located within the downtown core of the City of Berkeley. In addition to serving downtown Berkeley, the station is also the primary station for those travelling to and from the UCB, which is one block to the east. It is used by patrons of events taking place at the University, such as concerts or lectures, and especially football games and other athletic events.

3.1 Station Context

3.1.1 Station History

The Downtown Berkeley BART Station was constructed in the early 1970s and opened on January 29, 1973 as part of a system extension from Oakland to Richmond, the second segment of the BART system.

3.1.2 Land Use Development Context

The Downtown Berkeley BART Station is on Shattuck Avenue between Allston Way and Addison Street. The station is one block west of the UC Berkeley campus, in the core of downtown, close to shops, restaurants, theaters, and other attractions. The Downtown Berkeley BART Station (one of three underground stations in Berkeley) is the second-busiest BART station outside of San Francisco. In addition to residents and employees in the area, the station is used by students attending UCB and other nearby educational institutions; and by people patronizing museums, restaurants, theaters, and shops in the downtown area. **Figure 3-1** displays the Downtown Berkeley BART Station's location in the BART system. **Figure 3-2** and **Figure 3-3** display the Downtown Berkeley BART Station site and surrounding land use, respectively.

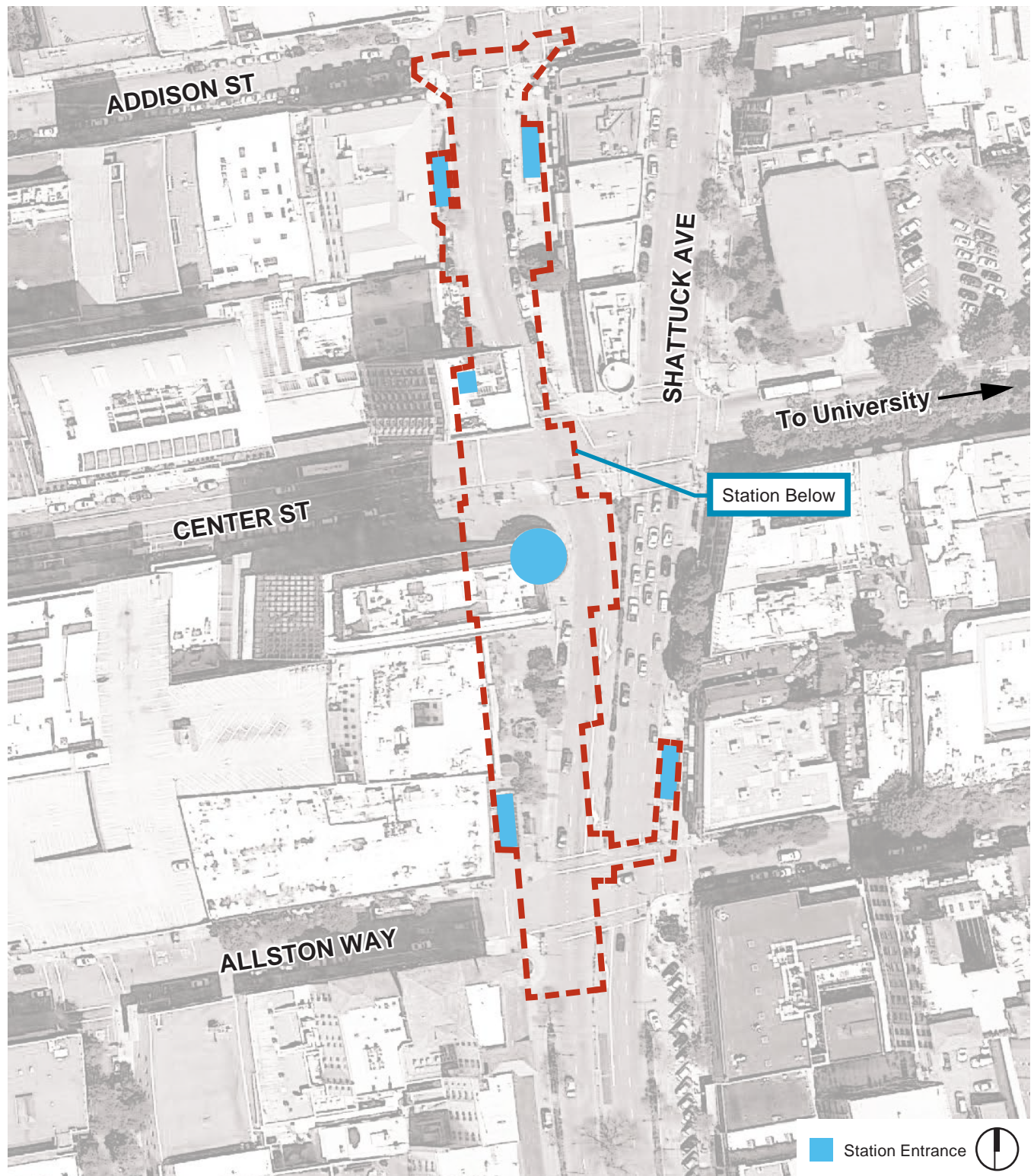
Institutional, city, and regional Plans have established the future development around the station. UCB's Long Range Development Plan (LRDP) envisions up to 800,000 net new gross square feet of campus space on the blocks just west of the campus. On a citywide level, the Berkeley City Council passed the new 2012 Downtown Area Plan (2012 DAP) for the 168 acres making up the Downtown Area. The 2012 DAP builds on the 1990 Downtown Plan, which emphasized the importance of protecting the downtown's traditional character, and identified high-density housing as being critical to the revitalization of the area. And on a regional level, Plan Bay Area's preferred alternative establishes the land use and socioeconomic inputs for neighborhoods surrounding the Downtown Berkeley BART Station for 2040 used in the Metropolitan Transportation Commission (MTC) travel demand model.

Figure 3-1: BART System Map



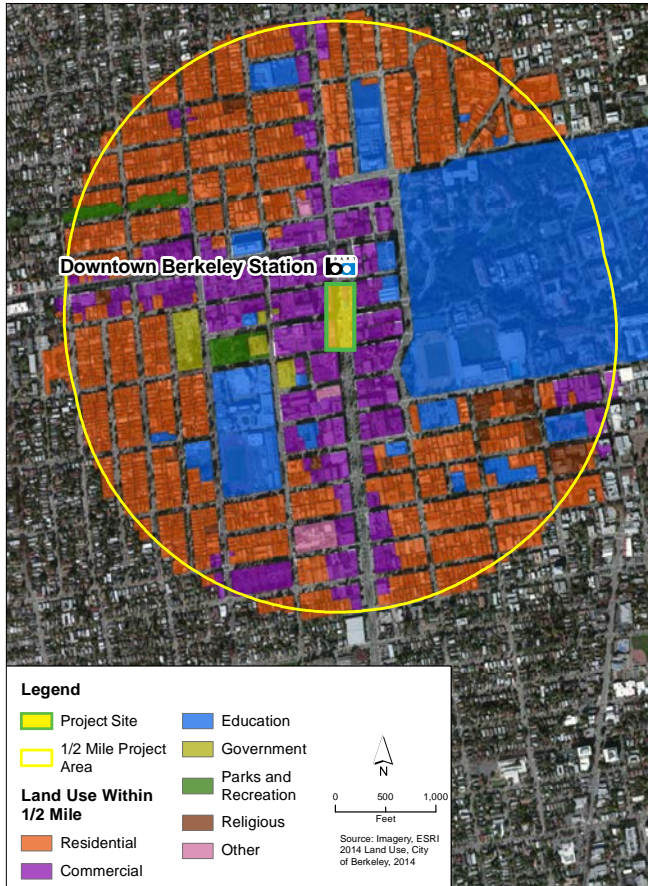
Source: BART, 2017

Figure 3-2: Downtown Berkeley BART Station Site



Source: AECOM, 2017

Figure 3-3: Downtown Berkeley BART Station Area Land Use Map



Source: City of Berkeley, 2014

3.1.3 Station Profile & Customer Access

The Downtown Berkeley BART Station is a multi-modal transportation hub, combining pedestrians, bikes, buses, and BART with a key auto route in the City. A comprehensive network of connecting bus transit currently serves the station. These networks include routes operated by Alameda Contra-Costa Transit (AC Transit), UCB (Bear Transit), and the Lawrence Berkeley National Laboratory (LBNL) shuttle.

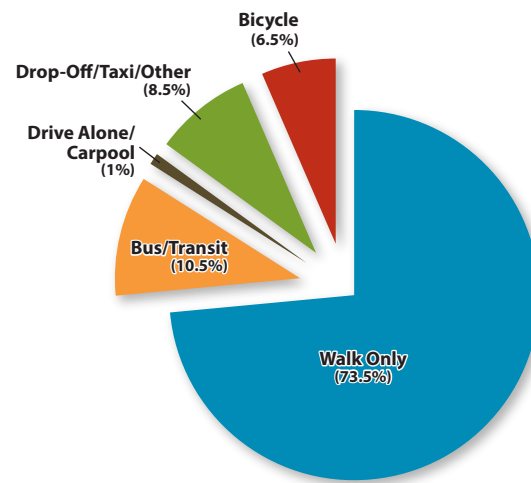
The majority of BART customers walk to and from the station (73.5% of origin trips and 90% of destination trips, **Figure 3-4** and **Figure 3-5**, respectively). For customers traveling by bicycle, a bike station is available at street level for passenger use. Bicycle access to and around the station is generally very good and includes striped bike lanes on Center Street west of Shattuck Avenue and north-south bike routes on Oxford Street and Milvia Street.

For customers traveling by transit, a comprehensive network of connecting bus transit currently serves the station.

Surface public transportation includes 15 AC Transit, three Bear Transit, and two LBNL shuttles.

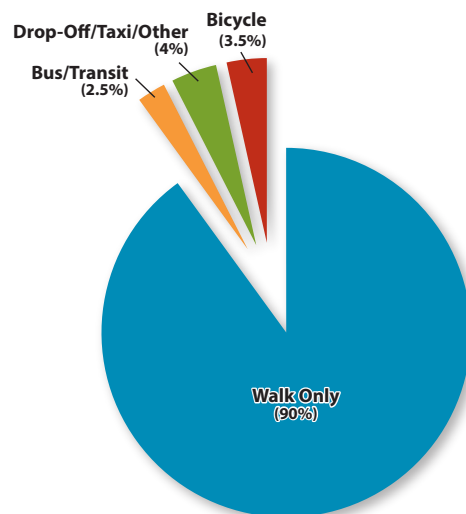
While there is no dedicated BART automobile parking provided at the station, public parking facilities and on-street parking are available in the surrounding areas. For customers being dropped off or picked up by automobile, a dedicated loading area on Shattuck directly in front of the plaza has space for two cars and serves as the kiss-and-ride zone. This situation will change, however, with the City's planned realignment of Shattuck Avenue, which is still in the planning process.

Figure 3-4: Modes of Customers Originating BART Trips at Downtown Berkeley



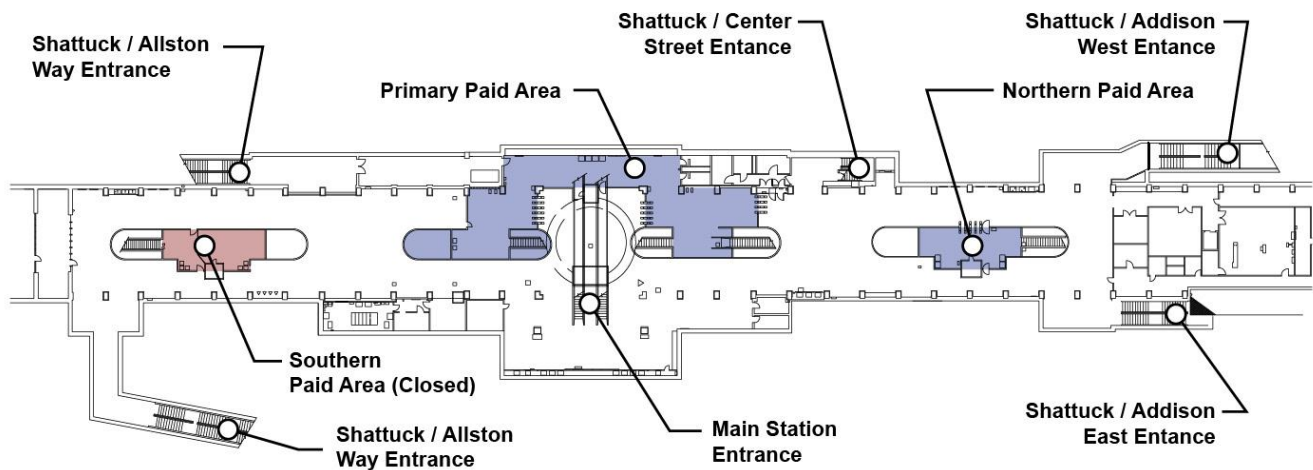
Source: BART, 2015

Figure 3-5: Modes of Customers Terminating BART Trips at Downtown Berkeley



Source: BART, 2015

Figure 3-6: Figure 6: Downtown Berkeley BART Station Entrances



Source: BART, 2013

Customers enter the station through six entrances illustrated on **Figure 3-6**. Lack of wayfinding signage and recognizable landmarks can make it difficult for pedestrians exiting from the station to orient themselves. Other than the main station entrance (two escalators) and the Shattuck/Center (north) elevator entry, all existing station entrances provide only stairs. All station entrances are gated at night.

3.1.4 Ridership & Capacity (Current & Future)

BART provided customer origin–destination (OD) data for the BART network, compiled in hourly slices and averaged across all weekdays in April and May 2015. **Table 3-1** summarizes these data for the 3 hour weekday AM and PM peak periods (7:00 AM to 10:00 AM and 4:00 PM to 7:00 PM) to capture the full range of customer activity (i.e., both entries and exits) at the Downtown Berkeley BART Station.

As shown in **Table 3-1**, the station serves approximately 26,500 passenger entries and exits each weekday. Station entries in the weekday AM peak period and station exits in the weekday PM peak period are heavily weighted to and from stations south, correlating with “traditional” Bay Area commute patterns to and from workplaces in the inner core of the region (San Francisco and Oakland).

The ridership data in **Table 3-1** indicate downtown Berkeley is a major travel destination. Specifically, station exits are higher than station entries during the 3 hour weekday AM peak period; while station entries are higher than station

exits during the weekday PM peak period. These trends correlate with the intensity of trip attractors served by the Downtown Berkeley BART Station, including the UCB campus and nearby institutions and facilities that attract a large number of students, faculty, and staff.

The majority of customers with their destination stop at Downtown Berkeley are traveling from south of the station, which is to be expected given that the majority of the BART network is to the south of this station. Although most customers prefer a one-seat ride, it is important to note the some may be making regional connections with transfer points to the north, such as El Cerrito del Norte Station (WestCAT, Golden Gate Transit, SolTrans, Fairfield and Suisun Transit, VINE Transit, and park-and-ride) or Richmond Station (Amtrak).

In addition to daily travel, a variety of special events at UCB and nearby institutions attract large volumes of attendees and visitors. In terms of BART operations, the primary event scenario for consideration at Downtown Berkeley BART Station involves college football home games at Memorial Stadium. These events represent the largest-attendance, highest capacity events regularly taking place at the campus. BART mode share among home game attendees has ranged from 11 percent for the 2014 season to 17 percent for the 2012 season. In terms of absolute passenger numbers, home game days generally showed 5,000 to 9,000 more exits at the Downtown Berkeley BART Station than the average non-event day over the past five years.

Table 3-1: Average AM and PM Peak-Period Ridership, April-May 2015

| Passenger Activity | Week-day Daily | Weekday AM Peak Period | | | AM Peak Total | Weekday PM Peak Period | | | PM Peak Total |
|---------------------|----------------|------------------------|--------------|--------------|---------------|------------------------|--------------|--------------|---------------|
| | | 7:00 | 8:00 | 9:00 | 7:00 | 16:00 | 17:00 | 18:00 | 16:00 |
| | | - | - | - | - | - | - | - | - |
| | | 7:59 | 8:59 | 9:59 | 9:59 | 16:59 | 17:59 | 18:59 | 18:59 |
| Entries | | | | | | | | | |
| To stations north | 2,536 | 19 | 31 | 34 | 84 | 317 | 465 | 319 | 1,101 |
| To stations south | 10,372 | 387 | 804 | 817 | 2,008 | 817 | 1,186 | 1,237 | 3,240 |
| Total | 12,907 | 406 | 835 | 851 | 2,092 | 1,134 | 1,652 | 1,556 | 4,342 |
| Exits | | | | | | | | | |
| From stations north | 2,641 | 317 | 516 | 405 | 1,238 | 106 | 102 | 88 | 296 |
| From stations south | 10,920 | 661 | 1,228 | 1,054 | 2,943 | 668 | 1,000 | 1,120 | 2,788 |
| Total | 13,562 | 978 | 1,744 | 1,459 | 4,181 | 774 | 1,101 | 1,208 | 3,083 |
| Total | 26,469 | 1,384 | 2,579 | 2,310 | | 1,909 | 2,753 | 2,763 | |

Source: BART, 2015.

Notes:

Component values may not sum to totals due to rounding.

Stations north includes data for passengers to/from North Berkeley, El Cerrito Plaza, El Cerrito del Norte, and Richmond

Stations south includes data for passengers to/from all other stations in the network

Table 3-2: Average AM and PM Peak-Period Ridership, 2020 and 2040

| Passenger Activity | Ridership (Weekdays) | | | | | | | | | Ridership Growth (Weekdays) | | |
|---------------------|----------------------|--------------|--------------|---------------|--------------|--------------|---------------|--------------|--------------|-----------------------------|------------|------------|
| | 2015 | | | 2020 | | | 2040 | | | 2015 → 2040 | | |
| | Daily | Peak Hour | | Daily | Peak Hour | | Daily | Peak Hour | | Daily | Peak Hour | |
| | | AM | PM | | AM | PM | | AM | PM | | AM | PM |
| Entries | | | | | | | | | | | | |
| To stations north | 2,154 | 15 | 350 | 2,435 | 15 | 390 | 2,908 | 18 | 444 | 35% | 18% | 27% |
| To stations south | 10,508 | 519 | 1,391 | 13,280 | 655 | 1,750 | 16,854 | 847 | 2,141 | 60% | 63% | 54% |
| Total | 12,663 | 534 | 1,741 | 15,716 | 670 | 2,140 | 19,763 | 865 | 2,586 | 56% | 62% | 49% |
| Exits | | | | | | | | | | | | |
| From stations north | 2,243 | 421 | 76 | 2,533 | 471 | 82 | 3,008 | 533 | 99 | 34% | 27% | 30% |
| From stations south | 10,228 | 1,083 | 1,039 | 13,171 | 1,447 | 1,332 | 16,805 | 1,788 | 1,754 | 64% | 65% | 69% |
| Total | 12,471 | 1,504 | 1,115 | 15,704 | 1,918 | 1,414 | 19,813 | 2,321 | 1,852 | 59% | 54% | 66% |
| Total | 25,134 | 2,038 | 2,856 | 31,419 | 2,588 | 3,554 | 39,575 | 3,185 | 4,438 | 57% | 56% | 55% |

Source: BART, 2015.

Notes:

Component values may not sum to totals due to rounding.

Data presented for 2015 represent forecasted ridership from the BRM (not actual ridership data collected from fare gate activity).

As described earlier, significant development is both planned and projected for the Downtown Berkeley area. Forecasted ridership activity at Downtown Berkeley BART Station for the time periods associated with the weekday AM and PM peak hours (AM peak, representing 8:00 AM to 8:59 AM; and PM peak, representing 5:30 PM to 6:30 PM), is summarized in **Table 3-2**. Daily ridership forecasts for weekdays are also presented for reference. As shown in **Table 3-2**, ridership at Downtown Berkeley BART Station is generally forecasted to grow by between 50 and 60 percent between now and 2040. Daily ridership is anticipated to grow from 25,134 riders to 39,575 riders, with an expected rise in AM peak ridership from 2,038 to 3,185 riders and PM peak from 2,856 to 4,438 riders.

BART provided the latest available ridership forecasts from the 2040 BART SRTP Ridership Model (BRM), prepared using employment and population growth estimates published by the Association of Bay Area Governments, the MTC, and county transportation authorities. Specifically, the data reflect the growth assumptions for horizon years of 2025 and 2040 under the Locally Preferred Alternative—more commonly known as the Jobs–Housing Connection scenario. These ridership forecasts assume several under-construction and planned extensions of the BART network, including the following projects:

- Warm Springs Extension (WSX): Phase 1 (Warm Springs/South Fremont Station) only; no station assumed at Irvington.
- East Contra Costa BART Extension (eBART): Phase 1 (Hillcrest Avenue Station in Antioch) only; no station assumed at Railroad Avenue in Pittsburg.
- Silicon Valley Berryessa Extension (SVBX): Entire extension (stations at Milpitas and Berryessa).
- Silicon Valley Santa Clara Extension (SVSX): Entire extension (stations at Alum Rock, Downtown San Jose, San Jose Diridon Station, and Santa Clara).

Even with this system expansion and increase in riders, the Downtown Berkeley BART Station should have sufficient capacity to accommodate projected ridership levels.

3.1.5 Capital Improvements Underway

Several design and construction projects are underway near the Downtown Berkeley BART Station. These improvements include a plaza redesign, improved wayfinding, and reopening the south paid area.

3.1.5.1 Plaza Redesign

The Downtown Berkeley BART Plaza and Transit Improvement Project, currently under construction, will replace the “gateway” rotunda entrance at the center of the station with a new transparent canopy (**Figure 3-7**); and install new pavement, lighting, and landscaping for the station plaza and sidewalk along the western side of Shattuck Avenue between Center Street and Allston Way. The station’s secondary entrances at Shattuck Avenue (southbound)/Addison Street (northwestern and northeastern corners), Shattuck Avenue/Center Street (northwestern corner), and Shattuck Avenue/Allston Way (northwestern and northeastern corners) will also be upgraded with new glass canopies featuring security gates and new lighting systems. Planters at secondary entrances will be replaced with bicycle parking.

The Plaza redesign is described in the Downtown Berkeley BART Plaza and Transit Improvement Project Initial Study/ Draft Mitigated Negative Declaration (May 2015). The design will modernize many aspects of the plaza, including lighting, paving and structure surfaces, and wayfinding. The design concept for the station interior proposed in **Chapter 4** complements the plaza’s new design. The preliminary construction plans for the project assume that access to the BART station will be maintained, even during demolition and removal of the existing rotunda enclosure and installation of a new glass canopy at the main entrance. Although portions of the existing plaza may be closed to allow for construction, it is expected that a path of travel will be maintained between the entrances and the adjacent crosswalks at the Shattuck Avenue/Center Street intersection.

3.1.5.2 Wayfinding

The Plaza redesign also includes upgrades to wayfinding signage in and around the station. Signage is aimed at directing customers to entrances closest to their desired destinations and identifying nearby transit connections, potentially reducing at-grade crossings. Wayfinding upgrades include installation of new backlit signs, and of real-time BART arrival / departure signage.

3.1.5.3 Reopening of South Paid Area

The South Paid Area (the fare entrance, station-agent booth and ticket vending machines) at the southern end of the concourse has been closed for several years. The reopening of the South Paid Area in conjunction with the Plaza Redesign project will increase the fare gate capacity at Downtown Berkeley BART Station, providing additional fixed fare gate capacity of 1,500 customers per hour in each

of the entry and exit directions, and additional variable fare gate capacity of 2,250 customers per hour.

Furthermore, the re-activation of the South Paid Area will provide one additional two-way, two-lane stairway between concourse and platform levels. This will provide capacity

for an additional 2,040 customers per hour in variable concourse–platform vertical circulation. Additionally, the reopening will reduce travel distance to the platform for customers entering from the southern end of the station, and will reduce opportunities for fare evasion at this access point to the platform.

Figure 3-7: Rendering of the Main Station Entrance



Source: BART, 2015.

3.2 Design Considerations & Existing Physical Conditions

3.2.1 Station Structure

As shown in **Figure 3-6**, the station has six street-level entrances to the free area on the concourse level of the station. These span both sides of Shattuck Avenue, and the blocks immediately North and South of Center Street, with the main station entrance in the rotunda at the Northwest corner of Shattuck Avenue and Center Street.

The architecture of the station concourse is distinctive within the BART network for the rotunda at the main entrance at the center of the station and for the series of arches

spanning the length of the concourse (**Figure 3-8**). The arched vault is seen as a defining element of the station design by BART and many stakeholders. The arches are paneled in white material, and the majority of spaces in between are surfaced in metal. The ceiling portions of the vaults are surfaced in off-white metal paneling with embedded light fixtures. The stairwells from the street have brick walls. The concourse floor is cream-colored terrazzo.

The concourse layout generally provides good visibility and a sense of space within the southern half of the concourse and within the northern half, but the Central Paid Area and existing street escalators limit visibility between the southern and northern areas. **Figure 3-9** includes the layout of the Downtown Berkeley BART Station.

Three “centroid” fare areas provide access between the concourse free area and the paid area on the platform level of the station. Passengers can enter the platform by way

of a stairway near the North fare gates, stairways and an escalator at the central fare gates, and an elevator at the Shattuck Avenue / Center Street entrance. The South fare gates and accompanying stairway to the platform have been closed to customer use for several years, but will be reopened for use in conjunction with the plaza renovation project.

The platform's layout is similar to that of other single-platform underground BART stations. There are a number of cutouts between the concourse and platform, enabling

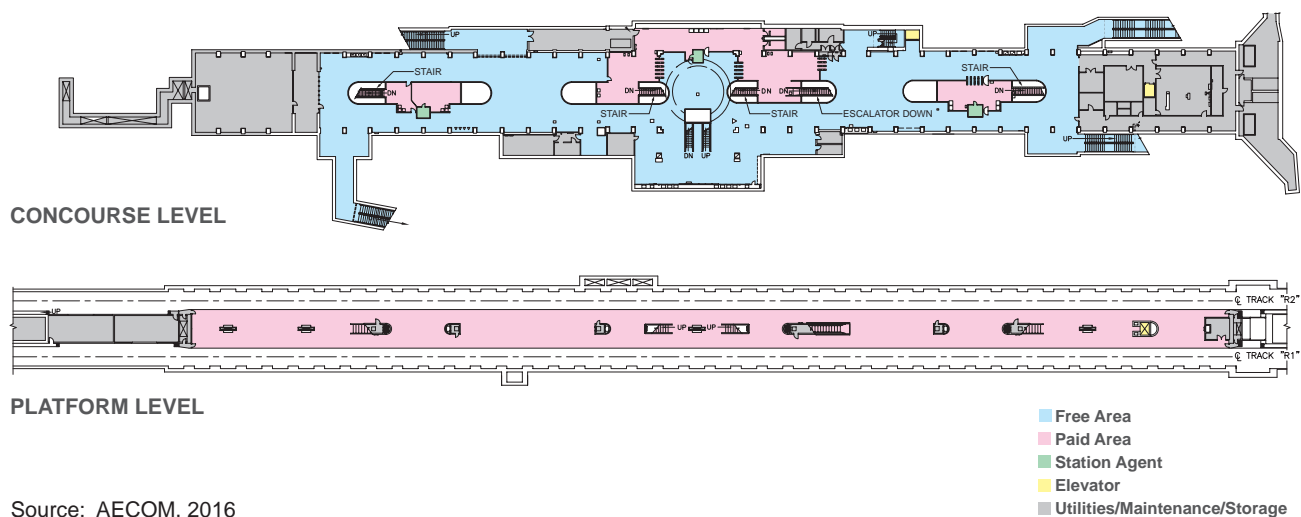
visibility between the two levels and improving the sense of light and openness on the platform. The concourse's vault pattern is mirrored on the platform level by curved concrete arches on the outboard track walls, interspersed with brick bays. The wall surfaces on the platform level are brick, and the floor is the same terrazzo material as that of the concourse. The ceiling is a crenelated waffle pattern, with light fixtures mounted in alternating spaces.

Figure 3-8: Downtown Berkeley BART Station Concourse Arches



Source: AECOM, 2016

Figure 3-9: Downtown Berkeley BART Station Layout



Source: AECOM, 2016

3.2.2 Vertical Circulation

Vertical circulation at the station (street–concourse and concourse–platform) is summarized in **Table 3-3**. Stairways have been expressed in terms of the number of “lanes” available, where the minimum width of each lane is 22 inches. There are 18 lanes between the street and the concourse, and 6 lanes between the concourse and the platform.

As shown in **Table 3-3**, the concourse–platform elements govern the overall capacity of the station’s vertical circulation system, as there are 13 fewer total escalators and stairways between concourse and platform levels than between street and concourse levels, resulting in three times greater vertical circulation capacity between the street and concourse than between the concourse and platform. The existing escalator and 6 stairway lanes between the concourse and the platform can handle approximately 4,500 customers per hour exiting the station, with an additional 6,120 customers per hour in variable capacity.

It should be noted that this is a theoretical capacity that does not consider the effects of train scheduling on customer flow, particularly with respect to platooning (or bunching) on vertical circulation. Therefore, the values in **Table 3-3** represent the maximum throughput, assuming full use of all existing vertical circulation elements (excluding the South Paid Area) for the entire 60 minute period. Given the existing timetable and service pattern at the Downtown Berkeley BART Station, and the constraints imposed by the rest of the BART system (particularly with respect to track segments shared with other lines), actual customer demand would generally be restricted by other factors such as the line-haul capacity for the given timetable and service plan, and the customer demand (and corresponding effects on train loading) generated upstream of the Downtown Berkeley BART Station.

As shown earlier, the data indicate about 5,000 to more than 9,000 additional customers ride BART on UC Berkeley football game days. All games are currently scheduled for Saturdays, which does not have the same level of peak commute ridership as the weekdays. However, for the purposes of presenting a conservative analysis, the data below display special event customers with peak-hour commute station use to determine if the station has a potential future problem with sufficient capacity. The maximum peak-hour entries and exits projected for the PM peak are approximately 4,000 (**Table 3-2**). The most additional customers recorded during UC Berkeley games was about 9,000, for a total of 13,000 customers (worst-case scenario). As shown in **Table 3-4**, most of the components of station capacity would be able to

accommodate this hypothetical worst-case scenario. The one limitation may be the vertical circulation between the concourse and the platform, which can only move 6,120 customers per hour.

3.2.3 Accessibility Needs

The BART Accessibility Task Force (BATF) and project team conducted a station walk-through to assess the existing station’s Universal Access and ADA compliance, and the consultant team completed an independent assessment. The station meets most ADA requirements, but insufficiencies were identified in the size of the station elevators and wayfinding signage to those elevators. The BART Facilities Standards (BFS) requires that elevators be prominent and visible from the fare gates. Existing signage in the elevator hallway is too high to be easily viewed from a wheelchair-user height. The elevators’ buttons are too close (within 24 inches) of the corner of the cab, preventing access for some wheelchair users, and the elevators are too small to meet code requirements. The current station configuration also makes it difficult for patrons to tag in/tag out at a fare gate when using the concourse/platform elevator.

Additionally, communications provided by the call boxes and the stair handrail grip were found to be noncompliant. Two-way communications are not enabled from the existing call boxes to accommodate customers with hearing disabilities. On the stairways, the handrail grip surface does not circle the cross-section dimension of 2½-inch maximum per requirement; the existing cross section is 2¾ inches.

Overall, paths of travel from transit and paratransit drop-off locations at the Downtown Berkeley BART station are compliant with current code requirements. Station elements including the existing train map/time schedule locations, existing ticket machines, pay-phones, and the existing stairway steps are also compliant with code requirements.

3.2.4 Fare Evasion

Fare evasion is a recognized problem at this station. The project team observed several individuals jumping the gate during a station visit. However, data on fare evasion rates was not available. BFS specifically calls out barrier dimensions requirements as “The paid and free areas will be separated by barriers, an array of ticket gates for normal customer circulation and service gates for station staff and equipment access. Barriers shall be five (5) feet in height, see-through type, non-climbable. If the barrier is elevated from the finished floor, the gap between the bottom of the barrier and floor shall be three (3) inches.” The station’s existing barriers do not meet these requirements.

Table 3-3: Vertical Circulation Summary

| Array | Escalators | | Stairways (Lanes) | Capacity (Passengers/Hour) | | |
|--------------------------------|------------|------------|----------------------|----------------------------|--------------|---------------|
| | Up | Down | | Up | Down | Variable |
| Street-concourse | | | | | | |
| Shattuck Avenue/Addison Street | | | | | | |
| Northwest corner | N/A | N/A | 2/2 | N/A | N/A | 4,080 |
| Northeast corner | N/A | N/A | 2/2 | N/A | N/A | 4,080 |
| Shattuck Avenue/Center Street | | | | | | |
| Northwest corner | N/A | N/A | 2 | N/A | N/A | 2,040 |
| Rotunda (main) entrance | 1 | 1 | N/A | 4,500 | 4,500 | N/A |
| Shattuck Avenue/Allston Way | | | | | | |
| Northwest corner | N/A | N/A | 2/2 | N/A | N/A | 4,080 |
| Northeast corner | N/A | N/A | 2/2 | N/A | N/A | 4,080 |
| Total | 1 | 1 | 18 | 4,500 | 4,500 | 18,360 |
| Concourse-platform | | | | | | |
| North Paid Area | N/A | N/A | 2 | N/A | N/A | 2,040 |
| Central (north) Paid Area | 1 | N/A | 2 | 4,500 | N/A | 2,040 |
| Central (south) Paid Area | N/A | N/A | 2 | N/A | N/A | 2,040 |
| Total | 1 | N/A | 6 | 4,500 | N/A | 6,120 |

Source: AECOM, 2015.

Table 3-4: Estimated Worst-Case Passenger Loads and Station Capacity

| | Maximum Capacity (Passengers per Hour) | Estimated Worst-Case Demand | Sufficient Capacity? (Yes/No) |
|---|--|-----------------------------------|-------------------------------------|
| Platforms | 13,000 | 13,000 | Yes |
| Vertical circulation – Street-Concourse | 18,360 | 13,000 | Yes |
| Vertical circulation – Concourse-Platform | 6,120 | 13,000 | No |
| Fare gates | 18,000 | 13,000 | Yes |

Source: AECOM, 2015

3.2.5 Environmental Safety

3.2.5.1 Security

The station has some isolated areas, such as the hallway on the concourse level to the platform elevator, which is not visible from the station agent booths, and the street stairwell at the southeast corner of the station. Both of these pose potential security concerns. In addition, poor lighting in some areas of the station exacerbates the visibility issue.

Although station agents are trained in safety, the current station-agent booth locations have poor lines-of-sight for continuous observation of some station areas. See **Figure 3-10** for an illustration of specific areas of concern.

Based on the Crime Statistic charts provided for year-to-date December 2014, crime levels (all crimes) per customer are slightly lower-than-average at the Downtown Berkeley BART Station compared to other BART stations. Poor lighting and poor visibility in certain locations create concern about safety and security. Fare evasion is an on-going issue to address at the station. BART recently installed additional Closed-Circuit Television (CCTV) equipment; these locations need to be evaluated further to determine if they are sufficient or if the station needs more.

3.2.5.2 Accidents

Many criminal and fare evasion incidents at the station are related to individuals being intoxicated or psychologically impaired which makes the incidents difficult to prevent. Both the safety and crime data indicate that customers slipping on the stairs is a problem at this station. The raised curb at the base of the concourse walls was also identified as

a tripping hazard, and prevents some customers from accessing the wall maps.

3.2.5.3 Asbestos

The arches and the fireproofing installed on the structural steel above the false ceiling on the concourse level are known to contain asbestos. Other locations may also be fireproofed with similar materials. Additionally, floor tiles, fire doors, mastics, and sealants in various locations around the station are believed to contain asbestos. Asbestos abatement in the station is partially completed; however, testing of all of the station elements has not been completed to determine the full extent of abatement required.

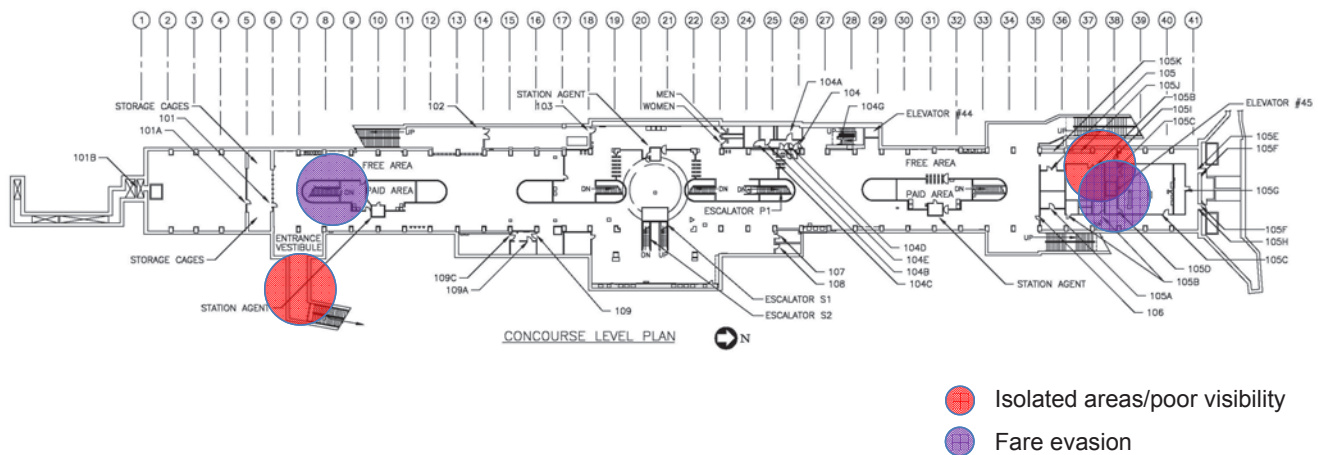
3.2.5.4 Acoustics

The sound quality of the public-address (PA) system varies throughout the station, making it ineffective in some locations. There are currently no PA speakers in the concourse-level elevator hallway, making it difficult to hear PA announcements while waiting for and using the elevator.

3.2.5.5 Ventilation

The existing ventilation in the station is passive, but is generally sufficient. The piston effect of the trains in the tunnels provides ventilation in the station; therefore, underground stations normally do not need ventilation systems that are very active. Some existing and planned retail uses in the station may generate heat and exhaust fumes that create the need for active ventilation in specific concourse locations.


Figure 3-10: Areas of Security Concern



Source: AECOM, 2016

Conceptual Design & Improvements

4



**A new concept design
for BART's Downtown
Berkeley Station that
honors the station's
iconic architecture.**

4. Conceptual Design & Improvements

BART's Downtown Berkeley Station, with its signature arches defining the concourse is an iconic centerpiece to Berkeley's transit system that has been serving the community for nearly 45 years. The conceptual design and planned station improvements will create a sustainable facility with exceptional access for all users, while honoring the station's history and character that is unique to downtown Berkeley.

4.1 Introduction

The design for the Downtown Berkeley BART Station modernization aims to breathe new life into a place with a rich history that has been serving its community for nearly half a century. It will create a more open, environmentally sustainable and accessible station that also keeps its ties to its past and to the fabric of the downtown Berkeley community. Existing features unique to the station architecture, such as the concourse vaulted ceiling are re-envisioned while preserving their intrinsic character. The spirit of the new plaza design above the station will be reflected in the new architectural finishes below ground, connecting BART riders to the energy of downtown Berkeley's street life.

This plan presents a design concept that incorporates amenities and services to satisfy all station users, laid out in a manner to make efficient use of the space while maintaining a sense of openness within the station. This is further enhanced by new finishes that enhance the station's architectural style and reinforce its distinct identity.

The design team began by reviewing the BART modernization goals and the Downtown Berkeley BART Station goals. Working with BART, the design team developed a set of overarching design goals, supported by a more detailed set of design objectives (**Tables 4-1 and 4-2**). These guided the selection of specific projects and improvements for the station modernization, to respond to the BART, stakeholder, and public identified needs and opportunities. These improvements were then incorporated into an overall program for use of space within the station. The program balances the use of space among the many, and often competing, uses for floorspace in the concourse and platform. After the preferred concept had been vetted by BART, stakeholders and the public the project team prepared an implementation plan and schedule (presented in **Chapter 5**) to guide the funding and installation of individual projects.

This chapter summarizes the key elements of the design concept, and the individual projects included in the plan. These projects are grouped into four broad categories:

- Placemaking, aesthetics & customer experience
- Access and circulation
- Safety and security
- System and facility upgrades

These classifications are used as organizing principle throughout this chapter, and in the project lists provided in **Chapter 5**. The final section of this chapter contains a set of station plans, renderings and other graphics to illustrate the elements of the design concept. **Chapter 5** and **Appendix D** include complete, detailed lists of the individual projects included in this Plan.

4.2 Design Approach

As described in **Chapter 2**, the design concept was developed through a collaborative planning process with BART and community stakeholders, along with input from riders through public outreach. These steps were undertaken to allow the new design to satisfy as many of the needs and interests as possible. The project team worked early to define a set of high-level design goals that support

the overall project goals (listed in **Table 4-1**) and that set a framework for the design process. These goals were expanded into a more detailed set of design objectives, based on input from BART, its stakeholders, and the public.

These objectives provided more concrete guidance for the selection of design elements and station improvements, in alignment with feedback from all project stakeholders.

Table 4-1: Goals Matrix

| Overarching BART Station Modernization Objectives | Overarching BART Station Modernization Goals | Project Goals | Project Design Goals |
|---|--|---|--|
| Maintain reliability: Protect investment in existing system through systematic replacement of aging components and infrastructure, with an emphasis on positive customer experience. | Make Transit Work | Improve the station's function, safety, capacity and appearance. | Sustainability: Reflect overall plaza design themes of openness, transparency and sustainability. |
| Increase station capacity: Optimize the BART system's ability to meet projected ridership increases by increasing BART's capacity to carry customers. | | Ensure that the station design reflects BART's sustainability goals. | |
| Improve employee environment: Ensure that the BART workforce has the tools and space that they need to support a healthy, safe, and productive workplace. | | | |
| Advance sustainability: Reduce BART's environmental footprint through implementation of sustainable and cost-effective techniques such as conserving resources, lowering greenhouse gas emissions, and reducing maintenance costs. | | | |
| Connect BART: Maximize connectivity and facilitate multi-modal access to stations and within station areas, including transit, walking and biking. | Connect to Community | Enhance access and connections between the station and Downtown Berkeley neighborhood. | |
| Expand universal design: Improve universal design of BART stations and access to stations to provide access for all in accordance with the ADA. | | | |
| Incorporate community input: Respond to the community and customer input regarding which improvements are perceived as most important. | | | |
| Enhance customer experience: Contribute to beautification, comfort, and placemaking (e.g., art, architecture, ambience) to enhance livability and vitality at stations, and to support regional goals. | Create Place | Enhance Downtown Berkeley BART Station as a gateway to the City of Berkeley and the UC Berkeley campus. | Materials and Finishes: Highlight the existing quality of design at the station (e.g., arches) with new improvements. |
| Ensure safety and security: Enhance customer and system, real and perceived safety and security. | | Modernize and refresh the station to bring it into the 21st century. | Art, Retail, Advertising: Reflect the vibrancy of Downtown Berkeley. |
| Leverage partnerships: Protect the investment in rail transit through strategic partnerships and leveraging outside funding to match BART investments. | | Incorporate art and community identity into the station. | Lighting, Safety and Security, Passenger Accessibility: Improve passenger experience, in particular in regards to safety as well as the flow and distribution of passengers throughout station. |
| | | Add station amenities to improve customer experience. | |

4.2.1 Design Goals

This vision for a new station experience has been brought into focus and guided by the following Design Goals, selected and refined with BART to support the overall project goals:

- Highlight the existing quality of design at the station (e.g., arches) with new improvements.
- Reflect overall plaza design themes of openness, transparency and sustainability.
- Improve passenger experience, in particular in regards to safety as well as the flow and distribution of passengers throughout station.
- Reflect the vibrancy of downtown Berkeley.

Table 4-2: Project Design Goals and Objectives

| Project Design Goals | Project Design Objectives |
|--|---|
| Sustainability: Reflect overall plaza design themes of openness, transparency and sustainability. | <ul style="list-style-type: none"> Use local and renewable materials with lower embodied energy. Where opportunities exist, reduce HVAC energy cost by upgrading mechanical equipment and systems. Provide energy cost savings by upgrading the elevator to a higher efficiency system. Reduce escalator energy cost by upgrading to high-efficiency escalators. Improve water efficiency and reduce water use through upgrading plumbing fixtures and considering grey water recycling in conformance with municipal codes. Reduce emittance of VOCs through low- or no-VOC materials Provide opportunities for improved recycling and waste reduction. |
| Materials and Finishes: Highlight the existing quality of design at the station (e.g., arches) with new improvements. | <ul style="list-style-type: none"> Select materials that complement existing materials while adding a more contemporary feel and look for the station. Select materials based on sustainability, long life, low maintenance, replacement considerations, and overall aesthetics and functional qualities. Consider the use of light colors that will reflect light and make the station feel more open. |
| Art, Retail, Advertising: Reflect the vibrancy of Downtown Berkeley. | Art |
| | <ul style="list-style-type: none"> In alignment with BART's recently approved Art Program Policies: Engage artists early in the design process to influence the design of surfaces, furnishings or functional elements to the fullest extent possible. Consider art as a wayfinding element that leads passengers to areas of entrance and egress and to and from functional areas (escalators, elevators, ticket vending machines, station maps, etc). Enlist art to encourage passengers to transition from crowded concourse or platform areas to less congested spaces through the use of color, sound, texture, or lighting. Leverage station construction funds by including standard architectural materials such as glass, tile, or metalwork, in the art budget. Through artwork, bring a unique character to the station that relates to the Downtown Berkeley community. |
| | Retail |
| Lighting, Safety and Security, Passenger Accessibility: Improve passenger experience, in particular in regards to safety as well as the flow and distribution of passengers throughout station. | Advertising |
| | <ul style="list-style-type: none"> Coordinate the location of advertising spaces with art spaces and informational signage within the station architecture so that all visual information is clear to passengers. |
| | Lighting |
| Lighting, Safety and Security, Passenger Accessibility: Improve passenger experience, in particular in regards to safety as well as the flow and distribution of passengers throughout station. | <ul style="list-style-type: none"> Upgrade station lighting to improve brightness, assist passenger wayfinding, reduced energy costs and enhance the passenger experience. Enhance the passenger experience by bringing more natural light into the station, by introducing new skylights or solar-light tubes. Combine LED lighting with daylight sensors and dimming controls that automatically reduce artificial light levels when not needed in order to achieve further energy cost savings. Integrate lighting to enhance the station architecture. |
| | Safety and Security |
| | <ul style="list-style-type: none"> Promote a safe environment by activating isolated areas and providing sufficient lighting. Reduce fare evasion. Improve visibility in and to stairwells and the elevators. |
| Lighting, Safety and Security, Passenger Accessibility: Improve passenger experience, in particular in regards to safety as well as the flow and distribution of passengers throughout station. | Passenger Accessibility |
| | <ul style="list-style-type: none"> Bring the station into compliance with ADA requirements and improve all aspects of the station to enhance passenger circulation, including upgraded elevator access. Improve pedestrian wayfinding by implementing appropriate art and design solutions. Consider ways to improve accessibility and enhance the user experience through real-time, digital display information. |

4.2.2 Design Objectives

To further guide the design process, the project team developed, with input from BART, a longer set of detailed design objectives to address more specific elements of the design concept:

Passenger Accessibility

- Bring the station into compliance with ADA requirements and improve all aspects of the station to enhance passenger circulation, including upgraded elevator access.
- Improve pedestrian wayfinding by implementing appropriate art and design solutions.
- Consider ways to improve accessibility and enhance the user experience through real-time, digital display information.

Safety and security

- Promote a safe environment by activating isolated areas and providing sufficient lighting.
- Reduce fare evasion.
- Improve visibility in and to stairwells and the elevators.

Retail

- Implement an efficient retail program in the station to provide a high level of interest and service to the ridership while maintaining or enhancing passenger flow.
- Integrate retail kiosks with the architecture of the station.

Advertisement

- Coordinate the location of advertising spaces with art spaces and informational signage within the station architecture so that all visual information is clear to passengers.

Materials and Finishes

- Select materials that complement existing materials while adding a more contemporary feel and look for the station.
- Select materials based on sustainability, long life, low maintenance, replacement considerations, and overall aesthetics and functional qualities.
- Consider the use of light colors that will reflect light and make the station feel more open.

Lighting

- Upgrade station lighting to improve brightness, assist passenger wayfinding, reduced energy costs and enhance the passenger experience.
- Enhance the passenger experience by bringing more natural light into the station, by introducing new skylights or solar-light tubes.
- Combine LED lighting with daylight sensors and dimming controls that automatically reduce artificial light levels when not needed in order to achieve further energy cost savings.
- Integrate lighting to enhance the station architecture.

Art

- In alignment with BART's recently approved Art Program Policies:
- Engage artists early in the design process to influence the design of surfaces, furnishings or functional elements to the fullest extent possible.
- Consider art as a wayfinding element that leads passengers to areas of entrance and egress and to and from functional areas (escalators, elevators, ticket vending machines, station maps, etc).
- Enlist art to encourage passengers to transition from crowded concourse or platform areas to less congested spaces through the use of color, sound, texture, or lighting.
- Leverage station construction funds by including standard architectural materials such as glass, tile, or metalwork, in the art budget.
- Through artwork, bring a unique character to the station that relates to the downtown Berkeley community.

Sustainability

- Use local and renewable materials with lower embodied energy.
- Where opportunities exist, reduce HVAC energy cost by upgrading mechanical equipment and systems.
- Provide energy cost savings by upgrading the elevator to a higher efficiency system.
- Reduce escalator energy cost by upgrading to high-efficiency escalators.
- Improve water efficiency and reduce water use through upgrading plumbing fixtures and considering grey water recycling in conformance with municipal codes.

- Reduce emittance of VOCs through low- or no-VOC materials
- Provide opportunities for improved recycling and waste reduction.

The design objectives have guided the concept design for the improvements described in this Plan. Some key considerations given by the planning team are highlighted in the following sections and are organized by the four broad categories: Placemaking, Aesthetics and Customer Experience; Access and Circulation; Safety and Security; and System and Facility Upgrades.

4.3 Space Planning Framework

In establishing the space planning approach for the Downtown Berkeley BART Station modernization the planning team worked closely with BART and community stakeholders, incorporating survey input from community stakeholders and the public in order to identify and prioritize the improvement needs and opportunities for the station within the framework of the established design goals. Program and operational areas that were studied for both the concourse and platform include:

- Station circulation
- Public restrooms
- Station agent booths
- Public art
- Advertisement
- Retail
- Kiosks
- Vending machines
- Signage and Information
- Fare machines

Careful consideration was given to the station's current uses and operations, along with input from BART and community stakeholders and opinions received from riders during BART's public outreach. The design concept for the concourse and platform is shown in **Figures 4-1 through 4-11**. The design concept identifies major uses of space within the station, as well as specific improvements in features and finishes.

4.4 Sustainability

Environmental sustainability is part of the primary overarching goals for BART's station modernization program, and was identified as a high priority by community stakeholders and the public. Any projects undertaken by BART should support sustainability objectives and should be completed in an environmentally sustainable manner. The modernization plan helps to bring the station up to current practices for environmental sustainability through the use of low-impact or renewable materials and energy saving features.

Sustainability is a theme that underlies all aspects of this Plan; elements and projects were selected with sustainability in mind. In addition some projects were selected to directly support sustainability: the introduction of energy cost saving elevator and escalator systems, replacement of old fluorescent lighting technology with high-efficiency and longer lasting LEDs, and the installation of locally-sourced, recycled and low or no-VOC materials and finishes whenever possible.

Special consideration was also given to increasing opportunities for natural daylight to illuminate the concourse and platform levels with the use of skylights, transparent materials, and potential selected use of light tube and/or fiber optic technology. These systems decrease reliance on artificial lighting within the station by channeling natural light from street level down to the concourse and platform. Light tubes and fiber optics maintain a higher level of transmission efficiency through technological elements, and in some cases allow light to be ported around obstructions within the station infrastructure. These elements are planned for later stages of the modernization process, to enable careful integration with design elements of the new plaza. With each of the proposed improvements discussed in the following sections by the four broad categories, the aim is always to make sustainable design choices that are cost-effective, readily maintained and enduring.

4.5 Placemaking, Aesthetics & Customer Experience



While the primary function of the station is to facilitate transit service, it is also important to provide a functional, comfortable space that allows for placemaking and enhances aesthetics and the customers' experience. Stakeholders and the public consistently expressed a strong desire for a "refresh" of the station environment.

Materials and finishes have not changed significantly since the station's opening, and many are due for upgrade or replacement. Improvements in this category target both the aesthetics of the station interior, as well as the services and amenities provided to customers. Such improvements, done effectively, will also reinforce the station's identity within the BART system.

The replacement of the station rotunda and main entrance, as part of improvements to the station plaza on Shattuck Avenue, is expected to be completed in Fall of 2017.

To complement the improvements at the plaza level, the proposed station modernization program will enhance the passenger experience as riders enter the station and continue below ground. A series of upgrades throughout the station ranging from new ceilings, new lighting, new metal panel wall covers, new retail opportunities to serve the ridership, additional fare machines, opening the South Paid Area, re-opening public bathrooms, refinishing floors, improving signage and information aim to improve the station operation, placemaking, aesthetics, and customer experience (**Figures 4-1 through 4-11**).

BART's Downtown Berkeley BART Station is an iconic site within the City of Berkeley. Its distinct, vaulted concourse ceiling, brick walls and coffered platform ceiling are some of the features that lend the station its enduring character. The conceptual design draws inspiration from these architectural features while re-envisioning them for the twenty-first century. The proposed new station ceiling at the concourse level creates an undulating surface that recalls the rhythm of the original arches while animating and lightening the concourse. The ceiling provides an open lattice structure that will mask station infrastructure above while providing ease of access for maintenance. While the current station design concept is based on positive feedback from BART and community stakeholders, it is not a finalized design and can be expected to evolve as the planning and design process progresses.

The following sections describe the details of the considerations and proposed improvements for placemaking, aesthetics and customer experience.

4.5.1 Station Brightening & Appearance

BART's Downtown Berkeley Station has been in operation for nearly 45 year without any major significant material replacement or overall appearance renovation. The station currently is in need of refreshing its appearance by replacing the majority of its materials and finishes. The proposed modernization plan calls for the upgrading of materials and finishes in a phased approach including the following elements:

- Ceilings
- Wall panels
- Floors
- Railings and handrails
- Signage (underway)
- Lighting

4.5.1.1 Concourse

Planned improvements that will brighten and enliven the concourse level include:

- A dramatic new vaulted ceiling that will transform the station concourse while recalling the stations historic arches.
- Refurbished or new terrazzo flooring,
- New wall and information panels, including attic stock of replacement panels
- New concourse lighting.
- Transparent fare barriers, to provide an elegant solution to greater visibility and security.

The proposed wall panel system establishes a consistent look and feel for the station, while providing tremendous flexibility to accommodate the myriad uses required in a transit station. Standardized panel sizes come in variations with different cutouts, so panels can house ticket vending equipment, wayfinding and information signage, industry-standard advertisements, small retail and vending functions, access doors to storage spaces, and other uses. The panels are sized to fit into the existing bays, and standoff space behind the panels will house conduit and other systems infrastructure, keeping it out of sight and helping to prevent tampering. **Figures 4-12 through 4-19** provide conceptual renderings of options for the wall panel system.

The proposed concourse ceiling system also provides for ready access to station services, cabling and lighting above, while concealing them from plain view. To prevent birds from perching within the ceiling, mitigation measures such as bird screening or netting will be provided. **Figures 4-2, 4-4 and 4-6** provide conceptual renderings of one option for the new concourse ceiling. **Figures 4-20 through 4-24** provide additional details of the wall and ceiling systems. Note that this is not a final design for the concourse, and that the illustrations of the walls and ceiling are only examples of various options to be considered.

4.5.2.1 Platform

At the platform level, many planned improvements will elevate the appearance of the space for riders as they board or alight from their trains at downtown Berkeley. These include:

- New upgraded advertising and information panels and brighter, renewed station finishes.
- New ceiling panels to provide a brighter, cleaner environment.
- Integrated LED lighting that could be programmed to change colors based on the time of day, or to signal the arrival of trains on specific train lines.

The proposed ceiling system at the platform level would also provide for integrated access panels to allow ready access to services while concealing these elements from view (**Figures 4-25 through 4-27**). Note that the illustrations of advertising panels included in this chapter are only examples of various options that would be developed in accordance with BART's advertising program. **Figures 4-8 and 4-28** provides a conceptual rendering of the platform ceiling and integrated LED lighting system.

4.5.2 Restrooms

Existing restrooms in the Central Paid Area on the concourse level are to be upgraded to meet accessibility requirements and reopened to BART customers. Improvements will include new finishes, plumbing fixtures and lighting. Note, BART is redesigning the public restrooms at 19th St. and Powell St. Stations as part of a pilot project. The design considerations of this pilot project will address operations, maintenance, security and passenger needs and include new finishes, fixtures and lighting. The outcome of this pilot project will inform any public restroom considerations at the Downtown Berkeley BART Station.

4.5.3 Real-time Signage

In response to a need expressed by the public for better information about arriving trains, particularly on the concourse level, suggested improvements to real-time information systems are included in the Plan. These will assist passengers by facilitating timely connections to arriving BART trains and other transit services. Additional dynamic signs on the concourse will supplement existing signs at the platform level. The new signs will be located along the main travel paths at the concourse level, to provide passengers with real-time notice of arriving BART trains, as well as information for connecting transit services at the street level. **Figures 4-3, 4-5 and 4-7** display

potential locations for new real-time information signs. These locations will be further refined through a future wayfinding analysis for the station.

4.5.4 Retail

As part of a BART system-wide program, the Downtown Berkeley BART Station will incorporate new retail spaces in the future, to supplement the existing retail uses. These are likely to include both kiosks and vending stations, which will provide services and amenities intended to compliment commercial activity at the street level and to enhance the customer experience in the station. Approximately 2,000 square feet of new retail space is proposed on the concourse level, in locations identified in **Figures 4-3, 4-5 and 4-7**. These locations were assessed and selected as part of the overall space planning process, with careful consideration given to maintaining the station's sense of openness and adequate space for passenger circulation, while providing retail services along customers' primary paths of travel. BART is in the process of refining its overall retail program, to be managed by a master services vendor. The final retail locations and the specific in-station retail services to be provided will be selected in accordance with the latest version of the program.

4.5.5 Public Art

BART recently updated its Public Art policy, to better promote the inclusion of artistic elements into station design. In accord with this, the conceptual design includes the incorporation of public art throughout the station. These art installations will enhance the station's aesthetics while reinforcing downtown Berkeley's sense of identity and culture. The selection and implementation of public art in the station will be part of the ongoing station modernization process. BART will involve local artists and art institutions in future design phases to take advantage of opportunities to incorporate art into other projects. The intent is to always include art as part of the design process, and in this way promote a comprehensive, integrated art program for the station. Possibilities include the planned upgrades to the station's ceiling, walls and floors. The station team will also consider the use of artistic elements as part of new lighting and wayfinding programs. It is anticipated that public art elements will range from small features to larger elements in the station, increasing opportunities to have art throughout the space.

While public art will ideally be present in all station areas, stakeholders expressed a preference for including one or two "signature" pieces on the concourse that will be visible from most areas of the station. Such a feature will make a

bold statement and reinforce downtown Berkeley's identity as a focal point of arts and culture. **Figures 4-3, 4-5 and 4-7** indicate preliminary locations being considered for larger installations on the concourse. These locations were selected for maximum visibility within the station, while maintaining open sightlines and the sense of openness. They were also selected to have some separation from other uses of space (retail, advertising, etc.), both to feature the artwork more prominently and to avoid visual clutter. The illustrations included in this chapter are only examples of many possibilities for incorporating art into the station space. The final selection of both the locations and the artwork will be done using the process outlined above.

On the platform level, space constraints and higher levels of dirt and dust (and corresponding cleaning requirements) dissuade the installation of larger art pieces. There are, however, opportunities to incorporate art in the metal panels, floor, or walls.

4.6 Access & Circulation

The customers' ability to move through a station easily and quickly is essential to providing effective transit service. Although the Downtown Berkeley BART Station's design is able to accommodate both current and projected levels of ridership, BART and community stakeholders identified improving passenger access and flow as an important part of enhanced passenger experience. This goes beyond the issue of capacity, to provide pathways and systems of travel that provide comfortable and easy travel to all of BART's riders. Accordingly the project team gave this a high priority for the station modernization program and assessed improvement opportunities for the following areas:

- Accessibility and ADA Improvements
- Vertical Circulation
 - Escalators
 - Elevators
 - Stairs
- Bicycle Access

The design concept's plan for addressing each of these areas is summarized below, and the locations of specific items are indicated in **Figures 4-3, 4-5 and 4-7** for the concourse and **Figures 4-9 through 4-11** for the platform.

4.6.1 Accessibility & ADA Improvements

The design concept reflects BART's commitment to ensuring its system and facilities serve all of its customers

equally. This includes provisions for riders with mobility impairments and other challenges. As part of improving ADA accessibility throughout the station the modernization plan calls for:

- Upgrading existing handrails and guardrails to meet ADA standards and California Building and Safety Code.
- New accessible elevators at the street and concourse levels.
- New accessible drinking fountains.
- Relocating payphones and other fixtures to appropriate locations and heights to conform to updated accessibility requirements.

4.6.2 Vertical Circulation: Escalators, Elevators, & Stairs

The Plan incorporates design elements that target several significant opportunities to improve vertical circulation, which stakeholders and the public consistently stated a strong interest in improving at the station.

To enhance passenger flow between the concourse and platform levels an additional escalator is proposed at the Central Paid Area. In addition to increasing capacity, this will enable simultaneous bi-directional escalator travel between the concourse and platform, to better support customers with limited mobility. Two additional escalators to the street are proposed for the south end of the station, to serve the reopened South Paid Area and to improve connections to the increasingly busy neighborhoods south of the station. The addition of any new street escalators would require the installation of a full canopy at street level for the escalators to improve their operation and protect them from the elements.

The station currently has one elevator in use from the street level at Shattuck Avenue to the concourse level, which has been identified as a high priority for replacement. A proposed replacement elevator, to be installed in the same location but with an updated size and sustainable design, will increase the cab size to better accommodate emergency personnel with a gurney. The new cab will also have its two doors on the same axis to enable linear in/out travel, rather than the current design that has its doors at right angles to each other.

In addition to upgrading the street elevator system, a new, centrally-located elevator between the concourse and platform is proposed to replace the current elevator. The proposed elevator will be conveniently located in the North Paid Area, near the main path of travel to / from the street elevator, for ease of access and a better level of service.

Locating the elevator within the paid area will facilitate fare payment for customers using the elevator and will help to reduce fare evasion.

The stairs in the station will have the yellow striping replaced and a texture applied at the platform / stairwell transition to improve safety and ADA accessibility.

4.6.3 Bicycle Access & Parking

As shown in **Chapter 3** a significant number of riders using the Downtown Berkeley BART station use bicycles to access the station, and BART strongly wishes to encourage this behavior. To better serve customers traveling through the station with their bicycles, stairs to the street will be enhanced with upgraded bicycle access channels where possible to improve the vertical circulation for commuters traveling with their bikes. Enhanced bicycle storage at the concourse is also planned, to supplement the existing bicycle racks.

4.7 Safety & Security

The safety of its riders, staff and the public are the highest priority for all aspects of BART's operations. Stations must be designed, maintained and operated in a manner that promotes a safe and secure environment. The station modernization plan proposes to improve the safety for riders and increase security features throughout the station by deploying active and passive design solutions.

Safety and security considerations for the station concept design include:

- A new wall panel system that will eliminate niches and improve sightlines.
- New ceiling systems at the concourse and platform to include replacing existing lighting with high efficiency LED fixtures that will brighten the station for greater visibility.
- As part of its ongoing efforts, BART will continue with asbestos removal at the Downtown Berkeley BART Station. BART will provide ongoing assessment to identify other potential asbestos locations and their removal in advance of implementing new projects at the station.

Through dialogue with BART stakeholders, the need was identified to reduce ongoing fare evasion at the station. As a part of this objective, the new plan calls for the reopening of the South Paid Area to improve access as well as to address fare evasion at that access point to the platform. At the South Paid Area and throughout the concourse level, new fare evasion barriers will provide:

- Increased height to discourage fare violations.
- New style consistent with barriers currently being installed at other BART stations.
- Glass construction in lieu of existing metal railings to renew the station architecture and provide a greater sense of openness.
- Transparency for improved visibility between areas of the concourse and between the concourse and platform.
- Glass fare barriers will be evaluated further in light of their higher cost, but they provide an elegant and functional option.

The locations of specific items are indicated in **Figures 4-3, 4-5 and 4-7** for the concourse and **Figures 4-9 through 4-11** for the platform.

4.8 System & Facility Upgrades (State of Good Repair)

The program of improvements for the Downtown Berkeley BART Station include station-wide facility upgrades to address ongoing operations and maintenance needs for the station infrastructure and systems. These help to ensure BART can continue to provide safe, reliable and convenient service to its customers. Identified upgrades include:

- Enhanced emergency and life safety systems
- Improved Public Address system
- Accessibility upgrades
- Improved fare control
- Upgrades to train control
- Removal/replacement of outdated hardware and fixtures
- Repairs to station areas receiving excessive wear

Additional details about system and facility projects are provided in **Chapter 5** and in **Appendix D**.

4.9 Early Wins

As part of its Station Modernization program, BART has identified a number of simple, low-cost improvements termed "early wins." These improvements, while small, can have a significant effect on the overall function and appeal of the station. Such projects are typically done in advance of other, larger station improvements since they can provide large benefits at a relatively low cost. In the Downtown

Berkeley BART Station, identified early wins projects span many of the categories above and include:

- Reduction of station clutter
 - Remove inactive transfer ticket machines
 - Remove inactive pay phones and phone panels, for potential alternate use of wall space
 - Remove redundant/inoperable closed-circuit cameras and conduit
 - Install storage cabinets for station equipment and cleaning supplies, to reduce visual clutter
- General maintenance
 - Clean and repair in-station signage
 - Replace worn platform edge strips
 - Replace worn stairway striping/texturing
 - Seal locations of existing leaks against further water intrusion
- ADA upgrades
 - Repair/replace sub-standard signage
 - Install/adjust fixtures (counters, pay phones, drinking fountains) in ADA-compliant manner
 - Replace worn cane detectors

4.10 Design Concept Station Plans & Renderings

This section contains the collected plan diagrams and illustrations that demonstrate the proposed station improvements described in this chapter (**Figures 4-1 through 4-28**). Exhibits begin with an overview of the station (**Figure 4-1**), followed by the concourse level (**Figures 4-2 through 4-7**), and then followed by the platform level (**Figures 4-8 through 4-11**). For clarity, plan diagrams are presented as enlarged, partial views. Please refer to the key plan on each page to locate the enlarged plan view within the overall station. Proposed improvements are called out on the plan diagrams with a letter and number in an oval that are referenced on the accompanying plan legend. The legend also shows the corresponding project number referenced in **Chapter 5 and Appendix D** for each improvement. Plan diagrams are followed by more detailed illustrations of proposed station components.

Figure 4-1: Station Axon



01 - Proposed Concourse Ceiling and Lighting

The proposed concourse ceiling system consists of soft sound fins that float below the existing structure and existing ceiling system. The new system includes new LED lighting.

02 - Proposed Wall Cladding System

The proposed wall cladding system consist of a family of metal panels that streamlines the station and allows for various equipment to be integrated within the new metal panel system , see **Figures 4-12 to 4-19**.

03 - Existing Ceiling System

Existing ceiling system to remain.

04 - Metal Panel Enclosure

Propose to clad over existing rough plaster structure cover with new metal panels.

05 - Cable Management

Run the cable management chase behind the station structure.

06 - LED Backlights

Backlight the station ceiling

07 - Outgoing Plaza Paving Improvements

BART has already committed to improve the Station Plaza with new paving.

08 - Proposed Platform Ceiling and Lighting

The proposed Platform ceiling system consists of a new metal panel drop ceiling with integrated LED lights.

09 - Proposed Wall Tile Cladding

New tile-work to cover the existing brick walls around the entrance. The tiles should match the color and size of the Plaza pavers.

10 - Re-surface Floors

Option to re-surface the existing concourse and platform terrazzo floors, to address cracking in lieu of full replacement.

11 - New Glass Guardrail

Replace all existing balustrade railing with glass guardrail.

Figure 4-2: Concourse - North



Concourse - North

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| (S1) Break Room Upgrades | 2 |
| (S2) Inactive Pass Machine Removal | 4 |
| (S3) Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-------------------------------|--------------|
| (A1) South Paid Area - Reopen | |
| (A2) (N) Bike Channels | 27 |
| (A3) (N) Bike Racks | 28 |
| (C1) (N) Elevator | 29 , 30 |
| (C2) (N) Escalator | 31 , 32 , 33 |
| (C3) (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (M2) (E) TVM Infrastructure | |
| (P1) (N) Public Art | 40 , 42 |
| (P2) (N) Retail Panel | |
| (P3) (N) Advertising Panel | 36 |
| (P4) (N) Epoxy Terrazzo Floor Overlay | 44 |
| (P5) (N) Wall Tile | 43 |
| (P6) TVM / AFM | |
| (P7) BART Info | |
| (P8) Transfer Ticket | |
| (P9) (E) Fire Hose | |
| (P10) (E) Pay Phone | |
| (P11) (E) Station Agent Phone | |
| (P12) (E) Change Machine | |
| (P13) (E) Emergency Phone | |
| (P14) (E) ATM | |

| Item | Project No. |
|--|-------------|
| (P19) Reopened Public Restrooms | 34 |
| (P17) Wall Removal at Southwest Station Entrance | 45 |
| (P18) AFG | |
| (P19) Locked Emergency Swing Gate | |
| (P20) AC Transit Schedules | |
| (P21) (E) Pay Phone Removal | |
| (P22) (N) Pay Phone | |
| (P23) (N) Drinking Fountain | |
| (P24) (N) Real-time Signage | 48 |



Safety and Security

| Item | Project No. |
|----------------------------|-------------|
| (S4) Fare Evasion Barriers | 21 |

Figure 4-3: Concourse Level - North

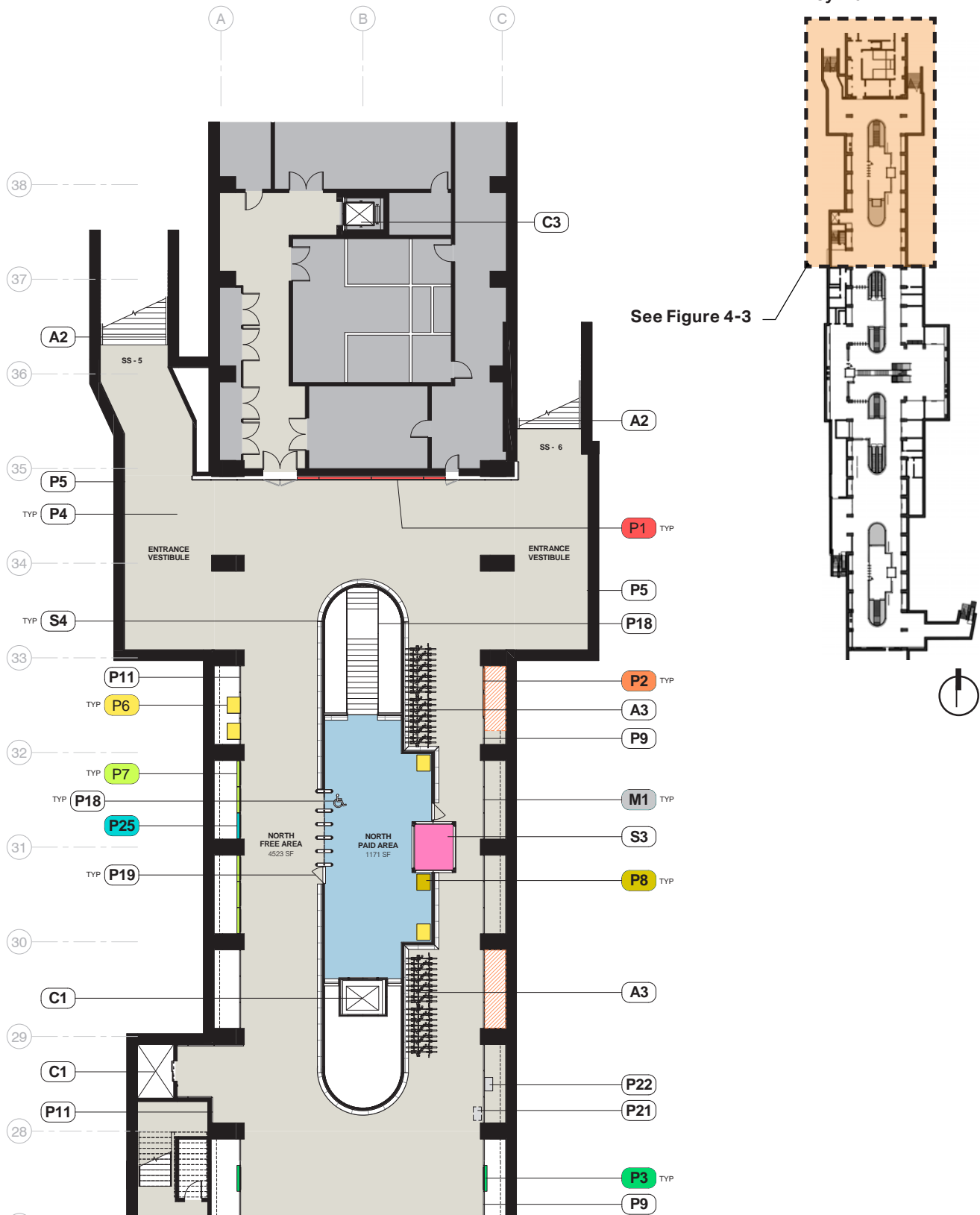


Figure 4-4: Concourse - Central



Concourse - Central

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| (S1) Break Room Upgrades | 2 |
| (S2) Inactive Pass Machine Removal | 4 |
| (S3) Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-------------------------------|---------------|
| (A1) South Paid Area - Reopen | |
| (A2) (N) Bike Channels | 27 |
| (A3) (N) Bike Racks | 28 |
| (C1) (N) Elevator | 29 , 30 |
| (C2) (N) Escalator | 31 , 32 33 |
| (C3) (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (M2) (E) TVM Infrastructure | |
| (P1) (N) Public Art | 40 , 42 |
| (P2) (N) Retail Panel | |
| (P3) (N) Advertising Panel | 36 |
| (P4) (N) Epoxy Terrazzo Floor Overlay | 44 |
| (P5) (N) Wall Tile | 43 |
| (P6) TVM / AFM | |
| (P7) BART Info | |
| (P8) Transfer Ticket | |
| (P9) (E) Fire Hose | |
| (P10) (E) Pay Phone | |
| (P11) (E) Station Agent Phone | |
| (P12) (E) Change Machine | |
| (P13) (E) Emergency Phone | |
| (P14) (E) ATM | |

| Item | Project No. |
|--|-------------|
| (P15) Reopened Public Restrooms | 34 |
| (P17) Wall Removal at Southwest Station Entrance | 45 |
| (P18) AFG | |
| (P19) Locked Emergency Swing Gate | |
| (P20) AC Transit Schedules | |
| (P21) (E) Pay Phone Removal | |
| (P22) (N) Pay Phone | |
| (P23) (N) Drinking Fountain | |
| (P24) (N) Real-time Signage | 48 |



Safety and Security

| Item | Project No. |
|----------------------------|-------------|
| (S4) Fare Evasion Barriers | 21 |

Figure 4-5: Concourse Level - Center



Figure 4-6: Concourse - South



Concourse - South

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| S1 Break Room Upgrades | 2 |
| S2 Inactive Pass Machine Removal | 4 |
| S3 Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-----------------------------|---------------|
| A1 South Paid Area - Reopen | |
| A2 (N) Bike Channels | 27 |
| A3 (N) Bike Racks | 28 |
| C1 (N) Elevator | 29 , 30 |
| C2 (N) Escalator | 31 , 32 33 |
| C3 (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. | Item | Project No. |
|-------------------------------------|-------------|--|-------------|
| M1 (N) Metal Panel | 43 | P19 Reopened Public Restrooms | 34 |
| M2 (E) TVM Infrastructure | | P17 Wall Removal at Southwest Station Entrance | 45 |
| P1 (N) Public Art | 40 , 42 | P18 AFG | |
| P2 (N) Retail Panel | | P19 Locked Emergency Swing Gate | |
| P3 (N) Advertising Panel | 36 | P20 AC Transit Schedules | |
| P4 (N) Epoxy Terrazzo Floor Overlay | 44 | P21 (E) Pay Phone Removal | |
| P5 (N) Wall Tile | 43 | P22 (N) Pay Phone | |
| P6 TVM / AFM | | P23 (N) Drinking Fountain | |
| P7 BART Info | | P24 (N) Real-time Signage | 48 |
| P8 Transfer Ticket | | | |
| P9 (E) Fire Hose | | | |
| P10 (E) Pay Phone | | | |
| P11 (E) Station Agent Phone | | | |
| P12 (E) Change Machine | | | |
| P13 (E) Emergency Phone | | | |
| P14 (E) ATM | | | |



Safety and Security

| Item | Project No. |
|--------------------------|-------------|
| S4 Fare Evasion Barriers | 21 |

Figure 4-7: Concourse Level - South

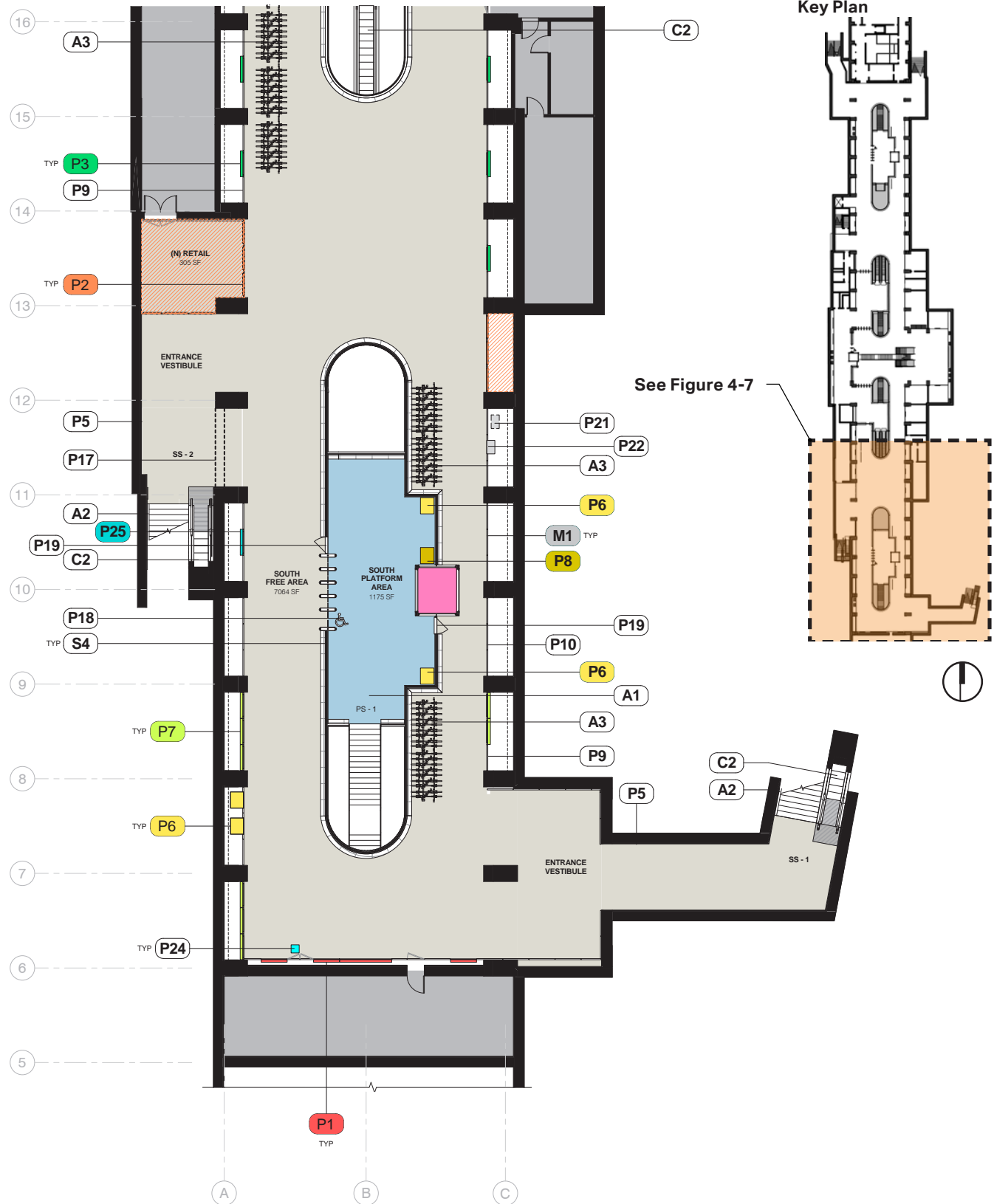


Figure 4-8: Platform - North



Legend



Facility and Systems Upgrades

- Item
 (S1) (N) Undercar Deluge System Upgrade



Access and Circulation

- | Item | Project No. |
|--------------------|-------------|
| (C1) (N) Elevator | 29 |
| (C2) (N) Escalator | 33 |
| (C3) (E) Elevator | 29 |

(N) = New
 (E) = Existing
 TYP = Typical

Space Legend

- Paid Area



Placemaking, Aesthetics, Passenger Experience

- | Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (E1) (N) Advertising Panel | 36 |
| (P2) (N) Epoxy Terrazzo Floor Overlay | 47 |
| (P3) (N) Glass Guardrail / Handrail | |
| (P4) (N) Wall Tile | 43 |
| (P5) Paint (E) Wall Black | 43 |
| (P6) (N) Station Signage | |
| (P7) Refurbished (E) Benches | |
| (P8) (N) Benches | |
| (P9) (N) DSU | |
| (P10) (N) Drinking Fountain | |

Figure 4-9: Platform Level - North

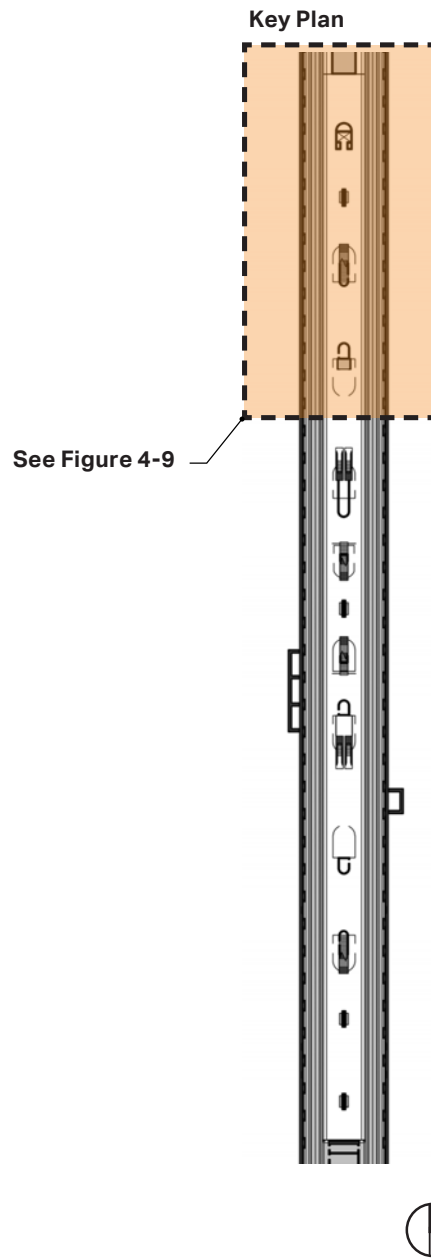
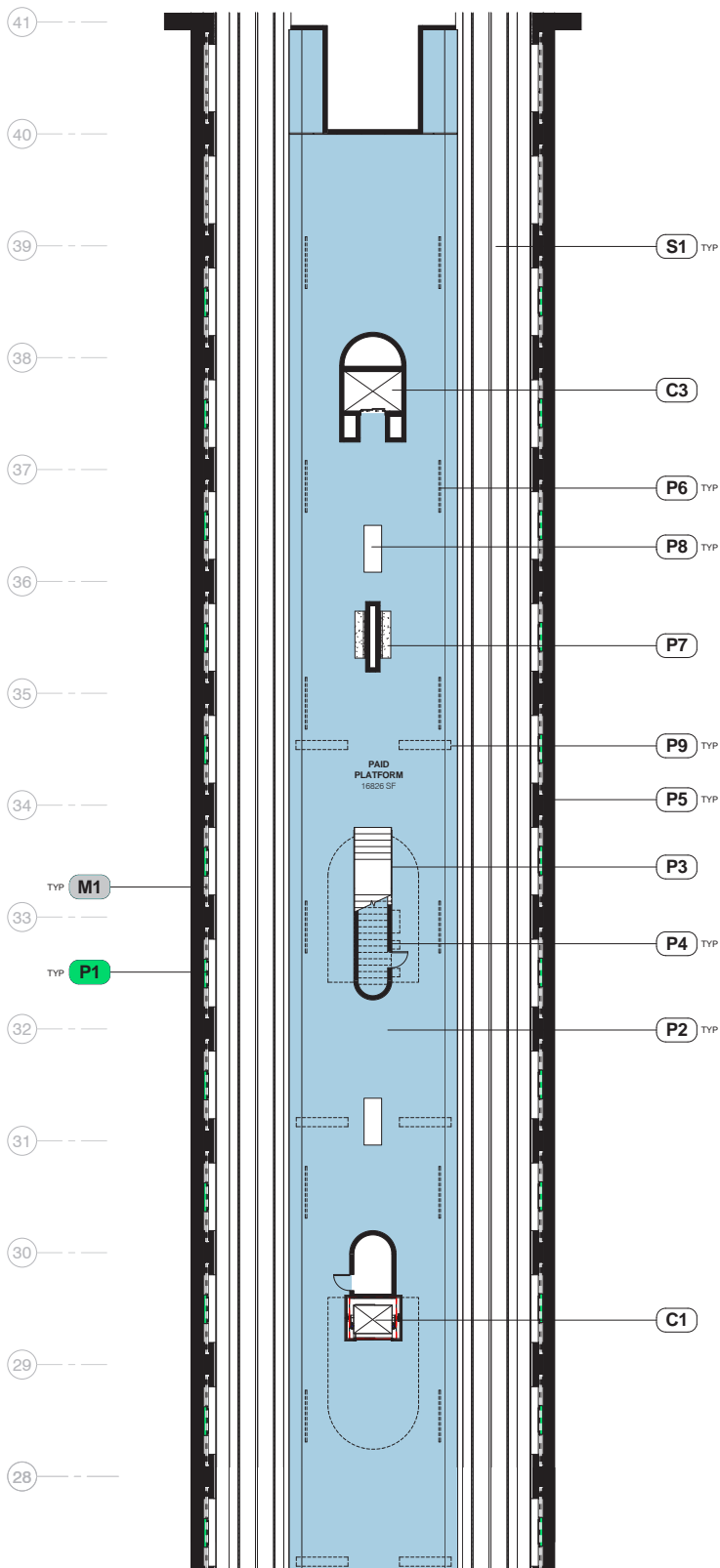
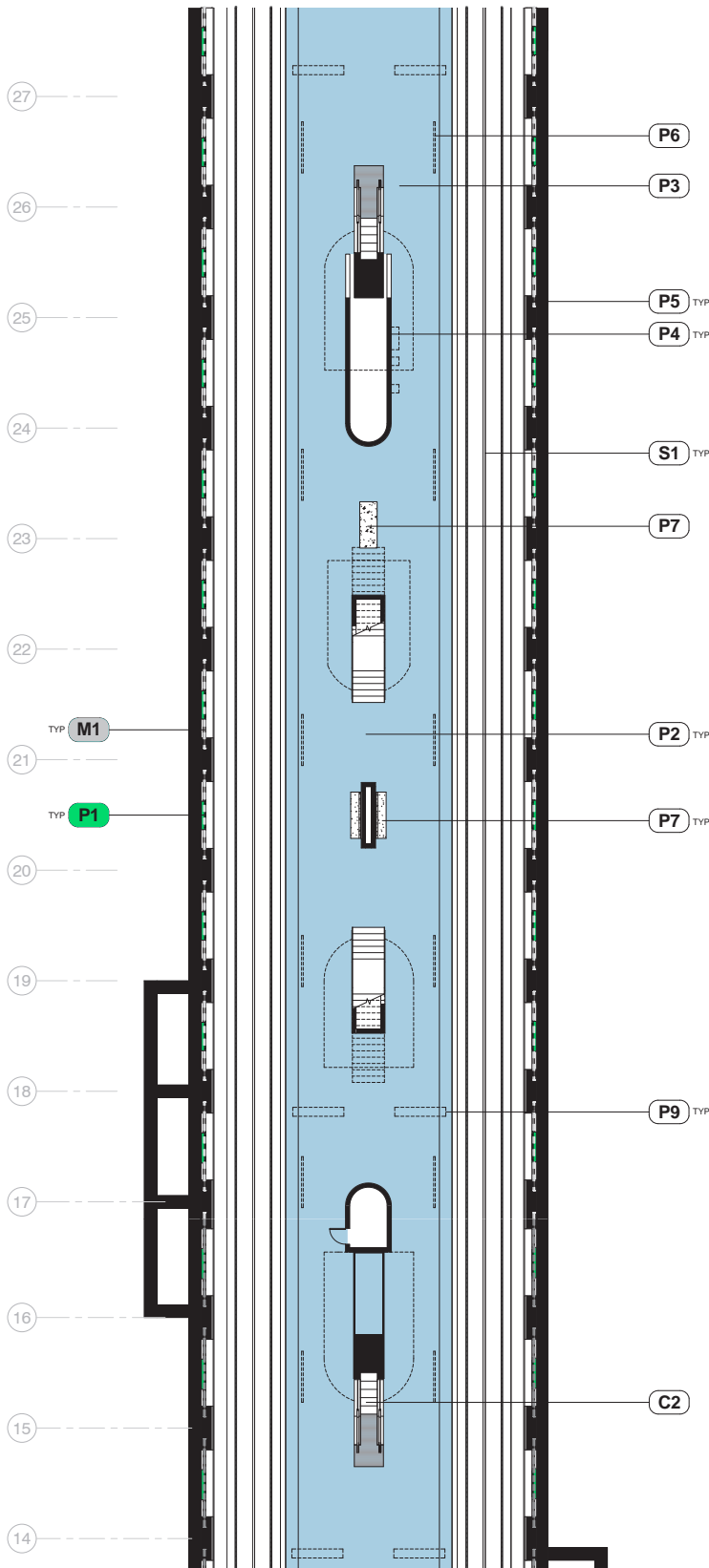


Figure 4-10: Platform Level - Center



Legend



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (P1) (N) Advertising Panel | 36 |
| (P2) (N) Epoxy Terrazzo Floor Overlay | 47 |
| (P3) (N) Glass Guardrail / Handrail | |
| (P4) (N) Wall Tile | 43 |
| (P5) Paint (E) Wall Black | 43 |
| (P6) (N) Station Signage | |
| (P7) Refurbished (E) Benches | |
| (P8) (N) Benches | |
| (P9) (N) DSU | |
| (P10) (N) Drinking Fountain | |



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| (S1) (N) Undercar Deluge System Upgrade | |



Access and Circulation

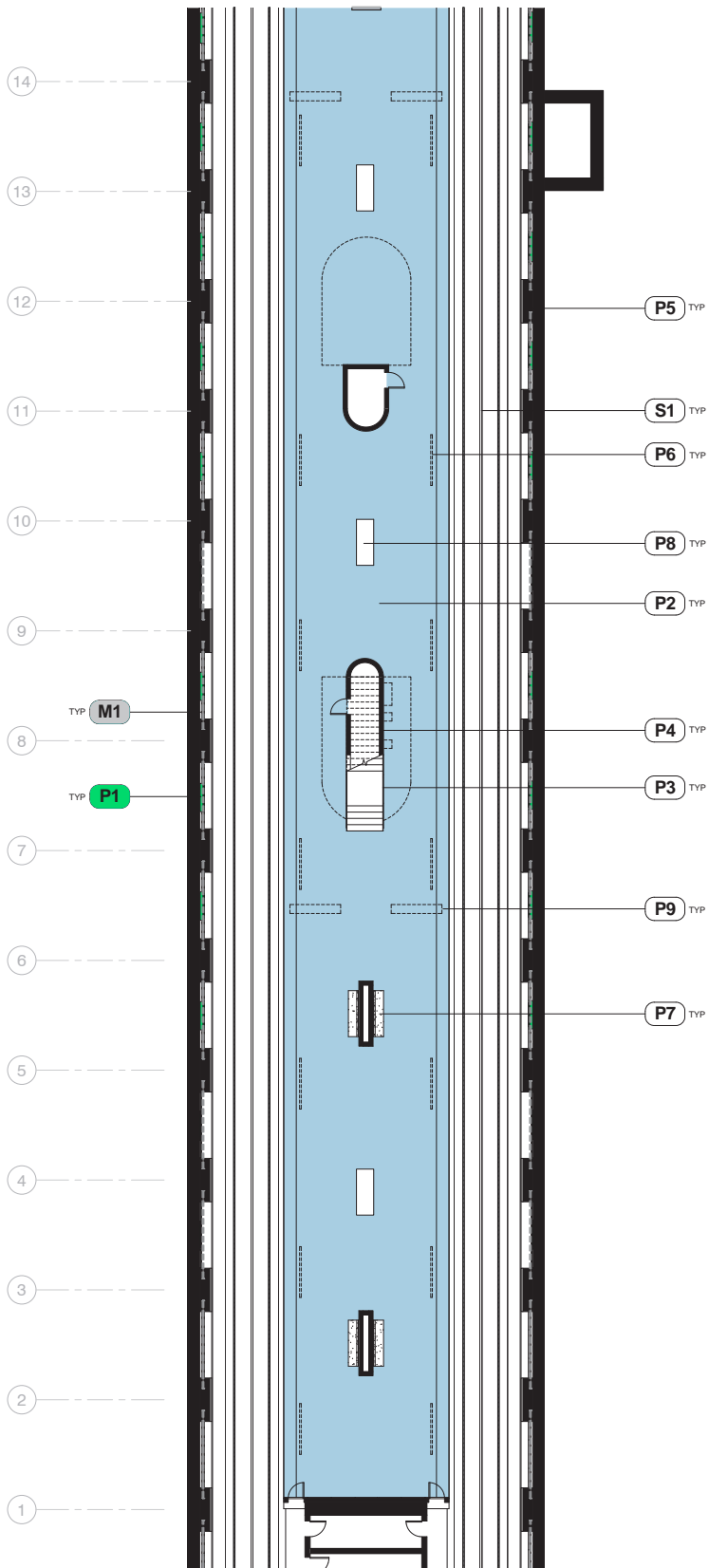
| Item | Project No. |
|--------------------|-------------|
| (C1) (N) Elevator | 29 |
| (C2) (N) Escalator | 33 |
| (C3) (E) Elevator | 29 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

■ Paid Area

Figure 4-11: Platform Level - South



Key Plan

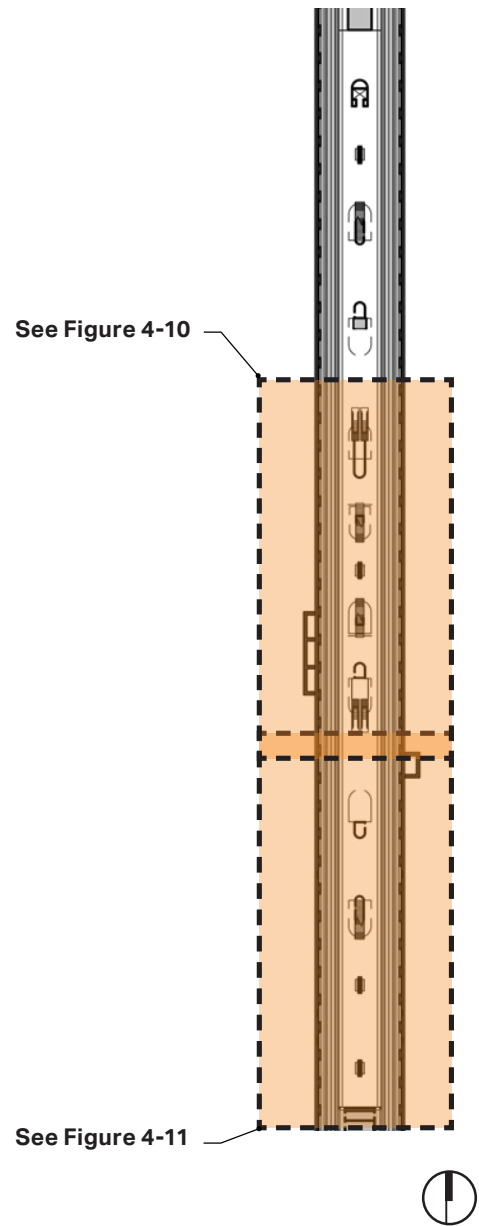
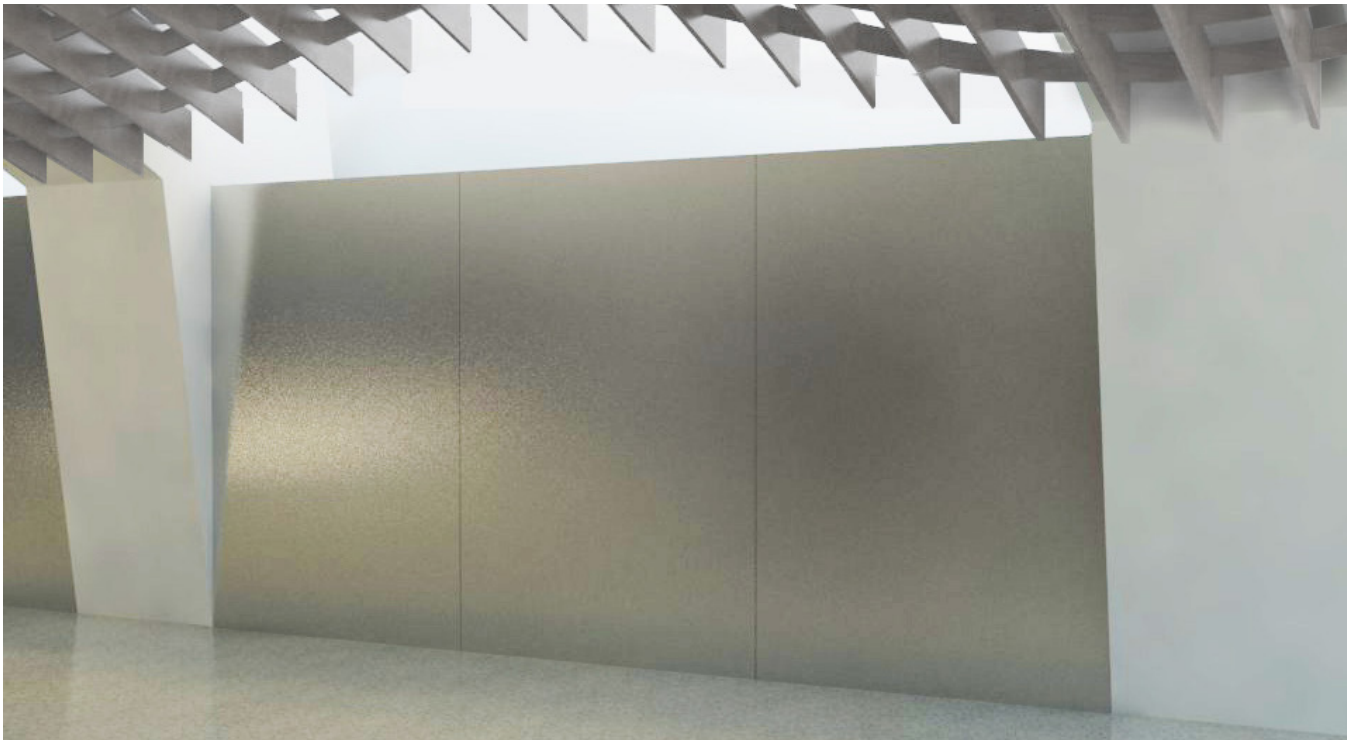


Figure 4-12: Metal Panels



Propose the installation of new metal panels in between concourse arches to eliminate niches and conceal conduit. Panels could house integrated lighting.

Figure 4-13: Information Panels



The proposed metal panels system can be adapted to house various uses; this example demonstrates information panels and system maps.

Figure 4-14: Ticket Machines



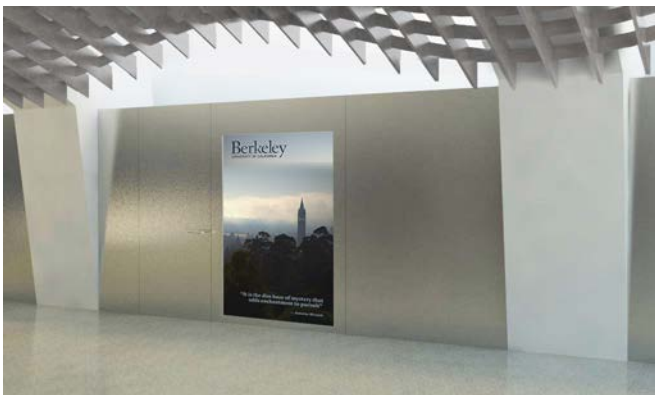
Integration of fare ticket machines in the proposed metal panels system

Figure 4-15: Art / Ad Panels



Integration of ad or art panels in the proposed metal panels system.

Figure 4-16: Backlit Advertisement Panel



Integration of backlit advertisement panels in the proposed metal panels system. Proposed to accommodate standard advertisement industry sizes.

Figure 4-17: Art Panels



Integration of art panels in the proposed metal panels system.

Figure 4-18: Vending Machine



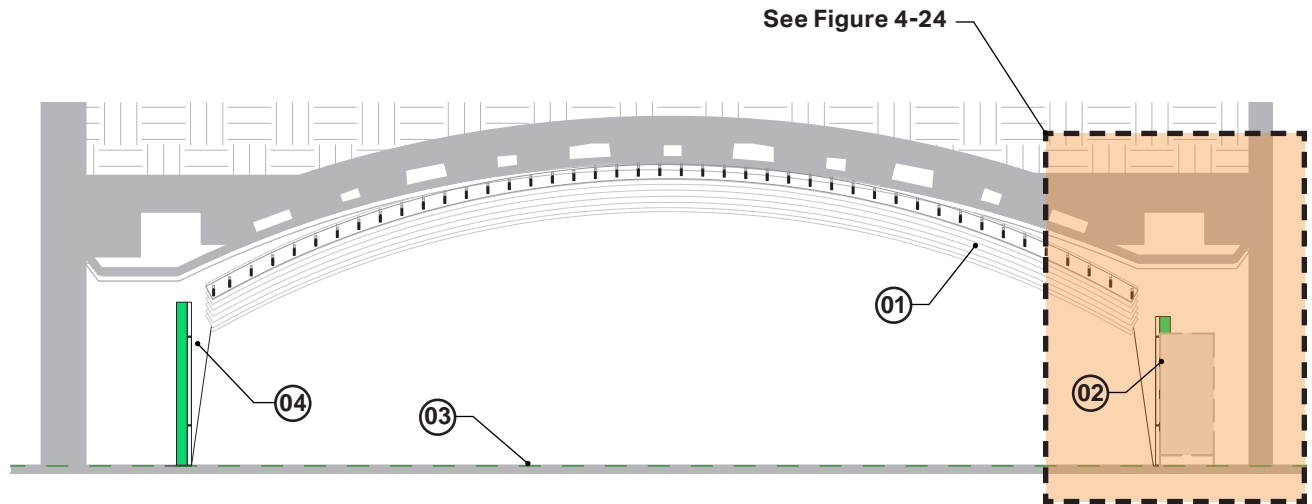
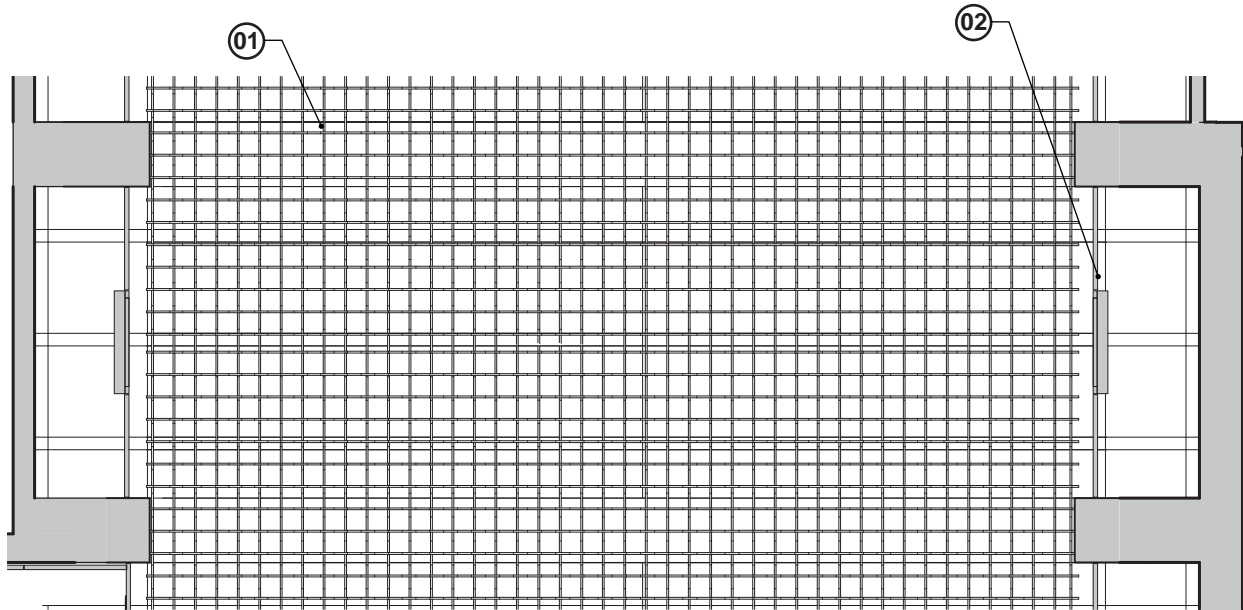
Integration of vending machines in the proposed metal panels system.

Figure 4-19: Retail



Integration of retail in the proposed metal panels system.

Figure 4-20: Concourse Reflected Ceiling Plan



01 - Proposed Concourse Ceiling and Lighting

The proposed concourse ceiling system consists of soft sound fins that float below the existing structure and existing ceiling system. The new system includes new LED lighting.

02 - Proposed Wall Cladding System

The proposed wall cladding system consist of a family of metal panels that streamlines the station and allows for various equipment to be integrated within the new metal panel system.

03- Re-surface Floors

Re-surface the existing concourse and platform terrazzo floors.

04 - Metal Panel Enclosure

Propose to clad over existing rough plaster structure cover with new metal panels.

Figure 4-21: Ceiling System Axon

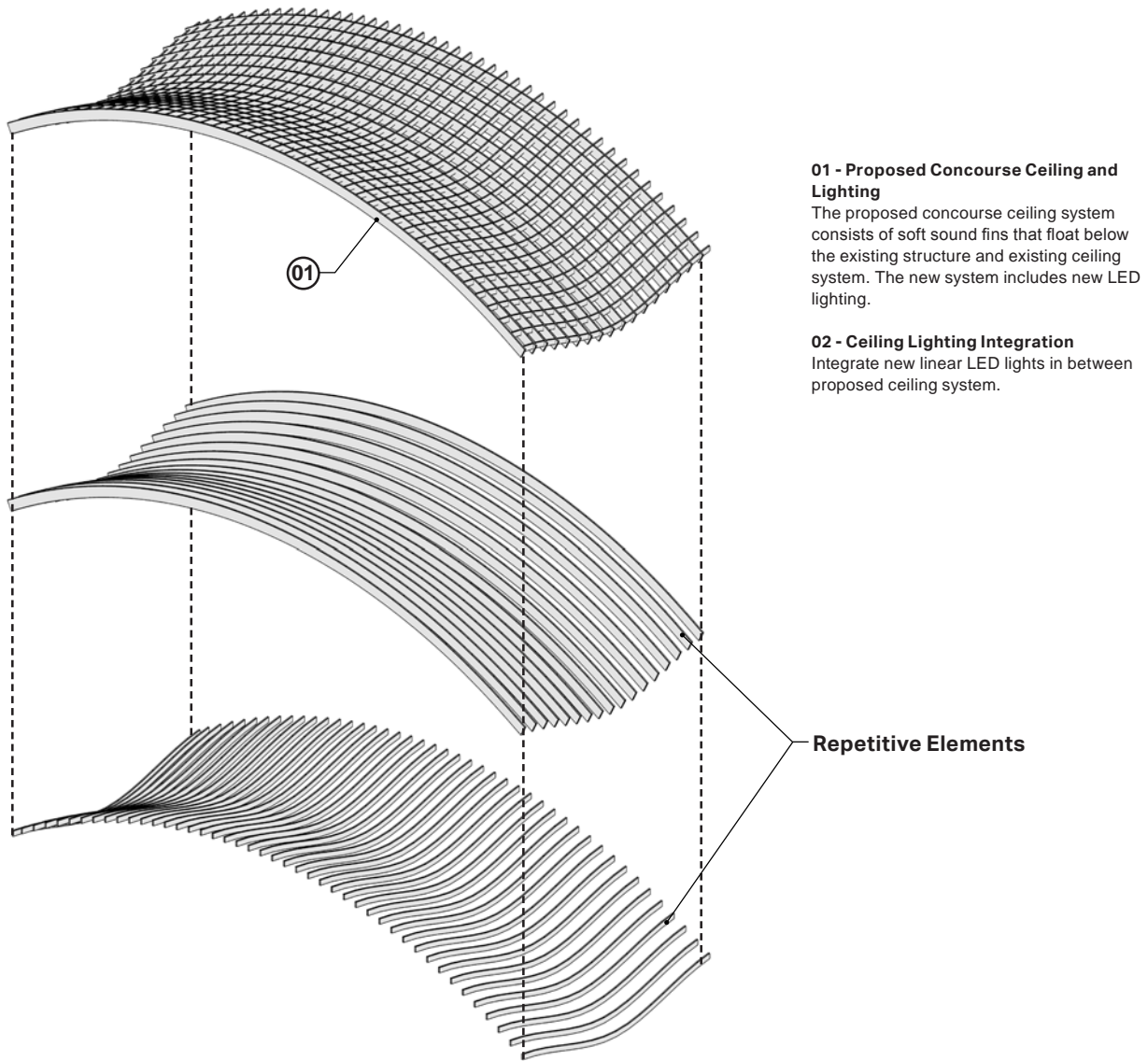


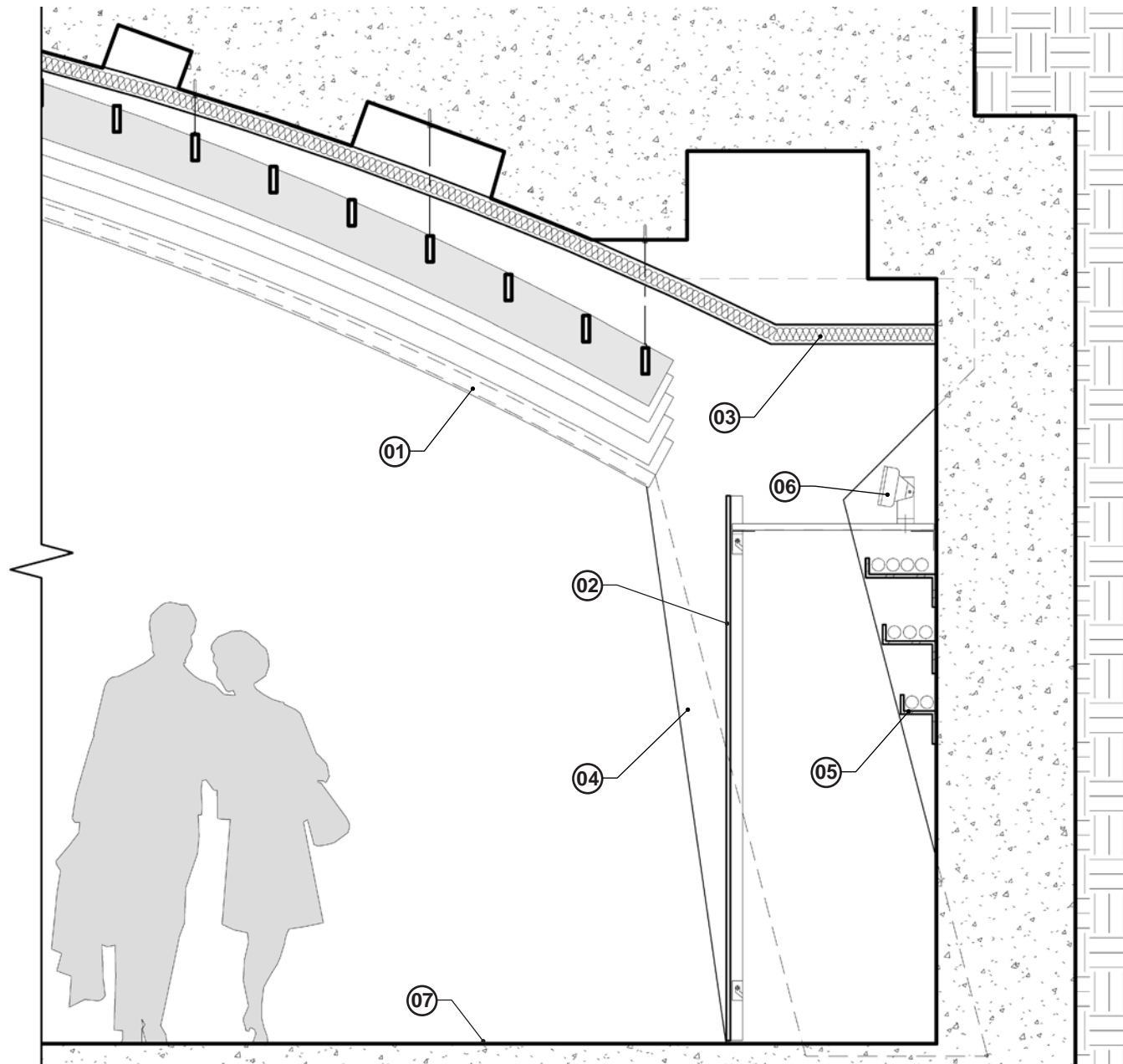
Figure 4-22: Ceiling System



Figure 4-23: Ceiling System Lighting



Figure 4-24: Concourse Enlarged Section



01 - Proposed Concourse Ceiling and Lighting
 The proposed concourse ceiling system consists of soft sound fins that float below the existing structure and existing ceiling system. The new system includes new LED lighting.

02 - Proposed Wall Cladding System
 The proposed wall cladding system consist of a family of metal panels that streamlines the station and allows for various equipment to be integrated within the new metal panel system , see **Figures 4-12 to 4-19**.

03 - Existing Ceiling System
 Existing ceiling system to remain.

04 - Metal Panel Enclosure
 Propose to clad over existing rough plaster structure cover with new metal panels.

05 - Cable Management
 Run the cable management chase behind the station structure.

06 - LED Backlights
 Backlight the station ceiling

07 - Re-surface Floors
 Option to re-surface the existing concourse and platform terrazzo floors, to address cracking in lieu of full replacement.

Figure 4-25: Platform Reflected Ceiling Plan

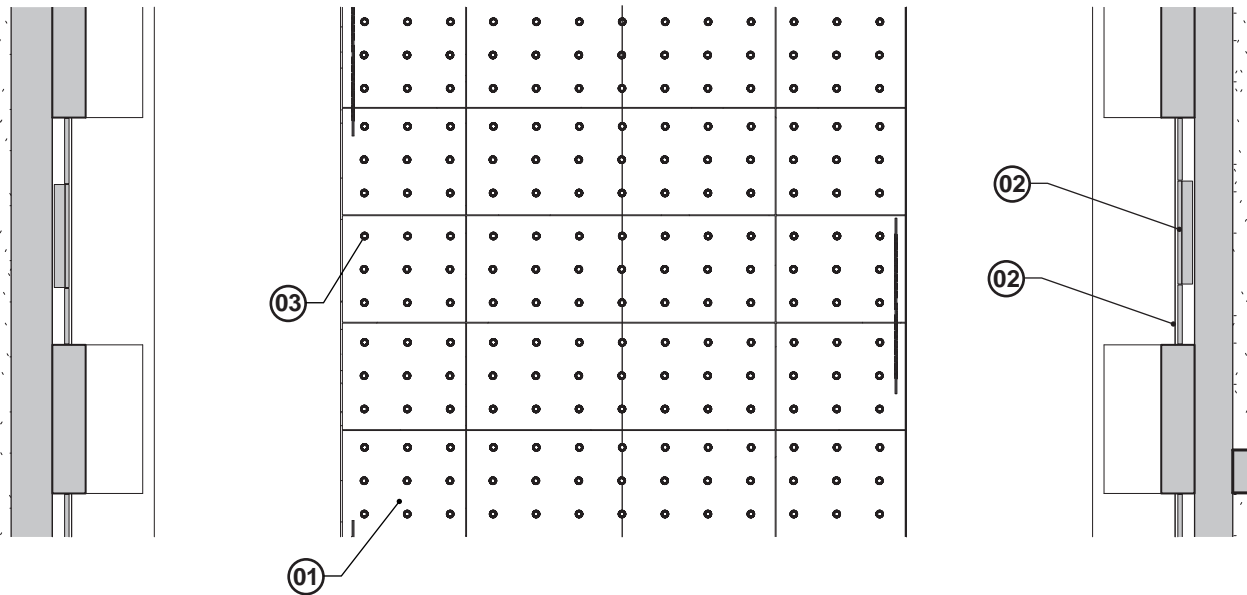
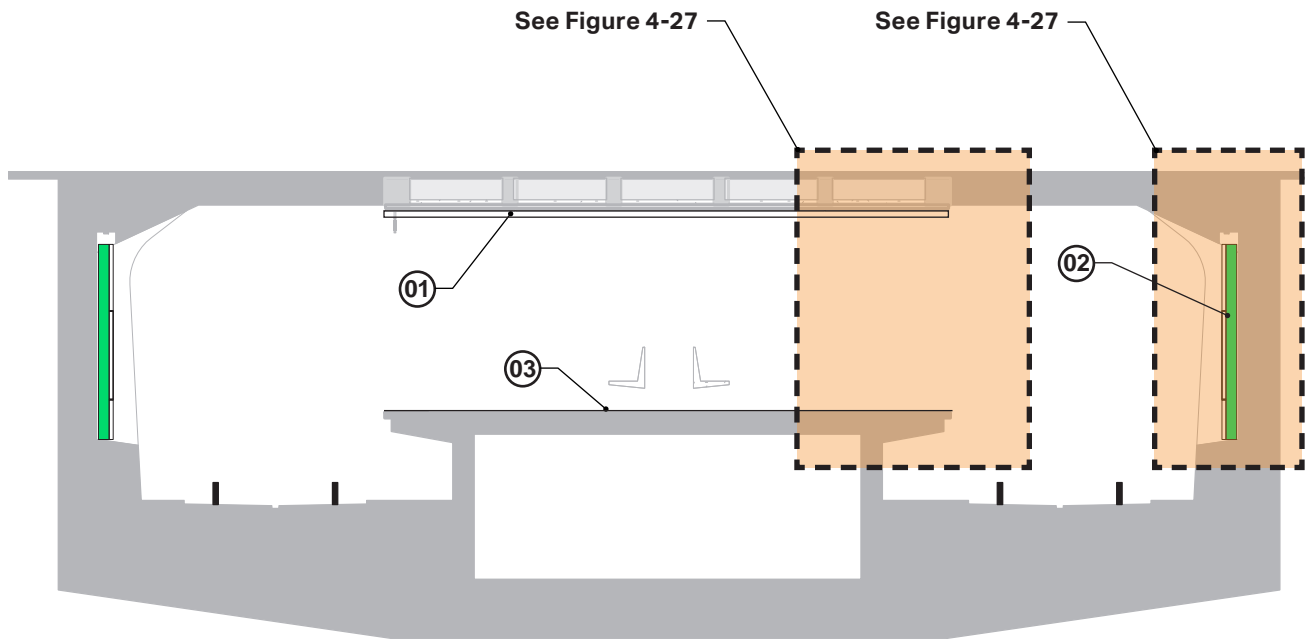


Figure 4-26: Platform Section



01 - Proposed Platform Ceiling and Lighting

The proposed Platform ceiling system consists of a new metal panel drop ceiling with integrated LED lights.

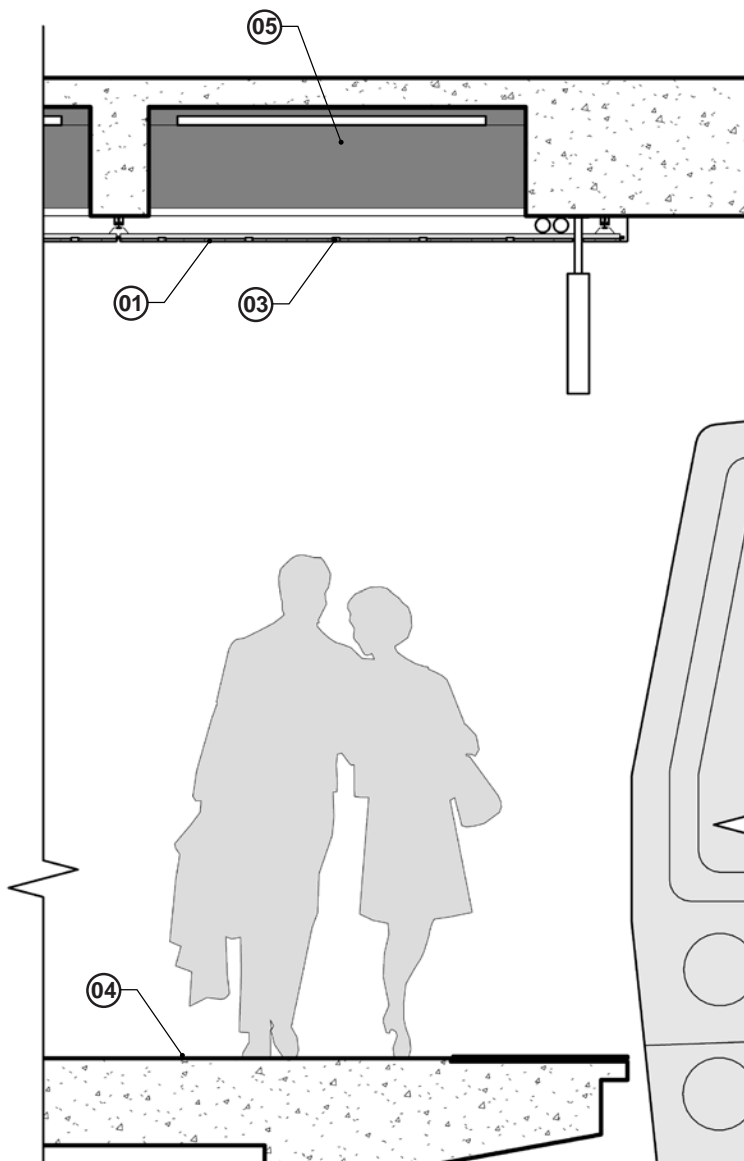
02 - Proposed Wall Cladding System

The proposed wall cladding system consist of a family of metal panels that streamlines the station and allows for various equipment to be integrated within the new metal panel system , see **Figures 4-12 to 4-19**.

03 - Re-surface Floors

Option to re-surface the existing concourse and platform terrazzo floors, to address cracking in lieu of full replacement.

Figure 4-27: Platform Enlarged Section



- 01 - Proposed Platform Ceiling and Lighting**
 The proposed Platform ceiling system consists of a new metal panel drop ceiling with integrated LED lights.
- 02 - Proposed Wall Cladding System**
 The proposed wall cladding system consist of a family of metal panels that streamlines the station and allows for various equipment to be integrated within the new metal panel system , see Figures 20-27.
- 03 - LED Lights**
 See Figure 38
- 04 - Re-surface Floors**
 Option to re-surface the existing concourse and platform terrazzo floors, to address cracking in lieu of full replacement.
- 05 - Existing Platform Coffered Ceiling and Lighting**

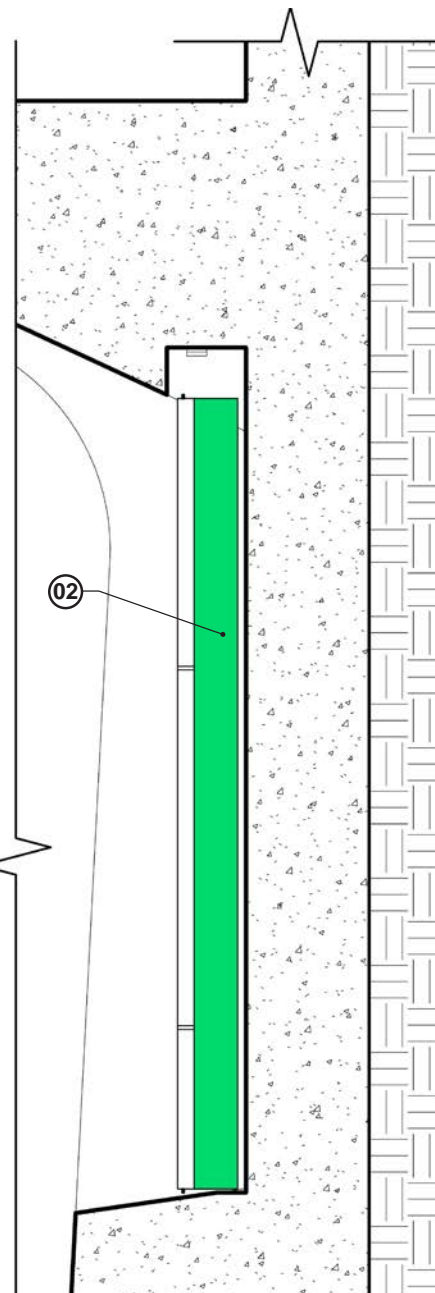


Figure 4-28: LED Lights



Implementation

5



TO ALL TRAINS

EXIT SHUTTLE ALLETON WAY

8
PLATFORM

Existing Conditions of Concourse Level
Photograph taken by AECOM in 2016

5. Implementation

The conceptual design for the Downtown Berkeley Station establishes a vision for a modernized and revitalized station that will benefit BART customers and the community. Turning this plan into reality will rely on a strategy that phases individual projects in a logical sequence, based on interdependencies among project design/construction and realistic budgeting. Projects will also be phased to prioritize those that are most important to BART, its stakeholders, and the community.

5. Implementation

Through the process of selecting a recommended modernization conceptual design plan for the Downtown Berkeley Station, several discrete projects were identified. The following sections detail an integrated prioritization strategy that defines the dependencies between project elements and places each into a proposed phased implementation plan. The implementation plan for the Downtown Berkeley Station reflects the priorities of BART, stakeholders, and the public; recognizes project predecessor / dependent relationships; and organizes projects into phases that, based on what is currently known, present the most logical and efficient approach to implement the recommended Plan.

While the implementation plans represent a comprehensive approach to addressing the Downtown Berkeley Station's modernization needs, it is recognized that additional study

and ongoing coordination will be needed as the plans are advanced. These are documented as “Next Steps” to be pursued in conjunction with the implementation plans.

5.1 Prioritization & Phasing Process

Starting with the Master Project List (see **Appendix D**) of modernization improvements described in the previous chapter, an integrated prioritization strategy was developed. Modernization improvements were organized into three general timeframes: near-term (Phase 1), middle-term (Phase 2), and long-term (Phase 3). The strategy takes the following criteria into consideration to prioritize the improvements:

- Early Wins status
- Predecessor / dependent linkages
- BART priority
- Community stakeholder priority
- Public priority
- Efficiency and estimated cost

Each of the above criteria is explained in greater detail below.

5.1.1. Early Wins Status

A key component of BART's Station Modernization Program is identifying station upgrades that are relatively low-cost investments that can be implemented quickly to bring immediate benefit. These “early wins” investments are high -priority improvements intended to be implemented in the short-term timeframe, in contrast to medium- and long-term projects that typically require more time and funding for planning, design, engineering, and coordination. Early Wins have highest priority, and are indicated in the Master Project List in **Appendix D**.

5.1.2. Predecessor / Dependent Linkages

Predecessor / dependent linkages between the proposed improvements were evaluated to identify “critical path”

improvements. Specific project components that require the completion of preceding improvement components indicate that these improvements exhibit a predecessor / dependent relationship. Sub-phases for which these relationships do not exist generally lie outside the “critical path” and are more flexible in terms of scheduling. Several predecessor / dependent relationships were identified between capacity improvements components, as summarized in **Table 5-1**. For these cases, the subsequent improvement requires the completion (or near-completion) of the improvement project before implementation can begin.

556 survey respondents to individual projects in the second outreach event in 2016. The results of these surveys were factored into the initial selection of specific projects, and then again into the prioritization of individual projects in the final phasing and implementation scheme. The full results of both public surveys are provided in **Appendices B & C**.

5.1.3. BART Priority

BART project staff, internal stakeholders, and the consultant team met regularly throughout all phases of the Downtown Berkeley Station modernization conceptual design planning process. Where applicable, individual improvements were noted as having special importance to both BART and the consultant team, and this was factored into the development of the prioritization and phasing for the overall station program.

5.1.4. Community Stakeholder Priority

The project team met several times with a group of select stakeholders, comprising local government agencies, and public and private organizations. These stakeholders provided input, through the use of Decision Lens (an interactive software for analyzing relative preferences for potential improvements) and facilitated workshops, on both overall priorities and the desirability/importance of individual improvements. **Figure 5-1** indicates the relative importance assigned by stakeholders to the individual Station Modernization objectives. **Figure 5-2** indicates the individual improvements to which stakeholders assigned the highest priority scores. These ranking and the qualitative input from the stakeholders were taken into account when prioritizing the improvements in the overall phasing scheme presented below.

5.1.5. Public Priority

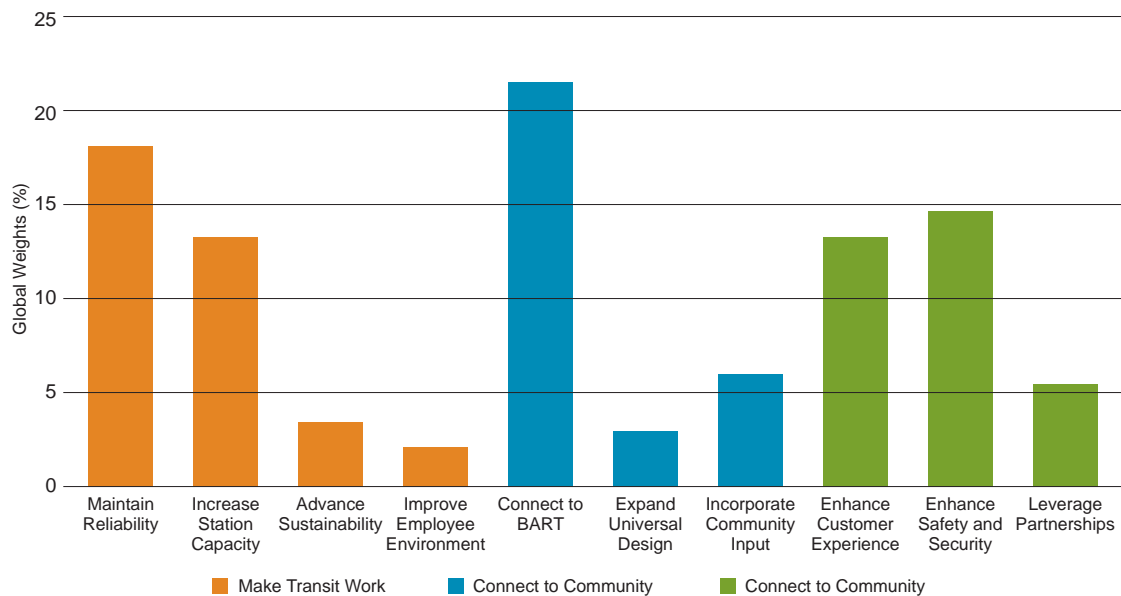
The project team conducted direct public outreach in the station twice during the project: the first at the beginning of the design alternatives development (September/October 2015), and the second during the implementation planning and process (September 2016). Each outreach effort included a public survey that participants could fill out at the event or on-line. **Table 5-2** indicates the importance assigned by 1,031 survey respondents to the initial list of prospective station improvements in the first outreach event in 2015. **Table 5-3** indicates the rankings assigned by the

Table 5-1: Project Predecessor / Successor Relationships

| Predecessor Project | Successor Project(s) |
|----------------------------|---|
| Asbestos Testing/Abatement | All projects involving disturbance of materials containing asbestos |
| Lighting | Walls and Ceilings, Emergency Lighting |
| Walls and Ceilings | Fire Sprinklers, Lighting, Real-Time Signage, Advertising, Retail |
| Floors | Fare Evasion Barriers, Retail |

Source: AECOM, 2016

Figure 5-1: Community Stakeholder Objectives Rankings



Source: AECOM, 2016

Figure 5-2: Stakeholder Improvement Scores

| Alternatives Name | Value | Value Scale | | | | |
|---|-------|-------------|------|-----|------|---|
| | | 0 | 0.25 | 0.5 | 0.75 | 1 |
| 2. Reopen the South Paid Area | 1.000 | [Full bar] | | | | |
| 19. Upgrade the ceiling/wall panels and treatments on the platform | 0.917 | [91.7% bar] | | | | |
| 21. Install new real-time signage/wayfinding | 0.917 | [91.7% bar] | | | | |
| 5. Install new bicycle channels in all street-entrance stairs | 0.833 | [83.3% bar] | | | | |
| 18. Upgrade the ceiling/wall panels and treatments in the concourse | 0.750 | [75% bar] | | | | |
| 23. Install new energy-efficient light fixtures on the platform | 0.667 | [66.7% bar] | | | | |

Source: AECOM, 2016

Table 5-2: Public Ranking of Potential Improvements (Public Survey #1 - October 2015)

| Feature | Average Score |
|---|---------------|
| Maintain and upgrade station infrastructure and functionality | 4.28 |
| Improve general station cleanliness and upkeep | 4.1 |
| Promote sustainability through efficient building systems and design | 3.87 |
| Improve safety through better sightlines/visibility | 3.66 |
| Improve lighting quality and efficiency | 3.55 |
| Provide public restrooms | 3.45 |
| Reopen the fare gates/platform access at south end of station | 3.4 |
| Improve bicycle access (new stairwell channels, more parking) | 3.36 |
| Add additional escalator access from street to concourse and/or concourse to platform | 3.1 |
| Update station architecture and finishes | 3.04 |
| Replace the street-to-concourse elevator | 2.99 |
| Integrate art in the station, to reflect the area’s unique character | 2.97 |
| Create thematic links to Berkeley culture and institutions | 2.76 |
| Provide more in-station shops and services | 2.56 |

Source: AECOM, 2015

Table 5-3: Public Ranking of Potential Improvements (Public Survey #2 - October 2016)

| Project | Average Score |
|---|---------------|
| Train arrival information on concourse | 4.44 |
| Increased natural lighting | 4.19 |
| Energy-efficient light fixtures | 4.16 |
| Universal accessibility upgrades for the disabled, bikes, and luggage | 4.15 |
| Reopened public restrooms | 3.74 |
| Reopened South Paid Area and faregates | 3.74 |
| New bike channels on street stairways | 3.55 |
| More secure bike parking on concourse | 3.53 |
| Additional street escalators | 3.5 |
| Additional platform escalators | 3.49 |
| New platform elevator (relocated to central location) | 3.47 |
| Public art | 3.42 |
| New street elevator (replacement) | 3.41 |
| Platform – New ceiling/wall/floor | 3.31 |
| New public address speaker system | 3.29 |
| Concourse – New ceiling/wall/floor | 3.27 |
| Higher guard rails/barriers to reduce fare evasion | 3.16 |
| Additional retail & vending on concourse | 2.89 |

Source: AECOM, 2016

5.1.6. Cost Estimates

The final criterion considered the construction cost for each improvement. Typically, all other criteria being equal, lower-cost projects would be implemented before higher-cost projects, maximizing cost/benefit considerations. Improvements were assigned one of six estimated construction cost categories as listed below.

| | |
|----------|--------------------|
| (-\$) | Paid for by others |
| \$ | < \$500K |
| \$\$ | \$500K - \$1.5M |
| \$\$\$ | \$1.5M - \$2.5M |
| \$\$\$\$ | > \$2.5M |

Assignments to the cost categories were based on preliminary cost estimates, prepared for the individual improvements selected for inclusion in the overall Plan. Estimates were based on direct data from BART for station-specific improvements or for comparable improvements at other BART stations. For those projects on the list for which no comparable cost data was available, the consultant team developed a rough order of magnitude cost based on comparable improvements on other systems and/or industry data.

The cost categories assigned to the projects are shown in the Phasing tables in **Section 5.2**, and in the Master Project List in **Appendix D**.

5.2. Implementation Plan

The modernization plan for Downtown Berkeley has several improvements with interdependencies, as illustrated in **Figure 5-3**, which provides a general summary of cost, timing, and sequencing. Relative cost is shown on the vertical axis with the lowest cost at the bottom.

Elapsed time from the present is shown on the horizontal axis, starting from the left. Sequencing is indicated by the lines and arrows connecting the packages. The category is identified by color.

Early Wins could start immediately, followed by asbestos testing and abatement, as necessary. The asbestos testing and abatement, as needed, is proposed prior to any station improvements that require intrusion.

One of the principles underlying the implementation plan is minimizing the area within the station under construction at any one time to limit impact and inconvenience to customers. The Plan generally focuses on the concourse elements in Phase 1 and the platform starting in Phase 2.

The relative cost of the Early Wins is low, while the cost of the modernization of the concourse ceilings and walls, elevators and escalators, and real-time signage are high. Renovation of the platform ceilings and walls, concourse floor, and lightning are relatively moderate cost improvements.

Figure 5-3 shows packages of improvements that may be implemented independently, and their placement is indicative of their relative phasing. The improvements and their relative costs are shown by phase in **Table 5-4** through **Table 5-6**.

Each improvement is identified by number and category. The project numbers and color coding of category in the table are consistent with those in the notes and call outs shown on the plan sheets in **Chapter 4**, allowing the improvement description to be cross-referenced with its location.

5.3. Next Steps

The strategy established in this plan for the Downtown Berkeley Station establishes a long-term vision for station improvements. The plan's framework of priorities and improvements can be used as a guide for selection and implementation as BART's scheduling and available funding permit.

Preliminary engineering should begin on selected Phase-1 improvements, to enable their implementation on a timely basis. Work on the street-level plaza and some associated improvements, such as the reopening of the South Paid Area, are planned to begin concurrently with the publication of this plan in 2017, and opportunities such as these should be leveraged for the completion of complementary improvements.

BART will continue to work with internal and external stakeholders to advance the improvements that require additional coordination, and BART will continue to engage the communities as designs for individual improvements are further developed.

Figure 5-3: Downtown Berkeley Station Implementation Plan

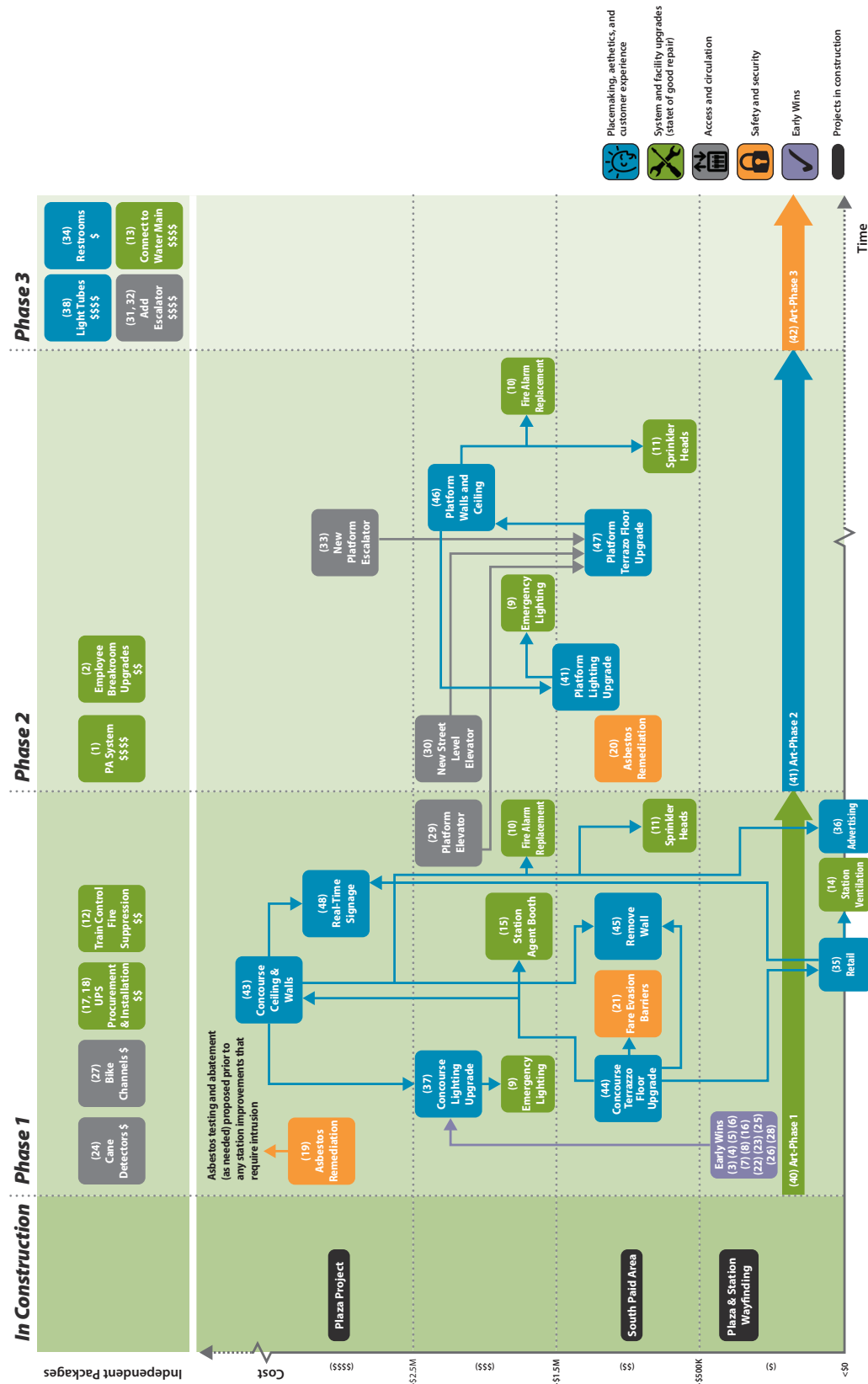


Table 5-4: Phase 1 Project List

| Category | Improvement Type | Project Number | Station Level | Project Name | Cost Category (\$-\$\$\$\$) |
|-------------------------------|-----------------------------------|----------------|---------------|---|-----------------------------|
| Facility and Systems Upgrades | Maintenance & Repair | 3 | Both | Removal of extra CCTV cameras | \$ (<\$500k) |
| Facility and Systems Upgrades | Maintenance & Repair | 4 | Concourse | Removal of inactive transfer pass machines | \$ (<\$500k) |
| Facility and Systems Upgrades | Maintenance & Repair | 5 | Concourse | Cleaning/repair of miscellaneous station signage | \$ (<\$500k) |
| Facility and Systems Upgrades | Maintenance and Repair | 6 | Platform | New platform edge strips | \$ (<\$500k) |
| Facility and Systems Upgrades | Maintenance and Repair | 7 | Platform | Sealing against water intrusion | \$ (<\$500k) |
| Facility and Systems Upgrades | Maintenance and Repair | 8 | Concourse | Removal of inactive pay telephone panels | \$ (<\$500k) |
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 9 | Both | Stations, Emergency Lighting - Phase 3 Upgrade | \$\$\$ (\$1.5M - \$2.5M) |
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 10 | Both | Station Fire Alarm Replacement - Phase 4 Upgrade | \$\$\$ (\$1.5M - \$2.5M) |
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 11 | Both | Sprinkler heads replacement: fire protection | \$\$ (\$500k - \$1.5M) |
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 12 | Concourse | Fire suppression in train control rooms | \$\$ (\$500k - \$1.5M) |
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 14 | Concourse | Station Ventilation | -\$ (Paid for by others) |
| Facility and Systems Upgrades | Employee Environment | 15 | Concourse | Station Agent Booth Replacement and Upgrade | \$\$\$ (\$1.5M - \$2.5M) |
| Facility and Systems Upgrades | Maintenance & Repair | 16 | Concourse | Storage cabinets installation, sightlines, and capacity | \$ (<\$500k) |

Note: A detailed list with project descriptions is provided in **Appendix D**.

Source: AECOM, 2017

Table 5-4: Phase 1 Project List (Continued)

| Category | Improvement Type | Project Number | Station Level | Project Name | Cost Category (\$-\$\$\$\$) |
|---|---------------------------|----------------|---------------|---|-----------------------------|
| Facility and Systems Upgrades | Systems Engineering | 17 | Concourse | Train Control Room, Procurement of Uninterruptible Power Supply (UPS) | \$\$ (\$500k - \$1.5M) |
| Facility and Systems Upgrades | Systems Engineering | 18 | Concourse | Train Control Room, Installation of UPS | \$\$ (\$500k - \$1.5M) |
| Safety & Security | Asbestos Abatement | 19 | Concourse | Asbestos Abatement | \$\$\$\$ (>\$2.5M) |
| Safety & Security | Fare Evasion Reduction | 21 | Concourse | Fare Evasion Barriers (glass) (1400 linear ft.) | \$\$ (\$500k - \$1.5M) |
| Access & Circulation | ADA Compliance & Upgrades | 22 | Both | ADA-compliant signage | \$ (<\$500k) |
| Access & Circulation | ADA Compliance & Upgrades | 23 | Both | ADA-compliant fixtures/features | \$ (<\$500k) |
| Access & Circulation | ADA Compliance & Upgrades | 24 | Both | Cane Detector | \$ (<\$500k) |
| Access & Circulation | ADA Compliance & Upgrades | 25 | Both | Stairway Yellow Striping | \$ (<\$500k) |
| Access & Circulation | ADA Compliance & Upgrades | 26 | Platform | Texture on Stairs at Platform/Stairwell Transition | \$ (<\$500k) |
| Access & Circulation | Bicycle Access | 27 | Concourse | Upgraded bicycle channels on entrance stairs | \$ (<\$500k) |
| Access & Circulation | Bicycle Access | 28 | Concourse | Additional bicycle racks | \$ (<\$500k) |
| Access & Circulation | Escalators & Elevators | 29 | Both | Newly-located platform elevator in North Paid Area | \$\$\$ (\$1.5M - \$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Customer Amenity | 35 | Concourse | Additional retail spaces | -\$ (Paid for by others) |
| Placemaking, Aesthetics & Customer Experience | Customer Amenity | 36 | Both | Additional advertising infrastructure | -\$ (Paid for by others) |
| Placemaking, Aesthetics & Customer Experience | Lighting | 37 | Concourse | Energy-efficient lighting system (concourse - 23k sq. ft.) | \$\$\$ (\$1.5M - \$2.5M) |

Note: A detailed list with project descriptions is provided in **Appendix D**.

Source: AECOM, 2017

Table 5-4: Phase 1 Project List (Continued)

| Category | Improvement Type | Project Number | Station Level | Project Name | Cost Category (\$-\$\$\$\$) |
|---|---|----------------|---------------|--|-----------------------------|
| Placemaking, Aesthetics & Customer Experience | Public Art | 40 | Concourse | Public art infrastructure (Phase 1) | \$ (<\$500k) |
| Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 43 | Concourse | New ceiling/wall panels & treatments (concourse) | \$\$\$\$ (>\$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 44 | Concourse | Epoxy terrazzo overlay for floor (concourse - 23k sq. ft.) | \$\$\$ (\$1.5M - \$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 45 | Concourse | Wall removal at Southwest station entrance | \$\$ (\$500k - \$1.5M) |
| Placemaking, Aesthetics & Customer Experience | Wayfinding and signage | 48 | Concourse | Real-Time Arrival Signage | \$\$\$\$ (>\$2.5M) |

Note: A detailed list with project descriptions is provided in **Appendix D**.

Source: AECOM, 2017

Table 5-5: Phase 2 Project List

| Category | Improvement Type | Project Number | Station Level | Project Name | Cost Category (\$-\$\$\$\$) |
|---|--|----------------|---------------|---|-----------------------------|
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 1 | Both | Upgraded public communications systems | \$\$\$\$ (>\$2.5M) |
| Facility and Systems Upgrades | Employee Environment | 2 | Concourse | Upgrades to employee break room | \$\$ (\$500k - \$1.5M) |
| Safety & Security | Asbestos Abatement | 20 | Platform | Asbestos Abatement | \$\$ (\$500k - \$1.5M) |
| Access & Circulation | Escalators & Elevators | 30 | Concourse | Replacement street elevator | \$\$\$ (\$1.5M - \$2.5M) |
| Access & Circulation | Escalators & Elevators | 33 | Both | Additional escalator: center of platform | \$\$\$\$ (>\$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Lighting | 39 | Platform | Energy-efficient lighting system (platform - 17k sq. ft.) | \$\$ (\$500k - \$1.5M) |
| Placemaking, Aesthetics & Customer Experience | Public Art | 41 | Concourse | Public art infrastructure (Phase 2) | \$ (<\$500k) |
| Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Platform | 46 | Platform | New ceiling/wall panels & treatments (platform) | \$\$\$ (\$1.5M - \$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Platform | 47 | Platform | Epoxy terrazzo overlay for floor (platform - 17k sq. ft.) | \$\$ (\$500k - \$1.5M) |

Note: A detailed list with project descriptions is provided in **Appendix D**.

Source: AECOM, 2017

Table 5-6: Phase 3 Project List

| Category | Improvement Type | Project Number | Station Level | Project Name | Cost Category (\$-\$\$\$\$) |
|---|-----------------------------------|----------------|---------------|---|-----------------------------|
| Facility and Systems Upgrades | Electrical/Mechanical Engineering | 13 | Both | Connection to City Water Main | \$\$\$\$ (>\$2.5M) |
| Access & Circulation | Escalators & Elevators | 31 | Concourse | Additional street escalator: Southeast entrance | \$\$\$\$ (>\$2.5M) |
| Access & Circulation | Escalators & Elevators | 32 | Concourse | Additional street escalator: Southwest entrance | \$\$\$\$ (>\$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Customer Amenities | 34 | Concourse | Reopened public restrooms | \$ (<\$500k) |
| Placemaking, Aesthetics & Customer Experience | Lighting | 38 | Concourse | Light tubes and installations for increased natural light | \$\$\$\$ (>\$2.5M) |
| Placemaking, Aesthetics & Customer Experience | Public Art | 42 | Concourse | Public art infrastructure (Phase 3) | \$ (<\$500k) |

Note: A detailed list with project descriptions is provided in **Appendix D**.

Source: AECOM, 2017

Appendix

A



Existing Conditions of Platform Level
Photograph taken by AECOM in 2016

Appendix A

LIST OF TECHNICAL DOCUMENTS

1. Drawings and Cost Estimate for Reopening of South Paid Area (May 2015)
2. Technical Memorandum: “Downtown Berkeley Station – Existing Conditions, Opportunities, and Constraints” (September 2015)
3. Station Base Plan (January 2016)
4. Station 3D Model (January 2016)
5. Public Outreach #1 – Outreach and Survey Summary Report (October 2015)
6. “Design Alternatives” Memorandum (January 2016)
7. Public Outreach #2 Survey Summary Report (October 2016)

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Appendix

B



Existing Conditions of Platform Level
Photograph taken by AECOM in 2016

Appendix B

BETTER BART. BETTER BAY AREA.



**DOWNTOWN BERKELEY
BART STATION**

Modernization Study

Outreach and Survey Summary Fall 2015



DOWNTOWN BERKELEY BART STATION Modernization Study: Outreach + Survey Summary



Introduction

BART held two public in-station outreach events at the Downtown Berkeley BART Station to acquire riders’ opinions on the modernization of the Downtown Berkeley station. They were held on September 30, 2015 during the evening commute (4-7 pm) and on October 1, 2015 during the morning commute (7-10 am). BART riders and members of the public could learn about the modernization study, fill out a survey, talk to BART planning staff and provide comments. In addition, between September 30 and October 19, 2015, BART collected feedback through an online survey. BART received **1,031** responses and **357** comments during this period. **Part I** of this summary report displays the results of the survey responses; **Part II** summarizes the free-response comments and suggestions received, which were analyzed for popular themes and requests from BART riders.

Part I – Survey Question Results

Respondents ranked the level of importance of investments at the Downtown Berkeley BART station in the first survey question. **Table 1** provides an overview of the responses received (as calculated averages) based on popularity, showing the highest-ranked improvements at the top.

Table 1 – Survey Question One - Ranking the Importance of Various BART Station Features.

Q1: Which of the following new or modernized features do you think BART should invest in? (On a scale of 1-5 where 1 is “not at all important” and 5 is “extremely important”).

| Feature | Weighted Average |
|---|------------------|
| Maintain and upgrade station infrastructure and functionality | 4.28 |
| Improve general station cleanliness and upkeep | 4.1 |
| Promote sustainability through efficient building systems and design | 3.87 |
| Improve safety through better sightlines/visibility | 3.66 |
| Improve lighting quality and efficiency | 3.55 |
| Provide public restrooms | 3.45 |
| Reopen the fare gates/platform access at south end of station | 3.4 |
| Improve bicycle access (new stairwell channels, more parking) | 3.36 |
| Add additional escalator access from street to concourse and/or concourse to platform | 3.1 |
| Update station architecture and finishes | 3.04 |
| Replace the street-to-concourse elevator | 2.99 |
| Integrate art in the station, to reflect the area’s unique character | 2.97 |
| Create thematic links to Berkeley culture and institutions | 2.76 |
| Provide more in-station shops and services | 2.56 |

DOWNTOWN BERKELEY BART STATION Modernization Study: Outreach + Survey Summary

The three features BART survey respondents ranked as most important were maintaining station infrastructure and functionality, improving general station cleanliness and upkeep, and promoting sustainability through efficient building systems and design.

Questions Two and Three: Use of the Berkeley BART Station

The following two graphics convey information regarding the survey respondents' use of the Berkeley BART station. **Figure 1** and **Figure 2** provide data on how frequently and during what times respondents use the Downtown Berkeley BART station.

In addition to prioritizing what features they think BART should invest in, survey respondents also answered questions regarding how often and when they use the Downtown Berkeley station, conveyed in **Figure 1** and **Figure 2**.

The majority of survey respondents were frequent riders who rode four or more days a week, and most respondents use this station during commute times, between 7-9 AM and 4-7 PM.

Figure 1 - Survey Question Two

Q2: How often do you use this station?

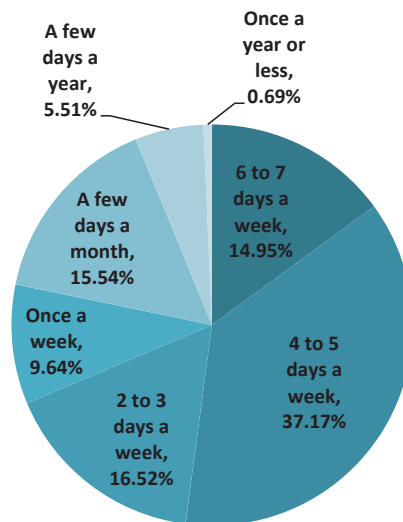
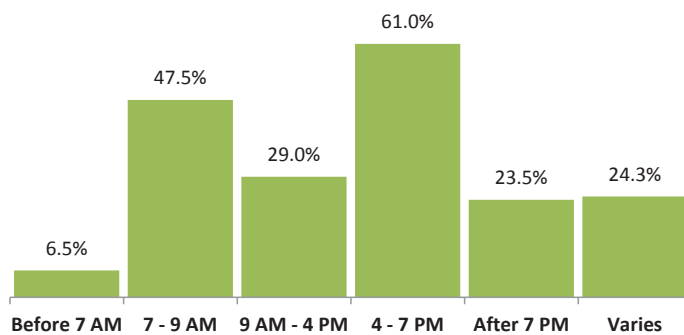


Figure 2 - Survey Question Three

Q3: When do you usually use this station?



DOWNTOWN BERKELEY BART STATION Modernization Study: Outreach + Survey Summary

Part II – Survey Comments & Suggestions

After ranking their station improvement priorities in Question One, respondents had the opportunity to submit their own comments in a free-response section. **357** comments were received during the survey period. The comments were then analyzed and placed into categories, which are summarized in the table below. The categories with the highest response rates of the overall number of responses are bolded and shown with the percentage they made up of the total responses.

Table 2 – Summary of Respondent Comments

| Station Environment | Station Accessibility | Service Improvements |
|--|--|---|
| <ul style="list-style-type: none"> • 14.8% Improve signage- in particular, arrival information before gates • 14.8% Improve overall cleanliness, reduce unpleasant smells • 12.3% Increase security, reduce presence of homeless and panhandlers • 5.9% Provide public restrooms • 4.2% Implement art to reflect local area • 1.4% Provide additional trashcans | <ul style="list-style-type: none"> • 15.7% Improve accessibility by adding more entrances and fare gates; reopen south gates • 14.0% Add more elevators, escalators, and stairs; widen staircases; improve elevator functionality • 7.0% Improve bike infrastructure and access, implement bike-specific escalators • 4.2% Improve overall access for disabled persons | <ul style="list-style-type: none"> • 6.4% Increase capacity of train cars and station waiting areas • 4.8% Increase number of cars and trips • 2.8% Prevent fare jumpers from gaining access without charge • 2.2% Install doors or windows to separate concourse from tracks |

Based on the free-response comments, the top suggestions were 1) improving access with more entrances and fare gates, 2) increasing signage, 3) improving station cleanliness and smell, 4) adding more elevators, escalators, and stairs, and 5) increasing safety. These topics are discussed in more detail below.

1) Improve Access

Suggestions related to increasing accessibility ranged from adding more entrances, adding more fare gates, reopening the south entrance, and installing more elevators/escalators/staircases. Many of the respondents who called for improved accessibility referred to reopening the south gates to improve flow and relieve congestion. Others cited a lack of sufficient staircases, elevators, and escalators as a cause for pedestrian traffic.

Sample quotes from the survey:

“Install escalators at the north and south end of the station.”

“Add a station entrance at the NE corner of Shattuck and Center St...Access from the south can be improved by opening the south fare gates”

“Reduce congestion by providing more staircases / escalators”

“More turnstiles open in certain directions during busy hours. More stairs/escalators from platforms to station.”

DOWNTOWN BERKELEY BART STATION Modernization Study: Outreach + Survey Summary

2) Improve Signage

An overwhelming 40 respondents specifically requested concourse-level signs indicating real-time train arrival forecasts, which would allow riders to know if they need to hurry or have time when passing the fare gates. This would also prevent people from running at the sound of a train without knowing its destination. Other signage requests included multiple requests for clearer signage in general, replacing the red LED train signage, and adding additional signs for connecting transit to the station.

Sample quotes from the survey:

“Install real-time [signage] on street and concourse showing when trains are due and arriving, and which trains. People go crazy running when they hear a train coming even though they don’t have a clue as to which train it is.”

“Better station signage for passengers within the train. BART signs can be very hard to see if the train is crowded and announcements are often unintelligible.”

“Clear signs that indicate when trains will arrive when riders are outside the paid areas (like when I’m running to my train from the Allston Way entrance, and the other entrances, too) would be great!”

3) Cleanliness & Smell

Additionally, nearly fifteen percent of respondents also complained of unpleasant smells in the stations and requested increased overall station cleanliness. The stairwells and elevators were repeatedly identified as problem areas for the “urine smell.”

Sample quotes from the survey:

“Cleanliness and safety in elevators. Discovering urine in stairwells and elevators.”

“A huge improvement would be more thorough/regular cleaning. The stairwells are particularly gross.”

“A regularly-maintained public bathroom is desperately needed”

Increasing Safety and Other Comments

Other popular comments included requests for increased bike infrastructure, particularly addressing the issue of bikes on escalators. Others suggested improved overall accessibility for disabled persons to the elevators and the fare gates. Many also requested that BART open public restrooms and install more trash receptacles throughout the station. Safety was another important concern to many respondents, some of whom cited high levels of homeless and vagrant loiterers in the station as a related concern.

Additional sample quotes from the survey:

“Better signage to keep bikes off the escalators!!!”

“Please make it easier to navigate fare gates for wheelchair users”

“Add kickplate buttons to interior and exterior of elevators for better accessibility; have more than one elevator on each level; put new elevator in public view instead of hidden hallways”

“Please make sure these changes improve the SAFETY of the station. I go out of my way to go to North Berkeley or El Cerrito Plaza (during the day) instead of this station, especially at night.”

Appendix

C



BERKELEY



RICHMOND EXIT PLAZA



RICHMOND 9 CAR TRAIN 9, 13 MIN

OUT OF SERVICE AT THIS TIME

BERKELEY

Existing Conditions of Platform Level
Photograph taken by AECOM in 2016

Appendix C



DOWNTOWN BERKELEY BART STATION

Modernization Plan Outreach and Survey Summary – Fall 2016

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results



Introduction

This report summarizes the results of a customer survey conducted online and in-person during public outreach events at the Downtown Berkeley BART Station, coordinated by the team for the Downtown Berkeley Station Modernization Conceptual Design project. This was the second of two surveys intended to gather customer feedback regarding customers' priorities for modernization and improvement of the Downtown Berkeley BART Station, and was timed to occur after development of the preferred station design concept but before preparation of the project's Conceptual Design Plan.

Part I – Outreach Overview

BART held two in-station public outreach events at the Downtown Berkeley BART Station to inform customers about the modernization of the Downtown Berkeley Station, and to obtain their opinions on proposed projects. They were held on September 20, 2016 during the afternoon commute (4:00 – 7:00 p.m.), and September 21, 2016 during the morning commute (7:00 – 10:00 a.m.). Copies of the display boards used to present project information during the event are provided in **Appendix A**.

BART customers and members of the public were asked to fill out a survey to rank their priorities for modernization improvements to the Downtown Berkeley BART Station. BART customers were also directed to the online survey, which was opened on September 19, 2016 and closed on October 7, 2016. A copy of the survey is included in **Appendix B**. BART received a total of **556** survey responses and **163** comments during this period. All informational materials and the survey were made available in English, Spanish and Chinese, both online and at the in-station events, and information about translation services for additional languages was provided. All survey responses were received in English.

Part II of this summary report presents the results of the survey responses; **Part III** summarizes the free-response suggestions and comments received in Survey Question 6.

Part II – Survey Results

Rating the Importance of Improvements

Question 1: On a scale of 1-5, where 1 is “not at all important” and 5 is “very important,” please rate how important EACH of the following proposed station improvements is to you.

- 1 = Not at all important
- 2 = Not important
- 3 = No opinion
- 4 = Important
- 5 = Very important

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

Table 1 provides the average ratings of the responses, listed in decreasing order of importance based on scores.

Table 1: Rate the importance of proposed improvements by category

| Improvement | Category* | Weighted Average |
|---|------------------------------------|------------------|
| Train arrival information on concourse | Facility Upgrades | 4.44 |
| Increased natural lighting | Sustainability | 4.19 |
| Energy-efficient light fixtures | Sustainability | 4.16 |
| Universal accessibility upgrades for the disabled, bikes, and luggage | Access Improvements | 4.15 |
| Reopened public restrooms | Facility Upgrades | 3.74 |
| Reopened South Paid Area and faregates | Access Improvements | 3.74 |
| New bike channels on street stairways | Access Improvements | 3.55 |
| More secure bike parking on concourse | Access Improvements | 3.53 |
| Additional street escalators | Circulation and Capacity | 3.5 |
| Additional platform escalators | Circulation and Capacity | 3.49 |
| New platform elevator (relocated to central location) | Circulation and Capacity | 3.47 |
| Public art | Placemaking and Station Experience | 3.42 |
| New street elevator (replacement) | Placemaking and Station Experience | 3.41 |
| Platform – New ceiling/wall/floor | Placemaking and Station Experience | 3.31 |
| New public address speaker system | Facility Upgrades | 3.29 |
| Concourse – New ceiling/wall/floor | Placemaking and Station Experience | 3.27 |
| Higher guard rails/barriers to reduce fare evasion | Facility Upgrades | 3.16 |
| Additional retail & vending on concourse | Placemaking and Station Experience | 2.89 |
| *category titles abbreviated from previous categories used in Downtown Berkeley Station Modernization Plan | | |
| <i>Weighted Average Key</i> | | |
| ≤ 2.99 | 3 – 3.49 | 3.5 – 3.99 |
| | | ≥ 4 |

Top 5 Improvement Priorities

Question 2: Not all improvements will be implemented at once—which of the proposed station improvements would you like to see implemented first? Please select your top 5 choices from the list below. The list is the same as Question 1.

The following five items were the features most frequently selected for respondents’ top-five items. The percentage of respondents who selected each item is shown for each:

1. Train arrival information on concourse (**66.2%**);
2. Increased natural lighting (**40.1%**);
3. Universal accessibility upgrades for disabled/bikes/luggage (**39.9%**);
4. Reopened public restrooms (**39.5%**); and
5. Energy-efficient light fixtures (**35.2%**).

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

These top-five features were the same as the five most highly-rated improvements in the responses to Question 1; however, the orders of priority are not consistent between the two sets of responses.

Station Environment

Amenities

Question 3: To help inform allocation of limited space on the concourse level, please rate—on a scale of 1-5 where 1 is “not at all important” and 5 is “very important”—how important EACH of the of the following station amenities are to you.

Table 2 shows that respondents did not feel strongly that any of the given amenity options were extremely important. However, respondents viewed public art, additional bike parking, and advertising as more important than retail and vending machines.

Table 2: Rate the importance of each of the following station amenities

| Station Amenity | Rating |
|---|--------|
| Public art | 3.28 |
| Additional bike parking | 3.19 |
| Advertising (revenue for BART maintenance and operations) | 3.12 |
| Retail | 2.65 |
| Vending machines | 2.23 |

Retail

Question 4a: Would you like to see more retail options within the station?

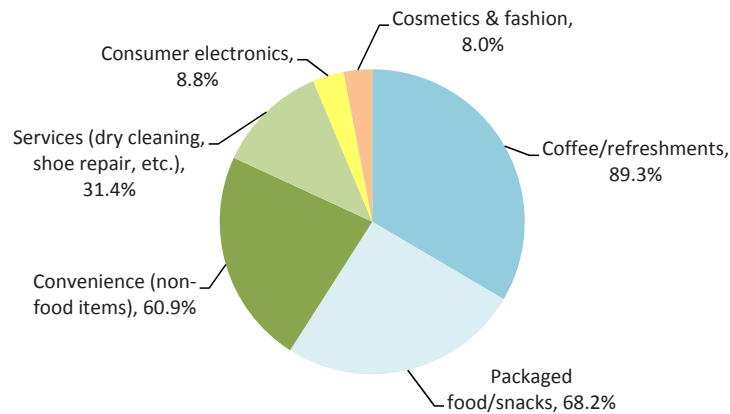
47.6% said “Yes” and 51.6% said “No.”

Those who selected “Yes” were directed to Question 4b:

Question 4b: What types of retail and/or services would you likely use in the Downtown Berkeley Station? (Check all that apply).

89.3% chose coffee/refreshments, 68.2% chose packaged foods, and 60.9% chose convenience (non-food items). In the “Other” space, 32 respondents provided comments, including 11 requests for books and magazines, three for flowers, and three for a post office.

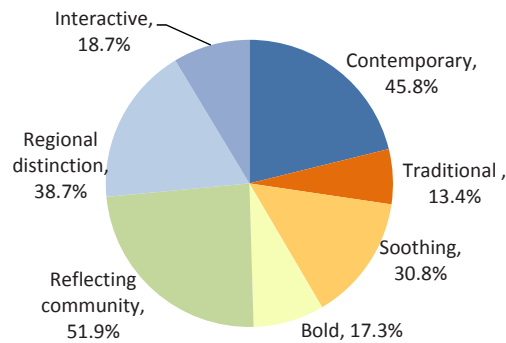
DOWNTOWN BERKELEY STATION MODERNIZATION PLAN Fall 2016 Public Outreach Survey Results



Look and Feel

Question 5: Which of the following describes the look and feel that you would like to see in future station design and public art in the Downtown Berkeley Station? (Check all that apply)

Respondents had mixed feedback with regard to station design and public art. The chart below shows the distribution of responses among the options.



DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

Part III – Free Response Comments and Suggestions

Question 6: Do you have any additional suggestions or comments?

A total of **163** comments were provided. These comments generally fell within the following topics:

- Look and Design (**50** comments)
- Accessibility (**27** comments)
- Cleanliness (**24** comments)
- Signage (**13** comments)
- Safety and Security (**11** comments)
- Service and Reliability (**9** comments)
- Customer Amenities (**12** comments)
- Other (**17** comments)

Summaries and sample quotes of the comments and suggestions are provided below.

Look and Design

The **50** suggestions related to look and design ranged from keeping the current design to incorporating more community aspects, natural light, UC Berkeley-themed elements, and design simplicity. Some respondents provided specific design requests, such as craftsman design, using K-12 art, UC Berkeley colors, nature themes, and indoor plants. Additional comments suggested other stations as design examples, including the Old Penn Station in New York and the London train station.

Sample quotes

| | | |
|---|---|---|
| <p>I strongly recommend sticking with the original design intent while simplifying and contemporizing the aesthetic...A lot of different people use this system so we should not be pandering to any one group or parochial vision of what Berkeley is or is not.</p> | <p>Community, community, community - let that be represented in advertisements, public art, food, and those available places for street/station performers. I love Berkeley for all the musicians and artists on the streets.</p> | <p>Keeping some of the current architectural details in any BART station is a good idea. If there is a way to integrate the old with the new, that would be best. (In other words, keep some of the brick and 70s styling!)</p> |
| <p>Simple is best!</p> | <p>I'm not overly concerned with how the station looks as it is a means to get somewhere, not a hangout place. BUT, if thought were going to go into it, I would prefer rotating art displays featuring art from regional (think micro regional) artists.</p> | |
| <p>Lots of natural light</p> | | |

Accessibility

The **27** accessibility-related comments covered a wide range of topics; however, improving station access for the disabled and seniors was a clear priority. Other suggestions included widening stairways and escalators, increasing elevator access, and improving bike access.

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

Sample quotes

Please make accessibility for seniors and the disabled a priority for the upgrades.

More and/or wider stairways. When lots of people get off a train and come up the stairs, I can't walk down.

Have two or [more] elevators at street and platform. Elevators need kick-plates in addition to buttons that calls the elevators. Elevators that are wider and have multiple doors so that one does not have to do a 3-point turn to enter/exit. More than one wheelchair accessible turnstile at each entrance and exit.

Need to improve handicapped access and accommodate lots of people with luggage; also allow for overcrowding during special events! This is the only BART station I've been in where people sit and lounge on the stairs need divided stairways

Cleanliness

The importance of station cleanliness was emphasized in 24 respondents' comments. In addition to general requests to keep the station cleaner, other suggestions included putting trash receptacles on the platform (5 comments), and reducing smell (4 comments).

Sample quotes

Please put garbage cans on the platform, especially if you sell more food on the concourse.

Please, invest in maintaining the elevator clean every day (several times during the day supervision and support)

Most important should be cleanliness and safety in and around the area. These were not really mentioned in the survey.

Clean more frequently

The improvement I would most like to see is in sanitation. There is one stairwell that always reeks of urine. Maybe reopening the public restrooms is the best way to solve this problem.

Signage

Most of the 13 comments related to signage suggested displaying train arrival times on the concourse level, outside the platform area. Others requested displaying train arrival information permanently on platform screens, placing footprints showing where to stand, and putting a clock at the bottom of the escalator.

Safety and Security

Respondents provided 11 safety- and security-related comments expressing concern regarding homeless presence at the station, preventing fare evasion, increasing police presence at the stations, placing barriers to keep people off tracks, and enforcing keeping bikes off escalators.

Service and Reliability

Of the 163 comments, 9 expressed concern over the need to prioritize service, reliability, and infrastructure before addressing station modernization concerns.

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

Customer Amenities

A total of **12** comments were received related to in-station customer amenities. Of these, **3** stated that reopening restrooms should be prioritized, and **3** requested additional or new ticketing machines. There were **6** comments addressing retail, either whether concourse-level retail should be included, or the types of retail to include. Sample quotes are below:

Retail-on-concourse has turned out to be a net negative: The Scooters(?) coffee stand constantly plays awful music, at high volume. Get them to be silent (or maintain drastically lower volumes), and I might change my mind about additional retail.

PLEASE get new ticket machines that let you add greater value (more than \$1 at a time) to tickets and clipper cards (like the MUNI machines)

Good Coffee one: Pete's, Philz, Standards and Healthy yogurt, Pastries, fruit, and grab and go

Since food and drink are prohibited on BART adding vending machines and (food/drink related) retailers seems a bit unnecessary.

The previous screen would not let me answer as I wanted. I wanted to check ONLY reopening of public restrooms as short term priority -- EVERYTHING else is secondary!

Other Comments

Other comments included requests to better coordinate with local transit, being cost-effective and thrifty throughout the modernization process, and comparisons between Downtown Berkeley and other BART stations. Sample quotes are below:

Cost-effective and not energy-intensive.

Better coordination with bus/shuttle stops is my most important requested improvement -- not needing to cross one or more streets to get from bus/shuttle stops to a BART entrance.

The least amount of construction (especially time) and public money would be the best.

Don't let the project drag on forever. Alacrity matters. Too many BART station projects (and public works projects in general) seem indifferent to the inconvenience the cause often for months on end. Be accountable for the disruption that these efforts cause.

Noise reduction features would be great

Conclusion

The second Downtown Berkeley Modernization Survey results showed that the majority of BART customers prioritize **improved train arrival information on the concourse**, **access upgrades for the disabled**, **reopened restrooms**, and **sustainability improvements**. Less than 50% of respondents chose that they would like to see more retail options within the station. Of those who would like to see more retail, the majority of them requested coffee and other refreshments.

In the free response section of the survey, respondents had strong opinions regarding station **design**. Feedback regarding design ideas varied. In addition, many would like to see additional or wider

DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

Fall 2016 Public Outreach Survey Results

stairways and escalators, improved station cleanliness, improved train **arrival signage**, and increased **security** measures at the station.

Appendix A – Outreach Event Information Boards

BETTER BART. BETTER STATIONS.



DOWNTOWN BERKELEY STATION MODERNIZATION PLAN PROJECT OVERVIEW

Project Purpose

Develop a phased implementation plan for improvements to modernize Downtown Berkeley Station and enhance customer experience.



Project Goals

- 1** Enhance Downtown Berkeley Station as a gateway to the City of Berkeley and the UC Berkeley campus.
- 2** Modernize and refresh the station to bring it into the 21st century.
- 3** Ensure that the station design reflects BART's sustainability goals.
- 4** Enhance access and connections between the station and the Downtown Berkeley neighborhood.
- 5** Improve the station's function, safety, capacity and appearance.
- 6** Incorporate art and community identity into the station.
- 7** Add station amenities to improve customer experience.



September 2016



BETTER BART. BETTER STATIONS.



DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

PROPOSED IMPROVEMENTS - STATION FUNCTION

BART is considering numerous improvements to make the Downtown Berkeley station easier to use. These changes will improve access to the station and will provide additional convenience for travel within the station.



ADDITIONAL STREET ESCALATORS

- New escalators at street entrances (Allston Way)
- Improved access to area South of station, and to East side of Shattuck Avenue
- Improved security and shelter from weather

UNIVERSAL ACCESS IMPROVEMENTS

- Improve access for all BART customers
- More accessibility measures for riders with special needs
- Updated signage, handrails and guardrails

DAYLIGHTING FIXTURES/ LIGHT TUBES

- Light tubes and other features to increase natural light in concourse
- Improved look and feel in station
- Reduce reliance on artificial lighting

REOPEN PUBLIC RESTROOMS

- Provide access to restrooms on concourse
- Renovated to improve convenience and safety



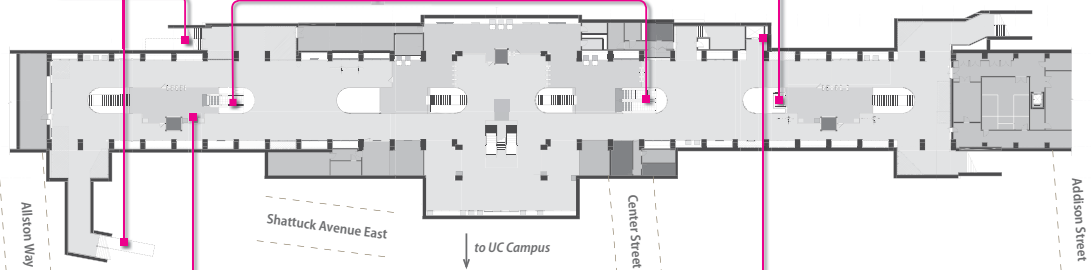
ADDITIONAL PLATFORM ESCALATORS

- Easier access between concourse and platform
- Better passenger distribution
- Enable bi-directional escalator travel



NEWLY LOCATED PLATFORM ELEVATOR

- New, improved cab
- Elevator moved inside paid area
- Convenient and safer location



REOPEN SOUTH PAID AREA

- Improve access at South end of station
- Promote better passenger distribution

STATE OF GOOD REPAIR

- Maintenance and upgrades for station infrastructure
- Upgrades to electrical and plumbing systems
- Fire detection and suppression system updates



REPLACE STREET ELEVATOR

- New elevator in same location
- Larger cab with aligned doors
- Better orientation for access and safety



BIKE ACCESS IMPROVEMENTS

- New bike rack in all street entrance stairwells
- Additional bike parking options on concourse

UPGRADED PUBLIC ADDRESS SYSTEM

- Better coverage/improved clarity throughout station
- Integrated with new BART system

REAL-TIME TRAIN ARRIVAL/WAYFINDING SIGNAGE

- Additional/improved signage to direct passengers
- Real-time train arrival information for BART trains and transfers

September 2016



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DOWNTOWN BERKELEY STATION MODERNIZATION PLAN PROPOSED IMPROVEMENTS - CUSTOMER EXPERIENCE

Ceilings, Walls, and Floors

Station-wide renovations will refresh the look and feel of the concourse and platform. These will enhance the overall aesthetics and make the station more distinct, while providing improved durability and reduced maintenance requirements.

- New materials throughout the concourse and platform
- Consistent design scheme with renovated street plaza
- New ceilings integrated with updated lighting system
- Energy-efficient adaptive lighting, with improved visibility
- Hidden routing for cabling and pipes

Concourse



Platform



Hallways



Modular Wall Design

- Provide new services and amenities
- Flexibility for future changes to station
- Reduce maintenance needs



Food/Coffee Stand



Vending Machines



BART Tickets



Transit Information



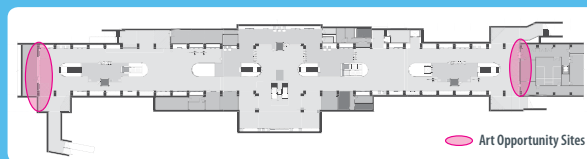
Advertising Option 1



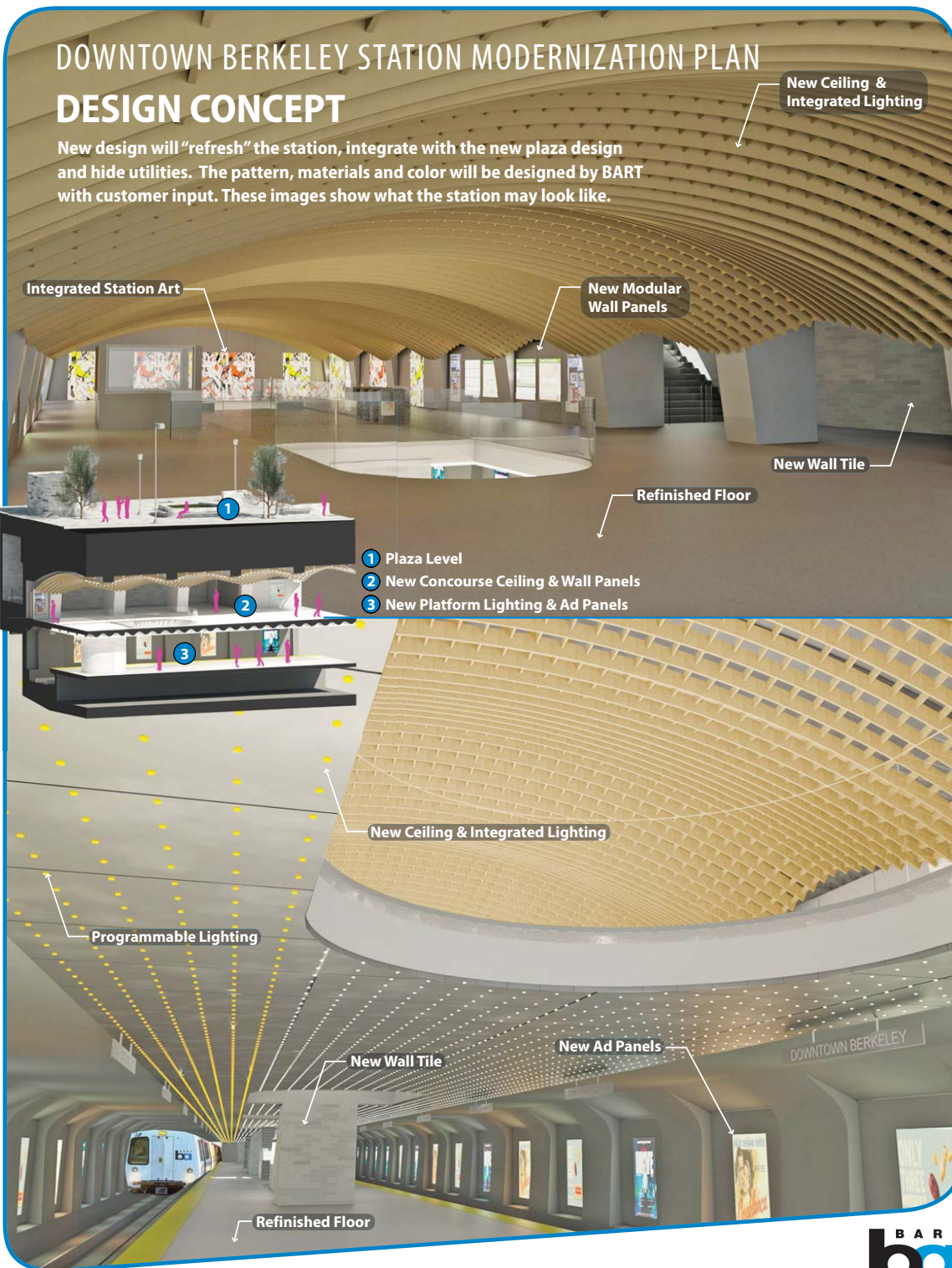
Advertising Option 2

Public Art Opportunities

- Installations to be selected in the future through a community process
- Incorporate art elements into station design
- Create strong station identity
- Promote culture of the neighborhood
- Partnerships with local artists and institutions



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DOWNTOWN BERKELEY STATION MODERNIZATION PLAN

PROPOSED PHASING AND IMPLEMENTATION

The proposed phasing below is based on customer input, opportunities for construction efficiencies, and potential funding availability. Each phase takes 3-4 years to implement from design to construction. Improvements will be phased as funding becomes available. BART will continue to seek local, state and federal funding for implementation.

| | | | |
|----------------|---|--|--|
| Phase 1 | <ul style="list-style-type: none"> • Station infrastructure upgrades • Reopen South fare entrance/paid area • Universal accessibility upgrades • Bike channels and bike parking • New platform elevator (relocated) • Retail • Concourse ceiling/wall/floor treatments • Concourse energy-efficient lighting • Public restrooms pilot program • Public art (1-2% of phase budget) |  <p>Platform Elevator</p> |  <p>Concourse Upgrades</p> |
| Phase 2 | <ul style="list-style-type: none"> • Station infrastructure upgrades • Upgraded public address system • Replace street elevator • New south platform escalator • Platform ceiling/wall/floor treatments • Platform energy-efficient lighting • Public art (1-2% of phase budget) |  <p>Street Elevator</p> |  <p>Platform Upgrades</p> |
| Phase 3 | <ul style="list-style-type: none"> • Add street escalators • New central platform escalator • Increased natural lighting • Public Art (1-2% of phase budget) |  <p>Street Escalator</p> |  <p>Natural Light Fixture</p> |

CUSTOMER INPUT

At the project start in 2015, BART held two in-station public information events and conducted a public survey. We received 1,388 survey responses. Your input informed BART's selection of planned improvements to the station.

Thanks for your comments and suggestions!

Input from BART customers and Downtown Berkeley stakeholders is a key part of our planning process. We want to hear about your priorities for implementing projects to help guide overall phasing.

Help us prioritize future station improvements!
Take our online survey at:
www.surveymonkey.com/r/DTBerkeleyBART

Appendix B – Customer Survey



DOWNTOWN BERKELEY STATION MODERNIZATION PLAN
OUTREACH #2: PREFERRED CONCEPT PLAN
SEPTEMBER 2016

The Downtown Berkeley Station Modernization Plan will guide future investment in upgrades to your station. This Plan is distinct from, but complementary to, the Downtown Berkeley Plaza project, which has gone through a separate community planning process in partnership with the City of Berkeley, and will begin construction this fall.

The proposed Plan identifies investment in fixing and upgrading core existing station and system facilities to keep the station functioning well. Informed by earlier customer input, other proposed improvements and upgrades will modernize and improve the station beyond its existing condition. Your answers to this survey will inform the final Station Modernization Plan and **the order in which improvements will be implemented in the future.**

Project details and link to online survey are available at <http://www.bart.gov/downtown-berkeley>.

Please begin the survey on the next page.

Surveys are due by October 5th, 2016. Please return this survey at the event, email to spoliwk@bart.gov, or mail back to BART, Attn: Susan Poliwka, 300 Lakeside Drive, Floor 21, Oakland, CA 94612. You can also fill out this survey online by visiting the project page: <http://www.bart.gov/downtown-berkeley>.



QUESTION #1

On a scale of 1-5, where 1 is “not at all important” and 5 is “very important,” please rate how important EACH of the following proposed station improvements is to you.

- 1 = Not at all important
- 2 = Not important
- 3 = No opinion
- 4 = Important
- 5 = Very important

| | 1 (not at all important) | 2 (not important) | 3 (no opinion) | 4 (important) | 5 (very important) |
|--|--------------------------------|-------------------------|-----------------------|-----------------------|--------------------------|
| Facility Upgrades | | | | | |
| 1. New public address speaker system | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Train arrival information on concourse | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Higher guard rails/barriers to reduce fare evasion | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Reopened public restrooms | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Access Improvements | | | | | |
| 5. Reopened South Paid Area and faregates | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 6. Universal accessibility upgrades for the disabled, bikes, and luggage | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 7. New bike channels on street stairways | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 8. More secure bike parking on concourse | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Circulation and Capacity | | | | | |
| 9. New platform elevator (relocated to central location) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 10. New street elevator (replacement) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 11. Additional platform escalators | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 12. Additional street escalators | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Placemaking and Station Experience | | | | | |
| 13. Concourse - New ceiling/wall/floor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 14. Platform - New ceiling/wall/floor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 15. Additional retail & vending on concourse | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 16. Public art | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sustainability | | | | | |
| 17. Energy-efficient light fixtures | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 18. Increased natural lighting | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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QUESTION #2

Not all improvements will be implemented at once—which of the proposed station improvements would you like to see implemented first? Please select your **top five (5)** choices from the list below. The list is the same as Question #1.

Facility Upgrades

Select your top five (5) choices

- 1. New public address speaker system
- 2. Train arrival information on concourse
- 3. Higher guard rails/barriers to reduce fare evasion
- 4. Reopened public restrooms

Access Improvements

- 5. Reopened South Paid Area and faregates
- 6. Universal accessibility upgrades for the disabled, bikes, and luggage
- 7. New bike channels on street stairways
- 8. More secure bike parking on concourse

Circulation and Capacity

- 9. New platform elevator (relocated to central location)
- 10. New street elevator (replacement)
- 11. Additional platform escalators
- 12. Additional street escalators

Placemaking and Station Experience

- 13. Concourse - New ceiling/wall/floor
- 14. Platform - New ceiling/wall/floor
- 15. Additional retail & vending on concourse
- 16. Public art

Sustainability

- 17. Energy-efficient light fixtures
- 18. Increased natural lighting

Please continue the survey on the next page.

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QUESTION #3

To help inform allocation of limited space on the concourse level, please rate—on a scale of 1-5 where 1 is “not at all important” and 5 is “very important”—how important EACH of the of the following station amenities are to you.

| Amenities | 1 (not at all important) | 2 | 3 | 4 | 5 (very important) |
|--|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. Additional bike parking | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 2. Retail | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 3. Public art | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 4. Advertising (revenue for BART maintenance and operations) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| 5. Vending machines | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

QUESTION #4a

Would you like to see more retail options within the station?

- Yes
- No

QUESTION #4b

If you answered yes to Question #4a, what types of retail and/or services would you likely use in the Downtown Berkeley Station? (Check all that apply)

- Convenience (non-food items)
- Services (dry cleaning, shoe repair, etc.)
- Consumer Electronics
- Cosmetics & Fashion
- Packaged food/snacks
- Coffee/refreshments
- Other (please specify) _____

QUESTION #5

Which of the following describes the look and feel that you would like to see in future station design and public art in the Downtown Berkeley Station? (Check all that apply)

- Contemporary
- Traditional
- Soothing
- Bold
- Reflecting community
- Regional distinction
- Interactive

Please continue the survey on the next page.

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QUESTION #6

Do you have any additional suggestions or comments?

QUESTION #7

How often do you use this station?

- | | | |
|---|---|--|
| <input type="checkbox"/> 6 to 7 days a week | <input type="checkbox"/> once a week | <input type="checkbox"/> a few days a year |
| <input type="checkbox"/> 4 to 5 days a week | <input type="checkbox"/> a few days a month | <input type="checkbox"/> once a year or less |
| <input type="checkbox"/> 2 to 3 days a week | | |

QUESTION #8

When do you usually use this station? (Check all that apply)

- | | | |
|---|--|--|
| <input type="checkbox"/> before 7 am | <input type="checkbox"/> between 9 am and 4 pm | <input type="checkbox"/> after 7 pm |
| <input type="checkbox"/> between 7 and 9 am | <input type="checkbox"/> between 4 and 7 pm | <input type="checkbox"/> varies/inconsistent |

QUESTION #9

Which station entrance/exit do you normally use? (Check all that apply)

- | | | |
|--|--|---|
| <input type="checkbox"/> Main Rotunda entrance on plaza (with escalators) | <input type="checkbox"/> Shattuck & Allston Way (west side of Shattuck on the plaza) | <input type="checkbox"/> Shattuck & Addison St. (west side of Shattuck) |
| <input type="checkbox"/> Shattuck & Center (northwest corner with street-level elevator) | <input type="checkbox"/> Shattuck & Allston Way (east side of Shattuck) | <input type="checkbox"/> Shattuck & Addison St. (east side of Shattuck) |

QUESTION #10

Would you like to receive email updates about this project? Yes No

If yes, please provide your email address: _____

Please continue the survey on the next page.

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Please tell us about yourself (your answers will help us evaluate how well we are reaching all the communities we serve).

QUESTION #11

Gender (optional): Female Male Trans Not Male/Female/Trans Prefer not to state

QUESTION #12

Age (optional): Under 18 18-24 25-34 35-44 45-54 55-64 65+

QUESTION #13

What is your race or ethnic identification (optional)? (Select one or more)

- | | |
|---|--|
| <input type="checkbox"/> American Indian or Alaska Native | <input type="checkbox"/> Hispanic, Latino or Spanish |
| <input type="checkbox"/> Asian or Pacific Islander | <input type="checkbox"/> White |
| <input type="checkbox"/> Black/African American | <input type="checkbox"/> Other: _____ |

QUESTION #14

What is your total annual household income before taxes (optional)?

- | | | | |
|--|--|--|--|
| <input type="checkbox"/> Under \$25,000 | <input type="checkbox"/> \$30,000 - \$39,999 | <input type="checkbox"/> \$50,000 - \$59,999 | <input type="checkbox"/> \$75,000 - \$99,999 |
| <input type="checkbox"/> \$25,000 - \$29,999 | <input type="checkbox"/> \$40,000 - \$49,999 | <input type="checkbox"/> \$60,000 - \$74,999 | <input type="checkbox"/> \$100,000+ |

QUESTION #15

Including yourself, how many people live in your household (optional)?

- 1 2 3 4 5 6+

QUESTION #16

Do you speak a language other than English at home (optional)?

- No Yes, I speak _____

If you need language assistance services, please call 510-464-6752.
Nếu quý vị cần được giúp đỡ về ngôn ngữ, xin vui lòng gọi số 510-464-6752.
통역이 필요하신 분은, 510-464-6752로 문의하십시오.
Kung kailangan mo ang tulong ng mga serbisyo ng wika, paki tawagan ang (510) 464-6752.

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Appendix

D

Appendix D

Table D-1: Downtown Berkeley BART Station - Master Project List

| PACKAGE | CATEGORY | IMPROVEMENT TYPE | PROJECT NUMBER | STATION LEVEL | PROJECT NAME | PROJECT DESCRIPTION | DEPENDENCIES | COST CATEGORY (\$-\$\$\$) | PROPOSED PHASE |
|---------|-------------------------------|-----------------------------------|----------------|---------------|---|---|--------------|---------------------------|----------------|
| | | | | N/A | [Rotunda/Plaza project] | Renovate street-level plaza and station entrance rotunda | N/A | N/A | 0 |
| | | | | Both | Wayfinding Signage (plaza project) | Install new static wayfinding signage throughout the concourse and platform levels. Included as part of the plaza project, to ensure consistency in signage style/locations. | None | N/A | 0 |
| | | | | Both | Reopened South Paid Area | Reactivate the previously-closed paid area at the south end of the station. Install new fare gates, TVMs and other infrastructure to enable access between the concourse and platform at this location. Does not include reactivation of the station agent booth. | N/A | N/A | 0 |
| IP | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 1 | Both | Upgraded public communications systems | Install new, IP-based speaker system throughout station, to improve clarity and address existing coverage gaps, as part of a BART system-wide upgrade. | None | \$\$\$\$ (>\$2.5M) | 2 |
| IP | Facility and Systems Upgrades | Employee Environment | 2 | Concourse | Upgrades to employee break room | Repair/replace floors, paint, furniture, and small items as needed. Repair existing or install new plumbing as appropriate. | None | \$\$ (\$500k - \$1.5M) | 2 |
| EW | Facility and Systems Upgrades | Maintenance & Repair | 3 | Both | Removal of extra CCTV cameras | Assess existing in-station video monitoring system(s), consolidate camera feeds as feasible/appropriate, and remove unnecessary cameras/conduit. | None | \$ (<\$500k) | 1 |
| EW | Facility and Systems Upgrades | Maintenance & Repair | 4 | Concourse | Removal of inactive transfer pass machines | Remove obsolete ticket transfer machines from the Central and North Paid Areas of the concourse. | None | \$ (<\$500k) | 1 |
| EW | Facility and Systems Upgrades | Maintenance & Repair | 5 | Concourse | Cleaning/repair of miscellaneous station signage | Clean and/or repair existing in-station static signage and sign frames | None | \$ (<\$500k) | 1 |
| EW | Facility and Systems Upgrades | Maintenance and Repair | 6 | Platform | New platform edge strips | Replace the missing/damaged edge strips along both the northbound and southbound platform edges. | None | \$ (<\$500k) | 1 |
| EW | Facility and Systems Upgrades | Maintenance and Repair | 7 | Platform | Sealing against water intrusion | Perform spot-sealing in selected locations on outboard track walls and platform-side columns to eliminate water leakage and staining. | None | \$ (<\$500k) | 1 |
| EW | Facility and Systems Upgrades | Maintenance and Repair | 8 | Concourse | Removal of inactive pay telephone panels | Remove paneling and associated signage at previous locations for wall-mounted payphones on the concourse. | None | \$ (<\$500k) | 1 |
| | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 9 | Both | Stations, Emergency Lighting - Phase 3 Upgrade | Upgrade station emergency lighting (including UPS) to meet building codes. | 37, 38 | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 10 | Both | Station Fire Alarm Replacement - Phase 4 Upgrade | Replace existing station fire alarm system with new state of art fire alarm system that meets ADA requirements, is NFPA code compliant and requires less maintenance as they are IP addressable and provide an automatic message when the system/sensors are not working. | 43, 46 | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 11 | Both | Sprinkler heads replacement: fire protection | Fire protection system sprinkler heads must be replaced at age 50 per fire code. Replace all fire protection system sprinkler heads that reach 50 years of age. | 43, 46 | \$\$ (\$500k - \$1.5M) | 1 |
| IP | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 12 | Concourse | Fire suppression in train control rooms | Regular maintenance and repair of fire suppression systems at train control rooms as necessary. Repair, recharge, or replace fire suppression system as needed. (BART M&E project) | None | \$\$ (\$500k - \$1.5M) | 1 |
| IP | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 13 | Both | Connection to City Water Main | Connect the station sprinkler system directly to the City of Berkeley water main. | None | \$\$\$\$ (>\$2.5M) | 3 |
| | Facility and Systems Upgrades | Electrical/Mechanical Engineering | 14 | Concourse | Station Ventilation | Replace non-compliant vent lines to Scooters Coffee location. Ventilation is currently all passive. Consider venting heat to exterior, to address potential heat from additional retail. | 35, 43 | -\$ (Paid for by others) | 1 |
| | Facility and Systems Upgrades | Employee Environment | 15 | Concourse | Station Agent Booth Replacement and Upgrade | All station agent booths will be upgraded with Dutch doors for security improvement. In addition, a total of 16 booths will have bullet proof glazing for security improvement. These are required per the union agreement. This project will install bullet proof glass at 16 stations and Dutch doors at all stations. (BART M&E project) | 44 | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| EW | Facility and Systems Upgrades | Maintenance & Repair | 16 | Concourse | Storage cabinets installation, sightlines, and capacity | To maintain sightlines, install storage cabinets that keep temporarily unused garbage containers, cleaning equipment, caution signage, cones, or informational materials out-of-sight. Storage capacity could always be increased – useful but not necessary. All storage spaces require ventilation, to manage odor. | 43, 44 | \$ (<\$500k) | 1 |
| IP | Facility and Systems Upgrades | Systems Engineering | 17 | Concourse | Train Control Room, Procurement of Uninterruptible Power Supply (UPS) | Procure Uninterruptible Power Supply (UPS) for Train Control rooms and huts at 53 locations. UPS is vital to keep trains running and life safety systems operating. (BART M&E project) | 18 | \$\$ (\$500k - \$1.5M) | 1 |
| IP | Facility and Systems Upgrades | Systems Engineering | 18 | Concourse | Train Control Room, Installation of UPS | UPS installation in train control rooms and huts at 53 locations. UPS is vital to keep trains running and life safety systems operating. (BART M&E project) | 17 | \$\$ (\$500k - \$1.5M) | 1 |

Appendix D

Table D-1: Downtown Berkeley BART Station - Master Project List (Continued)

| PACKAGE | CATEGORY | IMPROVEMENT TYPE | PROJECT NUMBER | STATION LEVEL | PROJECT NAME | PROJECT DESCRIPTION | DEPENDENCIES | COST CATEGORY (\$-\$-\$-\$) | PROPOSED PHASE |
|---------|---|---------------------------|----------------|---------------|--|--|--------------|-----------------------------|----------------|
| | Safety & Security | Asbestos Abatement | 19 | Concourse | Asbestos Abatement | <p>Consider abatement for the following locations :</p> <ul style="list-style-type: none"> • Fireproofing installed on the structural steel above the false ceiling on the concourse level contains asbestos. Other locations may also be fireproofed with similar materials. • Floor tiles installed in various locations in the station are believed to contain asbestos but these materials have not been tested. • Fire doors installed at numerous locations believed to contain asbestos. • Mastics and sealants installed in numerous locations in the building are likely to contain asbestos. <p>Asbestos abatement (partially abated)</p> <ul style="list-style-type: none"> • Arches are asbestos, would require abatement if touched. | 43, other? | \$\$\$ (\$>\$2.5M) | 1 |
| | Safety & Security | Asbestos Abatement | 20 | Platform | Asbestos Abatement | <p>Consider abatement for the following Downtown Berkeley Station locations :</p> <ul style="list-style-type: none"> • Fireproofing installed on the structural steel in the ceiling. Other locations may also be fireproofed with similar materials. • Floor tiles installed in various locations in the station are believed to contain asbestos but these materials have not been tested. • Fire doors installed at numerous locations believed to contain asbestos. • Mastics and sealants installed in numerous locations in the building are likely to contain asbestos. | 46, Other? | \$ (\$500k - \$1.5M) | 2 |
| | Safety & Security | Fare Evasion Reduction | 21 | Concourse | Fare Evasion Barriers (glass) | <p>Replace existing metal railings with five-foot tall, tempered glass barriers</p> <ul style="list-style-type: none"> • Remainder of barriers for South Paid Area, not included in plaza project • All existing barrier locations for Central Paid Area • All existing barrier locations for North Paid Area | 44 | \$ (\$500k - \$1.5M) | 1 |
| EW | Access & Circulation | ADA Compliance & Upgrades | 22 | Both | ADA-compliant signage | Repair/replace/supplement Braille signage, to bring into CA2 compliance including: elevator(s), escalators, stairwells, restrooms. Relocate some wall signage to appropriate height. | None | \$ (<\$500k) | 1 |
| | Access & Circulation | ADA Compliance & Upgrades | 23 | Both | ADA-compliant fixtures/features | Relocate/supplement existing fixtures (drinking fountains, pay phones, etc.) to ADA-compliant height (<48"). Install lower counters (28"-38"). | None | \$ (<\$500k) | 1 |
| IP | Access & Circulation | ADA Compliance & Upgrades | 24 | Both | Cane Detectors | Install cane detectors where emergency telephone boxes, utility boxes, water fountains, fire alarms, stairwells etc. protrude from the wall. | 44, 47 | \$ (<\$500k) | 1 |
| EW | Access & Circulation | ADA Compliance & Upgrades | 25 | Both | Stairway Yellow Striping | Replace worn yellow striping on stair treads throughout station | None | \$ (<\$500k) | 1 |
| EW | Access & Circulation | ADA Compliance & Upgrades | 26 | Platform | Texture on Stairs at Platform/Stairwell Transition | Add texture to platform at top of stairs to indicate about to enter stairwell | 44, 47 | \$ (<\$500k) | 1 |
| IP | Access & Circulation | Bicycle Access | 27 | Concourse | Upgraded bicycle channels on entrance stairs | Replace existing channels with new channels for bicycle wheels in all street-level stairways | None | \$ (<\$500k) | 1 |
| EW | Access & Circulation | Bicycle Access | 28 | Concourse | Additional bicycle racks | Install additional racks for bicycle parking, either as freestanding racks or integrated into the new wall paneling system. | None | \$ (<\$500k) | 1 |
| | Access & Circulation | Escalators & Elevators | 29 | Both | Newly-located platform elevator in North Paid Area | Install new platform elevator within the North Paid Area, including headhouse, shaft and cab. Restrict customer access to existing platform elevator, except for special circumstances. | None | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| | Access & Circulation | Escalators & Elevators | 30 | Concourse | Replacement street elevator | Replace existing elevator and infrastructure in the current location, with new headhouse, shaft and cab. New cab will conform to ADA standards, and will have in-line door sets to facilitate ingress/egress. | None | \$\$\$ (\$1.5M - \$2.5M) | 2 |
| IP | Access & Circulation | Escalators & Elevators | 31 | Concourse | Additional street escalator: Southeast entrance | Replace portion of the southeast street stairwell with an escalator. Install a street-level canopy to shelter the escalator and secure it during off hours. | None | \$\$\$ (\$>\$2.5M) | 3 |
| IP | Access & Circulation | Escalators & Elevators | 32 | Concourse | Additional street escalator: Southwest entrance | Replace portion of the southeast street stairwell with an escalator. Install a street-level canopy to shelter the escalator and secure it during off hours. | None | \$\$\$ (\$>\$2.5M) | 3 |
| IP | Access & Circulation | Escalators & Elevators | 33 | Both | Additional escalator: center of platform | Install new escalator in southernmost cutout of central paid area | None | \$\$\$ (\$>\$2.5M) | 2 |
| IP | Placemaking, Aesthetics & Customer Experience | Customer Amenities | 34 | Concourse | Reopened public restrooms | Renovate and reopen the public restrooms in the current location. | None | \$ (<\$500k) | 3 |
| | Placemaking, Aesthetics & Customer Experience | Customer Amenity | 35 | Concourse | Additional retail spaces | Install kiosks, vending machines and accompanying infrastructure for retail services, in accordance with the BART/Transmart retail plan. | 19, 44 | -\$ (Paid for by others) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Customer Amenity | 36 | Both | Additional advertising infrastructure | Install additional infrastructure for the display of wall- and kiosk-based advertising. | 43, 46 | -\$ (Paid for by others) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Lighting | 37 | Concourse | Energy-efficient lighting system (concourse - 23k sq. ft.) | Install new LED lighting system and fixtures in ceilings and walls. | 9, 19, 43 | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| IP | Placemaking, Aesthetics & Customer Experience | Lighting | 38 | Concourse | Light tubes and installations for increased natural light | Install fiber-optic tubes, skylights and other design elements to increase the amount of natural light on concourse. | None | \$\$\$ (\$>\$2.5M) | 3 |
| | Placemaking, Aesthetics & Customer Experience | Lighting | 39 | Platform | Energy-efficient lighting system (platform - 17k sq. ft.) | Install new LED lighting system and fixtures in ceilings and walls | 9, 46 | \$ (\$500k - \$1.5M) | 2 |

Appendix D

Table D-1: Downtown Berkeley BART Station - Master Project List (Continued)

| PACKAGE | CATEGORY | IMPROVEMENT TYPE | PROJECT NUMBER | STATION LEVEL | PROJECT NAME | PROJECT DESCRIPTION | DEPENDENCIES | COST CATEGORY (\$-\$\$\$\$) | PROPOSED PHASE |
|---------|---|---|----------------|---------------|--|---|--------------|-----------------------------|----------------|
| | Placemaking, Aesthetics & Customer Experience | Public Art | 40 | Concourse | Public art infrastructure (Phase 1) | Install infrastructure to enable display of public art (variety of media). Specific installations will be selected at a future time. | 43 | \$ (<\$500k) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Public Art | 41 | Concourse | Public art infrastructure (Phase 2) | Install infrastructure to enable display of public art (variety of media). Specific installations will be selected at a future time. | 40, 43 | \$ (<\$500k) | 2 |
| | Placemaking, Aesthetics & Customer Experience | Public Art | 42 | Concourse | Public art infrastructure (Phase 3) | Install infrastructure to enable display of public art (variety of media). Specific installations will be selected at a future time. | 40, 41, 43 | \$ (<\$500k) | 3 |
| | Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 43 | Concourse | New ceiling/wall panels & treatments (concourse) | Install new surface treatments for walls & ceilings. Will likely install over existing materials in place. | 19, 37, 44 | \$\$\$\$ (>\$2.5M) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 44 | Concourse | Epoxy terrazzo overlay for floor (concourse - 23k sq. ft.) | Resurface existing floor surface to provide new, clean floor in a different color. | 21, 43 | \$\$\$ (\$1.5M - \$2.5M) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Concourse | 45 | Concourse | Wall removal at Southwest station entrance | Remove wall at bottom of street-level stairs, to widen concourse-level entrance into the station | 43, 44 | \$\$ (\$500k - \$1.5M) | 1 |
| | Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Platform | 46 | Platform | New ceiling/wall panels & treatments (platform) | Install new surface treatments for walls & ceilings. Will likely install over existing materials in place. | 20, 39, 47 | \$\$\$ (\$1.5M - \$2.5M) | 2 |
| | Placemaking, Aesthetics & Customer Experience | Station Appearance & Experience – Platform | 47 | Platform | Epoxy terrazzo overlay for floor (platform - 17k sq. ft.) | Resurface existing floor surface to provide new, clean floor in a different color. | 29, 33, 46 | \$\$ (\$500k - \$1.5M) | 2 |
| | Placemaking, Aesthetics & Customer Experience | Wayfinding and signage | 48 | Concourse | Real-Time Arrival Signage | Install video screens/signs displaying dynamic information for arrival times of BART trains and connecting transit services. Final locations to be selected, but will be proximal to street entrances and paid areas. | 43 | \$\$\$\$ (>\$2.5M) | 1 |

Appendix

E

Figure E-1: Concourse - North



Concourse - North

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| (S1) Break Room Upgrades | 2 |
| (S2) Inactive Pass Machine Removal | 4 |
| (S3) Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-------------------------------|--------------|
| (A1) South Paid Area - Reopen | |
| (A2) (N) Bike Channels | 27 |
| (A3) (N) Bike Racks | 28 |
| (C1) (N) Elevator | 29 , 30 |
| (C2) (N) Escalator | 31 , 32 , 33 |
| (C3) (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (M2) (E) TVM Infrastructure | |
| (P1) (N) Public Art | 40 , 42 |
| (P2) (N) Retail Panel | |
| (P3) (N) Advertising Panel | 36 |
| (P4) (N) Epoxy Terrazzo Floor Overlay | 44 |
| (P5) (N) Wall Tile | 43 |
| (P6) TVM / AFM | |
| (P7) BART Info | |
| (P8) Transfer Ticket | |
| (P9) (E) Fire Hose | |
| (P10) (E) Pay Phone | |
| (P11) (E) Station Agent Phone | |
| (P12) (E) Change Machine | |
| (P13) (E) Emergency Phone | |
| (P14) (E) ATM | |

| Item | Project No. |
|--|-------------|
| (P19) Reopened Public Restrooms | 34 |
| (P17) Wall Removal at Southwest Station Entrance | 45 |
| (P18) AFG | |
| (P19) Locked Emergency Swing Gate | |
| (P20) AC Transit Schedules | |
| (P21) (E) Pay Phone Removal | |
| (P22) (N) Pay Phone | |
| (P23) (N) Drinking Fountain | |
| (P24) (N) Real-time Signage | 48 |



Safety and Security

| Item | Project No. |
|----------------------------|-------------|
| (S4) Fare Evasion Barriers | 21 |

Figure E-2: Concourse Level - North

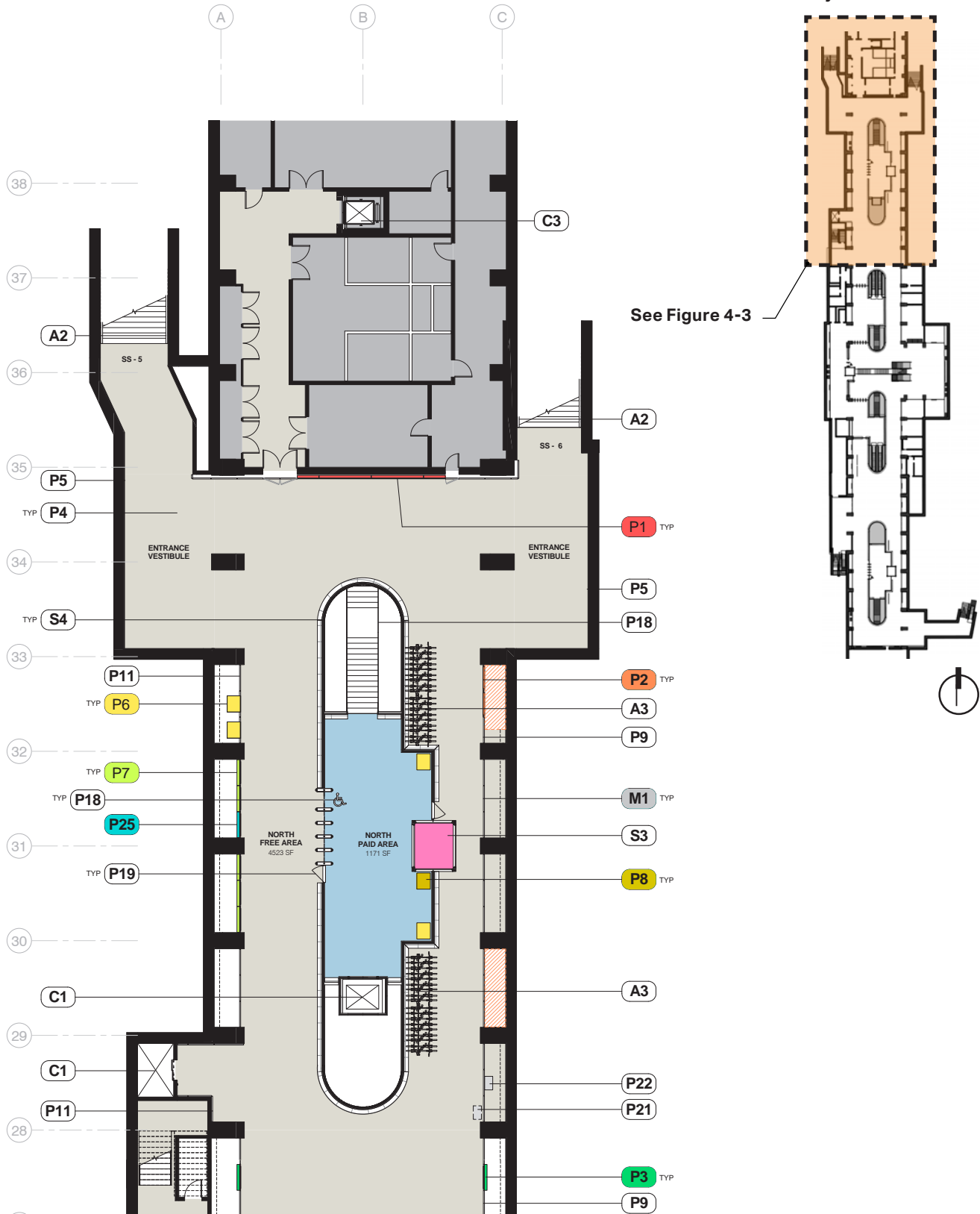


Figure E-3: Concourse - Central



Concourse - Central

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| (S1) Break Room Upgrades | 2 |
| (S2) Inactive Pass Machine Removal | 4 |
| (S3) Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-------------------------------|---------------|
| (A1) South Paid Area - Reopen | |
| (A2) (N) Bike Channels | 27 |
| (A3) (N) Bike Racks | 28 |
| (C1) (N) Elevator | 29 , 30 |
| (C2) (N) Escalator | 31 , 32 33 |
| (C3) (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. | Item | Project No. |
|---------------------------------------|-------------|--|-------------|
| (M1) (N) Metal Panel | 43 | (P19) Reopened Public Restrooms | 34 |
| (M2) (E) TVM Infrastructure | | (P17) Wall Removal at Southwest Station Entrance | 45 |
| (P1) (N) Public Art | 40 , 42 | (P18) AFG | |
| (P2) (N) Retail Panel | | (P19) Locked Emergency Swing Gate | |
| (P3) (N) Advertising Panel | 36 | (P20) AC Transit Schedules | |
| (P4) (N) Epoxy Terrazzo Floor Overlay | 44 | (P21) (E) Pay Phone Removal | |
| (P5) (N) Wall Tile | 43 | (P22) (N) Pay Phone | |
| (P6) TVM / AFM | | (P23) (N) Drinking Fountain | |
| (P7) BART Info | | (P24) (N) Real-time Signage | 48 |
| (P8) Transfer Ticket | | | |
| (P9) (E) Fire Hose | | | |
| (P10) (E) Pay Phone | | | |
| (P11) (E) Station Agent Phone | | | |
| (P12) (E) Change Machine | | | |
| (P13) (E) Emergency Phone | | | |
| (P14) (E) ATM | | | |



Safety and Security

| Item | Project No. |
|----------------------------|-------------|
| (S4) Fare Evasion Barriers | 21 |

Figure E-4: Concourse Level - Center



Figure E-5: Concourse - South



Concourse - South

Legend



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| Fire Suppression in Train Control Rooms | 12 |
| Train Control Room Uninterruptible Power Supply (UPS) | 17 |
| Train Control Room, UPS Installation | 18 |
| (S1) Break Room Upgrades | 2 |
| (S2) Inactive Pass Machine Removal | 4 |
| (S3) Station Agent Booth Replacement and Upgrade | 15 |

(N) = New
(E) = Existing
TYP = Typical

Space Legend

| | | | |
|-----------------|-----------|-----------|-----------------|
| BART Staff | Free Area | Paid Area | Retail |
| Non Public Area | Future | Police | Proposed Retail |



Access and Circulation

| Item | Project No. |
|-------------------------------|---------------|
| (A1) South Paid Area - Reopen | |
| (A2) (N) Bike Channels | 27 |
| (A3) (N) Bike Racks | 28 |
| (C1) (N) Elevator | 29 , 30 |
| (C2) (N) Escalator | 31 , 32 33 |
| (C3) (E) Elevator | 29 |



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (M2) (E) TVM Infrastructure | |
| (P1) (N) Public Art | 40 , 42 |
| (P2) (N) Retail Panel | |
| (P3) (N) Advertising Panel | 36 |
| (P4) (N) Epoxy Terrazzo Floor Overlay | 44 |
| (P5) (N) Wall Tile | 43 |
| (P6) TVM / AFM | |
| (P7) BART Info | |
| (P8) Transfer Ticket | |
| (P9) (E) Fire Hose | |
| (P10) (E) Pay Phone | |
| (P11) (E) Station Agent Phone | |
| (P12) (E) Change Machine | |
| (P13) (E) Emergency Phone | |
| (P14) (E) ATM | |

| Item | Project No. |
|--|-------------|
| (P15) Reopened Public Restrooms | 34 |
| (P17) Wall Removal at Southwest Station Entrance | 45 |
| (P18) AFG | |
| (P19) Locked Emergency Swing Gate | |
| (P20) AC Transit Schedules | |
| (P21) (E) Pay Phone Removal | |
| (P22) (N) Pay Phone | |
| (P23) (N) Drinking Fountain | |
| (P24) (N) Real-time Signage | 48 |



Safety and Security

| Item | Project No. |
|----------------------------|-------------|
| (S4) Fare Evasion Barriers | 21 |

Figure E-6: Concourse Level - South

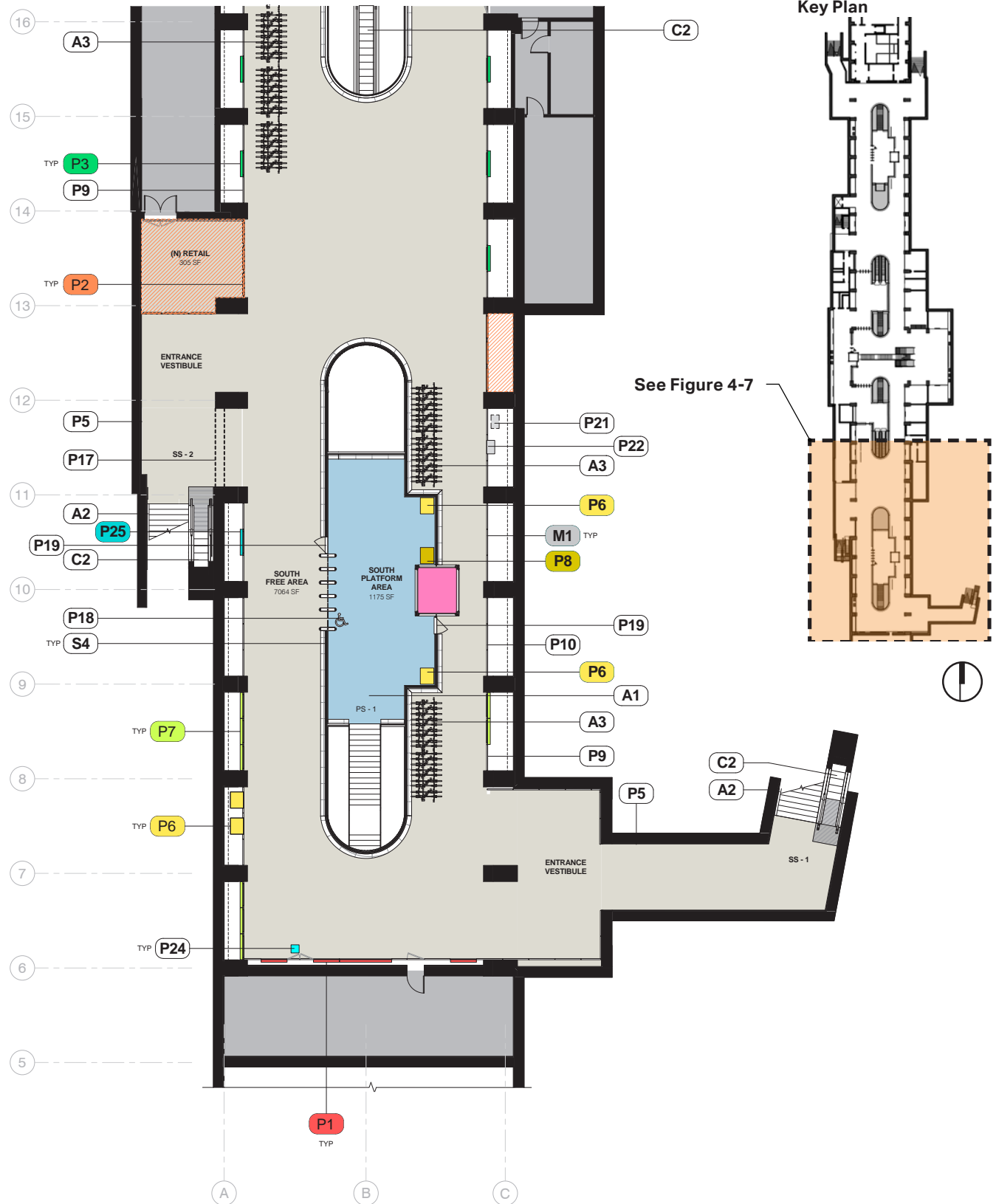


Figure E-7: Platform - North



Legend



Facility and Systems Upgrades

- Item
 (S1) (N) Undercar Deluge System Upgrade



Access and Circulation

- | Item | Project No. |
|--------------------|-------------|
| (C1) (N) Elevator | 29 |
| (C2) (N) Escalator | 33 |
| (C3) (E) Elevator | 29 |

(N) = New
 (E) = Existing
 TYP = Typical

Space Legend

- Paid Area



Placemaking, Aesthetics, Passenger Experience

- | Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (E1) (N) Advertising Panel | 36 |
| (P2) (N) Epoxy Terrazzo Floor Overlay | 47 |
| (P3) (N) Glass Guardrail / Handrail | |
| (P4) (N) Wall Tile | 43 |
| (P5) Paint (E) Wall Black | 43 |
| (P6) (N) Station Signage | |
| (P7) Refurbished (E) Benches | |
| (P8) (N) Benches | |
| (P9) (N) DSU | |
| (P10) (N) Drinking Fountain | |

Figure E-8: Platform Level - North

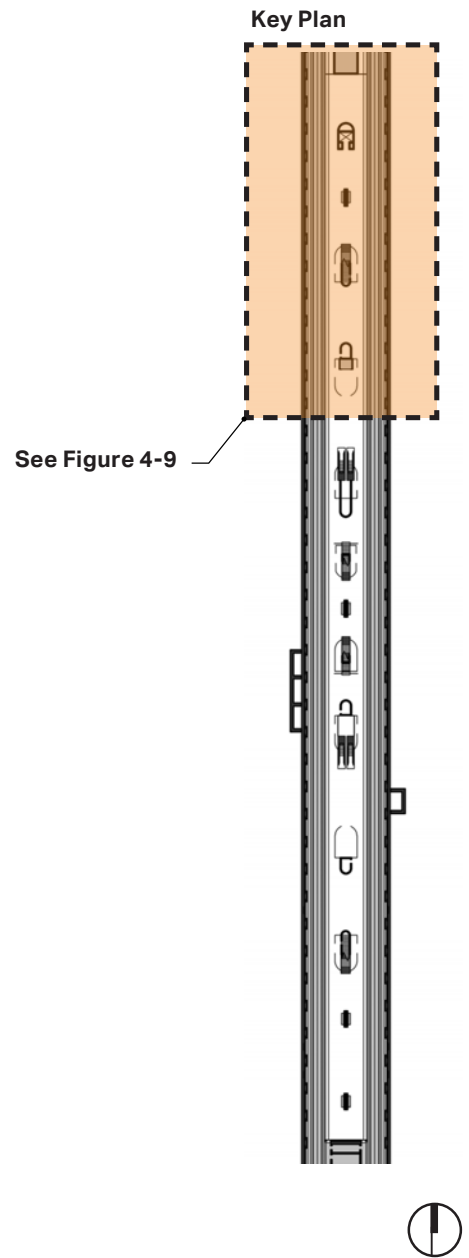
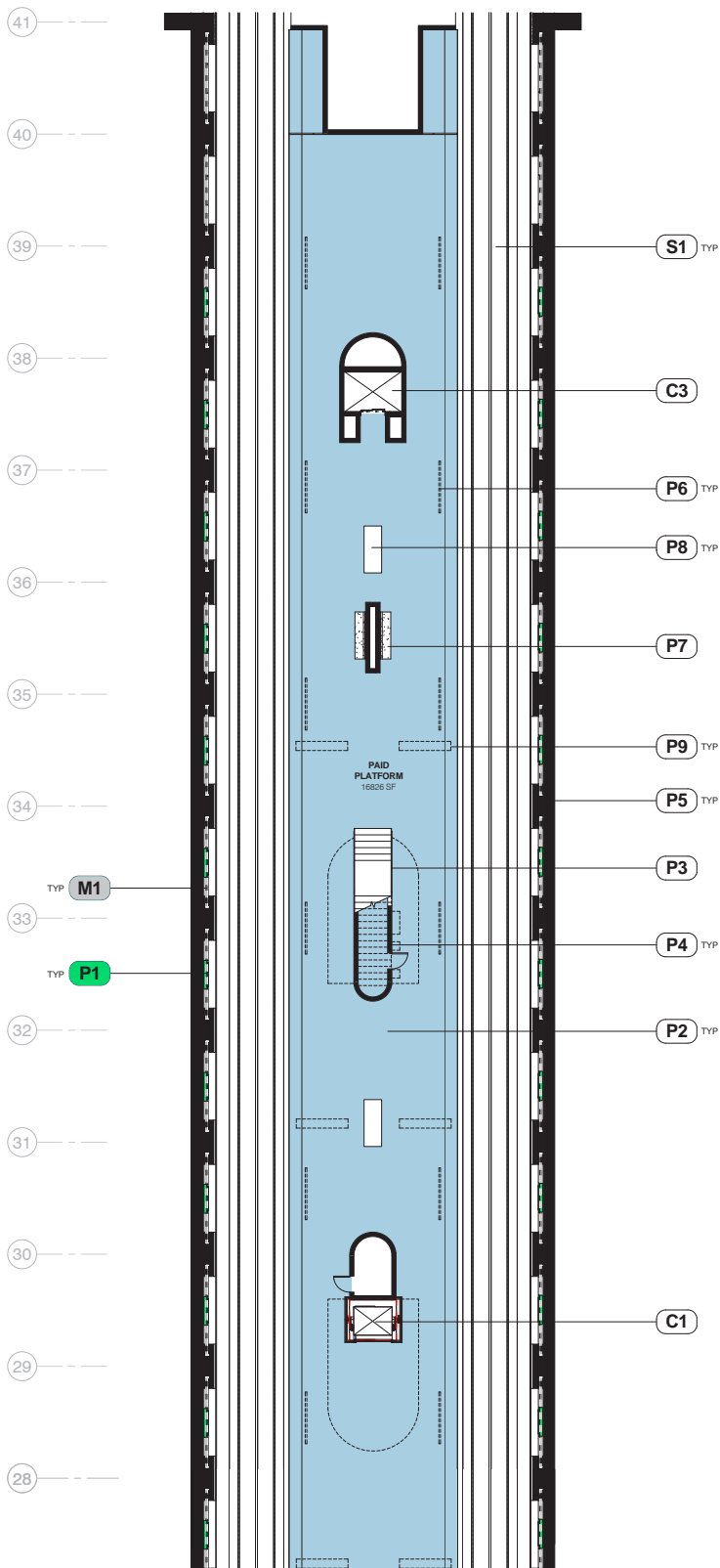
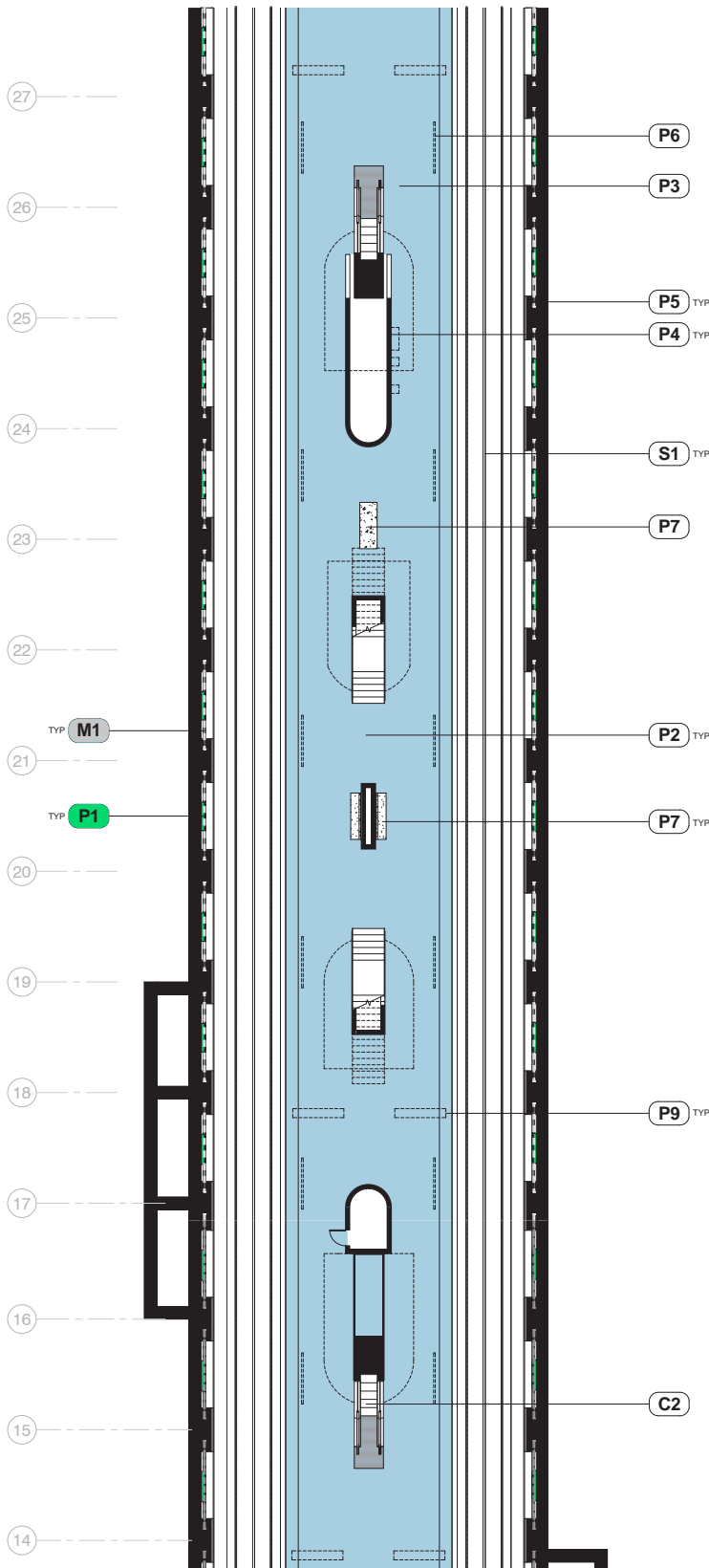


Figure E-9: Platform Level - Center



Legend



Placemaking, Aesthetics, Passenger Experience

| Item | Project No. |
|---------------------------------------|-------------|
| (M1) (N) Metal Panel | 43 |
| (P1) (N) Advertising Panel | 36 |
| (P2) (N) Epoxy Terrazzo Floor Overlay | 47 |
| (P3) (N) Glass Guardrail / Handrail | |
| (P4) (N) Wall Tile | 43 |
| (P5) Paint (E) Wall Black | 43 |
| (P6) (N) Station Signage | |
| (P7) Refurbished (E) Benches | |
| (P8) (N) Benches | |
| (P9) (N) DSU | |
| (P10) (N) Drinking Fountain | |



Facility and Systems Upgrades

| Item | Project No. |
|---|-------------|
| (S1) (N) Undercar Deluge System Upgrade | |



Access and Circulation

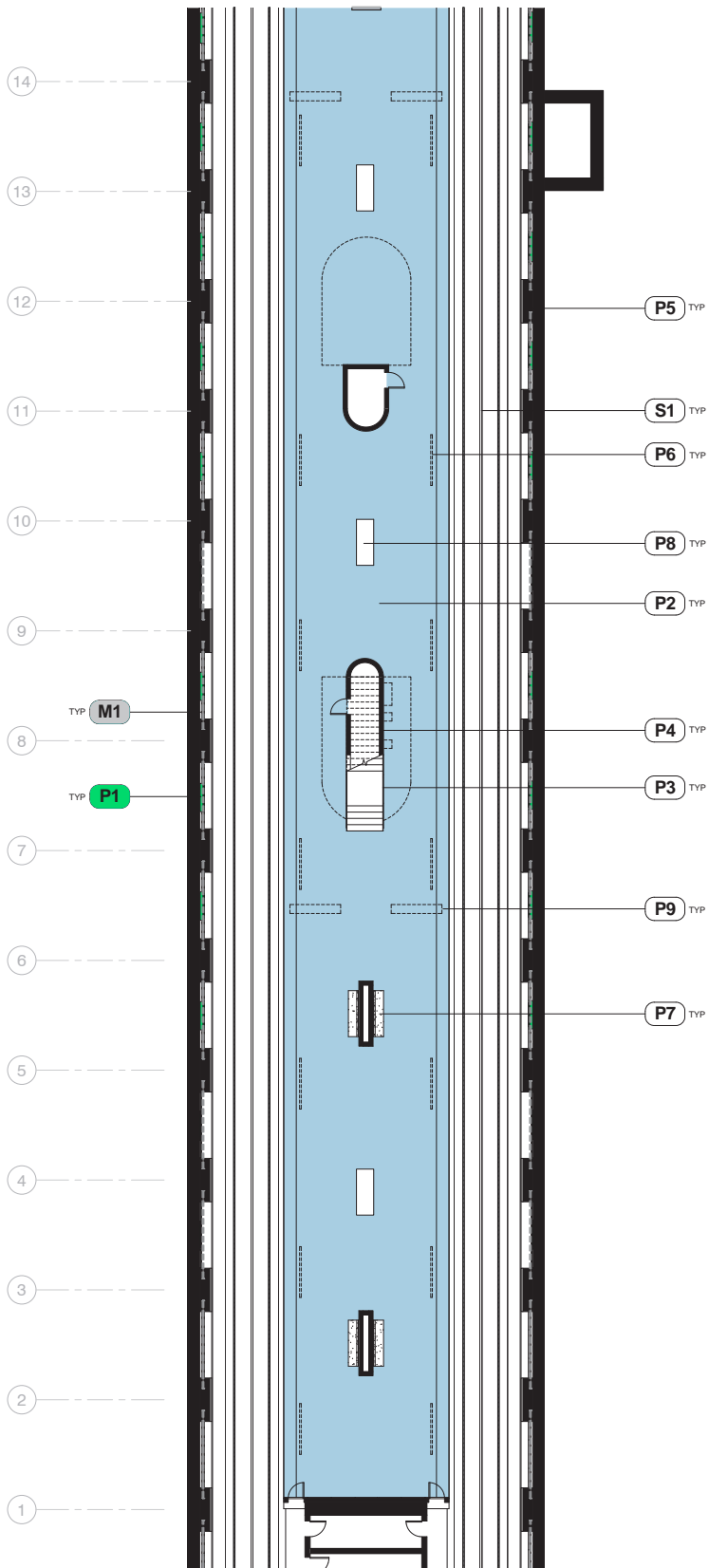
| Item | Project No. |
|--------------------|-------------|
| (C1) (N) Elevator | 29 |
| (C2) (N) Escalator | 33 |
| (C3) (E) Elevator | 29 |

(N) = New
(E) = Existing
TYP = Typical

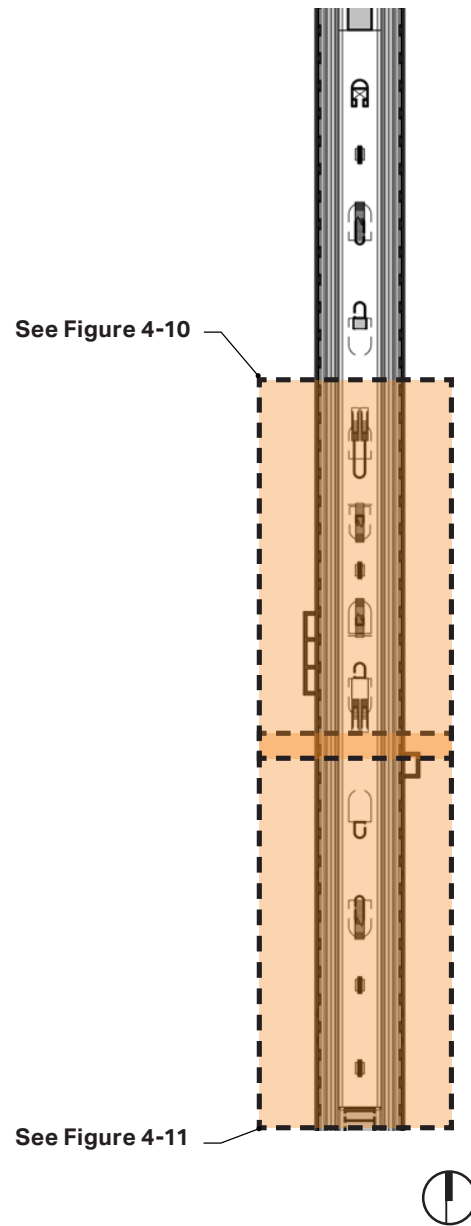
Space Legend

■ Paid Area

Figure E-10: Platform Level - South



Key Plan



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