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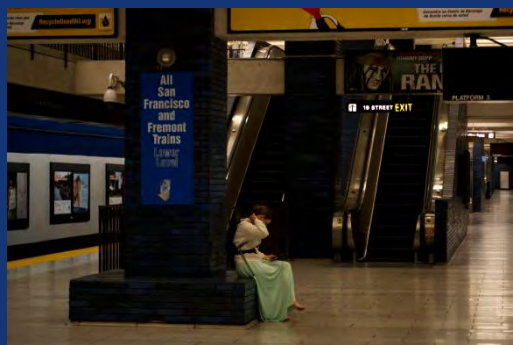
BART

Final Report

19th St/Oakland BART Station
Station Modernization Program
Conceptual Design Plan



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19th St/Oakland BART Station Conceptual Design Plan

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Acknowledgments

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1.0 Introduction

This conceptual design plan (the "Plan") documents a comprehensive effort to modernize the 19th St/Oakland Bay Area Rapid Transit (BART) Station in downtown Oakland, which opened with the first BART line on September 11, 1972. 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 TOD program, these station improvements will help make Plan Bay Area a reality.

Station Modernization 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 will address 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 upgrades.

The 19th St/Oakland Station has been identified as one of the first phase of stations that will receive funding for modernization. The Plan has been undertaken to thoroughly assess the station's needs and prioritize a set of improvements designed to make substantive upgrades that will create a cleaner, brighter, easier-to-use BART station, and that can be used to leverage funding. The Plan will create a comprehensive vision to positively impact the station's users and the surrounding community through beautification, improved access, and enhanced capacity. The Plan presents a unique set of improvements that respond to the station's existing needs and the flourishing growth of the surrounding area.

The 19th St/Oakland Station has ample capacity for ridership growth, and BART is supportive of high quality and more intensive development near stations – particularly office and employment growth that reinforces downtown Oakland as a regional employment center. Redevelopment and reinvestment in the surrounding area, Oakland's emerging "Uptown", also calls for a strategic response to accommodate current and future new riders.

The Plan has been undertaken to understand future access, capacity and operational issues at 19th St/Oakland Station, reflecting the City of Oakland's Broadway Valdez Specific Plan and 20th Street "complete street" conceptual planning. Underlying analysis has been conducted to evaluate passenger flows between the station platforms and the station portals at street level, considering the need for potential expansion and new vertical circulation elements. Accessibility and access investments, as well as urban design and architecture considerations, also inform the goal of modernizing the station and improving sustainability and security.

This Plan details both capacity and modernization improvements for the station, setting priorities, providing preliminary cost estimates, and identifying next steps. The Plan should serve as a flexible framework, providing a basis for the next phase of studies and more detailed design work for the identified improvements.

1.1 Project Coordination

1.1.1 Stakeholders

BART has engaged an AECOM team of engineers, planners and architects to develop and assess strategies for modernizing 19th St/Oakland Station. Input from stakeholders and the surrounding community has been solicited in preparation of the Plan. These include the City of Oakland; AC Transit, which operates its Uptown Transit Center adjacent to 19th St/Oakland Station; as well as the Lake Merritt / Uptown District Association. The stakeholders were invited to three workshop sessions in order to identify existing conditions and needs, discuss and vet proposed improvements, and help prioritize the recommended improvements.

1.1.2 Community Input

BART engaged the community by sharing the proposed improvements and solicited input by asking for feedback on and prioritization of the recommended project. BART developed a project website (http://www.bart.gov/19th) to disseminate the project information and held two outreach events. The in-station events were held during the AM and PM peak ridership hours, on June 6, 2014 from 4-7 pm and on June 12, 2014 from 7-10 am. During the events, 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 improvements they thought were most important.

The survey was organized to receive feedback on the prioritization of all of the improvements as a whole rather than by comparative ranking. Between the two in-station events and the online survey, a total of 629 surveys were received. The top three most important projects based on customer feedback are, in order: maintain and upgrade general infrastructure functionality, improve general station cleanliness and upkeep, and upgrade the lighting within the station, including more energy-efficient lighting.

1.2 Needs Assessment

Considering anticipated increases in ridership at 19th St/Oakland Station and the need to improve the station experience for riders and employees, BART hosted a station walk-through in June 2013 to identify issues related to renovation needs, station capacity, station access, surrounding land uses, and local transit improvements. The event formed the basis of a needs assessment for station modernization, identifying the following areas for improvement:

- **Renovation Needs**
  - General cleaning and repair (replace lights, replace broken tiles, clean floor)
  - Discourage fare evasion, urination and crime
  - Remove redundant equipment
  - Activate underutilized spaces
  - Install more sustainable lighting systems
- **Station Capacity**
  - Reduce congestion at entries and fare gates and queuing space on the platforms
  - Increase vertical circulation capacity at the north end of the station
- **Station Access**
  - Comply with Americans with Disabilities Act (ADA)
  - Improve wayfinding signage
  - Improve pedestrian and bicycle access on the surrounding streets, and into the station
  - Make the station entries more visible and vibrant
- **Surrounding Land Uses**
  - Integrate the identity of the surrounding community into the station
  - Coordinate with future development in the surrounding area

- Implement urban design improvements at the station portals to make them more welcoming and visible
- Engage the future developer of the former Sears Building to reinstitute access to the station via the existing concourse level entrance

- **Local Transit Improvements**
  - Provide more real-time transit information throughout station and in the surrounding area
  - Improve local transit connections, including the "Free B" Broadway shuttle service
  - Create more direct and efficient connections between the AC Transit Uptown Transit Center

Specific improvements to address these issues are recommended in Section 3.

1.3 Existing Conditions

1.3.1 Station Characteristics

As shown in **Figure 1**, the station is located along Broadway, the spine of downtown Oakland. Station access portals are provided near the intersections of 17th Street, 19th Street and 20th Street, and one street access elevator is provided on the east side of Broadway near 17th Street.

The station comprises three underground levels – one concourse level and two platform levels – as illustrated in **Figure 2**. The east and west sides of the upper platform level are designated "Platform 1" and "Platform 3", respectively, while "Platform 2" is found on the lower level.

The concourse level of the station currently provides three separate paid areas and features a total of four fare gate arrays (21 devices total), summarized in **Table 1**.

Table 1: Station Fare Gate Arrays

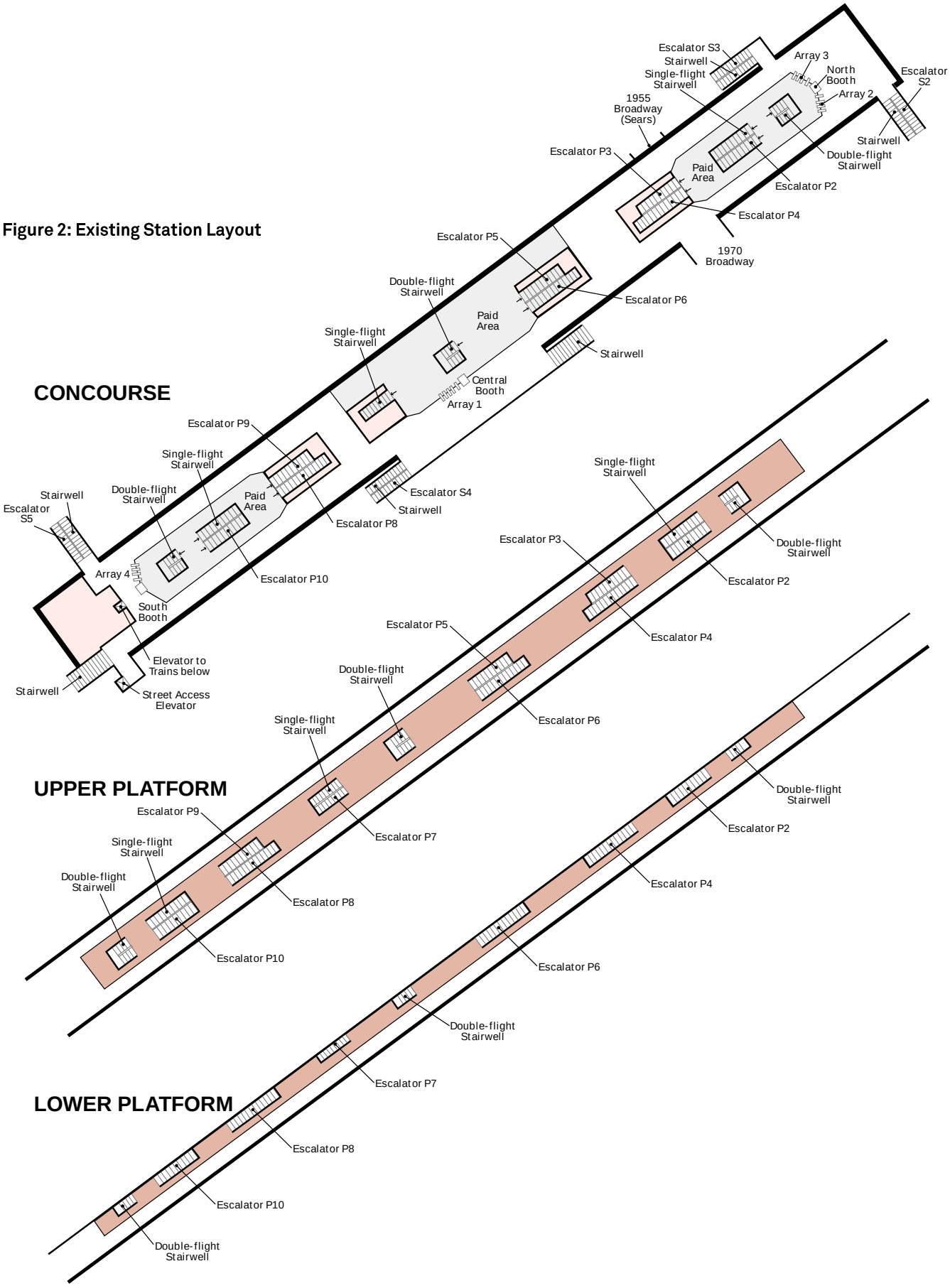
Array	Location	Fare Gates				
		Entry-only (E)	Exit-only (X)	Reversible (R)	Accessible (AFG)	Total
Array 1	Central Booth	1	1	3	1	6
Array 2	North Booth (East)	1	1	3	1	6
Array 3	North Booth (West)	1	1	2	0	4
Array 4	South Booth	1	1	2	1	5
Total		**4**	**4**	**10**	**3**	**21**

Source: BART, 2013.

A combination of escalators and stairs transition passengers between the paid area of the concourse and the station platforms.

Figure 1: Station Location and Context

Figure 2: Existing Station Layout



1.3.2 Surrounding Context

The 19th St/Oakland BART Station is an underground station serving the north end of Oakland's central business district. The station is located at the heart of "Uptown", downtown Oakland's arts and entertainment district. The area is home to a number of large-scale office buildings, recently-built residential developments, retail shops and cafés/restaurants, as well as cultural venues such as the historic Fox and Paramount theatres. The Uptown District has experienced significant growth in the last decade and is one of the fastest-growing neighborhoods in Oakland. Uptown is home to a number of art galleries and hosts the enlivened "Art Murmur" event on the first Friday of every month. The district has a unique art-enthused, maker (do-it-yourself) atmosphere that is valued and embraced by the local community and City as a whole.

The area is also served by the Lake Merritt / Uptown District Association, which provides maintenance, safety and security management, as well as cultural and community enrichment in the area. The association also promotes programs that help employees, residents and visitors to take pride in the area. The association employs a number of ambassadors that provide services such as sidewalk cleaning, walking escorts, and landscaping maintenance.

1.3.3 Station Planning Context

Figure 1 shows the greater station area, along with several public and private projects and initiatives that are currently underway or are planned. Some of these projects, which include multi-modal access, public safety, and public art improvements, are illustrated in **Figure 3**. The Plan has been developed to reflect and coordinate with these projects and initiatives, which are discussed in more detail below.

Broadway Valdez Specific Plan
The Broadway Valdez Specific Plan was recently adopted by the Oakland City Council at their June 17, 2014 and July 1, 2014 meetings. The Specific Plan does not include the 19th St/Oakland Station, but encompasses the areas surrounding Broadway just north of the station. The Specific Plan does recognize the station as a gateway to the Plan Area and calls for significant growth north of the station that would change the character of the Broadway Valdez area and increase future BART ridership. The Broadway Valdez District re-imagines the plan area as "a 'complete' neighborhood that supports socially and economically sustainable mixed-use development; increases the generation and capture of local sales tax revenue; celebrates the cultural and architectural influences of the neighborhood's past and present-day prosperity, and implements a 'green,' 'transit-first' strategy that reduces greenhouse gas emissions and the use of non-renewable resources."

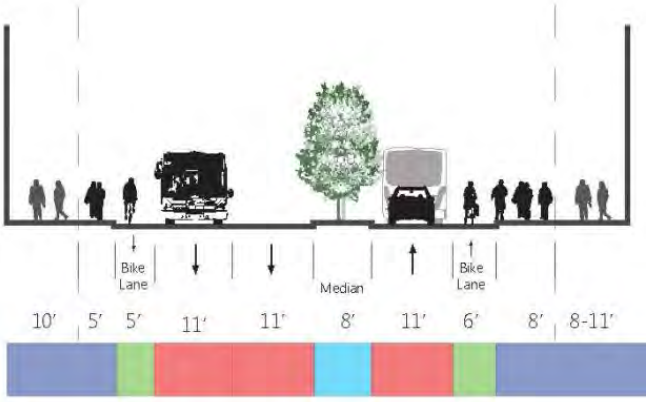
AC Transit BRT
Over the past 15 years, AC Transit has been working on implementing the East Bay's first comprehensive bus rapid transit (BRT) project in the Berkeley–Oakland–San Leandro corridor, following a 14-mile route between Downtown Berkeley and San Leandro BART stations via Telegraph Avenue, Broadway (downtown Oakland), and International Boulevard. While the segment between downtown Berkeley and downtown Oakland was eventually dropped from consideration under the Locally Preferred Alternative (LPA) in 2012 due to a variety of factors, the 9.5-mile segment between downtown Oakland and San Leandro (DOSL) remains and is expected to begin construction sometime in 2014, with revenue service beginning in 2017.

The northern terminus of the route would be at a new "Uptown Station" located along Broadway between 19th Street and 20th Street. As part of the station modernization planning efforts for 19th St/Oakland Station, BART has been coordinating with AC Transit on the location and design of the proposed BRT station to facilitate intermodal connectivity. Specifically, the northbound BRT platform would be located farside of the Broadway/19th Street intersection, in close proximity to 19th St/Oakland Station's central entrance, while the southbound BRT platform would be located farside of the Broadway/20th Street intersection, adjacent to the proposed location of a future elevator between street level and the station's concourse.

20th Street Complete Streets Project
The City of Oakland has proposed various enhancements to 20th Street in the vicinity of 19th St/Oakland Station to improve multi-modal accommodations along this vital east-west route connecting the station with Lake Merritt and the rest of Uptown. Specifically, the proposed redesign involves a "road diet" (reducing the current cross-section from four or six travel lanes to two travel lanes), new bike lanes, a widened sidewalk, and a landscaped median. Current sidewalk widths vary between eight and eleven feet along either side of 20th Street, but would be approximately doubled to 20 feet. This would expand pedestrian space along the congested north side of the street, which serves as one of the primary pedestrian routes to and from the station.

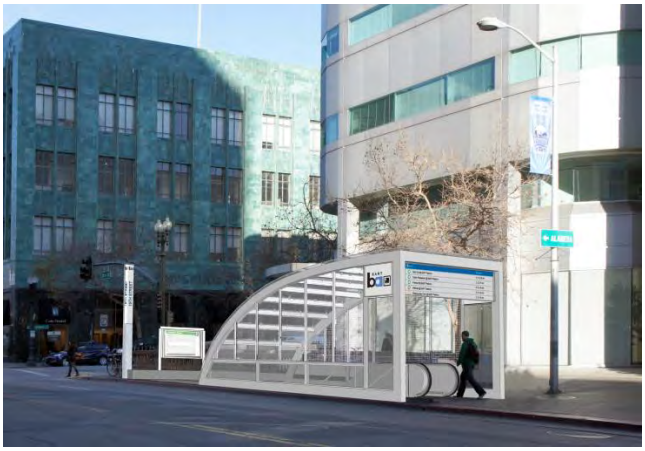
Figure 3: Related Projects

17th Street Gateway Project
(partnership with the City of Oakland)



20th Street Complete Streets Project
(City of Oakland)

19th Street Bike Station
(partnership with the City of Oakland)



20th Street Entrance Enclosure
(BART)

BART 20th Street Entrance Enclosure
As of August 2014, BART has begun construction of a pilot canopy/enclosure for the northeast entrance to 19th St/Oakland Station, located at the northeast corner of the Broadway/20th Street intersection. The enclosure will protect the existing escalator at this entrance from the effects of weather, as well as provide shelter for passengers and employees. Lighting, security cameras, and a roll-down gate will also improve safety for passengers and employees. Completion is scheduled for December 2014. If successful, the prototype design could be rolled out to additional underground BART station entrances.

17th Street Gateway Project
Improvements are underway at the 17th Street alley entrance to the station, which has been closed since late 2013 to allow construction crews to erect a public art installation along the north wall facing the alley. The mounted sculpture will feature light-emitting diode (LED) units to improve lighting and public safety in the alley. Completion is scheduled for late 2014.

19th Street Bike Station
The City of Oakland, in partnership with BART, is currently leading an effort to establish a bike station at the 19th St/Oakland Station to provide secure, enclosed bicycle parking similar to bike stations at Downtown Berkeley and Embarcadero stations. While several locations including the ground floor of 1970 Broadway (southeast corner of the Broadway/20th Street intersection) had been under consideration, the bike station is currently proposed for a location inside the vacant building at 1775 Broadway, at the southwest corner of the Broadway/19th Street intersection.

1.3.4 Station Access

Access to the station occurs primarily via pedestrian trips by residents, workers and visitors of the surrounding area. The *2008 BART Station Profile Study* estimated that 87 percent of all passengers entering the station on a typical weekday accessed the station on foot. This highlights the need to prioritize pedestrian access in the Plan's modernization and capacity improvement strategies.

The following points provide an overview of station access options:

- No off-street parking is provided at the station.
- Substantial free bike rack parking is available within the free area of the concourse level, which is highly utilized on weekdays. Bike racks and lockers, owned by the City of Oakland, are also provided on the sidewalks in close proximity to some of the station portals and are also well-utilized.
- A number of bus routes provide connections to the station, which is located adjacent to AC Transit's Uptown Transit Center on the block of 20th Street between Telegraph Avenue and Broadway. Bus stops are located along Broadway and 20th Street in proximity of the station portals.
- The "Free B" Broadway shuttle service currently operates along Broadway between Jack London Square and Grand Avenue on weekdays between 7 am and 7 pm. The service extends farther north on Friday and Saturday nights, operating until 1 am the following morning.

1.4 Ridership and Capacity Analysis

1.4.1 2008 BART Station Profile Study

The *2008 BART Station Profile Study* estimated that 9,794 riders per day entered the 19th St/Oakland Station on an average weekday. Of all riders entering 19th St/Oakland Station, 75 percent indicated that they were coming from non-home-based locations, with 65 percent coming from work and 10 percent from other origins. The overwhelming majority of the station's non-home-based trips (87 percent) were work trips.

Most station users travel to and from the station on foot, particularly non-home-based riders. In total, 87 percent of all passengers entering the station on a typical weekday were pedestrians. Travel mode to the station for both home and non-home origins is summarized in **Figure 4**.

Figure 5 provides an overview of the home locations of weekday riders who entered the BART system at 19th St/Oakland Station. Not surprisingly, riders who walked to the station originated in areas closest to the station, concentrated in the Adams Point and Lakeside neighborhoods situated east of the station. Riders who accessed the station by bicycle were also concentrated in Adams Point. Riders using other transit modes to get to the station came from a wider catchment area, including points along the Oakland Avenue and Grand Avenue corridors beyond the adjacent neighborhoods.

1.4.2 2012 Ridership

Assessment of ridership demand and capacity analysis for the Plan are based on fare gate data collected on Thursday, November 15, 2012, which recorded a total of 12,345 entries at 19th St/Oakland Station. This represents an increase of 26 percent over ridership volumes identified in the *2008 BART Station Profile Study*, or about 6.5 percent annual growth over the four-year interval. The increase reflects a rebound in employment in the station area as well as a surge in new residents and visitors attracted to new restaurants, bars and entertainment in the revitalizing Uptown District.

Figure 4: Travel Mode to Station (2008 BART Study)

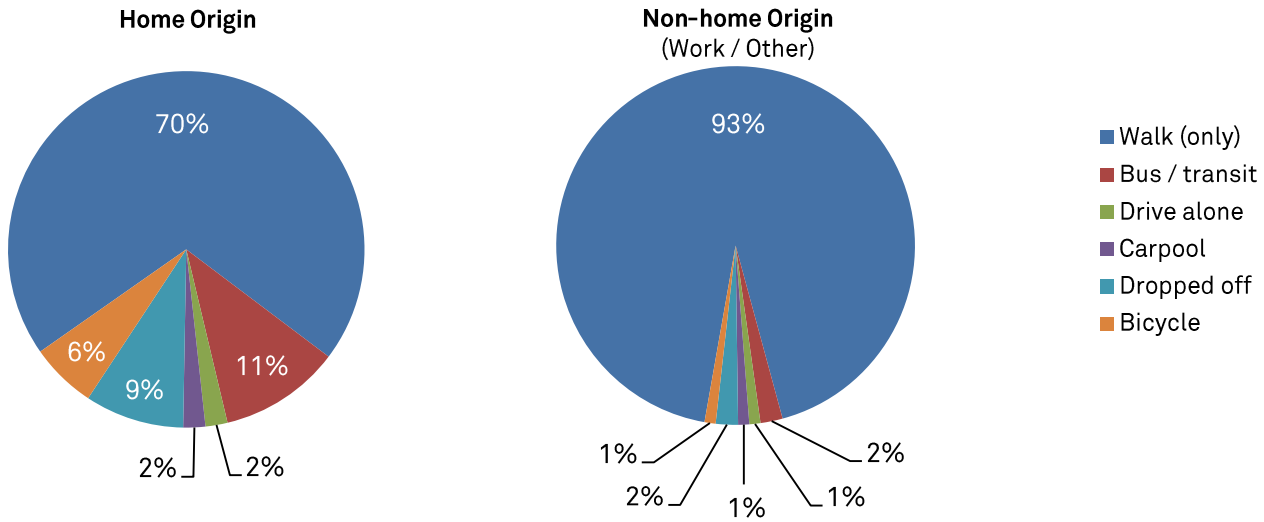
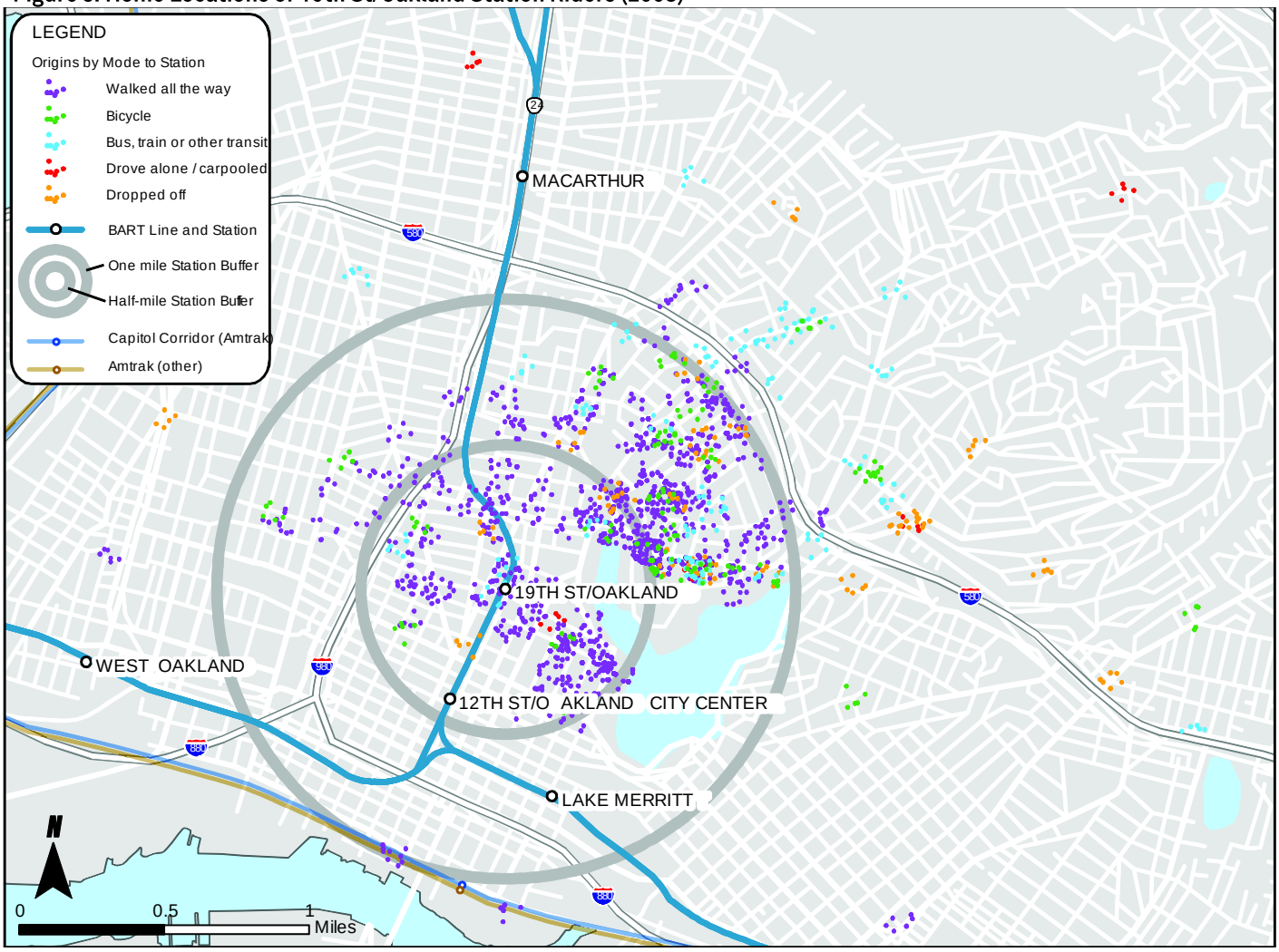


Figure 5: Home Locations of 19th St/Oakland Station Riders (2008)



Sources: ESRI, 2008 BART Station Profile Study

1.4.3 Projected 2040 Ridership

The Plan considers the impacts of development projects in the surrounding area on ridership at the station. The Uptown District has emerged as in important entertainment, cultural and residential district in downtown Oakland, and this trend is expected to continue in the years ahead. Over one million square feet of new office space at Kaiser Center has been approved, and the area is identified as a Priority Development Area in Plan Bay Area (adopted July 2013).

For the five traffic analysis zones (TAZs) in the immediate vicinity likeliest to contribute to ridership growth at the station, the land use assumptions in the Metropolitan Transportation Commission (MTC) regional travel demand forecasting model for Plan Bay Area estimate there will be an increase of approximately 8,300 households and 18,500 jobs. A systematic review of known, foreseeable land use developments within these five TAZs – including growth attributable to the Broadway Valdez Specific Plan, as well as growth attributable to specific development proposals – estimated only 3,500 units and 12,500 jobs in the pipeline. Given that the forecasted growth is larger than the pipeline developments, ridership projections obtained from the BART Ridership Model (BRM) – which estimates ridership growth at specific stations based on the Plan Bay Area land use and employment forecasts (as well as a variety of other factors) – are more conservative and were determined to be appropriate for use in the analysis of future-year capacity at the station.

The BART Ridership Model (BRM) estimates that there will be a total of 22,348 weekday entries to 19th St/Oakland Station in the horizon year of 2040. This represents an increase in station activity of over 80 percent as compared with today, or a 2.1 percent per annum increase over 2012 ridership volumes. **Table 2** provides a summary of existing (2012) and future (2040) ridership, with combined totals of both station entries and exits.

Table 2: Existing and Forecasted Ridership at 19th St/Oakland Station

Origin	Entries and Exits		Increase over Existing
	Existing Fare Gate Activity (2012)	Future Fare Gate Activity (2040 BRM Forecast)	
Weekday AM Peak Hour (8:00 – 9:00 am)	3,423	5,291	55%
Weekday PM Peak Hour (4:30 – 5:30 pm)	3,316	6,164	55%
Daily Ridership	24,219	44,711	85%

Source: *11/15/12 BART fare gate data; BART Ridership Model*

1.4.4 Capacity Analysis

The ridership projections presented in **Table 2** reveal that the total number of customers entering 19th St/Oakland Station is expected to increase by approximately 10,000 station entries per day (81 percent growth) by 2040. This suggests that the station will require substantial capacity improvements in the future, which may include additional fare gates, stairs, escalators, and expanded or new station portals.

To understand the impacts of this future growth, ridership data was modeled using Legion SpaceWorks pedestrian simulation software. This application provides output in the form of maps showing average pedestrian density or video clips showing simulated pedestrian behavior over a defined time period. **Figure 6** and **Figure 7** show density maps focusing on the north end of the station concourse of the existing AM peak hour and the future year (2040) AM peak hour, respectively. The colored areas in each of the figures show where pedestrian flows occur, in each case during the peak fifteen minutes of the AM peak

hour. The particular color shown corresponds to the average pedestrian density over the fifteen-minute period, ranging from blue to red. Blue represents "Level of Service" (LOS) grade A, with an average of over 35 square feet of circulation space available for each person, while red represents LOS F, with less than 5 square feet per person.

In the AM peak hour, most station customers are on their way to work and are exiting the station. The greatest concentration of workplaces in the station area lies north and east of the station, where Kaiser Center and several other office towers are located. Thus, the portal at the northeast corner of Broadway and 20th Street (NE portal) is the most heavily subscribed of the station's six access points.

Intuitively, the warmer colors in **Figure 6** and **Figure 7** are found where one would expect the greatest concentrations of pedestrians – at fare gates or at the foot of escalators or stairs. Pedestrians slow down at these locations, and if there are enough pedestrians, they will start to crowd together as they transition to a slower speed. Given enough crowding, queues will form and pedestrians may have to stop and wait before enough space ahead of them clears to allow them to move forward. These queues can form quite rapidly, given that the existing escalator at the NE portal has a single-width design and cannot accommodate as many users as the standard double-width escalators used throughout most of the BART system.

In existing conditions, queues of three to five people (corresponding to the yellow and orange area in **Figure 6**) form at the east side of the fare gate array closest to the NE portal. In the future year (**Figure 7**), these queues would more than double and increase demand on the west side of the fare gate array.

In existing conditions, queues form along the wall as customers line up to use the escalator, but access to the stairway alongside the escalator remains clear. In the future year, with a single-width escalator still in place, demand on the vertical circulation at the NE portal would also cause queues to form at the foot of the stairs, making access from street level down to the station concourse, against the flow of exiting pedestrians, very difficult.

Activity in the PM peak hour effectively is a reverse of the AM peak hour – most station customers are leaving their workplaces and entering the station to return home. Since the evening commute is less peaked than the morning commute, with a wider spread of arrival times at the station, there is less of a propensity for queues to form at the station portals or fare gates. Instead, congestion is more likely to be an issue on the platforms as homebound workers wait for their trains to arrive.

Accordingly, the warmer colors in **Figure 8** and **Figure 9** are found at the train door locations and at the more constrained platform areas, particularly toward the north end of the platforms, corresponding to the fact that most customers enter the station at the NE portal. In existing conditions (**Figure 8**), crowding is most evident on the narrower lower platform, at the foot of the escalator connecting from the fare gates at the north end of the concourse. Though other areas of the platform offer more space (light and dark blue), crowding along the narrow platform is an obstacle for customers to move south and reach the less-crowded south end of the platform.

In the future year (**Figure 9**), the model finds that crowding on the upper platform will be largely resolved by BART's three-door car fleet and ten-car train operations. However, on the lower platform, areas of crowding will have grown from an area of two train car lengths to about four train car lengths, making it very difficult for customers to move along the platform once they reach the bottom of the stairs and escalators.

At street level, there is also substantial crowding along the north sidewalk of 20th Street east of the NE portal, with platoons of passengers exiting the station during the weekday AM peak hour corresponding with the arrival of trains at the station. These surges in pedestrian flow exiting the station can conflict with the array of activities taking place at this particular station entrance, including the arrival of passengers entering the station, bicyclists parking and locking their bikes or entering the station, passengers being dropped off and picked up, and passengers waiting to be picked up by employer shuttles.

Combined with the limited effective width of the sidewalk as a result of obstructions (e.g., bus stop benches, utility poles, newspaper racks) and pavement treatments (e.g., cobbles at the California Bank & Trust building at 400 20th Street), pedestrian flows along the north sidewalk are particularly constrained. These effects are present, but in reverse, during the weekday PM peak hour, but are less serious for the reasons cited previously.

Some of the major capacity-related issues at the station are illustrated in **Figure 10**. Overall, the results of the pedestrian modeling show a need for expanded portal and fare gate capacity at the north end of the station concourse, as well as better distribution of customers along the lower platform.

Figure 6: Existing AM Peak Hour Density Map – North Concourse Focus

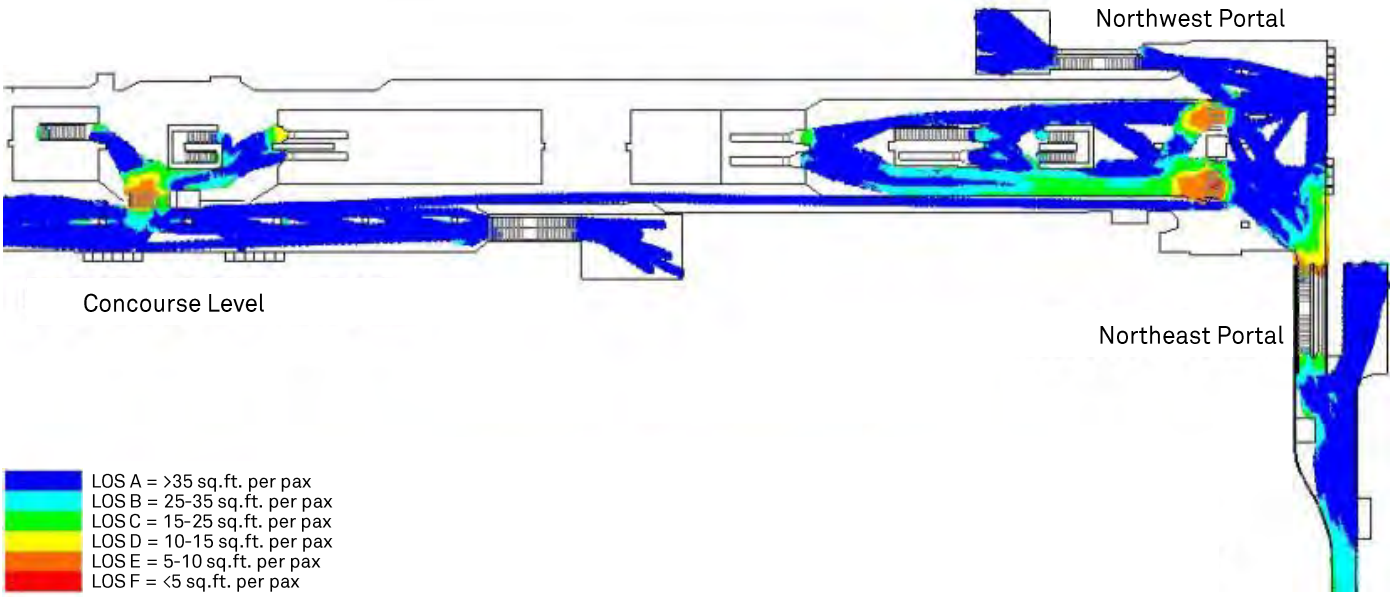


Figure 7: Future Year (2040) AM Peak Hour Density Map – North Concourse Focus

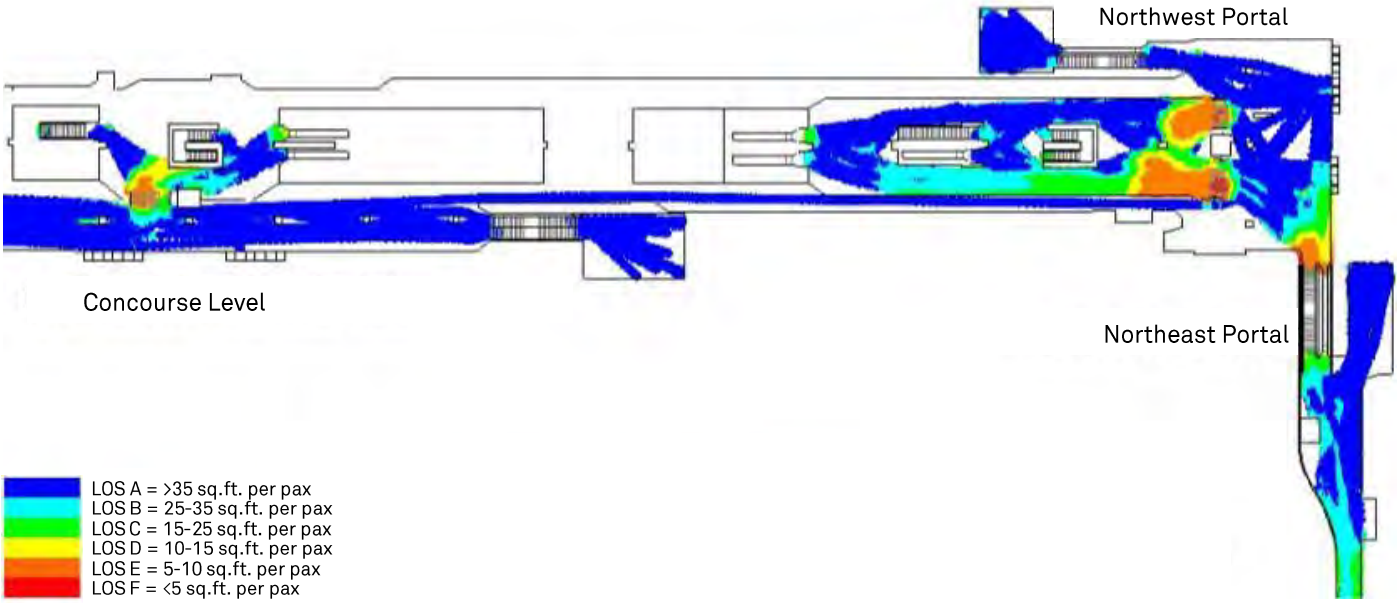


Figure 8: Existing PM Peak Hour Density Map – Platform Focus

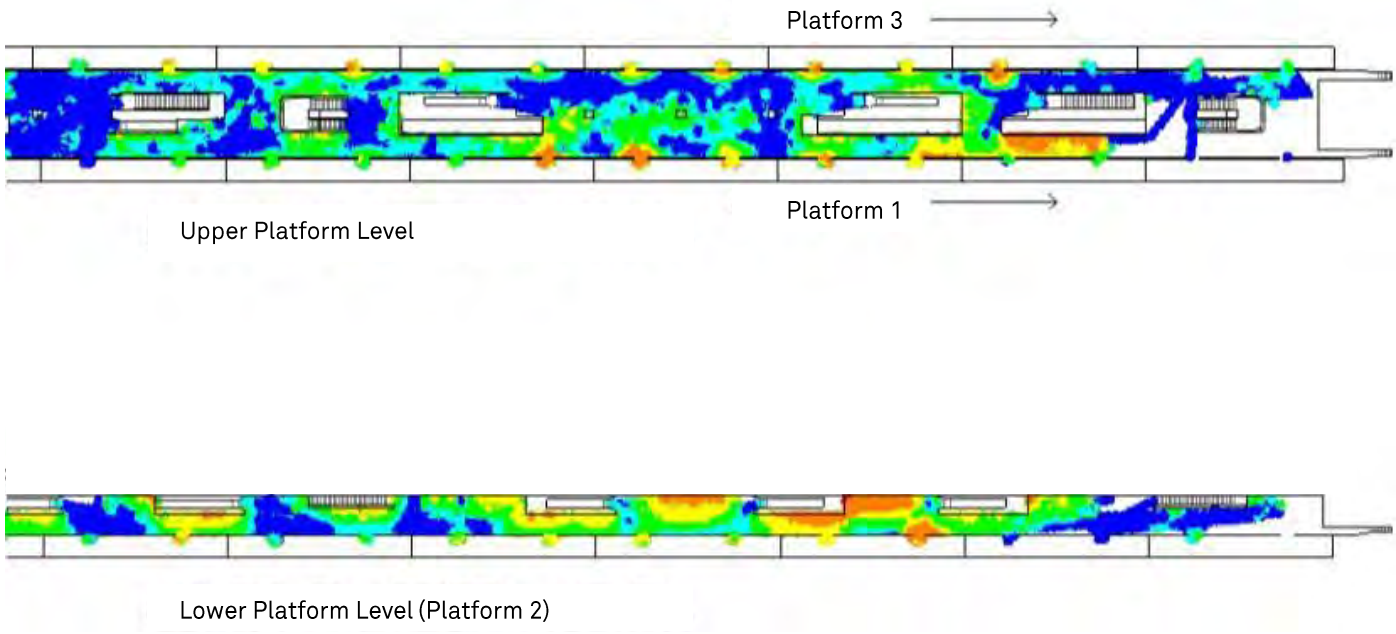


Figure 9: Future Year (2040) PM Peak Hour Density Map – Platform Focus

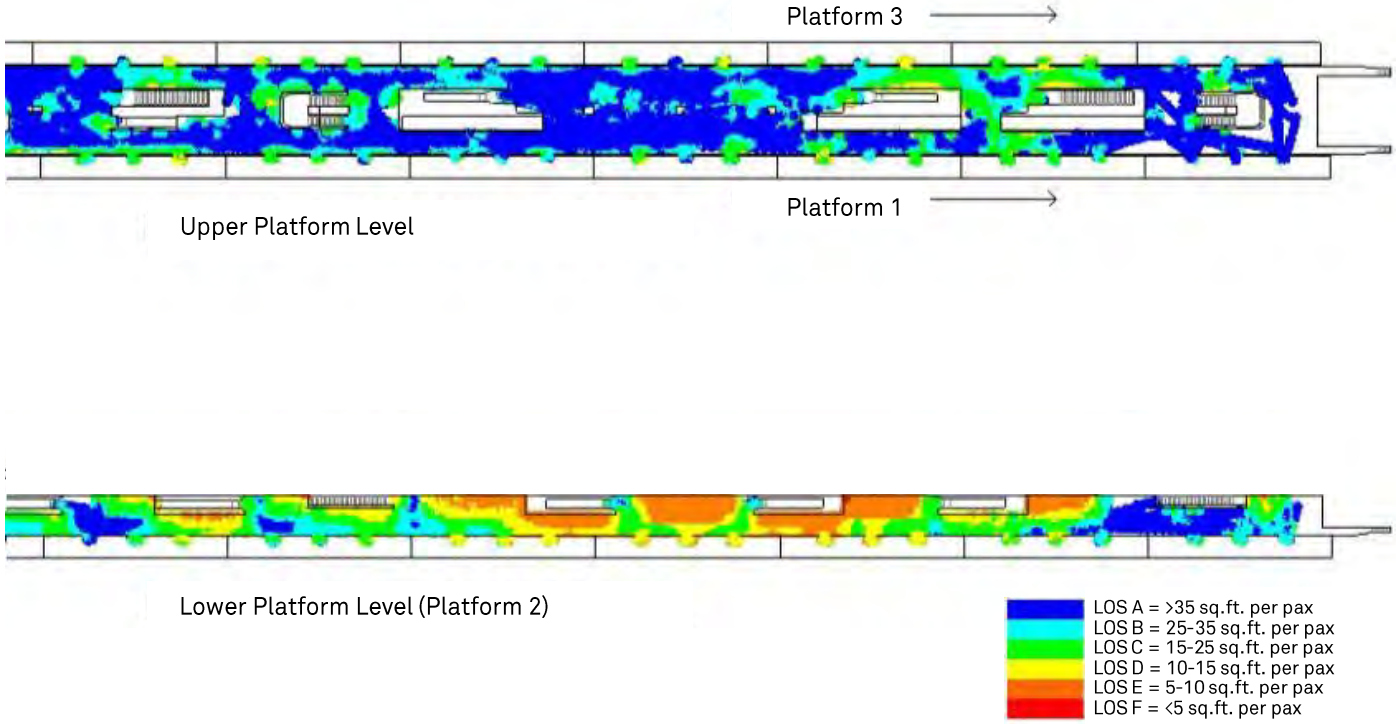
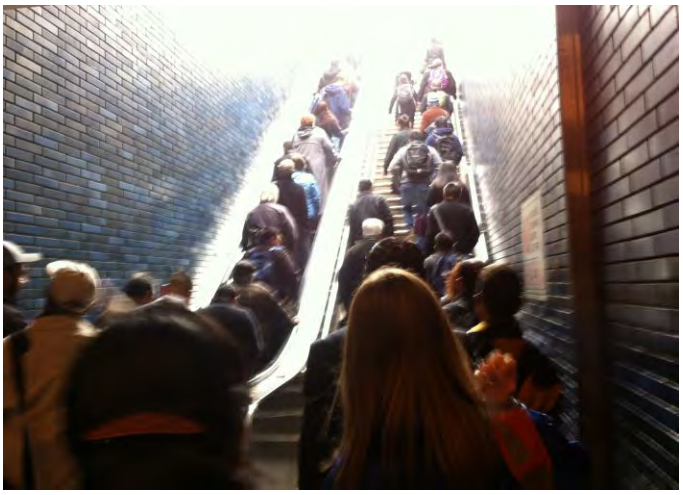


Figure 10: Station Capacity Issues



Queues and congestion at the NE portal
(Weekday AM peak hour)

Platooning on north sidewalk of 20th Street east of station
(Weekday AM peak hour)

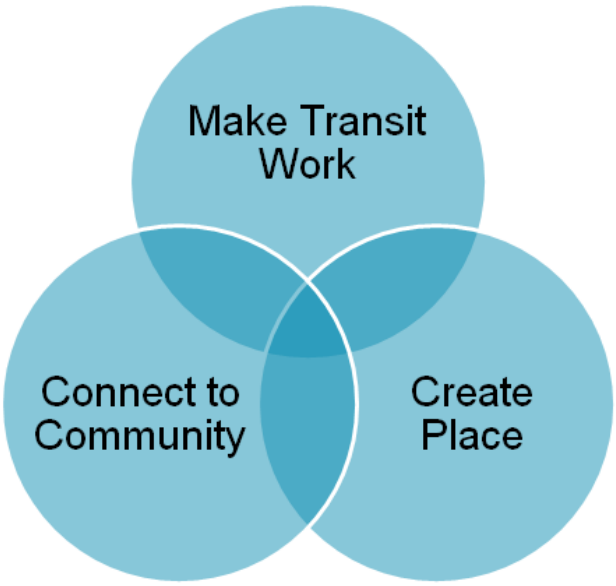
Lower-level platform crowding (Weekday PM peak hour)

2.0 Goals and Vision

2.1.1 Modernization Goals

This Plan is part of BART's Station Modernization Program, which invests resources and efforts into the existing core stations and surrounding areas to advance transit ridership and enhance the quality of life around the stations. BART has the following overriding 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 11**.

Figure 11: Station Modernization Goals



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

- **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 passengers.

- 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 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 Americans with Disabilities Act (ADA).

  - Incorporate community input
    Respond to the community and customer input regarding which improvements are perceived as most important.

- **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.

2.1.2 Project Vision

Each of the modernization goals are integrated into the overall vision for the 19th St/Oakland Station. The unique vision for the station is for a modernized facility that "**connects** to existing and future riders, imparts the Uptown District's **vibrant** flavor, and demonstrates BART's commitment to **sustainability**." These strategies of connectivity, vibrancy, and sustainability are articulated below and woven through all of the proposed station improvements:

- **Sustainability**
  Incorporate sustainable materials and technologies into the station to increase the life-cycle value of the station's infrastructure, to conserve natural resources and protect the reliability of the public investment.

- **Connectivity**
  Strengthen multi-modal and universal access to the station and promote a safe and comfortable passenger experience.

- **Vibrancy**
  Reflect the energy and unique character of the surrounding community and enhance the station's existing strengths.

These three strategies are discussed in greater detail below with regard to 19th St/Oakland Station.

2.2 Incorporate Sustainability

BART seeks to incorporate sustainable materials and technologies into station improvements to conserve natural resources, increase the life-cycle value of station infrastructure, and protect the reliability of the public's investment in BART. The *2008 BART Strategic Plan* highlights sustainability as a core value and focuses on techniques and business practices that improve operations and enhance quality of life for Bay Area residents.

In accordance with the goals of the *BART Sustainability Report*, strategies should prioritize improvements associated with:

- Energy and Water;
- Site and Materials;
- Experience and Accessibility; and
- Maintenance and Monitoring.

This Plan identifies opportunities to demonstrate to the public BART's commitment to sustainability by reducing greenhouse gas emissions and conserving resources. Concepts recommended as improvement options have been evaluated based on their environmental impact, cost effectiveness and impact on the passenger experience. The following sustainable design strategies are recommended as part of the modernization of 19th St/Oakland Station:

- Water efficient taps, urinals and toilet flushing systems in restrooms and janitor areas;
- LED lighting fixtures, light timers, daylight sensors;
- Environmentally-friendly elevators and escalators equipped to operate at variable speeds with motion sensors;
- Recycling; and
- Materials and site furnishings made from recycled products.

The Plan also recognizes the opportunity for the City of Oakland to implement strategies that encourage sustainable trips on BART in preference to private vehicle trips by residents, employees and visitors. These may include parking policies and enhanced pedestrian and bicycle facilities and amenities. Improved walking and cycling connections to and from BART encourage reduced auto dependency.

2.3 Improve Station Access and Connectivity

Improving access to and from BART is critical to meeting ridership goals and serving customer needs. The Plan aims to strengthen multi-modal and universal access to 19th St/Oakland Station and promote a safe and comfortable passenger experience. The *BART Station Access Guidelines* (2003) prioritizes access modes in the following order:

- Walking
- Transit
- Bicycle
- Pick-up / Drop-off
- Vehicle Parking

Access to 19th St/Oakland Station already conforms to this hierarchy, and vehicle parking is not provided at the station. However, the Plan identifies capacity and modernization improvements needed to accommodate users of each mode. In particular, the focus of access at the north end of the station raises capacity concerns and introduces conflicts between the users of different access modes. The Plan outlines strategies to increase capacity at the north end of the station and redistribute access to the less-utilized central and south station access points.

The Plan also calls for a new elevator to be located at the north end of the station. At this location, there is better opportunity to provide accessibility for the majority of station users and connectivity between BART and AC Transit.

2.4 Reflect the Vibrancy of the Surrounding Community

Recent years have seen considerable investment and increasing activity in the Uptown District surrounding 19th St/Oakland Station. In particular, recent projects have included the restoration of the Fox Theatre and the pedestrianization of Latham Square, as illustrated in **Figure 12**, and the Uptown District has developed as a destination for arts/entertainment and a community that fosters creativity and ingenuity.

The Plan seeks to reflect the energy of the surrounding community and enhance the station's existing strengths by:

- Incorporating art that reflects the creativity of the Uptown District
- Creating opportunities for local artists within the station
- Coordinating with the City of Oakland to integrate placemaking into the station entries to make them gateways to the community
- Coordinating with stakeholders and the community
- Attracting riders to stop and explore the Uptown District

Figure 12: Recent Projects in the Uptown District

Fox Theatre
Source: http://enviroinstitute.org

Latham Square
Source: http://oaklandlocal.com

3.0 Conceptual Improvements

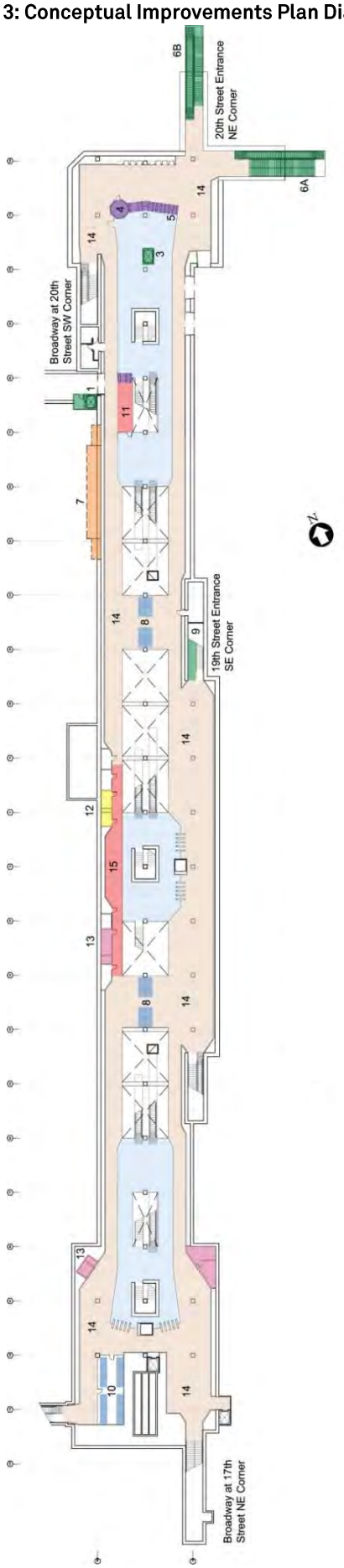
This section of the Plan identifies specific improvements for 19th St/Oakland Station in alignment with the goals presented in the previous section. Improvements are grouped into the following ten areas of consideration:

- **Make Transit Work**
  - Early Wins
  - State of Good Repair – Building & Systems Upgrade
  - Facility Upgrades
  - Station Capacity
- **Connect to Community**
  - Vertical Circulation
  - Access Redistribution
  - Passenger Amenities
- **Create a Place**
  - Aesthetic Improvements
  - Sustainability
  - Art and Community Placemaking

Figure 13 presents a diagram of the station concourse in plan view showing the specific locations of many of the improvements outlined in this section.

Figure 14 and **Figure 15** on the following pages present artist's renderings of a conceptual vision for the 19th St/Oakland Station after the improvements outlined in this section have been implemented. **Figure 14** shows a cross section at the north end of the station, looking south. **Figure 15** shows a side view at the center of the station, looking west.

Figure 13: Conceptual Improvements Plan Diagram



1 New street-to-concourse elevator

2 New fare gate array

3 New concourse-to-platform elevator

4 New station agent booth

5 Relocated fare gate array

6A Expanded portal with double stair and escalator

6B New stair and escalator in new portal

7 BRT location above

8 Relocated bike racks

9 New escalator in place of stair

10 New secure bike station

11 New free area – former Sears building entrance

12 Restrooms

13 Unused vendor and unassigned space

14 Free area

15 New free area – through corridor along west wall

New vertical circulation

Bicycle parking

New free area

New fare gate array

AC Transit BRT stop above

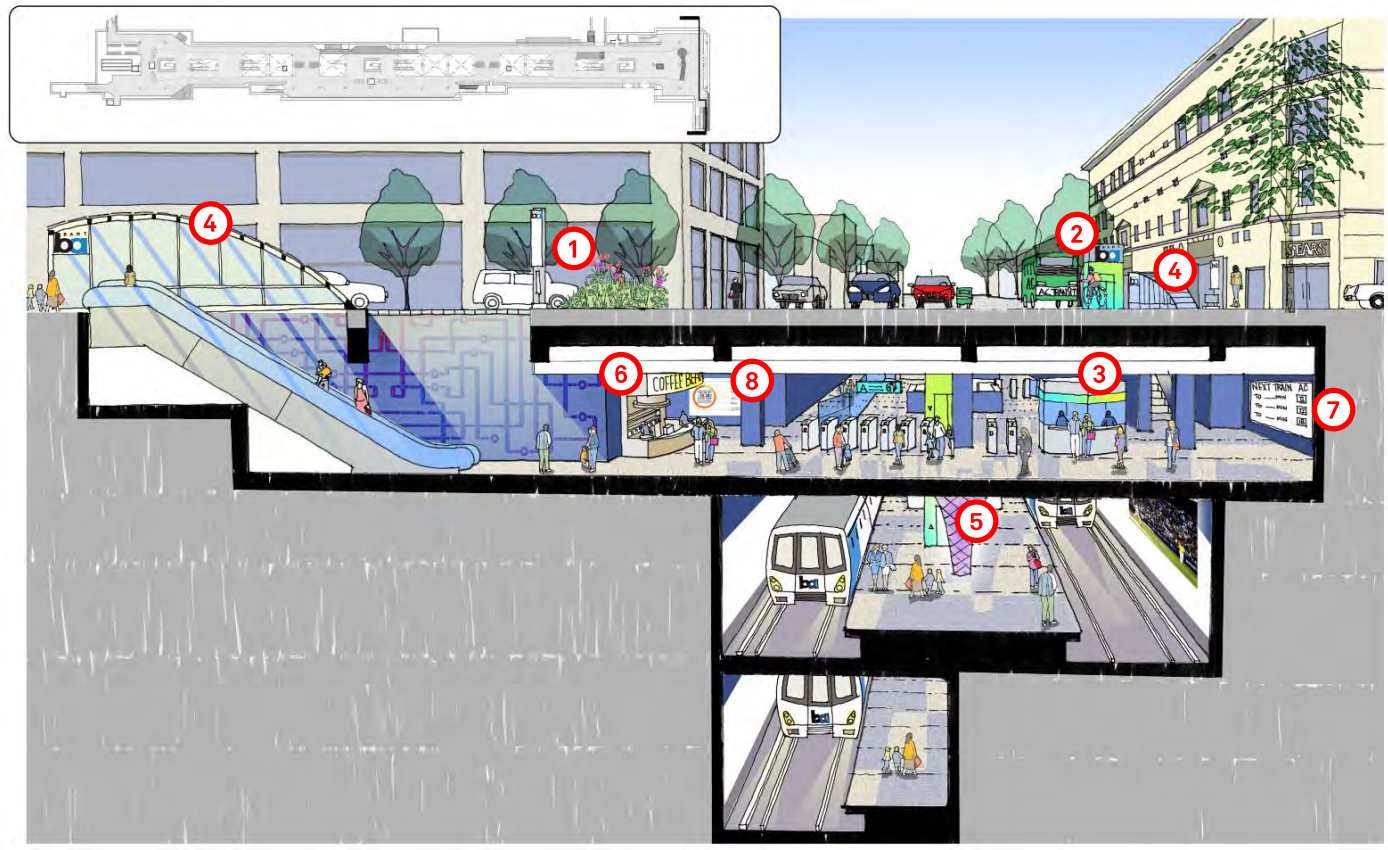
Restrooms

Unused vendor and unassigned space

Paid area

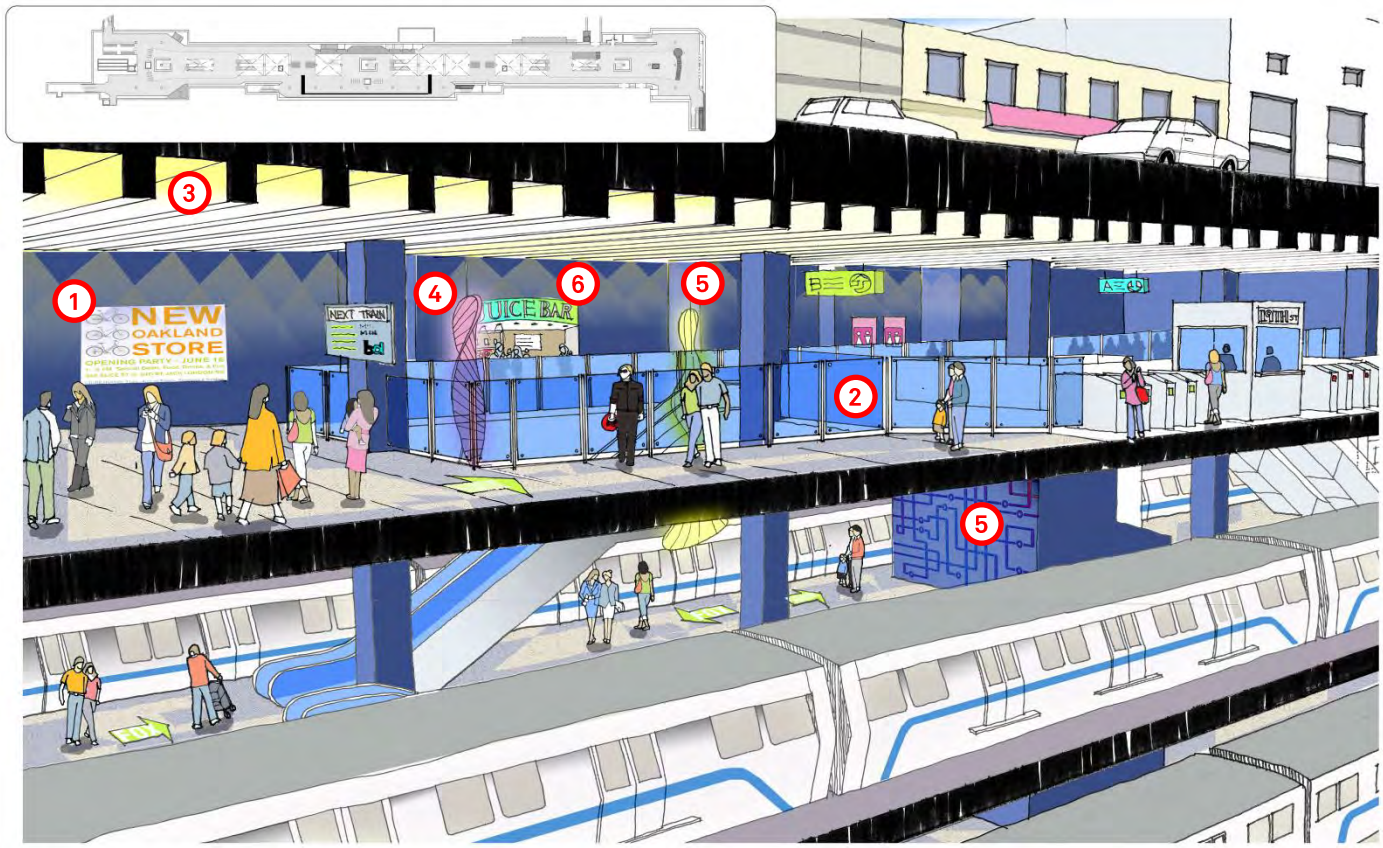
Free area

Figure 14: Vision Rendering – Cross-Section at North End of Station



1. Integrate placemaking at the station entrances, including lighting, landscaping, art, and wayfinding
2. Install new street-to-concourse elevator in northern end of station, either on the sidewalk in front of the former Sears building or integrated into future redevelopment of the Sears building
3. Upgrade Station Agent booths
4. Enclosures for entrances with escalators
5. Use art throughout the station to enliven and attract activity to underutilized areas of the station, specifically the northern and southern ends of the platforms to improve capacity
6. Integrate vendor and retail opportunities into the station concourse level
7. Work with AC Transit to develop a real-time multi-modal transit display at the northwest 20th Street corner of the concourse
8. Develop a system to communicate real-time energy usage and savings information and CO_2 saved through

Figure 15: Vision Rendering – Side View at Center of Station



1. Incorporate new wayfinding within the station and at the street level to direct passengers to nearby destinations
2. Replace the existing paid area barriers within the station with a more visually appealing railing, and increase the height to reduce fare evasion
3. Comprehensive station relamping (replace fluorescent lights with LED lights)
4. Use art throughout the station to enliven and attract activity to underutilized areas of the station, specifically the northern and southern ends of the platforms to improve capacity
5. Integrate art that is functional and relates to the vibrancy of the surrounding area, including the 17th Street alley installation and station area cultural destinations such as Lake Merritt, Children's Fairyland, and the Paramount and Fox theatres
6. Integrate vendor and retail opportunities into the station concourse level

3.1 Make Transit Work

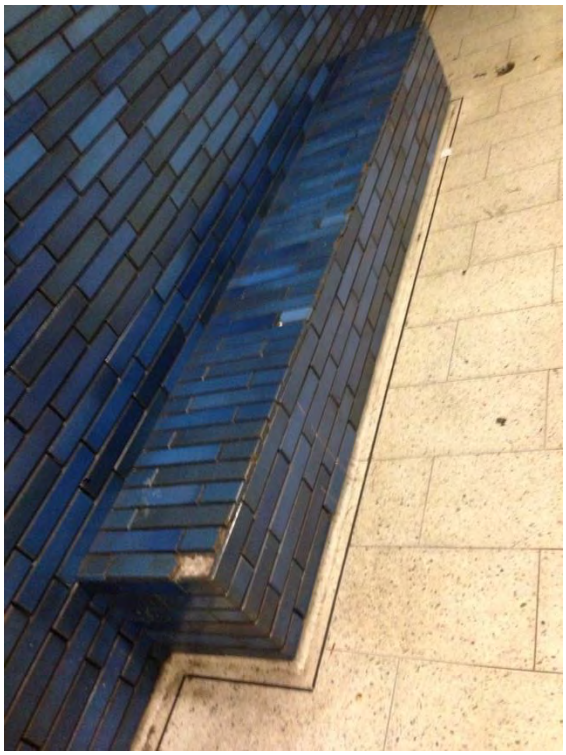
3.1.1 Early Wins

"Early Wins" refer to relatively small-scale, low-cost interventions that could be implemented in the short term ("early") to modernize the station. These projects represent "low-hanging fruit" that, despite a low level of investment, would result in a significant improvements ("wins") in the station's operation and appearance:

- **Improve the visibility** of the existing street-to-concourse elevator
- **Refurbish flooring** on concourse and platform levels
- **Repaint ceilings** to provide a fresher, brighter appearance
- **Repaint walls behind tracks**
- **Replace/repair damaged brick cladding**

Some of these potential Early Wins are illustrated in **Figure 16.**

Figure 16: Potential Early Wins Improvements



Damaged brick cladding in need of repair

Floor in need of refurbishment

3.1.2 State of Good Repair – Building & Systems Upgrade

Related to "Early Wins" are projects that have been identified as necessary to bring the station infrastructure and systems into a state of good repair. These projects are part of an effort to maintain similar facilities at other stations systemwide, and are projects that have been identified by BART staff as needing attention to keep the station in working order. While these items are not as visible to station customers as the "Early Wins", the ongoing function and safety of BART service at 19th St/Oakland Station depend on the following upgrades:

- Elevator water intrusion mitigation
- Station platform train control antennae
- Installation of paneling within station elevators to prevent corrosion
- Replacement and repair of station door hardware
- Replacement of wood core escalator balustrades (the waist-high walls on either side of the escalators upon which the moving handrails are mounted)

3.1.3 Facility Upgrades

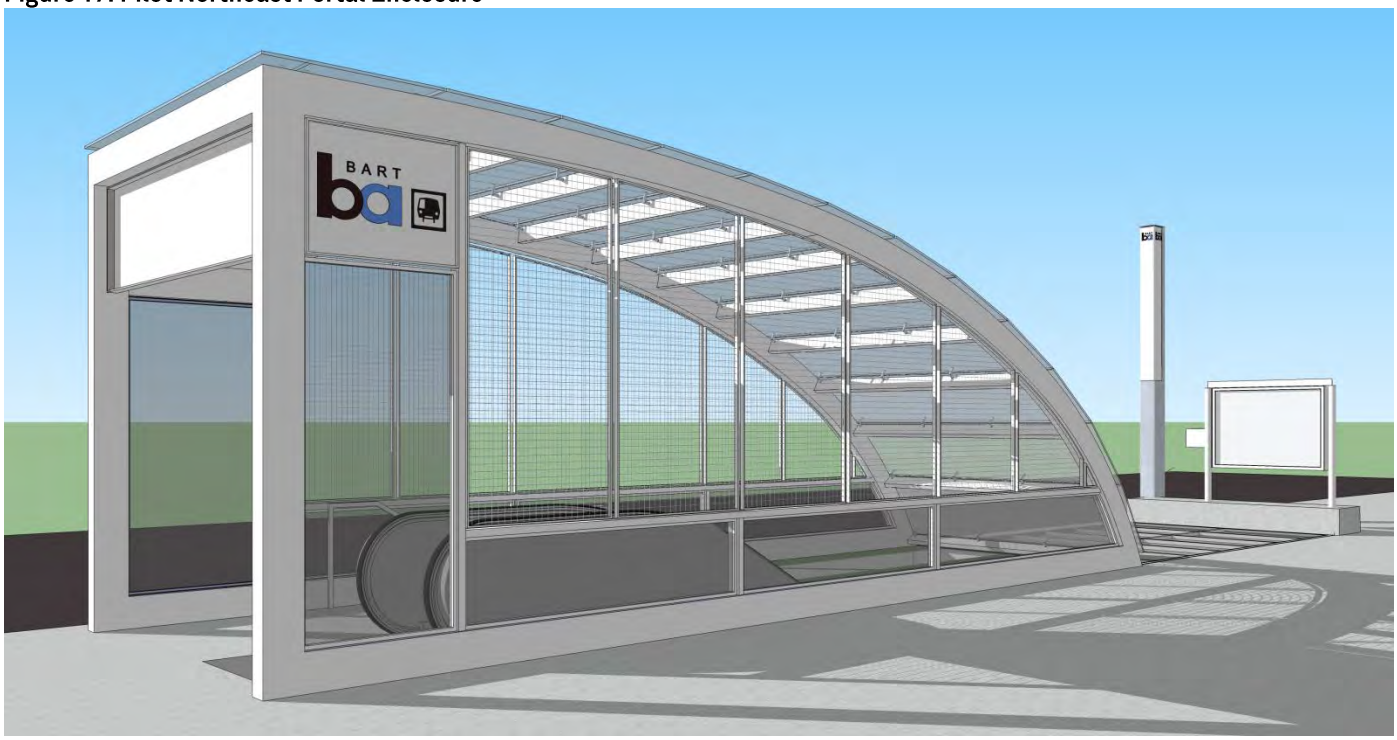
The following facility improvements are large-scale improvements complementing the "state of good repair" building and systems upgrades outlined in Section 3.1.2.

- **Upgrade Station Agent booths**
  The station's three Station Agent booths would be upgraded to conform to BART's latest standards. The updated Station Agent booth design is larger, more ergonomic and outfitted with modern equipment to meet the agents' needs.

- **Enclosures for entrances with escalators**
  BART is currently constructing a pilot enclosure at the entrance at the northeast corner of 20th Street/Broadway. BART's long term plan is to enclose all underground station entrances, prioritizing those with escalators. The enclosures will not only protect BART's assets from weather, but will also help to create cleaner and safer entrance environments for BART's customers and staff. The plan for 19th St/Oakland Station is to develop entrance enclosures for the four portals with escalators. The structures also have placemaking benefits and can contribute to BART's visibility, projecting a more modern image for the station. The pilot enclosure at the NE portal, featuring a roll-down gate, glass block sidewalk, station pylon, and information panel, is illustrated in **Figure 17**.

- **Upgrade and reopen public restrooms**
  After September 11, 2001, all underground station restrooms in the BART system were closed due to potential security risks. Recently, BART has embarked on a pilot study to evaluate potential solutions for reopening the underground restrooms. If these facilities are to be reopened, they would need to be redesigned to minimize security risks, prevent unwanted behavior, and minimize maintenance and cleaning requirements. Pending the outcome of the study, the restrooms at 19th St/Oakland Station (located in the paid area opposite the central Station Agent booth) would be redesigned and reopened.

Figure 17: Pilot Northeast Portal Enclosure



3.1.4 Station Capacity

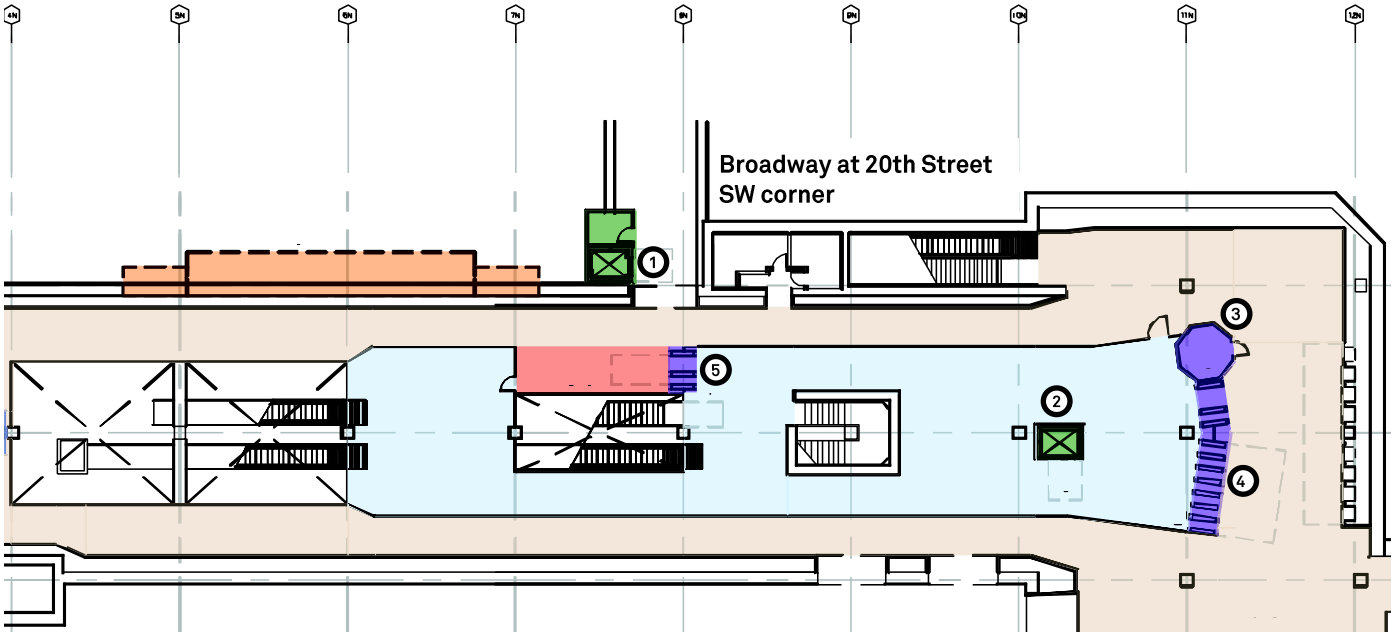
The station walk-through and capacity analysis conducted as part of the Plan have identified a number of projects to increase capacity at the concourse and platform levels. These projects would reduce crowding and improve circulation, as well as address fire and life safety concerns.

Expand Paid Area

- **Additional fare gate at north end of concourse, with potential redesign of the northeast station booth area to maximize number of devices at northeast fare gate array**
  The capacity analysis identified a need for an additional fare gate at the north end of the concourse. Since demand is oriented toward the NE portal, the fare gate array would benefit from relocating the Station Agent booth from the middle of the fare gate array to the end opposite of the NE portal and reconfiguration as shown in **Figure 18.**

- **Potential new fare gate array at new elevator / former Sears building entrance to embrace the potential increase of pedestrian access into the development**
  If the Sears building is redeveloped and the former concourse level entrance reopened, and/or a new street-to-concourse elevator is implemented at this location, a new set of fare gates would provide customer convenience and relieve demand on the existing fare gate array. As shown in **Figure 18**, the free area adjacent to the former Sears entrance would be expanded and a new set of fare gates (standard and accessible) installed. This would facilitate a direct path of travel between the street-to-concourse elevator and the concourse-to-platform elevator. These new fare gates would lie in a direct line of sight of the relocated Station Agent booth.

Figure 18: Proposed North Station End Elevator System and Reconfiguration of Free/Paid Areas



New vertical circulation
- 1 New street-to-concourse elevator
- 2 New concourse-to-platform elevator

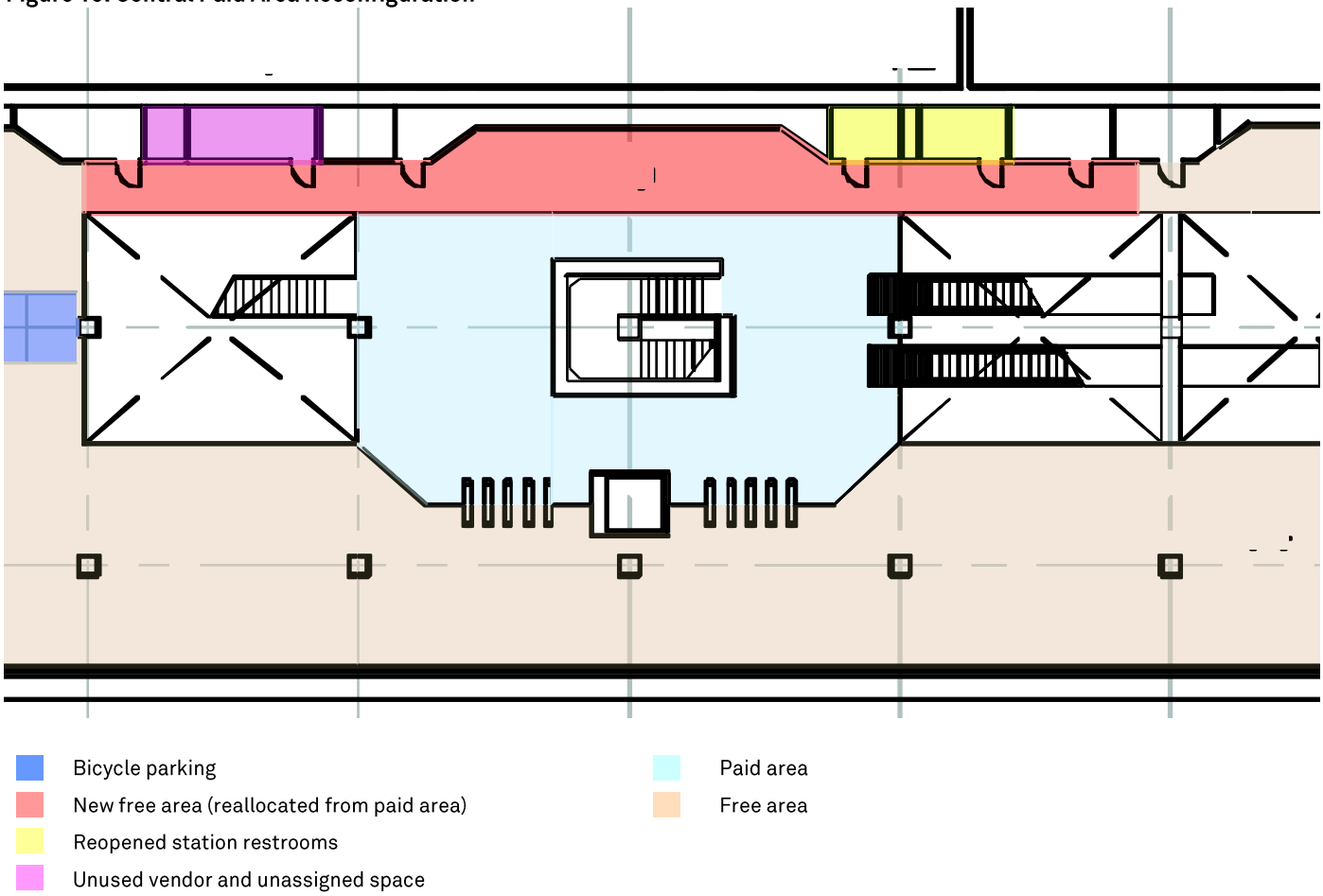
New fare gate arrays
- 3 New station agent booth
- 4 Relocated fare gates
- 5 New fare gates

AC Transit BRT stop above
Paid area
Free area
New free area

Reconfigure Central Paid Area

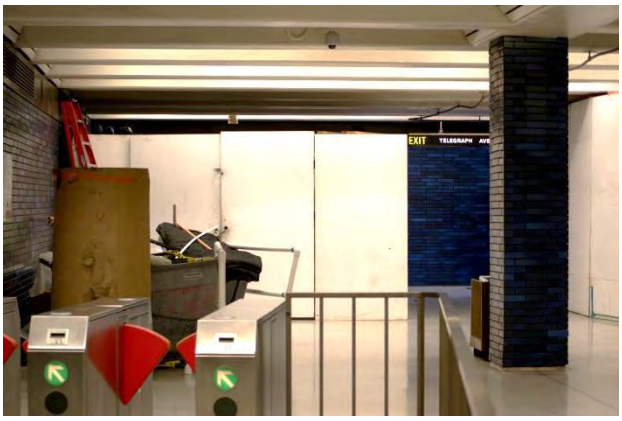
- **Reallocation of space within the paid area to the unpaid area to more efficiently use space**
  Opportunities have been identified to reallocate space from the paid area to the free area for more efficient circulation, including along the west concourse wall opposite the central Station Agent booth, where a new free area corridor could be implemented. This reconfiguration would allow direct circulation along the western side of the concourse. Reopening the station's restroom facilities, located in this same general location, would also improve convenience for station users. The restrooms and reallocated paid area at the central Station Agent booth are illustrated in **Figure 19**.

Figure 19: Central Paid Area Reconfiguration



- **Consolidate storage area for maintenance equipment**
  Unused rooms along the west concourse wall opposite the central Station Agent booth could be consolidated and/or repurposed to store maintenance equipment that is now stored out in the open in public view, as shown in **Figure 20.**

Figure 20: Maintenance Equipment Stored in Public View

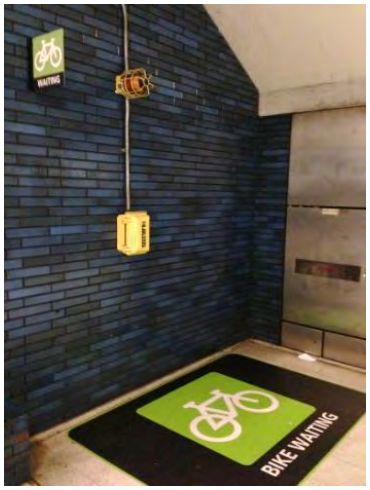


Promote More Efficient Utilization of Platform

- **Platform interventions to expedite boarding/alighting**
  To encourage more efficient use of space on the lower platform, designated bike waiting areas and arrows indicating where customers should stand near train car doors have been marked on the floor. These applications should be expanded along the entire platform and augmented with improved wayfinding signage. Floor markings should be considered on the upper platform as well, if congestion issues arise. Examples of these improvements already in use at the station are illustrated in **Figure 21**.

Figure 21: Platform Capacity Interventions

Boarding/alighting floor markings



"Bike Waiting" floor marking and wall sign

- **Art to attract passengers to end of platform**
  Art installations at or near the platform ends could attract customers to less-utilized platform areas and relieve crowding.

Fire & Life Safety

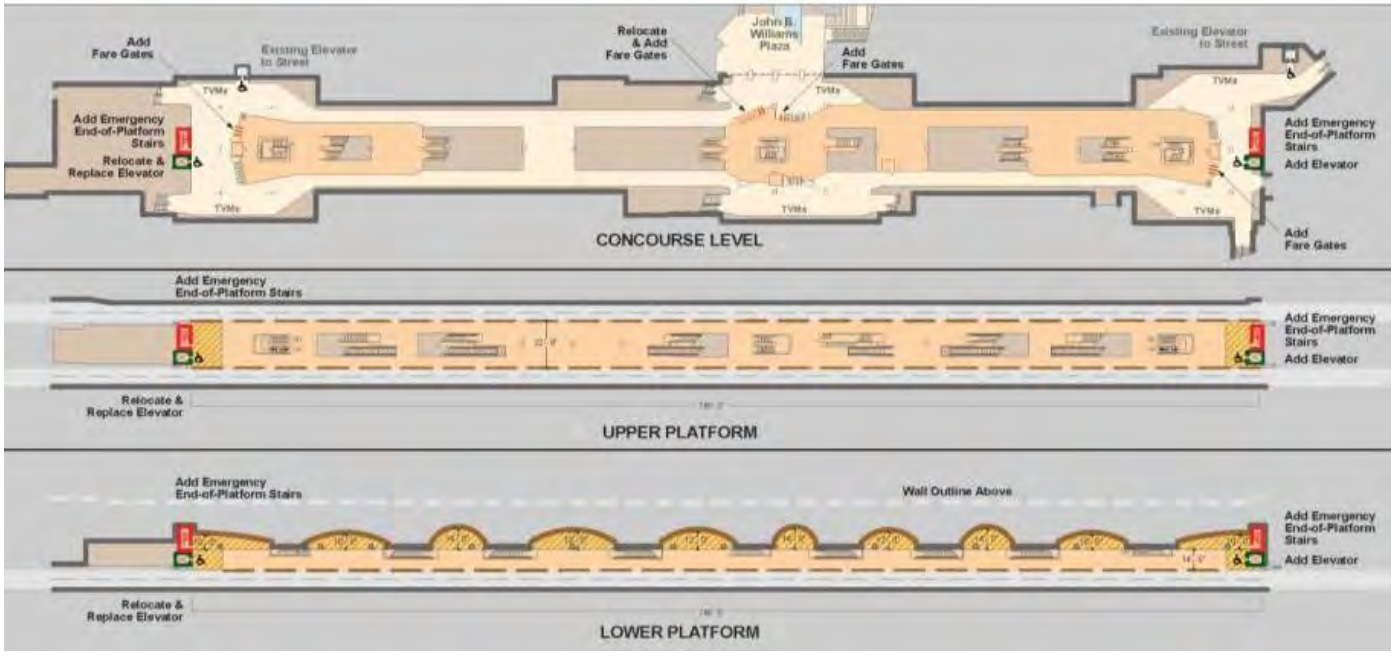
Currently 19th St/Oakland Station meets applicable fire and life safety regulations. The *BART SVRT (Silicon Valley Rapid Transit) Core Stations Modifications Study* (2010) was developed to identify station passenger capacity for 2030 with SVRT in operation. The study recommends end-of-platform stairs, platform expansion, and platform screen doors at 12th St/Oakland City Center Station to meet fire and life safety requirements with respect to increased system ridership associated with the extension of BART to Silicon Valley. These projects, illustrated in **Figure 22**, are applicable to 19th St/Oakland Station as well.

- **End-of-platform stairs (SVRT)**
  For new stations, performance targets established by the 2010 California Building Code require emergency stairs at each end of underground station platforms. Such stairs would be dedicated as egress-only in case of emergencies. Though this requirement only applies to new stations, end-of-platform stairs may be considered at 19th St/Oakland Station to supplement emergency egress provided by existing vertical circulation.

- **Expanded platform level – excavating alcoves and removing utility rooms (SVRT)**
  As shown in **Figure 22**, alcoves could be created on the lower platform level in the intervals between vertical circulation elements to provide more platform space. This could be the first phase of a long-term project to expand the lower platform to serve a fourth track in the BART tunnel through downtown Oakland.

- **Platform screen doors (SVRT)**
  Platform screen doors would effectively expand the platform by making the yellow safety strip along the platforms available for customer waiting and circulation. BART is exploring the use of platform screen doors to improve the capacity at the platform level at other stations with capacity issues. The outcome of those considerations will influence the decision for implementing platform screen doors at 19th St/Oakland Station.

Figure 22: SVRT Fire & Life Safety Projects Proposed at 12th St/Oakland City Center Station



3.2 Connect to Community

3.2.1 Vertical Circulation

The capacity analysis described in Section 1.4.4 identifies a need to increase vertical circulation between the street and concourse levels at the north end of the station as ridership continues to grow at 19th St/Oakland Station. In addition, given that demand is greatest at the north end of the station, the existing system of elevators at the south end of the station does not serve customers well. A new elevator at the northern end of the station would also help to provide better connectivity between the station and AC Transit's Uptown Transit Center. The following subsections describe the different options that have been considered for improving vertical circulation.

Street-to-Concourse Elevator

A new street-to-concourse elevator is proposed to connect between the sidewalk at street level and the free area of the north end of the concourse level. This location would further universal design at the busiest end of the station and facilitate ADA access between BART and AC Transit. In accordance with best practices and new elevators that have been installed in recent years in the BART system, the proposed elevator would maximize transparency to provide both security and orientation.

In general, any such elevator must provide enough street-level circulation and maneuvering space on all sides to accommodate wheelchair users without disruption to general pedestrian traffic in the adjacent sidewalk or introduction of safety hazards. In particular, there must be sufficient clearance on all sides between the elevator and any obstructions (e.g., street trees, fire hydrants, utility poles, etc.), as well as the adjacent curb. The ADA also establishes specific requirements for clear (i.e., unobstructed) space at elevator landings, as well as minimum dimensions for elevator cars. In addition, there must also be sufficient vertical clearance at any proposed street-level location to accommodate the mechanical and electrical equipment associated with the elevator.

Two options have been identified for the new street-to-concourse elevator based on the constraints above, both near the existing station portal on the southwest corner of Broadway and 20th Street (as shown in **Figure 18**). An elevator at this location would not interfere with circulation at the busier portal at the northeast corner of the intersection, and would also provide the most convenient connection for transit riders transferring between BART and AC Transit at the Uptown Transit Center. This location also takes advantage of an existing opening in the concourse wall that once provided a direct connection to the former Sears building.

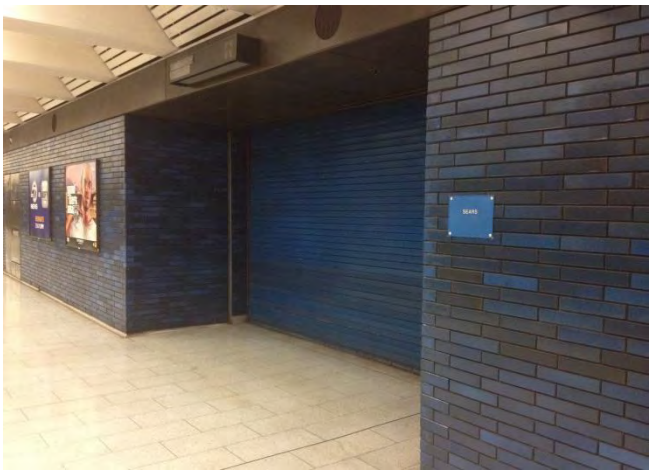
- **Free-standing Option**
  The elevator would be located in the sidewalk south of the portal at the southwest corner of 20th and Broadway, adjacent to the former street-level Sears Building entrance. This location has been vetted with the City of Oakland and AC Transit, which plans a platform for its East Bay BRT service directly south of the elevator location.

- **Sears Building Redevelopment**
  The elevator would be incorporated into redevelopment of the former Sears building, which was recently sold to a developer planning a retail and office redevelopment of the site. If the elevator is to be integrated into the façade of the existing building, it will be important to ensure that the elevator is highly visible and provides public access during BART hours, to avoid the problems of the existing elevator.

These options are illustrated in **Figure 23**.

Figure 23: Proposed Street-to-Concourse Elevator

Example of free-standing elevator
(BART/Muni elevator on Market Street, San Francisco)



Former Sears entrance at concourse level

Concourse-to-Platform Elevator

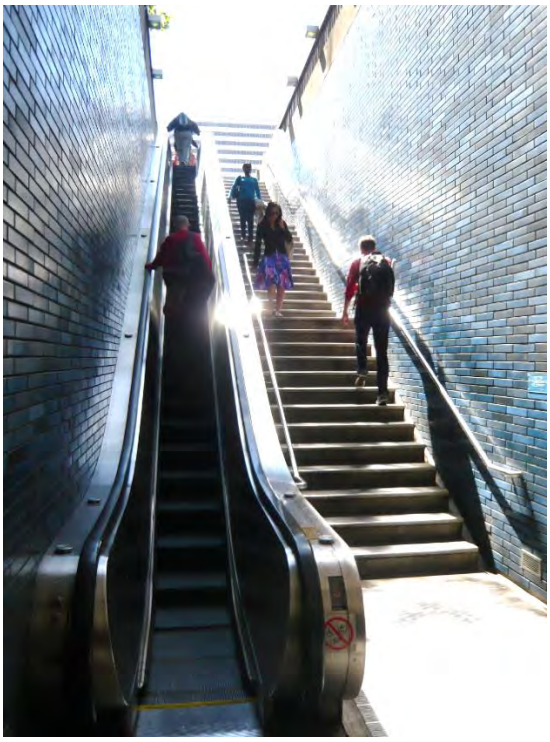
To complete barrier-free access at the north end of the station, a concourse-to-platform elevator would be installed within the paid area of the northern end of the concourse, between the fare gates and the spiral staircase. Because this space is currently constrained, the installation of the elevator would be coordinated with an expansion of the paid area and relocation of the Station Agent booth and the existing fare gates. The proposed locations for this new elevator and the relocated Station Agent booth and fare gates are illustrated in **Figure 18**.

The concourse-to-platform elevator would be accessed at the north end of the upper and lower platform levels, and not require any existing platform space. This new elevator would be located within the paid area, which is consistent with BART's goal of locating new elevators to avoid fare evasion.

North End of Concourse to Surface Capacity

The capacity analysis in Section 1.4.4 identifies a need to increase capacity at the northern end of the station, specifically dealing with the congestion at the northeast corner of 20th Street and Broadway (**Figure 24**). Three options have been developed – widening the existing portal, adding an additional portal in the sidewalk along Broadway, and/or improving the central portal to attract more passengers.

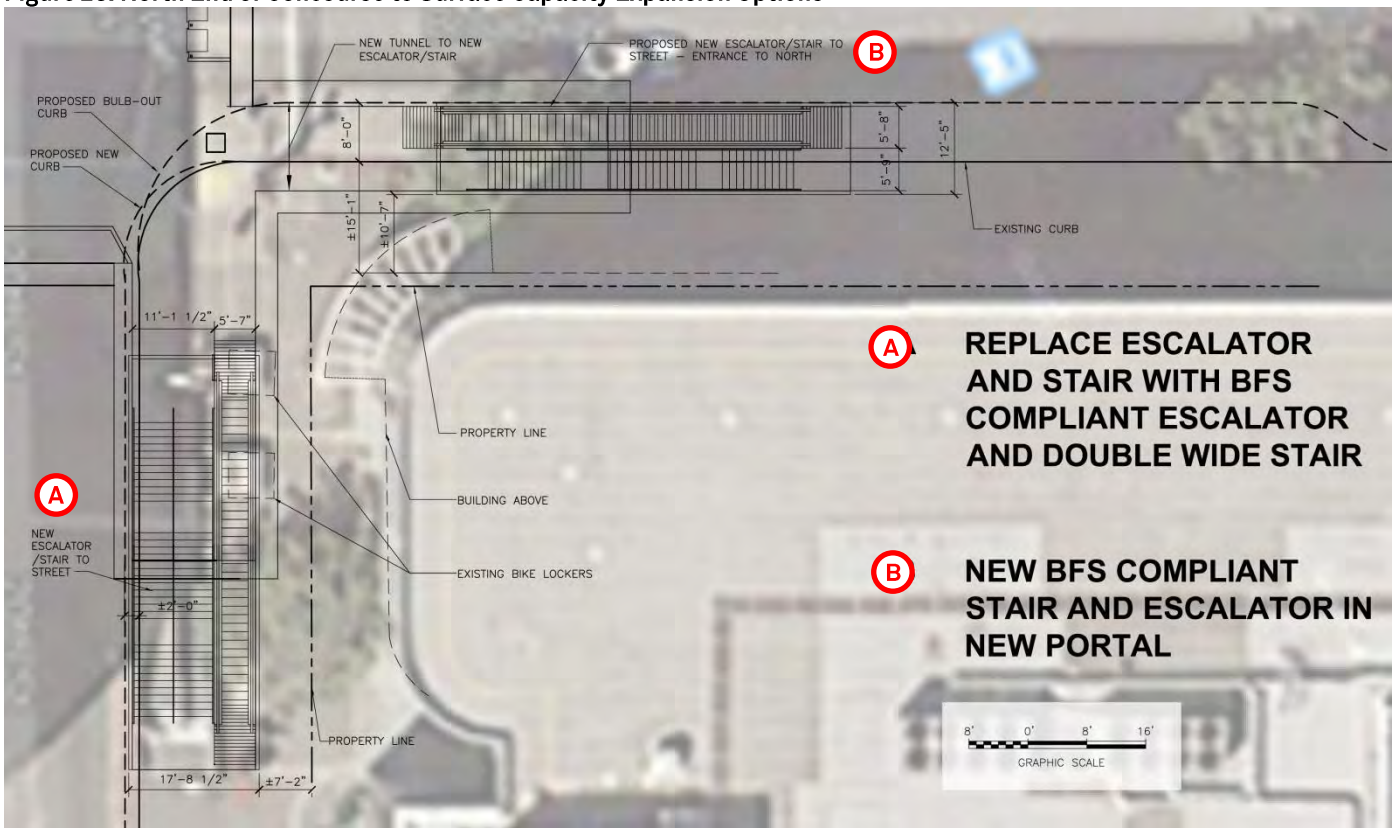
Figure 24: Northeast Portal (Existing)



- **Northeast Portal Expansion**
  The existing portal features a narrow, single-width escalator (no longer supported by BART Facilities Standards). This option proposes to expand the portal to accommodate a standard escalator (44", wide enough for two people standing abreast) as well as a double-width stairway, as shown as Option A in **Figure 25**. This option would require the removal or retrofit of the entrance enclosure that is currently in construction for the existing portal.

- **New Broadway Portal**
  A new portal would be constructed perpendicular to the existing portal and with an opening in the sidewalk along Broadway, just north of 20th Street, as shown as Option B in **Figure 25**. While existing demand is focused along 20th Street, the Broadway Valdez Specific Plan anticipates greater pedestrian demand along Broadway, which would be optimally served by this new portal. In order to accommodate both the new portal and a bus bulb for AC Transit (currently in the planning stage), most or all of the on-street parking along the east side of Broadway between 20th and 21st Streets would have to be removed and the planned AC Transit bus bulb would need to be relocated north along Broadway. BART has had preliminary discussions with AC Transit and the City about this concept, but further discussion would be required to advance this conceptual idea.

Figure 25: North End of Concourse to Surface Capacity Expansion Options



- **Improved Central Portal**
  This Plan identifies the need to encourage use of the underutilized portals at the center and south ends of the station. The portal north of the central Station Agent booth is oriented toward 20th Street and many customers using the NE portal could use this portal instead by accessing/egressing the middle of the platforms rather than their north ends. The portal was originally designed to accommodate an escalator and features a double-width stairway instead. This improvement proposes to retrofit the portal with an escalator to encourage greater usage and relieve demand on the NE portal. The proposal would need to be coordinated with other wayfinding/signage improvements to encourage passengers to utilize this portal.

3.2.2 Access Redistribution

Given that access/egress demand is heavily weighted toward the north end of the station, in particular the NE portal, the following improvements seek to redistribute access to other portals to improve circulation and avoid conflicts between modes, as indicated in **Figure 26**:

- **Reinforce North Station End in its existing role as the pedestrian and transit access point**
- **Repurpose South Station End for bicycle access and parking**
- **Formalize shuttle stop and drop-off/pick-up parking**
- **Wayfinding**
- **Improved LED pedestrian lighting**

Figure 26: Proposed Distribution of Multi-Modal Access

Reinforce North Station End in its Existing Role as the Pedestrian and Transit Access Point

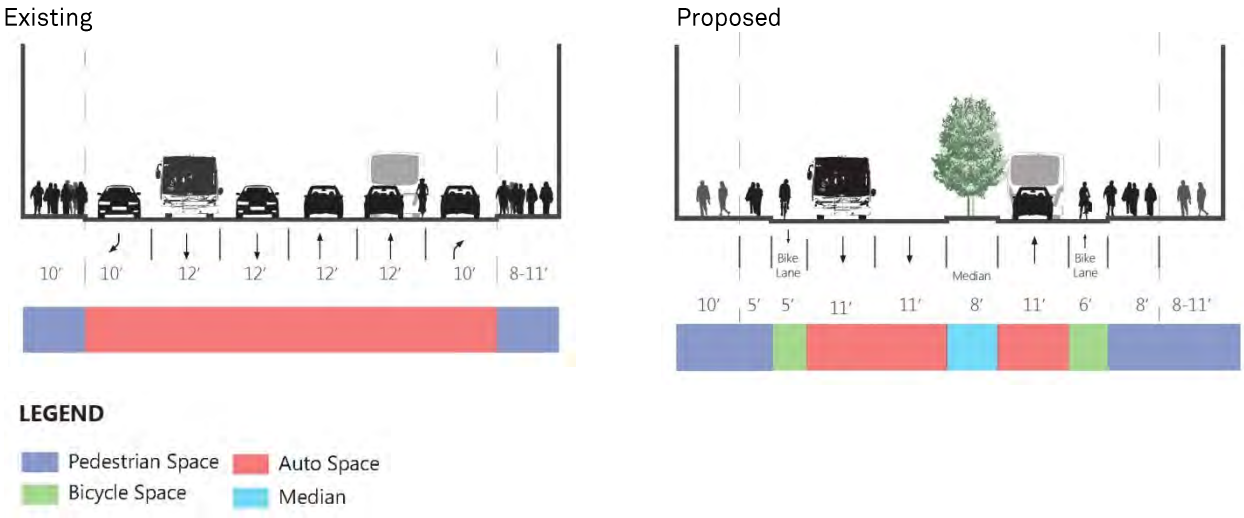
The northeast portal (orange shading in **Figure 26**) would remain the most important access point for pedestrians, and the northwest portal (light green shading) adjacent to the AC Transit Uptown Transit Center would be prioritized for customers transferring to and from BART from other transit modes, including East Bay BRT (dark green rectangle).

In conjunction with reinforcement of pedestrian/transit activity at the north end of the station, pedestrian access would be improved at the NE portal with the following projects:

- **Widen sidewalk (Complete Streets Plan)**
  Insufficient sidewalk capacity has been identified along the north side of 20th Street, east of the station entrance. In particular, the effective width of the sidewalk is narrowed as a result of a variety of obstructions including bus stop benches and poles, street trees and landscaping, and pavement treatments such as cobbles. There is also high potential for conflict between pedestrian flows entering and exiting the station, private automobile and shuttle pick-up and drop-off activities, and bicycle parking and circulation.

  As a result, pedestrian flow is often disrupted on these sections of sidewalk, and conditions are exacerbated during the weekday AM peak hour due to platooning, as passengers exit the station at this location in pulses following the arrival of each train at platform level. "Complete Streets" improvements currently being planned by the City of Oakland would include a redesign of 20th Street from Lake Merritt to the Uptown Transit Center (Lakeside Drive to San Pablo Avenue), including a "road diet" (conversion to a two-lane roadway), new bike lanes, and sidewalk widening. As shown in **Figure 27**, the sidewalk width would be expanded considerably. BART has participated in the development of this conceptual plan and is supportive of efforts to implement the proposed changes.

Figure 27: 20th Street "Complete Streets" Project (City of Oakland)



- **Crosswalk Improvements**
  In coordination with the City of Oakland, the crosswalks at the intersection of Broadway and 20th Street would be improved to increase pedestrian visibility and improve pedestrian convenience and safety by providing shorter crossing distances and longer pedestrian signal intervals, as feasible.

Prioritize Non-Congested Entries for Bicycle Access and Parking

The portal along Broadway between 19th and 20th Streets (north of the central Station Agent booth) and the southeastern portal (at 17th Street) (blue shading in **Figure 26**) would be prioritized as bicycle access points. These two entries are identified because they are the only two entries that currently have staircases wide enough to accommodate bicycle channels, per BART Facilities Standards (BFS). The goal of consolidating bicycle access improvements at the less-congested station entries is to minimize conflicts between cyclists and pedestrians. Bicycle access would be improved at these locations with the following projects:

- **Consolidated bike parking in concourse at southern end**
  In-station bike parking would be consolidated on the concourse level at the southern end of the station. The existing mid-concourse double-tiered bike racks would be replaced with single-tiered racks, and the double racks would be relocated to the southern end of the station. These improvements will result in an increase of bicycle racks within the station and reopen direct sightlines through the station concourse.

- **Bike stairway channels on entrances**
  Bike channels are special sloped surfaces, typically either flush or depressed, that allow bicyclists to walk, instead of carry, their bike alongside them when negotiating stairs. Installation of bike channels at the two bicycle-priority portals would provide convenience for cyclists using the storefront bike station at street level as well as the in-concourse bike racks.

Existing bike parking at the station and examples of these recommended improvements are illustrated in **Figure 28**.

Figure 28: Bicycle Access and Parking Improvements

Existing concourse level bike racks would be consolidated at the base of the alley portal

Bike channels would be installed along the stairways of the bicycle-priority portals

A storefront bike station, such as in downtown Berkeley, is planned at the corner of Broadway/19th Street

Formalize Shuttle Stop and Drop-off/Pick-up Parking

The north side of 20th Street between Broadway and Franklin Street is already informally used as a pick-up and drop-off point (red rectangle in **Figure 26**); this would be formalized with appropriate signage and pavement markings, and the City of Oakland would dedicate three existing paid parking spaces for a passenger loading zone.

Wayfinding

An important component of distributing access is new wayfinding within the station, as well as at street level, to direct passengers to nearby destinations. The following wayfinding projects have been identified as part of the Plan:

- **Implement Station Wayfinding Program**
  BART is in the process of implementing a systemwide wayfinding program to implement new directional signage, platform identification signs, and destination signs. Installation at 19th St/Oakland station is currently unfunded.

- **Inter-Station Wayfinding Plus**
  This wayfinding initiative would go above and beyond the existing program to direct passenger flows toward specific inter-station and out-of-station access points from the platform level. Street-level wayfinding would be coordinated with the City of Oakland to identify multi-modal connections and local destinations. The Wayfinding Plus program would be closely tied to any artistic improvements that are recommended for the station and would help to enforce the unique character of the station.

Examples of potential wayfinding improvements are illustrated in **Figure 29.**

Figure 29: Wayfinding Improvements

Station Wayfinding Program:
train destination signage

Inter-Station Wayfinding Plus:
local destinations at Fruitvale Station

Improved LED Pedestrian Lighting

As a complement to redistributed access and comprehensive wayfinding, improved LED pedestrian lighting would be installed at all station portals, elevators, and signs, and highlight wayfinding and landscaping elements. The goal of implementing the pedestrian lighting is to improve visibility and the perception of safety at the station entry points.

3.2.3 Passenger Amenities

The station walk-through and in-station survey identified a number of areas in which 19th St/Oakland Station could be improved to enhance passenger comfort and experience.

Improved Station Furnishings

- **New Recycling and Trash Receptacles**
  Existing trash receptacles would be replaced with a uniform, space-efficient design that considers security precautions and maintenance needs. New recycling receptacles would be installed as part of BART's pilot initiative to integrate recycling within the stations.

- **Upgraded platform level benches**
  Both longitudinal benches and seating around columns on the platform levels would be replaced with more efficient designs that include a modernized aesthetic and also meet accessibility requirements. Lean bars may be considered, especially on the lower platform where space is most constrained.

Communication

- **Improved public address system**
  The station's informational and emergency announcement system would be upgraded with features for the disabled and controls that power off the public address system when not in use, coordinated with overall systemic improvements.

- **Real-time multi-modal transit display**
  Working with AC Transit, a real-time multi-modal transit display would be installed on the west side of the north end of the concourse, adjacent to the portal nearest to the Uptown Transit Center. This would facilitate transfers from BART to AC Transit services by providing upcoming arrival times for buses at street level. Experience at other stations has demonstrated the importance of keeping real-time displays maintained and operating correctly.

- **Integrate real-time information at concourse, platform, and street level**
  Comprehensive real-time information would provide a considerable increase in passenger amenity, reducing anxiety about missing a connection. For example, if customers at street level can obtain real-time information about when the next trains to their destination are arriving, they may opt to take care of an errand or pass the time at street level rather than proceed directly to the platform. As part of the Broadway Valdez Specific Plan, the City of Oakland has a policy to work with business owners to display the next BART arrival times on their premises. BART is also collaborating with the City on a pilot wayfinding program in the Uptown area that may include real-time information.

- **Upgrade platform identification signage**
  Improved platform signage would better identify the station for customers aboard trains. The signage also has the potential to be part of the station's art program and contribute to enhancing Uptown's identity within the station.

- **Energy savings / greenhouse gas reduction monitor**
  BART's commitment to sustainability could be communicated through a display of the energy savings and/or greenhouse gas reduction achieved by customers using BART instead of driving. This would require infrastructure to monitor energy use in real time.

- **LED screen advertising**
  Strategically placed LED screen advertising could help enliven "dead" platform or concourse areas and provide increased revenue streams for BART. BART has an existing relationship with an advertiser and is currently piloting LED advertising at selected downtown San Francisco stations.

Examples of potential communication improvements are illustrated in **Figure 30**.

Figure 30: Communication Improvements

Real-time multi-modal transit display at Fremont Station

Platform identification signage with placemaking benefits at a station in Toronto
Source: http://www.lubiemetro.pl/historyczna-kolumnada/

3.3 Create a Place

3.3.1 Aesthetic Improvements

Building upon the "Early Wins" described in Section 3.1.1, the following aesthetic improvements would modernize the station for the next forty years of its life:

- **New lighting fixtures**
  New, more modern lighting fixtures would complement new ceiling elements and other furnishings to update the overall station appearance.

- **Concourse paid area barriers**
  In conjunction with replacing railings separating the free and paid area with a higher barrier (5') to discourage fare evasion, their aesthetics should be improved by integrating lighting, art or transparent materials. The concourse railings are also in need of replacement because they do not meet current ADA standards.

- **Upgrade flooring**
  Overall, the station's terrazzo floor is in good condition, but there are cracks in some locations. Upgrading the flooring would repair the cracks and refinish the flooring.

3.3.2 Sustainability

Modernization of 19th St/Oakland Station would align with BART's core value of sustainability by introducing energy- and water-efficient fixtures and elements. Walk-through attendees recommended the conversion to more energy-efficient LED installations as part of general improvements to the station's lighting systems. BART staff also suggested potential integrated lighting/signage solutions, such as high-luminosity station lighting combined with unlit, low-maintenance signage.

Energy Efficiency

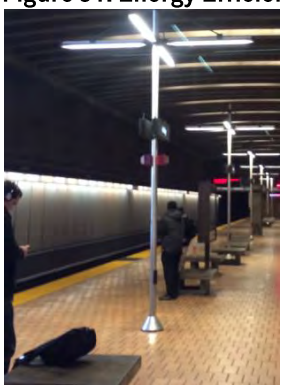
Since the majority of the station's power requirements are dedicated to lighting and escalator operation, these elements are where the greatest energy savings can be realized:

- **Variable-speed escalators**
  Escalators designed to operate at 20 percent speed in "sleep mode" would save energy during off-peak hours. Escalator motors could be equipped with regenerative power systems to reduce heat dissipation and feed electricity back into the station's power system for other uses.

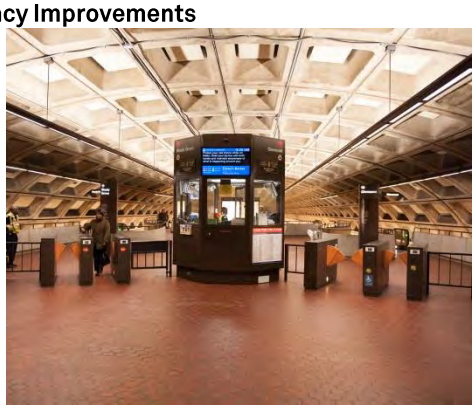
- **Replace fluorescent lights with LED lights with selective switching**
  A comprehensive lighting analysis is needed to guide the relamping of the station. Some areas of the station are overlit; a study would help identify an overall strategy to reduce the amount of lighting. A revision of BART's lighting standards is currently in process. The 16th St/Mission and 24th St/Mission stations were recently relamped to identify new lighting configuration levels that would save energy while maintaining or enhancing comfort and safety. The relamping resulted in an energy reduction of over 1.5 million kWh/year, an annual savings of nearly $150,000.

Examples of potential energy efficiency improvements are illustrated in **Figure 31**.

Figure 31: Energy Efficiency Improvements



LED replaced fluorescent lighting at Ashby BART Station



LED fixtures in the Washington Metro have improved light levels and quality
Source: http://planitmetro.com

LED lighting upgrade at a station in Brussels, Belgium has reduced energy consumption by half
Source: http://www.schreder.com

Water Efficiency

All fixtures throughout the station would be upgraded to be water-efficient. Replacement of conventional plumbing fixtures with modern, low-flow designs could achieve water savings of up to 60 percent.

3.3.3 Art and Placemaking

The Plan has been developed during a period that represents a unique moment in the history of downtown Oakland. Public and private revitalization and redevelopment efforts have created new energy and vibrancy for the Uptown District that 19th St/Oakland Station can capitalize on and further advance. The following initiatives aim to integrate art and placemaking within the station and at the station entrances, including lighting, landscaping, and wayfinding that reflect the emerging new character of Uptown Oakland. In addition, BART is currently undertaking the development of an art policy that will help to identify systemwide policies for themes, media, locations and integration of art into BART stations.

- **Work with the City of Oakland to develop a street level gateway**
  As part of the Broadway Valdez Specific Plan, the City of Oakland has identified the need to develop a gateway to the planning area near the 19th St/Oakland BART station's northern entrances.

- **Integrate art concepts throughout the station**
  Art of various media should be used to enliven and attract activity, particularly to improve capacity by attracting customers to underutilized areas of the station. Interactive or constantly updating installations would especially encourage efficient use of the platforms. The theme of art at the station will be informed by BART's art policy, but should be developed to reflect the vibrancy of the Uptown community and provide opportunities for local artists.

  Both temporary and permanent art installations such as live performances, audio programming, and large-scale artwork such as murals would enhance the concourse and platform levels. Art themes shall conform to BART's overall Art Policy. Installations should relate to the surrounding area, and could result from collaborative efforts with nearby destinations such as Children's Fairyland and the Fox and Paramount theatres.

  Art and placemaking should also be integrated into the redesign of functional components of the station, such as lighting, bike racks and paid area barriers. Integrating art and placemaking into the station's functional aspects will provide further opportunities for the station to reflect the unique character of Uptown.

- **"Signature" large-scale art installation**
  The areas where the concourse is open to the upper platform could be utilized for hanging large-scale artwork that unites the concourse with the platform, creating an effect that would be unique to 19th St/Oakland Station.

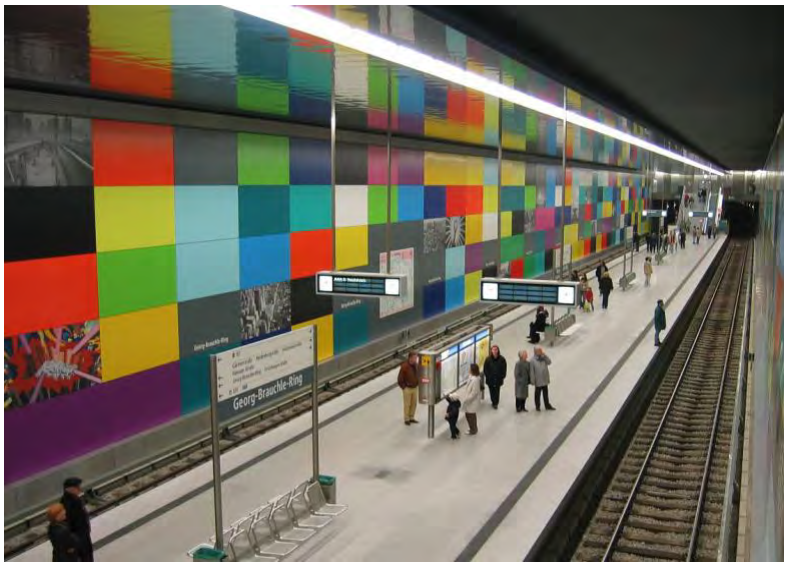
- **Incorporate color and graphics for more intuitive wayfinding**
  Use of logical, standardized iconography systemwide can improve wayfinding within stations, making access to station amenities and facilities (such as restrooms, ticket vending machines, and elevators) intuitive, particularly for passengers with limited English proficiency. Icons can be combined with standardized color schemes (e.g., green for station exits) to further enhance wayfinding. Similar signage standards for mounted and drop signs are already being implemented in stations throughout BART, but could be expanded with other signage schemes such as floor decals.

- **Utilize art as an invitation to stop and visit Uptown**
  Many regional riders and visitors to the area may pass through the station with little knowledge of the Uptown District and its vibrancy and amenities. Integrating art at the platform level that can be seen from the trains presents a great opportunity to introduce riders to the area's vitality and invite them to visit and enjoy its offerings.

Examples of potential art and community placemaking improvements are illustrated in **Figure 32**.

Figure 32: Art and Community Placemaking Improvements

Placemaking sculpture at Uptown ArtPark near the station
Source: http://oaklandartenthusiast.com



Color and photographic art engage waiting passengers at a station in Munich, Germany
Source: https://de.wikipedia.org/wiki/U-Bahnhof_Georg-Brauchle-Ring

4.0 Cost Estimates

Cost estimates for the conceptual improvements described in Section 3 have been developed by utilizing conceptual estimating methods. This process entails the development of conceptualized quantities based on information provided in conceptual design drawings, representing a 15 percent level of design. In addition, historical pricing and lump sum cost assumptions were considered to provide an approximation of costs.

Unit prices used in the estimates are for the most part current and represent the cost for materials, labor, equipment, subcontracting, general conditions, indirect costs, and contractor's overhead and profit. Also, soft costs allowances have been applied to cover project administration, design engineering, construction management, insurance, legal fees, permits and other project fees. The estimates are subject to further refinement as individual projects progress beyond a 15 percent level of design.

The total cost for all of the improvements identified in the Plan is estimated at $75 million. The cost estimates per project are presented in **Table 4** in the following section.

5.0 Prioritization and Implementation

5.1 Prioritization Process

The prioritization of the conceptual improvements described in Section 3 was developed through a two-step outreach process involving representatives of various BART departments as well as the project's stakeholders, including the City of Oakland, AC Transit, and the community. The prioritization process utilized a decision support software tool designed to guide stakeholders through an organized and transparent decision making process. Stakeholders were engaged in an interactive Decision Lens prioritization activity, during which the relative importance of the Station Modernization program goals and objectives described in Section 2.1.1 were valued with respect to each other in head-to-head comparisons. The stakeholders' weighting of the importance of the goals and objectives for the station are identified below in **Table 3.**

Prior to the Decision Lens activity, each improvement project was given an effectiveness rating by the project team with respect to how well it would address each of the objectives. For example, relamping the station with energy-efficient lighting would rate very high across multiple categories and be given a high rating.

A preliminary prioritization list of the improvement projects was prepared by combining the results of the activities described above – the weighting of goals and objectives by BART staff and stakeholders and the effectiveness ratings by the project team. The initial ranking shown in **Table 4** provided a framework for identifying the proposed phasing of the improvements identified in Section 5.2. For instance, projects with high ratings for the objectives deemed most important have highest priority; projects with lower ratings for those objectives or high ratings for objectives of middle importance would have less priority; and projects with the lowest ratings, especially for objectives deemed least important, would have least priority.

The decision support tool process identified the goal of Making Transit Work as the goal with the highest importance. This is consistent with the input received from the community participants who filled out a survey as part of the outreach process, as identified in Section 1.1.2. When asked to rank different types of projects, the three categories the public identified as having the highest level of importance are, in order:

1. Maintain and upgrade general infrastructure and functionality
2. Improve general station cleanliness and upkeep
3. Upgrade the lighting within the station, including more energy-efficient lighting

5.2 Improvement Prioritization

The prioritization process resulted in the ranking (0.0–1.0 scale) of projects as shown in **Table 4** below. Based upon the stakeholders' weighting of the goals, projects that were rated to contribute to the objectives of Making Transit Work (Maintain Reliability, Increase Station Capacity, Advance Sustainability and Improve Employee Environment) ranked the highest.

However, this prioritization does not directly translate into the phasing of the implementation of projects because this process does not take into consideration aspects of the projects that influence the phasing, such as necessary coordination, construction efficiencies, and budget, which are necessary to consider when planning for implementation. In addition, the Decision Lens software has a feature that allocates resources based on ranking, project costs, and identified budgets and recommends a "best value" portfolio of improvements to fund. This portfolio of improvements was used as a first pass to inform the recommended phasing of the projects, as identified in **Table 4** below.

Table 3: Weighting of Goals and Objectives

Make Transit Work (58%)	Connect to Community (15%)	Create Place (18%)	Implementation (10%)
Maintain Reliability Protect investment in existing system through systematic replacement of aging components and infrastructure; emphasis on positive customer experience.	Connect BART Maximize connectivity and facilitate multi-modal access to stations and within station areas, including transit, walking and biking.	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.	Project Readiness A measure of the time it will take to construct the project, taking into consideration availability of existing standards, required additional analysis, outreach, or design, coordination and/or any foreseeable hurdles of implementation.
Increase Station Capacity Optimize the BART system's ability to meet projected ridership increases by increasing BART's capacity to carry passengers.	Expand Universal Design Improve universal design of BART stations and access to stations to provide access for all (ADA).	Ensure Safety & Security Enhance customer and system, real and perceived safety and security.	Project Efficiency A measure of the long-term benefits and or savings gained by the project.
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.	Incorporate Community Input Respond to the community and customer input regarding which improvements are perceived as most important.	Leverage Partnerships Protect the investment in rail transit through strategic partnerships and leveraging outside funding to match BART investments.	
Improve Employee Environment Ensure that the BART workforce has the tools and space that they need to support a healthy, safe, and productive workplace.			

5.3 Proposed Phasing

19th St/Oakland Station has been identified as one of three stations to receive funds to advance projects into the design and engineering phase as part of the first round of the Station Modernization program. As part of this program, $10-12 million have been preliminarily allocated to fund design and construction of improvements. This money is available to BART as part of the Proposition 1B funding program, which must be spent by 2018.

The design and construction budget and funding timeline influences the phasing of projects, which are categorized as:

- **Phase 1** (Immediate) – to be advanced into preliminary engineering and design immediately, queuing the projects for potential construction by 2014. Projects in Phase 1 are largely within BART's jurisdiction and require minimal outside coordination.
- **Phase 2** (Medium-term) – to be advanced within the next ten years. Phase 2 includes projects that are beyond the available funding of Phase 1 and/or entail more planning and coordination with outside agencies to advance. In addition, Phase 2 includes projects that are systemwide in nature, either requiring design/engineering decisions that would apply to the entire BART system or would be more efficiently implemented as a systemwide improvement rather than at individual stations.
- **Phase 3 (**Long-term) – to be advanced within the next 10-20 years. Projects in Phase 3 largely deal with increasing the capacity of the station as necessitated by potential future development and ridership growth.

5.4 Implementation – Next Steps

The projects identified in Phase 1 are currently being moved forward into Preliminary Engineering. The goal of the Preliminary Engineering phase will be to advance design to a level that defines a scope in sufficient detail to allow a realistic estimate of project costs and schedule that will be moved forward through the engineering process. The Preliminary Engineering phase is estimated to take five to six months. BART will continue to work with internal and external stakeholders to advance the projects that require additional coordination, and BART will continue to engage the community as the designs are further developed.

In addition, BART will be advancing the design and engineering of the new elevator and fare gates adjacent to the former Sears Building concourse entry. Although there is currently only $10-12 million in potential funding to implement these projects, BART has decided to further advance these high-ranking projects to Preliminary Engineering in an effort to position these projects for additional funding sources.

Table 4: Preliminary Project Prioritization and Cost Estimates

Improvement	Ranking (0.0–1.0)	Conceptual Cost
Phase 1 (Immediate)		
Upgrade visibility of existing street elevator	0.597	$150,000
Repaint ceiling	0.244	$504,000
Repaint walls behind track	0.209	$630,000
Replace/repair damaged brick	0.335	$500,000
Platform interventions to expedite boarding/alightings	0.582	$200,000
Consolidate storage area for maintenance equipment	0.457	$200,000
Bike channels on entrance stairways	0.530	$300,000
Consolidate bike parking	0.460	$100,000
Formalize passenger and shuttle drop-off	0.428	$60,000
Station Wayfinding Plus	0.664	$1,000,000
20th Street/Broadway crosswalk improvements	0.409	$100,000
Implement Standard Station Wayfinding Program	0.769	$2,000,000
LED pedestrian lighting at station entrances	0.787	$1,000,000
New recycling and trash receptacles	0.465	$150,000
New lighting fixtures (cost included in new LED lights)	0.795	n/a
Replace paid area barriers	0.701	$1,000,000
Refurbish flooring on concourse and platform levels	0.351	$1,560,000
LED lights with selective switching and new lighting fixtures	0.795	$4,536,000
Water-efficient fixtures	0.592	$150,000
Integrate art concepts throughout the station	0.375	$400,000
Phase 2 (Medium-term, within 10 years)		
Variable-speed escalators	0.839	$1,950,000
Elevator water intrusion mitigation	0.666	$1,000,000
Station platform train control antennae	0.677	$140,000
Install paneling within the elevator to prevent erosion	0.730	$16,000
Replace and repair station door hardware	0.633	$100,000
Replace wood core escalator balustrades	0.804	$1,200,000
Entrance enclosures for entrances with escalators (4)	0.835	$8,000,000
Upgrade and reopen public bathrooms (pending outcome of pilot study)	n/a	$100,000
New Station Agent booths (3)	0.691	$2,100,000
Additional fare gate at north end of concourse	0.641	$1,794,500
New fare gates at new elevator / former Sears building entrance	0.641	$929,000
Street-to-platform elevator (includes new fare gates adjacent to elevator)	0.834	$4,700,000
Widen 20th Street sidewalk (Complete Streets Plan)	0.546	$510,000
Upgrade platform level benches	0.306	$200,000
Real-time multi-modal transit display at the northwest concourse corner	0.539	$300,000
Real-time information at concourse, platform, and street level	n/a	$2,000,000
Incorporate LED screen advertising	0.149	$1,000,000
Phase 3 (Long-term, 10-20 years)		
End-of-platform stairs (SVRT)	n/a	$800,000
Expand platform level (SVRT)	n/a	$3,000,000
Platform screen doors (SVRT)	n/a	$6,000,000
Widen NE portal	0.776	$7,933,700
New Broadway portal (on east side north of 20th Street)	0.701	$9,549,100
New escalator in Broadway portal north of the central Station Agent booth	0.713	$3,371,500
Real-time publicly-accessible energy usage and savings information	0.215	$600,000
Street-level gateway at the 20th Street entrances (with City of Oakland)	0.327	$3,000,000