

SAN JOAQUIN REGIONAL RAIL COMMISSION

Robert J. Cabral Station Master Plan Update

March 7, 2008



Prepared By:



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Robert J. Cabral Station Master Plan Update

A Report to the San Joaquin Regional Rail Commission

March 7, 2008

San Joaquin Regional Rail Commission

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Introduction



In 2006, the San Joaquin Regional Rail Commission adopted a Master Plan for the neighborhood surrounding the Robert J. Cabral Station in Downtown Stockton. The plan, entitled *Robert J. Cabral Station Neighborhood: A Plan for Revitalizing East Downtown Stockton*, identified a series of key physical problems and physical design improvements. A proposal for site planning and circulation improvements to the immediate station area was central to the plan.

Above: Aerial photograph of the Master Plan project area, with the Phase I project area outlined in blue.

This report serves as an update to the Master Plan, and includes a detailed description of the "Phase I" improvements which are slated for implementation beginning later this year. It also includes strategies and recommendations for parking, signage, and wayfinding for the entire project area, which can be implemented in the future.

The project area is located in east Downtown Stockton, bordered by Miner Avenue to the north, the Union Pacific railway tracks to the east, Weber Avenue to the south, and Aurora Street to the west. It includes 5 adjacent parcels, totaling approximately 2.66 acres:

- #15114004 (949 E. Channel Street), currently owned by the Rail Commission
- #1511508, currently owned by the Rail Commission
- #15114015 (920 E. Miner Avenue), formerly the Bockman Electric facility
- #15114014 (930 E. Miner Avenue), formerly the Bockman Electric facility
- The Channel Street right-of-way between Aurora Street and the Station



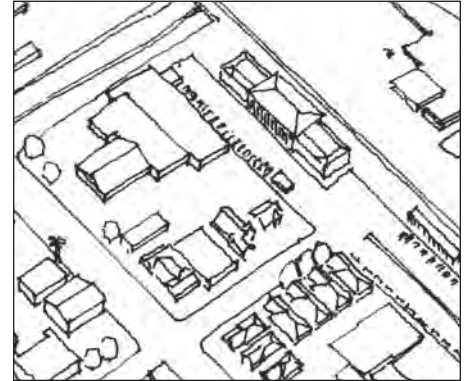
Background

The 2006 plan identified three key issues with the area immediately surrounding the station:

- Buses traveling along Miner Avenue, or wishing to travel eastbound along Weber, must currently use Aurora and Channel Streets to access the station, which are not designed for the turning requirements of buses and are incompatible with small-scale residential uses. In addition, no facilities are currently provided for bus layover or for bus passengers.
- Pedestrian access is also poor, with difficult crossings at both Miner and Weber Avenues, an inhospitable underpass along Miner, and a lack of good sidewalks across the tracks at Weber.
- The Cabral Station suffers from poor visual access, particularly along the Miner Avenue approach to and from Downtown.

In addition to these key circulation and access issues, the 2006 plan also identified the following:

- Although the area has seen considerable improvements for ACE Train riders, there continues to be a lack of services for riders and a general lack of perceived personal security.
- Community members also expressed a desire for more neighborhood gathering space, such as a small community center or public meeting hall.



Above: Illustrative image of existing conditions around the station.

Project Description

Further development of the 2006 Master Plan ideas began in October of 2006. The current project anticipates the following items:

1. Vertical demolition of the existing Bockman Electric buildings at 920 and 930 E. Miner Avenue
2. Improvements to the area immediately west of the Cabral Station, including improved circulation through the station area, pedestrian improvements, reconfigured parking, a pedestrian plaza, and a signature clock tower
3. Improvements to the area immediately south of the Cabral Station, including improved circulation through the station area, pedestrian improvements, reconfigured parking, bus drop-off, and platform improvements
4. Improvements to the public right-of-way along East Channel Street between Aurora Street and the station area, including pedestrian improvements, new curb, gutter, sidewalk, and landscaping
5. Retention of the existing Bockman Electric building at 911 E. Channel Street for storage purposes
6. Additional recommendations for parking management, signage, and wayfinding throughout the project area
7. Recommendations on future uses for the former Western Pacific Station property, located at the corner of Weber Avenue, Union Street, and Main Street

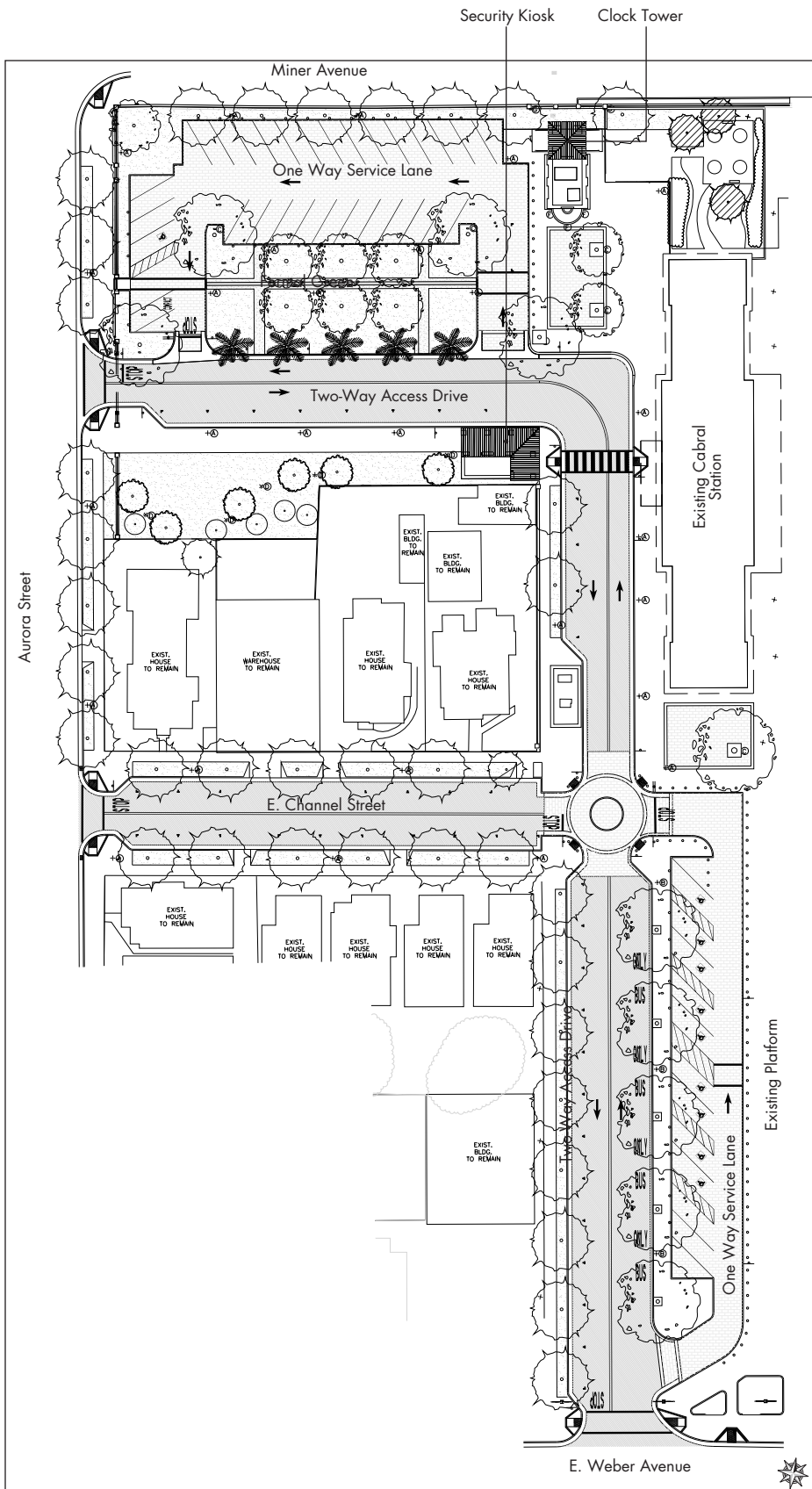
Item #1 should be considered as an independent project to be completed prior to any improvements in the project area. Items #2, 3, and 4 describe elements of the current improvements that will be completed as Phase I. Items #5, 6, and 7 describe potential future projects that the Rail Commission may wish to pursue.

Vehicular Circulation

Due to limited access, the majority of bus and vehicular traffic currently accesses the station via East Channel Street, which has been largely incompatible with the existing small-scale residential uses along the block. The design proposes that non-local traffic be rerouted to access the station via Aurora Street and Weber Avenue along a two-way access drive. Buses may enter via Weber Avenue, are provided with four spaces for pickup and drop-off parallel to the platform, and may exit the property onto Aurora Street, where they may easily return to Miner and Weber Avenues. This improved route seeks to eliminate existing problems in the station area with buses traveling the wrong way and providing pickup and drop-off on the wrong side of the platform. Potential conflicts between pedestrians and buses are minimized. The project team has communicated with the SJRTD and Amtrak during the process to facilitate these recommended changes in local bus circulation.

Other vehicles wishing to access the station area may enter and exit the property from Aurora Street and Weber Avenue. A pickup/drop-off lane for vehicles is provided parallel to the platform south of the station, and a row of “kiss & ride” spaces is provided west of the station along the access drive.

In order to facilitate Weber Avenue circulation and ensure safe passage for pedestrians walking from ACE’s commuter parking lots south of Weber Avenue to the station platform area, the design anticipates the potential future implementation of a traffic light at Weber Avenue and the station entry.



Left: Proposed site plan for the project area.

Parking

The site currently contains 50 parking spaces, including 23 in a staff area north of the station, and 27 commuter spaces in the area south of the station. 10 of these spaces are currently designated for handicapped use (1 handicapped staff space and 9 handicapped spaces for commuters). In addition, the site currently includes 1 space designated for taxis, 1 “kiss & ride” space, and 1 bus space. The design proposes a total of 58 parking spaces for staff and commuters, with at least 10 of these designated for handicapped use, in addition to 3 taxi/ “kiss & ride” spaces, and 4 dedicated bus spaces. The map at right illustrates recommended locations for the different types of parking spaces.

Management Recommendations

ACE’s ridership and customer satisfaction will both improve if parking is available at all times of day at its stations. This can be accomplished by increasing supply, but it can also be accomplished through better parking management. Sound parking management follows the same principles as the management of any scarce commodity. The telephone company, electric company and airlines all offer a variety of strategies for ensuring that their customers can always get what they want, 24 hours a day, 365 days a year. The best managed parking systems use similar strategies to ensure optimal utilization of their spaces – nearly every space should be full, but there should always be a handful of empty spaces so new customers can arrive.

The following tools and techniques are recommended to manage parking within the immediate station area:

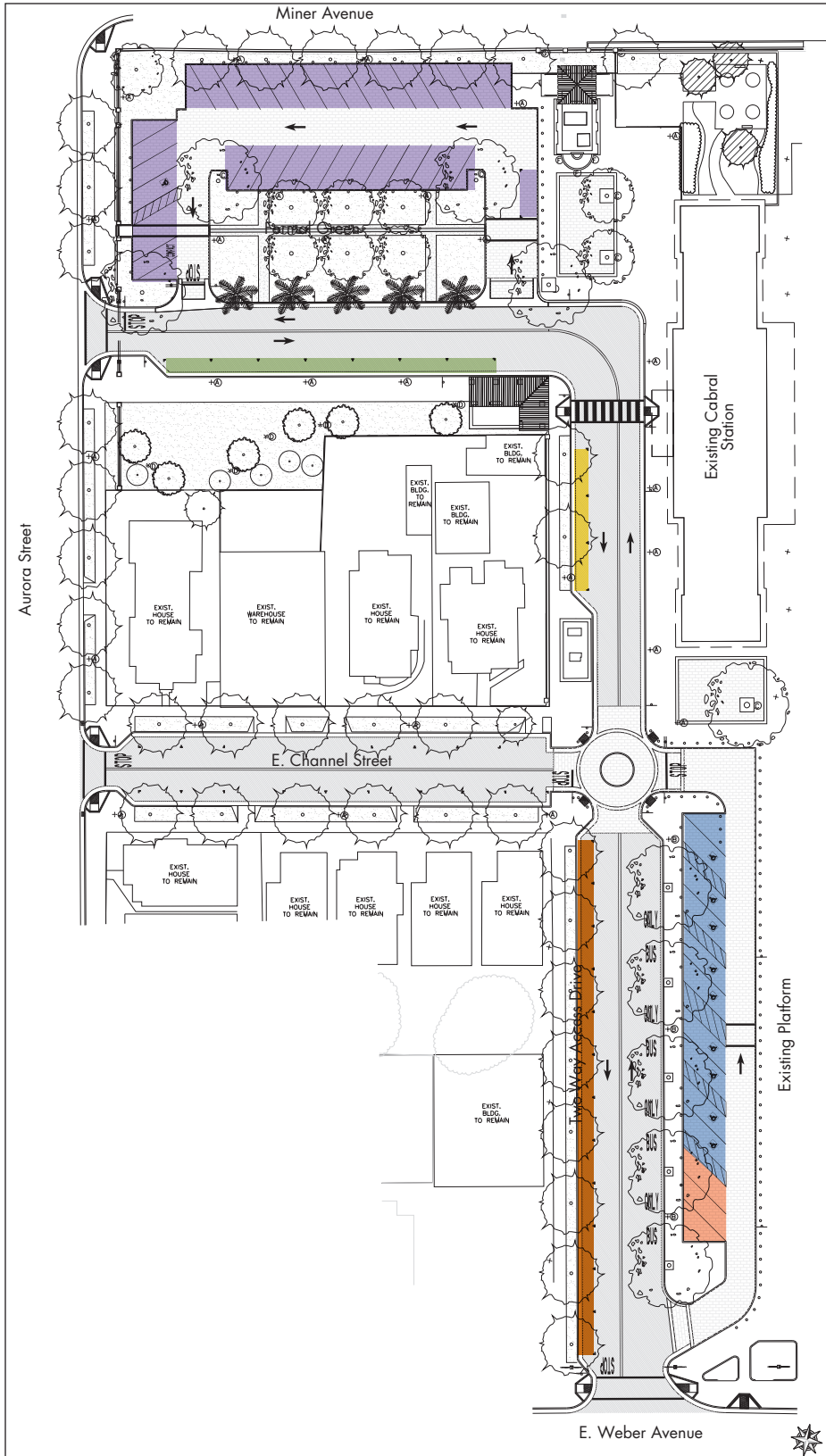
Visitors

To ensure visitors to the station building can always find a space, the closest spaces to the front door should be reserved for high-turnover, short term visitor parking. There are two primary tools for doing this:

- Time limits. The Rail Commission can post its spaces to limit parking for any period of time. Since visitors would primarily be competing with commuters, a time limit of four hours could be posted, which would accommodate almost all visitor trips while excluding commuters. A disadvantage with time limits is the cost of enforcement – officers must visit the vehicle twice, typically chalking tires to see who has exceeded the time limit.
- Meters. The Rail Commission can install parking meters in its short term spaces to maximize turnover, reduce enforcement costs and keep employees out of short-term spaces. Rather than conventional coin-only meters, The Commission should install modern pay stations that accept credit cards, debit cards and bills, in order to remove payment obstacles. This option has the advantage of helping to reveal the actual cost of providing parking, but the obvious disadvantage of charging motorists for a service they may be accustomed to receiving free.

Employees

The Rail Commission needs approximately 27 employee spaces for its employees, and the logical location for these spaces is in the new lot near the corner of Miner and Aurora. The Commission should simply post these spaces for employee permit parking only, noting the penalty and applicable vehicle code section (21113(a)) on the signs. Parking permits can be issued to employees and long-term guests.



Key

- Employee parking
- 2-Hour metered
- 30 Minutes visitor
- Disabled
- No parking before 9am;
No parking overnight
- 30 Minutes Maximum

Left: Proposed parking management recommendations for the project area.

As a transportation district, the Rail Commission may want to consider offering a parking cash-out program in order to reveal the actual cost of providing parking to employees. In these programs, parking is provided for free, but employees who choose not to drive are given the cash value of the parking they do not use. They can take this benefit in the form of non-taxable vanpool or transit pass credits or taxable cash. The notion is that “free” parking is expensive to provide, and all employees should be treated equally in their overall benefits package.

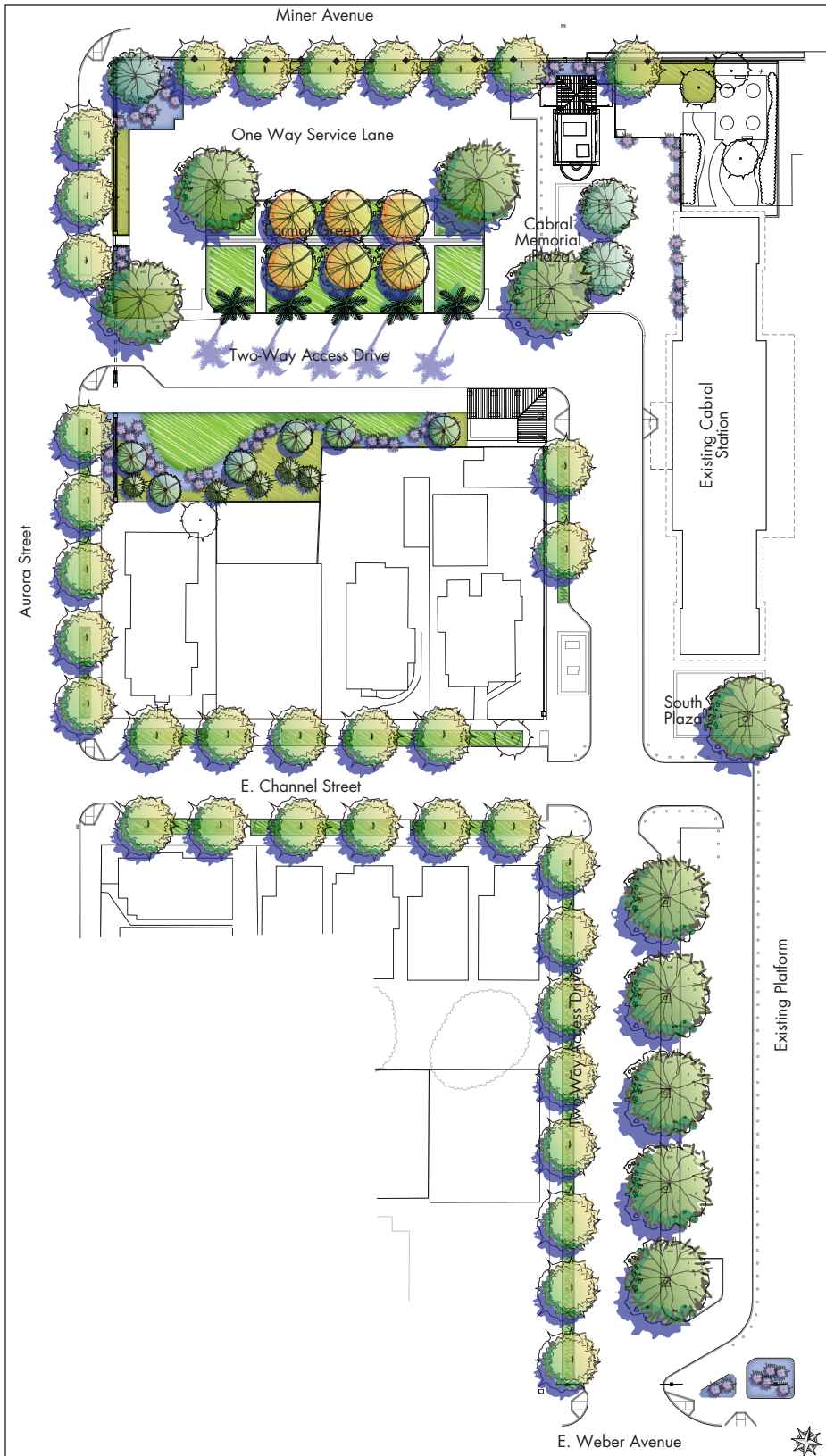
Landscaping and Open Space

The design incorporates an 8,000 square-foot “formal green” on the site of the former Bockman Electric facility to provide open space for the adjacent community and an opportunity for public events, particularly on non-commuting days. Infrastructure (water and electric) will be installed in and around this open space to accommodate a potential future farmer’s market in this location, and the one-way parking access lane (with counterclockwise flow) around the open space is designed for closure with removable bollards for increased pedestrian access. The open space is planted with a combination of palm trees (which historically were used to mark important public buildings), shade trees, and open lawn.




The design also incorporates two pedestrian plaza spaces. On the northern side of the property, adjacent to the formal green, a 2,500 square-foot hardscaped space includes shade trees and an outdoor fountain. This space will be known as the “Cabral Memorial Plaza” and will incorporate a bronze memorial plaque in memory of the founder of ACE. Along the southern side of the historic station, a 1,600 square-foot hardscaped space provides an additional large shade tree and a buffer between the platform area and the Rail Commission’s Board Room.

Improvements to the platform area will also facilitate its use for public events on non-commuting days. The western edge of the platform will be planted with large shade trees.

Additional landscaping will be added in the form of street trees and a landscaped verge along the site’s western and northern edges. The area will be lit with pedestrian-scaled lighting similar to the existing historic fixtures east of the station.



Key

-  Quercus rubra (Red Oak) - 24" Box
-  Prunus dulcis "Mission" (Almond) - 15 G.C.
-  Platanus acer "Columbia" (London Plane) - 15 G.C.
-  Cupressocyparis leylandii (Leyland Cypress) - 15 G.C.
-  Quercus Robur (Columnar English Oak) - 36" Box
-  Phoenix Canariensis (Canary Island Date Palm) - 30'
-  Gleditsia triacanthos inermis "Shademaster (Honey Locust) - 24" Box
-  Turf (Delta Bluegrass)
-  Abelia grandiflora "sherwoodil" - 1 gal
-  Agapanthus "snow pixie" (Lily of the Nile) - 1 gal
-  Trachelospermum jasminoides "star jasmine" - 5 gal

Left: Proposed landscape plan for the project area, prepared by Prentice & Prentice, Inc.

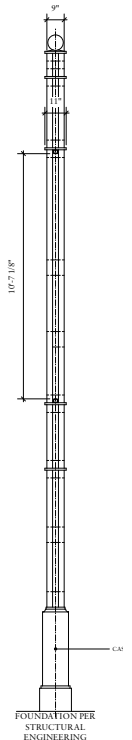
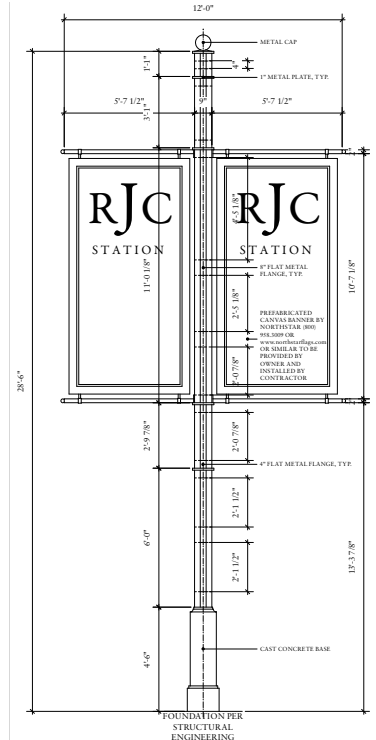
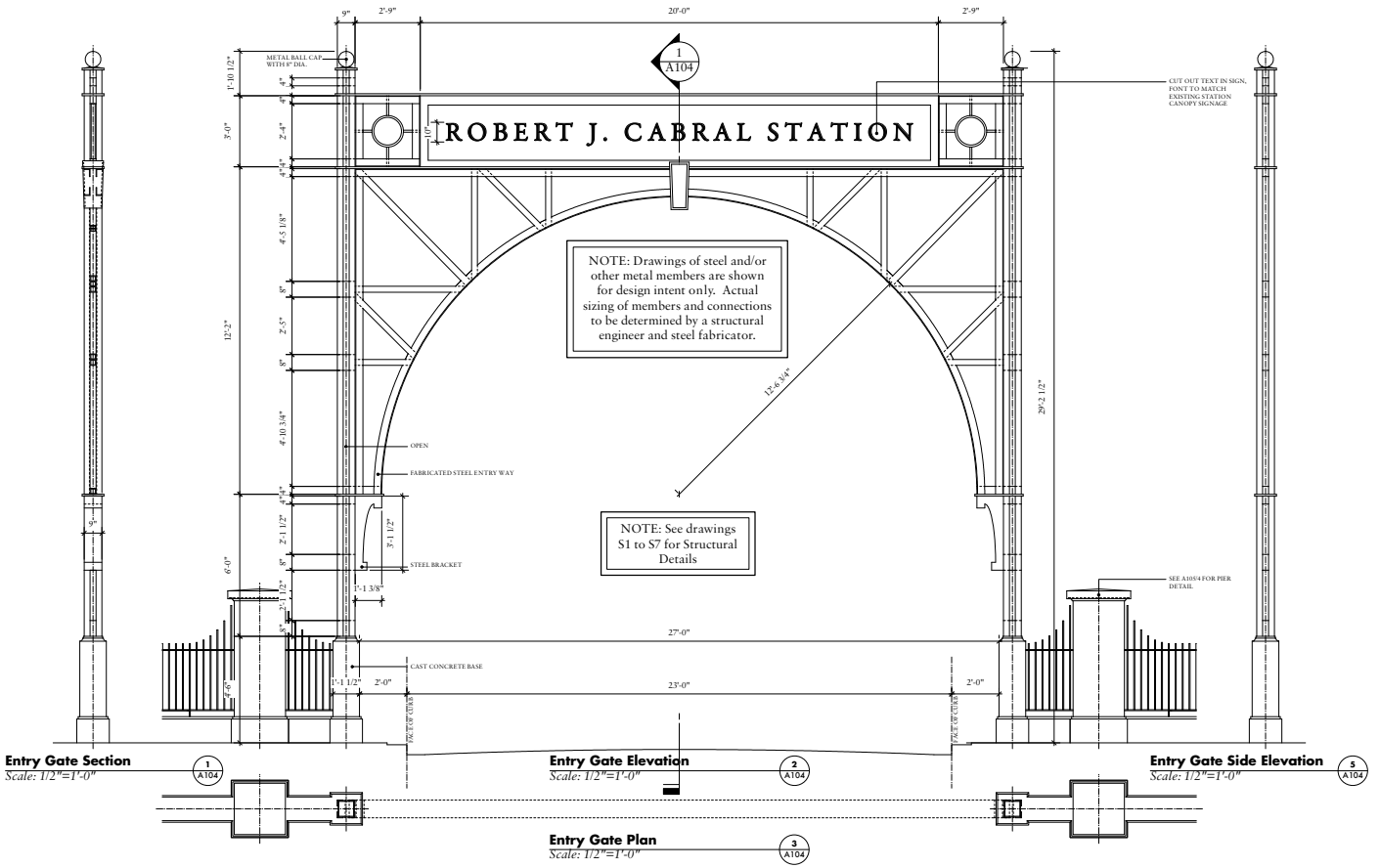


Entry Treatments

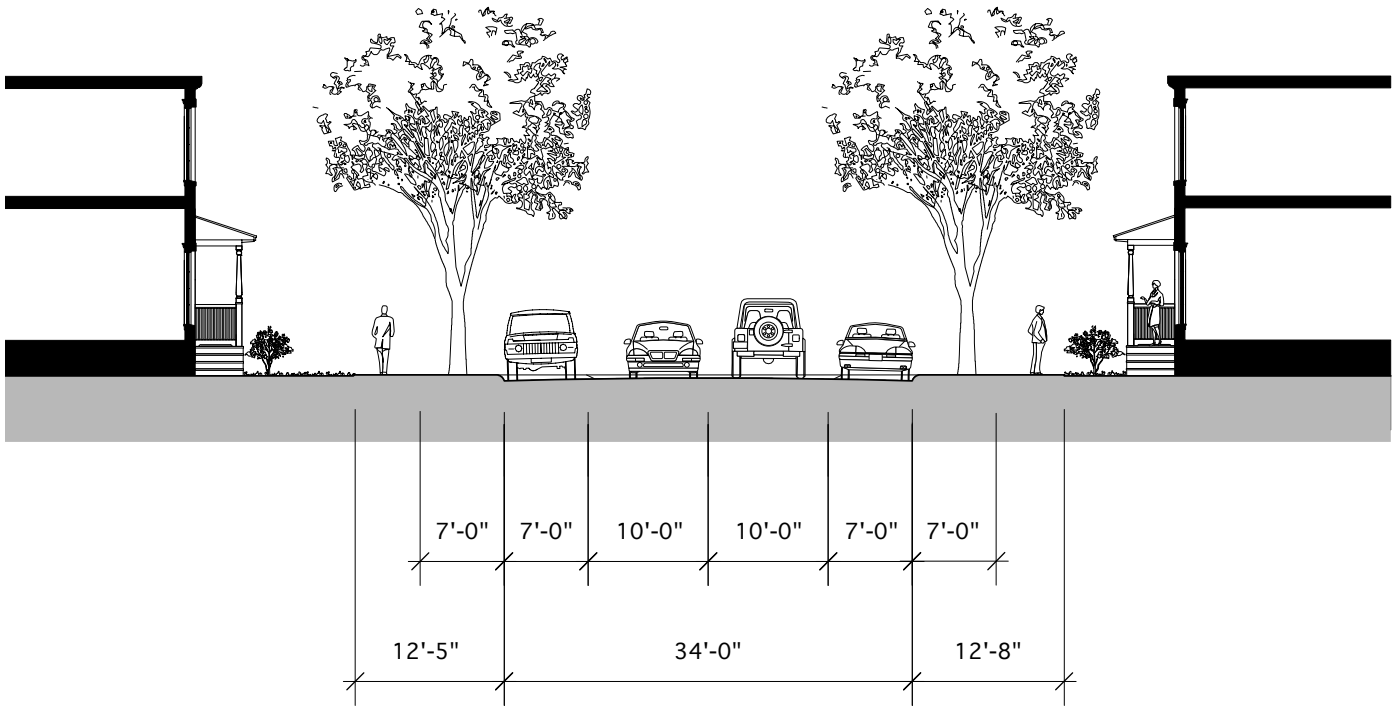
The western edge of the project area along Aurora Street is defined by a decorative low wall, fence, and archway. The archway is a steel structure that spans the two-way access drive and provides a strong edge along Aurora. Stucco masonry piers will be constructed to the same size and scale as the existing brick piers on the property.

Along the project area’s southern edge at Weber Avenue, a set of three piers holding banners announce entry. They incorporate the steel structure design of the Aurora Street archway.

Top: Elevation view along Aurora Street showing steel entry archway and decorative fence and masonry piers; Above: Elevation along Weber Avenue showing steel entry piers supporting decorative banners.



Top: Elevation detail of Aurora Street archway; Left: Elevation detail of Weber Avenue entry pier with decorative banners.



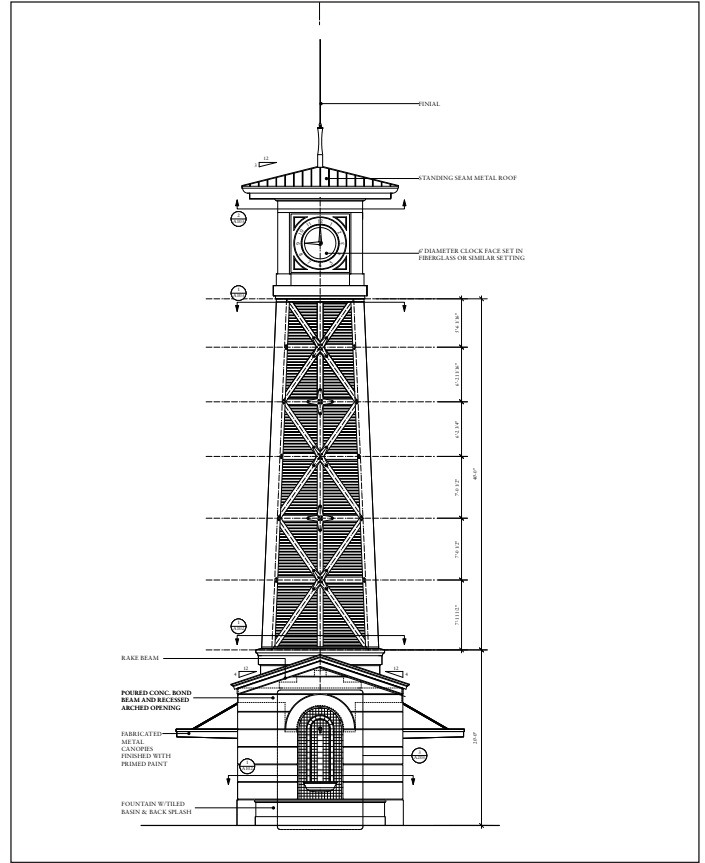
Channel Street Improvements

The project also includes improvements to the block of E. Channel between Aurora Street and the station area, including construction of a new curb, gutter, sidewalk, and landscape strip with new street trees and pedestrian-scaled street lights. Bulb-outs at the intersection of E. Channel and Aurora Street and the intersection of E. Channel and the station will calm traffic and provide safer crossings for pedestrians. The eastern intersection will incorporate a “speed table” to provide additional traffic calming and to discourage the use of the intersection as a primary entry and exit point for the station.

Above: Cross section illustrating Channel Street improvements.

Due to the residential nature of this street, and its very low traffic volumes, the street will be rebuilt with a relatively narrow curb-to-curb width of 34 feet, suitable for local residential/commercial streets as per the 2003 City of Stockton Street Design Guidelines.

The Rail Commission will maintain these improvements within the existing Channel Street right-of-way, and has begun the process of transferring this section of Channel from the City to facilitate this maintenance.



Architectural Features

The project proposes two main architectural features: a clock tower located northwest of the existing Cabral Station, and a covered open-air pavilion and security kiosk located west of the existing station.

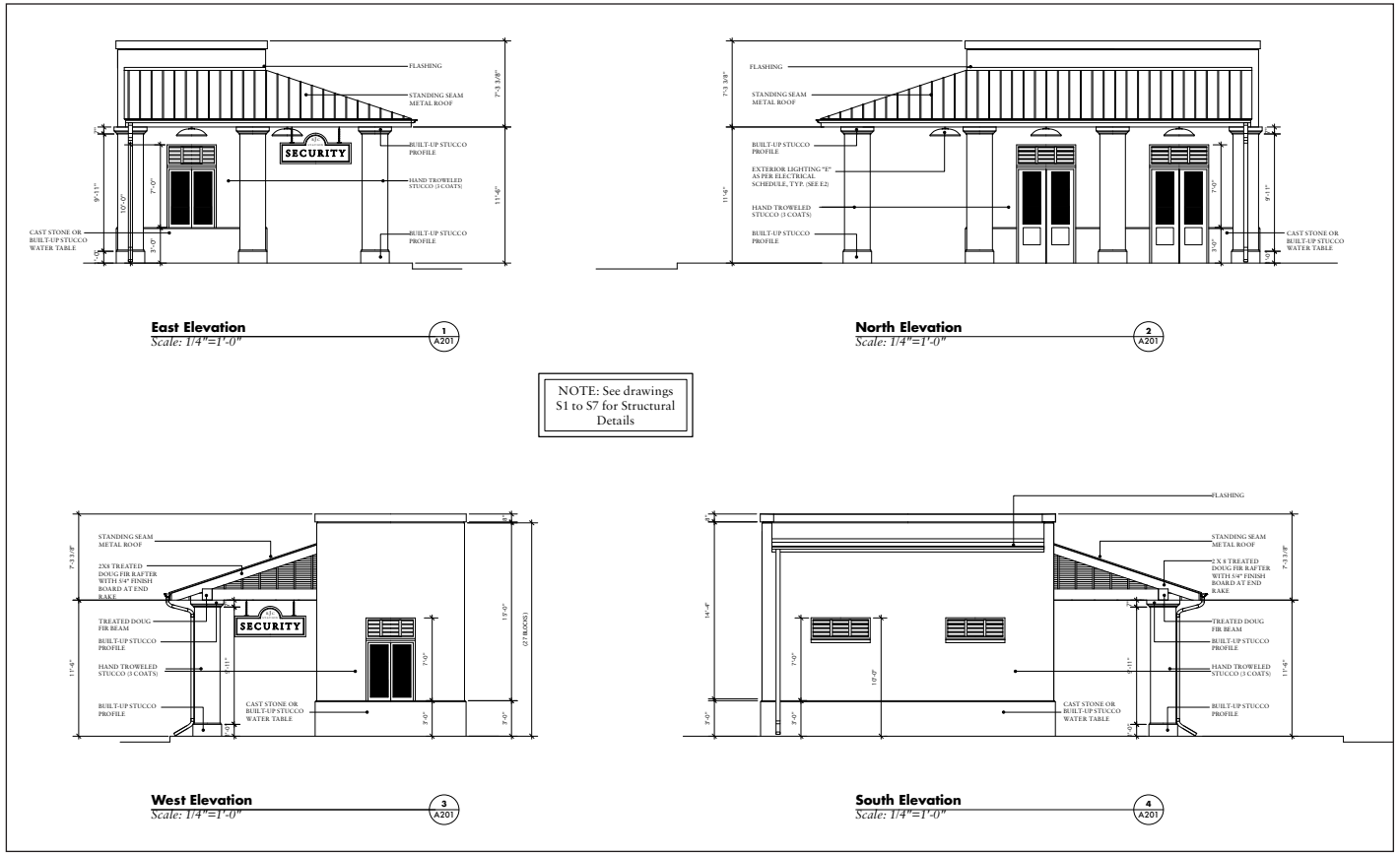
Clock Tower

The clock tower is designed as an icon in the spirit of public buildings and train stations, and is intended to provide a strong sense of identity for the ACE train and the surrounding neighborhood in order to encourage its continued revitalization. Its forms and architecture relate to the historic industrial iconography of the area as well as the strong civic tradition of California train stations and public works buildings of the City Beautiful movement. It is located to maximize its visibility in all directions along downtown's primary corridors.

The tower incorporates an existing outdoor mechanical room into its base in order to provide a more fitting address for the northwest entry plaza. A new enclosure is constructed around the existing mechanical room that is open to the above to allow for ventilation. A fountain is incorporated into the building's southern wall.

The tower is placed approximately 10' from the existing retaining wall along the Miner Avenue underpass. It measures approximately 14' square at the base, 10' square at the level of the clock face, and 75' to the peak of the roof from finish grade.

Above left: Rendering of the west elevation of the Clock Tower illustrating proposed color scheme; Above right: South elevation view along the Cabral Memorial Square.



Security Kiosk

The open-air pavilion west of the station is intended to anchor the access drive’s northeast corner and provide a covered waiting area for station users. This structure will initially be constructed to provide a central location for a 24-hour security guard. In the future, it can accommodate a potential “coffee cart” or other small vendor that can provide limited food services to station passengers.

The building is constructed using concrete-block masonry and stucco, with simple shed roofs in standing seam metal. It is provided with electrical, telephone, and internet connections to the securable, 300 square-foot interior. The building will utilize the Cabral Station for its restroom facilities.

The area just to the west of the kiosk will be reserved for the potential future development of a new mixed-use building that fronts the two-way access drive, and is architecturally compatible with the character of the other structures on the site. In the interim, this open space is be improved with temporary landscaping.

Above: Elevations of the Security Kiosk.

Phase I Project Costs

Construction cost estimates completed at 100% design foresee that project construction will cost approximately 3.8 million dollars. A breakdown of the estimated costs is as follows:

GENERAL ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
G-1	Mobilization	1	LS	\$164,629	\$164,629
G-2	Survey Monuments	8	EA	\$300.00	\$2,400
G-3	Unforeseen conditions allowance	1	LS	\$50,000.00	\$50,000
				SUBTOTAL	\$52,400

SPECIALTY ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
S-1	Storm Water Pollution Control	1	LS	\$10,000.00	\$10,000
S-2	Utility Relocation (PG&E Switchboard & Transformer)	1	LS	\$20,000.00	\$20,000
S-3	Cage/Stemwall and Foundation for Switchboard & Transformer	176	SF	\$40.00	\$7,040
				SUBTOTAL	\$37,040

DEMO ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
D-1	Site Demolition	1	LS	\$153,255.00	\$153,255
				SUBTOTAL	\$153,255

GRADING ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
GR-1	Site Grading	3	Acre	\$5,000.00	\$15,000
				SUBTOTAL	\$15,000

STORM DRAIN ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
SD-1	Furnish and Install Type I Curb Inlet Catch Basin	2	EA	\$4,000.00	\$8,000
SD-2	Furnish and Install 8" RCP Storm Drain Pipe	100	LF	\$120.00	\$12,000
SD-3	Furnish and Install 6" Perforated Underdrain Pipe	300	LF	\$20.00	\$6,000
SD-4	Provide Connection to Existing Storm Drain Maintenance Hole	3	EA	\$2,000.00	\$6,000
SD-5	Furnish and Install Maintenance Access Clean-Outs: Park Area	3	EA	\$150.00	\$450
SD-6	Furnish & Install 18" Trench Frame with Grated Cover & 4" Outlet: Neehah Valley Inter equal	50	LF	\$5.00	\$250
				SUBTOTAL	\$32,700

ELECTRICAL ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
E-1	Furnish and Install No. 5 Pull Box	39	EA	\$1,700.00	\$66,300
E-2	Furnish and install 78mm (3") conduit	6500	LF	\$30.00	\$195,000
E-3	Furnish and Install conductors	35000	LF	\$3.00	\$105,000
E-4	Relocate Main Switchboard	1	LS	\$10,000.00	\$10,000
E-5	Provide Temporary Generator	1	LS	\$10,000.00	\$10,000
E-6	Furnish and Install new Pole. Conduit Foundation	27	EA	\$3,090.00	\$83,430
E-7	Furnish and Install new Pole. Conduit Foundation	4	EA	\$4,810.00	\$19,240
E-8	Furnish and Install new Pole. Conduit Foundation	7	EA	\$1,050.00	\$7,350
E-9	Furnish and Install new Pole. Conduit Foundation	5	EA	\$375.00	\$1,875
E-10	Furnish and Install new Pole. Conduit Foundation	3	EA	\$795.00	\$2,385
E-11	Furnish and Install new Pole. Conduit Foundation	3	EA	\$355.00	\$1,065
E-12	Furnish and Install new Pole. Conduit Foundation	2	EA	\$1,125.00	\$2,250
E-13	Furnish and Install new Pole. Conduit Foundation	1	EA	\$488.00	\$488
E-14	Furnish and Install new Pole. Conduit Foundation	4	EA	\$875.00	\$3,500
				SUBTOTAL	\$507,883

ROADWAY ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
R-1	Provide Roadway Excavation	4600	CY	\$70.00	\$322,000
R-2	Furnish and Install Class II Aggregate Base and Sub-base	1225	CY	\$45.00	\$55,125
R-3	Furnish and Install Asphalt Concrete (Type A, 1/2-Inch Maximum with Medium Grading)	85	TON	\$150.00	\$12,750
R-4	Furnish and Install 6" Concrete Spill Curb	220	LF	\$18.00	\$3,960
R-5	Furnish and Install Combined 6" Concrete Curb and 24" Gutter	2200	LF	\$30.00	\$66,000
R-6	Furnish and Install Rolled Curb and Gutter	60	LF	\$35.00	\$2,100
R-7	Furnish and Install 6" Flush Curb	1600	LF	\$22.00	\$35,200
R-8	Furnish and Install 6" Concrete Sidewalk	30200	SF	\$22.00	\$664,400
R-9	Provide Transition from Vertical to Flush Curb	12	LF	\$20.00	\$240
R-10	Furnish and Install Concrete Curb Ramp	9	EA	\$2,500.00	\$22,500
R-11	Furnish and Install Pre-Fabricated Truncated Domes	216	SF	\$60.00	\$12,960
R-12	Furnish and Install Concrete Driveway	5	EA	\$3,000.00	\$15,000
R-13	Adjust Manhole Frame and Cover to Grade	4	EA	\$500.00	\$2,000
R-14	Adjust Drain Inlet/Catch Basin Grate and Frame to Grade	1	EA	\$300.00	\$300
R-15	Adjust Utility Box Casting and Cover to Grade	45	EA	\$100.00	\$4,500
R-16	Furnish and Install 4" Valley Gutter	131	LF	\$15.00	\$1,965
R-17	Furnish and Install 3"x12" 18 Gauge Sheet Metal Duct	20	LF	\$12.00	\$240
				SUBTOTAL	\$1,221,240

TRAFFIC ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
41	Traffic Routing & Traffic Control Work	1	EA	\$10,000.00	\$10,000
42	Install New Sign and Post	31	EA	\$300.00	\$9,300
43	Furnish and Install Pavement Markings	1200	SF	\$5.00	\$6,000
44	Furnish and Install Pavement Striping	4200	LF	\$2.50	\$10,500
SUBTOTAL					\$25,800

LANDSCAPE

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
45	Lime stabilization	20000	SF	\$0.75	\$15,000
46	Furnish & Install 18" Trench Grate	130	LF	\$5.00	\$650
47	Furnish & Install Irrigation System (refer to irrigation plan for components)	20000	SF	\$1.50	\$30,000
48	Furnish and Install Quercus Rubra (Red Oak)	10	24" box	\$450.00	\$4,500
49	Furnish and Install Prunus Dulcis "Mission" (Almond)	6	15 g.c.	\$100.00	\$600
50	Furnish and Install Platanus acer. 'Columbia' (London Plane)	37	15 g.c.	\$100.00	\$3,700
51	Furnish and Install Cupressocypripis leylandii (Leyland Cypress)	6	15 g.c.	\$100.00	\$600
52	Furnish and Install Quercus Robur (Columnar English Oak)	3	36" box	\$700.00	\$2,100
53	Furnish and Install Phoenix Canariensis (Canary Island Date Palm) (Optional)	5	30'	\$9,500.00	\$47,500
54	Furnish and Install Gleditsia triacanthos inermis 'Shademaster' (Honey Locust)	6	24"	\$280.00	\$1,680
55	Furnish and Install Turf: 90-10 Tall Fescue (Delta Bluegrass)	13400	SF	\$0.38	\$5,025
56	Furnish and Install Abelia grandiflora 'Sherwoodii'	320	1 g.c.	\$22.50	\$7,200
57	Furnish and Install Agapanthus 'snow pixie' (Lily of the Nile)	320	1 g.c.	\$6.50	\$2,140
58	Furnish and Install Trachelospermum jasminoides 'Star Jasmine'	14	5 g.c.	\$14.50	\$189
59	Furnish and Install Tree Well Covers and tree guards: bus stop area	5	8"	\$90.00	\$4,550
60	Furnish and Install Permeable Pavers SF Concrete VS 5 Eco or similar	2300	SF	\$13.25	\$302,100
61	Furnish and Install Landscape Masonry Piers	1	EA	\$450.00	\$7,200
62	Furnish and Install Landscape Masonry base wall and iron fence	230	LF	\$27.00	\$5,400
63	Furnish and Install Landscape Other iron fencing	30	LF	\$22.00	\$6,600
64	Furnish and Install Landscape Other wood fencing	230	LF	\$15.00	\$3,450
65	Furnish and Install Landscape Entry Archway at Aurora	1	EA	\$25,000.00	\$25,000
66	Furnish and Install Landscape Entry Banners	3	EA	\$7,500.00	\$22,500
67	Furnish and Install Memorial Plaque	1	EA	\$450.00	\$450
68	Furnish and Install Benches	2	EA	\$325.00	\$650
69	Furnish and Install Bollards: Reliable Foundry 30 or similar	123	EA	\$242.00	\$29,766
70	Furnish and Install Concrete Footing on Landscape Area	27	EA	\$500.00	\$13,500
SUBTOTAL					\$546,100

ARCHITECTURE

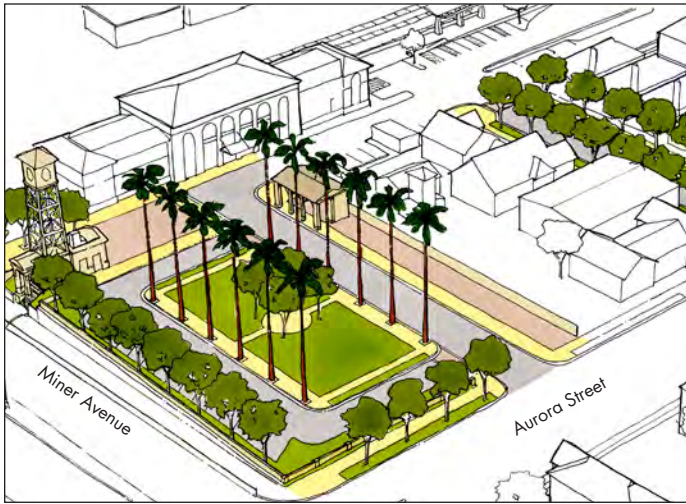
Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
71	Clock Tower: Entry Base Foundation	785	SF	\$96.00	\$75,360
72	Clock Tower: Entry Shaft	440	SF	\$200.00	\$88,000
73	Clock Tower: Security Kiosk	1	EA	\$60,000.00	\$60,000
74	Clock Tower: Deck	1	EA	\$45,000.00	\$45,000
75	Clock Tower: Clock	1	EA	\$45,000.00	\$45,000
76	Clock Tower: Memorial Fountain	1	EA	\$10,000.00	\$10,000
77	Security Kiosk	809	SF	\$75.00	\$60,675
SUBTOTAL					\$384,035

ELECTRICAL ITEMS

Item No.	Item Description	Quantity	Unit	Price/Unit	Extension
78	Furnish and Install No. 5 Pull Box	39	EA	\$1,700.00	\$66,300
79	Furnish and install 78mm (3") conduit	6500	LF	\$30.00	\$195,000
80	Furnish and Install conductors	35000	LF	\$3.00	\$105,000
81	Main switchboard relocation	1	LS	\$10,000.00	\$10,000
82	Temporary Generator	1	LS	\$10,000.00	\$10,000
83	Furnish and Install new Single Site Light Poles	27	EA	\$3,090.00	\$83,430
84	Furnish and Install new Double Site Light Poles	4	EA	\$4,810.00	\$19,240
85	Furnish and Install new Inground Fixtures	7	EA	\$1,050.00	\$7,350
86	Furnish and Install new Spot Lights	5	EA	\$375.00	\$1,875
87	Furnish and Install new Wall Mounted Luminaire	3	EA	\$795.00	\$2,385
88	Furnish and Install new Underwater Fixture	3	LF	\$355.00	\$1,065
89	Furnish and Install new Spot Lights on Tower	2	LF	\$1,125.00	\$2,250
90	Furnish and Intall new Tower Fixture	1	LF	\$488.00	\$488
91	Furnish and Install new Tower Uplighting	4	LF	\$875.00	\$3,500
SUBTOTAL					\$507,883

SUBTOTAL	\$3,220,513
Contingency @15%	\$483,077
Mobilization @ 5%	\$161,026
PROJECT TOTAL	\$3,864,615

The Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.



Phasing Considerations

The new layout of the area around the station can ultimately accommodate a new, mixed-use infill building that can provide additional program space for the Rail Commission. Such a building would be visible immediately upon entry into the station area and would help to frame the formal green.

If the Rail Commission is able to establish a public presence with the green the area could initially be improved with a continuation of the Security Kiosk loggia to the west. This loggia could be used for special activities, such as a farmer's market, or could provide space for local vendors to provide services to ACE train users.

The design can also accommodate a 2-story building in this location that would provide about 8100 square feet of office space for the Rail Commission. In the event that the house on the northeast corner of Aurora and Channel Streets and the adjacent storage building are redeveloped, the parcel could accommodate a much larger, 2-3 story building with frontage along the formal green, Aurora Street, and Channel Street.

These improvements would help to maintain a sense of security on the station grounds and provide additional "eyes on the street" focused on the formal green.

Above: Illustrative aerial views of current improvements (left) and ultimate condition along the two-way access drive (right), with a two-story office building incorporating the security kiosk's loggia over the sidewalk.

Additional Recommendations

Wayfinding

Guiding Principles

Wayfinding is the art of helping people find their way through their environment. The primary purpose of developing wayfinding is to move people from their point of origin to their destination efficiently, while also preventing people from becoming lost or confused. Wayfinding is conducted both to plan a route ahead of time (sometimes using a map, or a schedule), and while on route (sometimes by reading signage or noting landmarks). Although signs are generally a critical element at rail stations, the need for signs is an indication of wayfinding failure. At rail stations especially, landmarks, transparency and other design tools should be the primary emphasis for helping people find their way. Other conventional wayfinding tools include:

- Maps
- Schedules
- Pavement markings
- Landmarks
- Electronic Devices
 - Web
 - Real-Time Info Message Signs
 - PDA and Mobile updates

Even signage programs must be designed with great care. Common failures of sign programs include :

- The signs were there, but people could not see them because they were too small.
- The sign was big enough for its message to be seen, but it made no sense; people could see it, but not read or understand it.
- Because the signs were poorly located, people could not find them.
- Because people expected the signs to be unreliable, they ignored them, preferring to ask questions instead
- Sign “clutter” – an excessive number of signs in one place – provided so much information so that no information could be reasonably discerned.

Users

In developing a wayfinding system, the point of view of the user is critical. A wayfinding system that merely places signs where they are easiest to place but are not visible to users does not help people find their way. In addition to user’s point of view, consistency and clarity of wayfinding design (architecture, signage, web sites, etc.) is critical to creating an effective system.

All types of modes must be considered. Many people who drive to the station must also walk from the parking lot or drop-off location to the station. Some train riders must arrive via bus and walk from the bus stop to the station.

In order to make a wayfinding system that has multiple agencies and jurisdictions involved, a basic understanding and baseline of wayfinding standards will go a long way to make the system work well.

Good wayfinding standards can also be used to improve safety since clear, visible directional signage serves to avoid confusion on the part of drivers, cyclists and pedestrians. Coordinated wayfinding can help to promote a broader image and sense of community with common nomenclature and themes used to aesthetically link the study area. Good wayfinding is a major contributor to personal security, since feeling lost or uncertain worsens both perceived and actual personal security.

To the greatest extent possible, signs should use internationally recognized symbols rather than words. For example, the green 'P' symbol can be more easily seen and understood by all users than the word "Parking."

The ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) provides detailed guidance for all aspects of the design of rail station areas, including specifications for signage. Besides being critical for disabled passengers, these standards also result in stations that are easier for all passengers to move and navigate through. For more detail, see: <http://www.access-board.gov/adaag/html/adaag.htm>

Arriving at the Station

The updated station area plan and clock tower will significantly improve passengers' ability to find the station and the platforms. For accessing the station, the greatest obstacle is helping motorists find a place to park.

Walking and Biking

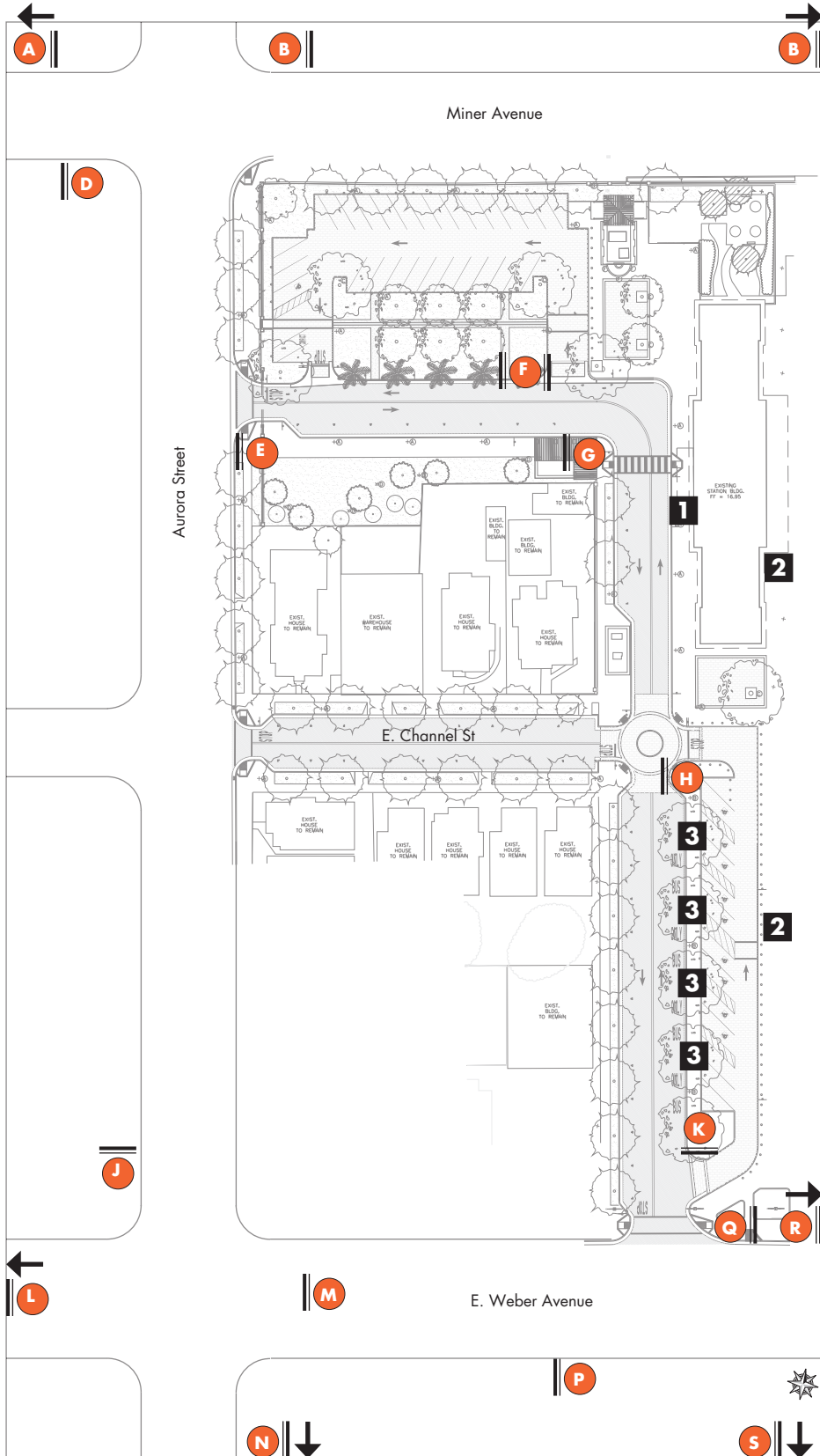
Pedestrians and cyclists often use the same tools to navigate their way to the station. In some cases even vehicular signage will work for pedestrians and cyclists. Simple directional signage should indicate the direction and distance to the station. Signage should be placed at critical locations within walking distance and from the existing and growing bike network. Examples of locations include CSU Stanislaus-Stockton, King Plaza, the Greyhound Bus Terminal, and the Calaveras River Bike Path. In the immediate vicinity of the station, the new clock tower will act as the best wayfinding tool. Some additional signage may be necessary to indicate locations of bike parking, ticketing (if necessary) and any other critical information at the site of the station.

Bus

Clear sight lines from the bus stops to the station with clear walking paths are important to moving bus passengers to the train station. Both bus route and Amtrak route numbers and destinations should be clearly visible on bus stop pole flags directly in front of where buses stop.

Driving and Parking

Signage should indicate directions to drop-off, short-term and ACE (long-term) parking. Currently, ACE parking is located in two lots south of the station, south of East Weber Avenue. Without clear signage, some drivers may drive to the station building in search of parking, and drive in circles since currently there is no direct vehicle connection between the station and the lots to the south. This can be remedied with simple signage directing drivers to the lot south of Weber from an appro-



Key

- || Symbol for placement of Sign: Thick line represents the side from which it is read from
- A** On E. Miner Ave westbound just east of N. Grant St: ACE Parking ←
- B** ACE Parking ↑
- C** On E. Miner Ave westbound just west of N. Pilgrim St: ACE Parking ←
- D** ACE Parking →
- E** Short-term Parking ↑ Commuter Parking →
- F** Employee Parking (two faces sign) (right arrow on east face and left arrow on west face)
- G** Short-term and Drop-off →
- H** Short-term Parking ← Drop-off →
- J** ACE Parking ←
- K** Short-term Parking ↑ Drop-off Parking →
- L** On E. Weber Ave eastbound just east of N. Grand St: Short-term Parking ← ACE Parking →
- M** Drop-off and short-term Parking ←
- N** On E. Main St., just east of N. Aurora St: ACE Parking ←
- P** ACE Parking →
- Q** Short-term and Drop-off →
- R** On E. Weber Ave westbound just west of N. Pilgrim St: Drop-off Parking → ACE Parking (Left at N. Union St)
- S** On E. Main St, just west of the railroad tracks ACE Parking →
- 1** Bus Stop Pole, flag and info indicating bus routes (SJRTD and Amtrak,) schedule and route map.
- 2** Possible location for info kiosk. Info includes: local map, SJRTD map, Amtrak and ACE schedules and maps.
- 3** Pedestrian signage: right arrow (meeting point or short term parking,) left arrow (buses and ACE Parking.)

Left: Proposed signage types and locations for the project area.

appropriate distance. For example, signage for drop-offs, and ACE parking for eastbound Weber Avenue could be located just east of Grant Street, and again just after Aurora Street where the two paths separate.

Due to the several turning restrictions on E. Weber Avenue, and several one-way streets, it is important that signage east of the station along Weber provide directions to ACE parking early enough for motorists to make the appropriate turns to reach the ACE parking entrance on E. Main Street.

Better yet, Sacramento Street could be restored west of the railroad tracks, allowing for full, direct access from the station to its parking areas, as well as full turning movements from Weber into the station and parking areas.

Within the immediate station area, parking spaces should be allocated as follows:

- Employee parking by permit. Section 21113(a) of the California Vehicle Code allows ACE to establish special permit areas on its property. If ACE wishes to enforce this rule, it will need to set up its own enforcement division, contract with the Stockton Police Department for enforcement under city parking regulations, or tow away offending vehicles. In any case, signs should note the penalty. If ACE chooses the towing option, signs should cite the code section and the telephone number and address of the towing yard. If towing is chosen, each space should be individually signed. Sufficient parking should be provided for all employees who drive, as well as for a limited number of guests who must park beyond two hours. Placard or special daily permits would be available from staff in the station building. While it is important to provide a sufficient number of employee spaces, positive passenger relations requires that this number not be excessive.
- 2-hour limit. Sufficient spaces should be provided for visitors to the station building and other short-term parking needs. Standard, off-the-shelf two hour limit signs can be installed. Enforcement can be provided by City of Stockton or ACE. Curb may be painted green.
- Taxi Zone. Two to three curb parking spaces may be set aside for taxis. Here, the curb should be painted white with the words “No Parking – Taxis Only” or similar stenciled. A prominent sign with the international taxi symbol should be within view of the platform.
- Bus Zone. The bus zone should be prominently striped to keep cars out of it.
- Pick-up and drop-off. Sufficient spaces should be provided to accommodate evening passenger pick-up without blocking traffic.
- Disabled Parking. Sufficient disabled parking should be provided and signed to meet code requirements for a rail station: See <http://www.access-board.gov/adaag/html/adaag.htm#tranfac>.
- Reserved Parking. To ensure that its regular passengers can always find a parking space and reduce search traffic, ACE should introduce a reserved parking program. All parking spaces north of Weber not required for the above purposes should be part of the reserved pool.
- ACE Passenger Parking. Spaces south of Weber should be designated for ACE passengers.

Leaving the Station

Train

Passengers, especially ones new to the station, need to know where to go. New passengers must choose their destination from an assortment of choices. Designing the station in such a way that reduces the amount of signage yet indicates the way to reach their destinations is ideal.

An information kiosk should provide critical information including:

1. Local area map, noting key destinations within walking distance, locations of bus stops and the routes serving them, taxi zone, bike routes and general parking areas.
2. Bus map (SJRTD). Ideally, this would be redesigned to focus on routes serving the station, as well as key connecting services.
3. Amtrak schedule, information and map
4. ACE schedule, information and map

The location of the map must be where people can easily see it while also not blocking important sightlines to the area. Depending on the final configuration and design of the station, a kiosk could be located at the current shelter, or if this blocks too many sightlines it could be placed on the east-facing wall of the station. The map could be designed as a low-level podium rather than a wall map; this has the advantage of keeping sightlines clear and allows the map to be oriented to actual directions.

Walking and Biking

The information maps and kiosk noted above will serve pedestrians and cyclists.

Bus and Taxi

From the station building, passengers debarking should be able to see the bus stops beyond parallel to the platform, although those getting off in front of the station itself may not see the buses or bus stops. Directional signage in this case should direct passengers to the bus stops. Signs at the bus stops themselves should note:

- Agency (SJRTD or Amtrak)
- Route(s)
- Destination
- Hours and average frequency (for example, Mon-Fri 6:30 AM to 8:00 PM, Peak Only)
- Route map and schedule (this is typically slipped into a frame mounted on the pole so it can be updated frequently.)

Driving and Parking

Signage or a kiosk should indicate where all types of parking are located. Drop-off parking may be immediately in front of passengers, however signage should indicate where short-term and ACE parking are located.

Additional Parking Recommendations

Guiding Principles

Access

The primary purpose of parking at ACE stations is to provide passenger access to the trains. As a young rail system serving a relatively low density corridor, ACE will have parking as its primary form of home-end station access for some time to come. As the system and the communities it serves mature, however, other forms of access will become more viable and cost effective.

- ACE should provide the same level of support to all passengers accessing its stations, regardless of how they arrive.
- ACE should work to ensure accommodating one form of access does not compromise another.
- Over time, ACE should emphasize access by the most efficient modes, including, in order: Walking, biking, feeder transit, drop-off, carpool and single-occupant vehicle.

Land banking and Joint Development

Like most transit agencies, ACE faces extremely limited resources, particularly in its operating budget. Like most rail agencies, public investments in ACE service and infrastructure produce significant real estate value around its stations, but ACE captures little if any of this value increase.

- ACE should see parking as a short-term land banking strategy, developing its lots as compact, transit-oriented development as the real estate market merits.
- ACE should use its land resources to optimize ridership and revenue. This may mean that its parking supply will decline over time, with any ridership lost to declining parking spaces offset by riders gained by new development. More importantly, it should use ongoing revenue streams from development to improve service and reduce the need to increase fares.

Parking Management

Its parking lots are one of ACE's greatest assets, and these assets should be managed wisely to benefit the agency and its passengers.

- ACE's parking lots should be managed to maximize total ridership, and so that passengers can always find a space.

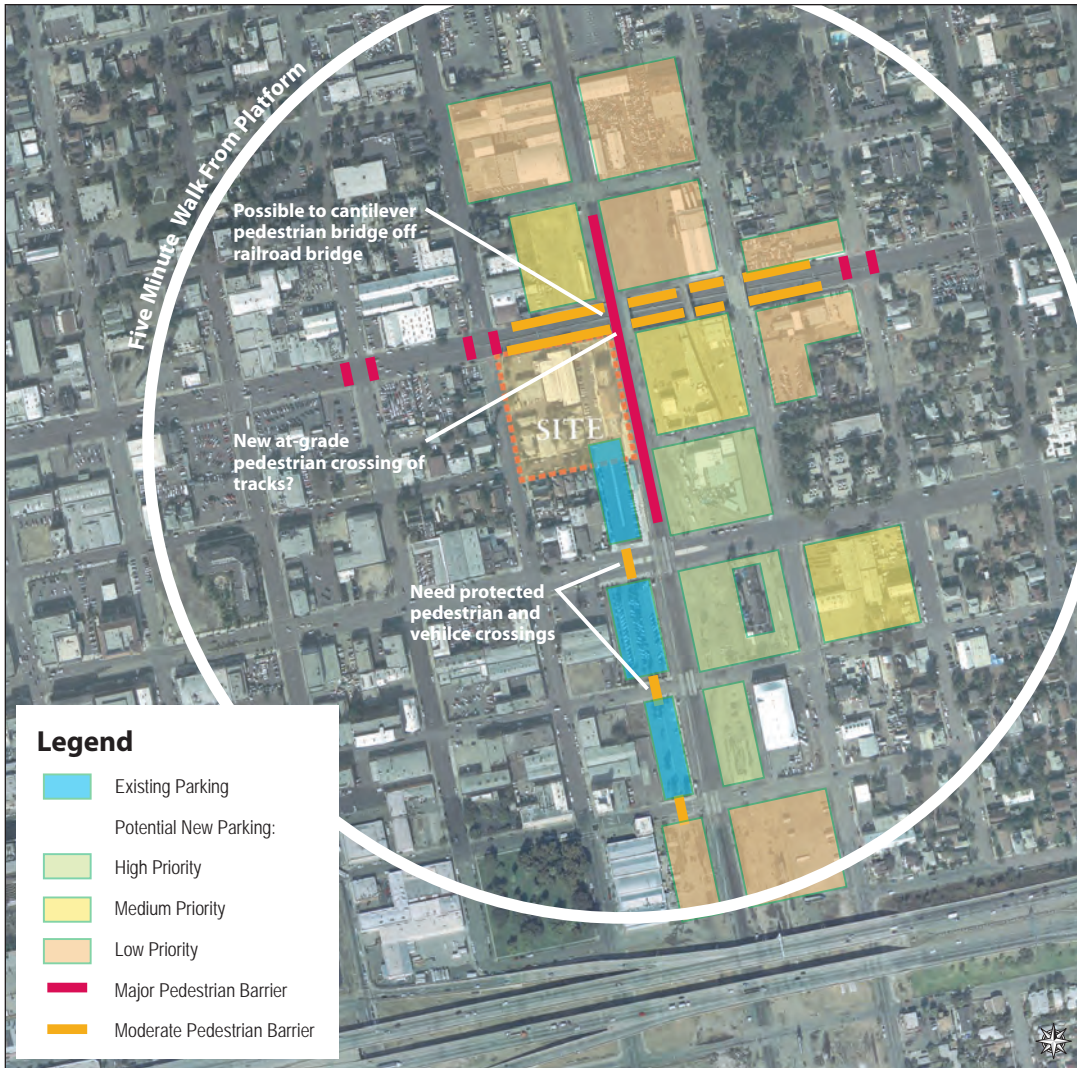
Tools for Managing Commuter Parking Supply

ACE should manage its parking lots in order to maximize ridership and ensure that commuters can find a space for all train departures. The best spaces should be reserved for the most productive uses. This means adopting the following techniques:

- **Drop-off/pick-up spaces.** The spaces closest to the platform should be reserved for motorists waiting to pick up passengers in the evening. Sufficient spaces should be reserved so that the evening pickup does not block bus circulation. A certain degree of double parking is acceptable, and the pick-up spaces should be adjusted over time.
- **Time of day restrictions.** In order to ensure access to all trains, particularly the midday train, some spaces should be set aside that do not allow parking before 8:30 AM. ACE should set aside sufficient spaces to encourage ridership on its 9:30 AM departure, but not so many as to reduce total system ridership.
- **Carpool spaces.** ACE may wish to reward passengers who drive together to the station by setting aside close-in spaces for carpools. Carpool programs require advance registration and monitoring so that they are not abused.
- **Pricing.** When ACE's general commuter lots fill, it should use pricing as a tool to balance supply and demand. The aim with pricing is to set the fee just right – not too high, not too low – so that one empty space is generally available when the last morning train leaves. Prices need to be adjusted over time to keep supply and demand in balance, and different stations will have different price levels. Stations with lots that do not fill should retain free parking. Paying for parking should be made as easy as possible, typically by using pay station devices that accept credit cards and debit cards, and by selling daily, monthly and annual parking passes.
- **Reserved.** If the politics of charging for all parking spaces are too difficult, ACE can set aside a limited number of its best spaces for paid reserved parking. Passengers should be able to book reserved spaces by the day, month or year. Some rail systems allow passengers to reserve spaces online and print their own permit at home with the license plate number and a unique barcode for enforcement purposes.

Authority

As a transit district, the Rail Commission has broad authority under California Vehicle Code Section 21113(a) to manage its parking, including issuing citations and towing vehicles for non-compliance. The Rail Commission may also contract with the City of Stockton to enforce the parking rules on its property.



Design and Siting Recommendations

For siting parking lots, perceived distance is more important than actual distance. Commuters will walk significant distances if the walk is direct and pleasant - easily up to a quarter mile -- and especially if they can see their destination. Pedestrians have little tolerance for being asked to walk out of direction, away from their direct "desire line." Transit users' anxiety will be greatly reduced if they can see the platform and know whether or not they should rush to catch their train.

For these reasons, the best potential parking lots are south of the station along both sides of the tracks. These areas provide clear sightlines to the platform and station building. Pedestrian crossings of the tracks are available at Weber and Main. Pedestrian access could be greatly improved by upgrading the sidewalks along Weber and Main, particularly at the tracks themselves and, more importantly, providing protected pedestrian crossings along former Sacramento Street, just west of the tracks.

If necessary, parking can be provided as far south as the freeway overpass, but the farther the distance, the greater the perception of personal security problems.

Above: Diagram illustrating priority rankings for potential parking lots in the vicinity of the Cabral Station.

The highest priority areas for new parking development should be the parcels east of the tracks, between Channel and Market.

ACE should also work with the City of Stockton to explore whether any on-street parking may be used for ACE commuters. On-street parking is the most efficient form of parking, taking up half the land area per space, since there is no need for added drive aisles or wasted corner spaces. Given the width of the streets in the area and the low intensity of uses, all day unrestricted parking could be provided on several streets, with sufficient time-limited spaces to ensure easy access to other uses in the vicinity.

The parcels north of Miner should be a lower priority for acquisition for parking, since pedestrian access to them is currently poor. In the north-south direction, protected pedestrian crossings are available at Stanislaus and Airport, significantly out of direction for pedestrians heading to the station. To be safely accessible, parking lots north of Miner would likely require costly pedestrian bridges. The parcel northwest of Miner and the tracks might be cost effectively accessed by a pedestrian bridge cantilevered off the west side of the existing railroad bridge. The parcel northeast of Miner and the tracks would require a long, high, diagonal bridge with elevators on both sides. At 35' clear above the tracks and at least 160' clear span, this would be an extremely expensive structure.

The parcels east of the railroad tracks and north of Channel become more valuable if pedestrian access to the platform could be improved. One way of doing this would be to create a protected, at-grade track crossing for pedestrians. This crossing should be clear of the location where the trains stop, so that it might be accessible while the train is at the station. With a direct pedestrian crossing, the parcel northeast of Miner and the tracks becomes more valuable, since pedestrians could use the abandoned railroad bridge to cross Miner then cross the tracks to reach the station.

Another option is to provide a direct stair connection to the south side of Miner from both sides of the tracks. This is less desirable than a track crossing, since the underpass is unpleasant and would be perceived as out-of-direction.

Joint Development

The area around Cabral Station contains a mix of residential, light industrial and abandoned uses. It is in ACE's financial and ridership interest to seek to acquire the underutilized parcels around its station, particularly those that are abandoned. ACE may use its eminent domain authority to purchase parcels to expand its parking, and it may identify willing sellers of parcels that ACE can develop.

Becoming directly involved in the development of the parcels around its station is in ACE's interest. The underutilized parcels create indirect but major costs for ACE, by increasing both real and perceived personal security problems and thereby discouraging ridership. By converting the underutilized parcels to new homes, ACE can help to increase property values for its existing residential neighbors, improve the local quality of life, improve safety and security and directly increase ridership. By developing these parcels, ACE also increases the value of its own land.



Western Pacific Station Recommendations

The former Western Pacific station, located on an adjacent block bound by E. Weber Ave to the north, Union St on the east, Main St to the south, and the UP rail line to the west, is designated as "High Priority" for the Rail Commission to obtain additional parking spaces for commuters. Two design studies were completed to illustrate its potential site capacity if control of the property is transferred to the Rail Commission.

The Western Pacific station is in a badly deteriorated condition. However, it remains a signature building in the Mediterranean style that should be preserved and adaptively re-used. Both design studies assume that the building can be renovated. Use of this block will also require improvements to ensure safe passage for pedestrians traveling to and from the Cabral Station.

Option A

Option A looked at improving the site around the station with a surface parking lot and landscaping. The site could accommodate approximately 110 parking spaces. If the Western Pacific station is used as offices, it would likely create a demand for approximately 25 parking spaces. The site could also accommodate a small pavilion, open stand, or building at its northeast corner which could provide about 900 square feet of space for a commercial use such as a restaurant.

Option B

Option B looked at integrating a 3-story parking structure on the site combined with a mixed-use office/commercial building facing Weber Avenue. This scheme could accommodate a 21,500 square foot building facing Weber lining a 3-story ramped parking structure with space for 180 cars. As the building would likely generate demand for 70 parking spaces, 110 spaces could be available for commuters.

Above, left to right: Option A proposing the renovation of the Western Pacific Station and surface parking along the UP line; Option B proposing the renovation of the Western Pacific Station, a mixed-use office/retail building along E. Weber Ave. and a 3-level garage fronting Main Street.