

CITY OF ALBANY CITY COUNCIL AGENDA STAFF REPORT

Agenda Date: December 17, 2018

Reviewed by: NA

SUBJECT: Update on Lower Codornices Creek Maintenance and Restoration

REPORT BY: Claire Griffing, Sustainability & Resilience Manager

Jeff Bond, Community Development Director

SUMMARY

Staff has been working with the City of Berkeley, UC Berkeley, and Restoration Design Group (RDG) to develop a maintenance plan for Codornices Creek. RDG has also completed 75% plans for Phase IV of the Codornices Creek Restoration Project.

STAFF RECOMMENDATION

That the Council:

- 1. Review and comment on Lower Codornices Creek Management Actions Memo
- 2. Authorize expenditure of funds for creek monitoring and maintenance in the Codornices Creek Fund (#71236019) per the Memorandum of Understanding
- 3. Review and comment on 75% plans for Phase IV of the Codornices Creek Restoration Project

BACKGROUND

The planning and implementation of the restoration of Codornices Creek between Kains Avenue to Interstate 80 has been ongoing since the late 1990's, and involves the City of Albany, the City of Berkeley, and the University of California. Lower Codornices Creek forms the boundary between the cities of Berkeley and Albany, and on the Albany side, the primary owner is the University of California (University Village). The original master plan was prepared in 2001 and the City Council approved a Mitigated Negative Declaration in 2004, pursuant to the requirements of the California Environmental Quality Act. In addition, in 2004, the City entered into a three-way Memorandum of Understanding with the University of California and the City of Berkeley in 2004 for maintenance and restoration of the segment of creek that runs from the railroad tracks on the west to San Pablo Avenue on the east.

Three phases of the restoration project, from 8th Street downstream to the railroad tracks, have been completed to date. As a result of earlier creek projects, native riparian habitats have been

created. In addition, bicycle-pedestrian shared use trail has been constructed that connects to local and regional bicycle trail networks, and provides recreational, educational and stewardship opportunities, as well as restoring habitat to native Steelhead Trout, and improving community resilience by reducing exposure to flooding at UC Village student housing. In 2010, the first phases of restoration of Codornices Creek won the ABAG Growing Smarter Together Award in the category of "Protecting and Preserving the Environment" for advancing smart or "focused" growth in the Bay Area. In May 2017, the City Council received a briefing on the status of Creek and Albany Hill projects.

Future Phases 4 and 5 of the creek project address the remaining unrestored sections of the creek, from San Pablo Avenue to 8th Street. The current Capital Improvement Plan approved by the City Council in March 2018 included a partially funded project for continued restoration of Codornices Creek. The City has been working with Restoration Design Group (RDG) to design Phase 4 of the project, which includes a trail connection from 8th Street to 10th Street and vegetation improvements. The conceptual plan for Phase 5, between San Pablo and 10th Street, includes removal of a culvert underneath 10th Street, construction of a pedestrian bridge to maintain pedestrian and bicycle access from Albany to Berkeley on 10th Street, and a full ecological creek restoration project in the creek channel. Phase 5 is a future project, likely to be funded by grants.

DISCUSSION

Codornices Creek Maintenance Activities

Beginning in early 2018, staff from the cities of Albany and Berkeley, along with UC Berkeley, have been meeting on a regular basis and reviewing the Memorandum of Understanding (MOU) for lower Codornices Creek maintenance. Some issues, particularly the presence encampments and associated debris along the creek, have surfaced since the MOU was negotiated, and require a modified approach to creek maintenance. After a site walk by all three agencies on August 22nd, Restoration Design Group (RDG) developed the attached vegetation management memo, which will be used to update management agreements for Codornices Creek. The agreements will articulate which agency handles various maintenance actions in different reaches of the creek between San Pablo Avenue and Eastshore Highway. This includes policing, trash and debris removal, trail maintenance, graffiti abatement, removal of invasive vegetation and other actions.

The vegetation management plan proposes removing invasive plants by hand, pruning vegetation to approximately 6' high, and preserving higher vegetation to continue to shade the creek channel. The intent of pruning is to create sightlines and reduce the creeks attraction for illegal encampments while preserving the shading and habitat functions of the native vegetation. Tree and shrub pruning for improved sightlines and public safety - will require review and approval by the Regional Water Quality Control Board, California Department of Fish and Wildlife, and possibly the Army Corps of Engineers.

The City and its partners will meet with staff from the regulatory agencies on site in early 2019 to discuss management of the creek vegetation, determine what is an acceptable amount of pruning, and identify any new permits or permit amendments that may be necessary. The City will work with RDG to develop the necessary documentation for any required permits, and RDG will assist with necessary permit applications. City and UC staff will identify responsible parties and frequency for each management recommendation by location. The three agencies plan to hold the 2019 annual maintenance meeting on January 10th to discuss the maintenance plan for the year and will hold bi-monthly meetings after that.

Escrow Fund Update

Per the MOU, \$452,000 was being held by an escrow company set aside for monitoring, trail and landscape maintenance, culverts, and bridge maintenance in Berkeley and Albany. A transfer of maintenance funds from the escrow account to Albany was completed in November of this year. This funding will cover the cost of the RDG contract and future maintenance activities. UC Berkeley and the City of Berkeley will invoice the City of Albany for maintenance performed in line with the agreement, to be paid with these funds. As a procedural step, the City Council is requested to approve the appropriation of the funds pursuant to the terms of the agreement.

Codornices Creek Restoration Project: Phase 4

City staff have been working with Restoration Design Group to develop plans for Phase 4 of the Codornices Creek Restoration Project (Project), which includes a bicycle and pedestrian shared-use path from 8th-10th Streets, a crossing at 8th street to link to the Phase 3 project, and minor vegetation management. Staff completed a site walk with RDG in June, followed by a kick-off meeting with stakeholders that are currently active in the project area, including an adjacent property owner, Ecocity Builders, Friends of Five Creeks, Albany Little League, and UC Village to generate. Out of these discussions, a concept plan was developed. A 60% plan set was reviewed by key environmental, transportation, and public works staff at the cities of Albany and Berkeley as well as UC over the past few months. A second round of input was also solicited from stakeholders that are currently active in the project area at a meeting in November, and an additional site walk has been scheduled to discuss the best way for the trail to pass to the south the Little League fields. The attached 75% plans reflect this stakeholder input.

The plans include a raised crosswalk at 8th Street in the City of Berkeley to connect to the existing trail to the west. The 10-foot ADA compliant trail will continue east along the existing dirt trail, along the UC Village staff parking lot, and to the south of the Little League fields. Existing fencing along the creek will be replaced with a split-rail fence to improve sightlines, and an interpretive feature will be placed near the Little League fields. The plans retain existing trees where possible.

RDG will complete 90% plans in late January, and 100% plans in April, along with specifications and estimates. The Traffic & Safety Commission is scheduled to review the plans at their December 18, 2018 meeting.

SUSTAINABILITY IMPACT

Codornices Creek is a perennial stream that flows from the hills east of San Francisco Bay. The approximately 1.5 square mile watershed extends from the headwaters in the Berkeley Hills and drains to the San Francisco Bay. It is one of the most open creeks in this area of San Francisco Bay and represents an important fish run along the Bay. Maintenance activities are necessary to protect the creek and its fish habitat.

FINANCIAL IMPACT

Construction costs for Phase 4 are currently estimated at just under \$950,000. This Project is partially funded in the current approved CIP through Measure R open space funds. Update to project funding will be incorporated into a forthcoming update to the CIP expected in spring 2019.

Attachments

- 1. Lower Codornices Creek Management Actions Memo
- 2. Lower Codornices Creek Parcel Map
- 3. 75% plans for Phase IV of the Codornices Creek Restoration Project



LOWER CODORNICES CREEK MANAGEMENT ACTIONS

October 11, 2018

On August 22, 2018, representatives of the cities of Albany and Berkeley and the University of California, Berkeley attended a creek walk to discuss management activities for Lower Codornices Creek and its trail (San Pablo Avenue to Union Pacific Railroad). Meeting notes dated September 10, 2018 documented the discussions and decisions of the group.

This memo intends to further the discussion of management actions between the cities, university, and the permitting agencies who will need to approve some of the proposed vegetation management actions.

Table 1 (below) lists the management actions agreed to by the cities and university. As part of the next round of decisions, the group should assign responsibilities and confirm or modify the frequencies recommended in the table.

Table I. List of Management Actions

RESTORATION DESIGN GROUP, INC

BERKELEY 2332 5th Street Suite C Berkeley California 94710 510.644.2798

MOUNT SHASTA 1808 Deetz Road Mount Shasta California 96067

MEDFORD 1495 S Oakdale Avenue Medford Oregon 97501 541.238.2812

 $Restoration Design G\,roup.com$

	Frequency	Permit Required?
UPRR to 5th Street (Phase I)		•
Prune limbs where necessary up to 6' feet to improve and maintain sightlines from the trail into the creek	Annually	Yes
Remove climbing vines (bindweed) by hand	Biannually	No
Remove other invasive vegetation by hand	Biannually	No
Trash removal as necessary	Weekly	No
Debris removal as necessary	Annually	No
Mow along trail to maintain a 2' clearance	Monthly	No
Police the area for illegal encampments	Weekly	No
Maintain decomposed granite trail surfacing as necessary	Inspect monthly, repair as necessary	No
Close off the fence and gate areas attracting illegal encampments	Once	No
5th Street to 6th Street (Phase II)		
Prune limbs on the north bank where necessary up to 6' feet to improve and maintain sightlines from the trail into the creek	Annually	Yes
Remove climbing vines (bindweed) by hand	Biannually	No
Remove other invasive vegetation by hand	Biannually	No
Trash removal as necessary	Weekly	No
Debris removal as necessary	Annually	No

Graffiti abatement on interpretive signs	As necessary	No
Mow along trail to maintain a 2' clearance	Monthly	No
Police the area for illegal encampments	Weekly	No
Maintain trail pavement as necessary	Inspect monthly, repair as necessary	No
6th Street to 8th Street (Phase III)		
Prune limbs on the south bank up to 6' feet to establish and maintain sightlines from the trail into the creek	Annually	Yes
Leave coyote bush (<i>Baccharis sp.</i>) in the floodplain unpruned	Annually	No
Remove invasive vegetation by hand	Biannually	No
Trash removal as necessary	Weekly	No
Debris removal as necessary	Annually	No
Graffiti abatement on wall and trail	As necessary	No
Mow along trail to maintain a 2' clearance	Monthly	No
Police the area for illegal encampments	Weekly	No
Repair and maintain permeable trail pavement	Inspect monthly, repair as necessary	No
8th Street to 10th Street		
Prune limbs on the north bank up to 6' feet to establish and maintain sightlines from the trail into the creek	Annually	Yes
Remove invasive vegetation by hand	Biannually	No
Trash removal as necessary	Weekly	No
Debris removal as necessary	Annually	No
Graffiti abatement on wall and trail	As necessary	No
Mow along trail to maintain a 2' clearance	Monthly	No
Police the area for illegal encampments	Weekly	No
Repair and maintain trail pavement	Inspect monthly, repair as necessary	No
10th Street to San Pablo Avenue		
Prune limbs on the north bank (outside of fence) up to 8' feet	Annually	Yes
Remove invasive vegetation by hand	Biannually	No
Trash removal as necessary	Weekly	No
Debris removal as necessary	Annually	No
Police the area for illegal encampments	Weekly	No
Maintain trail pavement as necessary	Inspect monthly, repair as necessary	No

Vegetation Management Actions

Most of the management actions do not require further explanation or approval from permitting agencies. However, modifying the vegetation within the creek and riparian zones require additional detail both for the management group and for the permitting agencies.

The intent of managing the vegetation is two-fold. First, the removal of invasive species will improve habitat conditions for native plants and wildlife using the stream channel and riparian area. Second, Lower Codornices Creek attracts illegal encampments, associated garbage, and other creek impacts. These encampments tend to make use of vegetation screens and other types of refuge within the creek. Providing sight lines into the creek zone from the adjacent trail and ballfields will hopefully reduce the attractiveness of the creek to illegal encampments and reduce the related impacts and required policing.

Typically, as the creek vegetation matures, it will naturally create better sight lines. For the first ten years after a creek restoration project is complete, the vegetation along tends to be dominated by shrubs and dense willows. As it ages, these willows increase in height, other trees start to dominate the site, and the taller trees shade the lower canopy, preventing dense vegetation and improving site lines. Phase I (5th Street to the UPRR) is about 14 years old now and the interior canopy is 20 feet tall. Sightlines have improved in the past five years. By contrast, Phase III (6th to 8th Street) is only about seven years old and is dominated by dense willows preventing any sightlines to the creek or across the creek channel.

Even in the areas with older trees and less lower canopy vegetation, leaves and branches growing along the edge of the riparian area between the creek and trail (where sunlight is most abundant) will need to be pruned to maintain sightlines.

Removal of Invasive Plants

Removal of non-native vegetation by hand does not require agency approval and may be required or strongly encouraged by the terms of the permits that cover the various restoration projects along this reach of Codornices Creek. Bindweed, blackberry, broom, ivy, fennel, and other invasive plants impair visibility and should be removed immediately and repeatedly.

Because it does not require agency approval (if done by hand), the responsible parties can immediately begin removing invasive plants, particularly those that block visibility into and through the riparian area. The parties should consult with RDG, a botanist, or other creek specialist to determine the best time and method to remove invasive plants. Conspicuous invasive plants that block visibility in this reach include bindweed, English and Algerian ivy, Himalayan blackberry, broom, and fennel.

Bindweed



Bindweed is a thin, climbing vine with arrowhead shaped leaves and white trumpet-shaped flowers that wraps itself around other vegetation, fences, and bridges. These delicate looking plants have large, durable root systems and will require multiple attempts to remove completely.

The most effective technique for removing bindweed by hand is to prune it to the ground repeatedly until its roots have exhausted their stored supply of energy.

Broom



Broom is an upright shrub with round stems, small leaves in groups of three, and small yellow flowers. Scotch and French broom both grow in disturbed areas in the East Bay.

Broom should be removed at the roots with a weed wrench. While it will remove the shrub, it will also disturb the soil and disperse broom seeds so follow up weeding will be necessary until the broom is gone and the area is occupied by other plants. Alternately, broom may be removed by saw-cutting the shrub in late summer, mulch the site with 4 inches of sterile mulch, and return to the site every summer to remove new seedlings. Place the removed shrub and plant material on a tarp and dispose of offsite.

Ivy

Several types of ivy grow along Lower Codornices Creek. Removal techniques are similar across species. Remove ivy roots, remove the ivy from the site for disposal and mulch (or sheet mulch with cardboard) the area to prevent its return. Like any invasive plant, it will require follow up to remove new seedlings and sprouts until the stored energy in the roots is spent.

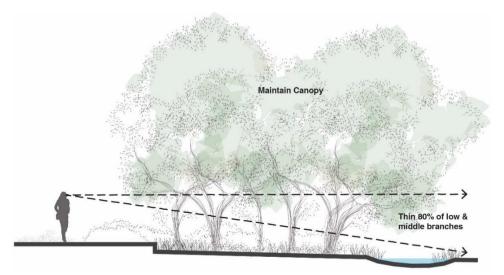
Fennel

Fennel is a large perennial herb that blooms in the summer. Root systems can grow to ten feet in depth and seeds can remain in the soil for years. It is less a concern for visibility but prevents native plants from establishing themselves along the creek.

Depending on the size of the plant, remove by hand or with trowels, hoes, or shovels. Large plants may require picks to remove the deep taproot. Remove the root to 3" to 6" in depth. Removal is easiest when the soil is wet. Complete removal may take up to four years.

Pruning

The intent of pruning is to create sightlines and reduce the creeks attraction for illegal encampments while preserving the shading and habitat functions of the native vegetation. Pruning limbs and leaves between the trail and creek requires agency approval and sensitivity to the habitat impacts it could cause if done improperly.



Pruning should preserve upper canopy shade but allow for reasonable sight lines from the trail into and across the creek channel.

Other than at the culverts, the vegetation in the creek channel from San Pablo Avenue to the UPRR creates a nearly contiguous canopy of shade. Along much of the channel, the canopy is naturally 10′ and higher above the creek channel.

What prevents visibility into the channel is often just the vegetation on the edge of the riparian zone between the trail and creek.



The photo on the left shows low-hanging willow branches upstream of 6th Street creating a screen between the trail and creek. Two small illegal encampments were just behind the vegetation when the photo was taken. The yellow measuring tape is 6 feet tall. The pruning of the lower limbs up to about 5 feet would allow for more visibility into the creek channel similar to the creek immediately downstream of 6th Street (see photo on right).

UPRR to 5th Street

Figure 1. Parcel Map shows Lower Codornices Creek. 5th Street to the UPRR (also known as Phase I) is the lowest reach. This reach was restored in 2004 and the mature vegetation has begun to shade out lower canopy vegetation. Vegetation along the edges of the riparian area and fences and dense willow trunks still interrupt sightlines from the adjacent playing fields. Several persistent illegal encampments exist downstream of the 4th Street bridge, in part because the trail does not extend below the bridge. Additionally, as show in the photo below, some encampments are extremely visible from the adjacent ballfields and more frequent policing rather than improved sightlines may be the necessary approach.

Vegetation Management: Remove broom, bindweed, and other invasive plants by hand. Prune vegetation along north and south edges of the riparian zone to approximately 6' high.



5th Street to 6th Street

5th Street to 6th Street (Phase II) was restored in 2005. Like Phase I immediately downstream, the upper canopy is beginning to shade out the lower canopy creating natural sightlines. However, leaves, branches, and bindweed along the edge still create a barrier to visibility.

Vegetation Management: Remove bindweed and other invasive plants by hand. Prune vegetation along north edge of the riparian zone (along trail) to approximately 6' high.

6th Street to 8th Street

6th Street to 8th Street (Phase III) is only about seven years old. The vegetation is still dominated by shrubs and dense willows. There are almost no sightlines into or across the channel. The vegetation shelters two to three small illegal encampments. Pruning will be most significant in this reach.

Vegetation Management: Remove fennel and other invasive plants by hand. Prune vegetation along south edge of the riparian zone (along trail) to approximately 6' high to provide sightline into and across the channel. Preserve higher vegetation to continue to shade the creek channel.

8th Street to 10th Street

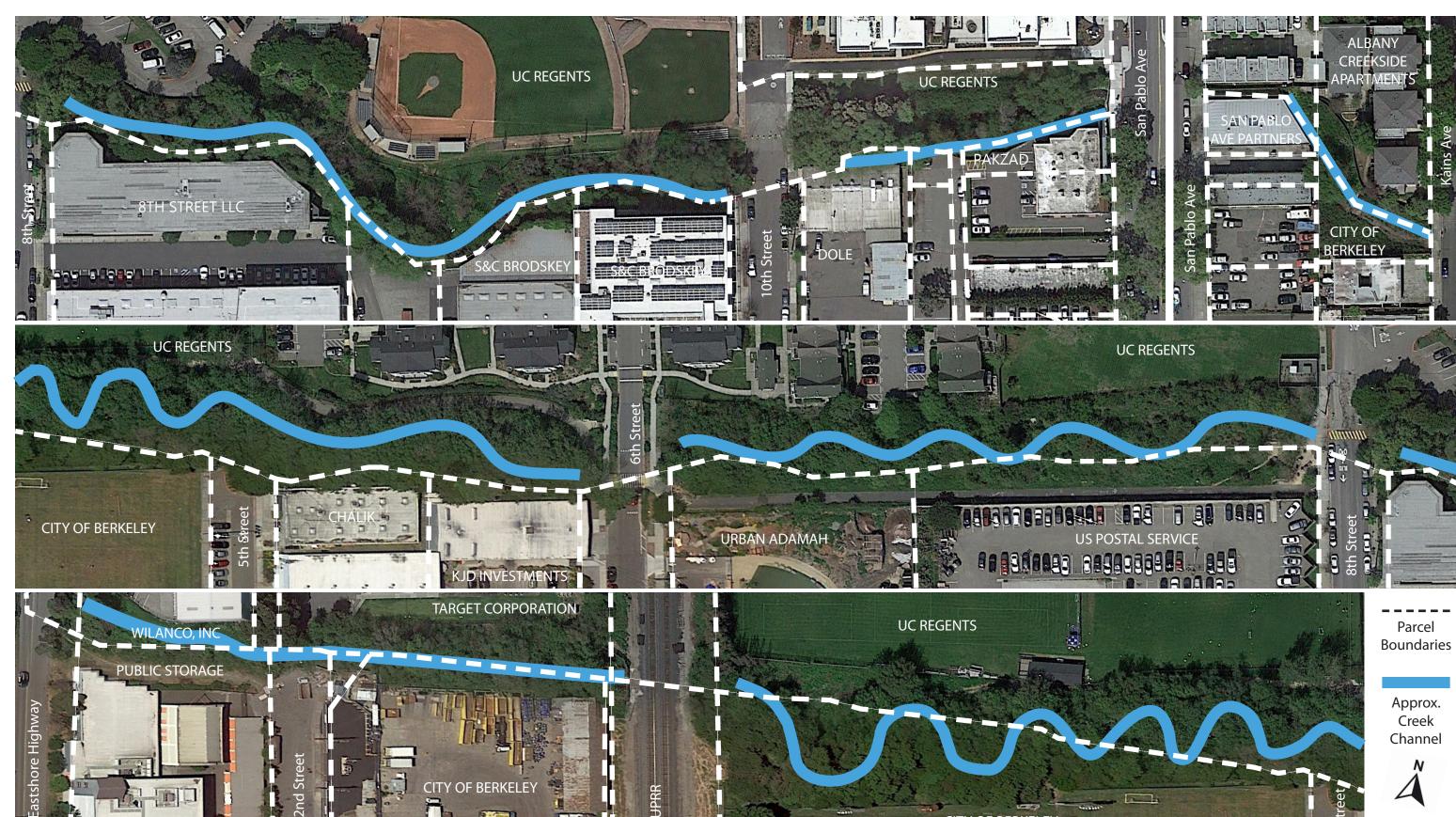
8th Street to 10th Street was restored over twenty years ago. The upper canopy is tall and mature. Dappled sunlight near the creek allows for some lower canopy vegetation that screens the creek from the planned trail along the ballfields. Recent illegal encampments have cut down some vegetation already.

Vegetation Management: Remove invasive plants by hand. Prune vegetation along north edge of the riparian zone and down to creek channel to approximately 6' high to provide sightline into and across the channel. Preserve higher vegetation to continue to shade the creek channel.

10th Street to San Pablo Avenue

The reach between San Pablo and 10th Street is slated for a restoration project sometime in the future. It is fenced on four sides and has not attracted illegal encampments in the way that other reaches downstream have.

Vegetation Management: Pruning should be focused on the mostly invasive vegetation (ivy, Himalayan blackberry, and acacia) on the north side of the channel. Vegetation should be pruned back to the fence and up to approximately 8 feet in height (in line with the fence).



Creek Channel



50 FEET

DRAFT Parcel Map 23 August 2018



CITY OF BERKELEY

GENERAL PROJECT NOTES

- 1. THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 2. THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE
- 3. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL OF THE WORK PERFORMED BY HIS SUBCONTRACTORS, WITHOUT EXCEPTION.
- 4. THE CONTRACTOR SHALL IDENTIFY A RESPONSIBLE CONTACT PERSON, WHO IS AN EMPLOYEE OF THE CONTRACTOR, AND A 24-HOUR TELEPHONE NUMBER TO CALL TO RESOLVE PROBLEMS WITH NOISE, DUST OR OTHER CONSTRUCTION-RELATED ISSUES.
- 5. THE CONTRACTOR SHALL BE REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE RIGHTS-OF-WAY AND EASEMENTS OBTAINED FOR THIS PROJECT UNLESS OTHERWISE SHOWN. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATIONS, AND STOCKPILED NEW MATERIAL
- 6. THE CONTRACTOR SHALL PROVIDE PROTECTION DEVICES INCLUDING BARRICADES, FENCING, WARNING SIGNS, LIGHTS, FLAGGERS OR OTHER ITEMS NECESSARY TO ENSURE PUBLIC SAFETY WITHIN THE PROJECT SITE. THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.
- 7. CONTRACTOR SHALL EXERCISE DUE CAUTION DURING CONSTRUCTION TO PROTECT ANY EXISTING LANDSCAPING, FIXTURES, EQUIPMENT, CONCRETE SIDEWALK, CONCRETE DRIVEWAY, CONCRETE CURB & GUTTER, AND AC PAVING TO REMAIN. ANY DAMAGE RESULTING FROM CONTRACTOR OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE CITY'S REPRESENTATIVE, AT NO ADDITIONAL COST TO THE CITY.
- CONTRACTOR SHALL CONFORM TO THE CITY OF ALBANY MONUMENT PRESERVATION POLICY AND PRESERVE ALL SURVEY MARKERS AND MONUMENTATION. PRIOR TO STARTING ANY WORK, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER OF ANY EXISTING FEDERAL, STATE, COUNTY, AND PRIVATE LAND SURVEY CONTROL POINTS OR MONUMENTS THAT MAY BE DISTURBED BY THE WORK FOR THIS PROJECT.
- CONSTRUCTION ACTIVITY SHALL BE RESTRICTED TO THE HOURS OF 8:00 AM TO 5:00 PM, MONDAY THROUGH FRIDAY UNLESS OTHERWISE APPROVED IN WRITING BY THE ENGINEER.
- 10. DUST SHALL BE CONTROLLED AND ADJOINING STREET AND PRIVATE DRIVES SHALL BE KEPT CLEAN OF PROJECT DIRT, MUD, MATERIALS AND DEBRIS, TO THE SATISFACTION OF
- 11. THE CONTRACTOR SHALL COMPLY WITH ALAMEDA COUNTY CLEANWATER PROGRAM AND CITY OF ALBANY NPDES PERMIT REQUIREMENTS. WATER SHALL NOT BE DISCHARGED FROM THE CONSTRUCTION SITE TO THE STORM DRAINAGE SYSTEM UNLESS HE/SHE OBTAINS APPROVAL FROM THE CITY ENGINEER AS SET FORTH IN THE CLEANWATER PROGRAM. THE WEBSITE IS REFERENCED IN THE SPECIAL PROVISIONS.
- 12. THIS PROJECT INVOLVES WORK IN PUBLIC AREAS AND NEAR PRIVATE PROPERTY. THE CONTRACTOR SHALL SPECIFICALLY INSTRUCT ALL HIS/HER WORKERS TO EXERCISE GOOD PUBLIC RELATIONS DURING THE WORK, INCLUDING BEING COURTEOUS, AVOIDING THE USE OF SWEAR WORDS. AND MINIMIZING DAMAGE TO EXISTING IMPROVEMENTS.
- 13. CONTRACTOR SHALL SWEEP AND CLEAN THE CONSTRUCTION SITE DAILY BEFORE THE END OF EACH WORKING DAY.
- 14. CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES IN PLACE EXCEPT AS SHOWN HEREIN. DURING SAWCUTTING & CURB REMOVAL PROTECT RESIDENTIAL WATER METERS AND SEWER CLEANOUT BOXES AND RIMS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY EXISTING UTILITY THAT IS DAMAGED DURING THE COURSE OF THE WORK & SHALL REPAIR OR REPLACE THE DAMAGED UTILITY TO THE SATISFACTION OF THE UTILITY OWNER.

LAYOUT NOTES

- HORIZONTAL AND VERTICAL DIMENSIONS PROVIDED ON THE DRAWINGS ARE APPROXIMATE. FIELD MEASUREMENTS MAY VARY FROM THOSE ON THE DRAWINGS. ADJUSTMENTS TO LINE AND GRADE MAY BE MADE BY THE CITY'S REPRESENTATIVE DURING CONSTRUCTION. PAYMENT WILL BE BASED ON QUANTITIES INSTALLED.
- 2. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO, IS INSUFFICIENTLY OR INCORRECTLY DETAILED OR EXPLAINED ON THESE PLANS, CONTRACTOR SHALL CONTACT THE CITY'S REPRESENTATIVE FOR FURTHER EXPLANATIONS AS MAY BE NECESSARY TO SUFFICIENTLY UNDERSTAND THE INTENT OF THE DESIGN PLANS.
- 3. THE CONTRACTOR SHALL NOTIFY THE CITY'S REPRESENTATIVE IMMEDIATELY, UPON DISCOVERY OF ANY POTENTIAL FIELD CONFLICTS.



USA TOLL FREE 811

APPROVE) BY:
City of Albany	
Ву:	Date:
City of Berkeley	
By:	Date:
University of California	
By:	Date:

SURFACE RESTORATION NOTES

- ALL PAVEMENT CUTS SHALL BE SAWCUT, SMOOTH AND VERTICAL. THE PAVEMENT AREA BEING REMOVED SHALL BE RECTANGULAR, UNLESS SHOWN OTHERWISE ON PLANS.
- CONTRACTOR SHALL RESTORE ALL EXISTING PRIVATE AND PUBLIC IMPROVEMENTS TO THEIR EXISTING CONDITION OR BETTER. THIS INCLUDES, BUT IS NOT LIMITED TO ALL LANDSCAPING. IRRIGATION, DRIVEWAYS, AC PAVING, CONCRETE WORK AND UTILITIES UNLESS NOTED OR DIRECTED OTHERWISE BY THE CITY'S REPRESENTATIVE.
- RIMS OF EXISTING UTILITY BOXES AND OTHER RELATED APPURTENANCES THAT ARE TO REMAIN SHALL BE PROTECTED DURING CONSTRUCTION AND SHALL BE ADJUSTED TO FINISH GRADES TO PROVIDE FOR SMOOTH PATH OF TRAVEL. ANY DAMAGE RESULTING TO EXISTING UTILITY FACILITIES FROM CONTRACTOR OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE APPROPRIATE AGENCY AT NO ADDITIONAL COST TO THE CITY OR UTILITY OWNER.
- 4. ALL MANHOLES, VALVES AND MONUMENT FRAMES SHALL BE SET TO FINISH GRADE AFTER PAVING TO PROVIDE FOR SMOOTH PATH OF TRAVEL.
- CONTRACTOR SHALL PROVIDE SMOOTH CONFORMS TO EXISTING A.C. PAVEMENT.

APPROVAL/COORDINATION NOTES

- 1. THE CONTRACTOR SHALL CONTACT "UNDERGROUND SERVICE ALERT" BY DIALING "811" AT LEAST 2 DAYS PRIOR TO CONSTRUCTION AND 48 HOURS PRIOR TO ANY EXCAVATION.
- 2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS NECESSARY TO PERFORM THE WORK SHOWN IN THESE PLANS FROM THE APPROPRIATE AGENCIES, PRIOR TO PERFORMING ANY WORK.
- 3. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL SOUND CONTROL AND NOISE LEVEL RULES, REGULATION AND ORDINANCES WHICH APPLY TO ANY WORK PERFORMED UNDER THE CONTRACT. EACH INTERNAL COMBUSTION ENGINE USED ON THE PROJECT SHALL BE EQUIPPED WITH A MUFFLER RECOMMENDED BY THE MANUFACTURER. NO INTERNAL COMBUSTION ENGINE SHALL BE OPERATED ON THE PROJECT WITHOUT SAID MUFFLER. NOISE LEVELS SHALL BE KEPT TO THE SATISFACTION OF THE CITY'S REPRESENTATIVE.
- 4. ALL WORK SHALL CONFORM TO THE CITY OF ALBANY STANDARD SPECIFICATIONS DATED DEC 2010, THE CITY OF ALBANY STANDARD DETAILS (2015), CITY OF BERKELEY STANDARD DETAILS, AND THE CALTRANS STANDARD SPECIFICATIONS (CURRENT EDITION) WHEN REFERENCED, AND THE CURRENT CONTRACT SPECIAL PROVISIONS.
- COORDINATE ALL WORK INVOLVING UTILITIES WITH THE APPROPRIATE UTILITY COMPANY.
- 6. PROVIDE TEMPORARY SIGNS, CONES, BARRICADES AND ADVANCE WARNING SIGNS PER CALTRANS REQUIREMENTS.
- 7. CONTRACTOR SHALL EXPOSE ALL POTENTIAL UTILITY CONFLICT CROSSINGS AS WELL AS CONNECTION POINTS TO EXISTING UTILITIES. HE SHALL COORDINATE WITH THE ENGINEER TO LOCATE AND VERIFY DEPTHS. ENGINEER SHALL THEN MAKE ANY REVISIONS TO HIS DESIGN PRIOR TO CONSTRUCTION. ALL REVISIONS MUST BE APPROVED BY THE CITY OF ALBANY ENGINEER.
- 8. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL PRIOR TO STARTING ANY WORK IN THE PUBLIC STREETS.
- MAINTAIN ONE ELEVEN-FOOT TRAFFIC LANE IN EACH DIRECTION IN PUBLIC STREETS AT ALL TIMES DURING WORKING HOURS OR PROVIDE FLAGGERS PER CALTRANS REQUIREMENTS AND AS REQUIRED BY CONTRACTORS TRAFFIC CONTROL PLAN.
- 10. NO OPEN EXCAVATION SHALL BE LEFT UNSUPERVISED AT ANY TIME.
- 11. PRUNING OF TREE ROOTS & BRANCHES SHALL BE APPROVED IN ADVANCE AS DIRECTED BY THE CITY.
- 12. CONTRACTOR SHALL USE MATERIALS AS SPECIFIED ON PLANS AND/OR SPECIAL PROVISIONS. SHOULD THE CONTRACTOR CHOOSE TO USE MATERIALS DIFFERENT THAN THOSE SPECIFIED, HE/SHE SHALL SUBMIT MATERIAL MANUFACTURER INFORMATION TO THE CITY'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION. CONTRACTOR SHALL CONFORM TO CITY'S REPRESENTATIVE'S RECOMMENDATIONS.

TREE PROTECTION NOTES

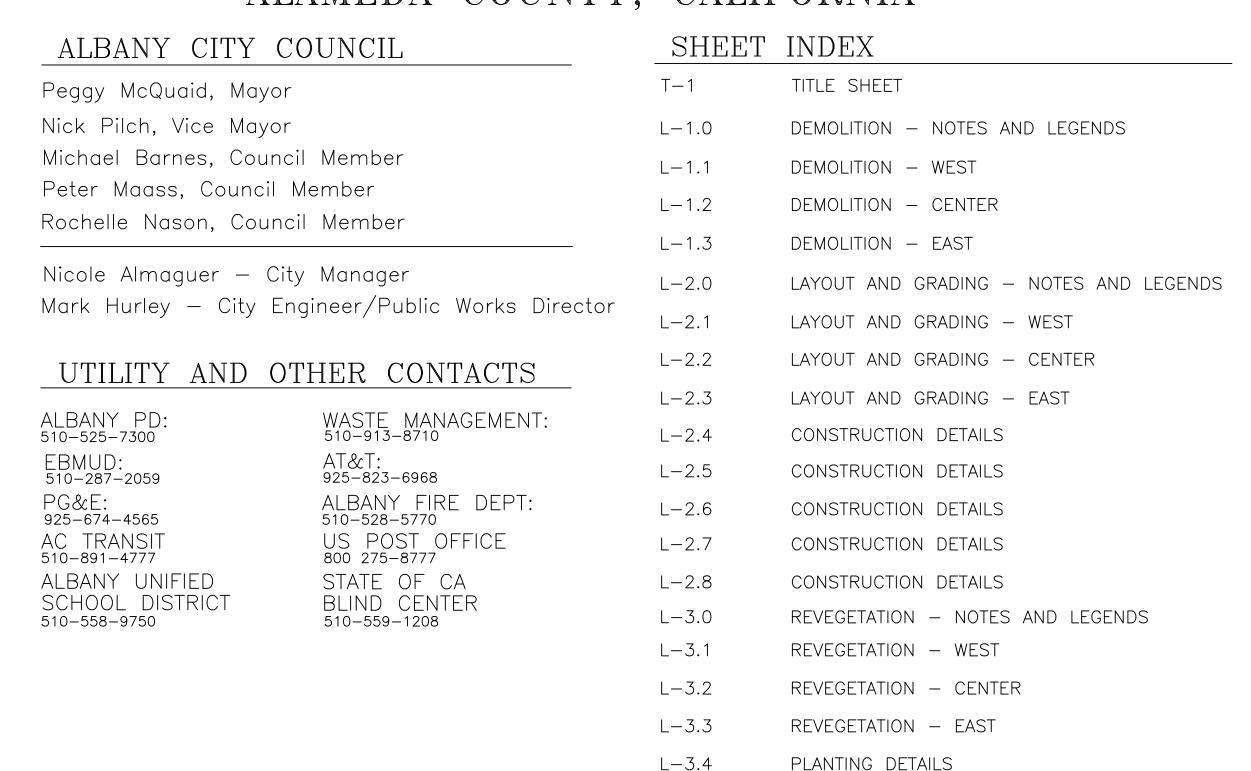
- 1. ARBORIST: IF TREE ROOTS ARE TO BE ENCOUNTERED, CONTRACTOR SHALL CONTACT THE CITY'S ARBORIST FOR "ON-CALL" CONSULTATION DURING CONSTRUCTION. NO EXCAVATION SHALL BE PERMITTED ON-SITE UNTIL THE CITY'S ARBORIST HAS APPROVED THE PROPOSED STAGING AREA(S). NO TREE PRUNING, REMOVAL OR ROOT-CUTTING SHALL OCCUR WITHOUT THE CITY ARBORISTS DIRECTION, RECOMMENDATIONS OR APPROVAL.
- 2. TRENCHING: ALL TRENCHING WITHIN THE DRIP LINE OF EXISTING TREES SHALL BE BY HAND WITH CARE TAKEN NOT TO DAMAGE ROOTS OVER 2" DIAMETER.
- 3. ADVANCE MARKING: CITY'S ARBORIST SHALL MARK LIMITS OF AREA WITHIN DRIP LINES IN ADVANCE PRIOR TO EXCAVATING.
- 4. PRUNING: TREES SHALL BE PRUNED ONLY AS RECOMMENDED BY CITY ARBORIST.
- CONSTRUCTION OPERATIONS: NO CONSTRUCTION OPERATIONS SHALL BE CARRIED ON WITHIN THE DRIP LINE AREA OF ANY TREE DESIGNATED TO BE SAVED EXCEPT AS AUTHORIZED BY THE CITY ARBORIST.
- 6. STORAGE: THE AREA UNDER THE DRIP LINE OF THE TREE SHALL BE KEPT CLEAN. NO CONSTRUCTION MATERIALS NOR CHEMICAL SOLVENTS SHALL BE STORED OR DUMPED UNDER A TREE.
- 7. TREE DAMAGE: ANY DAMAGE TO EXISTING TREE CROWNS OR ROOT SYSTEMS SHALL BE REPAIRED IMMEDIATELY BY AN APPROVED TREE SURGEON UNDER THE DIRECTION OF THE CITY'S ARBORIST.

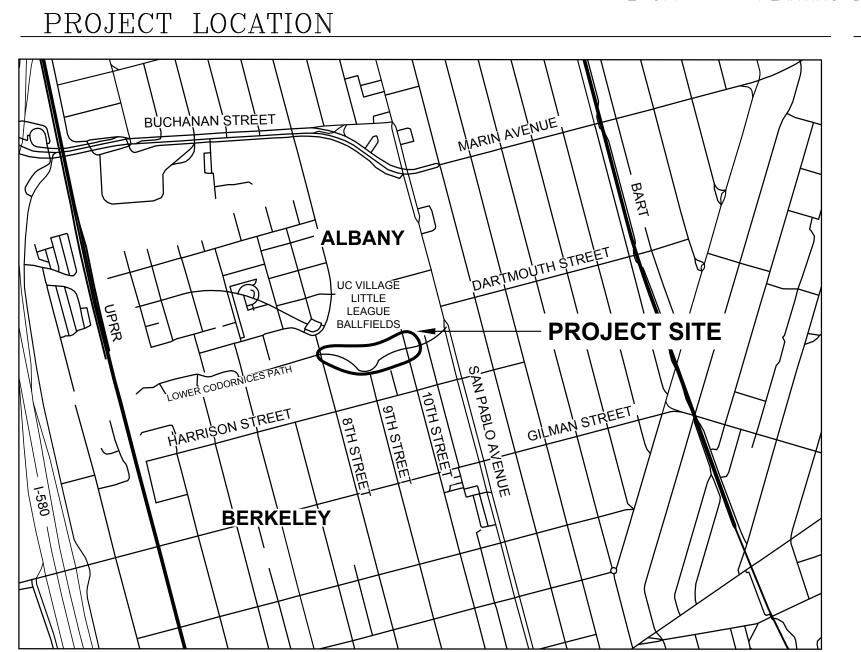
CITY OF ALBANY

CODORNICES CREEK PHASE IV 8TH STREET TO 10TH STREET

75% PROGRESS SET DECEMBER 7, 2018

CITY OF ALBANY PROJECT NO. XXXXX PROJECT PARTNERS: CITY OF BERKELEY AND UC BERKELEY ALAMEDA COUNTY, CALIFORNIA





ABBREVIATIONS ASPHALT CONCRETE CLR CLEAR CENTERLINE EXISTING EXPANSION JOINT FINISH GRADE FLOW LINE FINISH SURFACE GB GRADE BREAK HDG HOT-DIP GALVANIZED HIGH POINT LINEAR FEET LOW POINT L.O.W. LIMIT OF WORK MEET AND MATCH NOT IN CONTRACT ON CENTER OWNER'S REPRESENTATIVE 0.R. РΑ PLANTING AREA PRESERVE AND PROTECT RIGHT-OF-WAY SIMILAR SCORE JOINT TO BE DETERMINED TYP. TYPICAL UNLESS OTHERWISE NOTED

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T 510.644.2798 F 510.644.2799 www.restorationdesigngroup.com PR, AS, KB

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EMOLITION LEGEND

PROPERTY BOUNDARY

---- EASEMENT

LIMIT OF WORK (SHOWN SCHEMATICALLY)

AREA TO BE CLEARED AND GRUBBED. SEE DEMOLITION NOTES.



PAVING TO BE DEMOLISHED AND REMOVED. SEE DEMOLITION NOTES AND SPECIFIC NOTES ON PLAN.

FENCING, GATES, WALLS, AND CURB/GUTTER TO BE REMOVED



CONSTRUCTION ACCESS

TREE TO BE REMOVED TREE TO BE TRANSPLANTED

ROSION CONTROL NOTES

- PROVIDE STORM INLET PROTECTION MEASURES AT ALL DI'S WITHIN THE PROJECT SITE.
- PROVIDE SWPPP AND ENSURE COMPLIANCE THROUGHOUT THE DURATION OF CONSTRUCTION.
- SEE GRADING PLAN FOR ADDITIONAL EROSION CONTROL NOTES.

EMOLITION NOTES

- MAINTAIN PROJECT PERIMETER FENCE FOR THE DURATION OF THE CONSTRUCTION PERIOD.
- PROTECT ALL IMPROVEMENTS NOT NOTED FOR DEMOLITION.
- PP ALL UTILITIES UNLESS OTHERWISE NOTED.
- LEGALLY DISPOSE OF ALL MATERIAL CLEARED, GRUBBED, DEMOLISHED, OR SALVAGED BUT NOT UTILIZED FOR PROJECT OR ACCEPTED BY OWNER. STOCKPILE ALL MATERIALS NOTED ON PLANS FOR
- SALVAGE (E) IRRIGATION COMPONENTS AS FEASIBLE AND RETURN TO OWNER. SALVAGED COMPONENTS, IF DEEMED IN PROPER WORKING ORDER AND IF APPROVED BY O.R. MAY BE RE-USED IN PROJECT IRRIGATION INSTALLATION.

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LEGEND AND

CREEK PHASE I

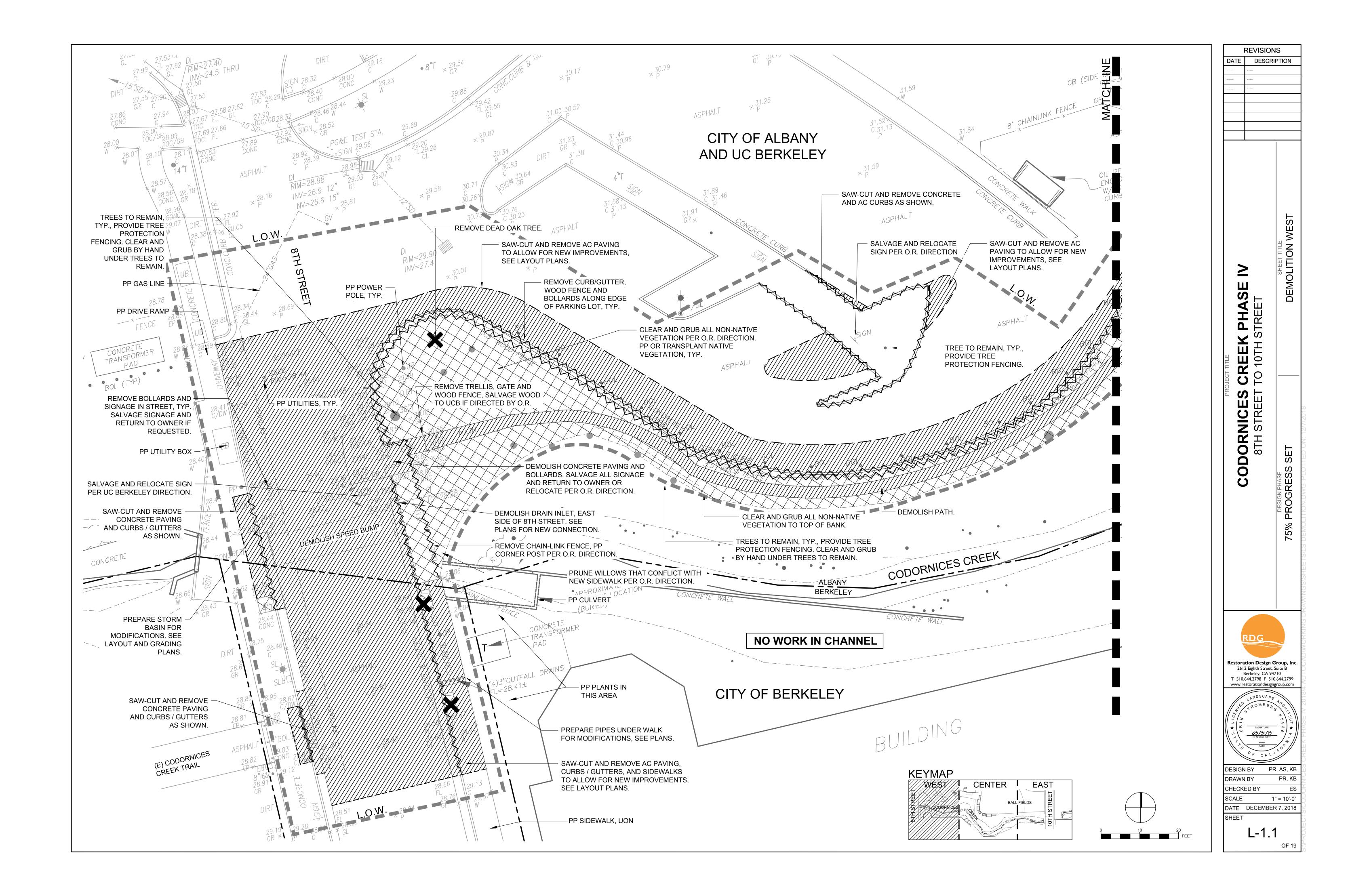
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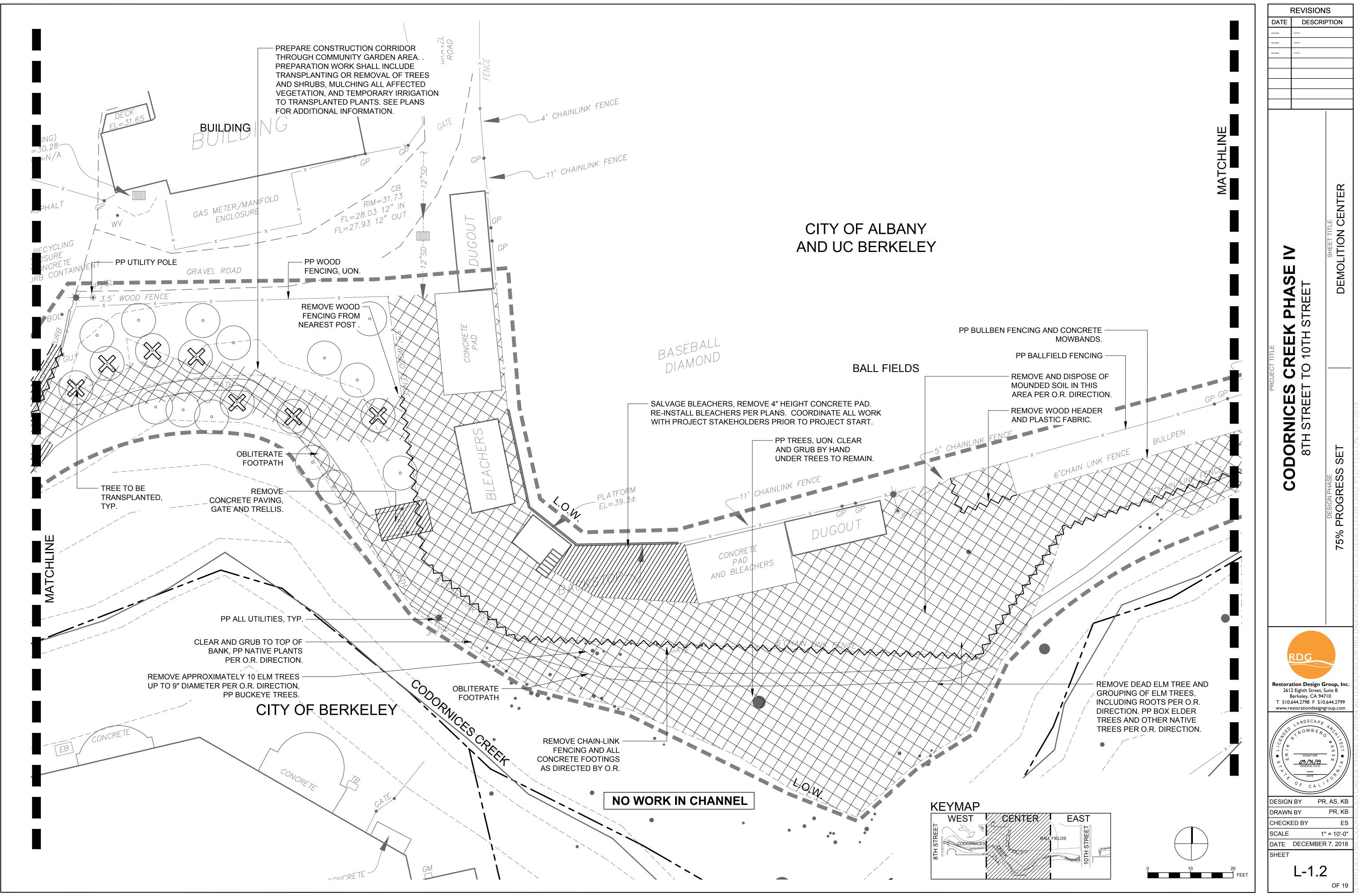
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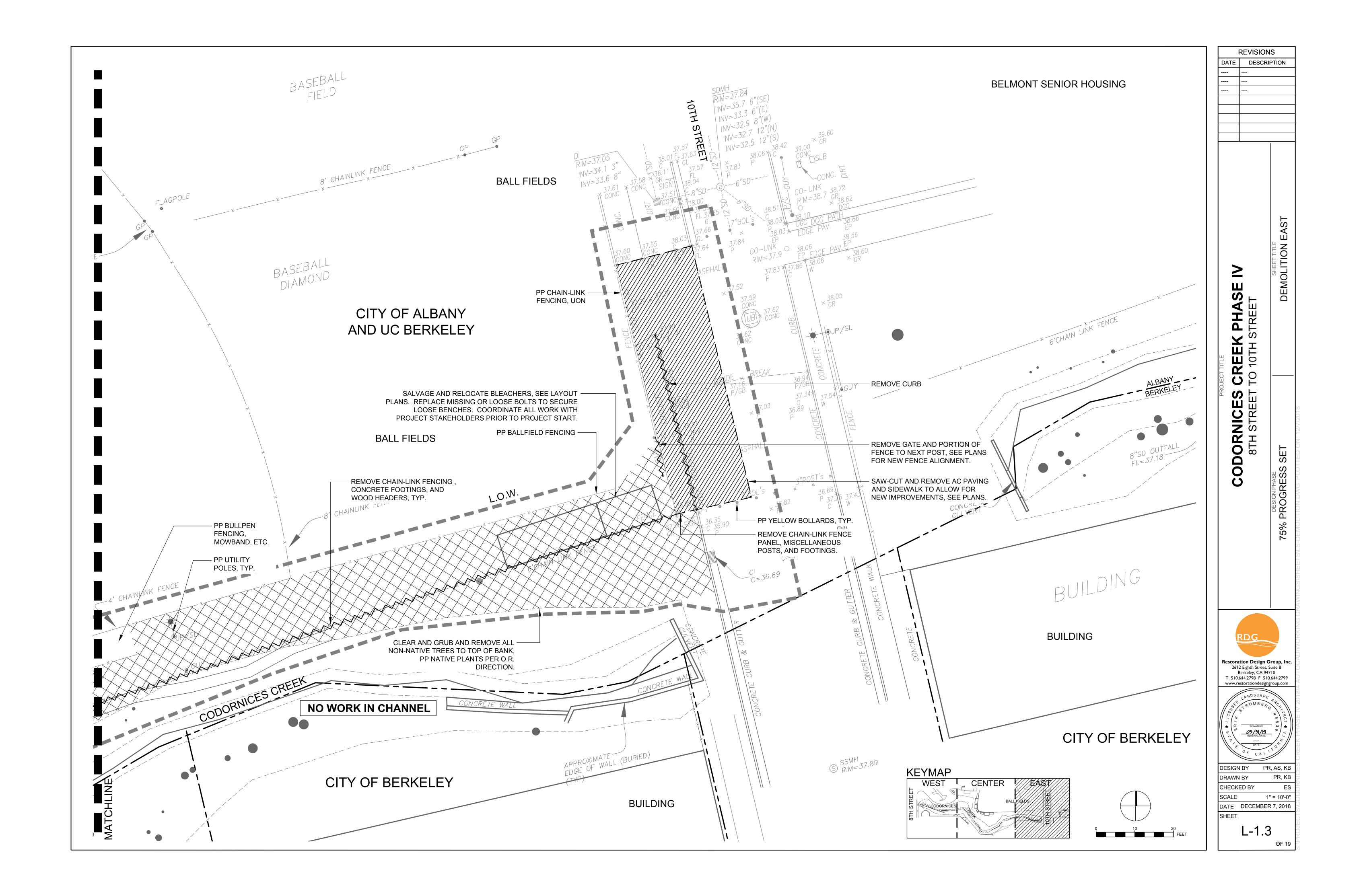


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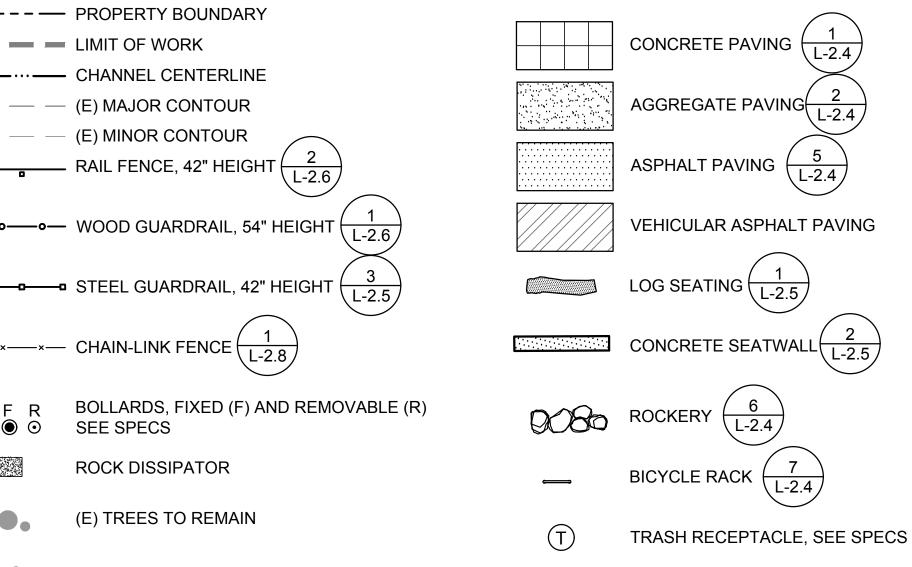






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AYOUT LEGEND



LAYOUT NOTES

ALIGN, TYP.

- 1. PROVIDE SHOP DRAWINGS AND AS-BUILTS AS NOTED IN SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS ON THE SITE AND NOTIFY O.R.
 OF ALL DISCREPANCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING
 MINOR SITE ADJUSTMENTS TO GRADING, ALIGNMENT, AND LAYOUT TO PROPOSED SITE
 IMPROVEMENTS AT NO COST TO THE OWNER.
- 3. DIMENSIONS AS SHOWN ARE TO BE VERIFIED WITH THE O.R. PRIOR TO INSTALLING THE IMPROVEMENTS. IF MINOR FIELD ADJUSTMENTS ARE REQUIRED, THEY SHALL BE COMPLETED BY THE CONTRACTOR AT NO COST TO THE OWNER.
- 4. PRESERVE, PROTECT AND RESTORE ALL EXISTING ADJACENT IRRIGATION EQUIPMENT AND SYSTEMS TO PROVIDE COMPLETE EFFICIENT HEAD TO HEAD COVERAGE.
- 5. SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO: FENCES, GUARDRAILS, SWALES, CURBS, AND PAVING SHALL BE STAKED IN THE FIELD FOR REVIEW AND APPROVAL BY O.R. PRIOR TO INSTALLATION.

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DATE	DESCRIPTION

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GRADING NOTES AND LEGEND

LAYOUT AND

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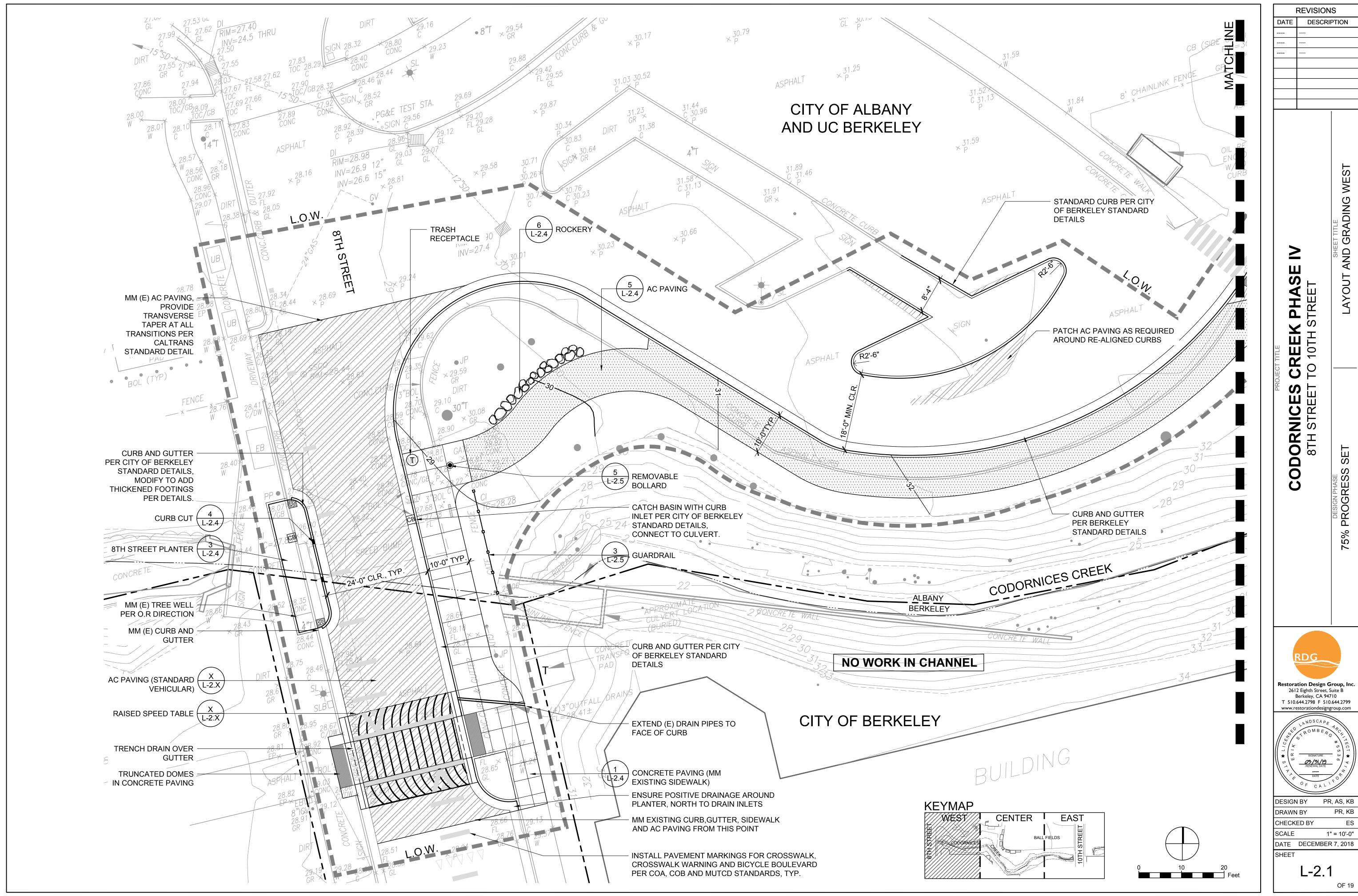
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Berkeley, CA 94710
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www.restorationdesigngroup.com



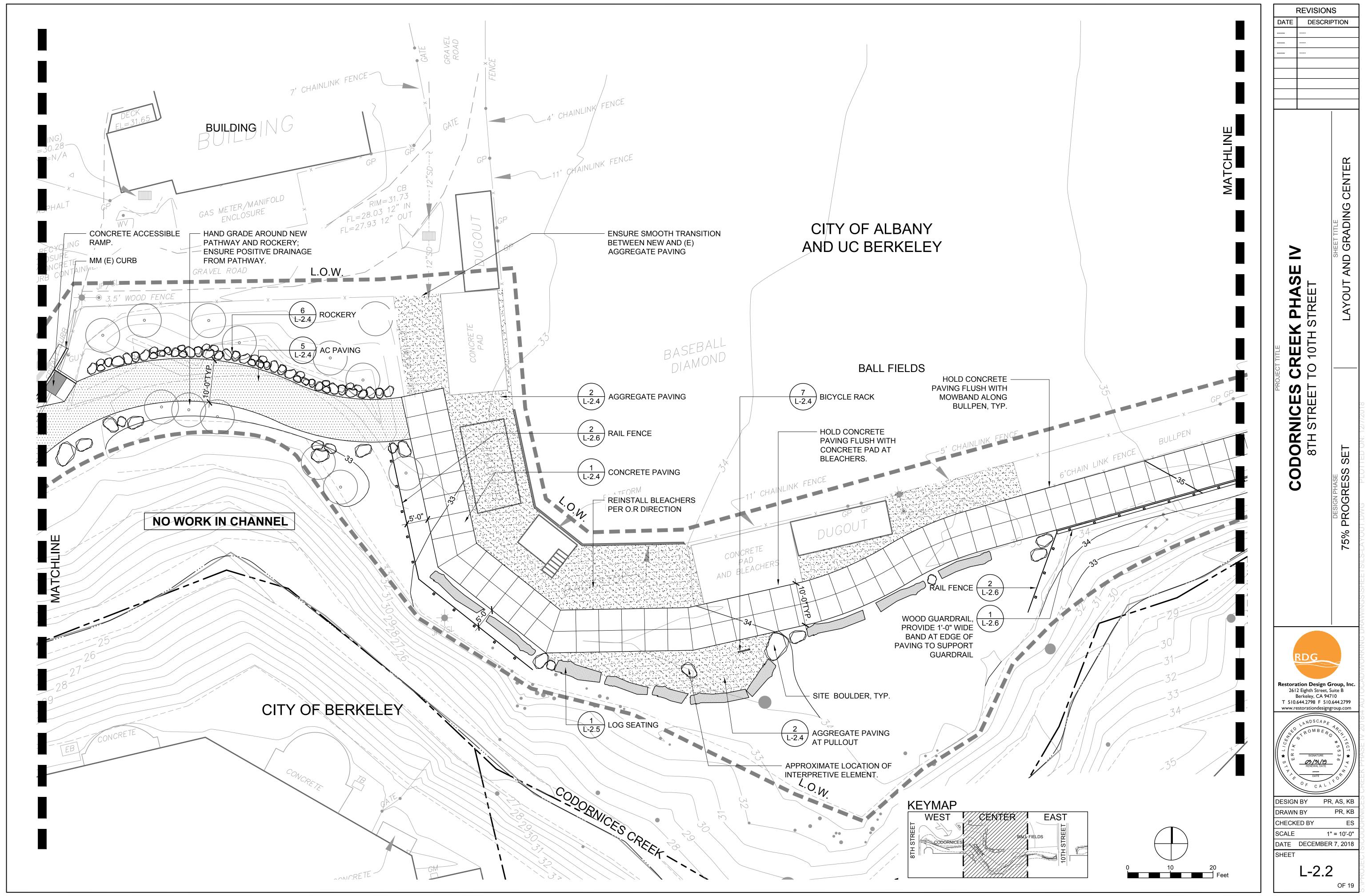
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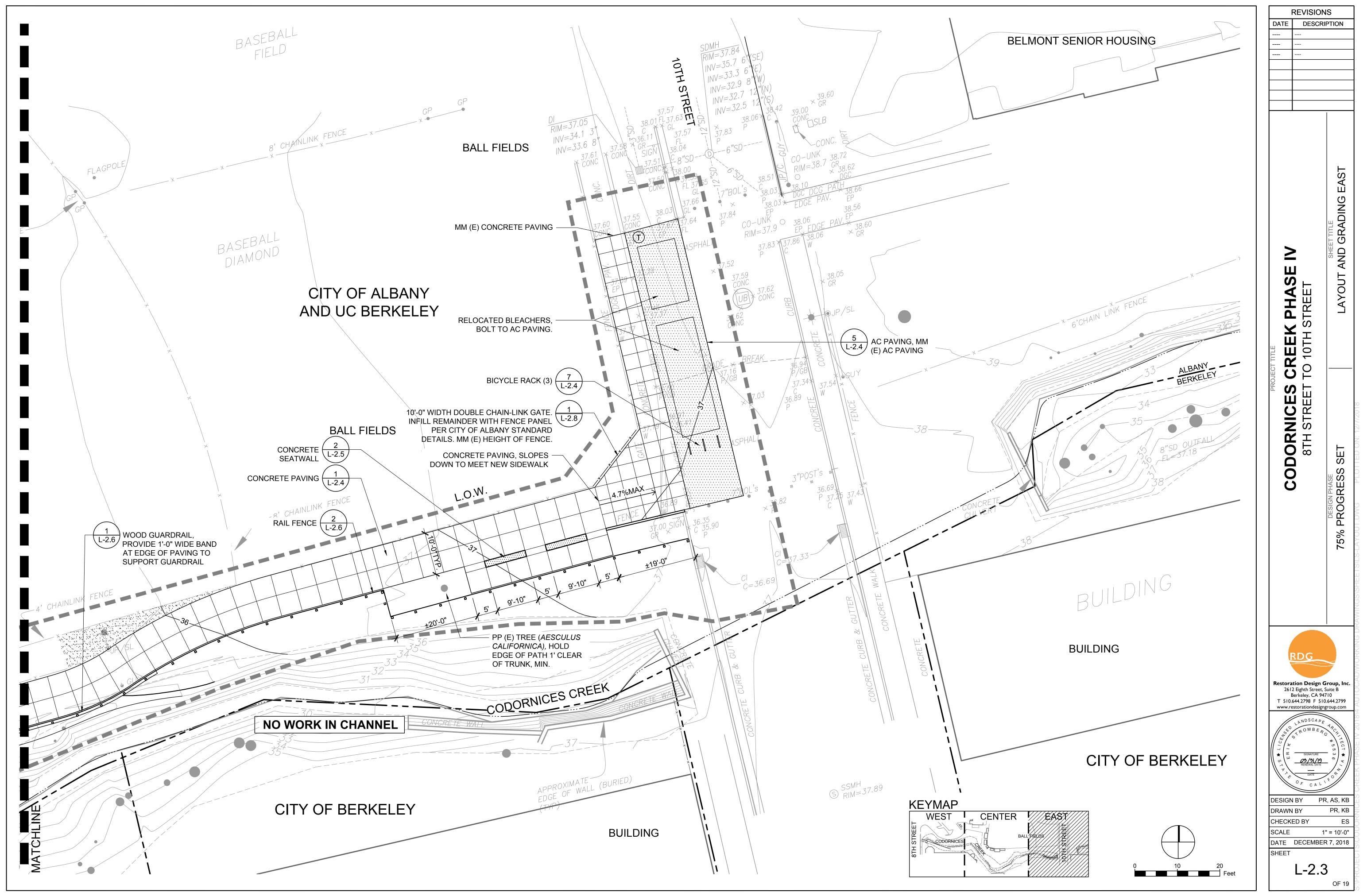


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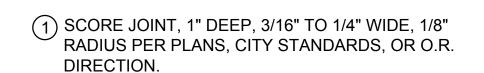
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CODORNICES CREEK PHASE IV Restoration Design Group, Inc. Beligher Street TO 10TH STREET Beligher Street Street SHEETTITLE 75% PROGRESS SET LAYOUT AND GRADING EAST
Restoration Design Group, Inc. 2612 Eighth Street, Suite B Berkeley, CA 94710 T 510.644.2798 F 510.644.2799 www.restorationdesigngroup.com
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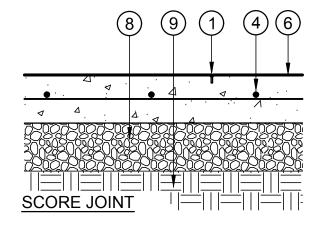


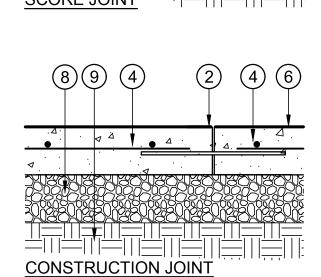
- (2) CONSTRUCTION JOINT WITH 18" LONG, 5/8" DIAMETER SMOOTH, GALVANIZED STEEL DOWEL AT MID-DEPTH OF SLAB.
- (3) PRE-MOLDED EXPANSION JOINT FILLER WITH JOINT SEALANT TO PROTECT FILLER (25' MAX. SPACING ALONG PATH). 3/8" WIDTH WITH 18" LONG, 5/8" DIAMETER SMOOTH GALVANIZED STEEL DOWEL, 36" O.C. AT MID-DEPTH OF SLAB.
- (4) #4 REBAR @ 18" O.C. BOTH WAYS AT CENTER OF CONCRETE SLAB. PLACE BAR 3" FROM EDGES AND EACH SIDE OF FORMED JOINTS. PLACE AT MID-DEPTH OF SLAB.
- (5) (2) #4 REBAR @ BOTTOM OF THICKENED EDGE. PLACE 3" CLEAR FROM EDGES.

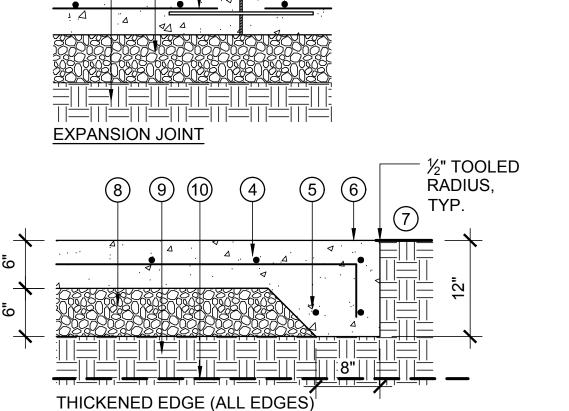
- CONCRETE PAVING. INSTALL THICKENED EDGE AT PERIMETER, UON. FINISH PER SPECIFICATIONS AND O.R. DIRECTION.
- FINISH GRADE OR FINISH SURFACE FLUSH WITH CONCRETE PAVING FINISH SURFACE. SEE PLANS FOR LOCATIONS WITH AGGREGATE SHOULDER.
- (8) BASE COURSE, COMPACTED CLASS 2 AB. SEE GEOTECH REPORT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- (9) COMPACTED SUBGRADE PER GEOTECHNICAL REPORT.

VARIES, SEE PLANS

10 PROVIDE 6" PVC SLEEVES UNDER CONCRETE PAVING WHERE REQUIRED. COORDINATE WITH IRRIGATION CONTRACTOR PRIOR TO PAVING.





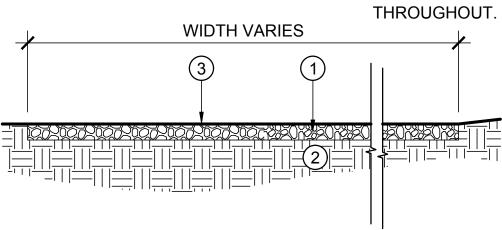


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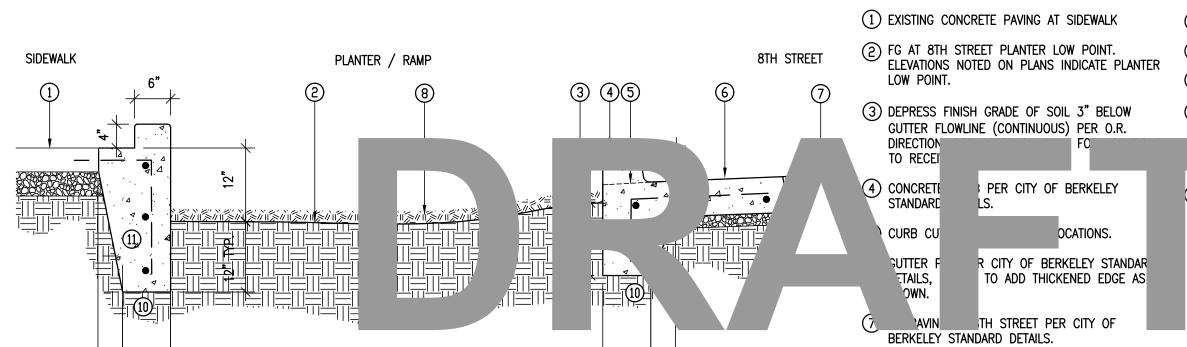
1) BASE COURSE, 4" DEPTH, CLASS 2 AB, FLUSH WITH ADJACENT FINISH GRADE CROSS SLOPE 2%, SEE PLANS FOR GRADING. COMPACT TO 95% TYP.

(2) COMPACTED SUBGRADE, 95%, TOP 12".

(3) FINISH GRADE, SEE GRADING PLANS. **ENSURE POSITIVE DRAINAGE**



CONCRETE PAVING SCALE: NTS



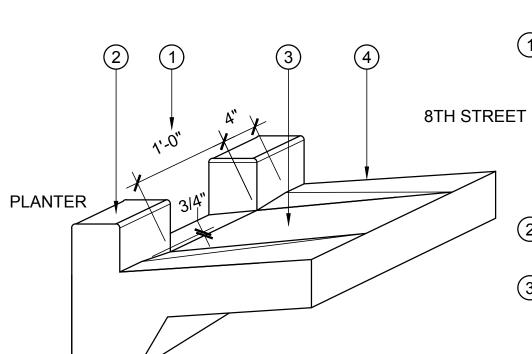
(9) NATIVE SITE SOIL, SEE SPECIFICATIONS.

(10) COMPACTED SUBGRADE

8 MULCH, 2" DEPTH

(11) AT CONCRETE PAVING THICKENED EDGE: #4 REBAR @12" O.C. VERTICAL, HOOK TOP 12". (3) BAR HORIZONTAL AS SHOWN. DOWEL INTO DEWALK AT 16" O.C.

(12) AT GUTTER THICKENED EDGE: #4 REBAR @12" O.C. VERTICAL, HOOK TOP THROUGH GUTTER PAN AS SHOWN. (2) #4 REBAR HORIZONTAL AS SHOWN.



AGGREGATE PAVING

(1) CURB CUT, 1'-0" WIDE, CONTINUE **GUTTER PAN SLOPE DOWN CURB** CUT INTO PLANTING AREAS (6" CURB SHOWN). AT 4" CURB ALONG EDGE OF SIDEWALK, OMIT CURB CUT DEPRESSION PER O.R. DIRECTION. ENSURE POSITIVE DRAINAGE INTO PLANTING AREAS, TYP.

(2) CURB PER CITY OF BERKELEY STANDARD DETAILS.

(3) CURB CUT DEPRESSION. DEPRESS GUTTER PAN 3/4" ACROSS 4" ON BOTH SIDES OF CURB CUT AS SHOWN.

(4) GUTTER PAN PER CITY OF BERKELEY STANDARD DETAILS.



SECTION (LOOKING NORTH)

8TH STREET PLANTER

(1) SHOULDERS, 2'-0" WIDTH BOTH SIDES,

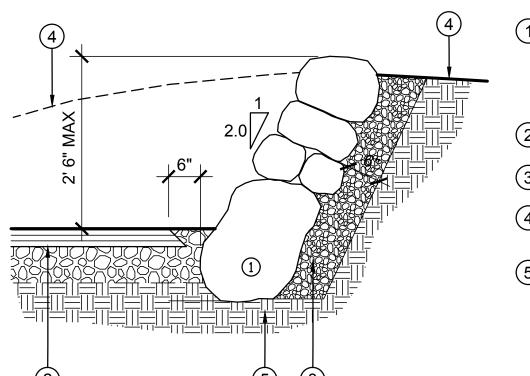
UON, COMPACTED CLASS 2 AB, F.G. FLUSH WITH F.S.

(2) AC PAVING, 3" DEPTH

- (3) BASE COURSE, 6" DEPTH, COMPACTED CLASS 2 AB. SEE GEOTECH REPORT AND SPECIFICATIONS FOR ADDITIONAL
- PROVIDE 45 DEGREE BEVEL. PROVIDE SMOOTH, CONSISTENT TAMPED EDGE.

(5) FINISHED EDGE OF AC PATH.

- (6) PROVIDE 6" PVC SLEEVES UNDER AC PAVING WHERE REQUIRED. **COORDINATE WITH IRRIGATION** CONTRACTOR PRIOR TO PAVING.
- REQUIREMENTS. (4) COMPACTED SUBGRADE PER GEOTECHNICAL REPORT. 10'-0" AC TRAIL CONSTANT WIDTH, UON SLOPE TO DRAIN, 1.7% MAX TOWARDS



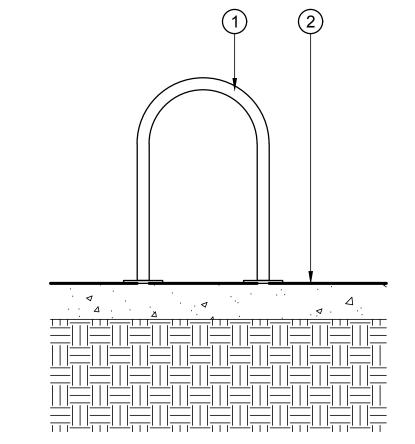
1 BOULDERS,1/16, 1/8 AND 1/4 TON **ROCK MIX. BATTER INTO TIGHT FIT** ROCK FACE. STEP DOWN NORTH AND SOUTH ROCKERY ENDS.

2 AC PAVING $\left(\frac{\#\#\#}{L-2.4}\right)$

3 CLASS II PERMEABLE, 6" DEPTH.

(E) GRADE (SHOWN SCHEMATICALLY), SEE PLANS.

(5) COMPACTED SUBGRADE



CURB CUT

SCALE: NTS

(1) BIKE RACK, SURFACE MOUNT. CBBR-2UR-SS 'U' BIKE RACK BY BELSON OUTDOORS - (800) 323-5664

(2) CONCRETE PAVING, PROVIDE THICKENED SECTION AS REQUIRED (L-2.4) PER MANUFACTURER'S RECOMMENDATION.



AC TRAIL SCALE: NTS

ROCKERY



BICYCLE RACK

REVISIONS DESCRIPTION

DETAIL

TION

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PROGRESS PROGRESS

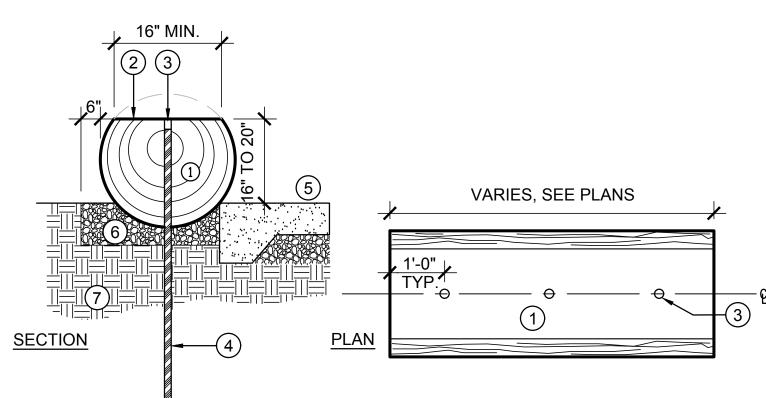


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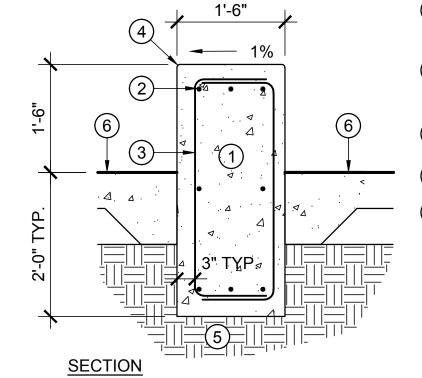
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LOG SEATING

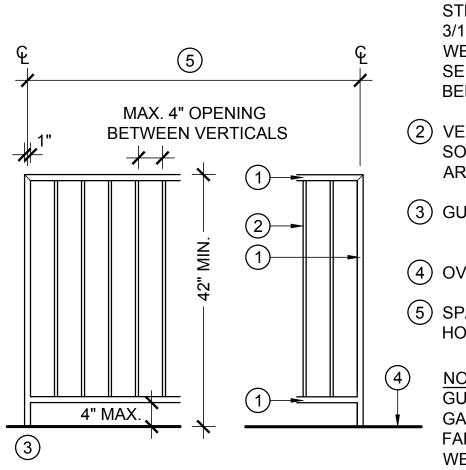
SCALE: NTS

- 1 LOG, LENGTH PER PLANS. FINAL LOG SELECTION AND SEATING HEIGHT PER O.R. DIRECTION. SEE PLANS AND SPECIFICATIONS FOR SPECIES.
- 2 CUT TOP FACE OF LOG TO PROVIDE LEVEL SURFACE PER O.R. DIRECTION. SAND SMOOTH FOR SEATING AND EASE EDGES. FINISH PER SPECIFICATIONS.
- 3 CORE DRILL FOR PIPE AND FILL WITH REDWOOD CORED PLUG. INSTALL FINAL PLUG, 3" LONG. GLUE, THEN CUT PLUG FLUSH AND SAND SMOOTH.
- 4) 1-1/2" DIAMETER GALVANIZED PIPE DRIVEN TO REFUSAL (6'-0" MINIMUM OVERALL LENGTH). DRIVE TOP 3" BELOW TOP OF LOG SURFACE. (3) PIPE STAKES PER 10' LOG, (4) PIPE STAKES PER 10'+ LOG.
- +3 5 CONCRETE PAVING $\frac{3}{L-5.1}$
 - 6 EXTEND BASE COURSE UNDER LOG TO DIMENSIONS SHOWN. EMBED LOG MIN. 4"
 - 7 COMPACTED SUBGRADE



- 1) CONCRETE SEATWALL. JOINTING AS DIRECTED BY O.R. IN FIELD.
- 2 SEATWALL HORIZONTAL REBAR: (3) #4 TOP, (2) #4 MID-HEIGHT AND (3) #4 BOTTOM AS SHOWN.
- 3 SEATWALL VERTICAL REBAR: #4 EACH FACE WITH 12" HOOK, TOP AND BOTTOM AS SHOWN.
- 4) 1/2" TOOLED RADIUS, TYP.
- 5 COMPACTED SUBGRADE
- 6 CONCRETE PAVING, DOWEL INTO 1 L-2.4 SEATWALL AT 18" OC WITH 5/8' DIAMETER SMOOTH, GALVANIZED STEEL DOWEL, MID DEPTH OF SLAB.

CONCRETE SEATWALL

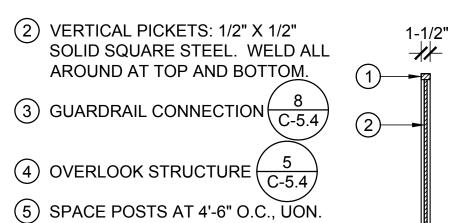


GUARDRAIL

SCALE: NTS

ELEVATION

1) TOP AND BOTTOM RAIL AND **VERTICAL POST MEMBERS:** STRUCTURAL TUBING: 1-1/2" X 1" X 3/16". ALL JOINTS SHALL BE WELDED AND GROUND SMOOTH. SEE ENLARGEMENT FOR RADIUS BEND IN GUARDRAIL.



5 SPACE POSTS AT 4'-6" O.C., UON. HOLD TOP OF GUARDRAIL LEVEL.

GUARDRAIL SHALL BE HOT DIP GALVANIZED AFTER FABRICATION. TOUCH UP FIELD WELDS PER SPECIFICATIONS.

SECTION

1 CONCRETE FOOTING, 10" DIA. 30" DEPTH

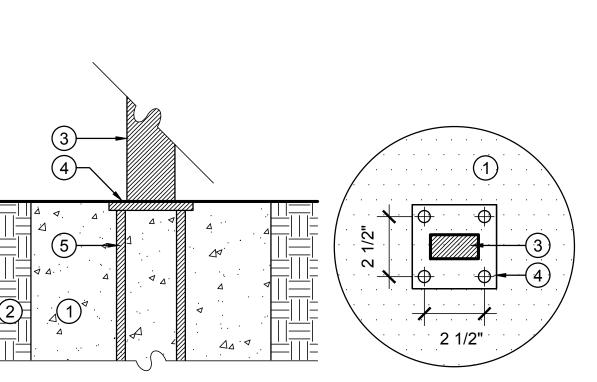
(2) COMPACTED SUBGRADE

(3) GUARDRAIL POST 1-1/2" X 1" X 3/16" FIELD WELD TO BASE PLATE. NOTE: ALL JOINTS SHALL BE FULLY WELDED AND GROUND SMOOTH.

4 BASE PLATE 3/8" THICK, 3-1/2" SQUARE EMBEDDED STEEL PLATE WITH **ANCHORS**

(5) (4)#4 REBAR STUD ANCHORS, IN 2-1/2" SQUARE PATTERN. LENGTHS VARY, SEE NOTE. USE 12" LENGTH ANCHORS AT CONCRETE FOOTING. WELD TO BOTTOM OF BASE PLATE.

GUARDRAIL CONNECTION SCALE: NTS



SECTION AT CONCRETE FOOTING PLAN AT CONCRETE FOOTING

SHEET

CONSTRUCTION DETAILS CREEK PHASE TO 10TH STREET ORNICES 8TH STREET 0 75% PROGRESS

REVISIONS

DESCRIPTION

Restoration Design Group, Inc 2612 Eighth Street, Suite B
Berkeley, CA 94710
T 510.644.2798 F 510.644.2799 www.restorationdesigngroup.com

PR, AS, KB **DESIGN BY** DRAWN BY PR, KB CHECKED BY SCALE AS NOTED DATE DECEMBER 7, 2018

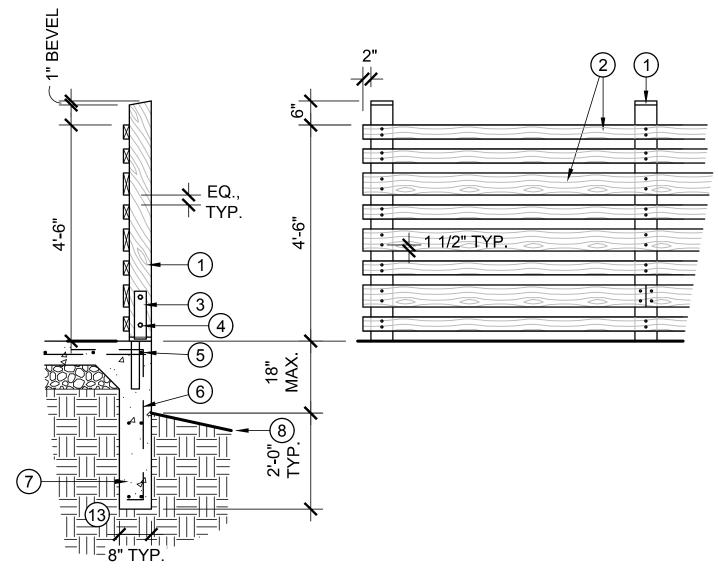
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- 1) POST, CONSTRUCTION HEART REDWOOD. USE 6X6 FOR LINE, CORNER AND END POSTS. SPACE 6'-0" O.C. MAX. LOCATE POSTS 6" CLR OF PAVING, TYP.
- 2 RAILS, CONSTRUCTION HEART REDWOOD. (3) 2X6 AND (5) 2X4 CONTINUOUS ON TRAIL SIDE OF POSTS. RAILS SHALL SPAN 3 POSTS MINIMUM WHERE POSSIBLE. BUTT JOINTS AT Q OF POSTS (ALTERNATE JOINTS - NO ADJACENT BUTT JOINTS ALLOWED AT SINGLE POST). MITER JOINTS AT CORNER POSTS. EXTEND PAST END POSTS AS SHOWN. FASTEN AT EACH END OF EACH BOARD WITH (2) SIMPSON SWDS SCREWS, 5" LONG. WHERE WOOD 9 SIDE PLATES, 1/4"X3"X12" WITH (2) 15/16" GUARDRAIL TRANSITIONS TO RAIL FENCE, RAILS SHALL RUN CONTINUOUS.
- 3 CUSTOM GALVANIZED STEEL POST BRACKET, EMBED IN CONCRETE, SEE BRACKET ENLARGEMENT AND SPECIFICATIONS.
- (4) (2) 7/8" DIAMETER BOLTS AT POST BRACKET, DESTROY EXPOSED THREADS.

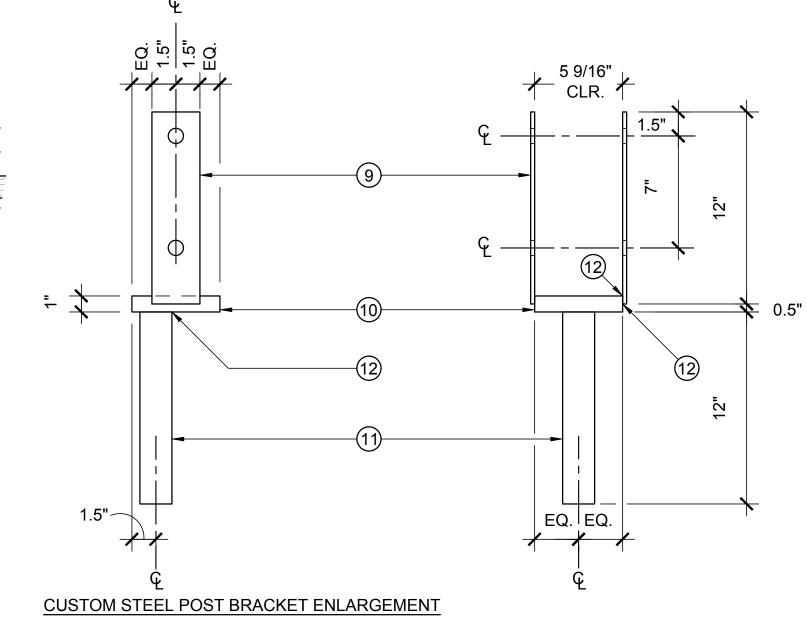
- 5 HORIZONTAL REBAR: RUN #4 ADJACENT TO AND OUTSIDE POST BRACKET AS SHOWN.
- 6 VERTICAL REBAR: #4 BARS AT 12" O.C., TYP. EXCEPTION: AT EACH POST BRACKET, INSTALL (1) EACH SIDE TIGHT AGAINST BRACKET, TYP.
- (7) THICKENED EDGE OF CONCRETE SLAB WITH (4) #4 REBAR, (2) MIDDLE AND (2) BOTTOM.
- 8 FINISH GRADE VARIES, SEE GRADING PLANS
- DIAMETER HOLES
- (10) SEAT PLATE, 1" THICK X 5-9/16" SQUARE
- 1) STEEL PIPE, 2" SCHEDULE 40 STANDARD
- 12 FILLET WELD (CONTINUOUS) ALL POST BRACKET CONNECTIONS, TYP.

SECTION

(13) COMPACTED SUBGRADE



ELEVATION



WOOD GUARDRAIL

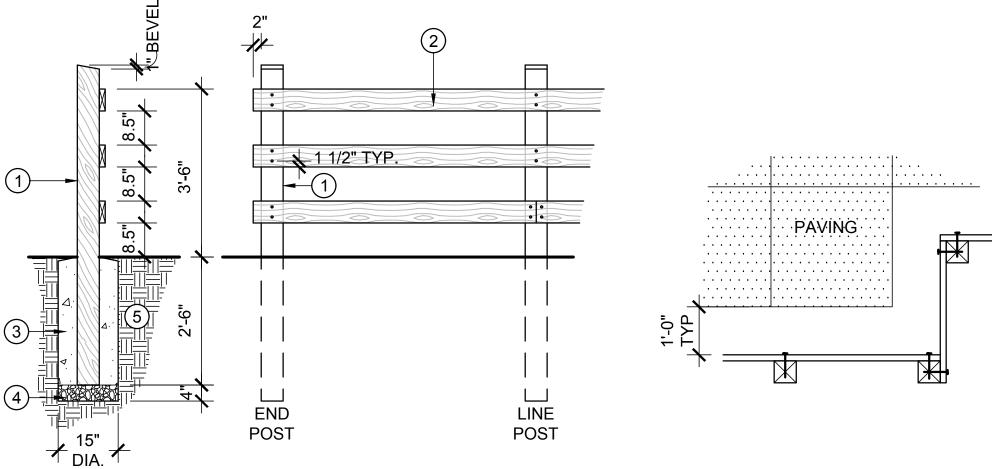
SCALE: NTS

- 1) POST, CONSTRUCTION HEART REDWOOD. USE 6X6 FOR LINE, CORNER AND END POSTS. SPACE 6'-0" O.C. MAX. LOCATE POSTS 6" CLR OF PAVING, TYP.
- (2) RAILS, CONSTRUCTION HEART REDWOOD. (2) 2X6 CONTINUOUS ON TRAIL SIDE OF POSTS. RAILS SHALL SPAN 3 POSTS MINIMUM WHERE POSSIBLE. BUTT JOINTS AT & OF POSTS (ALTERNATE JOINTS - ONLY ONE BUTT JOINT ALLOWED AT EACH POST). MITER JOINTS AT CORNER POST. EXTEND PAST END POSTS AS SHOWN. FASTEN AT EACH END OF EACH BOARD WITH (2) SIMPSON SWDS SCREWS, 5" LONG. WHERE RAIL FENCE TRANSITIONS TO WOOD GUARDRAIL, RAILS SHALL RUN CONTINUOUS.
- (3) CONCRETE POST FOOTING, SLOPE TOP TO DRAIN.

SECTION

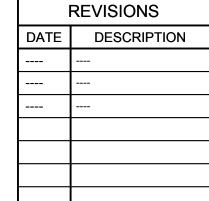
ELEVATION

- (4) COMPACTED BASE COURSE
- (5) COMPACTED SUBGRADE



PLAN VIEW AT CORNER





CONSTRUCTION DETAILS

CREEK PHAS
TO 10TH STREET ORNICES 8TH STREET

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75% PROGRESS

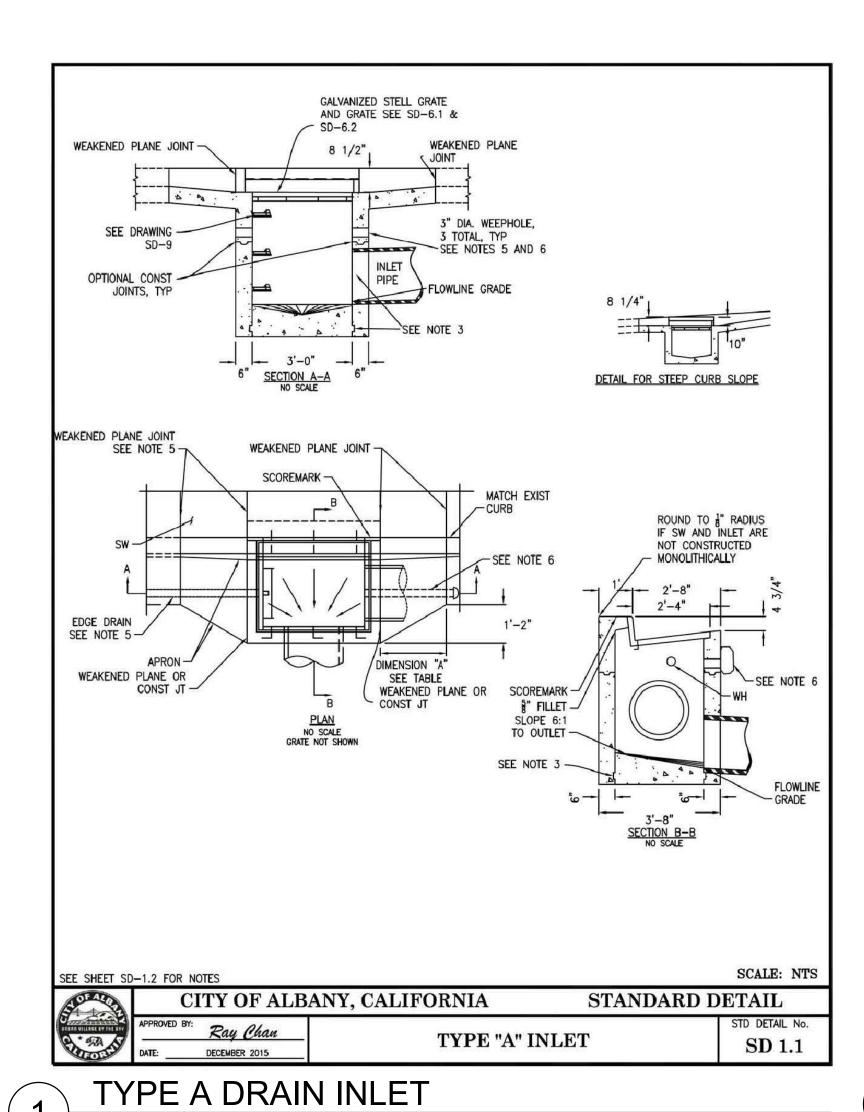
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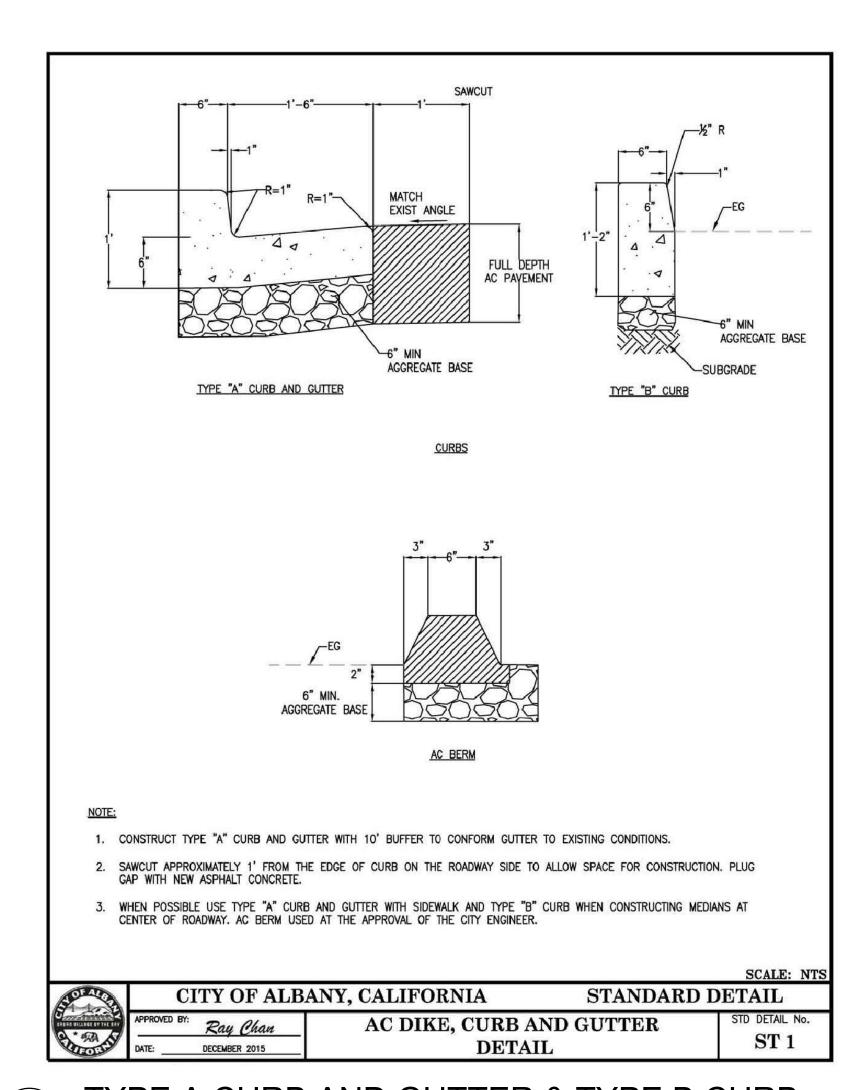
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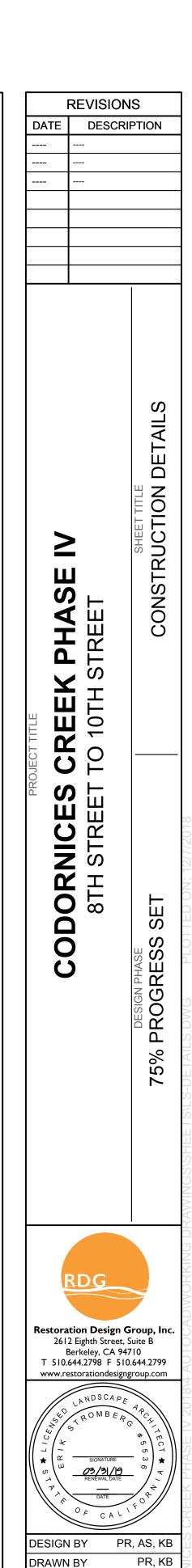
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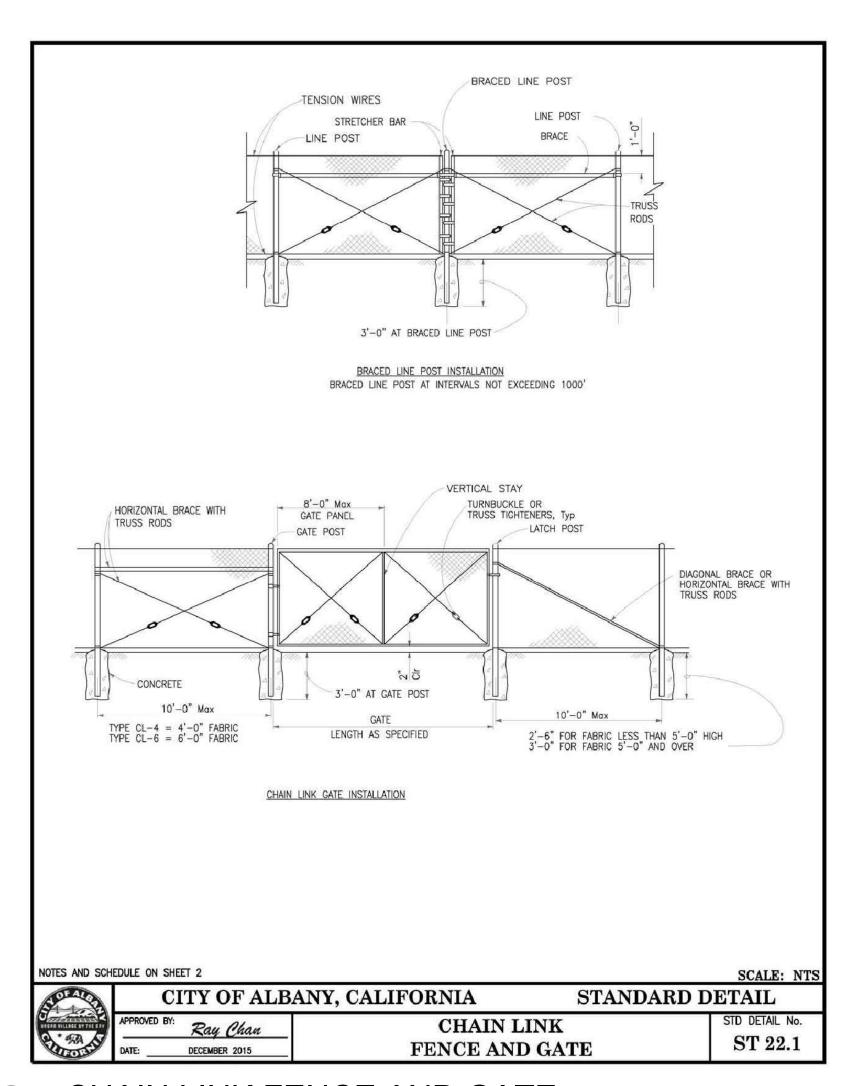
DATE DECEMBER 7, 2018

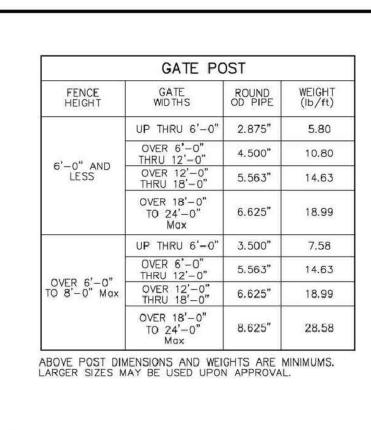
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2 TYPE A CURB AND GUTTER & TYPE B CURB SCALE: NTS





				TYPICAL	. MEMBER	DIMENSI	ONS (S	ee Notes)		
	LINE POSTS				END, LATCH AND CORNER POSTS BRACES					
			ROLL FORMED		RCUND OD PIPE	D WEIGHT	ROUND OD PIPE	WEIGHT (lb/ft)	ROLL FORMED	
FENCE HEIGHT	ROUND OD PIPE	WEIGHT								
		D PIPE (lb/ft)	SECTION	WEIGHT (Ib/ft)					SECTION	WEIGH (Ib/ft)
6'-0" AND LESS	1.900"	2.72	1.875" x 1.625"	1.85	2.375"	3.65	1.66"	2.27	1.625" x 1.25"	1.35
OVER 6'-0" TO 8'-0" Max	2.375"	3.65	2.25" x 1.70"	2.78	2.875"	5.80	1.66"	2.27	1.625" x 1.25"	1.35

- THE TABLE BELOW SHOWS MINIMUM SIZED POSTS AND BRACES COMPLYING WITH THE SPECIFICATIONS. LARGER OR HEAVIER POST AND BRACE SIZES MAY BE USED UPON APPROVAL
- SECTIONS SHOWN IN THE TABLES MUST ALSO COMPLY WITH THE STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS.
- 3. OTHER SECTIONS WHICH COMPLY WITH THE STRENGTH REQUIREMENTS AND OTHER PROVISIONS OF THE SPECIFICATIONS MAY BE USED UPON APPROVAL.
- 4. OPTIONS EXERCISED SHALL BE UNIFORM ON ANY ONE PROJECT.
- OFFSET TO BE 2'-0" AT MONUMENT LOCATIONS, MEASURED AT RIGHT ANGLES TO R/W LINES. TAPER TO ACHIEVE OFFSET TO BE AT LEAST 20'-0" LONG.
- 6. SEE REVISED STANDARD PLAN RSP A85B FOR BRACE, STRETCHER BAR, AND TRUSS TIGHTENER DETAILS.

				SCALE: NTS
SOTATO	CITY OF ALBANY	Y, CALIFORNIA	STANDA	RD DETAIL
	APPROVED BY: Ray Chan DATE: DECEMBER 2015	CHAIN LINK AND GATE -		STD DETAIL No. ST 22.2

CHAIN LINK FENCE AND GATE

CHAIN LINK FENCE AND GATE
SCALE: NTS

REVISIONS DATE DESCRIPTION

CONSTRUCTION DETAILS

DORNICES CREEK PHASE 8TH STREET TO 10TH STREET

00

75% PROGRESS



PR, AS, KB DESIGN BY PR, KB DRAWN BY CHECKED BY AS NOTED

DATE DECEMBER 7, 2018 SHEET

L-2.8

TREE SCHEDULE

SYMBOL	SCIENTIFIC	COMMON	QTY	SIZE
	ACER NEGUNDO	BOX ELDER	3	15 GAL
	CERCIS CANADENSIS	REDBUD	7	15 GAL
	QUERCUS AGRIFOLIA	LIVE OAK	4	15 GAL

PLANT SCHEDULE

_		SCIENTIFIC NAME	COMMON NAME	SIZE	QT
	*	CAREX PRAEGRACILIS	SLENDER SEDGE	D-40	60
	F	FRANGULA CALIFORNICA	COFFEEBERRY	5 GALLON	13
	•	HETEROMELES ARBUTIFOLIA	TOYON	5 GALLON	6
		IRIS DOUGLASIANA	DOUGLAS IRIS	1 GALLON	66
	\bigoplus	JUNCUS PATENS	GREY RUSH	D-40	24
	*	MUHLENBERGIA RIGENS	DEER GRASS	1 GALLON	57
	(C)	RIBES SANGUINEUM	FLOWERING CURRANT	1 GALLON	19
	R	ROSA CALIFORNICA	CALIFORNIA ROSE	1 GALLON	22
		SALVIA 'BEE'S BLISS'	BEE'S BLISS SAGE	1 GALLON	27

NOTES

- 1. CONTAINER PLANTS SHALL BE RESTORATION GRADE NATIVE PLANTS. CULTIVARS OF NATIVE SPECIES WILL NOT BE ACCEPTED. COUNTY OF ORIGIN FOR EACH PLANT SHALL BE NOTED IN SUBMITTAL.
- 2. FINAL LAYOUT OF CONTAINER PLANTS TO BE APPROVED BY O.R. IN THE FIELD. CONTRACTOR TO PROVIDE MEANS OF MARKING PLANT LOCATIONS.
- 3. CONTRACTOR SHALL PROVIDE PLANTS IN CONTAINER SIZES NOTED IN LEGEND. IN SOME CIRCUMSTANCES CONTAINER SIZES MAY BE SUBSTITUTED WITH O.R. APPROVAL. THE FOLLOWING ARE PLANT QUANTITY RATIOS FOR PLANT CONTAINER SIZE SUBSTITUTIONS. CONTRACTOR TO PROVIDE A SUBMITTAL FOR ALL PROPOSED SUBSTITUTIONS. SEE SPECIFICATIONS.
 - = NO SUBSTITUTIONS 15 GALLON POT

= 1:1.4

= 1:2

- 5 GALLON POT TO 4-GAL TREEPOT = 1:1.2 = 1:1.2
- 1 GALLON POT TO D-40 1 GALLON POT TO 4" POT
- 1 GALLON POT TO D-16

- 4. PLANTS SHALL BE UNEVENLY SPACED, UNLESS DIRECTED
 - OTHERWISE BY O.R. IN THE FIELD.
- 5. IRRIGATION DESIGN SHALL BE PROVIDED BY CONTRACTOR AS BIDDER DESIGN IRRIGATION PLAN(S) SUBMITTAL (SEE SPECIFICATIONS). CONTRACTOR SHALL PROVIDE BIDDER DESIGN IRRIGATION PLAN AS SHOP DRAWING FOR REVIEW AND APPROVAL BY O.R. SEE SPECIFICATIONS AND SPECIFIC NOTES ON PLAN FOR REQUIREMENTS.
- 6. BIDDER DESIGN IRRIGATION PLAN SHALL ENSURE ALL SPRAY IRRIGATION PROVIDES HEAD TO HEAD COVERAGE, MATCHED PRECIPITATION & AVOIDS OVER-SPRAY ONTO PAVED OR NON-PLANTED AREAS.
- 7. NO PLANTING OPERATIONS SHALL BE INITIATED PRIOR TO THE INSTALLATION, OPERATIONAL TEST AND APPROVAL OF THE SYSTEM BY O.R.
- 8. INSTALL IRRIGATION COMPONENTS AS NOTED IN THE
- SPECIFICATIONS.
- 9. COORDINATE IRRIGATION POINT OF CONNECTION AND POWER SOURCE WITH CLIENT AND PROJECT PLANNING TEAM. PROVIDE ALL NECESSARY CONNECTIONS.

		YEE -	CRII	SHEET TITLE
PROJECT TITLE	TOPODAILER CEEK DHACE	8IH SIKEEL IO 10IH SIKEEL		DESIGN PHASE

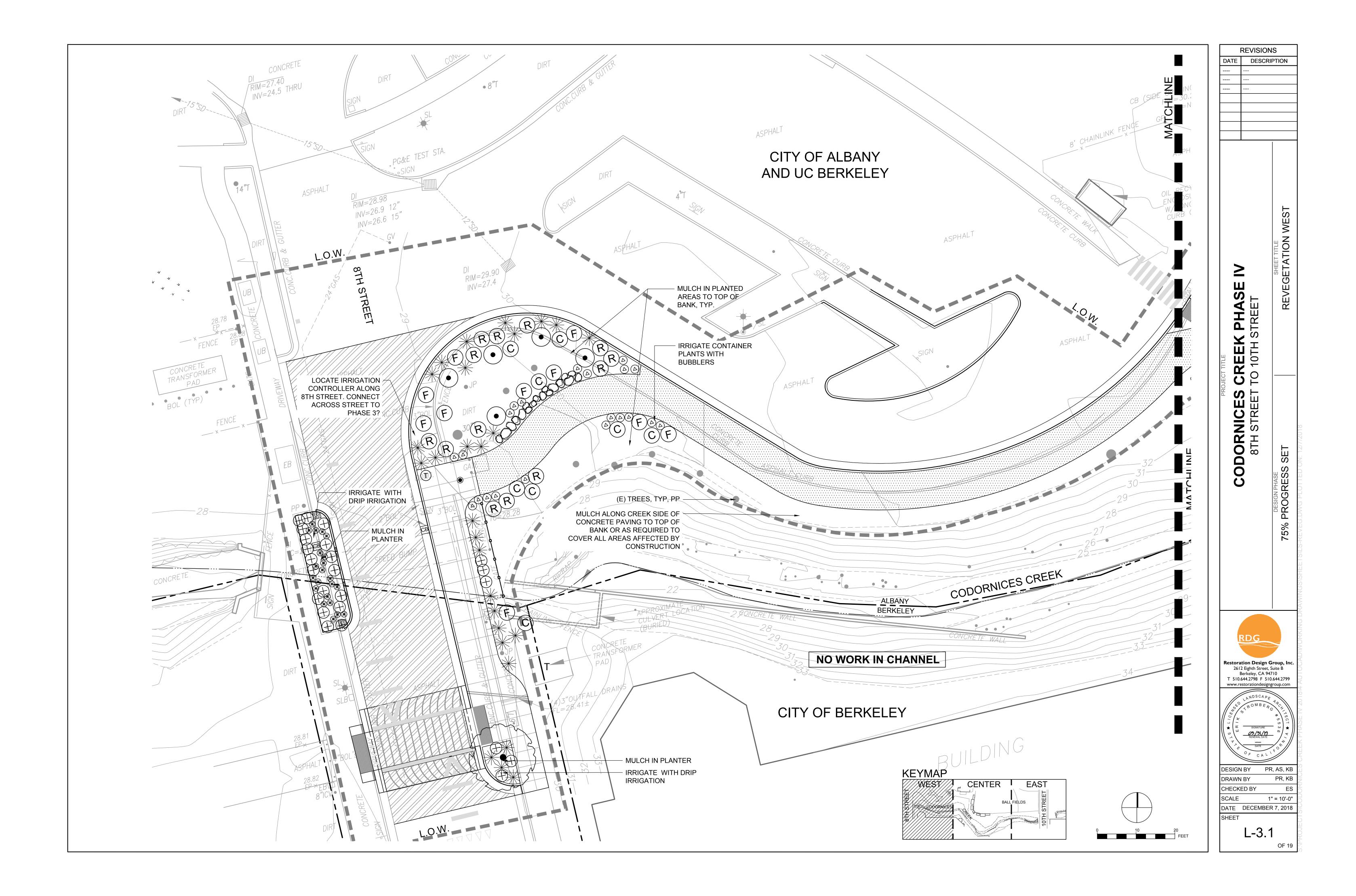


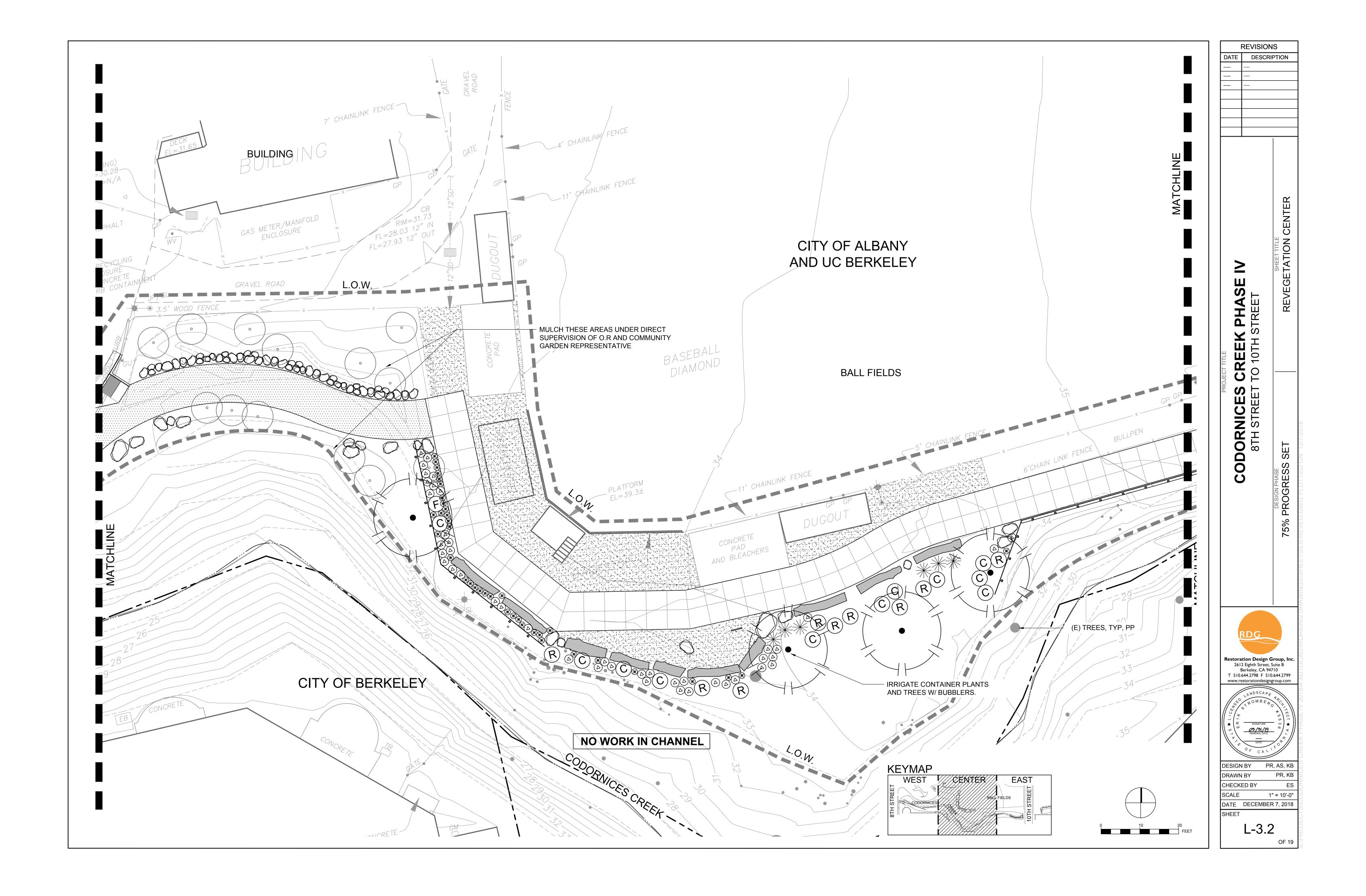


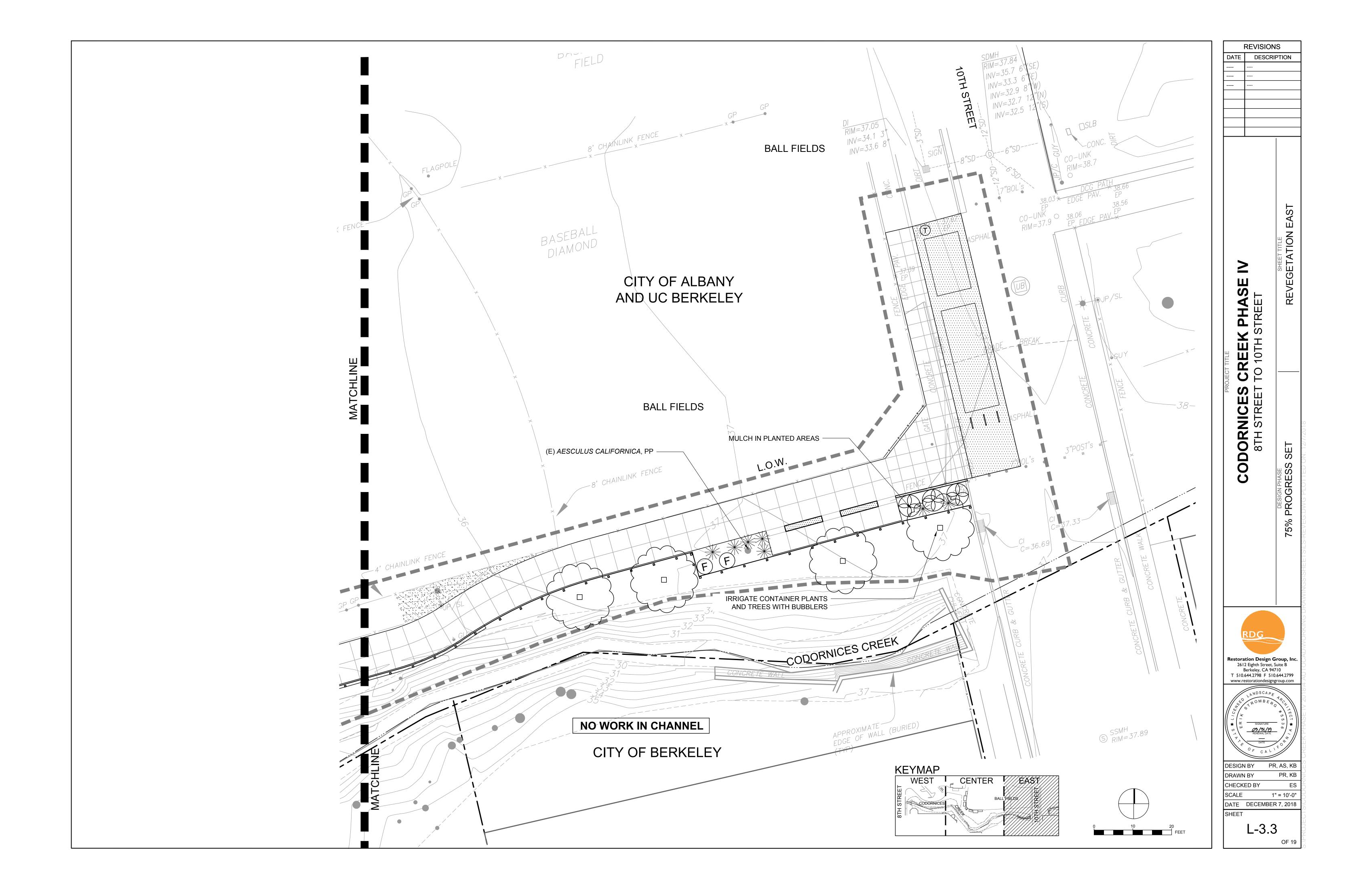
	<u> </u>	
DESIGN	N BY	PR, AS, KE
DRAWN	l BY	PR, KE
CHECK	ED BY	ES
SCALE		1" = 10'-0'
DATE	DECEM	BER 7, 2018

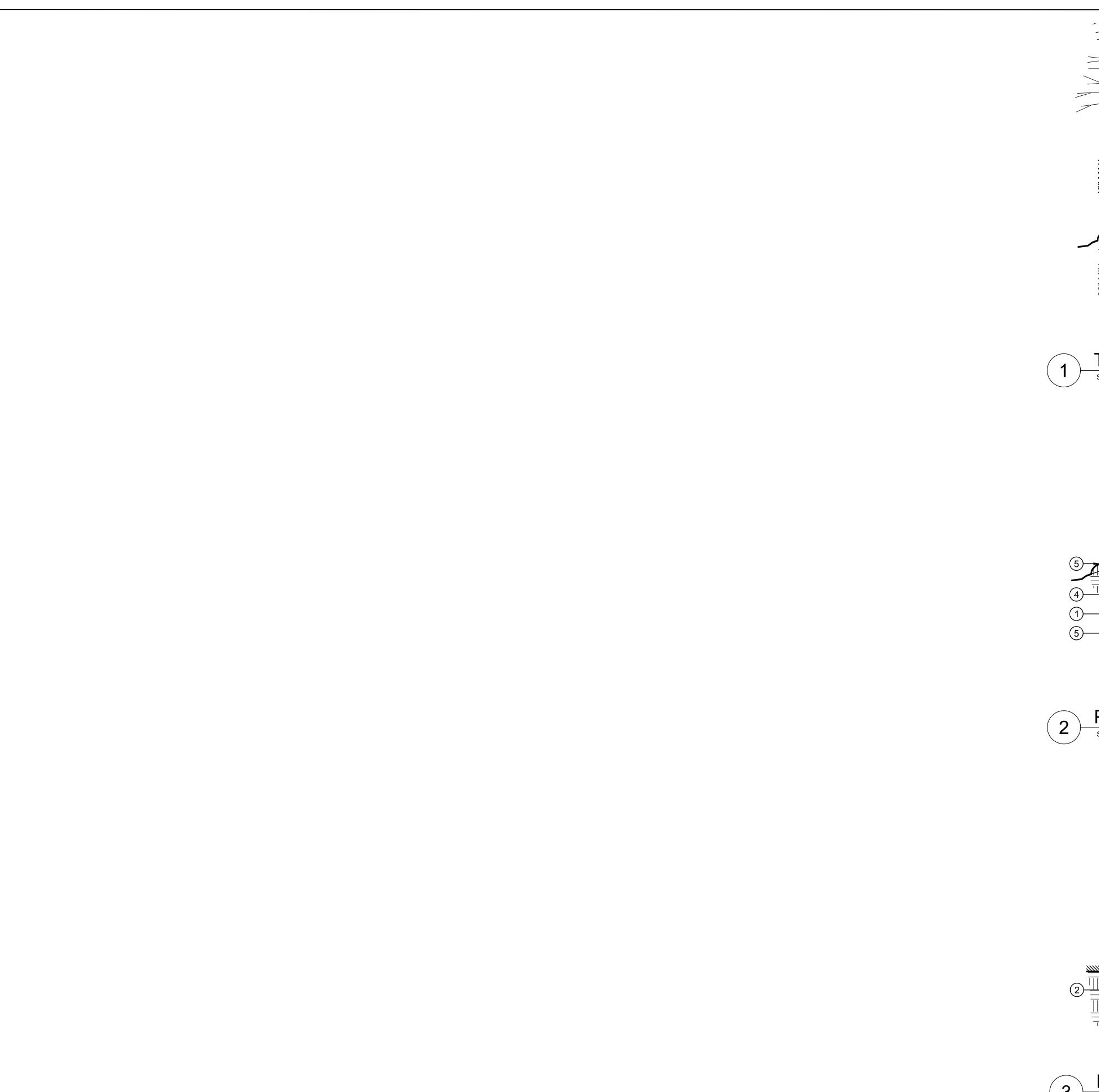
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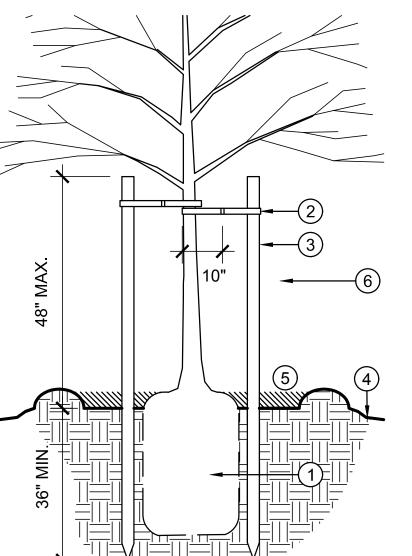
SHEET





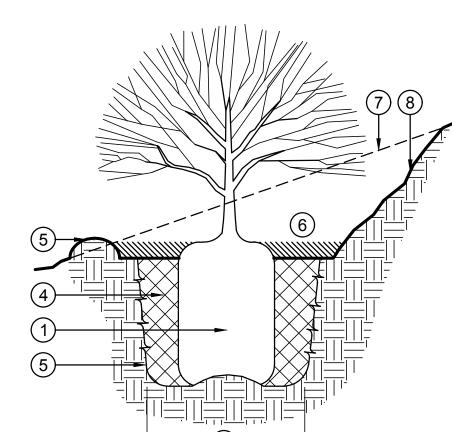




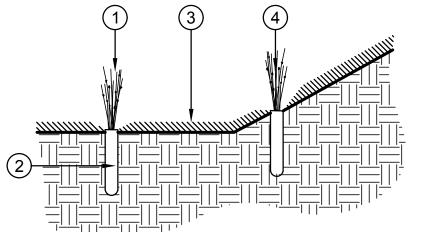


- 1 LARGE CONTAINER TREE (5 GALLON OR LARGER)
- 2 ARBORTIE TREE TIES (2), W/ 10" WIDE LOOPS AROUND TRUNK. SECURE ARBORTIES 4" MIN FROM TOP OF STAKES. DIRECTION AND APPROVAL OF INSTALLATION BY O.R.
- TREE STAKES, SET VERTICAL OUTSIDE ROOTBALL. KEEP TOP OF STAKES 6" MIN CLEAR OF LIMBS. SET IN LINE WITH CREEK FLOW DIRECTION.
- 4 FINISH GRADE
- 5 MULCH
- 6 CREEK FLOW DIRECTION





- TREE OR SHRUB ROOTBALL
 (1 GALLON OR LARGER). SET CROWN 1-2"
 ABOVE FINISHED GRADE
- 2 PIT DIAMETER, TWO TIMES THE ROOTBALL DIAMETER. EXCAVATE PIT 2" SHALLOWER THAN CONTAINER, DEEPER BEYOND ROOTBALL. PLACE ROOTBALL ON CENTER MOUND AS SHOWN.
- 3 EDGE OF PIT, FRACTURE & SCARIFY.
- 4 NATIVE SOIL, BACKFILLED. HAND COMPACT IN 6" LIFTS
- (5) WATERING BASIN LIP, 4" HEIGHT. DOWN SLOPE EDGE ONLY IN SLOPED CONDITION; COMPLETE PERIMETER IN LEVEL CONDITION
- 6 MULCH
- 7 ORIGINAL GRADE, SLOPED CONDITION
- (8) FINISHED GRADE, SLOPED CONDITION
- 2 PLANT SHRUB
 SCALE: NTS
- PLANT GROWN IN RESTORATION
 CONTAINER (SMALLER THAN 1 GALLON)
- 2 PLANTING PIT, EQUAL DIAMETER TO CONTAINER. USE DIBBLE OR HAND SPADE. SET CROWN ABOVE FINISH GRADE. PINCH NATIVE SOIL TIGHT AGAINST ROOTS.
- MULCH / SEEDING, SEE PLANS AND SPECIFICATIONS. KEEP MULCH CLEAR OF CROWN.
- 4 SLOPED CONDITION SET PLANT PLUMB



Restoration Design Group, Inc.

2612 Eighth Street, Suite B
Berkeley, CA 94710
T 510.644.2798 F 510.644.2799
www.restorationdesigngroup.com

ANDSCAPE

ANDSCAPE

BIGNATURE

OF CAL

DESIGN BY

PR, AS, KB

DRAWN BY

PR, KB

DRAWN BY PR, KB
CHECKED BY ES
SCALE AS NOTED
DATE DECEMBER 7, 2018

L-3.4

3 PLANT - SMALL
SCALE: NTS

CREEK PHASE IV
TO 10TH STREET

75% PROGRESS

REVISIONS

DATE DESCRIPTION

CODORNICES CRE 8TH STREET TO 10