

BID DOCUMENTS COVER SHEET

CONTRACT DOCUMENTS

FOR

**C-608 PE/K SERVICE ROAD RE-PAVING Project**

AT

Contra Costa College  
2600 Mission Bell Drive  
San Pablo, CA. 94806

**CONTRA COSTA COMMUNITY COLLEGE DISTRICT**

Consist of the following:

**Volume 1 – Division 0 & 1 &**

**Volume 2 – Technical Specifications and Drawings**

Architect:

**LIONAKIS**

2025 19th Street  
Sacramento, CA 95818  
916.558.1900

**January 11, 2023**

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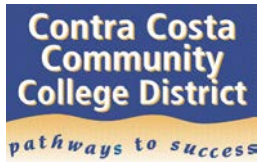
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**END OF SECTION**

SECTION 00016

CONTRA COSTA COLLEGE CAMPUS MAP





**SECTION 00100  
NOTICE INVITING BIDS  
(INFORMAL BIDS)**

**C-608 PE/K SERVICE ROAD RE-PAVING**

**Contra Costa College**  
2600 Mission Bell Dr.  
San Pablo, CA 94806

**SCOPE OF WORK:** The Scope of Work consists of general construction including, but not limited to: general site work, demolition, excavation, earthwork, grading, compaction, paving, striping a service road at the renovated PE/K Complex, Contra Costa College, 2600 Mission Bell Drive, San Pablo, California 94806. Scope of Work includes 2 Add Alternates.

**IMPORTANT INFORMATION:**

- **Pre-Bid Meeting and Job Walk, Non-Mandatory**  
Date/Time: ..... Tuesday, January 17, 2023, 11:00 AM
- **Pre-Bid Meeting Location:..... Service Road on the West Side of the Gym – see Campus Map**

PLEASE NOTE: A Site Visit will be held Immediately following the Pre-Bid meeting. Please remember to obtain a Certification of Site Visit, signed by the District Representative, prior to leaving the site.

- **Cost Estimate (Range): ..... \$90,000 to \$100,000**
- **CA License Required: ..... A - General Engineering Contractor; B - General Building Contractor; or C-12 - Earthwork and Paving Contractors**
- **Last Date / Time for Bidder’s Requests for Information (RFI):**  
**January 20, 2023, prior to 5:00 PM**
- **BID OPENING DATE/TIME: ..... January 31, 2023 @ 2:00 PM**

This project is a public works project and is subject to prevailing wage rate laws. A copy of the prevailing rates of wages is on file with the Contracts & Purchasing Office of the Contra Costa Community College District. Said rates of wages will be included in the contract for the work.

**Attention is directed to Section 4100 through 4113 of the Public Contract Code concerning Subcontractors, with emphasis on Section 4104, known as the “Subletting and Subcontracting Fair Practices Act, effective July 1, 2014.**

**Attention is directed to Labor Code Section 1725.5 regarding Department of Industrial Relations (DIR) contractor registration process including registration criteria and implementation of DIR registration requirements. Labor Code Section 1771.7 establishes contractor’s obligation to submit Certified Pay Roll (CPR) to the Department of Labor and Standards Enforcement (DLSE) and public works monitoring and enforcement. Labor Code Section 1773.3 requires the District to submit a PWC-100 to DIR for all public works contract awarded effective January 1, 2015.**

~~Site Visit Certification (Section 00450) shall be authorized by the representative of the District and shall be submitted with the bid. Failure to submit all of the above may cause your bid to be non-responsive and disqualified for contract award.~~

For information directly from the District, you may log in to the District Website: <https://webapps.4cd.edu/apps/purchasingviewbids/default.aspx>. Project documents available include, but are not limited to, plans, specifications, addenda, bidders' lists, bid results, etc., and can be viewed on this District webpage.

The District does not provide hardcopies of bid documents or reimburse cost of printing, delivery, or any expenses related to the bidding process.

**All questions related to this project must be submitted electronically, no later than January 20, 2023, prior to 5:00 PM, to:**

**Ben M. Cayabyab, Contracts Manager**  
**Contra Costa Community College District**  
**Email: [bcayabyab@4cd.edu](mailto:bcayabyab@4cd.edu)**

Each bid shall be made on the **Bid Proposal Form**, which is included in the Bid Documents. The successful bidder will be required to furnish a payment bond in an amount equal to one hundred percent (100%) of the contract price and a faithful performance bond in an amount equal to one hundred percent (100%) of the contract price, said bonds to be secured from a surety company acceptable to the Contra Costa Community College District and authorized to execute such surety in the State of California.

Certificates of Liability Insurance with proper endorsements shall be required for the successful bidder.

The contract time is **42 Calendar Days** between the Notice to Proceed date and the Contract Substantial Completion date. Liquidated Damages shall be set for **Seven Hundred and Fifty Dollars (\$750.00)** for each Calendar Day the Work is delayed beyond the contract Substantial Completion date; and **Two Hundred and Fifty Dollars (\$250.00)** for each Calendar Day Remaining Work is delayed beyond the Contract Final Completion Date. The Contra Costa Community College District reserves the right to reject any and all bids and/or waive any informality or irregularity in any bid received. No bidder may withdraw their Bid for a period of fifteen (15) Calendar Days after the date set for opening thereof.

**END OF SECTION**

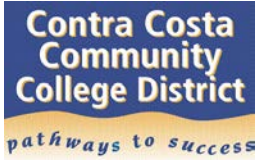
## SECTION 00210

### INFORMATION AVAILABLE TO BIDDERS

#### PART 1 - REPORT AND INFORMATION

- 1.1** Existence of reports, record drawings, and utility surveys: Contra Costa Community College District, its consultants, and prior contractors may have collected documents providing a general description of the site and conditions of the work. These documents may consist of geotechnical reports for and around the site, record drawings, utility drawings, and information regarding underground utilities. These reports, documents and other information are not part of the Contract Documents and do not show new work to be constructed, rather, they show existing conditions that Contractor may have to address as part of its construction planning.
- 1.2** Available Documentation: The following existing documentation has been made available for downloading via the District's web site:  
<https://webapps.4cd.edu/apps/purchasingviewbids/default.aspx>
- A. Campus Utilities Maps, prepared by LCC Engineering and Surveying, 8 sheets, dated 9/24/18
  - B. Topographic Maps, prepared by LCC Engineering and Surveying, 24 sheets, dated 9/24/18
- 1.3** Contractor shall acknowledge and accept that the documents are not a part of the Contract Documents and are made available to bidders for reference only. The District and its representatives are not responsible for any and all discrepancies between the documents and the existing and actual as-built conditions, and do not guarantee the accuracy of the documents.
- 1.4** The District and Design Consultants assume no responsibility for the completeness or accuracy of the documents, or the records compiled there from and the interpretations made from the documents. There is no express or implied guarantee that the conditions indicated in the documents are representative of those existing throughout the building and/or site Conditions differing substantially from those indicated may be encountered.

**END OF SECTION 00210**



SECTION 00300  
BID PROPOSAL FORM  
(INFORMAL BIDS)

Bidder's Name

**C-608 PE/K SERVICE ROAD RE-PAVING**

**Contra Costa College**  
2600 Mission Bell Dr.  
San Pablo, CA 94806

**BID DATE: January 31, 2023, 2:00 PM**

=====

**INSTRUCTIONS TO BIDDERS:**

- *Submit your BID Proposal via mail/overnight mail or deliver, in person, to:  
Contra Costa Community College District  
500 Court Street  
Martinez, CA 94553  
Attn: Ben M. Cayabyab, Contracts Manager*
  - *Don't forget to include a Bid Bond for 10% of the Bid amount; (copy attached to Bid Proposal is accepted, original by mail to follow); and signed Certification of Site Visit;*
  - *Bid results shall be sent to you via email message and posted at the District Website;  
For clarification, please email: **Ben M. Cayabyab, Contracts Manager, [bcayabyab@4cd.edu](mailto:bcayabyab@4cd.edu)***
- =====

**Attention is directed to Labor Code Section 1725.5 regarding Department of Industrial Relations (DIR) contractor registration process; registration criteria and implementation of DIR registration requirements. Labor Code Section 1771.7 establishes contractor's obligation to submit Certified Payroll (CPR) to the Department of Labor and Standards Enforcement (DLSE) and public works monitoring and enforcement. Labor Code Section 1773.3 requires the District to submit a PWC-100 to DIR for all public works contract awarded effective January 1, 2015.**

1. INTRODUCTION

- A. The Bidder proposes to perform the Work for the Contract Sum and within the proposed time, based upon an examination of the Job Site and Specifications.
- B. The Bidder certifies this proposal is submitted in good faith.
- C. The signed copy of the Certification of Visit to the Site shall be attached to the Bid Proposal Form.
- D. The Bidder shall attach a Bid Security for ten percent (10%) of the Bid Amount in the form of Bid Bond, or Certified Check payable to the District.
- E. The District shall award the contract to the lowest responsive and responsible Bidder. The evaluation of the low bid shall be based on the total of Base Bid plus Add Alternates #1 and #2.**

Please Note: PCC 20651 (b); In the event, the successful bidder fails to provide the required Payment and Performance bonds, the Bid Security shall be forfeited in favor of the District and Contractor shall not be entitled for contract award.

2. BID AMOUNT

For labor, materials, insurances, bonds, fixtures, equipment, tools, transportation, services, sales taxes and other costs necessary to complete the public project in accordance with Contract Drawings and Specifications, for a stipulated Contract Sum in the amount of:

A. Quote for the BASE BID Scope of Work:

Dollars \$ \_\_\_\_\_

(Write amount of Base Bid)

B. ADD ALTERNATES:

B1) ADD ALTERNATE 1: Add parking along the east side of service road. See Drawing C4.2

ADD: \_\_\_\_\_ Dollars \$ \_\_\_\_\_

(Write amount of ALTERNATE 1 Bid)

B2) ADD ALTERNATE 2: Add parking along the west side of service road. See Drawing C4.2

ADD: \_\_\_\_\_ Dollars \$ \_\_\_\_\_

(Write amount of ALTERNATE 2 Bid)

3. ADDENDUM (if applicable): #1 Received Date: \_\_\_\_\_; #2 Received Date: \_\_\_\_\_;

4. SUBCONTRACTORS LIST (If Any)

Attention is directed to Section 4100 through 4113 of the Public Contract Code concerning Subcontractors, with emphasis on Section 4104, known as the "Subletting and Subcontracting Fair Practices Act, effective July 1, 2014.

	Type of Work	Subcontractor's Name	Address/Phone	Business License # & DIR Registration #
(1)		_____	_____	_____
(2)		_____	_____	_____
(3)		_____	_____	_____

4. COMPLETION TIME

A. For establishing the Date of Substantial Completion, the contract time shall be **42 calendar days** after date of Notice to Proceed.

B. Final Completion shall be **15 calendar days** after the date of Substantial Completion.



C. Prior to the Notice to Proceed issued by the District, the Contractor shall provide a CPM construction schedule, prepared in Microsoft Project format, utilizing the entire time allowed to complete the project. Schedule shall be subject to District's approval.

5. ACCEPTANCE AND AWARD

The District reserves the right to waive minor irregularities or reject all bids; or negotiate changes before or after execution of the Contract. This Bid shall remain open and shall not be withdrawn for a period of 10 days after Bid Opening date.

If written notice of acceptance of this Bid is mailed or delivered to the Bidder within 10 days after the date set for the receipt of this Bid, or other time before it is withdrawn, the Bidder shall execute and deliver to the District a Contract prepared by District with the required Surety Bonds and Certificates of Insurance, within 10 days after personal delivery or deposit in the mail of the notification of acceptance.

Notice of acceptance or request for additional information may be addressed to the Bidder at the address provided.

The undersigned hereby certifies under penalty of perjury under the laws of the State of California that all the information submitted by the bidder in connection with this proposal and all the representations herein made are true and correct.

\_\_\_\_\_ CSLB License No.: \_\_\_\_\_ Exp: \_\_\_\_\_  
Firm Name

\_\_\_\_\_ DIR Registration No.: \_\_\_\_\_  
Address

\_\_\_\_\_ Phone: \_\_\_\_\_

\_\_\_\_\_ Email: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION 00500**

**PAYMENT BOND  
(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, the Contra Costa Community College District (sometimes referred to hereinafter as "Obligee") has awarded to \_\_\_\_\_ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: \_\_\_\_\_ (hereinafter referred to as the "Public Work"); and

WHEREAS, said Contractor is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code Section 9550;

NOW, THEREFORE, We, \_\_\_\_\_, the undersigned Contractor, as Principal; and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the Contra Costa Community College District and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code Section 9100, or any person, company, or corporation entitled to make a claim on this bond, in the sum of \_\_\_\_\_ Dollars (\$ \_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code Section 9100; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code Section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code Sections 9550 et seq.

This bond shall inure to the benefit of any person named in Civil Code Section 9100 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance, addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or

pertaining or relating to the furnishing of labor, materials, or equipment therefor; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the Obligee and the Contractor or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code Sections 9100, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

PRINCIPAL/CONTRACTOR:

\_\_\_\_\_

By: \_\_\_\_\_

SURETY:

\_\_\_\_\_

By: \_\_\_\_\_

Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service for service of process in California)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Telephone: \_\_\_\_\_

STATE OF CALIFORNIA )

) ss.

COUNTY OF )

On \_\_\_\_\_ before me, \_\_\_\_\_,  
(insert name and title of the officer)

a Notary Public in and for said State, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument as the Attorney-in-Fact of the \_\_\_\_\_ (Surety) and acknowledged to me that he/she/they subscribed the name of the \_\_\_\_\_ (Surety) thereto and his own name as Attorney-in-Fact on the executed instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(SEAL)

\_\_\_\_\_  
Notary Public in and for said State

Commission expires: \_\_\_\_\_

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

**CONTRACT PERFORMANCE BOND  
(CALIFORNIA PUBLIC WORK)**

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Contra Costa Community College District (sometimes referred to hereinafter as "Obligee") has awarded to \_\_\_\_\_ (hereinafter designated as the "Principal" or "Contractor"), an agreement for the work described as follows: \_\_\_\_\_ (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the Contractor is more particularly set forth in that certain contract for said Public Work dated \_\_\_\_\_, (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the Contractor is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, \_\_\_\_\_, the undersigned Contractor, as Principal, and \_\_\_\_\_, a corporation organized and existing under the laws of the State of \_\_\_\_\_, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto the Contra Costa Community College District in the sum of \_\_\_\_\_ Dollars (\$\_\_\_\_\_), said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded Contractor, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

The Surety, for value received, hereby stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any change, extension of time, alteration in or addition to the terms of the contract or to the work to be performed there under or the specifications accompanying the same, nor by any change or modification to any terms of payment or extension of time for any payment pertaining or relating to any scheme of work of improvement under the contract. Surety also stipulates and agrees that it shall not be exonerated or released from the obligation of this bond (either by total exoneration or pro tanto) by any overpayment or underpayment by the Obligee that is based upon estimates approved by the Architect. The Surety stipulates and agrees that none of the aforementioned

changes, modifications, alterations, additions, extension of time or actions shall in any way affect its obligation on this bond, and it does hereby waive notice of any such changes, modifications, alterations, additions or extension of time to the terms of the contract, or to the work, or the specifications as well notice of any other actions that result in the foregoing.

Whenever Principal shall be, and is declared by the Obligee to be, in default under the Contract, the Surety shall promptly either remedy the default, or shall promptly complete the Contract through its agents or independent contractors, subject to acceptance and approval of such agents or independent contractors by Obligee as hereinafter set forth, in accordance with its terms and conditions and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages; or, at Obligee's sole discretion and election, Surety shall obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by Obligee of the lowest responsible bidder, arrange for a contract between such bidder and the Obligee and make available as Work progresses (even though there should be a default or succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the "balance of the Contract price" (as hereinafter defined), and to pay and perform all obligations of Principal under the Contract, including, without limitation, all obligations with respect to warranties, guarantees and the payment of liquidated damages. The term "balance of the Contract price," as used in this paragraph, shall mean the total amount payable to Principal by the Obligee under the Contract and any modifications thereto, less the amount previously paid by the Obligee to the Principal, less any withholdings by the Obligee allowed under the Contract.

Surety expressly agrees that the Obligee may reject any agent or contractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal. Unless otherwise agreed by Obligee, in its sole discretion, Surety shall not utilize Principal in completing the Contract nor shall Surety accept a bid from Principal for completion of the work in the event of default by the Principal.

No final settlement between the Obligee and the Contractor shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

The Contractor and Surety shall remain responsible and liable for all patent and latent defects that arise out of or are related to the Contractor's failure and/or inability to properly complete the Public Work as required by the Contract and the Contract Documents. The obligation of the Surety hereunder shall continue so long as any obligation of the Contractor remains.

Contractor and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, Contractor and Surety shall pay Obligee's reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

PRINCIPAL/CONTRACTOR:

\_\_\_\_\_

By: \_\_\_\_\_

SURETY:

\_\_\_\_\_

By: \_\_\_\_\_

Attorney-in-Fact

The rate of premium on this bond is \_\_\_\_\_ per thousand.

The total amount of premium charged: \$\_\_\_\_\_ (This must be filled in by a corporate surety).

**IMPORTANT:      THIS IS A REQUIRED FORM.**

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)

(Name and Address of agent or representative for service for service of process in California)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Telephone: \_\_\_\_\_

Telephone: \_\_\_\_\_

STATE OF CALIFORNIA )  
 ) ss.  
COUNTY OF )

On \_\_\_\_\_ before me, \_\_\_\_\_  
(insert name and title of the officer)

On \_\_\_\_\_, before me, \_\_\_\_\_, a Notary

Public in and for said State, personally appeared \_\_\_\_\_, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument as the Attorney-in-Fact of the \_\_\_\_\_ (Surety) and acknowledged to me that he/she/they subscribed the name of the \_\_\_\_\_ (Surety) thereto and his own name as Attorney-in-Fact on the executed instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

\_\_\_\_\_  
Notary Public in and for said State

(SEAL)

Commission expires: \_\_\_\_\_

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.



**SECTION 00510  
NOTICE OF AWARD**

DATE: \_\_\_\_\_

TO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PROJECT: C-608 PE/K SERVICE ROAD RE-PAVING

The Contract Sum of your contract is \_\_\_\_\_ Dollars,  
(\$\_\_\_\_\_).

You must comply with the following conditions within **ten (10)** calendar days of the date of this Notice of Award, that is, by \_\_\_\_\_.

1. You must deliver to the District two fully executed counterparts of Section 00600, "Construction Agreement."
2. You must deliver to the District the "Contract Performance Bond," and "Payment Bond," executed by you and your surety, which are included in Section 00500.
3. You must deliver to the District the Contractor's CPM Schedule, prepared in Microsoft Project format, including both PDF and electronic file for the District's review.

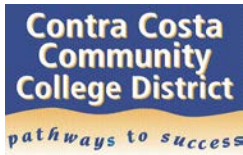
Failure to comply with these conditions within the time specified will entitle District to consider your bid abandoned, to annul this Notice of Award, and to declare your Bid Security forfeited. Within **ten (10)** calendar days after you comply with these conditions, the District will return to you one fully signed counterpart of the Construction Agreement.

Contra Costa Community College District

By: \_\_\_\_\_

Title: \_\_\_\_\_

**END OF DOCUMENT**



**CONTRACT NO.** \_\_\_\_\_  
(Construction Agreement)

=====

**1. SPECIAL TERMS.** These special terms are incorporated below by reference.

(§1.1) Parties: (Public Agency) CONTRA COSTA COMMUNITY COLLEGE DISTRICT  
500 Court St, Martinez, CA 94553

(Contractor) \_\_\_\_\_  
Address: \_\_\_\_\_

(§1.2) Effective Date: See **Section (§1.4) Completion Time**, below

(§1.3) The Work: **C-608 PE/K SERVICE ROAD RE-PAVING**

(§1.4) Completion Time: **42 Calendar Days** from the Notice to Proceed to Substantial Completion, and **15 Calendar Days** from Substantial Completion to Final Completion (Remaining Work).

(§1.5.1) Liquidated Damages, Substantial Completion: **\$750** per Calendar Day beyond the Contract Substantial Completion Date.

(§1.5.2) Liquidated Damages, Remaining Work/Final Completion: **\$250/** per Calendar Day Remaining Work is delayed beyond the Contract Final Completion Date.

(§1.6) Public Agency's Agent: **CONTRA COSTA COMMUNITY COLLEGE DISTRICT (The District)**

(§1.7) Contract Price: \_\_\_\_\_

**2. SCOPE OF WORK**

The scope of work includes general construction including, but not limited to: general site work, demolition, excavation, earthwork, grading, compaction, paving, striping a service road at the renovated PE/K Complex, Contra Costa College, 2600 Mission Bell Drive, San Pablo, California 94806. Scope of Work includes 2 Add Alternates. For the complete scope of work, see SECTION 00010 Table of Contents, for the list of the Contract Drawings and Specifications.

**3. WORK CONTRACT, CHANGES**

(a) By their signatures below, effective on the above date, these parties promise and agree as set forth in this Agreement, incorporating by these references labor and materials contained in Section 2, Scope of Work.

(b) Contractor shall, at Contractor's own cost and expense, and in a workmanlike manner, fully and faithfully perform and complete the work; and will furnish all materials, labor, services, equipment, and transportation necessary, convenient and proper in order fairly to perform the requirements of this

contract, all strictly in accordance with the Scope of Work in Section 2 above, and the Public Agency's plans, drawings and specifications, and with Supplementary General Conditions, if any.

- (c) The work can be changed only with Public Agency's prior written order specifying such change and its cost agreed to by the parties; and the Public Agency shall never have to pay more than specified in Section 7 without such an order.

**4. TIME: NOTICE TO PROCEED**

Contractor shall start this work as directed in Section 1.4 Completion Time above or as directed by the Notice to Proceed, if any, and shall complete it as specified in Section 1.4, Completion Time.

**5. LIQUIDATED DAMAGES**

If the Contractor fails to complete this contract and this work within the time fixed therefore, allowance being made for contingencies as provided herein, he becomes liable to the Public Agency for all its loss and damage there from; and because, from the nature of the case, it is and will be impracticable and extremely difficult to ascertain and fix the Public Agency's actual damage from any delay in performance hereof, it is agreed that Contractor will pay as liquidated damages to the Public Agency the reasonable sum specified in Section 1, the result of the parties' reasonable endeavor to estimate fair average compensation therefore, for each calendar day's delay in finishing said work; and if the same be not paid, Public Agency may, in addition to its other remedies, deduct the same from any money due or to become due Contractor under this contract. If the Public Agency for any cause authorizes or contributes to a delay, suspension of work or extension of time, its duration shall be added to the time allowed for completion, but it shall not be deemed a waiver nor be used to defeat any right of the Agency to damages for non-completion or delay hereunder. Pursuant to Government Code Section 4215, the Contractor shall not be assessed liquidated damages for delay in completion of the work, when such delay was caused by the failure of the Public Agency or the owner of a utility to provide for removal or relocation of existing utility facilities.

**6. INTEGRATED DOCUMENTS**

The plans, drawings and specifications or special provisions of the Public Agency's call for bids, and Contractor's accepted bid for this work are hereby incorporated into this contract; and they are intended to cooperate, so that anything exhibited in the plans or drawings and not mentioned in the specifications or special provisions, or vice versa, is to be executed as if exhibited, mentioned and set forth in both, to the true intent and meaning thereof when taken all together; and differences of opinion concerning these shall be finally determined by the Public Agency.

**7. PAYMENT**

- (a) For strict and literal fulfillment of these promises and conditions, and full compensation for all this work, the Public Agency shall pay the Contractor the sum specified in Section 1, except that in unit price contracts the payment shall be for finished quantities at unit bid prices.
- (b) On or about the first day of each calendar month, the Contractor shall submit to the Public Agency a verified application for payment, supported by a statement showing all materials actually installed during the preceding month, the labor expended thereon, and the cost thereof; whereupon, after checking, the Public Agency shall issue to Contractor a certificate for the amount determined to be due, minus five (5%) percent thereof, but not until defective work and materials have been removed, replaced and made good. Payment of the approved amount will be made to the Contractor within 30 calendar days from the date the Public Agency approves in writing the Contractor's application for payment.

## 8. PAYMENTS WITHHELD

- (a) The Public Agency or its agent may withhold any payment, or because of later discovered evidence nullify all or any certificate for payment, to such extent and period of time only as may be necessary to protect the Public Agency from loss because of:
  - (1) Defective work not remedied, or work not completed, or
  - (2) Claims filed or reasonable evidence indicating probable filing, or
  - (3) Failure to properly pay subcontractors or for material or labor, or
  - (4) Reasonable doubt that the work can be completed for the balance then unpaid, or
  - (5) Damage to another contractor, or
  - (6) Damage to the Public Agency, other than damage due to delays.
- (b) The Public Agency shall use reasonable diligence to discover and report to the Contractor, as the work progresses, the materials and labor which are not satisfactory to it, so as to avoid unnecessary trouble or cost to the Contractor in making good any defective work or parts.
- (c) Thirty-five (35) calendar days after Public Agency files its notice of completion of the entire work, it shall issue a certificate to the Contractor and pay the balance of the contract price after deducting all amounts withheld under this contract, provided the Contractor shows that all claims for labor and materials have been paid, no claims have been presented to the Public Agency based on acts or omissions of the Contractor, and no liens or withhold notices have been filed against the work or site, and provided there are not reasonable indications of defective or missing work or of late-recorded notices of liens or claims against Contractor.

## 9. INSURANCE

Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California as admitted carriers, or a District approved equal, with a financial rating of at least A status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the Public Agency from claims set forth below, which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

- (a) Claims for damages because of bodily injury, sickness, disease, or death of any person District would require indemnification and coverage for employee claim;
- (b) Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;
- (c) Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;
- (d) Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;
- (e) Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and
- (f) Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)
- (g) Claims involving sudden or accidental discharge of contaminants or pollutants.

**Additional Insured Endorsement Requirement:** The Contractor shall name, on any policy of insurance, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured. Subcontractors shall name the Contractor, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured. The Additional Insured Endorsement included on all such insurance policies shall state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the Additional Insured, have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor must be designated in the policy as primary to any insurance obtained by the Public Agency. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

**Specific Insurance Requirement:** Contractor shall take out and maintain and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

- (a) Comprehensive General Liability Insurance with an aggregate of not less than \$2,000,000.00; Per occurrence, \$1,000,000.00
- (b) Automotive (any auto) where operated in amounts \$1,000,000.00
- (c) Workers' Compensation Insurance: \$1,000,000.00; Contractor is aware of and complies with Labor Code Section 3700 and the Worker's Compensation Law.

## 10. BONDS

**(Not Required for Public Projects below \$25,000; Civil Code 9550; Public Contract Code 7103.)**

**Bond Requirements:** Prior to commencing any portion of the Work, the Contractor shall furnish separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the Public Agency, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the Public Agency. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bonds, the Public Agency may terminate the Contract for cause.

On signing this contract, Contractor shall deliver to Public Agency for approval good and sufficient bonds with sureties, in amount(s), specified in the specifications or special provisions, guaranteeing faithful performance of this contract and payment for all labor and materials hereunder.

## 11. FAILURE TO PERFORM

If the Contractor at any time refuses or neglects, without fault of the Public Agency or its agent(s), to supply sufficient materials or workers to complete this agreement and work as provided herein, for a period of ten days or more after written notice thereof by the Public Agency, the Public Agency may furnish same and deduct the reasonable expenses thereof from the contract price.

## 12. LAWS APPLY: General

Both parties recognize the applicability of various federal, state and local laws and regulations, especially Chapter 1 of Part 7 of the California Labor Code (beginning with Section 1720, and including Sections 1735, 1777.5, 1777.6, forbidding discrimination) and intend that this agreement complies therewith. The parties specifically stipulate that the relevant penalties and forfeitures provided in the Labor Code, especially in

Sections 1775, 17776, and 1813, concerning prevailing wages and hours, shall apply to this agreement as though fully stipulated herein.

### **13. REGISTRATION WITH DEPARTMENT OF INDUSTRIAL RELATIONS**

Contractor shall be registered pursuant to Section 1725.5 of the California Labor Code to be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any public work contract that is subject to the requirements of Section 1725.5. For the purposes of this requirement, "contractor" includes a subcontractor as defined by Labor Code Section 1722.1.

The requirement to list only registered contractors and subcontractors on bids becomes effective on March 1, 2015. The requirement to only use registered contractors and subcontractors on public works projects applies to all projects awarded on or after April 1, 2015.

### **14. SUBCONTRACTORS**

Public Contract Code Sections 4100-4113 are incorporated herein.

### **15. WAGE RATES**

- (a) Pursuant to Labor Code Section 1773, the Director of the Department of Industrial Relations has ascertained the general prevailing rates of wages per diem, and for holiday and overtime work, in the locality in which this work is to be performed, for each craft, specified in the call for bids for this work and are on file with the Public Agency, and are hereby incorporated herein.
- (b) This schedule of wages is based on a working day of eight (8) hours unless otherwise specified; and the daily rate is the hourly rate multiplied by the number of hours constituting the working day. When less than that number of hours are worked, the daily wage rate is proportionately reduced, but the hourly rate remains as stated.
- (c) The Contractor, and all subcontractors, must pay at least these rates to all persons on this work, including all travel, subsistence, and fringe benefit payments provided for by applicable collective bargaining agreements. All skilled labor not listed above must be paid at least the wage scale established by collective bargaining agreement for such labor in the locality where such work is being performed. If it becomes necessary for the Contractor or any subcontractor to employ any person in a craft, classification or type of work (except executive, supervisory, administrative, clerical or other non-manual workers as such) for which no minimum wage rate is specified, the contractor shall immediately notify the Public Agency which shall promptly determine the prevailing wage rate therefore and furnish the Contractor with the minimum rate based thereon, which shall apply from the time of the initial employment of the person affected and during the continuance of such employment.

### **16. HOURS OF LABOR**

Eight hours of labor in one calendar day constitutes a legal day's work, and no worker employed at any time on this work by the Contractor or by any subcontractor shall be required or permitted to work longer thereon except as provided in Labor Code Sections 1810-1815.

### **17. APPRENTICES**

Properly indentured apprentices may be employed on this work in accordance with Labor Code Sections 1777.5 and 1777.6, forbidding discrimination.

**18. SUBMISSION OF CERTIFIED PAYROLL RECORDS**

Contractors and subcontractors on all public works projects will be required to submit certified payroll records (CPRs) to the Labor Commissioner unless excused from this requirement. This requirement will be phased in as follows:

- (a) Applies immediately to public works projects that have already been under CMU monitoring, i.e. contractors on ongoing projects that have been submitting CPRs to the CMU will continue doing so.
- (b) Will apply to any new projects awarded on or after April 1, 2015.
- (c) May apply to other projects as determined by Labor Commissioner.
- (d) Will apply to all public works projects, new or ongoing, on and after January 1, 2016.

**19. PREFERENCE FOR MATERIALS**

The Public Agency desires to promote the industries and economy of Contra Costa County, and the Contractor therefore promises to use the products, workers, laborers and mechanics of this County in every case where the price, fitness and quality are equal.

**20. ASSIGNMENT**

This agreement binds the heirs, successors, assigns, and representatives of the Contractor; but Contractor cannot assign it in whole or in part, nor any monies due or to become due under it, without the prior written consent of the Public Agency and the Contractor's surety or sureties, unless they have waived notice of assignment.

**21. NO WAIVER BY PUBLIC AGENCY**

Inspection of the work and/or materials, or approval of work and/or materials inspected, or statement by any officer, agent or employee of the Public Agency indicating the work or any part thereof complies with the requirements of this contract, or acceptance of the whole or any part of said work and/or materials, or payments therefore, or any combination of these acts, shall not relieve the Contractor of Contractor's obligation to fulfill this contract as prescribed; nor shall the Public Agency be thereby stopped from bringing any action for damages or enforcement arising from the failure to comply with any of the terms and conditions hereof.

**22. HOLD HARMLESS AND INDEMNITY**

- (a) Contractor promises to and shall hold harmless and indemnify from the liabilities as defined in this section.
- (b) The indemnities benefited and protected by this promise are the Public Agency and its elective and appointive boards, commissions, officers, agents and employees.
- (c) The liabilities protected against are any liability or claim for damage of any kind allegedly suffered, incurred or threatened because of actions defined below, including personal injury, death, property damage, inverse condemnation, or any combination of these, regardless of whether or not such liability, claim or damage was unforeseeable at any time before the Public Agency approved the improvement plan or accepted the improvements as completed, and including the defense of any suit(s) or action(s) at law or equity concerning these.
- (d) The actions causing liability are any act or omission (negligent or non-negligent) in connection with the matters covered by this contract and attributable to the contractor, subcontractor(s), or any officer(s), agent(s), or employee(s) of one or more of them.
- (e) Non-conditions: The promise and agreement in this section is not conditioned or dependent on whether or not any Indemnities has prepared, supplied, or approved any plan(s), drawing(s), specifications(s) or special provision(s) in connection with this work, has insurance or other indemnification covering any of

these matters, or that the alleged damage resulted partly from any negligent or willful misconduct of any Indemnities.

**23. EXCAVATION**

Contractor shall comply with the provisions of Labor Code Section 6705, if applicable, by submitting to Public Agency a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during trench excavation.

**24. GOVERNMENT CODE SECTION 10532**

Contractor shall be subject to the examination and audit of the Auditor General for a period of three years after final payment under the contract.

**25. WARRANTY**

The Contractor warrants to the Public Agency that materials and equipment furnished under the Contract will be of good quality and new unless otherwise required or permitted by the Contractor Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work shall conform to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. The Contractor's warranty excludes remedy for damage or defect caused by abuse, modifications not executed by the Contractor improper or insufficient maintenance, improper operation, or normal wear and tear and normal usage.

**26. CONSEQUENTIAL DAMAGES**

The Contractor and Public Agency waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

- (a) Damages incurred by the Public Agency for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
- (b) Damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.
- (c) This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination. Nothing contained in this subparagraph shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

**27. HAZARDOUS MATERIALS**

- (a) If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos, lead or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Public Agency in writing.
- (b) The Public Agency shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. The Public Agency shall furnish in writing to the Contractor the names and qualifications of persons or entities who are to perform tests verifying the



presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written notification from the Public Agency and Contractor. The Contract Time shall be extended appropriately.

**28. SAFETY:**

- (a) **Safety Programs.** The Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code §§8350 et seq.). Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs. Prior to commencement of Work, the Contractor shall meet with the campus Buildings and Grounds Manager, Project Manager, and Construction Manager to review Contractor's safety precautions and implementation of safety programs during the Work.
- (b) **Safety Precautions.** The Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall take adequate precautions and measures to protect existing roads, sidewalks, curbs, pavement, utilities, adjoining property and improvements thereon (including without limitation, protection from settlement or loss of lateral support) and to avoid damage thereto. Without adjustment of the Contract Price or the Contract Time, the Contractor shall repair, replace or restore any damage or destruction of the foregoing items as a result of performance or installation of the Work.
- (c) **Safety Signs, Barricades.** The Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.
- (d) **Safety Notices.** The Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.
- (e) **Safety Coordinator.** The Contractor shall designate a responsible member of the Contractor's organization at the Site whose duty shall be the prevention of accidents and the implementation and maintenance safety precautions and programs. This person shall be the Contractor's superintendent unless otherwise designated by the Contractor in writing to the Project Inspector and the Architect.

**29. SIGNATURES AND ACKNOWLEDGEMENT**

**Public Agency:**

By: \_\_\_\_\_  
Assistant Secretary, Governing Board  
**AMY STERRY, Director of Purchasing & Contracts**

**Note to Contractor:** (1) Execute acknowledgement form below, and (2) if a corporation, affix Corporate Seal.

**Contractor** hereby also acknowledging awareness of and compliance with Labor Code S1861 concerning Worker's Compensation Law.

**Contractor:**

By: \_\_\_\_\_ (CORPORATE SEAL)  
(Designate Official Capacity – **NAME**)

\_\_\_\_\_  
Print NAME and TITLE

\_\_\_\_\_  
License Number

\_\_\_\_\_  
Federal ID Number

**NOTARY PUBLIC**

=====

STATE OF CALIFORNIA            )  
  ) ss.  
COUNTY OF CONTRA COSTA    )

On \_\_\_\_\_, before me, \_\_\_\_\_, Notary Public,

personally appeared \_\_\_\_\_, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing is true and correct.

Witness my hand and official seal.

\_\_\_\_\_

Notary Public

[SEAL]

=====

**SECTION 00650**

**NOTICE TO PROCEED**

DATE: \_\_\_\_\_

TO: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
\_\_\_\_\_

PROJECT: C-608 PE/K Service Road Re-Paving \_\_\_\_\_

You are notified that the Contract Time under the above contract will commence to run on \_\_\_\_\_. By that date, you are to start performing your obligations under the Contract Documents. In accordance with Section 00600, Construction Agreement, the date of Substantial Completion is \_\_\_\_\_, and the date for Final Completion is \_\_\_\_\_.

CONTRA COSTA COMMUNITY COLLEGE DISTRICT

By : \_\_\_\_\_

Ines Zildzic  
Vice Chancellor, Facilities Planning and Construction

**END OF SECTION 00650**

**SECTION 00800**  
**SUPPLEMENTARY GENERAL CONDITIONS**

**PART 1 - GENERAL**

**1.1 SCOPE OF WORK**

- A. Refer to Scope of Work in Section 00600 Construction Agreement.

**1.2 REFERENCES**

- A. The publications listed below form a part of this specification by reference.
1. Current California Occupational Safety and Health Act Regulations
  2. Current California Occupational Safety and Health Construction Safety Orders
  3. This work will be contracted using the District's Short Form Construction Agreement; See Section 00600.

**1.3 SUBMITTALS**

- A. Provide submittals in the format, and as described below:
1. **Submittals shall be submitted to the District, electronically in PDF format, within four (4) Calendar Days from the Notice to Proceed, except as otherwise noted.**
  2. Not used.
  3. Submittals that require local and State agency approval, shall conform to this Specification and the requirements of the local or State agency.
  4. **District will review and provide a response to submittals within seven (7) calendar days (excluding holidays).** Submittals that include design documents prepared by a licensed California Engineer will be submitted for the District's records. Any District review and response to the Contractor's design documents by a licensed California Engineer will be for format and general compliance only. Contractor and Contractor's licensed California Engineer are responsible for compliance with all applicable State of California codes, laws, and regulations applicable to this project.
- B. Provide submittals for all equipment and materials, if any, listed on the Drawings or in the Specifications.
- C. The **Schedule of Values** shall be submitted to the District within seven (7) calendar days after the Notice of Award. The Schedule of Values shall be broken down by the following minimum categories:
1. Mobilization/Fencing/Temporary Signage
  2. Demolition of Existing Paved Areas (Separate Activities for Alt 1 & Alt 2, if accepted)
  3. Install Aggregate Base (Separate Activities for Alt 1 & 2, if accepted)
  4. Install New Pavement (Separate Activities for Alt 1 & Alt 2, if accepted)

5. Install Asphalt Striping (Separate Activities for AI 1 & Alt 2, if accepted)
6. Other
7. Demobilization and Final Cleaning of Site
8. Owner and Maintenance Manuals and Warranties
9. As-Built Drawings

The District will only pay for Work installed at the Site.

- D.** CPM construction schedule shall be submitted within **seven (7) calendar days** from the Contract Award date. District and Contractor shall meet and review the schedule. The Notice to Proceed will not be issued until the District accepts the schedule or accepts it with conditional changes. Below are the minimum activity types that shall be included in the schedule:

1. Contractor Submittals Per Contract Documents
2. Submittal Reviews by District
3. Procurement and Fabrication of Equipment and Materials
4. Construction activities corresponding to the above Schedule of Values
5. Substantial Completion Milestone
6. Contractor Punch List Activities
7. Project Closeout Activities.
8. Final Completion Milestone

- E.** Submittals are for review of conformance with the requirements of the Contract.

#### **1.4 SUBSTITUTIONS.**

- A.** *One Product Specified.* Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific material, product, thing or service, or any specific name, make, trade name, or catalog number, with or without the words “or equal,” such specification shall be deemed to be used for the purpose of facilitating description of the material, product, thing or service desired and shall be deemed to be followed by the words “or equal” unless the Contract Documents specify “no substitution allowed”, “no equal”, “no equivalent”, or other language with similar meaning, in which case no substitutions will be allowed. Pursuant to Paragraph 1.3.F.3, the Contractor may, unless otherwise stated, within three (3) workdays after the bid opening, submit a substitution request for any material, product, thing or service, which shall be materially equal or better in every respect to that so indicated or specified (“Specified Item”) and will completely accomplish the purpose of the Contract Documents.

1. *Products Specified which are Commercially Unavailable.* If the Contractor fails to make a request for substitutions for products, within three (3) workdays after bid opening, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The

decision to grant this request is solely at the District's discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or guaranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the contract sum should the substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the District, DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, all procurement and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

**B. Substitution Request Form.** Requests for substitutions of materials, products, things or services in place of a Specified Item must be submitted to the District in writing on the District's Substitution Request Form ("Request Form") within three (3) workdays after bid opening, except as provided for in Paragraph 1.3.F.1.

1. The Substitution Request Form must be accompanied by evidence as to whether the proposed substitution:
  - (a) Is equal in quality/service/ability to the Specified Item;
  - (b) Will entail no changes in detail, construction, and scheduling of related work;
  - (c) Will be acceptable in consideration of the required design and artistic effect;
  - (d) Will provide no cost disadvantage to the District;
  - (e) Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
  - (f) Will required no change of the construction schedule.
2. In completing the Substitution Request Form, the bidder shall state, with respect to each requested substitution, that the bidder will agree to provide the Specified Item if the District denies the bidder's request for such requested substitution. In the event the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District and waives all rights to submit a claim.

**C. After Bid Opening.** After bids are opened, the apparent lowest bidder shall provide, within three (3) days of opening such bids, all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Design Consultant and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

1. After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed through a Change Order. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or guaranty or

other assurances of adequate performance of the substitution. All risks of delay due to approval by the District, DSA or any other governmental agency having jurisdiction shall be on the bidder.

2. If the Design Consultant and District accept a proposed substitution, the Contractor agrees to pay for all District expenses, including but not limited to Division of the State Architect fees, engineering and design services, compensation to the Design Consultant for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Contractor Provided Materials: The Contractor provided materials shall include any associated equipment and appurtenances required for performing the contract properly and in accordance with the equipment manufacturer's literature.
- B. All materials shall be new, unless otherwise authorized or specified in the scope of work of this specification.

## **PART 3 - EXECUTION AND RELATED REQUIREMENTS**

### **3.1 GENERAL**

- A. **Work Restrictions: Below are special work restrictions for this project.**
  1. **The Contractor shall provide a staging plan to show the location of fencing and other blockades to deter faculty and students from working in the construction zones. The staging plan shall also show the location of portable toilets, equipment staging, material stockpiles, etc.**
  2. **Path of Travel: The Contractor's staging plan shall show the location of the suggested path of travel around construction zones and temporary wayfinding signage.**
  3. **Construction Parking: The Contractor will be allowed to park on site in designated areas to be determined. Contractor will need to review the proposed staging plan with the Fire District to confirm fire trucks have the code-compliant access to buildings and other structures at all times.**
  4. **At the end of each workday, the Contractor shall clean up the construction zone and areas outside the construction zone impacted by the removal of aggregate base, soil, etc.**
- B. Contractor shall provide barricades, wayfinding signage, safety signage, and COVID-19 signage around the construction site through Substantial Completion to deter access by students, faculty, and the public to areas under the control of the Contractor.
- C. Contractor will be allowed to have access and use Campus utilities for temporary water and electricity, but Contractor shall be responsible to investigate prior to bid, and for all work

necessary to connect to existing utilities for temporary use (e.g., permits from EBMUD for temporary meter on fire hydrants).

- D. Contractor shall control all construction-generated dust during construction, and clean-up said dust and debris daily to prevent migration to adjacent areas used by students and faculty.
- E. Scheduling and Coordination: Before commencing work on a specific area, the Contractor shall confirm that all requirements have been met pertaining to scheduling of the work. The Contractor shall further determine that all required written notices have been given to the District.
- F. Scheduling and Sequence of Work: The work shall be prosecuted in such a manner as to cause the least interference with the normal functions of the campus activity in the adjacent areas. Prior to beginning any work, the Contractor shall meet with the District and the Contractor's schedule shall be approved as noted in Article 1.3D above.
- G. Interruption of Utilities Services: Interruptions shall be kept to a minimum and shall be at such times and duration as approved ahead of time by the District. No interruption shall occur unless scheduled with the District and approved in advance in writing as to time and duration of such interruption. No utility interruptions that impact building operation during classes will be allowed, and these types of interruptions, if any, shall be scheduled for after normal hours when classes are not in session.
- H. Material, equipment, tools, and workers shall be scheduled and delivered to the Site in a timely manner to avoid delay in the work. Materials provided shall be inspected by the Contractor to make certain they follow the specifications and are free from defects and damage.
- I. Measurements: Before fabrication, obtain necessary field measurements and verify all measurements.
- J. **Bathroom Facilities: The Contractor will NOT be allowed to use College bathroom facilities and the Contractor shall provide porta-potties and cleaning stations to wash hands for construction personnel located at the Site. The location shall be approved in writing by the District before locating the porta-potties.**
- K. Workmanship: Skilled personnel shall execute in a careful, neat, and proficient manner and in compliance with accepted trade practices for all work. All work shall be executed in accordance with Cal/OSHA standards and safety orders. And all work on this contract shall comply with all Local, State, and Federal Environmental Laws.



L. Incidental Work: Minor incidental materials and work not specifically mentioned herein, but necessary for the proper completion of the specified work, shall be provided without additional cost to the District

M. Administrative Forms: District shall provide its standard forms for use by Contractor.

### **3.2 EXISTING CONDITIONS & DRAWINGS**

A. See Section 00210, Information Available to Bidders for documents available for review by the Contractor and its subcontractors prior to and after bid.

### **3.3 WORK BY CALIFORNIA LICENSED ENGINEER**

A. Note that modifications to existing building structures, fire systems, or ADA changes, if any are discovered during construction, will require DSA approval. Contractor will be granted a non-compensable time extension for the duration it takes to obtain DSA approval. A change order will be negotiated for added direct labor field construction costs, if any.

### **3.4 NOISE CONTROL**

A. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to building occupants.

1. Notify District's Representative not less than two days in advance of proposed disruptive operations.
2. Obtain District's Representative's written permission before proceeding with disruptive operations.

### **3.5 Not Used**

### **3.6 PROJECT CLOSEOUT REQUIREMENTS (After Substantial Completion & Before Final Completion)**

- A. Refer to the Drawings listed in Section 00010, Table of Contents for requirements, and these Supplementary General Conditions.
- B. Provide final clean-up of Site prior to Final Completion.
- C. Warranty
  1. The Contractor warrants to the District that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty and guaranty to District includes, but is not limited to the following representations:
    - a. In addition to any other warranties and guaranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the Certificate of Substantial Completion date issued by District and shall repair or replace any or all such work, together with any other work, which may be displaced in so

- doing that may prove defective in workmanship or materials within a one (1) year period from date of completion as defined in Public Contract Code Section 7107(c) without expense whatsoever to District, ordinary wear and tear, unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.
- b. In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.
  - c. If, in the opinion of the District, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the District, the District will attempt to give the notice required by this Article. If the Contractor cannot be contacted or does not comply with the District's requirements for correction within a reasonable time as determined by the District, the District may, notwithstanding the provisions of this article, proceed to make such correction or attention which shall be charged against Contractor. Such action by the District will not relieve the Contractor of the guarantee provided in this Article or elsewhere in this Contract.
  - d. This Article does not in any way limit the guarantee on any items for which a longer warranty or guaranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guaranty or warranty certificates upon completion of the project.
2. Format - All Warranties/Guaranties and shall include:
    - a. Contractor, subcontractor, and equipment supplier shall provide Warranties and Guaranties on their original company letterhead with original signature.
    - b. Contractor shall provide original Warranties and Guaranties. Photocopies, fax, and e-mail copies are not acceptable.
  3. Preparation
    - a. Contractor shall obtain warranties and guaranties, executed in duplicate by each applicable and/or responsible subcontractor(s), supplier(s), and manufacturer(s), within fifteen (15) days after Certificate of Substantial Completion date of the applicable Work. Except for items put into use with District's permission, Contractor shall leave date of beginning of time of warranty or guaranty blank until the date of completion is determined by District.
    - b. Contractor's Response to Construction Warranty and Guaranty Service Requirements: Following oral or written notification by the District, respond to construction warranty and guaranty service requirements within 24 hours, or earlier in case of emergency.
  4. Warranty and/or Guaranty Tags
    - a. At the time of installation of mechanical equipment or other major system elements, tag each warranted or guaranteed item with a durable, oil and water-resistant tag approved by the District. Attached each tag with a copper

wire and spray with a silicone waterproof coating. The date of Substantial Completion and the Contractor Authorized signature must remain blank until the date the District makes a determination of Substantial Completion. Show the following information on the tag:

**WARRANTY/GUARANTY INFORMATION – [insert project number and name on actual tag]**

- a. Type of product/material \_\_\_\_\_.
- b. Model number \_\_\_\_\_.
- c. Serial number \_\_\_\_\_.
- d. Contract number \_\_\_\_\_.
- e. Warranty/Guaranty period \_\_\_\_\_ (months) from \_\_\_\_\_ to \_\_\_\_\_.
- f. Inspector's signature \_\_\_\_\_.
- g. Construction Contractor \_\_\_\_\_.  
Address \_\_\_\_\_.  
Telephone number \_\_\_\_\_.
- h. Warranty or Guaranty contact \_\_\_\_\_.  
Address \_\_\_\_\_.  
Telephone number \_\_\_\_\_.
- i. **WARNING - PROJECT PERSONNEL TO PERFORM ONLY OPERATIONAL MAINTENANCE DURING THE WARRANTY PERIOD.**

**3.7 Project As-Built**

- A.** Contractor shall dedicate one complete full-size set of the Contract Drawings and one complete Project Manual for use in documenting as-built conditions, including but not limited to; RFIs, ASI, PCOs and Change Order.
- B.** Contractor shall submit to District in hard copy one original and two copies of all Project As-Built Documents. In addition, one electronic copy shall be submitted to District. District reserves the right to require resubmittal in accordance with these Supplementary General Conditions if the documents are inaccurate or incomplete, or otherwise fail to meet the requirements of these Contract Documents.
- C.** Electronic Media Format: Electronic media format for all Project As-Built Documents shall be Adobe PDF, with chapter markers and/or bookmarks inserted in place of the equivalent hard copy section tabs. Electronic copy shall include all tables, charts, drawings, codes, and all other matters reflected in hard copies. Electronic media files shall be delivered on a unique CD-ROM or flash drive.

**3.8 TIME OF COMPLETION**

- A.** See Section 00300, Bid Proposal Form for specific requirements to complete the Work. Time requirements are also included in Section 00600, Construction Agreement.
- B.** Substantial Completion: The date on which the Work or designated portion thereof, as certified by the District and Architect, is sufficiently complete, in accordance with the Contract Documents, so the District may occupy or utilize the Work or designated portion thereof for the use for which it is intended.
- C.** Remaining Work after Substantial Completion: If the Architect or District determines that the work required by the Contract is Substantially Complete during any inspection conducted

pursuant to this Agreement, the Contractor shall be notified of that determination and the District shall determine if there is Remaining Work. A list of Remaining Work shall be issued only by the District or the Architect and only after the District has certified Substantial Completion. The District or Architect shall give the Contractor the necessary instructions for correction or completion of the Remaining Work, and the Contractor shall immediately comply with and execute such instructions within the Contract Time. Upon completion of the Remaining Work, another inspection shall be made that shall constitute the Final Inspection, provided the Remaining Work has been completed to the satisfaction of the District. If the remaining work has been completed to the satisfaction of the District, the District shall make the final acceptance and notify the Contractor in writing of this acceptance as of the date of Final Inspection.

- D. Final Completion:** The date when all Work for the total project has been completed in accordance with the terms of the Contract Documents and has been inspected following completion of Work identified in the Punch List Inspection and accepted by the Architect and the District. Final Completion is also sometimes referred to as Final Acceptance.

### ~~3.9 ADDITIONAL REQUIREMENTS FOR DSA APPROVED PROJECTS~~

- ~~A. All substitutions affecting DSA regulated items shall be considered as a Construction Change Document or Addenda and shall be approved by DSA prior to fabrication and installation, as required by IR A-6 and Section 4-338(c), Part 1. Substitutions shall be for any material, system or product that would otherwise be regulated by DSA.~~
- ~~B. All Addenda must be signed by **Engineer of Record** and approved by DSA (Section 4-338, Part 1).~~
- ~~C. The Construction Change Documents (Section 4-338(c), Part 1) must be signed by all the following:~~
- ~~1. A/E of Record~~
  - ~~2. Structural Engineer (when applicable)~~
  - ~~3. Delegated Professional Engineer (when applicable)~~
  - ~~4. DSA~~



**CONTRA COSTA COMMUNITY COLLEGE DISTRICT**

500 Court Street, Martinez, CA 94553

**SUBSTITUTION REQUEST FORM**

Contractor Name: _____
Contract #: _____

RFS # \_\_\_\_\_ Date: \_\_\_\_\_

DSA Application #: \_\_\_\_\_

Campus: Contra Costa College

Project No., Name: \_\_\_\_\_

Contractor pursuant to General Conditions submits the proposed items. If the District accepts such items so described, the undersigned may furnish such item with all necessary labor, materials, equipment and incidentals to perform and complete the Work.

Item No.	SPECIFIED ITEM OR DRAWING	SPECIFICATION SECTION	PROPOSED SUBSTITUTION (and name of Subcontractor if different)

**CERTIFICATION**

Under penalty of perjury under the Laws of California, I certify that the proposed substitution will be readily available, perform adequately the functions and achieve the results called for by the design concept, be similar in substance to that specified, and be suited to the same use as that specified in Contract Documents.

Contractor: \_\_\_\_\_  
(Please print name of company) Name and Title (print/type) Contractor Authorized Representative Date

A. Does the substitution affect dimensions shown on Drawings?
B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution?
C. What effect does the substitution have on other trades?
D. Will substitution cause change to Project Schedule, or to critical delivery dates? Add ? Shorten ?
E. Differences between proposed substitution and specified item?
F. What is the Cost Differential including all mark-ups?
G. Are Manufacturer's guarantees for the proposed item the same as for item specified? Explain differences.
H. The undersigned accepts full responsibility for delays caused by redesign of other items of the Work necessitated by substitution.
I. The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

<b>A/E Response:</b> <input type="radio"/> Accepted <input type="radio"/> Not Accepted <input type="radio"/> Accepted As Noted <input type="radio"/> Received Too Late BY: _____ Date: _____	<b>District Representative Response:</b> <input type="radio"/> Accepted <input type="radio"/> Not Accepted <input type="radio"/> Accepted As Noted <input type="radio"/> Received Too Late By: _____ Date: _____
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**END OF SECTION 00800**

## SECTION 01572

### STORM WATER POLLUTION PREVENTION – LESS THAN AN ACRE

#### PART 1 - GENERAL

##### 1.1 RELATED DOCUMENTS

- A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

##### 1.2 RELATED DOCUMENTS SPECIFIED IN OTHER SECTIONS

- ~~A. Section 01010 – “Summary of Work” - NOT USED~~
- ~~B. Section 01015 – “Project Phasing” - NOT USED~~
- ~~C. Section 01050 – “Field Engineering” - NOT USED~~
- ~~D. Section 01330 – “Submittal Procedures” - NOT USED~~
- ~~E. Section 01410 – “Regulatory Requirements” - NOT USED~~
- ~~F. Divisions 2 through 16 Sections for Storm Water Prevention Plan requirements for the work in those sections. - NOT USED~~

##### 1.3 REFERENCES

- A. California Stormwater Quality Association (CASQA) – Construction Best Management Practice (BMP) Handbook.

##### 1.4 SUMMARY OF WORK

- A. Contractor is advised that the Work disturbs less than one acre of land and therefore is not subject to the requirements of the Statewide General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ (CGP), issued by the State Water Resources Control Board (SWRCB). However, BMPs indicated in the BMP Handbook needed to prevent or minimize storm water pollution shall be submitted to the District as a BMP Plan, and implemented at no extra cost to the District.
- B. If at any time during construction the disturbed area exceeds one acre, the requirements of the SWRCB will be enforced including the development of a SWPPP.
- C. Within two weeks after Award of Contract by the District, the Contractor shall submit to the District one PDF copy of the SWPPP or BMP Plan for review. After the District’s approval, the Contractor shall provide the District an approved PDF copy of the SWPPP or BMP Plan.

~~D. See General Conditions Article 13.12, Storm Water Pollution Prevention, for other requirements when applicable.~~

## **1.5 STORM DRAIN NOTICE**

- A. Storm drains discharge directly to creeks and the Bay without treatment. Discharge of pollutants (any substance, material, or waste other than uncontaminated storm water) from this Project into the storm drain system is strictly prohibited by the California Regional Water Quality Control Board's (RWQCB) Water Quality Control Plan.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- A. Provide all materials and equipment necessary to fulfill all requirements of the Storm Water Pollution Prevention Plan or BMP Plan during execution of the Work or any Phase of the Work.

### **2.2 REPORTS AND LOGS**

- A. Provide and maintain all report, logs, and other data as required by the Storm Water Pollution Prevention Plan or BMP Plan. Make copies available to governing agencies and/or District as requested.

### **2.3 CONTACT INFORMATION**

- A. Provide the name and contact information for the individual responsible for implementing and updating, as required, the SWPPP or BMP Plan.

## **PART 3 - EXECUTION**

### **3.1 COMPLIANCE**

- A. Comply with all requirements of the Storm Water Pollution Prevention Plan or BMP Plan during the Work or any Phase of the Work.

### **3.2 PERSONNEL TRAINING**

- A. The Contractor shall train its employees working on the Project on the requirements contained in this Section and in the SWPPP or BMP Plan. The Contractor shall document this training in writing and make copies available to the District as requested.
- B. The Contractor shall inform all Subcontractors of the SWPPP or BMP Plan requirements contained in this specification and include appropriate Subcontract provisions to ensure that these requirements are met.

**END OF SECTION 01572**

**SECTION 311100**  
**CLEARING AND GRUBBING**

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Clearing vegetation, debris, trash and other materials within limits indicated.
- B. Grubbing of vegetation within limits indicated.

**1.2 RELATED DOCUMENTS**

- A. Caltrans Standard Specifications. Section 16, Clearing and Grubbing.
- B. California Building Code: Chapter 33 – Site Work, Demolition and Construction.

**PART 2 PRODUCTS**  
NOT USED

**PART 3 EXECUTION**

**3.1 PREPARATION**

- A. Locate and clearly flag vegetation to remain or to be relocated.

**3.2 RESTORATION**

- A. Repair or replace vegetation indicated to remain that is damaged by construction operations, as directed by the Owner.
- B. Employ a qualified arborist, licensed in jurisdiction where the Project is located, to submit details of proposed repairs and to repair damage to shrubs.

**3.3 CLEARING AND GRUBBING**

- A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.
- B. Remove trash, debris, logs, concrete, masonry and other waste materials.
- C. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.
- D. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18-inches below subgrade.
- E. Use only hand methods for grubbing within drip line of remaining trees.

END OF SECTION



## SECTION 312300

### EXCAVATION AND FILL

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Excavation and/or embankment from existing ground to subgrade, including soil sterilant, for roadways, driveways, parking areas, walks, paths, or trails and any other site improvements called for on the Plans.

##### 1.2 SECTION EXCLUDES

- A. Not applicable.

##### 1.3 RELATED SECTIONS

- A. Not applicable.

##### 1.4 RELATED DOCUMENTS

###### A. ASTM:

1. D 1557, Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort.
2. D 1586, Method for Penetration Tests and Split-Barrel Sampling of Soils.
3. D 2487, Classification of Soils for Engineering Purposes.
4. D 3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
5. D 4318. Test Method for Liquid Limit, Plastic Limit and Plasticity Index of Soils.
6. E 329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
7. E 548, Guide for General Criteria Used for Evaluating Laboratory Competence.

###### B. California Code of Regulation Title 24, Part 2, California Building Code:

1. Chapter 11B – Accessibility to Public Buildings.
2. Chapter 33 – Site Work, Demolition and Construction.

###### C. Caltrans Standard Specifications:

1. Section 17, Watering.
2. Section 19, Earthwork.

###### D. CAL/OSHA, Title 8.

##### 1.5 DEFINITIONS

- A. Borrow: Approved soil material imported from off-site for use as Structural Fill or Backfill.
- B. Excavation: Removal of material encountered above subgrade elevations.

1. Authorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions as shown on plans or authorized by the Geotechnical Consultant.
  2. Unauthorized Over-Excavation: Excavation below subgrade elevations or beyond indicated horizontal dimensions without authorization by the Geotechnical Consultant.  
Unauthorized excavation shall be without additional compensation.
- C. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock definition testing, as documented according to ASTM D 3740 and ASTM E 548.
  - D. Structural Backfill: Soil materials approved by the Geotechnical Consultant and used to fill excavations resulting from removal of existing below grade facilities, including trees.
  - E. Structural Fill: Soil materials approved by the Geotechnical Consultant and used to raise existing grades.
  - F. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material  $\frac{3}{4}$ -cubic yards or more in volume that, according to ASTM D 1586, exceeds a standard penetration resistance of 100 blows/2-inches.
  - G. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.
  - H. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.
  - I. Unsuitable Material: Any soil material that is not suitable for a specific use on the Project.
  - J. Utilities: onsite underground pipes, conduits, ducts and cables.

## **1.6 SUBMITTALS**

- A. Follow submittal procedures outlined in Section 00800 Supplementary General Conditions
- B. Submit material certificates signed by the material producer and the Contractor, certifying that that each material item complies with, or exceeds the specified requirements.

## **1.7 QUALITY ASSURANCE**

- A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Consultant.
- B. Conform all work to the appropriate portion(s) of the California Code of Regulations, Title 24 and Caltrans Standard Specifications, Sections 17 and 19.
- C. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.
- D. Perform excavation, filling, compaction and related earthwork under the observation of the Geotechnical Consultant. Materials placed without approval of the Geotechnical Consultant will be presumed to be defective and, at the discretion of the Geotechnical Consultant, shall

be removed and replaced at no cost to the Owner. Notify the Geotechnical Consultant at least 24-hours prior to commencement of earthwork and at least 48 hours prior to testing.

- E. The Geotechnical Consultant will perform observations and tests required to enable him to form an opinion of the acceptability of the Project earthwork. Correct earthwork that, in the opinion of the Geotechnical Consultant, does not meet the requirements of these Technical Specifications and the Geotechnical Report.
- F. Upon completion of the construction work, certify that all compacted fills and foundations are in place at the correct locations, and have been constructed in accordance with sound construction practice. In addition, certify that the materials used are of the types, quality and quantity required by these Technical Specifications. The Contractor shall be responsible for the stability of all fills and backfills constructed by his forces.
- G. Finish soil grade tolerance at completion of grading:
  - 1. Building and paved areas: +0.05
  - 2. Other areas:  $\pm 0.10$  feet.

## **1.8 PROJECT CONDITIONS**

- A. Promptly notify the Owner of surface or subsurface conditions differing from those disclosed in the Geotechnical Report. First notify the Owner verbally to permit verification and extent of condition and then in writing. No claim for conditions differing from those anticipated in the Contract Documents and disclosed in the Geotechnical Report will be allowed unless the Contractor has notified the Owner in writing of differing conditions prior to the Contractor starting work on affected items.
- B. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.
- C. Prevent erosion of freshly graded areas during construction and until such time as permanent drainage and erosion control measures have been installed.
- D. Temporarily stockpile fill material in an orderly and safe manner and in a location approved by the Owner.
- E. Provide dust and noise control in conformance with Division 1 General Requirements.
- F. Environmental Requirements: When unfavorable weather conditions necessitate interrupting earthwork operation, areas shall be prepared by compaction of surface and grading to avoid collection of water. Provide adequate temporary drainage to prevent erosion. After interruption, compaction specified in last layer shall be re-established before resuming work.

## **PART 2 PRODUCTS**

### **2.1 SOIL MATERIALS**

- A. General: Provide borrow soil materials when sufficient satisfactory soil materials are not available from on-site excavations.

- B. Obtain approval of on-site soil materials and borrow materials to be used for structural fill or structural backfill from the Geotechnical Consultant.
- C. On-Site Structural Fill and Structural Backfill: Soil or soil-rock mixture from on site excavations, free from organic matter or other deleterious substances. On-site structural fill and backfill shall not contain rocks or rock fragments over 3 inches in greatest dimension, and 90% by weight shall pass the 1" sieve and with an organic content less than 3.0 percent by weight.
- D. Imported Structural Fill and Structural Backfill: Conform to the requirements of on-site structural fill. Material shall also be a non-expansive and predominantly granular soil or soil-rock mixture with plasticity index of 15 or less in accordance with ASTM D 4318 and an R-Value of 25 or greater.

### **PART 3 EXECUTION**

#### **3.1 GENERAL**

- A. Conform to Section 19, Earthwork, Caltrans Standard Specifications as modified by the Contract Documents.
- B. Placement and compaction of material by flooding, ponding, or jetting will not be permitted.
- C. The use of explosives will not be permitted.

#### **3.2 CONTROL OF WATER AND DEWATERING**

- A. Prevent surface water and ground water from entering excavations, from ponding on prepared subgrades, and from flooding the site and surrounding area. Provide dewatering equipment necessary to drain and keep excavations and site free from water.
- B. Dewater during backfilling operation so that groundwater is maintained a least one foot below level of compaction effort.
- C. Obtain the Geotechnical Consultant's approval for proposed control of water and dewatering methods.
- D. Protect subgrades from softening, undermining, washout and damage by rain or water accumulation.
- E. Reroute surface water runoff away from excavated areas. Do not allow water to accumulate in excavations.
- F. Maintain dewatering system in place until dewatering is no longer required.

#### **3.3 WET WEATHER CONDITIONS**

- A. Do not prepare subgrade, place or compact soil materials if above optimum moisture content.
- B. If the Geotechnical Consultant allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Consultant.

#### **3.4 BRACING AND SHORING**

- A. Conform to California and Federal OSHA requirements.

- B. Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.
- C. Be solely responsible for all bracing and shoring and, if requested by the Owner, submit details and calculations to the Owner. The Owner may forward the submittal to the Geotechnical Consultant, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner.
- D. Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

### **3.5 EXCAVATION**

- A. Excavate earth and rock to lines and grades shown on drawings and to the neat dimensions indicated on the Plans, required herein or as required to satisfactorily compact backfill.
- B. Remove and dispose of large rocks, pieces of concrete and other obstructions encountered during excavation.
- C. Where forming is required, excavate only as much material as necessary to permit placing and removing forms.
- D. Provide supports, shoring and sheet piles required to support the sides of excavations or for protection of adjacent existing improvements.

### **3.6 REMOVAL OF EXISTING FILLS AND UNSUITABLE MATERIAL**

- A. Over-excavate areas of existing fills and other unsuitable material encountered during mass grading as directed by the Geotechnical Consultant.
- B. Compensation for increased removal widths and depths that are not required by the Geotechnical Consultant will not be considered, except when such increase is necessary for protection of life and property as determined by and approved by the Owner.
- C. The Geotechnical Consultant will provide written approval for each excavation prior to placement of fill. Allow adequate time after excavation and before filling for the Geotechnical Consultant's review and written approval and, if necessary, time for the Owner to conduct as built survey prior to placing fill. Basis for calculating the quantity of material excavated or placed may be the difference between the grading shown on the Plan and an as built survey of the grading.

### **3.7 GRADING**

- A. Uniformly grade the Project to the elevations shown on plans.

- B. Finish ditches, gutters and swales to the sections, lines and grades indicated and to permit proper surface drainage.
- C. Round tops and bottoms of slopes as indicated or to blend with existing contours.

### **3.8 SUBGRADE PREPARATION**

- A. Install underground utilities and service connections prior to final preparation of subgrade and placement of base materials for final surface facilities. Extend services so that final surface facilities are not disturbed when service connections are made.
- B. Prepare subgrades under paved areas, curbs, gutters, walks, structures, other surface facilities and areas to receive structural fill.
- C. Prepare subgrades for paved areas, curbs and gutters by plowing or scarifying surface at least 6 inches below final subgrade elevations and 5-feet beyond edge of pavement unless specified otherwise by the Geotechnical Consultant. Uniformly moisture condition to obtain optimum moisture contents. Break clods and condition surface by harrowing or dry rolling. Remove boulders, hard ribs and solid rock. Prepare earth uniform for full depth and width of subgrade.
- D. Protect utilities from damage during compaction of subgrades and until placement of final pavements or other surface facilities.
- E. Obtain the Geotechnical Consultant's approval of subgrades prior to placing pavement.

### **3.9 PLACEMENT OF STRUCTURAL FILL**

- A. Obtain the Geotechnical Consultant's approval of surface to receive structural fill prior to placement of structural fill material.
- B. Place structural fill on prepared subgrade.
- C. Spread structural fill material in uniform lifts not more than 8-inches in un-compacted thickness and compact.
- D. Place structural fill material to suitable elevations above grade to provide for anticipated settlement and shrinkage.
- E. Overbuild fill slopes, as required by the Geotechnical Consultant, to obtain required compaction. Remove excess material to lines and grades indicated.
- F. Do not drop fill on structures. Do not backfill around, against or upon concrete or masonry structures until structure has attained sufficient strength to withstand loads imposed and the horizontal structural system had been installed.

### **3.10 KEYWAYS AND BENCHES**

- A. Provide keyways as indicated for fill slopes steeper than 6 horizontal to 1 vertical. Extend keyway 5-feet minimum into competent, undisturbed soil or 3-feet minimum into competent, undisturbed rock as directed by the Geotechnical Consultant.
- B. Place subsurface drains in bottom of keyway in conformance with Section 334600 – Subdrainage.

- C. Bench subgrade as indicated above toe of fill.
- D. Place subsurface drains at benches every 20 vertical feet or as directed by the Geotechnical Consultant.

**3.11 LOT FINISH GRADING**

- A. Blade finish lots to lines and grades indicated.

**3.12 COMPACTION AND TESTING**

- A. Do not compact by ponding, flooding or jetting.
- B. Compact soils at optimum water content. Aerate material if it is too wet. Add water to material if it is too dry. Thoroughly mix lifts before compaction to ensure uniform moisture distribution.
- C. Perform compaction using rollers, pneumatic or vibratory compactors or other equipment and mechanical methods approved by the Geotechnical Consultant.
- D. Compaction requirements:
  - 1. Compact structural fills less than 5-feet thick to 90 percent compaction.
  - 2. Compact structural fill 5-feet thick or greater to 95 percent compaction.
  - 3. Compact the upper 6 inches of subgrade soils beneath pavements, curbs and gutters to 95 percent compaction. Extend compaction 5-feet beyond pavement edges unless specified otherwise by the Geotechnical Consultant.
  - 4. Compact the upper 6-inches of subgrade soils under walks, structures and areas to receive structural fill to 90 percent compaction.

**3.13 DISPOSAL**

- A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

**END OF SECTION**

**SECTION 320523**  
**CEMENT AND CONCRETE FOR EXTERIOR IMPROVEMENTS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Materials for portland cement concrete.
- B. Aggregate and aggregate grading for portland cement concrete.
- C. Water for portland cement concrete.
- D. Admixtures for portland cement concrete.
- E. Proportioning for portland cement concrete.
- F. Mixing and transporting portland cement concrete.
- G. Formwork for cast in place portland cement concrete.
- H. Embedded materials for portland cement concrete.
- I. Steel reinforcement for portland cement concrete.
- J. Placing and finishing portland cement concrete.
- K. Curing portland cement concrete.
- L. Protecting portland cement concrete.

**1.2 RELATED SECTIONS**

- A. Section 312300, Excavation and Fill.
- B. Section 321613, Concrete Curbs and Gutters.
- C. Section 330513, Manhole Grade Adjustment.

**1.3 RELATED DOCUMENTS**

- A. ASTM Standards
  - 1. A 82, Cold Drawn Steel Wire for Concrete Reinforcement.
  - 2. A 185, Steel Welded Wire Fabric, Plain for Concrete Reinforcement.
  - 3. A 615, Deformed and Plain Billet Steel Bars, for Concrete Reinforcement.
  - 4. C 94, Specification for Ready-mixed Concrete.
  - 5. C 114, Method for Chemical Analysis of Hydraulic Cement.
  - 6. C 150. Portland Cement.
  - 7. C 618, Fly Ash and Raw or Calcined Natural Pozzolan for use as Natural Admixture in Portland Cement.



8. C 1751, Preformed Expansion Joint Fillers for Concrete. Paving and Structural Construction (Non-extruded and Resilient Bituminous Types).

**B. Caltrans Standard Specifications:**

1. Section 51: Concrete Structures.
2. Section 73: Concrete Curbs and Sidewalks.
3. Section 90: Portland Cement Concrete.

**C. California Building Code:**

1. Chapter 11B – Accessibility To Public Buildings.
2. Chapter 19A – Concrete.
3. Chapter 33 – Site Work, Demolition and Construction.
4. Section 1133B – General Accessibility for Entrances, Exits and Paths of Travel.

## **1.4 DEFINITIONS**

- A. ASTM:** American Society for Testing and Materials.

## **1.5 SUBMITTALS**

- A.** Follow submittal procedures outlined in Section 00800 Supplementary General Conditions
- B. Design Mixes:** Have all concrete mixes designed by a testing laboratory and approved by the Consulting Engineer. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the drawings. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.
- C. Reinforcing Steel Shop-Drawings**

## **1.6 QUALITY ASSURANCE**

- A.** Concrete shall be subject to quality assurance in accordance with Section 90 of the Standard Specifications.
1. Slump tests: Have available, at job site, equipment required to perform slump tests. Make one slump test for each cylinder sample, from same concrete batch. Allowable maximum slump shall be 4 inches for walls and 3 inches for slabs on grade and other work.
- B. Certifications:**
1. Provide Owner's Representative at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
  2. Materials contained comply with the requirements of the Contract Documents in all respects.
  3. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
  4. Statement of type and amount of any admixtures.

5. Provide Owner's Representative, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.
- C.** Conform to the applicable provisions of Section 51, 73 and 90 of the Caltrans Standard Specification and these Technical Specifications.
1. Conform construction of portland cement concrete surface improvements (including curbs, gutters, medians, valley gutters, walks) to the requirements of Section 73 of the Caltrans Standard Specifications unless otherwise required in these Technical Specifications or shown on the Plans.
  2. Construct "V" ditches in accordance with Section 72-4 of the Standard Specifications; except that finishing shall be in accordance with Standard Specification Section 73 instead of 53, or as otherwise required in these Technical Specifications or shown on the Plans.
  3. Conform other construction of portland cement concrete items to the requirements of Section 51 of the Caltrans Standard Specifications unless otherwise required in these Technical Specifications or shown on the Plans.
- D.** Conform to the requirements of the California Building Code section 1929A.2 for testing of reinforcing bars.

## **1.7 DESIGNATION**

- A.** General: Whenever the 28-day compressive strength is designated herein or on the plans is greater than 3,600 psi, the concrete shall considered to be designated by compressive strength. The 28-day compressive strength shown herein or on the plans which are 3,600 psi or less are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the plans, the concrete shall contain the cement per cubic meter shown in section 90-1.01 of the Caltrans Standard Specifications.
- B.** Unless specified otherwise herein or on the Plans, Portland Cement Concrete for this Project shall be Class "2" as specified in Section 90-1.01 of the Caltrans Standard Specifications.

## **PART 2 PRODUCTS**

### **2.1 GENERAL**

- A.** For products to be installed within the jurisdiction of a local, state or federal agency, product(s) shall conform to the agency's standard specifications.

### **2.2 PORTLAND CEMENT**

- A.** General: Type V or type II (modified) cement conforming to the requirements of ASTM C 150, with the following modifications:
1. Cement shall not contain more than 0.60% by weight of alkalis, calculated as the percentage of Na<sub>2</sub>O plus 0.658 times the percentage of K<sub>2</sub>O when determined by either 4 intensity flame photometry or by the atomic absorption method. The instrument and procedure used shall be qualified as to precision and accuracy in accordance with the requirements of ASTM C 114.

2. The autoclave expansion shall not exceed 0.50%.
3. Mortar containing the Portland Cement to be used and the sand, when tested in accordance with Test Method No. Calif. 527, shall not expand in water more than 0.010% and shall have an air content less than .048%.
4. Allowable tri-calcium Aluminate (C3A) by weight shall not exceed 5%. Allowable tetracalcium aluminoferrite plus twice the tricalcium aluminate (C4AF+2C3A) by weight shall not exceed 25%. The sulfate expansion test (ASTM C 452) may be used in lieu of the above chemical requirements, provided the sulfate expansion does not exceed 0.040% at 14 days (max.).
5. Contractor may substitute pozzolan for Portland Cement in amounts up to 15% of the required mix unless high early strength concrete is specified. Pozzolan shall consist of Class F Fly Ash meeting the requirements of ASTM C 618.

### **2.3 AGGREGATE AND AGGREGATE GRADING**

- A. General: Conform to the requirements of Section 90-1.02C of the Caltrans Standard Specifications.
- B. Aggregate Size and Gradation: Conform to the requirements of section 90-1.02C of the Caltrans Standard Specifications for 25-mm (1-inch) maximum combined aggregate.

### **2.4 WATER**

- A. General: Conform to the requirements of section 90-1.02D of the Caltrans Standard Specifications, for mixing and curing portland cement concrete and for washing aggregates.

### **2.5 CLASSIFICATION OF PORTLAND CEMENT CONCRETE**

- A. Concrete for the following items shall be designated by the following classes per Section 90-1.01 of the Caltrans Standard Specifications:
  1. Vehicular Pavement: Class 2.
  2. Curbs, Gutters, and Sidewalks: Minor Concrete per Section 90-2 of the Caltrans Standard Specifications.
  3. Cast in place Concrete Pipe: The concrete shall consist of a minimum of 564 pounds of Portland cement per cubic yard of concrete.
  4. Thrust Blocks: The concrete shall have a minimum compressive strength of 3,000 psi.
  5. Sign and Fence Footings: The concrete shall consist of a minimum of 376 pounds of Portland cement per cubic yard of concrete.
  6. Water, Storm, and Sanitary Structures: The concrete shall consist of a minimum of 564 pounds of Portland cement per cubic yard of concrete.

### **2.6 EXPANSION JOINT MATERIAL**

- A. Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM Designation D 1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site. Unless noted otherwise herein or on the Plans expansion joint thickness shall be as follows:

1. Curbs, Curb Ramps, Sidewalks, Driveways and Gutter Depressions: 1/4-inch.
2. Concrete Slope Protection, Gutter Lining, Ditch Lining and Channel Lining: 1/2-inch.
3. Structures: As indicated.

## **2.7 REINFORCEMENT AND DOWELS**

- A. Bar reinforcement for concrete improvements shall be deformed steel bars of the size or sizes called for on the plans conforming to the requirements of ASTM Designation A 615 for Grade 60 bars. Size and shape for bar reinforcement shall conform to the details shown or called for on the Plans. Substitution of wire mesh reinforcement for reinforcing bars will not be allowed.
- B. Slip dowels, where noted or called for on the plans or detail drawings shall be smooth billet-steel bars as designated and conforming to the requirements of ASTM Designation A 615 for Grade 60 bars. Ends of bars inserted in new work shall be covered with a cardboard tube sealed with cork; no grease or oil shall be used.
- C. Mesh for reinforcement for concrete improvements shall be cold drawn steel wire mesh of the size and spacing called for on the plans conforming to the requirements of ASTM Designation A 82 for the material and ASTM Designation A 185 for the mesh. Size and extent of mesh reinforcement shall conform to the details shown or called for on the plans.
- D. Tie wire for reinforcement shall be eighteen (18) gauge or heavier, black, annealed conforming to the requirements of ASTM Designation A 82.
- E. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.

## **2.8 ACCESSORY MATERIALS**

- A. Conform water stops and other items required to be embedded in of Portland Cement Concrete structures to the applicable requirements of Section 51 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans or detail drawings.
- B. Curing Compounds:
  1. Regular Portland Cement Concrete: "Non-Pigmented Curing Compound - chlorinated Rubber Base-Clear" conforming to the requirements contained in Section 90-1.02J, of the Caltrans Standard Specifications.

## **2.9 FORMS**

- A. Conform to the requirements of Section 51-1.03C(2) of the Caltrans Standard Specifications.

## **2.10 PRECAST CONCRETE STRUCTURES**

- A. Conform to the following Sections of Caltrans Standard Specifications:
  1. 51-1.02, Minor Structures.
  2. 70-1.02C, Flared End Sections.
  3. 70-1.02H, Precast Concrete Structures.

## **2.11 PORTLAND CEMENT CONCRETE VEHICLUAR PAVEMENT**

- A.** General: See Section 321300 – Rigid Paving.

## **PART 3 EXECUTION**

### **3.1 STRUCTURAL EXCAVATION**

- A.** Structural excavation may be either by hand, or by machine and shall be neat to the line and dimension shown or called for on the plans. Excavation shall be sufficient width to provide adequate space for working therein, and comply with CAL-OSHA requirements.
- B.** Where an excavation has been constructed below the design grade, refill the excavation to the bottom of the excavation grade with approved material and compact in place to 95% of the maximum dry density.
- C.** Remove surplus excavation material remaining upon completion of the work from the job site, or condition it to optimum moisture content and compact it as fill or backfill on the site, if the material is approved by the Geotechnical Consultant.

### **3.2 SOIL STERILANT**

- A.** Furnish and apply to areas indicated in accordance with Section 313119 – Vegetation Control.

### **3.3 BRACING AND SHORING**

- A.** Conform to California and Federal OSHA requirements.
- B.** Place and maintain such bracing and shoring as may be required to support the sides of the excavations for the proper protection of workmen; to facilitate the work; to prevent damage to the facility being constructed; and to prevent damage to adjacent structures or facilities. Remove all bracing and shoring upon completion of the work.
- C.** Be solely responsible for all bracing and shoring and, if requested by the Owner's Representative, submit details and calculations to the Owner's Representative. The Owner's Representative may forward the submittal to the Geotechnical Consultant, the Consulting Engineer and/or the California Division of Industrial Safety for their review. The Contractor's submittal shall include the basic design, assumed soils conditions and estimation of forces to be resisted, together with plans and specifications of the materials and methods to be used, and shall be prepared by a civil engineer or structural engineer registered in California. No excavations related to the proposed facility shall precede a response to the submittal by the Owner's Representative.
- D.** Be solely responsible for installing and extracting the sheathing in a manner which will not disturb the position or operation of the facility being constructed or adjacent utilities and facilities.

### **3.4 PLACING CONCRETE FORMS**

- A.** Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.
- B.** Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.
- C.** Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.
- D.** Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

### **3.5 PLACING STEEL REINFORCEMENT**

- A.** Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond. All bending shall be done cold, to the shapes shown on the plans. The length of lapped splices shall be as follows:
  - 1. Reinforcing bars No. 8, or smaller, shall be lapped at least 45 bar diameters of the smaller bar joined, and reinforced bars Nos. 9, 10, and 11 shall be lapped at least 60 bar diameters of the smaller bars joined, except when otherwise shown on the plans.
  - 2. Splice locations shall be made as indicated on the plans.
- B.** Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.
- C.** Place reinforcing to provide the following minimum concrete cover:
  - 1. Surfaces exposed to water: 4-inches.
  - 2. Surfaces poured against earth: 3-inches.
  - 3. Formed surfaces exposed to earth or weather: -inches.
  - 4. Slabs, walls, not exposed to weather or earth: 1-inch.
- D.** Minimum spacing, center of parallel bars shall be two and one half (2-1/2) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

### **3.6 MIXING AND TRANSPORTING PORTLAND CEMENT CONCRETE**

- A.** Transit mix concrete in accordance with the requirements of ASTM Designation C 94. Transit mix for not less than ten (10) minutes total, not less than three (3) minutes of which shall be

on the site just prior to pouring. Mix continuous with no interruptions from the time the truck is filled until the time it is emptied. Place concrete within one hour of the time water is first added unless authorized otherwise by the Owner's Representative.

- B. Do not hand mix concrete for use in concrete structures.

### **3.7 PLACING PORTLAND CEMENT CONCRETE**

- A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.
- B. Do not place concrete until the subgrade and the forms have been approved.
- C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.
- D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner's Representative. Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.
- E. Concrete in certain locations may be pumped into place upon prior approval by the Owner's Representative. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

### **3.8 PLACING ACCESSORY MATERIALS**

- A. Place water stops and other items required to be embedded in of portland cement concrete structures at locations shown or required in accordance with Section 51 of the Caltrans Standard Specifications unless otherwise specifically noted or called for on the Plans.
- B. Curing Compounds:
  - 1. Regular Portland Cement Concrete: Apply "Non-Pigmented Curing Compound - chlorinated Rubber Base-Clear" in accordance with Section 90-1.02J of the Caltrans Standard Specifications.

### **3.9 EXPANSION JOINTS**

- A. Construct expansion joints incorporating premolded joint fillers at twenty (20) foot intervals in all concrete curbs, gutters, sidewalks, median/island paving, valley gutters, driveway approaches and at the ends of all returns. At each expansion joint install one-half inch by twelve inch (1/2" x 12") smooth slip dowels in the positions shown or noted on the detail drawings.
- B. Orient slip dowels at right angles to the expansion joint and hold firmly in place during the construction process by means of appropriate chairs.

### **3.10 WEAKENED PLANE JOINTS**

- A.** Construct weakened plane joints in concrete curbs, gutters, sidewalks, median/island paving and valley gutters between expansion joints at ten (10) foot intervals throughout, or as otherwise indicated. Depth of joint score depth to be one-fourth (25%) the thickness of the concrete.
  - 1. Grooved Joints: Form weakened plane joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8-inch. Repeat grooving of weakened plane joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

### **3.11 FINISHING CONCRETE**

- A.** Finish curb and gutter in conformance with the applicable requirements of Section 73-2.03 of the Caltrans Standard Specifications as modified herein.
- B.** Where monolithic curb, gutter and sidewalk is specified, separate concrete pours will not be allowed.
- C.** Provide a medium broom finish to all horizontal surfaces unless otherwise shown.

### **3.12 FORM REMOVAL**

- A.** Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.
- B.** Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.
- C.** Leave forms for cast-in-place walls in place at least 72 hours after pouring.
- D.** Leave edge forms in place at least 24 hours after pouring.

### **3.13 CONSTRUCTION**

- A.** Form, place and finish concrete walkways, island paving, valley gutters and driveway approaches in conformance with the applicable requirements of Section 73-1.03, 73-2.03 and 73-3.03 of the Caltrans Standard Specifications as modified herein.
- B.** Construct new concrete curb, curb and gutter and valley gutters against existing asphalt concrete by removing a minimum of 12-inches of the asphalt concrete to allow placement of curb or gutter forms. Patch pavement with a 6-inch deep lift of asphalt concrete after gutter form is removed.

### **3.14 CONNECTING TO EXISTING CONCRETE IMPROVEMENTS**

- A.** New curb, gutter, or sidewalk is to connect to existing improvements to remain by saw cutting to existing sound concrete at the nearest score line, expansion joint or control joint. Drill and insert 1/2-inch diameter by 12-inch long dowels at 24-inches on center into existing improvements. Install pre-molded expansion joint filler at the matching joint.
- B.** A cold joint to the existing curb is not acceptable.



### **3.15 FIELD QUALITY CONTROL**

- A.** Finish subgrade for concrete improvements shall be subject to approval prior to placement of forms.
- B.** No concrete shall be placed prior to approval of forms.
- C.** Concrete improvements constructed shall not contain "bird baths" or pond water and shall be smooth and ridge free.
- D.** Conform the finish grade at top of curb, flow line of gutter, and the finish cross section of concrete improvements to the design grades and cross sections.
- E.** Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances established in Section 73 of the Caltrans Standard Specifications.

### **3.16 RESTORATION OF EXISTING IMPROVEMENTS**

- A.** Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.
- B.** Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

**END OF SECTION**

## SECTION 321100

### BASE COURSES

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Aggregate subbase.
- B. Aggregate base.
- C. Cement treated base.

##### 1.2 RELATED SECTIONS

- A. Section 312300 – Excavation and Fill.
- B. Section 321200 – Flexible Paving.

##### 1.3 RELATED DOCUMENTS

- A. Not applicable.
- B. ASTM:
  - 1. D 3740, Practice for Evaluation of Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction.
  - 2. E 329, Specification for Minimum Requirements for Agencies Engaged in the Testing and/or Inspection of Materials Used in Construction.
  - 3. E 548, Guide for General Criteria Used for Evaluating Laboratory Competence.
- C. Caltrans Standard Specifications:
  - 1. Section 24, Lime Stabilization.
  - 2. Section 25, Aggregate Subbases.
  - 3. Section 26, Aggregate Bases.
  - 4. Section 27, Cement Treated Bases.

##### 1.4 DEFINITIONS

- A. Geotechnical Testing Agency: An independent testing agency qualified according to ASTM E 329 to conduct soil materials and rock definition testing, as documented according to ASTM D 3740 and ASTM E 548.
- B. Rock: Rock material in beds, ledges, unstratified masses, and conglomerate deposits and boulders of rock material  $\frac{3}{4}$ -cubic yards or more in volume that when tested, according to ASTM D 1586, exceeds a standard penetration resistance of 100 blows/2-inches.
- C. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man made stationary features constructed above or below grade.

- D. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, base or topsoil materials.

#### **1.5 SUBMITTALS**

- A. Follow submittal procedures outlined in Section 00800 Supplementary General Conditions
- B. Submit material certificates signed by the material producer and the Contractor, certifying that that each material item complies with, or exceeds the specified requirements.

#### **1.6 QUALITY ASSURANCE**

- A. Conform all work and materials to the recommendations or requirements of the Geotechnical Report and meet the approval of the Geotechnical Consultant.
- B. Percentage of compaction specified shall be the minimum acceptable. The percentage represents the ratio of the dry density of the compacted material to the maximum dry density of the material as determined by the procedure set forth in ASTM D 1557.
- C. Perform installation of base materials under the observation of the Geotechnical Consultant. Materials placed without approval of the Geotechnical Consultant will be presumed to be defective and, at the discretion of the Geotechnical Consultant, shall be removed and replaced at no cost to the Owner. Notify the Geotechnical Consultant at least 24-hours prior to commencement of base material installation and at least 48 hours prior to testing.
- D. Do not mix or place cement treated base when the temperature is below is below 36 degrees F or when the ground is frozen.
- E. Finish surface of material to be stabilized prior to lime treatment shall be as specified in Section 24-1.02 of Caltrans Standard Specifications.
- F. Finish surface of the stabilized material after lime treatment shall be as specified in Section 24-2.03F of Caltrans Standard Specifications.
- G. Finish surface of cement treated base shall be as specified in Section 27 of Caltrans Standard Specifications.
- H. Do not project the finish surface of aggregate subbase above the design subgrade.
- I. Finish grade tolerance at completion of base installation: +0.05

#### **1.7 PROJECT CONDITIONS**

- A. Protect open excavations, trenches, and the like with fences, covers and railings to maintain safe pedestrian and vehicular traffic passage.
- B. Temporarily stockpile material in an orderly and safe manner and in a location approved by the Owner.
- C. Provide dust and noise control in conformance with Division 1 General Requirements.

## **PART 2 PRODUCTS**

### **2.1 AGGREGATE SUBBASE**

- A.** Material: Caltrans Standard Specification Section 25.
  - 1. Class 1, 2, or 3: Section 25-1.02B.
  - 2. Class 4: Section 25-1.02C.
  - 3. Class 5: Section 25-1.02D.

### **2.2 AGGREGATE BASE**

- A.** Material: Caltrans Standard Specification Section 26.
  - 1. Class 2, 1-1/2-inch Maximum: Section 26-1.02B.
  - 2. Class 2, 3/4-inch Maximum: Section 26-1.02B.
  - 3. Class 3: Section 26-1.02C.

### **2.3 CEMENT TREATED BASE**

- A.** Materials: Caltrans Standard Specification Section 27-1.02.

## **PART 3 EXECUTION**

### **3.1 GENERAL**

- A.** Placement and compaction of material by flooding, ponding, or jetting will not be permitted.

### **3.2 WET WEATHER CONDITIONS**

- A.** Do not place or compact subgrade if above optimum moisture content.
- B.** If the Geotechnical Consultant allows work to continue during wet weather conditions, conform to supplemental recommendations provided by the Geotechnical Consultant.

### **3.3 AGGREGATE SUBBASE**

- A.** Spreading and Compacting: Sections 25-1.03D and 25-1.03E of Caltrans Standard Specifications.

### **3.4 AGGREGATE BASE**

- A.** Watering, Spreading and Compacting: Section 26-1.03D and 26-1.03E of Caltrans Standard Specifications.

### **3.5 CEMENT TREATED BASE**

- A.** Cement treated base shall be as follows: Proportioning and Mixing Plant-Mixed: Section 27-1.03D of Caltrans Standard Specifications.

### **3.6 LIME STABILIZATION**

- A.** Performing the stabilization shall conform to Section 24-2.03 of Caltrans Standard Specifications and the following:

1. Add lime in the amount specified by the Geotechnical Consultant.
2. Lime treat subgrade soils from back of curb to back of curb to a depth specified by the Geotechnical Consultant.
3. Mix in two mixing periods, both with the tines lowered to the same depth. Both mixing periods shall be monitored and verified by a Geotechnical Consultant. The second mixing shall occur at about 24 hours after the initial mixing.
4. Compact and grade the lime mixed subgrade immediately after the second mixing.
5. Compact the lime treated subgrade to 93 percent as determined by ASTM D1557.
6. After application of the curing seal, do not allow traffic on the lime treated material for a period of 7 days in lieu of the 3 days specified in Section 24-2.03A of Caltrans Standard Specifications.
7. Proof-roll the stabilized subgrade after compacting to confirm that a non-yielding surface has been achieved. Yielding areas, if any, shall be mitigated. Mitigation could consist of over-excavation, utilization of stabilization fabric, or chemical treatment. Each case shall be addressed individually in the field by the Geotechnical Consultant.

### **3.7 DISPOSAL**

- A. Lawfully dispose of all unsuitable and excess or surplus material off-site at no cost to the Owner.

**END OF SECTION**

**SECTION 321200**  
**FLEXIBLE PAVING**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Tack coat.
- B. Asphaltic concrete paving.
- C. Asphaltic concrete overlay.
- D. Slurry seals.
- E. Speed bumps.
- F. Asphalt curbs.
- G. Pavement grinding.

**1.2 RELATED SECTIONS**

- A. Section 321100 – Base Courses.

**1.3 RELATED DOCUMENTS**

- A. Geotechnical Report.
- B. ASTM:
  - 1. D 979: Practice for Sampling Bituminous Paving Mixtures.
  - 2. D 1073: Specification for Fine Aggregate for Bituminous Paving Mixtures.
  - 3. D 1188: Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Paraffin-Coated Specimens.
  - 4. D 2041: Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures.
  - 5. D 2726: Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures.
  - 6. D 2950: Test Method for Density of Bituminous Concrete in Place by Nuclear Method.
  - 7. D 3549: Test Method for Thickness or Height of Compacted Bituminous Paving Mixture Specimens.
  - 8. D 3666: Specifications for Minimum Requirements for Agencies Testing and Inspecting Bituminous Paving Mixtures.
- C. Caltrans Standard Specifications.
  - 1. Section 37: Bituminous Seals.
  - 2. Section 39: Asphalt Concrete.
  - 3. Section 96: Engineering Fabrics.
  - 4. Section 92: Asphalts.

5. Section 94: Asphaltic Emulsions.

**D. California Building Code:**

1. Chapter 11B – Accessibility to Public Buildings.
2. Section 1127B – Exterior Routes of Travel.

**1.4 DEFINITIONS**

**A. ASTM:** American Society for Testing Materials.

**1.5 QUALITY ASSURANCE**

**A. Testing Agency:** Owner will engage a qualified independent testing agency to perform field inspections and tests and to prepare test reports.

1. Testing agency will conduct and interpret tests and state in each report whether tested work complies with or deviates from specified requirements.

**B. Additional testing,** at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

**C. Thickness of Asphaltic Concrete:** In-place compacted thickness of asphalt courses will be determined according to ASTM D 3549.

**D. Surface Smoothness:** Finished surface of each asphalt course will be tested for compliance with smoothness tolerances.

**E. In-Place Density:** Samples of uncompacted paving mixtures and compacted pavement will be secured by testing agency according to ASTM D 979.

1. Reference maximum theoretical density will be determined by averaging results from 4 samples of hot-mix asphalt-paving mixture delivered daily to site, prepared according to ASTM D 2041, and compacted according to job-mix specifications.
2. In-place density of compacted pavement may be determined by testing core samples according to ASTM D 1188 or ASTM D 2726.
  - a. One core sample may be taken for every 1000 sq. yd. or less of installed pavement, but in no case will fewer than 3 cores be taken.
  - b. Field density of in-place compacted pavement may also be determined by nuclear method according to ASTM D 2950 and correlated with ASTM D 1188 or ASTM D 2726.

**1.6 SUBMITTALS**

**A. Follow submittal procedures** outlined in Section 00800 Supplementary General Conditions

**B. Job-Mix Designs:** Certificates signed by manufacturers certifying that each asphaltic concrete mix complies with requirements.

- C. Material Certificates: Certificates signed by manufacturers certifying that each material complies with requirements.

## **1.7 PROJECT CONDITIONS**

### **A. Environmental Limitations:**

1. Tack Coat: Minimum surface temperature of 60 deg F at application.
2. Asphalt Base Course: Minimum surface temperature of 40 deg F and rising at application.
3. Asphalt Surface Course: Minimum surface temperature of 60 deg F at application.
4. Reinforcing Fabric: Air temperature is 50 deg F and rising and pavement temperature is 40 deg F and rising.

## **1.8 PRODUCTS**

## **1.9 ASPHALTIC CONCRETE**

### **A. Caltrans Standard Specifications Section 39, Type A.**

### **B. Asphalt Materials:**

1. Asphalt: Caltrans Standard Specification Section 92, steam refined paving asphalt.
  - a. Asphalt Curbs: use grade PG 70-10
  - b. All other asphalt products: use grade PG 64-10.
2. Tack Coat: Caltrans Standard Specification Section 93, SS1.
3. Asphaltic Emulsion: Caltrans Standard Specification Section 94, quick-setting type, Grade QS1h anionic or CQS1h cationic.

### **C. Aggregates: Conform to Caltrans Standard Specification Sections 37-2.02C and 39-2.01B(4) as applicable.**

### **D. Storing, Proportioning and Mixing Materials: Caltrans Standard Specification Section 39-3.**

### **E. Pavement Reinforcing Fabric (If indicated on drawings): Caltrans Standard Specification Section 96.**

### **F. Sand: ASTM D 1073, Grade No. 2 or 3.**

## **PART 2 EXECUTION**

## **2.1 EXAMINATION**

- A. Verify that subgrade is dry and in suitable condition to support paving and imposed loads.**
- B. Proof-roll subbase using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.**



- C. Notify Owner in writing of any unsatisfactory conditions. Do not begin paving until these conditions have been satisfactorily corrected.

## **2.2 PAVEMENT GRINDING**

- A. Clean existing paving surface of loose or deleterious material immediately before pavement grinding.
- B. Grind conforms as indicated.

## **2.3 SOIL STERILANT**

- A. Not applicable.

## **2.4 SURFACE PREPARATION FOR AGGREGATE BASE MATERIALS**

- A. General: Immediately before placing asphalt materials remove loose and deleterious material from substrate surfaces and ensure that prepared subgrade is ready to receive paving according to the Caltrans Standard Specification Section 39-2.02C.
- B. Tack Coat: Apply uniformly to all vertical surfaces against which asphaltic concrete is to be placed, including existing surfaces of previously constructed asphalt or portland cement concrete paving and to surfaces abutting or projecting into new asphalt pavement, according to the Caltrans Standard Specification Section 39-2.01C(3)(f).
  - 1. Allow tack coat to cure undisturbed before paving.
  - 2. Avoid smearing or staining adjoining surfaces, appurtenances, and surroundings. Remove spillages and clean affected surfaces.

## **2.5 SURFACE PREPARATION FOR PAVEMENT AT ASPHALTIC CONCRETE OVERLAYS AND SLURRY SEALS**

- A. Pavement Irregularities: Level with asphaltic concrete, Type B, No. 4 maximum.
- B. Pavement Cracks:
  - 1. Less than ¼-inch wide: Clean of all dirt by compressed air jet, spray and seal with RS-1 asphaltic emulsion.
  - 2. Wider than ¼-inch: Clean of all dirt by compressed air jet, spray and seal with RS-1 asphaltic emulsion and skin patch.
- C. Clean surface of all material, such as leaves, dirt, sand, gravel, water and vegetation prior to applying binder of paving asphalt to existing surface.

## **2.6 PAVEMENT REINFORCING FABRIC**

- A. Protect from exposure to ultraviolet rays until placed.
- B. Reject rolls with broken or damaged cores, or factory wrinkled fabric that prevents wrinkle free placement.
- C. Place with binder of paving asphalt in accordance with Section 39-2.01B(3) of Caltrans Standard Specifications.

## **2.7 ASPHALTIC CONCRETE SPREADING AND COMPACTING EQUIPMENT**

- A. Spreading Equipment: Caltrans Standard Specification Section 39-2.01C(2).
- B. Compaction Equipment: Caltrans Standard Specification Section 39-2.01C(2).

## **2.8 ASPHALTIC CONCRETE PLACEMENT**

- A. Place, spread and compact asphaltic concrete to required grade, cross section, and thickness according to the Caltrans Standard Specification Sections 39-2.01C(1).
- B. Promptly correct surface irregularities in paving course behind paver. Use suitable hand tools to remove excess material forming high spots. Fill depressions with hot asphalt to prevent segregation of mix; use suitable hand tools to smooth surface.

## **2.9 JOINTS**

- A. Construct joints to ensure continuous bond between adjoining paving sections according to the Caltrans Standard Specification Sections 39-2.01C(4).
  - 1. Construct joints free of depressions with same texture and smoothness as other sections of asphalt course.
  - 2. Clean contact surfaces and apply tack coat.
  - 3. Offset longitudinal joints in successive courses a minimum of 6 inches.
  - 4. Offset transverse joints in successive courses a minimum of 24 inches.
  - 5. Compact joints as soon as asphaltic concrete will bear roller weight without excessive displacement.

## **2.10 COMPACTION**

- A. General: Begin compaction as soon as placed hot-mix paving will bear roller weight without excessive displacement. Compact according to the Caltrans Standard Specification Sections 39-2.01C(2).
- B. Compaction Requirements: Average Density to be 92 percent of reference maximum theoretical density according to ASTM D 2041, but not less than 90 percent nor greater than 96 percent.
- C. Finish Rolling: Finish roll paved surfaces to remove roller marks while asphalt is still warm.
- D. Edge Shaping: While surface is being compacted and finished, trim edges of pavement to proper alignment. Bevel edges while still hot, with back of rake or smooth iron. Compact thoroughly using tamper or other satisfactory method.

- E. Repairs: Remove paved areas that are defective or contaminated with foreign materials and replace with fresh asphalt. Compact by rolling to specified density and surface smoothness.
- F. Protection: After final rolling, do not permit vehicular traffic on pavement until it has cooled and hardened. Erect barricades to protect paving from traffic until mixture has cooled enough not to become marked.

## **2.11 INSTALLATION TOLERANCES**

### **A. Asphalt Pavement:**

1. Course thickness and surface smoothness within the tolerances in the Caltrans Standard Specification Section 39.
2. Total Thickness: Not less than indicated.

### **B. Trench Patch:**

1. Compacted surface: Within 0.01 foot of adjacent pavement.
2. Do not create ponding.

**END OF SECTION**

**SECTION 321613**  
**CONCRETE CURBS AND GUTTERS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Portland Cement Concrete curbs and gutters.

**1.2 RELATED SECTIONS**

- A. Section 312300 – Excavation and Fill.
- B. Section 321100 – Base Courses.
- C. Section 320523 – Cement and Concrete for Exterior Improvements.

**1.3 RELATED DOCUMENTS**

- A. American Concrete Institute (ACI):
  - 1. ACI 301 - Specifications for Structural Concrete for Buildings.
  - 2. ACI 308 - Standard Practice for Curing Concrete.
- B. American society for Testing and Materials (ASTM):
  - 1. ASTM A 185 - Specification for Steel Welded Wire, Fabric, Plain, for Concrete Reinforcement.
  - 2. ASTM A 615 - Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement.
  - 3. ASTM D 1751 - Specification for Preformed Expansion Joint Fillers for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types).
- C. Caltrans Standard Specifications:
  - 1. Section 73: Concrete Curbs and Sidewalks.
  - 2. Section 90: Portland Cement Concrete.

**1.4 DEFINITIONS**

- A. ASTM: American Society for Testing Materials

**1.5 SUBMITTALS**

- A. Follow submittal procedures outlined in Section 00800 Supplementary General Conditions
- B. Concrete Mix Design: Have all concrete mixes designed by a testing laboratory and approved by the Owner. Conform all mixes to the applicable building code requirement, regardless of other minimum requirements listed herein or on the drawings. Submit mix designs for review before use. Show proportions and specific gravities of cement, fine and coarse aggregate, and water and gradation of combined aggregates.

## **1.6 QUALITY ASSURANCE**

- A.** Concrete shall be subject to quality assurance in accordance with Section 90 of the Standard Specifications.
- B.** Certifications:
  - 1. Provide Owner at the time of delivery with certificates of compliance signed by both Contractor and Supplier containing the following statements:
    - a. Materials contained comply with the requirements of the Contract Documents in all respects.
    - b. Proportions and mixing comply with the design mix approved by the Consulting Engineer. Design mix shall have been field tested in accordance with the herein requirements of the Caltrans Standard Specifications and produces the required compressive strength under like conditions.
    - c. Statement of type and amount of any admixtures.
  - 2. Provide Owner, at time of delivery, with certified delivery ticket stating volume of concrete delivered and time of mixing, or time of load-out in case of transit mixers.
- C.** Conform to the applicable provisions of Section 51, 73 and 90 of the Caltrans Standard Specification and these Technical Specifications.
  - 1. Conform construction of portland cement concrete surface improvements (including curbs, gutters, medians, valley gutters, walks) to the requirements of Section 73 of the Caltrans Standard Specifications unless otherwise required in these Technical Specifications or shown on the Plans.
  - 2. Construct "V" ditches in accordance with Section 72-4 of the Standard Specifications; except that finishing shall be in accordance with Standard Specification Section 73 instead of 53, or as otherwise required in these Technical Specifications or shown on the Plans.

## **1.7 DESIGNATION**

- A.** General: Whenever the 28-day compressive strength is designated herein or on the Plans is 3,500 psi or greater, the concrete shall considered to be designated by compressive strength. The 28-day compressive strength shown herein or on the plans which are less than 3,500 psi are shown for design information only and are not considered a requirement for acceptance of the concrete. Whenever the concrete is designated by class or as minor concrete herein or on the Plans, the concrete shall contain the cement per cubic yard shown in Section 90-1.01 of the Caltrans Standard Specifications.

## **PART 2 PRODUCTS**

### **2.1 GENERAL**

- A.** Comply with requirements of Section 320523 – Cement and Concrete for Exterior Improvements.

## **2.2 PORTLAND CEMENT CONCRETE**

- A.** Unless specified otherwise herein or on the Plans, Portland Cement Concrete for items in this section shall be Minor Concrete as specified in Section 90-1.01 of the Caltrans Standard Specifications.

## **2.3 CURBS AND GUTTERS FORMS**

- A.** Use flexible spring-steel forms or laminated boards to form radius bends. Tolerance: Not to deviate more than 1/4 inch in 10 feet in grade and alignment.

## **2.4 EXPANSION JOINT MATERIAL**

- A.** Material for expansion joints in portland cement concrete improvements shall be premolded expansion joint fillers conforming to the requirements of ASTM Designation D 1751. Expansion joint material shall be shaped to fit the cross section of the concrete prior to being placed. Suppliers certificates showing conformance with this specification shall be delivered with each shipment of materials delivered to the job site.
- B.** Unless noted otherwise herein or on the Plans expansion joint thickness shall be as follows:
  - 1. Curbs, Curb Ramps, Island Paving, Driveways and Gutter Depressions: ¼-inch.

## **PART 3 EXECUTION**

### **3.1 GENERAL**

- A.** Comply with requirements of Section 320523 – Cement and Concrete for Exterior Improvements.
- B.** Form, place and finish concrete walkways, island paving, valley gutters and driveway approaches in conformance with the applicable requirements of Section 73-1.03 and 73-2.03 of the Caltrans Standard Specifications as modified herein.
- C.** Construct new concrete curb, curb and gutter and valley gutters against existing asphalt concrete by removing a minimum of 12-inches of the asphalt concrete to allow placement of curb or gutter forms. Patch pavement with a 6-inch deep lift of asphalt concrete after gutter form is removed.

### **3.2 SUBGRADE**

- A.** Conform to Section 40-1.03B of Caltrans Standard Specifications.

### **3.3 SOIL STERILANT**

- A.** Not applicable.

### **3.4 PLACING CONCRETE FORMS**

- A.** Form concrete improvements with a smooth and true upper edge. Side of the form with a smooth finish shall be placed next to concrete. Construct forms rigid enough to withstand the pressure of the fresh concrete to be placed without any distortion.

- B. Thoroughly clean all forms prior to placement and coat forms with an approved form oil in sufficient quantity to prevent adherence of concrete prior to placing concrete.
- C. Carefully set forms to the alignment and grade established and conform to the required dimensions. Rigidly hold forms in place by stakes set at satisfactory intervals. Provide sufficient clamps, spreaders and braces to insure the rigidity of the forms.
- D. Provide forms for back and face of curbs, lip of gutters and edge of walks, valley gutters or other surface slabs that are equal to the full depth of the concrete as shown, noted or called for on the Plans. On curves and curb returns provide composite forms made from benders or thin planks of sufficient ply to ensure rigidity of the form.

### **3.5 PLACING STEEL REINFORCEMENT**

- A. Bars shall be free of mortar, oil, dirt, excessive mill scale and scabby rust and other coatings of any character that would destroy or reduce the bond.
- B. Accurately place reinforcement as shown on the plans and hold firmly and securely in position by wiring at intersections and splices, and by providing precast mortar blocks or ferrous metal chairs, spacers, metal hangers, supporting wires, and other approved devices of sufficient strength to resist crushing under applied loads. Provide supports and ties of such strength and density to permit walking on reinforcing without undue displacement.
- C. Place reinforcing to provide the following minimum concrete cover:
  1. Surfaces exposed to water: 4-inches.
  2. Surfaces poured against earth: 3-inches.
  3. Formed surfaces exposed to earth or weather: 2-inches.
  4. Slabs, walls, not exposed to weather or earth: 1-inch.
- D. Minimum spacing, center of parallel bars shall be two and one half (2-1/2) times the diameter of the larger sized bar. Accurately tie reinforcing securely in place prior to pouring concrete. Placing of dowels or other reinforcing in the wet concrete is not permitted.

### **3.6 PLACING PORTLAND CEMENT CONCRETE**

- A. Thoroughly wet subgrade when concrete is placed directly on soil. Remove all standing water prior to placing concrete.
- B. Do not place concrete until the subgrade and the forms have been approved.
- C. Convey concrete from mixer to final location as rapidly as possible by methods that prevent separation of the ingredients. Deposit concrete as nearly as possible in final position to avoid re-handling.
- D. Place and solidify concrete in forms without segregation by means of mechanical vibration or by other means as approved by the Owner. Continue vibration until the material is sufficiently consolidated and absent of all voids without causing segregation of material. The use of vibrators for extensive shifting of fresh concrete will not be permitted.

- E. Concrete in certain locations may be pumped into place upon prior approval by the Owner. When this procedure requires redesign of the mix, such redesign shall be submitted for approval in the same manner as herein specified for approval of design mixes.

### **3.7 EXPANSION JOINTS**

- A. Construct expansion joints incorporating premolded joint fillers at twenty (20) foot intervals in all concrete curbs, gutters, median/island paving, valley gutters, driveway approaches and at the ends of all returns. At each expansion joint install one-half inch by twelve inch (1/2" x 12") smooth slip dowels in the positions shown or noted on the detail drawings.

### **3.8 WEAKENED PLANE JOINTS**

- A. Construct weakened plane joints in concrete curbs, gutters, median/island paving and valley gutters between expansion joints at ten (10) foot intervals throughout, or as otherwise indicated. Depth of joint score depth to be one-fourth (25%) the thickness of the concrete.
- B. Grooved Joints: Form weakened plane joints after initial floating by grooving and finishing each edge of joint to a radius of 1/8-inch. Repeat grooving of weakened plane joints after applying surface finishes. Eliminate groover tool marks on concrete surfaces.

### **3.9 FINISHING CONCRETE**

- A. Finish curb and gutter in conformance with the applicable requirements of Section 73-1.03 and 73-2.03 of the Caltrans Standard Specifications as modified herein.
- B. Where monolithic curb, gutter and sidewalk is specified, separate concrete pours will not be allowed.
- C. Provide a medium broom finish to all horizontal surfaces unless otherwise shown.

### **3.10 FORM REMOVAL**

- A. Remove forms without damage to the concrete. Remove all shores and braces below the ground surface, before backfilling.
- B. Do not backfill against concrete until the concrete has developed sufficient strength to prevent damage.
- C. Leave edge forms in place at least 24 hours after pouring.

### **3.11 CONNECTING TO EXISTING CONCRETE IMPROVEMENTS**

- A. New curb or gutter is to connect to existing improvements to remain by saw cutting to existing sound concrete at the nearest score line, expansion joint or control joint. Drill and insert 1/2-inch diameter by 12-inch long dowels at 24-inches on center into existing improvements. Install pre-molded expansion joint filler at the matching joint.
- B. A cold joint to the existing curb is not acceptable.



### **3.12 FIELD QUALITY CONTROL**

- A.** Conform the finish grade at top of curb, flow line of gutter, and the finish cross section of concrete improvements to the design grades and cross sections.
- B.** Variation of concrete improvements from design grade and cross section as shown or called for on the plans shall not exceed the tolerances established in Section 73 of the Caltrans Standard Specifications.

### **3.13 RESTORATION OF EXISTING IMPROVEMENTS**

- A.** Replace in kind all pavement or other improvements removed or damaged due to the installation of concrete improvements.
- B.** Remove, landscaping or plantings damaged or disturbed due to the installation of concrete improvements. Replace in kind.

**END OF SECTION**

**SECTION 321723**  
**PAVEMENT MARKINGS**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Removal of existing traffic stripes and pavement markers.
- B. Removal of existing signs.
- C. Cleaning and sweeping of streets before application of traffic stripes and pavement markings.
- D. Materials and application for traffic stripes and pavement markings.
- E. Materials and application for pavement markers.
- F. Traffic control signs and street name signs.
- G. Object markers.
- H. Survey monuments.

**1.2 RELATED SECTIONS**

- A. Section 320523 – Cement and Concrete for Exterior Improvements.

**1.3 RELATED DOCUMENTS**

- A. Caltrans Standard Specifications:
  - 1. Section 56, Signs.
  - 2. Section 81, Monuments.
  - 3. Section 82, Markers and Delineators.
  - 4. Section 84, Traffic Stripes and Pavement Markings.
  - 5. Section 85, Pavement Markers.
- B. Caltrans Standard Plans:
  - 1. Plan A20A through A20D: Pavement Markers and Traffic Lines, Typical Details.
  - 2. Plan A24A and A24B: Pavement Markings Arrows.
  - 3. Plan A24C: Pavement Markings, Symbols and Numerals.
  - 4. Plan A24D: Pavement Markings, Words.
  - 5. Plan A24E: Pavement Markings, Words and Crosswalks.
  - 6. Plan A73A: Object Markers.
  - 7. Plan A73B: Markers.
  - 8. Plan A74: Survey Monuments.
  - 9. Plan RS1: Roadside Sign, Typical Installation Details No. 1.
- C. The Manual of Uniform Traffic Control Devices (MUTCD), and the California Supplement to the MUTCD, the editions in effect at time of date on plans.

- D. The regulations, standards, and tests of the State of California Department of Transportation Materials and Research Division, edition in effect at time of date on plans.

#### **1.4 QUALITY ASSURANCE**

- A. Deliver certificates showing conformance with this specification to the Owner with each shipment of materials and equipment to the Project site.

#### **1.5 PROJECT CONDITIONS**

- A. Do not apply traffic striping or pavement markings to the pavement until after approval to proceed has been given by the Owner.
- B. Thoroughly cure new asphalt concrete and portland cement concrete before application of stripes, markings or markers.

### **PART 2 PRODUCTS**

#### **2.1 GENERAL**

- A. For products to be installed within the jurisdiction of a local, state or federal agency, product(s) shall conform to the agency's standard specifications.

#### **2.2 THERMOPLASTIC STRIPES AND MARKING**

- A. Conform thermoplastic striping and marking materials to Section 84-2.02 of Caltrans Standard Specifications, unless noted otherwise herein or on the Plans.

#### **2.3 PAINTED STRIPES AND MARKINGS**

- A. Conform painted striping and marking materials to Section 84-3.02 of Caltrans Standard Specifications, unless noted otherwise herein or on the Plans.

#### **2.4 PAVEMENT MARKERS**

- A. Types: Section 85-1.02 of Caltrans Standard Specifications and as indicated.
- B. Sampling, Tolerances and Packaging: Section 85-1.03 of Caltrans Standard Specifications.
- C. Material
  - 1. Non-reflective: Section 85-1.04 of Caltrans Standard Specifications.
  - 2. Retroreflective: Section 85-1.05 of Caltrans Standard Specifications.

#### **2.5 TRAFFIC CONTROL SIGNS**

- A. General: Section 56-2 of the Caltrans Standard Specifications.
- B. Sign Panels: Conform type (regulatory or warning), size, shape and pattern to the State of California, Department of Transportation, Traffic Manual, edition in effect at the date of the Plans. Sign faces to be of reflectorized porcelain enamel.

- C. Posts:
  - 1. Metal: Two (2) inch inside diameter steel pipe. Conform to Section 56-2.02A of Caltrans Standard Specifications, unless otherwise specified.
  - 2. Wood: Conform to Section 56-2.02B.
- D. Mounting Hardware: Section 56-2.02D of Caltrans Standard Specifications, unless otherwise specified.
- E. Post Foundations: Portland cement concrete conforming to Section 320523 – Cement and Concrete for Exterior Improvements.

## **2.6 REFLECTORIZED OBJECT MARKERS**

- A. ReflectORIZED Metal Object Markers: Conform to the applicable requirements of Section 82 of Caltrans Standard Specifications for target plates and reflectors, and Caltrans Standard Plan A73A for type L-1 or L-2 object markers.
- B. Posts: Metal posts conforming to the applicable requirements of Section 82-1.02B of Caltrans Standard Specifications and Caltrans Standard Plan A73B.
- C. Mounting Hardware: Conform to the applicable requirements of Section 82-1.02G of Caltrans Standard Specifications.

## **PART 3 EXECUTION**

### **3.1 REMOVAL OF TRAFFIC STRIPES, PAVEMENT MARKINGS AND PAVEMENT MARKERS**

- A. Where blast cleaning is used for the removal of painted traffic stripes and pavement markings, or for removal of objectionable material, remove the residue, including dust and water, immediately after contact with the surface being treated. Remove by a vacuum attachment operating concurrently with the blast cleaning operation.
- B. Where grinding is used for the removal of thermoplastic traffic stripes and pavement markings; remove the residue by means of a vacuum attachment to the grinding machine. Do not allow the residue to flow across or be left on, the pavement.
- C. Where markings are to be removed by blast cleaning or by grinding, the removed area shall be approximately rectangular so that no imprint of the removed marking remains on the pavement.
- D. Contractor will be responsible for repairing any damage to the pavement during removal of pavement markers. Damage to the pavement, resulting from removal of pavement markers, shall be considered as any depression more than 1/4-inch deep.

### **3.2 TEMPORARY PAVEMENT MARKERS**

- A. If permanent pavement markers cannot be installed immediately, and the street or road is to be placed in service, install short term, temporary pavement markers on the new pavement prior to opening the street or road to traffic.

- B. Place markers, at a minimum, of 24 feet on centers or as required by the governmental agency having jurisdiction, in the appropriate colors to delineate centerlines and travel lanes on multi-lane roadways.

### **3.3 THERMOPLASTIC TRAFFIC STRIPES AND PAVEMENT MARKINGS**

- A. Apply in conformance with the manufacturer's instructions and the applicable requirements of Section 84-2.04 of Caltrans Standard Specifications and Caltrans Standard Plans A20A through A20D, and A24A through A24E.

### **3.4 PAINTED TRAFFIC STRIPES AND PAVEMENT MARKINGS**

- A. Apply in conformance with the manufacturer's instructions and the applicable requirements of Section 84-3.03, 3.04 and 3.05 of Caltrans Standard Specifications and Caltrans Standard Plans A20A through A20D, and A24A through A24E.

### **3.5 PAVEMENT MARKERS**

- A. Place in conformance with the requirements of Section 85-1.06 of the Caltrans Standard Specifications.
- B. Pavement recesses are not required. Markers shall be installed accurately to the line established by the Engineer. No markers shall be installed until the surface has been approved by the Owner.

### **3.6 TRAFFIC CONTROL SIGNS**

- A. Install in conformance with Sections 56-2.03 and 2.04 of Caltrans Standard Specifications, Caltrans Standard Plan RS1, the applicable requirements of the State of California Department of Transportation Maintenance Manual and the details shown on the Plans. The horizontal locations shown on Caltrans Standard Plan RS1 shall not be applicable, the horizontal location shall be as shown on the Plans.
- B. Portland cement concrete for post foundations shall be of the configuration shown on the Plans.
- C. After erection, damage to traffic sign faces shall be touched up or the sign replaced.

### **3.7 STREET NAME SIGNS**

- A. Install in accordance with the manufacturer's instructions and as shown on the Plans.
- B. Horizontal location shall be as shown on the Plans.
- C. Portland cement concrete for post foundations shall be of the configuration shown on the Plans.

### **3.8 REFLECTORIZED OBJECT MARKERS**

- A. Install in conformance with the requirements of Section 82-1.03 of Caltrans Standard Specifications, except that the metal marker posts shall not be driven in place without prior approval of the Owner.

- B. Install at locations shown on the Plans.

### **3.9 STREET SURVEY MONUMENTS**

- A. General: Conform to Section 81-03 of Caltrans Standard Specifications and Caltrans Standard Plan A74, except that the marker disk will not be furnished. Exact point in marker to be determined by an accurate survey and clearly punched in top of marker together with California Registered Civil Engineer's or California Licensed Land Surveyor's license number.

### **3.10 PROTECTION**

- A. Protect the newly installed and traffic stripes and pavement markings from damage until the material has cured.
- B. Replace any traffic stripes or pavement markings or markers broken, misaligned or otherwise disturbed prior to opening roadway to traffic.

### **3.11 RESTORATION OF EXISTING IMPROVEMENTS**

- A. Existing signs striping or other markings removed or damaged due to the installation of new facilities shall be replaced in kind.
- B. Existing landscaping or planting removed, damaged or disturbed due to the installation of traffic control signs or street name signs shall be replaced in kind.

**END OF SECTION**

**SECTION 330513**  
**MANHOLE GRADE ADJUSTMENT**

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Adjusting manholes, valves, monument covers and other structures to grade.

**1.2 RELATED SECTIONS**

- A. Section 321200 – Flexible Paving.

**1.3 DEFINITIONS**

- A. ASTM: American Society for Testing Materials.

**1.4 SUBMITTALS**

- A. Not applicable.

**1.5 RELATED DOCUMENTS**

- A. California Building Code: Section 1127B – Exterior Routes of Travel.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

**3.1 ADJUSTING MANHOLES, VALVES, MONUMENT COVERS AND OTHER STRUCTURES TO GRADE**

- A. Remove pavement, using vertical cuts, as needed to remove frame and provide for concrete collar. Do not damage adjacent pavement.
  - 1. Circular Covers: Cut circle with radius 6 inches larger than cover and concentric with cover.
  - 2. Rectangular Covers: Cut rectangle 6 inches larger than cover on all sides.
- B. Install grade rings or blocking as needed to raise cover to finish grade.
- C. Pour concrete collar:
  - 1. Bottom of Collar: Top of existing collar or 6 inches below top of proposed collar, whichever is at a higher elevation.
  - 2. Top of Collar: Bottom of existing asphalt pavement.
  - 3. Apply tack coat to all exposed surfaces.
  - 4. Fill excavation with asphaltic concrete and, while still hot, compact flush with adjacent surface.

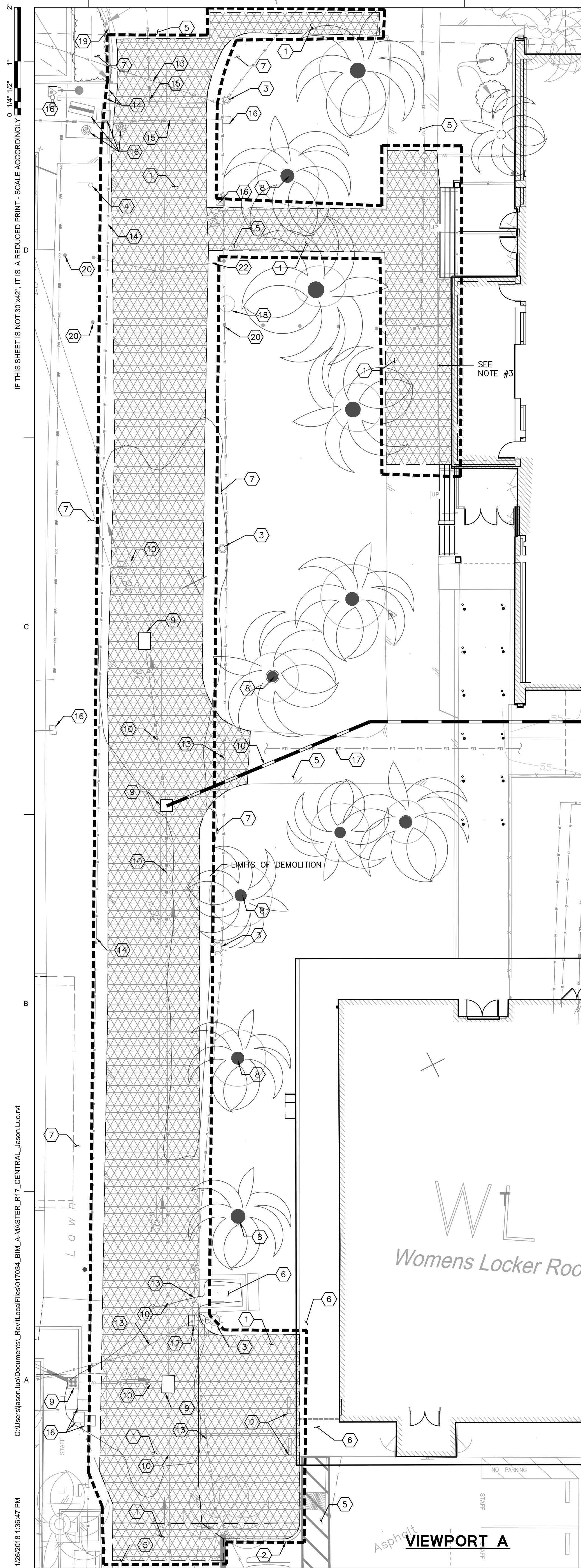
**3.2 INSTALLATION TOLERANCES**

- A. Adjust Covers:

1. Compacted surface: Up to 0.01 foot higher, and no lower, than adjacent pavement.
2. Do not create ponding.

**END OF SECTION**





**DEMOLITION ITEMS**

- DEMOLITION LIMIT LINE ---
- 1 REMOVE EX AC/AB [Hatched Box]
- 2 PROTECT EX CURB
- 3 PROTECT EX SITE LIGHT
- 4 PROTECT EX SIGN
- 5 PROTECT EX AC
- 6 PROTECT EX CONCRETE
- 7 PROTECT EX LANDSCAPE
- 8 PROTECT EX TREE
- 9 PROTECT EX STORM DRAIN STRUCTURE
- 10 PROTECT EX UNDERGROUND STORM DRAIN UTILITY
- 11 PROTECT EX HIGH VOLTAGE ELEC. UTILITY
- 12 PROTECT EX ELECTRICAL UTILITY STRUCTURE
- 13 PROTECT EX UNDERGROUND ELECTRICAL UTILITY
- 14 PROTECT EX UNDERGROUND WATER UTILITY
- 15 PROTECT EX UNDERGROUND IRRIGATION UTILITY
- 16 PROTECT EX WATER UTILITY STRUCTURE
- 17 PROTECT EX UNDERGROUND COMMUNICATION UTILITY
- 18 PROTECT EX STRUCTURE
- 19 PROTECT EX CURB AND GUTTER
- 20 PROTECT EX BOLLARD
- 21 PROTECT EX COMMUNICATION UTILITY STRUCTURE
- 22 RELOCATE EX TEMPORARY FENCE
- 23 CLEAR AND GRUB [Dotted Box]
- 24 REMOVE EX HEADER BOARD
- 25 SALVAGE AND REUSE EX WHEELSTOPS
- 26 PROTECT EX CLEANOUT AND RAISE RIM TO GRADE

\*KEYNOTES APPLY TO ALL DEMOLITION SHEETS.

**DEMOLITION NOTES**

1. CONTRACTOR TO USE CAUTION WHEN WORKING ADJACENT TO EXISTING BUILDING.
2. CONTRACTOR TO CLEAR AND GRUB WITHIN THE LIMITS OF PROPOSED WORK, UNLESS OTHERWISE NOTED ON PLANS.
3. WHERE APPLICABLE IN LANDSCAPE AREAS, CONTRACTOR SHALL REMOVE EXISTING IRRIGATION UTILITY LINES AND CAP A MINIMUM OF 18" BELOW GRADE.
4. RIM ELEVATIONS FOR EXISTING UTILITY STRUCTURES SHALL BE RAISED TO PROPOSED SURFACE ELEVATIONS.
5. THE UTILITY LINES AND STRUCTURES SHOWN ON THESE PLANS ARE DERIVED FROM RECORD DATA AND/OR SURFACE OBSERVATION AND ARE APPROXIMATE ONLY. ACTUAL LOCATION AND SIZE, TOGETHER WITH THE PRESENCE OF ANY ADDITIONAL UTILITY LINES AND STRUCTURES NOT SHOWN ON THIS PLAN, SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
6. THE CONTRACTOR IS REQUIRED BY STATE LAW TO ACTIVELY RESEARCH THE WORK AREA PRIOR TO COMMENCEMENT OF CONSTRUCTION, REFERENCE ANY MONUMENTS, AND REPLACE THOSE DAMAGED OR REMOVED DURING CONSTRUCTION.
7. THE LIMITS OF DEMOLITION SHOWN ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION IN PAVING, CURBS, GUTTERS, AND SIDEWALKS AND AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS SLOPES OR HAZARDOUS CONDITIONS.
8. EXISTING CURB AND SIDEWALK AND LANDSCAPE/IRRIGATION WITHIN THE PROJECT LIMITS THAT ARE DAMAGED OR DISPLACED, EVEN THOUGH THEY WERE NOT TO BE REMOVED, SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
9. PROTECT ALL EXISTING UTILITIES AND SITE FEATURES FROM BEING DAMAGED. UNLESS OTHERWISE NOTED, ALL UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED AT NO ADDITIONAL COST TO THE OWNER AND TO THE SATISFACTION OF THE ENGINEER.

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**C-608 PHYSICAL EDUCATION  
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RENOVATION**  
2600 MISSION BELL DRIVE  
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DISTRICT  
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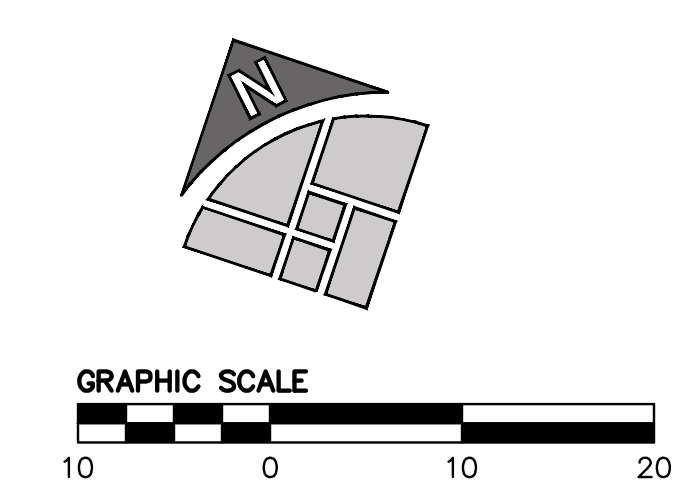
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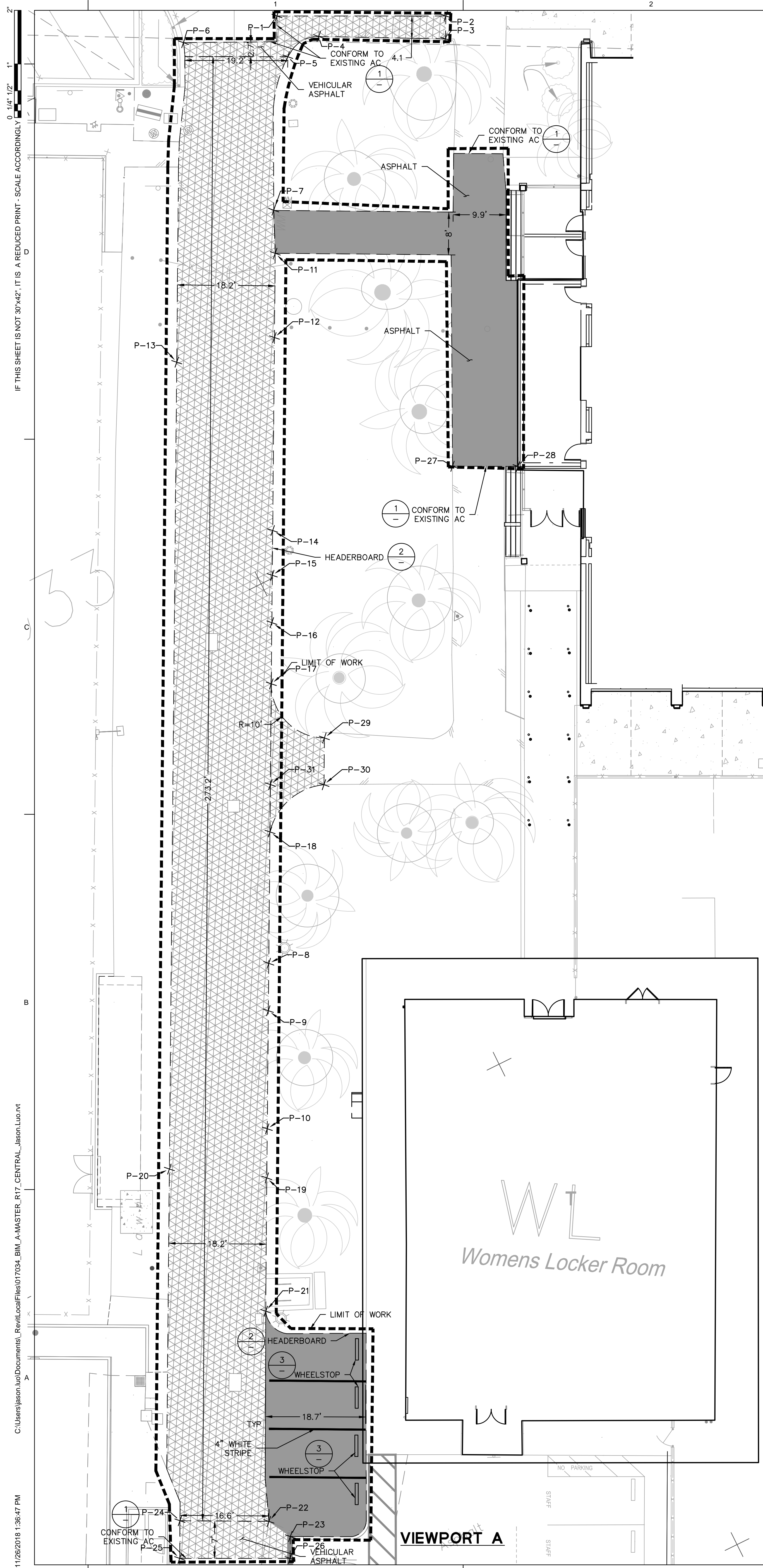
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**01-117456**  
AC \_\_\_\_\_ FLS \_\_\_\_\_ SS \_\_\_\_\_  
DATE \_\_\_\_\_

TITLE  
**DEMOLITION  
PLAN**

SHEET  
**C3.0**





**SURFACE IMPROVEMENTS LEGEND**

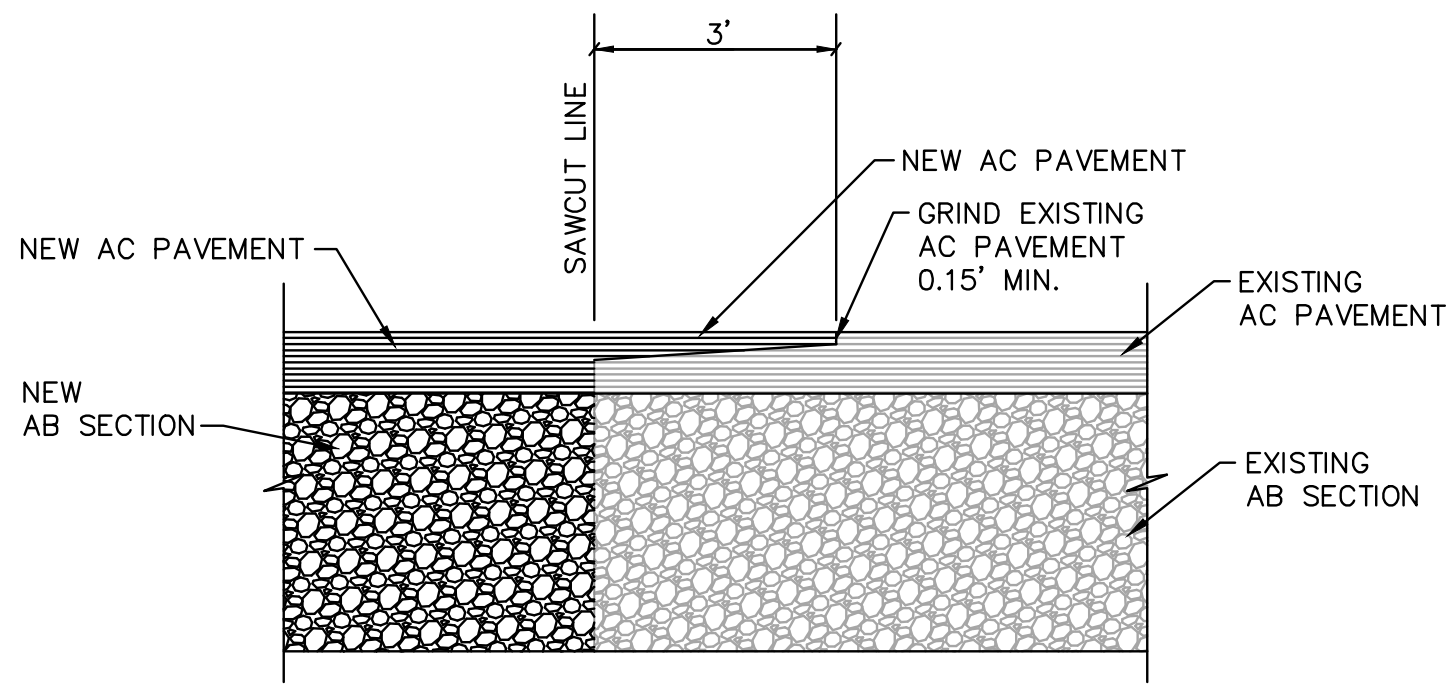
- VEHICULAR ASPHALT PAVEMENT (3" AC/10" CLASS II AB)
- ASPHALT CONCRETE (2" AC/6" CLASS II AB, TI=5)

**SURFACE IMPROVEMENTS NOTES**

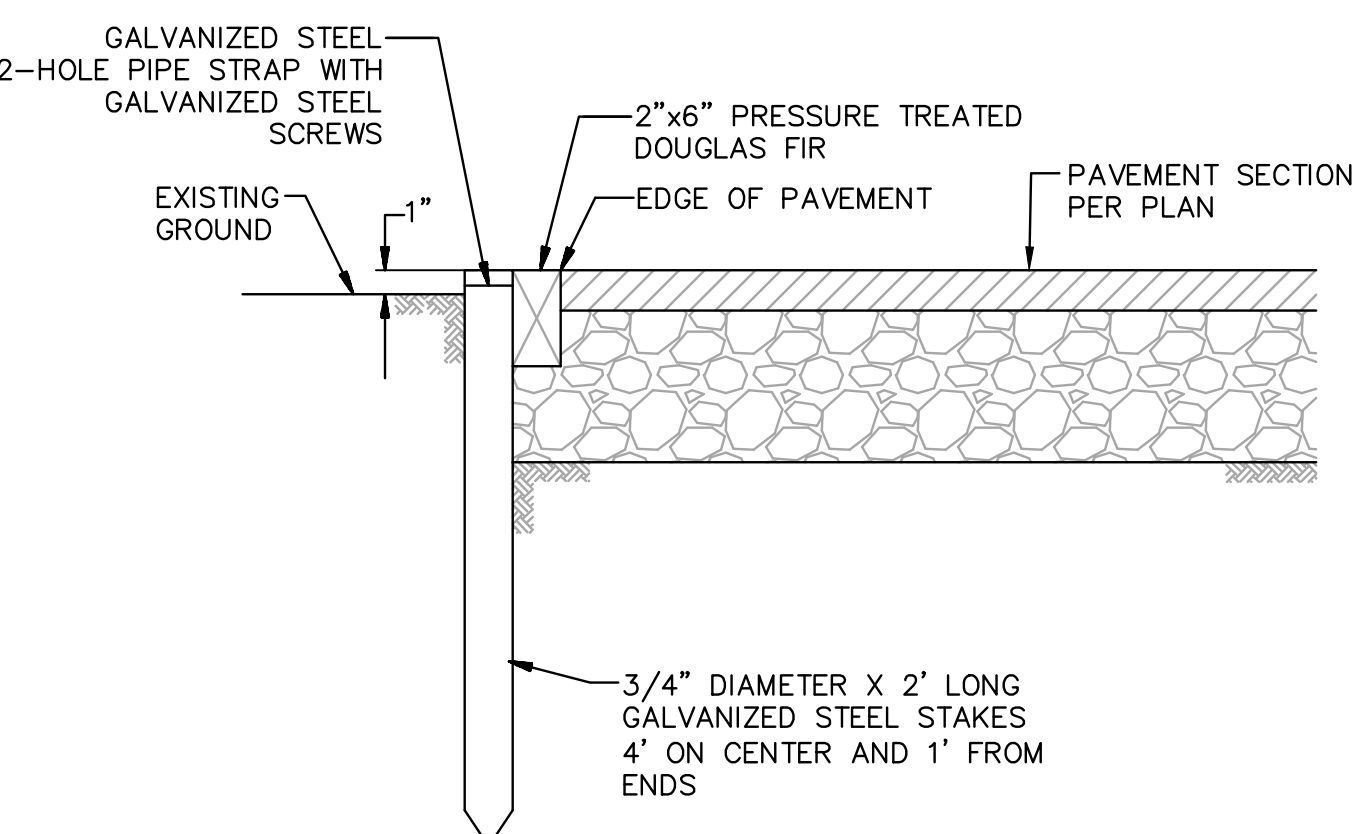
1. THE LIMITS OF WORK ARE APPROXIMATE ONLY. CONTRACTOR IS RESPONSIBLE FOR MATCHING EXISTING SURROUNDINGS, LANDSCAPE, AND OTHER IMPROVEMENTS WITH A SMOOTH TRANSITION, AVOIDING ANY ABRUPT OR APPARENT CHANGES IN GRADES OR CROSS-SLOPES OR HAZARDOUS CONDITIONS.
2. ALL NEW CONCRETE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
3. EXISTING CONCRETE SHALL BE REMOVED AT THE NEAREST EXPANSION JOINTS.
4. NEW WORK SHALL MATCH EXISTING AS CLOSELY AS POSSIBLE IN FINISH, SCORING, AND COLOR.
5. EXISTING SITE FEATURES (CURBS, CONCRETE WALKS, LANDSCAPE, IRRIGATION, ETC.) DEMOLISHED DURING CONSTRUCTION SHALL BE REPLACED IN KIND.
6. CONTROL POINTS TABLE INCLUDES POINTS ON ALL SURFACE IMPROVEMENT PLAN SHEETS.

**CONSTRUCTION NOTES**

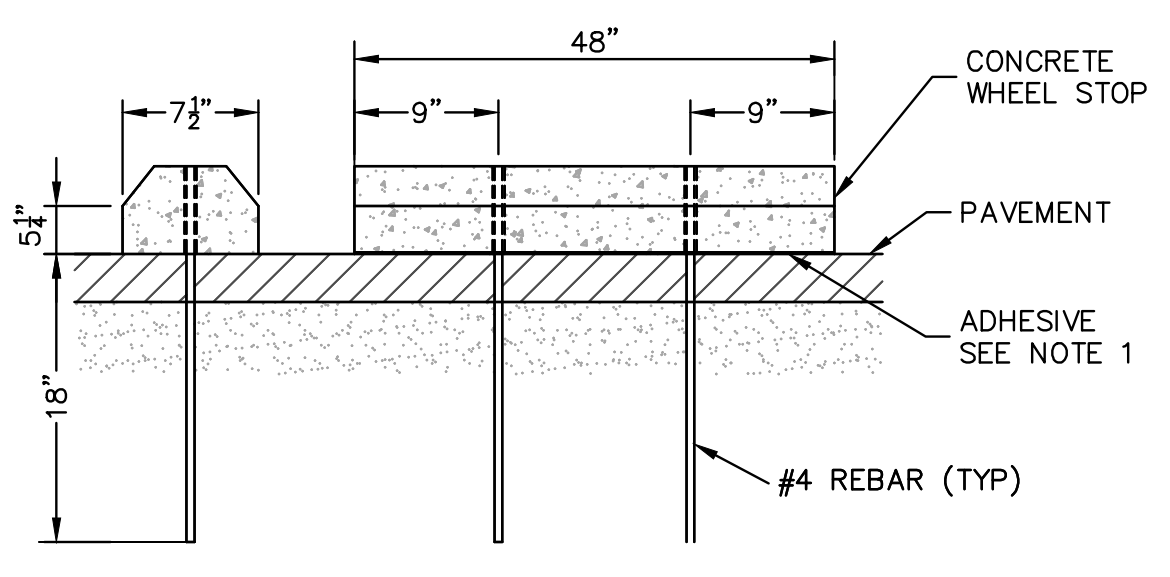
1. AGGREGATE BASE SHALL BE 3" MAX, CLASS 2 PER SECTION 26 OF CALTRANS STANDARD SPECIFICATIONS. SUBGRADE AND BASE ROCK SHALL BE COMPACTED TO 95% RELATIVE COMPACTION.
2. ASPHALT SHALL BE 3" MAX TYPE A PER SECTION 39 OF CALTRANS STANDARD SPECIFICATION. ASPHALT BINDER SHALL BE PG 64-10 OR PG 64-16 PER SECTION 92 OF THE CALTRANS SPECIFICATION.



**1 AC PAVEMENT CONFORM NTS**



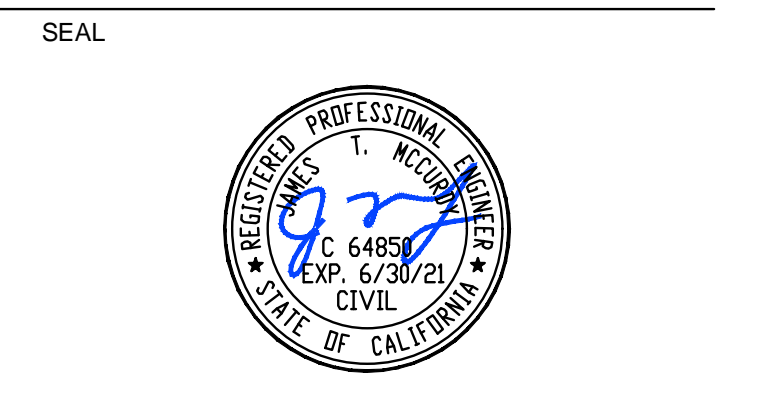
**2 HEADERBOARD NTS**



- NOTE:**
1. ADHESIVE FOR ANCHORING WHEEL STOPS TO PAVEMENT SHALL BE AN EPOXY ADHESIVE MANUFACTURED FOR THE PURPOSE, SIMILAR AND EQUAL TO THE ADHESIVES SPECIFIED IN SECTION 95 OF THE CALTRANS STANDARD SPECIFICATIONS, SECTION 95-2.04 (RAPID SET EPOXY ADHESIVE) OR 95-2.05 (STANDARD SET EPOXY ADHESIVE).

**3 WHEEL STOP NTS**

Point #	DESCRIPTION	Northing	Easting
1	ASPHALT IMPROVEMENTS	2180593.6065	6031149.6887
2	ASPHALT IMPROVEMENTS	2180579.6165	6031177.9211
3	ASPHALT IMPROVEMENTS	2180575.8223	6031175.9686
4	ASPHALT IMPROVEMENTS	2180586.7120	6031154.9750
5	ASPHALT IMPROVEMENTS	2180585.9088	6031148.1205
6	ASPHALT IMPROVEMENTS	2180596.8951	6031131.8530
7	ASPHALT IMPROVEMENTS	2180561.4201	6031133.0724
8	ASPHALT IMPROVEMENTS	2180435.9385	6031069.8525
9	ASPHALT IMPROVEMENTS	2180428.0580	6031065.8574
10	ASPHALT IMPROVEMENTS	2180408.4118	6031055.8988
11	ASPHALT IMPROVEMENTS	2180554.0834	6031129.7443
12	ASPHALT IMPROVEMENTS	2180540.0656	6031122.6379
13	ASPHALT IMPROVEMENTS	2180544.0411	6031104.2581
14	ASPHALT IMPROVEMENTS	2180507.9547	6031106.3592
15	ASPHALT IMPROVEMENTS	2180500.5043	6031102.5822
16	ASPHALT IMPROVEMENTS	2180492.6238	6031098.5872
17	ASPHALT IMPROVEMENTS	2180482.4468	6031093.4279
18	ASPHALT IMPROVEMENTS	2180457.8069	6031080.9366
19	ASPHALT IMPROVEMENTS	2180400.2378	6031051.7573
20	ASPHALT IMPROVEMENTS	2180409.7996	6031036.2040
21	ASPHALT IMPROVEMENTS	2180378.0349	6031040.5420
22	ASPHALT IMPROVEMENTS	2180342.6540	6031023.6660
23	ASPHALT IMPROVEMENTS	2180338.3548	6031025.9911
24	ASPHALT IMPROVEMENTS	2180350.1327	6031008.8418
25	ASPHALT IMPROVEMENTS	2180343.8669	6031005.6807
26	ASPHALT IMPROVEMENTS	2180334.7202	6031024.1391
27	ASPHALT IMPROVEMENTS	2180503.7988	6031141.7450
28	ASPHALT IMPROVEMENTS	2180498.3512	6031152.6932
29	ASPHALT IMPROVEMENTS	2180469.0058	6031097.8255
30	ASPHALT IMPROVEMENTS	2180461.2298	6031093.8834
31	ASPHALT IMPROVEMENTS	2180465.6874	6031084.9317



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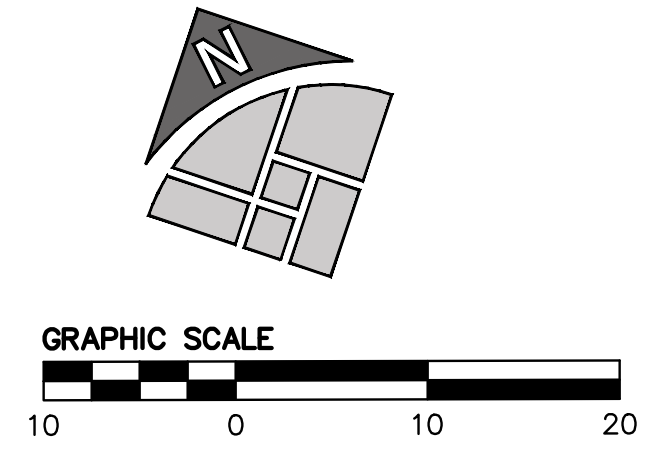
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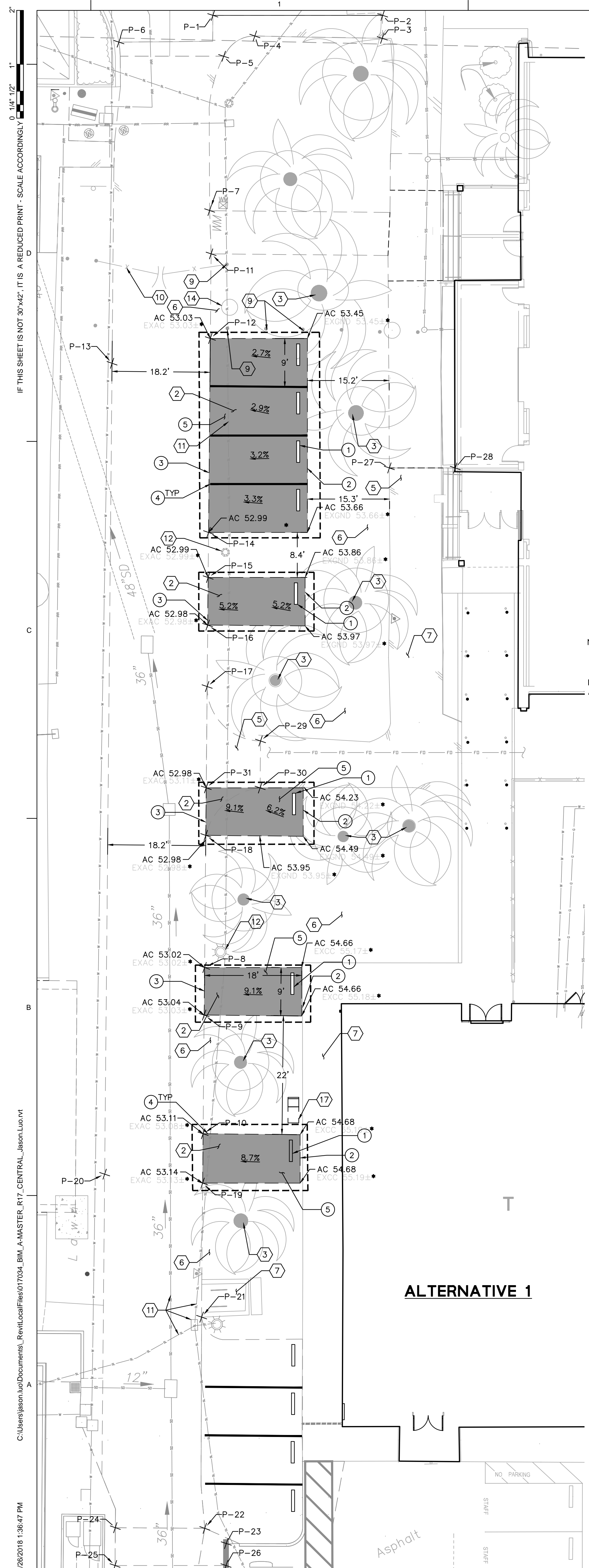
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TITLE  
**SURFACE IMPROVEMENT PLAN**

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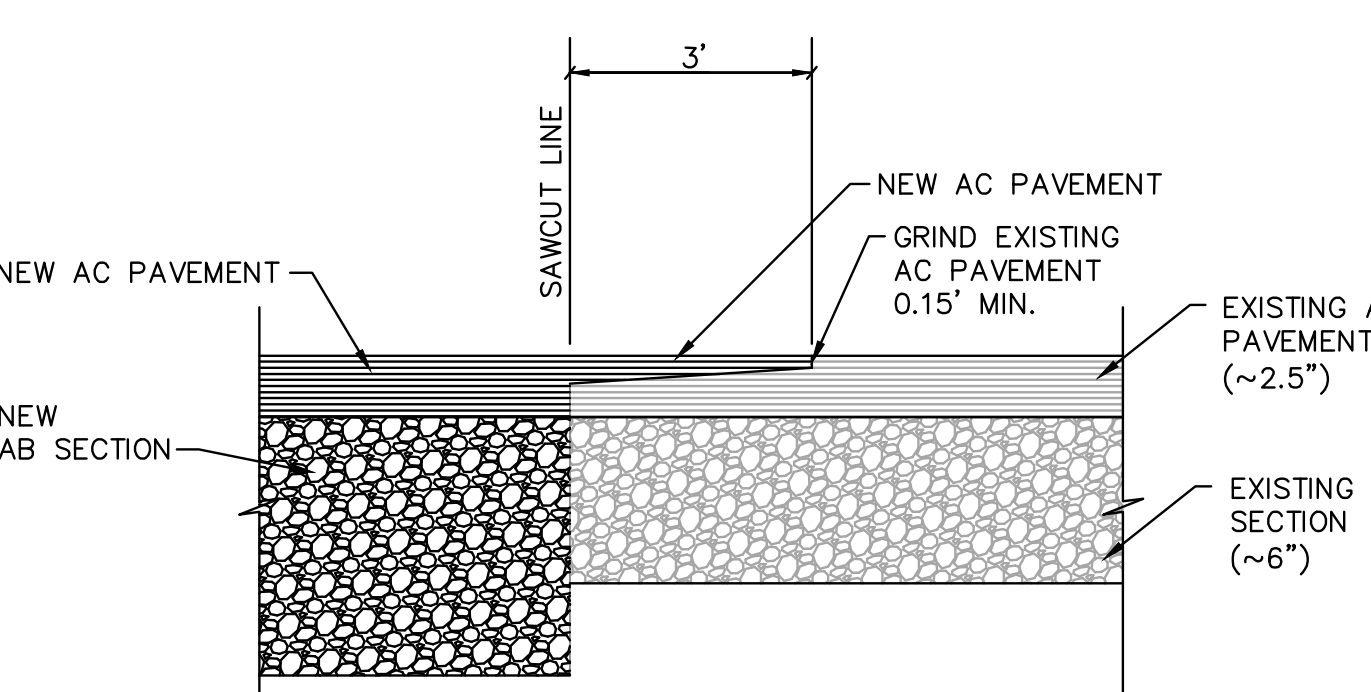




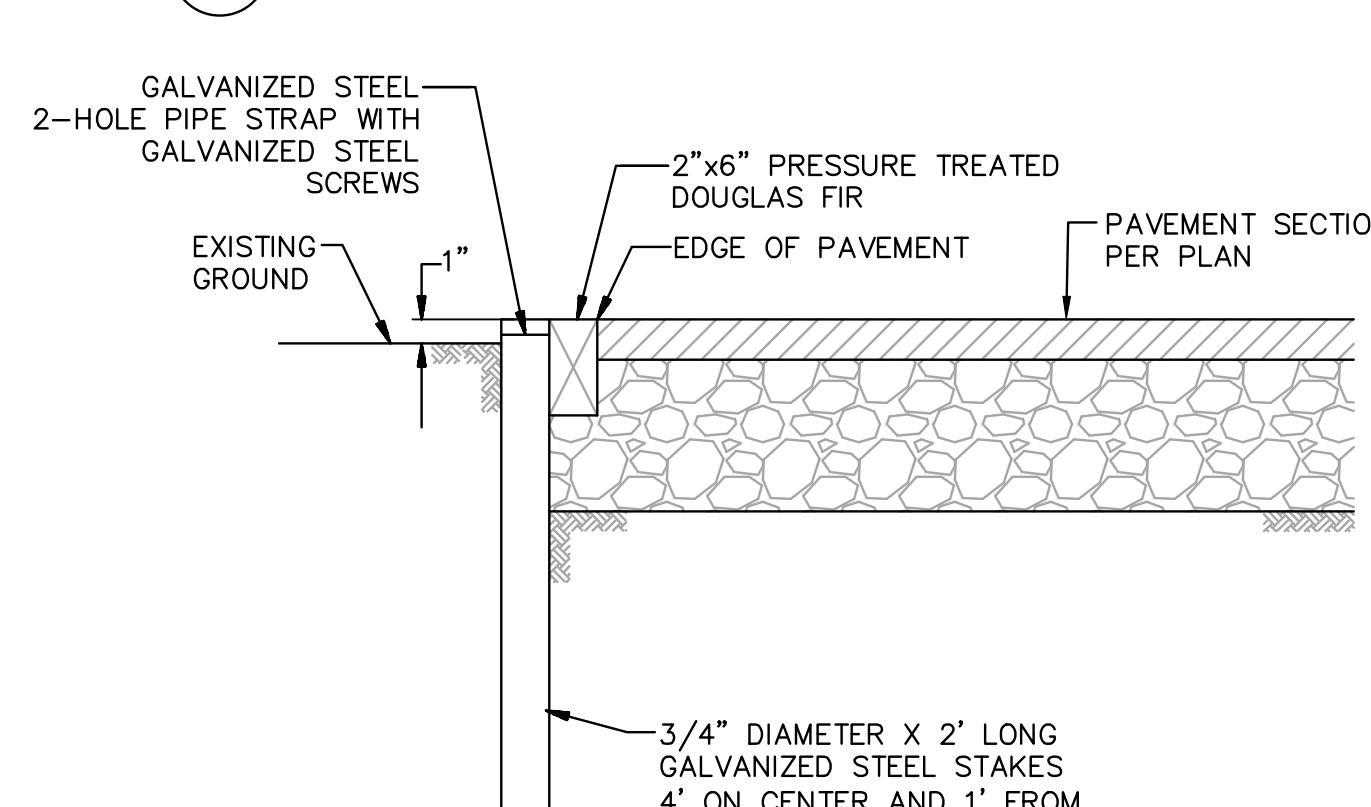
- ADDITIONAL ALTERNATIVE A ITEMS**
- 1 DEMOLITION LIMIT LINE
  - 2 REMOVE EX AC/AB
  - 3 REMOVE EX LANDSCAPE
  - 4 PROTECT EX TREE
  - 5 PROTECT EX STAIRS
  - 6 PROTECT EX AC/AB
  - 7 PROTECT EX LANDSCAPE
  - 8 PROTECT EX CONCRETE
  - 9 PROTECT EX BUILDING
  - 10 PROTECT EX BOLLARD
  - 11 PROTECT EX GATE
  - 12 PROTECT EX UTILITY
  - 13 PROTECT EX LIGHT POLE
  - 14 PROTECT EX CURB
  - 15 PROTECT EX STRUCTURE
  - 16 SALVAGE AND RESUSE EX WHEELSTOPS
  - 17 PROTECT EX TRANSFORMER
- 1 WHEELSTOP, SEE DETAIL 3  
 2 HEADBOARD, SEE DETAIL 2  
 3 AC CONFORM, SEE DETAIL 1  
 4 4" WHITE STRIPE  
 5 VEHICULAR ASPHALT CONCRETE (3" AC/10" CLASS II AB, TI=5)

**NOTES:**

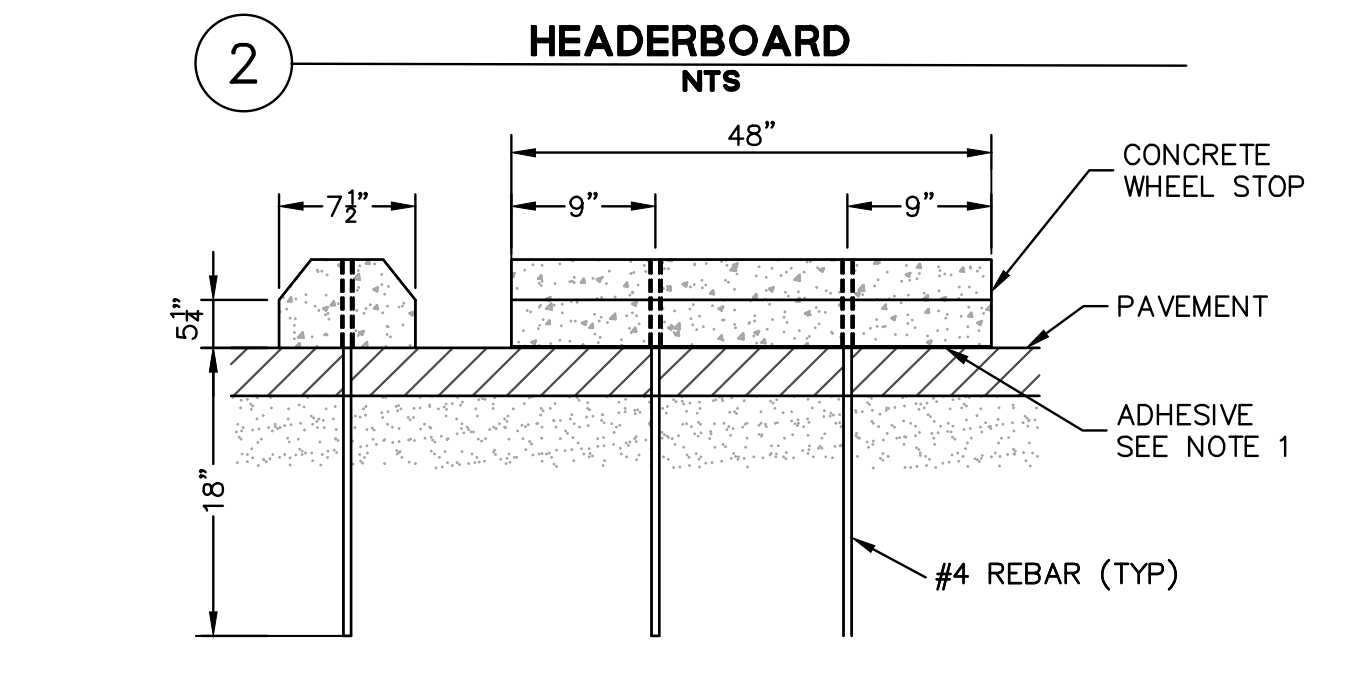
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2. WHERE APPLICABLE IN LANDSCAPE AREAS, CONTRACTOR SHALL REMOVE EXISTING IRRIGATION UTILITY LINES AND CAP A MINIMUM OF 18" BELOW GRADE.



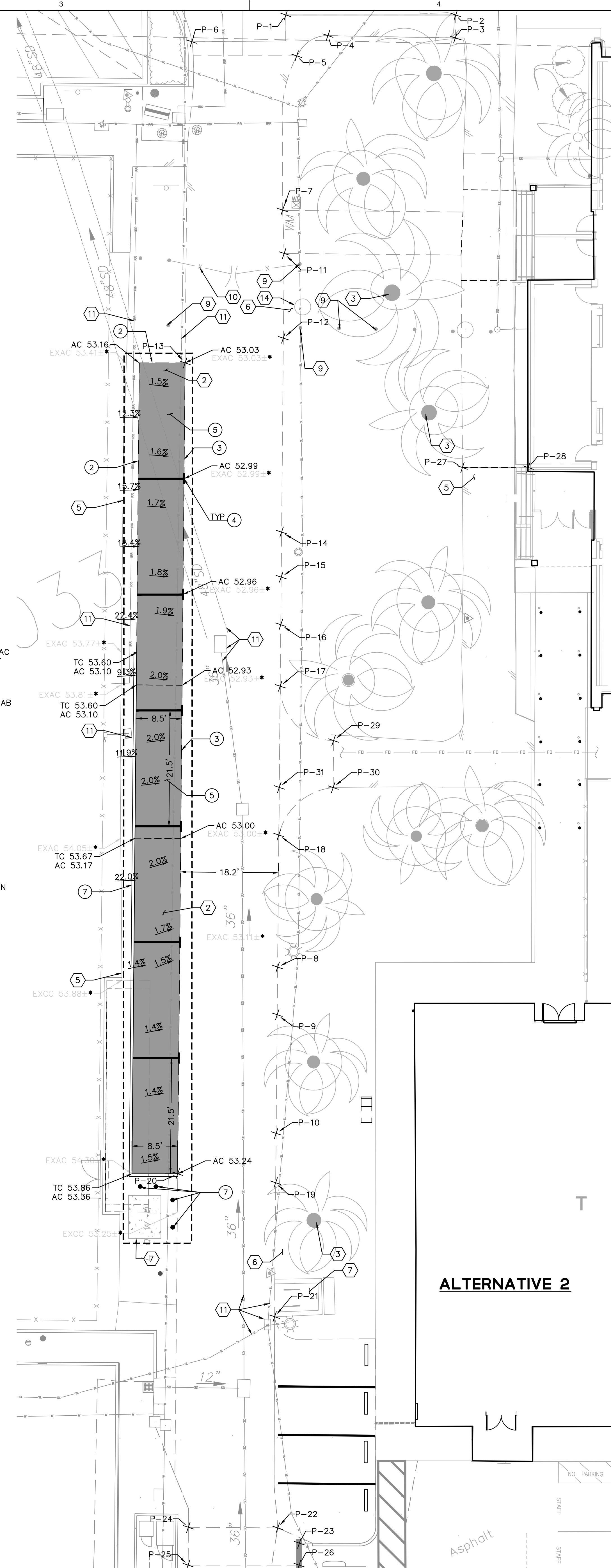
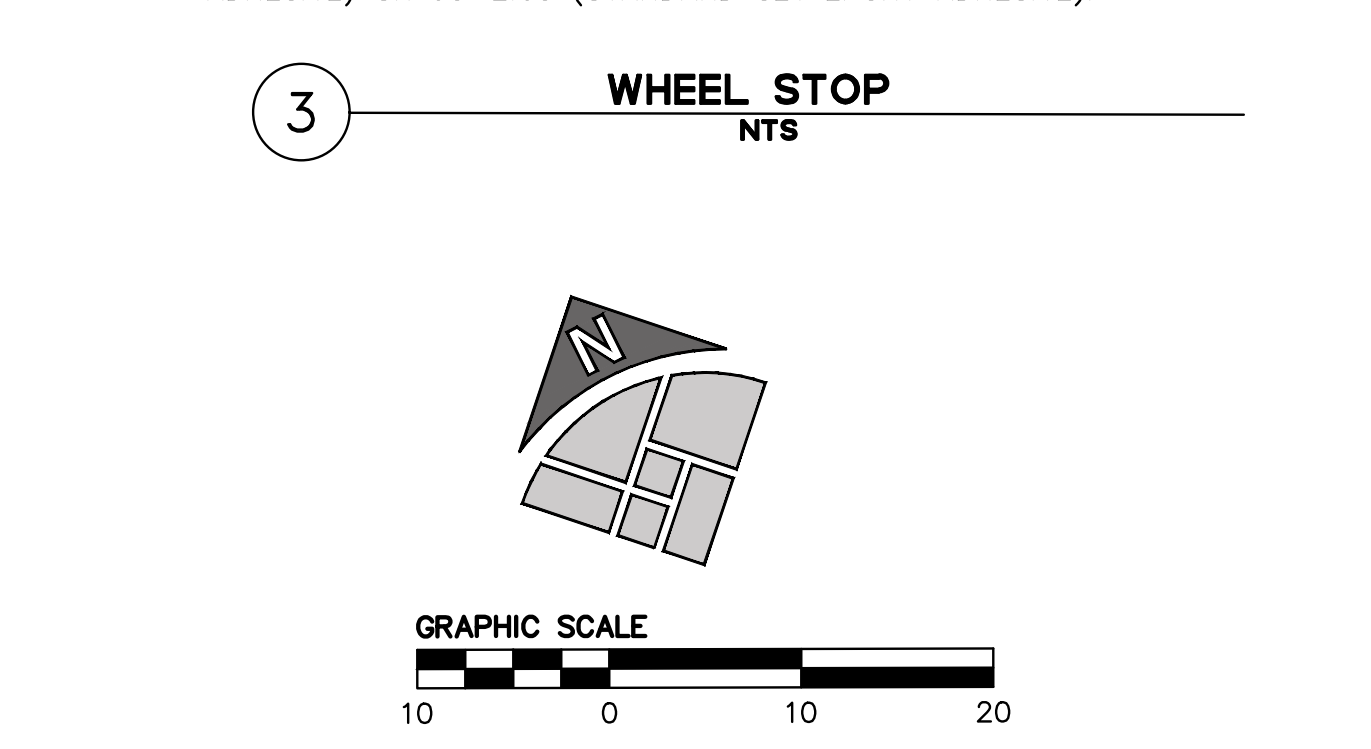
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**2 HEADERBOARD**  
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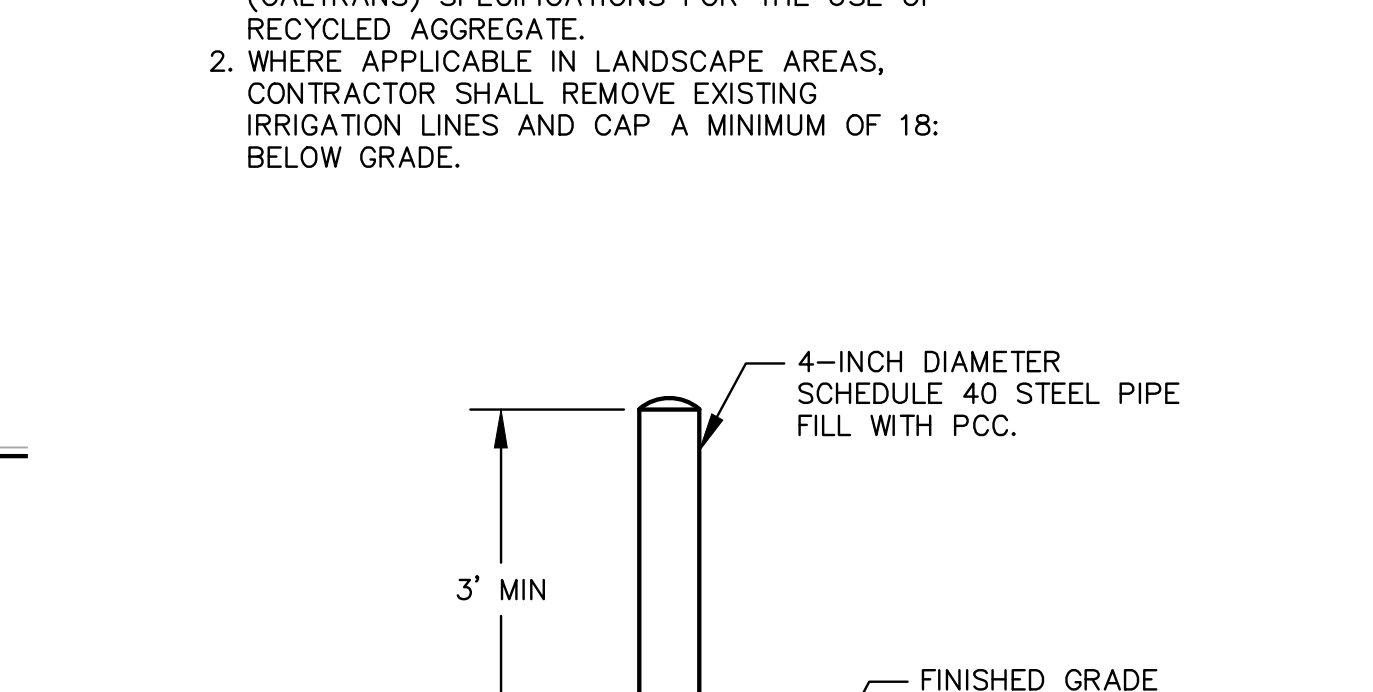
**3 WHEEL STOP**  
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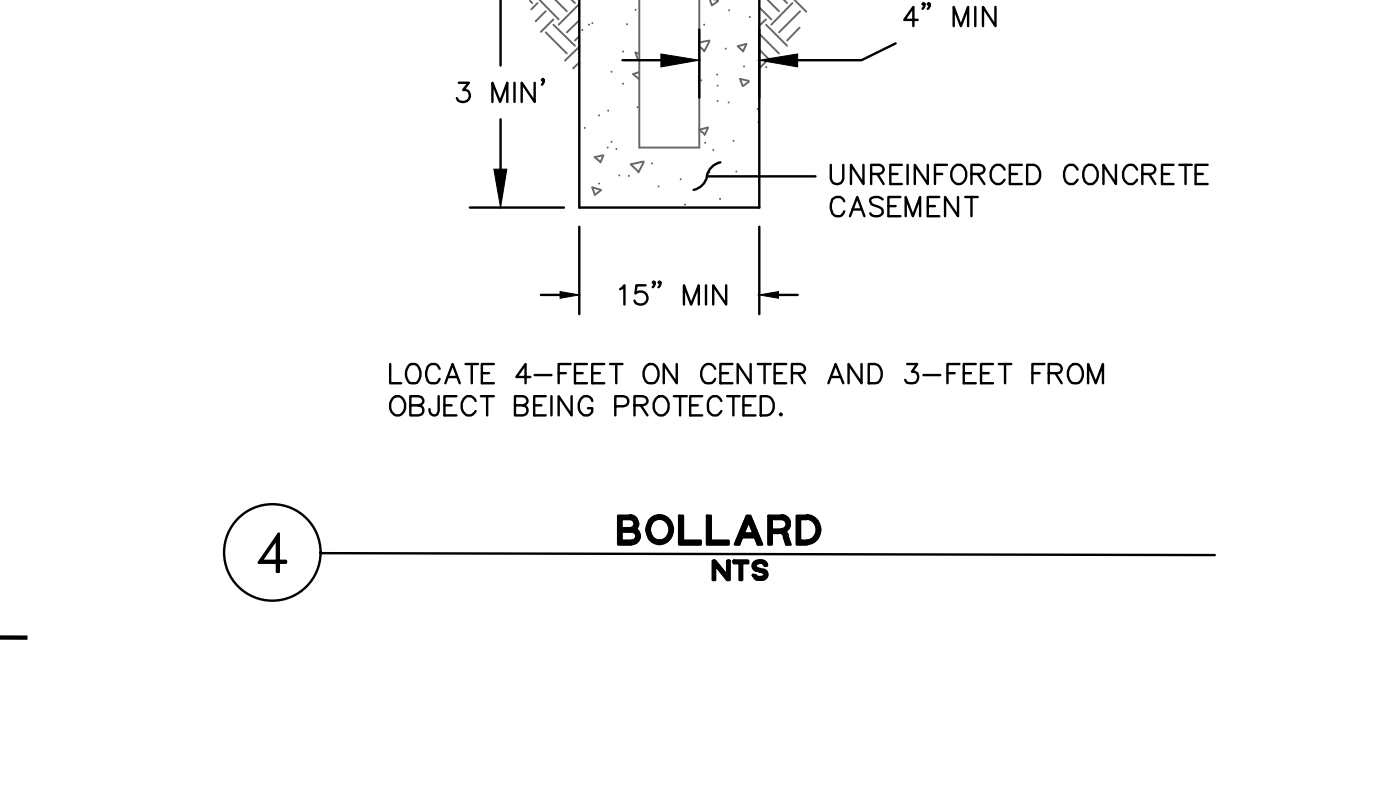
- ADDITIONAL ALTERNATIVE B ITEMS**
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  - 14 PROTECT EX CURB
  - 15 PROTECT EX STRUCTURE
  - 16 SALVAGE AND REUSE EX WHEELSTOP
  - 17 PROTECT EX TRANSFORMER
- 1 WHEELSTOP, SEE DETAIL 3, THIS SHEET  
 2 HEADBOARD, SEE DETAIL 2, THIS SHEET  
 3 AC CONFORM, SEE DETAIL 1, THIS SHEET  
 4 4" WHITE STRIPE  
 5 VEHICULAR ASPHALT CONCRETE (3" AC/10" CLASS II AB, TI=5)  
 6 VERTICAL CURB, SEE DETAIL 5, THIS SHEET  
 7 BOLLARD, SEE DETAIL 4, THIS SHEET

**NOTES:**

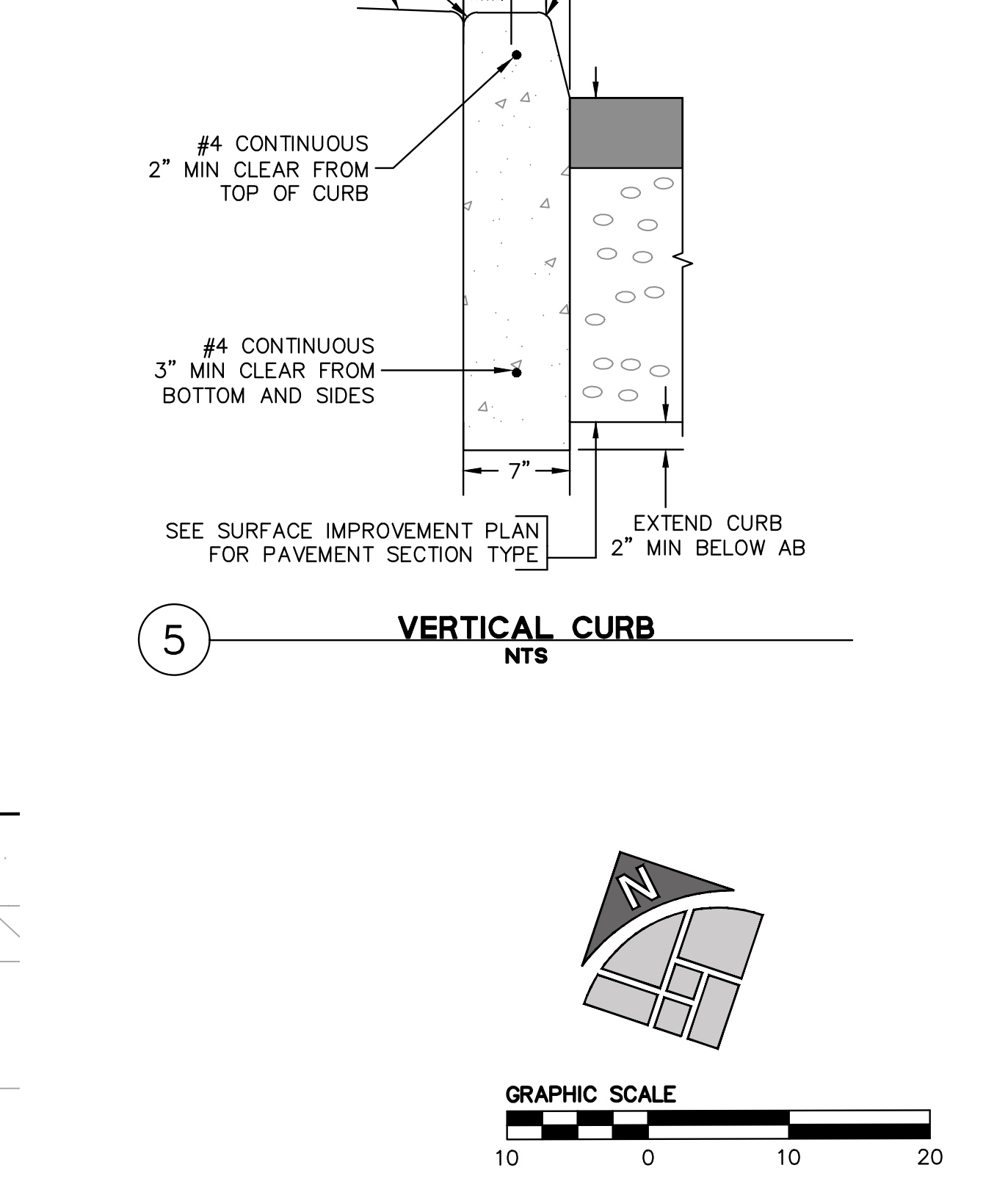
1. RECYCLED AGGREGATE MUST COMPLY WITH THE CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS) SPECIFICATIONS FOR THE USE OF RECYCLED AGGREGATE.
2. WHERE APPLICABLE IN LANDSCAPE AREAS, CONTRACTOR SHALL REMOVE EXISTING IRRIGATION LINES AND CAP A MINIMUM OF 18" BELOW GRADE.



**4 BOLLARD**  
NTS



**5 VERTICAL CURB**  
NTS



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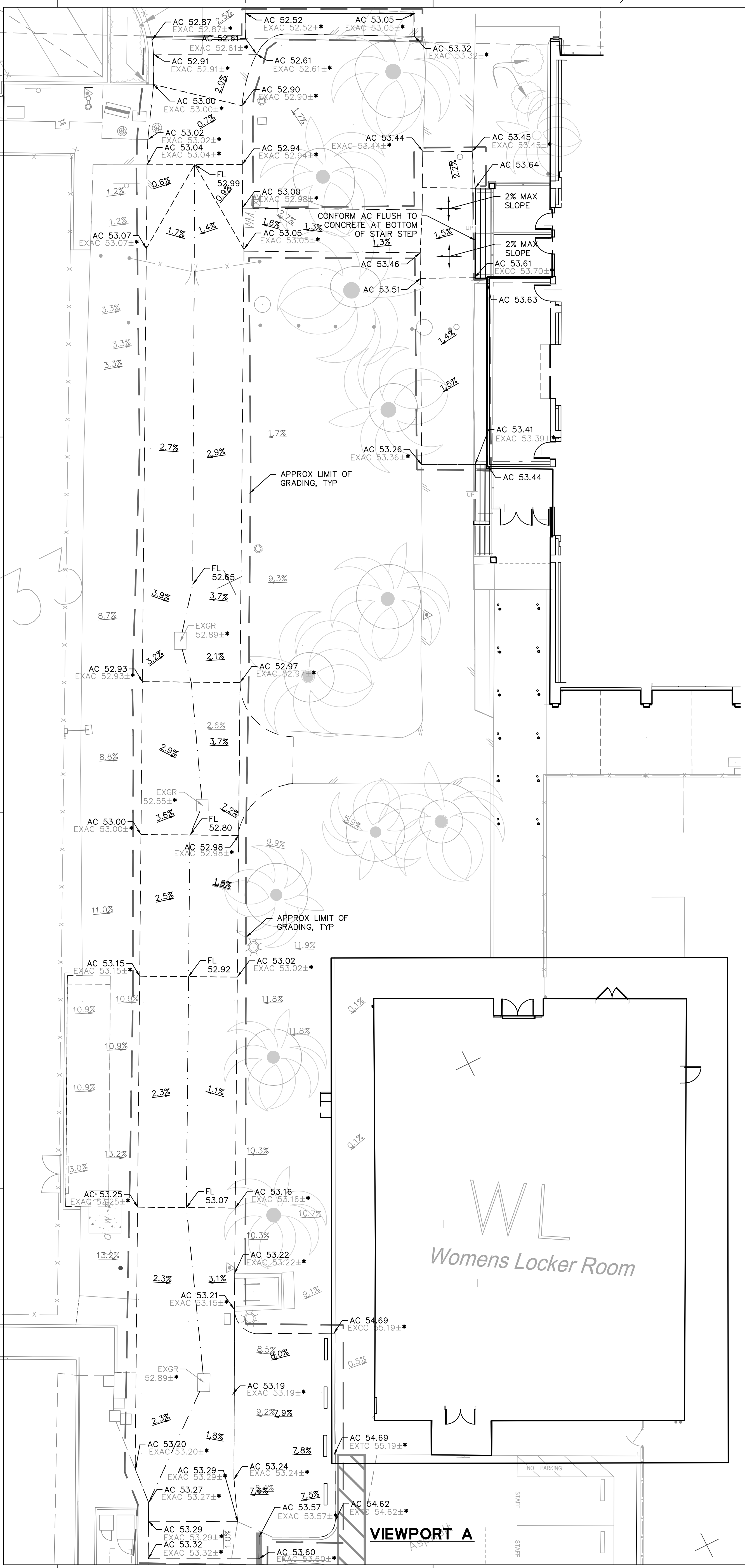
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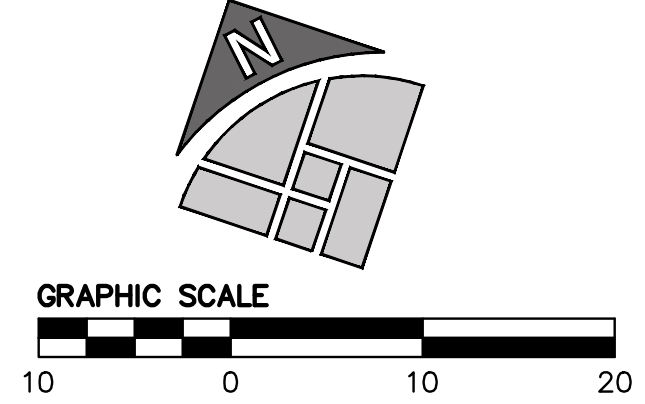


**LEGEND**

- 100— PROPOSED MAJOR CONTOUR
- 99— PROPOSED MINOR CONTOUR
- FF XXX— ELEVATION LABEL:
- AC: ASPHALT CONCRETE
- CC: CONCRETE
- EX: EXISTING
- FL: FLOW LINE
- GR: GRATE
- TC: TOP OF CURB
- FLOW LINE
- - - - - GRADE BREAK LINE
- LIMIT OF WORK

**GRADING NOTES**

1. PROPOSED SITE PLAN AND UTILITIES HAS BEEN SCREENED FOR CLARITY.
  2. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN THE PROJECT GEOTECHNICAL REPORT.
  3. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT IN LANDSCAPED AREAS AND TWO-HUNDREDTHS OF A FOOT IN HARDSCAPED OR PAVED AREAS. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTOR SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.
  4. CONTRACTOR SHALL TAKE CAUTION WHEN GRADING ADJACENT TO EXISTING BUILDINGS, TO PROTECT EXISTING FOUNDATIONS AND TO NOT TO COVER EXISTING VENTS.
  5. RIMS OF UTILITY STRUCTURES SHALL BE ADJUSTED TO FINISHED GRADE IN AREAS OF RE-GRADING. IN PAVED AREAS, ELEVATION DIFFERENCE SHALL NOT BE MORE THAN 1/4 INCH BETWEEN RIMS AND ADJACENT SURFACE.
  6. SHALLOW UTILITIES MAY BE PRESENT. CONTRACTOR SHALL IDENTIFY AND LOCATE ALL UTILITIES IN PROJECT AREA PRIOR TO CONSTRUCTION.
  7. WHERE IMPROVEMENTS INVOLVE ADA ACCESSIBILITY, CONTRACTOR'S ATTENTION IS DIRECTED TO THE FOLLOWING PARAMETERS THAT NEED TO BE MET WITH THE FINISHED CONSTRUCTION:
    - a. WALKWAYS SHALL HAVE A MAXIMUM LONGITUDINAL SLOPE OF 4.9% AND A MAXIMUM CROSS SLOPE OF 2%.
    - b. LANDINGS SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
    - c. ADA PARKING STALLS AND STRIPED AISLE SHALL HAVE A MAXIMUM SLOPE OF 2% IN ALL DIRECTIONS, INCLUDING DIAGONAL.
    - d. TRANSITIONS BETWEEN PROPOSED IMPROVEMENTS AND EXISTING CONDITIONS SHALL BE SMOOTH AND FREE OF ABRUPT CHANGES.
- \* CONTRACTOR SHALL FIELD VERIFY EXISTING GRADES AT CONFORMS PRIOR TO FORMING/AC WORK AND INFORM OWNER/ENGINEER.



**LIONAKIS**

1919 Nineteenth Street  
Sacramento CA 95811  
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**GRADING PLAN**

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**C5.0**