



**TECHNICAL SPECIFICATIONS**  
(Special Provisions)

for

**ADA Compliant Curb Ramps**  
**County Project No. CP40024TD**

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# **SECTION 10 SPECIAL PROVISIONS**

## **10-1 GENERAL**

### **10-1.01 Description of Work**

The work in general consists of removal and replacement of concrete curb ramps, installation of new curb ramps, minor concrete sidewalk, curb and gutter, asphalt concrete pavement conforms, thermoplastic striping, removal and replacement of pedestrian push buttons, removal and installation of new pedestrian push button assemblies on new pole, and such other items of work as required to complete the project.

The estimate of the quantities of work to be done is approximate only, being as a basis for the comparison of bids, and the County does not expressly or by implication agree that the actual amount of work will correspond therewith but reserves the right to increase or decrease the amount or any portion of the work as directed by the County Director or their representative.

Incidental items of construction necessary to complete the whole work in a satisfactory and acceptable manner as shown on the plans and as provided for in the specifications and not specifically referred to in this section, shall be understood to be furnished by the Contractor.

### **10-1.02 Construction Limitations**

The Contractor will be expected to conduct his operations in a manner which creates minimum damage to the natural vegetation and landscaping, paving and gravel areas. Care shall be exercised to avoid hazards that may cause injury to persons, animals, or property either during working hours or after work hours, which will include dust control, backfilling trenches or placement of steel plates and temporary fencing as required.

Equipment will be restricted to the immediate area of construction and trenches will be backfilled as soon as possible.

Receptacles for construction residue, including oil, cleaning fluids and litter, will be covered. Such residues will be disposed of in a proper manner.

Mufflers and/or baffles will be required on all construction equipment.

Construction activity within the existing right-of-way will be scheduled to minimize traffic inconvenience and safety hazards to motorists, pedestrians, and cyclists.

### **10-1.03 Order of Work**

Order of work shall be in accordance with Section 5, "Control of Work," of the Standard Specifications and these Special Provisions.

Attention is directed to "Construction Area Signs & Traffic Control" of these Special Provisions.

### **10-1.04 Storm Water Pollution Prevention**

Attention is directed to the provisions in Section 13, "Water Pollution Control," of the Standard Specifications and these Special Provisions.

The Contractor shall exercise every reasonable precaution to protect streams, lakes, reservoirs, bays, and coastal waters from pollution with fuels, oils, bitumens, calcium chloride and other harmful materials and shall conduct and schedule his operations so as to avoid or minimize muddying and silting of said streams, lakes, reservoirs, bays and coastal waters. Care shall be exercised to preserve roadside vegetation beyond the limits of construction.

Water pollution control work is intended to provide prevention, control, and abatement of water pollution to streams, waterways, and other bodies of water. It shall consist of constructing those facilities which may be shown on the plans, specified herein or in the special provisions, or directed by the County's Director.

Before starting any work on the project, the Contractor shall submit, for acceptance by the County Director, a program to control water pollution effectively during construction of the project. Such program shall show the schedule for the erosion control work included in the contract and for all water pollution control measures which the Contractor proposes to take in connection with construction of the project to minimize the effects of his operation upon adjacent streams and other bodies of water. The Contractor shall not perform any clearing and grubbing or earthwork on the project, other than that specifically authorized in writing by the County Director, until such program has been accepted.

The County Director will notify the Contractor of the acceptance or rejection of any submitted or revised water pollution control program not more than five (5) working days after its receipt by the County Director.

#### **10-1.05 Temporary Erosion Control**

Temporary erosion control shall consist of, but not be limited to, constructing such facilities and taking such measures as are necessary to prevent, control and abate water, mud, and erosion damage to public and private property as a result of the construction of this project.

Conformance with the requirements of this section shall in no way relieve the Contractor from its responsibilities, as provided in Section 13, "Water Pollution Control," Section 5-1.36, "Property and Facility Preservation," and Section 5-1.39, "Damage Repair and Restoration," of the Standard Specifications.

Temporary erosion control features as are necessary to prevent damage during the winter season shall be constructed and functioning. The Contractor shall construct such supplementary temporary erosion control facilities as are necessary to protect adjacent private and public property.

Temporary erosion control measures shall conform to the current edition of the ABAG Manual of Standards for erosion and sediment control measures and includes, but not limited to the following:

1. The Contractor shall conduct its operations in such a manner that storm runoff will be contained within the project or channeled into the storm drain system which serves the runoff area. Storm runoff from one area shall not be allowed to divert to another runoff area.
2. The roadway shall be kept swept, and spoils from grinding, sawcutting, trenching, etc. and silt, shall be removed daily or as often as needed to prevent spoils and silt from entering the storm drain system and roadside ditches.

#### **10-1.06 Maintaining Traffic and Pedestrian Operations**

The site of the work shall be enclosed by suitable barricades, signs, and lights to warn and protect traffic effectively and shall be in accordance with those procedures as set by the Federal Highway Administration.

Attention is directed to Section 10-3, "Construction Area Signs & Traffic Control," of these Special Provisions.

The Contractor shall provide adequate barricades, signs, warning lights, watchmen and flagmen in accordance with the latest revision of the State of California "Manual for Warning Signs, Lights and Devices for Use in Performing Work Upon Highways" to protect the work and the safety of the public. Warning lights using inflammable liquids will not be permitted; only electrically operated lights will be approved for use. Warning lights shall be kept burning from sunset to sunrise, and barricades shall be painted to increase their visibility at night.

All traffic control shall be between 8:00 a.m. and 5:00 p.m.; unobstructed two-way traffic shall be maintained daily from 5:00 p.m. to 8:00 a.m.

Attention is directed to Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," of the Standard Specifications, which sections are hereby incorporated in these Special Provisions as if set forth in full. Attention is also directed to Section 10-1.07, "Public Safety," of these Special Provisions.

Adequate traffic control, flagmen, signing, and barricades shall be provided by the Contractor at all times as approved by the County Director.

#### **10-1.07 Public Safety**

The Contractor shall at all times conduct its work in accordance with Construction Safety Orders of the Division of Industrial Safety, State of California, to ensure the least possible obstruction to traffic and inconvenience to the general public, and adequate protection of persons and property in the vicinity of the work.

No access way shall be closed to the public without first obtaining permission of the County Director.

Should the Contractor fail to provide public safety as specified or if, in the opinion of the County Director, the warning devices furnished by the Contractor are not adequate, the County may place any warning lights or barricades or take any necessary action to protect or warn the public of any dangerous condition connected with the Contractor's operations and the Contractor shall be liable to the County for all costs incurred including, but not limited to, administrative costs.

Nothing in this section shall be construed to impose tort liability on the County or the County Director.

#### **10-1.08 Water for Construction and Dust Control**

Construction and testing water shall conform to Section 10-6, "Watering," of the Standard Specifications and these Special Provisions. The Contractor shall be responsible for providing all water necessary for construction and testing and disposing of all water needed for testing.

During the performance of the work called for under these Specifications, or any operations appurtenant thereto, the Contractor shall furnish all labor, equipment and means required, and as often as necessary, to prevent its operations from producing dust in amounts damaging to property or causing a nuisance to persons living nearby or occupying buildings in the vicinity.

#### **10-1.09 Protection of Existing Facilities and Property**

The Contractor shall notify Underground Service Alert (USA) for marking the locations of existing underground facilities.

The Contractor shall take all necessary measures to avoid injury to existing surface and underground utility facilities in and near the site of the work. No error or omission of utility markouts shall be construed to relieve the Contractor from its responsibility to protect all underground pipes, conduits, cables or other structures. The Contractor shall indemnify the County and hold it harmless from any and all claims, demands, or liability made or asserted by any person or entity on account of or in connection with any damage to such surface or underground facilities caused by the Contractor or any of its agents or subcontractors.

The existing underground facilities in the area of work may include telephone, television and electrical cables, gas mains, water mains, sewer pipe and drainage pipe. The various utility companies shall be notified before trenching begins and at such other times as required to protect their facilities. Underground facilities shall be located and exposed ahead of trenching to prevent damage to the facilities, and to determine the depth and character of all facilities that cross or infringe on the trench prism. The Contractor shall immediately notify the County Engineer of any facilities found. If damage should occur to the existing facilities, the utility company and the County shall be notified immediately and repairs acceptable to the utility company shall be made at the Contractor's expense.

Attention is directed to the provisions in Section 5-1.36, "Property and Facility Preservation," of the Standard Specifications, which section is hereby incorporated in these special provisions as if set forth in full, and these Special Provisions.

Existing trees, shrubs, and other plants, that are not to be removed and are injured or damaged by reason of the Contractor's operations, shall be replaced by the Contractor in accordance with the requirements in Section 20-3.01C(4), "Replacement Plants," of the Standard Specifications. Section 20-3.01C(4) of the Standard Specifications is hereby incorporated in these Special Provisions.

#### **10-1.10 Obstructions**

Attention is directed to Sections 5-1.36C, "Nonhighway Facilities," and 15, "Existing Facilities," of the Standard Specifications, which sections are hereby incorporated in these Special Provisions as if set forth in full, and these Special Provisions.

Attention is directed to the existence of overhead and underground power, telephone, and television cable poles, underground sewer mains and laterals, underground gas mains, and underground water mains and laterals within the area in which construction is to be performed.

Prior to starting work, the Contractor shall (a minimum of 2 working days in advance) call Underground Service Alert (USA), toll free, at (800) 642-2444 and provide USA with all necessary data relative to the proposed work. USA will accept calls and process information to participating agencies who have underground facilities in the area between the hours of 7:30 a.m. and 5:00 p.m. daily, except Saturdays, Sundays, and holidays. Between the hours of 5:00 p.m. and 7:30 a.m. calls will be recorded and then processed after 7:30 a.m. For emergency situations, after hours and on Saturdays, Sundays and holidays, the Contractor shall contact the organization owning the affected facility. Upon notification, agencies having facilities in the area of the proposed excavation will mark their locations in the field using USA standard colors and codes to identify the facility.

Any delays claimed by the Contractor as a direct result of the utility facilities not being rearranged as provided will not be recognized nor will any delays be considered right-of-way delays within the meaning of Section 8-1.07, "Delays," of the Standard Specifications, except that any such delays will entitle the Contractor to an extension of time as provided in Section 8-1.10, "Liquidated Damages," of the Standard Specifications. The Contractor shall immediately notify the County Director of such delays.

The Contractor will be required to work around public and private utility facilities and other improvements that are to remain in place within the construction area and it will be held liable to the owners of such facilities or interference with service resulting from his operations.

#### **10-1.11 Hours of Work**

The Contractor shall restrict its hours of work to 8:00 a.m. to 5:00 p.m. Monday through Friday. Deviations from these hours may be requested and approved in writing by the County Director.

#### **10-1.12 Dust Control**

Dust control shall conform to the provisions in Sections 10-5 and 14-11.04 entitled “Dust Control” of the Standard Specifications, which section is hereby incorporated in these special provisions as if set forth in full, and these Special Provisions.

#### **10-1.13 Preconstruction Conference**

Prior to beginning any work, the Contractor shall provide the County Engineer and affected agencies with a list of key and responsible personnel and how they may be reached at any time. A preconstruction conference shall be scheduled at least 72 hours prior to construction, at which time the Contractor shall be required to present his proposed work schedule, information of offsite yards, subcontractors, location of disposal and stockpile areas, and traffic control plans. All such schedules shall be subject to the approval of the County Engineer and the applicable agencies.

#### **10-1.14 Referenced Specifications and Standards**

All contract work will be in accordance with the County Standards, all other terms of this contract including, but not limited to, these Special Provisions, and applicable law. Provisions of the State Standards and the Standard Specifications will only apply to and be a part of this contract to the extent such provisions are expressly incorporated in these Special Provisions.

#### **10-1.15 Cleanup**

Attention is directed to Section 4-1.13, “Cleanup,” of the Standard Specifications, which section is hereby incorporated in these Special Provision as if set forth in full.

Before final inspection of the work, the Contractor shall clean the construction site and all ground occupied by him in connection with the work, of all rubbish, excess material, falsework, temporary structures and equipment. All parts of the work shall be left in a neat and presentable condition.

Nothing herein shall require the Contractor to remove warning, regulatory, and guide signs prior to formal acceptance by the Engineer.

#### **10-1.16 Construction Staking**

Where the Contract Documents require, the Contractor shall employ a licensed Land Surveyor to perform construction staking. Stakes and marks will be set by the Surveyor as the Engineer determines to be necessary to establish the lines and grades required for the completion of the Work.

The Contractor will be responsible for coordinating performance of the Work with the Surveyor and for all costs associated with construction staking and layout.

Contractor shall provide “cutsheets” for the Engineer to review and use in checking grades. Finished grades shall be within 0.01 feet in elevation and 0.03 feet horizontal layout of the grades as shown on the plans.

Full compensation for Construction Staking shall be considered as included in the prices paid for the various items of Work involved, and no additional payment will be made therefore by the County.

#### **10-1.17 Quality Control**

Site Investigation and Control: The Contractor shall verify all dimensions in the field and shall check all field conditions continuously during construction. The Contractor shall be solely responsible for any inaccuracies built into the work.

Submittals: Submittals shall be submitted by the Contractor for review and approval by the County prior to delivery to the job site.

#### **Inspection of the Work**

The work shall be subject to inspection by representatives of the County to ensure strict compliance with the requirements of the Contract Documents.

The authorized representative of the Director on the project site shall be the Project Engineer acting directly and through various inspectors at the site. The presence of the Inspectors, however, shall not relieve the Contractor of the responsibility for the proper execution of the Work in accordance with all requirements of the Contract Documents. Compliance is distinctly a duty of the Contractor, and said duty shall not be avoided by any act or omission on the part of the inspector(s).

All materials and articles furnished by the Contractor shall be subject to rigid inspection and no material or articles shall be used in the Work until it has been inspected and accepted by the Engineer or the County.

Testing and employment of a testing agency or laboratory shall not relieve the Contractor of the obligation to perform Work in accordance with requirement of Contract Documents.

Re-testing or re-inspection required because of non-conformance to specified requirements shall be performed by same independent firm on instructions by the Engineer. Payment for re-testing or re-inspection will be charged to the Contractor by deducting testing charges from the Contract Sum/Price.

Defective Materials to be Removed: All materials not conforming to the requirements of these Specifications shall be considered as defective; and all such materials, whether in place or not, shall be rejected and shall be removed immediately from the site of work at the Contractor’s expense.

Quality Control Plan: The Contractor shall develop and submit a quality control procedure for the project. Approval of the quality control plan by the Engineer does not relieve the contractor of responsibility for quality control or work methods.

#### **10-1.18 Payment**

Full compensation for conforming to the provisions of this Section 10-1, “General,” shall be considered as included in the contract price paid for various other items of work and no additional allowances shall be made therefore.

## 10-2 MOBILIZATION

### 10-2.01 Mobilization

Mobilization shall conform to the provisions in Section 9-1.16D, "Mobilization," of the Standard Specifications and to these Special Provisions.

Mobilization shall include the obtaining of all permits, moving onto the site of all equipment, temporary buildings, if needed, and other construction facilities as required for the proper performance and completion of the work.

Mobilization shall include but not be limited to the following principal items:

1. Signed Contract by the County and the Contractor.
2. Completion of all tasks and submittal of all documents (bonds, insurance, schedule, etc.) required as conditions of issuing the Notice to Proceed.
3. Moving onto the site of all Contractor's equipment required for operations.
4. Installing temporary construction water supply, power, wiring and lighting facilities, as required.
5. Providing field office trailers if needed by the Contractor.
6. Providing all on-site communication facilities, including telephones and radio pagers.
7. Obtaining all required permits.
8. Having all OSHA required notices and establishment of safety programs.
9. Attendance at Pre-Construction Conference of Contractor's principal construction personnel.
10. Physical verification (potholing) of existing utilities.
11. Beginning work on the project or at the subject site as applicable.

### 10-2.02 Property Owner Notification

The Contractor shall furnish all property owners immediately adjacent to the work areas and businesses written notification that describes the proposed work and schedule within ten (10) business days of the Notice to Proceed. Within five (5) business days in advance of the start of work, the Contractor shall furnish affected property owners and businesses a second written notification.

The notices shall be in writing, placed on doors and shall indicate the Contractor's name and phone number, type of work, locations of work, day(s) and time when work will occur. Notice shall be reviewed and approved by the Engineer prior to being posted.

Parking restrictions shall be posted 48 hours in advance along the affected construction areas. See Section 10-3.05 , "Removal of On-Street Parking," of these Special Provisions.

### 10-2.03 Emergency Service Providers Notifications

The Contractor shall furnish the name and phone number of a representative that can be contacted in the event of an emergency. Said information shall be reported to the Sonoma County Sheriff's dispatcher, and updated as required to provide 24-hour phone access.

### 10-2.04 Measurement and Payment

**Mobilization** will be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work involved in mobilization, as specified herein, and no additional allowance will be made therefor.

## **10-3 CONSTRUCTION AREA SIGNS & TRAFFIC CONTROL**

### **10-3.01 Construction Area Signs**

Construction area signs are required for the direction of public vehicle and pedestrian traffic through or around the work during construction.

Construction area signs shall be furnished, installed, maintained, and removed when no longer required in accordance with the provisions in Section 12, "Temporary Traffic Control," of the Standard Specifications and these Special Provisions. Sections 7-1.03, "Public Convenience," and 7-1.04, "Public Safety," of the Standard Specifications set forth the Contractor's responsibilities for public convenience and public safety are hereby incorporated in these Special Provisions as if set forth in full and are considered to be part of the contract requirements.

Construction area signs shall not be used until they are needed, and when no longer needed, they shall be removed from the site of the work.

### **10-3.02 Maintaining Traffic**

Attention is directed to Section 7-1.03, "Public Convenience," Section 7-1.04, "Public Safety," and Section 12, "Temporary Traffic Control," of the Standard Specifications, which sections are hereby incorporated in these Special Provisions as if set forth in full. Nothing in these Special Provisions shall be construed as relieving the Contractor from his responsibilities as provided in said Section 7-1.04.

### **10-3.03 Flagging Costs**

Section 12-1.04, "Payment," of the Standard Specifications is amended to read:

The cost of furnishing all flaggers, including transporting flaggers, to provide for passage of public traffic through the work under the provisions in Section 7-1.03, "Public Convenience," and Section 7-1.04, "Public Safety," of the Standard Specifications shall be considered as included in the contract lump sum price paid for traffic control and no additional allowance will be made therefor.

### **10-3.04 Traffic Control Plan**

It is the responsibility of the Contractor to provide a Traffic Control Plan five (5) working days prior to beginning construction. Work shall not begin until the plan is approved by the Engineer.

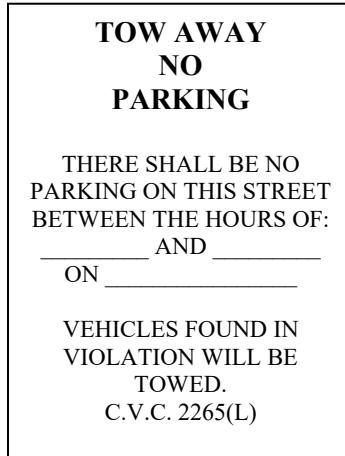
The content of the Traffic Control Plan shall include, but not be limited to, the following:

- a. Show location and limits of the work zone.
- b. Give dimensions of lanes affected by traffic control that will be open to traffic.
- c. Indicate signing, cone placement, and other methods of delineation and reference to appropriate County or Caltrans standard.
- d. Dimension location of signs and cone tapers.
- e. Identify side streets and driveways affected by construction and show how they will be handled.
- f. Show how pedestrian traffic will be handled through the construction site.
- g. Demonstrate how two-way traffic will be maintained.

No work except for the installation of project identification signage will be allowed to commence prior to approval of the work zone Traffic Control Plan.

### **10-3.05 Removal of On-Street Parking**

Forty-eight (48) hours prior to construction, the Contractor shall place barricades signed “NO PARKING –TOW AWAY – Specific Time and Date(s)” at 100-foot intervals or a minimum of two (2) signs per block, whichever is greater, in the work area. “NO PARKING” signs must also state “C.V.C. 22651 (L)”. See example below.



“NO PARKING – TOW AWAY” signs shall be submitted for approval by the Engineer prior to their use. The Contractor shall notify the Engineer immediately after the “NO PARKING” signs are in place. “NO PARKING” signs and barricades shall be supplied by the Contractor.

Failure to comply with this section will prevent the County from towing vehicles parked in the proposed work area. Any resulting delay will be the responsibility and at the expense of the Contractor.

“NO PARKING – TOW AWAY” signs will not be permitted to remain if no work occurs for five (5) business days. Signs must be removed completely from the site and will not be permitted to be placed until affected property owners and businesses are notified again.

### **10-3.06 Contractor Staging Area**

Contractor shall not utilize public streets or parking spaces for overnight or weekend storage of vehicles, equipment, or materials unless approved by the Engineer.

### **10-3.07 Measurement and Payment**

**Traffic Control System** will be paid for at the contract **lump sum** price, which price shall include full compensation for furnishing all labor (including flagging costs), materials (including signs), Maintaining Traffic, Traffic Control Plan, Construction Area Signs, Removal of On-Street Parking, tools, equipment, and incidentals and for doing all the work involved in placing, removing, storing, maintaining, and moving to new locations, replacing, and disposing of the components of the traffic control system as specified in the Standard Specifications and these Special Provisions, and as directed by the Engineer. The total cost of furnishing all flaggers will be borne solely by the Contractor.

## **10-4 EXISTING FACILITIES**

### **10-4.01 Existing Facilities**

The work performed in connection with various existing highway facilities shall conform to the provisions in Section 15, “Existing Facilities,” of the Standard Specifications and these Special Provisions.

### **10-4.02 Removal of Miscellaneous Items**

Various items shown on the Plans to be removed will be completely removed and disposed of.

No separate payment shall be made for the various items to be removed unless specified and listed in the Bid Schedule.

Full compensation for conforming to the requirements of this section shall be considered as included in the contract prices paid for the various contract items of work and no additional compensation will be allowed.

### **10-4.03 Sawcut Pavement**

Where no joint exists in concrete or asphalt concrete to be removed and concrete or asphalt concrete to remain in place, the concrete or asphalt concrete shall be cut in neat lines to a minimum depth of 0.17 foot with a power-driven saw before the concrete or asphalt concrete is removed.

Full compensation for sawcutting shall be considered as included in the contract prices paid for the various contract items of work requiring sawcutting and no additional compensation will be allowed.

### **10-4.04 Remove Concrete**

Existing concrete (sidewalk, curb and gutter and curb ramps), shown on the Plans to be removed shall be completely removed and disposed of in accordance with Section 15-1.03B, “Removing Concrete,” of the Standard Specifications and these Special Provisions.

Adjacent facilities damaged during concrete removal shall be repaired to a condition satisfactory to the Engineer or shall be removed and replaced if ordered by the Engineer. Repairing or removing and replacing damaged facilities shall be at the Contractor’s expense and no additional compensation will be allowed.

Concrete as shown on the plans to be removed, shall be completely removed and disposed of in accordance with Section 5-1.20B(4), “Contractor-Property Owner Agreement,” of the Standard Specifications.

Existing concrete valley gutter, sidewalk, pavement, curb and gutter, and curb ramps shall be cut to a true line at the nearest joint, in accordance with the Section entitled “Sawcut Pavement” of these Special Provisions.

Reinforcing or other steel may be encountered in portions of the concrete. No additional compensation will be allowed for the removal of concrete containing reinforcing or steel.

Full compensation for the cutting, removal and disposal of concrete shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed.

### **10-4.05 Remove Asphalt Concrete and Aggregate Base**

Asphalt concrete and aggregate base shall be removed at the locations shown on the Plans and as specified in these Special Provisions. Existing asphalt concrete pavement shall be cut to a true line where new

concrete is to join existing asphalt concrete pavement. Removal shall be to the lines and grades shown, specified, or determined by the Engineer.

Adjacent facilities damaged during asphalt concrete removal shall be repaired to a condition satisfactory to the Engineer or shall be removed and replaced if ordered by the Engineer. Repairing or removing and replacing damaged facilities shall be at the Contractor's expense and no additional compensation will be allowed.

Asphalt concrete shall be completely removed and disposed of in accordance with Section 5-1.20B(4), "Contractor-Property Owner Agreement," of the Standard Specifications.

No separate measurement or payment will be made for asphalt concrete and aggregate base removal.

Full compensation for the cutting, removal and disposal of asphalt concrete and aggregate base shall be considered as included in the prices paid for various contract items of work and no additional compensation will be allowed.

#### **10-4.06 Adjust Manhole Frame and Cover to Grade**

Existing manhole frames and covers shall be adjusted to the final concrete grade, complete and in place in accordance with the Plans and these Special Provisions.

The Contractor shall accurately locate and record the location of all manhole covers to be raised to grade and shall furnish the County Engineer a copy of said record prior to resurfacing.

Waste materials generated while adjusting the manhole and utility frame and cover to grade shall be completely removed and disposed of in accordance with Section 5-1.20B(4), "Contractor-Property Owner Agreement," of the Standard Specifications.

Concrete used for collars shall conform to the provisions in Section 90-2, "Minor Concrete," of the Standard Specifications.

All sections of manhole frames and grade rings shall be set in Portland Cement Concrete the same day that the grade rings are placed. Contractor shall let the concrete collar cure for 24 hours prior to traffic loading.

**Adjust Manhole Frame and Cover to Grade** will be measured per **each** from actual count.

**Adjust Manhole Frame and Cover to Grade** will be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in adjusting manhole frame and cover to grade as herein specified, including, required excavation and backfill, additional grade rings if required, concrete collars, furnishing location of existing boxes and covers to be adjusted to grade, removing silt and debris and no additional compensation will be allowed.

#### **10-4.07 Adjust Utility Box and Cover to Grade**

Existing utility boxes and covers, of the various types, shall be adjusted to conform to finished grades where shown on plans in accordance with Section 15, "Existing Facilities," of the Standard Specifications and to these Special Provisions.

Waste materials generated while adjusting the utility box and cover to grade shall be completely removed and disposed of in accordance with Section 5-1.20B(4), "Contractor-Property Owner Agreement," of the Standard Specifications.

**Adjust Utility Box and Cover to Grade** will be measured per **each** from actual count.

**Adjust Utility Box and Cover to Grade** will be paid for at the contract price **each**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in adjusting the electrical box and cover to grade as herein specified, including, required excavation and backfill, furnishing location of existing boxes and covers to be adjusted to grade, removing silt and debris and no additional compensation will be allowed.

#### **10-4.08 Remove and Replace Pedestrian Push Button Assembly**

Existing pedestrian push button station (PBS) located on existing utility or street lighting pole shall be removed as shown on the Plans. Holes in the metal street lighting poles caused by the removal of mounting bolts or screws shall be retapped when necessary and new screws and bolts shall be placed as necessary to fill and waterproof the exposed voids. The existing push button equipment shall be salvaged and returned to the County Public Infrastructure Department unless otherwise specified in the Plans.

The new Accessible Pedestrian Signal (APS) shall be a Polara iNS2 Navigator Accessible Pedestrian Signal push button for each pole as shown on the plans. The assembly shall also include a new iNS 2-wire unit, with a shelf mount compatible Polara Central Control Unit (CCU), Interconnect Board and SDLC Cabinet Cable Package for each intersection as required for each intersection.

The Polara PBS shall be wired using the existing wires located on the existing pole wherever possible and as shown on the Plans. The Contractor shall submit catalog and installation information for the new APS and compatible CCU for County approval.

The buttons shall be black with a five inch by seven inch (5" x 7") informational faceplate. The push button shall have directional arrow pointing the direction to cross.

The pedestrian push button shall conform to the provisions in Section 86-1.02U, "Push Button Assemblies", of the Caltrans Specifications.

All new equipment shall be mounted, wired and programmed according to the manufacturer's recommendations and as approved by the Engineer.

**Remove and Replace Existing Pedestrian Push Button Assembly** will be measured and paid per **each** from the actual count.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved including, but not limited to removal of the existing pedestrian PBS, waterproofing voids on pole due to PBS removal, salvaging and delivering equipment to the County and installing, wiring and testing the new Polara APS system per manufacturer's recommendations shall be considered as included in the contract unit price for Remove and Replace Existing Pedestrian Push Button Assembly as specified in the Standard Specifications, these Special Provisions, Plans, and as directed by the Engineer.

#### **10-4.09 Remove Pedestrian Push Button System Components**

Existing pedestrian push button components located on existing utility or street lighting pole shall be removed as shown on the Plans. Exposed holes and/or voids in the metal poles shall be plugged/plated as necessary to fill and waterproof. The existing push button equipment shall be salvaged and returned to the County Public Infrastructure Department unless otherwise specified in the Plans. Existing pole and foundation shall be removed where noted on plans. Voids shall be backfilled with Class 2 Aggregate Base.

**Remove Push Button System Components** will be measured and paid by **lump sum**.

Full compensation for furnishing all labor, materials, tools, equipment and incidentals, and for doing all the work involved including, but not limited to removal of the existing pedestrian PBS, waterproofing voids on pole due to PBS removal, salvaging and delivering equipment to the County, removing pole and foundation, and filling voids with Class 2 Aggregate Base shall be considered as included in the contract lump sum price for Remove Pedestrian Push Button Components as specified in the Standard Specifications, these Special Provisions, Plans, and as directed by the Engineer.

## 10-5 ASPHALT CONCRETE

### 10-5.01 Asphalt Concrete Conform

Asphalt concrete conform will be used where shown on plans and as directed by the Engineer and shall conform to these specifications. Asphalt Concrete Conform shall consist of removal of existing asphalt concrete and aggregate base as required to provide an asphalt concrete conform a minimum two (2) feet in width and a minimum six (6) inches thick per Plans.

Asphalt concrete and the placing thereof shall conform to the requirements of Section 39, "Hot Mix Asphalt," of the Standard Specifications with the following modifications:

Aggregate shall be Type A, ½" maximum.

Paving asphalt shall be PG 64-10 conforming to the latest published provisions in Section 92, "Asphalt Binders," of the Standard Specifications.

The Contractor shall furnish the Owner's Engineer, at least ten (10) working days prior to the start of work, a list of sources of materials together with a Certified of Compliance indicating that materials to be incorporated in the work fulfill the requirements of these specifications and a mix design for the asphalt concrete. The mix design shall be performed in accordance with CTM 366 and 367. The Certified of Compliance shall be signed by the material supplier or his representative. The Contractor shall be responsible for all costs associated with the required mix design.

A tack coat, type SS-1, shall be applied to all mating surfaces along lip of gutter and at conforms to existing pavement prior to placement of new asphalt concrete and shall conform to Section 94, "Asphaltic Emulsions" of the Standard Specifications.

Tack coat shall be applied between all asphalt concrete lifts.

Trucks or other construction equipment shall not be allowed on the newly placed asphalt concrete base until the day after it is placed. Super Dumps or other trucks with liftable trailing load bearing axles shall not be allowed on the newly placed asphalt concrete base at any time unless specifically approved by the Engineer. All trucks or other construction equipment to be driven on the newly placed asphalt concrete base shall not exceed the surface load bearing capacity and shall not produce rutting or pumping at any time.

Construction equipment shall be in accordance with Section 39-2.01C(2)(c) "Method Compaction Equipment" of the Standard Specifications. Asphalt concrete shall be compacted to 91-97% of maximum theoretical density (CT 309) as determined by CT 375 (a nuclear density device may be used). A profilograph will not be required.

A drop-off of more than 0.15-foot will not be allowed at any time between adjacent lanes open to public traffic. Attention is directed to Section entitled, "Maintaining Traffic" of these Special Provisions. Temporary asphalt concrete tapers or grinding of the existing pavement edge shall be used to provide a slope of 30:1, or flatter, between adjacent lanes open to traffic.

Refer to Section 10-4.05 "Remove Asphalt Concrete and Aggregate Base" of these Special Provisions. Existing asphalt concrete pavement and aggregate base course shall be removed to accommodate the asphalt concrete conform and disposed of as specified in these Special Provisions. Existing asphalt concrete shall be sawcut and removed at the locations and to the dimensions shown on the plans. Any removal performed by the Contractor beyond the limits of the road reconstruction shown on the Project Plans shall be replaced to match existing.

#### **10-5.02 Measurement and Payment**

**Asphalt Concrete Conform** will be measured and paid for at the contract price **per ton** in place, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work involved in removing existing asphalt concrete and aggregate base, placing asphalt concrete, including but not limited to pavement preparation, tack coat, spreading and compacting, and no additional compensation will be allowed.

**Section 9-1.07, “Payment Adjustments for Price Index Fluctuations,” of the Standard Specifications shall not apply. No adjustments in payment will be made for fluctuations in the cost of asphaltic materials.**

## 10-6 CONCRETE CURBS & SIDEWALKS

### 10-6.01 General

Section 10-6 includes general specifications for construction of concrete curbs, sidewalks, and their appurtenances such as curb ramps and landings.

### 10-6.02 Minor Concrete

Concrete curbs, gutters, curb ramps, and sidewalks shall be constructed in accordance with Section 73, "Concrete Curbs and Sidewalks," of the Standard Specifications, the County of Sonoma Construction Standards, and the details shown on the plans. Concrete used to construct concrete, curbs, gutters, curb ramps, and sidewalks shall be minor concrete in accordance with Section 90-2, "Minor Concrete," of the Standard Specifications. Portland Cement Concrete shall contain no less than 505 pounds of cementitious material per cubic yard and have a minimum compressive strength of 3,000 psi.

Minor concrete curb, gutter, curb ramp, and sidewalk shall have a medium broom finish.

Attention is directed to Section 10-1.09 , "Protection of Existing Facilities and Property," of these Special Provisions with regard to damage to existing improvements and landscaping. Damage to existing landscaped areas or sidewalk due to construction or replacement of curb and gutter shall be repaired and/or replaced to the condition existing before construction. Replacement landscape materials shall match the existing materials as closely as possible. Damaged lawn areas shall be replaced by sod.

Attention is also directed to Section 10-1.06 , "Maintaining Traffic and Pedestrian Operations," of these Special Provisions.

All soft or spongy subgrade material within sidewalk areas shall be removed and replaced with suitable material as required by the Engineer. Aggregate base shall be placed under all minor concrete, as specified below and as shown on the Plans.

Aggregate base shall be placed under all minor concrete per County Standards and as shown on the Plans. Aggregate base shall be Class 2 Aggregate Base, 3/4" maximum gradation, in accordance with Section 26-1.02B, "Class 2 Aggregate Base," of the Standard Specifications and to these Special Provisions. Aggregate base material shall be compacted to 95% of maximum theoretical compaction as determined by California Test 231 (Nuclear Density Device may be used).

Reinforcement shall conform to the requirements of Section 52, "Reinforcement," of the Standard Specifications. Reinforcing steel shall be grade 60.

Where new concrete is joining existing concrete, the new concrete shall align and conform to adjacent elevations and create a smooth transition. When tying into existing concrete curb, gutter, and sidewalk, the existing concrete shall be doweled as shown on the plans and per County Std. Dwg. No 220.

The Engineer shall be notified 24 hours prior to concrete pour. The Contractor shall provide string lines and forms delineating the proposed concrete surface for Engineer observation a minimum of four (4) hours prior to concrete pour. No concrete shall be poured until Engineer has approved the forms.

All oil, paint, tire, graffiti, and other marks shall be removed from all minor concrete construction by sandblasting or complete replacement prior to acceptance by the Engineer. Cement mortar will not be an acceptable substitute for sandblasting or complete replacement.

All grade differentials adjacent to new concrete over 1" shall be backfilled with native soil at a 4:1 maximum slope and compacted to 90% relative compaction. No separate payment will be made for backfilling and compaction of native soil.

For measurement and payment purposes, curb ramps and landings shall be considered as Minor Concrete, Sidewalk or Minor Concrete, Thickened Edge Sidewalk and Curb as shown on the Plans.

#### **10-6.03 Detectable Warning Surface**

Curb ramp detectable warning surface shall consist of prefabricated raised truncated domes in conformance with the Caltrans Standard Plan A88A and these Special Provisions. The color of the detectable warning surface shall be yellow conforming to Federal Standard 595B, Color No. 33538. Prefabricated detectable warning surface shall be in conformance with the requirements established by the California Building Code and the requirements established by the Department of General Services, Division of State Architect and be attached in conformance with the manufacturer's recommendations.

Prefabricated detectable warning surfaces shall be installed in accordance with the manufacturer's recommendations.

The manufacturer shall provide a written 5-year warranty for prefabricated detectable warning surfaces, guaranteeing replacement when there is defect in the dome shape, color fastness, sound-on-cane acoustic quality, resilience, or attachment. The warranty period shall begin upon acceptance of the contract.

#### **10-6.04 Measurement and Payment**

**Minor Concrete, A1-6 Curb** will be paid for at the contract price per **linear foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in constructing curb in place complete as herein specified, including:

- excavation,
- sawcutting,
- portland cement concrete,
- doweling to existing,
- forms,
- furnishing and placing backfill,
- compaction,
- furnishing and placing Class 2 aggregate base cushion,
- furnishing and placing rebar per County Standards and Plan details,
- furnishing and placing expansion joint filler,
- constructing weakened plane joints,
- constructing curb depression per Plans,
- furnishing and applying curing materials,
- removing discoloration,

and any other work necessary to construct curb and gutter not specifically enumerated in the Plans or Specifications, and no additional allowance will be made therefore.

**Minor Concrete, Sidewalk** will be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in constructing sidewalk and curb ramps in place complete as herein specified, including:

- excavation,

- sawcutting,
- portland cement concrete,
- doweling to existing,
- forms,
- furnishing and placing backfill,
- compaction,
- furnishing and placing Class 2 aggregate base cushion,
- furnishing and placing rebar per County Standards,
- furnishing and placing expansion joint filler,
- constructing weakened plane joints,
- furnishing and applying curing materials,
- removing discoloration,

and any other work necessary to construct sidewalk not specifically enumerated in the Plans or Specifications, and no additional allowance will be made therefore.

**Minor Concrete, Thickened Edge Sidewalk and Curb** will be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in constructing sidewalk and curb ramps in place complete as herein specified, including:

- excavation,
- sawcutting,
- portland cement concrete,
- doweling to existing,
- forms,
- furnishing and placing backfill,
- compaction,
- furnishing and placing Class 2 aggregate base cushion,
- furnishing and placing rebar per Plan details,
- furnishing and placing expansion joint filler,
- constructing weakened plane joints,
- constructing curb depression per Plans,
- constructing thickened edge,
- constructing 6" curbs,
- constructing curb height transition per Plan details,
- furnishing and applying curing materials,
- removing discoloration,

and any other work necessary to construct thickened edge sidewalk and curb not specifically enumerated in the Plans or Specifications, and no additional allowance will be made therefore.

**Minor Concrete, Valley Gutter** will be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools and equipment, and doing all the work involved in constructing valley gutter in place complete as herein specified, including:

- excavation,
- sawcutting,
- portland cement concrete,
- doweling to existing,
- forms,

- furnishing and placing backfill,
- compaction,
- furnishing and placing Class 2 aggregate base cushion,
- furnishing and placing rebar per County Standards,
- furnishing and placing expansion joint filler,
- constructing weakened plane joints,
- furnishing and applying curing materials,
- removing discoloration,

and any other work necessary to construct valley gutter not specifically enumerated in the Plans or Specifications, and no additional allowance will be made therefore.

**Minor Concrete, Concrete Infill** will be paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all the work involved in constructing concrete infill in place complete as herein specified, including:

- excavation,
- sawcutting,
- portland cement concrete,
- forms,
- furnishing and placing backfill,
- compaction,
- furnishing and placing Class 2 aggregate base cushion,
- furnishing and placing expansion joint filler,
- constructing weakened plane joints,
- furnishing and applying curing materials,
- exposed aggregate finish,
- removing discoloration,

and any other work necessary to construct concrete infill not specifically enumerated in the Plans or Specifications, and no additional allowance will be made therefore.

**Detectable Warning Surface** will be measured and paid for at the contract price per **square foot**, which price shall include full compensation for furnishing all labor, materials, tools, and equipment, and doing all work included in installing curb ramp detectable warning surface on curb ramps and landings complete in place as specified in the plans or these specifications, and no additional allowance will be made therefore.

## **10-7 ACCESSIBLE PEDESTRIAN SIGNAL SYSTEM**

### **10-7.01 General**

Work shall consist of providing and installing complete and in place the Accessible Pedestrian Signal (APS) system which shall include a Polara iNS2 (2-wire unit) PBS, with a shelf mount compatible Polara Central Control Unit (CCU), Interconnect Board, poles and pole foundations, mounting hardware, and all incidentals needed thereto.

Accessible Pedestrian Signal System assembly installation shall be as shown on the plans and in accordance with the most current edition of California MUTCD, these Special Provisions, and the manufacturer's specifications.

The locations of the Accessible Pedestrian Signal System elements shown are approximate; the Engineer shall determine the final location.

### **10-7.02 Submittals**

Submit catalog and installation information for:

1. Polara iNS2 (2-wire) Accessible Pedestrian Signal
2. Shelf Mount CCU
3. Push Button Assemblies
4. Poles

### **10-7.03 Material and Equipment**

#### **10.7.03(A) Components**

The Accessible Pedestrian Signal System shall be as manufactured by Polara Enterprises.

The Accessible Pedestrian Signal System shall include the following components:

1. Polara iNS2 (2-wire unit) PBS
2. Shelf mount compatible Polara Central Control Unit (CCU), interconnect board, and configurator for each intersection (4 total).
3. Push button assemblies per plan
4. Poles

#### **10.7.03(B) Requirements**

1. Polara Push Button Station
  - a. The buttons shall be black with a five inch by seven inch (5" x 7") informational faceplate. The push button shall have directional arrow pointing the direction to cross.
  - b. The pedestrian push button shall conform to the provisions in Section 86-1.02U, "Push Button Assemblies", of the Caltrans Specifications.
2. Polara Central Control Unit
  - a. The CCU unit shall be a Polara iCCU-S2: Intelligent Central Control Unit for Shelf Mount.
  - b. A configurator shall be provided, programmed and placed within the controller cabinet at each intersection.
3. Poles

- a. Poles shall be Schedule 40 galvanized steel pipe conforming to ASTM A53.
  - b. Push button assembly poles be 4 inches in diameter and be in accordance Caltrans Standard Plan ES-7A.
  - c. Concrete footings shall be in accordance with the respective Caltrans Standard Plan. Concrete shall conform to Section 90-2, "Minor Concrete," of the Standard Specifications. Concrete for footings shall contain no less than 505 pounds of cementitious material per cubic yard and have a minimum compressive strength of 3,000 psi.
4. Conduit
- a. The Contractor shall furnish conduits, electrical metallic tubing and fittings for all power systems as specified on the Plans. Rigid Metallic Conduit (RMC) shall be hot-dip galvanized steel including threads as per UL 6. Electrical Metallic Tubing (EMT) shall be electrolytically galvanized steel per UL 797. Rigid nonmetallic conduit (PVC) Schedule 40 shall be polyvinyl chloride (PVC) as required per ul 651.
  - b. Conduit shall be installed with a minimum of 24 inches of cover. Where existing facilities prevent installing conduit with 24 inches of cover, the Contractor shall depress the new conduit a minimum of 6 inches under the existing facilities without exception. Underground buried electric line warning tape shall be installed 12 inches above all conduit.
5. Pullboxes
- a. Junction and pull boxes shall be used where shown on the plans and as necessary to facilitate the installation of raceway and pulling of wire or cable. Consideration shall be given to the size and number of conductors, number of bends in the raceway, change in direction of the raceway or conductors and the need for support of conductors in vertical raceways. They shall be of a type intended or suitable for the use and location. They may be catalog items or custom designed and fabricated to meet the particular requirements.
  - b. Pullboxes shall be installed where required and cleaned out after installation. Lids shall be marked "Street Lighting".
6. Conductors
- a. The Contractor shall furnish conductors providing power for feeders and branch circuits at less than 600 volts as noted on the Drawings. Conductors shall be type THWN-2.

#### **10-7.04 Pedestrian Push Button Location**

- a. Adjacent to landing. The push button shall be mounted adjacent to a clear ground space or a landing on the pedestrian access route leading to the crosswalk. The clear ground space shall be at least 60 inches by 60 inches, shall slope no more than 1:48 in any direction, and shall be provided with a stable, firm and slip resistant surface from which to operate controls. This clear ground space may overlap entirely with the pedestrian access route.
- b. Proximity to approach. Where a parallel approach to the push button is provided, controls shall be within 10 inches of the clear ground space, measured horizontally, and centered on it. Where a forward approach is provided, controls shall abut and be centered on the clear ground space.
- c. Direction of control face. The control face of the push button shall be parallel to the direction of the crosswalk controlled by the push button, and no closer than 30 inches to the curb line.

- d. Mounting height. The centerline of the push button shall be mounted 42 inches above the clear ground space for approach.
- e. Close to crosswalk. The push button shall be mounted no further than 5 feet from the extension of the crosswalk lines, and within 10 feet of the curb line, unless the curb ramp is longer than 10 feet.

Contractor shall test the complete installation in the presence of the County's Representative upon completion of the project, including tests for controls. Contractor shall provide the County with any instruction manual and parts list(s) provided by the manufacturer.

#### **10-7.05 Warranty**

The APS system, including PBS, CCU, and its components shall be supported by a two-year warranty.

#### **10-7.06 Measurement and Payment**

**Pedestrian Push Button Assembly on New Pole** will be measured and paid per **each** which price shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals for doing all the work required specified herein for the **Pedestrian Push Button Assembly on New pole**, but not necessarily limited to providing and installing complete and in-place pedestrian push button assembly, poles and foundations, conduit, trenching and backfill, CCU compatible unit, wiring, mounting hardware, programming, testing, warranty, as specified in the plans or these specifications, and no additional allowance will be made therefore.

## 10-8 STRIPING & PAVEMENT MARKINGS

### 10-8.01 Traffic Stripes and Pavement Markings

Thermoplastic traffic stripes and pavement markings shall conform to the applicable provisions of Sections 84-2, "Traffic Stripes and Pavement Markings," of the Standard Specifications, and to these Special Provisions and shall be placed at the locations shown on the plans.

Existing stripes and pavement markings shall be removed by grinding.

Existing stripes and pavement markings not shown on Plans to be removed which are damaged by the work shall be replaced AS DIRECTED BY THE ENGINEER.

### 10-8.02 Materials

Thermoplastic traffic stripes (traffic lines) and pavement markings of the various types and sizes shall conform to the provisions in Sections 84-1, "General," and 84-2, "Traffic Stripes and Pavement Markings," of the Standard Specifications and these Technical Specifications.

Thermoplastic material shall be free of lead and chromium and shall conform to the requirements in State Specification PTH 02ALKYD.

Glass bead material shall conform to 84-2.02D of the Standard Specifications.

Retroreflectivity of the **thermoplastic** traffic stripes and pavement markings shall conform to the requirements in ASTM Designation: D 6359 99. White thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 250 mcd m<sup>2</sup> lx<sup>-1</sup>. Yellow thermoplastic traffic stripes and pavement markings shall have a minimum initial retroreflectivity of 150 mcd m<sup>2</sup> lx<sup>-1</sup>.

Paint material for painted traffic stripes (red or white curb) shall be waterborne type and conform to Section 84-2.02C of the Standard Specifications.

### 10-8.03 Submittals:

The Contractor shall furnish the Engineer a Certificate of Compliance in accordance with Section 6-2.03C of the Standard Specifications for each material used. In addition, the Contractor shall furnish product data, METS certificates that materials are authorized for use by Caltrans, and MSDS sheets.

### 10-8.04 Measurement and Payment

**Thermoplastic Pavement Markings** will be measured and paid for at the contract price per **square foot** of the various types, which price shall include full compensation for furnishing all equipment, tools, and labor, and doing all the work involved, as herein specified, including:

- all glass beads,
- thermoplastic material,
- tape,
- removal of existing markings by grinding,
- temporary pavement markings,
- replacement of damaged markings, and
- pavement surface preparation

and any other work required to install pavement markings not specifically enumerated in the plans or specifications, and no additional compensation will be allowed.