

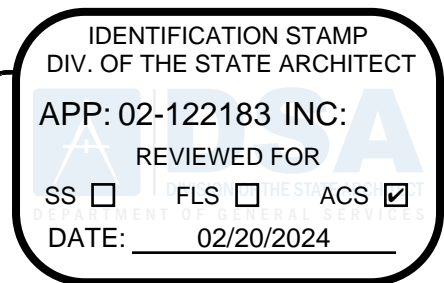
CLOVIS UNIFIED SCHOOL DISTRICT

**SPECIFICATIONS
FOR THE CONSTRUCTION OF
2024 ASPHALT PAVEMENT
REHABILITATION
AT**

**Alta Sierra Intermediate School
Bud Rank Elementary School
Clark Intermediate School
Clovis East High School
Cole Elementary School
David E. Cook Way
Fancher Creek Elementary School
Liberty Elementary School
Maple Creek Elementary School
Nelson Elementary School
Sierra Vista Elementary School**

Plans and Specifications Prepared by:

Blair, Church & Flynn
Consulting Engineers
A California Corporation
451 Clovis Avenue, Suite 200
Clovis, California 93612
(559) 326-1400
(559) 326-1500



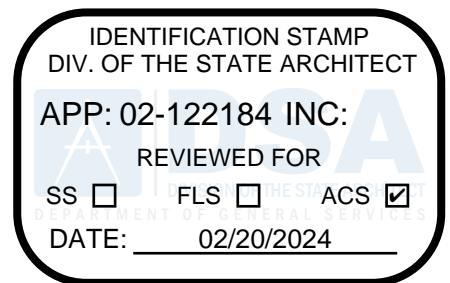
CLOVIS UNIFIED SCHOOL DISTRICT

**SPECIFICATIONS
FOR THE CONSTRUCTION OF
2024 ASPHALT PAVEMENT
REHABILITATION
AT**

**Alta Sierra Intermediate School
Bud Rank Elementary School
Clark Intermediate School
Clovis East High School
Cole Elementary School
David E. Cook Way
Fancher Creek Elementary School
Liberty Elementary School
Maple Creek Elementary School
Nelson Elementary School
Sierra Vista Elementary School**

Plans and Specifications Prepared by:

Blair, Church & Flynn
Consulting Engineers
A California Corporation
451 Clovis Avenue, Suite 200
Clovis, California 93612
(559) 326-1400
(559) 326-1500



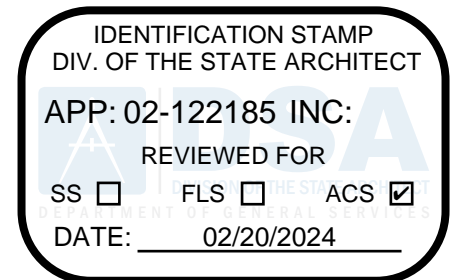
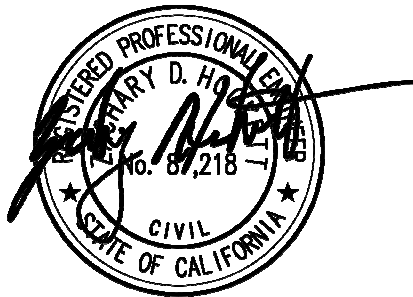
CLOVIS UNIFIED SCHOOL DISTRICT

**SPECIFICATIONS
FOR THE CONSTRUCTION OF
2024 ASPHALT PAVEMENT
REHABILITATION
AT**

**Alta Sierra Intermediate School
Bud Rank Elementary School
Clark Intermediate School
Clovis East High School
Cole Elementary School
David E. Cook Way
Fancher Creek Elementary School
Liberty Elementary School
Maple Creek Elementary School
Nelson Elementary School
Sierra Vista Elementary School**

Plans and Specifications Prepared by:

Blair, Church & Flynn
Consulting Engineers
A California Corporation
451 Clovis Avenue, Suite 200
Clovis, California 93612
(559) 326-1400
(559) 326-1500



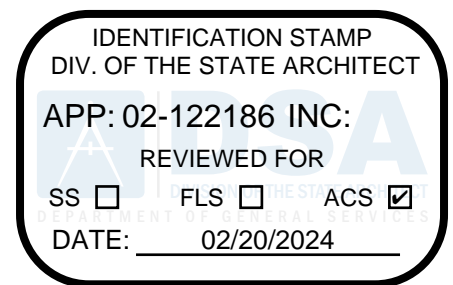
CLOVIS UNIFIED SCHOOL DISTRICT

**SPECIFICATIONS
FOR THE CONSTRUCTION OF
2024 ASPHALT PAVEMENT
REHABILITATION
AT**

**Alta Sierra Intermediate School
Bud Rank Elementary School
Clark Intermediate School
Clovis East High School
Cole Elementary School
David E. Cook Way
Fancher Creek Elementary School
Liberty Elementary School
Maple Creek Elementary School
Nelson Elementary School
Sierra Vista Elementary School**

Plans and Specifications Prepared by:

Blair, Church & Flynn
Consulting Engineers
A California Corporation
451 Clovis Avenue, Suite 200
Clovis, California 93612
(559) 326-1400
(559) 326-1500



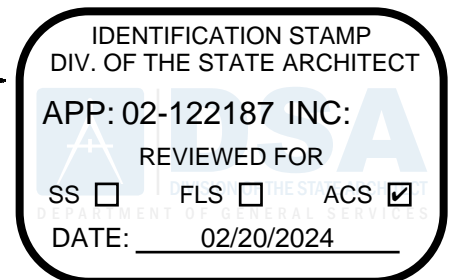
CLOVIS UNIFIED SCHOOL DISTRICT

**SPECIFICATIONS
FOR THE CONSTRUCTION OF
2024 ASPHALT PAVEMENT
REHABILITATION
AT**

**Alta Sierra Intermediate School
Bud Rank Elementary School
Clark Intermediate School
Clovis East High School
Cole Elementary School
David E. Cook Way
Fancher Creek Elementary School
Liberty Elementary School
Maple Creek Elementary School
Nelson Elementary School
Sierra Vista Elementary School**

Plans and Specifications Prepared by:

Blair, Church & Flynn
Consulting Engineers
A California Corporation
451 Clovis Avenue, Suite 200
Clovis, California 93612
(559) 326-1400
(559) 326-1500



SECTION 00 01 10
TABLE OF CONTENTS

DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS

00 01 10 - TABLE OF CONTENTS

DIVISION 01 -- GENERAL REQUIREMENTS

01 11 00 - SUMMARY OF WORK

01 32 26 - CONSTRUCTION FORMS

01 45 29 - TESTING AND INSPECTIONS

01 71 23 - FIELD ENGINEERING

01 73 29 - CUTTING AND PATCHING

01 74 00 - CLEANING DURING CONSTRUCTION & FINAL CLEANING

DIVISION 31 -- EARTHWORK

31 11 00 - SITE CLEARING

31 20 00 - EARTHWORK: EXCAVATION, FILLING AND GRADING

31 22 22 - SOIL MATERIALS

DIVISION 32 -- EXTERIOR IMPROVEMENTS

32 11 26 - AGGREGATE BASE COURSE

32 12 16 - SOIL STERILIZATION

32 12 17 - ASPHALT PAVING

32 13 13 - SITE CONCRETE IMPROVEMENTS

32 13 15 - CONCRETE REINFORCEMENT

32 17 13 - PARKING LOT FURNITURE

32 17 23 - PAVEMENT MARKINGS

END OF SECTION 00 01 10

SECTION 01 11 00
SUMMARY OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General Conditions and Supplemental General Conditions and other Division 01 General Requirements, apply to this Section.

1.02 DEFINITIONS:

- A. The words "Owner" and "District" are synonymous and are interchangeable when used throughout this Project Manual.

1.03 PROJECT DESCRIPTION:

- A. The Project Name: 2024 CUSD Pavement Maintenance
- B. Project Location: Clovis Unified School District, 1490 Herndon Avenue, Clovis California, 93611
- C. Owner: Clovis Unified School District
- D. Civil Engineer: Blair, Church & Flynn, 451 Clovis Ave, Suite 200 Clovis, CA 93612

1.04 SCOPE OF WORK:

- A. The work to be done consists, in general, of the following at various sites throughout Clovis Unified School District:
 - 1. Removal and replacement of asphalt concrete
 - 2. Crackfill & seal coat existing pavement
 - 3. Striping parking lots and playcourts
 - 4. Accessibility upgrades including accessible parking signage and re-striping accessible parking stalls and access aisles.

1.05 CONTRACT

- A. The Work will be constructed under a single general construction contract.

1.06 CONTRACTOR'S DUTIES

- A. Coordination and interpretation of Plans & Specifications
 - 1. The work covered by this Project shall be done in accordance with these specifications and with the City of Clovis Plans and Specifications; and Title 21 and Title 24 of the California Code of Regulations (CCR). If the referenced specifications conflict with one another, the City of Clovis Plans and Specifications shall govern.
- B. Permits & Licenses
 - 1. The Contractor is responsible to pay all fees and to obtain said permits. An encroachment permit from the City of Clovis is required if work is done within the public right-of-way.
- C. Public Safety
 - 1. Temporary barricades, caution tape, snow fencing, or other means of preventing foot traffic within areas of work shall be installed by contractor.
- D. Public Convenience
 - 1. This work will be required to be done while onsite facilities are being used for other authorized purposes. The Contractor is advised that the construction of this project will be during business hours and therefore, there may be employees, public visitors, and District personnel in the vicinity of the work.
- E. Preservation of Property

1. The Contractor shall exercise extreme caution in excavating and compacting for this project in the area of suspected existing utilities and shall protect existing utilities from damage, in as much as their exact location or the exact number of utilities is uncertain.

F. Cooperation

1. The Contractor shall cooperate with all Clovis Unified School District personnel during their pursuit of normal work activities at the site, whether or not related to this work. There may be other contractors at the site conducting construction or maintenance operations under separate contracts to the District. The Contractor shall cooperate with such other contractors to ensure that his or her activities do not delay or hinder their operations or the related activities of District Personnel. The District reserves the right to direct the order of the Contractor's work at the site as may be necessary to coordinate this work with other onsite operations and activities. The Contractor shall coordinate efforts with the District to ensure that site irrigation practices and scheduling does not result in the saturation of soils in the work area
2. Full compensation for all costs involved in meeting and satisfying the details and requirements specified in this Section shall be included, as part of the contract lump sum bid for the entire project, and no additional payment will be made therefore.

G. Utility Locating

1. The Contractor shall notify Underground Service Alert (USA), by calling 811, and the District at least 48 hours prior to the scheduled commencement of construction operations to request identification and marking of known utilities in the area of the work.
2. The Contractor shall perform underground utility locating of their own over the extent of the project site being impacted by the work to locate and identify known utilities in the area of work.
3. Marking and identification of utilities shall in no way relieve the Contractor of responsibility to protect and preserve existing utilities that are identified and located on the site and responsibility to repair or replace those damaged as a result of their operations. No separate measurement or payment will be made for the protection and preservation of known existing utilities or for the repair or known replacement of existing utilities damaged by the Contractor, the cost thereof being considered as included in the contract lump sum price for the entire project.

H. Construction Staking

1. No construction staking will be provided to the Contractor. The Contractor shall retain, at his or her own expense, the services of State of California Licensed Land Surveyor or Civil Engineer to provide construction staking for all work involved in the project

1.07 CONTRACTOR'S USE OF PREMISES

- A. Contractor may be required to share use of Project site during construction period with contractors performing work under other contracts for construction of the overall Project and shall coordinate construction operations with those of other contractors. Designated areas will be established for the shared use of the Contractor, and contractors performing work under other contracts. Contractor's use of premises is limited only by Owner's right to perform work or to obtain other contractors on portions of the Project.
- B. Confine operations to areas within Contract limits indicated. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
- C. Keep driveways and entrances serving the premises clear and available to the Owner and the public at all times. The Contractor is to provide and maintain free and clear access to areas throughout the site for emergency services. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site.

- D. Repair and replace damaged existing site improvements to remain such as curbs, parking lot paving, roadways, site vegetation, turfgrass, and utilities.

1.08 SCHEDULING

A. Beginning of Work

- 1. The Contractor shall begin onsite construction operations within ten (10) calendar days of the commencement date specified by the District in the Notice to Proceed.

B. Progress Schedule

- 1. At least seven (7) calendar days prior to the commencement date, the Contractor shall submit a proposed progress schedule. The schedule shall indicate the dates proposed for beginning and completion of each part of the work. The schedule will be reviewed by the Engineer for practicability with respect to overall completion time and with respect to potential effects of the work on campus access and parking during construction. No onsite construction operations shall begin prior to the date of the Engineer's approval of the Contractor's proposed progress schedule.
- 2. The Contractor shall diligently prosecute this work to completion no later than sixty (60) calendar days total after the commencement date specified by the District in the Notice to Proceed.

PART 2 – PRODUCTS (NOT USED)

PART 3 – EXECUTION (NOT USED)

END OF SECTION 01 11 00

SECTION 01 32 26
CONSTRUCTION FORMS

PART 1 GENERAL

1.01 SUMMARY

- A. Contractor to provide all forms as required by the Engineer for administrative procedures and other related items necessary to document the Project as required by the contract documents, including but not limited to those forms provided under this specification section.

1.02 SUBMITTALS

- A. Submit in accordance with the specification section 01 33 00 - SUBMITTAL PROCEDURES

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 SCHEDULE OF FORMS

- A. Submittal Transmittal
- B. Request for Information (RFI)
- C. Change Order Request (COR)
- D. Contractor's Usage Agreement for Electronic Files
 - 1. The language from this document shall be copied onto the Contractor's letterhead

END OF SECTION 01 32 26

SECTION 01 45 29
TESTING AND INSPECTIONS

PART 1 GENERAL

1.01 SUMMARY

- A. The owner's testing laboratory and special inspector shall be retained by the Owner
 - 1. Payment of the Owner's Testing Laboratory will be by the Owner
 - 2. The Owner shall pay for all initial testing indicated as paid for by Owner
 - a. Cost of re-testing (due to initial failures) will be back-charged to the Contractor, and those excess costs will be deducted from the Contract Price
- B. District employees or their representatives shall have full access to work in order to ensure adherence to contract documents.

1.02 TESTING

- A. Compaction testing and Special Inspections and Testing per the current edition of the California Building Code and as listed on the permit drawings
- B. Responsibility of the Testing Laboratory
 - 1. Taking all specimens
 - 2. Performing Tests
 - 3. Writing test reports
 - 4. Review of continuous inspection reports by the Project Inspector
 - 5. Distribute test reports to the Owner and Engineer
- C. Responsibility of the Contractor
 - 1. Contractor shall provide a testing schedule that is in accordance with the following:
 - a. Cooperates with the Testing Laboratory's schedule of required testing
 - b. Contractor shall coordinate Construction Schedule and Testing Schedule
 - 2. Cooperation with testing laboratory
 - a. Provide access to work being tested
 - b. Provide test samples as selected by the testing laboratory
 - c. Schedule work so that there shall be no excessive inspection time
 - 1) At times that an inspector is required, sufficient work shall be laid out and adequate personnel supplied so that the inspector's time shall be used to full advantage
 - 2) If inspection costs become excessive because of poor construction procedure, such excess costs will be paid for by the Owner but deducted from the Contract Price.
 - d. Inspections and tests required by regulatory agencies shall be the responsibility of and shall be paid for by the Owner unless specified otherwise.
 - e. Inspections and testing performed exclusively for the Contractor's convenience shall be the sole responsibility of the Contractor.
 - f. Test Reports
 - 1) Distribute test reports and related instructions to insure all required re-testing and/or replacement of materials.

END OF SECTION 01 45 29

SECTION 01 71 23
FIELD ENGINEERING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Supplemental General Conditions and other Division 01 General Requirements, apply to this Section.

1.02 DESCRIPTION

- A. Layout and install the Work to the lines and grades indicated and specified.
- B. Retain and pay expenses of a qualified engineer or land surveyor to establish on the site the required reference points and benchmarks, establish building lines and elevations, check structural steel framework for plumbness, and establish on steel frame the required basic grid lines from which Work of other sections shall be laid out.

1.03 QUALIFICATIONS OF ENGINEER OR SURVEYOR

- A. The engineer or land surveyor shall be licensed in the State of California and shall be acceptable to the Owner.

1.04 PROJECT SURVEY REQUIREMENTS

- A. Establish lines and levels; at a minimum, locate and layout:
 - 1. Site Improvements
- B. From time to time verify layouts to ensure accuracy.

1.05 RECORDS

- A. Maintain a complete, accurate log of control and survey Work as it progresses.

1.06 SUBMITTALS

- A. Submit name and address of civil engineer and land surveyor.
- B. Upon request, submit documentation to verify accuracy of field engineering Work.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 01 71 23

SECTION 01 73 29
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS:

- A. Drawings and general provisions of Contract, including General Conditions and Supplemental General Conditions and other Division 01 General Requirements, apply to this Section.

1.02 SUMMARY:

- A. This Section specifies administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
- C. Refer to Divisions 2 through 40 Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

1.03 DEFINITIONS

- A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after Installation of other Work.

1.04 SUBMITTALS:

- A. Cutting and Patching Methodology: Where approval of procedures for cutting and patching is required before proceeding, submit a methodology describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the methodology:
 - 1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to in-place construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
 - 3. List products to be used and firms or entities that will perform work.
 - 4. Indicate dates when cutting and patching is to be performed.
 - 5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
- B. Construction Managers approval: Obtain approval of cutting and patching methodology before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.
- C. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations signed and sealed by a structural engineer licensed to practice in the State of California to show how reinforcement is integrated with the original structure.
- D. Review of the Contractor's submittal by the Engineer to proceed with cutting and patching does not waive the Engineer's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

1.05 QUALITY ASSURANCE:

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load-carrying capacity or load-deflection ratio.
- B. Obtain approval of the cutting and patching methodology before cutting and patching the following structural elements:
 - 1. Foundation construction.

2. Structural concrete.
3. Equipment supports.
4. Piping, duct work, vessels and equipment.
5. Operational and Safety Limitations: Do not cut and patch operational elements or safety related components in a manner that would result in reducing their safety to perform as intended, or result in increased maintenance, or decreased operational life or safety.

PART 2 - PRODUCTS

2.01 MATERIALS:

- A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and action before proceeding, if unsafe or unsatisfactory conditions are encountered
- B. Before proceeding, meet at the site with parties involved in cutting and patching, including electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.02 PREPARATION:

- A. Temporary Support: Provide temporary support of Work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- D. Take all precautions necessary to avoid cutting existing pipe, conduit or duct work serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

3.03 PERFORMANCE:

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete work without delay.
 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with original installer's recommendations.
 1. In general, where cutting is required use hand of small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 3. Cut through concrete and masonry using a cutting machine that is appropriate for the work to be done.
 4. Comply with requirements of applicable Sections of Division 31 where cutting and patching requires excavating and backfilling.

5. By-pass utility services such as pipe and conduit, before cutting, where services are shown or required to be removed, relocated or abandoned. Cut-off pipe or conduit in walls or partitions to be removed. Cap valve or plug and seal the remaining portion of pipe and conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
6. Patch with durable seams that are as invisible as possible. Comply with tolerances.
7. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
8. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction to break of plane in a manner that will eliminate evidence of patching and refinishing.
9. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing patch, after patched area has received prime and base coat.

3.04 CLEANING:

- A. Thoroughly clean areas and spaces where cutting and patching is performed or
 1. used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit, and similar features before painting or other finishing is applied. Restore damaged pipe covering to its original condition.

END OF SECTION 01 73 29

SECTION 01 74 00
CLEANING DURING CONSTRUCTION & FINAL CLEANING

GENERAL

1.01 THIS SECTION INCLUDES CLEANING DURING CONSTRUCTION AND FINAL CLEANING ON COMPLETION OF THE WORK.

- A. At all times maintain areas covered by the Contract and adjacent properties and public access roads free from accumulations of waste, debris, and rubbish caused by construction operations, including dirt and dust.
- B. Conduct cleaning and disposal operations to comply with local ordinances and antipollution laws. Do not burn or bury rubbish or waste materials on project site. Do not dispose of volatile wastes, such as mineral spirits, oil, or paint thinner, in storm or sanitary drains. Do not dispose of wastes into streams or waterways.
- C. Use only cleaning materials recommended by manufacturer of surface to be cleaned.

1.02 CLEANING DURING CONSTRUCTION

- A. During execution of work, clean site, adjacent properties, and public access roads and dispose of waste materials, debris, and rubbish to assure that buildings, grounds, and public properties are maintained free from accumulations of waste materials and rubbish.
- B. Wet down dry materials and rubbish to prevent blowing dust.
- C. Provide containers for collection and disposal of waste materials, debris, and rubbish.
- D. Cover or wet excavated material leaving and arriving at the site to prevent blowing dust. Clean the public access roads to the site of any material falling from the haul trucks.

1.03 SITE CLEANING PRIOR TO LANDSCAPING

- A. Remove concrete, concrete wash, stucco splatter, gunite overspray, and all other wastes and debris prior to final grading and landscaping.

1.04 FINAL CLEANING

- A. At the completion of work and immediately prior to final inspection, clean the entire project site as follows.
- B. Clean, sweep, wash, and polish all work and equipment including finishes.
- C. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior finished surfaces, polish surfaces.
- D. Repair, patch, and touch up marred surfaces to match adjacent surfaces.
- E. Broom clean paved surfaces; rake clean landscaped areas.
- F. Remove from the site all temporary structures and all materials, equipment, and appurtenances not required as a part of, or appurtenant to, the completed work.

END OF SECTION 01 74 00

SECTION 31 11 00
SITE CLEARING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section includes the following:
1. Provide all material, labor, equipment and services necessary to completely clear and demolish all materials, accessories and other related items necessary to complete the Project as indicated by the Contract Documents.
- B. RELATED SECTIONS:
1. Contract General Conditions and Division 1, General Requirements
 2. Section 31 20 00 - EARTHWORK: EXCAVATION, FILLING AND GRADING
 3. Section 31 22 22 - SOIL MATERIALS
 4. Section 31 23 33 - TRENCH EXCAVATION AND BACKFILL

1.03 QUALITY ASSURANCE

- A. Regulatory Requirements:
1. In accordance with all Division 01 sections, and the following:
 - a. Materials and equipment used for this project shall comply with the current applicable regulations of the California Air Resources Board [CARB] and the Environmental Protection Agency [EPA].
- B. Meetings:
1. Minimum agenda shall be to discuss coordination of upcoming work, review the work progress, discuss field observations, identification of any potential problems which may impede planned progress; corrective measures to regain projected schedule; and maintenance of quality and work standards.
 2. Meetings shall include Pre-Clearing and Demolition Meetings.
 3. Participants (or designated representative of) invited to attend each of the above meetings shall be as follows:
 - a. Contractor.
 - b. Owner.
 - c. Engineer.
 - d. Testing Laboratory.
 - e. Local Governing Authorities as applicable.
 - f. Utility Representatives as applicable.
 - g. Owner's Inspector.
 - h. Clearing and Demolition Subcontractor.
 - i. Other subcontractors, as appropriate (including any accessory subcontractors).

1.04 PROJECT CONDITIONS OR SITE CONDITIONS

- A. Dust Control
1. Contractor shall comply with all requirements of the San Joaquin Valley Air Pollution Control District (SJVAPCD) for construction activity related to this project.

2. A Dust Control Plan, as required by the SJVAPCD, may be required for this project. Contractor shall be responsible for preparing said Dust Control Plan, submitting to the SJVAPCD for review and approval, and paying all SJVAPCD review and permitting fees related to the Dust Control Plan.
 3. No construction activity related to this project may begin until Contractor has secured an approved Dust Control Plan, if one is required.
 4. Contractor shall be solely responsible to implement all requirements of the Dust Control Plan throughout the life of this contract.
 5. Should fines or fees be levied against the Project for violations of the Dust Control Plan and/or related SJVAPCD regulations, Contractor shall be responsible to pay all said fines or fees and to implement all mitigation measures required by SJVAPCD in order to bring the construction activity into compliance with SJVAPCD regulations. The costs for any such fines or fees shall be included in the lump sum price bid for work under this contract and no additional payment will be made therefor.
- B. Existing Conditions:
1. Examine site and compare it with the drawings and specifications. Thoroughly investigate and verify conditions under which the work is to be performed. No allowance will be made for extra work resulting from negligence or failure to be acquainted with all available information concerning conditions necessary to estimate the difficulty or cost of the work.
 2. Conduct work so as not to interfere unnecessarily with adjacent roads, streets, drives, walks or occupied facilities.
 - a. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and Authorities having jurisdiction.
 - b. Provide alternate routes around closed or obstructed traffic ways if required by Authorities having jurisdiction.
 3. Locate and identify utilities.
 - a. Call a Local Utility Locator Service (USA – “Underground Service Alert” – [800] 227-2600) for the task of locating any applicable utilities in the area where the Project is located.
 4. Carefully remove items indicated to be salvaged and store on Owner’s premises at the Owner’s direction.

PART 2 PRODUCTS

2.01 (NOT APPLICABLE)

PART 3 EXECUTION

3.01 PREPARATION

- A. Coordination:
1. Coordinate work under this specification section with work specified under other sections to ensure proper and adequate interface of work.
- B. Protection:
1. Protect and maintain all benchmarks and survey control points from disturbance during clearing and demolition operations.
 2. Provide erosion-control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties.
 3. Furnish and install temporary protection/barrier fencing surrounding the limits of demolition.
 4. Protect trees, plant growth, and features not specifically designated for removal. Locate and clearly flag trees and vegetation to remain or to be relocated.

5. Protect existing improvements designated to remain from damage during construction.
 - a. Restore damaged improvements to their original condition, as acceptable to the Owner.

3.02 CONSTRUCTION

A. Shrub and Weed Removal:

1. Remove weeds and rooted topsoil to a minimum four (4) inch depth and temporarily stockpile as needed for re-use in finished grading of landscape areas. Remove excess material from the site.
2. Where existing vegetation is to be replaced by new materials, remove contaminated or excess soil from the site and legally dispose of off-site.

B. Existing Site Improvements Removal:

1. Remove existing above and below grade improvements as necessary to facilitate new construction.
 - a. Remove concrete slabs, sidewalk, curbs, mow strips, gutters, and fence post footings.
 - 1) Neatly saw-cut length of existing pavement to remain before removing existing pavement unless existing full-depth joints coincide with line of demolition. Saw-cut faces vertically.
 - b. Remove indicated utility improvements within the limits of construction.
 - 1) Excavate for and disconnect utilities designated to be removed. Seal or cap off underground.
 - 2) Coordinate removal and/or relocation of utilities with the appropriate utility agencies.
 - c. Where existing underground utilities, irrigation pipes, wells, leach fields, or underground tanks are encountered, they must be removed or moved to a point at least 5 feet horizontally outside the proposed building and 3 feet horizontally outside the concrete flatwork or pavement construction areas. All resultant cavities must be backfilled with engineered fill.
 - d. Remove concrete slabs, foundations, and utilities within building footprint.

C. Existing Utilities to Remain or be Relocated:

1. Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
 - a. Notify the Engineer and the Owner not less than seven (7) days in advance of proposed utility interruptions.
 - b. Arrange to shut off indicated utilities with utility companies and Owner.

D. Disposal:

1. Legally dispose of all debris (surplus soil materials, unsuitable topsoil, obstructions, demolished materials, waste materials, trash, etc.) resulting from clearing, grubbing, demolition and from construction. Disposal of all materials shall be at a location secured by the Contractor off of the Owner's property.

END OF SECTION 31 11 00

SECTION 31 20 00
EARTHWORK: EXCAVATION, FILLING AND GRADING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section includes the following:
 - 1. Excavating soil and other material for surface improvements.
 - 2. Placing fill.
 - 3. Compaction of existing ground and fill.
 - 4. Preparation of subgrade for other improvements.
 - 5. Grading of soil.
- B. RELATED SECTIONS
 - 1. Contract General Conditions and Division 01, General Requirements
 - 2. Section 31 11 00 - SITE CLEARING
 - 3. Section 31 22 22 - SOIL MATERIALS
 - 4. Section 31 23 33 - TRENCH EXCAVATION AND BACKFILL

1.03 REFERENCES

- A. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil Aggregate Mixtures Using 10 lb (4.54 Kg) Rammer and 18-inch (457 mm) Drop.

1.04 DEFINITIONS

- A. Utility: Any buried or above ground pipe, conduit, cable, associate device or appurtenances, or substructure pertaining thereto.

1.05 SUBMITTALS

- A. Product Data:
 - 1. Information indicating the source of all import material, the fill material type and where it is to be used, and approval of the District's Inspector of Record for incorporation of import material into the Work.
- B. Material Test Reports:
 - 1. Classification of Soils
 - 2. Compaction Characteristics of Soils
 - 3. Density and Unit Weight of Soils in Place.
 - 4. Imported fill shall be tested and approved by the Owner's Geotechnical Engineer prior to import to the site, including testing for compliance with Department of Toxic Substances Control (DTSC) guidelines. Said testing and certification documents shall be paid for by the Owner.

1.06 QUALITY ASSURANCE

- A. Installer:
 - 1. Qualifications:
 - a. Engage an experienced Installer who has successfully completed three (3) projects of similar scope and size to that indicated for this project within the past 5 years.
- B. Regulatory Requirements:
 - 1. In accordance with Specification Section REGULATORY REQUIREMENTS and the following:
 - a. CARB Materials and equipment used for this Project shall comply with the current applicable regulations of the California Air Resources Board [CARB]
 - b. CC City of Clovis, codes and Ordinances
 - c. EPA Environmental Protection Agency.
 - d. CAL/OSHA Comply with all provisions of the Construction Safety Orders and the General Safety Orders of the California Division of Occupational Safety and Health, as well as all other applicable regulations as they pertain to the protection of workers from the hazard of caving ground excavations.
 - e. DTSC Comply with all recommendations of the California Department of Toxic Substance Control (DTSC) regarding soil testing for potential contaminants.
- C. Certificates:
 - 1. Installer's certification that all Earthwork installation meets or exceeds the requirements of this specification.
 - 2. Contractor's certification (on Contractor's letterhead paper) that the Earthwork materials and installation meets or exceeds the requirements of this specification.
- D. Meetings:
 - 1. Pre-Installation: Schedule prior to the start of work.
 - a. Coordinate the work with other work being performed.
 - b. Identify any potential problems, which may impede planned progress and proper installation of work regarding quality of installation and warranty requirements.
 - 2. Progress: Scheduled by the Contractor during the performance of the work.
 - a. Review for proper installation of work progress.
 - b. Identify any installation problems and acceptable corrective measures.
 - c. Identify any measures to maintain or regain project schedule if necessary.
 - 3. Completion: Scheduled by the Contractor upon proper completion of the work.
 - a. Inspect and identify any problems which may impede issuance of warranties or guaranties.
 - b. Maintain installed work until the Notice of Substantial Completion has been filed.

1.07 COORDINATION

- A. Coordinate work with Owner's personnel.
- B. Provide required notification to the Owner and Geotechnical Engineer or the Engineer of Record so that a representative from the Owner's Geotechnical Engineering consultant can be present for all excavation, filling and grading operations to test and observe earthwork construction.

- C. Verify that the location of existing utilities has been indicated at work site by utility authorities, by Owner, and as specified on the Plans.

1.08 EXISTING CONDITIONS

- A. Existing Conditions:
 - 1. Examine the site and verify conditions with the Drawings and Specifications. Contractor shall familiarize himself with existing site conditions and any changes that have occurred at the site since the preparation of the contract documents and shall be responsible to account for any such changes in the price bid for this work.
 - 2. Thoroughly investigate and verify conditions under which the Work is to be performed.
 - 3. Locate and identify utilities:
 - a. Call a Local Utility Locator Service (USA - "Underground Service Alert" – [800] 227-2600) for the task of locating any applicable off-site and on-site utilities in the area where the Project is located.
 - b. Contractor to provide 3rd party utility locating within the limits of the project work area
 - 4. No allowance for Extra Work will be granted resulting from negligence or failure to meet requirements of this Section.
- B. Where subsurface work involves more than the normal depth of excavation required for the removal and/or construction of surface improvements (surface improvements such as concrete flatwork, paving, landscaping, signs, etc.), the engineer will have made a diligent attempt to indicate on the plans the location of all main and trunk line utility facilities which may affect the Work. In many cases, however, the only available information relative to the existing location of said facilities may have been small scale undimensioned plats. The locations of said facilities, therefore, shall be considered approximate only, until located and exposed by the Contractor.
- C. Under similar circumstance, service laterals and appurtenances will have also been shown where information was available as to their location. In many cases, however, the only available information relative to the existing location of said facilities may have been small scale undimensioned plats. The locations of said facilities, therefore, shall be considered approximate only, until located and exposed by the Contractor.
- D. Determine exact location of existing buried utilities by:
 - 1. Utilizing a 3rd party utility locator, mark on ground or pavement surface the alignment and extent of the facilities and the probable location of existing utilities using construction plans and existing surface features.
 - 2. Requesting Underground Service Alert (USA) to indicate location of existing buried facilities (phone 1-800-227-2600). Provide USA a minimum of two (2) working days notice of request for locations and notify Owner of said request concurrently.
 - 3. Confirm exact location of existing utilities by hand methods of excavation, or by use of vacuum equipment.
- E. At proposed work location, expose by hand methods (or vacuum equipment) all existing utilities along the route of the proposed work prior to using any mechanical equipment. If mechanical equipment is allowed at a particular location, it may only be used after the completion by the Contractor of a successful exhaustive search by hand (or vacuum equipment) methods to locate all existing facilities as indicated on the plans, and/or as indicated on the ground by USA or Contractor's 3rd party utility locator.
- F. Provide Field Engineering to record the location of all utilities encountered. Where locational conflicts exist between existing utilities and the planned location of facilities to be constructed under this Contract, submit detailed information to the Engineer for review and direction.
- G. Maintain all existing utility mains and service lines in constant service during construction of the Work.

- H. Where service disruptions are allowed, minimize the length of such disruptions by proper scheduling and diligent pursuit of the work, and coordinate the timing of any such disruptions in advance with the District.
- I. Existing soils are considered to have a highly corrosive potential to buried metal objects.
- J. Existing soils are considered to have a low expansion potential.

1.09 ENVIRONMENTAL REQUIREMENTS

- A. Dust control: Perform work in a manner as to minimize the spread of dust and flying particles. Thoroughly moisten all surfaces as required to prevent dust from being a nuisance to the public, neighbors and concurrent performance of other on-site work.
 - 1. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, shall be effectively stabilized of dust emissions using water, chemical stabilizer/suppressant, or vegetative ground cover.
 - 2. All land clearing, demolition, grubbing, scraping, excavation, land leveling, grading, and cut and fill activities shall be effectively controlled of fugitive dust emissions utilizing application of water or by pre-soaking.
 - 3. When materials are transported off-site, all material shall be covered, effectively wetted to limit visible dust emissions or at least six inches of freeboard space from the top of the container shall be maintained.
 - 4. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets at least once every 24 hours when operations are occurring. The use of dry rotary brushes is expressly prohibited except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. The use of blower devices is expressly forbidden.
 - 5. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized of fugitive dust emissions utilizing sufficient water or chemical stabilizer/ suppressant.
 - a. Contractor shall comply with all requirements of the San Joaquin Valley Air Pollution Control District (SJVAPCD) for construction activity related to this project.
 - b. A Dust Control Plan, as required by the SJVAPCD, may be required for this project. If required, Contractor shall be responsible for preparing said Dust Control Plan, submitting to the SJVAPCD for review and approval, and paying all SJVAPCD review and permitting fees related to the Dust Control Plan.
 - c. If a dust control plan is required, no construction activity related to this project may begin until Contractor has secured an approved Dust Control Plan.
 - d. Contractor shall be solely responsible to implement all requirements of the Dust Control Plan throughout the life of this contract.
 - e. Should fines or fees be levied against the Project for violations of the Dust Control Plan and/or related SJVAPCD regulations, Contractor shall be responsible to pay all said fines or fees and to implement all mitigation measures required by SJVAPCD in order to bring the construction activity into compliance with SJVAPCD regulations. The costs for any such fines or fees shall be included in the lump sum price bid for work under this contract and no additional payment will be made therefore
- B. Burning: No burning will be allowed on-site.
- C. Rain: Work under this section shall not be started or maintained under threat of rain, unless the work is not affected by the rain.
- D. Do not place fill during weather conditions which will alter moisture content of fill materials sufficiently to make compaction to the specified densities difficult or impossible.
- E. When reference is made to SWPPP (Storm Water Pollution Prevention Plan), if any within this Project Manual, then comply with all environmental protection requirements included therein.

- F. In accordance with EPA, CARB and CC.
- G. Protection:
 1. Protect cut and fill areas to prevent water running into excavation. Maintain areas free of water. Remove seeping water immediately by pumps. Provide dewatering as necessary.
 2. Protect cut slopes from erosion due to precipitation and other sources of runoff.
 3. Protect utilities to remain within the construction area and special construction. If utility lines are uncovered (water, electric, sewer, etc.) not shown on the drawings during excavation of site, notify the Architect promptly for its review and action.
 4. Do not permit access to undeveloped portions of the site, nor to areas that are outside of the limits of grading.
- H. Before being brought onto the site, all import soil must be sampled, tested and approved by Owner's Geotechnical Engineer. All import material must comply with DTSC recommendations and guidelines for environmentally clean soil suitable for school construction. Import testing will be provided and paid for by the Owner.

1.10 PROJECT RECORD DOCUMENTS

- A. Submit under provisions of GENERAL CONDITIONS and DIVISION 1, GENERAL REQUIREMENTS.
- B. Accurately record actual locations of utilities encountered including depth and horizontal location, as measured from permanent site features.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Fill in Turf or Other Planting Areas: Type S2 or S3 per Division 31 Specification Section 31 22 22 - SOIL MATERIALS
- B. Fill in Non-planting Areas: Type S1, S2 or S4 per Division 31 Specification Section 31 22 22 - SOIL MATERIALS.
- C. Imported material: Type S3, S4 or S5 per Division 31 Specification Section 31 22 22 - SOIL MATERIALS.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify site conditions.

3.02 PREPARATION

- A. Layout of Work:
 1. Contractor shall be responsible for all lines and grades. Layout shall be provided by a California registered Land Surveyor or Civil Engineer, at Contractor's expense.
 2. Check all benchmarks, monuments and property lines and verify locations.
 3. Locate and maintain all grade stakes.
 4. Monuments moved or displaced during grading operation are to be replaced by a California Registered Civil Engineer or Surveyor, at Contractor's expense.
- B. Locate, identify, and protect existing above and below grade utilities from damage.
- C. Protect plant life, lawns, trees, shrubs, and other features not authorized for removal.
- D. Protect existing structures, fences, curbs, sidewalks, paving and other improvements to remain from damage from excavation equipment and vehicular traffic.
- E. Employ equipment and methods appropriate to the work site.
- F. Protect excavated areas from drainage inflow and provide for drainage of all excavated areas.

- G. Comply with all provisions of the Construction Safety Orders and General Safety Orders of the California Division of Industrial Safety, as well as all other applicable regulations as they pertain to the protection of workers from the hazard of caving ground in excavations.

3.03 SITE STRIPPING:

- A. Reference is made to Specification Section 31 11 00 - SITE CLEARING.
- B. Within the areas of planned surface improvements and structures, the near surface soils containing vegetation, roots, organics, or other objectionable material must be stripped and removed from the site. Upon approval of the Geotechnical Engineer, suitable materials stripped from the site may stockpiled and incorporated into the finish fill for planting areas.
- C. All areas to receive surface improvements shall be stripped to remove turf, shrubs, trees and other vegetation, along with associated root systems, concrete, wood, metal, rubbish and other unsuitable debris, and any loose, saturated or unconsolidated soil material. Minimum stripping depth is expected to be 4-inches below existing site grades. Stripping shall continue to the depth required to expose acceptable basement soils that are free from deleterious which are not suitable for Engineered Fill, as required by the Geotechnical Engineer.

3.04 EXCAVATION

- A. Following clearing and stripping operations, excavate planned construction areas as specified in this Section.
- B. Areas of exterior concrete slabs on grade located outside the building pad over-excavation limits, should be prepared by scarification of the upper 12-inches below existing grade or 12-inches below the bottom of the recommended aggregate base section, whichever is greater. The zone of subgrade preparation should extend a minimum of 3 feet beyond these improvements. These soils should be moisture conditioned to slightly above optimum and compacted as engineered fill.
- C. Provide additional excavation as required to conform to the lines, grades and cross-sections shown on the plans.
- D. When excavating through tree roots, perform work by hand and cut roots, where authorized, with a saw. Remove all roots 1/4" in diameter and greater.
- E. Remove excess soil not to be used as fill in the Work from the site. Unless requested by Owner to be deposited at a site designated by Owner on the property, obtain a disposal site and legally dispose of said excess material, all at no additional cost to the Owner.
- F. Areas disturbed by demolition must be excavated to expose undisturbed soils.
- G. Excavated soils free of deleterious substances (organic matter, demolition debris, tree roots, etc.) and with less than 3% organic content by weight, may be returned to the excavations as Engineered Fill.

3.05 FILLING AND COMPACTING

- A. Place and compact soil to finish subgrade of improvements to be placed thereon, or to finished surface grade where no improvements are to be placed thereon.
- B. All fill required shall be placed as Engineered Fill.
- C. The Contractor shall be solely responsible for securing an acceptable source of import material as required to grade the site. Reference is made to 31 20 00 1.09.H
- D. On-site soils are suitable for re-use as Engineered Fill, providing they are cleansed of excessive organics (less than 3 percent by weight, ASTM D2974), debris, and fragments larger than three (3) inches in maximum dimension and meet the requirements of soil Type S4, Division 31 Specification Section SOIL MATERIALS.
- E. Engineered Fill shall be moisture conditioned to within 2% of optimum moisture, placed in uncompacted layers not exceeding eight (8) inches in thickness, and compacted as specified, based on ASTM Test Method D1557.

1. Non-vegetative surface improvement areas (structures and site concrete improvements) - To a minimum of 92% of maximum dry density (relative compaction).
 2. Vegetative surface improvement areas (turf and planters) - Below top twelve (12) inches - to a minimum of 90% of maximum dry density (relative compaction). Top twelve (12) inches - 85% of maximum dry density (relative compaction).
 3. Pavement areas: to a minimum 95% of maximum dry density (relative compaction) in top twelve (12) inches.
- F. Maintain optimum moisture content of fill materials to attain required compaction density.
- G. Additional lifts shall not be placed if the previous lift did not meet the required dry density or relative compaction, or if soil conditions are not stable.
- H. Conform fill to the lines, grades and cross-sections shown on the plans.
- I. Fill materials to conform to Division 31 Specification Section SOIL MATERIALS.
- J. Provide, at no additional cost to Owner, imported soil material conforming to the requirements of Division 31 Specification Section SOIL MATERIALS, as needed to attain finished grades of Work.
- K. Utilize equipment which will not disturb or damage existing utilities and other improvements.

3.06 PREPARATION OF SUBGRADE FOR SURFACE IMPROVEMENTS

- A. Where concrete, asphalt-concrete, aggregate base, or other non-vegetative surface improvements, or a layer of said surface improvements, are to be constructed on the soil surface, prepare the subgrade for said improvements in accordance with this section.
- B. Scarify the soil as specified and remove and dispose of (off the project site) all rocks, hardpan chunks or otherwise unsuitable material over 3-inches in size.
- C. Thoroughly moisture condition and compact as described above.
- D. Prior to commencing construction of surface improvements, pass a test roller of size and weight as approved by the Owner over the subgrade to establish the extent of soft or spongy areas requiring repairs.
- E. Conform finished subgrade surface to the lines, grades and cross-sections shown on the plans.

3.07 FINE GRADING

- A. Fine grade all finished surfaces to the lines, grades and cross-sections shown on the plans, and to blend to hard surface improvements.
- B. Rake and smooth all finished surfaces not to receive hard surface improvements.
- C. Use suitable stockpiled or imported topsoil for the top 12-inches of areas to receive landscape improvements.
- D. Import topsoil meeting the requirements of Division 31 Specification Section SOIL MATERIALS, as required to complete finish grading.
- E. Topsoil may not be used in areas requiring Engineered Fill.

3.08 TOLERANCES

- A. Top surface of Subgrade for Non-Vegetative Surface Improvements or Layers thereof: Plus or minus 0.02 foot from planned elevation.
- B. Top surface of Subgrade for Vegetative Surface Improvements or for Bare Ground - Plus or minus 0.05 foot of planned elevation, or as required for finish surface to match adjacent improvements or ground.

3.09 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of GENERAL CONDITIONS and/or DIVISION 1, GENERAL REQUIREMENTS.
- B. Compaction testing will be performed in accordance with ANSI/ASTM D1557.

- C. If tests indicate work does not meet specified requirements, recompact, or remove and replace, and retest.
- D. All retesting required as a result of failure of initial test will be performed by Owner's testing agency, at the expense of the Contractor.

3.10 PROTECTION

- A. Protect graded areas from traffic, freezing, erosion, and all other sources of damage. Keep free of debris and trash.
- B. Repair and re-establish grades to specified tolerances where completed or partially completed work becomes eroded, rutted, settled, or where it is damaged by subsequent construction operations or weather.
- C. Where settlement occurs prior to acceptance of the work, remove and replace surface improvements, excavate, replace, and re-compact in accordance with these specifications, and restore the surface improvements.

3.11 CLEANING

- A. Remove all surplus or unsatisfactory soil material, trash, and debris, and legally dispose of off of the Owner's property.

END OF SECTION 31 20 00

SECTION 31 22 22
SOIL MATERIALS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY:

A. SECTION INCLUDES

- 1. Excavated (and re-used) materials and imported materials.

1.03 RELATED SECTIONS:

- A. Section 31 20 00 - Earthwork: Excavation, Filling and Grading.
- B. Section 31 23 33 - Trench Excavation and Backfill.

1.04 SUBMITTALS

- A. Samples: Submit, in air-tight containers, 10 lb. sample of Type S3, S4 and S5 fill to inspector.
- B. Soil Analysis: Submit for Type S3, S4 and S5 soils to be imported.
- C. Materials Source: Submit location of imported materials source. Provide materials from same source throughout the work. Change of source requires approval.
- D. For imported soil, obtain Geotechnical Engineer and District approval prior to importing.

PART 2 PRODUCTS

2.01 SOIL MATERIALS

- A. Soil Type S1: Excavated and reused material, graded; free of lumps larger than 3 inches, rocks larger than 2 inches, and debris.
- B. Soil Type S2: Excavated and reused material, graded; free of roots, lumps greater than one inch, rocks larger than 1/2 inch, debris, weeds and foreign matter.
- C. Soil Type S3: Imported topsoil, friable loam; reasonably free of roots, rocks larger than 1/2 inch, debris, weeds, and foreign matter.
- D. Soil Type S4: Imported borrow, suitable for purposes intended, meeting the following characteristics:
 - 1. Maximum Particle Size: 3"
 - 2. Percent Passing #4 Sieve: 65-100
 - 3. Percent Passing #200 Sieve: 20-45
 - 4. Expansion Index: <20
 - 5. Plasticity Index: <12
 - 6. R-Value (in paved areas): >50
 - 7. Low Corrosion Potential:
 - a. Soluble Sulfates: <1,500 mg/Kg
 - b. Soluble Chlorides: <300 mg/Kg
 - c. Soil Resistivity: >5,000 ohm-cm
- E. Soil Type S5: Imported sand. Natural river or bank sand (sand equivalent greater than 30), washed; free of silt, clay, loam, friable or soluble materials, and organic matter.

2.02 SOURCE QUALITY CONTROL

- A. Inspection of imported soil will be performed by the Geotechnical Engineer, at source of import and prior to being delivered to the site.

PART 3 EXECUTION

3.01 STOCKPILING

- A. Stockpile excavated or imported material onsite at location designated by project inspector.
- B. Stockpile excavated or imported material in sufficient quantities to meet project schedule and requirements.

3.02 STOCKPILE CLEANUP

- A. Remove stockpile, leave area in a clean and neat condition. Grade site surface to prevent free standing surface water.
- B. Dispose of excess material off-site.

END OF SECTION 31 22 22

SECTION 32 11 26
AGGREGATE BASE COURSE

P1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
- B. Provide all material, labor, equipment and services necessary to install aggregate base surfacing as indicated by the Contract Documents.

1.03 RELATED SECTIONS

- A. All Division 00 Specification Sections
- B. All Division 01 Specification Sections
- C. Section 31 20 00 – Earthwork: Excavation, Filling, and Grading.
- D. Section 31 23 33 – Trench Excavation and Backfill.
- E. Section 32 12 16 – Soil Sterilization.
- F. Section 32 12 17 – Asphalt Paving.
- G. Section 32 13 13 – Site Concrete Improvements.

1.04 REFERENCES

- A. SSCDOT - Standard Specifications, Department of Transportation, State of California (Caltrans), latest edition, except for references to method of payment, and references to any state furnished materials

1.05 QUALITY ASSURANCE

- A. Provide and install in accordance with SSCDOT.

1.06 SUBMITTALS

- A. Submit data sheets from supplier to document compliance with SSCDOT requirements.
- B. Certificates of compliance for material.
- C. Load tags for delivered material.

1.07 COORDINATION

- A. Coordinate with other work, including subgrade preparation and soil sterilization.
- B. Coordinate installation schedule with Owner's use of the premises and with other contractors working at the site.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Aggregate Base: Unless specified otherwise on Plans, Class 2, 3/4 Inch Maximum per Section 26 of SSCDOT.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify quantities required.
- B. Verify that subgrade has been placed and compacted per Contract Documents
- C. Verify gradients and elevations of subgrade are correct.

3.02 INSTALLATION OF AGGREGATE BASE COURSE

- A. Install in conformance with SSCDOT Section 26, Aggregate Bases.

- B. Thickness - As shown on construction drawings.
- C. Spreading and Compacting - In accordance with Section 26, SSCDOT. Base course shall be moisture conditioned to within 2% of optimum moisture, placed in uncompacted layers not exceeding six (6) inches in thickness, and compacted as specified, based on ASTM Test Method D1557. The relative compaction of each layer of compacted base material shall be not less than 95 percent.
- D. The completed surface shall be thoroughly compacted, free from ruts, depressions, and irregularities, true to grade and cross-section.
- E. Lines and grades for the installation of aggregate base shall be set by a California licensed Land Surveyor or Civil Engineer, at Contractor's expense.

3.03 TOLERANCES

- A. Compacted thickness of aggregate base: Not less than the thickness specified on the Plans.
- B. Finished Surface: Within 0.02 foot of planned grade per Section 26, SSCDOT. No more than 50% of the finish surface shall be above or below the specified grade for aggregate base.

3.04 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed by the Owner's inspector, under provisions of Division 01.

3.05 PROTECTION

- A. Immediately after placement and compaction, protect surface from mechanical injury.
- B. Protect completed surface until surfacing layers are in place.

END OF SECTION 32 11 26

SECTION 32 12 16
SOIL STERILIZATION

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to the work specified in this section.

1.02 SECTION INCLUDES

- A. Furnish and install soil sterilant under all asphalt paving.

1.03 RELATED SECTIONS

- A. Section 31 20 00 - Earthwork: Excavation, Filling, and Grading
- B. Section 31 23 33 - Trench Excavation and Backfill
- C. Section 32 11 26 – Aggregate Base Course
- D. Section 32 12 17 – Asphalt Paving
- E. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specifications sections, apply to the work of this section.

1.04 STANDARDS

- A. In accordance with the following:
- B. CCR-T21 California Code of Regulations, Title 21 Public Works.
- C. California Building Code, California Code of Regulations,
 - 1. Title 24, Part 2, CCR-T24.
- D. United States Department of Agriculture.
- E. Environmental Protection Agency.
- F. City of Clovis
 - 1. All applicable Environmental Regulations and Standards.

1.05 QUALITY ASSURANCE

- A. Provide licensed operator to apply soil sterilant.
- B. All products shall comply with the current EPA laws at time of application. Should the products listed become unavailable because of changes in the law, submit substitute products for review by the Owner.

1.06 SUBMITTALS

- A. Submit in accordance with Specification Section SUBMITTAL PROCEDURES.
- B. Certificates of application.
- C. Certificates of compliance for material.

1.07 COORDINATION

- A. Coordinate with other work, including subgrade preparation.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Soil Sterilant: Bayer Oust XP, weed and grass preventer, or approved equal.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that site is ready for application.

3.02 PREPARATION

- A. Identify installation locations.
- B. Employ equipment and methods appropriate to the work site.

3.03 APPLICATION

- A. Thoroughly water soak surface to be treated. Avoid excessive water runoff.
- B. Apply sterilant solution over surface to receive pavement or surfacing prior to the start of pavement or surfacing installation.
- C. Apply in spray form, at rate as allowable by State of California and the manufacturer's recommended application rate.
- D. Take all precautions to limit soil sterilant solution to areas immediately under proposed pavement or surfacing. Use shields as necessary, and do not apply under windy conditions.

END OF SECTION 32 12 16

SECTION 32 12 17
ASPHALT PAVING

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Provide all material, labor, equipment and services necessary to completely install all pavement materials, accessories and other related items as required by the Contract Documents.

1.03 RELATED SECTIONS:

- A. All Division 00 Specification Sections
- B. All Division 01 Specification Sections
- C. Section 31 22 00 - Earthwork: Excavation, Filling, and Grading
- D. Section 31 23 33 - Trench Excavation and Backfill
- E. Section 32 11 26 - Aggregate Base Course.
- F. Section 32 12 16 - Soil Sterilization.

1.04 REFERENCES

- A. SSCDOT - Standard Specifications, Department of Transportation, State of California (Caltrans), latest edition, except for references to method of payment, and references to any state furnished materials.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with SSCDOT.
- B. Mixing Plant: Conform to SSCDOT.
- C. Installation Criteria: Asphalt concrete shall show no evidence of cracking, uneven settlement, improper drainage, or untoward junctions with adjoining or existing surfaces. Work displaying such conditions shall be corrected under the Contractor's guarantee of all work.

1.06 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Mix design
- C. Certificates of compliance for material.
- D. Load tags for delivered material.

1.07 COORDINATION

- A. Coordinate with other work, including subgrade preparation, aggregate base placement and soil sterilization.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Do not place asphalt-concrete when atmosphere temperature is less than 50 degrees F, or surface is wet or frozen.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Paint Binder: In accordance with SSCDOT Section 94, Asphaltic Emulsions.
- B. Asphalt-Concrete: Type A in accordance with Section 39, SSCDOT, ½ inch or ¾ inch maximum aggregate (medium) as indicated on the Plans. The asphaltic concrete shall be compacted to an

average relative compaction of 97 percent, with no single test value being below a relative compaction of 95 percent based on a 50 blow Marshall maximum density. Use asphalt binder performance grade PG 64-10.

- C. Seal Coat: Asphalt based seal coat shall be "Ace Seal" as manufactured by Asphalt Coatings Engineering, Wasco, California, or approved equivalent

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify quantities required. New asphalt-concrete paving is required at all locations shown on the plans, and where existing asphalt-concrete paving to remain is removed or damaged by the Project excavation or related work.
- B. Verify that subgrade or base material has been compacted to required relative compaction and is dry.
- C. Verify gradients and elevations of base are correct.
- D. Verify that subgrade or base material has been sterilized per Section 32 12 16 SOIL STERILIZATION.

3.02 AGGREGATE BASE

- A. Where shown on the construction plans, place and compact aggregate base course per Section 32 11 26 AGGREGATE BASE COURSE.
- B. Where shown on the construction plans, place asphalt on compacted earth subgrade per Section 31 20 00 EARTHWORK: EXCAVATION, FILLING AND GRADING and Section 31 23 00 TRENCH EXCAVATION AND BACKFILL.
- C. A soil sterilant shall be applied over the entire area which is to be paved in accordance with Section 31 12 16 SOIL STERILIZATION

3.03 PREPARATION – PAINT BINDER

- A. Apply paint binder to existing asphalt-concrete or concrete surfaces which will be in contact with asphalt-concrete surfacing.
- B. Rate of application for all surfaces against which asphalt concrete is to be placed shall be no less than 0.02 and no more than 0.05 gallons per square yard. All vertical concrete surfaces which will be in contact with asphalt concrete surfacing and all areas now in place which will be covered with new surfacing materials and feathering operations shall be coated with a paint binder applied at the rate of 0.05 gallons per square yard.

3.04 INSTALLATION OF ASPHALTIC-CONCRETE

- A. Install in conformance with SSCDOT Section 39, Asphalt-Concrete.
- B. Thickness - As shown on construction plans. Where thickness exceeds 3 inches, place in no less than 2 layers with top layer no thicker than one inch. Asphaltic concrete shall be laid to the thickness designated on the Plans. The plan thickness is to be considered as a minimum thickness. The Contractor shall lay the asphaltic concrete to a depth required to ensure that, after compaction, the in place compacted thickness is equal to or greater than the specified plan thickness.
- C. The Contractor shall provide to the Engineer the truck delivery weight tags for the asphaltic concrete material. The quantity delivered shall be equal to or greater than the calculated in place quantity based on the specified thickness and area to be paved as designated on the construction plans and based on a unit density of the asphaltic concrete of 141 pounds per cubic feet.
- D. Asphalt type: PG 64-10
- E. Compaction Equipment - In accordance with Section 39, SSCDOT. At small difficult areas, equipment may be altered as approved by Engineer.
- F. The completed surface shall be thoroughly compacted, free from ruts, depressions, and irregularities and to be true to grade and cross-section.

3.05 TOLERANCES –GENERAL

- A. Finished Surface: within 0.02 foot of planned grade.
- B. Flatness: Maximum variation of 1/4 inch measured with 10-foot straight edge.
- C. Scheduled Compacted Thickness: Not less than specified.

3.06 INSTALLATION OF SEAL COAT

- A. Immediately prior to applying the sealer, the surface shall be cleaned of all loose material which might adversely affect bonding of the sealer. Any standard cleaning method such as power sweep-ers and blowers may be employed. In areas where gasoline, grease, oil spots, or chemical stains have been in contact with pavement, "Poly Oil Sil" or approved equal emulsion primer shall be applied to the pavement surface per manufacturer recommendations prior to placing seal coat. In locations where the pavement has been softened by contact with oils, fuels, or other substances, remove and replace pavement as directed by the Engineer.
- B. Where cracks in pre-existing pavement exceed 1/2 inch in depth or 1/4 inch in width, or both, shall be thoroughly cleaned and repaired with Type A, No. 4 maximum asphalt concrete before placing the sealer. All cracks between 1/8" and 1/4" in width shall be filled with "Flex Crax", as manufactured by Asphalt Coatings Engineering, of Wasco CA, or approved equivalent, in accordance with the manufacturer's recommendations.
- C. Whether or not specifically indicated on the plans, all loose or raveling pavement, potholes and badly distorted or depressed areas, except those lying within areas designated for pavement removal and replacement, shall be properly cleaned and repaired by applying a binder coat and Type A, 3/4-inch maximum asphalt concrete patch conforming to the requirements of Section 39, SSCDOT, before placing the seal coat. Any vegetation such as, a soil sterilant per Section 32 12 16 SOIL STERILIZATION shall be applied to the area and any required pavement patching shall then be completed.
- D. Except as otherwise indicated on the Plans, asphalt-based seal coat shall not be applied to new asphalt concrete pavement. Unless otherwise authorized by the Engineer, asphalt-based seal coat shall not be applied to new asphalt concrete pavement until a minimum of twenty-one (21) calendar days have elapsed since pavement placement.
- E. The new seal coat shall fully cover the appearance of old pavement marking and striping. Otherwise, additional coats of seal coat shall be applied to the surface until the old pavement marking and striping is no longer visible.
- F. Two coats of asphalt-based seal coat shall be applied. The first coat shall have added to it a silica sand mineral filler which has passed a 50-mesh screen. Apply at a rate of 2 to 3 pounds per 1 gallon of concentrated sealer. When the first coat is dry enough to walk on without picking the material up, a second coat shall be applied without mineral filler. If the manufacturer indicates that the product may be diluted, it may be diluted with no more than 20 percent by volume clean fresh water with the prior approval of the Engineer. The total application rate shall be as follows:
 - 1. Seal Coat (for new pavement) - a minimum of 20 gallons of undiluted product per 1,000 square feet, as directed by the Engineer.
 - 2. Seal Coat (for existing pavement) - 35 to 40 gallons of undiluted product per 1,000 square feet, as directed by the Engineer.
- G. Protect sealed surface until it is cured.

3.07 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Division 01.
- B. Pavement shall comply with the following:
 - 1. Water shall not be able to accumulate at any point and the surface shall be free to drain to drainage inlets or gutters.

2. The paving contractor shall water flood the surface with the use of a water truck. If, after 30 minutes on a 70 degree F day, "bird baths" are evident in a depth more than 0.01 foot, the paving contractor and the Owner's representative will determine the best method of correction.
 3. A 10 foot straightedge shall be used to check for high spots and ridges. High spots and ridges out of compliance shall be reduced by a remedy determined by the paving contractor and the Owner's representative.
- C. Should a section of the work be not acceptable on the basis of inadequate compaction and/or the mixture becomes loose and broken, mixed with dirt, out of tolerance, or in any other way defective, it shall be repaired or removed and replaced with fresh mixture and immediately compacted to conform to the surrounding area to the satisfaction of the Owner.

3.08 PROTECTION

- A. Immediately after placement, protect pavement from mechanical injury.
- B. Protect sealed surface until it is cured.

END OF SECTION 32 12 17

SECTION 32 13 13
SITE CONCRETE IMPROVEMENTS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section includes the following:
 - 1. All material, labor, equipment and services necessary to completely install exterior Portland cement flatwork, cast-in-place concrete, and architectural flatwork concrete, accessories and other related items, slabs, ramps and sidewalks and walkways, curb and gutter, mowstrips, and other miscellaneous concrete items of the form and dimensions shown on the plans and necessary to complete the project, and in accordance with the requirements of the Standard Specifications as modified and supplemented by these Special Provisions
 - 2. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specifications sections, apply to the work of this section.
- B. RELATED SECTIONS:
 - 1. Section 31 20 00 - Earthwork: Excavation, Filling, and Grading
 - 2. Section 32 11 26 - Aggregate Base Course.
 - 3. Section 32 13 15 - Concrete Reinforcement

1.03 REFERENCES

- A. SSCDOT - Standard Specifications, Department of Transportation, State of California (Caltrans), latest edition, except for references to method of payment, and references to any state furnished materials.
- B. ACI standards, including but not limited to #304, 305, 306, 308, 309 and 347.
- C. ASTM standards, including but not limited to #C-33, C-39, C-94, C-136, C-143, C-150, and C-309.

1.04 SUBMITTALS

- A. Submit under provisions of Specification Section SUBMITTALS.
 - 1. Certificates of compliance for materials and mix designs.
 - 2. Load tags for delivered material.
 - 3. Strength testing as required by the approving agency.
 - 4. Application instructions for the architectural finish materials.
 - 5. Accessories and manufacturer's installation specifications.

1.05 QUALITY ASSURANCE

- A. Furnish concrete materials conforming with SSCDOT.
- B. Perform work in accordance with SSCDOT, unless noted otherwise herein.

PART 2 PRODUCTS

2.01 MIXES

- A. Mix Design and Proportions in accordance with SSCDOT:
 - 1. Mix designs with Fly Ash content no greater than 15 percent of the total weight of cementitious materials shall be proportioned by SSCDOT.
 - 2. Provide a maximum of 4 percent air entrainment, unless noted otherwise.
 - 3. Owners Testing laboratory shall review all mix designs before submittal.

4. All concrete shall have the following minimum compressive strengths in accordance with ACI 318 and SSCDOT at 28 days and shall be proportioned within the following limits:
 - a. Site Concrete: Use for exterior concrete slabs on grade including, but not limited to sidewalks, curbs, gutters, mow strips, utility appurtenances and miscellaneous site improvements.
 - 1) Strength: 3,000 psi at 28 days
 - 2) Maximum Aggregate Size: 1-inch
 - 3) Cement Type: Type I/III/IV/V
 - 4) Cement Content: 5.5 sacks/yd minimum
 - 5) Max Water/Cement Ratio: Per SSCDOT
 - 6) Admixture Per SSCDOT
 - b. Structures & Vehicular Concrete Paving: Use for site structures, foundations, and exterior slabs on grade subject to vehicle traffic.
 - 1) Strength: 4,000 psi at 28 days
 - 2) Maximum Aggregate Size: 1-inch
 - 3) Cement Type: Type I/III/IV/V
 - 4) Cement Content: 6.5 sacks/yd minimum
 - 5) Max Water/Cement Ratio: Per SSCDOT
 - 6) Admixture: Per SSCDOT
 - c. Slurry Backfill: Use for backfill of over-excavated trenches, encasement of all penetration, and site utility piping.
 - 1) Maximum Aggregate Size: 3/8-inch
 - 2) Cement Type: Type I/III/IV/V
 - 3) Cement Content: 2.0 sacks/yd minimum

EXECUTION

3.01 PREPARATION

- A. Subgrade shall conform to the requirements of Division 31 Specification Section EARTHWORK: EXCAVATION, FILLING AND GRADING. The District may elect to verify compacted subgrade elevations by measurement made from adjacent existing improvements or by a template supported by forms.

3.02 GENERAL CONCRETE

- A. Concrete placement shall conform to the applicable requirements of Standard Specification Sections 51 and 90. Concrete shall not be placed when the air temperature in the shade at the project site exceeds 95° F or is below 45° F, or when the temperature of the concrete exceeds 85° F.
- B. After the concrete has been placed, it shall be struck off to proper section and compacted with a grid of parallel metal bars until a layer of mortar not less than 3/8 inch thick has been brought to the surface. All exposed concrete surfaces shall receive a medium broom finish applied transversely to the line of pedestrian traffic or to the longest dimension of the concrete, as applicable.
- C. General concrete surfaces shall be cured by the curing compound method and shall be protected in accordance with the provisions of Subsections 90-1 and 90-2 of the Standard Specifications.

3.03 PROTECTION OF CONCRETE

- A. The Contractor shall be responsible for the condition of all concrete work until such time as all work has been completed and is accepted by the District. The Contractor shall limit vehicular travel across concrete until such time as the concrete has achieved strength sufficient that it can

support traffic without damage. In no case, however, will vehicles be allowed to travel across new concrete improvements until seven calendar days have passed since the concrete was placed.

3.04 CONCRETE JOINTS

- A. Expansion joints and weakened plane joints shall be constructed at the locations shown on the plans or as directed by the Engineer. Where joint locations are not specified on the plans, expansion joints shall be constructed at maximum intervals of 30 feet, and weakened plane joints shall be constructed at maximum intervals of 10 feet.
- B. Expansion joints shall be considered as weakened plane joints for the purpose of spacing weakened plane joints. Expansion joints shall be tooled with a 1/4 inch maximum radius edger, and shall be filled with 3/8 inch pre-formed expansion joint filler.

3.05 CONCRETE FINISHES

- A. Where concrete is being installed adjacent to or near existing concrete improvements, match the finish of similar concrete surfaces (i.e. new sidewalks shall match existing sidewalks, new curbs shall match existing curbs, etc.).
- B. Sidewalks and Mowstrips: Medium sweat finish or medium broom finish perpendicular to the direction of travel.
- C. Curbs: Trowel smooth and finish with a light brush.
- D. Gutters: Medium broom finish parallel with curb or direction of flow.
- E. Drive approaches and wheelchair ramps: medium broom finish, perpendicular to the direction of travel.

3.06 INSTALLATION OF ACCESSORIES

- A. Strictly comply with manufacturer's instructions and recommendations and approved details. Securely anchor work to substrate.

3.07 REPAIR AND CLEAN-UP

- A. Contractor shall legally remove all trash, debris, containers and excess materials from the site on a periodic basis, and shall keep the work broom clean until Owner's acceptance.
- B. The Contractor shall be held responsible for the repair and/or replacement of new or existing improvements damaged as a result of this work to the satisfaction of the Owner.
- C. The Contractor shall provide roll-off bins for wash-out of ready mix concrete trucks and pumper. Do not allow concrete debris or cement water onto soils scheduled for landscape planting.

END OF SECTION 32 13 13

SECTION 32 13 15
CONCRETE REINFORCEMENT

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY:

- A. This Section includes the following:
 - 1. Deformed reinforcing bars for site concrete improvements.
- B. RELATED SECTIONS
 - 1. Section 32 13 13 - Site Concrete Improvements.

1.03 SUBMITTALS

- A. Submit in accordance with Specification Section SUBMITTALS and the Contract General Conditions.
 - 1. Mill test certificates identifying chemical and physical analysis of each load of reinforcing steel delivered. If mill test reports are not available and the quantity of steel for a structure exceeds 5 tons, provide a laboratory test to prove yield strength and bending.
 - 2. Drawings and placing diagrams for each grade slab including dowels and corner bars.
 - 3. On the placing diagrams, show all openings for pipelines and architectural features. Include additional reinforcing at openings and corner bar arrangements at intersecting beams, walls, and footings.
 - 4. Coordinate placing diagrams with the concrete placing schedule.

1.04 PRODUCT DELIVERY

- A. Deliver reinforcement to project site in bundles marked with tags indicating bar size and length.
- B. Store on wooden supports above ground surface.

PART 2 PRODUCTS

2.01 BARS

- A. Bars shall be deformed billet steel conforming to ASTM A 615, Grade 60. Mixing of steel grades will not be allowed.

2.02 BAR SUPPORTS

- A. Bar support shall be concrete or metal chairs, spacers or hangers. Reinforcing bars shall not be supported by forms.

2.03 TIE WIRE

- A. Tie wire shall be annealed steel wire of not less than 16-gauge.

PART 3 EXECUTION

3.01 PLACEMENT

- A. Position reinforcement in accordance with the drawings, secure with wire ties or suitable clips at all intersections, and support by an adequate number of concrete or metal chairs, spacers, or metal hangers such that reinforcing bars do not sag more than one quarter of an inch (1/4") between supports. Do not place reinforcement or supports in contact with the forms. Bend tie wires away from the forms in order to provide the specified concrete coverage. To secure reinforcement in position, the Contractor may elect to locate bars additional to those shown on the drawings, but at no additional cost to the Owner.
- B. Set reinforcing dowels and anchor bolts in place prior to placing concrete. Do not press them into the concrete after the concrete has been placed.

3.02 SPLICES

- A. Splice bars only at locations shown on the drawings. Where splices are not detailed, lap bars 72 bar diameters.

3.03 CLEANING

- A. Remove dirt, form oil, excessive rust, cement coating from previous pours, and foreign matter that will reduce bond with concrete.

3.04 PROTECTION DURING CONCRETING

- A. Keep reinforcing steel in proper position during concrete placement.

END OF SECTION 32 13 15

SECTION 32 17 13
PARKING LOT FURNITURE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Furnish and install signs, posts and concrete wheelstops

1.02 RELATED SECTIONS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specifications sections, apply to the work of this section.
- B. Section 32 12 17 – Asphalt Paving
- C. Section 32 13 13 – Site Concrete Improvements.

1.03 REFERENCES

- A. SSCDOT Standard Specifications, California Department of Transportation (Caltrans), latest edition, except for references to methods of payment.
- B. CBC – California Building Code, latest edition.

1.04 COORDINATION

- A. Coordinate work with Owner's personnel.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Signs: As per detail drawing.
- B. ADA Accessible Signs: As per detail drawing.
- C. Sign Posts: 2 inch diameter galvanized iron pipe, A 120, Schedule 40, unless otherwise shown on drawing.
- D. Concrete for Sign Footings: Specification Section - SITE CONCRETE IMPROVEMENTS
- E. Wheelstop: 3 or 4 feet long pre-cast concrete per detail drawing.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing and proposed site conditions.

3.02 PREPARATION

- A. Identify installation locations.
- B. Locate, identify, and protect existing above and below grade utilities from damage.
- C. Employ equipment and methods appropriate to the work site.

3.03 INSTALLATION

- A. Install all sign posts straight and plumb in concrete footings as shown on plans.
- B. Secure all signs to posts with vandal resistant galvanized hardware furnished by the Contractor.
- C. Orient direction of all signs as indicated on the plans.
- D. Install concrete wheelstops at locations shown on drawings. Anchor each wheelstop with two deformed reinforcing bars driven into the asphalt concrete pavement per detail drawing.

3.04 FIELD QUALITY CONTROL

- A. Field inspection will be performed under Division 01.

END OF SECTION 32 17 13

SECTION 32 17 23
PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES:

- A. Furnishing and installing paint parking stall, traffic marking and wording on asphalt concrete surfaces.
- B. Furnishing and installing disabled marking and hatching area on asphalt concrete pavement.

1.02 RELATED SECTIONS:

- A. Section 32 12 17 – Asphalt Paving.
- B. Section 32 13 13 – Site Concrete Improvements.
- C. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specifications sections, apply to the work of this section.

1.03 REFERENCES

- A. SSCDOT Standard Specifications, California Department of Transportation (Caltrans), latest edition, except for references to methods of payment and to furnishing of materials by State.

1.04 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Certificates of compliance for materials.

1.05 COORDINATION

- A. Coordinate work with other work, including associated traffic signing.
- B. Commence striping or marking of asphalt concrete no sooner than 7 days following any sealing of the asphalt concrete.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Paint: Quick drying, high visibility water soluble acrylic striping paint; Stripe Master, Wikel Mfg. Company, or similar by Sherwin Williams, J.E. Bauer, or PPG, or approved equal.
- B. Paint shall be of color indicated on the construction plans.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that site is ready for application.

3.02 PREPARATION

- A. Identify installation locations. Place parking stall striping, traffic marking, wording, international symbol of accessibility and access striping at locations, as shown on construction plans.
- B. Thoroughly clean all surfaces to be painted.
- C. Employ equipment and methods appropriate to the work site.
- D. Provide vehicular and traffic controls per Division 01.

3.03 INSTALLATION

- A. Apply paint striping and marking as indicated on the plans.
- B. Apply paint uniformly, straight and true, with equipment designed for traffic striping and marking applications.
- C. Apply paint striping and marking per Section 84 of SSCDOT, except supply paint conforming to 2.01 A. of this specification.

- D. Apply a minimum of 2 separate coats of paint at all striping and marking locations, including asphalt concrete and concrete surfaces.
- E. Paint international symbol of accessibility at the location as shown on the plans.
- F. Paint accessible access area striping at the location as shown on the plans.

3.04 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Division 01.

END OF SECTION 32 17 23