DOCUMENT 00 91 01

ADDENDUM NO. 01
Dated October 28, 2025

1. GENERAL

This document includes requirements that clarify or supersede portions of the bid and/or contract requirements for the project. This Addendum is a Contract Document.

2. SUMMARY

The following changes, additions, and deletions shall be made to the following document(s) as noted in **RED**; all other conditions shall remain the same.

Changes to Document 00 01 15 Drawings and Tables

1. Replace Document 00 01 15 Drawings and Tables in its entirety with the attached.

Changes to Informal Bid Packet – CUPCCAA Agreement

3. Work shall be completed within ~~**Fourteen (14)**~~ **Seventeen (17)** consecutive calendar days ("Contract Time") from the date specified in the District's Notice to Proceed.

It is understood and agreed that the Work shall be performed and completed as required in the Contract Documents (as defined herein) including, without limitation, the Drawings and Specifications and submission of all documents required to secure funding or by the Division of the State Architect ("DSA") for close-out of the Project, under the direction and supervision of, and subject to the approval of, the District or its authorized representative.

Changes to Informal Bid Packet – CUPCCAA Exhibit "A" (Scope of Work)

1. Replace Informal Bid Packet – CUPCCAA Exhibit "A" (Scope of Work) in its entirety with the attached.

Changes to Drawings:

1. Add Structural Sketch, DOWEL IN DETAIL, dated 10-25-2025.

Changes to Specifications:

1. Add Specification Section 31 10 00 Site Clearing.
2. Add Specification Section 31 20 00 Earthmoving.
3. Add Specification Section 31 23 33 Trench Backfilling.
4. Add Specification Section 32 12 16 Asphalt Paving.
5. Add Specification Section 32 13 12 Concrete Paving.

END OF DOCUMENT

DOCUMENT 00 01 15

LIST OF DRAWINGS AND TABLES

LIST OF DRAWINGS:

A1.0 SITE PLAN

A1.1 SITE PLAN ENLARGED

C1.0 DEMOLITION PLAN

C2.0 GRADING & PAVING PLAN

C3.0 CIVIL DETAILS

STRUCTURAL SKETCH – DOWEL IN DETAIL, DATED 10-25-2025

LIST OF TECHNICAL SPECIFICATIONS:

31 10 00 SITE CLEARING

31 20 00 EARTHMOVING

31 23 33 TRENCHING BACKFILLING

32 12 16 ASPHALT PAVING

32 13 12 CONCRETE PAVING

END OF DOCUMENT

EXHIBIT "A"

(SCOPE OF WORK)

The work of this contract consists of the following:

Contractor to remove existing AC paving and concrete by Building G, per the limits identified in the Civil Drawings. Contractor to review the General Notes and Demolition Legend for details. Contractor shall locate and confirm all underground utilities within the project site prior to demolition to avoid damage and interruption to any utility services.

Contractor to grade, compact, and install new hardscape as described in the Contract Document. It is essential for the Contractor to follow all the grading requirements as noted in the Civil Drawings, so the new hardscape will provide an acceptable route for the Path of Travel for accessibility. Grades and slope will be inspected and verified by a District representative for acceptance. *Should Contractor's work failed to comply with the Contract Document, the Contractor is responsible to revise and correct the deficiency at no additional cost and time to the District.*

Contractor to reference the Contract Documents for detailed scope of work. See below for the list of drawings and technical specifications. *Existing underground utilities are shown on Sheet C2.0 GRADING & PAVING PLAN, Contractors are responsible for protecting all existing utilities in place. Contractor shall repair all known utilities that were damaged during construction at no additional cost and time to the District.*

Contractor should note that the square footage and linear dimensions provided in the Architectural sheets are for reference only, Contractor is responsible to perform their own takeoff to provide an accurate price for the bid.

Contractor is required to provide physical separation between the work area and the rest of the campus for the safety of the students and staff.

Contractor is responsible for reviewing all the Notes, General Notes and Legends identified in all the drawings prior to start of construction.

Project duration is listed as 17 consecutive calendar days, which includes 3 days of weather days. Construction shall take place between Monday 12/15/2025 and Sunday 01/04/2026, ***where Construction must finish by Sunday 01/04/2026****.*

END OF DOCUMENT

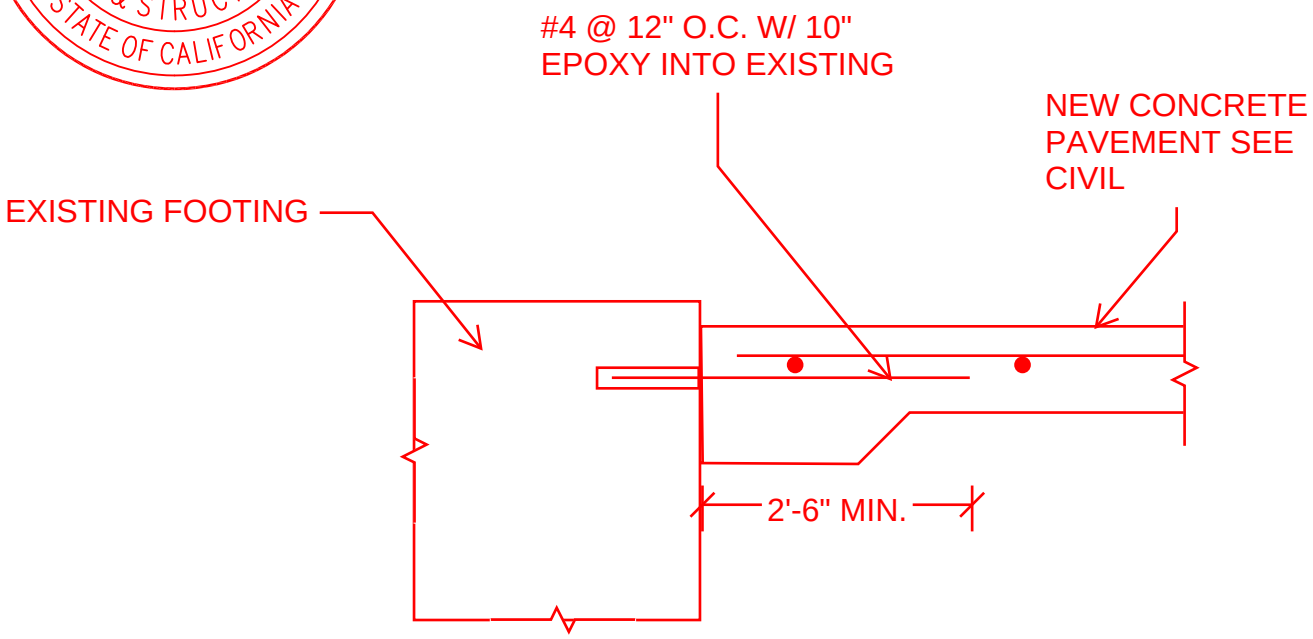
T&S STRUCTURAL

1171 Homestead Road
Suite 275
Santa Clara, CA 95050

Phone: (408) 615-9200
Fax: (408) 615-9900

Date: 10-21-25
Subject: DOWEL IN DETAIL
Address: 230 Pala Ave.,
San Jose, CA95127
Job No: 22-0110

REGISTERED PROFESSIONAL ENGINEER
STEVEN P. DUQUETTE
S 3019
EXP. 3-31-2027
CIVIL & STRUCTURAL
STATE OF CALIFORNIA



NOTES:
1- SPECIAL INSPECTION REQUIRED FOR EPOXY.
2- HILTI HIT RE-500 SHOULD BE USED FOR EPOXY. (EQUIVALENT SIMPSON IS ALSO ACCEPTABLE)
3- SEE CIVIL FOR INFO NOT SHOWN.

Addendum No. 01
Dated October 28, 2025

SECTION 311000

SITE CLEARING

Addendum No. 01
Dated October 28, 2025

PART 1 – GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Protecting existing trees and vegetation to remain.
2. Removing trees and other vegetation.
3. Clearing and grubbing.
4. Topsoil stripping.
5. Removing above-grade site improvements.
6. Disconnecting, capping or sealing, and abandoning site utilities in place.
7. Disconnecting, capping or sealing, and removing site utilities.

B. Related Sections include the following:

1. Division 1 Section "Field Engineering" for verifying utility locations and for recording field measurements.
2. Division 1 Section "Construction Facilities and Temporary Controls" for temporary utilities, temporary construction and support facilities, temporary security and protection facilities, and environmental protection measures during site operations.
3. Division 2 Section "Building Demolition" for demolition of buildings, structures, and site improvements.
4. Division 2 Section "Selective Demolition" for partial demolition of buildings or structures undergoing alterations.
5. Division 2 Section "Tree Protection and Trimming" for protecting trees remaining on-site that are affected by site operations.
6. Division 2 Section "Earthwork" for soil materials, excavating, backfilling, and site grading.
7. Division 2 Section "Landscaping" for finish grading, including placing and preparing topsoil for lawns and planting.

Addendum No. 01
Dated October 28, 2025

1.2 DEFINITIONS

A. Topsoil: Natural or cultivated surface-soil layer containing organic matter and sand, silt, and clay particles; friable, pervious, and black or a darker shade of brown, gray, or red than underlying subsoil; reasonably free of subsoil, clay lumps, gravel, and other objects more than 2 inches (50 mm) in diameter; and free of weeds, roots, and other deleterious materials.

1.3 MATERIALS OWNERSHIP

A. Except for materials indicated to be stockpiled or to remain Owner's property, cleared materials shall become Contractor's property and shall be removed from the site.

1.4 SUBMITTALS

A. Photographs or videotape, sufficiently detailed, of existing conditions of trees and plantings, adjoining construction, and site improvements that might be misconstrued as damage caused by site clearing.

B. Record drawings according to Division 1 Section "Contract Closeout."

1. Identify and accurately locate capped utilities and other subsurface structural, electrical, and mechanical conditions.

1.6 QUALITY ASSURANCE

A. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."

1.7 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining roads, streets, walks, and other adjacent occupied or used facilities during site-clearing operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from Owner and authorities having jurisdiction.

2. Provide alternate routes around closed or obstructed traffic ways if required by authorities having jurisdiction.

B. Improvements on Adjoining Property: Authority for performing indicated removal and alteration work on property adjoining Owner's property will be obtained by Owner before award of Contract.

C. Salvable Improvements: Carefully remove items indicated to be salvaged and store on Owner's premises where indicated.

D. Notify utility locator service for area where Project is located before site clearing.

PART 2 - EXECUTION

2.1 PREPARATION

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Locate and clearly flag trees and vegetation to remain or to be relocated.

C. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Owner.

2.2 TREE PROTECTION

A. Erect and maintain a temporary fence around drip line of individual trees or around perimeter drip line of groups of trees to remain. Remove fence when construction is complete.

1. Do not store construction materials, debris, or excavated material within drip line of remaining trees.

2. Do not permit vehicles, equipment, or foot traffic within drip line of remaining trees.

B. Do not excavate within drip line of trees, unless otherwise indicated.

C. Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks, comb soil to expose roots, and cleanly cut roots as close to excavation as possible.

1. Cover exposed roots with burlap and water regularly.

2. Temporarily support and protect roots from damage until they are permanent-ly relocated and covered with soil.

3. Coat cut faces of roots more than 1-1/2 inches (38 mm) in diameter with an emulsified asphalt or other approved coating formulated for use on damaged plant tissues.

4. Cover exposed roots with wet burlap to prevent roots from drying out. Backfill with soil as soon as possible.

D. Repair or replace trees and vegetation indicated to remain that are damaged by construction operations, in a manner approved by Architect.

1. Employ a qualified arborist, licensed in jurisdiction where Project is located, to submit details of proposed repairs and to repair damage to trees and shrubs.

2. Replace trees that cannot be repaired and restored to full-growth status, as determined by the qualified arborist.

2.3 UTILITIES

A. Owner will arrange for disconnecting and sealing indicated utilities that serve existing structures before site clearing when requested by Contractor.

1. Verify that utilities have been disconnected and capped before proceeding with site clearing.

B. Locate, identify, disconnect, and seal or cap off utilities indicated to be removed.

1. Owner will arrange to shut off indicated utilities when requested by Contractor.

2. Arrange to shut off indicated utilities with utility companies.

C. Existing Utilities: 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:

1. Notify Architect not less than two days in advance of proposed utility interruptions.

2. Do not proceed with utility interruptions without Architect's written permission.

D. Excavate for and remove underground utilities indicated to be removed.

E. Removal of underground utilities is included in Division 15 mechanical or Division 16 electrical Sections.

2.4 CLEARING AND GRUBBING

A. Remove obstructions, trees, shrubs, grass, and other vegetation to permit installation of new construction. Removal includes digging out stumps and obstructions and grubbing roots.

1. Do not remove trees, shrubs, and other vegetation indicated to remain or to be relocated.

2. Cut minor roots and branches of trees indicated to remain in a clean and careful manner where such roots and branches obstruct installation of new construction.

3. Completely remove stumps, roots, obstructions, and debris extending to a depth of 18 inches (450 mm) below exposed subgrade.

4. Use only hand methods for grubbing within drip line of remaining trees.

B. Fill depressions caused by clearing and grubbing operations with satisfactory soil material, unless further excavation or earthwork is indicated.

1. Place fill material in horizontal layers not exceeding 8-inch (200-mm) loose depth, and compact each layer to a density equal to adjacent original ground.

2.5 TOPSOIL STRIPPING

A. Remove sod and grass before stripping topsoil.

B. Strip topsoil to whatever depths are encountered in a manner to prevent intermingling with underlying subsoil or other waste materials.

1. Strip surface soil of unsuitable topsoil, including trash, debris, weeds, roots, and other waste materials.

C. Stockpile topsoil materials away from edge of excavations without intermixing with subsoil. Grade and shape stockpiles to drain surface water. Cover to prevent wind-blown dust.

1. Limit height of topsoil stockpiles to 72 inches (1800 mm).

2. Do not stockpile topsoil within drip line of remaining trees.

3. Dispose of excess topsoil as specified for waste material disposal.

4. Stockpile surplus topsoil and allow for respreading deeper topsoil.

2.6 SITE IMPROVEMENTS

A. Remove existing above- and below-grade improvements as indicated and as necessary to facilitate new construction.

B. Remove slabs, paving, curbs, gutters, and aggregate base as indicated.

1. Unless existing full-depth joints coincide with line of demolition, neatly saw-cut length of existing pavement to remain before removing existing pavement. Saw-cut faces vertically.

2.7 DISPOSAL

A. Disposal: Remove surplus soil material, unsuitable topsoil, obstructions, demolished materials, and waste materials, including trash and debris, and legally dispose of them off Owner's property.

END OF SECTION

SECTION 312000

EARTHMOVING

Addendum No. 01
Dated October 28, 2025

PART 1 – GENERAL

1.1 SUMMARY

A. In accordance with pertinent provisions of this Section, excavate, backfill, compact, and grade the site to the elevations shown on the Drawings and as needed to meet the requirements of the construction shown in the Contract Documents.

1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

C. In addition to complying with requirements of governmental agencies having jurisdiction, comply with the directions of the soils engineer.

1.3 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of General Conditions.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Fill and backfill materials:

1. Provide soil materials free from organic matter and deleterious substances, containing no rocks or lumps over 6” in greatest dimension, and with not more than 15% of the rocks or lumps larger than 2-3/8” in their greatest dimension.

2. Fill material is subject to the approval of the construction soil engineer, and is that material removed from excavations or imported from off-site borrow areas, predominantly granular non-expansive soils, free from roots and other deleterious matter.

3. Do not permit rocks having a dimension greater than 1” in the upper 12” of fill or embankment.

4. Cohesionless material used for structural backfill:

   a. Provide sand free from organic material and other foreign matter, and as approved by the construction soil engineer.

2.2 WEED KILLER

A. Provide a dry, free-flowing, dust-free chemical compound, soluble in water, capable of inhibiting growth of vegetation, and approved for use on this Work by governmental agencies having jurisdiction.

2.3 TOPSOIL

A. Where and if shown on the Drawings or otherwise required, provide topsoil consisting of friable, fertile soil of loamy character, containing an amount of organic matter normal to the region, capable of sustaining healthy plant life, and reasonably free from subsoils, roots, heavy or stiff clay, stones larger than 2” in greatest dimension, noxious weeds, sticks, brush, litter, and other deleterious matter.

B. Obtain topsoil from sources within the project limits, or provide imported topsoil obtained from sources outside the project limits, or from both sources.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 CLEARING, GRUBBING, AND PREPARING AREAS TO BE FILLED

A. All vegetable matter, trees, root systems, shrubs, debris, and organic topsoil shall be removed from all structural areas and areas to receive fill to a minimum depth of 4”.

3.3 PROCEDURES

A. Utilities:

1. Unless shown to be removed, protect active utility lines shown on the Drawings or otherwise made known to the Contractor prior to excavating. If damaged, repair or replace at no additional cost to the Owner.

2. If active utility lines are encountered, and are not shown on the Drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.

3. If service is interrupted as a result of work under this Section, immediately restore service by repairing the damaged utility at no additional cost to the Owner.

4. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Architect and secure his instructions.

5. Do not proceed with permanent relocation of utilities until written instructions are received from the Architect.

B. Protection of persons and property:

1. Barricade open holes and depressions occurring as part of this Work, and post warning lights on property adjacent to or with public access.

2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.

C. De-watering:

1. Remove all water, including rainwater, encountered during trench and substructure work to an approved location by pumps, drains, and other approved methods.

2. Keep excavations and site construction area free from water.

D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

E. Maintain access to adjacent areas at all times.

3.4 EXCAVATING

A. Perform excavating of every type of material encountered within the limits of the Work to the lines, grades, and elevations indicated and specified herein.

B. Satisfactory excavated materials:

1. Transport to, and place in, fill or embankment areas within the limits of the Work.

C. Unsatisfactory excavated materials:

1. Excavate to a distance below grade as directed by the construction soil engineer, and replace with satisfactory materials.

2. Include excavation of unsatisfactory materials, and replacement by satisfactory materials, as parts of the work of this Section.

D. Surplus materials:

1. Dispose of unsatisfactory excavated materials, and surplus satisfactory excavated material, away from the site at disposal areas arranged and paid for by the Contractor.

E. Excavation of rock:

1. Where rocks, boulders, granite, or similar material is encountered, and where such material cannot be removed or excavated by conventional earth moving or ripping equipment, take required steps to proceed with the general EARTH MOVING operations of the Work, and remove or excavate such material by means which will neither cause additional cost to the Owner nor endanger buildings or structures whether on or off the site.

F. Excavate and backfill in a manner and sequence that will provide proper drainage at all times.

G. Ditches and gutters:

1. Cut accurately to the cross sections, grades, and elevations shown.
2. Maintain excavations free from detrimental quantities of leaves, sticks, trash, and other debris until completion of the Work.
3. Dispose of excavated materials as shown on the Drawings or directed by the construction soil engineer; except do not, in any case, deposit materials less than 3’-0” from the edge of a ditch.

H. Unauthorized excavation:

1. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific instruction from the Architect or the construction soil engineer.
2. Under footings, foundations, or retaining walls:
   a. Fill unauthorized excavation by extending the indicated bottom elevation of the footing or base to the excavation bottom, without altering the required top elevation.
   b. When acceptable to the construction soil engineer, lean concrete fill may be used to bring bottom elevations to proper position.
3. Elsewhere, backfill and compact unauthorized excavations as specified for authorized excavations, unless otherwise directed by the construction soil engineer.

I. Stability of excavations:

1. Slope sides of excavation to 1:1 or flatter, unless otherwise directed by the construction soil engineer.

2. Shore and brace where sloping is not possible because of space restrictions or stability of the materials being excavated.

3. Maintain sides and slopes of excavations in a safe condition until completion of backfilling.

J. Shoring and bracing:

1. Provide materials for shoring and bracing as may be necessary for safety or personnel, protection of work, and compliance with requirements of governmental agencies having jurisdiction.

2. Maintain shoring and bracing in excavations regardless of the time period excavations will be open.

3. Carry shoring and bracing down as excavation progresses.

3.5 FILLING AND BACKFILLING

A. Backfill excavations as promptly as progress of the Work permits, but not until:

1. Acceptance of construction below finish grade.

2. Inspecting, testing, approving, and recording locations of underground utilities.

3. Concrete formwork is removed.

4. Shoring and bracing are removed, and voids have been backfilled with satisfactory materials.

5. Trash and debris have been removed.

6. Horizontal bracing is in place on horizontally supported walls.

B. Ground surface preparation:

1. See soils report for over excavation and re-compaction requirements.

2. Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from the ground surface prior to placement of fills.

3. Plow, strip, or break up surfaces steeper than one vertical to four horizontal, so that fill material will bond with existing surface.

4. When existing ground surface has a density less than that specified under “compacting” for the particular area, break up the ground surface, pulverize, moisture condition to the optimum moisture content, and compact to required depth and percentage of maximum density.

5. At exposed soils in areas to be paved or to support slab-on-grade, scarify to a minimum depth of 6”, and re-compact at a moisture content that will permit proper compaction as specified for fill.

C. Placing and compacting:

1. Place backfill and fill materials in layers not more than 8” in loose depth.

2. Before compacting, moisten or aerate each layer as necessary to provide the optimum moisture content.

3. Compact each layer to required percentage of maximum density for the area.

4. Do not place backfill or fill material on surfaces that are muddy, frozen, or containing frost or ice.

5. Place backfill and fill materials evenly adjacent to structures, to required elevations.

6. Take care to prevent wedging action of backfill against structures by carrying the material uniformly around the structures to approximately the same elevation in each lift.

3.6 EARTH MOVING

A. General:

1. Uniformly grade the areas within limits of EARTH MOVING under this Section, including adjacent transition areas.

2. Smooth the finished surfaces within specified tolerance.

3. Compact with uniform levels or slopes between points where elevations are shown on the Drawings, or between such points and existing grades.

4. Where a change of slope is indicated on the Drawings, construct a rolled transition section having a minimum radius of approximately 8’-0”, unless adjacent construction will not permit such a transition, or if such a transition defeats positive control of drainage.

B. EARTH MOVING outside building lines:

1. Grade areas adjacent to buildings to achieve drainage away from the structures, and to prevent ponding.

2. Finish the surfaces to be free from irregular surface changes, and:

   a. Shape the surface of areas scheduled to be under walks to line, grade, and cross-section, with finished surface not more than 0.10 feet above or below the required subgrade elevation.

   b. Shape the surface of areas scheduled to be under pavement to line, grade, and cross-section, with finished surface not more than 0.05 feet above or below the required subgrade elevation.

3.7 COMPACTING

A. Control soil compaction during construction to provide the minimum percentage of density specified for each area as determined according to ASTM D1557. See soils report.

B. Provide not less than the following maximum density of soil material compacted at optimum moisture content for the actual density of each layer of soil material in place, and as approved by the construction soil engineer: See soils report.

1. Structures:

   a. Compact the top 8” of subgrade and each layer of fill material or backfill material at 90% of maximum density.

2. Lawn and unpaved areas:

   a. Compact the top 8” of subgrade and each layer of fill material or backfill material at 90% of maximum density;

   b. Compact the upper 12” of filled areas, or natural soils exposed by excavating, at 85% of maximum density.

3. Walks:

   a. Compact the top 6” subgrade and each layer of fill material or backfill material at 90% of maximum density.

4. Pavements and slabs-on-grade:

   a. Compact the top 6” of subgrade and each layer of fill material or backfill material at 95% of maximum density.

C. Moisture control:

1. Where subgrade or layer of soil material must be moisture-conditioned before compacting, uniformly apply water to surface of subgrade or layer of soil material to prevent free water appearing on surface during or subsequent to compacting operations.

2. Remove and replace, or scarify and air dry, soil material that is too wet to permit compacting to the specified density.

3. Soil material that has been removed because it is too wet to permit compacting may be stockpiled or spread and allowed to dry. Assist drying by discing, harrowing, or pulverizing until moisture content is reduced to a satisfactory value as determined by moisture density relation tests approved by the construction soil engineer.

3.8 FIELD QUALITY CONTROL

A. Secure the construction soil engineer's inspection and approval of subgrades and fill layers before subsequent construction is permitted thereon.

3.9 MAINTENANCE

A. Protection of newly graded areas:

1. Protect newly graded areas from traffic and erosion, and keep free from trash and weeds;

2. Repair and re-establish grades in settled, eroded, and rutted areas to the specified tolerances.

B. Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify the surface, reshape, and compact to the required density prior to further construction.

END OF SECTION

SECTION 312333

TRENCHING & BACKFILLING

Addendum No. 01
Dated October 28, 2025

PART 1 - GENERAL

1.1 RELATED WORK

A. Division 31: Grading.

1.2 SUMMARY

A. Trench, backfill, and compact as specified herein and as needed for installation of underground utilities associated with the Work.

1.3 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Use equipment adequate in size, capacity, and numbers to accomplish the work in a timely manner.

C. In addition to complying with requirements of governmental agencies having jurisdiction, comply with the directions of the construction soil engineer.

PART 2 - PRODUCTS

2.1 SOIL MATERIALS

A. Fill and backfill materials:

1. Provide soil materials free from organic matter and deleterious substances, containing no rocks or lumps over 3" in greatest dimension, and with not more than 10% of the rocks or lumps larger than 1" in their greatest dimension.
2. Fill material is subject to the approval of the construction soil engineer, and is that material removed from excavations or imported from off-site borrow areas, predominantly granular, non- expansive soil free from roots and other deleterious matter.
3. Imported fill material shall, in addition, have 10 to 40% by weight passing the #200 sieve, a plasticity index of less than 15, and a liquid limit of less than 30%.

2.2 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

Addendum No. 01
Dated October 28, 2025

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 FINISH ELEVATIONS AND LINES

A. Comply with documents.

3.3 PROCEDURES

A. Utilities:

1. Unless shown to be removed, protect active utility lines shown on the Drawings or otherwise made known to the Contractor prior to trenching. If damaged, repair or replace at no additional cost to the Owner.

2. If active utility lines are encountered, and are not shown on the Drawings or otherwise made known to the Contractor, promptly take necessary steps to assure that service is not interrupted.

3. If service is interrupted as a result of work under this Section, immediately restore service by repairing the damaged utility at no additional cost to the Owner.

4. If existing utilities are found to interfere with the permanent facilities being constructed under this Section, immediately notify the Architect and secure his instructions.

5. Do not proceed with permanent relocation of utilities until written instructions are received from the Architect.

B. Protection of persons and property:

1. Barricade open holes and depressions occurring as part of the Work, and post warning lights on property adjacent to or with public access.

2. Operate warning lights during hours from dusk to dawn each day and as otherwise required.

3. Protect structures, utilities, sidewalks, pavements, and other facilities from damage caused by settlement, lateral movement, washout, and other hazards created by operations under this Section.

C. De-watering:

1. Remove all water, including rainwater; encountered during trench and sub-structure work to an approved location by pumps, drains, and other approved methods.

2. Keep trenches and site construction area free from water. Addendum No. 01 Dated October 28, 2025

D. Use means necessary to prevent dust becoming a nuisance to the public, to neighbors, and to other work being performed on or near the site.

E. Maintain access to adjacent areas at all times.

3.4 TRENCHING

A. Provide sheeting and shoring necessary for protection of the Work and for the safety of personnel.

1. Prior to backfilling, remove all sheeting.

2. Do not permit sheeting to remain in the trenches except when, in the opinion of the Architect, field conditions or the type of sheeting or methods of construction such as use of concrete bedding are such as to make removal of sheeting impracticable. In such cases, the Architect may permit portions of sheeting to be cut off and remain in the trench.

B. Open cut:

1. Excavate for utilities by open cut.

2. If conditions at the site prevent such open cut, and if approved by the Architect, trenching may be used.

3. Short sections of a trench may be tunneled if, in the opinion of the Architect, the conductor can be installed safely and backfill can be compacted properly into such tunnel.

4. Where it becomes necessary to excavate beyond the limits of normal excavation lines in order to remove boulders or other interfering objects, backfill the voids remaining after removal of the objects as directed by the construction soil engineer.

5. When the void is below the subgrade for the utility bedding, use approved earth materials and compact to the relative density directed by the construction soil engineer, but in no case to a relative density less than 90%.

6. When the void is in the side of the utility trench or open cut, use approved earth or sand compacted as approved by the construction soil engineer, but in no case to a relative density less than 85%.

7. Remove boulders and other interfering objects, and backfill voids left by such removals, at no additional cost to the Owner.

8. Excavating for appurtenances:

a. Excavate for manholes and similar structures to a distance sufficient to leave at least 12" clear between outer surfaces and the embankment or shoring that may be used to hold and protect the banks.

b. Overdepth excavation beyond such appurtenances that has not been directed will be considered unauthorized. Fill with sand, gravel, or lean concrete as directed by the construction soil engineer, and at no additional cost to the Owner.

C. Trench to the minimum width necessary for proper installation of the utility, with sides as nearly vertical as possible. Accurately grade the bottom to provide uniform bearing for the utility.

D. Depressions:

1. Dig bell holes and depressions for joints after the trench has been graded. Provide uniform bearing for the pipe on prepared bottom of the trench.

2. Except where rock is encountered, do not excavate below the depth indicated or specified.

3. Where rock is encountered, excavate rock to a minimum overdepth of 4" below the trench depth indicated or specified.

E. Where utility runs traverse public property or are subject to governmental or utility company jurisdiction, provide depth, bedding, over, and other requirements as set forth by legally constituted authority having jurisdiction, but in no case less than the depth shown in the Contract Documents.

F. Where trenching occurs in existing lawns, remove turf in sections and keep damp. Replace turf upon completion of the backfilling.

G. Cover:

1. Provide minimum trench depth indicated below to maintain a minimum cover over the top of the installed item below the finish grade or subgrade:

a. Areas subject to vehicular traffic:
(1) Sanitary sewers: 24";
(2) Storm drains: 24".

b. Areas not subject to vehicular traffic:
(1) Sanitary sewers: 18";
(2) Storm drains: 18".

c. All areas:
(1) Water lines: 18";
(2) Natural gas lines: 18";
(3) Electrical cables: 24";
(4) Electrical ducts: 18".

d. Concrete encased:
(1) Pipe sleeves for water and gas lines: 18";
(2) Sanitary sewers and storm drains: 12";
(3) Electrical ducts: 18".

2. Where utilities are under a concrete structure slab or pavement, the minimum depth need only be sufficient to completely encase the conduit or pipe sleeve, and electrical long-radius rigid metal conduit riser, provided it will not interfere with the structural integrity of the slab or pavement.

3. Where the minimum cover is not provided, encase the pipes in concrete as indicated. Provide concrete with a minimum 28-day compressive strength of 2500 psi.

3.5 BEDDING

A. Provide bedding as indicated on the Drawings.

3.6 BACKFILLING

A. General:

1. Do not completely backfill trenches until required pressure and leakage tests have been performed, and until the utilities systems as installed conform to the requirements specified in the pertinent Sections of these Specifications.

2. Except as otherwise specified or directed for special conditions, backfill trenches to the ground surface with selected material approved by the construction soil engineer.

3. Reopen trenches that have been improperly backfilled, to a depth as required for proper compaction. Refill and compact as specified, or otherwise correct to the approval of the construction soil engineer.

4. Do not allow or cause any of the Work performed or installed to be covered up or enclosed by work of this Section prior to required inspections, tests, and approvals.

5. Should any of the Work be so enclosed or covered up before it has been approved, uncover all such Work and, after approvals have been made, refill and compact as specified, all at no additional cost to the Owner.

B. Lower portion of trench:

1. Deposit approved backfill and bedding material in layers of 6" maximum thickness, and compact with suitable tampers to 90% relative density (85% in landscape areas), until there is a cover of not less than 24" over sewers and 12" over other utility lines.

2. Take special care in backfilling and bedding operations to not damage pipe and pipe coatings.

C. Remainder of trench:

1. Except for special materials for pavements, backfill the remainder of the trench with approved backfill.

2. Deposit backfill material in layers not exceeding the thickness specified, and compact each layer to the minimum density indicated by the construction soil engineer.

D. Adjacent to buildings: Mechanically compact backfill within ten feet of buildings.

E. Consolidation of backfill by jetting with water may be permitted, when specifically approved by the construction soil engineer, in areas other than building and pavement areas.

3.7 TEST FOR DISPLACEMENT OF SEWERS AND STORM DRAINS

A. Check sewers and storm drains to determine whether displacement has occurred after the trench has been backfilled to above the pipe and has been compacted as specified.

B. Flash a light between manholes or, if the manholes have not yet been constructed, between the locations of the manholes, by means of a flashlight or by reflecting sunlight with a mirror.

C. If the illuminated interior of the pipeline shows poor alignment, displaced pipes, or any other defects, correct the defects to the specified conditions and at no additional cost to the Owner.

3.8 PIPE JACKING

A. The Contractor may, at his option, install steel pipe casings, tongue-and-groove reinforced concrete pipes, and steel pipes under existing roads or pavements by jacking into place using procedures approved by the governmental agencies having jurisdiction and approved by the construction soil engineer.

3.9 TUNNELING OPERATIONS

A. The Contractor may, at his option, tunnel pipes into position using procedures approved by the construction soil engineer and the governmental agencies having jurisdiction.

3.10 FIELD QUALITY CONTROL

A. The construction soil engineer will inspect open cuts and trenches before installation of utilities, and will make the following tests:

1. Assure that trenches are not backfilled until all tests have been completed;

2. Check backfilling for proper layer thickness and compaction;

3. Verify that test results conform to the specified requirements, and that sufficient tests are performed;

4. Assure that defective work is removed and properly replaced.

END OF SECTION

SECTION 321216

ASPHALT PAVING

Addendum No. 01
Dated October 28, 2025

PART 1 - GENERAL

1.01 SUMMARY

A. Provide asphaltic concrete paving where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.02 SUBMITTALS

A. Comply with pertinent provisions of these Sections.

B. Product data: Within 30 calendar days after the Contractor has received the Notice to Proceed, submit:
1. Materials list of items proposed to be provided under this Section;
2. Certificates, signed by the materials producer and the asphalt-paving subcontractor, stating that materials meet or exceed the specified requirements.

1.03 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Comply with pertinent provisions of these Sections.

PART 2 - PRODUCTS

2.01 AGGREGATES

A. Provide aggregates consisting of crushed stone, gravel, sand, or other sound, durable, mineral materials processed and blended, and naturally combined.

B. Base rock shall conform to Caltrans Class 2 Aggregate Base.

C. Asphalt Concrete shall be Type A and shall conform to Section 39 of the Standard Specifications and these Special Provisions:

1. The viscosity grade of paving asphalt shall be AR-4000.
2. In no case shall the minimum asphalt content be below 5.3% of the dry aggregate weight.

3. All surface courses of asphalt concrete shall be 1/2” maximum aggregate, and a minimum of 5.8% asphalt.

2.02 WEED KILLER

A. Provide a dry, free-flowing, dust-free chemical compound containing not less than 30% sodium chlorate or a chlorateborate compound, non-flammable, not creating a fire hazard when applied in accordance with the manufacturer's recommendations, soluble in water, and capable of being spread dry or in solution.

B. Acceptable products:

1. "Clorax 40": Chipman Chemical Company, Inc., Palo Alto, California
2. "Monobar-Chlorate": U.S. Borax and Chemical Corp., Los Angeles, California

2.03 HEADERS AND STAKES

A. Provide Redwood, Construction grade, in dimensions shown on the Drawings or as required for the use where dimensions are not shown on the Drawings.

2.04 ASPHALTS

A. Asphalt Concrete shall be Type A and shall conform to Section 39 of the Standard Specifications and these Special Provisions:
1. The viscosity grade of paving asphalt shall be AR-4000.
2. In no case shall the minimum asphalt content be below 5.3% of the dry aggregate weight.
3. All surface courses of asphalt concrete shall be 1/2” maximum aggregate, and a minimum of 5.8% asphalt.

2.05 SLURRY COAT

A. Poly-Kote TA-1000 is a special blend of asphalt emulsion, mineral fillers, fiber, and polymer for use on parking lots, driveways, playgrounds, tennis courts, and other asphalt surfaces. Poly-Kote TA-1000 is formulated to fill voids, provide a smoother black surface, and protect asphalt surfaces from possible water damage. Contractor shall apply a slurry coat on new and existing AC pavement

PHYSICAL PROPERTIES (NO ASBESTOS OR COAL TAR)

Color (cured film).....Deep Black
Penetration of base asphalt.....40 pen. Max. ASTM D-5
Residue at 300-400 degrees f.....55-65 %
Cone Penetration at 77 degrees f.....400-750 dmm ASTM D-217
Density;lbs.per gallon at 60 degreesf.....10-11

B. TA-200 is a specially blended acrylic copolymer emulsion, designed to modify Poly-Kote TA 1000 asphalt base. TA-200 will increase toughness/flexibility, and enhance suspension of fillers. Its also improves color, oil/gas resistance, and will protect from “DAMAGING” ultra-violet rays; when added to POLY-KOTE TA 1000.

PHYSICAL PROPERTIES	Minimum	Maximum
LBS. Per Gallon @ 77 Degrees f	8.5	8.9
Specific Gravity @ 77 Degrees f	1.0	1.2
% Nonvolatile	49%	51%

2.06 MIXING ASPHALTIC CONCRETE MATERIALS

A. Provide hot plant mixed asphaltic concrete paving materials.
   1. Temperature leaving the plant: 290 degrees F minimum, 320 degrees F maximum.
   2. Temperature at time of placing: 280 degrees F minimum.

PART 3 - EXECUTION

3.01 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.02 FINAL PREPARATION OF SUBGRADES

A. After preparation of subgrade as specified in another Section of these Specifications, scarify and moisture condition the entire area to be paved to a depth of 8 inches, and then compact to a smooth, hard, even surface of 95% compaction to receive the aggregates.

B. Apply the specified week killer to the entire area to be paved. Adhere to the manufacturer's application recommendations.

3.03 PLACEMENT OF BASE COURSES

A. Sub-base (when required):
   1. Spread the specified sub-base material to a thickness providing the compacted thickness shown on the Drawings.
   2. Compact to 95%.

B. Base:
   1. Spread the specified base material to a thickness providing the compacted thickness shown on the Drawings. No single lift shall exceed 8" in loose thickness prior to compaction.
   2. Compact to 95% at near optimum moisture content.

C. Thickness tolerance: Provide the compacted thicknesses shown on the Drawings within a tolerance of minus 0.0" to plus 0.5".

D. Smoothness tolerance: Provide the lines and grades shown on the Drawings within a tolerance of 3/8" in ten feet.
1. Deviations: Correct by removing materials, replacing with new materials, and reworking or recompacting as required.

E. Moisture content: Use only the amount of moisture needed to achieve the specified compaction.

3.04 PLACEMENT OF ASPHALTIC CONCRETE PAVING

A. Install the specified headers and stakes to achieve the arrangement of paving shown on the Drawings.

B. Remove all loose materials from the compacted base.

C. Apply the specified prime coat and tack coat where required and allow to dry, in accordance with the manufacturer's recommendations as approved by the Engineer.

D. Adjust frames and covers, if so required, to meet final grades.

E. Receipt of asphaltic concrete materials:

1. Do not accept material unless it is covered with a tarpaulin until unloaded, and unless the material has a temperature of not less than 280 degrees F.

2. Do not commence placement of asphaltic concrete materials when the atmospheric temperature is below 50 degrees F, nor during fog, rain, or other unsuitable conditions.

F. Spreading:

1. Spread material in a manner that requires the least handling.

2. Where thickness of finished paving will be 3" or less, spread in one layer.

G. Rolling:

1. After the material has been spread to the proper depth, roll until the surface is hard, smooth, unyielding, and true to the thickness and elevations shown on the Drawings.

2. Roll in at least two directions until no roller marks are visible.

3. Finished paving smoothness tolerance:
a. Free from birdbaths.
b. No deviations greater than 1/8" in six feet.

3.05 FLOOD TEST

Addendum No. 01
Dated October 28, 2025

A. Prior to application of seal coat, perform a flood test in the presence of the Engineer.

B. Method:
1. Flood the entire asphaltic concrete paved area with water by use of a tank truck or hoses.

2. If a depression is found where water ponds to a depth of more than 1/8" in six feet, feather and smooth the edges of fill so that the joint between fill and original surface is invisible and retest. Continue until ponding is eliminated.

3.06 APPLICATION OF SLURRY COAT

A. Prepare the surfaces, mix the seal coat material, and apply in accordance with the manufacturer's recommendations as approved by the Engineer.

B. Apply slurry coat as specified above, 2.05.

C. Achieve a finished surface of slurry coat which, when dry and thoroughly set, is smooth, tough, resilient, of uniform black color, and free from coarse textured areas, lap marks, ridges, and other surface irregularities.

3.07 PROTECTION

A. Protect the asphaltic concrete paved areas from traffic until the sealer is set and cured and does not pick up under foot or wheeled traffic.

END OF SECTION

SECTION 321312

CONCRETE PAVING

Addendum No. 01
Dated October 28, 2025

PART 1 - GENERAL

1.1 SUMMARY

A. Provide Portland cement concrete paving where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.2 QUALITY ASSURANCE

A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

B. Do not commence placement of concrete until mix designs have been reviewed and approved by the Architect and all governmental agencies having jurisdiction, and until copies of the approved mix designs are at the job site and the batch plant.

C. Provide access for, and cooperate with, the inspector and testing laboratory described in General Requirements.

PART 2 - PRODUCTS

2.1 FORMS

A. Provide wood or metal formwork, including adequate bracing, to the lines and grades shown on the Drawings within a vertical tolerance of 0.05 feet and an alignment tolerance of 1" at any point.

B. Earth forms will not be permitted for paving.

2.2 REINFORCEMENT

A. Comply with the following as minimums:

1. Bars: ASTM A615, grade 60, unless otherwise shown on the Drawings, using deformed bars for number 3 and larger.
2. Welded wire fabric: ASTM A185
3. Bending: ACI 318.

B. Fabricate reinforcement to the required shapes and dimensions, with fabrication tolerances complying with the CRSI "Manual of Standard Practices."

C. Do not use reinforcement having any of the following defects:

1. Bar lengths, depths, or bends exceeding the specified fabricating tolerances;

2. Bends or kinks not indicated on the Drawings or required for the Work;

3. Bars with cross-section reduced due to excessive rust or other causes.

2.3 CONCRETE

A. Comply with the following as minimums:

1. Portland cement: ASTM C150, type I or II, low alkali.

2. Aggregate, general:

a. ASTM C30, uniformly graded and clean;

b. Do not use aggregate known to cause excessive shrinkage.

3. Aggregate, coarse: Crushed rock or washed gravel with maximum size between 3/4" and 1-1/2", and with minimum size number 4.

4. Aggregate, fine: Natural washed sand of hard and durable particles varying from fine to particles passing a 3/8" screen, of which at least 12% shall pass a 50-mesh screen.

5. Water: Clean and potable.

B. Use only such additives as are recommended in the mix design and approved by the Architect and governmental agencies having jurisdiction.

C. Unless specified otherwise on the drawings, all concrete shall be not less than 3,000 psi 28-day compressive strength.

D. Provide "Hunt TLF" curing agent manufactured by Hunt Process Co., Inc., at the manufacturer's recommended rate of application.

2.4 OTHER MATERIALS

A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 SURFACE CONDITIONS

A. Examine the areas and conditions under which work of this Section will be performed. Correct conditions detrimental to timely and proper completion of the Work. Do not proceed until unsatisfactory conditions are corrected.

3.2 FINAL PREPARATION OF SUBGRADES

A. After preparation of subgrade as specified in another Section of these Specifications, thoroughly scarify and sprinkle the entire area to be paved, and then compact to a smooth, hard, even surface of 95% compaction to receive the aggregates.

3.3 PLACEMENT OF BASE COURSE

A. Base (where required):

1. Spread the specified coarse aggregate to a thickness providing the compacted thickness shown on the Drawings. No single lift shall exceed 8" in loose thickness prior to compaction.

2. Compact to 95% at near optimum moisture content.

B. Thickness tolerance: Provide the compacted thicknesses shown on the Drawings within a tolerance of minus 0.0" to plus 0.5".

C. Smoothness tolerance: Provide the lines and grades shown on the Drawings within a tolerance of 0.05 feet vertically and 1" in alignment at any point.

D. Correct deviations by removing materials, replacing with new materials, and reworking or recompacting as required.

E. Use only the amount of moisture needed to achieve the specified compaction.

3.4 INSTALLATION

A. Upon completion of base course and formwork, install reinforcement as shown on the Drawings.

1. Clean reinforcement to remove loose rust and mill scale, earth, and other materials that reduce bond or destroy bond with concrete.

2. Position, support, and secure reinforcement against displacement by formwork, construction, and concrete placement operations.

3. Place reinforcement to obtain the required coverages for concrete protection.

B. Transit mix the concrete in accordance with provisions of ASTM C94.

1. With each load, provide ticket certifying to the materials and quantities and to compliance with the approved mix design.

2. On the transit-mix ticket, state the time water was first added to the mix.

3. At the batch plant, withhold 2-1/2 gal of water per cu yd of concrete.

4. Upon arrival at the job site, and as directed by the testing laboratory inspector, add all or part of the withheld water before the concrete is discharged from the mixer.

5. Mix not less than five minutes after the withheld water has been added, and not less than one minute of that time immediately prior to discharge of the batch.

6. Unless otherwise directed, provide 15 minutes total mixing time per batch after first addition of water.

C. Do not use concrete that has stood over 30 minutes after leaving the mixer, or concrete that is not placed within 90 minutes after water is introduced into the mix.

D. Conveying:

1. Place concrete in accordance with the following and pertinent recommendations contained in ACI 304.

2. Deposit concrete continuously in layers of such thickness that no concrete will be placed on concrete which has hardened sufficiently to cause formation of seams or planes of weakness within the section.

3. If a section cannot be placed continuously, provide construction joints as specified herein.

4. Perform concrete placing at such a rate that concrete that is being integrated with fresh concrete is still plastic.

5. Deposit concrete as nearly as practicable in its final location so as to avoid segregation due to rehandling and flowing.

6. Do not subject concrete to any procedure that will cause segregation.

7. Do not use concrete which becomes non-plastic and unworkable, or does not meet required quality control limits, or has been contaminated by foreign materials.

8. Remove rejected concrete from the site.

E. Deposit and consolidate concrete in a continuous operation within the limits of construction joints until the placing of a panel or section is completed.

1. Bring surfaces to the correct level with a straightedge, and then strike off.

2. Use bullfloats or darbies to smooth the surface, leaving it free from bumps and hollows.

3. Do not sprinkle water on the plastic surface. Do not disturb the surfaces prior to start of finishing operations.

F. Expansion joints: Provide premolded joint filler for expansion joints abutting concrete curbs, catch basins, manholes, inlets, structures, walks and other fixed objects, unless otherwise indicated.

1. Extend joint fillers full-width and depth of joint, and not less than 1/2 inch or more than 1 inch below finished surface where joint sealer is indicated. If no joint sealer, place top of joint filler flush with finished concrete surface.

2. Furnish joint fillers in one-piece lengths for full width being placed, wherever possible. Where more than one length is required, lace or clip joint filler sections together.

3. Protect top edge of joint filler during concrete placement with a metal cap or other temporary material. Remove protection after concrete has been placed on both sides of joint.

G. Finishing:

1. Begin floating when the water sheen has disappeared and when the surface has stiffened sufficiently to permit the operation.

2. During or after the first floating, check the planeness of surface with a ten-foot straightedge applied at not less than two different angles.

3. Cut down high spots and fill low spots, and produce a surface level within 1/4" in two feet as determined by a two foot straightedge placed anywhere on the surface in any direction.

4. Refloat the surface immediately to a uniform sandy texture.

5. While the surface is still plastic, provide a textured finish by drawing a fiber bristle broom uniformly over the surface.

a. Unless otherwise directed by the Architect, provide the texturing in one direction only.

b. Provide medium broom finish at slopes less then 6% and heavy broom finish at slopes greater or equal then 6% as directed by the Architect.

3.5 INTEGRAL COLOR IN CONCRETE

A. Integral colored concrete to be used in locations shown on drawings.

B. Water-reducing, set-controlling admixture; Chromix Admixture, L.M. Scofield Co., Los Angeles, CA, or approved equal.

C. Integral color shall be added as recommended by manufacturer to produce accepted color.

D. Color as shown on drawings: To be selected from manufacturer's standard or custom colors, as accepted.

3.6 CURING AND PROTECTION

A. Beginning immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures and mechanical injury.

END OF SECTION