RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

ADDENDUM NO. #1

Bid #1475 Synthetic Football Field Project
at
Santa Ana College

Address: 1530 West 17th Street, Santa Ana, CA 92706

Project ID #3798, DSA #04-123937

May 9, 2025

Owner:
Rancho Santiago Community College District
2323 North Broadway, Room 112
Santa Ana, California 92706

RECEIPT OF THIS ADDENDUM MUST BE ACKNOWLEDGED ON BID FORM WHEN SUBMITTED

The following changes, additions, deletions or corrections shall become a part of the Contract Documents for the project named on the previous page and all other conditions shall remain the same. The Bidders shall be responsible for transmitting this information to all affected Subcontractors and Suppliers, prior to the closing of Bids. Prospective Bidders shall acknowledge receipt of all Addenda in the space provided on the Bid Proposal Form by the number (list every addenda). Failure to do so shall deem the Bid Proposal as non-responsive and subject the Bidder to disqualification.

Item No. AD 1-1 DSA Addendum #02

DSA Addendum #02 has been issued for the project. Please review attached application form and supporting narrative sheet for corresponding changes.

Item No. AD 1-2 Responses to Questions

The following provides a response to the Bidder's Request for Pre-Bid Information submitted on the Pre-Bid Clarification Form. See attached for a total of (16) RFI Response(s).

Item No. AD 1-3 Submittal of Bid Proposals Due Date Extension (revision in red)

Submittal of Bid Proposals. All Bid Proposals must be submitted on forms furnished by the District prior to **2:30 P.M.**, ~~**Thursday, May 15, 2025,**~~ **Tuesday, May 20, 2025**, the last time for submission of Bid Proposals. Submit Bids to RSCCD Facility Planning, Construction and District Support Services at 2323 North Broadway, Suite 112, Santa Ana, CA 92706. Bidders are solely responsible for timely submission of Bid Proposals to the District at the designated location. The District shall not be responsible for any delays or issues with mail delivery. Any bid received after the scheduled closing time for receipt of bids shall be returned to the bidder unopened. Bid Summary will be posted on the District's website (www.rsccd.edu then click on "Bid Opportunities")

Enclosure: DSA Addendum #02
(16) Pre-Bid Clarification Forms

This is the end of Addendum No.1

DSA **140**

APPLICATION FOR SUBMITTAL OF POST-APPROVAL DOCUMENT

This application is for submittal of documents, after the initial approval of the project (post-approval documents), that require Division of the State Architect (DSA) review and approval.This form shall be completed by the Design Professional in General Responsible Charge of the project, in accordance with California Code of Regulations, Title 24, Part 1, Sections 4-317, 4-323 and 4-338 and in compliance with DSA IR A-6: Construction Change Document Submittal and Approval Process.

DSA documents referenced within this form are available on the DSA Forms or DSA Publications webpages.

1. SUBMITTAL TYPE: (Is this a resubmittal? Yes ☐ No ☐)

Deferred Submittal ☐	Addendum Number: 02	Revision Number:	CCD Number: Category A ☐ or B ☐

2. PROJECT INFORMATION:

School District/Owner: Rancho Santiago Community College District	DSA File Number: 30 C2
Project Name/School: Santa Ana College Football Field Turf Replacement	DSA Application Number 04 123937

3. APPLICANT INFORMATION:

Date Submitted: 05/07/25	Attached Pages? No ☐ Yes ☑ Number of pages? 38		
Firm Name: PBK Architects	Contact Name: Jacob Schmautz		
Work Email: jacob.schmautz@pbk.com	Work Phone: (909) 987-0909		
Firm Address: 8163 Rochester Ave	City: Rancho Cucamonga	State: CA	Zip Code: 91730

4. REASON FOR SUBMITTAL: (Check applicable boxes)

☑ For revision or addendum prior to construction.

☐ For a project currently under construction.

☐ For a project that has a form *DSA 301-N: Notification of Requirement for Certification*, *DSA 301-P: Posted Notification of Requirement for Certification* or a 90-Day Letter issued.

☐ To obtain DSA approval of an existing uncertified building or buildings.

☐ For Category B CCD this is: ☐ a voluntary submittal, ☐ a DSA required submittal (attach DSA notice requiring submission).

5. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE:

Name of the Design Professional In General Responsible Charge: Bruce Ou

Professional License Number: C-34832 Discipline: Architecture

Design Professional in General Responsible Charge Statement: The attached post-approval documents have been examined by me for design intent and appear to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications. They are acceptable for incorporation into the construction of the project.

Signature: _____

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE

6. CONFIRMATION, DESCRIPTION AND LISTING OF DOCUMENTS:

For addenda, revisions, or CCDs: CHECK THIS BOX ☑ to confirm that *all* post-approval documents have been stamped and signed by the Responsible Design Professional listed on form *DSA 1: Application for Approval of Plans and Specifications* for this project. (For *Deferred Submittals*, refer to *IR A-18: Use of Construction Documents Prepared by Other Professionals,* and *IR A-19: Design Professional's Signature and Seal (Stamp) on Construction Documents*, when applicable, for signature and seal requirements.)

Provide a brief description of construction scope for this post-approval document (attach additional sheets if needed):

Revised technical specifications, added pedestrian gate and details.

List of DSA-approved drawings affected by this post-approval document:

A1.2, A1.3, and 2.1

DSA USE ONLY

SSS_____ Date_____ ☐Approved ☐Disapproved ☐Not Required

Comments:_____

FLS_____ Date_____ ☐Approved ☐Disapproved ☐Not Required

Comments:_____

ACS_____ Date_____ ☐Approved ☐Disapproved ☐Not Required

Comments:_____

Returned	DSA STAMP
Date:	
By:	

DSA Addendum No 002 Narrative

May 8, 2025

Santa Ana College Football Field Turf Replacement

Rancho Santiago Community College District

Prepared by: PBK
8363 Rochester Ave
Rancho Cucamonga, CA 91730

PBK Project No.: 240117
DSA A#: A# 04-123937
DSA File No.: 30-C2

Notice to Bidders:

A. Receipt of this addendum shall be acknowledged on the bid form.

B. This addendum forms part of the contract documents for the above-referenced project and shall be incorporated integrally therewith.

C. Each bidder shall make necessary adjustments and submit his bid with full knowledge of all modifications, clarifications, and supplemental data included therein. Where provisions of the following supplemental data differ from those of the original contract documents, this addendum shall govern.

SPECIFICATIONS

Item No. 01: Section 09 90 00

A. Revise Part 1 General, item 1.2 SUMMARY OF PAINTED SUBSTRATES to read as follows:

"1.2 SUMMARY OF PAINTED SUBSTRATES

A. Section includes the application of paint systems on the following exterior substrates:

1. Scoreboard steel structure and truss"

Item No. 02: Section 10 21 20 Solid Color Reinforced Composite Toilet Compartment

A. Add this section in its entirety with the version included herein.

Item No. 03: Section 11 66 43 Dynamic Video-Scoreboard Display

A. Add this section in its entirety with the version included herein.

Item No. 04: Section 31 23 26 Base Course

A. Replace this section in its entirety with the version included herein.

Item No. 05: Section 32 01 17 Asphalt Pavement Repair

A. Add this section in its entirety.

Item No. 06: Section 32 13 13 Site Concrete

A. Replace this section in its entirety with the version included herein.

Item No. 07: Section 33 40 00 Storm Drainage Utilities

A. Replace this section in its entirety with the version included herein.

DRAWINGS

Item No. 08: Sheet A1.2 Enlarged Site Plan

A. Added keynote 0212 to legend

B. Added keynote 0112 to legend

C. Added keynote 0113 to legend

D. Added keynote 0212 to gate at southwest corner of track

E. Path of travel adjusted to new gate to ensure smooth transition

Item No. 09: Sheet A1.3 Existing Accessible Restrooms

A. Revised detail 17 to clarify the items included in the scope of this project and the items that are existing to remain. Items not within scope are half-toned for clarity

Item No. 10: Sheet A2.1 Site Details

A. Added details 11, 12, 14, 15, and 16 for added pedestrian gate.

PRE-BID RFI RESPONSES

Item No. 09: See District Issued Pre-Bid Clarification forms for pre-bid RFI responses.

PBK ARCHITECTS

By _____
Bruce Ou, Architect

END OF ADDENDUM NO. 02

SECTION 10 21 20

SOLID COLOR REINFORCED COMPOSITE TOILET COMPARTMENT

1. PART 1 GENERAL

1.1 SECTION INCLUDES

A. Solid color reinforced composite toilet partitions and sight screens, floor mounted, headrail braced.

B. Urinal screens, wall mounted.

C. Hardware.

D. Attachments screws and bolts.

1.2 REFERENCES

A. 2010 Americans with Disabilities Act (ADA) Standards for Accessible Design.

B. CBC - California Building Code, (CCR) - California Code of Regulations, Title 24, Part 2, California State Accessibility Standards.

C. ASTM A167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

D. ASTM E84 - Test Method of Surface Burning Characteristics of Building Materials.

E. D2197 - Standard Test Method for Adhesion of Organic Coatings by Scrape Adhesion.

F. D2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).

G. D6578 - Standard Practice for Determination of Graffiti Resistance.

1.3 PERFORMANCE REQUIREMENTS

A. Graffiti Resistance: Five staining agents cleaned off in accordance with ASTM D6578.

B. Scratch Resistance: Maximum load value shall exceed 10 kilograms in accordance with ASTM D2197.

C. Impact Resistance: Maximum impact force value shall exceed 30 inch-lbs in accordance with ASTM D2794.

1.4 SUBMITTALS

A. Submit product data under provisions of Section 01 33 00.

B. Submit product data for components, hardware, and accessories.

C. Submit samples under provisions of Section 01 33 00.

D. Submit three samples 4 x 4 inch in size cut from actual panel construction, illustrating panel pattern.

E. Provide a sample of each type of hardware.

F. Submit manufacturer's installation instructions under provisions of Section 01 33 00.

1.5 REGULATORY REQUIREMENTS

A. Conform to CBC - California Building Code, (CCR) California Code of Regulations, Title 24, Part 2, and the 2010 ADA Standards for Accessible Design for accessibility requirements.

B. Conform to Class B flame spread rating of 26-75 and smoke developed ratings of 0/450 for panel materials when tested in accordance with ASTM E84.

1.6 COORDINATION

A. Coordinate work under provisions of Section 01 31 00.

B. Coordinate work with support framing, anchors, and blocking.

C. Coordinate work with placement of plumbing fixtures and floor drains.

D. Coordinate work with placement of electrical fixtures and equipment.

E. Coordinate work with toilet accessories.

1.7 WARRANTY

A. Provide 10-year warranty under provisions of Section 01 77 00.

B. Warranty to provide for replacement of solid color reinforced composite panels, doors and stiles for breakage, corrosion and delamination.

C. Furnish one-year warranty for defects in material and workmanship for stainless steel door hardware and mounting brackets.

2. PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Bobrick Washroom Equipment, Inc., Sierra Series with Institutional hardware, www.bobrick.com.

B. Substitutions: No known substitute.

2.2 MATERIALS

A. Material composed of dyes, organic fibrous material, and polycarbonate/phenolic resins with a non-ghosting, graffiti resistant surface integrally bonded to core.

B. Stainless Steel: ASTM A167, Type 304.

2.3 ACCESSORIES

A. Pilaster Shoe: ASTM A167, Type 304 stainless steel, with adjustable screw jack.

B. Headrail and Bracing: 1 x 1-5/8 inch anodized extruded aluminum; with anti-grip configuration; with stainless steel wall brackets.

C. Attachments, Screws, Bolts, and Nuts: Pin-in-head Torx stainless steel fasteners set in threaded brass inserts, factory installed for door hinge and latch connections, capable of withstanding a direct pull force exceeding 1,500 pounds per fastener.

D. Through Bolts and Nuts: Pin-in-head Torx stainless steel sex bolt fasteners factory installed for latch keeper to stile connections capable of withstanding direct pull force exceeding 1,500 pounds per fastener.

2.4 HARDWARE

A. Hinges: Full height continuous hinges of 0.0625 inch thick stainless steel. Spring-loaded and self-closing.

B. Latch and Keeper, Standard Doors: 0.0781 inch thick stainless steel combination slide latch and bumper.

C. Latch and Keeper, Accessible Stall Door: 14-gage stainless steel combination slide and bumper door latch requiring less than five pound force to operate. Twisting latch operation not acceptable.

D. Door Stop: Vinyl coated 0.125 inch thick stainless steel door stop with rubber bumpers.

E. Coat Hook: 0.1094 inch thick stainless steel coat hook.

F. Door Pull: Stainless steel “U” shaped door pull.

G. Panel Brackets: Full length “U” shaped brackets of 0.050 inch thick stainless steel.

H. Leveling Device: 3/16 inch thick hot rolled steel bar; chromate-treated and zinc-plated.

2.5 FABRICATION

A. Doors and Panels:

1. Door Thickness: 3/4 inch.

2. Panel Thickness: 1/2 inch.

3. Door Width: 24 inch.

4. Door Width for Accessible Use: 36 inch.

5. Panel Height: 58 inch.

6. Panel Height from Floor: 12 inch.

B. Pilasters: 3/4 inch thick, constructed same as doors, of sizes required to suit cubicle width and spacing.

C. Furnish units with cutouts and drilled holes to receive partition mounted hardware, accessories, and grab bars as indicated.

2.6 FINISHES

A. Solid Color Reinforced Composite: Color to be selected by Architect from standard colors. Edges to match color of panel.

B. Stainless Steel Surfaces: No. 4 finish.

C. Aluminum: Clear anodized.

3. PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that openings are ready to receive work.

B. Verify field measurements are as shown on shop drawings.

C. Verify correct location of built-in framing, anchorage, bracing, blocking, electrical, and plumbing fixtures.

D. Beginning of installation means installer accepts existing conditions.

3.2 ERECTION

A. Erect in accordance with manufacturer's instructions.

B. Install partition components secure, plumb and level.

C. Attach panel brackets securely to walls and floors using appropriate anchor devices.

D. Anchor urinal screen panels to walls with continuous brackets.

E. Attach panels and pilasters to brackets with through bolts and nuts. Locate headrail joints at pilaster center line.

F. Set all floor anchors and pilaster shoes firmly in mastic.

G. Provide additional headrail cross bracing at end compartments and accessible stalls to form rigid assembly.

H. Provide 1/2 inch space between wall surface and panels or pilasters.

I. Provide for adjustment of floor variations with screw jack through steel saddles integral with pilaster. Conceal floor fastenings with pilaster shoes.

J. Equip each toilet stall door with hinge, door latch and pull.

K. Factory install threaded brass inserts for hinge attachments.

L. Equip each accessible toilet stall door with two pulls, one each side of door. Mount at 3'-4" from floor line to center of pull.

M. Thru bolt door strike keeper on each pilaster in alignment with door latch.

N. Equip each accessible toilet stall door with coat hook and bumper. Mount at 4'-0" from floor line to top of hook. Center coat hook and bumper on interior face of door.

O. Equip each standard toilet stall door with one coat hook and bumper. Mount on interior of door at 6 inches from top of the door to top of hook and 6 inches to hook centerline from strike side of door.

3.3 ERECTION TOLERANCES

A. Maximum Variation from Plumb or Level: 1/8 inch.

B. Maximum Misplacement from Intended Position: 1/8 inch.

3.4 ADJUSTING

A. Adjust work under provisions of Section 01 77 00.

B. Adjust and align door hardware to uniform clearance at vertical edges of doors. Clearance space not to exceed 3/16 inch.

C. Adjust door hinges so that free movement is attained and will locate in-swinging doors in partial open position when unlatched and will return out-swinging doors to closed position.

3.5 CLEANING

A. Clean work under provisions of Section 01 77 00.

B. Remove protective coverings.

C. Clean surfaces and hardware.

3.6 PROTECTION OF FINISHED WORK

A. Protect finished installation under provisions of Section 01 61 00.

B. Field touch-up of finished surfaces will not be permitted.

C. Replace damaged or scratched materials with new materials.

END OF SECTION

SECTION 11 66 43

DYNAMIC VIDEO-SCOREBOARD DISPLAY

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Furnish and install dynamic scoring display including LED video matrix, standard scoreboard, controllers, operating racks, decorative truss, and all equipment and components necessary for a fully functioning scoring display. To be installed at the football field.

1.02 REFERENCES

A. Standard for Electric Signs, UL 48
B. Standard for CSA C22.2 #207
C. Federal Communications Commission Regulation Part 15
D. National Electric Code

1.03 SUBMITTALS

A. Product data: Submit manufacturer's product illustrations, data and literature that fully describe the displays and accessories proposed for installation.
B. Shop drawings: Submit mechanical and electrical drawings.
C. Maintenance data: Submit manufacturer's installation, operation, and maintenance manuals.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Product delivered on site.
B. Display and equipment to be housed in a clean, dry environment.

1.05 PROJECT CONDITIONS

A. Environmental Limitations: Do not install display equipment until mounting structure is secure and concrete has ample time to cure.
B. Field Measurements: Verify position and elevation of structure and its layout for display equipment. Verify dimensions by field measurements.
C. Verify mounting structure can support the display's weight and wind load in addition to the auxiliary equipment.
D. Installation may proceed within acceptable weather conditions

1.06 QUALITY ASSURANCE

A. For outdoor use
B. Source Limitations: Obtain each type of electronic display through one source from a single manufacturer.
C. UL listed to UL 48
D. UL listed to CSA 22.2 #207
E. FCC compliant
F. Installed per NEC

1.07 WARRANTY

A. Provide 5 years of no cost parts exchange including ground shipping on electronics parts due to manufacturing defects.
B. Provide 1-year on-site technical service support.
C. Provide toll-free service coordination.

D. Provide technical online and phone support during Daktronics business hours.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Scoreboard Manufacturer
   1. Basis of Design: Daktronics, Inc., 201 Daktronics Drive, P.O. Box 5128, Brookings, SD 57006-5128
      a. Contact: Leie Sualua, leie.sualua@datronics.com, 949.312.0903
   2. Fair-Play Scoreboard Co., www.fair-play.com
   3. Nevco Scoreboard Co., www.nevcoscoreboards.com
   4. Porter Athletic Equipment Co., www.porter-ath.com
   5. Spectrum, www.spectrum.com
   6. Substitutions: Under provisions of Section 01 25 13.

B. Brokers or Resellers of LED display equipment are not permitted.

C. LED display must be manufactured from component level to full mode module in the U.S. outsourcing of modules outside of the U.S. and assembling the display at a U.S. factory will not be permitted.

D. Display manufacturer must maintain part availability for a minimum of 10-years including 10 years after a product has been discontinued.

E. Display manufacturer to have a minimum of 10 locations installed of this size or larger at a sports facility in a similar environment.

2.02 VIDEO DISPLAY

A. General information
   Product: LVX-3000-16MT: LED display
   Pixel Layout: Vertical RGB, clustered design not permissible.
   Cabinet Dimensions: 7' 11” H, 25' W, 11" D
   Matrix size: 144 x 456
   Weight: 2200 lb.
   Power requirements: 5385 Watts

B. Cabinet Paint Color
   1. Standard: Semi-gloss black on sides only

C. Communication type
   1. Fiber optic (50/125 µm multi-mode), minimum 6 strand, non-terminated ends, quantity 1,000 lineal feet.

D. Construction
   1. All-aluminum construction for light weight and corrosion resistance
   2. Service Access: Front or Rear

E. Display Capabilities
   1. Color Capacity: 16 bit (281 trillion colors)
   2. LED Refresh Rate: 4800 Hz as defined by the number of times per second the LED image is repainted in intensity
   3. Display has signal redundancy allowing for signal path both forward and backwards through modules allowing for loss of only 1 module vs. rows or blocks of multiple modules or panels in case of failure.

F. Viewing Characteristics

1. Module Intensity: 9500 nits (adjustable)
2. Brightness Control: 256 levels (manual, scheduled or automatic)
3. Suggested Viewing Angle: 160° horizontal and +25°/-45° vertical

G. Pixel Characteristics
1. Each pixel consists of 3 through-hole LEDs per pixel (1 red, 1 green, 1 blue).

H. LED Module Characteristics
1. Module shall be for outdoor use.
2. Module shall have anti-reflective paint or coating applied to display face. Black state across all modules shall exhibit a Delta E color variation of no more than .4.
3. Modules shall have horizontal louvers running between LEDs or pixels.
4. Modules shall be able to be removed and installed from both the front and rear of the display.
5. It is not necessary to remove or insert screws in order to remove or install modules.
6. Module shall be silicon potted on face beneath louver and rear, providing a 100% waterproof seal, regardless of module, cabinet or panel construction.

I. Video Processing
1. Video Frame Rate: 50/60 frames per second
2. Graphic Frame Rate: 30 frames per second
3. Processing Architecture: 22-bit distributed
4. System Architecture: 100% digital
5. Video Enhancement: Color space conversion, adjustable gamma correction, proprietary sharpening technology and enhancement algorithms for optimal picture quality

J. LED Quality
1. Quality Control: Sorted by intensity and color wavelength
2. LED Lifetime: 100,000 hours of operation as defined by time at which display intensity has decreased to 50 percent of the original intensity

K. Calibration
1. Pixel-to-pixel and module-to-module optical color calibration must be performed at the factory. The manufacturer must also provide easy-to-use calibration software that allows individual modules and pixels to be independently adjusted while in the display.
2. If modules should need replacement during the life of the display, the calibration software must match newer modules' brightness levels to older modules' levels to preserve picture quality and maintain a uniform display appearance.

L. Display Interface
1. The full-color video display must be able to interface and display real-time data from the control system without the need for a duplicate or redundant input.

2.03 SCOREBOARD

A. General information
1. Product: FB-2022: single sided hard wired and wireless controlled football scoreboard.
2. Dimensions: 8'-0" H, 25'-0" W, 0'-8" D
3. Base weight: 805 lb. with electronic captions and team name message center
4. Base power requirement: 705 W (white digits) with electronic captions
5. Color: 8800 Black

B. Construction
1. Alcoa aluminum alloy 5052 for excellent corrosion resistance

2. Scoreboard back, face, and perimeter: 0.063" thick
3. Scoreboard top and bottom: 0.125" thick

C. Digits & Indicators
1. LED color: White
2. Clock digits: 36" high
3. 'TNMC' in place of 'HOME', GUEST.
4. Team Name, DOWN, TO GO, BALL ON, QTR, digits: 24" high, and T.O.L. digits: 18"
5. Seven bar segments per digit
6. PanaView® LED digit technology
7. All digits and indicators are sealed front and back with weather-tight silicone gel

D. Captions
1. All electronic

2.04 DECORATIVE PANELS

A. General Information
1. Product: DA-1000-25 decorative truss
2. Dimensions: 3' 0" x 25'
3. Screen backing with 50% backlit lettering

2.05 VIDEO CONTROL/OPERATIONS SYSTEM

A. General Information
1. Product: 1V Input Control System
2. Show Control software on provided laptop.
3. All Sport Pro tablet & modem

B. Provide custom spirit animation package for the following sports/events
1. Football, 14 animations
2. Soccer, 8 animations
3. Lacrosse, 8 animations
4. Track & Field, 8 animations

C. Equipment Rack
1. Dimensions: 15" H x 10.65" W x 14" D; 8HU
2. A larger rack may be required based on additional optional equipment.

D. Media Player
1. Provide a Digital Media Player (DMP).
2. Animation rates of up to 60 frames per second
3. Resolution: 1080p 59.94
4. Video Input: up to 1080p 59.94
5. Video Output: DisplayPort to Video Image Processor
6. Audio Output: balanced 3-pin XLR
7. Ports: USB 2.0 @4, USB 3.0 @2
8. Memory: 16 GB DDR4
9. Storage: 1 TB
10. Networking: 10/100/1000 Ethernet (RJ-45 LAN) @2
11. Dimensions: Half-width 1RU; 1.75" H x 8.75" W x 12" D

E. Video Processor
1. Provide a Video Image Processor (VIP).

2. Video Input: DVI from Daktronics DMP
3. Video Output: Daktronics ProLink® 6 (fiber optic) @2
4. Color space conversion: Proprietary LED conversion
5. Networking: 10/100/1000 Ethernet (RJ-45 LAN) @1
6. Dimensions: Half-width 1RU; 1.75" H x 8.75" W x 12" D

F. Network Router
1. 8-port gigabit

G. Live Scorebug
1. Portable device providing a game-in-progress scoreboard data overlay for video streams.

2.06 SCOREBOARD CONTROL/OPERATIONS SYSTEM

A. General Information
1. Product: AllSport PRO: Tablet and/or touchscreen laptop with controller software, tablet base, wireless transmitter, and delay of game clock handheld controllers.
2. Wireless Access Point

B. Provide custom RTD frames for the following sports
1. Football
2. Soccer
3. Lacrosse
4. Track & Field

C. Recalls clock, score, and period information if power is lost.

D. Console capable of automatically calculating and displaying DOWN & TO GO for each play

E. Runs Time of Day and Segment Timer modes

F. Console includes:
1. All Sport Pro Modem
2. Power cord that plugs into a standard grounded outlet; 6 watts max
3. Control cable to connect to the control receptacle junction box (wired system only)
4. Hand-held controllers for game clocks.

G. Transmitter
1. 2.4 GHz spread spectrum radio system with frequency hopping technology and 64 non-interfering channels; system includes a transmitter installed inside the console and a receiver installed inside the scoreboard.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that mounting structure is ready to receive the display. Verify that placement of conduit and junction boxes are as specified and indicated in plans and shop drawings. Verify concrete has cured according to specifications.

3.02 INSTALLATION

A. All power and control cables to display will be routed in conduit. Power to the display as well as raceways shown on electrical plans by the Electrical Contractor. Display control wiring including conduit will be the responsibility of the contractor assigned the display equipment.

B. Install display to beams in location detailed and in accordance with manufacturer's instructions. Verify unit is plumb and level.

C. Manufacturer to supply final commissioning support and connections to display from primary power junction box at base of structure provided by contractor.
D. Manufacture to provide tech support to ensure system is working as specified.

3.03 INSTALLATION—CONTROL CENTER

A. Provide boxes, cover plates and jacks in locations per plans.
B. Test the operation of the display, controller, and all control jacks; leave control unit and other loose items with owner's designated representative.
C. Conduct operator training on the display/controller operation.
D. Manufacturer must supply all required signal conversion hardware to allow for direct wire control of electronic display.

END OF SECTION

SECTION 31 2326

BASE COURSE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Installation of base material.

B. Related Requirements:

1. Division 01 - General Requirements.

3. Section 31 1000 - Site Clearing.

4. Section 31 2200 - Grading.

5. Section 31 2313 - Excavation and Fill.

6. Section 31 2316 - Excavation and Fill for Paving.

6. Section 32 0117 - Pavement Repair.

7. Section 32 1216 - Asphalt Paving.

9. Section 32 1313 - Site Concrete Work.

1.02 SUBMITTALS

A. Crushed aggregate base (CAB) shall consist of native rock without naturally occurring asbestos or recycled materials. The CONTRACTOR shall submit written documentation, which identifies the source, volume, and proposed transport date of the material for review and approval by OWNER prior to importing the material. A statement on company letterhead from the CAB source, stamped by either a California Professional Geologist or Engineer, which states that the subject materials are native rock, do not contain any recycled materials and that the source quarry does not mine ultramafic materials, a source of natural occurring asbestos shall be included in the submittal to OWNER. The CONTRACTOR may request variance from analytical testing required by Section 01 4524 for CAB. To be considered for a variance, the CONTRACTOR shall submit a documentation package for OWNER'S approval, which includes all of the aforementioned information at least 48 hours in advance of planned import.

1. Frequently used suppliers include:

a. Hansen Aggregates.

b. Vulcan Materials, Reliance Company.

c. Vulcan Materials Durbin.

C. Product Data: Submit material source, technical information and test data for base materials. Gradation and quality certifications shall be dated within 30 days of the submittal.

D. Sample: Submit sample of proposed base course material.

1.03 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition.

B. Installer: Company with minimum 5 years' experience installing base course drainage layers for synthetic grass surfacing for educational projects similar in scale and complexity to those required for this project.

1. Installer shall be a California "A" or "C-12" licensed contractor

2. Installer shall be acceptable to the manufacturer (and installer, if different) of the synthetic grass surfacing.

3. Installer shall have completed at least eight (8) subsurface drainage bases for sports fields at least 70,000 SF in the last five (5) years in southern California. In addition, Installer shall have three (3) installations no more than three (3) years old. Upon request, installer shall provide names and telephone numbers of knowledgeable client contacts.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Crushed Aggregate Base (CAB) materials shall conform to the requirements of the Standard Specifications for Public Works Construction: Section 200 - Rock Materials.

B. Crushed Miscellaneous Base (CMB) or materials generated on site shall not be used as a base course material.

2.02 MATERIAL APPROVAL

A. Base material shall be inspected by the Project Inspector for gradation and material content prior to installation. The OWNER may choose to have additional tests performed by a geotechnical engineer, retained by the OWNER, before installation.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install base course material in layers not exceeding 4 inches in thickness, unless required otherwise. Grade and compact to indicated levels or grades, cut and fill, water and roll until the surface is hard and true to line, grade and required section. Provide a relative compaction of at least 95 percent, unless otherwise required.

B. Grade base course to elevations indicated on Drawings, ready to receive surfacing, in accordance with Section 31 2200 - Grading.

3.02 PROTECTION

A. Protect the Work of this section until Substantial Completion.

3.03 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 32 0117

ASPHALT PAVEMENT REPAIR

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Bituminous Surfacing Repair: Areas removed for utility trenches, heaved by tree roots, cracked areas, protruding areas where pavement meets hard surfaces, depressed areas, holes and areas around new structures, and raveled bituminous pavement.

2. Areas heaved by tree roots, cracked areas, holes and trenches, and areas around new structures.

B. Related Sections:

1. Division 01 - General Requirements.

2. Section 31 2200 - Grading.

3. Section 31 2316 - Excavation and Fill for Paving.

4. Section 31 2323 - Excavation and Fill for Utilities.

5. Section 31 2326 - Base Course.

6. Section 32 0113 - Rolled Slurry Seal, Existing Pavement.

7. Section 32 1216 - Asphalt Paving.

8. Section 32 1313 - Site Concrete Work.

9. Section 32 1236 - Seal for Bituminous Surfacing.

1.02 SUBMITTALS

A. Shop Drawings: Submit Shop Drawings indicating areas to be repaired.

B. Product Data: Submit manufacturer’s technical data for materials and products.

1.03 QUALITY ASSURANCE

A. Comply with Standard Specifications for Public Works Construction, current edition.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Base course materials: Section 31 2326 - Base Course.

B. Asphalt paving materials: Section 32 1216 - Asphalt Paving.

C. Seal materials: Section 32 1236 - Seal for Bituminous Surfacing.

D. Headers: Section 32 1216 - Asphalt Paving.

2.02 BITUMINOUS MATERIALS

A. Provide materials and products of the class, grade or type indicated, conforming to relevant provisions of Section 203 - Bituminous Materials of the latest Standard Specifications for Public Works Construction.

PART 3 - EXECUTION

3.01 PAVEMENT REMOVAL

A. Remove bituminous and concrete pavement in accordance with applicable provisions of Section 300 - Earthwork of the Standard Specifications for Public Works Construction.

B. Pavement Heaved By Roots: Remove pavement to limits of distortion and expose roots. Trim roots to provide at least 12-inch clearance to pavement. Coordinate with OWNER's Tree Trimming Department for recommendations and approval prior to trimming roots.

C. Remove protruding bituminous surfaces flush with the surrounding grade using a suitable tool or equipment so that adjacent finishes are not blackened.

D. Remove raveled and depressed bituminous pavement to limits indicated or required.

E. Saw cut existing improvements, trim holes and trenches in bituminous and concrete pavement to permit mechanical hand tampers to compact the fill.

F. Remove broken concrete by saw cutting. If the required cut line is within 30 inches of a score or joint line or edge, cut and remove to the score, joint line, or edge.

3.02 EXCAVATING, BACKFILLING AND COMPACTING

A. Conform to requirements in Section 31 2313 - Excavation and Fill; Section 31 2316 - Excavation and Fill for Paving; Section 31 2319 - Excavation and Fill for Structures; or Section 31 2323 - Excavation and Fill for Utilities, as required.

B. Where subgrade or base is deemed to be unstable or otherwise unsuitable, excavate such materials to firm earth, and replace with a required material. Install and compact fill materials in accordance with the requirements of Section 31 2316 Excavation and Fill for Paving.

3.03 HEADERS

A. Install headers along edge of bituminous surfacing abutting turf, earth, or planting area, unless indicated otherwise.

B. Install headers so the bottom surface has continuous bearing on solid grade. Where excavation for headers is undercut, thoroughly tamp soil under the header. Compact backfill on both sides of header to the density of the adjacent undisturbed grade.

C. Fasten headers in place with redwood or Douglas fir stakes of length necessary to extend into solid earth a minimum of 12 inches. Stakes shall be of sound material, neatly pointed, driven vertically, and securely nailed to headers. Space stakes, not to exceed 4 feet on centers with top of stakes set one inch below top of header. Provide a minimum of two 12d galvanized common nails through each stake.

D. Remove existing headers where new surfacing is installed adjacent to existing surfacing.

E. Install temporary headers at transverse joints of paving where continuous paving operations are not maintained.

F. Provide additional stakes and devices as required to fasten headers.

3.04 BASE COURSE

A. Unless otherwise indicated, base course shall be crushed aggregate base, fine grade, 3 inches thick or equal to thickness of the existing base, whichever is greater.

B. Fill grade and compact as specified in Section 31 2200 - Grading.

3.05 RESURFACING

A. Utility Trenches: Remove loose dirt and backfill with cement-sand slurry allowing for surfacing one inch thicker than existing. Resurface flush with existing adjoining pavement installing the same type of materials and section provided in existing improvements.

B. Other Areas: Other surface improvements damaged or removed shall be cut to a neat even line and excavated one inch below the bottom of the existing pavement. Resurface by following the original grades and installing the same type of materials provided in existing improvements.

C. Where bituminous surfacing abuts concrete, masonry, walks or paving, tamp joint smooth, if necessary, as described above to obtain a uniformly even joint, true to line and grade. Tamp and smooth materials before asphalt cools.

3.06 REPAIRING AND RESEALING EXISTING SURFACES

A. Preparation of Surfaces: Prior to filling cracks, clean existing bituminous surfacing of loose and foreign materials and coat with a film of asphalt emulsion.

B. Repair of Existing Surfacing:

1. Fill cracks 1/2 inch wide and less with RS-1 emulsion and washed plaster sand or other OEHS approved crack filler material. Cracks larger than ½ inch wide shall be filled with Type F/Sheet Mix Asphalt Concrete as specified. Cracks shall be filled to the level of adjacent surfacing.

2. Where low areas, holes, or depressions occur in existing surfacing, refer to Section 32 1216; Asphalt Paving, Article 3.02. Use Type E/School Mix and feather edge joint flush to the level of adjacent surfacing.

C. Testing: Flood test entire area in presence of the Project Inspector. Inspect area after waiting one hour. Entire area tested shall be free of standing water or puddles in excess of 0.01 foot. Practical field measurement: 0.01 foot = two quarters stacked.

D. Surface Seal: After surface has been repaired and tested, install seal coat over entire area indicated. Surface seal shall be as specified in Section 32 1236 - Seal for Bituminous Surfacing.

3.07 CLEANING

A. Remove all stains on the Project site and adjacent properties caused by or attributed to the Work of this section.

B. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 32 1313

SITE CONCRETE WORK

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: On-site concrete work:

1. Portland cement concrete pavement, driveways, curbs, gutters and mowing strips.

2. Portland cement concrete paving shall be stable, firm, and slip resistant and shall comply with CBC Sections 11B-302 and 11B-403

B. Related Requirements:

1. Section 03 1000 – Concrete Formwork.

2. Section 31 2200 – Grading.

3. Section 31 2316 - Excavation and Fill for Pavement.

4. Section 31 2326 - Base Course.

5. Section 32 1216 - Asphalt Paving.

6. Section 33 4000 - Storm Drainage Utilities.

1.02 REFERENCES

A. Structural work, such as retaining walls, planter walls, cast-in-place benches, equipment pads, and footings for playground equipment, fences, walls, shade structures and flagpoles shall conform to the following Sections:

B. Flatwork, such as walkways, driveways, ramps and steps on grade, swales, curbs, mow strips and utility related concrete, conform to:

1. Standard Specifications for Public Works Construction, The “Greenbook”, except reclaimed aggregates and processed miscellaneous base are not allowed.

C. National Ready Mixed Concrete Association (NRMCA):

1. Checklist for the Concrete Pre-Construction Conference.

1.03 QUALITY ASSURANCE

A. Source Limitations for Exposed Concrete: Obtain each color, size, type, and variety of concrete material and concrete mixture from single manufacturer with resources to provide concrete of consistent quality in appearance and physical properties. Secure material required for the duration of the project as needed to ensure consistent quality in appearance.

B. Pre-Installation Conference:

1. CONTRACTOR shall use the NRMCA “Checklist for the Concrete Pre-Construction Conference” as the meeting agenda.

C. Mockup:

1. Build 8 feet by 8 feet mockups of full-thickness sections of concrete paving using processes and techniques intended for use on permanent work, including curing procedures.

2. Build mockups to demonstrate typical joints; surface finishes and standard of workmanship.

3. Obtain ARCHITECT’s approval of mockup before proceeding with work of this Section.

4. Mockup shall remain through completion of the work for use as a quality standard for finished work.

5. Remove mockup when directed by the OAR.

D. Field applied primers, paintings, sealers, sealants, caulking, leveling and patching compounds, crack/joint repair compounds adhesives and similar products shall be approved by the OWNER.

E. Accessible walking surface and ADA related slopes shall be measured with a twenty-four-inch digital level.

1.04 SUBMITTALS

A. Flatwork: Submit mix design in conformance to the Greenbook.

B. Shop Drawings: Submit drawings indicating the locations of concrete joints, including construction joints, expansion joints, isolation joints, and contraction joints.

1.05 DELIVERY, STORAGE AND HANDLING

A. Store cement and aggregate materials so to prevent their deterioration or intrusion by foreign matter. Deteriorated or contaminated materials shall not be furnished.

B. Packaged materials shall bear the manufacturers and brand name label and shall be stored in their original unbroken package in a weather tight place until ready for use in the work.

C. Avoid exposure of reinforcing steel bars, wire, and wire fabric to dirt, moisture or conditions harmful to reinforcing.

D. Reinforcing steel bars, wire, and wire fabric shall be stored on the Project site to permit easy access for examination and identification of each shipment. Material of each shipment shall be separated by size and shape.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Structural Work: Conform to the applicable requirements of the following Sections, except as otherwise specified:

B. Flatwork: Conform to the applicable requirements of the Greenbook, Section 201, except as follows:

1. Water/cement ratio for concrete flatwork shall be 0.50 maximum.

2. Base course shall conform to Section 32 3226 Base Course.

3. Reclaimed concrete material shall not be used.

A. Fabricated from 6061-T6 aluminum, clear anodized.

1. Fixed Angle Series:

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that gradients and elevations of base are correct. Maintain subgrade clean and in a smooth, compacted condition until the concrete is placed.

B. Maintain subgrade in a smooth, compacted condition in conformity with the required section and established grade until the concrete is placed. Earth surface shall be kept moist by frequent sprinkling up to the time of placing concrete.

3.02 CONSTRUCTION OF FORMS

A. Flatwork Forming: Set forms to the indicated alignment, grade and dimensions. Hold forms rigidly in place by a minimum of 4 stakes per form placed at intervals not to exceed two feet. Use additional stakes and braces at

corners, deep sections, and radius bends, as required. Use clamps, spreaders, and braces where required to ensure rigidity in the forms.

B. Wall Formwork: Forms shall be constructed to conform to final concrete shape, lines and dimensions of members required by Drawings and Specifications. Forms shall be sufficiently tight to prevent leakage of concrete and properly braced or tied together to maintain position and shape.

3.03 STEEL REINFORCEMENT INSTALLATION

A. Fabricate bars of the indicated sizes and bend and form to required shapes and lengths by methods not injurious to materials. Do not heat reinforcement for bending. Bend bars No. 6 size and larger in the shop only. Bars with unscheduled kinks or bends are not permitted.

B. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover to reinforcement.

C. Install welded-wire reinforcement in lengths as long as practicable. Lap adjoining pieces, and lace splices with wire.

D. Clean reinforcement of loose rust and mill scale, earth, or bond-reducing materials.

3.04 PREPARATION FOR CONCRETE PLACEMENT

A. Surfaces to receive concrete shall be free of debris, standing water, and any other deleterious substances before start of concrete placing.

B. Do not place concrete until forms, reinforcement, pipe, conduits, outlet boxes, anchors, sleeves, bolts, and other embedded materials are securely fastened in place. Maintain a minimum of two inches clearance between said items and any part of the concrete reinforcement.

C. Adjust pull boxes, meter boxes, valve covers and manholes to proposed finish grade prior to placement of concrete. Anchor bolts shall be accurately set and maintained in position by templates while being embedded in concrete.

D. Clean thoroughly the surfaces of metalwork to be in contact with concrete, remove dirt, grease, loose scale and rust, grout, mortar, and other foreign substances before the concrete is placed.

E. Moisten subbase to provide a uniform dampened condition at time concrete is placed.

3.05 CONCRETE PLACEMENT

A. Place, compact, screed, float and trowel concrete as indicated in Section 03 3000 Cast-in-Place Concrete.

B. Finish: After straightedging, when most of the water sheen has disappeared and just before the concrete hardens, finish the surface with a wood or magnesium float or darby to a smooth and uniformly fine granular or sandy texture free of waves, irregularities, or tool marks. Produce a scored surface by brooming with a fiber-bristle brush in a direction transverse to that of the traffic, followed by edging.

1. Provide medium broom finish on surfaces up to six percent slope by striating surface 1/32 to 3/64 inch deep with a soft bristle broom across concrete surface to provide a uniform fine line texture.

2. Provide heavy broom finish on surfaces over six percent by striating surface 1/16 inch to 1/8 inch deep with a stiff-bristled broom.

3.06 JOINTS

A. Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated. Align curb, gutter, and sidewalk joints.

B. Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour.

1. Continue steel reinforcement across construction joints unless otherwise indicated on the Drawings.

2. Provide tie bars at sides of paving strips where indicated on the Drawings

3. Butt Joints: Use bonding agent or epoxy-bonding adhesive at joint locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.

4. Keyed Joints: Provide preformed keyway-section forms or bulkhead forms with keys unless otherwise indicated. Embed keys at least 1-1/2 inches into concrete.

5. Doweled Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, other fixed objects, and where indicated on the Drawings.

D. Expansion Joints:

1. Provide premolded joint fillers in one-piece lengths. Where more than one length is required, lace or clip joint-filler sections together. Extend expansion joint fillers full-width and depth of joint, and 1/4" below finished surface where joint filler is indicated. If no joint sealer is

indicated place top of premolded joint filler flush with top of concrete or curb.

2. During concrete placement, protect top edge of joint filler with metal, plastic, or other temporary preformed cap. Remove protective cap after concrete has been placed on both sides of joint.

E. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints to a depth equal to at least one-fourth of the concrete thickness, as follows:

1. Grooved Joints: Form contraction joints after initial floating by grooving and finishing each edge of joint with grooving tool to a 1/4-inch radius. Repeat grooving of contraction joints after applying surface finishes. Remove grooving-tool marks on concrete surfaces.

2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8-inch wide joints into concrete when cutting action will not tear, abrade, or otherwise damage surface and before developing random contraction cracks.

3. Doweled Contraction Joints: Install dowel bars and support assemblies at joints where indicated. Lubricate or coat with asphalt one-half of dowel length to prevent concrete bonding to one side of joint.

F. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/4-inch radius. Repeat tooling of edges after applying surface finishes. Remove edging-tool marks on concrete surfaces.

G. Where concrete is to be cast against old concrete, (greater than 60 days of age), the surface of the old concrete shall be thoroughly cleaned and roughened by sand-blasting, exposing the aggregate. The hardened surface shall be cleaned of latent foreign material and washed clean, prior to the application of an epoxy bonding agent.

3.07 CURB AND GUTTER CONCRETE PLACEMENT AND FINISHING

A. Formed Curb and Gutter: Place concrete to the required section in a single lift. Consolidate concrete using approved mechanical vibrators. Finish curve shaped gutters with a standard curb mule or concrete slipformed curb paving equipment.

B. Concrete Finishing: Float and finish exposed surfaces with a smooth wood float until true to grade and section and uniform in texture. Brush floated surfaces with a fine-hair brush using longitudinal strokes. Round the edges of the gutter and top of the curb with an edging tool to a radius of 1/2 inch. Immediately after removing the front curb form, rub the face of the curb with a wood or concrete rubbing block and water until blemishes, form marks, and tool marks have been removed. Brush the front curb surface, while still wet, in

the same manner as the gutter and curb top. Finish the top surface of gutter to grade with a wood float.

C. Surface and Thickness Tolerances: Finished surfaces shall not vary more than 1/4 inch from the testing edge of a 10-foot straightedge. Permissible deficiency in section thickness will be up to 1/4 inch.

3.08 TRACK AND FIELD CONCRETE WORK

A. Provide a Conformance Survey for concrete curbs, bands, drains, edge of paving dimensions and elevations in accordance with Section 32 1823 Asphalt Paving for Synthetic Running Track Surfacing.

B. Corrective Measures: Determine If the planarity, cross slopes, elevations or general specifications have not been met submit corrective measures for the ARCHITECT's and OWNER's review and approval. Once the corrective measures have been completed the track surfacing contractor shall submit a notification accepting the concrete work.

3.10 CLEAN UP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project Site.

3.11 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 33 4000

STORM DRAINAGE UTILITIES

PART 1 - GENERAL

1.01 SUMMARY

A. This Section includes storm drainage piping; sub-surface drains; metal covers, grates and frames; catch basins; box culverts; manholes, and BMPs.

1. Best Management Practices (BMPs):

2. Closed-circuit television inspection of storm drain lines.

1.02 RELATED REQUIREMENTS

A. Section 31 2323 - Excavation and Fill for Utilities.

B. Section 32 0117 - Pavement Repair.

C. Section 32 1313 - Site Concrete Work.

1.03 DEFINITIONS

A. AASHTO: American Association of State Highway and Transportation Officials.

B. ASME: American Society of Mechanical Engineers.

C. ASTM: American Society for Testing and Materials.

D. BMP: Stormwater Best Management Practice.

E. CBC: California Building Code.

F. CCTV: Closed-Circuit Television.

G. DET: Detention BMP.

H. DWV: Drain, Waste, and Vent.

I. FILT: Filter BMP.

J. GS: Gravity Separator.

K. HDPE: High Density Polyethylene.

L. IAPMO: International Association of Plumbing and Mechanical Officials.

M. IOR: Inspector of Record.

N. NPS: Nominal Pipe Size.

O. OAR: OWNER's Authorized Representative.

P. PE: Polyethylene.

Q. Post Construction BMP: Devices installed by the CONTRACTOR for storm water management to be left on site after construction completion.

R. PP: Polypropylene.

S. PVC: Poly Vinyl Chloride.

T. RET: Retention.

U. SDR: Standard Dimensions Ratio.

V. VEG: Vegetative.

W. OWNER: Rancho Santiago Community College District

X. SWPPP: Storm Water Pollution Prevention Plan.

1.04 REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO):

1. ASHTO M 252: Geotextile Specification for Highway Applications.

2. AASHTO M 294: Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter.

3. AASHTO M 330: Standard Specification for Polypropylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter.

B. American Society for Testing and Materials International (ASTM):

1. ASTM A888: Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

2. ASTM C14: Standard Specification for Nonreinforced Concrete Sewer, Storm Drain, and Culvert Pipe.

3. ASTM C443: Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.

4. ASTM C564: Standard Specification for Rubber Gaskets for Cast Iron Soil Pipe and Fittings.

5. ASTM C76: Standard Specification for Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.

6. ASTM C857: Standard Practice for Minimum Structural Design Loading for Underground Precast Concrete Utility Structures.

7. ASTM C858: Standard Specification for Underground Precast Concrete Utility Structures.

8. ASTM C891: Standard Practice for Installation of Underground Precast Concrete Utility Structures.

9. ASTM D2564: Standard Specification for Solvent Cements for Poly (Vinyl Chloride) (PVC) Plastic Piping Systems.

10. ASTM D2665: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings.

11. ASTM D2855: Standard Practice for the Two-Step (Primer and Solvent Cement) Method of Joining Poly (Vinyl Chloride) (PVC) or Chlorinated Poly (Vinyl Chloride) (CPVC) Pipe and Piping Components with Tapered Sockets.

12. ASTM D3034: Standard Specification for Type PSM Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings.

13. ASTM D3212: Standard Specification for Joints for Drain and Sewer Plastic Pipes Using Flexible Elastomeric Seals.

14. ASTM D448: Standard Classification for Sizes of Aggregate for Road and Bridge Construction.

15. ASTM F1866: Standard Specification for Poly (Vinyl Chloride) (PVC) Plastic Schedule 40 Drainage and DWV Fabricated Fittings.

16. ASTM F2306: Standard Specification for 12 to 60 in. [300 to 1500 mm] Annular Corrugated Profile-Wall Polyethylene (PE) Pipe and Fittings for Gravity-Flow Storm Sewer and Subsurface Drainage Applications.

17. ASTM F2418: Standard Specification for Polypropylene Corrugated Wall Stormwater Collection Chambers.

18. ASTM F2764: Standard Specification for 6 to 60 in. [150 to 1500 mm] Polypropylene (PP) Corrugated Double and Triple Wall Pipe and Fittings for Non-Pressure Sanitary Sewer Applications.

19. ASTM F2787: Standard Practice for Structural Design of Thermoplastic Corrugated Wall Stormwater Collection Chambers.

20. ASTM F2881: Standard Specification for 12 to 60 in. [300 to 1500 mm] Polypropylene (PP) Dual Wall Pipe and Fittings for Non-Pressure Storm Sewer Applications.

21. ASTM F2922: Standard Specification for Polyethylene Corrugated Wall Stormwater Collection Chambers.

22. ASTM F477: Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe.

23. ASTM F656: Standard Specification for Primers for Use in Solvent Cement Joints of Poly (Vinyl Chloride) (PVC) Plastic Pipe and Fittings.

24. ASTM F794: Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe and Fittings Based on Controlled Inside Diameter.

C. Cast Iron Soil Pipe Institute (CISPI):

1. CISPI 301: Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

2. CISPI 310: Coupling for Use in Connection with Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications.

D. The International Association of Plumbing and Mechanical Officials (IAPMO):

1. IAPMO IS 6: Hubless Cast Iron Sanitary and Rainwater Systems - Installation Standards.

E. Standard Specifications for Public Works Constructions (Greenbook):

1. Section 202: Masonry Materials.

2. Section 206: Miscellaneous Metal Items.

3. Section 207: Pipe.

4. Section 208: Pipe Joint Types and Materials.

5. Section 210: Paint and Protective Coatings.

6. Section 306: Underground Conduit Construction.

1.05 SUBMITTALS

A. Shop Drawings: Submit site plan denoting locations of lines, valves, and appurtenances.

B. Product Data: Manufacturer’s catalog data for all required materials. Include technical data for accessories, information concerning gaskets, joints and couplings.

C. Certificates: Certificates attesting that tests set forth in referenced publication have been performed and the results required by design have been met.

D. Closeout Documents: At Substantial Completion submit to the OAR two CD's and one hard copy of the documents indicated in paragraphs 1 through 5 below:

1. Maintenance Log: Provide Microsoft Excel Spreadsheet including the following information:

   a. Maintenance log and upkeep records of the installed Post Construction BMPs. Include the following headers as a minimum: "Date of Service", "Location of BMP", "Type of Maintenance or Service", "Notes", "Next Scheduled Preventive Maintenance Due", and "Inspector Signature".

   b. Maintenance Requirements: Include the following headers as a minimum: "BMP Description", "Location of BMP and Map Grid Location" and "Type of Maintenance or Service Needed", i.e.; weekly, monthly, quarterly, etcetera. "Stock No.", "Manufacturer Contact Information", along with "Frequency" namely: weekly, monthly, quarterly, etcetera and "Special Instructions".

2. Maintenance Manuals: Provide Maintenance Manual for storm drainage BMP components installed along with requirements, replacement or maintenance schedule and plans with the location of each BMP component. This manual shall include product information cut sheet, shop drawings, vendor information for each component and warranty.

3. Record drawings: 'As-Builts' site plan(s) showing Post Construction BMP. Provide a copy of marked record set with red pencil identifying any variations from design documents.

4. Training Documentation:

   a. OWNER attendees sign off training sheet.

   b. Two DVD's of materials covered in the training and components installed.

5. Post-Construction BMP Maintenance Plan: Submit complete Plan per Attachment "A", edit per As-Built conditions and provide missing information.

6. Records of Closed-Circuit Television Inspection: At Substantial Completion submit to the OAR three DVD's of Closed-circuit television inspections performed. Include the following information:

   a. Electronic Media Recordings: Visual and audio record of the entire length of pipe. For existing laterals identify problem areas, such as roots, cracks, fractures, broken pipe, and other unusual conditions found.

   b. Digital Photographs of the pipe condition, connections, points of interest and defects found. Indicate distance of defects to a point

of reference such as face of building or mainline. Provide the Digital Photographs after fixing the defective pipes.

c. Inspection Log: Provide written report including:

1) Date and time of inspection.

2) Name of School, Project, CONTRACTOR, and operator name.

3) Location, material and size of pipe.

4) Description of defects found and attempts to fix them.

1.06 QUALITY ASSURANCE

A. Comply with the following as a minimum requirement: Standard Specifications for Public Works Construction, current edition.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Do not store plastic products, pipes, and fittings in direct sunlight.

B. Protect pipe, pipe fittings, and seals from dirt and damage.

C. Handle all products according to manufacturer's written rigging instructions.

1.08 TRAINING OF OWNER PERSONNEL

A. At Substantial Completion and when the storm drainage system is fully operational, knowledgeable representatives from the CONTRACTOR and manufacturer(s) of the components specified and installed at the site shall provide up to 8 hours of training. Date, time and location for the training shall be coordinated through the project OAR. Have OWNER attendees sign off training sheet and provide a copy to the OAR.

B. Training period shall cover but not be limited to the following:

1. Explain the operation of storm drainage system and its design intent.

2. Explain the maintenance requirements of every component of the system.

3. Provide recommendations of practices to minimize or eliminate negative impact on the system.

4. Provide maintenance schedule as recommended by the manufacturers for every component and review it with OWNER’s Maintenance and Operations staff.

5. Conduct a site walk, identify every component of the system and demonstrate its operation.

6. Training shall be conducted with the use of Maintenance log and Maintenance manual.

1.09 SURPLUS MATERIALS

A. Provide enough additional materials for each component of BMP that requires replacement or service during the first year.

PART 2 – MATERIALS AND PRODUCTS

2.01 PIPING MATERIALS

A. General: Minimum 5 feet away from building boundaries. For piping within 5 feet from building boundaries, and interior piping refer to Division 22 plumbing sections. Provide piping system in conformance with Section 207 - Pipe and Section 208 - Pipe Joint Types and Materials of the Standard Specifications for Public Works Construction. All Soil-tight pipes shall be provided with joints that are function of opening size, channel length, and backfill particle size. A backfill material containing a high percentage of fine-graded soils requires investigation for the specific type of joint to be used to guard against soil infiltration, including the requirement for fabric-wrapped joints.

B. Corrugated, Dual Wall, High Density Polyethylene Drainage Pipe (HDPE):

1. Corrugated PE Drainage Pipe and Fittings NPS 4 to NPS 10: AASHTO M 252, Type S (double-wall) with smooth waterway for coupling joints.

2. Corrugated PE Pipe and Fittings NPS 12 to NPS 60: AASHTO M 294 or ASTM F2306, Type S (double-wall) with smooth waterway for coupling joints.

3. Approved manufacturer: ADS, Hancor, JM Eagle, or equal.

C. Corrugated, Dual or Triple Wall, Polypropylene Pipe (PP):

1. Corrugated PP Drainage Pipe and Fittings NPS 12 to NPS 60: ASTM F2764, ASTM F2881, or AASHTO M 330, Type S (double-wall) or Type D (triple-wall), for respective diameters. Provide coupling joints with smooth waterway.

2. Approved manufacturers: ADS, Prinsco, or equal.

D. PVC (Poly Vinyl Chloride) Schedule 40 DWV Pipe:

1. Conform to ASTM D2665, ASTM F794, and ASTM F1866.

2. Installer of PVC Schedule 40 DWV piping system shall carry ASTM D2855 and ASME B31.3 qualification. Installer shall provide proof of these qualifications to IOR prior to commencing work.

3. Containers for solvent and primer shall be clearly marked with manufacturer's data. Solvent and primer shall not be more than one year old. The safety placards must be visible.

4. Blue or red-hot glue shall not be used.

5. Approved manufacturers and products:

a. Pipe: Charlotte pipe and foundry, Harvel Plastics Inc., JM Eagle, Spears Manufacturing Company, or equal.

b. Primer: Weld-On P-70 by IPS, Conforming to ASTM F656.

c. Cement: Weld-On 711 (gray) by IPS, Conforming to ASTM D2564.

E. PVC (Poly Vinyl Chloride) SDR-35 Pipe, 6” through 15”:

1. Conform to ASTM D3034.

2. Gasketed Joints: Elastomeric gasket joints conforming to ASTM D3212.

3. Gaskets: Chloroprene conforming to ASTM F477.

4. Approved manufacturers: Charlotte pipe and foundry, Harvel Plastics Inc., JM Eagle, Spears Manufacturing Company, or equal.

2.02 BEDDING MATERIAL FOR PIPE

A. General: Conform to the requirements of Section 31 2313 - Excavation and Fill or Section 31 2323 - Excavation and Fill for Utilities, as required.

B. Approved manufacturers and products:

1. Propex Fabrics, Inc.: Geotex 451.

2. TenCate Geosynthetics Americas: Mirafi 140N.

3. US Fabrics, Inc.: 120NW.

4. Equal products.

2.03 PERFORATED SUBSURFACE DRAIN PIPE

A. Perforations shall be symmetrically located within a maximum arc of 160 degrees. Perforations shall provide a total open area of at least 0.3 square

inches per linear foot of pipe, with a minimum of one perforation per linear foot, except for joint areas. Perforation shall be either holes or slots. Hole diameters of ¼-inch minimum to ½-inch maximum. Width of slots of 1/8-inch minimum to 5/16-inch maximum with slot length not exceeding 5 inches.

B. Aggregate Around Perforated Pipe shall be 6 inches of gravel containing no particles finer than a 1/2-inch to 3/4-inch sieve opening size.

2.04 STORMWATER TREATMENT SYSTEMS /BMPS

A. VEG: Proprietary Biotreatment Devices, approved manufacturers and products:

1. BioClean: Modular Wetlands System.

    a. Infiltration media shall be ARCOSA.

2. Contech: Filterra Bioretention Systems.

    a. Infiltration media shall be Filterra Media consist of a combination of natural sand, gravel, and organic materials.

3. DeepRoot Urban Landscape: Silva Cell 2.

4. Oldcastle: BioPod Underground.

    a. Infiltration media shall be StormMix.

5. StormTree: Tree Filter System.

    a. Grates shall be Hot-dip galvanize steel.

    b. Infiltration media shall be CocoGro Coir Fiber.

6. Equal products.

2.05 MANHOLES

A. Provide round reinforced concrete manhole with an H-20 traffic rated hatch & solid cover of minimum 30-inch in diameter with holes of maximum ½-inch in diameter.

2.06 MISCELLANEOUS MATERIALS

A. Metal Covers, Grates, Frames and Accessories:

1. Conform to Section 206 - Miscellaneous Metal Items of the Standard Specifications for Public Works Construction.

2. Hot-dip galvanize steel parts after fabrication in accordance with Section 210 - Paint and Protective Coatings of the Standard Specifications for Public Works Construction.

3. Grates and Frames:

a. Vandal-proof design and construction.

b. ADA compliant, in conformance to CBC 11B-302.3.

c. Rated for vehicular traffic on areas intended for use by motor vehicles.

d. Hot-dip galvanized.

B. Concrete, Mortar and Related Materials: Conform to Section 32 1313 - Site Concrete Work.

C. Manhole Brick Mortar, Grout, and Plaster: Conform to Standard Specifications for Public Works Construction, Section 202 - Masonry Materials.

D. Underground Concrete Structures: Shall be precast and rated for H-20 traffic loading and applicable soil loads. The materials and structural design of the devices shall be per ASTM C857 and ASTM C858.

2.07 NAMEPLATES

A. Stainless steel or aluminium nameplate permanently fastened to BMP showing the following information:

1. BMP ID number and BMP type.

2. Next service day followed by a 1-inch by 4-inch long blank space.

3. Manufacturer name, model number, telephone number and stock ID number.

4. Installation or production date.

5. 1-inch by 4-inch blank space for OWNER’s use.

PART 3 – EXECUTION

3.01 GENERAL INSTALLATION REQUIREMENTS

A. CONTRACTOR shall arrange for a preconstruction meeting with the manufacturer’s representative to review the basic principles for proper installation of Underground BMP type products prior to any installation.

B. Underground Concrete modules shall be installed in accordance with manufacturer’s instructions and the current ASTM C891 procedures.

3.02 EXCAVATION, BACKFILLING AND COMPACTING

A. Conform to the requirements of Section 31 2313 - Excavation and Fill or Section 31 2323 - Excavation and Fill for Utilities, as required.

3.03 INSTALLATION OF PIPE

A. Conform to Section 306 - Underground Conduit Construction of the Standard Specifications for Public Works Construction.

B. Non-ferrous drainpipe installed with less than 12 inches of cover to finish grade shall be provided with a 4-inch thick concrete pipe encasement.

3.04 DRAINAGE APPURTENANCES

A. Catch basins, junction chambers, manholes, box culverts, outlet chambers and other drainage structures: Construct as indicated on Drawings and as specified in Section 32 1313 - Site Concrete Work, and in compliance with the Standard Specifications for Public Works Construction, Section 303 - Concrete and Masonry Construction.

B. Ensure that Post Construction BMP have a visible identifying manufacturer tag with product identification, manufacturer contact information, date of last service and date of next service due.

C. Provide storm drain stencil per City or County requirements as applicable.

3.05 ABANDONED DRAINAGE LINES AND STRUCTURES

A. Cap or plug existing drain lines that are cut and abandoned and remove existing drainage structures that are abandoned.

3.06 CLOSED-CIRCUIT TELEVISION INSPECTION

A. Coordinate with OAR time and date of inspection. Project Inspector shall be present during the CCTV inspection.

B. Clean laterals by hydraulic jet.

C. Perform internal closed-circuit television inspection of lateral from the building to the public mainline. Record drain line in its entirety with no breaks or interruptions. Move camera at a speed no greater than 30 feet per minute, stopping for a minimum of ten seconds to record pipe connections, defects, and points of interest.

D. Maintain technical quality, sharp focus and distortion free picture. Pan, tilt, and rotate as necessary to best view and evaluate connections, defects and points of interest.

E. Minimum Requirements for Closed-circuit Television Equipment:

1. Television camera specially designed for pipe inspections, and operative in 100 percent humidity conditions.

2. Camera and television monitor capable of producing minimum 470H-line resolution color video picture.

3. Camera capable to inspect lines as small as three inches up to 70 feet from storm drain mainline.

4. Camera lighting shall be suitable to allow clear picture of inner wall at least ten feet in front.

F. Defective Work:

1. New Lines: Defective Work found shall be repaired at CONTRACTOR's expense. Perform a new closed-circuit television inspection at no cost to OWNER.

2. Existing Laterals:

a. If roots, sludge, or sediment material or other defect not related to the Work of this project impedes inspection, withdraw camera, restart inspection from opposite end and notify OAR of defects found.

b. If obstruction or stoppage was caused by Work related to this project, remove obstruction at no cost to OWNER. Perform a new closed-circuit television inspection at CONTRACTOR's expense.

3.07 CLEANUP

A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

B. Maintain Post Construction BMP after installation and keep a maintenance log to be turned over to OAR at Substantial Completion.

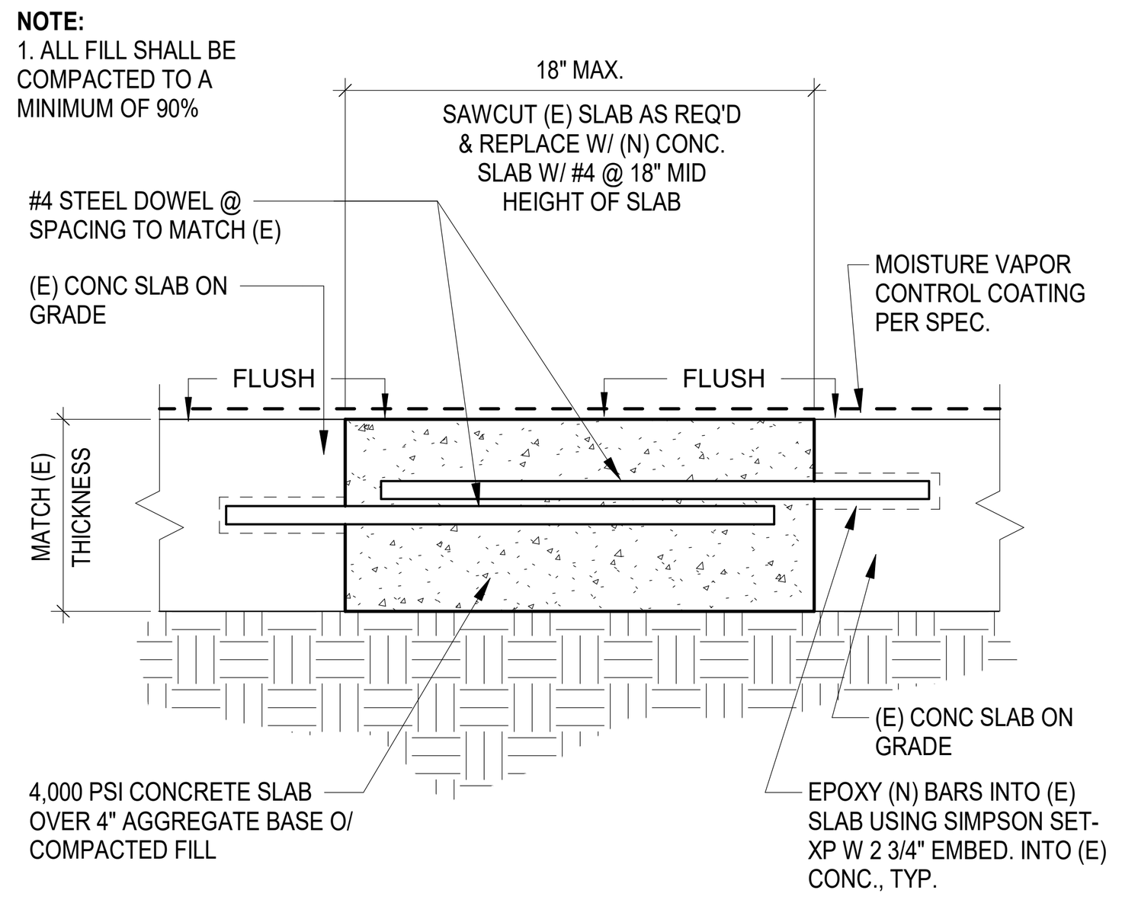
3.08 PROTECTION

A. Protect the Work of this section until Substantial Completion.

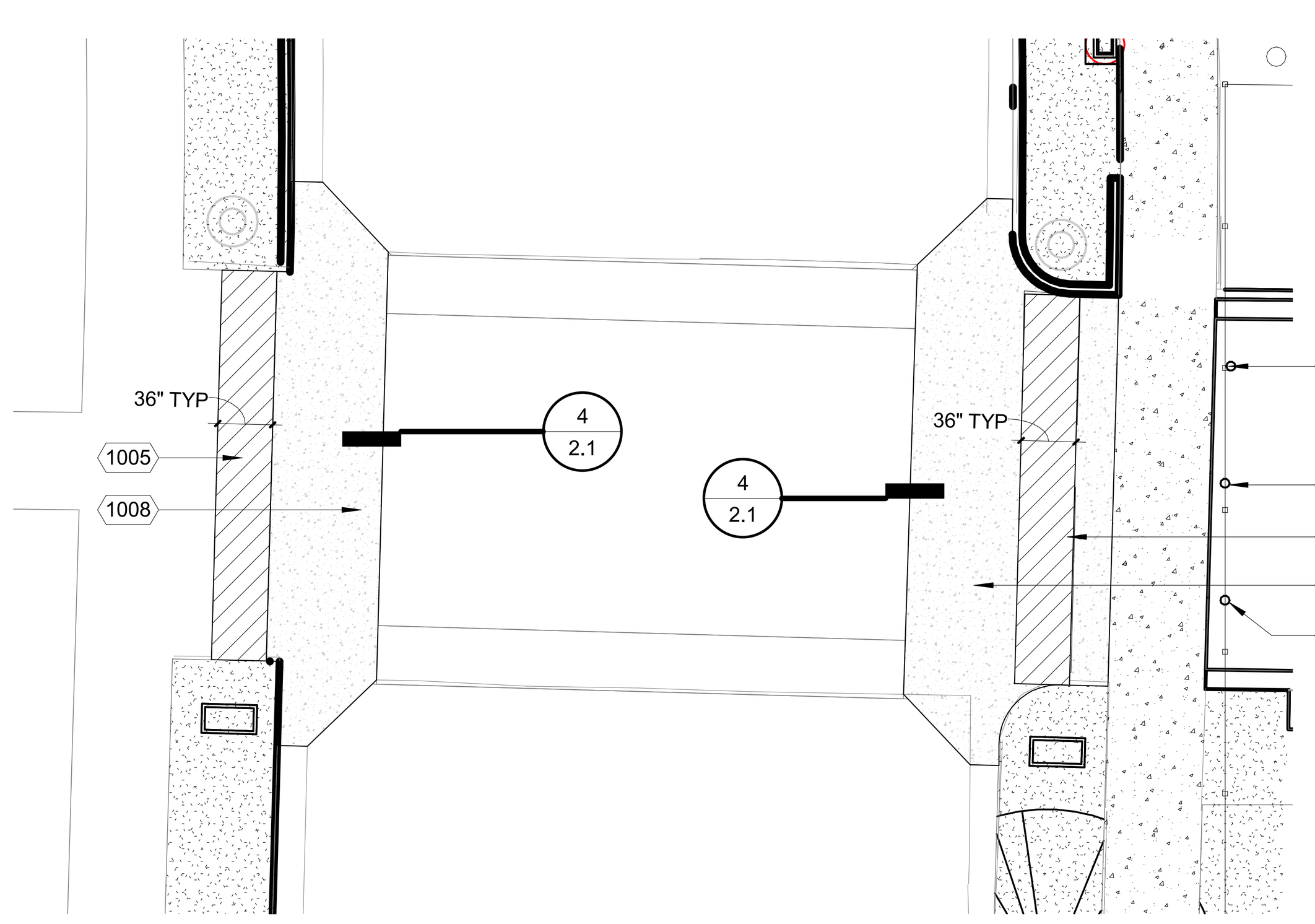
END OF SECTION

FOR BLUEBEAM LABELING/OCR:
A1.2
ENLARGED SITE PLAN

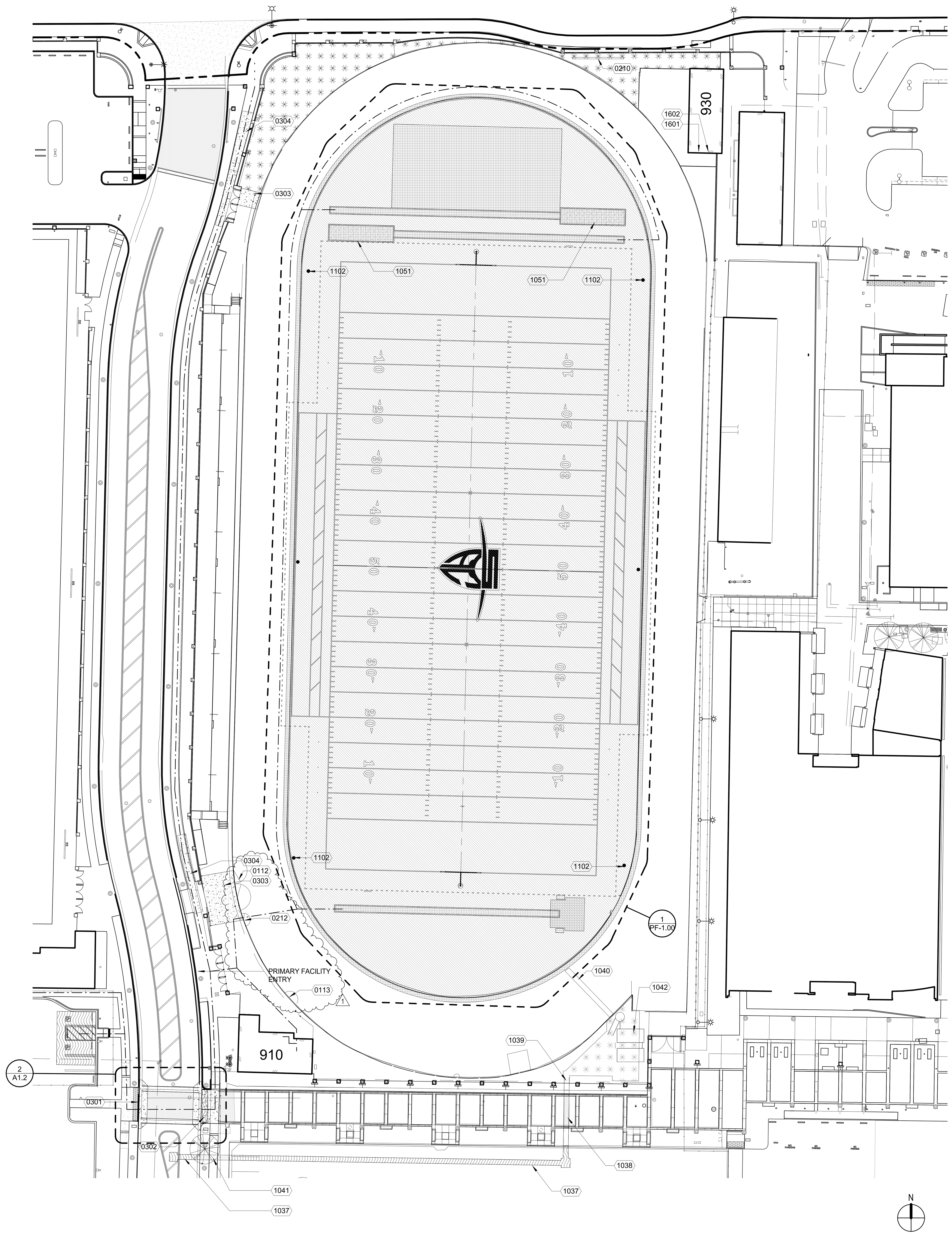
KEYNOTE	DESCRIPTION
0112	(E) 8' DOUBLE SWING GATE TO REMAIN, PROTECT IN PLACE
0113	(E) 4' SWING GATE TO REMAIN, PROTECT IN PLACE
0210	NEW 16'X 25' DIGITAL VIDEO SCOREBOARD, SEE 3/A1.2, 4/2.1, AND 4/C5.1, PULL TWO 120V POWER CIRCUITS FROM STORAGE ROOM PANEL L1E AND (1) SINGLE MODE FIBER FROM RESTROOM ELECTRICAL ROOM
0212	NEW 36" WIDE X 42" TALL CHAIN LINK ACCESSIBLE GATE, SEE 16/2.1
0301	REMOVE AND REPLACE EXISTING TRUNCATED DOMES AND 4" CONCRETE SLAB, SEE 1/2.1
0302	(N) TRUNCATED DOMES, SEE 1/2.1
0303	REMOVE AND REPLACE EXISTING NON-CONFORMING CONCRETE UP TO TRACK CURB AND REINSTALL PER 3, 5, AND 10/2.1 AND CIVIL, PROTECT EXISTING FENCING IN PLACE, TYPICAL
0304	REMOVE AND REPLACE EXISTING CONCRETE, SEE CIVIL DRAWINGS
1005	(N) TRUNCATED DOMES, SEE 1/2.1 TYP
1006	(E) BOLLARDS TO REMAIN, PROTECT IN PLACE
1008	(N) CONCRETE RIBBON GUTTER, TIE FLUSH TO EXISTING CONCRETE, SEE 3, 5/2.1 AND 9/C5.0
1037	(N) 3' WIDE TRENCH AT (E) ASPHALT FOR STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS. PATCH AND REPLACE EXISITNG ASPHALT
1038	(N) 3' WIDETRENCH AT (E) MASONRY PAVERS FOR STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS. PATCH AND REPLACE EXISITNG MASONRY PAVERS PER DETAIL 13/2.1
1039	(N) 3' WIDE TRENCH AT (E) TURF FOR STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS. PATCH AND REPLACE EXISITNG TURF
1040	(N) 3' WIDE TRENCH AT (E) RUBBERIZED TRACK FOR STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS. PATCH AND REPLACE EXISITNG RUBBERIZED TRACK
1041	(N) 3' WIDE TRENCH AT (E) CONCRETE FOR STORM DRAIN SYSTEM, SEE CIVIL DRAWINGS. PATCH AND REPLACE EXISITNG CONCRETE
1042	(E) STORM DRAIN SYSTEM, REFER TO CIVIL DRAWINGS
1051	(N) SAND PIT
1102	(N) QUICK COUPLER TIED INTO EXISTING IRRIGATION SYSTEM
1601	(E) PANEL L1E
1602	LOCATION OF COMPUTER CONTROL STATION FOR SCOREBOARD, PROVIDE FIBEROPTIC CABLING TO DIGITAL VIDEO SCOREBOARD TO THIS LOCATION



CONC. INFILL @ SLAB SAW CUT | 3" = 1'-0" | 3



CROSSWALK ENLARGED PLAN | 1/8" = 1'-0" | 2



ENLARGED SITE PLAN | 1/32" = 1'-0" | 1

SITE PLAN PLAN LEGEND | 1" = 1'-0"

- INSTALL ARTIFICIAL TURF PER ASTM F1951 IS A REQUIREMENT FOR ACCESSIBLE SURFACES ARTIFICIAL TURF, SEE PF-1.00. TURN AND INFILL TO BE OWNER FURNISHED.
- RUBBERIZED TRACK SURFACING OVER ASPHALT/CONCRETE PAVING, SEE L&N/PF-2.00
- NEW CONCRETE PAVING PER 2/C5.0
- (E) PLANTER
- (E) CONCRETE

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ARCHITECT PBK, Inc.
PBK.com
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909-987-0909 P

CIVIL
VCA ENGINEERS, INC.
T 323-729-6098
LANDSCAPE
EDGELAND
T 000-000-0000
SPORTS FIELD
PBK SPORTS
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MEPT
LEAF
T 000-000-0000

FOOTBALL FIELD TURF REPLACEMENT

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
SANTA ANA COLLEGE
1530 WEST 17TH STREET
SANTA ANA, CA 92706

CLIENT LOGO
RANCHO SANTIAGO
Community College District

SANTA ANA COLLEGE
DONS

DISCIPLINE

LICENSED ARCHITECT
BRUCE OU
C-34832
REN. 10-31-25
STATE OF CALIFORNIA

CLIENT
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

DATE	PROJECT NUMBER
10/17/24	240117

DRAWING HISTORY

No.	Description	Date
1	ADDENDUM 1	04/02/2025
2	DSA ADDENDUM 2	5/7/25

PROJECT STATUS

BUILDING NUMBER

ENLARGED SITE PLAN

A1.2

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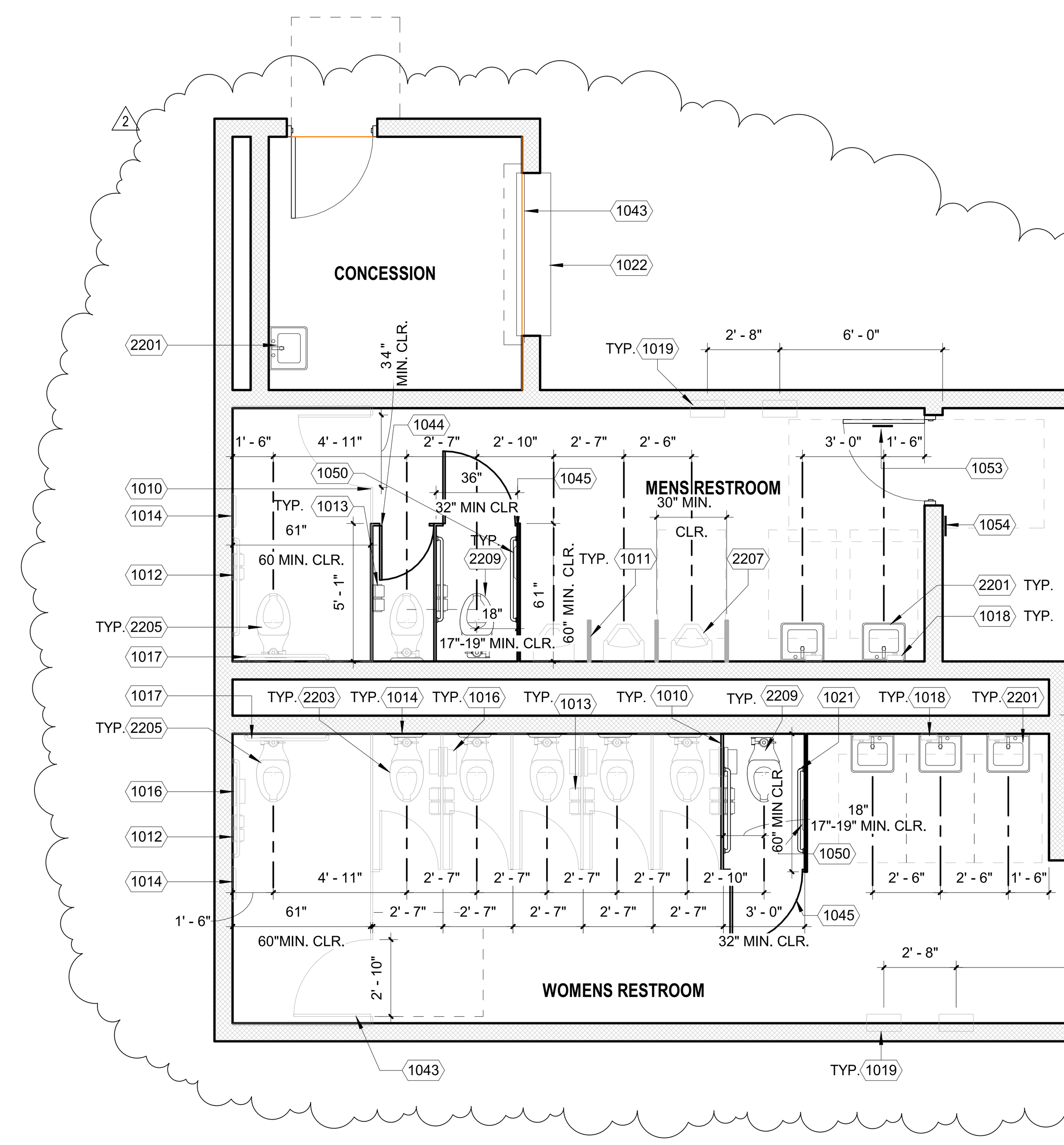
CHECKED BY:
Checker
DRAWN BY:
Author
PLOT STAMP:
5/8/2025 1:58:11 PM

EXISTING ACCESSIBLE RESTROOMS
A1.3
FOR BLUEBEAM LABELING/OCR:

EXISTING DRINKING FOUNTAIN NOTE:
THE SPOUT SHALL PROVIDE A FLOW OF WATER 4" HIGH MINIMUM AND SHALL BE LOCATED 5" MAXIMUM FROM THE FRONT OF THE UNIT. THE ANGLE OF THE WATER STREAM SHALL BE MEASURED HORIZONTALLY RELATIVE TO THE FRONT FACE OF THE UNIT. WHERE SPOUTS ARE LOCATED LESS THAN 3" OF THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHELL BE 30 DEGREES MAXIMUM. WHERE SPOUTS ARE LOCATED BETWEEN 3" AND 5" MAXIMUM FROM THE FRONT OF THE UNIT, THE ANGLE OF THE WATER STREAM SHALL BE 15 DEGREES MAXIMUM. CONTRACTOR ADJUST EXISTING DRINKING FOUNTAIN FLOW AS REQUIRED TO MEET THESE REQUIREMENTS.

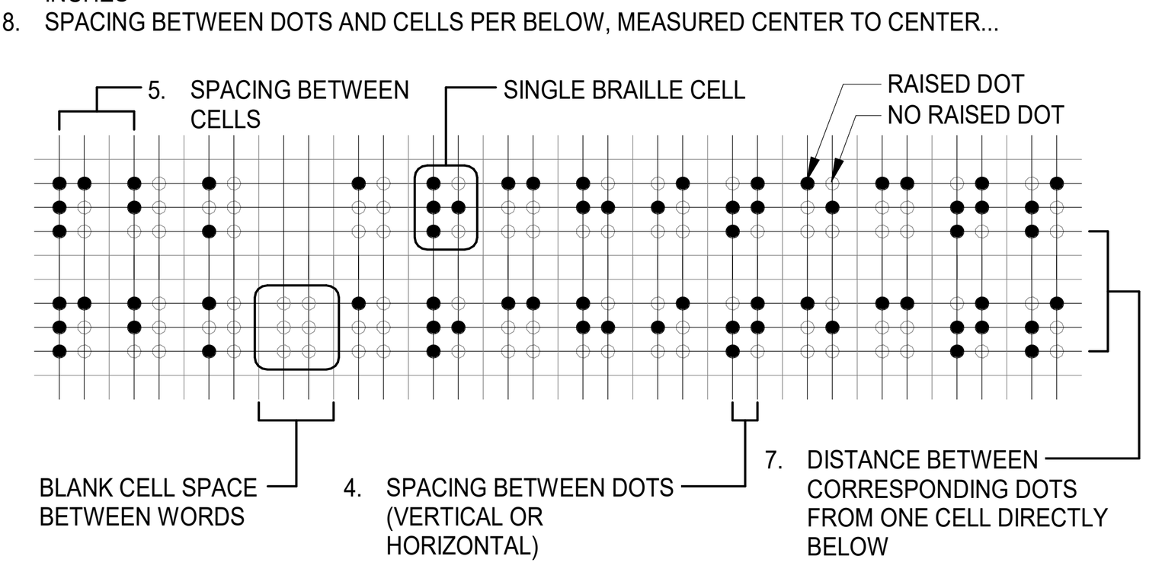


BUILDING 910 PUBLIC RESTROOM | 1/4" = 1'-0" | 17

KEYNOTE	DESCRIPTION
1010	(E) TOILET PARTITION
1011	(E) URINAL PARTITION
1012	(E) RECESSED TOILET TISSUE DISPENSER
1013	(E) SURFACE MOUNTED TOILET TISSUE DISPEENSER, REMOVE AND REINSTALL AS REQUIRED
1014	(E) TOILET SEAT COVER DISPENSER
1016	(E) SANITARY NAPKIN DISPENSER, 3" MAX PROSTUTION AT SEMI AMBULATORY STALL
1017	(E) STAINLESS STEEL GRAB BAR - 42" AT SIDE AND 36" AT REAR
1018	(E) SURFACE MOUNTED SOAP DISPENSER
1019	(E) RECESSED ELECTRIC HAND DRYER, 4" MAX PROJECTION
1020	(E) WALL MOUNTED DRINKING FOUNTAIN
1021	(E) 42" STAINLESS STEEEL GRAB BAR MOUNTED TO TOILET PARTITION
1022	(E) CANTILEVERED STAINLESS STEEL COUNTERTOP
1043	(E) ROLL UP COUNTER DOOR TO REMAIN, PROTECT IN PLACE
1044	DEMOLISH AND REPLACE EXISTING TOILET PARTITION WITH NEW TOILET PARTITION TO MATCH EXISTING, BOBRICK SRC OR EQUAL
1045	DEMOLISH AND REPLACE EXISTING TOILET PARTITION WITH NEW SEMI-AMBULANT TOILET PARTITION, BOBRICK SRC OR EQUAL
1050	(E) TOILET SEAT COVER DISPENSER TO BE REMOVED AND RELOCATED AT AMBULATORY STALLS
1053	(E) ACCESSIBLE RESTROOM DOOR SIGN TO REMAIN, PROTECT IN PLACE
1054	(E) ACCESSIBLE RESTROOM WALL SIGN TO REMAIN, PROTECT IN PLACE
2201	(E) LAVATORY, PROVIDE INSULATED PIPE PROTECTION AT COLD AND HOT WATER LINES
2203	(E) STANDARD WATER CLOSET
2205	(E) ACCESSIBLE WATER CLOSET
2207	(E) ACCESSIBLE URINAL
2209	REMOVE AND ADJUST EXISTING WALL MOUNT TOILET TO TOP OF SEAT AFF TO MEET SEMI-AMBULANT TOILET HEIGHT REQUIREMENTS, DEMOLISH AND PATCH EXISTING WALL AS REQUIRED AND ADJUST CARRIER BOLTS TO MATCH

NOTE:
ALL PLUMBING FIXTURES AND ACCESSORIES SHALL COMPLY WITH DETRAIL 2/-

BRAILLE REQUIREMENTS PER 2022 CBC 11B-703.3:
1. CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL COMPLY WITH SECTIONS 11B-703.3 AND 11B-703.4
2. BRAILLE DOTS SHALL HAVE A DOMED OR ROUNDED SHAPE AND COMPLY WITH TABLE 11B-703.3.1
3. DOT BASE DIAMETER = 0.059 TO 0.063 INCHES
4. DISTANCE BETWEEN TWO DOTS IN THE SAME CELL = 0.100 INCHES
5. DISTANCE BETWEEN CORRESPONDING DOTS IN ADJACENT CELLS = 0.300 INCHES
6. DOT HEIGHT = 0.025 TO 0.037 INCHES
7. DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW = 0.395 TO 0.400 INCHES
8. SPACING BETWEEN DOTS AND CELLS PER BELOW, MEASURED CENTER TO CENTER...



9. BRAILE SHALL BE POSITIONED BELOW THE CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE PLACED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" (9.5MM) MIN. AND 1/2 INCH (12.7MM) MAXIMUM FROM ANY OTHER TACTILE CHARACTERS AND 3/8" MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS.

BRAILLE STANDARDS FOR SIGNAGE | 6" = 1'-0" | 27

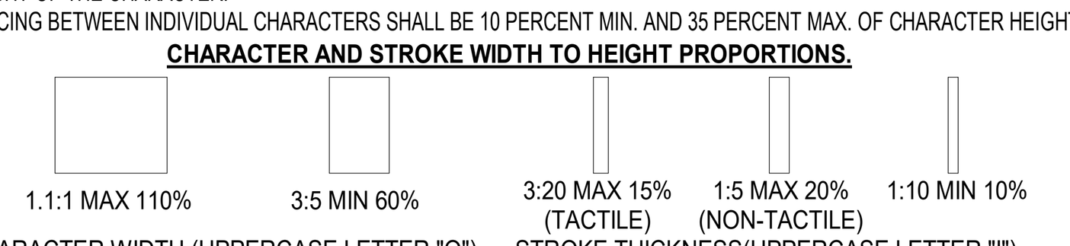
CHARACTER REQUIREMENTS:

A. CHARACTER REQUIREMENTS FOR ALL SIGNS PER 2022 CBC 11B-703:
1. CHARACTERS SHALL BE UPPERCASE.
2. CHARACTERS SHALL BE SANS SERIF. CHARTERS SHALL NOT BE ITALLIC, OBLIQUE, SCRIPT, HIGHLY DECORATIVE, OR OF OTHER UNUSUAL FORMS.
3. CHARACTER SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I".
4. SPACING BETWEEN THE BASELINES OF SEPARATE LINES OF RAISED CHARACTERS WITHIN A MESSAGE SHALL BE 135 PERCENT MIN. AND 170 PERCENT MAX. OF THE CHARACTER HEIGHT.
5. TEXT SHALL BE IN HORIZONTAL FORMAT.
6. CHARACTERS AND THEIR BACKGROUND SHALL HAVE A NON-GLARE FINISH AND CONTRAST WITH ONE ANOTHER

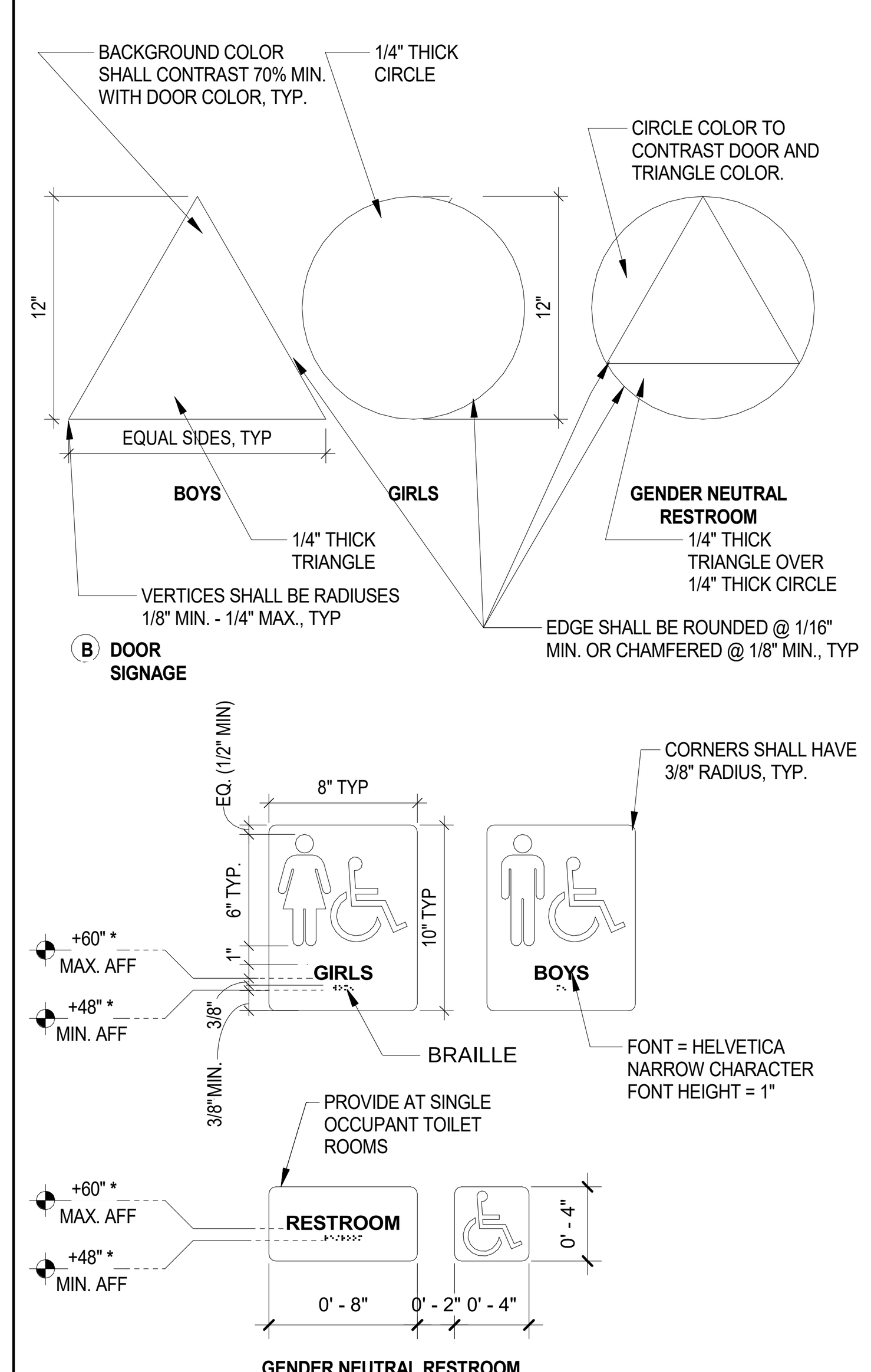
B. RAISED CHARACTER REQUIREMENTS FOR SIGNS WITH BRAILLE PER 2022 CBC 11B-703.2:
1. RAISED CHARACTERS SHALL COMPLY WITH REQUIREMENTS NOTED IN PARAGRAPH 'A' ABOVE
2. RAISED CHARACTERS SHALL BE 1/32 INCH MIN ABOVE BACKGROUND.
3. RAISED CHARACTER HEIGHT MEASURED VERTICALLY FROM THE BASELINE OF THE CHARACTER SHALL BE 5/8 INCH MINIMUM AND 2 INCHES MAXIMUM BASED ON THE HEIGHT OF THE UPPERCASE LETTER "I".
4. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.
5. CHARACTER SPACING BETWEEN INDIVIDUAL RAISED LETTERS SHALL BE 1/8 INCH MINIMUM AND FOUR (4) TIMES THE RAISED CHARACTER STROKE WIDTH MAXIMUM.

C. VISUAL CHARACTER REQUIREMENTS FOR SIGNS WITHOUT BRAILLE PER 2022 CBC 11B-703.5:
1. VISUAL CHARACTERS SHALL COMPLY WITH REQUIREMENTS NOTED IN PARAGRAPH 'A' ABOVE
2. MIN. CHARACTER HEIGHT SHALL CONFORM TO 2022 CBC TABLE 11B-703.5.5 BUT IN NO CASE SHALL BE LESS THAN 5/8 INCH.
3. HEIGHT FROM FINISH FLOOR SHALL BE NO LESS THAN 40 INCHES.
4. STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 20 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER.
5. SPACING BETWEEN INDIVIDUAL CHARACTERS SHALL BE 10 PERCENT MIN. AND 35 PERCENT MAX. OF CHARACTER HEIGHT.

CHARACTER AND STROKE WIDTH TO HEIGHT PROPORTIONS.



CHARACTER REQ. FOR SIGNAGE | 1" = 1'-0" | 28

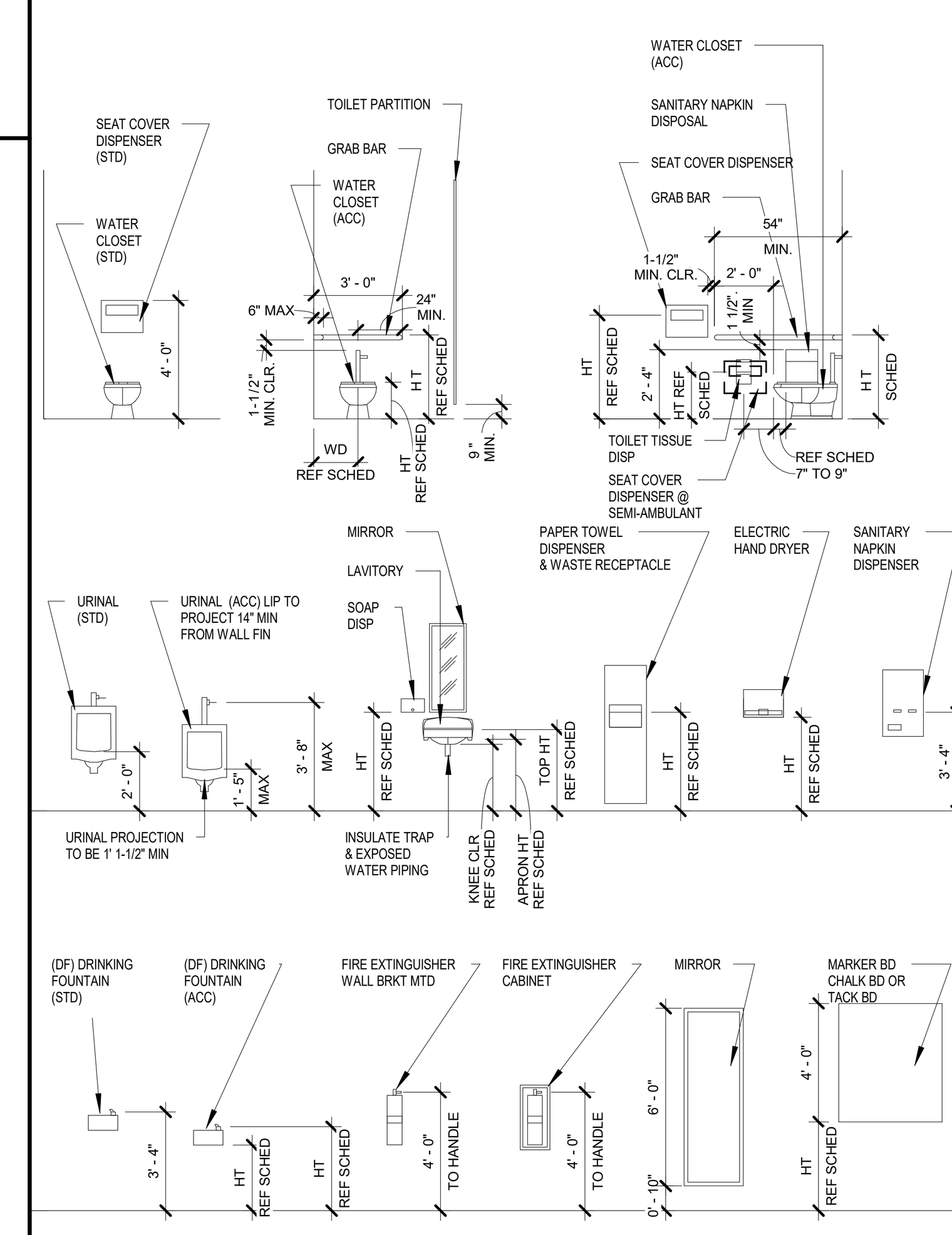


A WALL SIGNAGE

* 60" MAX A.F.F. TO THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS & 48" MIN. A.F.F. TO THE BASELINE OF THE LOWEST BRAILLE CELLS

NOTE:
FOR CHARACTER TYPE AND BRAILLE REQUIREMENTS SEE DETAILS 27 & 28
WHERE USED, THE ISA (INTERNATIONAL SYMBOL OF ACCESSIBILITY) SHALL APPROXIMATE COLOR AND PROPORTIONS FIG . 11B-703.7.2.1
THIS MEANS THAT THE FIGURE SHALL BE WHITE ON A BLUE BACKGROUND MATCHING 15090 OF FS 595C.

RR DOOR & WALL SIGNS | 1 1/2" = 1'-0" | 1



FIXTURE	SUGGESTED DIMENSION A		
TOILET CENTER LINE FROM WALL	1' - 5" ~ 1' - 6"		
TOILET SEAT HEIGHT (TOP OF SEAT)	1' - 5" ~ 1' - 7"		
GRAB BAR HEIGHT (TOP OF BAR)	2' - 9" ~ 3' - 0"		
TOILET PAPER DISPENSER HT TO OUTLET	1' - 7" MIN		
NAPKIN DISPOSAL IN BACK OF TOILET	6" MAX		
DISPENSER OR MIRROR HEIGHT	3' - 4" MAX		
LAVATORY/SINK TOP HEIGHT	2' - 10" MAX		
LAVATORY APRON CLEARANCE	2' - 5" MIN		
LAVATORY/SINK KNEE CLEARANCE	2' - 3" MIN		
DF BUBBLER HEIGHT	3' - 0" MAX		
DF BUBBLER FROM FRONT EDGE	5" MAX		
DF CONTROL FROM FRONT EDGE	6" MAX		
DF KNEE CLEARANCE	2' - 3" MIN		

NOTE

1. ALL FIXTURES AND ACCESSORIES ARE ACCESSIBLE UNLESS OTHERWISE NOTED OR DIMENSIONED.
2. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES UNDER LAVATORIES.
3. SEE ENLARGED TOILET PLANS FOR TOILET ACCESSORY LOCATIONS.
4. ALL ACCESSORIES ARE TO BE ACCESSIBLE WITH A MAXIMUM REACH HEIGHT OF 3'-4" FROM FLOOR TO TOP OF FUNCTIONAL POINT UNLESS OTHERWISE NOTED OR DIMENSIONED. MIRROR HEIGHT IS TO BOTTOM OF REFLECTIVE SURFACE.

PLBG. FIXTURES AND ACCS | 3/16" = 1'-0" | 2

ARCHITECT PBK, Inc.
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909-987-0909 P
PBK.com
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T 000-000-0000
MEPT
LEAF
T 000-000-0000

FOOTBALL FIELD TURF REPLACEMENT

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
SANTA ANA COLLEGE
1530 WEST 17TH STREET
SANTA ANA, CA 92706

CLIENT LOGO

DISCIPLINE

LICENSED ARCHITECT BRUCE OU C-34832 REN. 10-31-25 STATE OF CALIFORNIA

CLIENT
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

DATE	PROJECT NUMBER
10/17/24	240117

DRAWING HISTORY

No.	Description	Date
2	DSA ADDENDUM 2	5/7/25

PROJECT STATUS

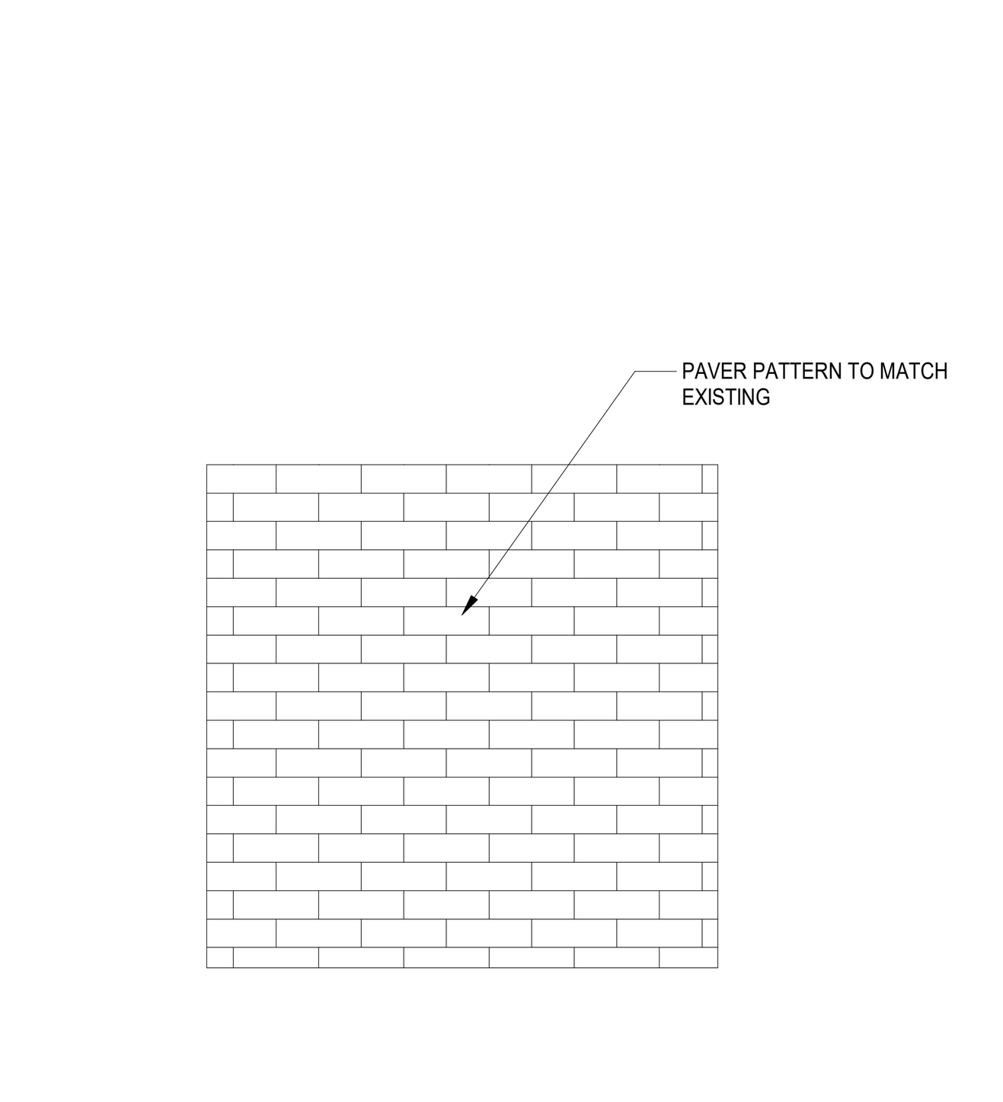
BUILDING NUMBER

EXISTING ACCESSIBLE RESTROOMS

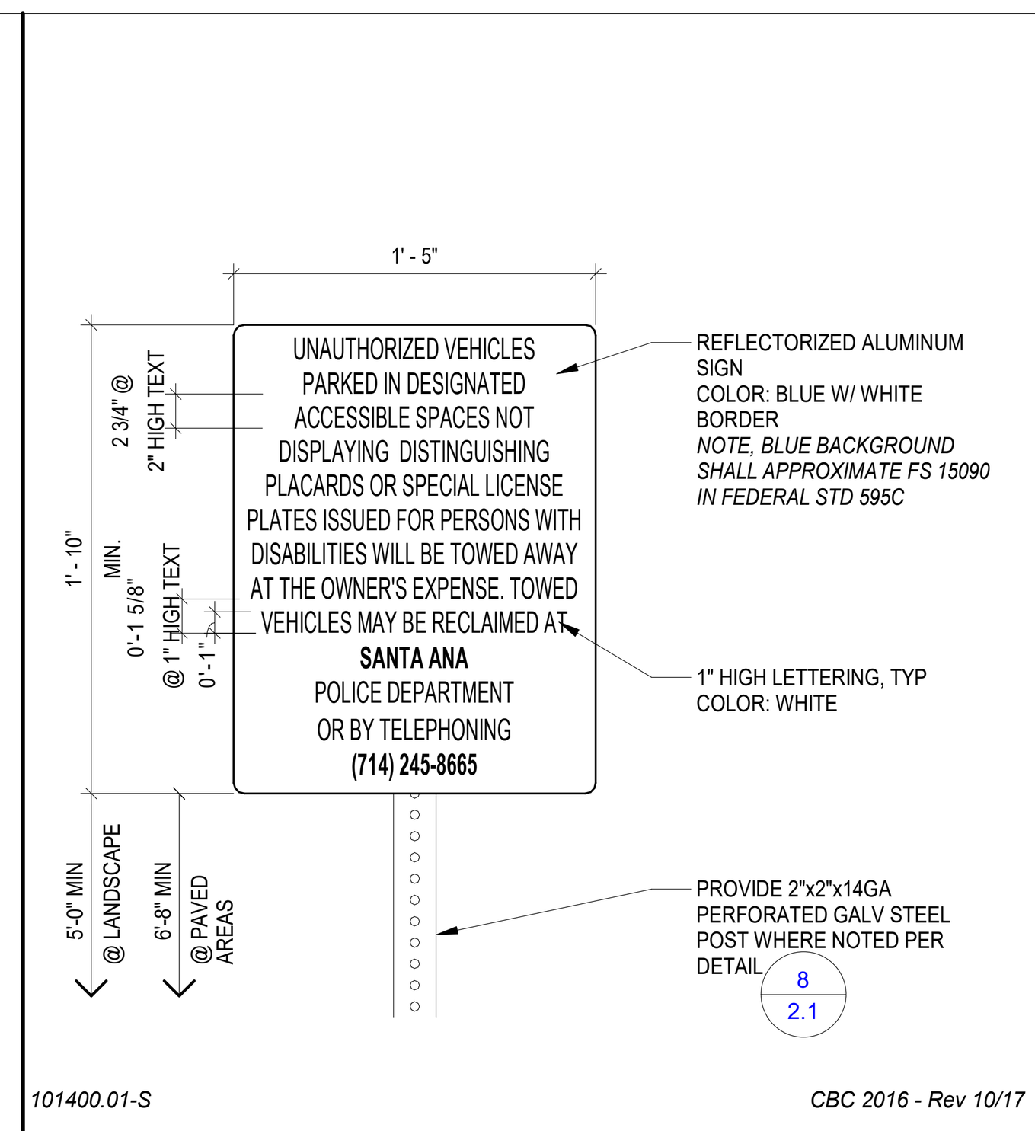
A1.3

FILE PATH: E:\Revit\240117 - RSCCD Santa Ana College Football Turf Replacement - Central.rvt
CHECKED BY: Checker
DRAWN BY: Author
PLOT STAMP: 5/8/2025 1:58:15 PM

SITE DETAILS
2.1
FOR BLUEBEAM LABELING/OCR:

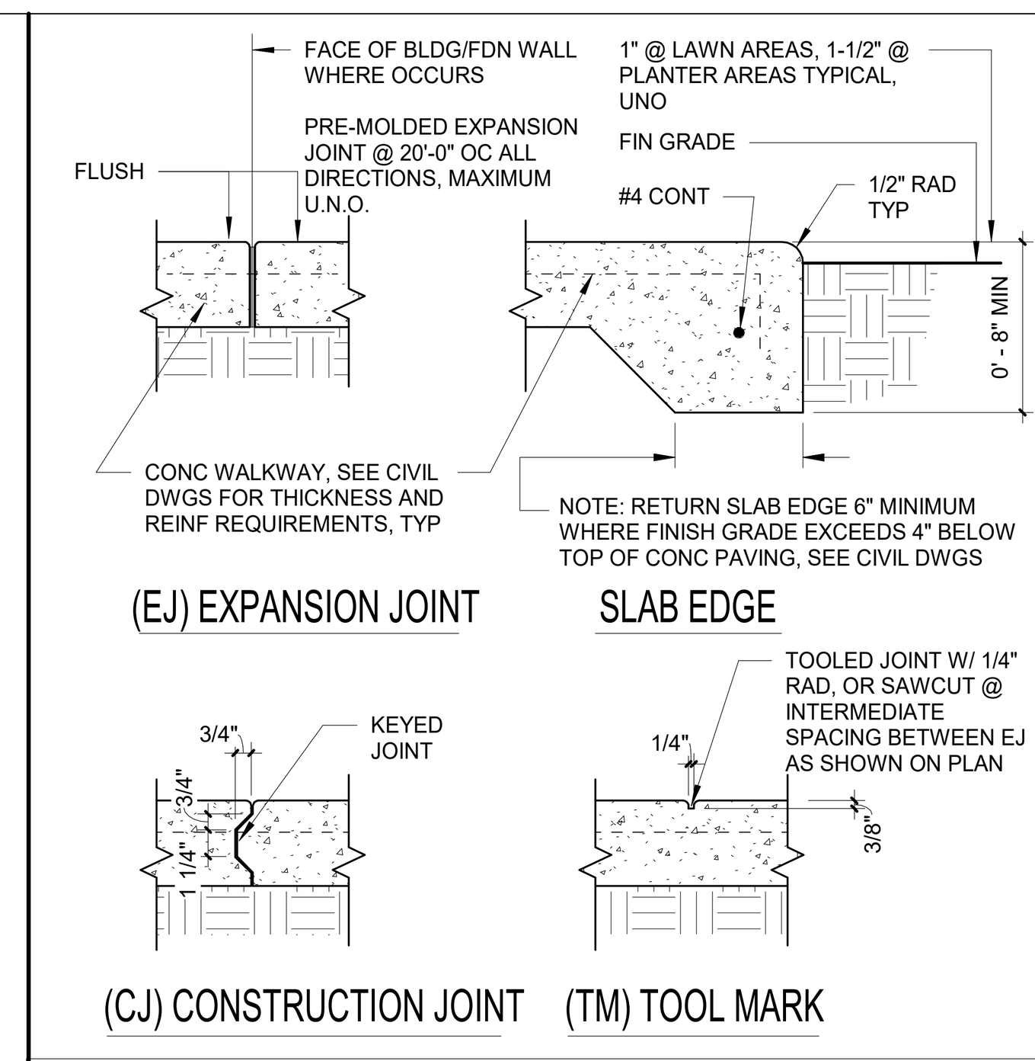


CONCRETE PAVER PATTERN | 3/4" = 1'-0" | 13



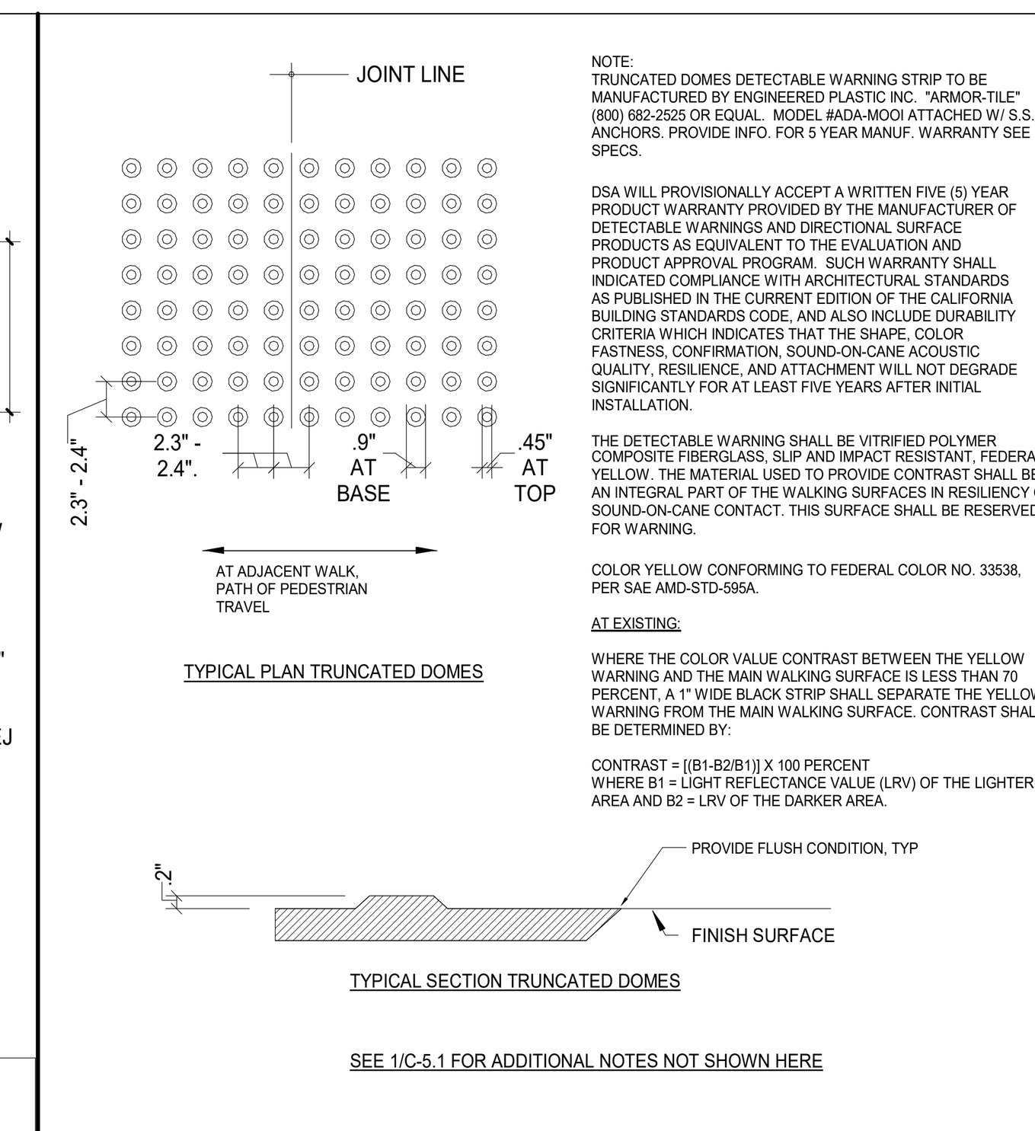
1' - 5"
UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE. TOWED VEHICLES MAY BE RECLAIMED AT:
SANTA ANA
POLICE DEPARTMENT
OR BY TELEPHONING
(714) 245-8665
REFLECTORIZED ALUMINUM SIGN COLOR: BLUE W/ WHITE BORDER
NOTE, BLUE BACKGROUND SHALL APPROXIMATE FS 15090 IN FEDERAL STD 595C
1" HIGH LETTERING, TYP COLOR: WHITE
PROVIDE 2"x2"x14GA PERFORATED GALV STEEL POST WHERE NOTED PER DETAIL 8/2.1
2 3/4" @ 2" HIGH TEXT
1' - 10" MIN
@ 1" HIGH TEXT
5'-0" MIN @ LANDSCAPE
6'-8" MIN @ PAVED AREAS
101400.01-S
CBC 2016 - Rev 10/17

TOW AWAY SIGN | 1 1/2" = 1'-0" | 9

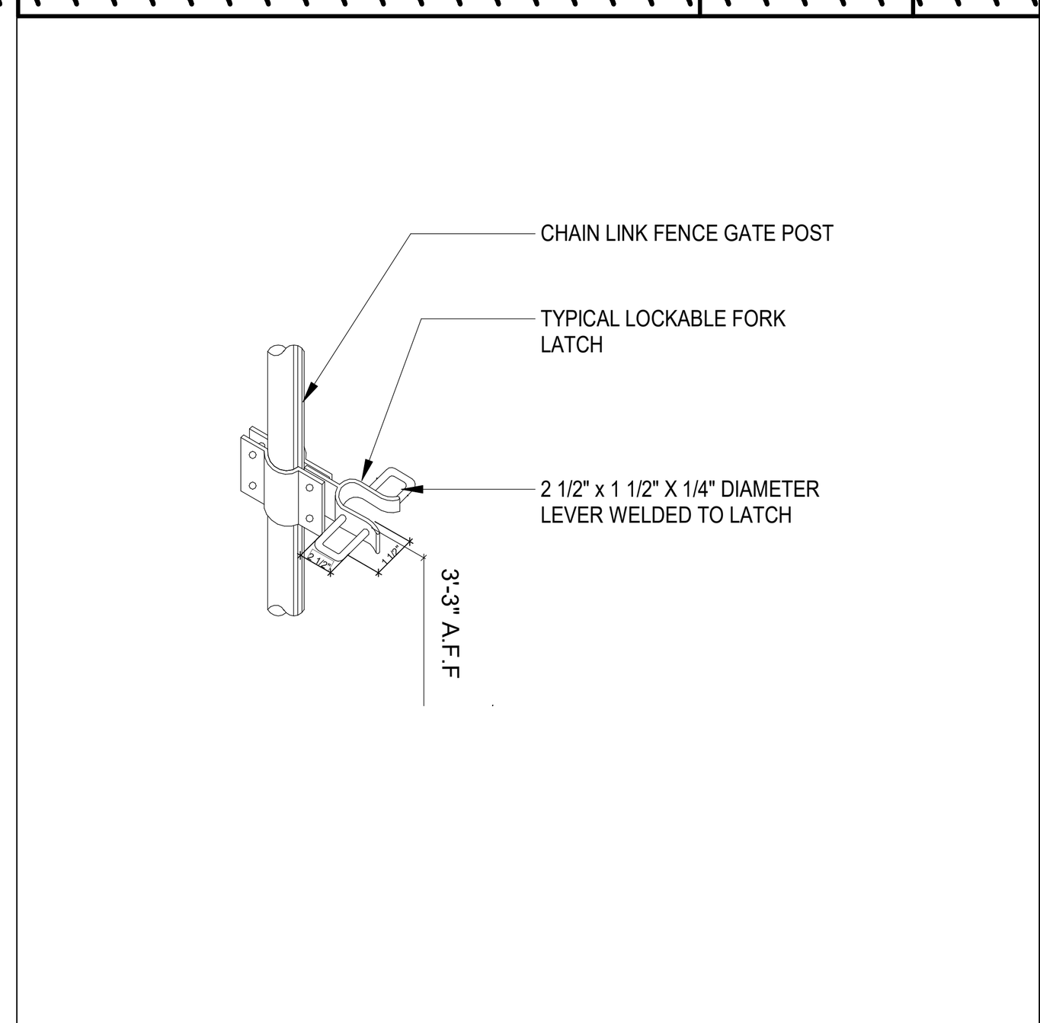


FACE OF BLDG/FDN WALL WHERE OCCURS
PRE-MOLDED EXPANSION JOINT @ 20'-0" OC ALL DIRECTIONS, MAXIMUM U.N.O.
FLUSH
CONC WALKWAY, SEE CIVIL DWGS FOR THICKNESS AND REINF REQUIREMENTS, TYP
1" @ LAWN AREAS, 1-1/2" @ PLANTER AREAS TYPICAL, UNO
FIN GRADE
#4 CONT
1/2" RAD TYP
0' - 8" MIN
NOTE: RETURN SLAB EDGE 6" MINIMUM WHERE FINISH GRADE EXCEEDS 4" BELOW TOP OF CONC PAVING, SEE CIVIL DWGS
(EJ) EXPANSION JOINT
SLAB EDGE
KEYED JOINT
TOOLED JOINT W/ 1/4" RAD, OR SAWCUT @ INTERMEDIATE SPACING BETWEEN EJ AS SHOWN ON PLAN
(CJ) CONSTRUCTION JOINT
(TM) TOOL MARK
SCARIFY SUBGRADE TO A MINIMUM OF 12" BELOW CONCRETE SITEWORK AND COMPACT TO AT LEAST 90% RELATIVE COMPACTION, TYPICAL U.O.N.

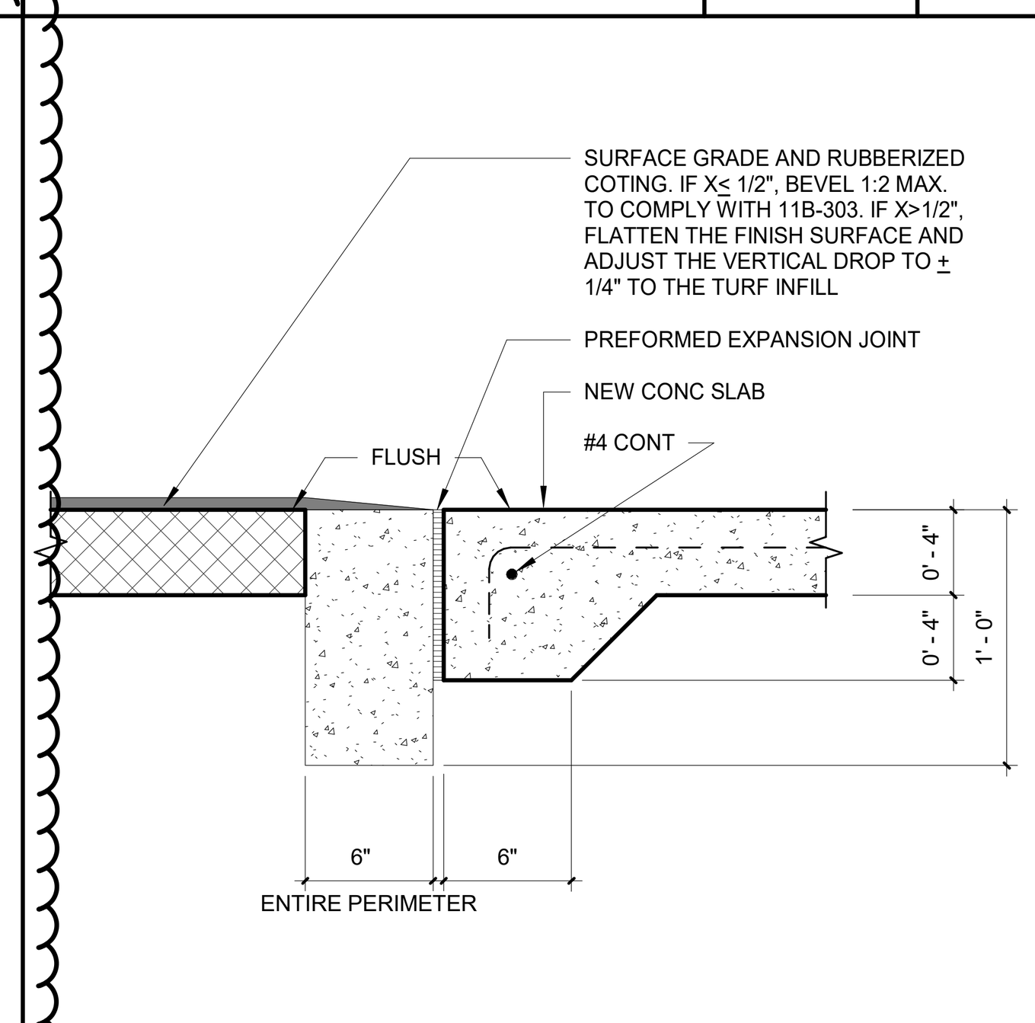
TYP CONC SLABS | 1 1/2" = 1'-0" | 5



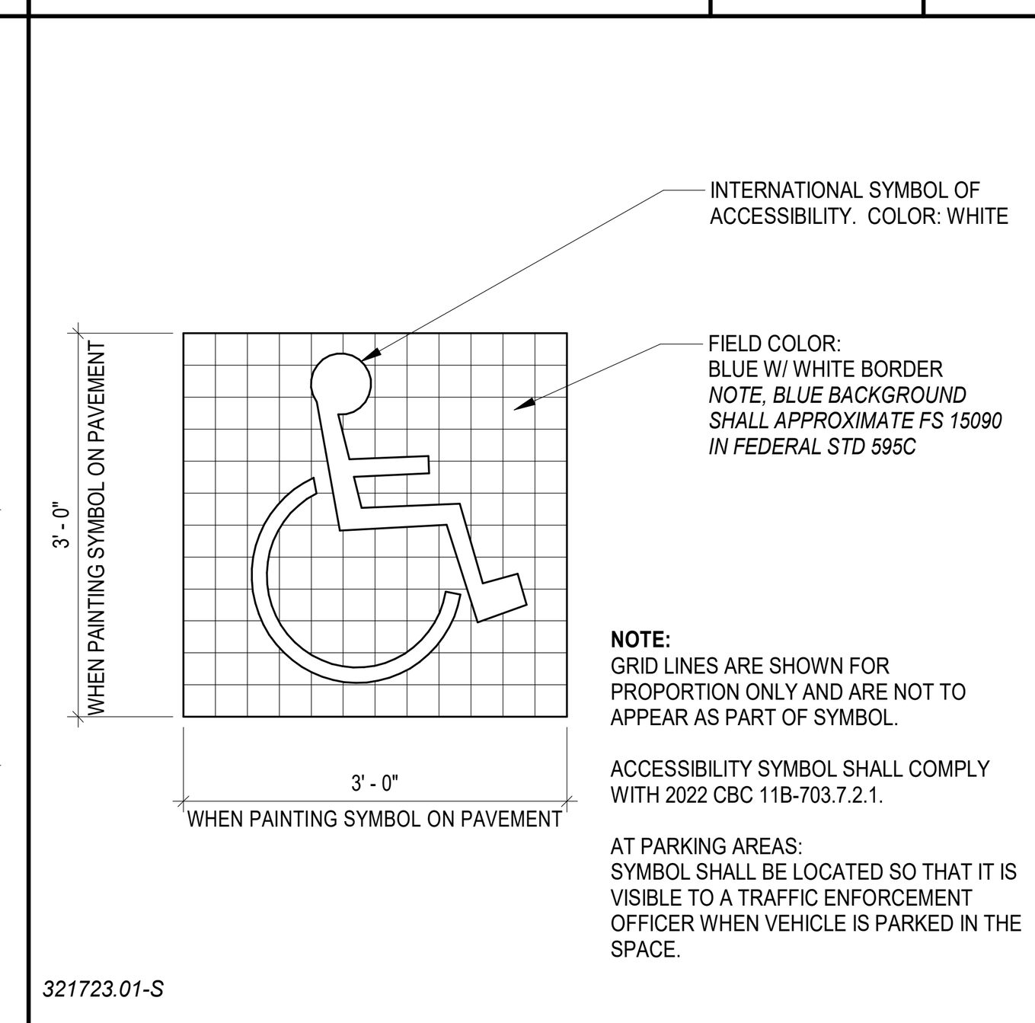
TRUNCATED DOMES | 1 1/2" = 1'-0" | 1



ACCESSIBLE GATE LATCH DTL. | 1/2" = 1'-0" | 14

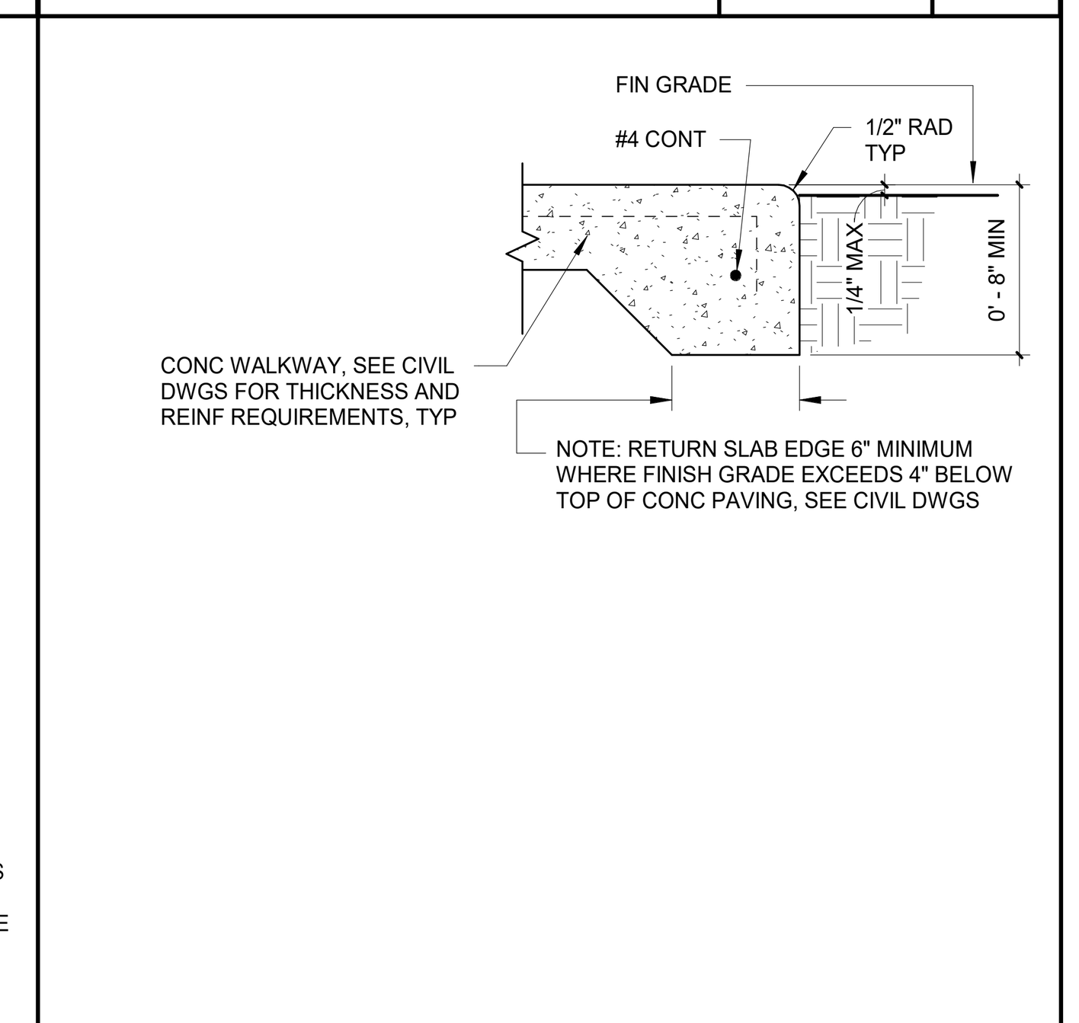


CONC. TO RUBBERIZED TRACK | 1 1/2" = 1'-0" | 10

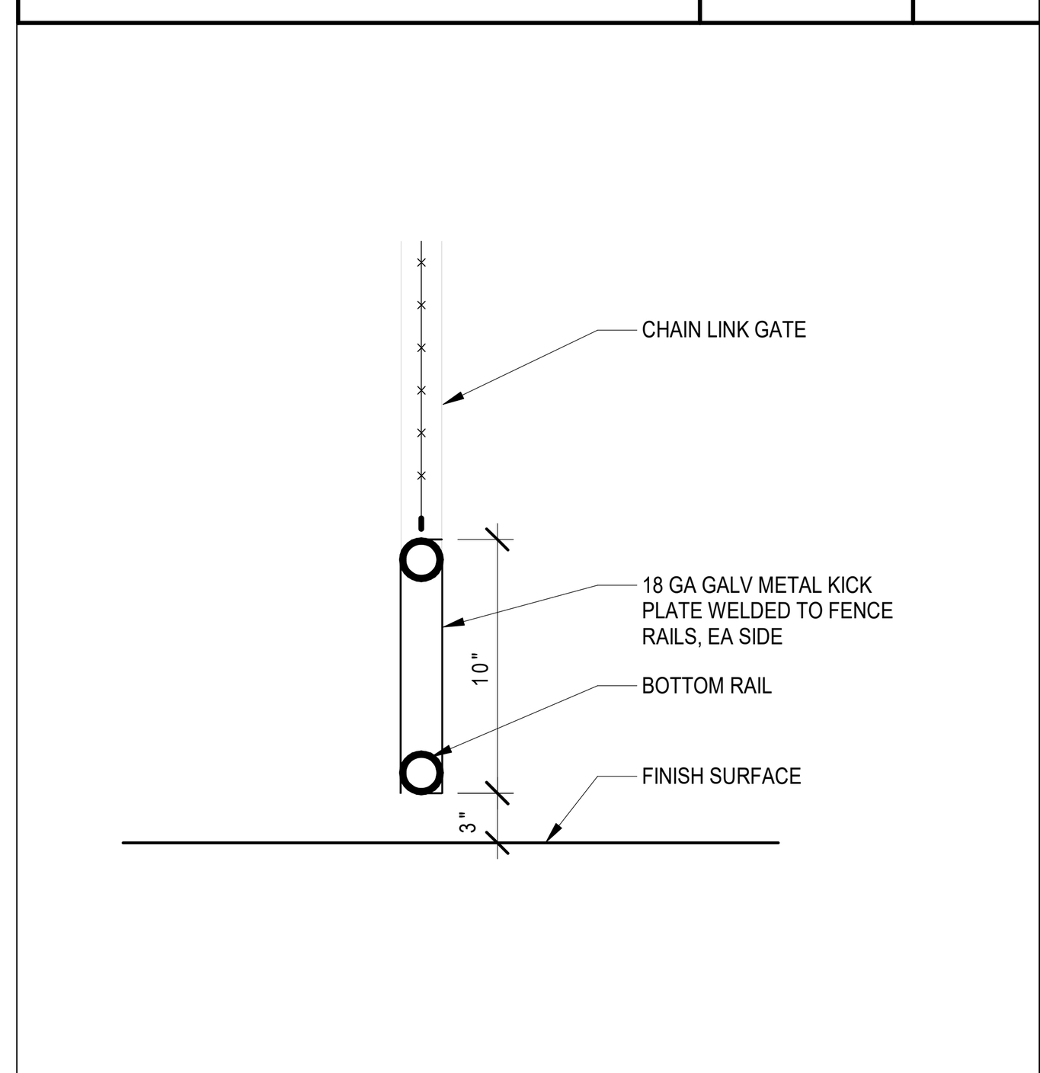


INTERNATIONAL SYMBOL OF ACCESSIBILITY. COLOR: WHITE
FIELD COLOR: BLUE W/ WHITE BORDER
NOTE, BLUE BACKGROUND SHALL APPROXIMATE FS 15090 IN FEDERAL STD 595C
WHEN PAINTING SYMBOL ON PAVEMENT
3' - 0"
NOTE:
GRID LINES ARE SHOWN FOR PROPORTION ONLY AND ARE NOT TO APPEAR AS PART OF SYMBOL.
ACCESSIBILITY SYMBOL SHALL COMPLY WITH 2022 CBC 11B-703.7.2.1.
AT PARKING AREAS:
SYMBOL SHALL BE LOCATED SO THAT IT IS VISIBLE TO A TRAFFIC ENFORCEMENT OFFICER WHEN VEHICLE IS PARKED IN THE SPACE.
321723.01-S

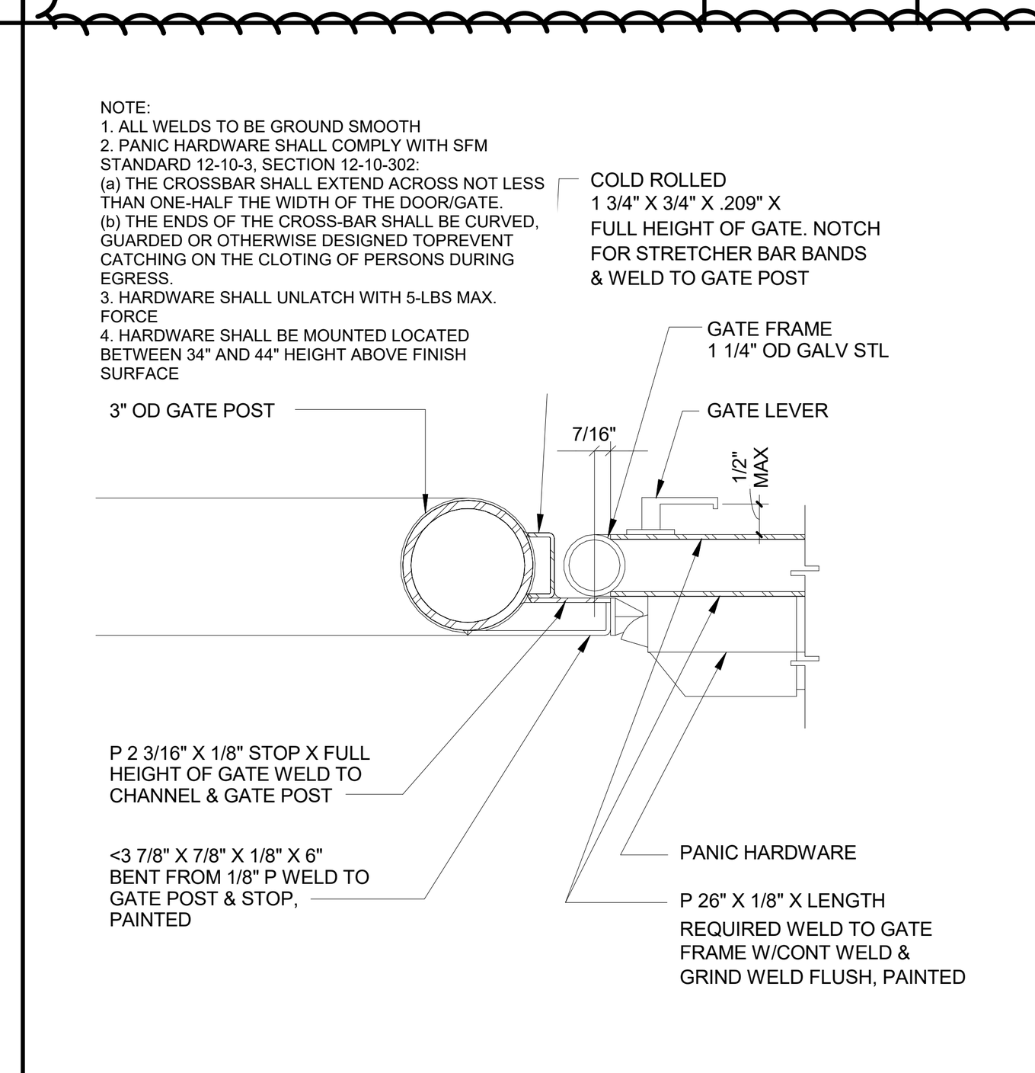
ISA | 3/4" = 1'-0" | 6



TRANSITION - CONC | 1 1/2" = 1'-0" | 2

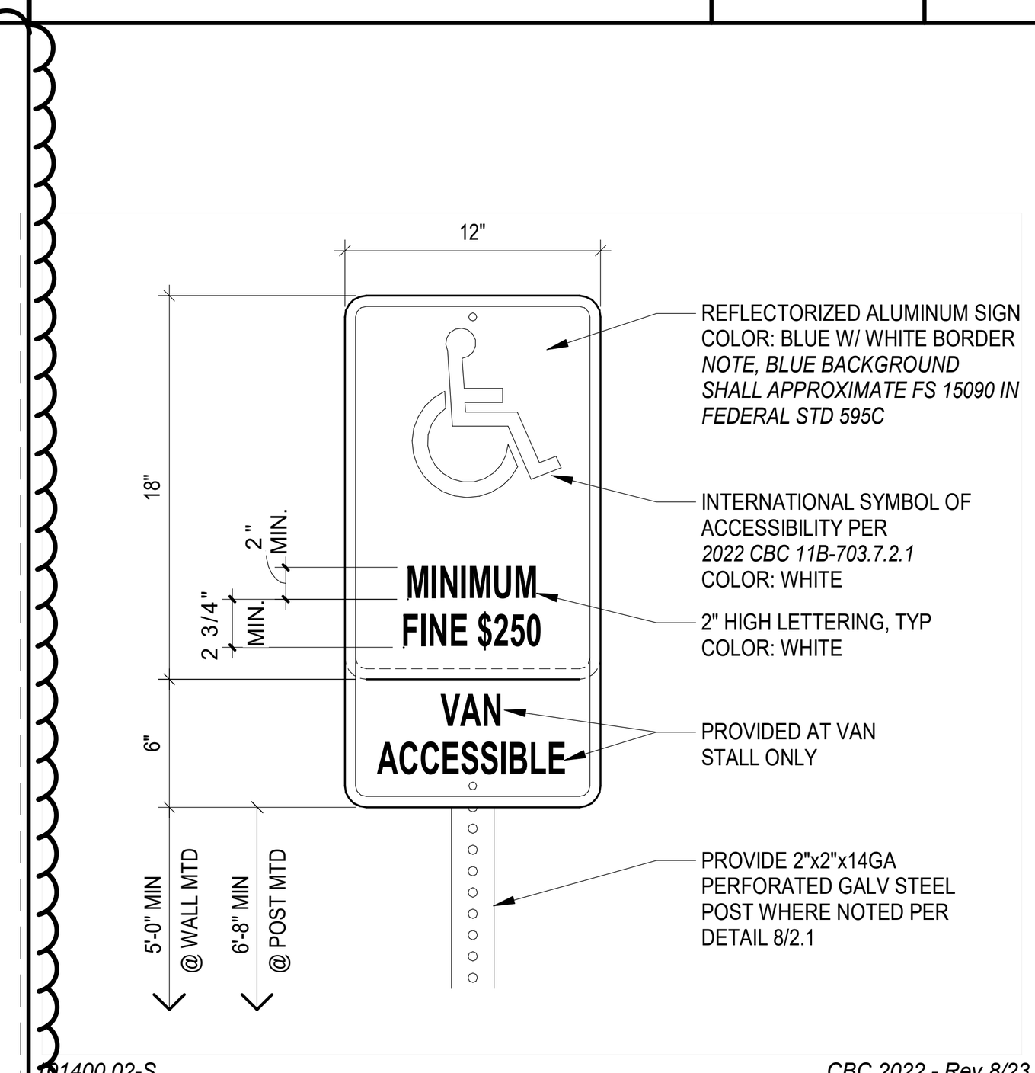


CHAIN LINK FENCE KICKPLATE | 1 1/2" = 1'-0" | 15



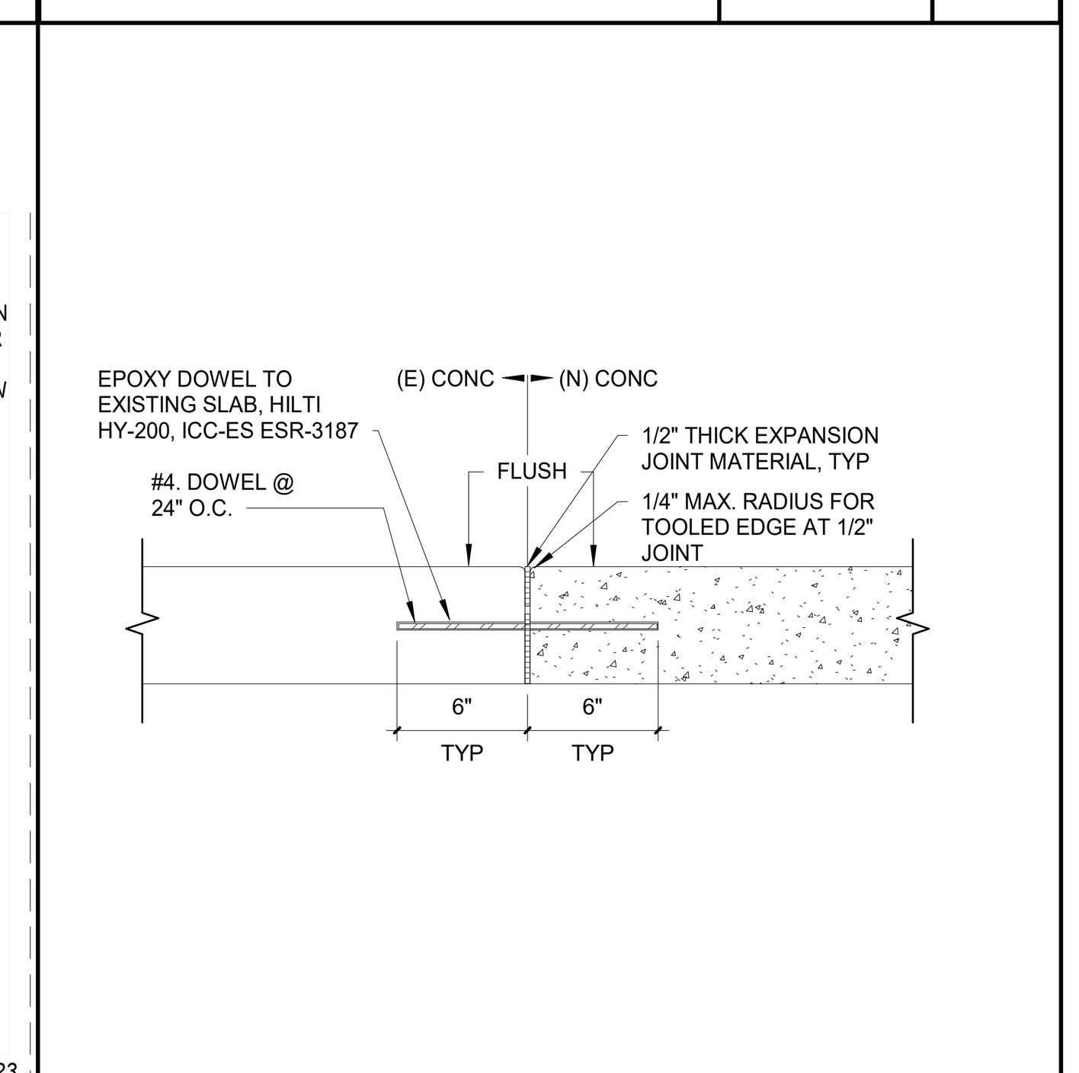
NOTE:
1. ALL WELDS TO BE GROUND SMOOTH
2. PANIC HARDWARE SHALL COMPLY WITH SFM STANDARD 12-10-3, SECTION 12-10-302
3. HARDWARE SHALL UNLATCH WITH 5-LBS MAX FORCE
4. HARDWARE SHALL BE MOUNTED LOCATED BETWEEN 34" AND 44" HEIGHT ABOVE FINISH SURFACE
COLD ROLLED 1 3/4" X 3/4" X .209" X FULL HEIGHT OF GATE. NOTCH FOR STRETCHER BAR BANDS & WELD TO GATE POST
GATE FRAME 1 1/4" OD GALV STL
3" OD GATE POST
GATE LEVER
PANIC HARDWARE

GATE LATCH | 3" = 1'-0" | 11

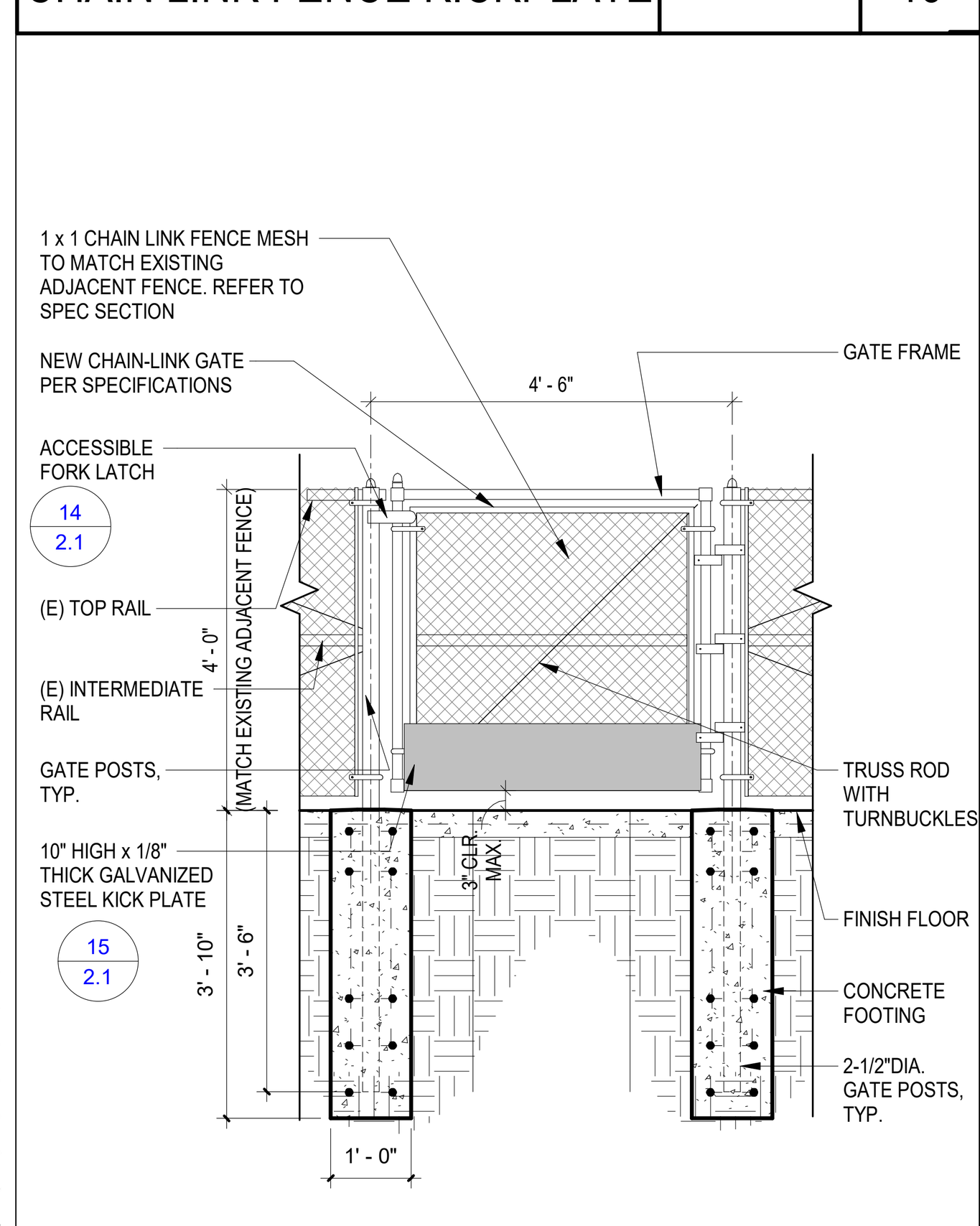


12"
REFLECTORIZED ALUMINUM SIGN COLOR: BLUE W/ WHITE BORDER
NOTE, BLUE BACKGROUND SHALL APPROXIMATE FS 15090 IN FEDERAL STD 595C
INTERNATIONAL SYMBOL OF ACCESSIBILITY PER 2022 CBC 11B-703.7.2.1 COLOR: WHITE
2" HIGH LETTERING, TYP COLOR: WHITE
MINIMUM FINE $250
VAN ACCESSIBLE
PROVIDED AT VAN STALL ONLY
PROVIDE 2"x2"x14GA PERFORATED GALV STEEL POST WHERE NOTED PER DETAIL 8/2.1
18"
6"
5'-0" MIN @ WALL MTD
6'-8" MIN @ POST MTD
101400.02-S
CBC 2022 - Rev 8/23

ACCESSIBLE PARKING SIGN | 1 1/2" = 1'-0" | 7

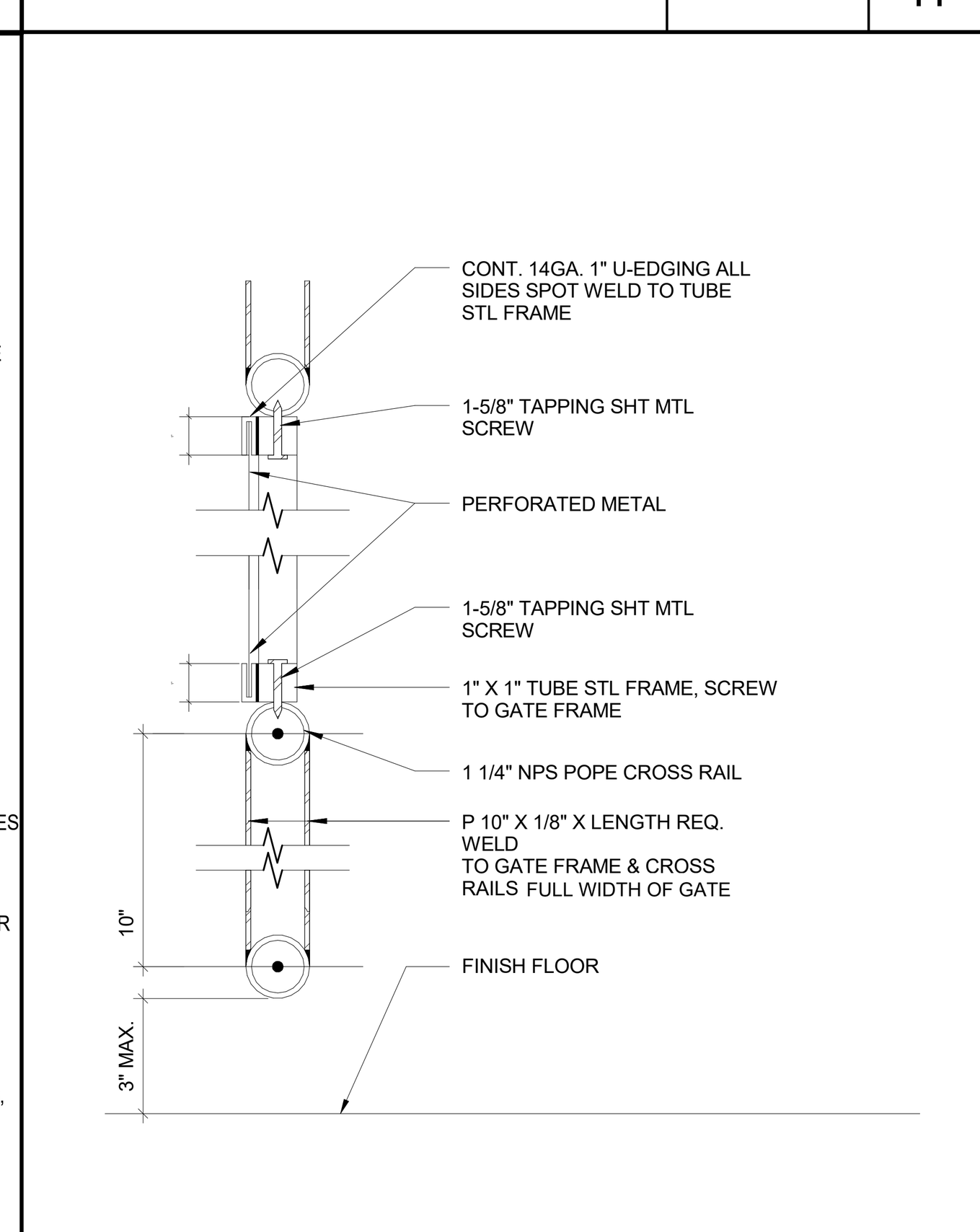


TYP (N) TO (E) CONCRETE | 1 1/2" = 1'-0" | 3



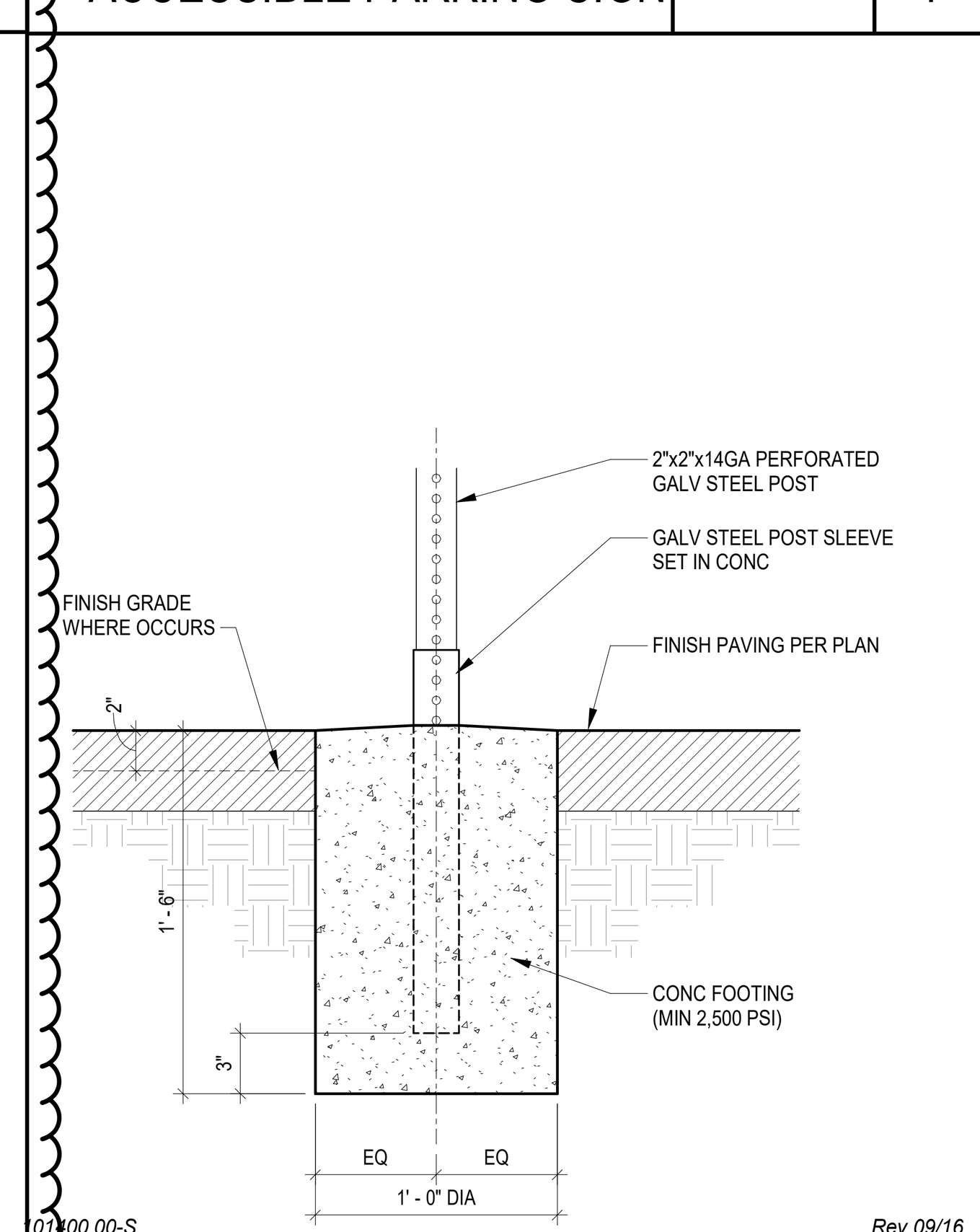
1 x 1 CHAIN LINK FENCE MESH TO MATCH EXISTING ADJACENT FENCE. REFER TO SPEC SECTION
NEW CHAIN-LINK GATE PER SPECIFICATIONS
ACCESSIBLE FORK LATCH
14 2.1
(E) TOP RAIL
(E) INTERMEDIATE RAIL
GATE POSTS, TYP.
10" HIGH x 1/8" THICK GALVANIZED STEEL KICK PLATE
15 2.1
4' - 6"
GATE FRAME
MATCH EXISTING ADJACENT FENCE
TRUSS ROD WITH TURNBUCKLES
FINISH FLOOR
CONCRETE FOOTING
2-1/2"DIA GATE POSTS, TYP.
1' - 0"

CHAINLINK PEDESTRIAN SINGLE GATE | NOT TO SCALE | 16

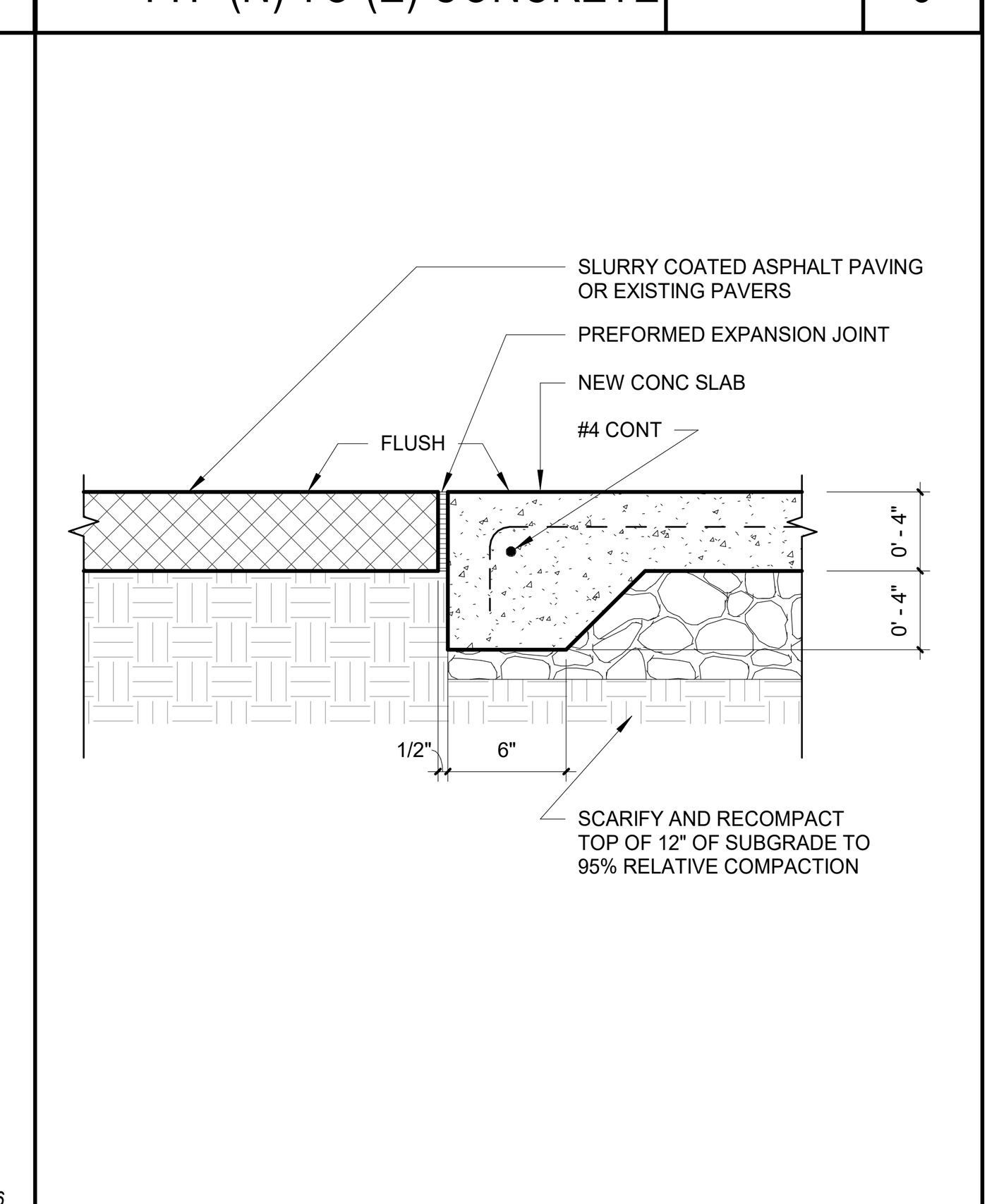


CONT. 14GA. 1" U-EDGING ALL SIDES SPOT WELD TO TUBE STL FRAME
1-5/8" TAPPING SHT MTL SCREW
PERFORATED METAL
1-5/8" TAPPING SHT MTL SCREW
1" X 1" TUBE STL FRAME, SCREW TO GATE FRAME
1 1/4" NPS POPE CROSS RAIL
P 10" X 1/8" X LENGTH REQ. WELD TO GATE FRAME & CROSS RAILS FULL WIDTH OF GATE
FINISH FLOOR

HARDWARE & KICK PLATE | 3" = 1'-0" | 12



SIGN POST FOOTING | 1 1/2" = 1'-0" | 8



SLAB @ ASPHALT | 1 1/2" = 1'-0" | 4

FILE PATH: C:\Users\leo.simental\Documents\240117 - RSCCD Santa Ana College Football Turf Replacement - Central_Leo.Simental.rvt

CHECKED BY:
XX
DRAWN BY:
XX
PLOT STAMP:
5/7/2025 2:44:13 PM

PBK

ARCHITECT
PBK, Inc.
RANCHO CUCAMONGA
8163 Rochester Avenue, Suite 100
Rancho Cucamonga, CA 91730
909-987-0909 P

CIVIL
VCA ENGINEERS, INC.

FOOTBALL FIELD TURF REPLACEMENT

RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT
SANTA ANA COLLEGE
1530 WEST 17TH STREET
SANTA ANA, CA 92706

CLIENT LOGO
RANCHO SANTIAGO Community College District

SANTA ANA COLLEGE DONS

DISCIPLINE
LICENSED ARCHITECT
BRUCE OU
C-34832
REN. 10-31-25
STATE OF CALIFORNIA

CLIENT
RANCHO SANTIAGO COMMUNITY COLLEGE DISTRICT

DATE	PROJECT NUMBER
10/17/24	240117

DRAWING HISTORY

No.	Description	Date
2	DSA ADDENDUM 2	

PROJECT STATUS
BUILDING NUMBER

SITE DETAILS

2.1

RFI #1

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	04/24/25		
FROM:	Environmental Construction	EMAIL:	egamonal@environcon.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

I'm writing to ask if the District will be conducting an additional job walk for this project.

RESPONSE TO CLARIFICATION:

The District will not be conducting an additional job walk at this time.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #2

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/28/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Geotech Report page 7. Spec section 32 18 13	DRAWING NUMBER:	PF 2.0 - Detail A

REQUESTED CLARIFICATION:

The plans call for a 1" layer of topping stone and a minimum 20" section of No. 57 Stone.

Alternatively the geotech report states - "We anticipate the use of at least 4 inches of #57 stone as base stone with a 2-inch cap of #8 stone."

Please confirm the section for the synthetic turf.

RESPONSE TO CLARIFICATION:

Contractor to follow per plan for 20” minimum section of No. 57 stone to meet WQMP and hydraulic requirements for storage of stormwater runoff.

- Dennis Pham, VCA Engineers, Inc. 05.06.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #3

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/28/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Geotech Report page 7	DRAWING NUMBER:	PF 2.0 - Detail A

REQUESTED CLARIFICATION:

The detail calls for a 1" topping stone and minimum 20" no. 57 stone. The geotech report states that

" In the past, a single gradation layer of Caltrans Modified Class 2 permeable aggregate was often used as drainage stone; however, in the recent past it has been difficult to find acceptable quality of that aggregate."

We brought these concerns to Vulcan and they have modified the procedure in which they produce the material. We have had no issues attaining permeability rates since bringing this to their attention. We have current test results that reflect this.

Please see attached submittal sheet from Vulcan.

RESPONSE TO CLARIFICATION:

Civil has no exception.

- Dennis Pham, VCA Engineers, Inc. 05.06.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

Vulcan Materials Company
Western Division

Contractor: ***Asphalt Fabric*** October 19, 2023

Project: ***Various Locations***

Plant: ***Vulcan Materials / Reliance Stone (Azusa Fish Canyon SMARA# 91-19-0035)***

Material: ***3/4" Class II Permeable Base***
Product Code: ***66000***

This is to certify that Vulcan Materials Company, Western Division, **Reliance Stone**, will supply 3/4" Class II Permeable Base to the above listed project and that this product will conform to Section 68- 2.02 F(3) of the 2018 State of California Standard Specifications **at the Vulcan production facility only**. Placement, compaction and permeability results are the responsibility of the contractor.

Sieve Size		Caltrans Section 68 - 2.02 F(3)	Percent Passing
25 mm	(1")	100	100
19 mm	(3/4")	90 - 100	93
12.5 mm	(1/2")	------	71
9.5 mm	(3/8")	40 - 100	61
4.75 mm	(No. 4)	25 - 40	32
2.36 mm	(No. 8)	18 - 33	22
1.18 mm	(No. 16)	------	14
600 um	(No. 30)	5 - 15	8
300 um	(No. 50)	0 - 7	5
150 um	(No. 100)	------	3
75 um	(No. 200)	0 - 3	1.7

	Result	Spec.
Sand Equivalent	82	75 min
Durability Index	80	40 min

Due to the natural segregation of aggregates that occurs during transportation, Vulcan will only guarantee the aggregate gradations at Vulcan's production facility not on the project site. Vulcan makes no representations or warranties as to whether this submittal complies with any project specifications or standards set forth in any contracts or design drawings, and is not responsible for obtaining any necessary approvals or certifications for use of these aggregates.

101923

This submittal is valid for 90-days from date of submittal.

Respectfully,
Vulcan Materials Company
Technical Services Department
Los Angeles Regional Laboratory
(626) 856-6190

Southern California Quality Control Department
16009 Foothill Boulevard • Irwindale, California 91706
Telephone (626) 856-6190 • Fax (626) 969-2918
Please Note: Not Valid if Altered

AASHTO ACCREDITATION PROGRAM
AMRL Certified

RFI #4

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/28/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:		DRAWING NUMBER:	CD 1.1/CD1.2 note 58,47

REQUESTED CLARIFICATION:

Per sheet CD1.1 note 58,47 protect in place ex. irrigation line and sprinkler heads.
We are unable to do so with the construction activities that will take place. Please confirm the existing irr. line and sprinklers to be removed.

RESPONSE TO CLARIFICATION:

Existing irrigation sprinkler heads within scope of new artificial turf may be demolished and disposed.

- BMaurer, PBK Architects, 05.08.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #5

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Temporary facilities and controls 01 50 00	DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm spec sections 1.7 - Temporary humidity controls are not needed.

RESPONSE TO CLARIFICATION:

Temporary Facilities and Controls 01 50 00, Section 1.7 Temporary Humidity Controls is not required. Please refer to DSA Addendum #1 for revised specification.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #6

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Temporary facilities and controls 01 50 00	DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm section 1.8 - Telephone service is to be included in bid.

RESPONSE TO CLARIFICATION:

Temporary Facilities and Controls 01 50 00, Section 1.8 Telephone Service can be excluded from bid. This is not required. Please refer to DSA Addendum #1 for revised specification.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #7

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Temporary facilities and controls 01 50 00	DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm section 1.9 - Electronic communication service is to be included in bid.

RESPONSE TO CLARIFICATION:

Temporary Facilities and Controls 01 50 00, Section 1.9 Electric Communication Service can be excluded from bid. This is not required. Please refer to DSA Addendum #1 for revised specification.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #8

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/25		
FROM:	AFE Sports	EMAIL:	estimating@afesports.com
SPEC SECTION:	Temporary facilities and controls 01 50 00	DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm section 1.28 - Field offices to be included in bid.

RESPONSE TO CLARIFICATION:

Temporary Facilities and Controls 01 50 00, Section 1.28 Field Office can be excluded from bid. This is not required. Please refer to DSA Addendum #1 for revised specification.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #9

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm that the client will be responsible for the removal and storage of all District owned equipment and fixtures.

RESPONSE TO CLARIFICATION:

This is confirmed.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #10

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please Provide estimated start date and anticipated completion date.

RESPONSE TO CLARIFICATION:

Estimated start of project is July 2025 and anticipated completion date is March 2026.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #11

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Is there an engineers estimate for this project? If so, please provide.

RESPONSE TO CLARIFICATION:

The engineers estimate for the project ranges from $4.5M to $5.5M.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #12

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Is there any hazardous material abatement for this project? If so, is this to be completed by the General Contractor and please provide report.

RESPONSE TO CLARIFICATION:

No anticipated hazardous material abatement required for the project or known at this time. If hazardous material is encountered through the course of the project, the District will engage a third-party testing agency for reporting recommendations.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #13

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

For paver removal for new Underground tie in at the south side of the stadium, please provide specification of existing pavers.

RESPONSE TO CLARIFICATION:

Paver manufacturer information is unavailable; pavers shall match the existing in size and color. Contractor to propose and submit product data, shop drawings, and a sample for review & approval prior to installation.

- Jacob Schmautz, PBK Architects, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #14

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Who is responsible for shut downs of utilities?

RESPONSE TO CLARIFICATION:

The awarded contractor is responsible for the shutdown of any utilities. Shutdown to be coordinated with District personnel prior to comply with shutdown procedures.

- DeAndre Ross, RSCCD PM, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #15

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please provide specification for new partitions.

RESPONSE TO CLARIFICATION:

Specifications have been included with DSA Addendum #2.

- Jacob Schmautz, PBK Architects, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT

RFI #16

PRE-BID CLARIFICATION FORM

(Email this completed form to FacilitiesBid@rsccd.edu. See Instructions to Bidders.)

PROJECT NAME:	Synthetic Football Field Project at Santa Ana College		
PROJECT NUMBER:	3798	BID NUMBER:	1475
EMAIL TO: facilitiesbid@rsccd.edu			
DATE:	4/30/2025		
FROM:	Sea West Enterprises, Inc.	EMAIL:	kyle@seawestinc.com
SPEC SECTION:		DRAWING NUMBER:	

REQUESTED CLARIFICATION:

Please confirm that only the specified partitions by Keynotes 1044,1045 and 2209 on sheet A1.3 are to replaced and not all partitions.

RESPONSE TO CLARIFICATION:

Only the partitions and fixtures with the corresponding keynotes shall be replaced per the direction provided by the keynote

- Jacob Schmautz, PBK Architects, 05.07.25

Attach additional numbered sheets as necessary; however, only one (1) request shall be contained on each submitted form.

END OF DOCUMENT