

EXHIBIT A
DLR Architects Addendum 01



DLR Group inc.
 a California corporation
 700 South Flower Street, 22nd Floor
 Los Angeles, CA 90017

October 1, 2024

ADDENDUM 01

Pre-Bid Revision for Contractors' Incorporation into:

Rosemead Adult Education and Transition Center
 El Monte Union High School District
 DSA Application No: 03-122743
 File No. 19-H10
 DLR Group Project No.: 75-20223-02

Prepared By: DLR Group
 700 South Flower Street, 22nd Floor
 Los Angeles, CA 90017
 (213) 800-9400

NOTICE TO BIDDERS:

The following revisions are being made to the Bidding Documents to the above referenced project:

Pre-Bid Requests for Information

The following pre-bid requests for information were received. The responses are incorporated into this Addendum via the answer directly below the RFI.

RFI 1. On Drawing A1.4, please provide an updated description for keynote 5.20 as it currently just states 'E'.
Answer.....See updated sheet A1.4.

RFI 2. Drawings A3.2 and A3.3, under the reflected ceiling plan legend, 2'x2' and 2'x4' acoustic ceiling tile is identified. No 2'x4' acoustic ceiling tile was found in any of the rooms of the building. Please confirm no 2'x4' acoustic ceiling tile is required.
Answer.....Confirmed. No 2'x4' acoustic ceiling tile is required.

RFI 3. The door schedule on A8.3 is missing information regarding size, material, frame type, etc. for door #A106H. Please provide this information.
Answer.....Door A106H omitted. See updated DOOR AND FRAME SCHEDULE on A8.3.

RFI 4. The door schedule on A8.3 indicates the material of gates G105 and G107 is wood. Please confirm this is correct and please clarify where these gates are located at the campus.
Answer.....Gate G105 and G107 have been omitted. See updated DOOR AND FRAME SCHEDULE on A8.3 – all gates are indicated to be steel.

RFI 5. The door schedule on A8.3 references details on drawing A9.20 for the left and right jambs of doors #A123A, A123B, A124, A127B, A200, A201. Please note that drawing A9.20 was not found in the plan set. Please clarify.
Answer.....Detail references updated. See updated DOOR AND FRAME SCHEDULE on A8.3.

RFI 6. The door schedule on A8.3 references details on drawing A9.24 for the left and right jambs of doors #A101A, A101B. Please note that drawing A9.24 was not found in the plan set. Please clarify.

Answer.....Detail references updated. See updated DOOR AND FRAME SCHEDULE on A8.3.

RFI 7...... The door schedule on A8.3, door #118B is indicated as existing to remain per the comments column but the detail columns are referencing details for a new door. Please clarify if this is a new or existing door.

Answer.....Information for Door A118B revised. See updated DOOR AND FRAME SCHEDULE on A8.3.

RFI 8...... Please provide a spec section for door type S on drawing A8.3.

Answer.....Door type S is included in added spec section 08 32 13 Sliding Aluminum-Framed Glass Doors.

RFI 9...... On elevation view 3/A4.1, gridline 9.1 has a window on the 2nd floor with no designation. Please clarify what window type this is.

Answer.....This is type 'DD' as shown on A8.4. A1.3 and A4.1 updated to show DD tag.

RFI 10...... On window schedule drawing A8.4, window type CC is identified twice but for two totally different size windows. This window type is found at the very top of the drawing and the very bottom of the drawing. Please clarify which window type CC is required for this project.

Answer.....Previous CC at the bottom of the page has been revised to type VV on A8.4. Window tag VV added on A1.2 and A4.1 at grid lines 8.1 and A.

RFI 11...... Demo drawing C2.0 shows a long run of asphalt paving to be sawcut and demolished at the North of the existing parking lot. No new asphalt paving is shown to be replaced at this location on Horizontal Control Plan C3.0. What is the required thickness of asphalt paving and aggregate base that is to be replaced at this location. Please clarify.

Answer.....The long run of asphalt being demolished at the North of the project, in the drive aisle East of the existing parking lot, is due to the placement of the proposed fire service. The trench resurfacing location for the fire service line is shown as construction note 26 on the Utility Plan sheet C5.0. The trench resurfacing detail is added in the Addendum 01 plans as detail 1 on sheet C4.0.

RFI 12...... Drawing C4.0 has crosshatch running adjacent to keynote 3 (ribbon gutter) at the North end of the existing parking lot. There is no indication on this drawing as to what the crosshatch represents. Please clarify.

Answer.....The crosshatch running adjacent to construction note 3 (the ribbon gutter) on sheet C4.0 is a 2' AC grind and overlay. This hatch is also showing on sheet C3.0. A construction note and detail have been added on sheet C3.0. For Grading Plan sheet C4.0, Construction note 16 was added to the plan referring to this detail.

RFI 13...... Drawing S1.2 shows a CMU wall at gridlines B.1 and 13. On drawing S1.1 the wall at this same gridline appears to be concrete. Elevation view 41/S2.2 shows this wall to be CMU for the full height of the building. Please clarify.

Answer.....This is a drafting error. The wall is a full height CMU wall. See revised S1.1.

RFI 14...... Detail 11/A0.4 is titled site precast concrete seatwall. But, an arrow pointing to the wall indicates it is cast in place concrete. Please clarify if the seatwall is precast or cast in place.

Answer.....It is cast in place concrete. Detail title revised to 'CONCRETE SEAT WALL WITH WOOD CAP'.

RFI 15...... Drawing C5.0, keynotes 20 to 28 apply to fire water utilities. Please provide a spec section for fire water utilities.

Answer.....Fire water utilities are covered in spec. section 22 11 13 – Water Distribution Systems.

RFI 16...... Drawing C5.0, keynotes 29 and 30 apply to sanitary sewer utilities. Please provide a spec section for sanitary sewer utilities.

Answer.....*Spec. section 22 13 13 – Sanitary Sewer Systems has been included in Addendum 01 to cover site sanitary sewer.*

RFI 17...... Detail 15/A0.4 shows a bike rack. Please clarify where on the site this bike rack is to be installed.

Answer.....*Location, quantity, and finish of bike rack indicated on revised sheet G2.1*

RFI 18...... On Drawing P2.1, Room A-101A has a fixture type FS-2. There is no information on the plumbing schedule on P0.2 on this fixture type. Please clarify.

Answer.....*See added fixture type FS-2 on revised PLUMBING FIXTURE SCHEDULE on P0.2.*

RFI 19...... On Drawing P2.1, Room B-109A has a fixture type SH-1. There is no information on the plumbing schedule on P0.2 on this fixture type. Please clarify.

Answer.....*See added fixture type SH-1 on revised PLUMBING FIXTURE SCHEDULE on P0.2.*

RFI 20...... On Drawing P2.1, Room A-114 has a fixture type SS-1. There is no information on the plumbing schedule on P0.2 on this fixture type. Please clarify.

Answer.....*See added fixture type SS-1 on revised PLUMBING FIXTURE SCHEDULE on P0.2.*

RFI 21...... The finish schedule on A12.1 indicates tag BR-1 is brick tile. Please provide a spec section for this scope.

Answer.....*BR-1 is a thin brick panel system and is included in new spec section 04 21 50.*

RFI 22...... The table of contents lists spec section 013300 - Submittal Procedures but this section was not found in the spec book. Please provide this section.

Answer.....*Spec section 01 33 00 – Submittal Procedures provided in Addendum 01.*

RFI 23...... The document titled 'Bid No. 2024-25-B2 Rosemead Adult Ed Transition Cntr Add-Mod' contains Supplementary Conditions on the last few pages. The table of contents for this document does not list Supplementary Conditions. Please confirm these pages apply to the project.

Answer.....*Please see Addendum No. 01 Special Conditions.*

RFI 24...... Please clarify site security requirements during project construction.

Answer.....*Please see Addendum No. 01 Special Conditions.*

RFI 25...... Reference: Attachment [S0.1]. Per General structural steel note No.1 please confirm the LA City Fabricator and installer qualification in lieu of the AISC as specified.

Answer.....*LADBS certified fabricator shall be acceptable in lieu of AISC certified fabricator.*

RFI 26...... Please provide the Continuity of Work Agreement between EMUSD and the LA/OC Building and Construction Trades Council as mentioned in the bid documents.

Answer.....*See CWA Agreement - Fully Executed ATTACHED.*

RFI 27...... Please provide project soils report if available.

Answer.....*Reference updated spec section appendix 01 for soils report.*

RFI 28...... Supplementary General Conditions section C1. Field Office Trailer states "The trailer must be set with power, restrooms, and internet connection by June 9th, 2023." Please advise.

Answer.....*Please see Addendum No. 01 Special Conditions*

RFI 29...... Regarding RCP plans A3.2 and A3.3, please provide clear direction on how the interior framed gypsum board ceilings should be built. Keynote 9.06 indicates a framed gypsum board ceiling and references drywall spec 092900. Various ceiling details are showing conflicting information as to whether the framing is to be made out of wood or metal studs. The Structural Drawings on sheet 56/S6.2 and 41/S8.3 provide Joist schedules using wood or metal to follow. Please advise.
Answer.....*The existing building is made of wood stud construction. All new gypsum board ceilings in the existing building are to be framed with wood per 56/S6.2. The new construction side of the project is to be of metal stud construction. All new gypsum board ceilings on the new construction side to be framed with metal per 41/S8.3. See updated A3.2 and A3.3. to indicate this.*

RFI 30...... On exterior elevation drawing A4.1, it's not clear if the existing portion of the building is to receive new plaster. Structural drawings S1.1 and S1.2 indicate new shear walls with the shear symbol pointing to exterior side of the walls. Please confirm that the shear is going on the outside per the legend notes and that new plaster should be figured at all new shear wall locations at the Existing Building where Shear (plywood) is being added. Please advise.
Answer.....*This would depend on the symbol displayed for the shear panel. If the sheathing symbol is halftone, this would indicate the existing shear panels to remain after modernization. No replacement is required unless sheathing is damaged during construction or removed due to the addition of hold-downs conduits and pipes per pertinent details; in which case this kind of work can proceed from the inside, see also section cuts for more information. If the symbol is full-tone, this is an indication of New shear walls and indication of shear panels is given on 41/S6.1, for single side sheathing the sheathing side should be shown on sections; it can also be located in the interior side of the building UNO. The existing building plaster is supposed to be painted to match PL-1 or PL-2 as indicated in the legend except where required to be replaced to match existing due to scope of work.*

RFI 31...... Please provide the quantity required of the following items referenced in section 015000 2.2 B - plan racks, bookcases and 4-foot-square tack and marker boards.
Answer.....*Provide as indicated on drawings.*

RFI 32...... On reflected ceiling plan A3.2, Room B-109 has a window facing the courtyard. Keynote 9.08 next to this window indicates a framed gyp board soffit. A cut through this window (43/A14.2) indicates roller shades are to be mounted in a recessed pocket at acoustical ceiling panels. Please confirm the detail that should be referenced instead is 44/A14.2.
Answer.....*Detail has been updated to reference 44/A14.2. See revised sheet A3.2.*

RFI 33...... Regarding the door schedule on drawing A8.3, no dimensions are provided for gates G101 and G102. Please provide these dimensions.
Answer.....*Dimensions for gates G101 and G102 provided. See updated DOOR AND FRAME SCHEDULE on A8.3.*

A. PROJECT MANUAL - Narrative of Changes

1. SECTION 00 01 10 – TABLE OF CONTENTS

- A. *REVISED* title of specification section 00 01 01.
- B. *ADDED* new specification section 04 21 50 under Division 04 – Masonry.
- C. *ADDED* new specification section 08 32 13 under Division 08 – Openings.
- D. *ADDED* new specification section 22 13 13 under Division 22 – Plumbing.
- E. *ADDED* new specification section 28 10 00 under Division 28 –Electronic Safety and Security.

F. *ADDED APPENDIX 01 'GEOTECHNICAL INVESTIGATION' under APPENDIX section.*

2. SECTION 01 33 00 – SUBMITTAL PROCEDURES

A. *ADDED new specification section.*

3. SECTION 01 50 00 – TEMPORARY FACILITIES AND CONTROLS

A. *ADDED section 2.4 'PROJECT IDENTIFICATION SIGN'.*

4. SECTION 04 21 50 – THIN BRICK PANEL SYSTEMS

A. *ADDED new specification section.*

5. SECTION 08 32 13 – SLIDING ALUMINUM-FRAMED GLASS DOORS

A. *ADDED new specification section.*

6. SECTION 08 71 00 – DOOR HARDWARE

A. *REVISED specification section – HARDWARE SETS.*

7. SECTION 22 13 13 – SANITARY SEWERAGE SYSTEMS

A. *ADDED new specification section.*

8. SECTION 28 10 00 – ACCESS CONTROL

A. *ADDED new specification section.*

9. APPENDIX 01

A. *ADDED new Appendix 01 - GEOTECHNICAL INVESTIGATION – Rosemead Adult Center Expansion, dated November 17, 2022.*

B. DRAWINGS – Narrative of Changes

1. SHEET G2.1 – OVERALL SITE PLAN

A. *Keynote 32.23 regarding wheel stops added to OVERALL SITE PLAN and REFERENCE KEYNOTES legend.*

B. *Keynote 32.24 regarding bike rack added to OVERALL SITE PLAN and REFERENCE KEYNOTES legend.*

2. SHEET C2.0 – DEMOLITION PLAN

A. *Revised note 7 to remove reference to grind and overlay.*

3. SHEET C3.0 – HORIZONTAL CONTROL PLAN

A. *Added grind and overlay callout to construction notes.*

B. *Added grind and overlay detail.*

4. SHEET C4.0 – GRADING PLAN

A. *Added construction note 16 for grind and overlay.*

B. *Added note referencing storm drain to trench detail.*

C. *Added trench resurfacing detail.*

5. SHEET C5.0 – UTILITY PLAN

A. *Revised note 26 referencing trench resurfacing.*

- B. Revised detail reference for fire line in legend.
- C. Added sewer line information to legend.
- D. Added fire, water and sewer pipe materials.

6. SHEET C7.0 – DETAILS

- A. Removed reference to paving in details 5 and 11.

7. SHEET A0.4 – DETAILS - SITE

- A. Revised title for detail 11/A0.4 to 'CONCRETE SEAT WALL WITH WOOD CAP'
- B. Revised 11/A0.4 with recessed lighting and conduit/electrical wiring at seat wall.

8. SHEET A1.2 – FIRST FLOOR PLAN

- A. Door A117 shifted to the opposite wall.
- B. Window tag VV added to storefront at grid lines 8.1 and A.
- C. Wall mounted video intercom noted near grid lines 8 and F.
- D. Wall mounted card reader noted near grid lines 12 and F.2.

9. SHEET A1.3 – SECOND FLOOR PLAN

- A. Door A217 shifted to the opposite wall.
- B. Flipped swing of door B202.
- C. Window tag DD added to second floor window at grid line 9.1 and F.1.
- D. Window tag FF added to storefront at grid lines 8.1 and A.

10. SHEET A1.4 – OVERALL ROOF PLAN

- A. Keynote 5.20 revised.
- B. Section cut reference 1/A9.3 added at edge of roof near grid line 11 and F.2.

11. SHEET A3.2 – FIRST FLOOR REFLECTED CEILING PLAN

- A. General Note M added to 'REFLECTED CEILING PLAN GENERAL NOTES'.
- B. Detail reference near grid line 8.6 and C.1 updated to detail 44/A14.2.

12. SHEET A3.3 – SECOND FLOOR REFLECTED CEILING PLAN

- A. General Note M added to 'REFLECTED CEILING PLAN GENERAL NOTES'.

13. SHEET A4.1 – EXTERIOR ELEVATIONS

- A. WALL ELEVATION FINISH LEGEND – updated PL-1 and PL-2 to 'SAND FLOAT 20/30' finish in lieu of smooth finish.
- B. 3/A4.1 – DD window tag added to second floor window at grid line 9.1.
- C. 3/A4.1 – Wall mounted video / intercom location indicated near gate G102.
- D. 3/A4.1 – Wall mounted card reader location indicated near door B110.
- E. 4/A4.1 – FF, VV, EE, BB window tags added to first and second floor storefronts at grid line 8.1 and 11.

14. SHEET A4.2 – EXTERIOR ELEVATIONS

- A. WALL ELEVATION FINISH LEGEND – updated PL-1 and PL-2 to 'SAND FLOAT 20/30' finish in lieu of smooth finish.

15. SHEET A8.3 – DOOR & FRAME TYPE & SCHEDULE

- A. Updates to Hardware set for various doors.
- B. Updates to HEAD, JAMB, SILL DETAIL references for various doors.
- C. Updates to HM from ALUM or WD for various doors.
- D. Added card reader access control per spec section 28 10 00 for various doors.

E. Added 'SCHEDULE COMMENTS LEGEND'

16. SHEET A8.4 – WINDOW TYPES & SCHEDULES

A. Window type tag revised to VV (bottom row of sheet).

17. SHEET A10.07 – INTERIOR DOOR DETAILS

A. New detail 34/A10.07 added.

18. SHEET A11.3 – ENLARGED RESTROOM PLANS AND ELEVATIONS

- A. SNV-1 Sanitary Napkin Dispenser added to Plumbing and Toilet Accessory Schedule.
- B. 2E/A11.3 – revised to add location of SNV-1.
- C. 2A/A11.3 – revised to add location of SNV-1.

19. SHEET A11.4 – ENLARGED RESTROOM PLANS AND ELEVATIONS

- A. SNV-1 Sanitary Napkin Dispenser added to Plumbing and Toilet Accessory Schedule.
- B. 2B/A11.4 – revised to add location of SNV-1.
- C. 3A/A11.4 – revised to add location of SNV-1.

20. SHEET A11.9 – INTERIOR ELEVATIONS – TRANS. CTR. LEVEL 1 – CLASSRM, HEALTH OFFICE, STAFF LOUNGE

- A. 1C/A11.9 updated due to relocation of door.
- B. 1B/A11.9 updated due to relocation of door.
- C. 5A/A11.9 updated with graphic concept for WC-3.
- D. 5C/A11.9 updated with graphic concept for hanging sign, keynote 11.07 and dimensions of sign added.
- E. Keynote 11.07 added to Keynotes.

21. SHEET A11.10 – INTERIOR ELEVATIONS – TRANS. CTR. TYP. CLASSROOMS, SKILL LAB

A. 5A/A11.10 updated dimensions and with graphic concept for WC-3.

22. SHEET A11.12 – INTERIOR ELEVATIONS – ADULT ED. BLDG

A. 1C/A11.12 updated with dimensions and with graphic concept for WC-4.

23. SHEET S1.1 – LEVEL 1 STRUCTURAL PLAN

- A. Concrete curbs on grids 3-4/C-D modified to accommodate the door change of position.
- B. Concrete hatch changed to CMU hatch at shear wall P2 on grid 13

24. SHEET S7.2 – STRUCTURAL SECTIONS

A. Section 52/S7.2 modified to be coordinated with plan view.

25. SHEET MD2.1 – MECHANICAL DEMOLITION PLAN – LEVEL 1

A. Added existing fan coil to remain for clarification.

26. SHEET MD2.2 – MECHANICAL DEMOLITION PLAN – LEVEL 2

A. Revised equipment in existing Data Rm, to fan coil to remain per existing conditions.

27. SHEET MD3.1 – MECHANICAL DEMOLITION ROOF PLAN

A. Added locations of existing condensing units.

28. SHEET M2.1 – MECHANICAL PLAN – LEVEL 1

A. Added existing fan coil to remain.

29. SHEET M2.2 – MECHANICAL PLAN – LEVEL 2

A. *Revised equipment to existing fan coil to remain.*

30. SHEET M3.1 – MECHANICAL ROOF PLAN

A. *Added locations of existing condensing units to remain.*

31. SHEET P0.2 – PLUMBING SCHEDULES AND DETAILS

A. *PLUMBING FIXTURE SCHEDULE updated to add fixture type SS-1, FS-2, SH-1.*

B. *Revised Gas Fired Water Heater, Expansion Tank & Circulating Pump Schedules.*

32. SHEET P2.1 – PLUMBING PLAN – LEVEL 1

A. *Extended hot water piping to Kitchen & Servery.*

33. SHEET E2.7 – FIRE ALARM PLAN – LEVEL 1

A. *Added AMP-1.*

34. SHEET E3.1 – FIRE ALARM SYMBOLS AND NOTES

A. *Revised Fire Alarm Legend, Fire Alarm Requirements, Fire Alarm Notes.*

35. SHEET E3.2 – FIRE ALARM WIRING DETAILS

A. *Revised fire alarm wiring details.*

36. SHEET E3.3 – FIRE ALARM WIRING DETAILS

A. *Revised fire alarm wiring details.*

37. SHEET E3.4 – FIRE ALARM RISER DIAGRAM

A. *Revised fire alarm riser diagram.*

38. SHEET E3.5 – FIRE ALARM BATTERY CALCULATIONS

A. *Revised fire alarm battery calculations.*

INCLUDED ATTACHMENTS:

Drawings: G2.1, C2.0, C3.0, C4.0, C5.0, C7.0, A0.4, A1.2, A1.3, A1.4, A3.2, A3.3, A4.1, A4.2, A8.3, A10.7, A11.3, A11.4, A11.9, A11.10, A11.12, S1.1, S7.2, MD2.1, MD2.2, MD3.1, M2.1, M2.2, M3.1, P0.2, P2.1, E2.7, E3.1, E3.2, E3.3, E3.4, E3.5

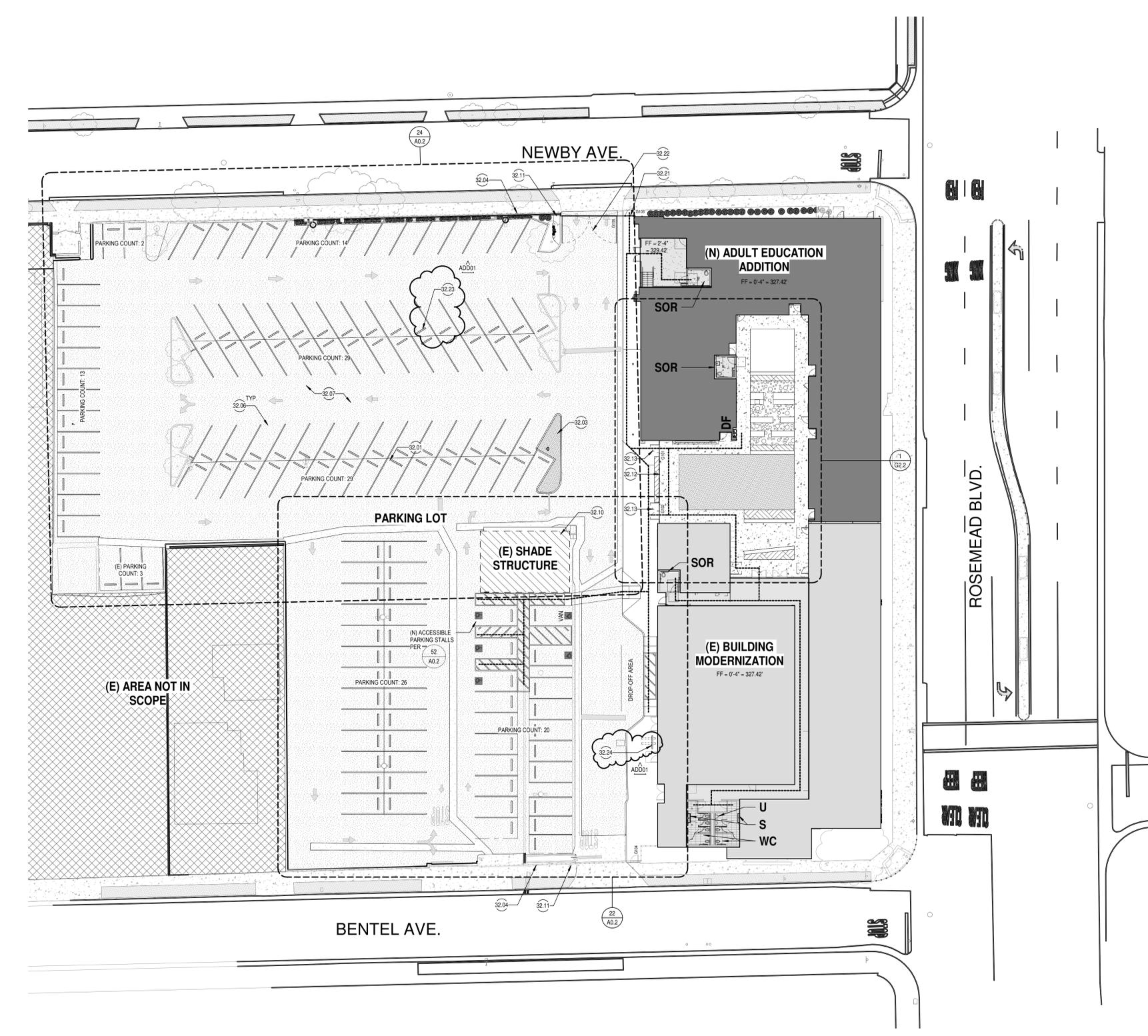
Specification Sections: 00 01 10, 01 33 00, 01 50 00, 04 21 50, 08 32 13, 08 71 00, 22 13 13, 28 10 00

Reports: GEOTECHNICAL INVESTIGATION – Rosemead Adult Center Expansion, dated November 17, 2022

El Monte Union High School District Rosemead Adult Education and Transition Center Addition/Modernization Special Conditions

Continuity of Work Agreement By and Between El Monte Union High School District and Los Angeles and Orange Counties Building and Construction Trades Council and the Signatory Craft Councils and Unions

**** END OF ADDENDUM 01 ****



OVERALL SITE PLAN
 SCALE: 1" = 20'-0"

APPLICATION #	FILE #	YEAR	CERTIFICATION STATUS
03-64326	19-H10	1/24/2019	#2-Certification & Close of File

PARKING CALCULATION ANALYSIS

PARKING LOT	
PARKING STALLS	136
REQUIRED ACCESSIBLE PARKING STALLS	5
PROVIDED ACCESSIBLE PARKING STALLS	5
REQUIRED ACCESSIBLE VAN PARKING STALLS	1
PROVIDED ACCESSIBLE VAN PARKING STALLS	1

GENERAL NOTES - SITE PLAN:

- AT NEW UTILITY TRENCHES, CONTRACTOR TO SCAN WITH GROUND PENETRATING RADAR ALONG THE PROPOSED ROUTE AND/OR POT HOLE TO DETERMINE IF ANY EXISTING UTILITIES ARE IN THE WAY OF THE NEW UTILITY ROUTE. CONTRACTOR IS WHOLLY RESPONSIBLE FOR DAMAGE TO EXISTING UNDERGROUND UTILITIES AND RESULTING DAMAGE.
- AT NEW PAVING, CONTRACTOR TO PROTECT IN PLACE EXISTING UTILITY MANHOLES, BOXES, CLEANOUTS, OR CATCH BASINS THAT ARE TO REMAIN, RAISE OR LOWER THE UTILITIES TO BE FLUSH WITH THE NEW PAVING SURFACE.
- CAP AND RELOCATE EXISTING IRRIGATION LINES AS REQUIRED FOR SCOPE OF WORK. TURF AND OTHER PLANTING MUST BE PROTECTED AND RETURNED TO ITS ORIGINAL CONDITION OR REPLACED.

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT:

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT:

- 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMENTS.

DURING CONSTRUCTION, IF POT ITEMS WITHIN THE SCOPE OF THE PROJECT PRESENTED AS CODE COMPLIANT ARE FOUND TO BE NONCOMPLYING BEYOND REASONABLE CONSTRUCTION TOLERANCES, THEY SHALL BE BROUGHT INTO COMPLIANCE WITH THE CBC AS A PART OF THIS PROJECT BY MEANS OF A CONSTRUCTION CHANGE DOCUMENT.

PATH OF TRAVEL STATEMENT:

PATH OF TRAVEL (P.O.T.) AS INDICATED, IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT VERTICAL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAXIMUM SLOPE EXCEPT LEVEL CHANGES THAT DO NOT EXCEED 1/4" VERTICAL AS PER CBC 11B-302 AND 11B-303. PATH OF TRAVEL SURFACE SHALL BE STABLE, FIRM, AND SLIP RESISTANT AND OPENINGS IN SURFACES SHALL NOT ALLOW PASSAGE OF A SPHERE MORE THAN 1/2" IN DIAMETER AND SHALL COMPLY WITH (CBC 11B-302), CROSS-SLOPE OF WALKING SURFACES SHALL NOT BE STEEPER THAN 1:48 (2%) AND SLOPE IN THE DIRECTION OF TRAVEL SHALL NOT BE STEEPER THAN 1:20 (5%) UNLESS OTHERWISE INDICATED. (CBC 11B-402)

PATH OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTION TO 80" MINIMUM. PROTRUDING OBJECTS WITH LEADING EDGES MORE THAN 2" AND NOT HORIZONTALLY AS PER CBC 11B-307.

PATH OF TRAVEL SHALL MAINTAIN CLEAR WIDTHS AS PER CBC 11B-403.

THE PRIMARY ACCESSIBLE PATH OF TRAVEL SHALL INCLUDE CBC 11B-202.4

1. A PRIMARY ENTRANCE TO THE BUILDING OR FACILITY
2. TOILET AND BATHING FACILITIES SERVING THE AREA
3. DRINKING FOUNTAINS SERVING THE AREA
4. PUBLIC TELEPHONES SERVING THE AREA AND SIGNS

AS INDICATED THE PATH OF TRAVEL SHALL PROVIDE GENERAL ACCESSIBILITY AND MAY CONSIST OF A COMBINATION OF THE FOLLOWING CODE COMPLIANT, ACCESSIBLE ELEMENTS:

1. ENTRANCE, EXITS
2. CURB RAMPS WITH FLUSH TRANSITIONS TO BOTTOM LANDINGS
3. EXTERIOR STAIRWAYS
4. EXTERIOR PEDESTRIAN RAMPS
5. WALKWAYS SURFACES, INCLUDING SLOPES, ABRUPT CHANGES IN LEVEL, AND GRATES

SITE LEGEND

- (E) AREA NOT IN SCOPE
- (E) BUILDING MODERNIZATION
- PROPOSED (N) BUILDING
- (E) SHADE STRUCTURE
- (E) FENCE, CLEAN, PREP. PAINT TO MATCH MT-2
- (N) ORNAMENTAL FENCE
- GATE # DOUBLE SWING GATE
- GATE # SINGLE SWING GATE
- CONCRETE PAVING
- LAWN / GRASS
- ASPHALT PAVING
- CONCRETE PAVING
- LAWN / GRASS / LANDSCAPE
- FIRE HYDRANT

LEGEND - ACCESSIBLE PATH OF TRAVEL

- ACCESSIBLE PATH OF TRAVEL
- AS** ACCESSIBLE SEATING POSITION (WC)
- WC** ACCESSIBLE WATER CLOSET
- A** AMBULATORY STALL
- U** ACCESSIBLE URINAL
- S** ACCESSIBLE SINK
- SOR** SINGLE OCCUPANCY RESTROOM (INCLUDES ACCESSIBLE WC, SINK)
- DF** DRINKING FOUNTAIN (H-HO)

REFERENCE KEYNOTES

Key Value	Keynote Text
32.01	(E) LIGHT POLES
32.03	(N) PLANTER, SEE LANDSCAPE
32.04	(E) ORNAMENTAL FENCING AND GATES TO BE CLEANED, PREP. AND PREPARED FOR RE-PAINING, PAINT COLOR TO MATCH MT-2
32.06	(N) PARKING STRIPING
32.07	PREPARE (E) AG PAVING WITH CRACK TREATMENT, SLURRY SEAL FOR PARKING RESTRIPIING
32.10	(E) SHADE STRUCTURE TO REMAIN - CLEAN, PREP. AND PREPARE EXISTING METAL ROOFING, FRAMING, COLUMNS, FASCIA, GUTTER AND DOWNSPOUTS FOR PAINTING, PAINT COLOR TO MATCH MT-2
32.11	(N) TOW-AWAY SIGNAGE MOUNTED ON FENCE PER 33B.A0.3
32.12	(N) WELDED WIRE PANEL GREEN SCREEN FENCE, SEE 36.A0.5
32.13	(N) CUSTOM METAL PANEL GATE, SEE 21.A0.5
32.21	(N) DECORATIVE FENCE AND GATE, SEE 52.A0.5 & 31.A0.5
32.22	(N) VEHICLE ACCESS GATE, SEE 22.A0.5
32.23	(N) WHEEL STOP TO BE PROVIDED AT ALL PARKING SPACES, SEE 15.A0.3
32.24	(N) 5 LOOP, 7 BIKE CAPACITY ROUND TUBE WAVE BIKE RACK, BLACK POWDER COAT FINISH, SEE 15.A10.4



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

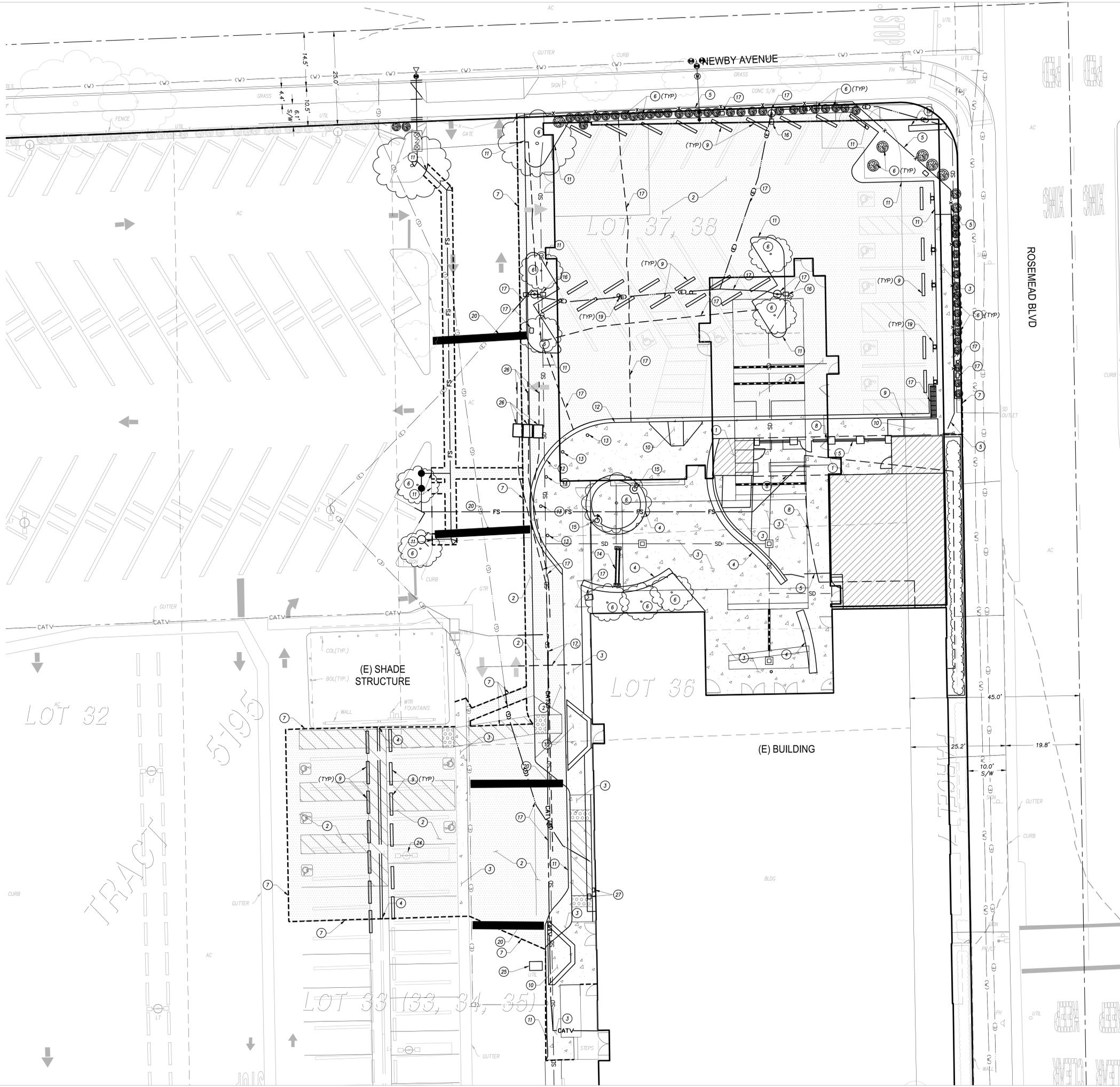


CONSTRUCTION DOCUMENTS

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 Architecture Engineering Planning Interiors
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DLR APPLICATION NO. 03-122743	09/26/2024
DLR FILE NO. 19-H10	
DLR PROJECT NO. 75-20223-02	
ISSUE DATE: 02/15/2024	
SUBMITTAL TITLE	
T. ADD01	

OVERALL SITE PLAN

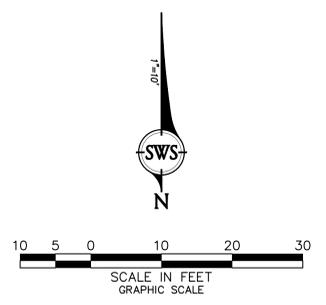


DEMOLITION LEGEND AND NOTES

- 1 [Hatched Box] REMOVE EXISTING BLDG
- 2 [Dotted Box] REMOVE EXISTING ASPHALT
- 3 [Stippled Box] REMOVE EXISTING CONCRETE IN ENTIRETY
- 4 [Solid Line] REMOVE EXISTING WALL AND PLANTER WALL AND CONCRETE SEAT WALLS
- 5 [X-X-X-X Line] REMOVE EXISTING FENCE, GATE, RAILING AND FOOTINGS IN ENTIRETY
- 6 [Cloud Outline] REMOVE EXISTING TREES, SHRUBS AND VEGETATION, INCLUDING ALL ROOTS
- 7 [Dashed Line] SAWCUT EXISTING ASPHALT
- 8 [Overhang Line] REMOVE EXISTING OVERHANG
- 9 [Wheel Stop Line] REMOVE EXISTING WHEEL STOP
- 10 [Stairs Line] REMOVE EXISTING STAIRS AND RAMPS
- 11 [Curb Line] REMOVE EXISTING CURB
- 12 [Curb and Gutter Line] REMOVE EXISTING CURB AND GUTTER
- 13 [Bollard Line] REMOVE EXISTING BOLLARD
- 14 [Bike Rack Line] REMOVE EXISTING BIKE RACK
- 15 [Flagpole Line] REMOVE EXISTING FLAGPOLE
- 16 [Light Line] REMOVE EXISTING LIGHT
- 17 [Utility Line] REMOVE EXISTING UTILITY
- 18 [Sign Line] REMOVE SIGN
- 19 [Concrete Sign Line] REMOVE CONCRETE SIGN
- 20 [Speed Bump Line] REMOVE EXISTING SPEED BUMP
- 21 [Protect Tree Line] PROTECT EXISTING TREE IN PLACE
- 22 [Protect Fence Line] PROTECT EXISTING FENCE, GATE, RAILING AND FOOTINGS IN PLACE
- 23 [Protect Utility Line] PROTECT EXISTING UTILITY IN PLACE
- 24 [Protect Lighting Line] PROTECT EXISTING LIGHTING IN PLACE
- 25 [Adjust Utility Line] ADJUST UTILITY TO GRADE
- 26 [Relocate Utility Line] RELOCATE UTILITY, SEE ELECTRICAL PLANS FOR NEW LOCATIONS
- 27 [Relocate Utility Line] RELOCATE EXISTING UTILITY, BY OTHERS

Rosemead Adult Education and Transition Center
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

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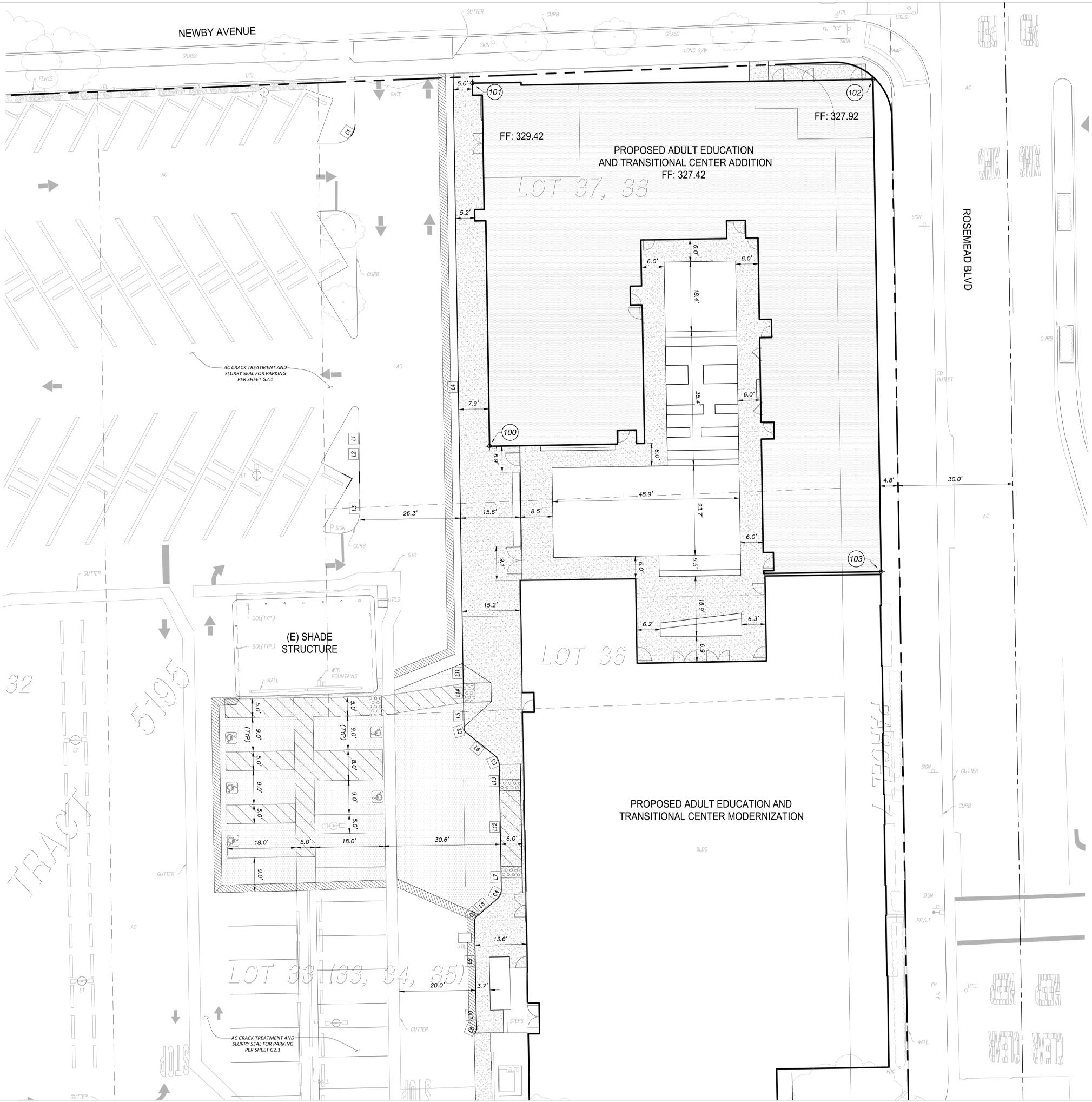
DSA APPLICATION NO: 03-122743
 DSA FILE NO: 19-110
 DLR PROJECT NO: 75-20223-02
 ISSUE DATE: 03/21/2024

SUBMITTAL TITLE	03/26/24
1 ADDITION	

DEMOLITION PLAN

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B:\1630\75-20223-01 El Monte UHSD Rosemead Adult School Building\75-20223-01_PDC_AR_2020.rvt
 4/14/2022 10:12:35 AM



- CONSTRUCTION NOTES**
- 4" AC OVER 4" CLASS 2 AB MIN. OVER 12" NATIVE @ 95% RELATIVE COMPACTION
 - 4" PCC WITH #4 REBAR @ 18" O.C. EACH WAY OVER OVER 24" NON-EXPANSIVE GRANULAR MATERIAL @ 95% RELATIVE COMPACTION, FINISH, COLOR AND JOINT DETAILS PER ARCHITECT PLANS
 - 2" AC GRIND AND OVERLAY, PER DETAIL 1 / C3.0
 - CURB PER DATA TABLE
 - CURB & GUTTER PER DATA TABLE
 - RIBBON GUTTER PER 8/C7.0
 - PAINT 4" WHITE STRIPE FOR PARKING STALL
 - ADA STRIPING AND SIGNAGE PER ARCHITECTURAL PLANS

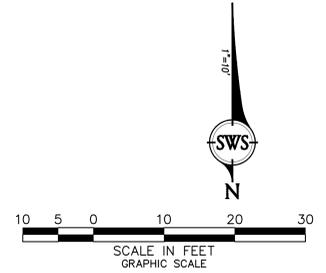
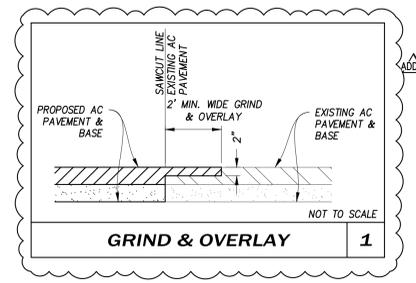
NOTE:
THE PAVEMENT SECTIONS SHOWN ON THESE PLANS ARE FROM SOILS REPORT RECOMMENDATIONS. PAVEMENT SECTIONS WILL BE CONFIRMED ONCE SUBGRADE ELEVATIONS HAVE BEEN ATTAINED AND R-VALUE TESTING ON SUBGRADE SAMPLES IS PERFORMED.

CURB DATA TABLE

SYMBOL	LENGTH	BEARING/Delta	RADIUS	DESCRIPTION
C1	3.36'	038° 27' 02"	5.00'	CURB PER 1/C7.0
C2	1.31'	049° 59' 52"	1.50'	CURB PER 1/C7.0
C3	2.62'	050° 00' 01"	3.00'	CURB PER 1/C7.0
C4	2.62'	050° 23' 08"	2.98'	CURB PER 1/C7.0
C5	1.31'	049° 59' 22"	1.50'	CURB PER 1/C7.0
C8	1.08'	003° 48' 16"	16.29'	CURB PER 1/C7.0
L1	3.00'	N00° 42' 17"W	-	CURB PER 1/C7.0
L2	3.00'	N00° 42' 17"W	-	CURB PER 1/C7.0
L3	3.00'	N00° 42' 17"W	-	CURB PER 1/C7.0
L4	156.07'	N00° 57' 08"W	-	CURB AND GUTTER PER 2/C7.0
L5	6.76'	N00° 57' 03"W	-	0"-6" CURB PER 1/C7.0
L6	9.72'	N50° 56' 55"W	-	CURB PER 1/C7.0
L7	6.17'	N00° 52' 00"W	-	0"-6" CURB PER 1/C7.0
L8	7.22'	N49° 03' 05"E	-	CURB PER 1/C7.0
L9	23.51'	N00° 56' 17"W	-	CURB PER 1/C7.0
L10	5.10'	N02° 09' 49"W	-	CURB PER 1/C7.0
L11	5.07'	N00° 54' 34"W	-	0"-6" CURB PER 1/C7.0
L12	19.98'	S00° 58' 25"E	-	0"-6" CURB PER 1/C7.0
L13	6.99'	S01° 01' 10"E	-	0" CURB PER 1/C7.0
L14	5.12'	N00° 54' 33"W	-	0" CURB PER 1/C7.0

BUILDING HORIZONTAL CONTROL POINT DATA

POINT #	NORTHING	EASTING	DESCRIPTION
100	1852337.1477	6539328.8639	BUILDING CORNER
101	1852433.0092	6539324.3539	BUILDING CORNER
102	1852434.0313	6539429.1594	BUILDING CORNER
103	1852304.0413	6539431.3122	BUILDING CORNER



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REGISTERED PROFESSIONAL ENGINEER
No. 5996
Exp. 12/31/2025
S.W.S. ENGINEERING, INC.
STATE OF CALIFORNIA

**Rosemead Adult Education and
Transitional Center**
El Monte Union High School District
4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

DSA SUBMITTAL

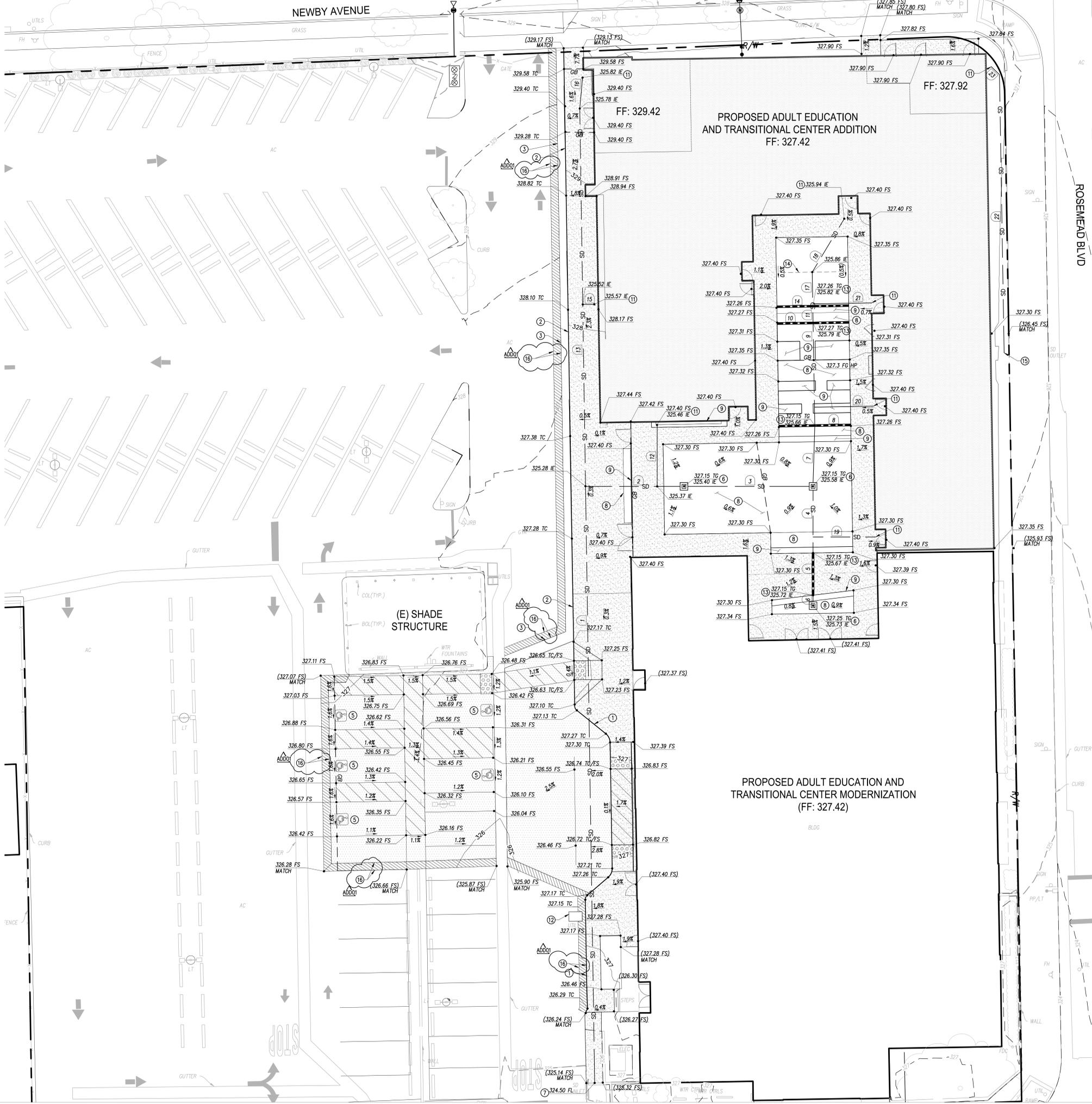
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DSA APPLICATION NO: 03-122743
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DLR PROJECT NO: 75-20223-02
ISSUE DATE: 03/21/2024

SUBMITTAL TITLE
1 ADDITIONAL SHEETS

HORIZONTAL CONTROL PLAN

C3.0

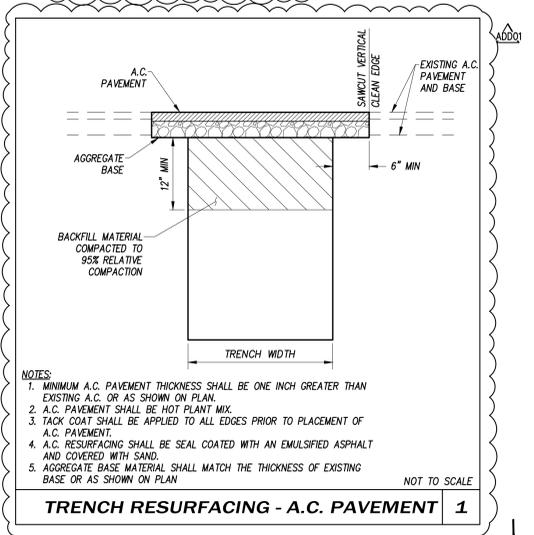


- CONSTRUCTION NOTES**
- 6" CURB PER DETAIL 1 / C7.0
 - 6" CURB AND GUTTER PER DETAIL 7 / C7.0
 - RIBBON GUTTER PER DETAIL 6 / C7.0
 - CURB RAMP & TRUNCATED DOMES PER ARCHITECTURAL PLANS
 - ADA PARKING SIGNAGE, STRIPING AND WHEEL STOPS PER ARCHITECTURAL PLANS
 - CATCH BASIN W/ ADA COMPLIANT GRATE PER DETAIL 2 & 3 / C7.0
 - PIPE OUTLET PER DETAIL 9 / C7.0
 - PLANTER/LANDSCAPE ISLAND PER LANDSCAPE PLANS
 - WALL, BENCH, FENCING AND GATES PER ARCHITECTURAL PLANS
 - SITE LIGHTING PER ARCHITECTURAL PLANS
 - STORM DRAIN P.O.C. SEE ARCHITECTURAL PLANS
 - ADJUST EXISTING UTILITY TO GRADE
 - TRENCH DRAIN W/ADA COMPLIANT GRADE PER DETAILS 8 & 10 / C7.0
 - 2" PVC PERFORATED DRAIN PIPE
 - LOCATE AND CONNECT TO EXISTING ROOF DRAIN
 - GRIND AND OVERLAY, PER DETAIL 1 / C3.0
- NOTE: SEE SHEET C3.0 FOR PAVING AND LANDSCAPE LEGEND AND INFORMATION

STORM DRAIN LINE DATA TABLE

SYM	LENGTH	BEARING	RADIUS	DESCRIPTION
1	156.79'	N00°52'06"W	-	2-3" PVC @ 0.5%
2	24.62'	N90°00'00"E	-	6" PVC @ 0.5%
3	31.61'	N90°00'00"W	-	6" PVC @ 0.5%
4	16.49'	N00°06'29"W	-	6" PVC @ 0.5%
5	11.10'	N00°08'00"E	-	6" PVC @ 0.5%
6	1.73'	S00°00'26"E	-	6" PVC @ 0.5%
7	15.00'	N01°44'43"E	-	6" PVC @ 0.5%
8	18.74'	N89°03'05"E	-	TRENCH DRAIN
9	26.96'	N00°56'55"W	-	6" PVC @ 0.5%
10	18.70'	N89°03'05"E	-	TRENCH DRAIN
11	4.17'	N00°56'55"W	-	6" PVC @ 0.5%
12	15.84'	N00°00'00"E	-	6" PVC @ 0.5%
13	75.08'	N00°52'06"W	-	6" PVC @ 0.5%
14	18.70'	N89°03'05"E	-	TRENCH DRAIN
15	3.00'	N89°07'54"E	-	4" PVC @ 0.5%
16	8.03'	N05°08'45"E	-	3" PVC @ 0.5%
17	8.70'	N00°56'55"W	-	6" PVC @ 0.5%
18	16.33'	N30°42'27"E	-	3" PVC @ 0.5%
19	16.22'	S89°59'37"E	-	4" PVC @ 0.5%
20	15.31'	N89°03'05"E	-	4" PVC @ 0.5%
21	15.31'	N89°03'05"E	-	4" PVC @ 0.5%
22	73.12'	S00°56'56"E	-	3" PVC @ 0.5%
23	2.97'	S45°56'56"E	-	3" PVC @ 0.5%

NOTE: STORM DRAIN PER DETAIL 11/C7.0



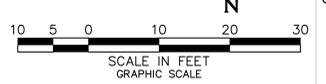
Rosemead Adult Education and Transitional Center Addition
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

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GRAIDING PLAN

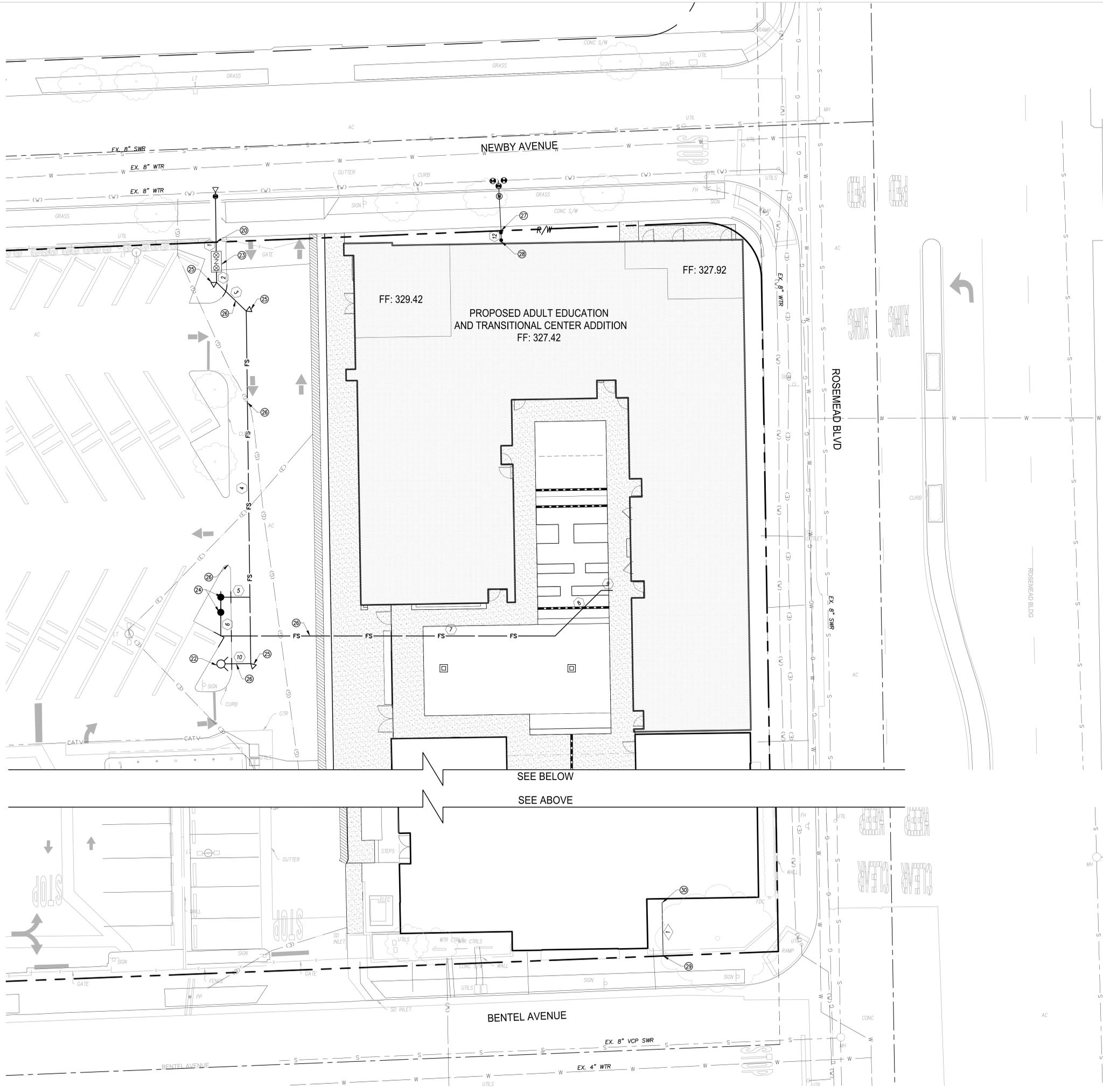
NO.	DESCRIPTION	DATE
1	ADD01	03/26/24



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DATE: Sep 25, 24 2:02pm
 FILE: Z:\Projects\2022\22-144\PROJ\Construct\VP\22-144_04-0.dwg

BM 360/75-2022-01 El Monte USD Rosemead Adult School Building\75-2022-01_POC_AR_2020.rvt
 4/14/2022 10:12:35 AM



CONSTRUCTION NOTES

- 20 CONNECT TO EXISTING 8" WATER
- 21 POINT OF CONNECTION - FIRE - SEE SPRINKLER PLANS FOR CONTINUATION
- 22 FIRE HYDRANT PER DETAIL 14 / C7.0
- 23 DCDA, WILKINS 350ADA, 8" OR APPROVED EQUAL
- 24 FDC/PIV PER DETAIL 13 / C7.0
- 25 THRUST BLOCK PER DETAIL 12 / C7.0
- 26 TRENCH RESURFACING - AC PAVEMENT PER DETAIL 1 / C4.0
- 27 CONNECT TO EXISTING 2" WATER SERVICE
- 28 POINT OF CONNECTION-WATER- SEE PLUMBING PLANS FOR CONTINUATION
- 29 CONNECT TO EXISTING 4" SEWER
- 30 CONNECTION-SEWER- SEE PLUMBING PLANS FOR CONTINUATION

LEGEND

- FS FIRE SERVICE LINE PER 5 / C7.0 CONSTRUCT WITH 3' MIN COVER PIPE DATA PER TABLE THIS SHEET
- S SEWER LINE PER 11 / C7.0 CONSTRUCT WITH 3' MIN COVER PIPE DATA PER TABLE THIS SHEET
- ▲ THRUST BLOCK
- FIRE DEPARTMENT CONNECTION & POST INDICATOR VALVE
- S EXISTING SEWER LINE
- W EXISTING WATER LINE
- FS EXISTING FIRE LINE
- SD EXISTING STORM DRAIN
- G EXISTING GAS LINE
- (FA) EXISTING FIRE ALARM LINE
- E EXISTING ELECTRICAL LINE

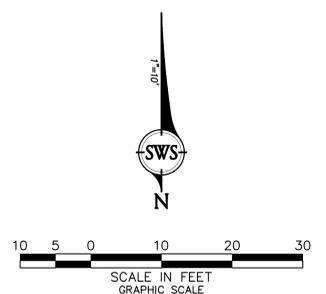
FIRE AND WATER SERVICE DATA TABLE

SYM	LENGTH	BEARING	DESCRIPTION
1	2.41'	N00°43'44"W	6" PVC FIRE (CL 150) ADD01
2	2.76'	N00°43'44"W	6" PVC FIRE (CL 150)
3	10.88'	S45°43'44"E	6" PVC FIRE (CL 150)
4	93.46'	N00°43'44"W	6" PVC FIRE (CL 150)
5	7.66'	N90°00'00"E	6" PVC FIRE (CL 150)
6	6.28'	S00°00'00"E	6" PVC FIRE (CL 150)
7	87.85'	N90°00'00"E	6" PVC FIRE (CL 150)
8	17.07'	N45°00'00"E	6" PVC FIRE (CL 150)
9	3.00'	N90°00'00"E	6" PVC FIRE (CL 150)
10	6.75'	N89°16'16"E	6" PVC FIRE (CL 150)
12	2.79'	N00°52'06"W	2" PVC WATER SERVICE (SCH 40)

SEWER LINE LINE DATA TABLE

SYM	LENGTH	BEARING	DESCRIPTION
1	14.06'	N01°07'55"W	4" PVC SEWER (SDR-35) ADD01

SEE BELOW
SEE ABOVE



**Rosemead Adult Education and
Transitional Center**
El Monte Union High School District
4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

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DSA APPLICATION NO: 03-122743
DSA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 03/21/2024

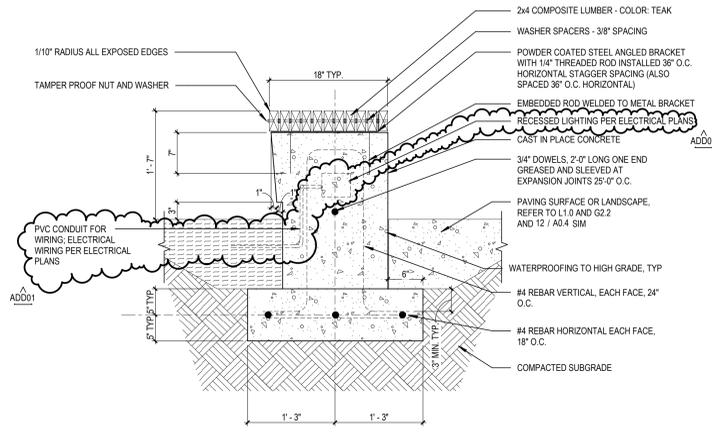
NO.	DATE	DESCRIPTION
1	ADD01	03/26/24

UTILITY PLAN

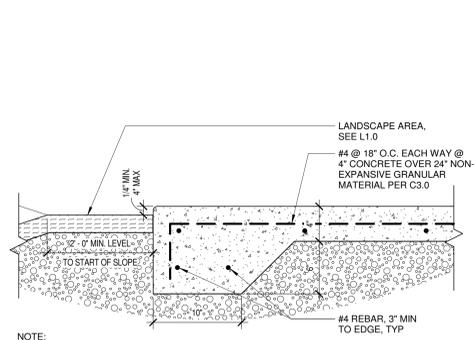
C5.0

BM 3607/75-20223-01 El Monte UHSD Rosemead Adult School Building/75-20223-01_PDC_AR_2020.rvt
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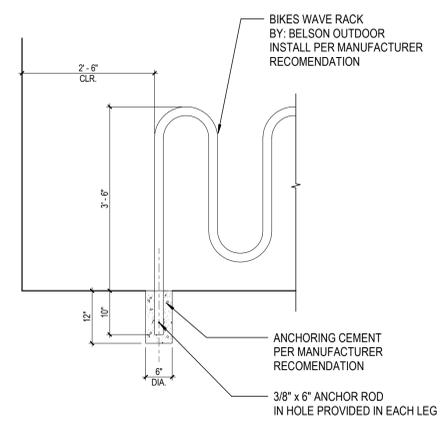
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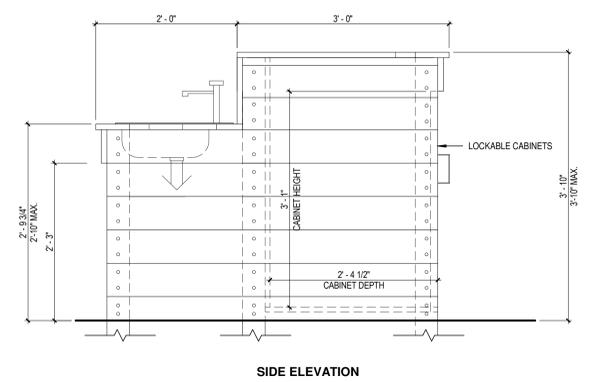
11 CONCRETE SEAT WALL WITH WOOD CAP
SCALE: 1" = 1'-0"



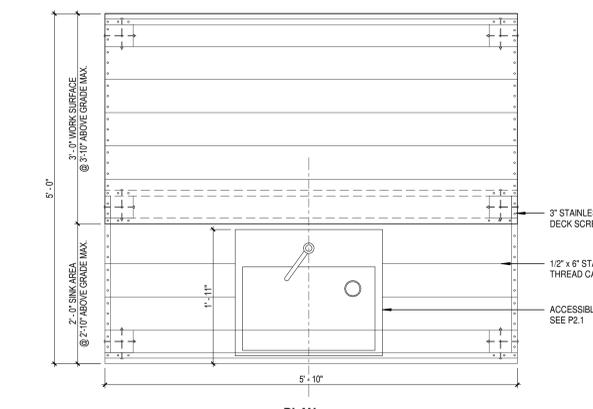
12 EDGE OF CONCRETE AT LANDSCAPE
SCALE: 1 1/2" = 1'-0"



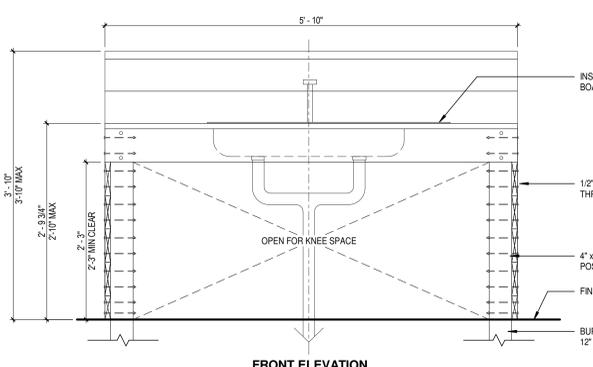
15 BIKE RACK - MOUNTING DETAIL
SCALE: 3/4" = 1'-0"



SIDE ELEVATION



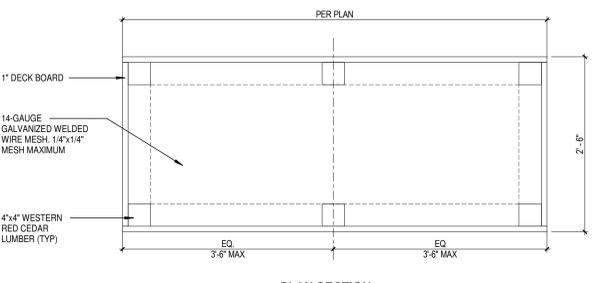
PLAN



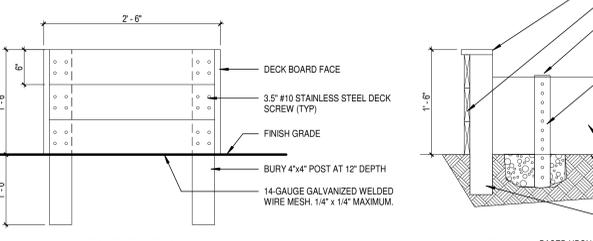
FRONT ELEVATION

NOTE:
1. ALL EXTERIOR DECK BOARDS USED FOR CONSTRUCTION OF THE WORK TABLES SHALL BE TREX 'TRANSCEND' COMPOSITE DECKING, COLOR: ROPE SWING, OR APPROVED EQUAL.
2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

34 WORK TABLE AND SINK DETAIL
SCALE: 1" = 1'-0"



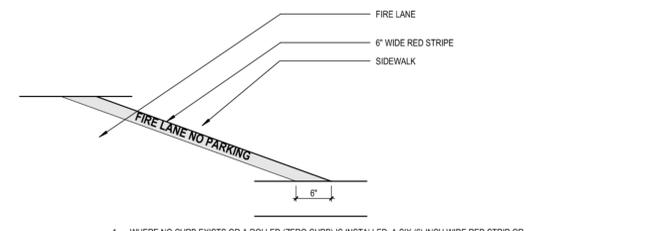
PLAN SECTION



SIDE ELEVATION

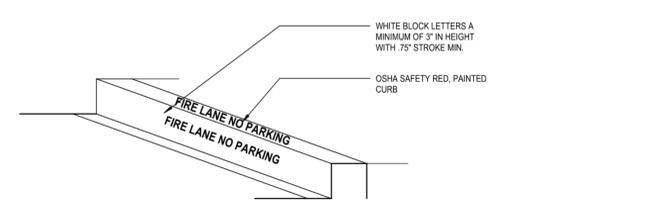
SECTION

54 PLANTER BOX DETAILS
SCALE: 1" = 1'-0"



1. WHERE NO CURB EXISTS OR A ROLLED (ZERO CURB) IS INSTALLED, A SIX (6) INCH WIDE RED STRIP OR APPROVED POSTED SIGNS APPLIED THE FULL LENGTH OF THE FIRE APPARATUS ACCESS ROAD SHALL BE INSTALLED.
2. THE DISTANCE BETWEEN SIGNS SHALL BE DETERMINED DURING PLAN REVIEW.

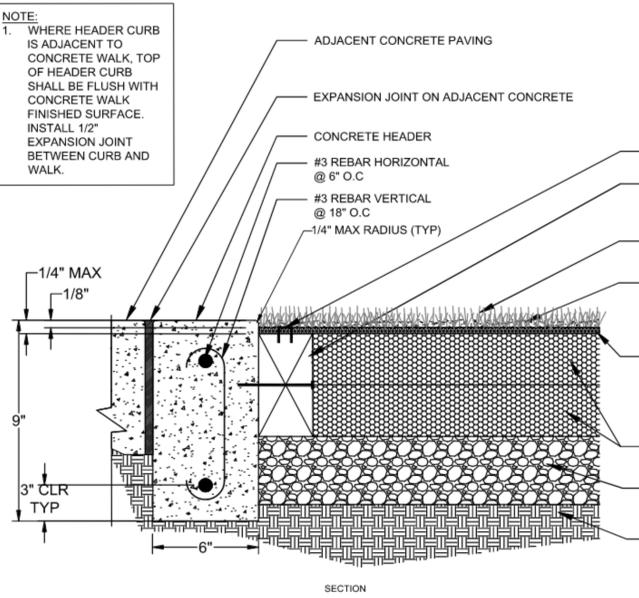
B. ZERO CURB CONDITION



1. STENCILS SHALL BE APPLIED TO THE PAINTED, CURBS AT THE FENCE AND TOP OF CURB AT LEAST EVERY 100'-0\"/>

A. CURB CONDITION

31 FIRE LANE CURB PAINTING
SCALE: 1" = 1'-0"



NOTE:
1. WHERE HEADER CURB IS ADJACENT TO CONCRETE WALK, TOP OF HEADER CURB SHALL BE FLUSH WITH CONCRETE WALK FINISHED SURFACE. INSTALL 1/2\"/>

*OR APPROVED EQUAL - INSTALL PER MANUFACTURES RECOMMENDATIONS

33 CONCRETE TO TURF
SCALE: 3" = 1'-0"



Rosemead Adult Education and Transition Center Addition/Modernization
El Monte Union High School District
4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



CONSTRUCTION DOCUMENTS

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USA APPLICATION NO: 03-122743
USA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 02/15/2024

NO.	REVISION	DATE
1	ADD01	09/26/2024

DETAILS - SITE

A0.4



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



CONSTRUCTION DOCUMENTS

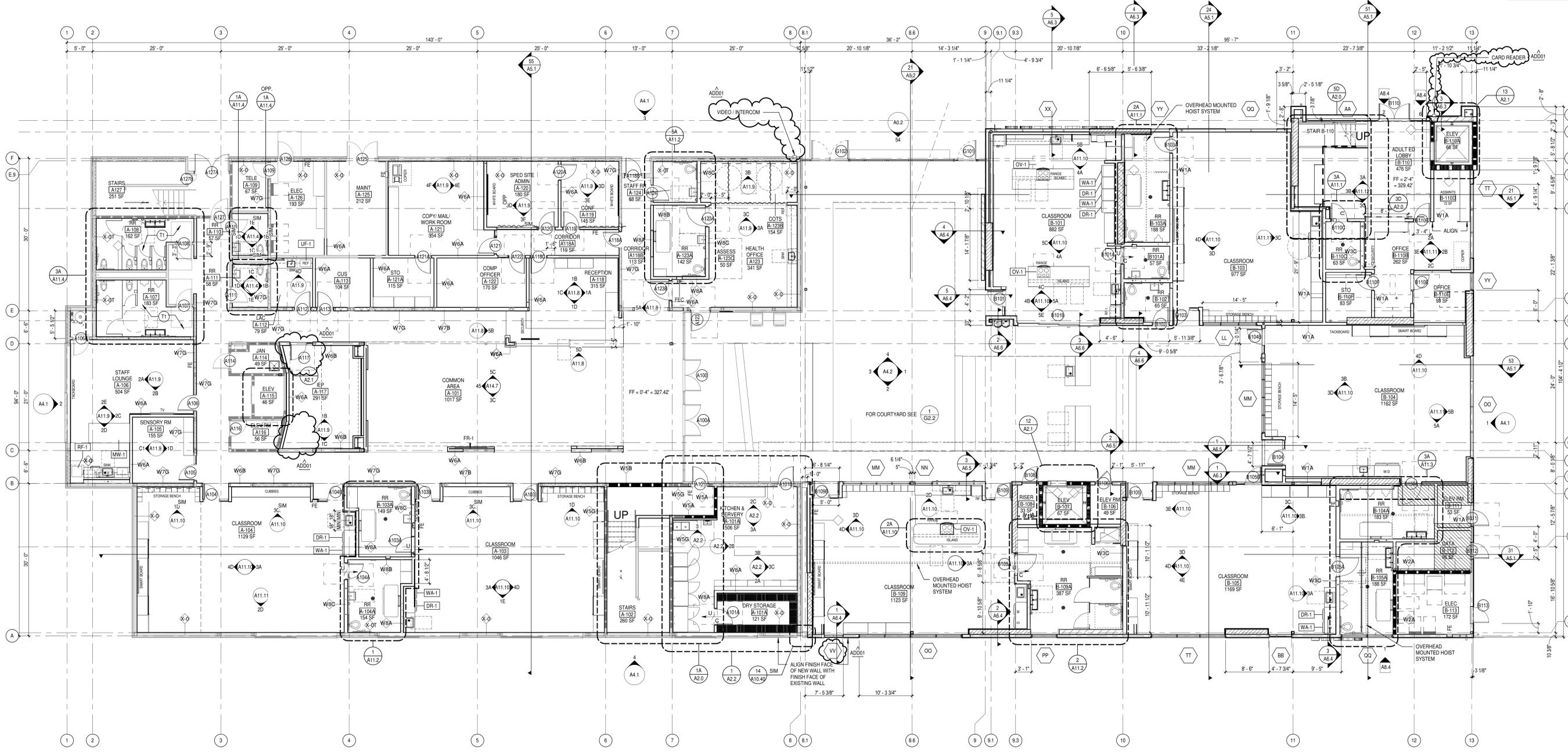


OSHA APPLICATION NO. 03-122743	09/26/2024
OSHA FILE NO. 19-110	
DLR PROJECT NO. 75-20223-02	
ISSUE DATE: 02/15/2024	
SUBMITTAL TITLE	
1. ADD01	09/26/2024

FIRST FLOOR PLAN

WALL TYPE SYMBOL	SEE FLOOR PLAN AND SEE SCHEDULE SHEET A8.0 - A8.2, A9.0
STOREFRONT / WINDOW ID	SEE SCHEDULE SHEET A8.4
EXISTING GUARDRAIL TO BE PAINTED	

A1.2



OVERALL FLOOR PLAN, LEVEL 1
 SCALE: 1/8" = 1'-0"

GENERAL ARCHITECTURAL NOTES

- A. GENERAL NOTES APPLY TO ALL SHEETS
- B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, CENTERLINE OF FRAMES OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
- C. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS THIS SHEET A8.0-A8.2; A9.0 FOR WALL TYPES. CONTRACTOR TO COORDINATE AND VERIFY WALL TYPE. CONTRACTOR TO PROVIDE ADDITIONAL LAYER OF GYP. BOARD AS REQUIRED TO ALIGN WALL FINISHES. ALL INTERIOR PARTITIONS ARE WALL TYPE W6A (AT THE EXISTING BUILDING) AND W1A AT THE NEW CONSTRUCTION UNLESS NOTED OTHERWISE.
- D. INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. SEE REFERENCED CEILING PLAN NOTES.
- E. WALLS OF FIRE-RESISTANCE-RATED CONSTRUCTION SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE.
- F. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN ALL PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS, I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, ETC. SEE DETAIL 11.10 FOR BACKING.
- G. GYPSUM BOARD AND PLASTER SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WHERE INDICATED ON DRAWINGS AND/OR AS DESCRIBED IN THE SPECIFICATIONS.
- H. PROVIDE AN AUTOMATIC FIRE ALARM SYSTEM THROUGHOUT INCLUDING WALL MOUNTED HORN/STROBE DEVICES.
- I. EXISTING EXTERIOR AND INTERIOR WALLS ARE 2X WOOD FRAMED WALLS WITH STUDS AT 16" O.C.
- J. PROVIDE CEMENT BACKER BOARD IN RESTROOMS WHERE WALL TILES OCCUR.
- K. DOOR JAMB TO BE 4" FROM ADJACENT STUD WALL U.O.
- L. AREAS WITH FLOOR DRAIN(S) SHALL HAVE 2% MAX SLOPE IN ALL DIRECTIONS.
- M. WHERE GYP BOARD AND INTERIOR WALL INSULATION WAS REMOVED, REPLACEMENT INSULATION AND GYP BOARD TO BE PROVIDED.
- N. WHERE A NEW WALL IS IN LINE WITH AN EXISTING WALL, PROVIDE ADDITIONAL GYP BOARD LAYER AS NEEDED FOR FLUSH FINISH WALL.

REFERENCE KEYNOTES

Key Value	Keynote Text
T1	PROVIDE NEW PLUMBING FIXTURES, TOILET PARTITIONS, TOILET ACCESSORIES, FINISHES, LIGHT FIXTURES

REMODEL PLAN LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL FRAMING TO REMAIN, INSTALL NEW WALL INSULATION (BATT SOUND INSULATION AT INTERIOR WALLS ONLY) NEW GYP BD, AND NEW FINISHES AS INDICATED ON A13.A AND A13.B
- NEW GYP BD SIDE
- EXISTING 1-HR RATED ASSEMBLY
- NEW STUD WALL, NON RATED, SEE A8.0-A8.1
- NEW 1-HR RATED ASSEMBLY, SEE 1/A8.1 FOR WS AND 2/A8.0 FOR W2
- CMU SHEAR WALL, SEE WALL TYPE AND STRUCTURAL DRAWINGS S1.1 & S1.2
- NEW CASEWORK / MILLWORK SEE INTERIOR ELEVATIONS A1.1 SERIES AND CASEWORK DETAILS A14.5 - A14.6
- EXISTING DOOR TO REMAIN SEE SCHEDULE SHEET A8.3
- NEW DOOR SEE SCHEDULE SHEET A8.3
- FIRE EXTINGUISHERS, SEE DETAIL 41 / A14.9
- WALL TYPE SYMBOL SEE FLOOR PLAN AND SEE SCHEDULE SHEET A8.0 - A8.2, A9.0
- STOREFRONT / WINDOW ID SEE SCHEDULE SHEET A8.4
- EXISTING GUARDRAIL TO BE PAINTED

Autodesk Docu75-20223-02 El Monte UHSD Rosemead Adult School Building 75-20223-02_POC_AR_2022.rvt
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Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



CONSTRUCTION DOCUMENTS



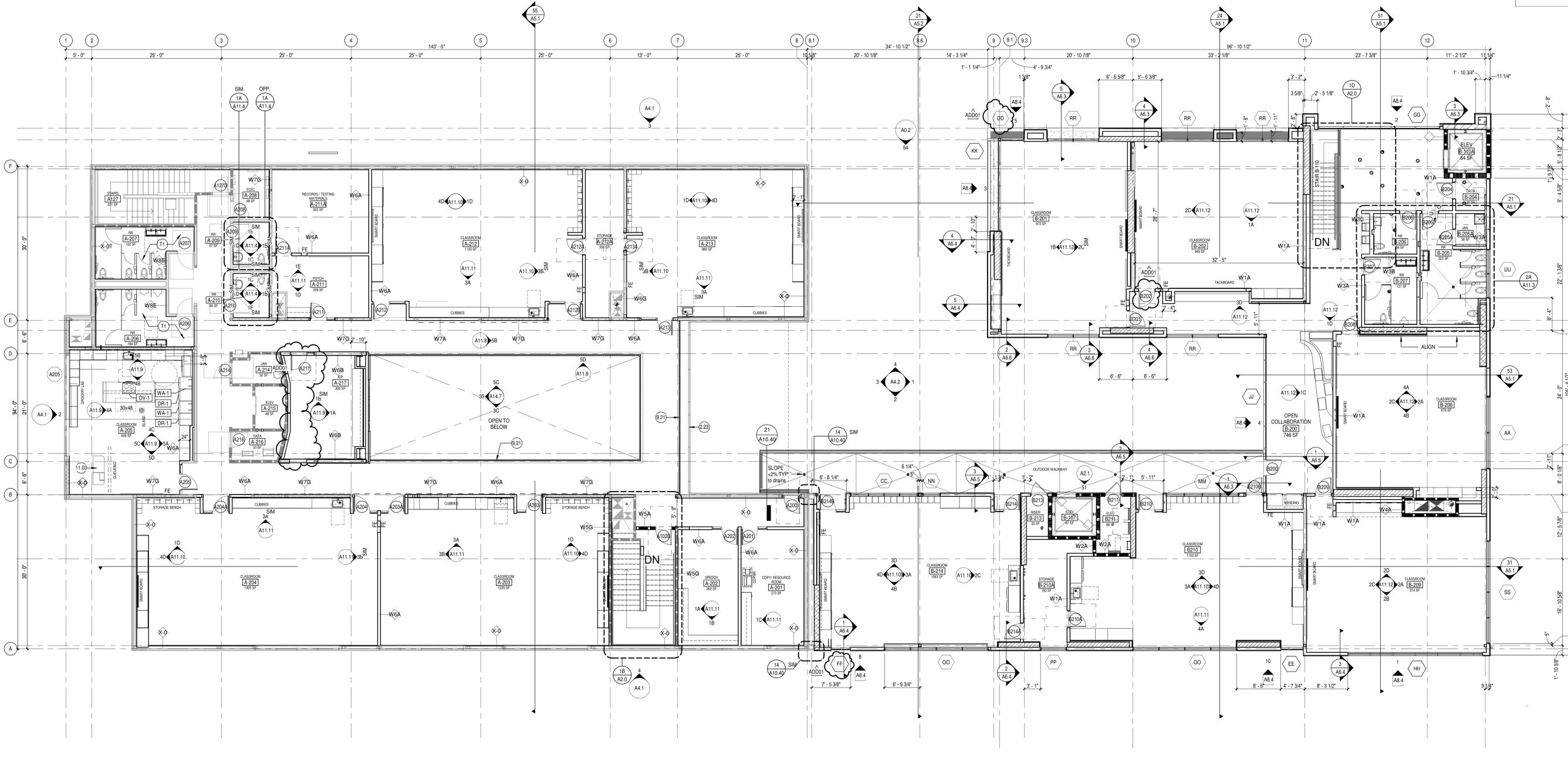
SEA APPLICATION NO: 03-122743
 SEA FILE NO: 19-110
 DLR PROJECT NO: 75-2022-02
 ISSUE DATE: 02/15/2024

SUBMITTAL TITLE	09/26/2024
1. A2001	

SECOND FLOOR PLAN

DATE	09/26/2024
BY	
CHECKED	
APPROVED	

A1.3



OVERALL FLOOR PLAN, LEVEL 2
 SCALE: 1/8" = 1'-0"

GENERAL ARCHITECTURAL NOTES

- A. GENERAL NOTES APPLY TO ALL SHEETS
- B. DIMENSIONS ARE ACTUAL AND ARE TO FACE OF STUDS, FACE OF CONCRETE WALLS, FACE OF CMU WALLS, CENTERLINE OF FRAMES OR CENTERLINE OF COLUMNS, UNLESS NOTED OTHERWISE.
- C. WALL TYPES SHALL BE DESIGNATED ON FLOOR PLANS. THIS SEE SHEET A8.0 FOR WALL TYPES. CONTRACTOR TO COORDINATE AND VERIFY WALL TYPE. CONTRACTOR TO PROVIDE ADDITIONAL LAYER OF GYP. BOARD AS REQUIRED TO ALIGN WALL FINISHES. ALL INTERIOR PARTITIONS ARE WALL TYPE W6A (AT THE EXISTING BUILDING) AND W1A AT THE NEW CONSTRUCTION UNLESS NOTED OTHERWISE.
- D. INTERIOR STUD WALLS SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE UNLESS NOTED OTHERWISE. SEE REFLECTED CEILING PLAN NOTES.
- E. WALLS OF FIRE-RESISTANCE-RATED CONSTRUCTION SHALL EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK ABOVE.
- F. FURNISH AND INSTALL FIRE-RETARDANT-TREATED WOOD BLOCKING OR METAL BACKING PLATE IN ALL PARTITIONS FOR PROPER ANCHORAGE OF WALL ATTACHED ITEMS. I.E. TOILET ACCESSORIES, TOILET PARTITIONS, CASEWORK, MILLWORK, WALL-MOUNTED FIXTURES, MARKERBOARDS, TACKBOARDS, DOOR STOPS, AUDIO VISUAL BRACKETS, ETC. SEE DETAIL 11/50.8 FOR BACKING.
- G. GYPSUM BOARD AND PLASTER SURFACES SHALL BE ISOLATED WITH CONTROL JOINTS WERE INDICATED ON DRAWINGS AND/OR AS DESCRIBED IN THE SPECIFICATIONS.
- H. PROVIDE AN AUTOMATIC FIRE ALARM SYSTEM THROUGHOUT INCLUDING WALL MOUNTED HORN/STROBE DEVICES.
- I. EXISTING EXTERIOR AND INTERIOR WALLS ARE 2X WOOD-FRAMED WALLS WITH STUDS AT 16" O.C.
- J. PROVIDE CEMENT BACKER BOARD IN RESTROOMS WHERE WALL TILES OCCUR.
- K. DOOR JAMB TO BE 4" FROM ADJACENT STUD WALL U.N.O.
- L. AREAS WITH FLOOR DRAINS SHALL HAVE 2% MAX SLOPE IN ALL DIRECTIONS.
- M. WHERE GYP BOARD AND INTERIOR WALL INSULATION WAS REMOVED, REPLACEMENT INSULATION AND GYP BOARD TO BE PROVIDED.
- N. WHERE A NEW WALL IS IN LINE WITH AN EXISTING WALL, PROVIDE ADDITIONAL GYP BOARD LAYER AS NEEDED FOR FLUSH FINISH WALL.

REFERENCE KEYNOTES

Key Value	Keynote Text
2.23	(E) CURTAIN WALL TO REMAIN. PROTECT IN PLACE
9.21	CLEAN EXISTING GUARDRAIL, SAND SMOOTH AND PREP FOR PAINT. ADD PRIMER AND FINISH COATS, PAINT P-15, SEMI-GLOSS FINISH
11.03	RW ROGERS NON-BELTED EXPRESS, GC FURNISHED OWNER INSTALLED
T1	PROVIDE NEW PLUMBING FIXTURES, TOILET PARTITIONS, TOILET ACCESSORIES, FINISHES, LIGHT FIXTURES

REMODEL PLAN LEGEND

- EXISTING WALL TO REMAIN
- EXISTING WALL FRAMING TO REMAIN. INSTALL NEW WALL INSULATION (BATT SOUND INSULATION AT INTERIOR WALLS ONLY) NEW GYP BD. AND NEW FINISHES AS INDICATED ON A13.A AND A13.B
- NEW GYP BD SIDE
- EXISTING 1-HR RATED ASSEMBLY
- NEW STUD WALL, NON RATED, SEE A8.0-A8.1
- NEW 1-HR RATED ASSEMBLY, SEE 1/A8.1 FOR WS AND 2/A8.0 FOR W2
- CMU SHEAR WALL, SEE WALL TYPE AND STRUCTURAL DRAWINGS S1.1 & S1.2
- NEW CASEWORK / MILLWORK
SEE INTERIOR ELEVATIONS A11.1 SERIES AND CASEWORK DETAILS A14.5 - A14.6
- EXISTING DOOR TO REMAIN
SEE SCHEDULE SHEET A8.3
- NEW DOOR
SEE SCHEDULE SHEET A8.3
- FIRE EXTINGUISHERS, SEE DETAIL 41 / A14.9
- WALL TYPE SYMBOL, SEE FLOOR PLAN AND SEE SCHEDULE SHEET A8.0 - A8.2, A8.0
- STOREFRONT / WINDOW ID
SEE SCHEDULE SHEET A8.4
- EXISTING GUARDRAIL TO BE PAINTED

Autodesk Docu75-2022-02-02 El Monte UHSD Rosemead Adult School Building 75-2022-02_POC_AR_2022.rvt
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Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



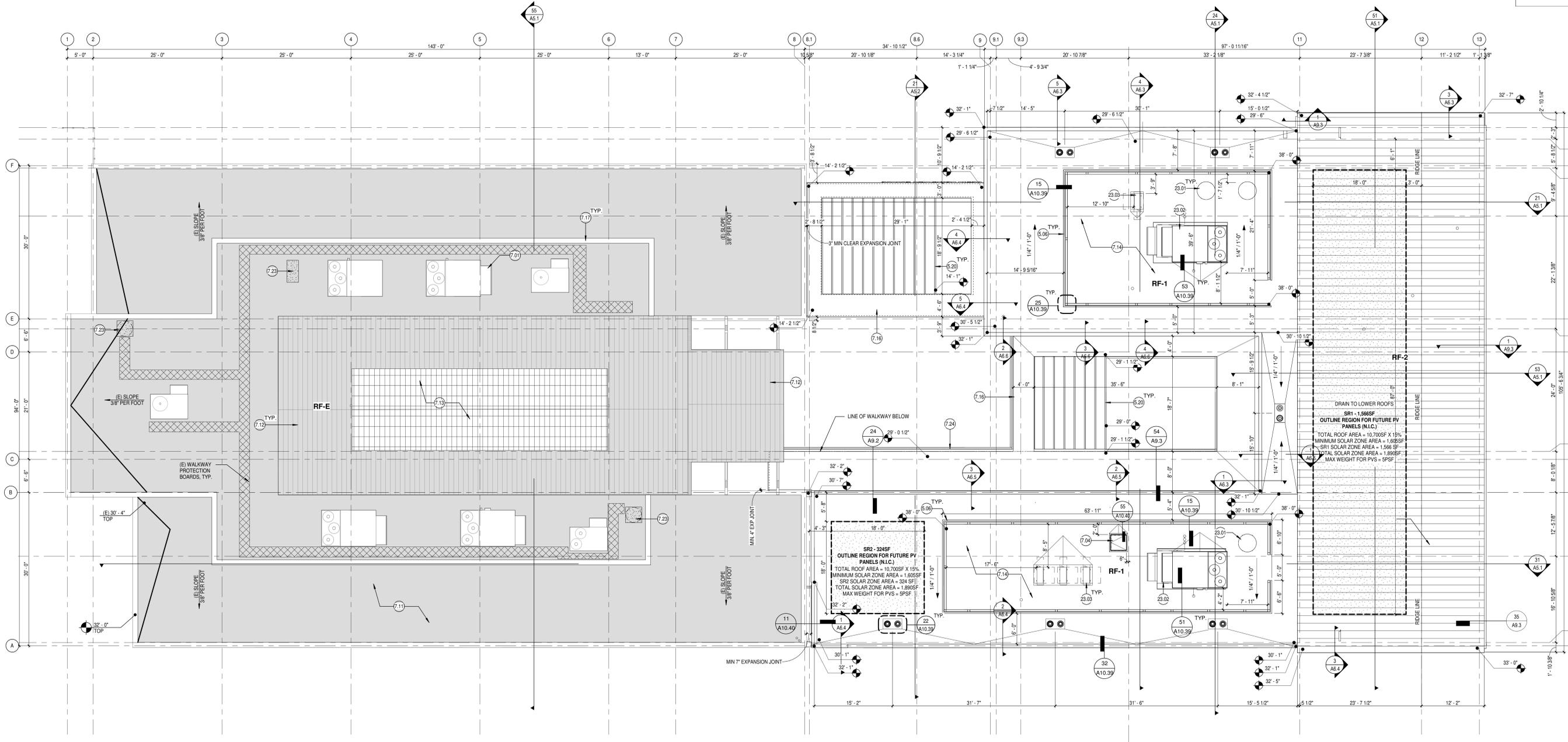
CONSTRUCTION DOCUMENTS



CSA APPLICATION NO. 03-122743	09/26/2024
CSA FILE NO. 19-110	
DLR PROJECT NO. 75-20223-02	
ISSUE DATE: 02/15/2024	
SUBMITTAL TITLE	
1. A1.001	

OVERALL ROOF PLAN

A1.4



OVERALL ROOF PLAN
 SCALE: 1/8" = 1'-0"

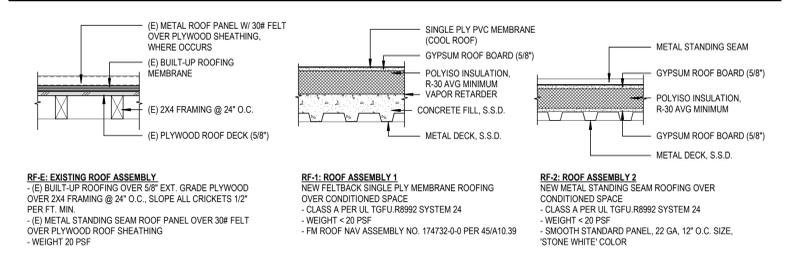
* FUTURE PV PANEL TOTAL NEW ROOF AREA = 10,700 SF X 15%
 ROOF AREA = 1,605 SF SOLAR

REFERENCE KEYNOTES

Key Value	Keynote Text
5.06	MTL. MECHANICAL SCREEN WITH STRUCTURAL SUPPORT POST. SEE 51 A10.39 AND REFER TO STRUCTURAL SHEET S5.
7.24	METAL PANEL OVERHANG. SEE 54 A9.3.
23.01	ROOF EXHAUST FAN. SEE MECHANICAL M3.1 AND SCHEDULE M0.2
23.02	HVAC UNIT ON CONCRETE MECH. EQUIPMENT PAD. SEE DET. 31 A10.39 AND MECHANICAL M3.1 AND SCHEDULE M0.2
23.03	SPLIT SYSTEM AIR CONDITIONING UNIT. SEE MECHANICAL M3.1 AND SCHEDULE M0.2
7.01	(E) BUILT-UP ROOFING ASSEMBLY TO REMAIN. PATCH AND REPAIR TO MATCH EXISTING AT LOCATION OF MECHANICAL WORK
7.04	ROOF HATCH. SEE 55 A10.40.
7.11	EXISTING BUILT-UP ROOF TO REMAIN
7.12	EXISTING STANDING SEAM ROOF TO REMAIN. CLEAN, PREP, AND PAINT COLOR TBD
7.13	EXISTING TRANSLUCENT PANEL TO REMAIN. CLEAN
7.14	ADHERED THERMOPLASTIC PVC FELTBACK MEMBRANE ROOFING
7.16	METAL PANEL CANOPY. SEE 54 A9.3.
7.17	(E) CEMENT PLASTER SCREEN WALL
7.23	REMOVE AND DEMO (E) EXHAUST FAN AND/OR CONDENSING UNIT. PATCH AND REPAIR ROOF TO MATCH EXISTING CONDITION

Key Value	Keynote Text
7.24	METAL PANEL OVERHANG. SEE 54 A9.3.
23.01	ROOF EXHAUST FAN. SEE MECHANICAL M3.1 AND SCHEDULE M0.2
23.02	HVAC UNIT ON CONCRETE MECH. EQUIPMENT PAD. SEE DET. 31 A10.39 AND MECHANICAL M3.1 AND SCHEDULE M0.2
23.03	SPLIT SYSTEM AIR CONDITIONING UNIT. SEE MECHANICAL M3.1 AND SCHEDULE M0.2

ROOF ASSEMBLIES



ROOF PLAN LEGEND

	PROVIDE RF-1 OR RF-2 ROOF ASSEMBLY, U.O.N. - SEE STRUCTURAL DRAWINGS FOR LOCATIONS WITH CONCRETE FILL		(E) ROOF HATCH TO REMAIN. PROTECT IN PLACE
	PROVIDE RF-1 OR RF-2 ROOF ASSEMBLY, U.O.N. - SEE STRUCTURAL DRAWINGS FOR LOCATIONS WITH CONCRETE FILL		(N) ROOF HATCH. SEE DET. 55 / A10.40
	1/4" - 1/2" MIN. SLOPE (U.O.N.) TO ROOF AND OVERFLOW DRAIN		T.O.R. TOP OF ROOF
	FOR ROOFING DETAILS. SEE SHEET A10.39		T.O.P. TOP OF PARAPET
	(E) RF-E ROOFING TO REMAIN PROTECT IN PLACE		
	(E) ROOF WALKWAY PAD, PROTECT IN PLACE		
	(N) ROOF WALKWAY PAD. SEE DET. 14 / A10.39		
	PATCH AND REPAIR (E) ROOF TO MATCH EXISTING		
	(E) ROOF DRAIN & OVERFLOW DRAIN TO REMAIN		
	(N) ROOF DRAIN & OVERFLOW DRAIN. SEE DET. 22 / A10.39		

NOTES:
 - REFER TO MECHANICAL DRAWINGS FOR ROOF EQUIPMENT INFORMATION AND SCHEDULE
 - IN ROOF CRICKETS TO HAVE 1/2" - 1/2" MIN. SLOPE, TYP.
 - REFER TO ROOF PLAN GENERAL NOTES FOR ADDITIONAL INFORMATION

ROOF PLAN GENERAL NOTES

- ROOF PLAN GENERAL NOTES APPLY TO ALL ROOF PLAN SHEETS.
- ROOF SLOPES ARE CREATED BY SLOPING THE ROOF STRUCTURE UNLESS NOTED OTHERWISE. SEE STRUCTURAL DRAWINGS FOR ELEVATIONS OF THE HIGH AND LOW POINTS TO DETERMINE PROPER TAPER IN INSULATION.
- TAPERED INSULATION SHALL PROVIDE A MINIMUM OF 1/4-INCH PER FOOT OF SLOPE TO ROOF DRAINS, UNLESS NOTED OTHERWISE.
- AREAS MARKED WITH A HATCHED PATTERN INDICATE TAPERED INSULATION.
- ALL ROOF CURBS TO BE A MINIMUM OF 8 INCHES ABOVE ROOFING LEVELS. PROVIDE TAPERED INSULATION ROOF SADDLES AT ROOF CURBS TO PROVIDE DRAINAGE AROUND CURBS.
- SEE STRUCTURAL DRAWINGS FOR FRAMING AROUND ROOF PENETRATIONS.
- COORDINATE THE SIZE AND LOCATION OF ROOF PENETRATIONS FOR MECHANICAL AND ELECTRICAL EQUIPMENT. REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR PENETRATIONS NOT SHOWN ON THIS DRAWING.
- FLASH DRAINS, CURBS, VENTS AND STACKS PER MANUFACTURER'S RECOMMENDATIONS IF DETAIL NOT SHOWN ON DRAWINGS.

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Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770

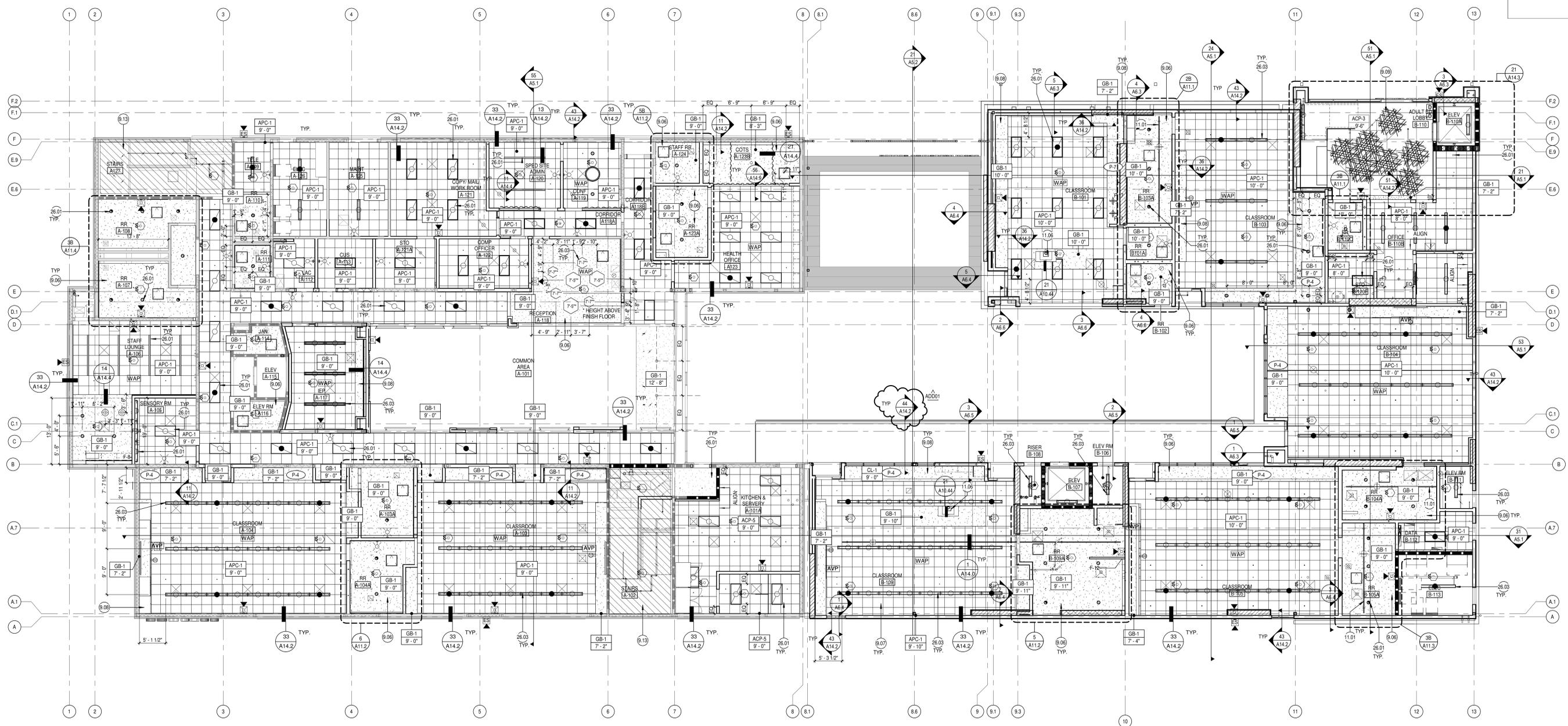


CONSTRUCTION DOCUMENTS



GBA APPLICATION NO. 03-122743	09/26/2024
GBA FILE NO. 19-110	
DLR PROJECT NO. 75-20223-02	
ISSUE DATE: 02/15/2024	
SUBMITTAL TITLE	09/26/2024
1. A3.201	

FIRST FLOOR REFLECTED CEILING PLAN



REFLECTED CEILING PLAN, LEVEL 1
 SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- C. CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM FINISH FLOOR OF THE ROOM.
- D. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
- E. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- F. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES. AT ACOUSTICAL PANEL CEILINGS.
 - a. FACE OF FINISHED WALL
 - b. FACE OF FINISHED BULKHEADS
 - c. CENTERLINE OF COLUMNS
 - d. CENTERLINE OF TEES
- H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
- I. ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 4 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.
- J. PAINT ALL EXPOSED SURFACES, EXPOSED MECHANICAL EQUIPMENT, STRUCTURAL MEMBERS, ELECTRICAL CONDUIT WIRING AND SUPPORT: P-1.
- K. ALL CEILING ARE NEW WORKS. U.O.N.
- L. CENTER CEILING TILE GRID IN THE ROOMS. U.O.N.
- M. AT THE GYPSUM BOARD CEILING IN THE EXISTING BUILDING AT THE FRAMED WINDOW PERIMETER, ALL NEW GYPSUM BOARD CEILING AND NEW CONSTRUCTION SHALL BE HANGERS WITH METAL BRACES. ADD01

REFERENCE KEYNOTES

Key Value	Keynote Text
9.06	FRAMED GYP. BOARD CEILING, SEE AND SPECS SECTION 09 29 00
9.07	SUSPENDED ACT CEILING, SEE AND SPECS SECTION 09 51 13
9.08	FRAMED GYP. BOARD SOFFIT, SEE 36A14.2
9.09	ACOUSTICAL CEILING CLOUD SYSTEM, SEE A14.3 FOR CEILING DETAILS
9.13	REMOVE AND REPLACE DAMAGED TILES WITH ACP-1; PATCH AND REPAIR AS REQUIRED FOR FIRE ALARM & SPRINKLER
11.01	OVERHEAD MOUNTED HOIST TRANSVERSE SYSTEM, SEE 11A14.0 & 5A14.0 FOR DETAILS
11.06	RANGE HOOD LOCATION, SEE 21A10.44
26.01	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
26.03	PENDANT LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS

REFLECTED CEILING PLAN LEGEND

	ACOUSTIC CEILING TILE IN SUSPENDED GRID (2X2)		PANEL TO CONTAIN NO ACOUSTIC CEILING TILE		SMOKE DETECTOR
	ACOUSTIC CEILING TILE IN SUSPENDED GRID (2X4)		MECHANICAL SUPPLY GRILLE		LIGHTING FIXTURE
	GYPSUM BOARD CEILING (GB-1), PAINTED P-1 U.O.		MECHANICAL RETURN GRILLE		FA STROBE
	MINIMAL CEILING SCOPE; PATCH AND REPAIR AS REQUIRED		MECHANICAL EXHAUST GRILLE		CEILING SPEAKER, COORDINATE REQUIREMENTS AND WIRING WITH DISTRICT AND MANUFACTURER
	EXPOSED STRUCTURAL DECK, PAINTED P-1 U.O.		ACCESS PANEL SEE 14 / A14.2		EXIT SIGN
	DENOTES CEILING TYPE AND HEIGHT				
	OPEN TO STRUCTURE, HEIGHT VARIES				

NOTE:
 1. SEE INTERIOR FINISH SCHEDULE ON SHEET A12.1 AND A12.2 FOR CEILING TYPE SPECIFICATIONS.
 2. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SCHEDULE SHEET E03

WINDOW SHADE DETAIL

	WINDOW SHADE WALL MOUNT NO POCKET, SEE DETAIL		WINDOW SHADE WALL MOUNT WITH RECESSED POCKET AT ACOUSTIC CEILING PANEL, SEE DETAIL
	WINDOW SHADE WALL MOUNT WITH RECESSED POCKET AT GYP.BD. CEILING, SEE DETAIL		

Autodesk Docu75-20223-02 El Monte UHSD Rosemead Adult School Building 75-20223-02_POC_AR_2022.rvt
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Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



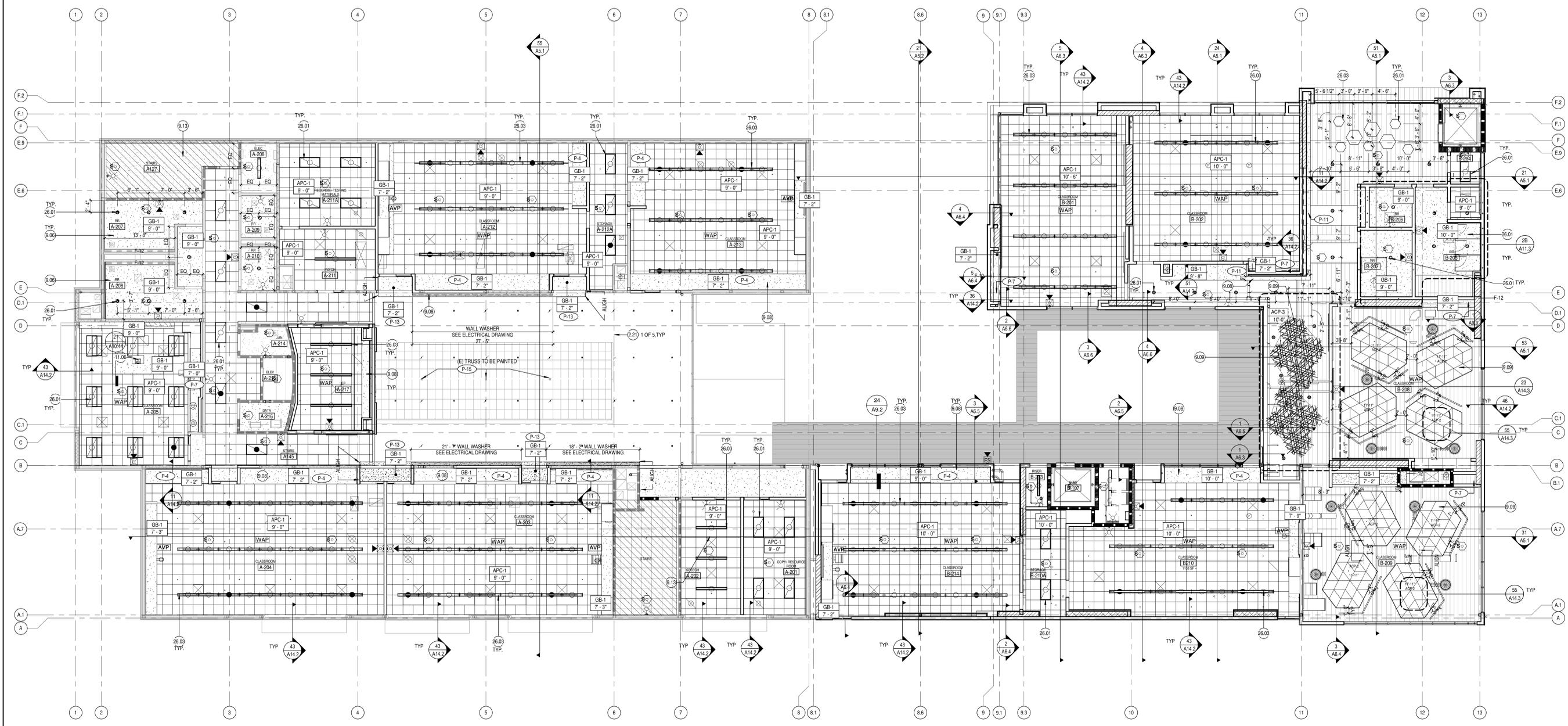
CONSTRUCTION DOCUMENTS



GBA APPLICATION NO. 03-122743
 GBA FILE NO. 19410
 DLR PROJECT NO. 75-20223-02
 ISSUE DATE: 02/15/2024

SECOND FLOOR REFLECTED CEILING PLAN

A3.3



REFLECTED CEILING PLAN, LEVEL 2
 SCALE: 1/8" = 1'-0"

REFLECTED CEILING PLAN GENERAL NOTES

- A. REFLECTED CEILING PLAN GENERAL NOTES APPLY TO ALL REFLECTED CEILING PLAN SHEETS.
- B. ALL CEILING GRIDS/PANELS SHALL BE CENTERED IN EACH ROOM UNLESS NOTED OTHERWISE.
- C. CEILING HEIGHTS ARE NOTED ON THE REFLECTED CEILING PLANS ARE MEASURED FROM FINISH FLOOR OF THE ROOM.
- D. ALL ELECTRICAL FIXTURES, SPEAKERS, SMOKE AND THERMAL DETECTORS, MECHANICAL GRILLES, SPRINKLER HEADS, AND OTHER CEILING MOUNTED DEVICES, SHALL BE CENTERED BETWEEN CEILING GRIDS UNLESS NOTED OTHERWISE. SPRINKLER HEADS SHALL BE WITHIN A 3-INCH RADIUS CENTERED BETWEEN CEILING GRIDS.
- E. IN ACOUSTICAL CEILING PANELS WITH SCORE IN THE CENTER, CENTER DEVICES REFERENCE IN NOTE D IN ONE HALF OF THE TILE. DO NOT LOCATE ON THE SCORE. FOR APC WITH MULTIPLE SCORED PATTERNS, COORDINATE LOCATION WITH THE ARCHITECT.
- F. PROVIDE SUSPENSION SYSTEM AROUND ELECTRICAL FIXTURES, MECHANICAL GRILLES, DIFFUSERS, AND OTHER CEILING MOUNTED DEVICES, AT ACOUSTICAL PANEL CEILINGS.
- G. ALL DIMENSIONS ON REFLECTED CEILING PLANS ARE ACTUAL AND ARE TO THE FOLLOWING UNLESS NOTED OTHERWISE:
 - a. FACE OF FINISHED WALL
 - b. FACE OF FINISHED BULKHEADS
 - c. CENTERLINE OF COLUMNS
 - d. CENTERLINE OF TEES
- H. IN AREAS WITH EXPOSED STRUCTURE CEILINGS, COORDINATE EXACT LOCATIONS OF MECHANICAL GRILLES, DIFFUSERS, DUCTWORK AND ELECTRICAL FIXTURES WITH EACH REPRESENTATIVE SUBCONTRACTOR.
- I. ALL WALLS EXTEND TO UNDERSIDE OF DECK EXCEPT THOSE SHOWN SHADDED IN WHICH GYPSUM BOARD OR MASONRY EXTENDS MIN 4 INCHES ABOVE FINISHED CEILING. ALL METAL STUDS EXTEND TO UNDERSIDE OF FLOOR OR ROOF DECK.
- J. PAINT ALL EXPOSED SURFACES, EXPOSED MECHANICAL EQUIPMENT, STRUCTURAL MEMBERS, ELECTRICAL CONDUIT WIRING AND SUPPORT: P-1.
- K. ALL CEILING ARE NEW WORKS. U.O.N.
- L. CENTER CEILING TILE ON GRID IN THE ROOMS. U.O.N.
- M. AT THE EXISTING BUILDING, THE EXISTING BUILDING AT THE FRAMED WINDOW PARTS SHALL BE NEW GYPSUM BOARD CEILING. NEW CONSTRUCTION SHALL BE GYPSUM BOARD CEILING WITH METAL STUDS. ADDITION.

REFERENCE KEYNOTES

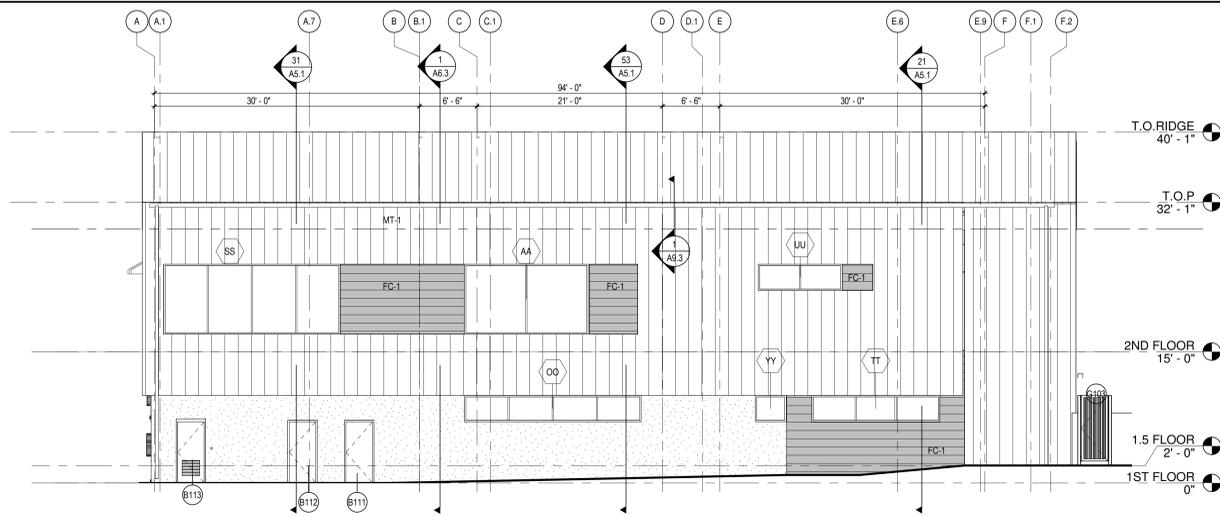
Key Value	Keynote Text
2.21	EXISTING EXPOSED TUBE STEEL TRUSSES TO REMAIN. CLEAN, PREP. AND PREPARE FOR STEEL TO BE PAINTED.
9.06	FRAMED GYP. BOARD SOFFIT, SEE AND SPECS SECTION 09 29 00
9.08	FRAMED GYP. BOARD SOFFIT, SEE 36/A14.2
9.09	ACOUSTICAL CEILING CLOUD SYSTEM, SEE A14.3 FOR CEILING DETAILS.
9.13	REMOVE AND REPLACE DAMAGED TILES WITH APC-1; PATCH AND REPAIR AS REQUIRED FOR FIRE ALARM & SPRINKLER.
11.06	RANGE HOOD LOCATION, SEE 21/A10.44
26.01	LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS
26.03	PENDANT LIGHT FIXTURE, SEE ELECTRICAL DRAWINGS

REFLECTED CEILING PLAN LEGEND

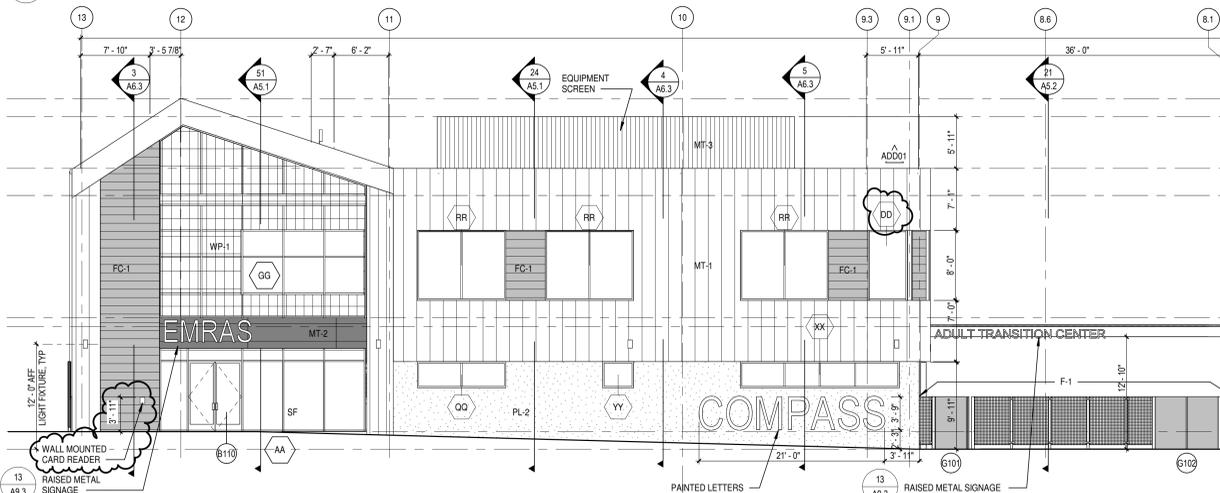
	ACOUSTIC CEILING TILE IN SUSPENDED GRID (2X2)		PANEL TO CONTAIN NO ACOUSTIC CEILING TILE		SMOKE DETECTOR
	ACOUSTIC CEILING TILE IN SUSPENDED GRID (2X4)		MECHANICAL SUPPLY GRILLE		LIGHTING FIXTURE
	GYPSUM BOARD CEILING (GB-1), PAINTED P-1 U.N.O.		MECHANICAL RETURN GRILLE		FA STROBE
	MINIMAL CEILING SCOPE; PATCH AND REPAIR AS REQUIRED		MECHANICAL EXHAUST GRILLE		CEILING SPEAKER, COORDINATE REQUIREMENTS AND WIRING WITH DISTRICT AND MANUFACTURER
	EXPOSED STRUCTURAL DECK, PAINTED P-1 U.N.O.		ACCESS PANEL, SEE 14 / A14.2		EXIT SIGN
	DENOTES CEILING TYPE AND HEIGHT				
	OPEN TO STRUCTURE, HEIGHT VARIES				

NOTE:
 1. SEE INTERIOR FINISH SCHEDULE ON SHEET A12.1 AND A12.2 FOR CEILING TYPE SPECIFICATIONS.
 2. SEE ELECTRICAL DRAWINGS FOR LIGHT FIXTURE SCHEDULE SHEET E3

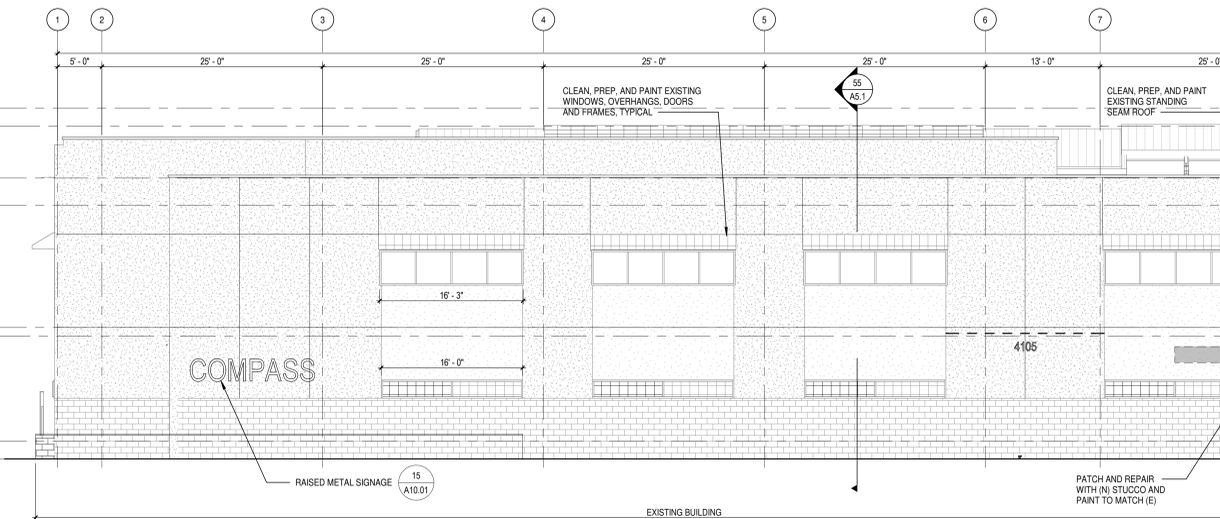
Autodesk Docu75-202202-02 El Monte UHSD Rosemead Adult School Building 75-20223-02_POC_AR_2022.rvt
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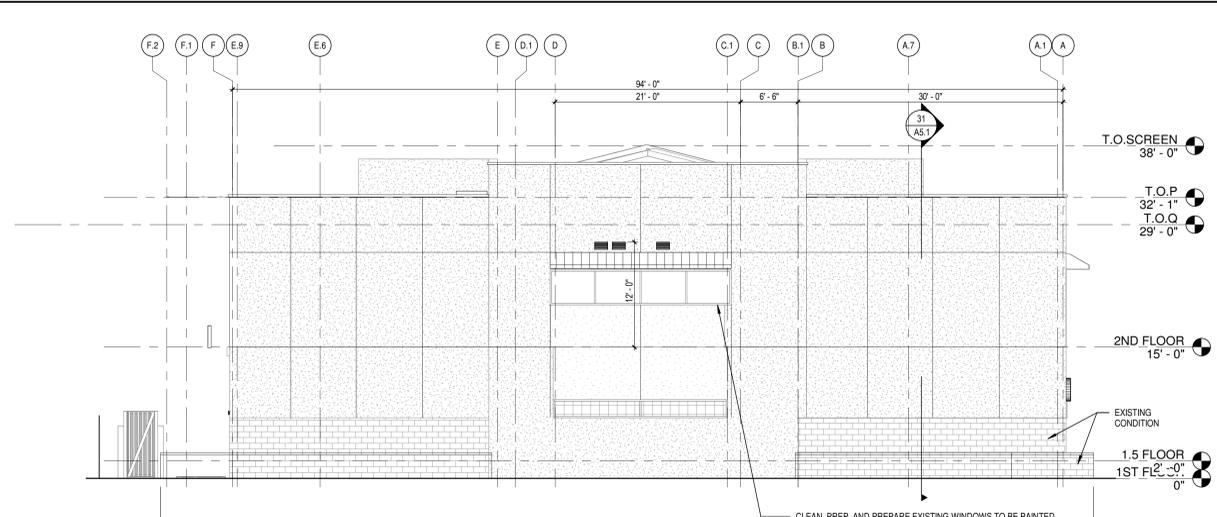
1 NORTH ELEVATION
A4.1 SCALE: 1/8" = 1'-0"



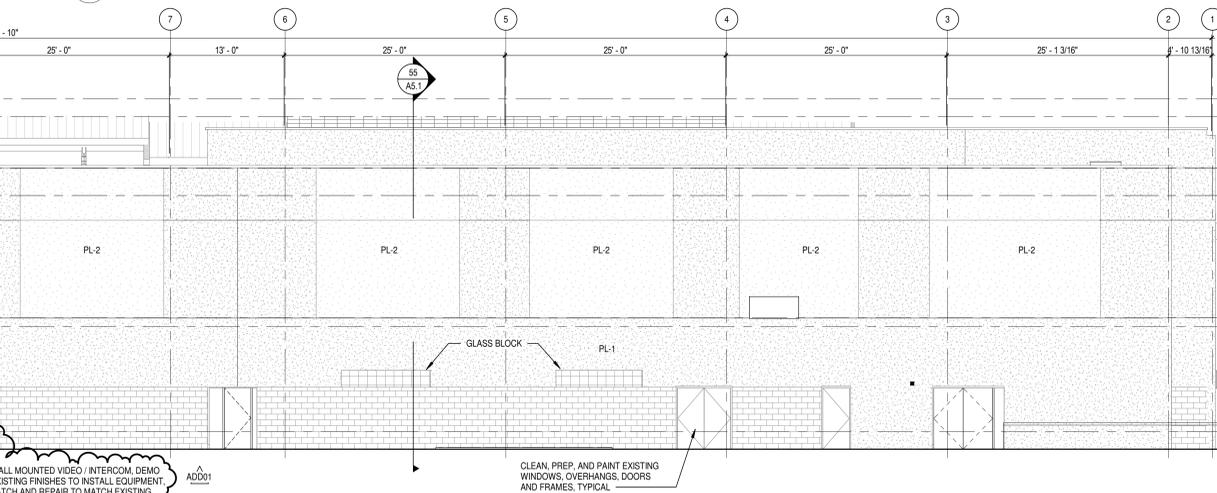
3 WEST ELEVATION
A4.1 SCALE: 1/8" = 1'-0"



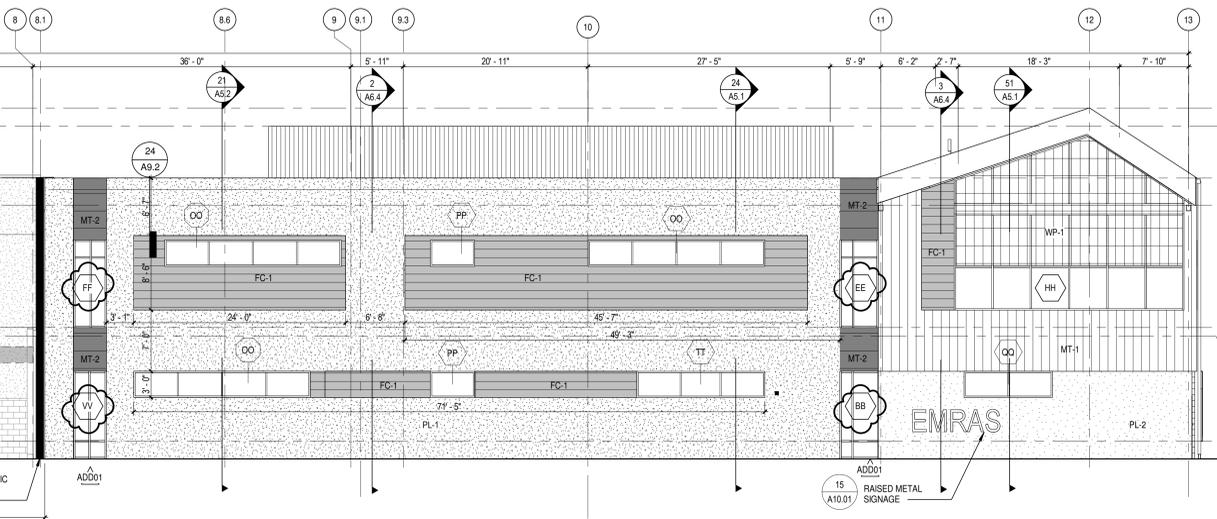
4 EAST ELEVATION
A4.1 SCALE: 1/8" = 1'-0"



2 SOUTH ELEVATION
A4.1 SCALE: 1/8" = 1'-0"



3 WEST ELEVATION
A4.1 SCALE: 1/8" = 1'-0"



4 EAST ELEVATION
A4.1 SCALE: 1/8" = 1'-0"

WALL ELEVATION FINISH LEGEND

FC-1 FIBER CEMENT PANEL SPEC 07 46 46	PL-1 PLASTER SAND BLOCK CHARLESTON PAINT EXISTING PLASTER AT EXISTING BLDG	XX WINDOW TYPE - SEE A8.4 WINDOW SCHEDULE
MT-1 PAINTED ALUMINUM METAL PANEL SPEC 07 41 13	PL-2 PLASTER SAND BLOCK SILVERADO PAINT EXISTING PLASTER AT EXISTING BLDG	EXTERIOR WALL LOUVER PAINTED TO MATCH ADJACENT MATERIAL U.N.O.
MT-2 PAINTED ALUMINUM METAL PANEL SPEC 07 42 13.16	WP-1 TRANSLUCENT WALL PANEL SPEC 08 45 00	F-1 WELDED WIRE PANEL FENCE, SEE 56/A0.5 & CUSTOM GATE, SEE 21/A0.5 SPEC 32 94 50
MT-3 CORRUGATED METAL ROOF SCREEN SPEC 07 42 13.15	EXISTING GLASS BLOCK TO REMAIN	WELDED WIRE PANEL PLANT SUPPORT SYSTEM, SEE 53/A0.1 SPEC 32 94 50
GR-1 PERFORATED METAL PANEL GUARDRAIL SEE 11/A10.04	EXISTING CMU VENEER TO REMAIN	



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El Monte Union High School District
4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



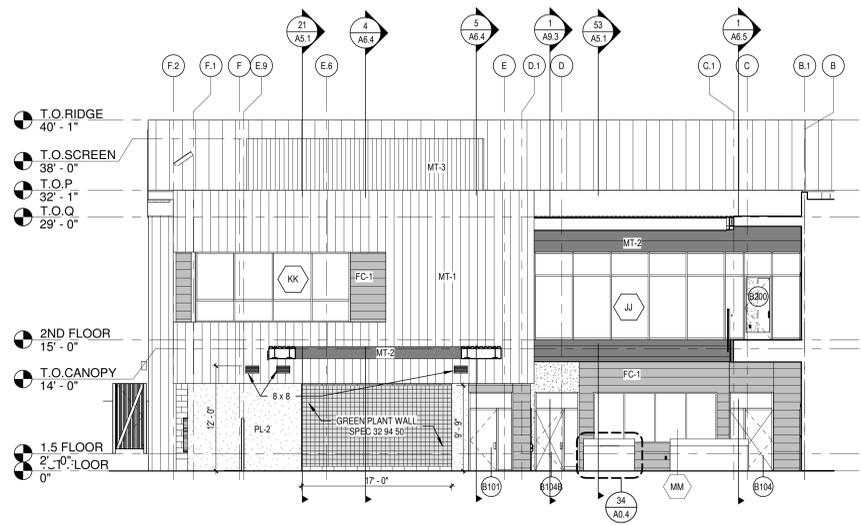
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DOCUMENTS**

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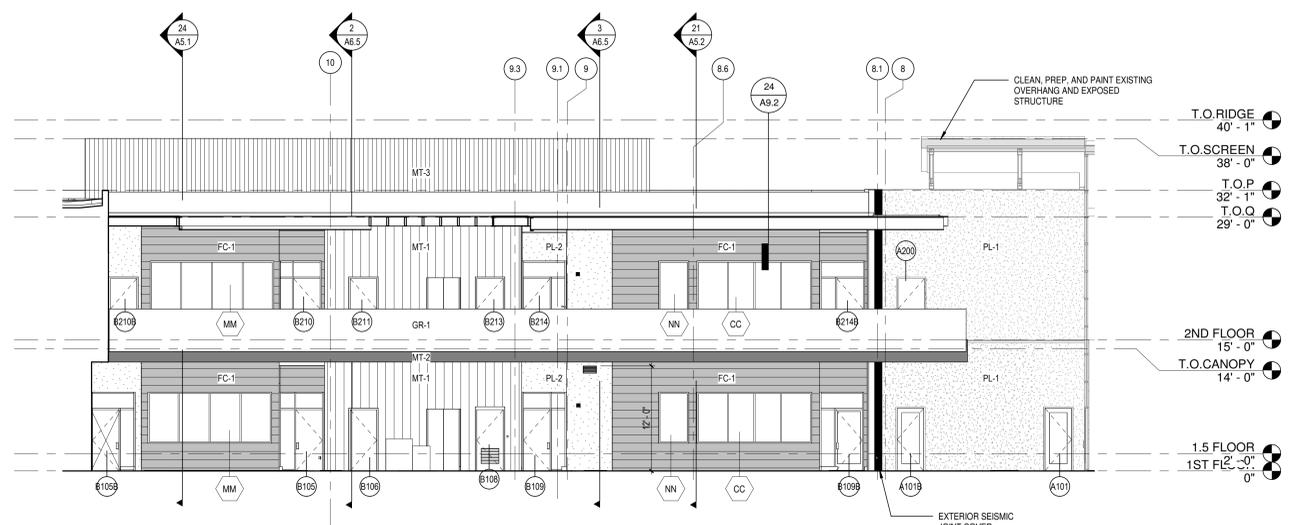
CSA APPLICATION NO: 03-122743
CSA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 02/15/2024

**EXTERIOR
ELEVATIONS**

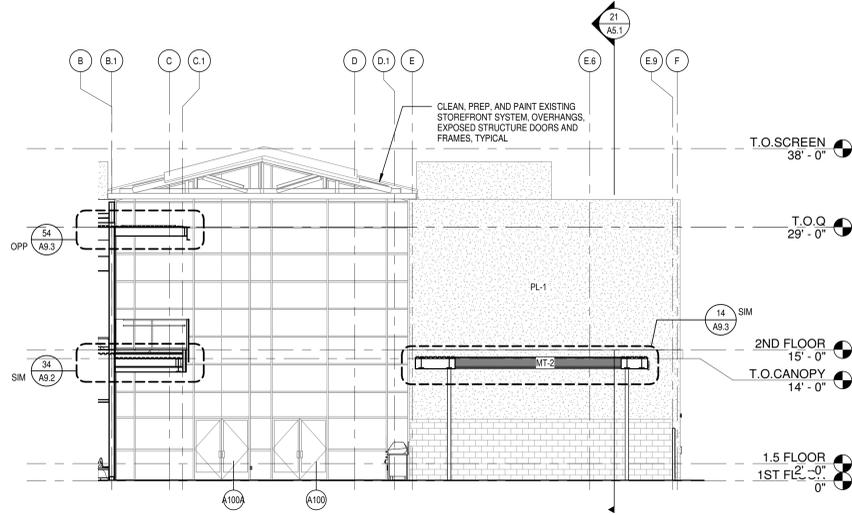
A4.1



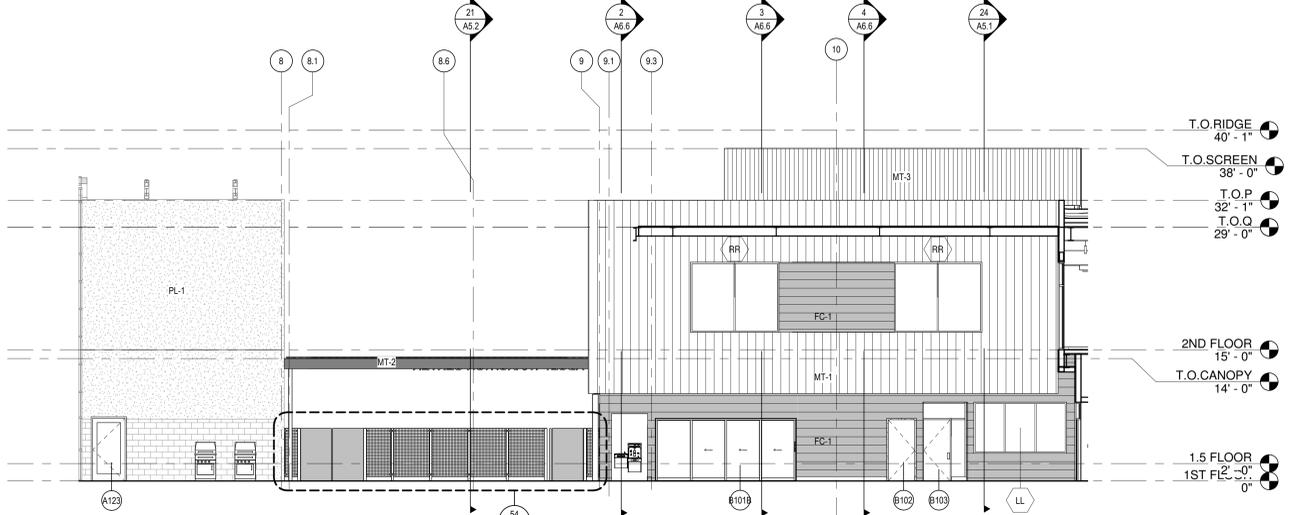
1 SOUTH ELEVATION - COURTYARD
A4.2 SCALE: 1/8" = 1'-0"



2 WEST ELEVATION - COURTYARD
A4.2 SCALE: 1/8" = 1'-0"



3 NORTH ELEVATION - COURTYARD
A4.2 SCALE: 1/8" = 1'-0"



4 EAST ELEVATION - COURTYARD
A4.2 SCALE: 1/8" = 1'-0"

WALL ELEVATION FINISH LEGEND

	FC-1 FIBER CEMENT PANEL SPEC 07 46 46		PL-1 PLASTER SAND FLOAT CHARLESTON PAINT EXISTING PLASTER AT EXISTING BLDG		WINDOW TYPE - SEE A8.4 WINDOW SCHEDULE
	MT-1 PAINTED ALUMINUM METAL PANEL SPEC 07 41 13		PL-2 PLASTER SAND FLOAT SILVERADO PAINT EXISTING PLASTER AT EXISTING BLDG		EXTERIOR WALL LOWER PAINTED TO MATCH ADJACENT MATERIAL U.N.O.
	MT-2 PAINTED ALUMINUM METAL PANEL SPEC 07 42 13.16		WP-1 TRANSLUCENT WALL PANEL SPEC 08 45 00		F-1 WELDED WIRE PANEL FENCE, SEE S6/A0.5 & CUSTOM GATE, SEE 21/A0.5 SPEC 32 94 50
	MT-3 CORRUGATED METAL ROOF SCREEN SPEC 07 42 13.13		EXISTING GLASS BLOCK TO REMAIN		WELDED WIRE PANEL PLANT SUPPORT SYSTEM - SEE S3/A0.1 SPEC 32 94 50
	GR-1 PERFORATED METAL PANEL GUARDRAIL SEE 11/A10.04		EXISTING CMU VENEER TO REMAIN		



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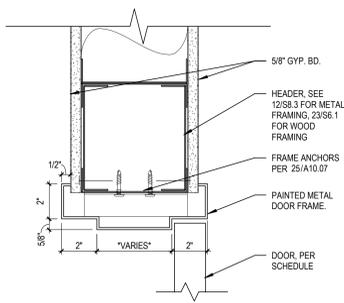
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CSA APPLICATION NO: 03-122743
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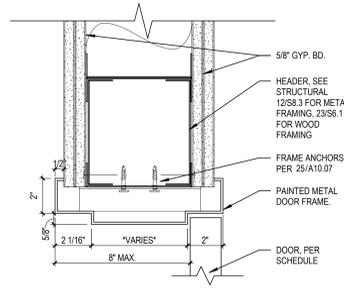
SUBMITTAL TITLE	09/26/2024
T. A001	

EXTERIOR
ELEVATIONS

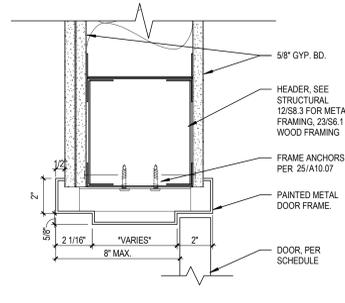
A4.2



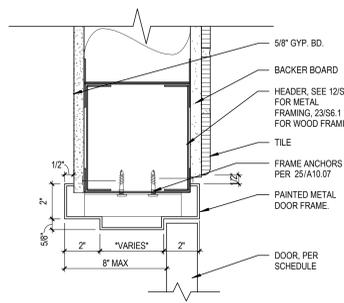
11 DOOR HEAD (INTERIOR)1
A10.07 SCALE: 3" = 1'-0"



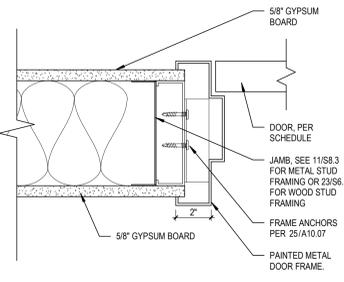
12 DOOR HEAD (INTERIOR) - 2 LAYERS OF GYP. BOTH SIDES1
A10.07 SCALE: 3" = 1'-0"



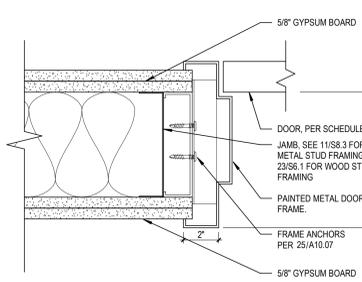
13 DOOR HEAD (INTERIOR) - 2 LAYERS OF GYP. ONE SIDE1
A10.07 SCALE: 3" = 1'-0"



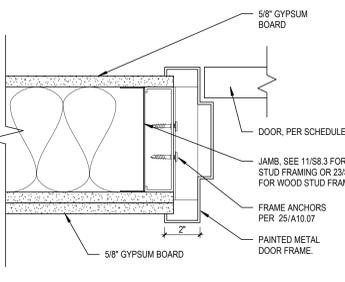
14 DOOR HEAD (INTERIOR) GYP/TILE1
A10.07 SCALE: 3" = 1'-0"



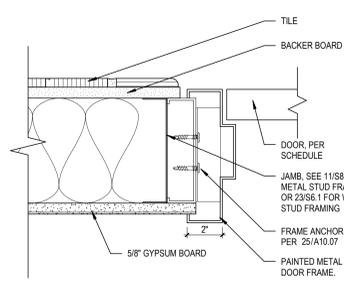
21 DOOR JAMB (INTERIOR)1
A10.07 SCALE: 3" = 1'-0"



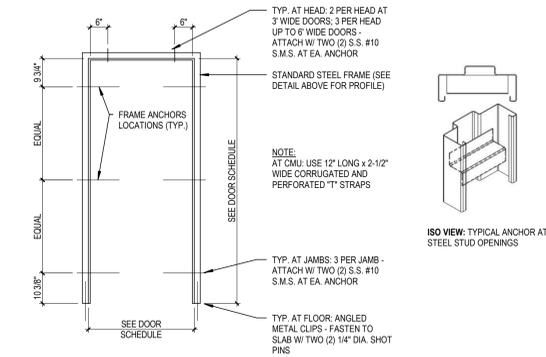
22 DOOR JAMB (INTERIOR) 2 LAYERS OF GYP. BOTH SIDES1
A10.07 SCALE: 3" = 1'-0"



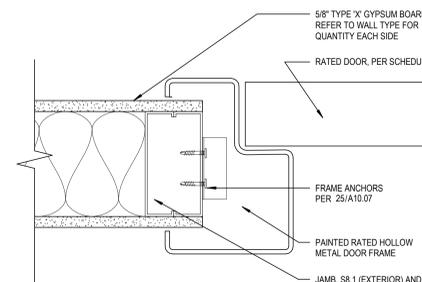
23 DOOR JAMB (INTERIOR) 2 LAYERS OF GYP. ONE SIDE1
A10.07 SCALE: 3" = 1'-0"



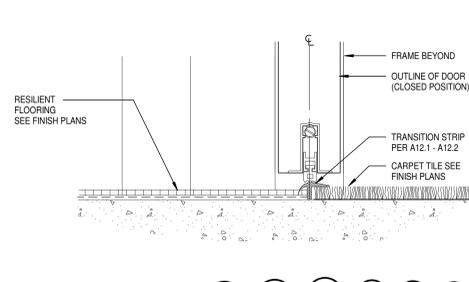
24 DOOR JAMB (INTERIOR) GYP/TILE1
A10.07 SCALE: 3" = 1'-0"



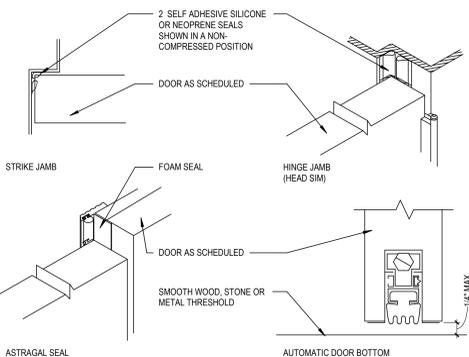
25 TYP. DOOR FRAME ANCHORS
A10.07 SCALE: 12\"/>



31 RATED DOOR JAMB
A10.07 SCALE: 3" = 1'-0"



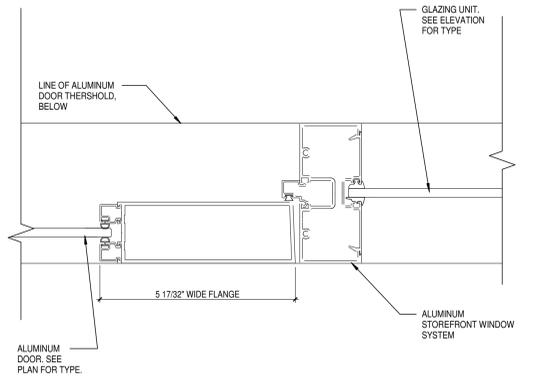
34 DOOR SILL (INTERIOR) RESILIENT FLOORING - CARPET
A10.07 SCALE: 6\"/>



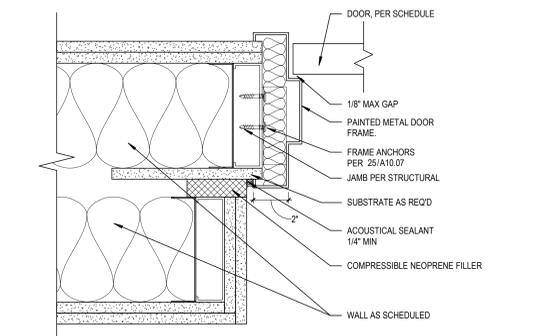
MANUFACTURER	PERIMETER	*ASTRAGAL	AUTOMATIC DOOR BOTTOM	
			MORTISE	SURF. MOUNT
NATIONAL GUARD	5050	10GN	423N	420N
PEMCO	S 88	355CS	434A/420A	
REESE	797		371	521
ULTRA			DB 043	
ZERO	1840	369	367	

- * NO ACOUSTICAL TEST DATA FROM MANUFACTURER
** ALTERNATE FOR HOLLOW METAL DOORS
- NOTES:
1. INSTALL DOOR IN FRAME WITH 1/8" MAX TOLERANCE @ HEAD, HINGE AND STRIKE JAMB
2. PERIMETER SEAL SHALL ALWAYS BE MIN SEMI COMPRESSED WITH DOOR CLOSED
3. IF TOLERANCE @ PERIMETER IS GREATER THAN 1/8" & DOOR CANNOT BE ADJUSTED, REPLACE W/ 1/2" SEAL INSTEAD OF 1/4" SEAL
4. ALL GAPS @ INTERSECTION OF ASTRAGAL & AUTOMATIC DOOR BOTTOM SHALL BE SEALED
5. FOR DOUBLE INTERCONNECTING DOORS PROVIDE PERIMETER SEALS AND AUTOMATIC DOOR BOTTOMS ON BOTH DOORS
6. IF REQ'D, SUBSTITUTE A SURFACE APPLIED AUTOMATIC DOOR BOTTOM WITH REESE 521 OR EQUAL

44 ACOUSTIC DOOR SEAL1
A10.07 SCALE: 3" = 1'-0"

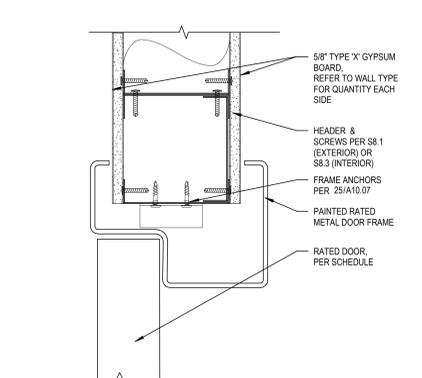


35 GLASS DOOR JAMB (INT)
A10.07 SCALE: 6\"/>

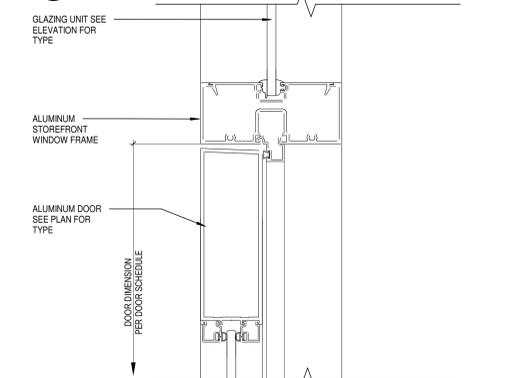


- NOTE:
1. INSTALL DOOR IN FRAME WITH 1/8" MAX TOLERANCE @ HEAD, HINGE AND STRIKE JAMB
2. PERIMETER SEAL SHALL ALWAYS BE MIN SEMI COMPRESSED WITH DOOR CLOSED

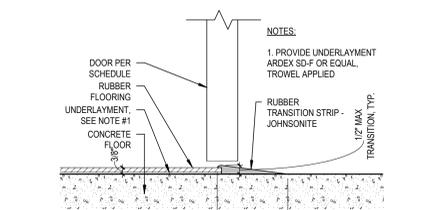
45 DOOR JAMB (ACOUSTIC)1
A10.07 SCALE: 3" = 1'-0"



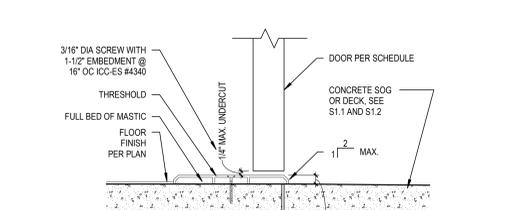
32 RATED DOOR HEAD
A10.07 SCALE: 3" = 1'-0"



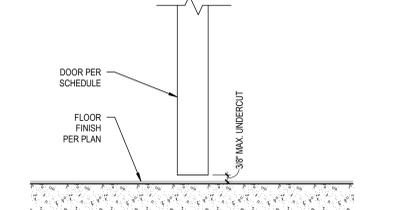
33 GLASS DOOR HEAD
A10.07 SCALE: 6\"/>



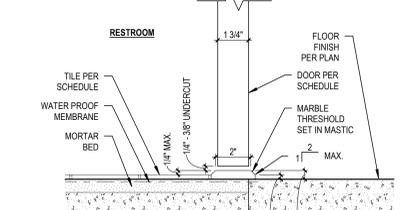
51 TRANSITION - RUBBER TO CONCRETE1
A10.07 SCALE: 3" = 1'-0"



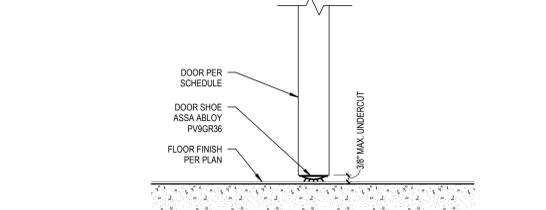
52 DOOR SILL (THRESHOLD)1
A10.07 SCALE: 3" = 1'-0"



53 DOOR SILL (INTERIOR) UNDERCUT1
A10.07 SCALE: 3" = 1'-0"



54 DOOR SILL RESTROOM1
A10.07 SCALE: 3" = 1'-0"



55 DOOR SILL (INTERIOR) DOOR SHOE1
A10.07 SCALE: 3" = 1'-0"



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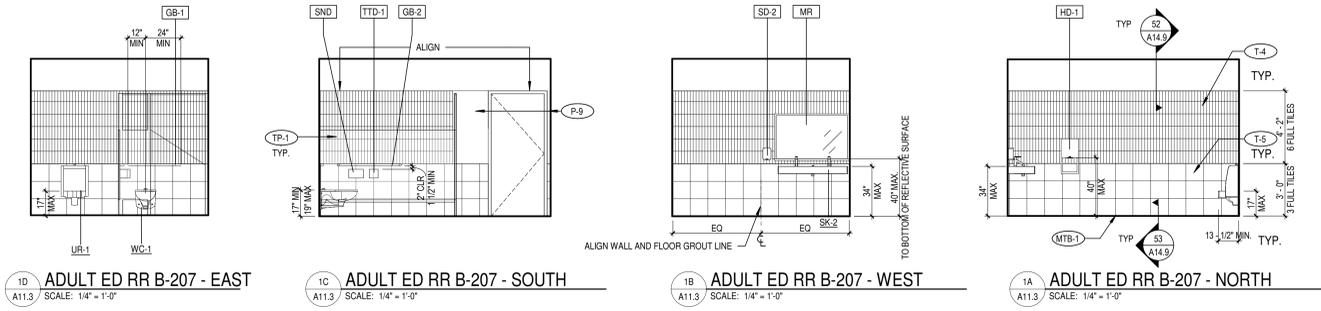
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SEA APPLICATION NO: 03-122743
SEA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 02/15/2024

NO.	REVISION	DATE
1	ADD	09/26/2024

INTERIOR DOOR DETAILS

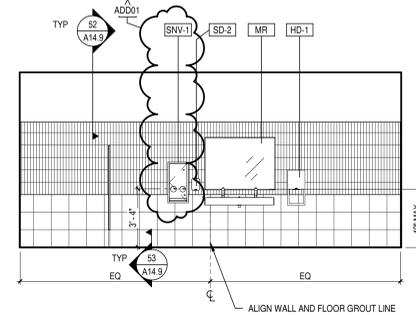


1D ADULT ED RR B-207 - EAST
A11.3 SCALE: 1/4" = 1'-0"

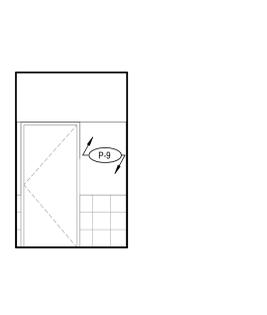
1C ADULT ED RR B-207 - SOUTH
A11.3 SCALE: 1/4" = 1'-0"

1B ADULT ED RR B-207 - WEST
A11.3 SCALE: 1/4" = 1'-0"

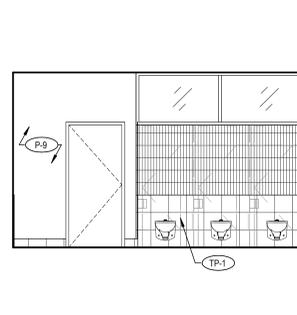
1A ADULT ED RR B-207 - NORTH
A11.3 SCALE: 1/4" = 1'-0"



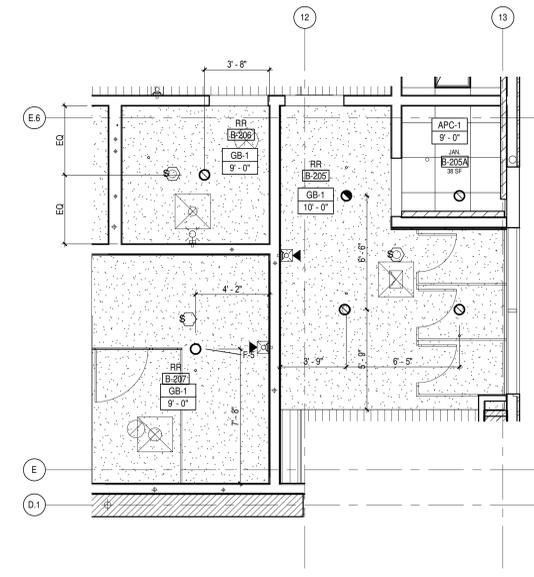
2E ADULT ED RR B-205 - SOUTH
A11.3 SCALE: 1/4" = 1'-0"



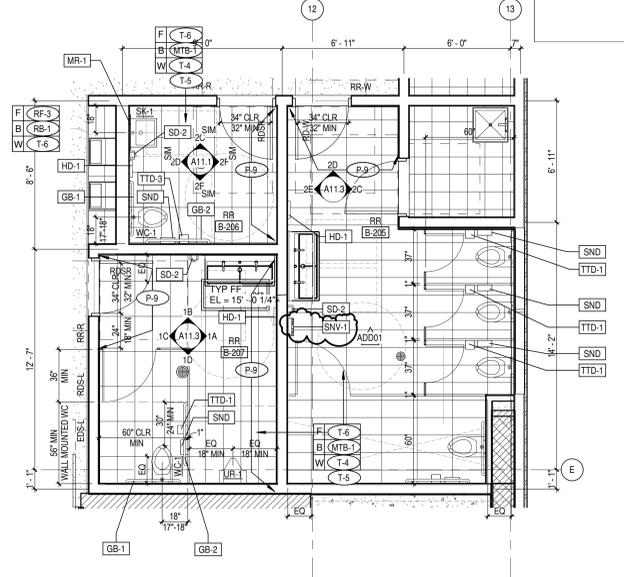
2D ADULT ED RR B-205 - WEST
A11.3 SCALE: 1/4" = 1'-0"



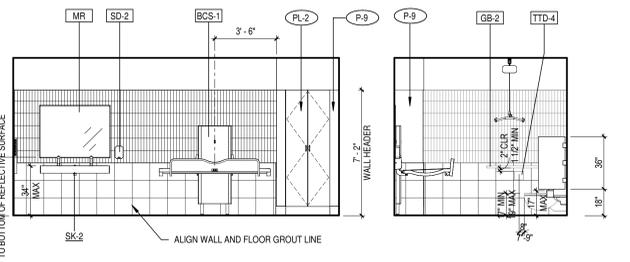
2C ADULT ED RR B-205 - NORTH
A11.3 SCALE: 1/4" = 1'-0"



2B ADULT ED ENLARGED RR RCP - B-205, B-206, B-207
A11.3 SCALE: 1/4" = 1'-0"

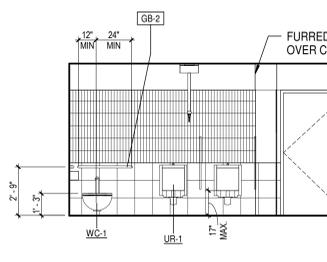


2A ADULT ED ENLARGED RR PLAN - B-205, B-206, B-207
A11.3 SCALE: 1/4" = 1'-0"

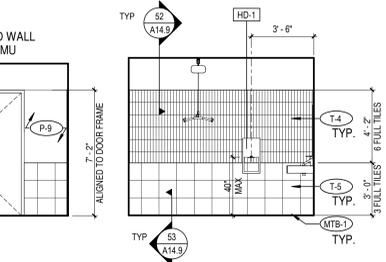


3F TRANS CTR RR B-104A - EAST
A11.3 SCALE: 1/4" = 1'-0"

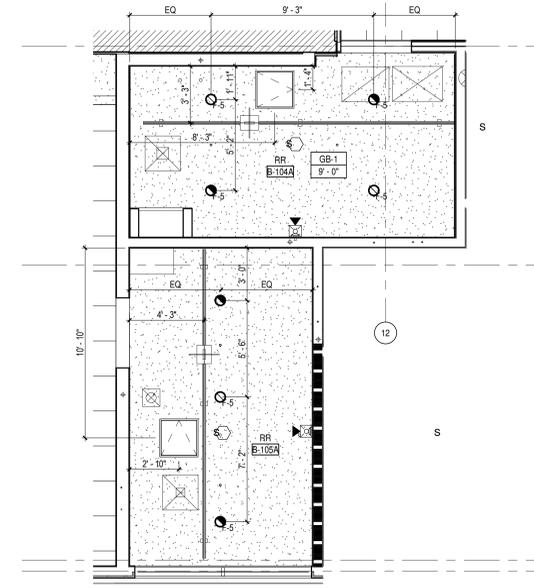
3E TRANS CTR RR B-104A - SOUTH
A11.3 SCALE: 1/4" = 1'-0"



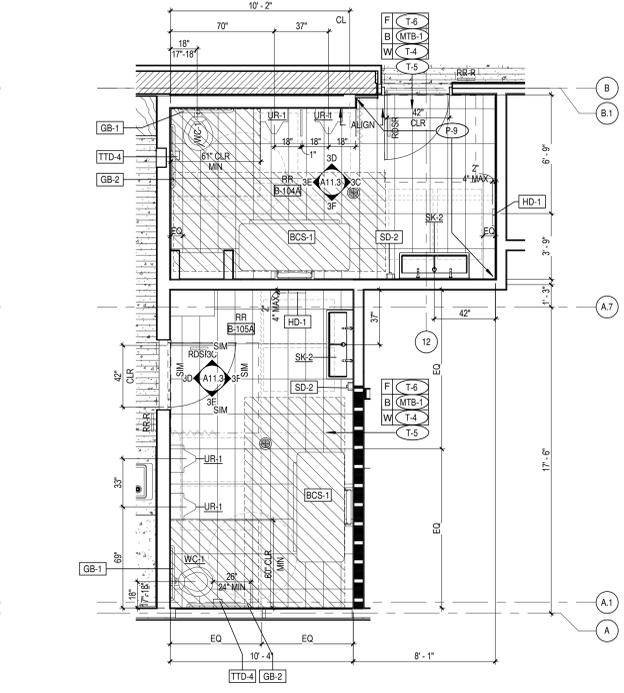
3D TRANS CTR RR B-104A - WEST
A11.3 SCALE: 1/4" = 1'-0"



3C TRANS CTR RR B-104A - NORTH
A11.3 SCALE: 1/4" = 1'-0"



3B TRANS CTR ENLARGED RR RCP - ENLARGED RR B-104A, B-105A
A11.3 SCALE: 1/4" = 1'-0"



3A TRANS CTR ENLARGED RR PLAN - B-104A, B-105A
A11.3 SCALE: 1/4" = 1'-0"

PLUMBING AND TOILET ACCESSORY SCHEDULE

TAG	ITEM	MANUFACTURER	COLLECTION	MODEL	FINISH OR COLOR	SIZE	LOCATION	
L-1	SINGLE RESTROOM SINK	DUFAVIT	VERO FURNITURE WASHBASIN	050400000	WHITE	19.5" x 18 1/2"	RESTROOM	
L-1A-2	FACET	KOHLER	TOUCLES	K-100236-SMA	POLISHED CHROME		CLASSROOM SKILL LAB	
L-2	2/20 RESTROOM SINK	DUFAVIT	VERO WASHBASIN GRIND	050410000	WHITE	47 1/4" x 18 1/2"	RESTROOM	
S-1	UNDERMOUNT SINGLE BOWL KITCHEN SINK	KOHLER	RIVERBY	K-5470-SU	WHITE	25" x 22" x 5 7/8"	MED FRAGILE CLASSROOM SKILL LAB	
S-2	UNDERMOUNT CERAMIC BASIN	KOHLER	VERTICYL RECTANGLE	K-2860	WHITE	19 1/8" x 15 5/8"	LACTATION ROOM	
S-1S-2	PULLDOWN KITCHEN FAUCET	MCEW	MICROTRONICS	7566 SERIES	STAINLESS STEEL	SPOUT HEIGHT 15.75"	CLASSROOM	
MR-1	MIRROR	BOBRICK	MIRROR WITH STAINLESS STEEL CHANNEL FRAME B-165 SERIES	B-165-4006	STAINLESS STEEL	24" x 48"	RESTROOM	
MR-2	MIRROR	BOBRICK	MIRROR WITH STAINLESS STEEL CHANNEL FRAME B-165 SERIES	B-165-4006	STAINLESS STEEL	48" x 24"	RESTROOM	
SK-1	SHOWER ENCLOSURE WITH SHOWER SEAT	GALATIE	10038TRCZL 6036		WHITE ACRYLIC	60" x 36" x 79"	RESTROOM	
TP-1	TOILET PARTITION	BOBRICK	1185 SERIES WALL - HUNG SCREEN	CLASS A 1180	FIELD ELM 79995C-665C	STANDARD, 58 1/4" 12" FLOOR CLEARANCE	48"	RESTROOM
TP-2	URINAL SCREEN - WALL HUNG	BOBRICK	1185 SERIES WALL - HUNG SCREEN	CLASS A 1180	FIELD ELM 79995C-665C	STANDARD, 58 1/4" 12" FLOOR CLEARANCE	48"	RESTROOM
BCS-1	CHANGING STATION	KOHLA KARE	KB300-AHL		WHITE	75.5" H x 49.5" D x 60.5" W WHEN FULLY OPENED	RESTROOM	
WC-1	WATER CLOSET	PER PLUMBING DRAWING					RESTROOM	
UR-1	URINAL	PER PLUMBING DRAWING					RESTROOM	
GB-1	36" GRAB BAR	BOBRICK	1 1/4" DIA STAINLESS STEEL GRAB BAR WITH SNAP FLANGE	B-5000036	STAINLESS STEEL SATIN	36"	RESTROOM	
GB-2	42" GRAB BAR	BOBRICK	1 1/4" DIA STAINLESS STEEL GRAB BAR WITH SNAP FLANGE	B-5000042	STAINLESS STEEL SATIN	42"	RESTROOM	
HD-1	HAND DRYER	DYSON	LOW WALL MOUNT AIRBLAST 114007	207174-01	SHINY/NEL	15 1/2" X 11 1/4" X 4" D	RESTROOM	
SD-1	SOAP DISPENSER - COUNTER	BRANLEY	LAVATORY MOUNTED SOAP DISPENSER	0334	CHROME PLATED BRASS	3 1/2" x 3 1/2"	RESTROOM	
SD-2	SOAP DISPENSER - WALL	BOBRICK	AUTOMATIC WALL MOUNTED SOAP DISPENSER	B-2012	SATIN	9 9/16" X 3 1/8" X 4 7/32"	RESTROOM	
RH-1	ROBE HOOK	BOBRICK	SURFACE MOUNTED DOUBLE ROBE HOOK	B-4127	STAINLESS STEEL	4" x 2 5/8" D	RESTROOM	
TTD-1 (ADA WOMEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	RECESSED TOILET SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER B-3574	B-3574	STAINLESS STEEL	17 3/16" W x 30 5/8" X 3 1/2" H	RESTROOM	
TTD-2 (ADA MEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	RECESSED TOILET SEAT COVER AND TOILET TISSUE DISPENSER B-3474	B-3474	STAINLESS STEEL	17 3/16" W x 30 5/8" X 3 1/2" H	RESTROOM	
TTD-3 (WOMEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	PARTITION MOUNTED SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, TOILET TISSUE DISPENSER B-357	B-3574	STAINLESS STEEL	17 3/16" W x 30 5/8" X 3 1/2" H	RESTROOM	
TTD-4 (MEN)	TOILET PAPER/SEAT COVER	BOBRICK	SURFACE MOUNTED SEAT COVER AND TOILET TISSUE DISPENSER B-3479	B-3479	STAINLESS STEEL	17 3/16" W x 30 5/8" X 3 1/2" H	RESTROOM	
WR-1	PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	BOBRICK	RECESSED CONVERTIBLE PAPER TOWEL DISPENSER AND WASTE RECEPTACLE B-3944	B-3944	STAINLESS STEEL		RESTROOM	
BCS-1	ADULT CHANGING STATION	KOHLA KARE	KB300-AHL ADULT CHANGING STATION	KB300-AHL	WHITE	75.5" H x 49.5" D x 60.5" W	RESTROOM	
BN-1	BENCH	HOLLMAN	OSLO BENCH ADA		WHITE	39" W x 48" X 18" H	RESTROOM	
WC-1	WATER CLOSET	WIPAC	SUPER BID STAT W/VC PRIVACY CURTAIN		WHITE	72 1/2" W	RESTROOM	
WC-1	WATER CLOSET	BOBRICK	HEAVY DUTY SHOWER CURTAIN ROD WITH CONCEALED MOUNTING B-257-26	B-20736	STAINLESS STEEL	38" X 1" DIA	RESTROOM	
SW-1	SANITARY NAPKIN DISPENSER	BOBRICK	NAPKIN TAMPON VENDOR, FREE VENDOR OPERATION	B-3706C	STAINLESS STEEL, SATIN FINISH	10 7/8" W x 27 7/8" H	SHARED RESTROOM	

RESTROOM GENERAL NOTES

- REPLACE EXISTING TILE AND GROUT ON TILED WALLS AND FLOORS WITH NEW TILE AND GROUT IN LOCATIONS THAT ARE DAMAGED BY RELOCATED RESTROOM FIXTURES. MATCH EXISTING TILE AND GROUT.
- ALL DIMENSIONS FOR ACCESS COMPLIANCES ARE TO THE FACE OF FINISH, U.N.O.
- REFERENCE SHEET CP2.1 FOR TYPICAL FIXTURE MOUNTING HEIGHTS.
- PROVIDE PIPE INSULATION UNDER ALL LAVATORIES.
- REFER TO SHEET A11.1 & A11.2 FOR NEW RESTROOM FIXTURE AND ACCESSORY SCHEDULE.
- REFER TO SHEET A12.1 & A12.2 FOR INTERIOR FINISH SCHEDULE.
- WHERE NEW FLOOR MOUNTED PLUMBING FIXTURES, EXISTING SLAB ON GRADE TO BE SAW CUT AND REMOVED AS REQUIRED TO INSTALL NEW PLUMBING SUPPLY AND DRAIN AS REQUIRED.
- FIXTURES IN BUILDINGS A,B,C,E & G TO REMAIN UNLESS OTHERWISE NOTED. FIXTURES WITH KEYNOTES ARE TO BE RELOCATED TO MEET ADA REQUIREMENTS.
- SECURE ALL RESTROOM FIXTURES AND ACCESSORIES TIGHT TO WALL, TYP.
- ALIGN WALL TILES (T-5, T-6B) AND FLOOR TILES (T-6) TILE GROUT LINE, TYP. THROUGHOUT.
- ALIGN WALL TILE GROUT LINES (T-4, T-5), TYP. THROUGHOUT.

GENERAL NOTES FOR ACCESSIBILITY

- ACCESSIBLE URINAL SHALL PROVIDE CLEAR FLOOR SPACE PER SECTION 11B-605.3
- ACCESSIBLE WATER CLOSETS SHALL PROVIDE CLEAR SPACE PER SECTION 11B-604.3.1
- ACCESSIBLE LAVATORIES AND SINKS SHALL PROVIDE CLEAR SPACE PER SECTION 11B-606.2
- ACCESSIBLE TOILET ROOMS SHALL PROVIDE A TURNING SPACE OF 60 INCHES IN DIAMETER PER SECTION 11B-304.3.1
- ACCESSIBLE DRINKING FOUNTAINS SHALL PROVIDE CLEAR FLOOR SPACE PER SECTION 11B-602.2
- ACCESSIBLE TOILET PARTITIONS SHALL COMPLY WITH SECTION 11B-604.8.1
- EXPOSED PIPES AND SURFACES UNDER LAVATORIES AND SINKS SHALL BE INSULATED PER SECTION 11B-605.5



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



CONSTRUCTION DOCUMENTS

DLR Group
 Architecture Engineering Planning Interiors

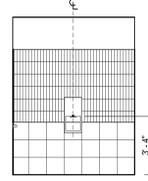
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 ISSUE DATE: 02/15/2024

SUBMITTAL TITLE: 09/26/2024

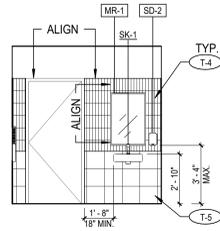
ENLARGED RESTROOM PLANS AND ELEVATIONS

A11.3

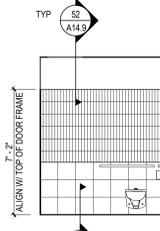
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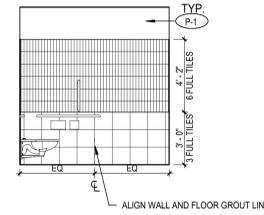
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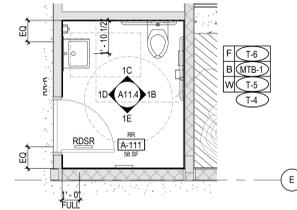
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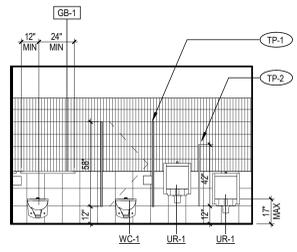
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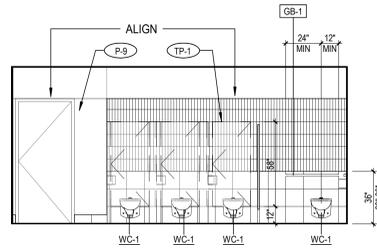
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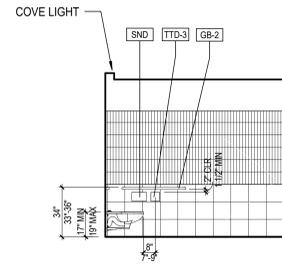
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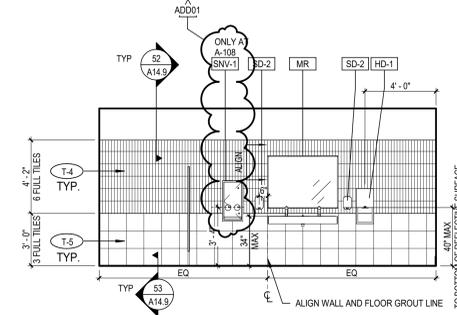
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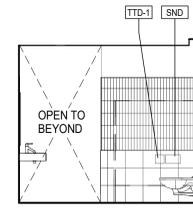
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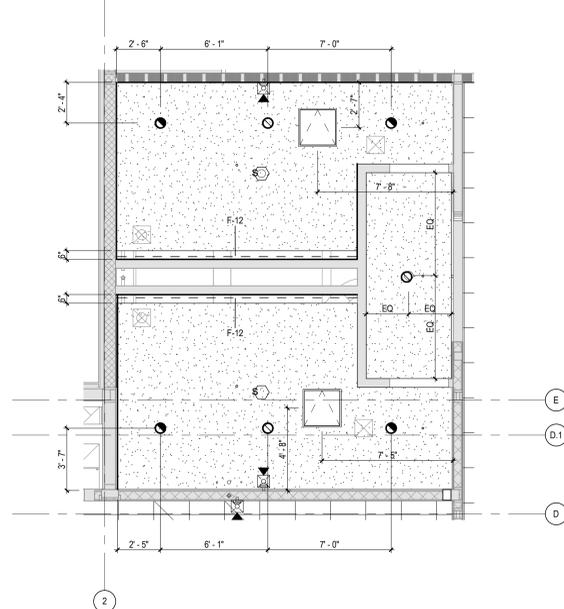
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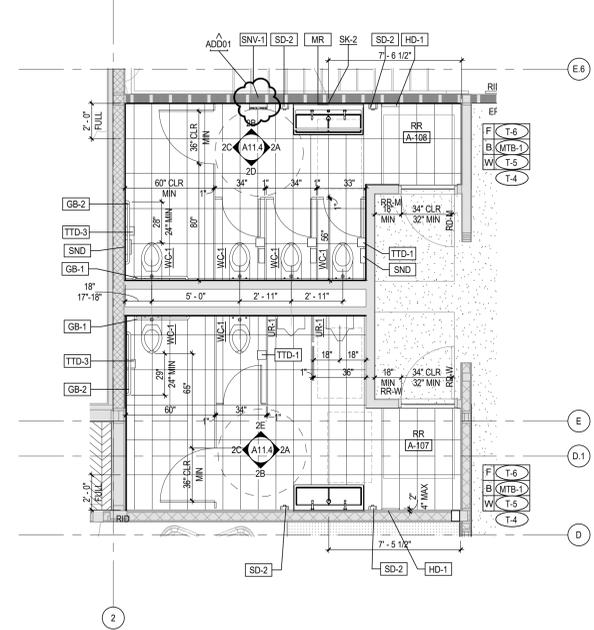
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A11.4 SCALE: 1/4" = 1'-0"



2A TRANS CTR WOMEN RR A-107, A-108 - NORTH
A11.4 SCALE: 1/4" = 1'-0"



3B TRANS CTR ENLARGED RR RCP - ENLARGED RR A-107, A-108
A11.4 SCALE: 1/4" = 1'-0"



3A TRANS CTR ENLARGED RR PLAN - A-107, A-108
A11.4 SCALE: 1/4" = 1'-0"

RESTROOM GENERAL NOTES

- A. REPLACE EXISTING TILE AND GROUT ON TILED WALLS AND FLOORS WITH NEW TILE AND GROUT IN LOCATIONS THAT ARE DAMAGED BY RELOCATED RESTROOM FIXTURES. MATCH EXISTING TILE AND GROUT.
- B. ALL DIMENSIONS FOR ACCESS COMPLIANCES ARE TO THE FACE OF FINISH, U.N.O.
- C. REFERENCE SHEET CP2.1 FOR TYPICAL FIXTURE MOUNTING HEIGHTS.
- D. PROVIDE PIPE INSULATION UNDER ALL LAVATORIES.
- E. REFER TO SHEET A11.1 & A11.2 FOR NEW RESTROOM FIXTURE AND ACCESSORY SCHEDULE.
- F. REFER TO SHEET A12.1 & A12.2 FOR INTERIOR FINISH SCHEDULE.
- G. WHERE NEW FLOOR MOUNTED PLUMBING FIXTURES, EXISTING SLAB ON GRADE TO BE SAW CUT AND REMOVED AS REQUIRED TO INSTALL NEW PLUMBING SUPPLY AND DRAIN AS REQUIRED.
- H. FIXTURES IN BUILDINGS A, B, C, E, & G TO REMAIN UNLESS OTHERWISE NOTED. FIXTURES WITH KEYNOTES ARE TO BE RELOCATED TO MEET ADA REQUIREMENTS.
- I. SECURE ALL RESTROOM FIXTURES AND ACCESSORIES TIGHT TO WALL, TYP.
- J. ALIGN WALL TILES' (T-5, T-6B) AND FLOOR TILES' (T-6) TILE GROUT LINE, TYP. THROUGHOUT.
- K. ALIGN WALL TILE GROUT LINES (T-4, T-5), TYP. THROUGHOUT.

GENERAL NOTES FOR ACCESSIBILITY

- A. ACCESSIBLE URINAL SHALL PROVIDE CLEAR FLOOR SPACE PER SECTION 11B-605.3
- B. ACCESSIBLE WATER CLOSETS SHALL PROVIDE CLEAR SPACE PER SECTION 11B-604.3.1
- C. ACCESSIBLE LAVATORIES AND SINKS SHALL PROVIDE CLEAR SPACE PER SECTION 11B-606.2
- D. ACCESSIBLE TOILET ROOMS SHALL PROVIDE A TURNING SPACE OF 60 INCHES IN DIAMETER PER SECTION 11B-304.3.1
- E. ACCESSIBLE DRINKING FOUNTAINS SHALL PROVIDE CLEAR FLOOR SPACE PER SECTION 11B-602.2
- F. ACCESSIBLE TOILET PARTITIONS SHALL COMPLY WITH SECTION 11B-604.8.1
- G. EXPOSED PIPES AND SURFACES UNDER LAVATORIES AND SINKS SHALL BE INSULATED PER SECTION 11B-606.5

PLUMBING AND TOILET ACCESSORY SCHEDULE

TAG	ITEM	MANUFACTURER	COLLECTION	MODEL	FINISH OR COLOR	SIZE	LOCATION
L-1	SINGLE RESTROOM SINK	QUAVERT	VERO FURNITURE WASHBASIN	840000001	WHITE	19 5/8" x 18 1/2"	RESTROOM
L-1.1	FAUCET	KOHLER	TOUCLESS	K-100236-SANNA	POLISHED CHROME	15 1/2" x 5 1/2" x 4"	CLASSROOM SKILL LAB
L-2	DUAL RESTROOM SINK	QUAVERT	VERO WASHBASIN GROUND	845412000	WHITE	47 1/4" x 18 1/2"	RESTROOM
S-1	UNDER-MOUNT SINGLE BOWL KITCHEN SINK	KOHLER	RIVERBY	K-6479-SU	WHITE	25" x 22" x 5-7/8"	MED FRAGILE CLASSROOM SKILL LAB
S-2	UNDER-MOUNT CERAMIC BASIN	KOHLER	VERTICL RECTANGLE	K-2882	WHITE	19 1/2" x 15 5/8"	LACTATION ROOM
S-19.2	PULL-DOWN KITCHEN FAUCET	MORIN	MOTIONLINE	79065 SERIES	STAINLESS STEEL	SPOUT HEIGHT 15.75"	RESTROOM
MR-1	MIRROR	BOBRICK	MIRROR WITH STAINLESS STEEL CHANNEL FRAME 8-165 SERIES	B-165-3245	STAINLESS STEEL	24"x30"	RESTROOM
MR-2	MIRROR	BOBRICK	MIRROR WITH STAINLESS STEEL CHANNEL FRAME 8-165 SERIES	B-165-4838	STAINLESS STEEL	48"x30"	RESTROOM
SH-1	SHOWER ENCLOSURE WITH SHOWER SEAT	GAJATIC	1603TRCCL 60x68	AC03662	WHITE ACRYL	60"x36"x78 1/2"	RESTROOM
TP-1	TOILET PARTITION	BOBRICK	DURALINE SERIES - COL	CLASS A 1180	FIELD ELM 79985C-63SC	STANDARD, 58"PH, 1" FLOOR CLEARANCE	RESTROOM
TP-2	URINAL SCREEN - WALL HUNG	BOBRICK	1185 SERIES WALL - HUNG SCREEN	1185	FIELD ELM 79985C-63SC	48"	RESTROOM
BCS-1	CHANGING STATION	KOHLA KARE	18070-SHWR HORIZONTAL STAINLESS STEEL SURFACE MOUNTED	KB3000-44L	WILLSON ART - FIELD ELM 79985C-63SC	75 5/8" L x 40 9/32" D x 60 15/32" H WHEN FULLY OPENED	RESTROOM
WC-1	WATER CLOSET		PER PLUMBING DRAWING				RESTROOM
UR-1	URINAL		PER PLUMBING DRAWING				RESTROOM
GB-1	3" GRAB BAR	BOBRICK	1 1/4" DIA STAINLESS STEEL GRAB BAR WITH SNAP FLANGE	B-5062X8	STAINLESS STEEL SATN	36"	RESTROOM
GB-2	42" GRAB BAR	BOBRICK	1 1/4" DIA STAINLESS STEEL GRAB BAR WITH SNAP FLANGE	B-5066X42	STAINLESS STEEL SATN	42"	RESTROOM
HD-1	HAND DRYER	DYKON	LOW VOLTAGE AIR-JETLE V-HDZ	307174-01	SPRAYED NIKEL	15 1/2" X 14 1/2" X 4" D	RESTROOM
SD-1	SOAP DISPENSER - COUNTER	BRADLEY	LAVATORY MOUNTED SOAP DISPENSER	8354	CHROME PLATED BRASS	3 1/2" SPOUT	RESTROOM
SD-2	SOAP DISPENSER - WALL	BOBRICK	AUTOMATIC WALL MOUNTED SOAP DISPENSER	B-2012	SATIN	8 5/8" X 5 1/8" X 4 7/8"	RESTROOM
RH-1	ROBE HOOK	BOBRICK	SURFACE MOUNTED DOUBLE ROBE HOOK	B-4727	STAINLESS STEEL	47.2 5/8" D	RESTROOM
TTD-1 (ADA WOMEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	RECESSED TOILET SEAT COVER, SANITARY NAPKIN DISPOSAL, AND TOILET TISSUE DISPENSER B-3074	B-3074	STAINLESS STEEL	17 3/16" X 35 5/16" X 3 1/8" H	RESTROOM
TTD-2 (ADA MEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	RECESSED TOILET SEAT COVER AND TOILET TISSUE DISPENSER B-3478	B-3478	STAINLESS STEEL	17 3/16" X 35 5/16" X 3 1/8" H	RESTROOM
TTD-3 (WOMEN)	TOILET PAPER/SEAT COVER, SANITARY NAPKIN DISPOSAL	BOBRICK	PARTITION MOUNTED SEAT COVER DISPENSER, SANITARY NAPKIN DISPOSAL, TOILET TISSUE DISPENSER B-367	B-3674	STAINLESS STEEL	17 3/16" X 35 5/16" X 3 1/8" H	RESTROOM
TTD-4 (MEN)	TOILET PAPER/SEAT COVER	BOBRICK	SURFACE MOUNTED SEAT COVER AND TOILET TISSUE DISPENSER B-3479	B-3479	STAINLESS STEEL	17 3/16" X 35 5/16" X 3 1/8" H	RESTROOM
WR-1	PAPER TOWEL DISPENSER AND WASTE RECEPTACLE	BOBRICK	RECESSED CONVERTIBLE PAPER TOWEL DISPENSER AND WASTE RECEPTACLE B-3644	B-3644	STAINLESS STEEL	17 3/16" X 35 5/16" X 3 1/8" H	RESTROOM
BCS-1	ADULT CHANGING STATION	KOHLA KARE	KB3000-AHL ADULT CHANGING STATION	KB3000-AHL	STAINLESS STEEL	75 5/8" L x 40 9/32" D x 60 15/32" H	RESTROOM
BN-1	BENCH	HOLLAND	COLOR BENCH-AD		WALDE BUTOCHER BLOCK SEAT, BRUSHED STAINLESS STEEL LEGS	27 1/4" X 48 1/4" X 1 1/4"	RESTROOM
SH-1	SHOWER CURTAIN	INPRO	SUPER BIG STAT VINYL PRIVACY CURTAIN		WHITE	72"x76"	RESTROOM
SD-1	SOAP DISPENSER	BOBRICK	HEAVY DUTY SHOWER CURTAIN ROD WITH CONCEALED MOUNTING B-20706	B-20706	STAINLESS STEEL	36" X 170A	RESTROOM
SD-2	SANITARY NAPKIN DISPENSER	BOBRICK	NAPKIN TAMPON VENDOR FREE VENDOR OPERATION	B-3786C	STAINLESS STEEL SATN FINISH	15 3/8" W x 27 7/8" H	SHARED RESTROOM

Autodesk Docu75-20220202-02 El Monte UHSD Rosemead Adult School Building/75-202202-02_PCC_AR_2022.rvt
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Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



CONSTRUCTION DOCUMENTS

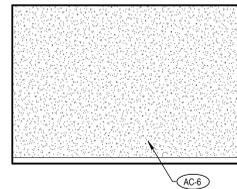
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 Architecture Engineering Planning Interiors
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GSA APPLICATION NO. 05-122743
 GSA FILE NO. 19-110
 DLR PROJECT NO. 75-2022-02
 ISSUE DATE: 02/15/2024
 SUBMITTAL TITLE: 09/26/2024

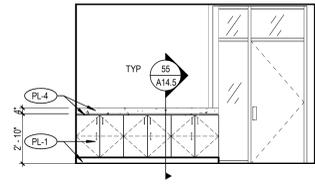
ENLARGED RESTROOM PLANS AND ELEVATIONS

A11.4

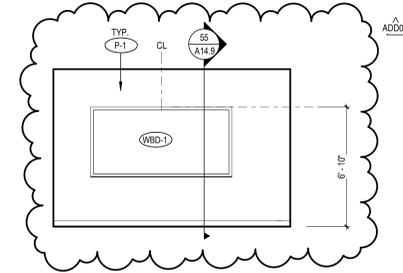
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11.04	ULINE SINGLE SIDED CONVOCA 48"X19"X34" GC FURNISHED, OWNER INSTALLED. PROVIDE BRACKET PER 48X32" AND THE SCREWS ARE 1/4" DIAMETER 1/2" LONG. PROVIDE EACH BRACKET CEILING HUNG ACRYLIC SIGNAGE, INPRO - OVERHEAD DIRECTIONAL SIGN, CABLE MOUNT, PHOTO POLYMER SIGN
ADD01	



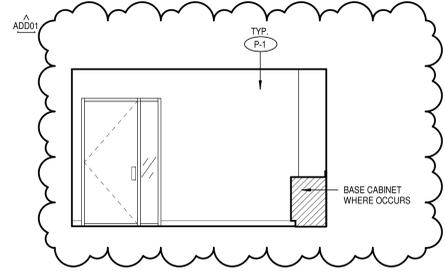
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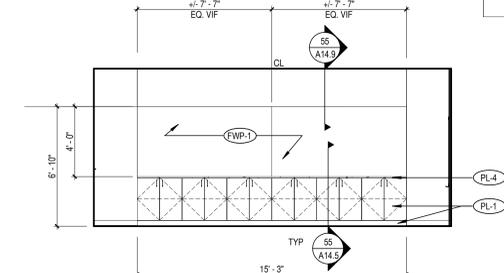
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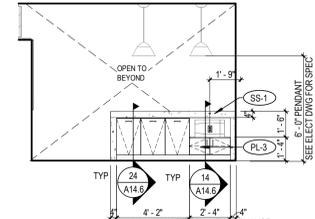
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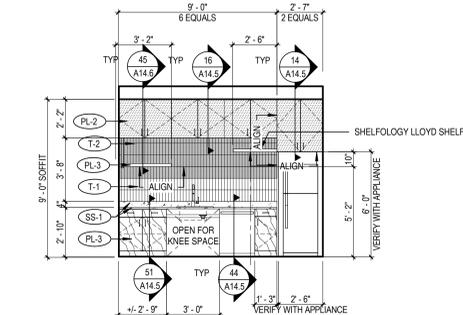
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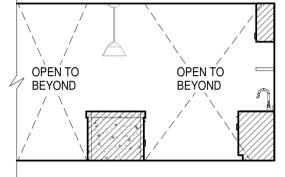
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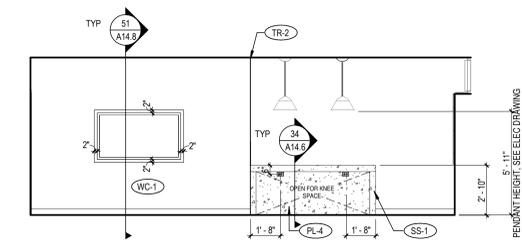
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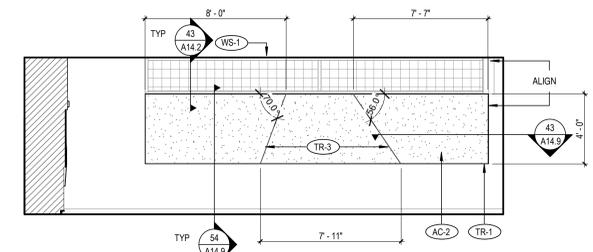
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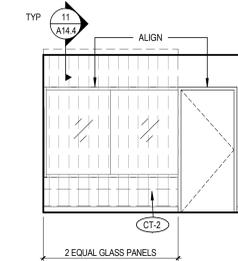
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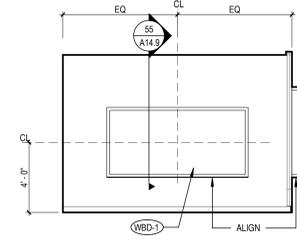
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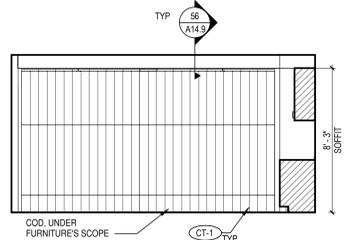
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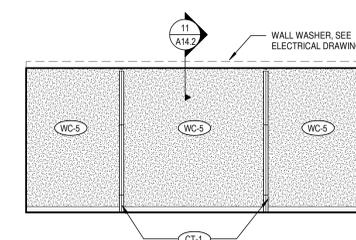
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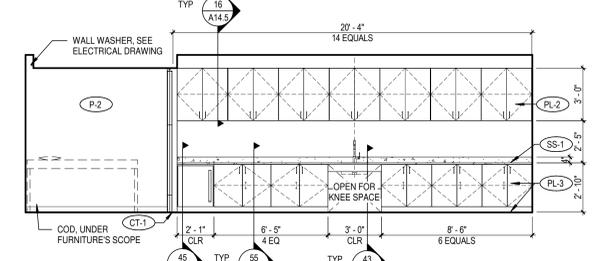
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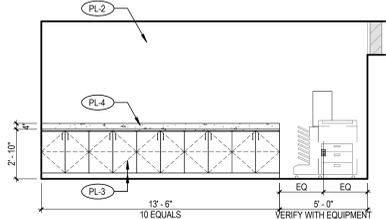
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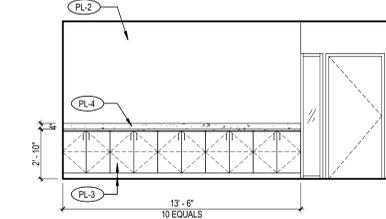
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A11.9 SCALE: 1/4" = 1'-0"



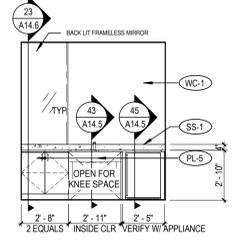
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A11.9 SCALE: 1/4" = 1'-0"



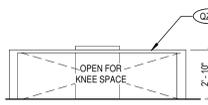
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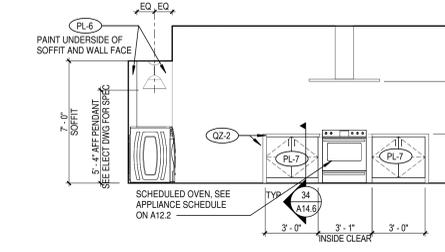
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A11.9 SCALE: 1/4" = 1'-0"



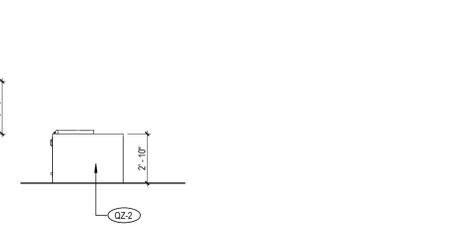
4D TRANSITION CTR - LACTATION RM - WEST
A11.9 SCALE: 1/4" = 1'-0"



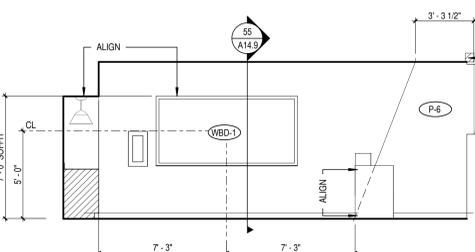
4C SKILLS LAB KITCHEN ISLAND A-205 - WEST
A11.9 SCALE: 1/4" = 1'-0"



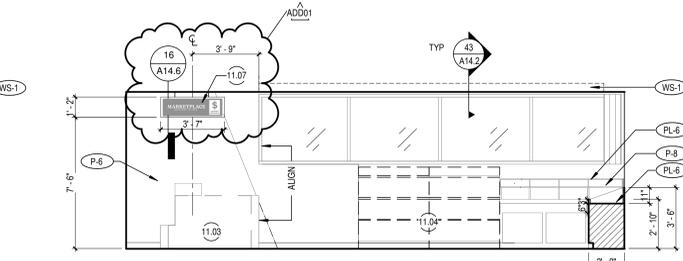
4B SKILLS LAB KITCHEN ISLAND A-205 - EAST
A11.9 SCALE: 1/4" = 1'-0"



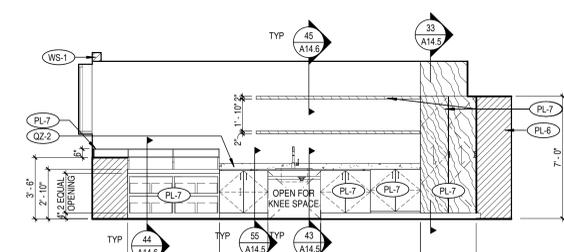
4A SKILLS LAB KITCHEN ISLAND A-205 - NORTH
A11.9 SCALE: 1/4" = 1'-0"



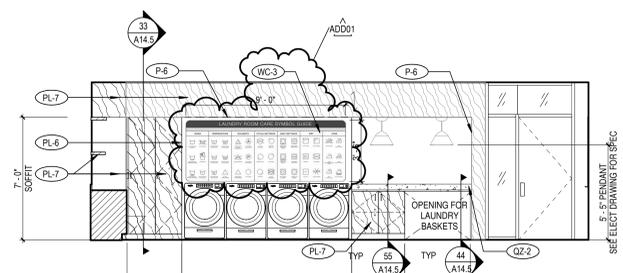
5D TRANS CTR SKILLS LAB KITCHEN A-205 - EAST
A11.9 SCALE: 1/4" = 1'-0"



5C TRANS CTR SKILLS LAB KITCHEN A-205 - SOUTH
A11.9 SCALE: 1/4" = 1'-0"



5B TRANS CTR SKILLS LAB KITCHEN A-205 - WEST
A11.9 SCALE: 1/4" = 1'-0"



5A TRANS CTR SKILLS LAB A-205 - NORTH
A11.9 SCALE: 1/4" = 1'-0"



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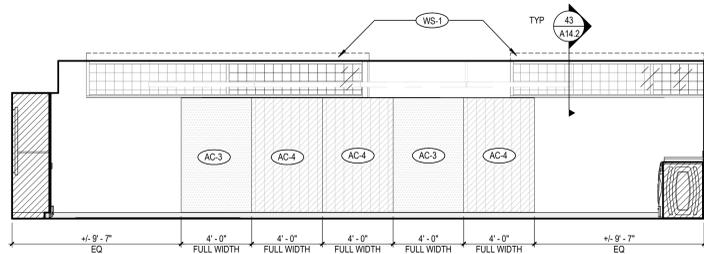
CONSTRUCTION DOCUMENTS



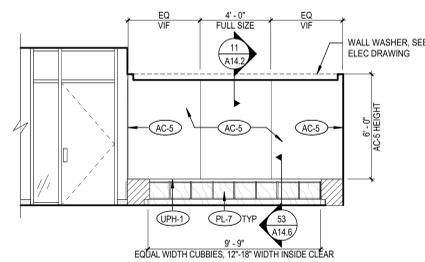
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OSHA FILE NO. 19-110	
DLR PROJECT NO. 75-20223-02	
ISSUE DATE: 02/15/2024	
SUBMITTAL TITLE	
DATE	

INTERIOR ELEVATIONS - TRANS. CTR. LEVEL 1 - CLASSRM, HEALTH OFFICE, STAFF LOUNGE

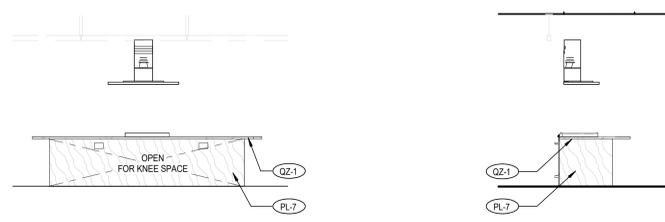
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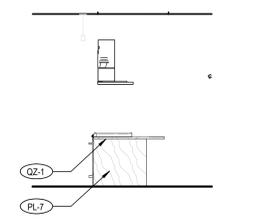
1E ACOUSTICAL/ TACKBOARD WALL (TRANS CTR A-103) - EAST
A11.10 SCALE: 1/4" = 1'-0"



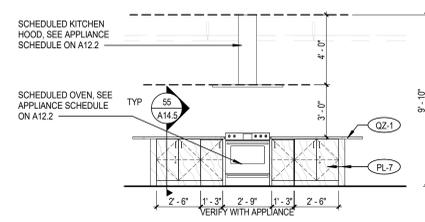
1D TYP. U SHAPED BENCH AT SOLID WALL (TRANS CTR A-103) - WEST
A11.10 SCALE: 1/4" = 1'-0"



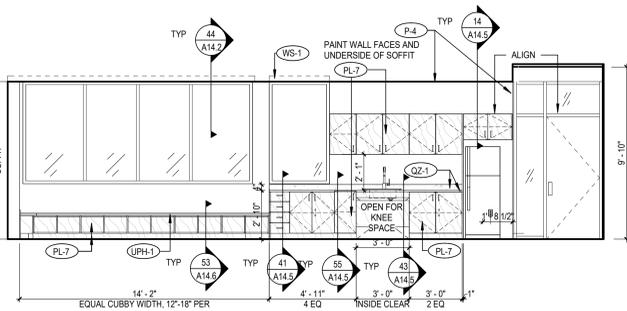
1C TYP. KITCHEN (TRANS CTR B-109) - WEST 2
A11.10 SCALE: 1/4" = 1'-0"



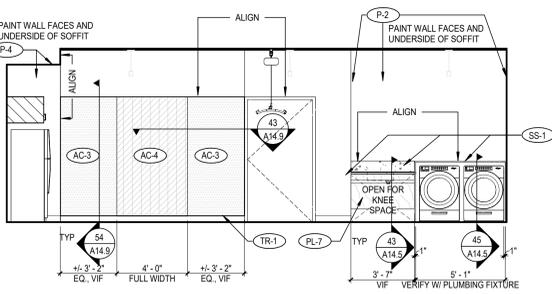
1B TYP. KITCHEN ISLAND (TRANS CTR B-109) - NORTH
A11.10 SCALE: 1/4" = 1'-0"



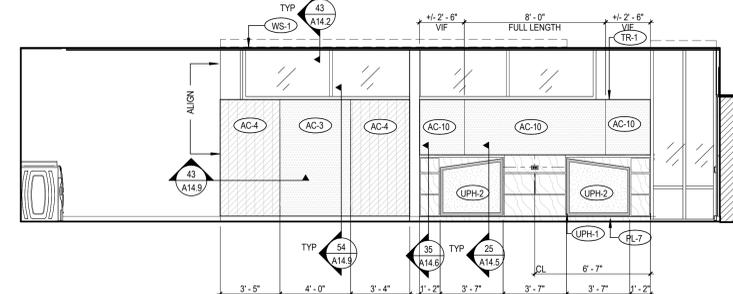
1A TYP. KITCHEN ISLAND (TRANS CTR B-109) - EAST 1
A11.10 SCALE: 1/4" = 1'-0"



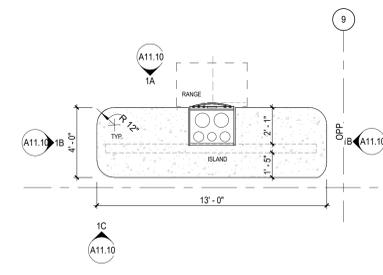
2D TYP. KITCHEN (TRANS CTR B-109) - WEST 1
A11.10 SCALE: 1/4" = 1'-0"



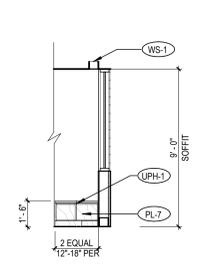
2C MEDICALLY FRAGILE B-109 - NORTH
A11.10 SCALE: 1/4" = 1'-0"



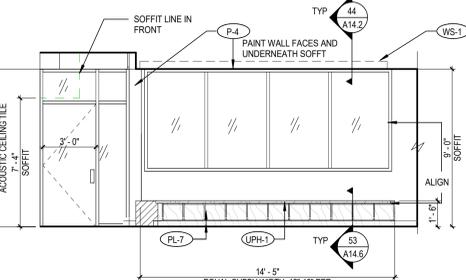
2B ACOUSTICAL/ TACKBOARD (TRANS CTR B-109) - EAST 2
A11.10 SCALE: 1/4" = 1'-0"



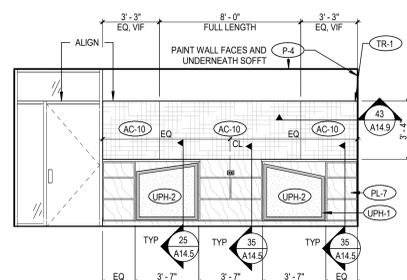
2A TYP. KITCHEN ISLAND PLAN
A11.10 SCALE: 1/4" = 1'-0"



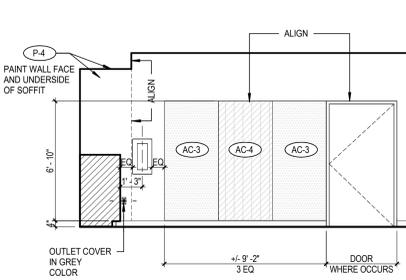
3E TYP. L SHAPED BENCH (TRANS CTR B-105) - SOUTH
A11.10 SCALE: 1/4" = 1'-0"



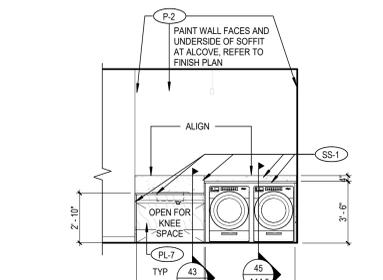
3D TYP. L SHAPED BENCH AT WINDOW WALL (TRANS CTR B-105) - WEST
A11.10 SCALE: 1/4" = 1'-0"



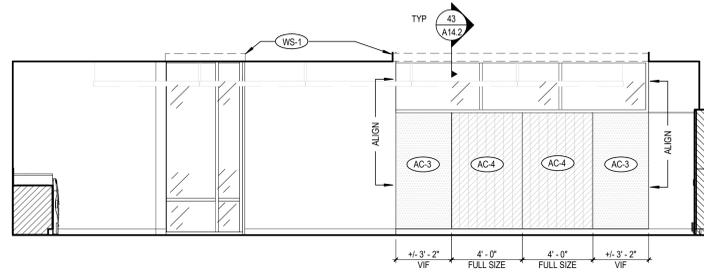
3C TYP. SEATING CUBBY (TRANS CTR A-105) - WEST
A11.10 SCALE: 1/4" = 1'-0"



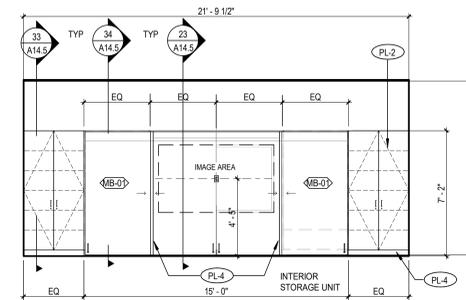
3B TYP. TACKBOARD (TRANS CTR A-105) - NORTH
A11.10 SCALE: 1/4" = 1'-0"



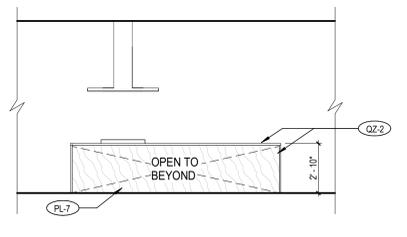
3A TYP. W&D (TRANS CTR A-105) - NORTH
A11.10 SCALE: 1/4" = 1'-0"



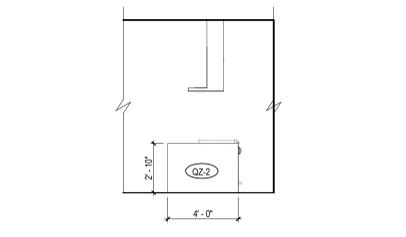
4E ACOUSTICAL/ TACKBOARD WALL (TRANS CTR A-105) - EAST
A11.10 SCALE: 1/4" = 1'-0"



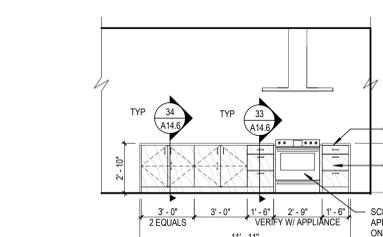
4D TYP. TEACHING WALL (TRANS CTR B-105) - SOUTH
A11.10 SCALE: 1/4" = 1'-0"



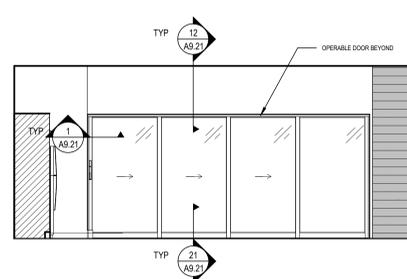
4C TYP. ISLAND (SKILLS LAB KITCHEN B-101) - WEST
A11.10 SCALE: 1/4" = 1'-0"



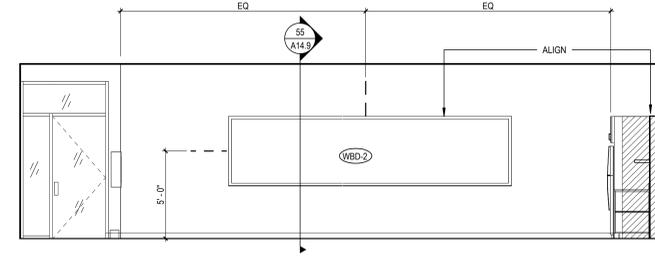
4B TYP. ISLAND (SKILLS LAB KITCHEN B-101) - SOUTH
A11.10 SCALE: 1/4" = 1'-0"



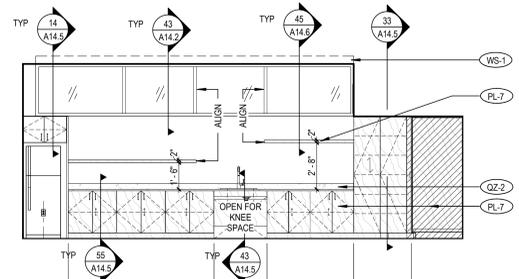
4A TYP. ISLAND (SKILLS LAB KITCHEN B-101) - EAST
A11.10 SCALE: 1/4" = 1'-0"



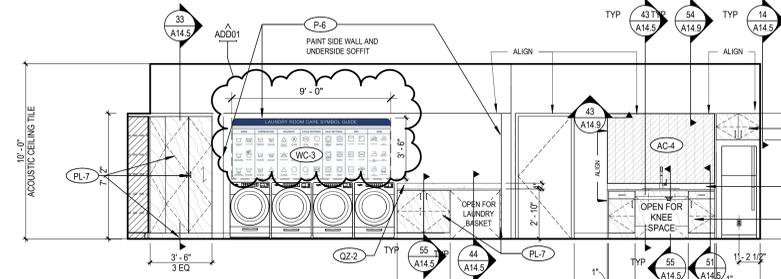
5E KITCHEN (SKILLS LAB KITCHEN B-101) - EAST
A11.10 SCALE: 1/4" = 1'-0"



5C KITCHEN (SKILLS LAB KITCHEN B-101) - SOUTH
A11.10 SCALE: 1/4" = 1'-0"



5B KITCHEN (SKILLS LAB KITCHEN B-101) - WEST
A11.10 SCALE: 1/4" = 1'-0"



5A KITCHEN (SKILLS LAB KITCHEN B-101) - NORTH
A11.10 SCALE: 1/4" = 1'-0"



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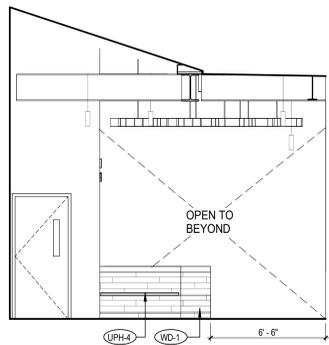
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ISSUE DATE:	02/19/2024
ISSUE NO.:	02
ISSUE DESCRIPTION:	REVISIONS
ISSUE BY:	ARCHITECT
ISSUE FOR:	CONSTRUCTION
ISSUE OF:	CONSTRUCTION DOCUMENTS
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ISSUE OF:	CONSTRUCTION DOCUMENTS

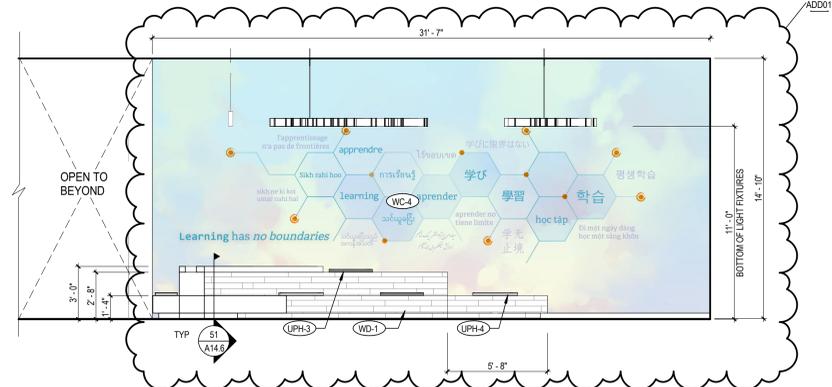
INTERIORS - TRANS. CTR. TYP. CLASSROOMS, SKILL LAB

A11.10

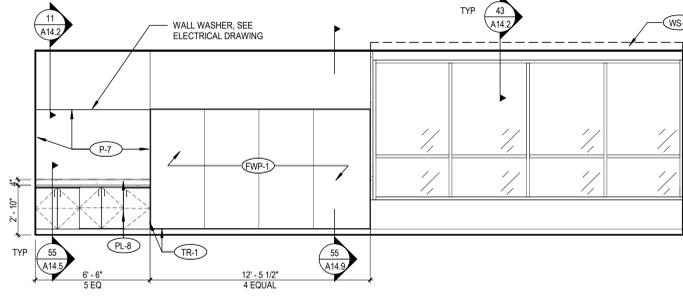
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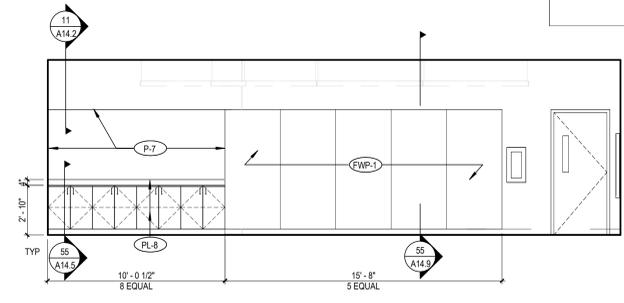
1D ADULT ED OPEN COLLAB CORRIDOR - EAST
A11.12 SCALE: 1/4" = 1'-0"



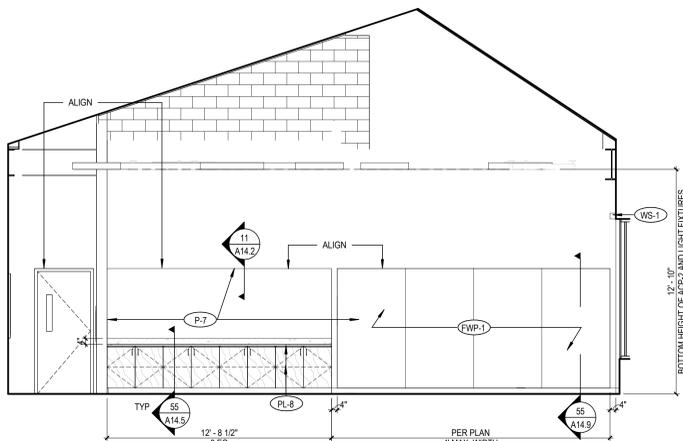
1C ADULT ED OPEN COLLAB SEATING - NORTH
A11.12 SCALE: 1/4" = 1'-0"



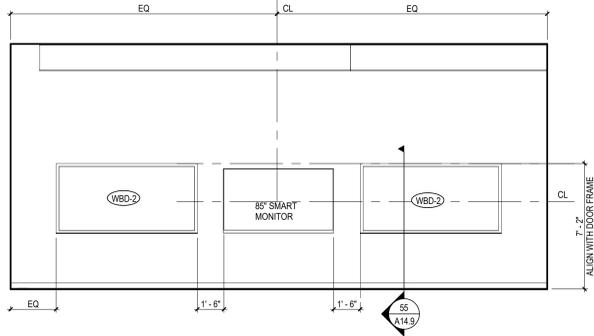
1B ADULT ED CLASSROOM B-201 - SOUTH
A11.12 SCALE: 1/4" = 1'-0"



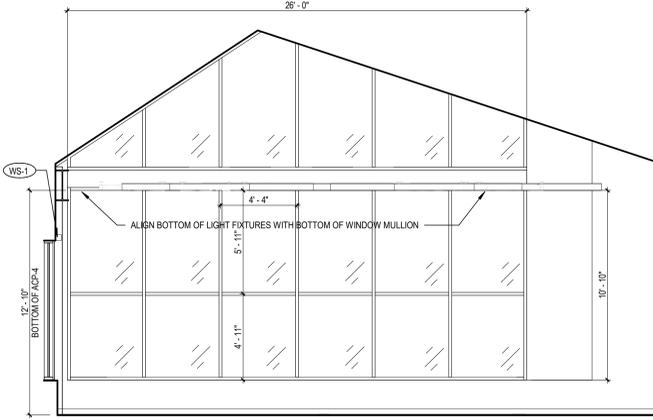
1A ADULT ED CLASSROOM B-202 - EAST
A11.12 SCALE: 1/4" = 1'-0"



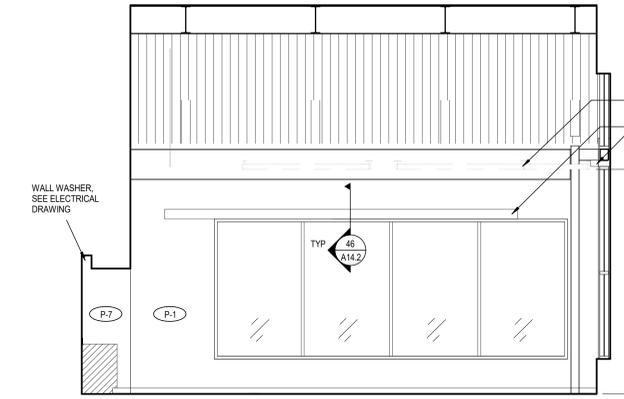
2D ADULT ED CLASSROOM B-209 - WEST
A11.12 SCALE: 1/4" = 1'-0"



2C ADULT ED CLASSROOM B-209 - SOUTH
A11.12 SCALE: 1/4" = 1'-0"

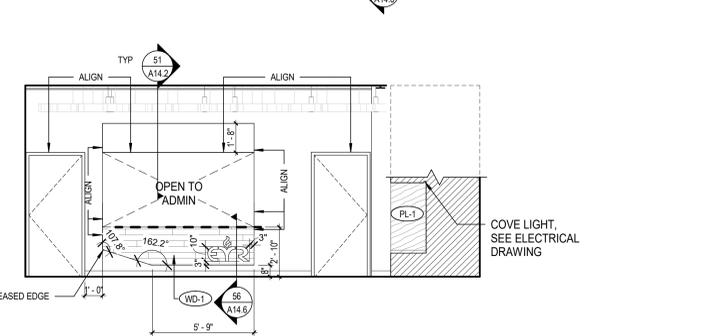
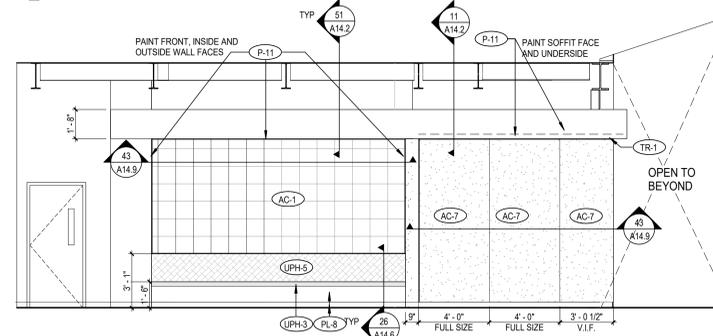


2B ADULT ED CLASSROOM B-209 - EAST
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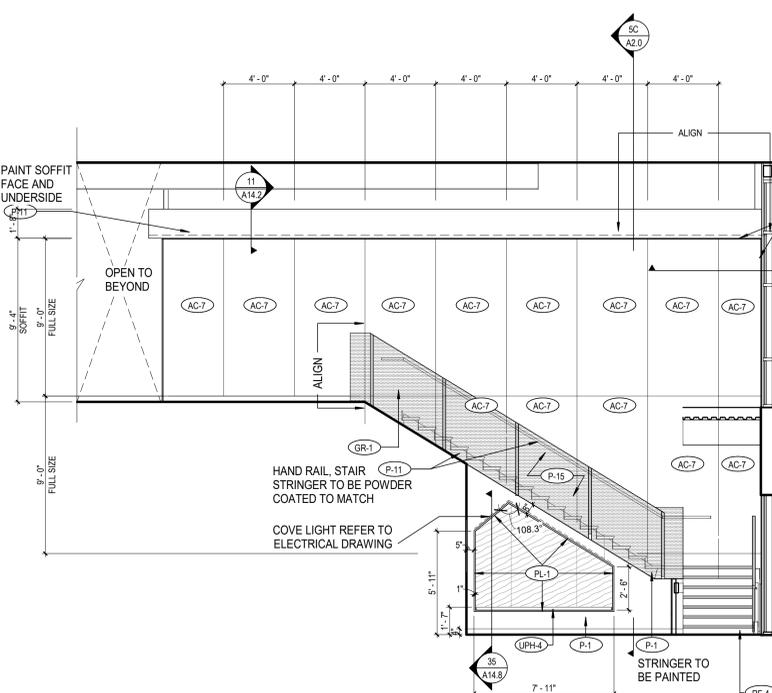


2A ADULT ED CLASSROOM B-209 - NORTH
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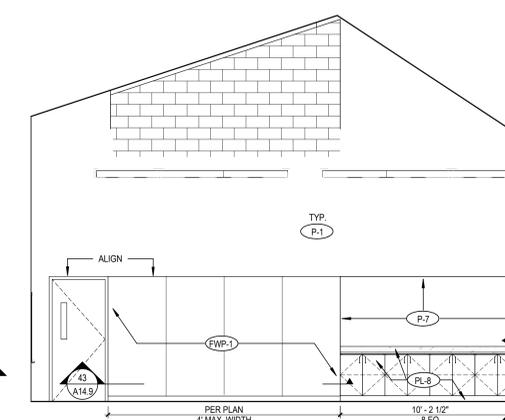
3D ADULT ED OPEN COLLAB CORRIDOR - WEST
A11.12 SCALE: 1/4" = 1'-0"



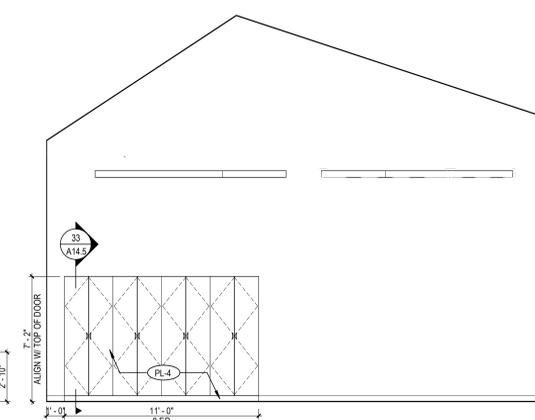
3C ADULT ED LOBBY B-110 - EAST
A11.12 SCALE: 1/4" = 1'-0"



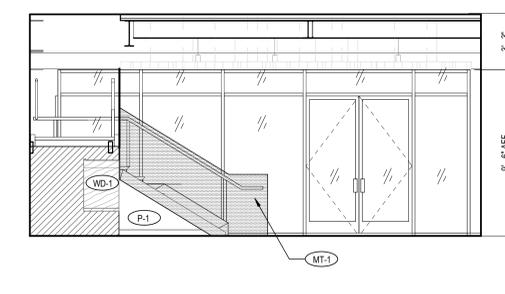
3B ADULT ED LOBBY B-110 - SOUTH
A11.12 SCALE: 1/4" = 1'-0"



4A ADULT ED CLASSROOM B-208 - NORTH
A11.12 SCALE: 1/4" = 1'-0"



4B ADULT ED CLASSROOM B-208 - SOUTH
A11.12 SCALE: 1/4" = 1'-0"



3A ADULT ED LOBBY B-110 - WEST
A11.12 SCALE: 1/4" = 1'-0"



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USA APPLICATION NO: 03-122743
USA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 02/19/2024

INTERIOR ELEVATIONS - ADULT ED. BLDG

A11.12



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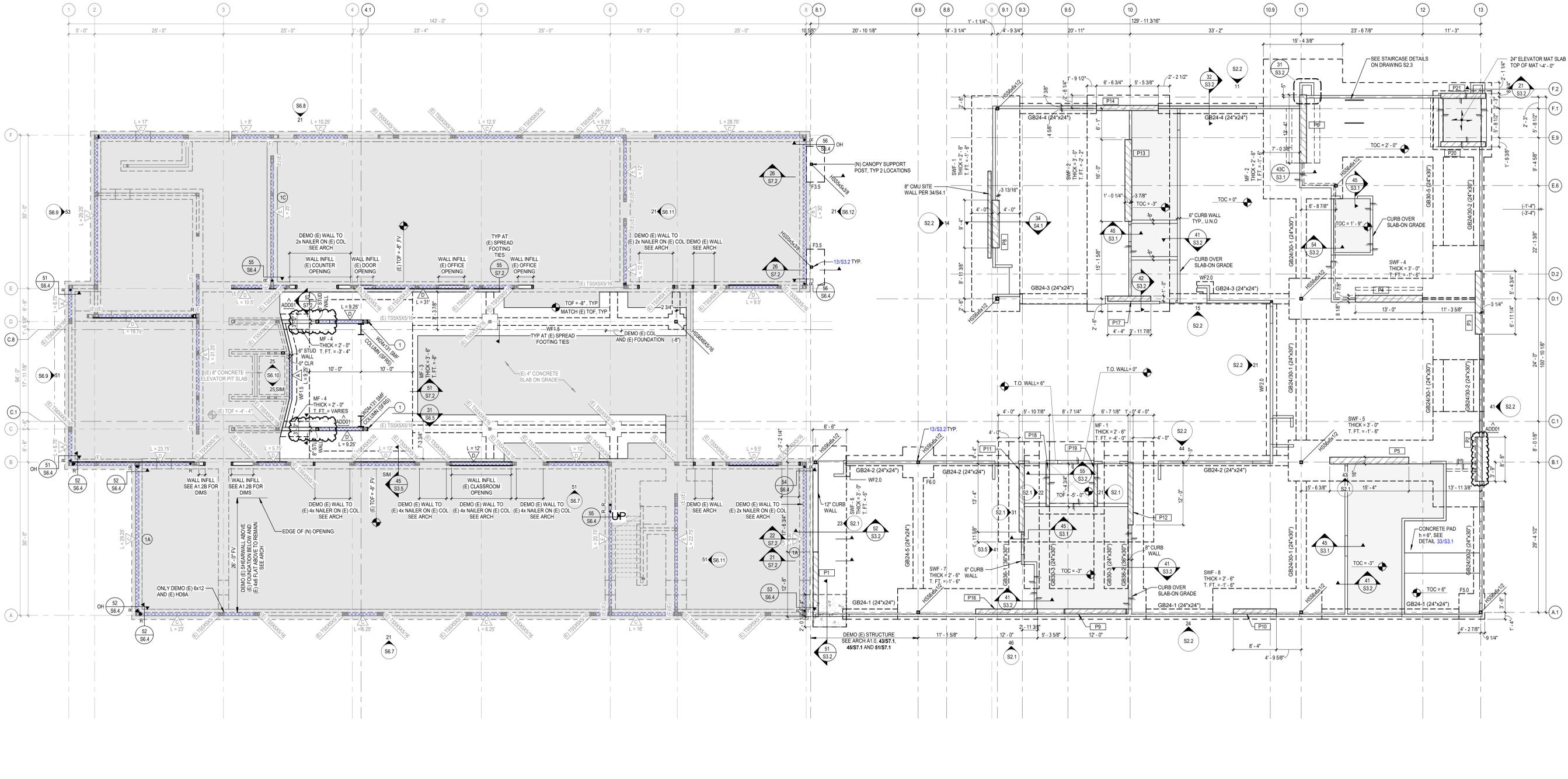


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GBA APPLICATION NO: 05-122743
 GBA FILE NO: 19-110
 DLR PROJECT NO: 75-2023-02
 ISSUE DATE: 11/20/2023

SUBMITTAL TITLE: LEVEL 1 FOUNDATION PLAN
 DATE: 09/26/2024

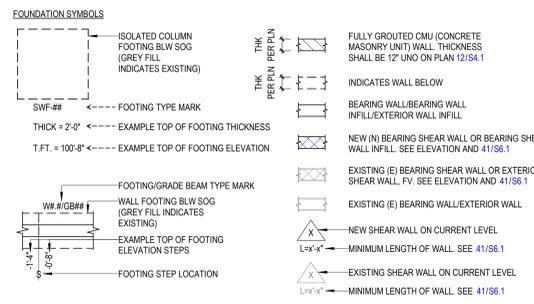
S1.1



FOUNDATION PLAN, LEVEL 01
 SCALE: 1/8" = 1'-0"

- FOUNDATION PLAN NOTES**
- NEW BUILD TOP OF SLAB ELEVATIONS ARE BASED ON A FLOOR DATUM OF 0'-0". TYPICAL UNO ON PLAN AS INDICATED BY ELEVATION SYMBOL (X'X'X').
 - NEW BUILD SLAB ON GRADE IS 5" THICK AND REINFORCED WITH #4 @ 16" OC EA DIRECTION. PLACED AT MID SLAB DEPTH UNO ON PLAN. SEE TYPICAL SLAB ON GRADE DETAILS S4/S3.1 FOR MORE INFORMATION.
 - TOP OF INTERIOR/EXTERIOR FOOTING ELEVATION = 1'-6". TYP UNO ON PLAN.
 - SEE DRAWING S3.3, S3.4 AND S3.8 FOR FOUNDATION REINFORCEMENT DETAILS.
 - SEE S3.1, S3.2, S4.1, S4.2, S5.1, S5.5 AND S6.1 - S6.3 FOR TYPICAL DETAILS.
 - CONTRACTOR TO FIELD VERIFY EXISTING ELEVATIONS AND NOTIFY SEOR IN WRITING OF ANY DISCREPANCIES PRIOR TO PROCEEDING WITH WORK.
 - SEE GEOTECHNICAL REPORT FOR ALL SITE AND SUBGRADE PREPARATION.
 - A. EXCAVATION SEE DETAIL S1/S.02
 - B. BACKFILL SEE DETAIL S1/S.02
 - C. FOOTINGS SEE DETAIL S1/S.02
 - D. SOG SEE DETAIL S4/S3.1
 - SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONAL INFORMATION NOT SHOWN.
 - SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ALL SLAB ON GRADE DEPRESSIONS, SLOPES, OPENINGS, DRAINS, TRENCHES AND SLAB EDGE LOCATIONS.
 - SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ALL EXTERIOR PAVEMENT, EXTERIOR SLABS, EXTERIOR SITE WALLS, ETC.
 - SEE PLUMBING DRAWINGS FOR ALL EXISTING SLAB ON GRADE SAWCUT LOCATIONS. SEE S3/S3.7 FOR ALL SLAB ON GRADE PATCHWORK.
 - ALL EXISTING OPENINGS IN WALL FRAMING WITH HEADERS SHALL REMAIN. ALL NEW OPENINGS IN WALL FRAMING SHALL HAVE HEADERS. SEE 23/S6.1 FOR ADDITIONAL INFORMATION.

- EXISTING FOUNDATION KEYNOTES**
- DEMO (E) WOOD POST FTG. (E) POST TO REMAIN SHORE BEAMS AT EA SIDE OF (E) POST ABV. PROVIDE (N) COLUMN BASE CONN AT (N) FTG BELOW



- POST INSTALLED RETROFIT HOLD DOWN. SEE 21/S6.1 AND ELEVATIONS ON SHEETS S6.7 - S6.12**
- EXISTING HOLD DOWN. F.V. SEE 21/S6.1 AND ELEVATIONS ON SHEETS S6.7 - S6.12**
- INDICATES CMU SHEAR WALL SEE S2/S2.1**
- INDICATES WALL BELOW**
- BEARING WALL/BEARING WALL INFILL/EXTERIOR WALL INFILL**
- NEW (N) BEARING SHEAR WALL OR BEARING SHEAR WALL INFILL. SEE ELEVATION AND 41/S6.1**
- EXISTING (E) BEARING SHEAR WALL OR EXTERIOR SHEAR WALL. F.V. SEE ELEVATION AND 41/S6.1**
- EXISTING (E) BEARING WALL/EXTERIOR WALL**
- NEW SHEAR WALL ON CURRENT LEVEL**
- MINIMUM LENGTH OF WALL. SEE 41/S6.1**
- EXISTING SHEAR WALL ON CURRENT LEVEL**
- MINIMUM LENGTH OF WALL. SEE 41/S6.1**

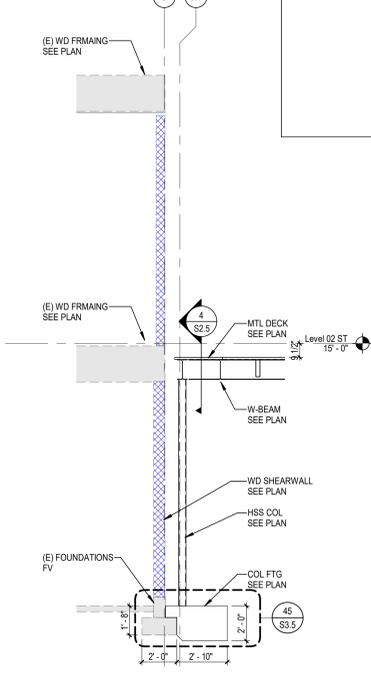
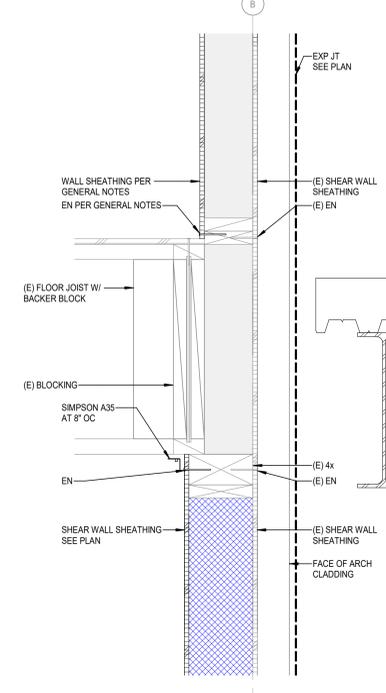
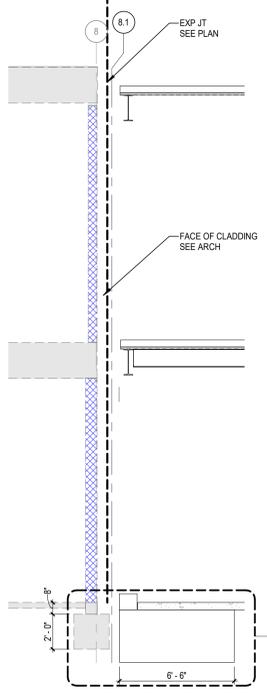
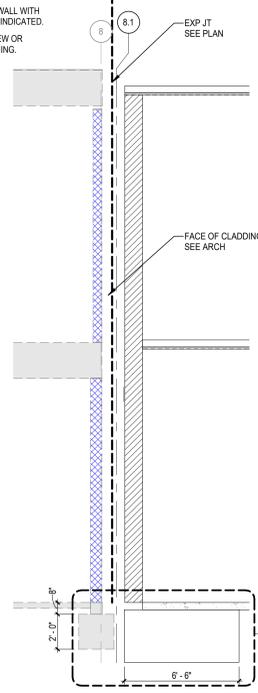
FOUNDATION SCHEDULE

MARK	THICKNESS	TOP OF FOOTING	DETAIL
SWF-1	2'-6"	-1'-6"	31/S3.3
SWF-2	3'-0"	-2'-2"	32/S3.3
SWF-3	3'-0"	-1'-6"	34/S3.3
SWF-4	3'-0"	-1'-6"	21/S3.4
SWF-5	3'-0"	-5"	43/S3.4
SWF-6	2'-6"	-1'-6"	41/S3.4
SWF-7	2'-6"	-1'-6"	31/S3.4
SWF-8	2'-6"	-1'-6"	51/S3.3
MF-1	2'-6"	-4'-0"	54/S3.3
MF-2	2'-6"	-1'-6"	54/S3.3
MF-3	3'-6"	-8"	31/S6.5
MF-4	2'-0"	VARIABLE	33/S6.4

GRADE BEAM SCHEDULE

MARK	WIDTH	DEPTH	DETAIL
GB24-1	2'-0"	2'-0"	56/S3.5
GB24-2	2'-0"	2'-0"	11/S3.6
GB24-3	2'-0"	2'-0"	56/S3.5
GB24-4	2'-0"	2'-0"	11/S3.5
GB24-5	2'-0"	2'-0"	56/S3.5
GB24-6	2'-0"	2'-0"	21/S3.5
GB24-7	2'-0"	2'-0"	31/S3.5
GB24-8	2'-0"	2'-0"	43/S3.5
GB24-9	2'-0"	2'-0"	43/S3.5
GB24-10	3'-0"	2'-0"	51/S3.5
GB24-11	3'-0"	2'-0"	41/S3.5

-  OUT OF PLAN EXISTING (E) BEARING SHEAR WALL OR BEARING SHEAR WALL INFILL
-  EXISTING (E) BEARING SHEAR WALL WITH REPLACEMENT SHEATHING AS INDICATED
-  BEARING SHEAR WALL WITH NEW OR ADDITIONAL LAYER OF SHEATHING
-  EXISTING (E) WALL

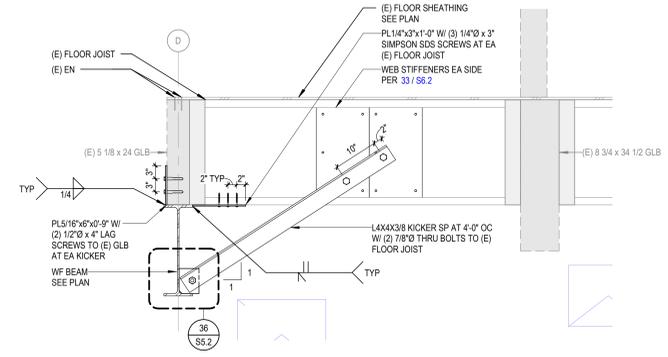


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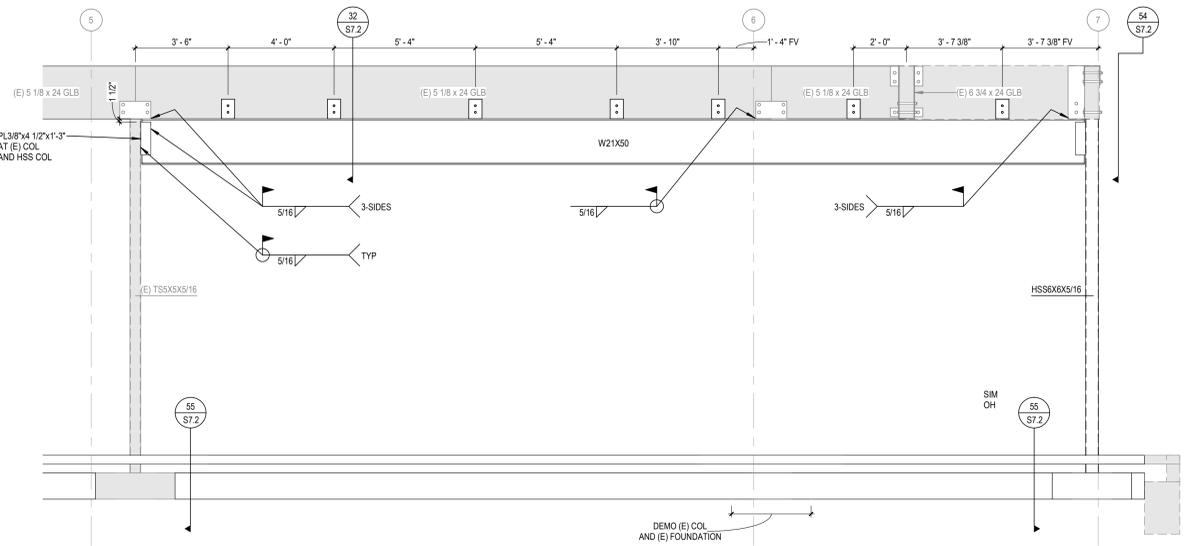
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23 SECTION AT CANTILEVERED CORRIDOR
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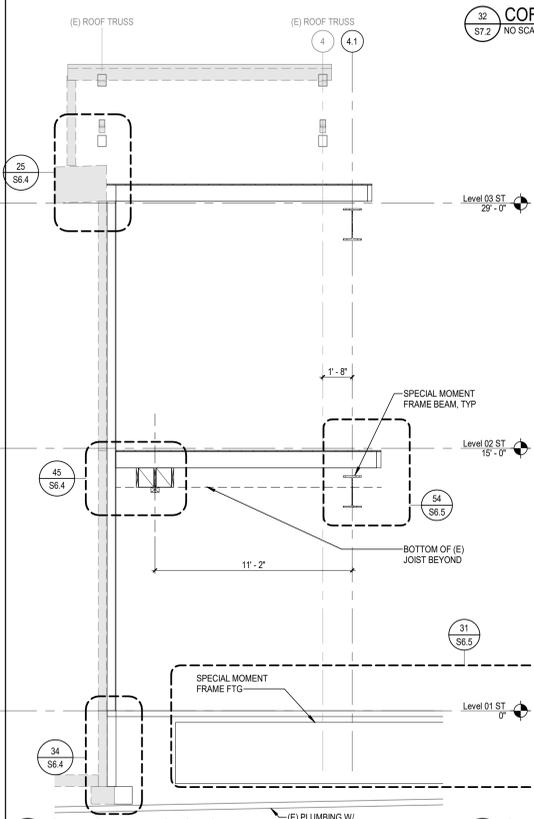
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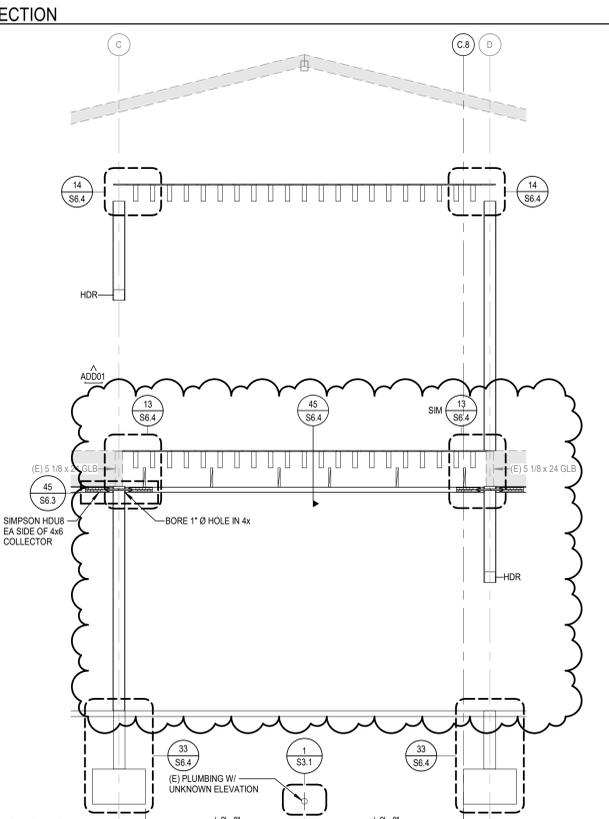
32 CORRIDOR SECTION
NO SCALE



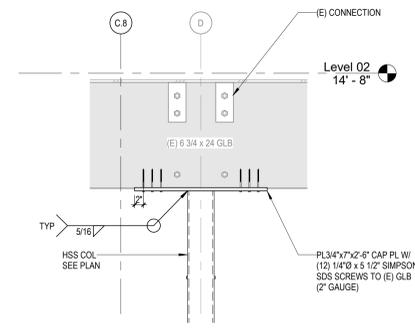
44 WALL ELEVATION
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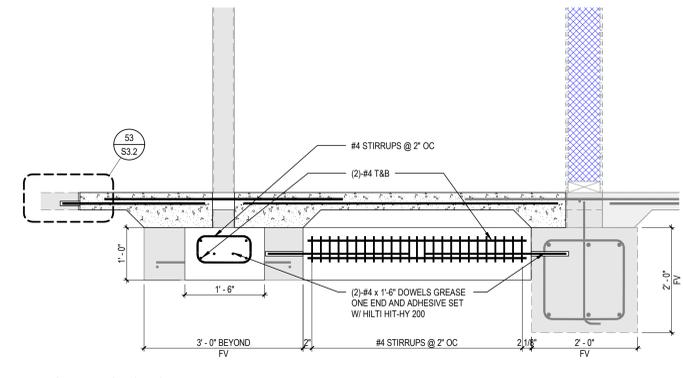
51 STRUCTURAL SECTION
NO SCALE



52 STRUCTURAL SECTION
NO SCALE



54 CORRIDOR SECTION
NO SCALE



55 FOUNDATION TIE SECTION
NO SCALE

STAMP DATE: 09/26/2024



Rosemead Adult Education and Transition Center / Modernization
El Monte Union High School District
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CONSTRUCTION DOCUMENTS

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SEA APPLICATION NO: 03-122743
SEA FILE NO: 19-110
DLR PROJECT NO: 75-20223-02
ISSUE DATE: 11/20/2023

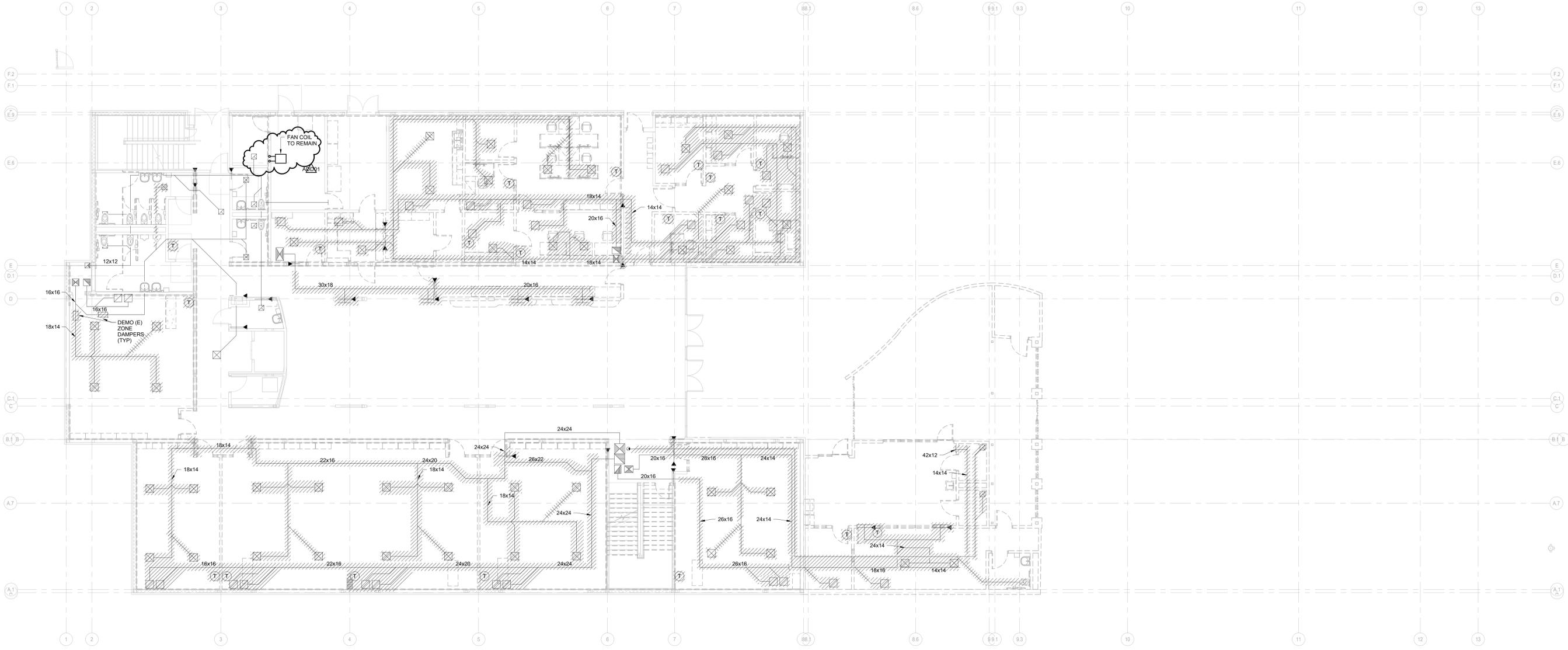
SUBMITTAL TITLE	09/26/2024
T. ADD01	

STRUCTURAL SECTIONS

S7.2

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MECHANICAL DEMOLITION PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"



Rosemead Adult Education and Transition Center Addition/Modernization
El Monte Union High School District
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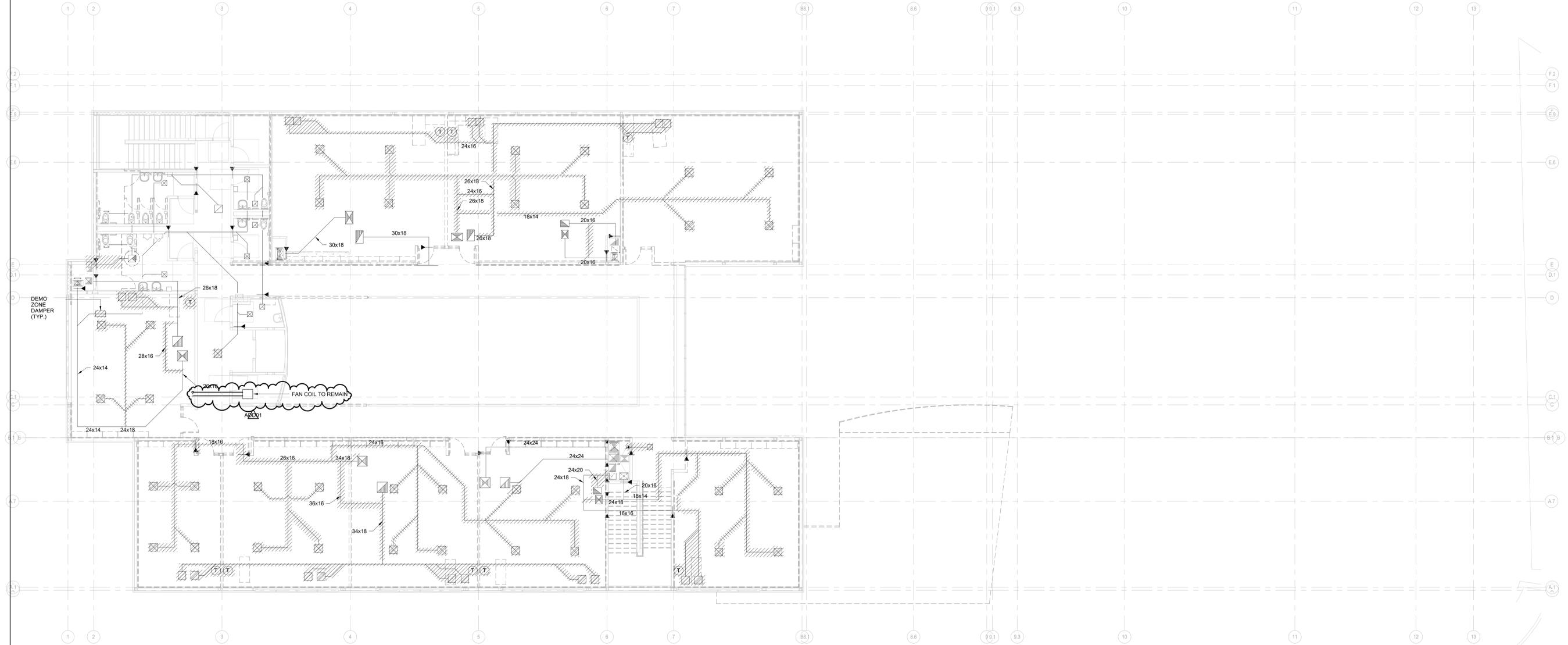
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DSA APPLICATION NO:	05-122743
DSA FILE NO:	19-110
DLR PROJECT NO:	75-2023-02
ISSUE DATE:	11/20/2023
SUBMITTAL TITLE	
Revision 1	1/6/2024
ADD A2001	1/10/2024
01	

MECHANICAL DEMOLITION PLAN - LEVEL 1

MD2.1

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 **MECHANICAL DEMOLITION PLAN - LEVEL 2**
SCALE: 1/8" = 1'-0"



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DSA FILE NO: 19-110
DLR PROJECT NO: 75-2023-02
ISSUE DATE: 11/20/2023

REVISION	DATE	DESCRIPTION
01	10/04/2024	ISSUE FOR PERMIT

MECHANICAL DEMOLITION PLAN - LEVEL 2

MD2.2



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
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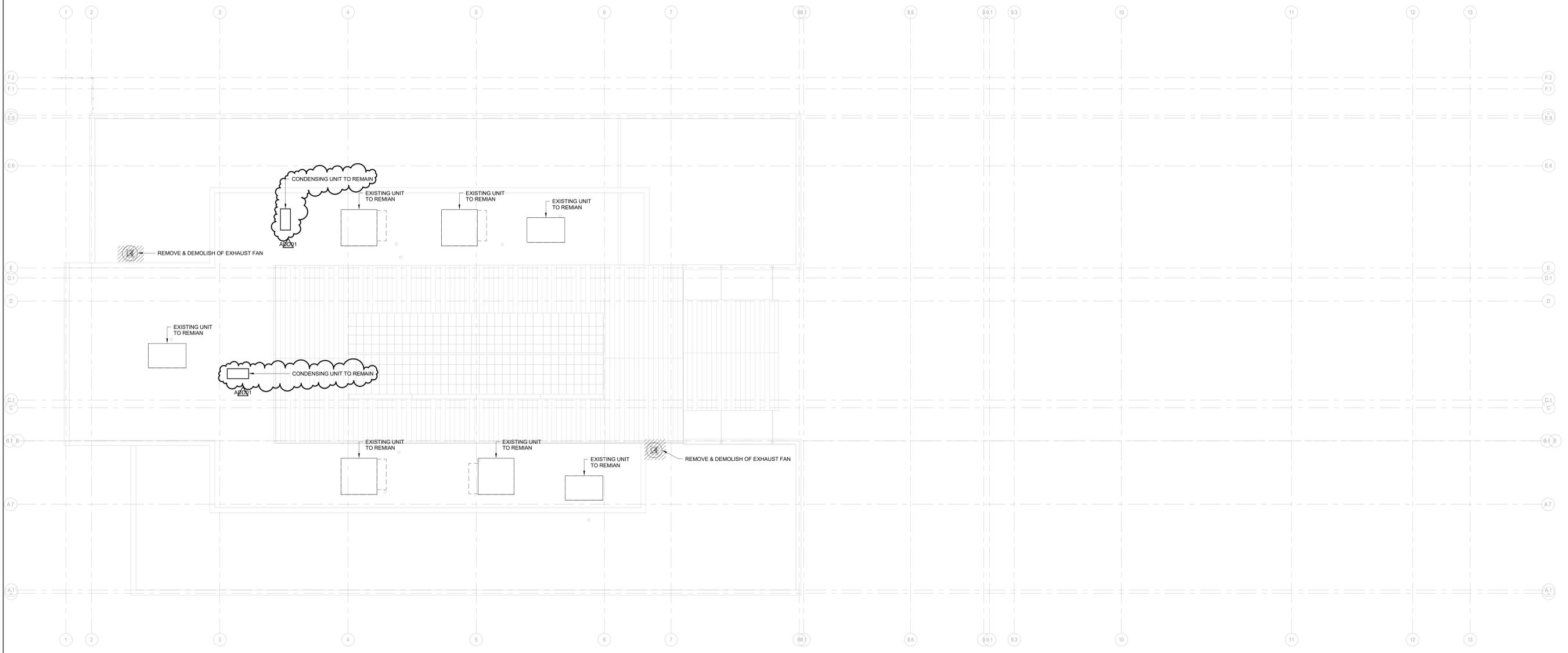
DSA SUBMITTAL



DSA APPLICATION NO: 05-122743	10/04/2024
DSA FILE NO: 19-110	
DLR PROJECT NO: 75-2023-02	
ISSUE DATE: 11/20/2023	
SUBMITTAL TITLE	
K20/MSD01	
01	

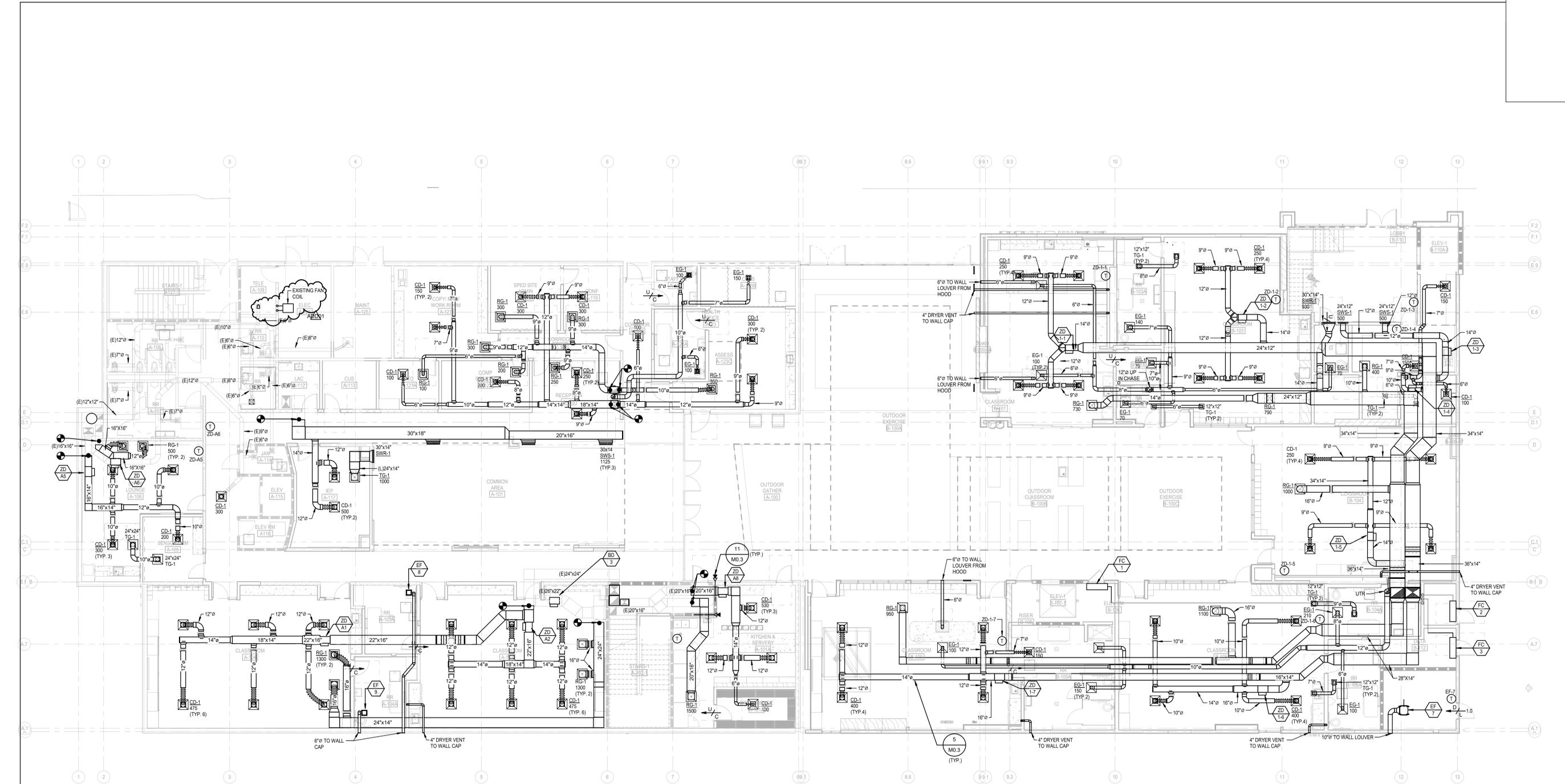
MECHANICAL DEMOLITION ROOF PLAN

MD3.1



MECHANICAL DEMOLITION ROOF PLAN
 SCALE: 1/8" = 1'-0"

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MECHANICAL PLAN - LEVEL 1
 SCALE: 1/8" = 1'-0"



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DSA APPLICATION NO: 05-122743
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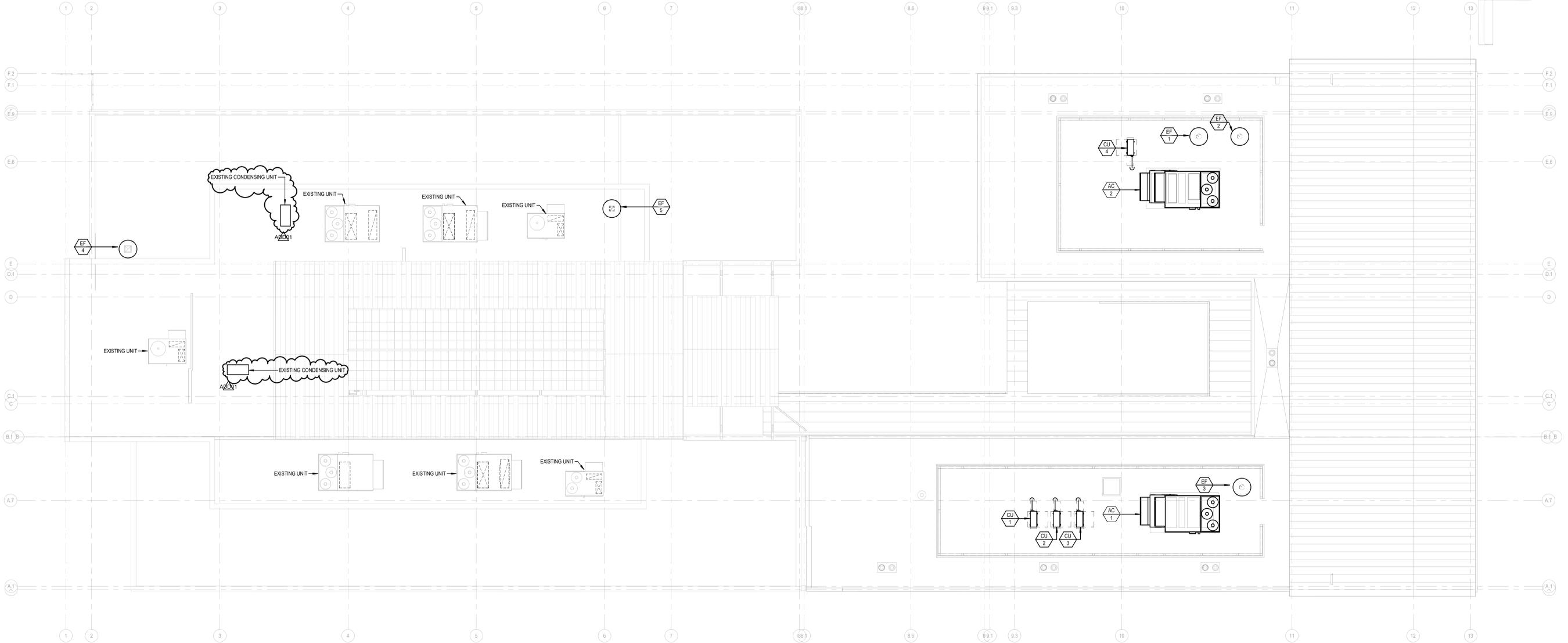
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Revision 1	1/6/2024
ADD A2001	1/10/2024
01	

MECHANICAL PLAN - LEVEL 1

M2.1

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MECHANICAL ROOF PLAN
SCALE: 1/8" = 1'-0"



**Rosemead Adult Education and
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ISSUE NO.	DATE
01	10/04/2024

**MECHANICAL
ROOF PLAN**

M3.1

NATURAL GAS LOADS - EXIST. BLDG.					
	SPACE HEATING	WATER HEATING	KITCHEN	OTHER	TOTAL
EXISTING	1506	0	-	-	-
PROPOSED	0	150	0	-	150
TOTAL	1506	150	0	-	1656
TOTAL DEVELOPED LENGTH: BUILDING CDC: 250 FT					
SYSTEM PRESURE: 8"11" WC					
BASED ON CPC 2019 TABLE 1215.2(1)					

NATURAL GAS LOADS - NEW BLDG.					
	SPACE HEATING	WATER HEATING	KITCHEN	OTHER	TOTAL
EXISTING	-	-	-	-	-
PROPOSED	440	150	0	-	590
TOTAL	440	150	0	-	590
TOTAL DEVELOPED LENGTH: BUILDING CDC: 450 FT					
SYSTEM PRESURE: 8"11" WC					
BASED ON CPC 2019 TABLE 1215.2(1)					

DOMESTIC WATER LOADS EXISTING BUILDING				
QUANTITY	FIXTURE	F.U.	TOTAL F.U.	
20	WATER CLOSET	5	100	
4	URINAL	4	16	
12	LAVATORY	1	12	
12	SINK	2	24	
2	DRINKING FOUNTAIN	0.5	2	
2	SERVICE SINK	3	6	
5	HOSE BIBB	2.5/1	6.5	
	TOTAL		166.5	

DOMESTIC WATER LOADS NEW BUILDING				
QUANTITY	FIXTURE	F.U.	TOTAL F.U.	
14	WATER CLOSET	5	70	
6	URINAL	4	24	
10	LAVATORY	1	10	
8	SINK	2	16	
4	DRINKING FOUNTAIN	0.5	2	
0	SERVICE SINK	3	0	
6	HOSE BIBB	2.5/1	7.5	
	TOTAL		129.5	

WATER PIPE SIZING SCHEDULE									
PIPE SIZE	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
GPM	2	4.5	10	17.5	27	57	88	150	230
FLUSH TANK FU	-	5	13	25	47	160	312	638	1173
FLUSH VALVE FV	1	5	13	25	47	171	401	638	1132
FT/SEC	5.0	5.0	5.0	5.0	6.0	8.0	8.0	8.0	8.0

PIPE SIZING BASED ON 3.0 PSI/100' AND MAX. VELOCITY OF 8 FEET PER SECOND

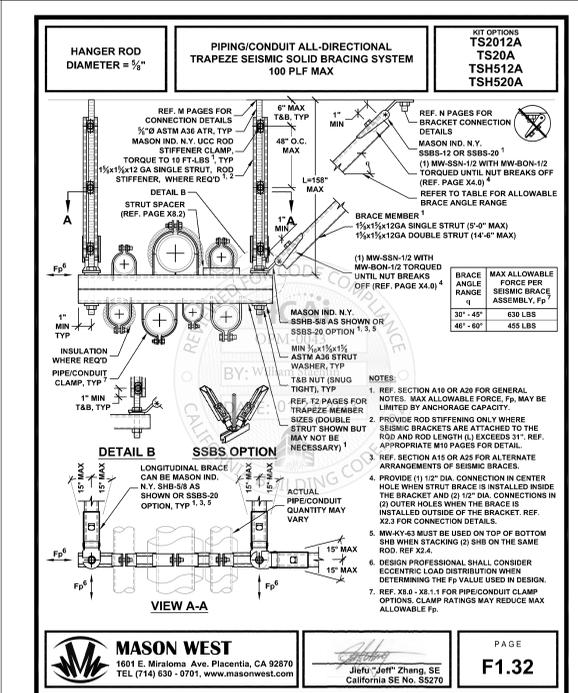
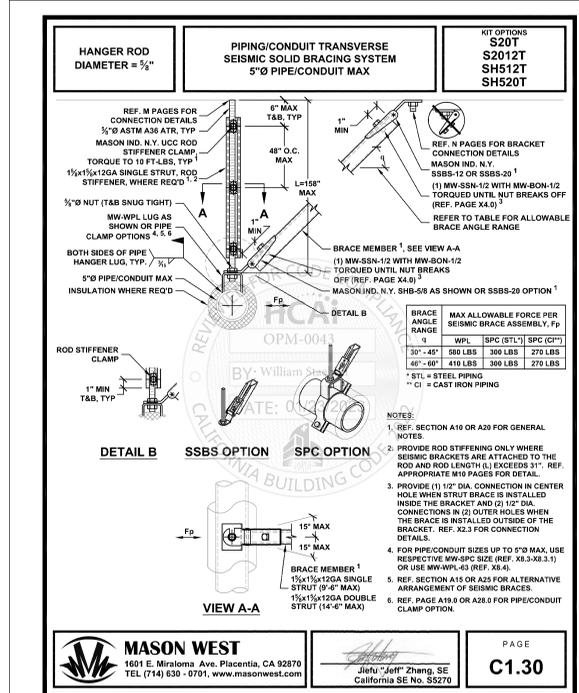
GAS FIRED WATER HEATER SCHEDULE															
SYMBOL	LOCATION	MFR/ MODEL No.	STOR. (GAL)	RECOV. (GPH)	TANK SIZE		TEMP		GAS INPUT (CFH)	CONTROL CIRCUIT			FLUE DIAM. (IN)	OPER. WEIGHT (LBS)	REMARKS
					WIDTH (IN)	HGT. (IN)	IN (°F)	OUT (°F)		KW	V	PH			
SW1	SPACE ZZ	AQ SMITH WBT11-20	50	143	27.75	55.5	60	120	120	-	120	1	(2)4"	960	FURNISH WITH CONCENTRIC RISER. REFER TO DETAIL 6/P.3
SW2	STORAGE B-110D	AQ SMITH WBT11-50	100	297	27.75	76.0	60	120	150	-	120	1	(2)4"	1356	FURNISH WITH CONCENTRIC RISER. REFER TO DETAIL 7/P.3

EXPANSION TANK SCHEDULE								
SYM.	LOCATION	MFR/ MODEL No.	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	CHARGING PRESSURE (PSIG)	SYSTEM CONNECTION SIZE (NPT)	OPER. WT. (LBS.)	REMARKS
ET1	SPACE ZZ	AMTROL THERM-X-TROL ST-12-C	3.2	1.9	50	3/4"	33.69	175 PSI ASME CONSTRUCTION. COMPLETE WITH 1/2" NPT CONNECTION AND 1/2" NPT LOCK. REFER TO DETAIL 6/P.3
ET2	STORAGE B-110D	AMTROL THERM-X-TROL ST-12-C	6.4	3.2	55	3/4"	50	175 PSI ASME CONSTRUCTION. COMPLETE WITH 1/2" NPT CONNECTION AND 1/2" NPT LOCK. REFER TO DETAIL 7/P.3

CIRCULATING PUMP SCHEDULE												
SYMBOL	LOCATION	MFR/ MODEL No.	TYPE	GPM	HEAD (FT.)	RPM	ELECTRICAL DATA				OPER. WEIGHT (LBS.)	REMARKS
							WATTS	VOLT	PHASE	HERTZ		
CP1	STORAGE B-110D	BELL & GOSSET NBF-10S/LW	INLINE	3	10	2800	52	120	1	60	9	ALL BRONZE CONSTRUCTION. COMPLETE WITH 1/2" NPT CONNECTION AND 1/2" NPT LOCK. REFER TO DETAIL 6 & 7/P.3

EQUIPMENT SCHEDULE										
SYMBOL	EQUIPMENT	MFR/ MODEL No.	MOTOR DATA				CAP.	GPM	WEIGHT (LBS.)	REMARKS
			HP	RPM	VOLTS	PHASE				
GD1	GARBAGE DISPOSER	IN-SINK ERATOR BADGER 1	1/3	1725	120	1Ø	-	-	15	

PLUMBING FIXTURE SCHEDULE												
MARK	FIXTURE	TRAP	ROUGH-IN-SIZE					FIXTURE UNIT		DESCRIPTION/REMARKS		
			SW	V	CW	HW	WASTE	WATER				
WC-1	WATER CLOSET	INT	4"	2"	1 1/2"	-	4	5	AMERICAN STANDARD MODEL NO. 3451.001 "FLOWISE". FLOOR MTD. VITREOUS CHINA. ELONGATED BOWL. SIPHON JET WITH SLOAN ROYAL MANUAL OPERATED 1.28 GPF FV ADA COMPLIANT FLUSH VALVE AND OLSONITE #95 OPEN FRONT SEAT.			
WC-2	WATER CLOSET (ACC)	INT	4"	2"	1 1/2"	-	4	5	AMERICAN STANDARD MODEL NO. 3461.001 "FLOWISE". FLOOR MTD. VITREOUS CHINA. ELONGATED BOWL. SIPHON JET WITH SLOAN ROYAL MANUAL OPERATED 1.28 GPF FV ADA COMPLIANT FLUSH VALVE AND OLSONITE #95 OPEN FRONT SEAT.			
WC-3	WATER CLOSET (ACC)	INT	4"	2"	1 1/2"	-	4	5	AMERICAN STANDARD MODEL #351.101 "AFWALL". WALL MOUNTED. VITREOUS CHINA ELONGATED BOWL. SYPHON JET WITH SLOAN ROYAL MANUAL OPERATED 1.28 GPF FV ADA COMPLIANT FLUSH VALVE AND OLSONITE #95 OPEN FLUSH VALVE.			
UR-1	URINAL	INT.	2"	1 1/2"	1 1/2"	-	2	4	AMERICAN STANDARD #5680.001 "WASHBROOK FLOWISE". WALL HUNG, VITREOUS CHINA. ELONGATED RIB. WASHOUT FLUSH ACTION. SLOAN ROYAL #R8-0.125 MANUAL OPERATED 1.125 GPF. JR. SMITH #9037 SERIES CARRIER WITH STEEL UPRIGHTS.			
UR-2	URINAL (ACC)	INT.	2"	1 1/2"	1 1/2"	-	2	4	SAME AS UR-1. SEE ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.			
L-1	LAVATORY (ACC)	1 1/2"	2"	1 1/2"	3/4"	-	1	1	DURAVIT VERO WASHBASIN FURNITURE #054500000 VITREOUS CHINA BOWL. WITH 1340 SINGLE AC ADAPTOR. COMPLETE WITH 0.35 GPM VANDAL PROOF NON-AERATING OUTLET AND #K-99799 THERMOSTATIC TEMPERING VALVE.			
L-2	LAVATORY (ACC)	1 1/2"	2"	1 1/2"	3/4"	3/4"	1	1	DURAVIT VERO WASHBASIN FURNITURE #054500000 VITREOUS CHINA BOWL WITH WALL HANGER. KOHLER #K-10336 TOUCHLESS SENSOR OPERATED FAUCET. K-13481 NON-AERATING OUTLET AND #K-99799 THERMOSTATIC TEMPERING VALVE.			
S-1	SINK (ACC)	1 1/2"	2"	1 1/2"	3/4"	3/4"	2	2	KOHLER #K-570 "RIVERBY" ENAMELED CAST IRON UNDERMOUNT SINGLE BOWL SINK. COMPLETE WITH MOEN #75656W SERIES ALIGN MOTIONSENSE WAVE SINGLE HANDLE HIGH ARC PULLDOWN KITCHEN FAUCET. 1.5 GPM FLOW. VANDAL PROOF NON-AERATING OUTLET AND #K-99799 THERMOSTATIC TEMPERING VALVE.			
S-2	SINK (ACC)	1 1/2"	2"	1 1/2"	3/4"	3/4"	2	2	KOHLER #K-570 "RIVERBY" ENAMELED CAST IRON UNDERMOUNT SINGLE BOWL SINK. COMPLETE WITH MOEN #75656W SERIES ALIGN MOTIONSENSE WAVE SINGLE HANDLE HIGH ARC PULLDOWN KITCHEN FAUCET. 1.5 GPM FLOW. VANDAL PROOF NON-AERATING OUTLET AND #K-99799 THERMOSTATIC TEMPERING VALVE.			
S-3	SINK	1 1/2"	2"	1 1/2"	3/4"	-	2	2	JOHN BOOS #29E-DP16. 16 GAUGE 2 COMPARTMENT SINK WITH DRAIN BOARD WITH 1/3" BRASS #8-3221. SWIVEL FAUCET. 4" WALL MOUNTED MIXING FAUCET WITH 12" SWING NOZZLE WITH STREAM REGULATOR OUTLET.			
S-4	SINK (ACC)	1 1/2"	2"	1 1/2"	3/4"	-	2	2	EAGLE GROUP #HSAP-14-ADA-PW. 16 GAUGE TYPE 304 STAINLESS STEEL HAND SINK. 1/3" BRASS #8-3221. SWIVEL FAUCET. 4" WALL MOUNTED MIXING SWING NOZZLE WITH STREAM REGULATOR OUTLET.			
DF-1	DRINKING FOUNTAIN (ACC)	1 1/2"	2"	1 1/2"	3/4"	-	5	6	MURDOCK #AT1218-03-02-12. BARRIER-FREE. UNIVERSAL. 8" LEVEL WALL MOUNTED WATER COOLER AND BOTTLE FILLING STATION. PROVIDE WITH STAINLESS STEEL BUBBLERS. BOTTLE FILLER WITH SENSOR OPERATION. PROVIDE WITH STAINLESS STEEL BUBBLER.			
HB-1	HOSE BIBB	-	-	-	3/4"	-	-	1	ACORN #B128 STANDPIPE. ROUGH CHROME PLATED. COMPLETE WITH LOOSE-KEY HANDLE AND VACUUM BREAKER.			
HB-2	HOSE BIBB	-	-	-	3/4"	-	-	-	ACORN #B134 WALL HYDRANT. RECESSED ALUMINUM BOX WITH BUTT IN DRIP LIP. WALL FLANGE. DOOR WITH RECESSED CAM LOCK. OPERABLE BE REMOVABLE WHEEL HANDLE WITH VACUUM BREAKER.			
FD-1	FLOOR DRAIN	2"	2"	1 1/2"	1/2"	-	-	1	JR. SMITH #2005Y-A. HUBLESS CAST IRON BODY, 5" ROUND BRASS GRATE WITH VANDAL PROOF SCREWS. P-TRAP AND TRAP PRIMER CONNECTION.			
TR-1	TRAP PRIMER	-	-	-	-	-	-	-	JR. SMITH BRONZE CONSTRUCTION WITH SHUT-OFF VALVE BEHIND ACCESS PANEL. 125 PSIG (860 KPA) MINIMUM. 3 PSI PRESSURE DROP ACTIVATION. (SIZED PER MANUFACTURERS RECOMMENDATIONS)			
WAH-1	WATER HAMMER ARRESTOR	-	-	-	1/2"	-	-	-	J.R. SMITH "HYDROTROL" 5000 SERIES. BEHIND ACCESS PANEL. 3 PSI ACTIVATION. (SIZE IN ACCORDANCE WITH PDI STANDARDS)			
CWC-1	COLD WATER CONNECTION	-	-	-	1/2"	-	-	-	GUY GRAY #B81675. 18 GAUGE FACEPLATE. HOT DIPPED GALVANIZED STEEL WITH COMPRESSION ANGLE VALVE.			
CWB-1	CLOTHES WASHER BOX	-	2"	1 1/2"	1/2"	-	-	-	GUY GRAY MODEL #FRM12S. RECESSED METAL OUTLET BOX. COMPLETE WITH CHROME QUARTER-TURN VALVE WITH LEVER HANDLE. UL LISTED.			
RD-1	ROOF DRAIN	-	-	-	-	-	-	-	JR. SMITH #1010-Y-RCU. CAST IRON BODY AND CAST IRON DOME STRAINER WITH BOTTOM OUTLET.			
OD-1	OVERFLOW DRAIN	-	-	-	-	-	-	-	JR. SMITH #1080-Y-RCU. CAST IRON BODY AND CAST IRON DOME STRAINER WITH BOTTOM OUTLET AND 2" HIGH WATER DAM.			
AD-1	AREA DRAIN	-	2"	-	-	-	-	-	JR. SMITH #2005Y-A. HUBLESS CAST IRON BODY, 5" ROUND BRASS GRATE WITH VANDAL PROOF SCREWS. (1/4" MAX GRATE OPENINGS IN ALL DIRECTIONS.)			
RD-2	ROOF DRAIN	-	-	-	-	-	-	-	JR. SMITH #1310-Y-RCU. CAST IRON BODY AND CAST IRON DOME STRAINER WITH BOTTOM OUTLET.			
OD-2	OVERFLOW DRAIN	-	-	-	-	-	-	-	JR. SMITH #1310-Y-RCU. CAST IRON BODY AND CAST IRON DOME STRAINER WITH BOTTOM OUTLET AND 2" HIGH WATER DAM.			
SS-1	SERVICE SINK	3"	3"	2"	3/4"	3/4"	3	3	AMERICAN STANDARD #7741.000 ENAMEL ON CAST IRON. FLOOR MTD. CHICAGO #R57-C-2" WITH ATMOSPHERIC VACUUM BREAKER. PAIL HOOK. WALL BRACE AND MALE HOSE THREADED OUTLET.			
FS-2	FLOOR SINK	3"	3"	2"	-	-	-	-	JR. SMITH #3140Y-C-12. 12.5"x12.5"x6". HUBLESS ADA RESISTANT ENAMELED CAST IRON RECEPTOR WITH REMOVABLE BOTTOM STRAINER. HALF GRATE. TRAP PRIMER CONNECTION AND P-TRAP.			
SH-1	SHOWER (ACC)	-	-	-	3/4"	3/4"	-	-	ADA ACCESSIBLE SHOWER. FOR SH-1 SPECIFICATIONS/DESCRIPTION REFER TO PLUMBING AND TOILET ACCESSORY SCHEDULE ON SHEET A11.2			



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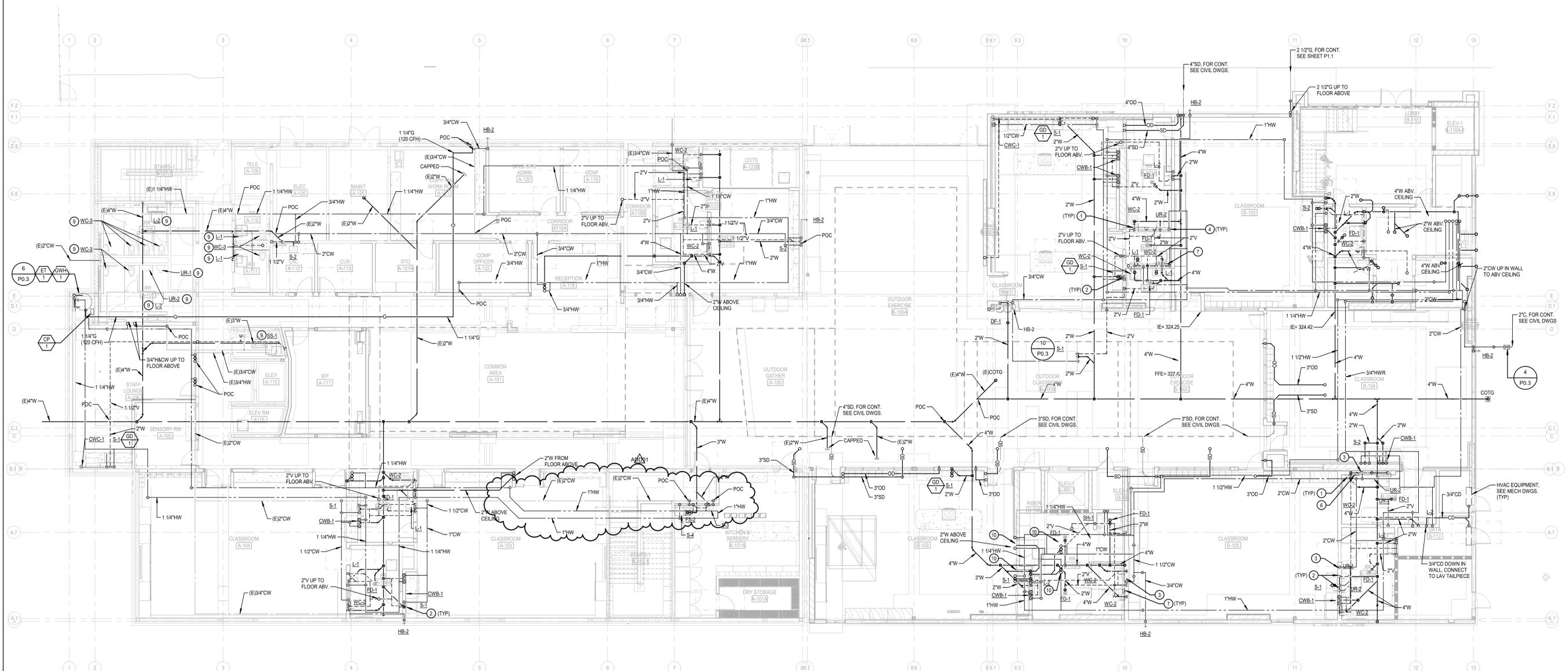
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 DSA FILE NO: 15410
 DLR PROJECT NO: 75-2023-02
 ISSUE DATE: 11/20/2023

SUBMITTAL TITLE
 KIT OPTIONS
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

PLUMBING SCHEDULES AND DETAILS

P0.2



PLUMBING PLAN - LEVEL 1
 SCALE: 1/8" = 1'-0"

SHEET NOTES

- ① 4"W DOWN AND 2"V UP.
- ② 2"W DOWN AND 1 1/2"V UP.
- ③ 2"W DOWN IN WALL WITH SOV BEHIND ACCESS PANEL.
- ④ 1 1/2"CW DOWN IN WALL WITH SOV BEHIND ACCESS PANEL.
- ⑤ 1"CW DOWN IN WALL WITH SOV BEHIND ACCESS PANEL.
- ⑥ 3/4"CW DOWN IN WALL WITH SOV BEHIND ACCESS PANEL.
- ⑦ TP-1 AND WHA-1 BEHIND ACCESS PANEL.
- ⑧ 1/2"CW CONTINUE DOWN TO BELOW FLOOR TO ED-1.
- ⑨ INSTALL NEW FIXTURE AND CONNECT TO EXISTING UTILITIES IN WALL, BELOW GRADE/FLOOR AND/OR ABOVE CEILING AS REQUIRED FOR FULLY FUNCTIONING FIXTURE/SYSTEM.
- ⑩ 2"W, 3/4"H&CW UP TO FIXTURE AT FLOOR ABOVE.



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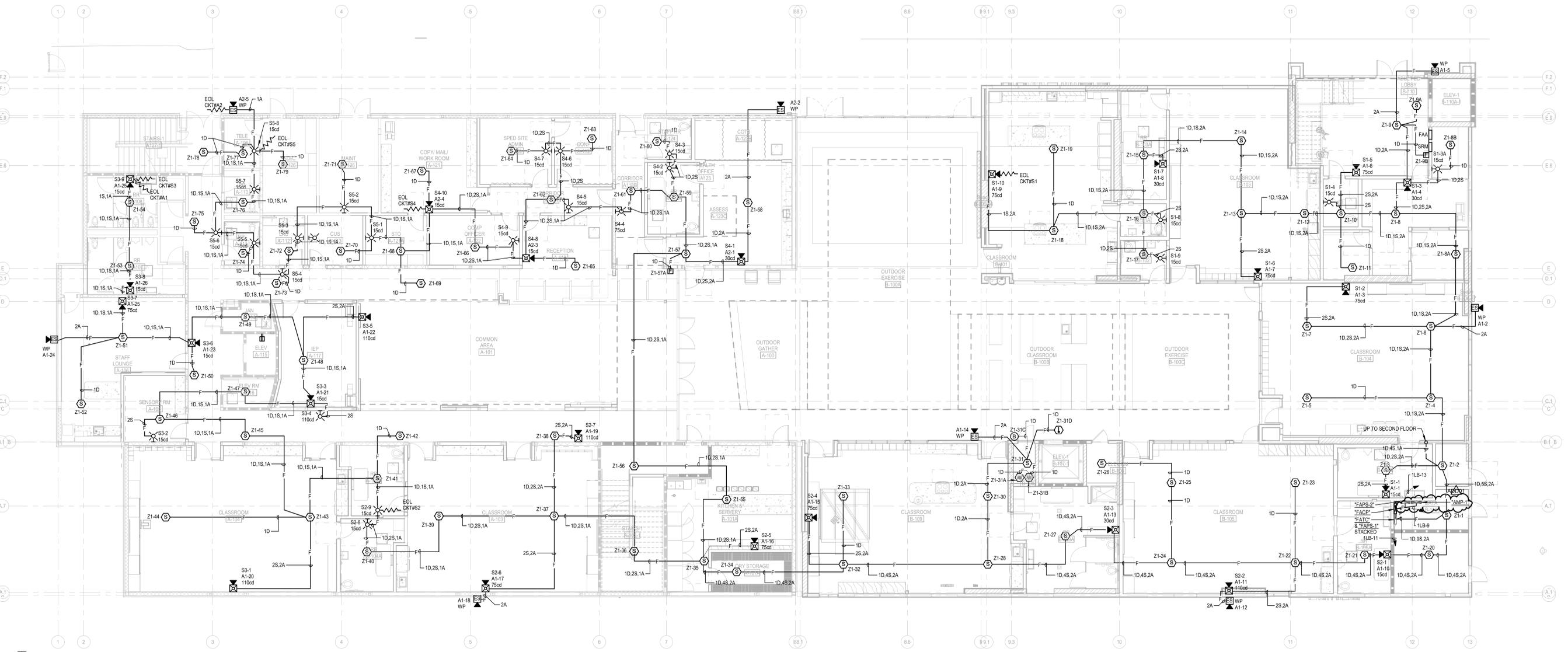
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 DSA FILE NO: 19-110
 DLR PROJECT NO: 75-20223-02
 ISSUE DATE: 11/20/2023

PLUMBING PLAN - LEVEL 1

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FIRE ALARM PLAN - LEVEL 1
SCALE: 1/8" = 1'-0"



Rosemead Adult Education and Transition Center Addition/Modernization
El Monte Union High School District
4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



DSA SUBMITTAL

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DLR APPLICATION NO: 05-122743
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SUBMITTAL TITLE
K20/AC001 10/04/2024
01

FIRE ALARM PLAN - LEVEL 1
1

E2.7

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SEQUENCE OF OPERATION								
DEVICE	MANUAL PULL STATION	SMOKE DETECTOR	HEAT DETECTOR	120VAC POWER FAILURE LOW BATTERY	FLOW SWITCH	TAMPER SWITCH	ELEV. SHAFT/ EQUIP. RM SMOKE DETECTOR	KITCHEN FIRE SUPPRESSION SYSTEM
SOUND CONTROL PANEL TROUBLE BUZZER	ON WIRING FAULT	ON WIRING FAULT	ALARM	YES	ALARM	SUPERVISORY	ALARM	ON WIRING FAULT
ANNUNCIATE AT ADMINISTRATION BUILDING	ALARM	ALARM	ALARM	TROUBLE	ALARM	SUPERVISORY	ALARM	ALARM
ANNUNCIATE AT FIRE CONTROL PANEL (ALARM OR TROUBLE)	ALARM	ALARM	ALARM	TROUBLE	ALARM	SUPERVISORY	ALARM	ALARM
ACTIVATE AUDIBLE/ VISUAL ALARM SIGNAL THROUGH - OUT BUILDINGS	YES	YES	YES	NO	YES	NO	YES	YES
SHUT DOWN HVAC UNITS & CLOSE FIRE/ SMOKE DAMPERS	NO	YES	NO	NO	NO	NO	YES	NO
SHUT DOWN ELEVATOR POWER SUPPLY	YES	YES	YES	NA	YES	NO	YES	YES
RECALL ELEVATOR	YES	YES	YES	NO	YES	NO	YES	NO
ALERT OFF-SITE MONITORING COMPANY	YES	YES	YES	NO	YES	NO	YES	YES

FIRE ALARM WIRE LEGEND		
SYMBOL	DESCRIPTION	TYPE
D	DATA LINE - INITIATING DEVICE	16/2 UNSHIELDED TWISTED PR (UTSP) DATA LOOP
P	POWER CIRCUIT	2#12 THWN
S	SIGNAL (STROBE) CIRCUIT	2#12 THWN
A	AUDIBLE (SPEAKER) CIRCUIT	2#16 SHIELDED (TSP)
N	NETWORK CONNECTION	INDOOR/OUTDOOR FIBER OPTIC CABLE, 6-STRAND, SINGLEMODE, OS2, 8/125

* ALL WIRING USED IN CONDUIT ON THE EXTERIOR OF THE BUILDING SHALL BE U.L. LISTED FOR WET LOCATION.

FIRE ALARM LEGEND

	FIRE ALARM CONTROL PANEL WITH VOICE CONTROL	SILENT KNIGHT: IFP-2000ECS CSFM #7165-0559-0174
	SUPERVISED REMOTE MICROPHONE	SILENT KNIGHT: ECS-RPU CSFM #7300-0559-0175
	INTELLIGENT 50 WATT AMPLIFIER	SILENT KNIGHT: ECS-50W CSFM #7300-0559-0173
	FIRE ALARM ANNUNCIATOR	SILENT KNIGHT: RA-2000 CSFM #7165-0559-0158
	FIRE ALARM MANUAL PULL STATION, MOUNT TOP AT 48" ST1 1200 OR 1230 WITHOUT HORN	SILENT KNIGHT: IDP-PULL-DA CSFM #7150-0559-0140
	PHOTOELECTRIC SMOKE DETECTOR & BASE (** ADJACENT INDICATES RELAY BASE)	SILENT KNIGHT: IDP-PHOTO CSFM #7272-0559-0149 *CSFM #7300-1653-0109
	100° FIXED TEMPERATURE HEAT DETECTOR MOUNTED IN CEILING SPACE. SEE FIRE ALARM NOTE #23 ON THIS SHEET.	SILENT KNIGHT: IDP-HEAT-HT CSFM #7270-0559-0147
	FIRE ALARM MULTI-CANDELA STROBE LIGHT, MOUNT AT +80" A.F.F. OR 8' BELOW CEILING, WHICHEVER IS LOWER.	SYSTEM SENSOR: SR CSFM #7320-1653-0186
	MULTI-CANDELA COMBINATION SPEAKER/STROBE LIGHT, MOUNT AT +80" A.F.F. OR 8' BELOW CEILING, WHICHEVER IS LOWER. SPEAKER SHALL HAVE THE POWER TAP SET AT 1/2W U.N.O.	SYSTEM SENSOR: SPSR CSFM #7320-1653-0201
	FIRE ALARM SPEAKER WEATHERPROOF, MOUNT AT +90" A.F.F. SPEAKER SHALL HAVE THE POWER TAP SET AT 2W U.N.O.	SYSTEM SENSOR: SPRK CSFM #7320-1653-0201
	FIRE ALARM REMOTE POWER EXPANDER WITH (2)5815XL SLC EXPANDER	SILENT KNIGHT: RPS-1000 SILENT KNIGHT: 5815XL CSFM #7165-0559-0158
	TAMPER SWITCH (VIA MONITOR MODULE)	
	FLOW SWITCH (VIA MONITOR MODULE)	
	FIRE ALARM BELL (VIA RELAY MODULE)	
	MONITOR MODULE	SILENT KNIGHT: IDP-MINIMON CSFM #7300-0559-0155
	RELAY MODULE	SILENT KNIGHT: IDP-RELAY CSFM #7300-0559-0155
	INDICATES SIGNAL CIRCUIT #1 INDICATES BUILDING DESIGNATION "S" INDICATES STROBE CIRCUIT. "A" INDICATES SPEAKER CIRCUIT.	
	INDICATES ADDRESS NUMBER	
	FIRE ALARM SYSTEM CONDUIT RUN (3/4" CONDUIT MINIMUM UNLESS INDICATED OTHERWISE ON DRAWINGS) AND REQUIRED WIRING.	BELDEN: FPLR CSFM #7161-0060-0103
	24" L x 24" W x 6" D FIRE ALARM TERMINAL CABINET	
	END OF LINE RESISTOR (10 OHMS)	

FIRE ALARM REQUIREMENTS

- THE CONTRACTOR SHALL PROVIDE AND SUBMIT THE FIRE ALARM SHOP DRAWINGS TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION OF THE FIRE ALARM SYSTEM. THE SUBMITTAL SHALL CONTAIN THE FOLLOWING:
 - SHOP DRAWINGS: COMPLETE 1/8" SCALE FLOOR PLANS SHOWING ALL DEVICES, COMPONENTS, CONDUIT AND WIRING INDICATING A COMPLETE AND OPERABLE SYSTEM AS DESIGNED AND SPECIFIED. REPRODUCED COPIES OF BID SET FIRE ALARM PLANS ARE NOT ACCEPTABLE AS SHOP DRAWINGS. SHOP DRAWINGS MUST ALSO INDICATE DEVICE MOUNTING HEIGHTS, ROOM NAMES AND NUMBERS AND THE LOCATION OF ALL FIRE RATED WALLS.
 - ELECTRICAL CONTRACTOR'S AND FIRE ALARM SYSTEM INSTALLER'S NAME, ADDRESS, PHONE NUMBER AND C-10 LICENSE NUMBER.
 - LIST OF SYSTEM COMPONENTS, EQUIPMENT AND DEVICES, INCLUDING MANUFACTURERS' MODEL NUMBER(S) AND CALIFORNIA STATE FIRE MARSHALL LISTING NUMBERS.
 - ORIGINAL COPIES OF MANUFACTURERS' SPECIFICATION SHEETS FOR ALL EQUIPMENT AND DEVICES INDICATED.
 - VOLTAGE DROP CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION FOR THE WORST CASE:
 - POINT-TO-POINT OR OHMS LAW CALCULATIONS.
 - IDENTIFICATION OF ZONE USED IN CALCULATIONS.
 - VOLTAGE DROP PERCENT (NOT TO EXCEED MANUFACTURERS' REQUIREMENTS).
 - NOTE: IF VOLTAGE DROP EXCEEDS 10% INDICATE MANUFACTURERS' LISTED OPERATING VOLTAGE RANGE(S) OR EQUIPMENT AND DEVICES.
 - NOTE CIRCUIT NUMBER FOR WORST CASE CALCULATION.
 - BATTERY TYPE(S), AMP HOURS AND LOAD CALCULATIONS -- INCLUDE THE FOLLOWING INFORMATION:
 - NORMAL OPERATION: 100% OF APPLICABLE DEVICES FOR 24 HOURS = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING STANDBY POWER CONDITION -- I.E.:
 - ZONE MODULES
 - DETECTORS
 - OTHER DEVICES (IDENTIFY)
 - ALARM CONDITION: 100% OF APPLICABLE DEVICES FOR 15 MINUTES = CONTROL PANEL AMPS PLUS LIST OF AMPS PER DEVICE WHICH DRAW POWER FROM THE PANEL DURING ALARM CONDITION -- I.E.:
 - ZONE MODULES
 - SIGNAL MODULES
 - DETECTORS
 - SIGNAL DEVICES
 - ANNUNCIATOR
 - OTHER DEVICES (IDENTIFY)
 - NORMAL OPERATION + ALARM OPERATION
 - TOTAL AMP HOURS REQUIRED.
 - TOTAL AMP HOURS PROVIDED.

FIRE ALARM NOTES

- SCOPE OF WORK: PROVIDE A COMPLETE AUTOMATIC FIRE ALARM SYSTEM WITH VOICE EVACUATION IN ACCORDANCE TO 2022 NFPA-72 AND CCR TITLE 24, PART 2, SECTION 907.2.3; 907.5.2.2.
- A FIRE ALARM SYSTEM IS BEING INSTALLED IN OCCUPANCIES LISTED. PROVIDE NEW EDWARDS FIRE ALARM CONTROL PANEL AS INDICATED.
- PLANS AND SPECIFICATIONS FOR THE SYSTEM SHALL BE APPROVED BY DSA-FIRE AND LIFE SAFETY PRIOR TO SYSTEM INSTALLATION.
- UPON RECEIPT OF THE CERTIFICATE OF COMPLIANCE, THE MANUFACTURER AND OR INSTALLER SHALL SUPPLY THE OWNER WITH WRITTEN OPERATING, TESTING AND MAINTENANCE INSTRUCTIONS, POINT-TO-POINT AS-BUILT DRAWINGS, AND EQUIPMENT SPECIFICATIONS.
- THE SYSTEM SHALL CONFORM TO TITLE 19 AND TITLE 24 AS APPLICABLE TO THIS PROJECT.
- ALL THE DEVICES OF THE FIRE ALARM SYSTEM SHALL BE APPROVED AND LISTED BY THE CALIFORNIA STATE FIRE MARSHAL.
- A STAMPED SET OF APPROVED PLANS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION. ANY DEVIATION FROM APPROVED PLANS SHALL BE APPROVED AND SIGNED BY THE DSA INSPECTOR OF RECORD.
- ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF THE INSPECTOR OR ARCHITECT/ENGINEER OF RECORD.
- CONDUIT SYSTEM TO BE FURNISHED AND INSTALLED PER PLANS AND SPECIFICATIONS.
- UPON COMPLETION OF SYSTEM INSTALLATION, THE SYSTEM SHALL BE TESTED IN THE PRESENCE OF AND IN A MANNER ACCEPTABLE TO THE ENFORCING AGENCY.
- PENETRATIONS OF FIRE-RATED WALLS SHALL BE PROTECTED IN ACCORDANCE WITH 2022 EDITION CALIFORNIA BUILDING CODE, CHAPTER 7.
- ALL EQUIPMENT SHALL BE U.L. AND C.S.F.M. LISTED.
- ALL WIRING SHALL BE IN ACCORDANCE WITH THE C.E.C. AND AUTHORITIES HAVING JURISDICTION.
- ALL FIRE ALARM CONDUIT SHALL BE 3/4" MIN. U.N.O. ALL FIRE ALARM CONDUIT INSTALLED UNDERGROUND SHALL BE 1" MIN. U.N.O. ALL FIRE ALARM CONDUCTORS SHALL BE INSTALLED IN AN APPROVED RACEWAY.
- ALL AUDIBLE DEVICES SHALL BE IN SYNCHRONOUS.
- VISUAL DEVICES SHALL NOT EXCEED 2 FLASHES PER SECOND AND SHALL NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA VISUAL DEVICES WITHIN 5' FROM EACH OTHER SHALL BE SYNCHRONIZED.
- UNDERGROUND AND EXTERIOR CONDUITS SHALL HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
- AUDIBLE DEVICES SHALL BE AT LEAST 15dBA ABOVE THE EQUIVALENT SOUND LEVEL BUT NOT LESS THAN 75dBA AT 10' OR MORE THAN 110dBA AT THE MINIMUM HEARING DISTANCE. SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECONDS. 5dBA MUST BE MAINTAINED.
- AUDIBLE DEVICES SHALL SOUND A PRERECORDED MESSAGE AS DIRECTED BY THE OWNER.
- COORDINATE EXACT LOCATION OF ALL CEILING FIRE ALARM DEVICES IN FIELD.
- CIRCUIT LENGTH INDICATED ON DRAWINGS IS FOR PLAN CHECK PURPOSES ONLY. CONTRACTOR SHALL FIELD VERIFY EXACT LENGTH.
- ALL JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH THE C.E.C.
- ELECTRICAL CONTRACTOR SHALL FURNISH ACCESS PANELS TO AREAS THAT REQUIRE SERVICING, TROUBLE SHOOTING, ETC., AS REQUIRED. COORDINATE WITH ARCHITECT FOR ACCESS PANELS.
- ALL 120VAC POWER REQUIREMENTS FOR THE FIRE ALARM SYSTEM SHALL BE FURNISHED BY CONTRACTOR AND SHALL MEET ALL REQUIREMENTS OF THE AUTHORITIES HAVING JURISDICTION.
- ALL WIRING, ANNUNCIATING DEVICES AND ANNUNCIATOR PANEL SHALL BE SUPERVISED TO THE PRINCIPLE POINT OF ANNUNCIATION. THE FIRE ALARM CONTROL PANEL TO SUPERVISE THE ANNUNCIATOR PANEL, ALL INITIATING AND INDICATING DEVICE CIRCUITS.
- AUTOMATIC FIRE ALARM SYSTEMS SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNALS TO AN APPROVED SUPERVISING STATION AS REQUIRED BY CFC 907.6.1. THE SUPERVISING STATION SHALL BE LISTED AS EITHER ULF-X OR ULJ-S BY UNDERWRITERS LABORATORY OR SHALL MEET THE REQUIREMENTS OF FACTORY MUTUAL RESEARCH APPROVAL STANDARD 3011. SUPERVISION OF SYSTEM AND LEASED TELEPHONE LINES SHALL BE ARRANGED BY OWNER.
- ALL FIRE ALARM WIRING IN PULLBOXES SHALL BE ROUTED WITHIN INNERDUCT AND IDENTIFIED AS FIRE ALARM.
- PROVIDE ACCESSIBLE OPERATING HARDWARE AT INITIATIVE DEVICE (e.g., NOT REQUIRING TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST AND FORCE LESS THAN 5 LBS.)
- SEE SHEET E3.2 FOR TYPICAL DEVICE MOUNTING HEIGHT DETAIL. CHECK SHEET REF.!!!
- INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM HAS BEEN APPROVED BY DSA.
- DSA ARCHITECT AND OWNER SHALL BE NOTIFIED MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
- THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
- ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
- PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC.
- SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1" FROM FIRE SPRINKLERS OR 3" FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
- ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT OR SURFACE RACEWAY, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
- FIRE ALARM PANELS, REMOTES AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20lbs WITHOUT SPECIAL MOUNTING DETAILS.
- A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL". CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
- THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURES 7.8.2(a) - 7.8.2(f).
- FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATIONS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
- MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
- THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.3.
- THE INSTALLING CONTRACTOR SHALL PERFORM A VOICE MESSAGE INTELLIGIBILITY TEST USING INTELLIGIBILITY MEASUREMENT METHODS 1 AND/OR 2 TO COMPLY WITH NFPA-72 24.3.1 AND 18.4.10. INTELLIGIBILITY TEST SHALL BE WITNESSED BY THE INSPECTOR OF RECORD.



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



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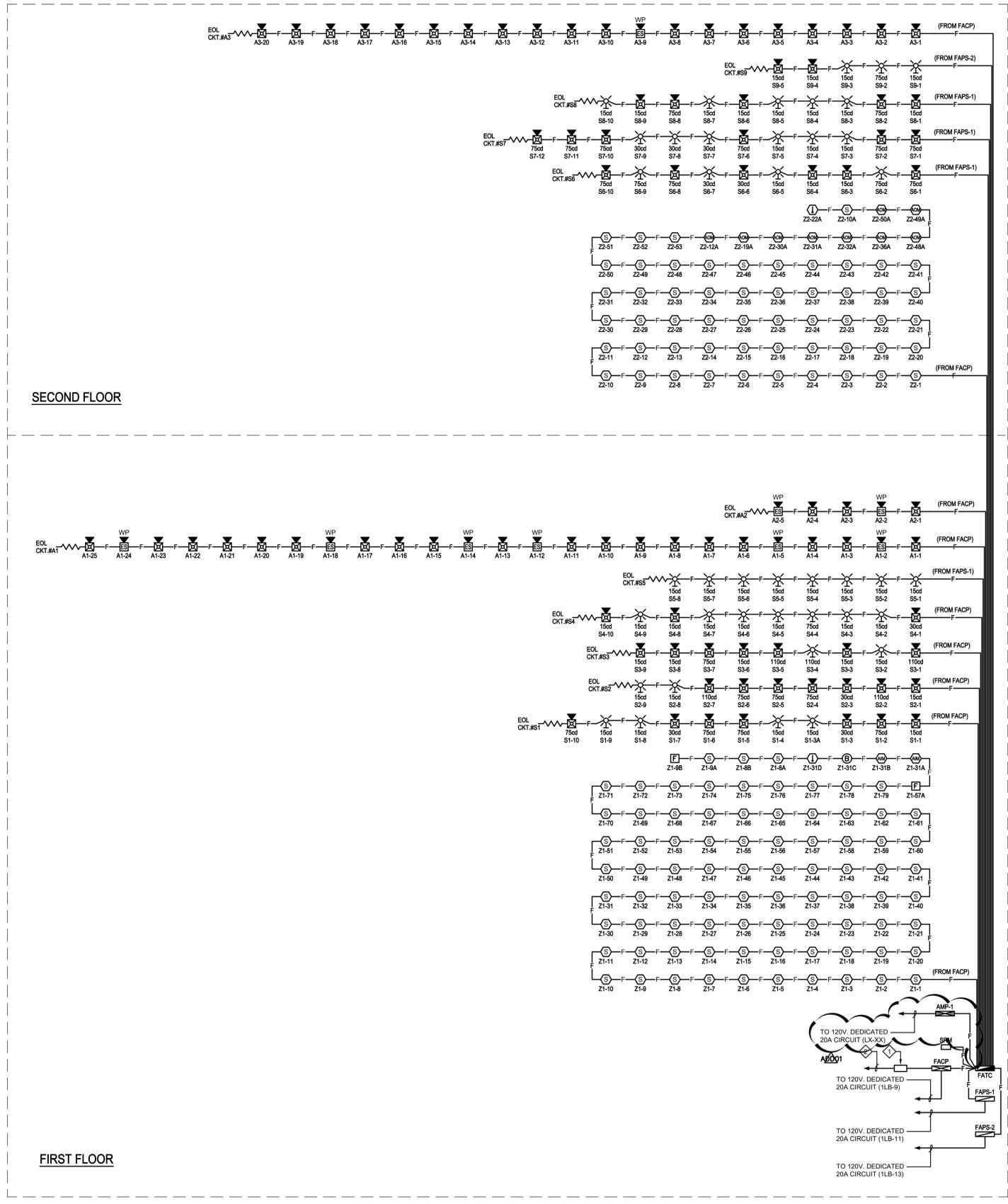
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DSA APPLICATION NO: 03-122743
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NO.	REVISION	DATE

FIRE ALARM SYMBOLS AND NOTES

E3.1



SECOND FLOOR

FIRST FLOOR

ROSEMEAD ADULT EDUCATION AND TRANSITION CENTER



Rosemead Adult Education and Transition Center Addition/Modernization
 El Monte Union High School District
 4105 ROSEMEAD BLVD., ROSEMEAD, CA 91770



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1		10/04/2023
2		

FIRE ALARM RISER DIAGRAM

E3.4

IFP-2000ECS Battery Calculations Rosemead Adult School FACP Data Loops Z1, Z2, Signal Circuits S1,S2,S3,S4					
Description	Quantity	Standby (Amps)	Total Standby (Amps)	Alarm (Amps)	Total Alarm (Amps)
CONTROL PANEL	1	x 0.290000	0.290000	0.570000	0.570000
ECS-RVM	1	x 0.070000	0.070000	0.100000	0.100000
ECS-VCM	1	x 0.070000	0.070000	0.100000	0.100000
ECS-RPU	1	x 0.070000	0.070000	0.100000	0.100000
ECS-50W	1	x 0.010000	0.010000	0.010000	0.010000
IFP-RPT-FO	1	x 0.013000	0.013000	0.013000	0.013000
RA-2000	1	x 0.025000	0.025000	0.050000	0.050000
5815XL SLC EXPANDER	1	x 0.055000	0.055000	0.055000	0.055000
IDP-PULL-DA	2	x 0.000300	0.000600	0.000300	0.000600
IDP-PHOTO	136	x 0.000300	0.040800	0.006500	0.884000
IDP-FIRE-CO	0	x 0.000300	0.000000	0.000300	0.000000
B200S	0	x 0.000300	0.000000	0.000300	0.000000
B200S (AUX POWER)	0	x 0.000500	0.000000	0.000500	0.000000
IDP-HEAT	2	x 0.000300	0.000600	0.006500	0.013000
IDP-HEAT-HT	0	x 0.000200	0.000000	0.006500	0.000000
IDP-RELAY	10	x 0.000300	0.003000	0.005500	0.055000
IDP-MONITOR	2	x 0.000400	0.000800	0.005500	0.011000
IDP-CONTROL	0	x 0.000400	0.000000	0.005500	0.000000
SR/SCW 15cd Strobe	13	x 0.000000	0.000000	0.065000	0.858000
SR/SCW 30cd Strobe	0	x 0.000000	0.000000	0.094000	0.000000
SR/SCW 75cd Strobe	1	x 0.000000	0.000000	0.158000	0.158000
SR/SCW 110cd Strobe	1	x 0.000000	0.000000	0.202000	0.202000
SPSR/SPSCW 15cd Spkr St.	8	x 0.000000	0.000000	0.066000	0.528000
SPSR/SPSCW 30cd Spkr St.	4	x 0.000000	0.000000	0.094000	0.376000
SPSR/SPSCW 75cd Spkr St.	8	x 0.000000	0.000000	0.158000	1.264000
SPSR/SPSCW 110cd Spkr St.	4	x 0.000000	0.000000	0.202000	0.808000
Total:					6.156000
Battery Calculation		Time Multiplier		Amp Hours	
Supervisory Hours	24	x	0.648800	=	15.571200
Alarm Hours	0.250	x	6.155600	=	1.5389
Total Amp Hours					17.110100
Battery Used (AH)					= 36.000000
Battery Spare (AH)					= 18.889900

ECS-50W Amplifier Calculation Rosemead Adult School AMP-1					
Description	Quantity	Standby (Amps)	Total Standby (Amps)	Alarm (Amps)	Total Alarm (Amps)
ECS-50W-25	0	x 0.085000	0.000000	0.525000	0.000000
ECS-50W-70.7	1	x 0.100000	0.100000	0.580000	0.580000
ECS-CE4	1	x 0.020000	0.020000	0.180000	0.180000
WATTS @ 25Vrms	0	x 0.000000	0.000000	0.040000	0.000000
WATTS @ 70.7Vrms	38.5	x 0.000000	0.000000	0.014000	0.530000
Total:			0.120000	1.299000	1.299000
Battery Calculation		Time Multiplier		Amp Hours	Total Watts
Supervisory Hours	24	x	0.120000	=	2.880000
Alarm Hours	0.250	x	1.299000	=	0.32475
Total Amp Hours					3.204750
Battery Used (AH)					= 7.000000
Battery Spare (AH)					= 3.795250

RPS-1000 Battery Calculations Rosemead Adult School FAPS-1					
Description	Quantity	Standby (Amps)	Total Standby (Amps)	Alarm (Amps)	Total Alarm (Amps)
POWER SUPPLY	1	x 0.040000	0.040000	0.160000	0.160000
5815XL SLC EXPANDER	0	x 0.055000	0.000000	0.055000	0.000000
IDP-PULL-DA	0	x 0.000300	0.000000	0.000300	0.000000
IDP-PHOTO	0	x 0.000300	0.000000	0.006500	0.000000
IDP-FIRE-CO	0	x 0.000300	0.000000	0.000300	0.000000
B200S	0	x 0.000300	0.000000	0.000300	0.000000
B200S (AUX POWER)	0	x 0.000500	0.000000	0.000500	0.000000
IDP-HEAT	0	x 0.000300	0.000000	0.006500	0.000000
IDP-HEAT-HT	0	x 0.000200	0.000000	0.006500	0.000000
IDP-RELAY	0	x 0.000300	0.000000	0.005500	0.000000
IDP-MONITOR	0	x 0.000400	0.000000	0.005500	0.000000
IDP-CONTROL	0	x 0.000400	0.000000	0.005500	0.000000
SR/SCW 15cd Strobe	18	x 0.000000	0.000000	0.066000	1.188000
SR/SCW 30cd Strobe	4	x 0.000000	0.000000	0.094000	0.376000
SR/SCW 75cd Strobe	2	x 0.000000	0.000000	0.158000	0.316000
SR/SCW 110cd Strobe	0	x 0.000000	0.000000	0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	5	x 0.000000	0.000000	0.066000	0.330000
SPSR/SPSCW 30cd Spkr St.	1	x 0.000000	0.000000	0.094000	0.094000
SPSR/SPSCW 75cd Spkr St.	11	x 0.000000	0.000000	0.158000	1.738000
SPSR/SPSCW 110cd Spkr St.	0	x 0.000000	0.000000	0.202000	0.000000
Total:			0.040000	4.202000	4.202000
Battery Calculation		Time Multiplier		Amp Hours	
Supervisory Hours	24	x	0.040000	=	0.960000
Alarm Hours	0.250	x	4.202000	=	1.0505
Total Amp Hours					2.010500
Battery Used (AH)					= 18.000000
Battery Spare (AH)					= 15.989500

RPS-1000 Battery Calculations Rosemead Adult School FAPS-2					
Description	Quantity	Standby (Amps)	Total Standby (Amps)	Alarm (Amps)	Total Alarm (Amps)
POWER SUPPLY	1	x 0.040000	0.040000	0.160000	0.160000
5815XL SLC EXPANDER	0	x 0.055000	0.000000	0.055000	0.000000
IDP-PULL-DA	0	x 0.000300	0.000000	0.000300	0.000000
IDP-PHOTO	0	x 0.000300	0.000000	0.006500	0.000000
IDP-FIRE-CO	0	x 0.000300	0.000000	0.000300	0.000000
B200S	0	x 0.000300	0.000000	0.000300	0.000000
B200S (AUX POWER)	0	x 0.000500	0.000000	0.000500	0.000000
IDP-HEAT	0	x 0.000300	0.000000	0.006500	0.000000
IDP-HEAT-HT	0	x 0.000200	0.000000	0.006500	0.000000
IDP-RELAY	0	x 0.000300	0.000000	0.005500	0.000000
IDP-MONITOR	0	x 0.000400	0.000000	0.005500	0.000000
IDP-CONTROL	0	x 0.000400	0.000000	0.005500	0.000000
SR/SCW 15cd Strobe	0	x 0.000000	0.000000	0.066000	0.000000
SR/SCW 30cd Strobe	0	x 0.000000	0.000000	0.094000	0.000000
SR/SCW 75cd Strobe	3	x 0.000000	0.000000	0.158000	0.474000
SR/SCW 110cd Strobe	0	x 0.000000	0.000000	0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	0	x 0.000000	0.000000	0.066000	0.000000
SPSR/SPSCW 30cd Spkr St.	0	x 0.000000	0.000000	0.094000	0.000000
SPSR/SPSCW 75cd Spkr St.	0	x 0.000000	0.000000	0.158000	0.000000
SPSR/SPSCW 110cd Spkr St.	2	x 0.000000	0.000000	0.202000	0.404000
Total:			0.040000	1.038000	1.038000
Battery Calculation		Time Multiplier		Amp Hours	
Supervisory Hours	24	x	0.040000	=	0.960000
Alarm Hours	0.250	x	1.038000	=	0.2595
Total Amp Hours					1.219500
Battery Used (AH)					= 18.000000
Battery Spare (AH)					= 16.780500

Voltage Drop Calculations Rosemead Adult School FACP Signal Circuit S1			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	4	x 0.066000	0.264000
SR/SCW 30cd Strobe	0	x 0.094000	0.000000
SR/SCW 75cd Strobe	0	x 0.158000	0.000000
SR/SCW 110cd Strobe	0	x 0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	1	x 0.066000	0.066000
SPSR/SPSCW 30cd Spkr St.	2	x 0.094000	0.188000
SPSR/SPSCW 75cd Spkr St.	4	x 0.158000	0.632000
SPSR/SPSCW 110cd Spkr St.	0	x 0.202000	0.000000
Total Current Draw:			= 1.150000
Wire Size 14	0	x	4110 = 0
Wire Size 12	1	x	6530 = 6530
Wire Used Circular Mills			= 6530
Distance to End of Circuit:			= 427
Multiplier			= 21.6
Voltage			= 24
Multiplier			= 4.166
Percentage Voltage Drop			= 6.767

Voltage Drop Calculations Rosemead Adult School FACP Signal Circuit S2			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	2	x 0.066000	0.132000
SR/SCW 30cd Strobe	0	x 0.094000	0.000000
SR/SCW 75cd Strobe	0	x 0.158000	0.000000
SR/SCW 110cd Strobe	0	x 0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	1	x 0.066000	0.066000
SPSR/SPSCW 30cd Spkr St.	1	x 0.094000	0.094000
SPSR/SPSCW 75cd Spkr St.	3	x 0.158000	0.474000
SPSR/SPSCW 110cd Spkr St.	2	x 0.202000	0.404000
Total Current Draw:			= 1.170000
Wire Size 14	0	x	4110 = 0
Wire Size 12	1	x	6530 = 6530
Wire Used Circular Mills			= 6530
Distance to End of Circuit:			= 472
Multiplier			= 21.6
Voltage			= 24
Multiplier			= 4.166
Percentage Voltage Drop			= 7.610

Voltage Drop Calculations Rosemead Adult School FACP Signal Circuit S3			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	1	x 0.066000	0.066000
SR/SCW 30cd Strobe	0	x 0.094000	0.000000
SR/SCW 75cd Strobe	0	x 0.158000	0.000000
SR/SCW 110cd Strobe	1	x 0.202000	0.202000
SPSR/SPSCW 15cd Spkr St.	4	x 0.066000	0.264000
SPSR/SPSCW 30cd Spkr St.	0	x 0.094000	0.000000
SPSR/SPSCW 75cd Spkr St.	1	x 0.158000	0.158000
SPSR/SPSCW 110cd Spkr St.	2	x 0.202000	0.404000
Total Current Draw:			= 1.094000
Wire Size 14	0	x	4110 = 0
Wire Size 12	1	x	6530 = 6530
Wire Used Circular Mills			= 6530
Distance to End of Circuit:			= 583
Multiplier			= 21.6
Voltage			= 24
Multiplier			= 4.166
Percentage Voltage Drop			= 8.789

Voltage Drop Calculations Rosemead Adult School FACP Signal Circuit S4			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	6	x 0.066000	0.396000
SR/SCW 30cd Strobe	0	x 0.094000	0.000000
SR/SCW 75cd Strobe	1	x 0.158000	0.158000
SR/SCW 110cd Strobe	0	x 0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	2	x 0.066000	0.132000
SPSR/SPSCW 30cd Spkr St.	1	x 0.094000	0.094000
SPSR/SPSCW 75cd Spkr St.	0	x 0.158000	0.000000
SPSR/SPSCW 110cd Spkr St.	0	x 0.202000	0.000000
Total Current Draw:			= 0.780000
Wire Size 14	0	x	4110 = 0
Wire Size 12	1	x	6530 = 6530
Wire Used Circular Mills			= 6530
Distance to End of Circuit:			= 439
Multiplier			= 21.6
Voltage			= 24
Multiplier			= 4.166
Percentage Voltage Drop			= 4.719

Voltage Drop Calculations Rosemead Adult School FAPS-1 Signal Circuit S5			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	8	x 0.066000	0.528000
SR/SCW 30cd Strobe	0	x 0.094000	0.000000
SR/SCW 75cd Strobe	0	x 0.158000	0.000000
SR/SCW 110cd Strobe	0	x 0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	0	x 0.066000	0.000000
SPSR/SPSCW 30cd Spkr St.	0	x 0.094000	0.000000
SPSR/SPSCW 75cd Spkr St.	0	x 0.158000	0.000000
SPSR/SPSCW 110cd Spkr St.	0	x 0.202000	0.000000
Total Current Draw:			= 0.528000
Wire Size 14	0	x	4110 = 0
Wire Size 12	1	x	6530 = 6530
Wire Used Circular Mills			= 6530
Distance to End of Circuit:			= 468
Multiplier			= 21.6
Voltage			= 24
Multiplier			= 4.166
Percentage Voltage Drop			= 3.405

Voltage Drop Calculations Rosemead Adult School FAPS-1 Signal Circuit S6			
Description	Quantity	Alarm (Amps)	Total Alarm (Amps)
SR/SCW 15cd Strobe	1	x 0.066000	0.066000
SR/SCW 30cd Strobe	1	x 0.094000	0.094000
SR/SCW 75cd Strobe	2	x 0.158000	0.316000
SR/SCW 110cd Strobe	0	x 0.202000	0.000000
SPSR/SPSCW 15cd Spkr St.	2	x 0.066000	0.132000
SPSR/SPSCW 30cd Spkr St.	1	x 0.094000	0.094000
SPSR/SPSCW 75cd Spkr St.	3	x 0.158000	0.474000
SPSR/SPSCW 110cd Spkr St.			

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APPENDIX

Appendix 01	GEOTECHNICAL INVESTIGATION – Rosemead Adult Center Expansion, dated November 17, 2022 ADD 01
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SECTION 01 33 00 - SUBMITTAL PROCEDURES ADD 01

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Submittal schedule requirements.
2. Administrative and procedural requirements for submittals.

B. Related Requirements:

1. Section 01 29 00 "Payment Procedures" for submitting Applications for Payment and the schedule of values.
2. Section 01 31 00 "Project Management and Coordination" for submitting coordination drawings and subcontract list and for requirements for web-based Project software.
3. Section 01 32 00 "Construction Progress Documentation" for submitting schedules and reports, including Contractor's construction schedule.
4. Section 01 40 00 "Quality Requirements" for submitting test and inspection reports, and schedule of tests and inspections.
5. Section 01 77 00 "Closeout Procedures" for submitting closeout submittals and maintenance material submittals.
6. Section 01 78 23 "Operation and Maintenance Data" for submitting operation and maintenance manuals.
7. Section 01 78 39 "Project Record Documents" for submitting record Drawings, record Specifications, and record Product Data.
8. Section 01 79 00 "Demonstration and Training" for submitting video recordings of demonstration of equipment and training of Owner's personnel.

1.3 DEFINITIONS

- A. Action Submittals: Written and graphic information and physical samples that require Architect's and Construction Manager's responsive action. Action submittals are those submittals indicated in individual Specification Sections as "action submittals."
- B. Informational Submittals: Written and graphic information and physical samples that do not require Architect's and Construction Manager's responsive action. Submittals may be rejected for not complying with requirements. Informational submittals are those submittals indicated in individual Specification Sections as "informational submittals."

1.4 SUBMITTAL SCHEDULE

- A. Submittal Schedule: Submit, as an action submittal, a list of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making corrections or revisions to submittals noted by Architect and Construction Manager and additional time for handling and reviewing submittals required by those corrections.
1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
 2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
 3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
 - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
 4. Format: Arrange the following information in a tabular format:
 - a. Scheduled date for first submittal.
 - b. Specification Section number and title.
 - c. Submittal Category: Action; informational.
 - d. Name of subcontractor.
 - e. Description of the Work covered.
 - f. Scheduled date for Architect's and Construction Manager's final release or approval.
 - g. Scheduled dates for purchasing.
 - h. Scheduled date of fabrication.
 - i. Scheduled dates for installation.
 - j. Activity or event number.

1.5 SUBMITTAL FORMATS

- A. Submittal Information: Include the following information in each submittal:
1. Project name.
 2. Date.
 3. Name of Architect.
 4. Name of Construction Manager.
 5. Name of Contractor.
 6. Name of firm or entity that prepared submittal.
 7. Names of subcontractor, manufacturer, and supplier.
 8. Unique submittal number, including revision identifier. Include Specification Section number with sequential alphanumeric identifier; and alphanumeric suffix for resubmittals.
 9. Category and type of submittal.
 10. Submittal purpose and description.
 11. Number and title of Specification Section, with paragraph number and generic name for each of multiple items.
 12. Drawing number and detail references, as appropriate.
 13. Indication of full or partial submittal.

14. Location(s) where product is to be installed, as appropriate.
15. Other necessary identification.
16. Remarks.
17. Signature of transmitter.

- B. Options: Identify options requiring selection by Architect.
- C. Deviations and Additional Information: On each submittal, clearly indicate deviations from requirements in the Contract Documents, including minor variations and limitations; include relevant additional information and revisions, other than those requested by Architect and Construction Manager on previous submittals. Indicate by highlighting on each submittal or noting on attached separate sheet.
- D. PDF Submittals: Prepare submittals as PDF package, incorporating complete information into each PDF file. Name PDF file with submittal number.
- E. Submittals for Web-Based Project Software: Prepare submittals as PDF files, or other format indicated by Project software website.

1.6 SUBMITTAL PROCEDURES

- A. Prepare and submit submittals required by individual Specification Sections. Types of submittals are indicated in individual Specification Sections.
 1. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
- B. Coordination: Coordinate preparation and processing of submittals with performance of construction activities.
 1. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
 2. Submit all submittal items required for each Specification Section concurrently unless partial submittals for portions of the Work are indicated on approved submittal schedule.
 3. Submit action submittals and informational submittals required by the same Specification Section as separate packages under separate transmittals.
 4. Coordinate transmittal of submittals for related parts of the Work specified in different Sections so processing will not be delayed because of need to review submittals concurrently for coordination.
 - a. Architect and Construction Manager reserve the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
- C. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Construction Manager's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 1. Initial Review: Allow 15 days for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Construction Manager will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 3. Resubmittal Review: Allow 15 days for review of each resubmittal.
 4. Sequential Review: Where sequential review of submittals by Architect's consultants, Owner, or other parties is indicated, allow 21 days for initial review of each submittal.
 5. Concurrent Consultant Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect and to Architect's consultants, allow 15 days for review of each submittal. Submittal will be returned to Construction Manager, through Architect, before being returned to Contractor.
 - a. Submit one copy of submittal to concurrent reviewer in addition to specified number of copies to Architect and Construction Manager.
- D. Resubmittals: Make resubmittals in same form and number of copies as initial submittal.
1. Note date and content of previous submittal.
 2. Note date and content of revision in label or title block and clearly indicate extent of revision.
 3. Resubmit submittals until they are marked with approval notation from Architect's and Construction Manager's action stamp.
- E. Distribution: Furnish copies of final submittals to manufacturers, subcontractors, suppliers, fabricators, installers, authorities having jurisdiction, and others as necessary for performance of construction activities. Show distribution on transmittal forms.
- F. Use for Construction: Retain complete copies of submittals on Project site. Use only final action submittals that are marked with approval notation from Architect's and Construction Manager's action stamp.

1.7 SUBMITTAL REQUIREMENTS

- A. Product Data: Collect information into a single submittal for each element of construction and type of product or equipment.
1. If information must be specially prepared for submittal because standard published data are unsuitable for use, submit as Shop Drawings, not as Product Data.
 2. Mark each copy of each submittal to show which products and options are applicable.
 3. Include the following information, as applicable:
 - a. Manufacturer's catalog cuts.
 - b. Manufacturer's product specifications.
 - c. Standard color charts.
 - d. Statement of compliance with specified referenced standards.
 - e. Testing by recognized testing agency.
 - f. Application of testing agency labels and seals.
 - g. Notation of coordination requirements.
 - h. Availability and delivery time information.
 4. For equipment, include the following in addition to the above, as applicable:
 - a. Wiring diagrams that show factory-installed wiring.
 - b. Printed performance curves.

- c. Operational range diagrams.
 - d. Clearances required to other construction, if not indicated on accompanying Shop Drawings.
 5. Submit Product Data before Shop Drawings, and before or concurrent with Samples.
- B. Shop Drawings: Prepare Project-specific information, drawn accurately to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data.
 1. Preparation: Fully illustrate requirements in the Contract Documents. Include the following information, as applicable:
 - a. Identification of products.
 - b. Schedules.
 - c. Compliance with specified standards.
 - d. Notation of coordination requirements.
 - e. Notation of dimensions established by field measurement.
 - f. Relationship and attachment to adjoining construction clearly indicated.
 - g. Seal and signature of professional engineer if specified.
- C. Samples: Submit Samples for review of kind, color, pattern, and texture for a check of these characteristics with other materials.
 1. Transmit Samples that contain multiple, related components such as accessories together in one submittal package.
 2. Identification: Permanently attach label on unexposed side of Samples that includes the following:
 - a. Project name and submittal number.
 - b. Generic description of Sample.
 - c. Product name and name of manufacturer.
 - d. Sample source.
 - e. Number and title of applicable Specification Section.
 - f. Specification paragraph number and generic name of each item.
 3. Web-Based Project Software: Prepare submittals in PDF form, and upload to web-based Project software website. Enter required data in web-based software site to fully identify submittal.
 4. Disposition: Maintain sets of approved Samples at Project site, available for quality-control comparisons throughout the course of construction activity. Sample sets may be used to determine final acceptance of construction associated with each set.
 - a. Samples that may be incorporated into the Work are indicated in individual Specification Sections. Such Samples must be in an undamaged condition at time of use.
 - b. Samples not incorporated into the Work, or otherwise designated as Owner's property, are the property of Contractor.
 5. Samples for Initial Selection: Submit manufacturer's color charts consisting of units or sections of units showing the full range of colors, textures, and patterns available.
 - a. Number of Samples: Submit one full set(s) of available choices where color, pattern, texture, or similar characteristics are required to be selected from manufacturer's product line. Architect, through Construction Manager, will return submittal with options selected.

6. Samples for Verification: Submit full-size units or Samples of size indicated, prepared from same material to be used for the Work, cured and finished in manner specified, and physically identical with material or product proposed for use, and that show full range of color and texture variations expected. Samples include, but are not limited to, the following: partial sections of manufactured or fabricated components; small cuts or containers of materials; complete units of repetitively used materials; swatches showing color, texture, and pattern; color range sets; and components used for independent testing and inspection.
 - a. Number of Samples: Submit three sets of Samples. Architect and Construction Manager will retain two Sample sets; remainder will be returned.
 - 1) Submit a single Sample where assembly details, workmanship, fabrication techniques, connections, operation, and other similar characteristics are to be demonstrated.
 - 2) If variation in color, pattern, texture, or other characteristic is inherent in material or product represented by a Sample, submit at least three sets of paired units that show approximate limits of variations.
- D. Product Schedule: As required in individual Specification Sections, prepare a written summary indicating types of products required for the Work and their intended location. Include the following information in tabular form:
 1. Type of product. Include unique identifier for each product indicated in the Contract Documents or assigned by Contractor if none is indicated.
 2. Manufacturer and product name, and model number if applicable.
 3. Number and name of room or space.
 4. Location within room or space.
- E. Qualification Data: Prepare written information that demonstrates capabilities and experience of firm or person. Include lists of completed projects with project names and addresses, contact information of architects and owners, and other information specified.
- F. Design Data: Prepare and submit written and graphic information indicating compliance with indicated performance and design criteria in individual Specification Sections. Include list of assumptions and summary of loads. Include load diagrams if applicable. Provide name and version of software, if any, used for calculations. Number each page of submittal.
- G. Certificates:
 1. Certificates and Certifications Submittals: Submit a statement that includes signature of entity responsible for preparing certification. Certificates and certifications shall be signed by an officer or other individual authorized to sign documents on behalf of that entity. Provide a notarized signature where indicated.
 2. Installer Certificates: Submit written statements on manufacturer's letterhead certifying that Installer complies with requirements in the Contract Documents and, where required, is authorized by manufacturer for this specific Project.
 3. Manufacturer Certificates: Submit written statements on manufacturer's letterhead certifying that manufacturer complies with requirements in the Contract Documents. Include evidence of manufacturing experience where required.
 4. Material Certificates: Submit written statements on manufacturer's letterhead certifying that material complies with requirements in the Contract Documents.
 5. Product Certificates: Submit written statements on manufacturer's letterhead certifying that product complies with requirements in the Contract Documents.

6. Welding Certificates: Prepare written certification that welding procedures and personnel comply with requirements in the Contract Documents. Submit record of Welding Procedure Specification and Procedure Qualification Record on AWS forms. Include names of firms and personnel certified.

H. Test and Research Reports:

1. Compatibility Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of compatibility tests performed before installation of product. Include written recommendations for primers and substrate preparation needed for adhesion.
2. Field Test Reports: Submit written reports indicating and interpreting results of field tests performed either during installation of product or after product is installed in its final location, for compliance with requirements in the Contract Documents.
3. Material Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting test results of material for compliance with requirements in the Contract Documents.
4. Preconstruction Test Reports: Submit reports written by a qualified testing agency, on testing agency's standard form, indicating and interpreting results of tests performed before installation of product, for compliance with performance requirements in the Contract Documents.
5. Product Test Reports: Submit written reports indicating that current product produced by manufacturer complies with requirements in the Contract Documents. Base reports on evaluation of tests performed by manufacturer and witnessed by a qualified testing agency, or on comprehensive tests performed by a qualified testing agency.
6. Research Reports: Submit written evidence, from a model code organization acceptable to authorities having jurisdiction, that product complies with building code in effect for Project. Include the following information:
 - a. Name of evaluation organization.
 - b. Date of evaluation.
 - c. Time period when report is in effect.
 - d. Product and manufacturers' names.
 - e. Description of product.
 - f. Test procedures and results.
 - g. Limitations of use.

1.8 DEFERRED APPROVALS

- A. Where shown on drawings and as specified in individual sections, submit documentation as required to obtain DSA approval of all deferred work.
- B. Architect will submit documents to DSA reviewing authority for review and comment. Architect will return documents to Contractor following DSA review.
- C. Where required, Contractor shall make all changes or corrections required by DSA reviewing authority. Contractor shall pay all fees and provide all coordination and management necessary to obtain approval, including all meeting, correspondence and communications. Once corrections are made, Contractor shall return to Architect for resubmittal.
- D. After receiving DSA final approval, Architect will furnish Contractor one complete set of DSA approved documents for Architects use in construction.

- E. Submit deferred approval documentation under the provisions of section 01 33 00 and as specified in the respective Sections.
1. Comply with the requirements of Section 4-3 17(g), Chapter 7, Part 1, title 24, CCR. All deferred approvals shall be stamped and sealed by the responsible engineer, licensed as specified. Architect will review and mark with notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the project.
 2. Submit documentation prepared under the supervision of a California licensed Engineer in the applicable discipline. All structural deferred approvals shall be prepared by California licensed Structural Engineer.
 3. Provide Deferred Approval Number and DSA Project Number and File number on the cover of each submittal.
 4. Provide document format with sufficient space for Architect and DSA agency review stamps.
 5. Clearly identify all deviations and proposed alternates to materials and systems shown on drawings and specified in the Project Manual.
 6. Drawings: Produce drawings on substantial bond paper using media of archive quality. Indicate dimensional locations of the various parts of the construction, sizes and type of members, connections, attachments, and openings.
 7. Structural Calculations: Produce calculations in booklet form, 8-112 x 1 1 inch size, minimum of 3 wet signed and sealed copies.
 8. Provide sufficient information with respect to design criteria, analysis methodology and material capacity to adequately evaluate documentation for compliance with applicable sections Title 24, CCR.
 9. Where required by Section 4-336, provide verified reports for work done under deferred approvals.

1.9 DELEGATED-DESIGN SERVICES

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
1. If criteria indicated are insufficient to perform services or certification required, submit a written request for additional information to Architect.
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF file of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

1.10 CONTRACTOR'S REVIEW

- A. Action Submittals and Informational Submittals: Review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. Mark with approval stamp before submitting to Architect and Construction Manager.

- B. Contractor's Approval: Indicate Contractor's approval for each submittal with indication in web-based Project software. Include name of reviewer, date of Contractor's approval, and statement certifying that submittal has been reviewed, checked, and approved for compliance with the Contract Documents.
 - 1. Architect and Construction Manager will not review submittals received from Contractor that do not have Contractor's review and approval.

1.11 ARCHITECT'S AND CONSTRUCTION MANAGER'S REVIEW

- A. Action Submittals: Architect and Construction Manager will review each submittal, indicate corrections or revisions required, and return it.
 - 1. PDF Submittals: Architect and Construction Manager will indicate, via markup on each submittal, the appropriate action.
 - 2. Submittals by Web-Based Project Software: Architect and Construction Manager will indicate, on Project software website, the appropriate action.
- B. Informational Submittals: Architect and Construction Manager will review each submittal and will not return it, or will return it if it does not comply with requirements. Architect and Construction Manager will forward each submittal to appropriate party.
- C. Partial submittals prepared for a portion of the Work will be reviewed when use of partial submittals has received prior approval from Architect and Construction Manager.
- D. Incomplete submittals are unacceptable, will be considered nonresponsive, and will be returned for resubmittal without review.
- E. Architect and Construction Manager will discard submittals received from sources other than Contractor.
- F. Submittals not required by the Contract Documents will be returned by Architect without action.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 01 33 00

SECTION 01 50 00 - TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Related Requirements:
 - 1. Section 01 10 00 "Summary" for work restrictions and limitations on utility interruptions.

1.3 USE CHARGES

- A. General: Installation and removal of and use charges for temporary facilities shall be included in the Contract Sum unless otherwise indicated. Allow other entities engaged in the Project to use temporary services and facilities without cost, including, but not limited to, Architect, testing agencies, and authorities having jurisdiction.

1.4 INFORMATIONAL SUBMITTALS

- A. Site Utilization Plan: Show temporary facilities, temporary utility lines and connections, staging areas, construction site entrances, vehicle circulation, and parking areas for construction personnel.
- B. Project Identification and Temporary Signs: Show fabrication and installation details, including plans, elevations, details, layouts, typestyles, graphic elements, and message content.
- C. Erosion and Sedimentation-Control Plan: Show compliance with requirements of EPA Construction General permit or authorities having jurisdiction, whichever is more stringent.
- D. Fire-Safety Program: Show compliance with requirements of NFPA 241 and authorities having jurisdiction. Indicate Contractor personnel responsible for management of fire-prevention program.
- E. Moisture- and Mold-Protection Plan: Describe procedures and controls for protecting materials and construction from water absorption and damage and mold.
- F. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation. Include the following:

1. Locations of dust-control partitions at each phase of work.
2. HVAC system isolation schematic drawing.
3. Location of proposed air-filtration system discharge.
4. Waste-handling procedures.
5. Other dust-control measures.

1.5 QUALITY ASSURANCE

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with CEC.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Engage Installer of each permanent service to assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Chain-Link Fencing: Minimum 2-inch, 0.148-inch-thick, galvanized-steel, chain-link fabric fencing; minimum 6 feet high with galvanized-steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top rails.

2.2 TEMPORARY FACILITIES

- A. Field Offices, General: Prefabricated or mobile units with serviceable finishes, temperature controls, and foundations adequate for normal loading.
- B. Common-Use Field Office: Of enough size to accommodate needs of Owner, Architect, Construction Manager, and construction personnel office activities and to accommodate Project meetings specified in other Division 01 Sections. Keep office clean and orderly. Furnish and equip offices as follows:
 1. Furniture required for Project-site documents including file cabinets, plan tables, plan racks, and bookcases.
 2. Conference room of enough size to accommodate meetings of 10 individuals. Provide electrical power service and 120-V ac duplex receptacles, with no fewer than one receptacle on each wall. Furnish room with conference table, chairs, and 4-foot-square tack and marker boards.
 3. Drinking water and private toilet.
 4. Heating and cooling equipment necessary to maintain a uniform indoor temperature of 68 to 72 deg F.
 5. Lighting fixtures capable of maintaining average illumination of 20 fc at desk height.

- C. Storage and Fabrication Sheds: Provide sheds sized, furnished, and equipped to accommodate materials and equipment for construction operations.
 - 1. Store combustible materials apart from building.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

2.4 PROJECT IDENTIFICATION SIGN

- A. CONTRACTOR s shall furnish and install one painted sign, 32 square foot area, bottom 6 feet above ground with six-inch square posts and 1 inch exterior grade plywood, bolted to posts.
 - 1. Content:
 - a. Project title and name of District as indicated on Contract Documents.
 - b. Names and titles of authorities.
 - c. Names and titles of Architect and Consultants.
 - d. Name of Construction Manager.
 - e. Name of Prime Contractor.
 - f. Image of Project as approved by Owner and Architect.
 - 2. No other signs shall be displayed without approval of Owner's Representative. At CONTRACTOR'S expense and without limitation remove and/or relocate Project signage and related facilities as rapidly as required in order to provide for progress of the Work.
 - 3. CONTRACTOR shall remove Project signage at Substantial Completion of the Work.
 - 4. Until Substantial Completion of the Work, CONTRACTOR shall employ appropriate means to remove all graffiti from buildings, equipment, fences and all other temporary and/or permanent improvements on the Project site within twenty-four (24) hours from the date of report or forty-eight (48) hours of each occurrence.
- B. Project Informational Signs:
 - 1. Painted informational signs of same colors and lettering as Project Identification sign, or standard products; size lettering for legibility at 100 feet distance.
 - 2. Provide sign at each field office, storage shed, and directional signs to direct traffic into and within site. Relocate as Work progress requires.
 - 3. No other signs are allowed without District permission except those required by law.
- C. Design sign and structure to withstand 60 miles per hour wind velocity.

PART 3 - EXECUTION

3.1 TEMPORARY FACILITIES, GENERAL

- A. Conservation: Coordinate construction and use of temporary facilities with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1. Salvage materials and equipment involved in performance of, but not actually incorporated into, the Work. See other Sections for disposition of salvaged materials that are designated as Owner's property.

3.2 INSTALLATION, GENERAL

- A. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.
 1. Locate facilities to limit site disturbance as specified in Section 011000 "Summary."
- B. Provide each facility ready for use when needed to avoid delay. Do not remove until facilities are no longer needed or are replaced by authorized use of completed permanent facilities.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- B. Temporary Erosion and Sedimentation Control: Provide measures to prevent soil erosion and discharge of soil-bearing water runoff and airborne dust to undisturbed areas and to adjacent properties and walkways, according to requirements of EPA Construction General Permit or authorities having jurisdiction, whichever is more stringent.
 1. Verify that flows of water redirected from construction areas or generated by construction activity do not enter or cross tree- or plant-protection zones.
 2. Inspect, repair, and maintain erosion- and sedimentation-control measures during construction until permanent vegetation has been established.
 3. Clean, repair, and restore adjoining properties and roads affected by erosion and sedimentation from Project site during Project.
 4. Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.
- C. Tree and Plant Protection: Install temporary fencing located as indicated or outside the drip line of trees to protect vegetation from damage from construction operations. Protect tree root systems from damage, flooding, and erosion.
- D. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people from easily entering site except by entrance gates.
 1. Extent of Fence: As required to enclose entire Project site or portion determined enough to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel. Furnish one set of keys to Owner.
- E. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- F. Temporary Egress: Maintain temporary egress from existing occupied facilities as indicated and as required by authorities having jurisdiction.

3.4 MOISTURE AND MOLD CONTROL

- A. Contractor's Moisture-Protection Plan: Describe delivery, handling, storage, installation, and protection provisions for materials subject to water absorption or water damage.
1. Indicate procedures for discarding water-damaged materials, protocols for mitigating water intrusion into completed Work, and replacing water-damaged Work.
 2. Indicate sequencing of work that requires water, such as sprayed fire-resistive materials, plastering, and terrazzo grinding, and describe plans for dealing with water from these operations. Show procedures for verifying that wet construction has dried sufficiently to permit installation of finish materials.
 3. Indicate methods to be used to avoid trapping water in finished work.
- B. Exposed Construction Period: Before installation of weather barriers, when materials are subject to wetting and exposure and to airborne mold spores, protect as follows:
1. Protect porous materials from water damage.
 2. Protect stored and installed material from flowing or standing water.
 3. Keep porous and organic materials from coming into prolonged contact with concrete.
 4. Remove standing water from decks.
 5. Keep deck openings covered or dammed.
- C. Partially Enclosed Construction Period: After installation of weather barriers but before full enclosure and conditioning of building, when installed materials are still subject to infiltration of moisture and ambient mold spores, protect as follows:
1. Do not load or install drywall or other porous materials or components, or items with high organic content, into partially enclosed building.
 2. Keep interior spaces reasonably clean and protected from water damage.
 3. Periodically collect and remove waste containing cellulose or other organic matter.
 4. Discard or replace water-damaged material.
 5. Do not install material that is wet.
 6. Discard and replace stored or installed material that begins to grow mold.
 7. Perform work in a sequence that allows wet materials adequate time to dry before enclosing the material in gypsum board or other interior finishes.
- D. Controlled Construction Period: After completing and sealing of the building enclosure but prior to the full operation of permanent HVAC systems, maintain as follows:
1. Control moisture and humidity inside building by maintaining effective dry-in conditions.
 2. Use temporary or permanent HVAC system to control humidity within ranges specified for installed and stored materials.
 3. Comply with manufacturer's written instructions for temperature, relative humidity, and exposure to water limits.
 - a. Hygroscopic materials that may support mold growth, including wood and gypsum-based products, that become wet during construction and remain wet for 48 hours are considered defective and require replacing.
 - b. Measure moisture content of materials that have been exposed to moisture during construction operations or after installation. Record readings beginning at time of exposure and continuing daily for 48 hours. Identify materials containing moisture levels higher than allowed. Report findings in writing to Architect.
 - c. Remove and replace materials that cannot be completely restored to their manufactured moisture level within 48 hours.

3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- C. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- D. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, repair, renovate, and clean permanent facilities used during construction period. Comply with final cleaning requirements specified in Section 017700 "Closeout Procedures."

END OF SECTION 01 50 00

SECTION 04 21 50 – THIN BRICK PANEL SYSTEMS ADD 01

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Brick-it DMG (Standard) Panel System.
- B. Brick-it MCS (Moisture Drainage) Panel System.
- C. Brick-it CI (Continuous Insulation) Panel System.
- D. General & Supplementary Conditions & Requirements.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 04200 - Masonry Units.
- C. Section 05120 - Structural Steel.
- D. Section 05400 - Cold-Formed Metal Framing.
- E. Section 06100 - Rough Carpentry.
- F. Section 06160 - Sheathing.
- G. Section 07210 - Building Insulation.
- H. Section 07620 - Sheet Metal Flashing and Trim.
- I. Section 07900 - Joint Sealants.

1.3 REFERENCES

ASTM International (ASTM):

- 1. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale); severe weather grade kiln-fired brick.
- 2. ASTM C 270 - Standard Specification for Mortar for Unit Masonry; specially formulated mortar mix.
- 3. ASTM C 513 - Standard Test Method for Obtaining and Testing Specimens of Hardened Lightweight Insulating Concrete for Compressive Strength; for bricks, minimum compression strength of 1000 PSI.
- 4. ASTM C 577 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing.
- 5. ASTM C 666 - Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing, brick, pass.
- 6. ASTM C 1088 - Standard Test Method for Thin Veneer Brick Units Made from Clay or Shale; severe weather grade kiln-fired brick.
- 7. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- 8. ASTM E 754 - Standard Test Method for Pullout Resistance of Ties and anchors Embedded in Masonry Mortar Joints.

1.4 SUBMITTALS

- A. Submit under provisions of Section 013300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Manufacturer's installation instructions, showing required preparation and installation procedures.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

4. Cleaning and maintenance instructions.
 5. Manufacturer's Warranty
- C. Shop Drawings: Provide drawings prepared by the applicator/contractor showing the wall layout, typical details, connections, expansion joints, plus the installation sequence shall be submitted shall be submitted to the architect upon request. Shop drawings shall include the following:
1. Submit elevations, sections and details of assembly components; indicate locations, configurations, large scale plans.
 2. Show sequence of installation, attachment details, and weather sealing.
 3. Show location of members, other items of work and related work of other Sections to be coordinated with work of this section.
 4. Submit detail drawings depicting proper installation and flashing techniques. Coordinate locations with those found on the Contract Drawings.
- D. Quality Assurance Submittals:
1. Copies of test reports by independent laboratories verifying the performance of the system shall be submitted to the Architect upon request.
 2. The certified applicator/contractor shall submit a copy of his current ' Certificate of Trained Applicator' from Brick-It to the architect prior to the application of the Brick-It Metal Grid Panel System.
- E. Verification Samples: For each finish product specified, two samples, minimum size 1 inches (305 mm) by 12 inches (305 mm), representing actual products, styles, colors, patterns, and textures.
- F. Warranty: Copy of manufacturer's standard warranty.

1.5 QUALITY ASSURANCE

- A. Single Source Requirements: Provide primary and secondary components required for installation of thin brick systems from a single source.
- B. Manufacturer Qualifications: Minimum 20 years' experience manufacturing similar products.
- C. Installer Qualifications:
1. Received instruction by manufacturer's personnel in the installation of the Brick-It System and received a ' Certificate of Trained Applicator' from Brick-It.
 2. Five-Years experienced and competent in the installation of brick type materials.
 3. If requested, submit a list of recently completed projects using similar materials.
- D. Performance Testing:
1. TAS 201 - Large Missile Impact Test
 2. TAS 202 - Uniform Static Pressure Test
 3. TAS 203 - Cyclic Wind Pressure Load Test
 4. E84 - Flame Smoke Test
 5. E754 - Shear Pull Test
 6. NFPA 285 - All combustible components being required & used in part or as part of the projects composite wall assembly (such as; insulation, weather resistive barrier, sheathing & adhesives) required to meet the NFPA 285 requirements unless otherwise exempt (see Part 2 "Products" 2.2 H. Insulation Board & 2.2 I. WRB).
- E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.

1. The mock-up shall demonstrate the proposed range of color, texture, and workmanship to be expected in completed work.
2. Locate mock-up on site in location as directed by Architect. Clean the sample panel installation using the same materials and tools as planned for the final construction.
3. Obtain Architect's acceptance of mock-up before start of work.
4. Do not proceed with remaining work until workmanship, color, style, pattern, and texture are approved by Architect.
5. Modify mock-up area as required to produce acceptable work.
6. Remove mock-up at the completion of the work.
7. Mock-up may be incorporated into the work.

F. Conduct a pre-installation meeting to verify all products, application procedures, site conditions and warranty terms. Conduct in accordance with Section 013100.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Materials shall be delivered to the location in unopened factory containers. Upon arrival, materials shall be inspected for damage and manufacturer informed of any discrepancies. Deficient materials shall not be used.
- B. Materials shall be stored in a protected location and safeguarded from damage.

1.7 PROJECT CONDITIONS

- A. The ambient air temperature shall remain at 36 degrees F (2.2 degrees C) or greater for at least 72 hours after the application of mortar.
- B. Flashing and sealants shall be installed immediately after completion of the system. For outdoor application, provide temporary protection as needed from precipitation, wind, airborne dust and debris, and similar items.
- C. Provide protection of surrounding areas and adjacent surfaces from application of brick panel systems.

1.8 COORDINATION / SCHEDULING

- A. The work in this section requires close coordination with related specifications sections and trades. Proper labor and equipment shall be employed to ensure a continuous operation satisfactory to the architect.
- B. Coordinate installation of brick panel systems with related wall elements, including, windows, doors, louvers, ducts, signage, flashings, sealants, weather resistive barrier, sealant tapes and membranes, supporting wall framing and sheathing, surface mounted objects, and similar items.
 1. Coordinate with installation of flashing, coping and sealants to ensure that materials are installed in accordance with manufacturer's instructions.
 2. Coordinate with installation of surface-mounted objects to ensure that watertight seal is provided.

1.9 WARRANTY

- A. Manufacturer's Warranty: Standard 20-year limited warranty, which include all system components manufactured &/or supplied by Brick-it.

PART: 2 PRODUCTS

2.1 MANUFACTURERS

- A. Brick-it located at: 17 Central Avenue, Hauppauge; Sales & Service: 631-244-3993, Technical 631-591-9222; Email: Info@brickit.com. Web: www.brickit.com or approved equal.

2.2 BRICK PANEL SYSTEMS

- A. Brick Panel Systems: System for aligning and locking thin brick to a substrate that does not depend on adhesive for its performance.
1. System Type: Brick-It (G60) Designer Metal Grid System.
 2. System Type: Brick-It (G90) Moisture Control Panel System.
 3. System Type: Brick-It (G90) Continuous Insulation Panel System.
 4. Wall Fabrication: Brick panel system shall be factory assembled and attached to prefabricated metal stud curtain wall system as indicated on the Drawings and in the Contract Documents.
- B. Metal Grid System Panels: Galvanized steel metal components formed to align brick courses and to support and ensure a mechanical bond of each brick in place.
1. Panels shall be chem-dry treated and be a minimum 0.0149-inch (0.36 mm) thickness with continuous carrying brick ledges (every course of brick) with minimum thickness per ledge: 0.028 inch (0.71 mm).
 2. Panels shall have a continuous interlock every third course, minimum thickness, 0.042 inch (1.07 mm).
 3. Panels shall be able to fold out corners, door and window sections, and have a continuous linear array of holes to receive adhesive and have a continuous array of mortar receptors to lock in mortar mix.
 4. Panels shall be designed to carry brick load evenly on entire wall surface without the use of footings, starter angles or special corner sections.
 5. Size: 48 inches by x (8.0", 8.25", 9.0", 9.60" or 12" as specified).
 6. Size: 96 inches by x (8.0", 8.25", 9.0", 9.60" or 12" as specified).
 7. Size: Spacing for Brick Veneer (2-1/4", 2-1/2", 2-3/4", 3-5/8", & 7-5/8" as specified).
 8. Size: Custom size as indicated on the Drawings.
 9. Size: Custom size as selected by Architect.
- C. Brick: Kiln-fired brick 1/2 to 1 inch (13 mm to 25 mm) nominal thickness, meeting ASTM C 216 (for cut Face Brick) &/or ASTM C 1088 (for extruded Thin Brick), Grade SW, Type TBS, TBX, FBS, FBX, &/or PCI requirements.
1. Brick Color: To be chosen and approved by Architect from www.brickit.com library &/or approved equal.
- D. Mortar: Brick-it Type "S" premixed mortar supplied by to meet ASTM C 270 or approved equal.
1. Mortar: Standard grey or white mortar.
 2. Mortar: Colored mortar selected by the Architect from Brick-it's full range of standard available mortar color options (custom colors are available upon request).
 3. Mortar Color: As indicated on the Drawings.
- E. Fasteners: Brick-it non-corrosive ribbed nails, screws or staples, designed for applicable substrate or approved equal.
- F. Adhesives: Brick-it high solid, solvent based silicone or construction adhesive that remains flexi-

- ble and unaffected by freeze-thaw cycles (cut brick requires the use of Brick-it silicone adhesive only).
- G. Water: Shall be clean, potable, and free of all foreign matter.
 - H. Insulation Board: Green Guard, Owens Corning or Dow minimum 25 PSI, 2" to maximum 6" XPS or approved equal. For Buildings which need to meet NFPA 285 requirements, insulation must be tested in accordance with NFPA 285 guidelines & meet ASTM E1354 requirements such as Carlisle Coatings and Waterproofing R2+Base Max 3" Polyiso, with FR 5/8" Plywood or approved equal.
 - I. Weather Resistive Barrier: Shall be manufactured by Carlisle, Kingspan, Tyvek or approved equal. For projects which need to meet NFPA 285, WRB must be tested in accordance with NFPA 285 guidelines & meet ASTM E1354 requirements, such as Carlisle Coatings and Waterproofing Fire-Resist Barritech VP/VP LT or approved equal.
 - J. Rain Screen &/or Drainage Mat: Green Guard DC14, MTI Sure Cavity 3mm or 5mm.
 - K. Cleaner: Prosoco, Deidrich Technologies or approved equal approved for use by Thin Brick Manufacturer.
 - L. Masonry Sealer: Manufacturer's recommended sealer, applied to brick and mortar joints.
Sealant Systems: Acceptable to Brick-It, color as selected by Architect. Joint design and surface preparation shall be based on sealant manufacturer's recommendation and project conditions.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Prior to installation, examine substrate for conditions including soundness, tightness of connections, crumbling or looseness of surfaces, and projections. Verify substrate is acceptable to authorities having jurisdiction prior to installation of the work of this Section.
- B. Report deviations from the requirements of project specifications or other conditions that might adversely affect the installation to the Contractor. Do not start work until deviations are corrected.

3.2 SUBSTRATE PREPARATION

- A. Repair damaged or cracked surfaces. Prepare substrate to be flat, within 1/8 inch (3.2 mm) within any 4 foot (1.2 m) square area.
- B. Remove surface contaminants on concrete and concrete masonry surfaces, such as form release oils, dust, paint, waterproofing, and similar items. If required by manufacturer, apply conditioner to substrate by sprayer or roller to chalking or excessively absorptive surfaces.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's written instructions as applicable to each type of substrate required. Install bricks to specified pattern and mortar.
- B. Metal Grid: Apply to substrate surface in the true level rows, interlock at every panel. Install such that panel does not extend 1/4 inch (6 mm) below the face of the brick.
 - 1. Offset vertical grid joints and leave 1/4 inch (6 mm) between joints. Install for brick to extend past grid by 1/2 inch (13 mm) at grid ends.
 - 2. Fasten grid system to a sound substrate or wall with a non-corrosive fastener; minimum penetration of substrate is 1 inch (25 mm). Concrete and masonry walls require fasteners and adhesive on rear of metal grid.
 - 3. Install fasteners on an average of 3 per square foot (0.1 square meters) and at top and bottom courses vertically and a maximum of 16 inches (406 mm) on center horizontally.

C. Adhesive:

1. Brick shall be spaced to ensure that the head joints do not exceed 5/8 inch (16 mm) or fall below 1/4 inch (6.5 mm). The optimum head joint size is 7/16 inch (11 mm).
2. Use adhesive supplied by manufacturer. For exterior installations, apply 3/8 inch (9.5 mm) vertical dabs. For interior applications, apply 3/8-inch (9.5 mm) beads over adhesive holes as shown in manufacturer's literature.
3. Do not use excessive adhesive as this will cause bricks to tilt away from grid. Check periodically and repress to grid.
4. Allow adhesive 24 hours to dry before mortaring.

D. Brick Placement:

1. Applications Requiring Corners:

- a. Start with corner brick, or a corner brick at each corner if there are corners at both ends.
- b. Install bricks adjusting vertical joints for fit or cut brick as required.

2. Applications that do not required corners:

- a. Install bricks in direction of arrows as shown in manufacturer's literature.
- b. Place adhesive on two rows of grid in the middle of wall.
- c. Adjust vertical joints to fit area, 3/8 inch to 1/2 inch (9.5 mm to 13 mm), to fit wall space.
- d. Cut end bricks as needed. Install bricks horizontally than vertically.
- e. Draw a plumb vertical line every 48 inches (1219 mm) to help maintain spacing.

E. Mortar:

1. Allow adhesive to fully cure before mortaring joints.
2. Use clean, cold water to mix mortar. Flush hoses regularly; especially during warm weather.
3. Slightly dampen bricks before mortaring; especially during hot weather.
4. Mix properly and test a sample area.
5. Do not apply mortar to brick panel system when the ambient outdoor temperature is below 36 degrees F (2.2 degrees C) unless temporary protection and heat can be provided for a minimum of 36 hours after installation.
6. Apply mortar into horizontal joints first, then vertical joints. Over fill joints with enough mortar to avoid leaving any voids. When mortar attains a firm consistency joints shall be tooled.
7. Use the joint tool supplied with the mortar kit to strike joints. Press the tool against the joint and strike joint to fill and seal mortar to edges of brick. Strike the vertical joints first than horizontal joints. Provide concave finish. Fill voids.

F. Sealer: Apply only after mortar joints are thoroughly cured. Allow a minimum of 2 weeks prior to application.

1. Seal exterior applications in accordance with manufacturer's recommendations.
2. Seal interior applications in accordance with manufacturer's recommendations.

3.4 FIELD QUALITY CONTROL

A. Arrange and pay for project inspection by Brick-It or its authorized representative to confirm warranty will be provided. Notify Architect 48 hours in advance of inspection.

3.5 CLEANING AND PROTECTION

- A. Cleaning: As recommended by manufacturer. Do not begin cleaning until mortar joints are properly cured. Allow a minimum of 24 to 72 hours. Soak bricks and mortar joints before applying cleaner.
 - 1. Thoroughly flush wall after cleaning.
 - 2. Clean adjacent materials and surfaces of all foreign materials resulting from the work of this Section.

- B. Protection:
 - 1. Protect installed materials from water impinging on the visible surface, chinking, sealants joints, and from behind.
 - 2. Protect installed materials from dust, dirt, precipitation, freezing, damaged, spilled materials, and continuous high humidity until they are fully dry.

END OF SECTION 04 21 50

SECTION 083213 - SLIDING ALUMINUM-FRAMED GLASS DOORS ADD 01

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes sliding aluminum-framed glass doors for exterior locations.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions.
- B. Shop Drawings: For sliding aluminum-framed glass doors.
 - 1. Include plans, elevations, sections, and details.
 - 2. Detail attachments to other work, and between units, if any.
 - 3. Include hardware and required clearances.
- C. Samples: For each exposed product and for each color specified, 12-inch-long section with glazing bead and factory-applied color finish.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Test Reports: For each sliding aluminum-framed glass door, for tests performed by manufacturer and witnessed by a qualified testing agency, and for each class and performance grade indicated, tested at AAMA gateway size.
- C. Sample warranty.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For finishes, operable panels, and operating hardware to include in maintenance manuals.

1.6 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** A manufacturer capable of fabricating sliding aluminum-framed glass doors that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations.
- B. **Installer Qualifications:** An installer acceptable to sliding aluminum-framed glass door manufacturer for installation of units required for this Project.

1.7 WARRANTY

- A. **Manufacturer's Special Warranty:** Manufacturer agrees to repair or replace components of sliding aluminum-framed glass doors that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - b. Structural failures including excessive deflection.
 - c. Faulty operation of movable panels and hardware.
 - d. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - e. Failure of laminated glass.
 - 2. Warranty Period:
 - a. Sliding Door: Five years from date of Substantial Completion.
 - b. Laminated Glass: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Basis-of-Design:** Arcadia ULT5920 Series Doors, or approved equal
- B. **Source Limitations:** Obtain sliding aluminum-framed glass doors from single source from single manufacturer. Obtain sliding doors from the same manufacturer as 08 41 13 Aluminum Framed Entrances and Storefronts systems or approved equal with matching finishes.

2.2 PERFORMANCE REQUIREMENTS

- A. **Product Standard:** Comply with AAMA/WDMA/CSA 101/I.S.2/A440 for minimum standards of performance, materials, components, accessories, and fabrication unless more stringent requirements are indicated.
 - 1. **Product Certification:** AAMA certified with label attached to each door.

2.3 SLIDING ALUMINUM-FRAMED GLASS DOORS

- A. Frames and Door Panels: Fabricated from aluminum extrusions complying with AAMA/WDMA/CSA 101/I.S.2/A440.
 - 1. Door configuration: Complete sliding door system including head, side jambs, thresholds and aluminum sliding panels to sizes indicated on the Drawings.

2.4 GLAZING

- A. Glass and Glazing: Manufacturer's standard glazing system.
 - 1. Glazing to be 1" thick assembly, tempered insulated glass, category II, VITRO Solarban 72 (2) Acuity + Acuity

2.5 HARDWARE

- A. General: Provide manufacturer's standard hardware, fabricated from a corrosion-resistant material compatible with aluminum complying with AAMA 907 and designed to smoothly operate, tightly close, and securely lock sliding aluminum-framed glass doors.
- B. Provide with standard two point lock system secures large sliding panels with locking hardware located on the primary sliding panel.
- C. Rolling Hardware: Manufacturer's standard rolling hardware integrated with engineered head track, side jambs and threshold frame system.
 - 1. Manufacturer's standard.
- D. Threshold and Sill Cap/Track: Provide extruded-aluminum threshold and track of thickness, dimensions, and profile indicated; designed to comply with performance requirements indicated; with manufacturer's standard finish.
 - 1. Low-Profile Floor Track: ADA and California Building Code compliant.
 - 2. As selected by Architect from manufacturer's full range.

2.6 ACCESSORIES

- A. Anchors, Clips, and Accessories: Provide anchors, clips, and accessories of aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron for sliding aluminum-framed glass doors, complying with ASTM B 456.

2.7 FABRICATION

- A. Fabricate sliding aluminum-framed glass doors in sizes indicated. Include a complete system for assembling components and anchoring doors.
- B. Fabricate sliding aluminum-framed glass doors that are reglazable without dismantling panel framing.
- C. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation.
- D. Factory-Glazed Fabrication: Glaze sliding aluminum-framed glass doors in the factory where practical and possible for applications indicated. Comply with requirements in Section 088000 "Glazing" and with AAMA/WDMA/CSA 101/I.S.2/A440.

2.8 ALUMINUM FINISHES

- A. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
 - 1. As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Verify rough opening dimensions, levelness of threshold substrate, and operational clearances.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing doors, hardware, accessories, and other components.
- B. Install sliding aluminum-framed glass doors level, plumb, square, true to line, without distortion, without warp or rack of frames and panels, and without impeding thermal movement; anchored securely in place to structural support; and in proper relation other adjacent construction.
- C. Install sliding aluminum-framed glass doors and components to drain condensation, water penetrating joints, and moisture migrating within doors to the exterior.

- D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Lubricate hardware and moving parts.
- B. Adjust operating panels and screens to provide a tight fit at contact points and weather stripping for smooth operation, without binding, and a weathertight closure. Adjust hardware for proper alignment, smooth operation, and proper latching without unnecessary force or excessive clearance.
- C. Clean exposed surfaces immediately after installing sliding aluminum-framed glass doors. Avoid damaging protective coatings and finishes. Remove nonpermanent labels, excess sealants, glazing materials, dirt, and other substances.
- D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- E. Protect sliding aluminum-framed glass door surfaces from contact with contaminating substances resulting from construction operations. If contaminating substances contact sliding aluminum-framed glass door surfaces, remove contaminants immediately according to manufacturer's written instructions.
- F. Refinish or replace sliding aluminum-framed glass doors with damaged finishes.
- G. Replace damaged components.

END OF SECTION 083213

SECTION 08 71 00 – DOOR HARDWARE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes:

- 1. Mechanical and electrified door hardware for:
 - a. Swinging doors.
- 2. Electronic access control system components, including:
 - a. Electronic access control devices.
- 3. Field verification, preparation and modification of existing doors and frames to receive new door hardware.

- B. Exclusions: Unless specifically listed in hardware sets, hardware is not specified in this section for:

- 1. Windows
- 2. Cabinets (casework), including locks in cabinets
- 3. Signage
- 4. Toilet accessories
- 5. Overhead doors

- C. Related Sections:

- 1. Division 01 Section "Alternates" for alternates affecting this section.
- 2. Division 07 Section "Joint Sealants" for sealant requirements applicable to threshold installation specified in this section.
- 3. Division 09 sections for touchup finishing or refinishing of existing openings modified by this section.
- 4. Division 13 Section "Radiation Protection" for requirements for lead-lining for door hardware at openings indicated to receive radiation protection.
- 5. Division 26 sections for connections to electrical power system and for low-voltage wiring.
- 6. Division 28 sections for coordination with other components of electronic access control system.

1.3 REFERENCES

- A. UL - Underwriters Laboratories
 - 1. UL 10B - Fire Test of Door Assemblies
 - 2. UL 10C - Positive Pressure Test of Fire Door Assemblies
 - 3. UL 1784 - Air Leakage Tests of Door Assemblies
 - 4. UL 305 - Panic Hardware
- B. ANSI - American National Standards Institute
 - 1. ANSI/BHMA A156.1 - A156.29, and ANSI/BHMA A156.31 - Standards for Hardware and Specialties
- C. California Code of Regulations
 - 1. Title 24: California Building Standards Code

1.4 SUBMITTALS

- A. General:
 - 1. Submit in accordance with Conditions of Contract and Division 01 requirements.
 - 2. Highlight, encircle, or otherwise specifically identify on submittals deviations from Contract Documents, issues of incompatibility or other issues which may detrimentally affect the Work.
 - 3. Prior to forwarding submittal, comply with procedures for verifying existing door and frame compatibility for new hardware, as specified in PART 3, "EXAMINATION" article, herein.
- B. Action Submittals:
 - 1. Product Data: Product data including manufacturers' technical product data for each item of door hardware, installation instructions, maintenance of operating parts and finish, and other information necessary to show compliance with requirements.
 - 2. Riser and Wiring Diagrams: After final approval of hardware schedule, submit details of electrified door hardware, indicating:
 - a. Wiring Diagrams: For power, signal, and control wiring and including:
 - 1) Details of interface of electrified door hardware and building safety and security systems.
 - 2) Schematic diagram of systems that interface with electrified door hardware.
 - 3) Point-to-point wiring.
 - 4) Risers.
 - 3. Samples for Verification: If requested by Architect, submit production sample or sample installations of each type of exposed hardware unit in finish indicated, and tagged with full description for coordination with schedule.
 - a. Samples will be returned to supplier in like-new condition. Units that are acceptable to Architect may, after final check of operations, be incorporated into Work, within limitations of key coordination requirements.

4. Door Hardware Schedule: Submit schedule with hardware sets in vertical format as illustrated by Sequence of Format for the Hardware Schedule as published by the Door and Hardware Institute. Indicate complete designations of each item required for each door or opening, include:
 - a. Door Index; include door number, heading number, and Architects hardware set number.
 - b. Opening Lock Function Spreadsheet: List locking device and function for each opening.
 - c. Type, style, function, size, and finish of each hardware item.
 - d. Name and manufacturer of each item.
 - e. Fastenings and other pertinent information.
 - f. Location of each hardware set cross-referenced to indications on Drawings.
 - g. Explanation of all abbreviations, symbols, and codes contained in schedule.
 - h. Mounting locations for hardware.
 - i. Door and frame sizes and materials.
 - j. Name and phone number for local manufacturer's representative for each product.
 - k. Operational Description of openings with any electrified hardware (locks, exits, electromagnetic locks, electric strikes, automatic operators, door position switches, magnetic holders or closer/holder units, and access control components).
Operational description should include how door will operate on egress, ingress, and fire and smoke alarm connection.
 - 1) Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate fabrication of other work that is critical in Project construction schedule.
 5. Key Schedule:
 - a. After Keying Conference, provide keying schedule listing levels of keying as well as explanation of key system's function, key symbols used and door numbers controlled.
 - b. Use ANSI/BHMA A156.28 "Recommended Practices for Keying Systems" as guideline for nomenclature, definitions, and approach for selecting optimal keying system.
 - c. Provide 3 copies of keying schedule for review prepared and detailed in accordance with referenced DHI publication. Include schematic keying diagram and index each key to unique door designations.
 - d. Index keying schedule by door number, keyset, hardware heading number, cross keying instructions, and special key stamping instructions.
 - e. Provide one complete bitting list of key cuts and one key system schematic illustrating system usage and expansion.
 - 1) Forward bitting list, key cuts and key system schematic directly to Owner, by means as directed by Owner.
 - f. Prepare key schedule by or under supervision of supplier, detailing Owner's final keying instructions for locks.
 6. Templates: After final approval of hardware schedule, provide templates for doors, frames and other work specified to be factory prepared for door hardware installation.
- C. Informational Submittals:
1. Qualification Data: For Supplier and Installer.
 2. Product Certificates for electrified door hardware, signed by manufacturer:

- a. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
3. Certificates of Compliance:
 - a. Certificates of compliance for fire-rated hardware and installation instructions if requested by Architect or Authority Having Jurisdiction.
 - b. Installer Training Meeting Certification: Letter of compliance, signed by Contractor, attesting to completion of installer training meeting specified in "QUALITY ASSURANCE" article, herein.
 - c. Electrified Hardware Coordination Conference Certification: Letter of compliance, signed by Contractor, attesting to completion of electrified hardware coordination conference, specified in "QUALITY ASSURANCE" article, herein.
 4. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by qualified testing agency, for door hardware on doors located in accessible routes.
 5. Warranty: Special warranty specified in this Section.
- D. Closeout Submittals:
1. Operations and Maintenance Data : Provide in accordance with Division 01 and include:
 - a. Complete information on care, maintenance, and adjustment; data on repair and replacement parts, and information on preservation of finishes.
 - b. Catalog pages for each product.
 - c. Name, address, and phone number of local representatives for each manufacturer.
 - d. Parts list for each product.
 - e. Final approved hardware schedule edited to reflect conditions as-installed.
 - f. Final keying schedule
 - g. Copies of floor plans with keying nomenclature
 - h. As-installed wiring diagrams for each opening connected to power, both low voltage and 110 volts.
 - i. Copy of warranties including appropriate reference numbers for manufacturers to identify project.

1.5 QUALITY ASSURANCE

- A. Product Substitutions: Comply with product requirements stated in Division 01 and as specified herein.
1. Where specific manufacturer's product is named and accompanied by "No Substitute," including make or model number or other designation, provide product specified. (Note: Certain products have been selected for their unique characteristics and particular project suitability.)
 - a. Where no additional products or manufacturers are listed in product category, requirements for "No Substitute" govern product selection.
 2. Where products indicate "acceptable manufacturers" or "acceptable manufacturers and products", provide product from specified manufacturers, subject to compliance with specified requirements and "Single Source Responsibility" requirements stated herein.

- B. Supplier Qualifications and Responsibilities: Recognized architectural hardware supplier with record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project.
 - 1. Warehousing Facilities: In Project's vicinity.
 - 2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 - 3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
 - 4. Coordination Responsibility: Coordinate installation of electronic security hardware with Architect and electrical engineers and provide installation and technical data to Architect and other related subcontractors.
 - a. Upon completion of electronic security hardware installation, inspect and verify that all components are working properly.
- C. Installer Qualifications: Qualified tradesmen, skilled in application of commercial grade hardware with record of successful in-service performance for installing door hardware similar in quantity, type, and quality to that indicated for this Project.
- D. Single Source Responsibility: Obtain each type of door hardware from single manufacturer.
 - 1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated.
 - 2. Manufacturers that perform electrical modifications and that are listed by testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- E. Fire-Rated Door Openings: Provide door hardware for fire-rated openings that complies with NFPA 80 and requirements of authorities having jurisdiction. Provide only items of door hardware that are listed and are identical to products tested by Underwriters Laboratories, Intertek Testing Services, or other testing and inspecting organizations acceptable to authorities having jurisdiction for use on types and sizes of doors indicated, based on testing at positive pressure and according to NFPA 252 or UL 10C and in compliance with requirements of fire-rated door and door frame labels.
- F. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meets requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.
 - 1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. (3 cu. m per minute/sq. m) at tested pressure differential of 0.3-inch wg (75 Pa) of water.
- G. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by testing agency acceptable to authorities having jurisdiction.
- H. Means of Egress Doors: Latches do not require more than 5 lbf (67 N) to release latch. Locks do not require use of key, tool, or special knowledge for operation.
- I. Accessibility Requirements: For door hardware on doors in an accessible route, comply with governing accessibility regulations cited in "REFERENCES" article, herein.
 - 1. Provide operating devices that do not require tight grasping, pinching, or twisting of wrist and that operate with force of not more than 5 lbf (22.2 N).
 - 2. Maximum opening-force requirements:

- a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
 - b. Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
 - c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
3. Bevel raised thresholds with slope of not more than 1:2. Provide thresholds not more than 1/2 inch (13 mm) high.
 4. Adjust door closer sweep periods so that, from open position of 70 degrees, door will take at least 3 seconds to move to 3 inches (75 mm) from latch, measured to leading edge of door.
- J. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01.
1. Attendees: Owner, Contractor, Architect, Installer, **Owner's Security Consultant**, and Supplier.
 2. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including:
 - a. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 - b. Preliminary key system schematic diagram.
 - c. Requirements for key control system.
 - d. Requirements for access control.
 - e. Address for delivery of keys.
- K. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01.
1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 2. Inspect and discuss preparatory work performed by other trades.
 3. Inspect and discuss electrical roughing-in for electrified door hardware.
 4. Review sequence of operation for each type of electrified door hardware.
 5. Review required testing, inspecting, and certifying procedures.
- L. Coordination Conferences:
1. Installation Coordination Conference: Prior to hardware installation, schedule and hold meeting to review questions or concerns related to proper installation and adjustment of door hardware.
 - a. Attendees: Door hardware supplier, door hardware installer, Contractor.
 - b. After meeting, provide letter of compliance to Architect, indicating when meeting was held and who was in attendance.
 2. Electrified Hardware Coordination Conference: Prior to ordering electrified hardware, schedule and hold meeting to coordinate door hardware with security, electrical, doors and frames, and other related suppliers.
 - a. Attendees: electrified door hardware supplier, doors and frames supplier, electrified door hardware installer, electrical subcontractor, Owner, **Owner's security consultant**, Architect and Contractor.
 - b. After meeting, provide letter of compliance to Architect, indicating when coordination conference was held and who was in attendance.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up for hardware delivered to Project site.
- B. Tag each item or package separately with identification coordinated with final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.
 - 1. Deliver each article of hardware in manufacturer's original packaging.
- C. Project Conditions:
 - 1. Maintain manufacturer-recommended environmental conditions throughout storage and installation periods.
 - 2. Provide secure lock-up for door hardware delivered to Project, but not yet installed. Control handling and installation of hardware items so that completion of Work will not be delayed by hardware losses both before and after installation.
- D. Protection and Damage:
 - 1. Promptly replace products damaged during shipping.
 - 2. Handle hardware in manner to avoid damage, marring, or scratching. Correct, replace or repair products damaged during Work.
 - 3. Protect products against malfunction due to paint, solvent, cleanser, or any chemical agent.
- E. Deliver keys to manufacturer of key control system for subsequent delivery to Owner.
- F. Deliver keys **and permanent cores** to Owner by registered mail or overnight package service.

1.7 COORDINATION

- A. Coordinate layout and installation of floor-recessed door hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.
- B. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- D. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.
- E. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

- F. Direct shipments not permitted, unless approved by Contractor.

1.8 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
1. Warranty Period: Years from date of Substantial Completion, for durations indicated.
 - a. Closers:
 - 1) Mechanical: 10 years. **30 years for LCN 4000**
 - b. Exit Devices:
 - 1) Mechanical: 3 years.
 - 2) Electrified: 1 year.
 - c. Locksets:
 - 1) Mechanical: 3 years
 - 2) Electrified: 1 year.
 - d. Continuous Hinges: Lifetime warranty.
 - e. Key Blanks: Lifetime
 2. Warranty does not cover damage or faulty operation due to improper installation, improper use or abuse.

1.9 REGULATORY REQUIREMENTS:

- A. Locate latching hardware between 34 inches to 44 inches above the finished floor, per 2019 California Building Code, Section 11B-404.2.7.
1. Panic hardware: locate between 36 inches to 44 inches above the finished floor.
- B. Handles, pull, latches, locks, other operable parts:
1. Readily openable from egress side with one hand and without tight grasping, tight pinching, or twisting of the wrist to operate. 2019 California Building Code Section 11B-309.4.
 2. Force required to activate the operable parts: 5.0 pounds maximum, per 2019 California Building Code Section 11B-309.4.
- C. Adjust doors to open with not more than 5.0-pounds pressure to open at exterior doors and 5.0-pounds at interior doors. As allowed per 2019 California Building Code Section 11B-404.2.9, local authority may increase the allowable pressure for fire doors to achieve positive latching, but not to exceed 15-pounds.
1. Exception: exterior doors' pressure-to-open may be increased to 8.5-pounds if: at a single location, and one of a bank of eight leafs or fraction of eight, and one leaf of this bank is fitted with a low- or high-energy operator.
- D. Adjust door closer sweep periods so that from an open position of 90 degrees, the door will take at least 5 seconds to move to a point 12 degrees from the latch, measured to the landing side of the door, per 2019 California Building Code Section 11B-404.2.8.

1. Spring hinges: adjust for 1.5 seconds minimum for 70 degrees to fully-closed.
- E. Smooth surfaces at bottom 10 inches of push sides of doors, facilitating push-open with wheelchair footrests, per 2019 California Building Code Section 11B-404.2.10.
 1. Applied kickplates and armor plates: bevel the left and right edges; free of sharp or abrasive edges.
 2. Tempered glass doors without stiles: bottom rail may be less than 10 inches if top leading edge is tapered 60 degrees minimum.
- F. Door opening clear width no less than 32 inches, measured from face of frame stop, or edge of inactive leaf of pair of doors, to door face with door opened to 90 degrees. Hardware projection not a factor in clear width if located above 30 inches and below 80 inches, and the hardware projects no more than 4 inches. 2019 California Building Code Section 11B-404.2.3.
 1. Exception: In alterations, a projection of 5/8 inch (15.9 mm) maximum into the required clear width shall be permitted for the latch side stop.
 2. Door closers and overhead stops: not less than 78 inches above the finished floor or ground, per 2019 California Building Code 11B-307.4.
- G. Thresholds: floor or landing no more than 0.50 inches below the top of the threshold of the doorway, per 2019 California Building Code Section 11B-404.2.5. Vertical rise no more than 0.25 inches, change in level between 0.25 inches and 0.50 inches: beveled to slope no greater than 1:2 (50 percent slope). 2019 California Building Code Section 11B-303.2 & ~.3.
- H. Floor stops: Do not locate in path of travel. Locate no more than 4 inches from walls, per DSA Policy #99-08 (Access).
- I. Pairs of doors with independently-activated hardware both leafs: limit swing of right-hand or right-hand-reverse leaf to 90 degrees to protect persons reading wall-mounted tactile signage, per 2019 California Building Code Section 11B-703.4.2.
- J. Door and door hardware encroachment: when door is swung fully-open into means-of-egress path, the door may not encroach/project more than 7 inches into the required exit width, with the exception of door release hardware such as lockset levers or panic hardware. These hardware items must be located no less than 34-inches and no more than 44-inches above the floor/ground. 2019 California Building Code, Section 1005.7.1.
- K. In I-2 occupancies, latch release hardware is not permitted to project in the required exit width, regardless of its mounting height, per 2019 California Building Code, Section 1005.7.1 at Exception 1.

1.10 MAINTENANCE

- A. Extra Materials:
- B. Maintenance Tools:
 1. Furnish complete set of special tools required for maintenance and adjustment of hardware, including changing of cylinders.
 - 2.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Where "No Substitute" is noted, submittals and substitution requests for other products will not be considered.
- B. Approval of manufacturers and/or products other than those listed as "Scheduled Manufacturer" or "Acceptable Manufacturer" in the individual article for the product category shall be in accordance with QUALITY ASSURANCE article, herein.
- C. Approval of products from manufacturers indicated in "Acceptable Manufacturers" is contingent upon those products providing all functions and features and meeting all requirements of scheduled manufacturer's product.
- D. Hand of Door: Drawings show direction of slide, swing, or hand of each door leaf. Furnish each item of hardware for proper installation and operation of door movement as shown.
- E. Where specified hardware is not adaptable to finished shape or size of members requiring hardware, furnish suitable types having same operation and quality as type specified, subject to Architect's approval.

2.2 MATERIALS

- A. Fasteners
 - 1. Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.
 - 2. Furnish screws for installation with each hardware item. Finish exposed (exposed under any condition) screws to match hardware finish, or, if exposed in surfaces of other work, to match finish of this other work including prepared for paint surfaces to receive painted finish.
 - 3. Provide concealed fasteners for hardware units exposed when door is closed except when no standard units of type specified are available with concealed fasteners. Do not use thru-bolts for installation where bolt head or nut on opposite face is exposed in other work unless thru-bolts are required to fasten hardware securely. Review door specification and advise Architect if thru-bolts are required.
 - 4. Install hardware with fasteners provided by hardware manufacturer.
- B. Modification and Preparation of Existing Doors: Where existing door hardware is indicated to be removed and reinstalled.
 - 1. Provide necessary fillers, Dutchmen, reinforcements, and fasteners, compatible with existing materials, as required for mounting new opening hardware and to cover existing door and frame preparations.
 - 2. Use materials which match materials of adjacent modified areas.
 - 3. When modifying existing fire-rated openings, provide materials permitted by NFPA 80 as required to maintain fire-rating.
- C. Provide screws, bolts, expansion shields, drop plates and other devices necessary for hardware installation.

1. Where fasteners are exposed to view: Finish to match adjacent door hardware material.
- D. Cable and Connectors: Hardwired Electronic Access Control Lockset and Exit Device Trim:
1. Data: 24AWG, 4 conductor shielded, Belden 9843, 9841 or comparable.
 2. DC Power: 18 AWG, 2 conductor, Belden 8760 or comparable.
 3. Provide type of data and DC power cabling required by access control device manufacturer for this installation.
 4. Where scheduled in the hardware sets, provide each item of electrified hardware and wire harnesses with sufficient number and wire gauge with standardized Molex plug connectors to accommodate electric function of specified hardware. Provide Molex connectors that plug directly into connectors from harnesses, electric locking and power transfer devices. Provide through-door wire harness for each electrified locking device installed in a door and wire harness for each electrified hinge, electrified continuous hinge, electrified pivot, and electric power transfer for connection to power supplies.

2.3 HINGES

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Ives 5BB series
2. Acceptable Manufacturers and Products: Hager BB series, McKinney TA/T4A series, Stanley FBB Series

B. Requirements:

1. Provide five-knuckle ball bearing hinges conforming to ANSI/BHMA A156.1.
2. 1-3/4 inch (44 mm) thick doors, up to and including 36 inches (914 mm) wide:
 - a. Exterior: Standard weight, bronze or stainless steel, 4-1/2 inches (114 mm) high
 - b. Interior: Standard weight, steel, 4-1/2 inches (114 mm) high
3. 1-3/4 inch (44 mm) thick doors over 36 inches (914 mm) wide:
 - a. Exterior: Heavy weight, bronze/stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
4. 2 inches or thicker doors:
 - a. Exterior: Heavy weight, bronze or stainless steel, 5 inches (127 mm) high
 - b. Interior: Heavy weight, steel, 5 inches (127 mm) high
5. Provide three hinges per door leaf for doors 90 inches (2286 mm) or less in height, and one additional hinge for each 30 inches (762 mm) of additional door height.
6. Where new hinges are specified for existing doors or existing frames, provide new hinges of identical size to hinge preparation present in existing door or existing frame.
7. Hinge Pins: Except as otherwise indicated, provide hinge pins as follows:
 - a. Steel Hinges: Steel pins
 - b. Non-Ferrous Hinges: Stainless steel pins
 - c. Out-Swinging Exterior Doors: Non-removable pins
 - d. Out-Swinging Interior Lockable Doors: Non-removable pins
 - e. Interior Non-lockable Doors: Non-rising pins

8. Width of hinges: 4-1/2 inches (114 mm) at 1-3/4 inch (44 mm) thick doors, and 5 inches (127 mm) at 2 inches (51 mm) or thicker doors. Adjust hinge width as required for door, frame, and wall conditions to allow proper degree of opening.
9. Doors 36 inches (914 mm) wide or less furnish hinges 4-1/2 inches (114 mm) high; doors greater than 36 inches (914 mm) wide furnish hinges 5 inches (127 mm) high, heavy weight or standard weight as specified.
10. Provide hinges with electrified options as scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware. Locate electric hinge at second hinge from bottom or nearest to electrified locking component.
11. Provide mortar guard for each electrified hinge specified.

2.4 CONTINUOUS HINGES

A. Aluminum Geared

1. Manufacturers:
 - a. Scheduled Manufacturer: Ives.
 - b. Acceptable Manufacturers: Markar, Stanley.
2. Requirements:
 - a. Provide aluminum geared continuous hinges conforming to ANSI/BHMA A156.26, Grade 1.
 - b. Provide aluminum geared continuous hinges, where specified in the hardware sets, fabricated from 6063-T6 aluminum, with 0.25-inch (6 mm) diameter Teflon coated stainless steel hinge pin.
 - c. Provide split nylon bearings at each hinge knuckle for quiet, smooth, self-lubricating operation.
 - d. Provide hinges capable of supporting door weights up to 450 pounds, and successfully tested for 1,500,000 cycles.
 - e. On fire-rated doors, provide aluminum geared continuous hinges that are classified for use on rated doors by testing agency acceptable to authority having jurisdiction.
 - f. Provide aluminum geared continuous hinges with electrified option scheduled in the hardware sets. Provide with sufficient number and wire gage to accommodate electric function of specified hardware.
 - g. Install hinges with fasteners supplied by manufacturer.
 - h. Provide hinges 1 inch (25 mm) shorter in length than nominal height of door, unless otherwise noted or door details require shorter length and with symmetrical hole pattern.

2.5 FLUSH BOLTS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:

1. Provide automatic, constant latching, and manual flush bolts with forged bronze or stainless steel face plates, extruded brass levers, and with wrought brass guides and strikes. Provide 12 inch (305 mm) steel or brass rods at doors up to 90 inches (2286 mm) in height. For doors over 90 inches (2286 mm) in height increase top rods by 6 inches (152 mm) for each additional 6 inches (152 mm) of door height. Provide dust-proof strikes at each bottom flush bolt.

2.6 COORDINATORS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:

1. Where pairs of doors are equipped with automatic flush bolts, an astragal, or other hardware that requires synchronized closing of the doors, provide bar-type coordinating device, surface applied to underside of stop at frame head.
2. Provide filler bar of correct length for unit to span entire width of opening, and appropriate brackets for parallel arm door closers and surface vertical rod exit device strikes. Factory-prep coordinators for vertical rod devices if required.

2.7 MORTISE LOCKS

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Schlage L9000 series

B. Requirements:

1. Provide mortise locks conforming to ANSI/BHMA A156.13 Series 1000, Grade 1 Operational, Grade 1 Security, and manufactured from heavy gauge steel, containing components of steel with a zinc dichromate plating for corrosion resistance. Provide lock case that is multi-function and field reversible for handing without opening case. Cylinders: Refer to "KEYING" article, herein.
2. Provide locks with standard 2-3/4 inches (70 mm) backset with full 3/4 inch (19 mm) throw stainless steel mechanical anti-friction latchbolt. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
3. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
4. Provide electrified options as scheduled in the hardware sets. Where scheduled, provide a request to exit (RX) switch that is actuated with rotation of inside lever.
5. Provide motor based electrified locksets with electrified options as scheduled in the hardware sets and comply with the following requirements:
 - a. Universal input voltage – single chassis accepts 12 or 24V DC to allow for changes in the field without changing lock chassis.
 - b. Fail Safe/Fail Secure – changing mode between electrically locked (fail safe) and electrically unlocked (fail secure) is field selectable without opening the lock case
 - c. Low maximum current draw – maximum 0.4 amps to allow for multiple locks on a single power supply.

- d. Low holding current – maximum 0.01 amps to produce minimal heat, eliminate “hot levers” in electrically locked applications, and to provide reliable operation in wood doors that provide minimal ventilation and air flow.
 - e. Request to Exit Switch (RX) –
 - 1) Modular Design – provide electrified locks capable of using, adding, or changing a modular RX switch without opening the lock case.
 - 2) Monitoring – where scheduled, provide a request to exit (RX) switch that detects rotation of the inside lever.
 - f. Connections – provide quick-connect Molex system standard.
 - g. UL Listed – 3 hour fire door
6. Lever Trim: Solid brass, bronze, or stainless steel, cast or forged in design specified, with wrought roses and external lever spring cages. Provide thru-bolted levers with 2-piece spindles.
- a. Lever Design: Schlage **06A**.
 - b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.8 CYLINDRICAL LOCKS – GRADE 1

A. Manufacturers and Products:

- 1. Scheduled Manufacturer and Product: Schlage ND Series

B. Requirements:

- 1. Provide cylindrical locks conforming to the following standards and requirements:
 - a. ANSI/BHMA A156.2 Series 4000, Grade 1.
 - b. UL 10C for 4'-0" x 10'-0" 3-hour fire door.
- 2. Cylinders: Refer to “KEYING” article, herein.
- 3. Provide cylindrical locksets exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security, and durability in the categories below:
 - a. Abusive Locked Lever Torque Test – minimum 3,100 inch-pounds without gaining access
 - b. Cycle life - tested to minimum 10 million cycles per ANSI/BHMA A156.2 Cycle Test with no visible lever sag or use of performance aids such as set screws or spacers.
- 4. Provide locks with standard 2-3/4 inches (70 mm) backset, unless noted otherwise, with 1/2 inch latch throw. Provide proper latch throw for UL listing at pairs.
- 5. Provide locksets with separate anti-rotation thru-bolts, and no exposed screws.
- 6. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.
- 7. Provide standard ASA strikes unless extended lip strikes are necessary to protect trim.
- 8. Provide electrified options as scheduled in the hardware sets.
- 9. Lever Trim: Solid cast levers without plastic inserts, and wrought roses on both sides.
 - a. Lever Design: Schlage Rhodes.

- b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.

2.9 AUXILIARY LOCKS

A. Deadlocks:

1. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product: Schlage L9000 series
2. Requirements:
 - a. Provide mortise deadlock series conforming to ANSI/BHMA A156 and function as specified. Cylinders: Refer to "KEYING" article, herein.
 - b. Provide deadlocks with standard 2-3/4 inches (70 mm) backset. Provide deadbolt with full 1 inch (25 mm) throw, constructed of stainless steel.
 - c. Provide manufacturer's standard strike.

B. Deadbolts:

1. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product: Schlage B600 series
 - b. Acceptable Manufacturers and Products: Arrow N series, Best T series, Corbin-Ruswin DL3000 series, Falcon D100 series, Sargent 480 series.
2. Requirements:
 - a. Provide deadbolt series conforming to ANSI/BHMA A156 and function as specified. Cylinders: Refer to "KEYING" article, herein.
 - b. Provide deadbolts with standard 2-3/4 inches (70 mm) backset. Provide 2-3/8 inches (60 mm) where noted or if door or frame detail requires. Provide deadbolt with full 1 inch (25 mm) throw, constructed of steel alloy.
 - c. Provide manufacturer's standard strike.

2.10 EXIT DEVICES:

A. Manufacturers and Products:

1. Scheduled Manufacturer and Product: Von Duprin 99/33 series

B. Requirements:

1. Provide exit devices tested to ANSI/BHMA A156.3 Grade 1, and UL listed for Panic Exit or Fire Exit Hardware. Cylinders: Refer to "KEYING" article, herein.
2. Provide touchpad type exit devices, fabricated of brass, bronze, stainless steel, or aluminum, plated to standard architectural finishes to match balance of door hardware.
3. Touchpad: Extend minimum of one half of door width. Match exit device finish, stainless steel for US26, US26D, US28, US32, and US32D finishes; and for all other finishes, provide compatible finish to exit device. No plastic inserts are allowed in touchpads.

4. Provide exit devices with dead-latching feature for security and for future addition of alarm kits and/or other electrified requirements.
5. Provide flush end caps for exit devices.
6. Provide exit devices with manufacturer's approved strikes.
7. Provide exit devices cut to door width and height. Install exit devices at height recommended by exit device manufacturer, allowable by governing building codes, and approved by Architect.
8. Mount mechanism case flush on face of doors, or provide spacers to fill gaps behind devices. Where glass trim or molding projects off face of door, provide glass bead kits.
9. Removable Mullions: 2 inches (51 mm) x 3 inches (76 mm) steel tube. Where scheduled as keyed removable mullion, provide type that can be removed by use of a keyed cylinder, which is self-locking when re-installed.
10. Where lever handles are specified as outside trim for exit devices, provide heavy-duty lever trims with forged or cast escutcheon plates. Provide vandal-resistant levers that will travel to 90-degree down position when more than 35 pounds of torque are applied, and which can easily be re-set.
 - a. Lever Style: Match lever style of locksets.
 - b. Tactile Warning (Knurling): Where required by authority having jurisdiction. Provide on levers on exterior (secure side) of doors serving rooms considered to be hazardous.
11. Provide UL labeled fire exit hardware for fire rated openings.
12. Provide factory drilled weep holes for exit devices used in full exterior application, highly corrosive areas, and where noted in hardware sets.
13. Provide electrified options as scheduled.

2.11 ELECTRONIC ACCESS CONTROL LOCKSETS AND EXIT DEVICE TRIM

- A. See Division 28:

2.12 CYLINDERS:

- A. Requirements:

1. Provide permanent interchangeable Small format interchangeable core SFIC. cylinders, compliant with ANSI/BHMA A156.5; latest revision, Section 12, Grade 1; permanent cylinders; cylinder face finished to match lockset, manufacturer's series as indicated. Refer to "KEYING" article, herein.
2. Replaceable Construction Cores. OPTION if using temporary construction cores in IC core cylinder in either F/S or S/F.
 - a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements.
 - 1) 3 construction control keys
 - 2) 12 construction change (day) keys.
 - b. Owner or Owner's Representative will replace temporary construction cores with permanent cores.

2.13 KEYING

- A. Provide cylinders/cores keyed into Owner's existing factory registered keying system, complying with guidelines in ANSI/BHMA A156.28, incorporating decisions made at keying conference.
- B. Manufacturer:
 - 1. Best Lock Co. Provide permanent cores keyed into the existing key system
- C. Requirements:
 - 1. Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.
 - a. Master Keying system as directed by the Owner.
 - b. Option: No Master Keying: Cylinders/cores only operated by change (day) keys.
 - 2. Forward bitting list and keys separately from cylinders, by means as directed by Owner. Failure to comply with forwarding requirements shall be cause for replacement of cylinders/cores involved at no additional cost to Owner.
 - 3. Provide keys with the following features:
 - a. Material: Nickel silver; minimum thickness of .107-inch (2.3mm)
 - 4. Identification:
 - a. Mark permanent cylinders/cores and keys with applicable blind code per DHI publication "Keying Systems and Nomenclature" for identification. Blind code marks shall not include actual key cuts.
 - b. Identification stamping provisions must be approved by the Architect and Owner.
 - c. Stamp cylinders/cores and keys with Owner's unique key system facility code as established by the manufacturer; key symbol and embossed or stamped with "DO NOT DUPLICATE".
 - d. Failure to comply with stamping requirements shall be cause for replacement of keys involved at no additional cost to Owner.
 - e. Forward permanent cylinders/cores to Owner, separately from keys, by means as directed by Owner.
 - 5. Quantity: Furnish in the following quantities.
 - a. Change (Day) Keys: 3 per cylinder/core.
 - b. Option for LFIC or SFIC: Permanent Control Keys: 3.
 - c. Master Keys: 6.

2.14 DOOR CLOSERS OPTION:

- A. Manufacturers and Products:
 - 1. Scheduled Manufacturer and Product: LCN 4040XP series.
 - 2. Acceptable Manufacturers and Products: No Substitute.
- B. Requirements:

1. Provide door closers conforming to ANSI/BHMA A156.4 Grade 1 requirements by BHMA certified independent testing laboratory. ISO 9000 certify closers. Stamp units with date of manufacture code.
2. Provide door closers with fully hydraulic, full rack and pinion action with high strength cast iron cylinder, and full complement bearings at shaft.
3. Cylinder Body: 1-1/2 inch (38 mm) diameter with 3/4 inch (19 mm) diameter double heat-treated pinion journal.
4. Hydraulic Fluid: Fireproof, passing requirements of UL10C, and requiring no seasonal closer adjustment for temperatures ranging from 120 degrees F to -30 degrees F.
5. Spring Power: Continuously adjustable over full range of closer sizes, and providing reduced opening force as required by accessibility codes and standards.
6. Hydraulic Regulation: By tamper-proof, non-critical valves, with separate adjustment for latch speed, general speed, and backcheck.
7. Provide closers with solid forged steel main arms and factory assembled heavy-duty forged forearms for parallel arm closers.
8. Pressure Relief Valve (PRV) Technology: Not permitted.
9. Finish for Closer Cylinders, Arms, Adapter Plates, and Metal Covers: Powder coating finish which has been certified to exceed 100 hours salt spray testing as described in ANSI Standard A156.4 and ASTM B117, or has special rust inhibitor (SRI).
10. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.15 DOOR TRIM

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:

1. Provide push plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick and beveled 4 edges. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
2. Provide push bars of solid bar stock, diameter and length as scheduled. Provide push bars of sufficient length to span from center to center of each stile. Where required, mount back to back with pull.
3. Provide offset pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
4. Provide flush pulls as scheduled. Where required, provide back-to-back mounted model.
5. Provide pulls of solid bar stock, diameter and length as scheduled. Where required, mount back to back with push bar.
6. Provide pull plates 4 inches (102 mm) wide by 16 inches (406 mm) high by 0.050 inch (1 mm) thick, beveled 4 edges, and prepped for pull. Where width of door stile prevents use of 4 inches (102 mm) wide plate, adjust width to fit.
7. Provide wire pulls of solid bar stock, diameter and length as scheduled.
8. Provide decorative pulls as scheduled. Where required, mount back to back with pull.

2.16 PROTECTION PLATES

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:

1. Provide kick plates, mop plates, and armor plates minimum of 0.050 inch (1 mm) thick, beveled four edges as scheduled. Furnish with sheet metal or wood screws, finished to match plates.
2. Sizes of plates:
 - a. Kick Plates: 10 inches (254 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - b. Mop Plates: 4 inches (102 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs
 - c. Armor Plates: 36 inches (914 mm) high by 2 inches (51 mm) less width of door on single doors, 1 inch (25 mm) less width of door on pairs

2.17 OVERHEAD STOPS AND OVERHEAD STOP/HOLDERS

A. Manufacturers:

1. Scheduled Manufacturers: Glynn-Johnson
2. Acceptable Manufacturers: Rixson, Sargent

B. Requirements:

1. Provide heavy duty concealed mounted overhead stop or holder as specified for exterior and interior vestibule single acting doors.
2. Provide heavy duty concealed mounted overhead stop or holder as specified for double acting doors.
3. Provide heavy or medium duty and concealed or surface mounted overhead stop or holder for interior doors as specified. Provide medium duty surface mounted overhead stop for interior doors and at any door that swings more than 140 degrees before striking wall, open against equipment, casework, sidelights, and where conditions do not allow wall stop or floor stop presents tripping hazard.
4. Where overhead holders are specified provide friction type at doors without closer and positive type at doors with closer.

2.18 DOOR STOPS AND HOLDERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Provide door stops at each door leaf:

1. Provide wall stops wherever possible. Provide convex type where mortise type locks are used and concave type where cylindrical type locks are used.
2. Where a wall stop cannot be used, provide universal floor stops for low or high rise options.

3. Where wall or floor stop cannot be used, provide medium duty surface mounted overhead stop.

2.19 THRESHOLDS, SEALS, DOOR SWEEPS, AUTOMATIC DOOR BOTTOMS, AND GASKETING

A. Manufacturers:

1. Scheduled Manufacturer: Zero International
2. Acceptable Manufacturers: National Guard, Pemko

B. Requirements:

1. Provide thresholds, weather-stripping (including door sweeps, seals, and astragals) and gasketing systems (including smoke, sound, and light) as specified and per architectural details. Match finish of other items.
2. Size of thresholds:
 - a. Saddle Thresholds: 1/2 inch (13 mm) high by jamb width by door width
 - b. Bumper Seal Thresholds: 1/2 inch (13 mm) high by 5 inches (127 mm) wide by door width
3. Provide door sweeps, seals, astragals, and auto door bottoms only of type where resilient or flexible seal strip is easily replaceable and readily available.

2.20 SILENCERS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

B. Requirements:

1. Provide "push-in" type silencers for hollow metal or wood frames.
2. Provide one silencer per 30 inches (762 mm) of height on each single frame, and two for each pair frame.
3. Omit where gasketing is specified.

2.21 LATCH PROTECTORS

A. Manufacturers:

1. Scheduled Manufacturer: Ives
2. Acceptable Manufacturers: Rockwood, Trimco

- ### B. Provide stainless steel latch protectors of type required to function with specified lock.

2.22 COAT HOOKS

A. Manufacturers:

1. Scheduled Manufacturer: Ives.
 2. Acceptable Manufacturers: Rockwood, Trimco
- B. Provide coat hooks as specified.

2.23 FINISHES

- A. Finish: BHMA 626/652 (US26D); except:
1. Hinges at Exterior Doors: BHMA 630 (US32D)
 2. Continuous Hinges: BHMA 630 (US32D)
 3. Continuous Hinges: BHMA 628 (US28)
 4. Push Plates, Pulls, and Push Bars: BHMA 630 (US32D)
 5. Protection Plates: BHMA 630 (US32D)
 6. Overhead Stops and Holders: BHMA 630 (US32D)
 7. Door Closers: Powder Coat to Match
 8. Wall Stops: BHMA 630 (US32D)
 9. Latch Protectors: BHMA 630 (US32D)
 10. Weatherstripping: Clear Anodized Aluminum
 11. Thresholds: Mill Finish Aluminum

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of hardware, examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Existing Door and Frame Compatibility: Field verify existing doors and frames receiving new hardware and existing conditions receiving new openings. Verify that new hardware is compatible with existing door and frame preparation and existing conditions.
- C. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Where on-site modification of doors and frames is required:
1. Carefully remove existing door hardware and components being reused. Clean, protect, tag, and store in accordance with storage and handling requirements specified herein.
 2. Field modify and prepare existing door and frame for new hardware being installed.
 3. When modifications are exposed to view, use concealed fasteners, when possible.
 4. Prepare hardware locations and reinstall in accordance with installation requirements for new door hardware and with:

- a. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.
- b. Wood Doors: DHI WDHS.5 "Recommended Hardware Reinforcement Locations for Mineral Core Wood Flush Doors."
- c. Doors in rated assemblies: NFPA 80 for restrictions on on-site door hardware preparation.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following, unless otherwise indicated or required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 2. Custom Steel Doors and Frames: HMMA 831.
 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each hardware item in compliance with manufacturer's instructions and recommendations, using only fasteners provided by manufacturer.
- C. Do not install surface mounted items until finishes have been completed on substrate. Protect all installed hardware during painting.
- D. Set units level, plumb and true to line and location. Adjust and reinforce attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- F. Install operating parts so they move freely and smoothly without binding, sticking, or excessive clearance.
- G. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than quantity recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- H. Intermediate Offset Pivots: Where offset pivots are indicated, provide intermediate offset pivots in quantities indicated in door hardware schedule but not fewer than one intermediate offset pivot per door and one additional intermediate offset pivot for every 30 inches (750 mm) of door height greater than 90 inches (2286 mm).
- I. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 1. Replace construction cores with permanent cores as indicated in keying section.
- J. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- K. Door Closers: Mount closers on room side of corridor doors, inside of exterior doors, and stair side of stairway doors from corridors. Closers shall not be visible in corridors, lobbies and other public spaces unless approved by Architect.

- L. Closer/holders: Mount closer/holders on room side of corridor doors, inside of exterior doors, and stair side of stairway doors.
- M. Thresholds: Set thresholds in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."
- N. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they may impede traffic or present tripping hazard.
- O. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- P. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- Q. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.4 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 - 1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.
- B. Occupancy Adjustment: Approximately three months after date of Substantial Completion, Installer shall examine and readjust each item of door hardware, including adjusting operating forces, as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DEMONSTRATION

- A. Provide training for Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.7 DOOR HARDWARE SCHEDULE

A. Locksets, exit devices, and other hardware items are referenced in the following hardware sets for series, type and function. Refer to the above-specifications for special features, options, cylinders/keying, and other requirements.

B. Hardware Sets:

HW SET: 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP	630	IVE
1	EA	ELEC OFFICE LOCK	*AD-400-MS-50-MTK-RHO-B	626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA ST-1944 SPEC ADD 01	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	GASKETING	429AA-S (HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

INSTALL SEAL BEFORE CLOSER.

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 02

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	ELEC OFFICE LOCK	*AD-400-MS-50-MTK-RHO-B	626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 02.1 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	ELEC OFFICE LOCK	*AD-400-MS-50-MTK-RHO-B	⚡ 626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 03

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	PA-AX-98-EO	ADD 01 626	VON
1	EA	EMERGENCY LOCKDOWN BUTTON	AD993 IPB RETROFIT KIT (HANDING AS REQ'D)	626	VON
1	EA	ELEC EXIT DEVICE TRIM	*AD-400-993R-70-MTK-RHO-B	⚡ 626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 03.1 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	PA-AX-98-EO	626	VON
1	EA	EMERGENCY LOCKDOWN BUTTON	AD993 IPB RETROFIT KIT (HANDING AS REQ'D)	626	VON
1	EA	ELEC EXIT DEVICE TRIM	*AD-400-993R-70-MTK-RHO-B	↗ 626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 03.2 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	FIRE EXIT HARDWARE	PA-AX-98-EO-F	626	VON
1	EA	EMERGENCY LOCKDOWN BUTTON	AD993 IPB RETROFIT KIT (HANDING AS REQ'D)	626	VON
1	EA	ELEC EXIT DEVICE TRIM	*AD-400-993R-70-MTK-RHO-B	↗ 626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 04

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-NL-OP-110MD ADD 01	626	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)	626	SCH
1	EA	SFIC RIM CYLINDER	80-159	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

HW SET: 05

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-NL-OP-110MD ADD 01	626	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)	626	SCH
1	EA	SFIC RIM CYLINDER	80-159	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	DOOR PULL	VR910 NL SNB	630	IVE
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

HW SET: 06

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
2	EA	CONT. HINGE	224XY EPT ADD 01	628	IVE
2	EA	POWER TRANSFER	EPT10 CON ADD 01	✓ 689	VON
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-98-EO-CON	✓ 626	VON
1	EA	ELEC PANIC HARDWARE	RX-QELX-PA-AX-98-NL-OP-110MD-CON ADD 01	✓ 626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	SFIC MORTISE CYL	80-132 (MULLION)	626	SCH
1	EA	SFIC RIM CYLINDER	80-159	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	DOOR PULL	VR910 DT SNB	630	IVE
1	EA	DOOR PULL	VR910 NL SNB	630	IVE
2	EA	SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA	MULLION SEAL	8780NBK PSA	BK	ZER
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER
4	EA	WIRE HARNESS	CON (LENGTH AS REQUIRED)		VON
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC ADD 01	✓	VON

CARD READER & WIRING BY DIVISION 28.

DOOR(S) NORMALLY CLOSED & LOCKED. PRESENTING VALID CREDENTIAL WILL MOMENTARILY UNLOCK DOOR FOR ENTRY. FREE EGRESS AT ALL TIMES.
 DOOR(S) CAN BE ELECTRICALLY DOGGED (UNLOCKED) THROUGH THE ACCESS CONTROL SYSTEM DURING NORMAL SCHOOL HOURS. AFTER HOURS DOORS ARE LOCKED (UNDOGGED). COORDINATE WITH ACCESS CONTROL. FREE EGRESS AT ALL TIMES.

HW SET: 07 - Not Used ADD 01

HW SET: 07.1 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 SH 4.5 X 4.5 NRP	630	IVE
1	EA	ELEC LOCK	*AD-400-MS-70-MTK-RHO-B	626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 SPEC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	GASKETING	429AA-S (HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

INSTALL SEAL BEFORE CLOSER.

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 08

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW SH 5 X 4.5 NRP	630	IVE
1	EA	ELEC LOCK	*AD-400-MS-70-MTK-RHO-B	626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA ST-1944 SPEC ADD 01	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	GASKETING	429AA-S (HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

INSTALL SEAL BEFORE CLOSER.

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

HW SET: 09 - Not Used ADD 01

HW SET: 10

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW 4.5 X 4.5	ADD 01	652	IVE
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-L-06		626	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)		626	SCH
1	EA	SFIC RIM CYLINDER	80-159		626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM		626	BES
1	EA	SURFACE CLOSER	4040XP TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)		626	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)		AA	ZER
1	SET	GASKETING	328AA-S (HEAD & JAMBS)		AA	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)		A	ZER

HW SET: 11

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	PUSH PLATE	8200 8" X 16"		630	IVE
1	EA	PULL PLATE	8302 10" 4" X 16"	ADD 01	630	IVE
1	EA	SURFACE CLOSER	4041 DEL TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER

SIGNAGE AS REQUIRED

HW SET: 12

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	STAFF PRIVACY	L9485L 06A L583-363 OS-OCC		626	SCH
1	EA	MORTISE CYLINDER	1E74 X SCHLAGE CAM		626	BES
1	EA	SURFACE CLOSER	4041 DEL TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER
1	EA	COAT AND HAT HOOK	582		626	IVE

SIGNAGE AS REQUIRED

HW SET: 13

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW 5 X 4.5		652	IVE
1	EA	PUSH PLATE	8200 8" X 16"		630	IVE
1	EA	PULL PLATE	8302 10" 4" X 16"	ADD 01	630	IVE
1	EA	OH STOP	100S		630	GLY
1	EA	SURFACE CLOSER	4041 DEL ST-1630 TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS		630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER
1	EA	COAT AND HAT HOOK	582		626	IVE

SIGNAGE AS REQUIRED

HW SET: 14

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK W/IND	L9040 06A L583-363 OS-OCC	ADD 01	626	SCH
1	EA	SURFACE CLOSER	4041 DEL EDA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	WALL STOP	WS406/407CCV		630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER
1	EA	COAT AND HAT HOOK	582		626	IVE

SIGNAGE AS REQUIRED

HW SET: 15

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5		652	IVE
1	EA	PRIVACY LOCK W/IND	L9040 06A L583-363 OS-OCC	ADD 01	626	SCH
1	EA	SURFACE CLOSER	4041 DEL EDA TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)		626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER
1	EA	COAT AND HAT HOOK	582		626	IVE

SIGNAGE AS REQUIRED

HW SET: 16

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY LOCK W/IND	L9040 06A L583-363 OS-OCC ADD 01	626	SCH
1	EA	SURFACE CLOSER	4041 DEL TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER
1	EA	COAT AND HAT HOOK	582	626	IVE

SIGNAGE AS REQUIRED

HW SET: 17

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW 5 X 4.5	652	IVE
1	EA	PRIVACY LOCK W/IND	L9040 06A L583-363 OS-OCC ADD 01	626	SCH
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER
1	EA	COAT AND HAT HOOK	582	626	IVE

HW SET: 18

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	ND75HD RHO XN12-035	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER

HW SET: 18A ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	ND75HD RHO XN12-035	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER

HW SET: 19

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ENTRANCE LOCK	ND53HD RHO	626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
3	EA	SILENCER	SR64/SR65	GRY	IVE

HW SET: 20

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	ND75HD RHO XN12-035	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER

HW SET: 21

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	ND75HD RHO XN12-035	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP TBSRT	689	LCN
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O

HW SET: 22 - Not Used ADD 01

HW SET: 23

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM SECURITY	ND75HD RHO XN12-035	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP H TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER

HW SET: 24

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70HD RHO	626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
3	EA	SILENCER	SR64/SR65	GRY	IVE

HW SET: 25

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ENTRANCE LOCK	ND53HD RHO	626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
3	EA	SILENCER	SR64/SR65	GRY	IVE

HW SET: 26

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
1	EA	CONT. HINGE	224XY	628	IVE
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-NL-OP-110MD ADD 01	626	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)	626	SCH
1	EA	SFIC RIM CYLINDER	80-159	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	DOOR PULL	VR910 NL SNB	630	IVE
1	EA	SURFACE CLOSER	4041 DEL TBSRT	689	LCN
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O

HW SET: 27

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70HD RHO	626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	OH STOP	90S	630	GLY
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64/SR65	GRY	IVE

HW SET: 28

ALL HARDWARE PROVIDED BY DOOR MANUFACTURER

HW SET: 29

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
2	EA	CONT. HINGE	224XY TWP CON	✓	628	IVE
1	EA	ELEC PANIC HARDWARE	RX-3549A-EO	✓	626	VON
1	EA	ELEC PANIC HARDWARE	RX-QEL-3549A-T-360T 24 VDC	✓	626	VON
1	EA	SFIC MORTISE CYL.	80-132		626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM		626	BES
2	EA	DOOR CONTACT	PROVIDED BY ACCESS CONTROL	✓	628	SCE
1	EA	POWER SUPPLY	PS902 900-2RS 120/240 VAC	✓		VON

RETROFIT EXISTING OPENING FOR CARD READER ACCESS CONTROL.
 CARD READER & WIRING BY DIVISION 28.
 VERIFY ALL HARDWARE IS COMPATIBLE WITH EXISTING DOOR/FRAME CONDITIONS PRIOR TO ORDERING HARDWARE.
 BALANCE OF HARDWARE IS EXISTING.
 DOOR(S) NORMALLY CLOSED & LOCKED. PRESENTING VALID CREDENTIAL WILL MOMENTARILY UNLOCK DOOR FOR ENTRY. FREE EGRESS AT ALL TIMES.

ADD 01

HW SET: 30 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW 4.5 X 4.5		652	IVE
1	EA	FIRE EXIT HARDWARE	PA-AX-98-L-BE-F-06		626	VON
1	EA	SURFACE CLOSER	4040XP TBSRT		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)		626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)		BK	ZER
1	EA	THRESHOLD	545A-223 (OR AS DETAILED)		A	ZER

HW SET: 31 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>		<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 SH 4.5 X 4.5 NRP		630	IVE
1	EA	STOREROOM LOCK	ND80HD RHO		626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM		626	BES
1	EA	LOCK GUARD	LG12		630	IVE
1	EA	SURFACE CLOSER	4040XP SCUSH ST-1595 SPEC		689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS		630	IVE
1	SET	GASKETING	429AA-S (HEAD & JAMBS)		AA	ZER
1	EA	DOOR SWEEP	39A		A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)		A	ZER

HW SET: 32 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PRIVACY LOCK W/IND	L9040 06A L583-363 OS-OCC	626	SCH
1	EA	SURFACE CLOSER	4041 DEL TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	MOP PLATE	8400 4" X 1" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	SET	GASKETING	328AA-S (HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER
1	EA	COAT AND HAT HOOK	582	626	IVE

SIGNAGE AS REQUIRED

HW SET: 33 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW 4.5 X 4.5	652	IVE
1	EA	ELEC OFFICE LOCK	*AD-400-MS-50-MTK-RHO-B	⚡ 626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP EDA TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	EA	GASKETING	488SBK PSA (HEAD & JAMBS)	BK	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28)

HW SET: 34 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	ELEC OFFICE LOCK	*AD-400-MS-50-MTK-RHO-B	626	SCE
1	EA	SFIC CONST. CORE	80-035		SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS436/FS438 (AS REQ'D)	626	IVE
1	SET	DOOR SEALS	PROVIDED BY ALUMINUM DOOR/FRAME MFG		B/O

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28)

HW SET: 35 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1HW SH 4.5 X 4.5 NRP	630	IVE
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-NL-OP-110MD	626	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)	626	SCH
1	EA	SFIC RIM CYLINDER	80-159	626	SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	DOOR PULL	VR910 NL SNB	630	IVE
1	EA	SURFACE CLOSER	4040XP EDA ST-1944 SPEC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS18S	BLK	IVE
1	EA	RAIN DRIP	142AA (OMIT @ OVERHANG)	AA	ZER
1	SET	GASKETING	429AA-S (HEAD & JAMBS)	AA	ZER
1	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

HW SET: 36 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	STOREROOM LOCK	ND80HD RHO	626	SCH
1	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
1	EA	SURFACE CLOSER	4040XP SCUSH TBSRT	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64/SR65	GRY	IVE

HW SET: E01

EXISTING HARDWARE TO REMAIN

HW SET: E02

EXISTING HARDWARE TO REMAIN

HW SET: E03

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
6	EA	HINGE	5BB1HW SH 5 X 4.5 NRP	630	IVE
1	EA	REMOVABLE MULLION	KR4954 STAB	689	VON
2	EA	PANIC HARDWARE	PA-AX-98-EO	626	VON
1	EA	MULLION STORAGE KIT	MT54	689	VON
1	EA	ELEC EXIT DEVICE TRIM	*AD-400-993R-70-MTK-RHO-B	626	SCE
1	EA	SFIC MORTISE CYL	80-132 (MULLION)	626	SCH
1	EA	SFIC CONST. CORE	80-035		SCH
2	EA	SFIC PERM CORE	MATCH EXISTING KEY SYSTEM	626	BES
2	EA	SURFACE CLOSER	4040XP EDA ST-1944 SPEC	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP	FS18S	BLK	IVE
1	SET	GASKETING	429AA-S (HEAD & JAMBS)	AA	ZER
2	EA	DOOR SWEEP	39A	A	ZER
1	EA	THRESHOLD	103A-223 (OR PER SILL DETAIL)	A	ZER

*AD-400 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28).

ADD 01

HW SET: G01 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
		SELF-CLOSING GATE HINGES	PROVIDED BY GATE FABRICATOR		B/O
2	EA	PANIC HARDWARE	LD-PA-AX-98-EO-WH	711	VON
1	EA	ELEC EXIT DEVICE TRIM	AD-400-993R-70-MTK-RHO-B 4AA	643e	SCE
			BATTERY		
1	EA	SFIC CONST. CORE	80-035		SCH
2	EA	DOOR CONTACT	PROVIDED BY ACCESS CONTROL	628	SCE

VIDEO/INTERCOM. REMOTE RELEASE BUTTON PROVIDED BY ACCESS CONTROL.

PROVIDE CENTER POST FOR PANIC HARDWARE.

PROVIDE MOUNTING PLATES AS REQUIRED.

BALANCE OF HARDWARE PROVIDED BY GATE FABRICATOR.

*AD-300 LOCK/TRIM IS LISTED FOR TEMPLATING PURPOSES ONLY. TO BE PROVIDED, INSTALLED, AND COMMISSIONED BY THE SECURITY CONTRACTOR (DIV 28)

DOOR NORMALLY CLOSED & LOCKED. PRESENTING VALID CREDENTIAL WILL MOMENTARILY UNLOCK DOOR FOR ENTRY. FREE EGRESS AT ALL TIMES.

HW SET: G02 ADD 01

<u>QTY</u>		<u>DESCRIPTION</u>	<u>CATALOG NUMBER</u>	<u>FINISH</u>	<u>MFR</u>
		SELF-CLOSING GATE HINGES	PROVIDED BY GATE FABRICATOR		B/O
1	EA	PANIC HARDWARE	CDSI-PA-AX-98-NL-OP-110MD- WH	US19/7 11	VON
1	EA	SFIC MORTISE CYL.	80-132 X XQ11-948 (DOGGING)	622	SCH
1	EA	SFIC RIM CYLINDER	80-159	622	SCH
2	EA	SFIC CONST. CORE	80-035		SCH
1	EA	DOOR PULL	VR910 NL SNB	630	IVE

PROVIDE MOUNTING PLATES AS REQUIRED.

BALANCE OF HARDWARE PROVIDED BY GATE FABRICATOR.

END OF SECTION 08 71 00

SECTION 221313 – SANITARY SEWERAGE SYSTEMS ADD 01

PART 1 – GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Site sanitary drainage piping, fittings, and accessories.
- 1.1.2 Connection of building sanitary drainage system to site sanitary sewers.
- 1.1.3 Connection of site sanitary drainage system to municipal sewers.
- 1.1.4 Manhole access and cleanout access.
- 1.1.5 Extent of sanitary sewage systems work is indicated on drawings and schedules, and by requirements of this section.
- 1.1.6 Refer to Section 312300 for excavation and backfill required for sanitary sewage systems; not work of this section.

1.2 QUALITY ASSURANCE

- 1.2.1 Manufacturer's Qualifications: Firms regularly engaged in manufacture of sanitary sewage system's products of types, materials, and sizes required, whose products have been in satisfactory use in similar service for not less than 5 years.
- 1.2.2 Installer's Qualifications: Firm with at least 3 years of successful installation experience on projects with sanitary sewage work similar to that required for project.
- 1.2.3 Codes and Standards:
 - 1.2.3.1 Comply with the applicable portions of the 2019 California Building Code (CCR Title 24, Part 2) Chapter 33.
 - 1.2.3.2 Coordinate work of this Section with Permit provisions of the State of California Water Resources Control Board Order Number 2012-0006-DWQ.
 - 1.2.3.3 The project Storm Water Pollution Prevention Plan.
 - 1.2.3.4 2019 California Plumbing Code (CCR Title 24, Part 5).
 - 1.2.3.5 Cal-OSHA.
 - 1.2.3.6 OSHA.
 - 1.2.3.7 ANSI A21.10
 - 1.2.3.8 AWWA Publications regarding pipe and installation;
 - 1.2.3.8.1 AWWA C 110.
 - 1.2.3.8.2 AWWA C 111.
 - 1.2.3.8.3 AWWA C 115.
 - 1.2.3.8.4 AWWA C 151.
 - 1.2.3.8.5 AWWA C 153.
 - 1.2.3.8.6 AWWA C 214
 - 1.2.3.8.7 AWWA C 503.

- 1.2.3.8.8 AWWA C 509.
- 1.2.3.8.9 AWWA C 511.
- 1.2.3.8.10 AWWA C 600.
- 1.2.3.8.11 AWWA C 651.
- 1.2.3.8.12 AWWA C 900.
- 1.2.3.8.13 AWWA C 901.
- 1.2.3.8.14 UNI - B - 3 with AWWA C 900.
- 1.2.3.9 American Society for Testing and Material publications;
 - 1.2.3.9.1 ASTM C12 - Practice for Installing Vitrified Clay Pipe Lines.
 - 1.2.3.9.2 ASTM C76 - Reinforced Concrete Culvert, Storm Drain, and Sewer Pipe.
 - 1.2.3.9.3 ASTM C425 - Compression Joints for Vitrified Clay Pipe and Fittings.
 - 1.2.3.9.4 ASTM C700 - Vitrified Clay Pipe, Extra Strength, Standard Strength and Perforated.
 - 1.2.3.9.5 ASTM D2321 - Recommended Practice for Underground Installation of Flexible Thermoplastic Sewer Pipe.
 - 1.2.3.9.6 ASTM D2751 - Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.
 - 1.2.3.9.7 ASTM D2774 - Recommended Practice for Underground Installation of Thermoplastic Pressure Piping.
 - 1.2.3.9.8 ASTM D3034 - Type PSM Poly(Vinyl Chloride) (PVC) Sewer Pipe and Fittings.
- 1.2.3.10 Sewer Purveyor Compliance: Comply with requirements of local sewer agency supplying sewer connections to project, obtain required permits and inspections.
- 1.2.3.11 Plumbing Code Compliance: Comply with applicable portions of National Standard Plumbing Code pertaining to selection and installation of storm sewage system's materials and products.
- 1.2.3.12 Environmental Compliance: Comply with applicable portions of local Environmental Agency regulations pertaining to storm sewage systems.

1.3 SUBMITTALS

- 1.3.1 Product Data: Submit manufacturer's technical product data and installation instructions for sewage system materials and products.
- 1.3.2 Record Drawings: At project close-out, submit record drawings of installed sanitary sewage piping and products, in accordance with requirements of Division 1.
- 1.3.3 Maintenance Data: Submit maintenance data and parts lists for sanitary sewage system materials and products. Include this data, product data, shop drawings, and record drawings in maintenance manual.

PART 2 – PRODUCTS

2.1 IDENTIFICATION

- 2.2.1 Underground-Type Plastic Line Markers: Manufacturer's standard permanent, bright-colored, continuous-printed plastic tape, intended for direct-burial service; metallic-lined, not less than 6" wide x 4 mils thick. Provide green tape with black printing reading "CAUTION - SEWER LINE BURIED BELOW".

2.2.1.1 Available Manufacturers: Subject to compliance with requirements, manufacturers offering identification markers which may be incorporated in the work include, but are not limited to, the following:

2.2.1.2 Manufacturer: Subject to compliance with requirements, provide identification markers of one of the following:

2.2.1.2.1 Terra Tape Sentry Line 1350

2.2.1.2.2 Allen Systems, Inc.

2.2.1.2.3 Emed Co., Inc.

2.2.1.2.4 Seton Name Plate Corp.

2.3 PIPES AND PIPE FITTINGS

2.3.1 General: Provide pipes of one of the following materials, of weight/class indicated. Provide pipe fittings and accessories of same material and weight/class as pipes, with joining method as indicated.

2.3.2 Vitrified Clay Pipe: ASTM C 700, bell and spigot ends, standard strength unless otherwise indicated.

2.3.2.1 Fittings: Vitrified clay bell and spigot, same strength as adjoining pipe, compression joints complying with ASTM C 425.

2.3.3 Polyvinyl Chloride (PVC) Sewer Pipe: ASTM D 3033, Type PSP, SDR 35; or ASTM D 3034, Type PSM, SDR 35.

2.3.3.1 Fittings: PVC, ASTM D 3033 OR ASTM D 3034, solvent-cement joints complying with ASTM D 2855 using solvent cement complying with ASTM D 2564; or elastomeric joints complying with ASTM D 3212 using elastomeric seals complying with ASTM F 477.

2.3.4 Polyvinyl Chloride (PVC) DWV Pipe: Schedule 80, ASTM D 2665.

2.3.4.1 Fittings: PVC Schedule 80, ASTM D 2665; solvent-cement joints, ASTM D 2664; or threaded joints.

2.3 SANITARY SEWER MANHOLE

2.3.1 General: Provide pre-cast reinforced concrete sanitary manholes as indicated, and complying with ASTM C 478.

2.3.2 Top: Pre-cast concrete, of concentric cone, eccentric cone, or flat slab top type, as indicated.

2.3.3 Base: Pre-cast concrete, with base riser section and separate base slab, or base riser section with integral floor, as indicated.

2.3.4 Steps: Ductile-iron or aluminum, integrally cast into manhole sidewalls.

2.3.5 Frame and Cover: Ductile-iron, 26" diameter cover, heavy-duty, indented top design, with lettering cast into top reading "SANITARY SEWER".

2.3.6 Pipe Connectors: Resilient, complying with ASTM C 923.

2.4 CLEANOUTS

- 2.4.1 General: Provide as indicated, pipe extension to grade with ferrule and countersunk cleanout plug. Provide round cast-iron access frame over cleanout, with heavy-duty secured scoriated cover with lifting device.

PART 3 – EXECUTION

3.1 EXAMINATION

- 3.1.1 Verify that trench cut is ready to receive work, and excavations, dimensions, and elevations are as indicated on Drawings.
- 3.1.2 Beginning of installation means acceptance of existing conditions.

3.2 PREPARATION

- 3.2.1 Hand trim excavations to required elevations. Correct over excavation with fill material or sand.
- 3.2.2 Remove large stones or other hard matter, which could damage drainage pipe or impede consistent backfilling or compaction.
- 3.2.3 Install bedding as specified in Section 312300.

3.3 INSTALLATION OF IDENTIFICATION

- 3.3.1 General: During back-filling/top-soiling of storm drainage systems, install continuous metallic lined underground warning tape, located directly over buried line at 6" to 8" below finished grade. Tape shall be polyethylene with metallic core, 6 inches wide by 4 mils thick, solid blue color with continuously printed caption in black letters "CAUTION – SEWER LINE BURIED BELOW."

3.4 INSTALLATION OF PIPE AND PIPE FITTINGS

- 3.4.1 General: Install piping in accordance with Section 306, of the Standard Specifications for Public Works Construction. Seal joints water tight.
- 3.4.2 Surveyor Qualifications
 - 3.4.2.1 Surveyor shall currently be licensed in the State of California as a Professional Land Surveyor.
 - 3.4.2.2 Surveyor shall employ proper field procedures, instrumentation and adequate survey personnel in order to achieve accuracies as required by each section.
 - 3.4.2.3 Cut sheets, if required, shall be provide to the Inspector of Record at the start of the following business day after completion of the work.
- 3.4.3 Sanitary Sewer Staking:
 - 3.4.3.1 Stakes shall be located with positional accuracies of a minimum of 0.04 feet horizontally and 0.01 feet vertically.
 - 3.4.3.2 One set of construction stakes with lath shall be set. Lath shall indicate offset, cut/fill, and reference point, i.e. "TC", "FL".

- 3.4.3.3 Stakes shall be provided for sewer lines at a maximum interval of 25 feet, grade breaks, angle points, manholes, cleanouts, clarifiers and building points of connection.
- 3.4.3.4 Construction stakes shall be offset to the side of the utility at a distance from centerline designated by contractor and agreed to by surveyor prior to commencement of staking.
- 3.4.3.5 Surveyor shall provide to the Inspector of Record cut sheets for all staking. The contractor shall not commence work until Inspector of Record has provided copies of said cut sheets.
- 3.4.3.6 All stakes shall be preserved in place until such time that the Inspector of Record has approved utility installation for backfilling.
- 3.4.3.7 All utilities to be installed at slopes less than 0.01 feet per foot shall be certified by the construction surveyor. Written certification shall be provided to the Inspector of Record and Construction Manager.
- 3.4.3.8 Should a dispute arise over the position of the utility in question and the stakes provided for said installation are removed, destroyed, or disturbed, the contractor assumes full responsibility for all cost associated with the resolution of the dispute.
- 3.4.4 Inspect piping before installation to detect apparent defects. Mark defective materials with white paint and promptly remove from site.
- 3.4.5 Lay piping beginning at low point of system, true to grades and alignment indicated, with unbroken continuity of invert.
- 3.4.6 Place bell ends or groove ends of piping facing upstream.
- 3.4.7 Install gaskets in accordance with manufacturer's recommendations for use of lubricants, cements, and other special installation requirements.
- 3.4.8 Plastic Pipe: Install in accordance with manufacturer's installation recommendations, and in accordance with ASTM D 2321.
- 3.4.9 Cleaning Piping: Clear interior of piping of dirt and other superfluous material as work progresses. Maintain swab or drag in line and pull past each joint as it is completed.
 - 3.4.9.1 In large, accessible piping, brushes and brooms may be used for cleaning.
 - 3.4.9.2 Place plugs in ends of uncompleted conduit at end of day or whenever work stops.
 - 3.4.9.3 Flush lines between manholes if required to remove collected debris.
- 3.4.10 Joint Adaptors: Make joints between different types of pipe with standard manufactured adaptors and fittings intended for that purpose.
- 3.4.11 Interior Inspection: Inspect piping to determine whether line displacement or other damage has occurred.
- 3.4.12 Make inspections after lines between manholes, or manhole locations, have been installed and approximately 2' of backfill is in place, and again at completion of project.

3.4.12.1 If inspection indicates poor alignment, debris, displaced pipe, infiltration or other defects, correct such defects, and re-inspect.

3.4.13 Close open ends of piping with threaded metal caps, plastic plugs, or other acceptable methods for size and type material being closed. Wood plugs are not acceptable.

3.5 SANITARY MANHOLES AND CLEANOUTS

3.5.1 General: Place pre-cast concrete sections as indicated. Where manholes and cleanouts occur in pavements, set tops of frames and covers flush with finish surface. Elsewhere, set tops 2" above finish surface, unless otherwise indicated.

3.5.2 Spacing of manhole and cleanouts shall be a minimum as indicated by the Uniform Plumbing Code.

3.5.3 Form bottom of excavation clean and smooth to correct elevation.

3.5.4 Form and place cast-in-place concrete base pad, with provision for sanitary sewer pipe end sections

3.5.5 Install in accordance with ASTM C 891.

3.5.6 Provide rubber joint gasket complying with ASTM C 443 at joints of sections.

3.5.7 Apply bituminous mastic coating at joints of sections.

3.5.8 Establish elevations and pipe inverted for inlets and outlets as indicated.

3.5.9 Mount lid and frame level in grout, secured to top cone section to elevation indicated.

3.6 TAP CONNECTIONS

3.6.1 Make connections to existing piping and underground structures, so that finished work will conform as nearly as practicable to requirements specified for new work.

3.6.2 Use commercially manufactured wyes for branch connections. Field cutting into piping will not be permitted. Spring wyes into existing line and encase entire wye, plus 6" overlap, with not less than 6" of 3,000-psi 28-day compressive strength concrete.

3.6.3 Branch connections made from side into existing 4" to 21" piping shall have wye sprung into existing line, and entire wye encased with not less than 6" of 3,000 psi 28-day compressive strength concrete.

3.6.4 Take care while making tap connections to prevent concrete or debris from entering existing piping or structure. Remove debris, concrete, or other extraneous material, which may accumulate.

3.6.5 Contractor shall be responsible for all coordination with the local sewer agency connections to be made to public mains.

3.7 BACKFILLING

3.7.1 General: Conduct backfilling operations of open-cut trenches closely following laying, jointing, and bedding of pipe, and after initial inspection and testing are completed.

3.7.2 To minimize local area traffic interruptions, allow no more than 100' between pipe laying and point of complete backfilling.

3.8 FIELD QUALITY CONTROL

- 3.8.1 Testing: Perform pressure testing of completed piping in accordance with the provisions of the project specifications prior to backfilling.
- 3.8.2 Request inspections by project Geotechnical Engineer during all backfill operations.

END OF SECTION

SECTION 28 10 00 – ACCESS CONTROL ADD 01

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes:
 - 1. Verkada cloud-based access control solution including cloud-based management platform using Verkada Command and the Verkada Pass App
 - 2. AC12 1-Door Controller
 - 3. AC41 4-Door Controller
 - 4. AC42 4-Door Controller
 - 5. Integration with Allegion Schlage AD Series (AD300, AD400, PIM400) Electronic Locks
 - 6. Allegion Schlage MTB Series Card Readers
 - 7. Verkada Badge Printing Software
 - 8. Allegion Schlage Access Control Credentials
 - 9. Verkada Access Control accessories
- B. Related Sections
 - 1. 28 05 11 Cyber Security Requirements for Electronic Safety and Security
 - 2. 28 06 10 Schedules for Access Control
 - 3. 28 13 00 Access Control Software and Database Management
 - 4. 28 15 00 Integrated Access Control Hardware Devices
 - 5. 28 15 23 – Intercom Entry Systems
 - 6. 28 17 11 – Visitor Management Systems
 - 7. 28 20 00 – Video Surveillance
 - 8. 28 30 00 – Environmental Sensor
 - 9. 28 31 00 – Intrusion Detection

1.02 REFERENCES

- A. Published specifications, standards, tests, codes, or recommended standards of trade, industry, or governmental organizations apply to work in these Sections, including:
 - 1. ADA – Americans with Disabilities Act
 - 2. ANSI – American National Standards Institute
 - 3. ASCII – American Standard Code for Information Interchange
 - 4. ASTM – American Society for Testing and Materials
 - 5. IBC – International Building Code
 - 6. IEEE – Institute of Electrical and Electronics Engineers
 - 7. ISO/IEC – International Organization for Standardization / International Electrotechnical Commission
 - 8. NEC – National Electrical Code
 - 9. NEMA – National Electrical Manufacturers' Association
 - 10. NFPA – National Fire Protection Association
 - 11. TIA/EIA – Telecommunications Industry Association / Electronic Industries Alliance
 - 12. UL – Underwriters Laboratories, Inc.

1.03 DEFINITIONS

- A. Abbreviations:
 - 1. ACS – Access Control System
 - 2. API – Application Programming Interface
 - 3. DHCP – Dynamic Host Configuration Protocol
 - 4. DPDT – Double pole, double throw
 - 5. IP – Internet Protocol
 - 6. LAN – Local Area Network
 - 7. LPR – License Plate Recognition

8. NFC – Near Field Communications
9. NVR – Network Video Recorder
10. ODBC – Open Database Connectivity
11. RAM – Random Access Memory
12. SPDT – Single pole, double throw
13. SSL – Secure Sockets Layer
14. SSO – Single sign-on
15. TCP – Transport Control Protocol
16. UPS – Uninterruptible Power Supply
17. VMS – Video Management System

B. Definitions:

1. ABA Track: Magnetic stripe that is encoded on track 2, at 75-bpi density in binary-coded decimal format.
2. Proximity Readers and Credentials: Readers and cards employing 125 KHz communication to validate when the card is presented within the proximity of the card reader.
3. Smart Card Readers and Contactless credentials: Readers and cards employing 13.56 MHz encrypted communication to validate when the card is presented within the proximity of the card reader.
4. Credential: Data assigned to an entity and used to identify that entity.
5. Trigger: Enables an action or a series of actions that are sent across any or all controllers, readers, contacts, or relays throughout the system. Triggers can be used to send commands to change the state of a door, multiple doors, contact states, relay states, shunt points, lockdowns or to activate predetermined overrides.
6. Pass-Through: The ability assigned to a person's credential that allows them to access a door even if in lockdown state.
7. Lockdown: An input or a credential that allows the system to be placed into a lockdown state.
8. Wiegand: Patented magnetic principle that originally used specially treated wires embedded in the credential card. Today Wiegand has become the communication standard for most reader heads.

1.04 SYSTEM DESCRIPTION

- A. Cloud-based electronic access control platform, controllers, access control credential readers, and bridging hardware necessary to provide integrated access control for entry points.
- B. Bridging to Fire Life Safety systems, video surveillance, and alarms.
- C. Verkada Command: Access Control Cloud-Based Management Software
 1. Set up new devices.
 2. Create and manage sites at scale.
 3. One-click device install:
 - a. Add devices without assigning a site or configuring the device upfront.
 - b. New devices will be added to and "Unassigned Devices" list.
 - c. Immediately check if device is online and see live data.
 4. User Management and Permissions
 - a. Import Users via CSV or add users manually.
 - b. Manage Users and Groups automatically with 3rd party IDPs via SCIM including (but not limited to) Okta, Azure AD, CyberArk.
 - c. Control door access via user groups and Access Levels.
 - d. Assign multi-format Credentials including cards, pins, and mobile Bluetooth access.
 - e. Bulk CSV credential upload.
 - f. Support bulk upload of User Photos for use in system display and card management.
 5. Door and Peripheral Management
 - a. Catalog events including live and historical footage.

- b. Filter by events such as unlocks, door opens, and access granted or denied.
 - c. Create custom lock / access control / unlock / card + pin code schedules.
 - d. Door access reports.
 - e. Programmable inputs and outputs.
 - f. Cross-device programmable AUX outputs.
 - g. Support for elevators security via configurable outputs.
 - h. Support for in/out doors (i.e., inbound reader and outbound reader).
 - i. Anti-passback monitoring and enforcement.
 - j. Programmable double badge functionality to override a door schedule.
 - k. Person of Interest (POI) and License Plate of Interest (LPOI) alerts
6. Video Integration
 - a. Associate existing Verkada cameras with doors.
 - b. Add multiple cameras to see events from multiple angles.
 - c. Video events associated with any individual.
 7. Site Management
 - a. Manage admins on a site-by-site basis. Allow certain Users the ability to manage one site and not another.
 - b. Support for different Admin roles within the management platform.
 - c. Passkeys: log into Command web or app with a fingerprint, face scan, or security key.
 - d. Temporary User Accounts: create temporary user accounts for installers, contractors, and support staff.
 - e. Session Management Tools: set maximum session duration, idle timeout, maximum concurrent sessions, and maximum login attempts.
 8. Alerting and Events
 - a. Configure real-time alerts via SMS or email.
 - b. Set up and configure alerts for access control, cameras, alarms, and environmental sensors from the Alerts page in Command.
 - c. Configurable alerts based on Door Held Open / Door Forced Open, Access Granted, Door Opens, Lockdowns, Offline, Aux Trigger, User Unlock Attempt, or Tailgate.
 - d. Alerts can be configured to only dispatch on a configurable schedule.
 - e. Automated responses to alerts.
 9. Lockdown Capabilities
 - a. Trigger a Lockdown via a wired button, wireless button, mobile app, or web.
 - b. System supports configurable User Groups to trigger Lockdowns.
 - c. System supports configurable User Groups for Access during Lockdowns.
 - d. System supports configurable User Groups for resolving / disabling Lockdowns.
 10. Reporting
 - a. Standard reporting and export of data.
 - b. System support Roll Call / Mustering Reporting.
 - c. Support for saved report filters with scheduled delivery.
 11. Floorplans
 - a. Provide a visualization of a physical security system and a live dashboard of activity.
 - b. Place a door on a floorplan and edit its size, orientation, and door style.
 - c. Select any door to instantly bring up a live feed from its context camera and to remote unlock.
 - d. In events mode, each door displays its current status.
 12. Application Programming Interface
 - a. User API: access and modify user entities within Verkada Command (get, delete, activate, deactivate, modify).
 - b. Access Control API: access and modify user access control permissions, credentials, and access groups. Enables integrations with third-party user management systems.

- c. Events Webhook: allows Verkada to send access control events programmatically, in real time, to a URL endpoint.
 - 13. Remote Access
 - a. Web app access.
 - b. Native apps for iOS, Android, and the Verkada VX52 Viewing Station.
 - c. Consistent features across web and mobile versions of Command, including full Alarms functionality.
- D. Verkada Pass App Touchless Entry via BLE
 - 1. Verkada Pass App for either iOS or Android facilitates access control events through either tapping from inside the app or through Touchless Access via Bluetooth.
- E. License Plate Recognition Unlock
 - 1. LPR unlock utilizes a peer-to-peer communication protocol to facilitate secure device-to-device interactions between LPR-enabled CB52 and CB62 bullet cameras and Verkada's AC42 and AC62 door controllers.
 - 2. LPR camera results can be used as an input method for a gate, unlocking that gate anytime an authorized license plate is verified by the access controller.
 - 3. License plates can be added to any access user profile. All unlock events from a license plate are attributed to an access user.
- F. AWS GovCloud:
 - 1. Optional for US government deployments.
 - 2. Continuous monitoring of the system.
 - 3. FIPS encryption in transit and at rest.
 - 4. Strengthened session and identity management capabilities.

1.05 SUBMITTALS

- A. Provide the following submittals for review and approval:
 - 1. Product Data and Shop Drawings
 - 2. System Programming
 - 3. Operation and Maintenance Manuals (O&M's)
 - 4. "As-Built" Record Drawings
- B. Submit Product Data and Shop Drawings submittals for review and approval prior to commencement of work:
 - 1. Manufacturer's name, brand name, exact part number, options, accessories, and catalog cutsheet references for all equipment supplied including cabling. Include manufacturer's published installation instructions. Indicate UL listings for system components.
 - 2. Complete wiring diagrams for all components, including cable types and quantities, routings, floor plans indicating device locations, conduit sizes, and point-to-point termination and riser diagrams.
 - 3. Device legend on the shop drawings that identifies the symbols used for all devices including mounting heights, back box requirements, part and model numbers, operating voltages (if applicable), wire and cabling requirements, label text, and panel termination points.
 - 4. Fully dimensioned shop drawings including floorplans, enlarged plans, elevations, and installation details of all security devices, equipment rooms and closets, consoles, controllers, racks, enclosures, and fabricated equipment, showing locations of all major components including mounting details. Indicate UL system and rating listings for penetration firestop systems through rated partitions and floors.
 - 5. Bill of Materials.
 - 6. Material Safety Data Sheets (MSDS) for fire stopping materials and sealants.
- C. Submit System Programming submittals for review and approval prior to commencement of work:
 - 1. Proposed programming, including nomenclature conventions, device names and text descriptions, timings, camera call-up trigger alarms with associated cameras, and sequence of operations.

2. Approved device names and text descriptions as programmed into the security systems shall be reflected on the "As-Built" Record Drawings as well as on device and cable labels.
- D. Submit Operation and Maintenance Manuals (O&M's) submittals for review and approval prior to the completion of the project:
 1. Updated product data and shop drawings submittals reflecting the final conditions.
 2. Warranty letter with start and end date.
 3. Warranty service and maintenance contact information: including names, address, phone number, and website address. Provide specific instructions or forms as required to initiate a trouble ticket or work order request.
 4. Letter indicating that all software and licensing is the sole property of the Owner.
 5. Troubleshooting checklist information.
 6. Replacement parts and consumables ordering information including the contact information for local sources.
 7. Provide an updated System Programming submittal including:
 - a. Final listing of doors, locations, and normal status in CSV format.
 - b. System administration and management operating instructions.
 - c. Setting up Users, User Groups, Access Levels, Doors, Door Schedules, and Exceptions
 - d. Assigning Access Groups to all Users.
 - e. Monitoring system activity.
 - f. Running standard reports.
 - g. Setting up logins and permissions.
- E. Submit "As-Built" Record Drawings submittals for review and approval prior to the completion of the project:
 1. Maintain a complete set of "As-Built" Record Drawings at the project site updated with mark-ups of the actual installation conditions.
 2. Prior to the completion of the project transfer all installation conditions mark-ups to electronic drawings and submit to the Owner in CAD and PDF formats.

1.06 QUALITY ASSURANCE

- A. Equipment shall be tested and found to comply with the limits for a Class A or B digital device, pursuant to part 15 of the FCC rules.
- B. Security technology devices shall be mounted using compatible Verkada accessories.
- C. Security technology devices shall be of the latest technology. No discontinued models or products are acceptable.
- D. Installation technicians shall successfully complete the Verkada Certified Engineer (VCE) program prior to starting work. For more information, visit www.verkada.com/partners/trainings.
- E. Contractor qualifications:
 1. Minimum of two years of system design, engineering supervision, and installation experience in the access control industry.
 2. Maintain a local office, with a service center staffed by trained technicians and must be adequately equipped to provide emergency phone service within 24 hours on a 24-hour, 365 days per year basis, whether or not the Owner purchases a maintenance contract with the Contractor.
 3. Maintain an inventory of spare parts and other items critical to system operation, as necessary to meet the emergency service requirements.
 4. Maintain an in-house engineering and project management capability consistent with the requirements of this project.

5. Provide a project manager who is actively engaged in the project. This person shall be the same individual throughout the course of the project and shall be the person responsible for the scheduling of the system programming, preparation of the submittals and project close-out documentation, training programs, system testing and report documentation, and the coordination of all subcontract labor. The Owner reserves the right to approve the Contractor's project manager.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Ship equipment in original packaging to prevent damage. All handling shall be in accordance with manufacturer recommendations. Inspect all products and materials for any damage immediately upon delivery to the project site.
- B. Provide protective covering during construction.
- C. Replace equipment and products damaged during shipping, handling, distribution, storage, installation, or construction with new equipment and products.
- D. Equipment and products stored at the project site or at an off-site location shall be protected from dust, dirt, and foreign matter. Protect equipment and products from water, damage, dents, bumps, and scratches.

1.08 SCHEDULING

- A. Submit proposed construction schedule detailing the task milestones, durations, and sequences for the project for review and approval prior to commencement of work.
- B. When work is performed in a sensitive area or in an area occupied with ongoing business activities coordinate with the Owner and the affected department's representative to determine the best time to perform the work required.

1.09 WARRANTY

- A. Provide one-year parts and labor project warranty. Parts and labor shall be guaranteed against defects in materials and workmanship for one year from written notification of acceptance.
- B. All Verkada hardware purchases are backed by a 10-year limited warranty. For more information, visit www.verkada.com/support/end-user-agreement/.

PART 2 - PRODUCTS (TO BE OWNER FURNISHED, CONTRACTOR INSTALLED**)**

2.01 MANUFACTURER

- A. Manufacturer shall be Verkada Inc.
 1. Headquarters: 405 E 4th Ave. San Mateo, CA 94401
 2. Toll Free: (888) 829-0668
 3. General: team@verkada.com
 4. Sales: sales@verkada.com
 5. Website: www.verkada.com
- B. Non-Verkada Inc. products shall be limited to those identified as compatible within the product descriptions below.

2.02 LICENSING

- A. Provide all required licenses for the specified system components.
- B. All system component licenses shall be [1-year|3-year|5-year|10-year] licenses.
- C. All system monitoring licenses shall be [LIC-BB Basic Alarm License | LIC-B Standard Alarm License | LIC-BV Premium Alarm License | Custom Video Monitoring].

2.03 DOOR CONTROLLERS

- A. AC12 1-Door Controller by Verkada Inc.
 1. Description: access control hardware controller provides power and control for standalone doors.
 2. Technical Specifications
 - a. Power Consumption:
 - i. 15W Max (on PoE)

- ii. 28W Max (on PoE+)
 - iii. 60W Max (on PoE++ with PoE passthrough camera)
 - b. Power Input:
 - i. IEEE 802.3af/at/bt PoE, PoE+, PoE++ (37VDC — 57VDC), 600mA maximum per pair; 12VDC with 2.5A minimum current
 - c. Inputs:
 - i. 2x REX inputs
 - ii. 1x DPI input
 - iii. 1x AUX input
 - d. Readers:
 - i. 2x 12VDC @ 250mA Verkada / RS-485 ports 2x 12VDC @ 250mA 2x Wiegand ports
 - e. Relay Outputs:
 - i. 1x wet or dry relay per door
 - ii. Wet relay switch-selectable power:
 - A) 12VDC operation @ 700mA maximum
 - B) 24VDC operation @ 350mA maximum
 - iii. 1x auxiliary dry relay
 - iv. Dry relay max pass-through power: 24VDC @ 2A (resistive load)
 - f. Dimensions:
 - i. Length: 175.5mm / 6.9in
 - ii. Width: 55.3mm / 2.2in
 - iii. Height: 175.4mm / 6.9in
 - g. Weight: 1.3kg / 2.9lbs
 - h. Operating Temperature: 0°C - 50°C (32°F - 122°F)
 - i. Operating Humidity: 5 - 85% Humidity
 - j. Compliance:
 - i. FCC Part 15B Class B
 - ii. ICES-003 Class B
 - iii. CE
 - iv. UKCA
 - v. VCCI
 - vi. RCM
 - vii. UL 294
 - viii. CAN-ULC 60839-11-1
 - ix. UL 62368-1
 - x. CSA C22.2 No. 62368-1
 - xi. IK06
 - xii. Compliant with requirements of UL 2043
 - k. Connectivity:
 - i. Ethernet: 10/100/1000 Mbps RJ-45 for network connection
 - ii. USB: USB 2.0
 - l. Included Accessories:
 - i. T10 security Torx screwdriver
 - ii. Mounting hardware kit
 - m. Mounting Hardware: 6-32 machine screws, M4 wall screws, wall anchors
 - n. Network Settings:
 - i. An Ethernet connection with DHCP must be used to connect the AC12 to the Local Area Network (LAN).
 - ii. Firewall settings: TCP port 443, UDP port 123 (NTP time synchronization), MAC address presence for single port in passthrough mode
- B. AC41 4-Door Controller by Verkada Inc.
 - 1. Description: access control hardware controller provides power and control for up to 4 sets of access control hardware. Provides fire alarm interface and auxiliary signal integration into the access control system.

2. Technical Specifications
 - a. Power Consumption (at 10-14V):
 - i. No Readers: 1000mA
 - ii. 4 Wiegand Readers: 2200mA
 - b. Power Supply: 160W PSU (capped at 100W for safety)
 - c. Relays:
 - i. Dry (External Power Supply): 6 Relays – 4 Door, 2 AUX at 500mA / 30VDC
 - ii. Wet (Powered by AC41): 12V - 700mA per relay max, 24V - 350mA per relay max
 - d. Inputs: Nominal 5VDC: 1Kohm to each input (resistors built-in)
 - e. Contact Sensors: 4 Contact Sensors: Nominal 5VDC, 1Kohm to each input (resistors built-in)
 - f. Dimensions:
 - i. With Mount:
 - A) Length: 415.6mm / 16.36in
 - B) Width: 319.6mm / 12.58in
 - C) Height: 111.74mm / 4.4in
 - ii. Without Mount:
 - A) Length: 415.6mm / 16.36in
 - B) Width: 319.6mm / 12.58in
 - C) Height: 105.74mm / 4.16in
 - g. Weight: 8.5kg / 18.74lb
 - h. Operating Temperature: 0°C to 50°C / 32°F to 122°F
 - i. Operating Humidity: 5% to 90%
 - j. Compliance:
 - i. FCC, CE
 - ii. UL 294
 - iii. UL 62368-1/CSA C22.2
 - iv. CAN/ULC-60839-11-1:2016
 - v. NDAA
 - k. Connectivity:
 - i. Ethernet: 100/1000Mbps RJ-45 cable connector for network connection
 - ii. USB: USB 2.0
 - l. Included Accessories:
 - i. Setup guide
 - ii. Screw pack
 - m. Mounting Hardware: Dry wall anchors (M8) and screws (M5)
 - n. Network Settings:
 - i. An Ethernet connection with DHCP must be used to connect the AC41 to the Local Area Network (LAN).
 - ii. Firewall settings: TCP port 443, UDP port 123 (NTP time synchronization)
- C. AC42 4-Door Controller by Verkada Inc.
 1. Description: access control hardware controller provides power and control for up to 4 sets of access control hardware. Provides fire alarm interface and auxiliary signal integration into the access control system.
 2. Technical Specifications
 - a. Power Consumption: 60W maximum
 - b. AC Power Input:
 - i. 100 to 240VAC
 - ii. 50 / 60Hz
 - iii. 1.5A maximum
 - c. AUX Power: 1x 12V @ 250mA
 - d. Inputs:
 - i. 2x REX dry inputs per door
 - ii. 1x DPI dry input per door

- iii. 2x auxiliary dry inputs
- e. Readers:
 - i. 1x reader port (Verkada/RS-485 or Wigand) per door
 - ii. Reader current consumption must be less than 250mA per reader.
 - iii. Maximum of 4 readers powered simultaneously.
- f. Dry Relays:
 - i. Dry relay max pass-through power: 24VDC @ 2A (resistive load)
 - ii. 2x auxiliary dry relays
- g. Wet Relays:
 - i. Wet relay switch-selectable power:
 - A) 12V operation: 700mA maximum
 - B) 24V operation: 350mA maximum
- h. Contact Sensors:
 - i. 4x contact sensors
 - ii. Nominal 5VDC
 - iii. 1Kohm to each input (resistors built-in)
- i. Dimensions:
 - i. With Mount:
 - A) Depth: 116.25mm / 4.6in
 - B) Width: 321mm / 12.6in
 - C) Height: 417mm / 16.4in
- j. Weight: 6.35kg / 13.9lb
- k. Operating Temperature: 0°C to 50°C / 32°F to 122°F
- l. Operating Humidity: 5% to 90%
- m. Compliance:
 - i. FCC, CE
 - ii. UL 294
 - iii. UL 62368-1/CSA C22.2
 - iv. CAN/ULC-60839-11-1:2016
 - v. NDAA
- n. Connectivity:
 - i. Ethernet: 100/1000Mbps RJ-45 cable connector for network connection
 - ii. USB: USB 2.0
- o. Included Accessories:
 - i. Lock key
 - ii. Flat head screwdriver
- p. Mounting Hardware: Mounting plate and 4 wood screws
- q. Network Settings:
 - i. An Ethernet connection with DHCP must be used to connect the AC41 to the Local Area Network (LAN).
 - ii. Firewall settings: TCP port 443, UDP port 123 (NTP time synchronization)

2.04 INTEGRATED CARD READER DOOR LOCKS

- A. Compatible electromagnetic lock integration:
 - 1. Connect doors secured by locks to the same Access Control Unit.
 - 2. Configure doors from Verkada Command web interface.
 - 3. Manage all doors and ACUs in Schlage mode Verkada Command cloud-based platform.
- B. Compatible Electromagnetic Locks:
 - 1. Allegion:
 - a. Schlage AD Series (AD300, AD400, PIM400-485)
 - i. Refer to Allegion Schlage documentation for hardware installation.

- ii. The Schlage AD series of locks come in two major variants, the AD400 wireless lockset and the AD300 wired lockset. The AD400 wireless lock connects to the Verkada AC41 through a wireless bridge called the PIM 400-485. The AD300 wired locks connect directly to the AC41. Both solutions communicate with the AC41 over RS485 via the aux RS485 port on the AC41 (the last cassette).
- iii. The Schlage AD series of locks has the AD400 wireless lockset and the AD300 wired lock set. They act the same to the end user. The only difference is the AD300 wires directly to the AC41 via RS485 and the AD400 connects to the AC41 through a wireless bridge called the PIM-400-485. The configuration process in Command is identical with the exception of selecting Wireless (AD400) or Wired (AD300) in Command when adding the locks.
- iv. The Schlage AD400 wireless lockset is configured using SUS-A Cable, and the Schlage Utility Software (SUS) which is a free Android app (there is no iOS app).

2.05 MULTI-FORMAT CARD READERS

A. MTB Series by Schlage

- 1. Description:
 - a. Access control credential readers to read data from presented access control credentials of multiple formats, communicate with Verkada Command access control database, and validate access to associated hardware.
 - b. Two-way communication with an integrated LED to display door status for entry and events.
 - c. Accessed and managed from Verkada Command.
- 2. Technical Specifications:
 - a. Dimensions:
 - i. Mullion(MTB11):
 - A) Length: 5.91in
 - B) Width: 1.72in
 - C) Height: 0.81in
 - ii. Single Gang(MTB15):
 - A) Length: 5.10in
 - B) Width: 3.25in
 - C) Height: 0.76in
 - b. Low Frequency Credential Formats:
 - i. HID Prox II 26-Bit (H10301)
 - c. High Frequency Credential Formats:
 - i. 13.56 MHz MiFare DESFire EV3/EV1 (Schlage Secure Sector)
 - ii. 13.56 MHz MiFare DESFire (CSN)
 - iii. 13.56 MHz Mifare Classic (Schlage Secure Sector)
 - iv. 13.56 MHz NFC (mobile)
 - v. 2.45 GHz Bluetooth (mobile)
 - d. Ratings:
 - i. IP65
 - e. Reference Standards:
 - i. UL 294 - Standard for Access Control System Units
 - ii. ISO
 - A) 14443A - Cards and security devices for personal identification — Contactless proximity objects
 - B) 15693 - Identification cards — Contactless integrated circuit cards — Vicinity cards
 - iii. FCC - 47 CFR Part 15 (Class B)
 - iv. EN 60529 Degrees of protection provided by enclosures – IP65
 - v. Directive 2002/95/EC Restriction of Hazardous Substances (RoHS)
 - f. Operating Temperature: -40° to 70°C / -40° to 158°F

- g. Controller Compatibility: Requires Verkada AC41/AC42 Access Control Unit
- h. Mounting Hardware:
 - i. Single gang mounting plate
 - ii. Mullion mounting plate
- i. Power Consumption: 5-28VDC, 190mA max
- j. Tamper: Integral tamper switch
- k. Warranty:
 - i. Limited lifetime warranty to the original end-user purchaser ("Original Purchaser") of Schlage Networked Reader, against defects in materials and workmanship under normal use and service.

2.06 BADGE PRINTING SOFTWARE

- A. Verkada Badge Printing Software by Verkada Inc.
 - 1. Description:
 - a. Verkada's badge printing software is a modern, simplified way to design and print employee and student badges. With badge printing, Verkada Access Control customers can now easily design, print and administer credentials across both physical badges and the Verkada Pass App, directly through Verkada Command.
 - 2. Key Features:
 - 3. Simplified Badge Printing: By embedding badge printing software within Verkada's user interface, customers can now manage the entire workflow with Verkada Command, saving time and software costs. Customers can design and print badges that leverage existing user profiles, active directory integrations, and of course, access control configurations — all from Verkada Command.
 - 4. Printer Agnostic: Verkada's badge printing solution is also printer agnostic and is compatible with most popular badge printers. Customers simply need to ensure that the badge printer driver is correctly installed on their computer and that their browser is able to recognize it. For customers without an existing badge printer, we have a recommended list of printers available on the Verkada Docs Page of our website.
 - 5. Automated Profiles with SCIM: Verkada's badge printing software extends the capabilities of Verkada Access Control and Automated user creation through Verkada's SCIM integration and bulk user import functionality. Verkada Access Control customers can automatically synchronize their user profiles from single sign-on service providers like Okta and Azure Active Directory to more easily manage and manage user credentials.
 - 6. Verkada Prox and NFC Cards: Verkada badge printing can print to any standard badge type supported on Verkada Access control — a full list is available on the Verkada website.

2.07 ACCESS CONTROL CREDENTIALS

- A. Schlage 13.56 MHz Mifare DesFIRE EV3 Encrypted Credentials
 - 1. Description: High frequency smart access control credential in a card format with embedded MIFARE DESFire EV3 chip.
 - 2. Technical Specifications:
 - a. Model Number:
 - i. Clamshell Cards: 8443 (3.37"H x 2.125"W x 0.075"D)
 - ii. ISO Printable Cards: 8543 (3.37"H x 2.125"W x 0.033"D)
 - iii. Fobs: 8643T (1.77"H x 1.18"W x 0.11"D)
 - b. Chip: MIFARE DESFire EV3
 - c. Encryption: AES 128-Bit
 - i. The Manufacturer shall offer Owner the option to take sole possession of the encryption keys
- B. Schlage 125 kHz Proximity Credentials
 - 1. Description: Standard 26-Bit Prox Format access control credential in a card format with embedded T5577 chip.
 - 2. Technical Specifications:

- a. Model Number:
 - i. Clamshell Cards: 7410 (3.37"H x 2.125"W x 0.075"D)
 - ii. ISO Printable Cards: 7510 (3.37"H x 2.125"W x 0.033"D)
 - iii. Fobs: 7610T (1.77"H x 1.18"W x 0.11"D)
- b. Base Part Number – PN: 2A-68001-A
- c. Descriptor: Proximity Cards
- d. Chip: T5577
- e. Format: Standard 26-Bit prox
- f. Compatibility: Standard FSK Prox

PART 3 - EXECUTION

3.01 INSTALLERS

- A. Installation shall be performed by technicians that have successfully completed the Verkada Certified Engineer (VCE) program. For more information, visit <http://www.verkada.com/partners/trainings>.

3.02 EXAMINATION

- A. Installation surfaces shall be clean and free from dust, dirt, and obstructions.
- B. Examine pathway elements intended for cables. Check raceways, cable trays, and other elements for compliance with space allocations, installation tolerances, hazards to cable installation, and other conditions affecting installation.
- C. Examine rough-in for LAN and control cable conduit systems to server, PCs, controllers, card readers, and other cable-connected devices to verify actual locations of conduit and back boxes before device installation.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 PREPARATION

- A. Refer to the Verkada Quick Start Guide applicable to each product.
- B. Pre-Installation Conference: Prior to installation arrange conference between supplier, Owner, and related trades to review materials, procedures, and coordinating related work.
- C. Furnish or coordinate any inserts required for building into concrete, masonry, and other work, to support and attach work of this Section. Furnish or coordinate in ample time to comply with schedule of work into which inserts are built.
- D. Verify that power and outlets are in correct locations.
- E. Verify that building structure is properly prepared for mounting, attachment, and support of equipment.
- F. Prior to installation of systems components and devices, verify all required preparations have been properly performed and that substrates are acceptable for installation.
 1. Verify all rough-ins and field dimensions.
- G. Report in writing to the Owner's representative any prevailing conditions that will adversely affect satisfactory execution of work in this Section.
 1. Owner or their representative reserves the right to review proposed methods of construction and installation, reject proposed methods, and have the installation done in a satisfactory method at the Contractor's cost.

3.04 INSTALLATION

- A. Refer to the Verkada Quick Start Guide applicable to each product.
- B. For support, proceed to www.verkada.com/support.
- C. Sequencing: The work shall be performed in the following sequence, unless directed otherwise by Owner or their representative:
 1. Installation of cables, controllers, and power supplies.
 2. Installation of new field devices and new readers.
 3. Installation of front-end equipment.
 4. Commissioning of the new system components.
 5. End User training

- D. Install work in accordance with manufacturer's recommendations and instructions as well as final shop drawings. All controllers and power supplies should be installed so as to allow easy access for service in the future.
- E. Anchor components securely in place, plumb, level, and accurately aligned.
- F. For card readers located in equipment traffic areas, and that are exposed to damage due to collision or impact from forklifts, or manually moved carts, carriers, or other equipment used by the Owner, provide protective bollards, railings, coverings etc. to ensure that all card readers installed are properly protected from such damage.
- G. Provide fastenings, plates, and other incidental items required for complete and operational installation.
- H. Provide required electrical work in accordance with Code requirements.
- I. Security and protection:
 - 1. Maintain strict security during the installation of equipment and software. Rooms housing the control station, and workstations that have been powered up shall be locked and secured during periods when a qualified operator in the employ of Contractor is not present.
 - 2. Equipment protection: Provide protective covers, fenders, and barriers as necessary to maintain work of this Section in same condition as installed until time of substantial completion.
- J. Cable requirements:
 - 1. Twisted, shielded, plenum-rated type cable shall be used.
 - 2. All exposed cables shall be in rigid conduit, electrical metallic tubing (EMT) raceway, or wire mold as approved by the Owner.
 - 3. All concealed cables routed in j-hook pathways shall be fastened to the structure at least every four feet.

3.05 LABELING

- A. Equipment and product labels shall be printed on self-adhesive labels. Hand written labels or writing directly on the equipment enclosures is not acceptable.
- B. Label equipment and products with the device address as programmed into the security systems and as reflected on the "As-Built" Record Drawings.
- C. Label networked equipment enclosures with the IP address.
- D. Cables shall be individually labeled at origin and termination.

3.06 PROGRAMMING

- A. Add all Verkada Access Controllers and Cameras to Owner's Verkada Command via serial number.
- B. Coordinate with the Owner to verify appropriate network connections for new components.
- C. Coordinate with the Owner to verify proper programming for new components into the system.
- D. Change default passwords to new, custom, secure passwords in compliance with any Owner password standards for endpoint devices.
- E. Complete all Verkada Command configuration programming, including but not limited to:
 - 1. Integrations with owner software systems, such as Microsoft Single Sign-On, Active Directory, or others. Coordinate with Owner for which compatible platforms.
 - 2. Verkada Command user information, including:
 - a. User groups
 - b. Username format
 - c. Number of users
 - d. User accounts
 - 3. Access system configuration, including:
 - a. Normal operating schedule
 - b. Holiday schedule
 - c. Access groups
 - d. Special system configurations, such as *Lockdown* or *Evacuation*

- e. Integrations with life safety systems, such as access control overrides from fire evacuation alarm events.

3.07 ACCEPTANCE TESTING

- A. Final Test and Acceptance Plan
 1. Develop a final test and acceptance plan to identify each new system component, intent of test, test method, and expected results.
 2. Each component listed in the plan shall include space for test part signatures, brief comments, time of test and pass/fail check boxes.
 3. Test all equipment, products, and devices in accordance with the plan to ensure completely operational and fully functional security systems. Submit a written final test and acceptance report for review and approval.
 4. The report shall be submitted to the Owner's representative at least 30 days prior to the scheduled system acceptance test.
 5. System acceptance of the access control system shall be conditioned upon successful completion and operational demonstration of all system functions and components as documented in the final test and acceptance report.
- B. System Acceptance
 1. System acceptance shall not occur until after the following activities have been successfully completed:
 2. Correction of all deficiencies and punch list items noted on the final test and acceptance report.
 3. Acceptance of final test and acceptance report.
 4. Acceptance of all project close-out submittals.
 5. Delivery of final project close-out documentation.
 6. Successful training and demonstration, including operation of systems, systems administration, and system management.
 7. Purging of Contractor user privileges and return of all credentials.

3.08 OWNER PERSONNEL TRAINING

- A. On-site operator training:
 1. Instruct operating staff in proper operation, including hands-on training.
 2. Minimum of two, four-hour sessions covering the operations for each system installed.
 3. Training sessions shall be provided to supervisors, end-user staff, security staff, maintenance personnel, IT personnel, and any other personnel designated by the Owner.
 4. Provide training sessions on all work shifts, including day, evening, and night shifts.
- B. On-site administrator training:
 1. Instruct security system administrators for each system installed, including hands-on training.
 2. Minimum of two, four-hour sessions covering the operations for each system installed.
 3. Training shall cover all administrative and management functions, including features and controls, for each system.
- C. Documentation:
 1. Provide owner with system component installation, configuration, and programming documentation, including but not limited to:
 - a. Components:
 - i. model name
 - ii. model number
 - iii. manufacturer
 - iv. serial number
 - v. installation location
 - vi. installation network port name
 - vii. installation network port location
 - viii. network address(es)
 - b. Network port configurations

- c. Verkada Command users:
 - i. Usernames
 - ii. Passwords
 - iii. User groups
 - iv. User group permissions
- d. Access control system configurations:
 - i. Schedules
 - ii. Holidays
 - iii. Event logic
 - iv. Alarm logic
- e. Access control users:
 - i. Groups
 - ii. Group permissions
 - iii. Individual
 - iv. Individual permissions.

END OF SECTION 28 10 00

GEOTECHNICAL INVESTIGATION

Rosemead Adult Center Expansion
4105 Rosemead Boulevard
Rosemead, California

El Monte Union High School District
c/o DLR Group
3537 Johnson Avenue
El Monte, California 91731

Date: November 17, 2022 Revised
MTGL Project No.: 6920A08
MTGL Log No.: 22-0502-R2



MTGL, Inc.
2992 East La Palma Avenue, Suite A
Anaheim, California 92806
714.632.2999 | www.mtglinc.com





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OFFICE LOCATIONS

**ORANGE COUNTY
CORPORATE BRANCH**

2992 E. La Palma Avenue
Suite A
Anaheim, CA 92806
Tel: 714.632.2999
Fax: 714.632.2974

**SAN DIEGO
IMPERIAL COUNTY**

6295 Ferris Square
Suite C
San Diego, CA 92121
Tel: 858.537.3999
Fax: 858.537.3990

INLAND EMPIRE

14467 Meridian Parkway
Building 2A
Riverside, CA 92518
Tel: 951.653.4999
Fax: 951.653.4666

**OC/LA/INLAND EMPIRE
DISPATCH**

800.491.2990

SAN DIEGO DISPATCH

888.844.5060

www.mtglinc.com

June 15, 2022

Revised November 17, 2022

MTGL Project No.: 6920A08

MTGL Log No.: 22-0502-R2

DSA LEA No.: 44 (Anaheim)

Roberto Marquez, Project Manager
El Monte Union High School District
c/o DLR Group
3537 Johnson Avenue
El Monte, CA 91731

Subject: **GEOTECHNICAL INVESTIGATION**
Rosemead Adult Center Expansion
4105 Rosemead Boulevard, Rosemead, California 91770

Dear Mr. Marquez,

In accordance with your request and authorization, we have completed a Geotechnical Investigation for the subject site. We are pleased to present the following report which includes existing site conditions, results of our field exploration and laboratory testing, and our conclusions and recommendations for grading and foundations design.

The project is located at 4105 Rosemead Boulevard in the city of Rosemead, County of Los Angeles, California. It is our understanding that the project will consist of the design and construction of a new, approximately 10,000 square feet building expansion on the north side of the existing two story building. In addition, seismic upgrades on the existing building will be performed which are assumed not to affect or change the building's footprint. Preliminary plans were not available for review at the time of our investigation. The purpose of our work was to provide conclusions and recommendations regarding the geotechnical aspects of the project.

We explored the subsurface conditions beneath the site by drilling three (3) borings to depths of approximately 11½- to 51½-feet below the existing ground surface using a truck-mounted drill rig equipped with a hollow-stem auger. In addition, three (3) electronic cone penetrometer soundings were advanced to a maximum depth of approximately 65-feet utilizing a truck mounted cone penetrometer rig. Our field engineer logged the borings and collected samples of the materials encountered in the borings for laboratory testing. Our laboratory subsequently tested selected samples from the borings to evaluate pertinent soil classification and engineering properties to assist in developing geotechnical conclusions and recommendations.

The materials encountered in the borings consisted primarily of fill and alluvium. The fill extended to approximate depths of 2-feet below the existing ground surface and consisted of loose silty sands. The alluvium underlying the fills consisted of sands, silty sands, and sands with gravel. Groundwater was not encountered during our field investigation.

Based on our investigation, the site will be suitable for construction, provided the recommendations presented herein are incorporated into the plans and specifications for the proposed construction.

The main geotechnical considerations affecting the planned development are the presence of compressible fills and potentially liquefiable soils. The fills should be excavated below the proposed expansion structure and any settlement-sensitive improvements. The foundations for new structures should consist of conventional foundations with grade beams designed to resist the anticipated static and dynamic settlements presented herein. The recommendations presented in this report will need to be updated once final plans are developed.

We appreciate this opportunity to be of continued service and look forward to providing additional consulting services during the planning and construction of the project. Should you have any questions regarding this report, please do not hesitate to contact us at your convenience.

Respectfully submitted,
MTGL, Inc.



Jay Rowerdink, E.I.T.
Staff Engineer



Isaac Chun, P.E., G.E.
Vice President | Engineering Manager



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ATTACHMENTS:

Figure 1 – Site Location Map

Figure 2 – Boring Location Map

Figure 3A – Cross Section A-A’

Figure 3B – Cross Section B-B’

Figure 4 – Retaining Wall Drainage Detail

Appendix A – References

Appendix B – Field Investigation

Appendix C – Laboratory Testing

Appendix D – General Earthwork and Grading Specifications

Appendix E – Liquefaction and Dynamic Settlement Analysis

Appendix F – Geologic Hazard Evaluation & Site Specific Ground Motion Hazard Analysis

1.00 INTRODUCTION

In accordance with your request and authorization, MTGL, Inc. has completed a Geotechnical Investigation for the subject site. The following report presents a summary of our findings, conclusions and recommendations based on our investigation, laboratory testing, and engineering analysis.

1.01 PLANNED CONSTRUCTION

The project consists of design and construction of a new, approximately 10,000 square feet expansion building on the north side of the existing two story building. In addition, seismic upgrades on the existing building will be performed which are assumed not to affect or change the building's footprint.

1.02 SCOPE OF WORK

The scope of our Geotechnical services included the following:

- Review of geologic, seismic, ground water and geotechnical literature.
- Logging, sampling, and backfilling of three (3) exploratory borings drilled with an 8-inch hollow stem auger drill rig to a maximum depth of 51½-feet below existing grades.
- Advancement of three (3) electronic cone penetrometer tests to a maximum depth of 65-feet below existing grades.
- Laboratory testing of representative samples (See Appendix C).
- Geotechnical engineering review of data and engineering recommendations.
- Preparation of this report summarizing our findings and presenting our conclusions and recommendations for the proposed construction.

1.03 SITE DESCRIPTION

The project is located at 4105 Rosemead Boulevard in the city of Rosemead, California. It is bounded by Newby Avenue to the north, Rosemead Boulevard to the east, Bentel Avenue to the south, and residential properties to the west. The approximate site location is shown on the accompanying Site Location Map (Figure 1). The site is currently used by Pasadena City College as a classroom building.

1.04 FIELD INVESTIGATION

Prior to the field investigation, a site reconnaissance was performed by a staff engineer from our office to mark the boring locations, as shown on the boring location plan, and to evaluate the locations with respect to obvious subsurface structures and access for the drilling rig. Underground Service Alert was then notified of the marked location for utility clearance. In addition, the County and/or City Department of Environmental Health Services (DEHS) was contacted, and a well drilling permit was obtained prior to conducting the drilling investigation.

Our subsurface investigation consisted of drilling exploratory borings utilizing a truck mounted drill rig equipped with an 8-inch diameter hollow stem auger and advancing electronic cone penetrometer tests with a cone penetrometer drill rig. See Appendix B for further discussion of the field exploration including logs of test borings.

Borings were logged and sampled using Modified California Ring (Ring) and Standard Penetration Test (SPT) samplers at selected depth intervals. Samplers were driven into the bottom of the boring with successive drops of a 140-pound weight falling 30-inches. The number of blows required to drive the last 12-inches of the 18-inch Ring and SPT samplers are shown on the boring logs in the “blows/foot” column (Appendix B). SPT was performed in the borings in general accordance with the American Standard Testing Method (ASTM) D1586 Standard Test Method. Representative bulk soil samples were also obtained from our borings.

Each soil sample collected was inspected and described in general conformance with the Unified Soil Classification System (USCS). The soil descriptions were entered on the boring logs. All samples were sealed and packaged for transportation to our laboratory. After completion of drilling, borings were backfilled with cement slurry in accordance with DEHS requirements.

1.05 LABORATORY TESTING

Laboratory tests were performed on representative samples to verify the field classification of the recovered samples and to determine the geotechnical properties of the subsurface materials. All laboratory tests were performed in general conformance with ASTM or State of California Standard Methods. The results of our laboratory tests are presented in Appendix C of this report.

2.00 FINDINGS

2.01 SUBSURFACE CONDITIONS

A total of three exploratory borings and three electronic cone penetrometers were advanced at the subject site, to a maximum depth of 65 feet. CPT-3 encountered refusal at 15-feet below existing ground surface. The onsite soils consisted of loose- to medium-dense fills underlain by medium- to very-dense alluvium. Boring and sounding locations and pertinent data for each boring and sounding is presented in the table below.

SUMMARY OF SUBSURFACE SOIL CONDITIONS

Boring No.	Drilled Depth (ft)	Latitude (Deg)	Longitude (Deg)	Surface Conditions	Existing Ground Elevation (ft)	Approximate Thickness of Fill (ft)	Groundwater Depth Below Ground Surface (ft)
B-1	51½	34.0824	-118.0738	Asphalt	326	2	None
B-2	11½	34.0824	-118.0736	Asphalt	325	2	None
B-3	11½	34.0820	-118.0738	Asphalt	325	2	None
CPT-1	65	34.0822	-118.0738	Asphalt	325	N/A	None
CPT-2	58	34.0825	-118.0736	Asphalt	325	N/A	None
CPT-3	15	34.0825	-118.0737	Asphalt	327	N/A	None

- **Fill** - Fill was encountered in all of the borings. The fill encountered in the borings extended to depths up to about 2-feet below the existing ground surface. The fill consisted of loose- to medium-dense silty sand.
- **Alluvium** - The fill is underlain by native alluvium. The alluvium generally consisted of medium- to very-dense sands and silty sands with layers of loose sands.

The subsurface soils encountered were generally at or above their optimum moisture content. Expansion testing of representative materials indicates a very low expansion index when tested in accordance with ASTM D4829.

2.02 SURFACE AND GROUNDWATER CONDITIONS

No areas of ponding or standing water were present at the time of our study. Further, no springs or areas of natural seepage were found.

According to the California Division of Mines and Geology (1998), historic high groundwater levels in the immediate site vicinity are on the order of 30-feet below ground surface. At the time of our field investigation, groundwater was not encountered in any of the borings to a depth of 51½-feet.

2.03 FLOODING POTENTIAL

According to the Federal Emergency Management Agency, the subject site is not located within the boundaries of a 100-year flood (Community Panel No. 06037C1675F, 2008). The site is shown to be located within "Zone X," which is defined as "Areas determined to be outside the 0.2% annual chance floodplain." However, during peak periods of rainfall heavy runoff could be anticipated and should be properly evaluated by the project civil engineer.

2.04 LIQUEFACTION POTENTIAL

Liquefaction is a phenomenon wherein earthquake induced ground vibrations increase the pore pressure in saturated, granular soils until it is equal to the confining, overburden pressure. When this occurs, the soil can completely lose its shear strength and enter a liquefied state. The possibility of liquefaction is dependent upon grain size, relative density, confining pressure, saturation of the soils, strength of the ground motion and duration of ground shaking. In order for liquefaction to occur three criteria must be met: underlying loose, coarse-grained (sandy) soils, a groundwater depth of less than about 50-feet and a nearby large magnitude earthquake.

The liquefaction analysis was conducted in general accordance with the recommended procedures for implementation of DMG Special Publication 117A (CGS, 2008). Our analysis was based on a historic high groundwater table of 30-feet, an earthquake magnitude of 6.9 (based on the seismic de-aggregation analysis), and an estimated Peak Ground Acceleration of 0.86g.

Based on our analysis of the soil types encountered during the field investigation at the site, there is a potential for liquefaction within the sand and silty sand layers. The seismically induced settlement is on the order of 3.35-inches, with differential settlements assumed to be 2/3 of the total settlement (2.2-inches across 40-feet). Our detailed analysis is presented in Appendix E.

3.00 CONCLUSIONS

3.01 GENERAL CONCLUSIONS

Based on our Geotechnical review of the planned construction, it is our opinion that the site is suitable for the proposed construction provided our conclusions are taken into consideration during design, and our recommendations are incorporated into the construction plans and specifications and implemented during grading and construction.

The main geotechnical considerations affecting the planned development are the presence of compressible fills and potentially liquefiable soils. The fills should be excavated below the proposed expansion structure and any settlement-sensitive improvements. The foundations for new structures should consist of conventional foundations with grade beams designed to resist the anticipated static and dynamic settlements presented herein. The recommendations presented in this report will need to be updated once final plans are developed.

3.02 SEISMIC DESIGN PARAMETERS

A geologic hazard likely to affect the project is ground shaking as a result of movement along an active fault zone in the vicinity of the subject site (USGS, 2020). Based on the subsurface conditions encountered during our investigation, the site may be classified as site class D.

3.02.1 SEISMIC DESIGN PARAMETERS

The mapped site coefficients and maximum considered earthquake (MCE) spectral response acceleration parameters in accordance with the 2019 CBC and ASCE 7-16 are presented below:

2019 CALIFORNIA BUILDING CODE – MAPPED SITE COEFFICIENTS

Site Coordinates		
Latitude	Longitude	
34.0822°	-118.0739°	
Site Coefficients and Spectral Response Acceleration Parameters		Values
Site Class		D
Site Coefficients, F_a		1.0
Site Coefficients, F_v		*See Note 1
Mapped Spectral Response Acceleration at Short Period, S_s		1.967g
Mapped Spectral Response Acceleration at 1-Second Period, S_1		0.711g
Mapped Design Spectral Acceleration at Short Period, S_{DS}		1.260g
Design Spectral Acceleration at 1-Second Period, S_{D1}		*See Note 1
Peak Ground Acceleration, PGA_m		0.86g
Shear-Wave Velocity, V_{S100}		1,129 ft/s
Risk Category		III

* Note 1 – ASCE 7-16, Section 11.4.8. A site-specific ground motion analysis is required to be performed in accordance with Section 21 unless exempted in accordance with Section 20.3.1.

3.02.2 SITE SPECIFIC GROUND MOTION ANALYSIS

For a site class D, a site-specific ground motion analysis is required to be performed in accordance with the requirements of 2019 CBC and ASCE 7-16. As part of the site-specific analysis, base ground motions were evaluated in conjunction with both a Probabilistic Seismic Hazard Analysis (PSHA) and a Deterministic Seismic Hazard Analysis (DSHA) to characterize earthquake ground shaking that may occur at the site during future seismic events.

Based on the PSHA and DSHA models, the Site-Specific Risk-Targeted Maximum Considered Earthquake (MCER) was taken as the lesser of the spectral response accelerations from the PSHA and DSHA. The design response spectrum and design acceleration parameters were calculated in accordance with the procedures of ASCE 7-16. The site coefficients and maximum considered earthquake spectral response acceleration parameters are presented below. Detailed analysis with tabulated values and plots are included in Appendix F.

ASCE 7-16 SITE SPECIFIC SEISMIC PARAMETERS

Site Coefficients and Spectral Response Acceleration Parameters	Values
Site Class	D
Site Specific Site Coefficient, F_v	1.7
Site-Specific Design Spectral Acceleration at 1-Second Period, S_{D1}	0.95g
Site Specific Peak Ground Acceleration, PGA	0.86g

3.03 BEARING FAILURE

When liquefaction occurs, the soil can completely lose its shear strength and lose its capacity to support the structure resulting in a foundation bearing failure. Lightweight structures which are embedded in liquefiable soil and extend below the groundwater table contain large void spaces which may “float” or lift up and out of the ground surface during or after an earthquake. Based on our analysis, the potential for bearing capacity failure due to liquefaction is low.

3.04 LATERAL SPREADING (LATERAL DISPLACEMENT)

Lateral spreading is a condition where a relatively stiff block of soil moves laterally toward a free face or slope on a liquefied zone of subsurface soil. Lateral spreads generally develop along gentle slopes and move toward a free face such as an incised river channel. Lateral spreads can cause significant horizontal movement causing fissures, and scarps to develop at the surface. Lateral spreads have been observed to disrupt foundations located across a failure, to rupture sewers, pipelines and other utilities and compress or buckle structures at the toe of the spread. Due to the low gradient of the site, the potential for lateral spreading is considered negligible.

3.05 LIFELINE HAZARDS

Liquefaction, lateral spreading, and seismically induced settlement of structures may also pose problems for streets and lifelines. Specifically, natural gas pipelines may break and catch fire during an earthquake and water lines may break preventing firefighters from accessing water. Therefore, consideration should be given to providing isolated and flexible connections for gas and water utility lines as a preventive measure.

4.00 RECOMMENDATIONS

Our recommendations are considered minimum and may be superseded by more conservative requirements of the architect, structural engineer, building code, or governing agencies. The foundation recommendations are based on the expansion index and shear strength of the onsite soils. Import soils, if necessary, should be a very low expansion potential and should be approved by the Geotechnical Engineer prior to importing to the site. In addition to the recommendations in this section, additional general earthwork and grading specifications are included in Appendix D.

4.01 EXCAVATION CHARACTERISTICS AND SHRINKAGE ESTIMATES

Our exploratory borings were advanced with some difficulty, but no oversize materials were encountered in our subsurface investigation. Accordingly, we expect that all earth materials will be rippable with conventional heavy duty grading equipment and oversized materials are not expected.

Shrinkage is the decrease in volume of soil upon removal and re-compaction expressed as a percentage of the original in-place volume, which will account for changes in earth volumes that will occur during grading. Our estimate for shrinkage of the onsite fill and native soils are expected to range from 15- to 20-percent.

4.02 SETTLEMENT CONSIDERATIONS

Foundations should be designed to resist the anticipated settlements. Static settlement of an individual foundation member will vary depending on the plan dimensions of the foundation and the actual load supported.

We estimate maximum static settlement of foundations designed and constructed in accordance with the recommendations presented to be on the order of 1-inch. Differential settlement between similarly loaded and adjacent footings are expected to be less than ½-inch across 40-feet, provided footings are founded on similar materials. Static settlement of all foundations is expected to occur rapidly and should be essentially complete shortly after initial application of the loads.

Seismically induced settlement occurs most frequently in areas of high seismicity that are underlain by loose, granular sediments. An analysis of the seismically induced settlement indicates that vertical movement due to seismically induced settlement is on the order of 3.35-inches, with differential settlements between similarly loaded and adjacent footings expected to be approximately 2.2-inches across 40-feet. Ground improvements should be considered to reduce the seismically induced settlement to tolerable values.

4.03 SITE CLEARING

All surface vegetation, trash, debris, asphalt concrete, Portland cement concrete and underground pipes should be cleared and removed from the proposed construction site. Underground facilities such as utilities, pipes or underground storage tanks may exist at the site. Removal of underground tanks is subject to state law as regulated by the County, City and/or Fire Department. If storage tanks containing hazardous or unknown substances are encountered, the proper authorities must be notified prior to any attempts at removing such objects.

Any water wells, if encountered during construction, should be exposed, and capped in accordance with the requirements of the regulating agencies.

Depressions resulting from the removal of foundations of existing buildings, underground tanks, and pipes, buried obstructions and/or tree roots should be backfilled with properly compacted material.

4.04 SITE PREPARATION

All fill materials should be compacted to at least 90-percent of maximum dry density as determined by ASTM Test Method D1557. Fill materials should be placed in loose lifts, no greater than 8-inches prior to applying compactive effort. All engineered fill materials should be moisture-conditioned and processed as necessary to achieve a uniform moisture content that is near optimum moisture content and within moisture limits required to achieve adequate bonding between lifts.

4.05 REMOVALS AND OVEREXCAVATION

Structural plans, grading plans and foundation elevations were not available at the time of our investigation. Therefore, once formal plans are prepared and available for review, this office should review these plans from a geotechnical viewpoint, comment on any changes, and revise the recommendations of this report, as necessary.

All vegetation, asphalt paving, trash and debris should be cleared from the grading area and removed completely from the site. Any existing utilities or conduits that extend beyond the limits of the proposed construction area should be removed completely or abandoned in place and plugged with a non-shrink cement grout.

Prior to placement of compacted fills, all non-engineered fills and loose, porous, or compressible soils will need to be over-excavated down to competent ground.

Shoring and/or underpinning of any adjacent existing buildings or improvements within close proximity to the grading area may be required prior to performing any over-excavations and/or removals.

4.05.1 STRUCTURES SUPPORTED ON CONVENTIONAL FOUNDATIONS

Existing fills and underlying loose native soils should be excavated in their entirety beneath the proposed buildings and other settlement sensitive structures to expose competent native materials. Over-excavations on the order of 3-feet below the bottom of footings are anticipated. Horizontally, excavations should extend at least 5-feet outside the perimeter footings, or up to existing improvements, whichever is less.

4.05.2 NON-STRUCTURAL AREAS

Non-structural areas such as sidewalks and other miscellaneous flatwork areas including all paved areas will require a minimum depth of 2-feet of removal and re-compaction below the lowest adjacent grade. Processing for hardscape areas should extend a minimum distance of -feet outside the hardscape limits.

The exposed soils beneath all over-excavation and in cut areas not otherwise requiring over-excavation should be scarified to a minimum depth of 12-inches, moisture conditioned and compacted to a minimum of 90-percent relative compaction.

The above recommendations are based on the assumption that soils encountered during field exploration are representative of soils throughout the site. Removal and over-excavation depths must be verified, and adjusted if necessary, at the time of grading.

4.06 FILL MATERIALS

Removed and/or over-excavated soils, except for roots, debris, and rocks greater than 6-inches, may be used as compacted fill. Material with an expansion index of 20 or less, as determined by ASTM D4829, should be placed, and compacted from 2-feet below the deepest planned footing bottom to finished pad grade elevation. Concrete slabs should be underlain by at least 2-feet of material with an expansion index of 20 or less. Based on our field investigation, we expect that most of the onsite materials will meet this expansion index criteria.

Prior to placing fill, exposed surfaces at the bottom of the excavations should be scarified to a depth of 8-inches, moisture conditioned to near optimum moisture content, and compacted to at least 90% relative compaction. Fill should be placed in horizontal lifts at a thickness appropriate for the equipment spreading, mixing, and compacting the material, but generally should not exceed 8-inches in loose thickness. Fill should be moisture conditioned to near optimum moisture content and compacted to at least 90-percent relative compaction. Fill should be benched into sloping ground inclined steeper than 5:1 (horizontal to vertical). The maximum dry density and optimum

moisture content for evaluating relative compaction should be determined in accordance with ASTM D1557.

Utility trench backfill beneath structures, pavements and hardscape should be compacted to at least 90-percent relative compaction. The top 12-inches of subgrade beneath pavements should be compacted to at least 95-percent.

4.07 EXPANSIVE SOILS

To reduce the potential for expansive heave, soils with an expansion index greater than 20 should be excavated a minimum 2-feet below the planned structure or exterior slab subgrade elevations. Horizontally, excavations should extend at least 2-feet outside the perimeter of the slab or up to temporary shoring or existing improvements, whichever is less. Granular material with an expansion index of 20 or less should be used as replacement fill.

4.08 IMPORTED SOILS

Imported soil should consist of predominately granular soil, free of organic matter and rocks greater than 4-inches. Imported soil should have an expansion index of 20 or less and should be inspected and, if appropriate, tested prior to transport to the site

4.09 OVERSIZED MATERIALS

Excavations may generate oversized material. Oversized material is defined as rocks or cemented clasts greater than 6-inches in largest dimension. Oversized material should be broken down to no greater than 6-inches in largest dimension for use in fill, used as landscape material, or disposed of off-site.

4.10 TEMPORARY EXCAVATIONS

Temporary excavations 3-feet deep or less can be made vertically. Deeper temporary excavations in fill should be laid back no steeper than 1:1 (horizontal:vertical). The faces of temporary slopes should be inspected daily by the Contractor's Competent Person before any personnel are allowed to enter the excavation. Zones of potential instability, sloughing, or raveling should be brought to the attention of the engineer and corrective action implemented before personnel begin working in the excavation. Excavated soils should not be stockpiled behind temporary excavations within a distance equal to the depth of the excavation. MTGL should be notified if other surcharge loads are anticipated so that lateral load criteria can be developed for the specific situation. If temporary slopes are to be maintained during the rainy season, berms are recommended along the tops of slopes to prevent runoff water from entering the excavation and eroding the slope faces.

Slopes steeper than those described above will require shoring. Additionally, temporary excavations that extend below a plane inclined at 1½:1 (horizontal:vertical) downward from the outside bottom edge of existing structures or improvements will require shoring. Soldier piles and lagging, internally braced shoring or trench boxes could be used. If trench boxes are used, the soil immediately adjacent to the trench box is not directly supported. Ground surface deformations immediately adjacent to the pit or trench could be greater where trench boxes are used compared to other methods of shoring.

4.11 TEMPORARY SHORING

For design of cantilevered shoring, an active soil pressure equal to a fluid weighing 40 pcf can be used for level retained ground or 60 pcf for 2:1 (horizontal:vertical) sloping ground. The surcharge loads on shoring from traffic and construction equipment adjacent to the excavation can be modeled by assuming an additional 2-feet of soil behind the shoring.

For design of soldier piles, an allowable passive pressure of 300 psf per foot of embedment over 2.5 times the pile diameter or the spacing of the piles, whichever is less, up to a maximum of 4,000 psf can be used for soil above the groundwater level. An allowable passive pressure of 150 psf per foot of embedment over 2.5 times the pile diameter or the spacing of the piles, whichever is less, up to a maximum of 2,000 psf can be used for soil below the groundwater level. Hydrostatic pressure should be applied below the groundwater level.

Soldier piles should be spaced at least three pile diameters, center to center. Continuous lagging will be required throughout. The soldier piles should be designed for the full-anticipated lateral pressure; however, the pressure on the lagging will be less due to arching in the soils. For design of lagging, the earth pressure but can be limited to a maximum value of 400 psf.

Installation of soldier piles below groundwater (or dewatered soil) will require special construction techniques and equipment, such as temporary casing and/or drilling slurry to cope with groundwater and potential heavy caving. Other installation methods may be available. Contract documents should specify that the contractor mobilize equipment capable of installing piles below groundwater (or dewatered soil) to reduce the potential that claims for delays or extra work will arise.

Piles should be filled with concrete immediately after drilling. The concrete should be pumped to the bottom of the drilled holes using the tremie method. If casing is used, the casing should be removed as the concrete is placed, keeping the level of the concrete at least 5-feet above the bottom of the casing at all times.

4.12 SLOPES

All permanent slopes should be constructed no steeper than 2:1 (horizontal:vertical). Faces of fill slopes should be compacted either by rolling with a sheepsfoot roller or other suitable equipment or by overfilling and cutting back to design grade. Fills should be benched into sloping ground inclined steeper than 5:1 (horizontal:vertical). It is our opinion that cut slopes constructed no steeper than 2:1 (horizontal:vertical) will possess an adequate factor of safety. An engineering geologist should observe all cut slopes during grading to ascertain that no unforeseen adverse geologic conditions are encountered that require revised recommendations. All slopes are susceptible to surficial slope failure and erosion. Water should not be allowed to flow over the top of slope. Additionally, slopes should be planted with vegetation that will reduce the potential for erosion.

4.13 TEMPORARY DEWATERING

Groundwater seepage may occur locally due to local irrigation or following heavy rain. Temporary dewatering can be accomplished by sloping the excavation bottom to a sump and pumping from the sump. A layer of gravel about 6 inches thick placed in the bottom of the excavation will facilitate groundwater flow and can be used as a working platform.

4.14 CONVENTIONAL FOUNDATIONS

Shallow spread and/or continuous footings may be used for the proposed structures. Due to the liquefaction potential, the spread footings should be tied together with reinforced grade beams designed to minimize the anticipated differential settlement. Footings and grade beams should extend at least 24-inches below lowest adjacent finished grade. Grade beams should be at least 18-inches wide, and isolated spread footings should be at least 24-inches wide.

For design purposes, an allowable bearing capacity of 2,500 psf can be used. The bearing capacity can be increased by 500 psf for each foot of depth below the minimum and 250 psf for each foot of width beyond the minimum up to a maximum of 4,000 psf. The bearing value can be increased by $\frac{1}{3}$ when considering the total of all loads, including wind or seismic forces. Footings located adjacent to or within slopes should be extended to a depth such that a minimum horizontal distance of 7-feet exists between the lower outside footing edge and the face of the slope.

Lateral loads will be resisted by friction between the bottoms of footings and passive pressure on the faces of footings and other structural elements below grade. An allowable coefficient of friction of 0.35 can be used. Passive pressure can be computed using an allowable lateral pressure of 300 psf per foot of depth below the ground surface for level ground conditions. Reductions for sloping ground should be made. The passive pressure can be increased by $\frac{1}{3}$ when considering the total of all loads, including wind or seismic forces. The upper 1-foot of soil should not be relied on for passive support unless the ground is covered with pavements or slabs.

Lateral loads will be resisted by friction between the bottoms of footings and passive pressure on the faces of footings and other structural elements below grade. An allowable coefficient of friction of 0.35 can be used. Passive pressure can be computed using an allowable lateral pressure of 300 psf per foot of depth below the ground surface for level ground conditions. Reductions for sloping ground should be made. The passive pressure can be increased by $\frac{1}{2}$ when considering the total of all loads, including wind or seismic forces. The upper 1-foot of soil should not be relied on for passive support unless the ground is covered with pavements or slabs.

4.15 CONCRETE SLABS ON GRADE

Concrete slabs on grade may be designed with a minimum thickness of 5-inches for normal loading conditions. However, if heavier loads are anticipated, a modulus of subgrade reaction of 100 pounds per cubic inch may be used when the slabs are supported by compacted fill.

All slabs should be reinforced with a minimum #4 bars, 18-inches on center, each direction at the mid-height of the slab. The structural engineer may require heavier reinforcement. Control joints should be constructed to create squares or rectangles with a maximum spacing of 12-feet on large slab areas.

A vapor barrier should be placed beneath slabs-on-grade where moisture sensitive floor coverings or equipment are planned. If plastic is used, a minimum 15-mil is recommended. The plastic should comply with ASTM E1745. Installation should comply with ASTM E1643 and ACI 302. The floor covering manufacturer should be contacted to determine the volume of moisture vapor allowable and treatment needed to reduce moisture vapor emissions to acceptable limits for the particular type of floor covering installed.

4.16 MISCELLANEOUS FLATWORK AND HARDSCAPES

Exterior slabs not subjected to vehicular loads should be at least 4-inches thick underlain by at least 2-feet non-expansive granular material and reinforced with at least No. 3 bars at 18-inches on center each way. Slabs should be provided with weakened plane joints. Joints should be placed in accordance with the American Concrete Institute (ACI) guidelines. The project architect should select the final joint patterns. A 1-inch maximum size aggregate mix is recommended for concrete for exterior slabs. The corrosion potential of on-site soils with respect to reinforced concrete will need to be taken into account in concrete mix design. Coarse and fine aggregate in concrete should conform to the "Greenbook" Standard Specifications for Public Works Construction. Control joints should be spaced at intervals of no more than 12-feet.

4.17 PREWETTING RECOMMENDATIONS

Prior to placing concrete slabs and flatwork, the underlying soils should be brought to a within 2-percent of their optimum moisture content for a depth of 12-inches prior to the placement of concrete. The geotechnical consultant should perform in-situ moisture tests to verify that the appropriate moisture content has been achieved a maximum of 24-hours prior to the placement of concrete or moisture barriers.

Once the slab subgrade soil has been pre-wetted and compacted, the soil should not be allowed to dry prior to concrete placement. If the subgrade soil is dry, the moisture content of the soil should be restored prior to placement of concrete and re-tested.

Proper moisture conditioning and compaction of subgrade soils prior to placement is very important prior to concrete placement. Even with proper site preparation, some soil moisture changes of the subgrade soils supporting the concrete flatwork due to edge effects (shrink/swell) may occur. Drying and/or wetting of subgrade soils adjacent to landscaped areas or open fields may increase the potential of shrink/swell effects beneath concrete flatwork areas. To help reduce edge effects, lateral cutoffs, such as inverted curbs are recommended. Control joints should be used to reduce the potential for flatwork panel cracks as a result of minor soil shrink/swell.

4.18 CORROSIVITY

Soluble sulfate tests indicate that concrete at the subject site will have a negligible exposure to water soluble sulfate in the soil. We recommend that the concrete be designed to resist a severe exposure category. Our recommendations for concrete exposed to sulfate-containing soils are presented below.

RECOMMENDATIONS FOR CONCRETE EXPOSED TO SULFATE CONTAINING SOILS

Sulfate Exposure Severity	Class	Water soluble sulfate (SO ₄) in soil (% by wgt)	Sulfate (SO ₄) in water (ppm)	Max Water to Cement Ratio by Weight	Minimum Compressive Strength (psi)	Cement Type	Calcium Chloride Admixture
Negligible	S0	0.00 - 0.10	0-150	---	2,500	---	No Restriction
Moderate	S1	0.10 - 0.20	150-1,500	0.50	4,000	II/V	No Restriction
Severe	S2	0.20 - 2.00	1,500-10,000	0.45	4,500	V	Not Permitted
Very Severe	S3	Over 2.00	Over 10,000	0.45	4,500	V Plus Pozzolan	Not Permitted

Corrosivity testing consisting of soils reactivity (pH) and resistivity (ohms-cm) were also tested on representative soils. The test results indicate that the soils have a soil reactivity ranging from 7.4 to 7.5 and a resistivity ranging from 3,100 to 11,500 ohms-cm. A neutral or non-corrosive soil has a

reactivity value ranging from 5.5 to 8.4. Generally, soils that could be considered corrosive to metal have resistivities less than 3,000 ohms-cm. Those soils with resistivity values of less than 1000 ohms-cm can be considered extremely corrosive.

Based on our test results, it is our opinion that the underlying soils at the site have a very low corrosion potential. Protection of buried pipes utilizing coatings on all underground pipes; clean backfills and a cathodic protection system can be effective in controlling corrosion. A qualified corrosion engineer should be consulted to further assess the corrosive properties of the soil.

4.19 RETAINING STRUCTURES

Embedded structural walls should be designed for lateral earth pressures exerted on the walls. The magnitude of these earth pressures will depend on the amount of deformation that the wall can yield under the load. If the wall can yield sufficiently to mobilize the full shear strength of the soils, it may be designed for the active condition. If the wall cannot yield under the applied load, then the shear strength of the soil cannot be mobilized, and the earth pressures will be higher. These walls such as basement walls and swimming pools should be designed for the at rest condition. If a structure moves towards the retained soils, the resulting resistance developed by the soil will be the passive resistance.

For design purposes, the recommended equivalent fluid pressure for each case for walls constructed above the static groundwater table and backfilled with non-expansive soils is provided below. Retaining wall backfill should be compacted to at least 90-percent relative compaction based on the maximum density defined by ASTM D1557. Retaining structures may be designed to resist the following lateral earth pressures.

- Allowable Bearing Capacity – 2,000 psf
- Coefficient of Friction (Soil to Footing) – 0.35
- Passive Earth Pressure - equivalent fluid weight of 300 pcf (Maximum of 3,000 psf)
- At rest lateral earth pressure - 60 pcf
- Active Earth Pressures (equivalent fluid weights):

Slope of Retained Material	Equivalent Fluid Weight (pcf)
Level	40
2:1 (H:V)	60

It is recommended that all retaining wall footings be embedded at least 24-inches below the lowest adjacent finish grade. In addition, the wall footings should be designed and reinforced as required for structural considerations. The wall areas should be over excavated to a minimum depth of 3-

feet below the bottom of the proposed footings. The required horizontal limits of the over excavated area shall be defined as the area extending from the edge of the footing for a minimum distance of 2-feet.

Lateral resistance parameters provided above are ultimate values. Therefore, a suitable factor of safety should be applied to these values for design purposes. The appropriate factor of safety will depend on the design condition and should be determined by the project Structural Engineer. If any super-imposed loads are anticipated, this office should be notified so that appropriate recommendations for earth pressures may be provided.

Retaining structures should be drained to prevent the accumulation of subsurface water behind the walls. Back drains should be installed behind all retaining walls exceeding 3-feet in height. Backdrains may consist of a 2-foot wide zone of $\frac{3}{4}$ -inch crushed rock. The backdrain should be separated from the adjacent soils using a non-woven filter fabric, such as Mirafi 140N or equivalent. Weep holes should be provided, or a perforated pipe should be installed at the base of the backdrain and sloped to discharge to a suitable storm drain facility. As an alternative, a geo-composite drainage system such as Miradrain 6000 or equivalent placed behind the wall and connected to a suitable storm drain facility can be used. The project architect should provide waterproofing specifications and details. A typical detail for retaining wall back drains is presented as Figure 3. All back drains should be outlet to suitable drainage devices.

4.20 SEISMIC EARTH PRESSURES

If required, the seismic earth pressure can be taken as equivalent to the pressure of a fluid weighing 23 pcf. This value is for level backfill and does not include a factor of safety. Appropriate factors of safety should be incorporated into the design. This pressure is in addition to the un-factored, static active earth pressure. The passive pressure and bearing capacity can be increased by $\frac{1}{3}$ in determining the seismic stability of the wall.

4.21 PAVEMENT STRUCTURAL SECTIONS

Recommended pavement structural sections are based on the procedures outlined in "Design Procedures for Flexible Pavements" of the Highway Design Manual, California Transportation Department. This procedure uses the principal that the pavement structural section must be of adequate thickness to distribute the load from the design traffic (TI) to the subgrade soils in such a manner that the stresses from the applied loads do not exceed the strength of the soil (R value). Pavement sections were designed based on an R-Value of 79. The recommend structural sections are as follows:

ASPHALT PAVEMENT STRUCTURAL SECTIONS

Pavement Area	Traffic Index	Asphalt Thickness (inches)	Base Thickness (inches)
Parking Areas	5.0	3	4
Driveways	6.0	3½	4
Truck/Fire Access Lanes	7.0	4	4

PORTLAND CEMENT CONCRETE PAVEMENT STRUCTURAL SECTION

Pavement Area	Traffic Index	Asphalt Thickness (inches)	Base Thickness (inches)
Concrete Pavement (min f'c = 4,500 psi)	5.0 – 8.0	7½	6

The top 12-inches of subgrade should be scarified, moisture conditioned to near optimum moisture content, and compacted to at least 95-percent relative compaction. All soft or yielding areas should be removed and replaced with compacted fill or aggregate base. Aggregate base and asphalt concrete should conform to the Caltrans Standard Specifications or the “Greenbook” and should be compacted to at least 95-percent relative compaction. Aggregate base should have an R-value of not less than 78. All materials and methods of construction should conform to good engineering practices.

4.22 UTILITY TRENCHES

All Cal/OSHA construction safety orders should be observed during all underground work. All utility trench backfill within street right of way, utility easements, under or adjacent to sidewalks, driveways, or building pads should be observed and tested by the geotechnical consultant to verify proper compaction. Trenches excavated adjacent to foundations should not extend within the footing influence zone defined as the area within a line projected at a 1:1 (horizontal to vertical) drawn from the bottom edge of the footing. Trenches crossing perpendicular to foundations should be excavated and backfilled prior to the construction of the foundations. The excavations should be backfilled in the presence of the geotechnical engineer and tested to verify adequate compaction beneath the proposed footing.

4.22.1 THRUST BLOCKS

For level ground conditions, a passive earth pressure of 300 psf per foot of depth below the lowest adjacent final grade can be used to compute allowable thrust block resistance. A value of 150 psf per foot should be used below groundwater level, if encountered.

4.22.2 MODULUS OF SOIL REACTION

A modulus of soil reaction (E') of 2,000 psi can be used to evaluate the deflection of buried flexible pipelines. This value assumes that granular bedding material is placed adjacent to the pipe and is compacted to at least 90-percent relative compaction.

4.22.3 BEDDING

Pipe bedding as specified in the "Greenbook" Standard Specifications for Public Works Construction can be used. Bedding material should consist of clean sand having a sand equivalent not less than 30 and should extend to at least 12-inches above the top of pipe. Alternative materials meeting the intent of the bedding specifications are also acceptable. Samples of materials proposed for use as bedding should be provided to the engineer for inspection and testing before the material is imported for use on the project. The on-site materials are not expected to meet "Greenbook" bedding specifications. The pipe bedding material should be placed over the full width of the trench. After placement of the pipe, the bedding should be brought up uniformly on both sides of the pipe to reduce the potential for unbalanced loads. No voids or uncompacted areas should be left beneath the pipe haunches. Ponding or jetting the pipe bedding should not be allowed.

4.22.4 BACKFILL

Excavated material free of organic debris and rocks greater than 6-inches in any dimension are generally expected to be suitable for use as backfill. Imported material should not contain rocks greater than 4-inches in any dimension or organic debris. Imported material should have an expansion index of 20 or less. MTGL should observe and, if appropriate, test proposed imported materials before they are delivered to the site. Backfill should be placed in lifts 8-inches or less in loose thickness, moisture conditioned to optimum moisture content or slightly above, and compacted to at least 90-percent relative compaction. The top 12-inches of soil beneath pavement subgrade should be compacted to at least 95-percent relative compaction.

4.22.5 CUTOFF WALLS

Where pipeline inclinations exceed 15-percent, cutoff walls may be necessary in trench excavations. Additionally, we do not recommend that open graded rock be used for pipe bedding or backfill because of the potential for piping erosion. The recommended bedding is clean sand having a sand equivalent not less than 30. Alternatively, 2-sack sand-cement slurry can be used for the pipe bedding. If sand-cement slurry is used for pipe bedding to at least 1-foot over the top of the pipe, cutoff walls are not considered necessary. The need for cutoff walls should be further evaluated by the project civil engineer designing the pipeline.

4.23 CONSTRUCTION CONSIDERATIONS

4.23.1 MOISTURE SENSITIVE SOILS AND WEATHER-RELATED CONCERNS

The upper soils encountered at this site may be sensitive to disturbances caused by construction traffic and to changes in moisture content. During wet weather periods, increases in the moisture content of the soil can cause significant reduction in the soil strength and its support capabilities. In addition, soils that become excessively wet may be slow to dry and thus significantly delay the progress of the grading operations. Therefore, it will be advantageous to perform earthwork and foundation construction activities during the dry season. Much of the on-site soils may be susceptible to erosion during periods of inclement weather. As a result, the project Civil Engineer/Architect and Grading Contractor should take appropriate precautions to reduce the potential for erosion during and after construction.

4.23.2 DRAINAGE AND GROUNDWATER CONSIDERATIONS

Based on our investigation, groundwater is expected to be below the anticipated depths of grading, the installation of subdrains is not expected to be necessary. However, variations in the ground water table may result from fluctuation in the ground surface topography, subsurface stratification, precipitation, irrigation, and other factors such as impermeable and/or cemented formational materials overlain by fill soils. In addition, during retaining wall excavations, seepage may be encountered. Therefore, we recommend that a representative of MTGL, Inc. be present during grading operations to evaluate areas of seepage. Drainage devices for reduction of water accumulation can be recommended should these conditions occur.

Water should not be allowed to collect in the foundation excavation, on floor slab areas, or on prepared subgrades of the construction area either during or after construction. Undercut or excavated areas should be sloped to facilitate removal of any collected rainwater, groundwater, or surface runoff. Positive site drainage should be provided to reduce infiltration of surface water around the perimeter of the structure and beneath the floor slabs. The grades should be sloped away from the structure and surface drainage should be collected and discharged such that water is not permitted to infiltrate the backfill and floor slab areas.

4.23.3 SITE DRAINAGE

The site should be drained to provide for positive drainage away from structures in accordance with the building code and applicable local requirements. Unpaved areas should slope no less than 2-percent away from structure. Paved areas should slope no less than 1-percent away from structures. Concentrated roof and surface drainage from the site should

be collected in engineered, non-erosive drainage devices and conducted to a safe point of discharge. The site drainage should be designed by a civil engineer.

4.24 PLAN REVIEW

MTGL should review the grading and foundation plans to verify that the intent of the recommendations presented in this report has been implemented and that revised recommendations are not necessary as a result of changes after this report was completed.

5.00 GEOTECHNICAL OBSERVATION AND TESTING

The recommendations provided in this report are based on preliminary design information and subsurface conditions as interpreted from the investigation. Our preliminary conclusion and recommendations should be reviewed and verified during site grading and revised accordingly if exposed Geotechnical conditions vary from our preliminary findings and interpretations. The Geotechnical consultant should perform Geotechnical observation and testing during the following phases of grading and construction:

- During site grading and over-excavation.
- During foundation excavations and placement.
- Upon completion of retaining wall footing excavation prior to placing concrete.
- During excavation and backfilling of all utility trenches
- During processing and compaction of the subgrade for the access and parking areas and prior to construction of pavement sections.
- When any unusual or unexpected Geotechnical conditions are encountered during any phase of construction.

6.00 LIMITATIONS

The findings, conclusions, and recommendations contained in this report are based on the site conditions as they existed at the time of our investigation, and further assume that the subsurface conditions encountered during our investigation are representative of conditions throughout the site. Should subsurface conditions be encountered during construction that are different from those described in this report, this office should be notified immediately so that our recommendations may be re-evaluated.

This report was prepared for the exclusive use and benefit of the owner, architect, and engineer for evaluating the design of the facilities as it relates to geotechnical aspects. It should be made available to prospective contractors for information on factual data only, and not as a warranty of subsurface conditions included in this report.

Our investigation was performed using the standard of care and level of skill ordinarily exercised under similar circumstances by reputable soil engineers and geologists currently practicing in this or similar localities. No warranty, express or implied, is made as to the conclusions and professional advice included in this report.

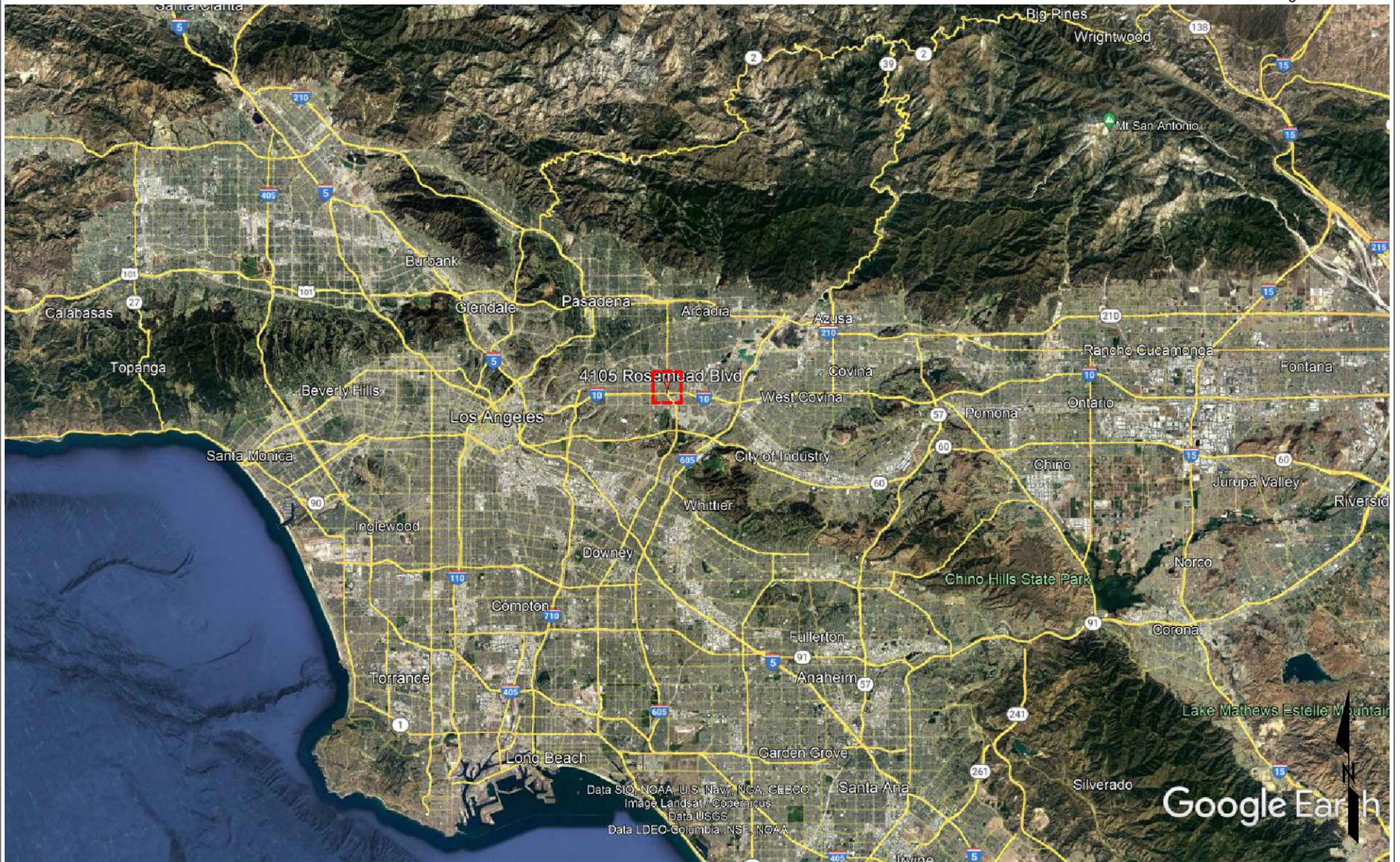
This firm does not practice or consult in the field of safety engineering. We do not direct the Contractor's operations, and we are not responsible for their actions. The contractor will be solely and completely responsible for working conditions on the job site, including the safety of all persons and property during performance of the work. This responsibility will apply continuously and will not be limited to our normal hours of operation.

The findings of this report are considered valid as of the present date. However, changes in the conditions of a site can occur with the passage of time, whether they are due to natural events or to human activities on this or adjacent sites. In addition, changes in applicable or appropriate codes and standards may occur, whether they result from legislation or the broadening of knowledge.

Accordingly, this report may become invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and revision as changed conditions are identified.

FIGURES

Note: All locations are approximate.
©2022 Google Earth



SITE VICINITY MAP
ROSEMEAD ADULT CENTER EXPANSION
4105 ROSEMEAD BLVD, ROSEMEAD, CA

MTGL Project No.:
6920A08

Date:
November, 2022

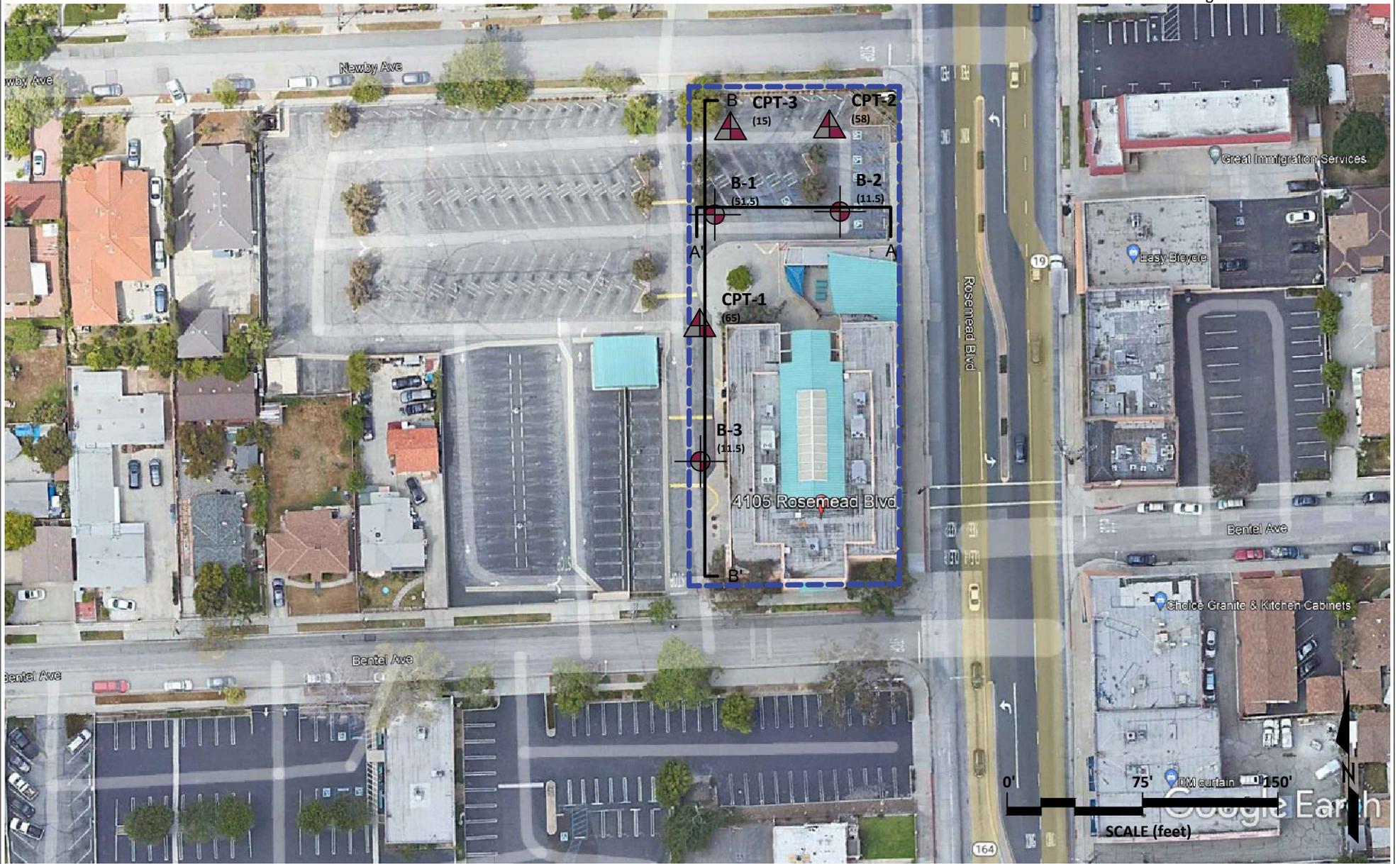
Author:
JCR



Figure No.

1

Note: All locations are approximate.
 ©2022 Google Earth



LEGEND

-  - Project Limits
-  - Geologic Cross Section
-  B-1 (51.5) - Location of Boring (Depth in Feet)
-  CPT-1 (65) - Location of CPT (Depth in Feet)

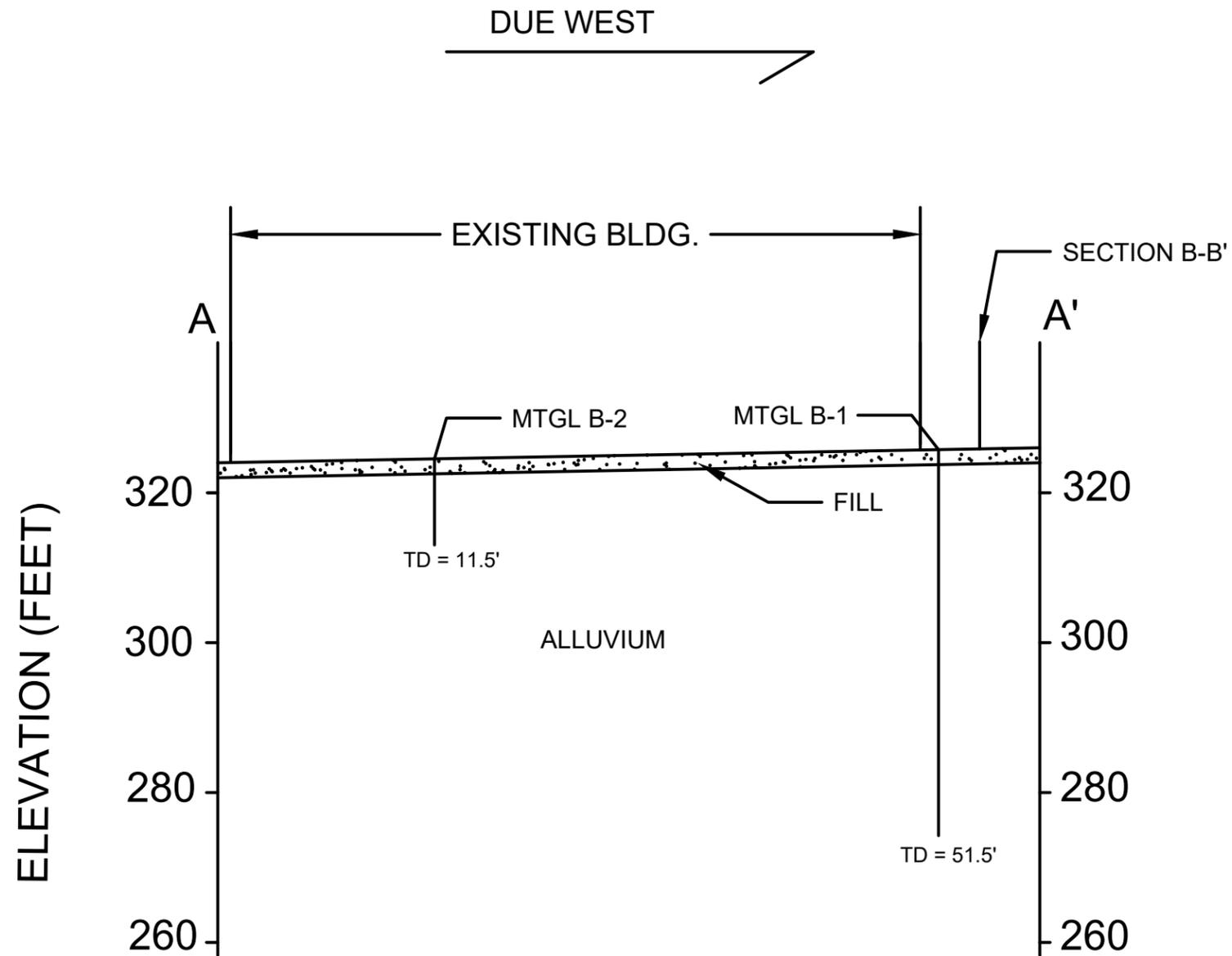
BORING LOCATION MAP
 ROSEMEAD ADULT CENTER EXPANSION
 4105 ROSEMEAD BLVD, ROSEMEAD, CA

MTGL Project No.: 6920A08	Date: November, 2022	Author: JCR
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Figure No.

2



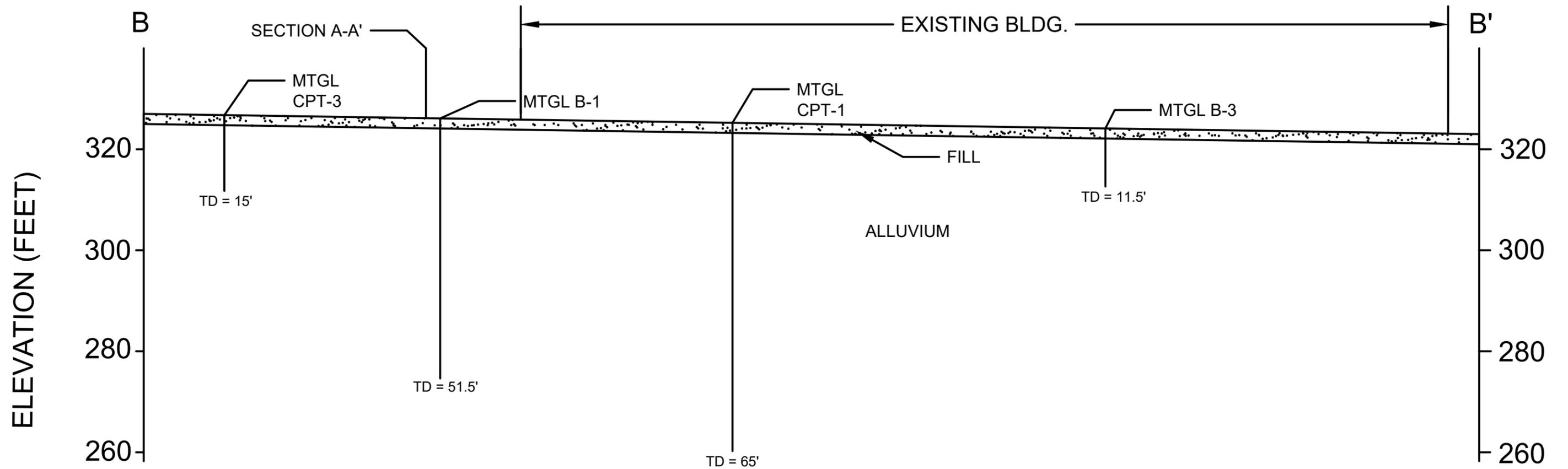
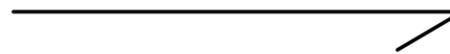
LEGEND:	NO.	REVISION DESCRIPTION	AUTHOR	DATE
REVISIONS				

DRAWN ON:	November, 2022
CHECKED BY:	IC
CLIENT:	El Monte Union High School District 3537 Johnson Avenue El Monte, California 91731

PROJECT:	ROSEMEAD ADULT CENTER EXPANSION	NO.	6920A08
DRAWING:	CROSS SECTION A-A'		
FIGURE:	3A	4105 ROSEMEAD BLVD ROSEMEAD, CA 91770	
SCALE:	1" = 20'		



DUE SOUTH

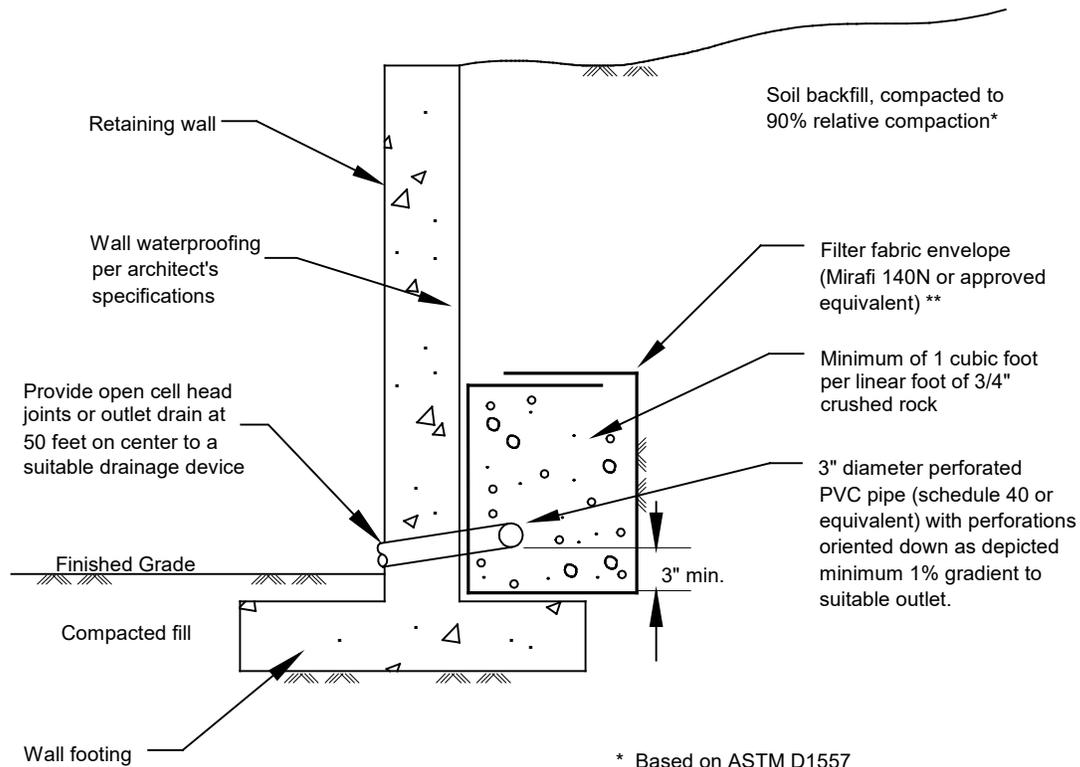


NO.	REVISION DESCRIPTION	AUTHOR	DATE
REVISIONS			

DRAWN ON: November, 2022
CHECKED BY: IC
CLIENT: El Monte Union High School District
 3537 Johnson Avenue
 El Monte, California 91731

PROJECT: ROSEMEAD ADULT CENTER EXPANSION
NO. 6920A08
DRAWING: CROSS SECTION B-B'
FIGURE: 3B
SCALE: 1" = 20'
 4105 ROSEMEAD BLVD
 ROSEMEAD, CA 91770





SPECIFICATIONS FOR CLASS 2 PERMEABLE MATERIAL (CAL TRANS SPECIFICATIONS)

Sieve Size	% Passing
1"	100
3/4"	90-100
3/8"	40-100
No.4	25-40
No.8	18-33
No.30	5-15
No.50	0-7
No.200	0-3

** If class 2 permeable material (See gradation to left) is used in place of 3/4" - 1 1/2" gravel. Filter fabric may be deleted. Class 2 permeable material compacted to 90% relative compaction. *

RETAINING WALL DRAINAGE DETAIL

Figure 4

APPENDIX A

REFERENCES

APPENDIX A

REFERENCES

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APPENDIX B

FIELD EXPLORATION PROGRAM

APPENDIX B

FIELD EXPLORATION PROGRAM

The subsurface conditions for this Geotechnical Investigation were explored by excavating exploratory borings with an 8-inch hollow-stem-auger and advancing electronic cone penetrometer test soundings (CPT) with a truck mounted CPT rig. All drive samples were obtained by Standard Penetration Tests (SPT) or California Tube Sampler. The approximate locations of the borings are shown on the Boring Location Map (Figure 2). The field exploration was performed under the supervision of our Geologist who maintained a continuous log of the subsurface soils encountered and obtained samples for laboratory testing.

Subsurface conditions are summarized on the accompanying Logs of Borings and Logs of CPTs. The logs contain factual information and interpretation of subsurface conditions between samples. The stratum indicated on these logs represents the approximate boundary between earth units and the transition may be gradual. The logs show subsurface conditions at the dates and locations indicated and may not be representative of subsurface conditions at other locations and times.

Identification of the soils encountered during the subsurface exploration was made using the field identification procedure of the Unified Soils Classification System (ASTM D2488). A legend indicating the symbols and definitions used in this classification system and a legend defining the terms used in describing the relative compaction, consistency or firmness of the soil are attached in this appendix. Bag samples of the major earth units were obtained for laboratory inspection and testing, and the in-place density of the various strata encountered in the exploration was determined

The exploratory borings and CPT soundings were located in the field by using cultural features depicted on a preliminary site plan provided by the client. Each location should be considered accurate only to the scale and detail of the plan utilized.

The exploratory borings were backfilled with a cement/sand slurry and patched where appropriate.

UNIFIED SOIL CLASSIFICATION SYSTEM					
No. 200 U.S. Standard Sieve is the smallest particle visible	Coarse-grained soils >1/2 of materials is larger than #200 sieve	GRAVELS are more than half of coarse fraction larger than #4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
			Gravels with fines	GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		SANDS are more than half of coarse fraction larger than #4 sieve	Clean Sands (less than 5% fines)	GM	Silty Gravels, poorly-graded gravel-sand-silt mixtures
			Sands with fines	GC	Clayey Gravels, poorly-graded gravel-sand-clay mixtures
	Fine-grained Soils >1/2 of materials is smaller than #200 sieve	SILTS AND CLAYS Liquid Limit Less than 50	SW	Well-graded sands, gravelly sands, little or no fines	
			SP	Poorly-graded sands, gravelly sands, little or no fines	
			SM	Silty Sands, poorly-graded sands-gravel-clay mixtures	
			SC	Clayey Sands, poorly-graded sand-gravel-silt mixtures	
			ML	Inorganic clays of low to med plasticity, gravelly, sandy, silty, or lean clays	
		SILTS AND CLAYS Liquid Limit Greater than 50	CL	Inorganic clays of low to med plasticity, gravelly, sandy, silty, or lean clays	
			OL	Organic silts and clays of low plasticity	
			MH	Inorganic silts, micaceous or diatomaceous fine sands or silts	
			CH	Inorganic clays of high plasticity, fat clays	
			OH	Organic silts and clays of medium to high plasticity	
Highly Organic Soils				PT	Peat, humus swamp soils with high organic content

GRAIN SIZE				SIZE PROPORTION
Description	Sieve Size	Grain Size	Approximate Size	
Boulders	>12"	>12"	Larger than basketball-sized	Trace – Less than 5%
Cobbles	3" - 12"	3" - 12"	Fist-sized to basketball-sized	Few – 5% to 10%
Gravel	Coarse	¾" - 3"	Thumb-sized	Little – 15% to 20%
	Fine	#4 - ¾"	Peat-sized to thumb-sized	Some – 30% to 45%
Sand	Coarse	#10 - #4	Rock salt-sized to pea-sized	Mostly – 50% to 100%
	Medium	#40 - #10	Sugar-sized to rock salt-sized	MOISTURE CONTENT
	Fine	#200 - #40	Flour-sized to sugar-sized	Dry – Absence of moisture
Fines	Passing #200	<0.0029"	Flour-sized or smaller	Moist – Damp but not visible
				Wet – Visible free water

CONSISTENCY FINE GRAINED SOILS			RELATIVE DENSITY COARSE GRAINED SOILS		
Apparent Density	SPT (Blows/Foot)	Mod CA Sampler (Blows/Foot)	Apparent Density	SPT (Blows/Foot)	Mod CA Sampler (Blows/Foot)
Very Soft	<2	<3	Very Loose	<4	<5
Soft	2-4	3-6	Loose	4-10	5-12
Firm	5-8	7-12	Medium Dense	11-30	13-35
Stiff	9-15	13-25	Dense	31-50	36-60
Very Stiff	16-30	26-50	Very Dense	>50	>60
Hard	>30	>50			

Project: **Rosemead Adult Center Expansion**
 Project Location: **4205 Rosemead Blvd, Rosemead, CA**
 Project Number: **6920A08**

Key to Log of Boring
Sheet 1 of 1

Elevation (feet)	Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
1	2	3	4	5	6	7	8	9	10

COLUMN DESCRIPTIONS

- | | |
|--|---|
| <p>1 Elevation (feet): Elevation (MSL, feet).
 2 Depth (feet): Depth in feet below the ground surface.
 3 Sample Type: Type of soil sample collected at the depth interval shown.
 4 Sampling Resistance, blows/ft: Number of blows to advance driven sampler one foot (or distance shown) beyond seating interval using the hammer identified on the boring log.
 5 Material Type: Type of material encountered.</p> | <p>6 Graphic Log: Graphic depiction of the subsurface material encountered.
 7 MATERIAL DESCRIPTION: Description of material encountered. May include consistency, moisture, color, and other descriptive text.
 8 Water Content, %: Water content of the soil sample, expressed as percentage of dry weight of sample.
 9 Dry Unit Weight, pcf: Dry weight per unit volume of soil sample measured in laboratory, in pounds per cubic foot.
 10 REMARKS AND OTHER TESTS: Comments and observations regarding drilling or sampling made by driller or field personnel.</p> |
|--|---|

FIELD AND LABORATORY TEST ABBREVIATIONS

- | | |
|--|--|
| <p>PI: Plasticity Index
 LL: Liquid Limit
 PL: Plastic Limit
 EI: Expansion Index
 DS: Direct Shear Test Performed
 CHEM: Chemical tests to assess corrosivity</p> | <p>COMP: Compaction test
 CONS: One-dimensional consolidation test
 LL: Liquid Limit, percent
 PI: Plasticity Index, percent
 SA: Sieve analysis (percent passing No. 200 Sieve)
 UC: Unconfined compressive strength test, Qu, in ksf
 WA: Wash sieve (percent passing No. 200 Sieve)</p> |
|--|--|

MATERIAL GRAPHIC SYMBOLS

- | | |
|---|---|
|  Asphaltic Concrete (AC) |  Silty SAND (SM) |
| |  Poorly graded SAND (SP) |

TYPICAL SAMPLER GRAPHIC SYMBOLS

- | | |
|---|---|
|  Auger sampler |  CME Sampler |
|  Bulk Sample |  Grab Sample |
|  3-inch-OD California w/ brass rings |  2.5-inch-OD Modified California w/ brass liners |

OTHER GRAPHIC SYMBOLS

- | |
|--|
|  Water level (at time of drilling, ATD) |
|  Water level (after waiting) |
|  Minor change in material properties within a stratum |
|  Inferred/gradational contact between strata |
|  Queried contact between strata |

GENERAL NOTES

- Soil classifications are based on the Unified Soil Classification System. Descriptions and stratum lines are interpretive, and actual lithologic changes may be gradual. Field descriptions may have been modified to reflect results of lab tests.
- Descriptions on these logs apply only at the specific boring locations and at the time the borings were advanced. They are not warranted to be representative of subsurface conditions at other locations or times.

C:\Users\jrowerink\Documents\6920A08 Rosemead Adult School Expansion\6920A08 Boring Logs\Logs.bg4\master 2 base.tpl

Project: **Rosemead Adult Center Expansion**
 Project Location: **4205 Rosemead Blvd, Rosemead, CA**
 Project Number: **6920A08**

Log of Boring B-1
Sheet 1 of 2

Date(s) Drilled 5/10/22	Logged By J. Rowerdink	Checked By I. Chun
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8" / HSA	Total Depth of Borehole 51.5 ft
Drill Rig Type CME-95, Truck Mounted	Drilling Contractor Baja Explorations	Approximate Surface Elevation 326 ft
Groundwater Level and Date Measured Not encountered	Sampling Method(s) Bulk, Cal, SPT	Hammer Data 140 lb / 30" Drop
Borehole Backfill Cement-Grout	Location 34.082377, -118.073756	

Elevation (feet)	Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
326	0			Asphalt		Surface = 3" AC / 6" AB			
				SM		FILL: Silty SAND, Brown, Trace Cobble, Moist			Max Density = 127.6 @ 7.3% % Fines = 12.2 LL = NV PL = NP PI = NP EI = 1
				SP		ALLUVIUM			
321	5		66	SP		SAND w/ Some Silt & Gravel, Light Brown, Moist, Very Dense	4.4	122.4	DS
			51	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Dense, 3" Cobble stuck in sampler	4.1	124.8	
316	10		50-6"	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Very Dense, 2" Cobble stuck in sampler			DS
311	15		56	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Very Dense, 2" Cobble stuck in Sampler			
306	20		16	SM		Silty SAND, Brown, Moist, Medium Dense			% Fines = 21.8
301	25		38	SM		Silty SAND w/ Trace Gravel, Brown, Moist, Dense			% Fines = 15.6
296	30								

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Project: **Rosemead Adult Center Expansion**
 Project Location: **4205 Rosemead Blvd, Rosemead, CA**
 Project Number: **6920A08**

Log of Boring B-1
Sheet 2 of 2

Elevation (feet)	Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
296	30	X	19	SM		Silty SAND w/ Trace Clay & Gravel, Brown, Moist, Medium Dense			
				SP					
291	35	X	36	SP		SAND w/ Trace Clay, Brown, Moist, Dense			
				SP					
286	40	X	21	SP		SAND w/ Trace Clay, Brown, Moist, Medium Dense			
				SM					
281	45	X	35	SM		Silty SAND, Brown, Moist, Dense			
				SM					
276	50	X	40	SM		Silty SAND, Brown, Moist, Dense			
						End of Boring as Planned at 51.5' No Free Groundwater Encountered No Caving Boring Backfilled with Cement-Grout on 5/10/22			
271	55								
266	60								
261	65								

Project: **Rosemead Adult Center Expansion**
 Project Location: **4205 Rosemead Blvd, Rosemead, CA**
 Project Number: **6920A08**

Log of Boring B-2
Sheet 1 of 1

Date(s) Drilled 5/10/22	Logged By J. Rowerdink	Checked By I. Chun
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8" / HSA	Total Depth of Borehole 11.5 ft
Drill Rig Type CME-95, Truck Mounted	Drilling Contractor Baja Explorations	Approximate Surface Elevation 325 ft
Groundwater Level and Date Measured Not encountered	Sampling Method(s) Bulk, Cal, SPT	Hammer Data 140 lb / 30" Drop
Borehole Backfill Cement-Grout	Location 34.082381, -118.073554	

Elevation (feet)	Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
325	0			Asphalt		Surface = 3" AC / 6" AB			
				SM		FILL: Silty SAND, Brown, Some 2"-3" Cobble, Moist			
				SP		ALLUVIUM			
320	5		61	SP		SAND w/ Some Silt & Gravel, Light Brown, Moist, Very Dense			
			37	SP		SAND w/ Some Silt & Gravel, Light Brown, Moist, Dense			
315	10		34	SP		SAND w/ Some Silt & Gravel, Light Brown, Moist Dense			
						End of Boring as Planned at 11.5' No Free Groundwater Encountered No Caving Boring Backfilled with Cement-Grout on 5/10/22			
310	15								
305	20								
300	25								
295	30								

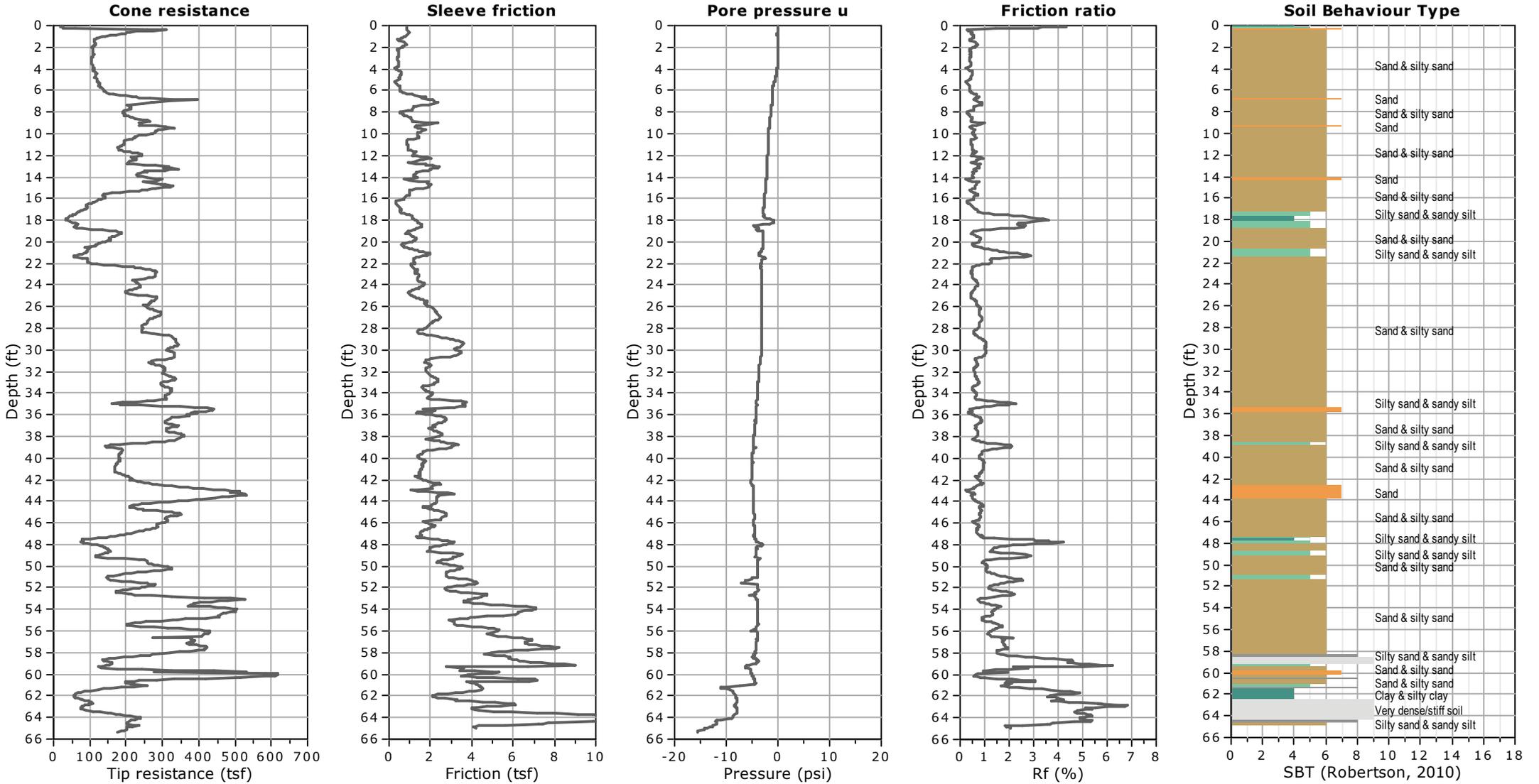
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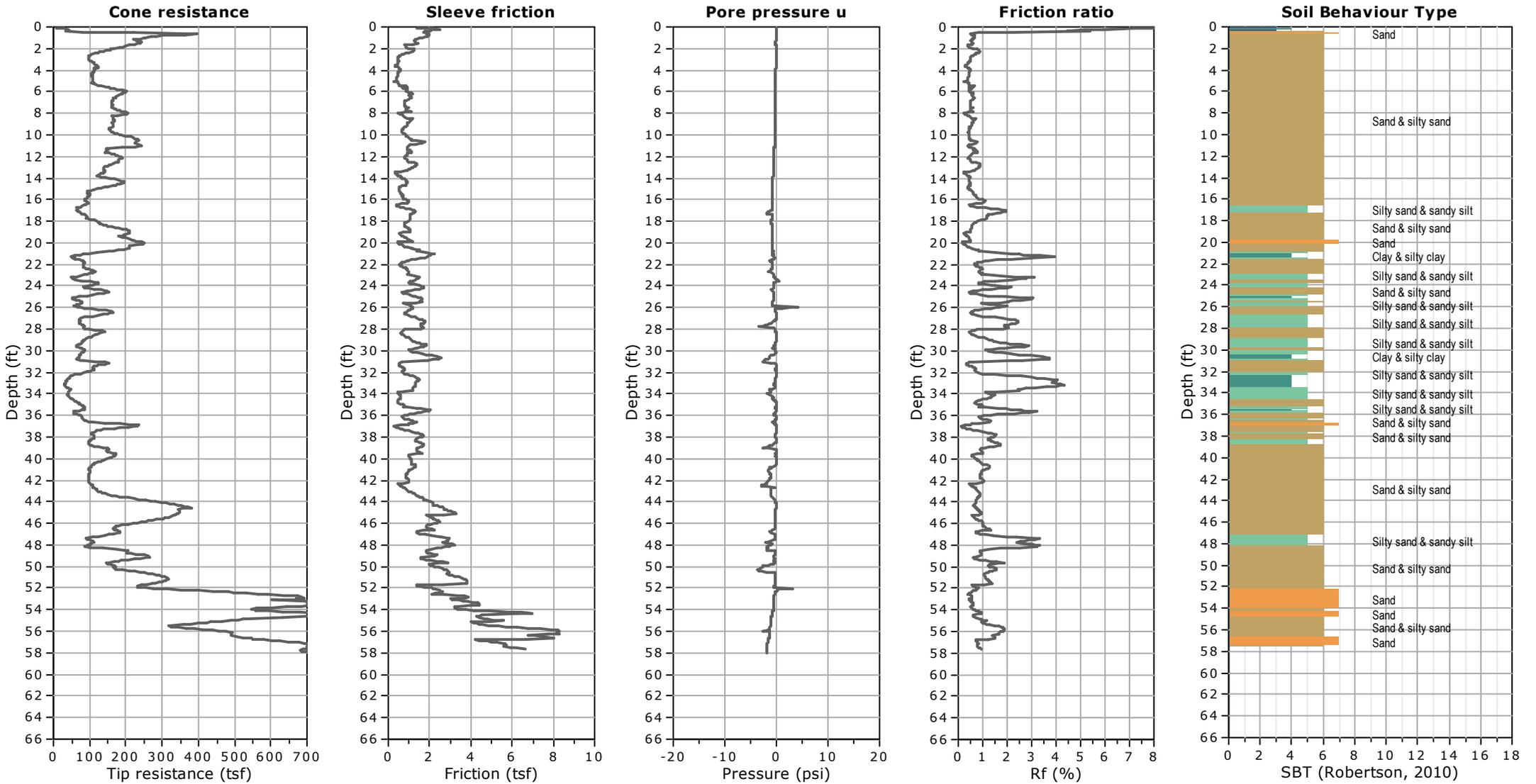
Project: **Rosemead Adult Center Expansion**
 Project Location: **4205 Rosemead Blvd, Rosemead, CA**
 Project Number: **6920A08**

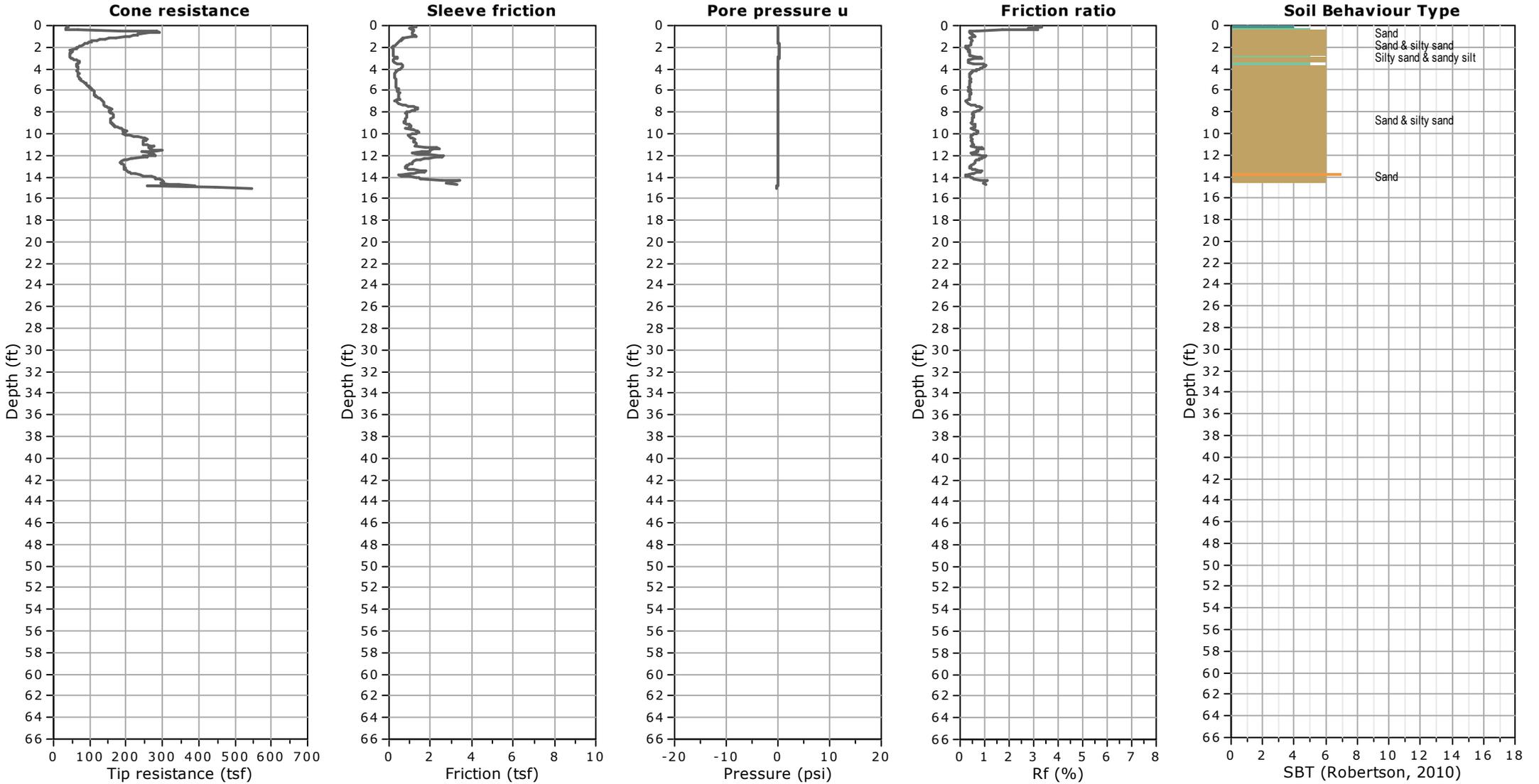
Log of Boring B-3
Sheet 1 of 1

Date(s) Drilled 5/10/22	Logged By J. Rowerdink	Checked By I. Chun
Drilling Method Hollow Stem Auger	Drill Bit Size/Type 8" / HSA	Total Depth of Borehole 11.5 ft
Drill Rig Type CME-95, Truck Mounted	Drilling Contractor Baja Explorations	Approximate Surface Elevation 325 ft
Groundwater Level and Date Measured Not encountered	Sampling Method(s) Bulk, Cal, SPT	Hammer Data 140 lb / 30" Drop
Borehole Backfill Cement-Grout	Location 34.082035, -118.073807	

Elevation (feet)	Depth (feet)	Sample Type	Sampling Resistance, blows/ft	Material Type	Graphic Log	MATERIAL DESCRIPTION	Water Content, %	Dry Unit Weight, pcf	REMARKS AND OTHER TESTS
325	0			Asphalt		Surface = 3" AC / 6" AB			R-Value = 79 % Fines = 17.2 LL = NV PL = NP PI = NP
				SM		FILL: Silty SAND w/ Trace Cobble, Brown, Moist			
				SP		ALLUVIUM			
320	5		22	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Medium Dense			
			58	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Dense	6.7	117.3	
315	10		23	SP		SAND w/ Some Silt & Gravel, Brown, Moist, Medium Dense			
						End of Boring as Planned at 11.5' No Free Groundwater Encountered No Caving Boring Backfilled with Cement-Grout on 5/10/22			
310	15								
305	20								
300	25								
295	30								







APPENDIX C

LABORATORY TEST PROCEDURES

APPENDIX C

LABORATORY TESTING PROCEDURES

1. Particle Size Analysis

Particle size analysis on representative soil samples were determined using the standard test method of the ASTM D422.

2. Atterberg Limits

The liquid limit, plastic limit, and the plasticity index of the major soil types encountered were determined using the standard test methods of the ASTM D4318.

3. Maximum Density

Maximum density tests were performed on a representative bag sample of the near surface soils in accordance with ASTM D1557.

4. Direct Shear

Direct Shear Tests were performed on in-place samples of site soils in accordance with ASTM D3080.

5. Resistance Value Testing

R-Value testing was completed in substantial compliance with Caltrans Test Method 301. Graphical plots of our tests are included in this appendix.

6. Expansion Index

Expansion Index testing was completed in accordance with the standard test method ASTM D4829. Test results are presented below.

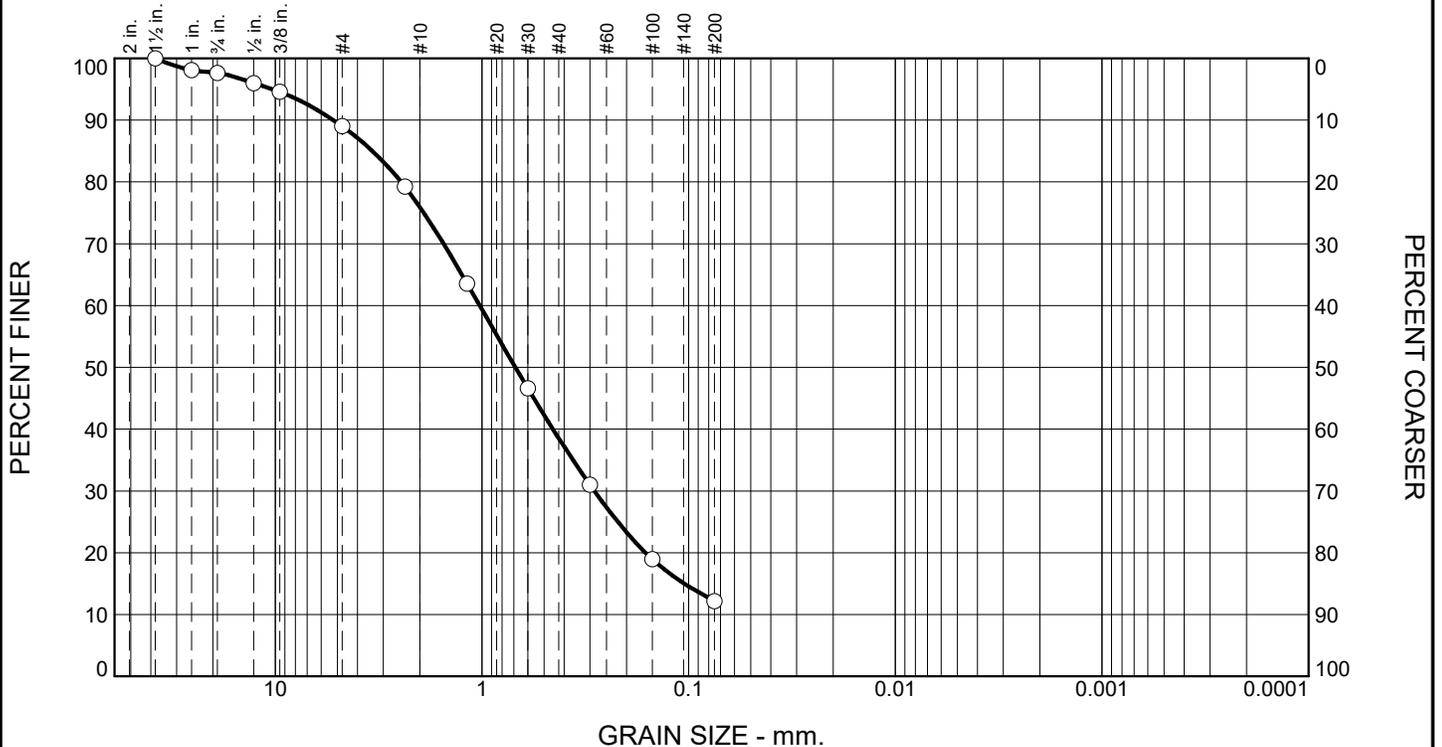
Sample Location	Expansion Index	Expansion Classification
B-1 @ 0 - 5'	1	Very Low

7. Corrosion

Chemical testing was performed on representative samples to determine the corrosion potential of the onsite soils. Testing consisted of pH, chlorides (CTM 422), soluble sulfates (CTM 417), and resistivity (CTM 643). Test results are as follows:

Sample Location	pH	Sulfates (ppm)	Chlorides (ppm)	Resistivity (ohm-cm)
B-1 @ 0-5 ft	7.5	107	56	11,500
B-3 @ 0-5 ft	7.4	140	66	3,100

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.4	8.6	13.1	37.4	26.3	12.2	

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1-1/2"	100.0		
1"	98.1		
3/4"	97.6		
1/2"	96.0		
3/8"	94.6		
#4	89.0		
#8	79.2		
#16	63.6		
#30	46.6		
#50	31.0		
#100	19.0		
#200	12.2		

* (no specification provided)

Material Description

Brown Silty SAND

Atterberg Limits (ASTM D 4318)

PL= NP LL= NV PI= NP

Classification

USCS (D 2487)= SM AASHTO (M 145)= A-1-b

Coefficients

D₉₀= 5.2393 D₈₅= 3.3927 D₆₀= 1.0247
D₅₀= 0.6891 D₃₀= 0.2857 D₁₅= 0.1048
D₁₀= C_u= C_c=

Remarks

SAMPLED BY JAY ROWERDINK
F.M.=2.79

Date Received: 05-10-2022 Date Tested: 05-24-22

Tested By: RJS

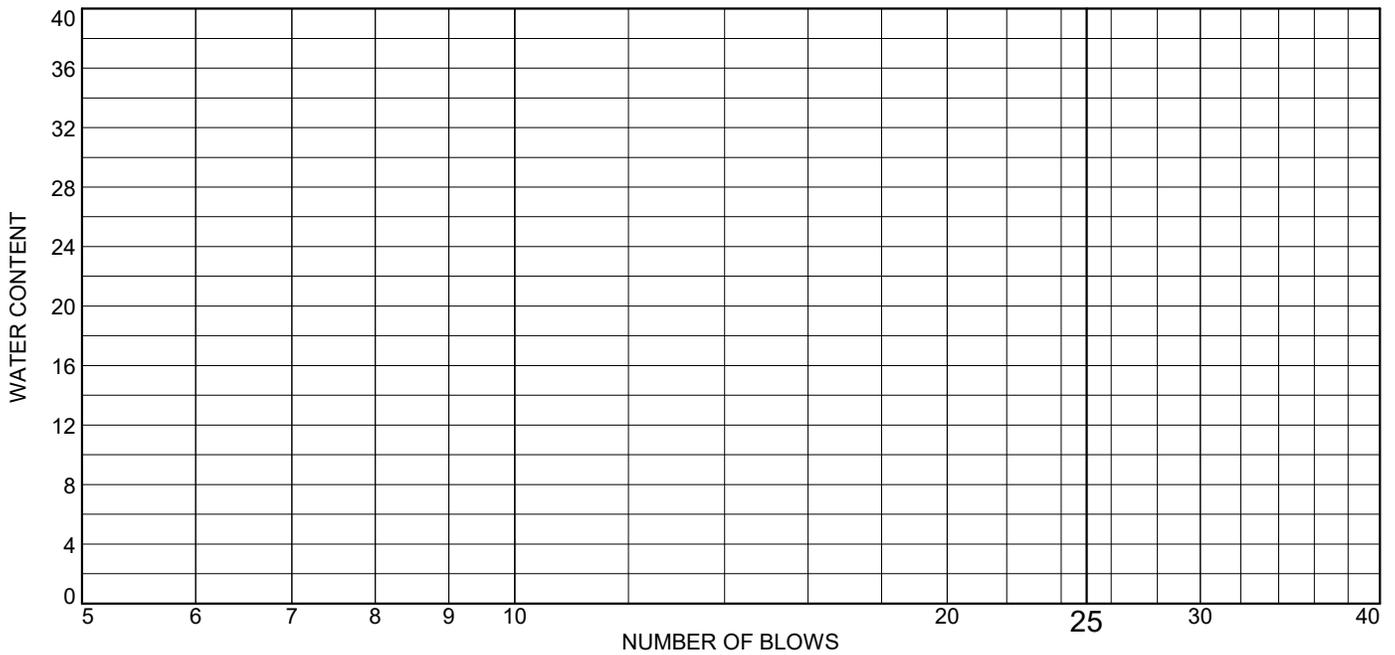
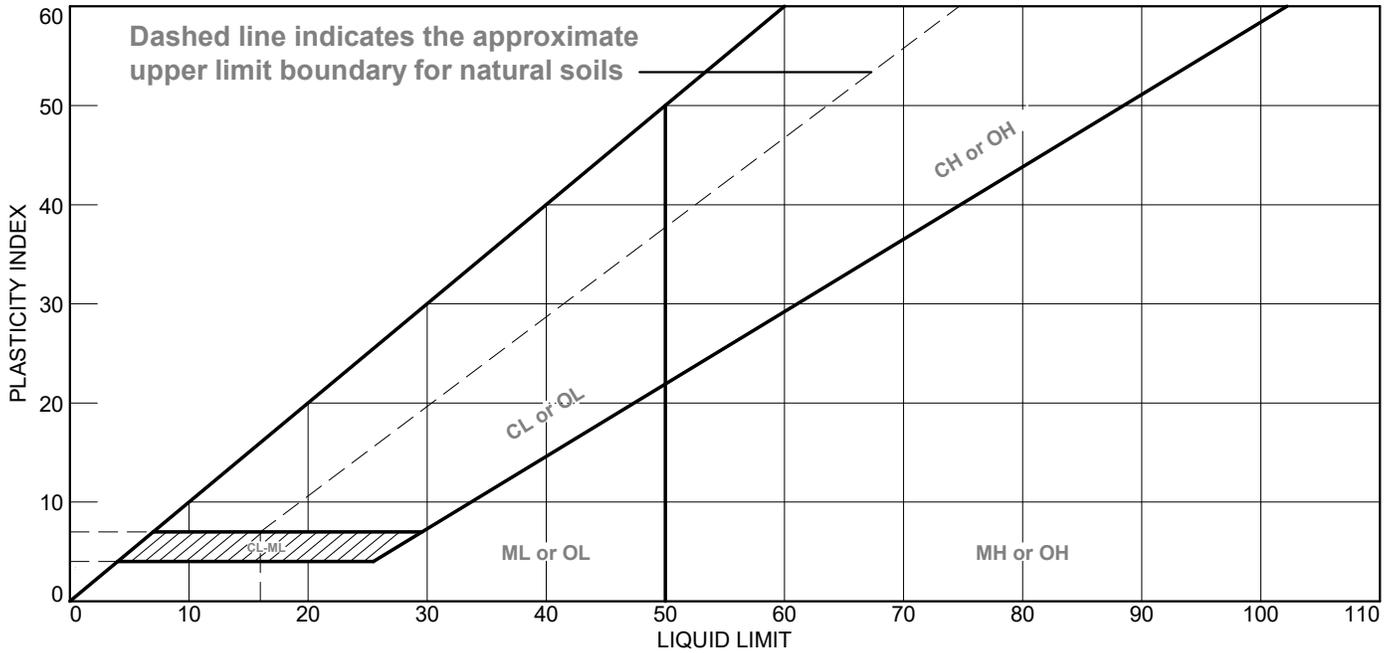
Checked By: IC

Title: PE,GE

Location: B1 @ 0'-5' Depth: 0'-5' Date Sampled: 05-10-2022
Sample Number: 636

MTGL, Inc. Anaheim, CA	Client: DLR/EMUSD Project: ROSEMEAD ADULT CENTER EXPANSION Project No: 6920A08
---	---

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Brown Silty SAND	NV	NP	NP	38.5	12.2	SM

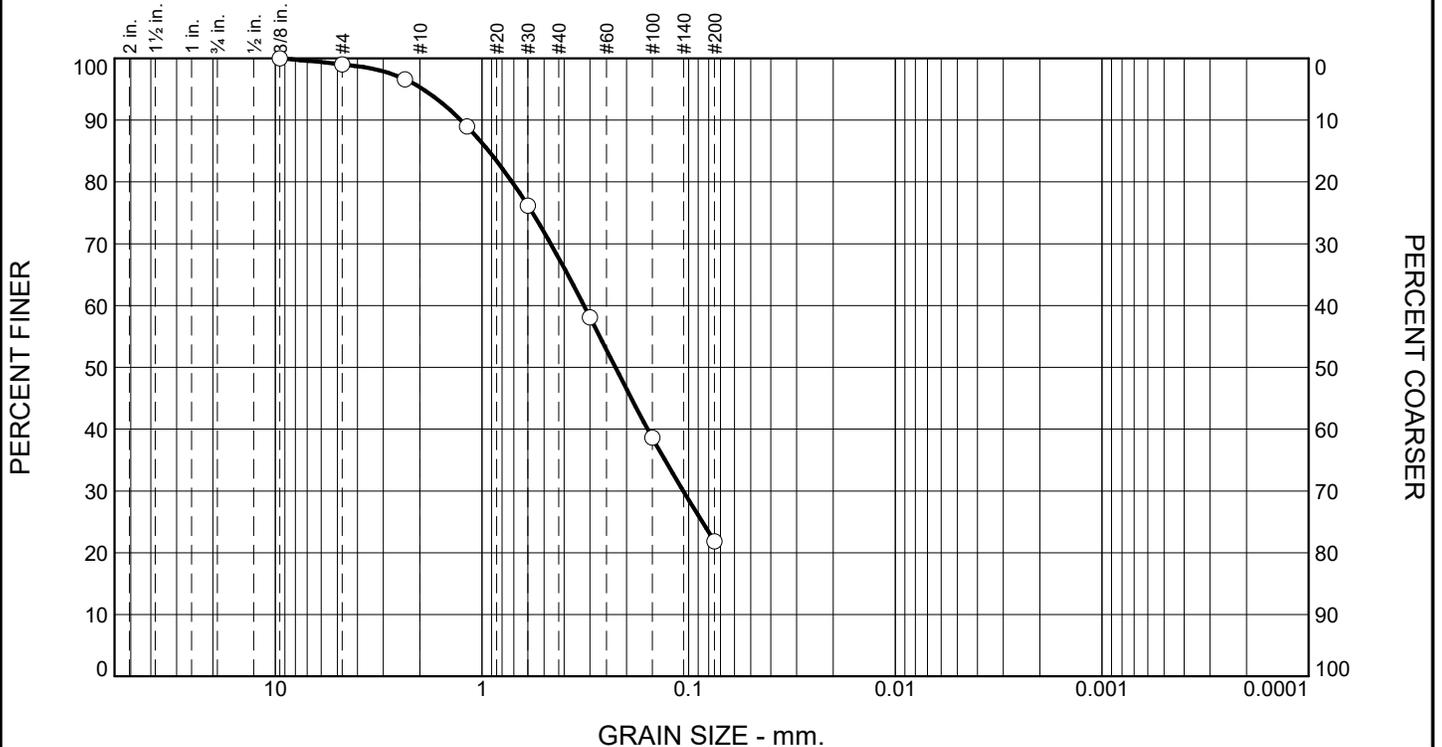
Project No. 6920A08 **Client:** DLR/EMUSD
Project: ROSEMEAD ADULT CENTER EXPANSION
Location: B1 @ 0'-5' **Depth:** 0'-5'
Sample Number: 636

MTGL, Inc.
Anaheim, CA

Remarks:
 ● SAMPLED BY JAY ROWERDINK

Tested By: RJS/JA **Checked By:** IC

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.0	3.7	27.7	45.8	21.8	

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3/8	100.0		
#4	99.0		
#8	96.6		
#16	89.0		
#30	76.2		
#50	58.1		
#100	38.6		
#200	21.8		

* (no specification provided)

Material Description

Brown Silty SAND

Atterberg Limits (ASTM D 4318)

PL= NP LL= NV PI= NP

Classification

USCS (D 2487)= SM AASHTO (M 145)= A-2-4(0)

Coefficients

D₉₀= 1.2666 D₈₅= 0.9270 D₆₀= 0.3212
D₅₀= 0.2261 D₃₀= 0.1062 D₁₅=
D₁₀= C_u= C_c=

Remarks

SAMPLED BY JAY ROWERDINK
F.M.=1.43

Date Received: 05-10-2022 Date Tested: 05-17-2022

Tested By: RJS

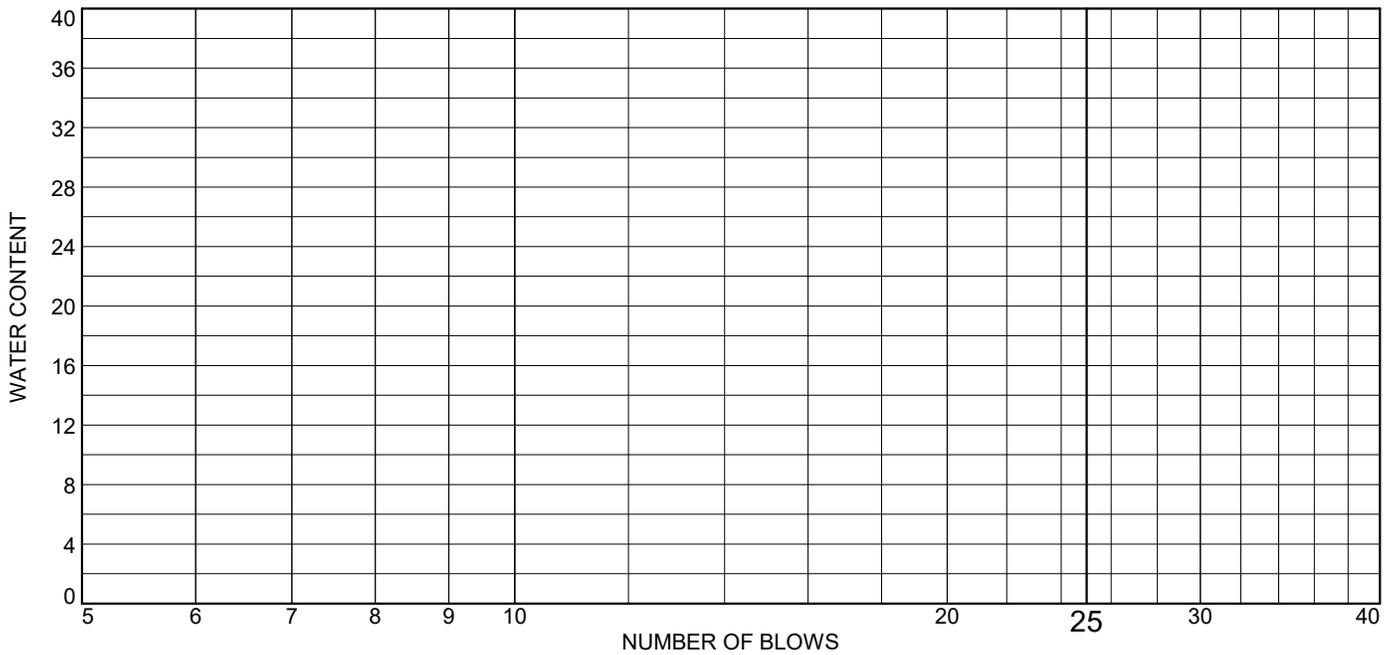
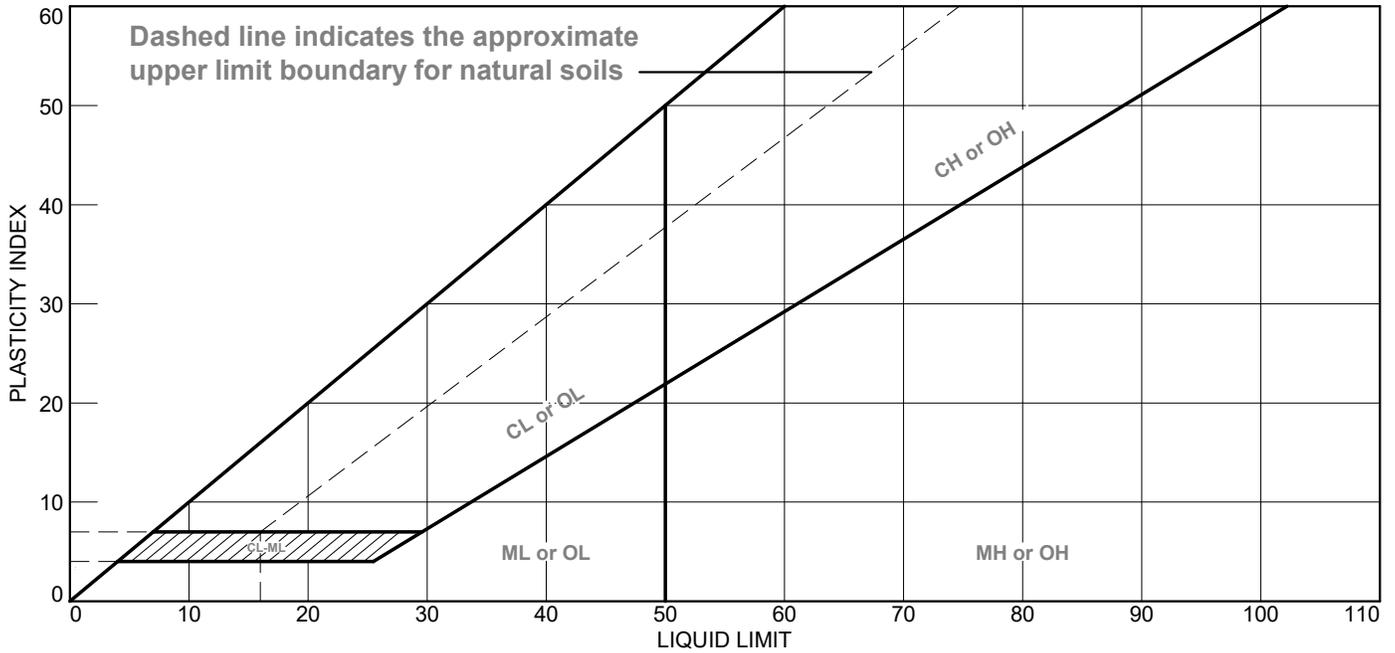
Checked By: IC

Title: PE,GE

Location: B1 @ 20' Depth: 20' Date Sampled: 05-10-2022
Sample Number: 636

MTGL, Inc. Anaheim, CA	Client: DLR/EMUSD Project: ROSEMEAD ADULT CENTER EXPANSION Project No: 6920A08
---	---

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Brown Silty SAND	NV	NP	NP	67.6	21.8	SM

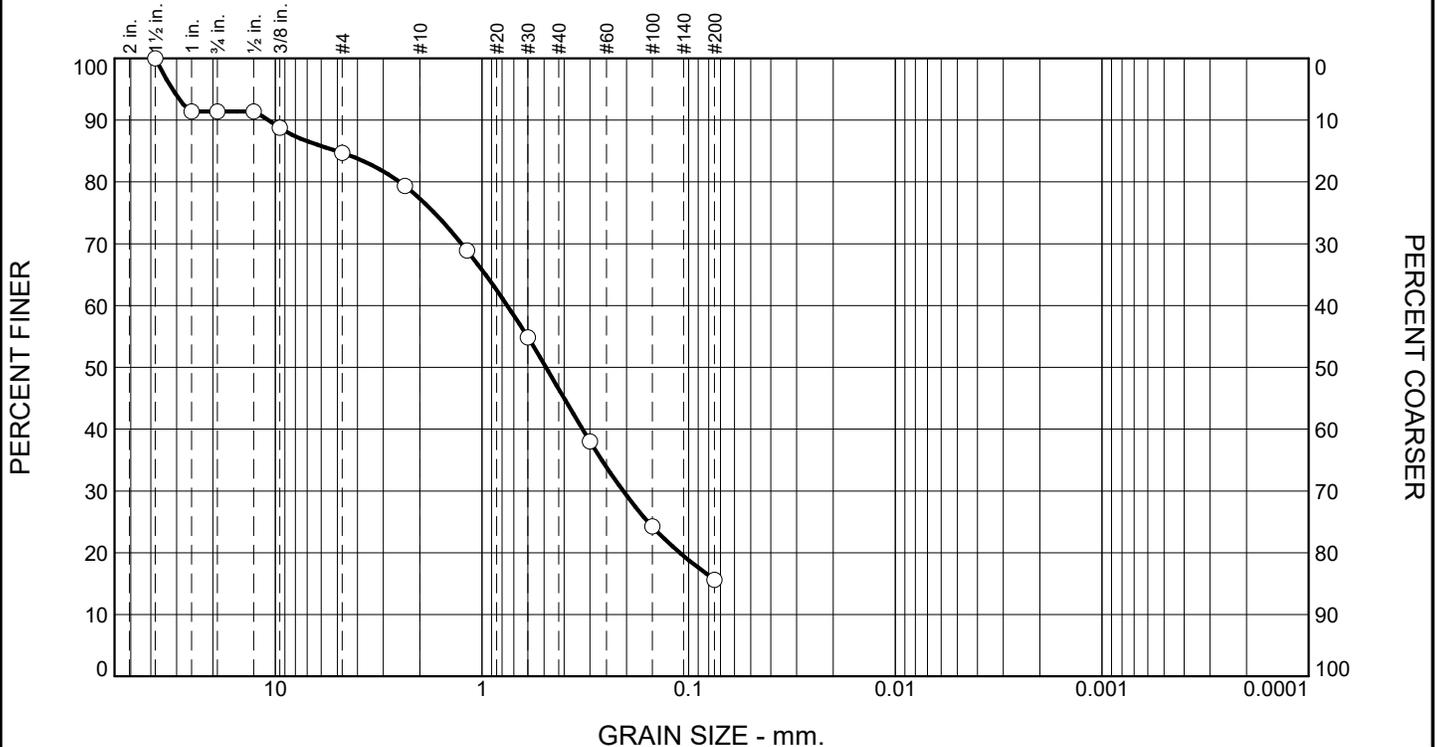
Project No. 6920A08 **Client:** DLR/EMUSD
Project: ROSEMEAD ADULT CENTER EXPANSION
Location: B1 @ 20' **Depth:** 20'
Sample Number: 636

MTGL, Inc.
Anaheim, CA

Remarks:
 ● SAMPLED BY JAY ROWERDINK

Tested By: RJS **Checked By:** IC

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	8.6	6.7	7.4	30.8	30.9	15.6	

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1-1/2"	100.0		
1"	91.4		
3/4"	91.4		
1/2"	91.4		
3/8"	88.8		
#4	84.7		
#8	79.3		
#16	68.9		
#30	54.9		
#50	38.0		
#100	24.2		
#200	15.6		

* (no specification provided)

Material Description

Brown Silty SAND w/ Gravel

Atterberg Limits (ASTM D 4318)

PL= NP LL= NV PI= NP

Classification

USCS (D 2487)= SM AASHTO (M 145)= A-1-b

Coefficients

D₉₀= 10.7961 D₈₅= 5.0451 D₆₀= 0.7541
D₅₀= 0.4902 D₃₀= 0.2073 D₁₅=
D₁₀= C_u= C_c=

Remarks

SAMPLED BY JAY ROWERDINK
F.M.=2.70

Date Received: 05-10-2022 Date Tested: 05-17-2022

Tested By: RJS

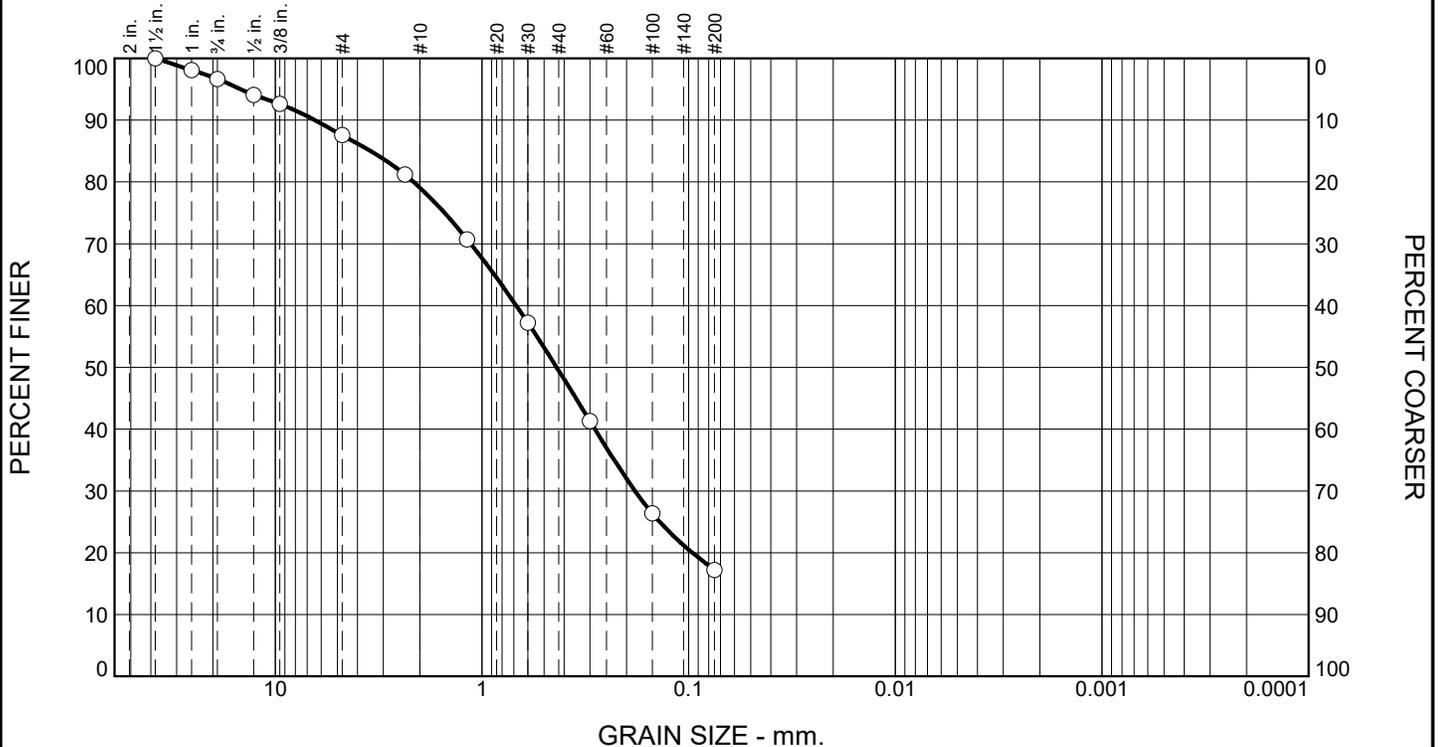
Checked By: IC

Title: PE,GE

Location: B1 @ 25' Depth: 25' Date Sampled: 05-10-2022
Sample Number: 636

MTGL, Inc. Anaheim, CA	Client: DLR/EMUSD Project: ROSEMEAD ADULT CENTER EXPANSION Project No: 6920A08
---	---

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	3.3	9.1	8.5	29.7	32.2	17.2	

Test Results (ASTM C 136 & ASTM C 117)			
Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
1-1/2"	100.0		
1"	98.1		
3/4"	96.7		
1/2"	94.1		
3/8"	92.6		
#4	87.6		
#8	81.2		
#16	70.7		
#30	57.2		
#50	41.3		
#100	26.4		
#200	17.2		

* (no specification provided)

Material Description

Brown Silty SAND

Atterberg Limits (ASTM D 4318)

PL= NP LL= NV PI= NP

Classification

USCS (D 2487)= SM AASHTO (M 145)= A-1-b

Coefficients

D₉₀= 6.4523 D₈₅= 3.4673 D₆₀= 0.6828
D₅₀= 0.4353 D₃₀= 0.1817 D₁₅=
D₁₀= C_u= C_c=

Remarks

SAMPLED BY JAY ROWERDINK
F.M.=2.46

Date Received: 05-10-2022 Date Tested: 05-17-2022

Tested By: RJS/JA

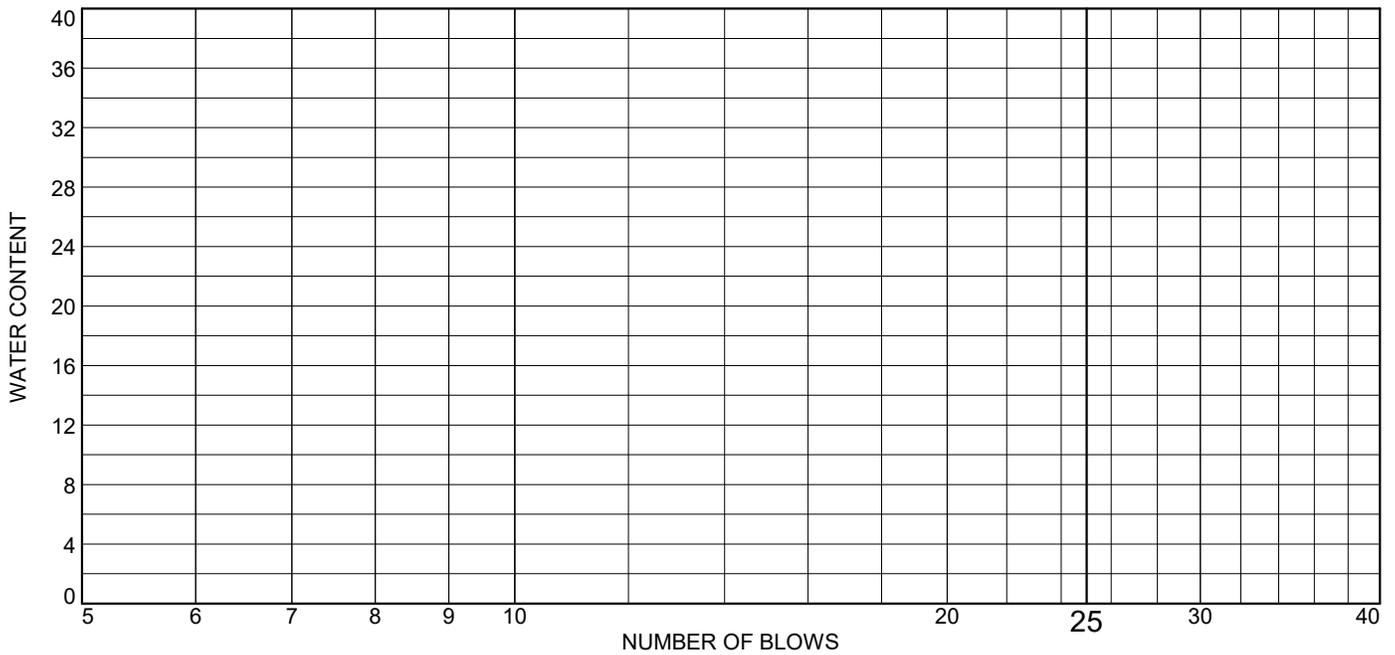
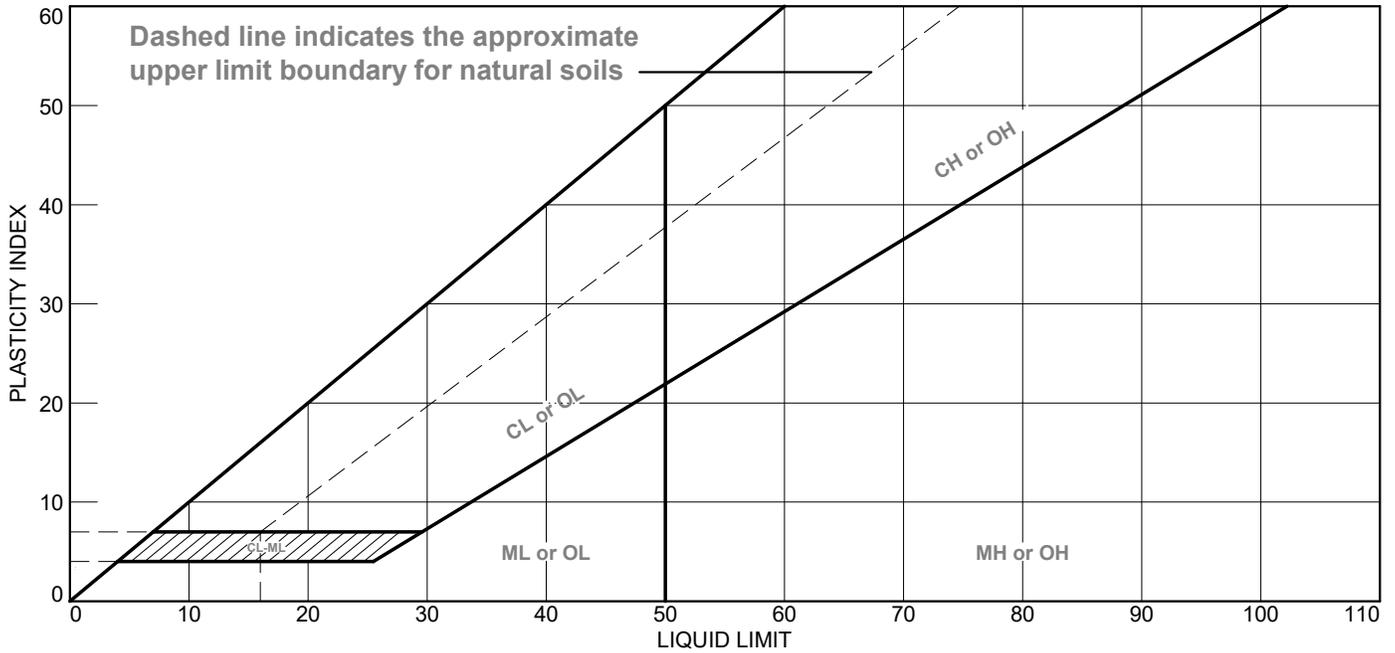
Checked By: IC

Title: PE,GE

Location: B3 @ 0'-5' Depth: 0'-5' Date Sampled: 05-10-2022
Sample Number: 636

MTGL, Inc. Anaheim, CA	Client: DLR/EMUSD Project: ROSEMEAD ADULT CENTER EXPANSION Project No: 6920A08
---	---

LIQUID AND PLASTIC LIMITS TEST REPORT



MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
● Brown Silty SAND	NV	NP	NP	49.4	17.2	SM

Project No. 6920A08 **Client:** DLR/EMUSD
Project: ROSEMEAD ADULT CENTER EXPANSION
Location: B3 @ 0'-5' **Depth:** 0'-5'
Sample Number: 636

Remarks:
● SAMPLED BY JAY ROWERDINK

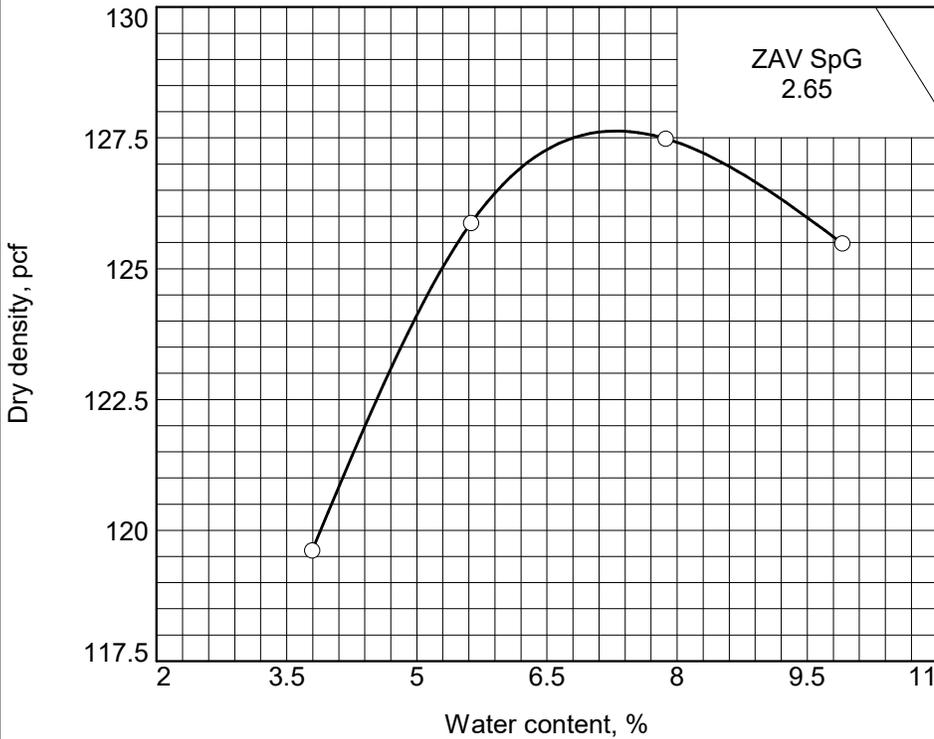
MTGL, Inc.
Anaheim, CA

Tested By: RJS

Checked By: IC

COMPACTION TEST REPORT

Curve No.
636



Test Specification:
ASTM D 1557-12 Method B Modified

Preparation Method Moist
Hammer Wt. 10 lb.
Hammer Drop 18 in.
Number of Layers five
Blows per Layer 25
Mold Size 0.03333 cu. ft.

Test Performed on Material
Passing 3/8 in. **Sieve**

NM _____ **LL** _____ **NV** _____ **PI** _____ **NP** _____
Sp.G. (ASTM D 854) 2.65
%>3/8 in. 5.4 **%<No.200** 12.2

USCS SM **AASHTO** A-1-b

Date Sampled 05-10-2022

Date Tested 05-24-2022

Tested By RJS/JA

TESTING DATA

	1	2	3	4	5	6
WM + WS	5987.0	6120.0	6189.0	6195.0		
WM	4110.0	4110.0	4110.0	4110.0		
WW + T #1	270.9	255.4	279.7	286.3		
WD + T #1	261.0	241.8	259.3	260.5		
TARE #1	0.0	0.0	0.0	0.0		
WW + T #2						
WD + T #2						
TARE #2						
MOISTURE	3.8	5.6	7.9	9.9		
DRY DENSITY	119.6	125.9	127.5	125.5		

TEST RESULTS

Maximum dry density = 127.6 pcf
 Optimum moisture = 7.3 %

Project No. 6920A08 **Client:** DLR/EMUSD
Project: ROSEMEAD ADULT CENTER EXPANSION

○ **Location:** B1 @ 0'-5' **Depth:** 0'-5' **Sample Number:** 636

MTGL, Inc.

Anaheim, CA

Material Description

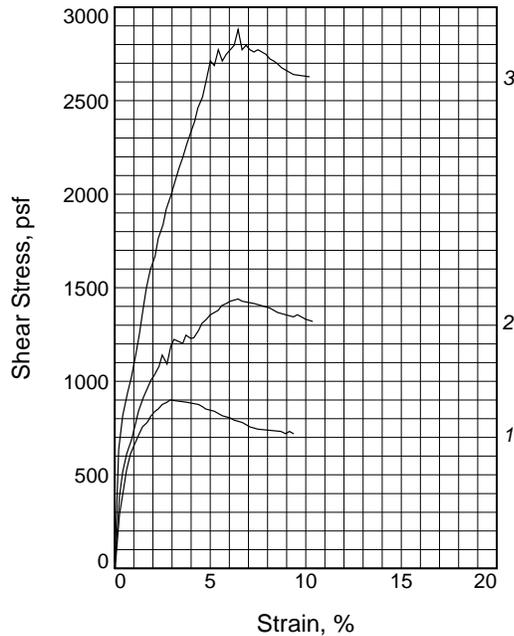
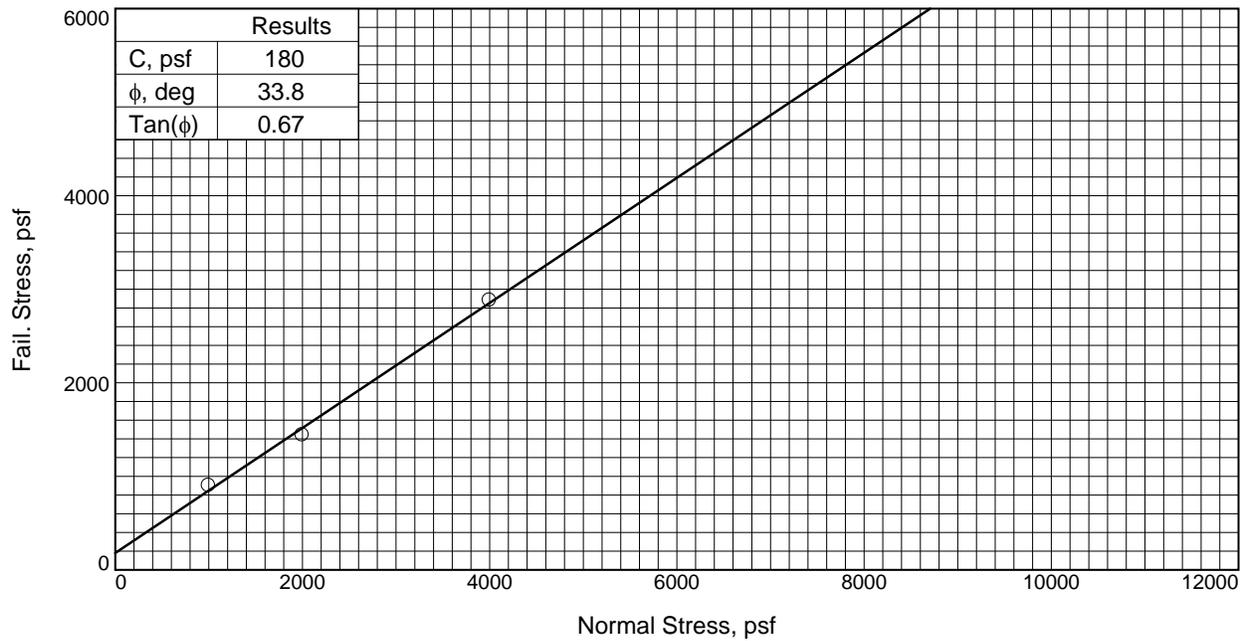
Brown Silty SAND

Remarks:

SAMPLED BY JAY ROWERDINK

Checked by: IC

Title: PE,GE



Sample No.	1	2	3	
Initial	Water Content, %	4.9	4.6	4.7
	Dry Density, pcf	119.0	120.8	119.4
	Saturation, %	33.2	33.1	32.1
	Void Ratio	0.3902	0.3692	0.3854
	Diameter, in.	2.42	2.42	2.42
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	13.8	11.3	10.9
	Dry Density, pcf	121.1	127.2	128.5
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.3663	0.3007	0.2877
	Diameter, in.	2.42	2.42	2.42
	Height, in.	0.98	0.95	0.93
Normal Stress, psf	1000	2000	4000	
Fail. Stress, psf	900	1440	2880	
Strain, %	2.9	6.5	6.5	
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.	0.010	0.010	0.010	

Sample Type:

Description: SILTY SAND (SM), with gravel, brown

Specific Gravity= 2.65

Remarks: LAB #636

Client:

Project: ROSEMEAD ADULT CENTER EXPANSION

Sample Number: B2 **Depth:** 5'

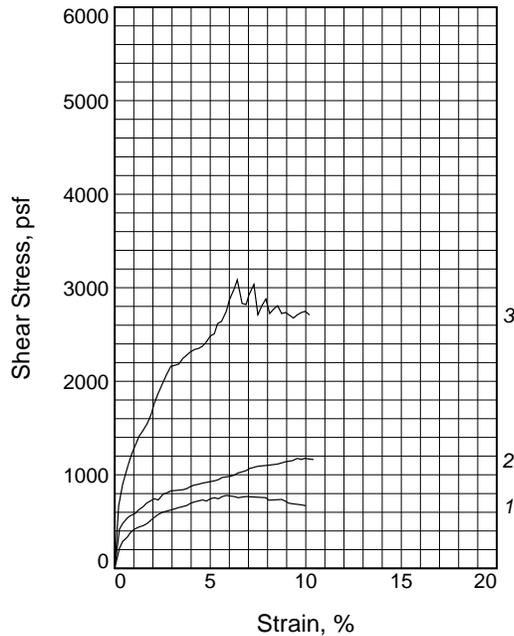
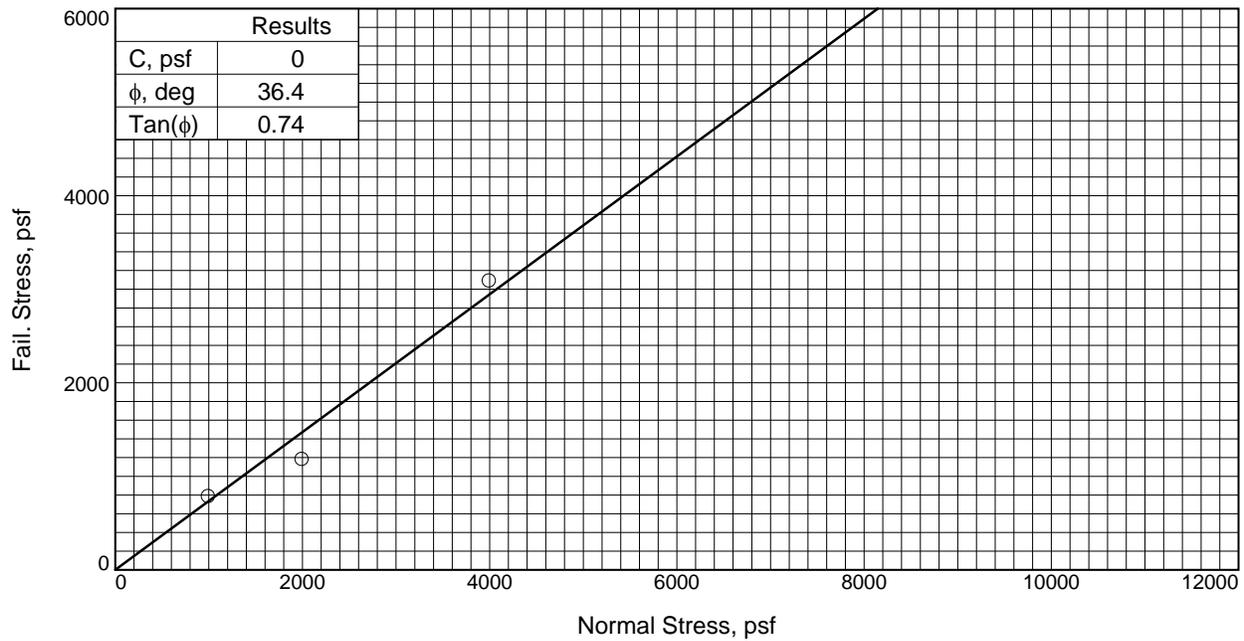
Proj. No.: 6920-A08

Date Sampled: 5/10/22

DIRECT SHEAR TEST REPORT
MTGL, Inc.

Tested By: JH

Checked By: IC



Sample No.	1	2	3	
Initial	Water Content, %	2.9	3.0	2.9
	Dry Density, pcf	107.4	108.8	102.9
	Saturation, %	14.4	15.2	12.7
	Void Ratio	0.5409	0.5209	0.6081
	Diameter, in.	2.42	2.42	2.42
	Height, in.	1.00	1.00	1.00
At Test	Water Content, %	17.0	17.2	18.9
	Dry Density, pcf	114.0	113.7	110.2
	Saturation, %	100.0	100.0	100.0
	Void Ratio	0.4512	0.4555	0.5008
	Diameter, in.	2.42	2.42	2.42
	Height, in.	0.94	0.96	0.93
Normal Stress, psf	1000	2000	4000	
Fail. Stress, psf	780	1176	3084	
Strain, %	5.8	9.6	6.4	
Ult. Stress, psf				
Strain, %				
Strain rate, in./min.	0.010	0.010	0.010	

Sample Type:

Description: SILTY SAND (SM), with gravel, brown

Specific Gravity= 2.65

Remarks: LAB #636

Client:

Project: ROSEMEAD ADULT CENTER EXPANSION

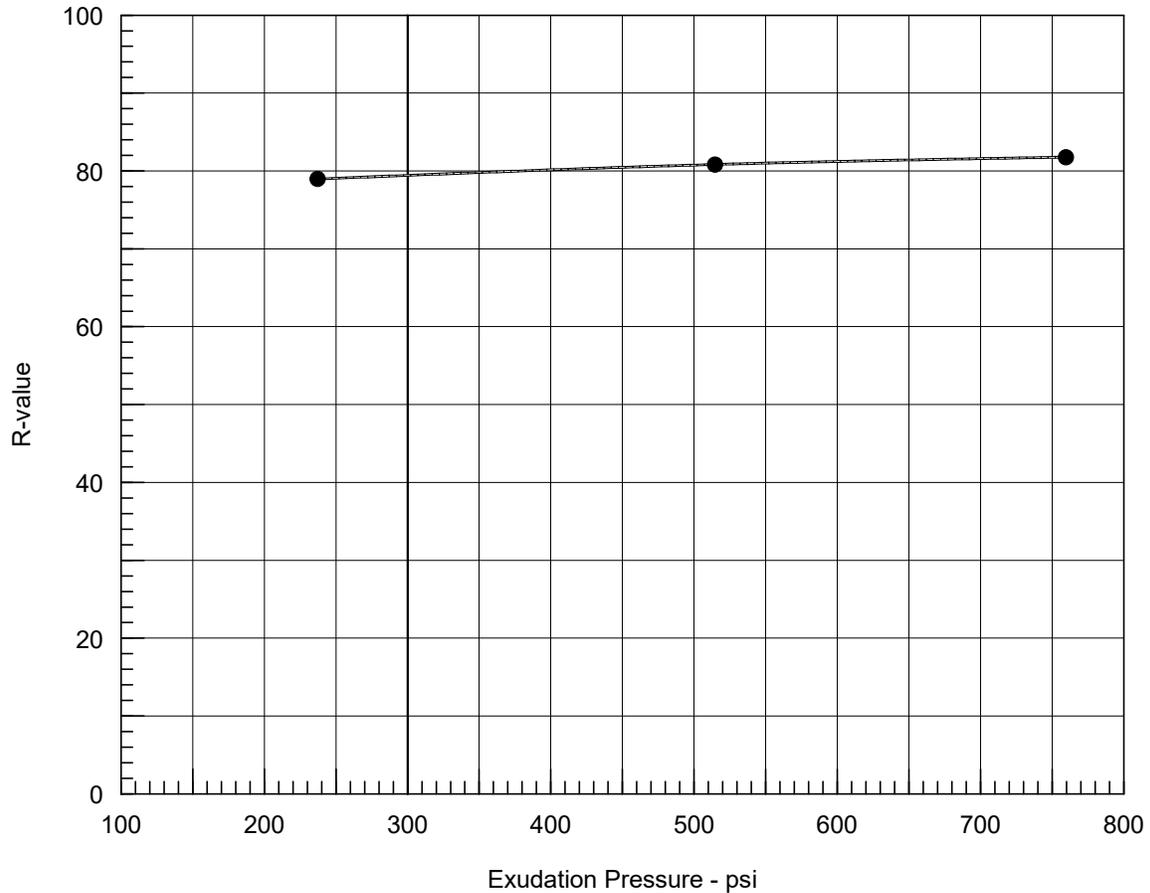
Sample Number: B1 **Depth:** 10'

Proj. No.: 6920-A08

Date Sampled: 5/10/22

DIRECT SHEAR TEST REPORT
MTGL, Inc.

R-VALUE TEST REPORT



Resistance R-Value and Expansion Pressure - ASTM D2844

No.	Compact. Pressure psi	Density pcf	Moist. %	Expansion Pressure psi	Horizontal Press. psi @ 160 psi	Sample Height in.	Exud. Pressure psi	R Value	R Value Corr.
1	350	127.8	8.9	0.00	17	2.47	237	79	79
2	350	129.0	7.5	0.00	15	2.46	515	81	81
3	350	129.2	6.5	0.00	14	2.47	760	82	82

Test Results	Material Description
R-value at 300 psi exudation pressure = 79	Brown Silty SAND
Project No.: 6920A08 Project: ROSEMEAD ADULT CENTER EXPANSION Location: B3 @ 0'-5' Sample Number: 636 Depth: 0'-5' Date: 6/15/2022	Tested by: RJS/JA Checked by: IC Remarks: SAMPLED BY JAY ROWERDINK
R-VALUE TEST REPORT MTGL, Inc.	

ANAHEIM TEST LAB, INC

196 Technology Drive, Unit D
Irvine, CA 92618
Phone (949) 336-6544

MTGL, INC.
2992 LA PALMA AVE. #A
ANAHEIM, CA 92806

DATE: 5/24/2022

P.O. NO: Transmittal

LAB NO: C-5996, 1-2

SPECIFICATION: CTM-643/417/422

MATERIAL: Soil

Project No: 6920A08
MTGL Lab No: 636
Project: Rosemead Adult Center Expansion
El Monte, CA

ANALYTICAL REPORT

CORROSION SERIES SUMMARY OF DATA

	pH	MIN. RESISTIVITY per CT. 643 ohm-cm	SOLUBLE SULFATES per CT. 417 ppm	SOLUBLE CHLORIDES per CT. 422 ppm
1) B-1 @ 0-5'	7.5	11,500	107	56
2) B-3 @ 0-5'	7.4	3,100	140	66

RESPECTFULLY SUBMITTED



WES BRIDGER LAB MANAGER

APPENDIX D

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

APPENDIX D

GENERAL EARTHWORK AND GRADING SPECIFICATIONS

GENERAL

These specifications present general procedures and requirements for grading and earthwork as shown on the approved grading plans, including preparation of areas to be filled, placement of fill, installation of subdrains, and excavations. The recommendations contained in the attached geotechnical report are a part of the earthwork and grading specifications and shall supersede the provisions contained herein in the case of conflict. Evaluations performed by the Consultant during the course of grading may result in new recommendations, which could supersede these specifications, or the recommendations of the geotechnical report.

EARTHWORK OBSERVATION AND TESTING

Prior to the start of grading, a qualified Geotechnical Consultant (Geotechnical Engineer and Engineering Geologist) shall be employed for the purpose of observing earthwork procedures and testing the fills for conformance with the recommendations of the geotechnical report and these specifications. It will be necessary that the Consultant provide adequate testing and observation so that he may determine that the work was accomplished as specified. It shall be the responsibility of the Contractor to assist the Consultant and keep them apprised of work schedules and changes so that he may schedule his personnel accordingly.

It shall be the sole responsibility of the Contractor to provide adequate equipment and methods to accomplish the work in accordance with applicable grading codes or agency ordinances, these specifications, and the approved grading plans.

Maximum dry density tests used to determine the degree of compaction will be performed in accordance with the American Society for Testing and Materials Test Method (ASTM) D1557.

PREPARATION OF AREAS TO BE FILLED

Clearing and Grubbing: All brush, vegetation and debris shall be removed or piled and otherwise disposed of.

Processing: The existing ground which is determined to be satisfactory for support of fill shall be scarified to a minimum depth of 8-inches. Existing ground, which is not satisfactory, shall be over-excavated as specified in the following section.

Over-excavation: Soft, dry, spongy, highly fractured, or otherwise unsuitable ground, extending to such a depth that surface processing cannot adequately improve the condition, shall be over-excavated down to firm ground, approved by the Consultant.

Moisture conditioning: Over-excavated and processed soils shall be watered, dried-back, blended, and mixed as required to have a relatively uniform moisture content near the optimum moisture content as determined by ASTM D1557.

Re-compaction: Over-excavated and processed soils, which have been mixed, and moisture conditioned uniformly shall be recompacted to a minimum relative compaction of 90-percent of ASTM D1557.

Benching: Where soils are placed on ground with slopes steeper than 5:1 (horizontal to vertical), the ground shall be stepped or benched. Benches shall be excavated in firm material for a minimum width of 4 feet.

FILL MATERIAL

General: Material to be placed as fill shall be free of organic matter and other deleterious substances and shall be approved by the Consultant.

Oversize: Oversized material defined as rock, or other irreducible material with a maximum dimension greater than 6-inches, shall not be buried or placed in fill, unless the location, material, and disposal methods are specifically approved by the Consultant. Oversize disposal operations shall be such that nesting of oversized material does not occur, and such that the oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 feet vertically of finish grade or within the range of future utilities or underground construction, unless specifically approved by the Consultant.

Import: If importing of fill material is required for grading, the import material shall meet the general requirements.

FILL PLACEMENT AND COMPACTION

Fill Lifts: Approved fill material shall be placed in areas prepared to receive fill in near-horizontal layers not exceeding 8-inches in compacted thickness. The Consultant may approve thicker lifts if testing indicates the grading procedures are such that adequate compaction is being achieved with lifts of greater thickness. Each layer shall be spread evenly and shall be thoroughly mixed during spreading to attain uniformity of material and moisture in each layer.

Fill Moisture: Fill layers at a moisture content less than optimum shall be watered and mixed, and wet fill layers shall be aerated by scarification or shall be blended with drier material. Moisture conditioning and mixing of fill layers shall continue until the fill material is at uniform moisture content at or near optimum.

Compaction of Fill: After each layer has been evenly spread, moisture conditioned, and mixed, it shall be uniformly compacted to not less than 90-percent of maximum dry density in accordance with ASTM D1557. Compaction equipment shall be adequately sized and shall be either specifically designed for soil compaction or of proven reliability, to efficiently achieve the specified degree of compaction.

Fill Slopes: Compacting on slopes shall be accomplished, in addition to normal compacting procedures, by backrolling of slopes with sheepsfoot rollers at frequent increments of 2- to 3-feet as the fill is placed, or by other methods producing satisfactory results. At the completion of grading, the relative compaction of the slope out to the slope face shall be at least 90-percent in accordance with ASTM D1557.

Compaction Testing: Field tests to check the fill moisture and degree of compaction will be performed by the consultant. The location and frequency of tests shall be at the consultant's discretion. In general, these tests will be taken at an interval not exceeding 2-feet in vertical rise, and/or 1,000 cubic yards of fill placed. In addition, on slope faces, at least one test shall be taken for each 5,000 square feet of slope face and/or each 10-feet of vertical height of slope.

SUBDRAIN INSTALLATION

Subdrain systems, if required, shall be installed in approved ground to conform to the approximate alignment and details shown on the plans or herein. The subdrain location or materials shall not be changed or modified without the approval of the Consultant. The Consultant, however, may recommend and, upon approval, direct changes in subdrain line, grade, or materials. All subdrains should be surveyed for line and grade after installation and sufficient time shall be allowed for the surveys, prior to commencement of fill over the subdrain.

EXCAVATION

Excavations and cut slopes will be examined during grading. If directed by the Consultant, further excavation or over-excavation and refilling of cut areas, and/or remedial grading of cut slopes shall be performed. Where fill over cut slopes are to be graded, unless otherwise approved, the cut portion of the slope shall be made and approved by the Consultant prior to placement of materials for construction of the fill portion of the slope.

APPENDIX E

**LIQUEFACTION AND DYNAMIC
SETTLEMENT ANALYSIS**

APPENDIX E

LIQUEFACTION AND DYNAMIC SETTLEMENT ANALYSIS

Liquefaction analysis was performed on the data gathered from the CPT soundings. The liquefaction analysis was based on the simplified techniques originally presented by Seed and Idris (1982), with recent improvements from the 1996 and 1998 NCEER workshops as summarized by Youd (2001). The liquefaction analysis was conducted in general accordance with the recommended procedures for implementation of DMG special publication 117A (CGS, 2008). The CPT data (qc1N)_{cs} was normalized for overburden pressure and corrected for fines content and thin layers using the methods described in the referenced document (Youd, 2001). The CPT fines correction was based on the Soil Behavior Type Index (I_c). The results of the liquefaction analysis are presented in this appendix.

LIQUEFACTION ANALYSIS REPORT

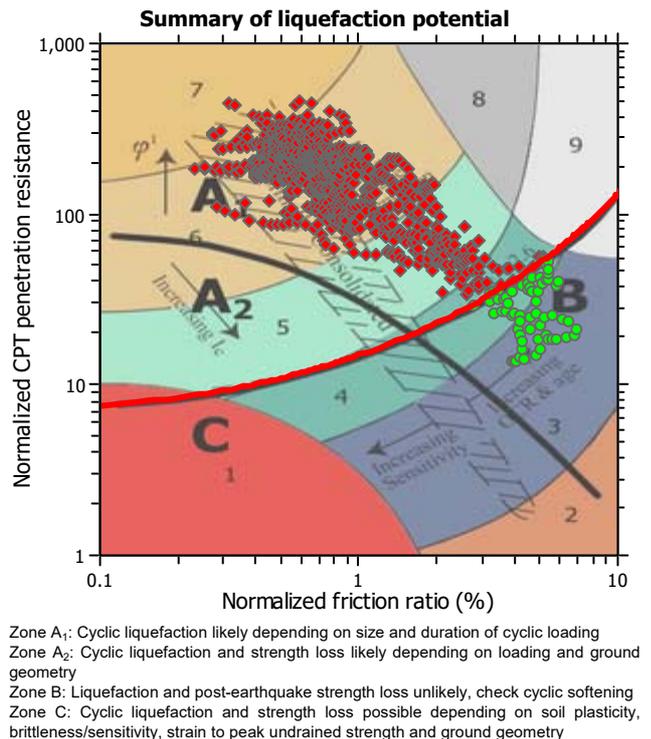
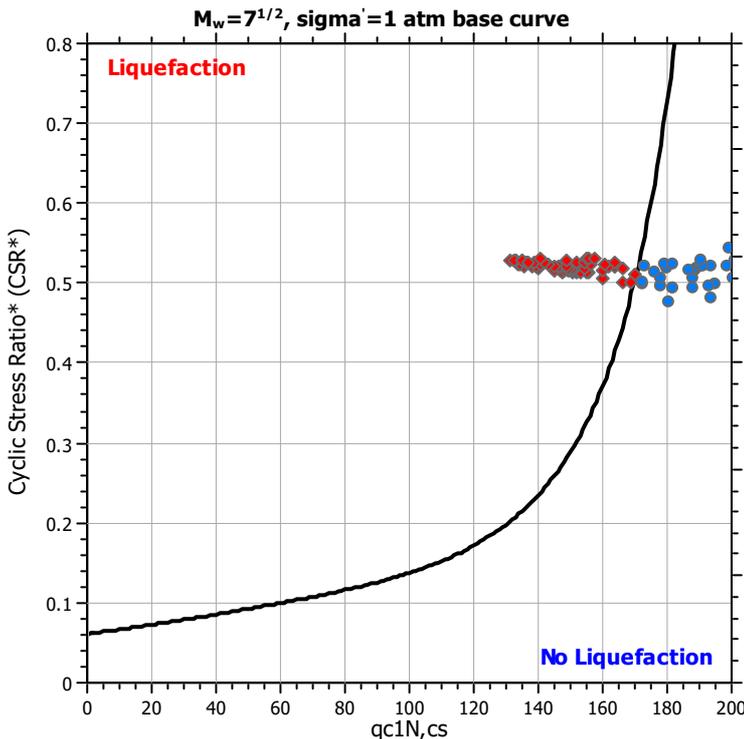
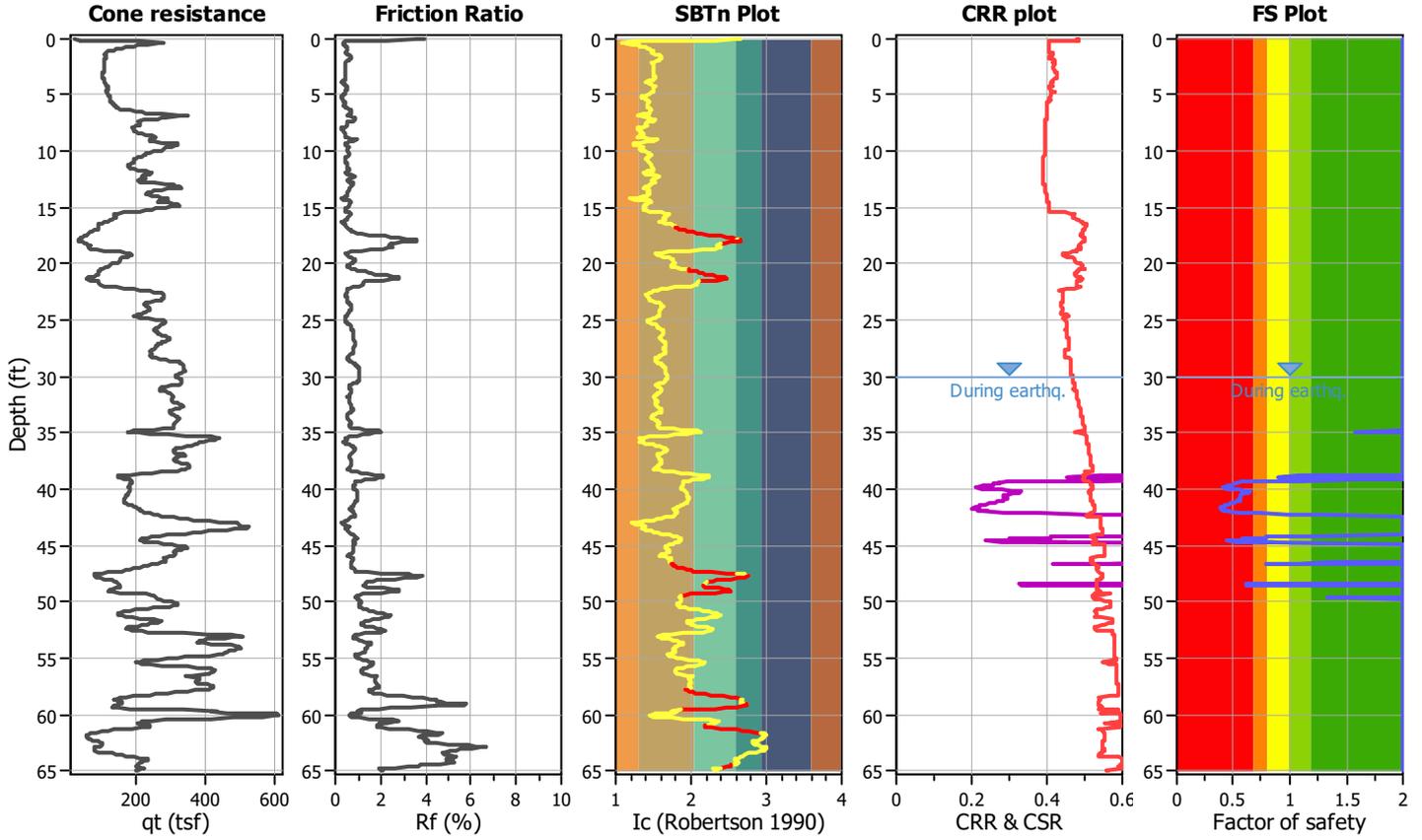
Project title : Rosemead Adult Center Expansion

Location :

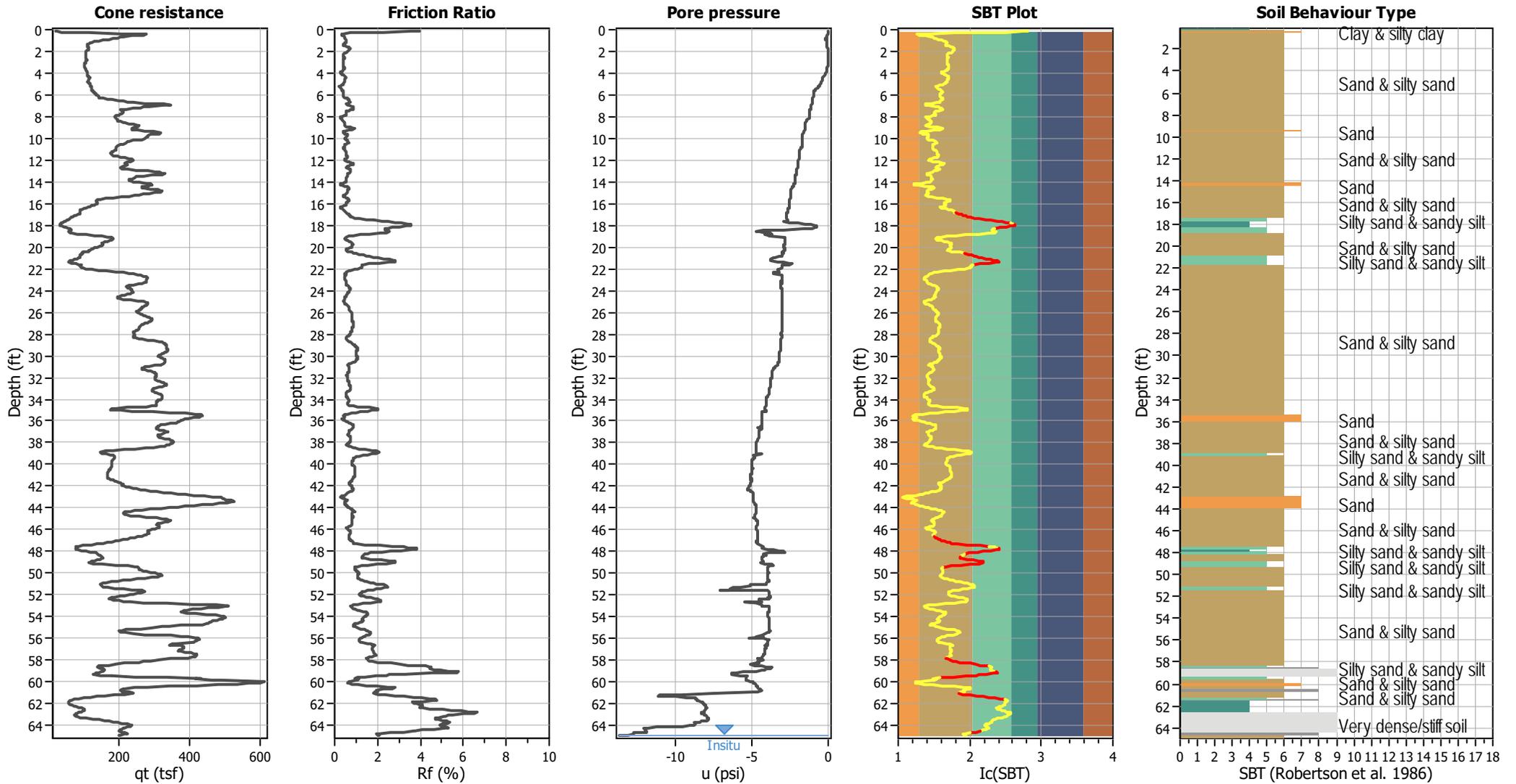
CPT file : CPT-1 (002)

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	65.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	30.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w :	6.90	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.86	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



CPT basic interpretation plots



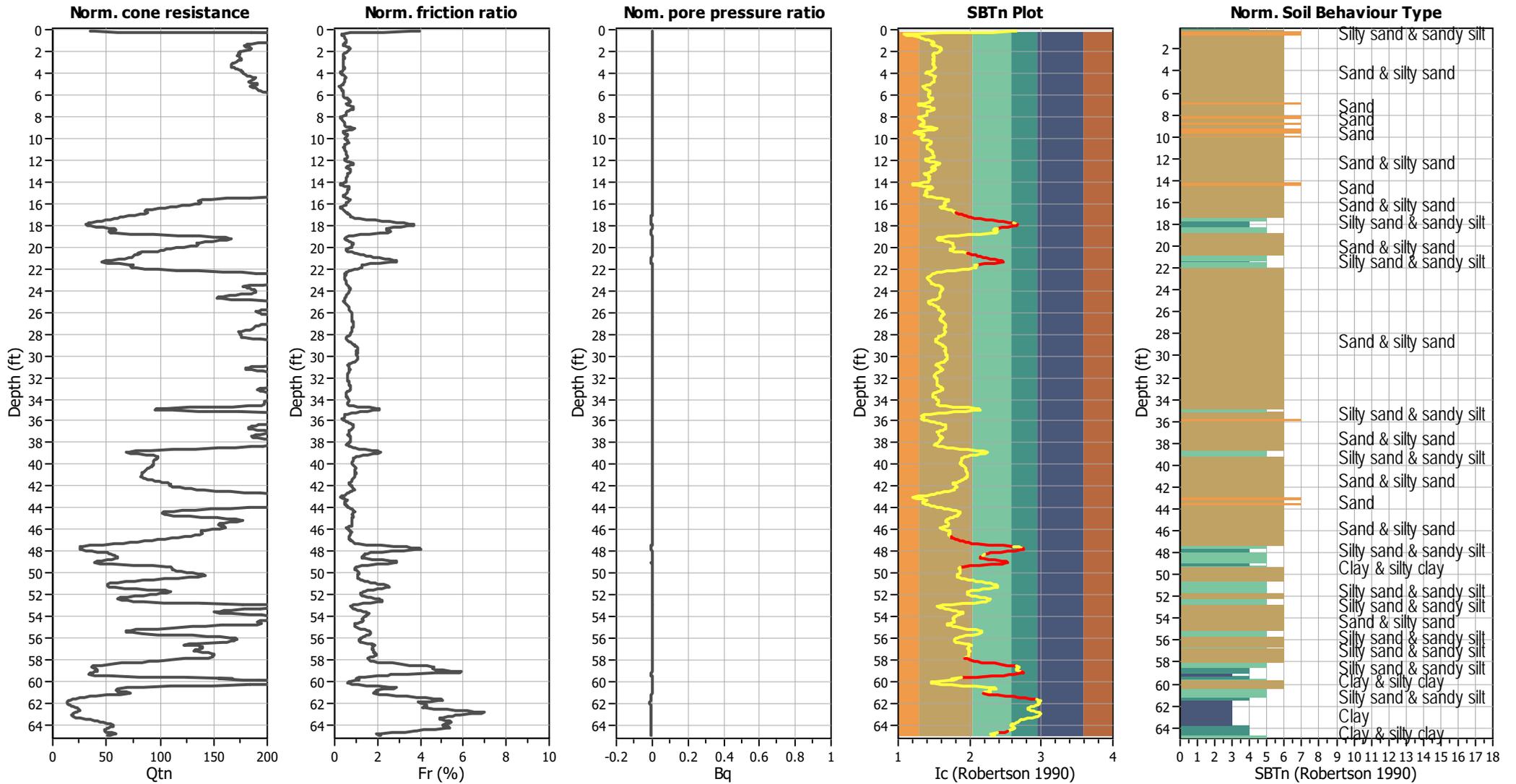
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT basic interpretation plots (normalized)



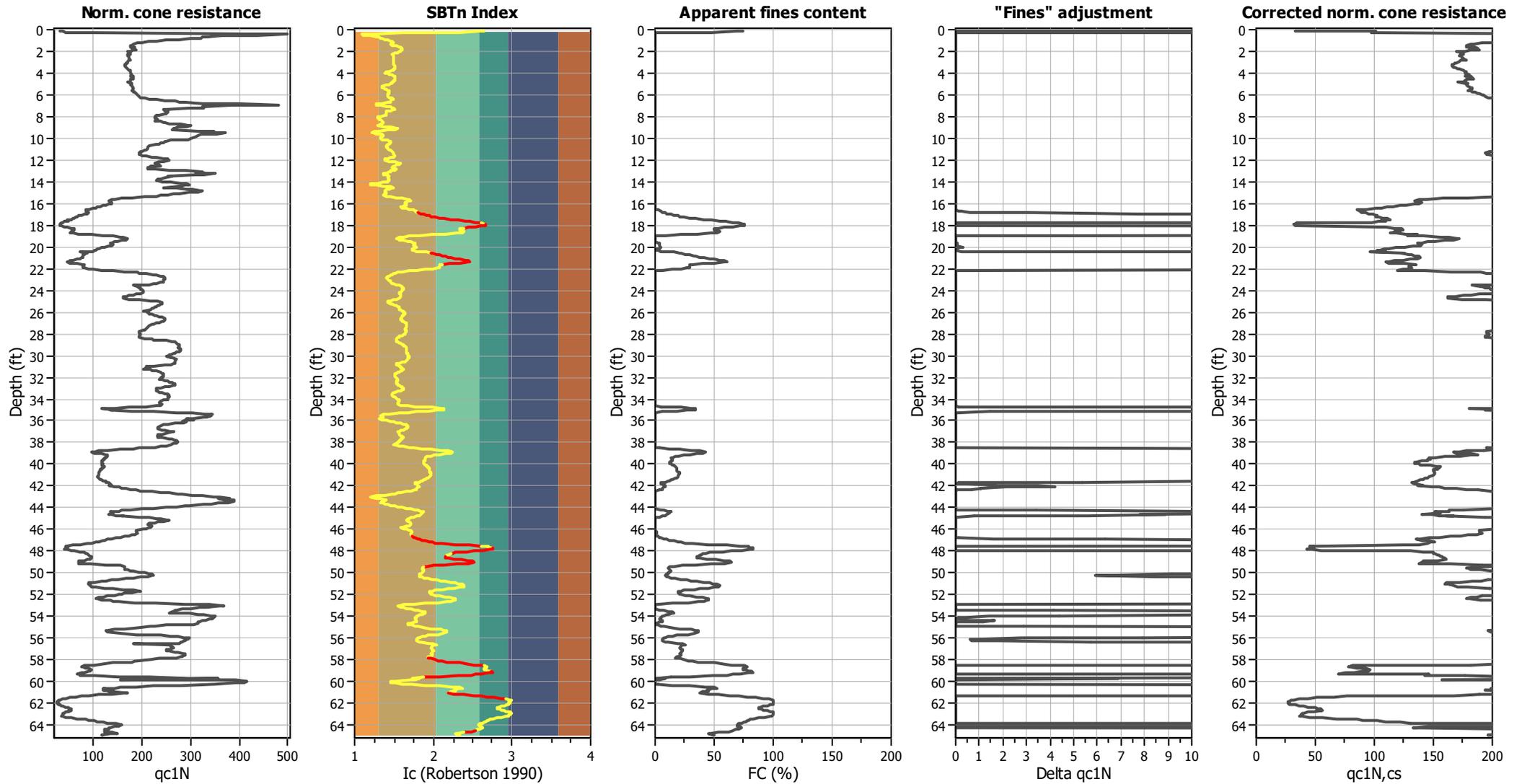
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _q applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

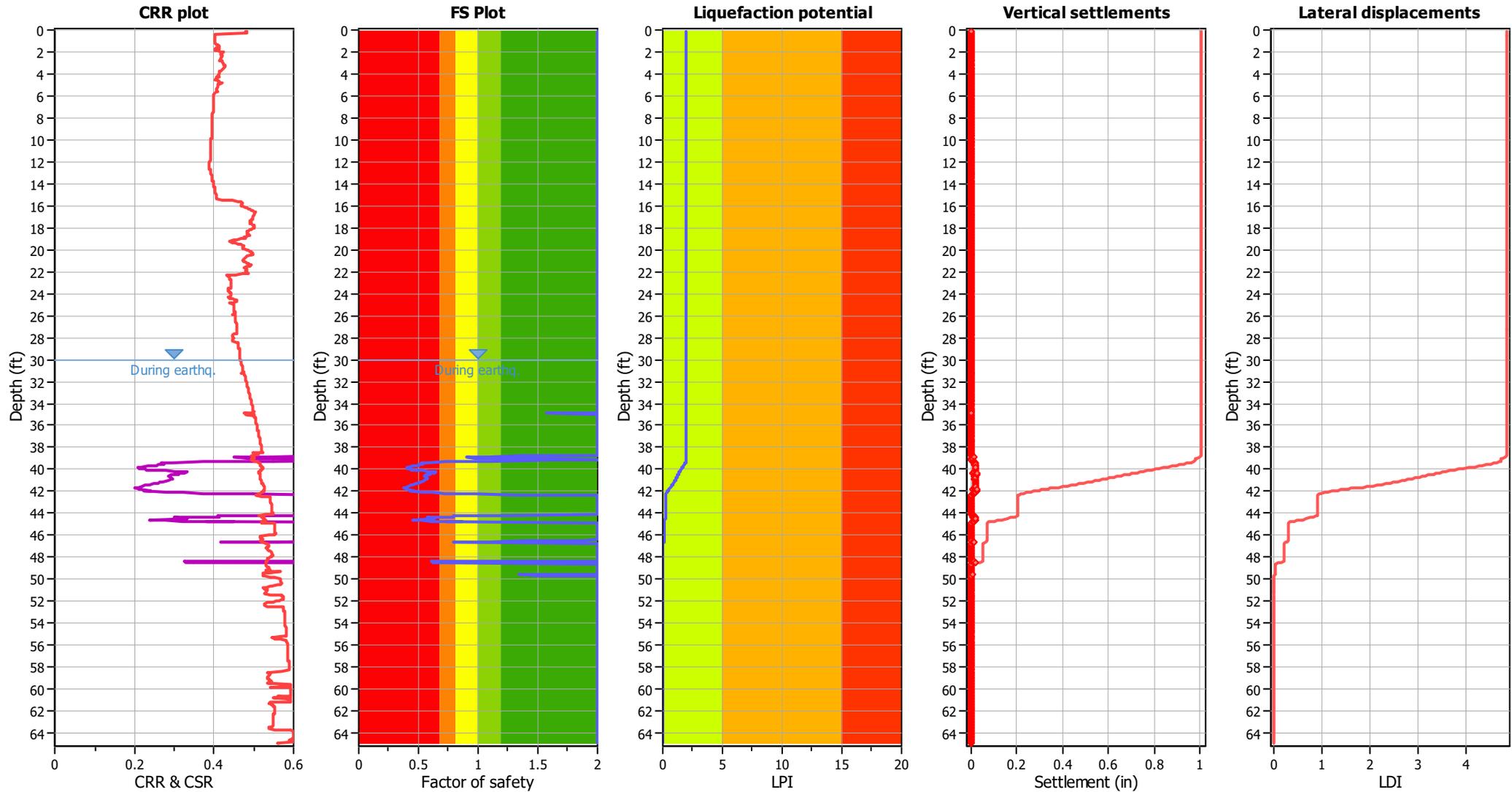
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (earthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_q applied:	Yes
Earthquake magnitude M_w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

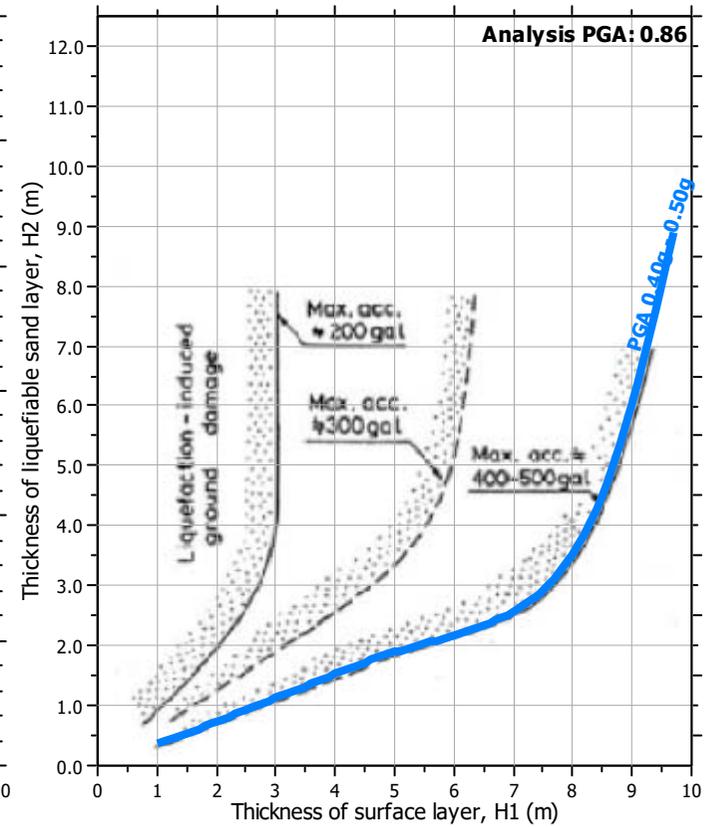
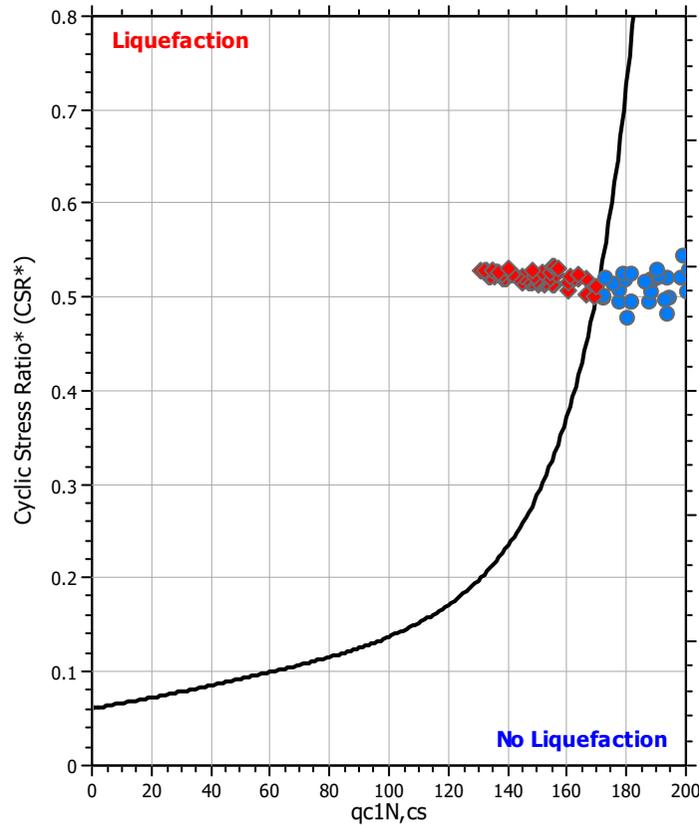
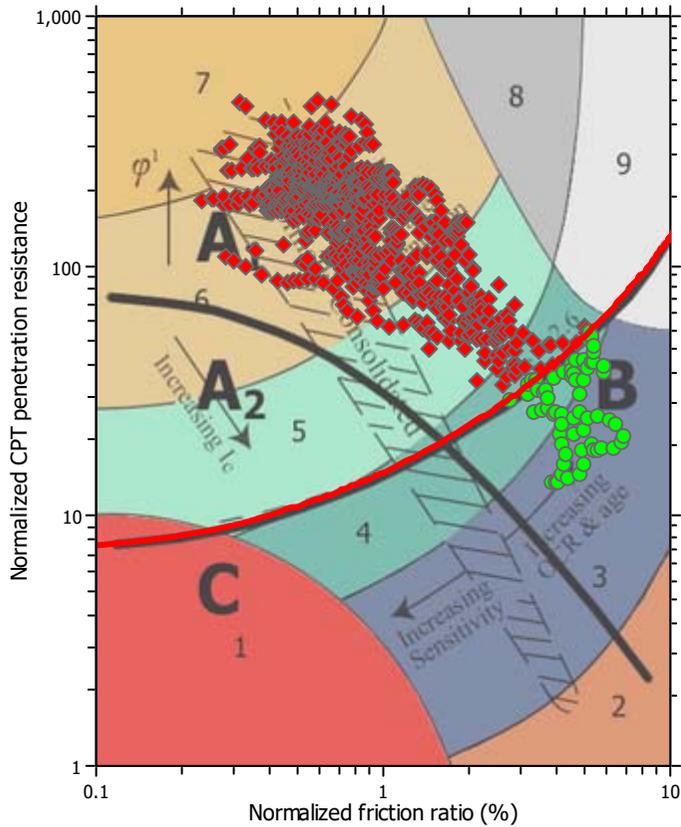
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

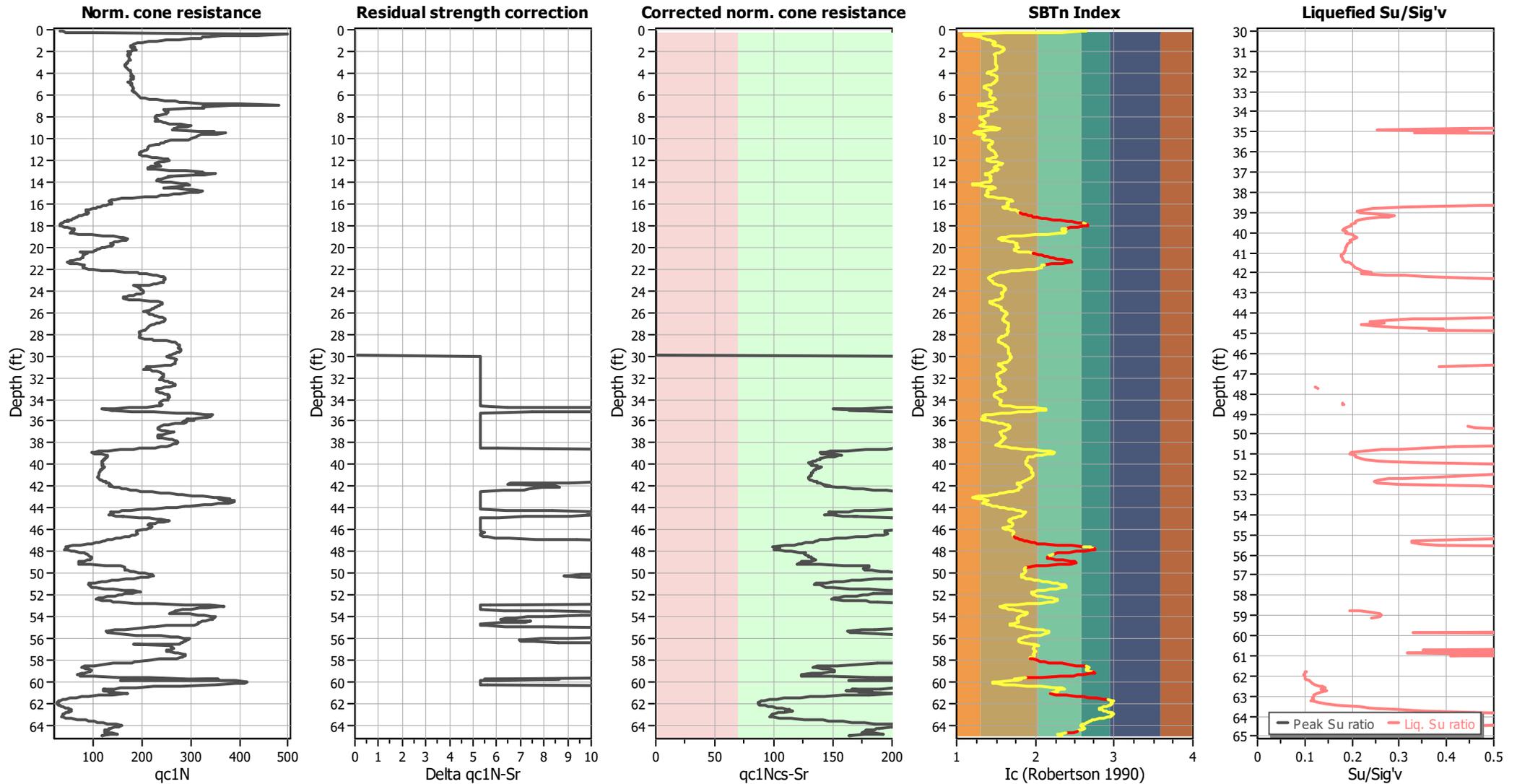
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

Check for strength loss plots (Idriss & Boulanger (2008))



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

LIQUEFACTION ANALYSIS REPORT

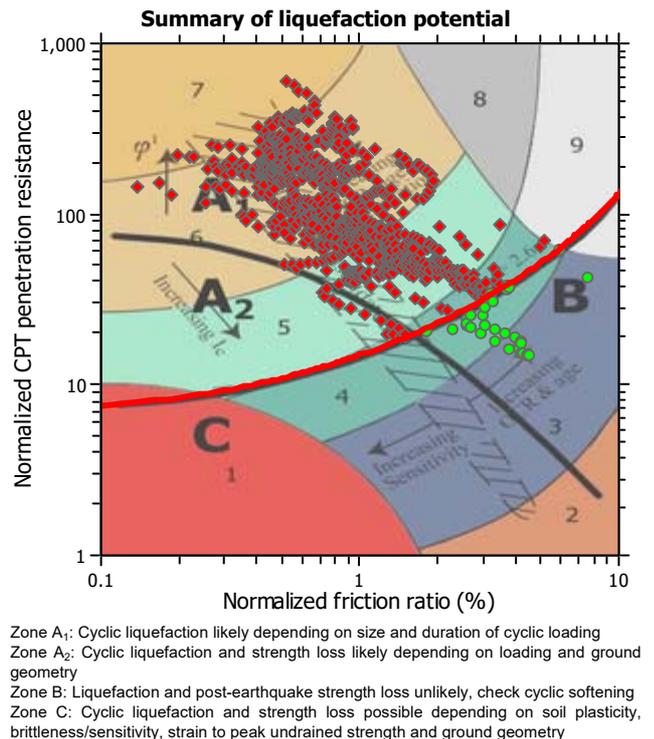
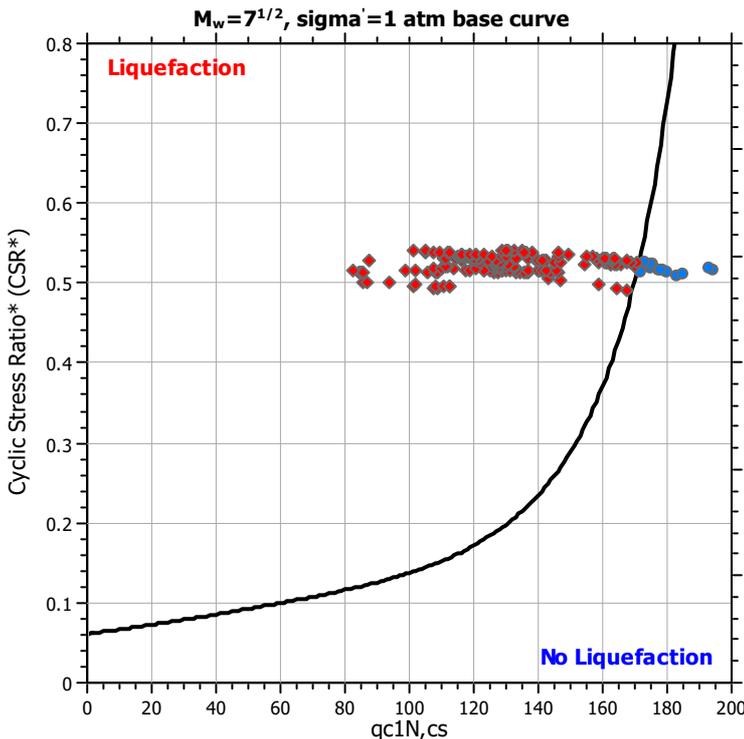
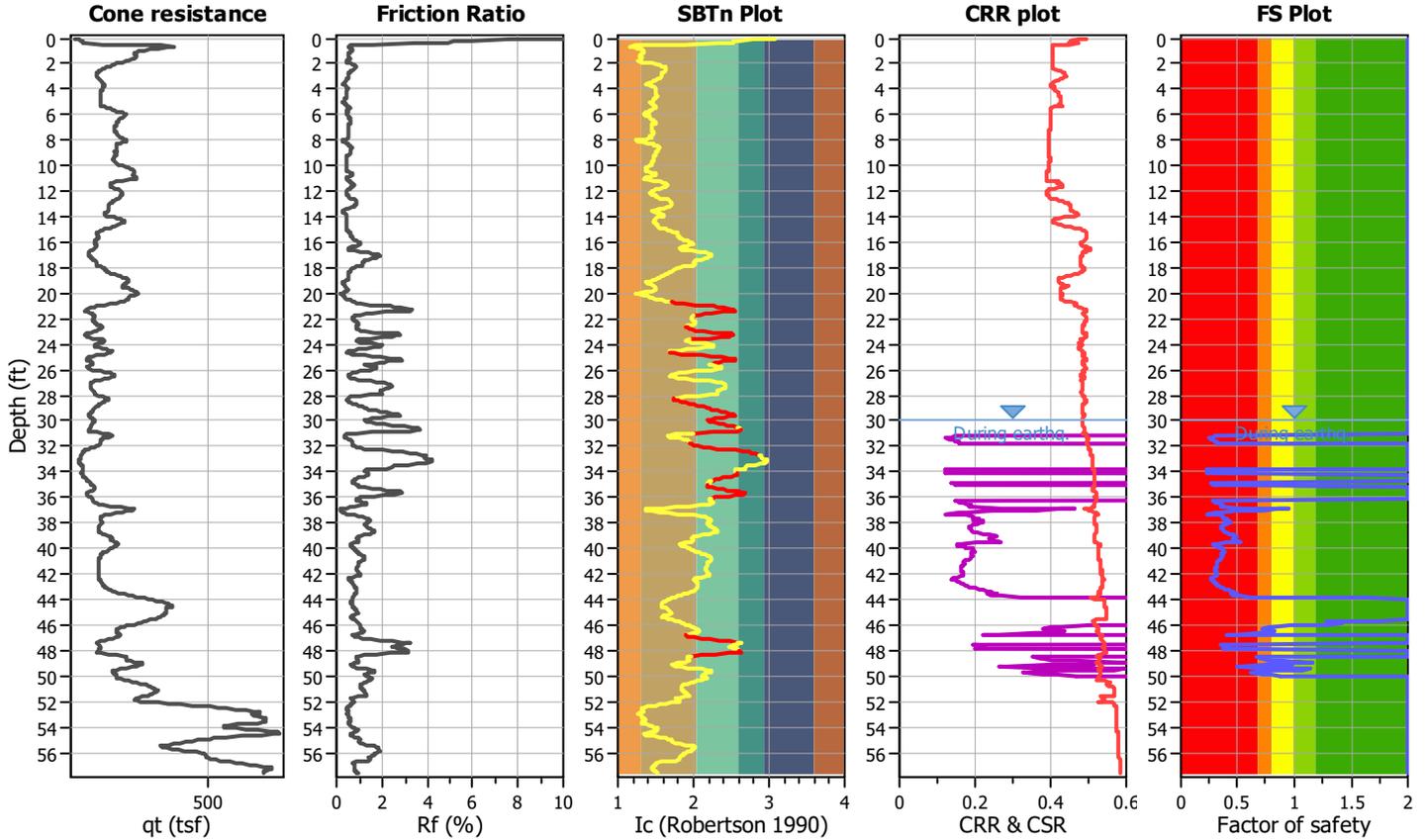
Project title : Rosemead Adult Center Expansion

Location :

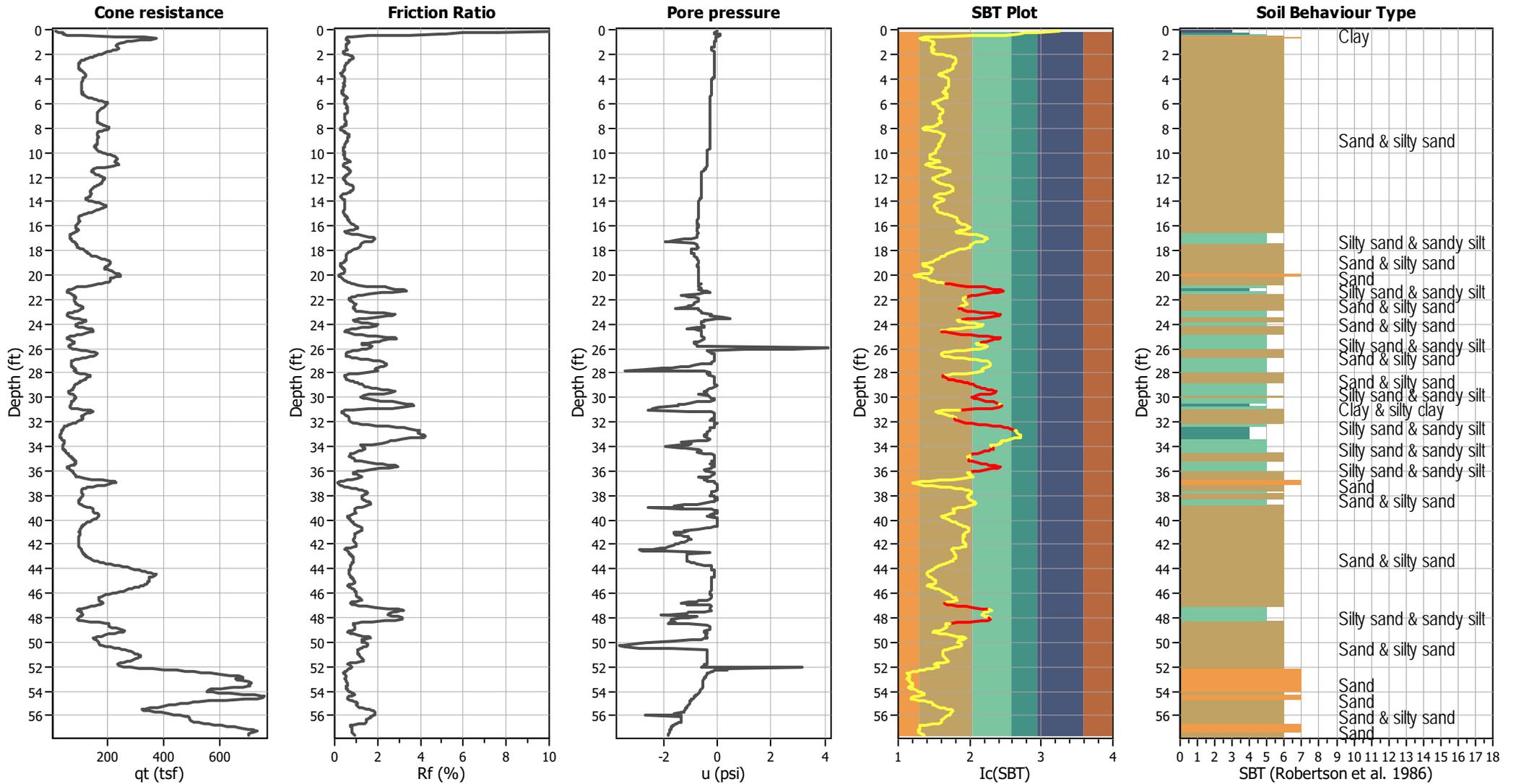
CPT file : CPT-2 (002)

Input parameters and analysis data

Analysis method:	B&I (2014)	G.W.T. (in-situ):	65.00 ft	Use fill:	No	Clay like behavior applied:	Sands only
Fines correction method:	B&I (2014)	G.W.T. (earthq.):	30.00 ft	Fill height:	N/A	Limit depth applied:	Yes
Points to test:	Based on Ic value	Average results interval:	3	Fill weight:	N/A	Limit depth:	50.00 ft
Earthquake magnitude M_w :	6.90	Ic cut-off value:	2.60	Trans. detect. applied:	Yes	MSF method:	Method
Peak ground acceleration:	0.86	Unit weight calculation:	Based on SBT	K_G applied:	Yes		



CPT basic interpretation plots



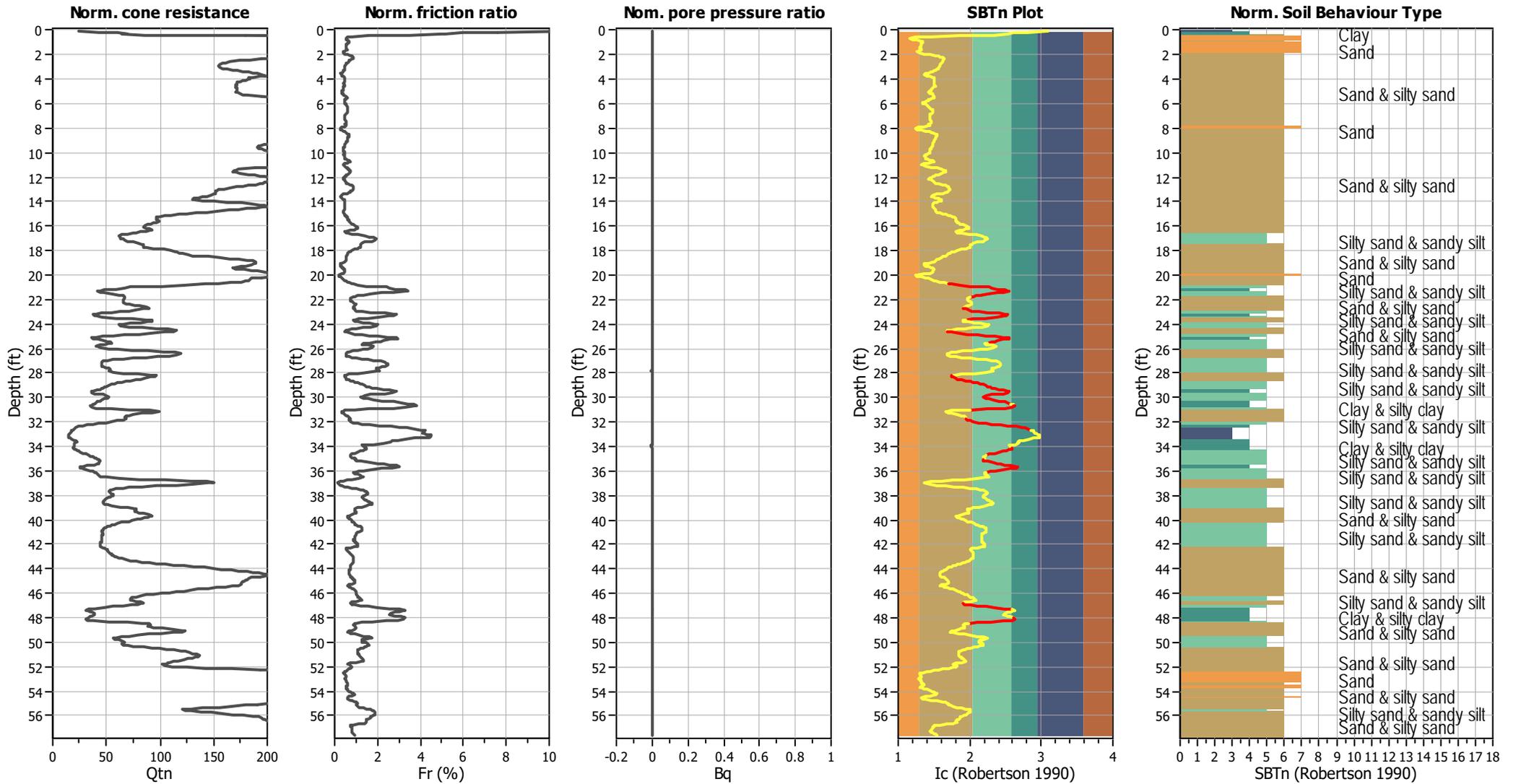
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	Insitu	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes	
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes	
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only	
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes	
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft	

SBT legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

CPT basic interpretation plots (normalized)



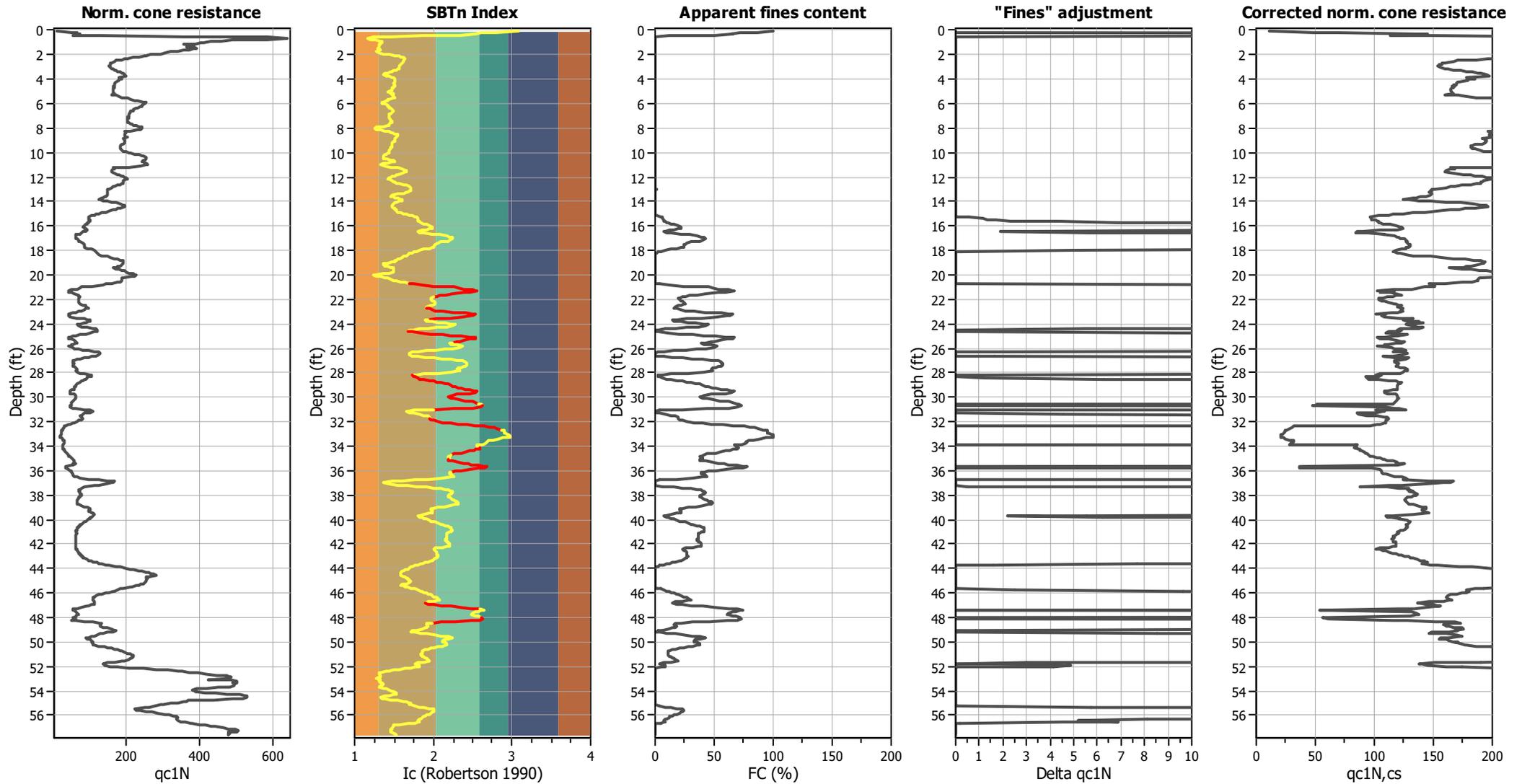
Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained	4. Clayey silt to silty	7. Gravely sand to sand
2. Organic material	5. Silty sand to sandy silt	8. Very stiff sand to
3. Clay to silty clay	6. Clean sand to silty sand	9. Very stiff fine grained

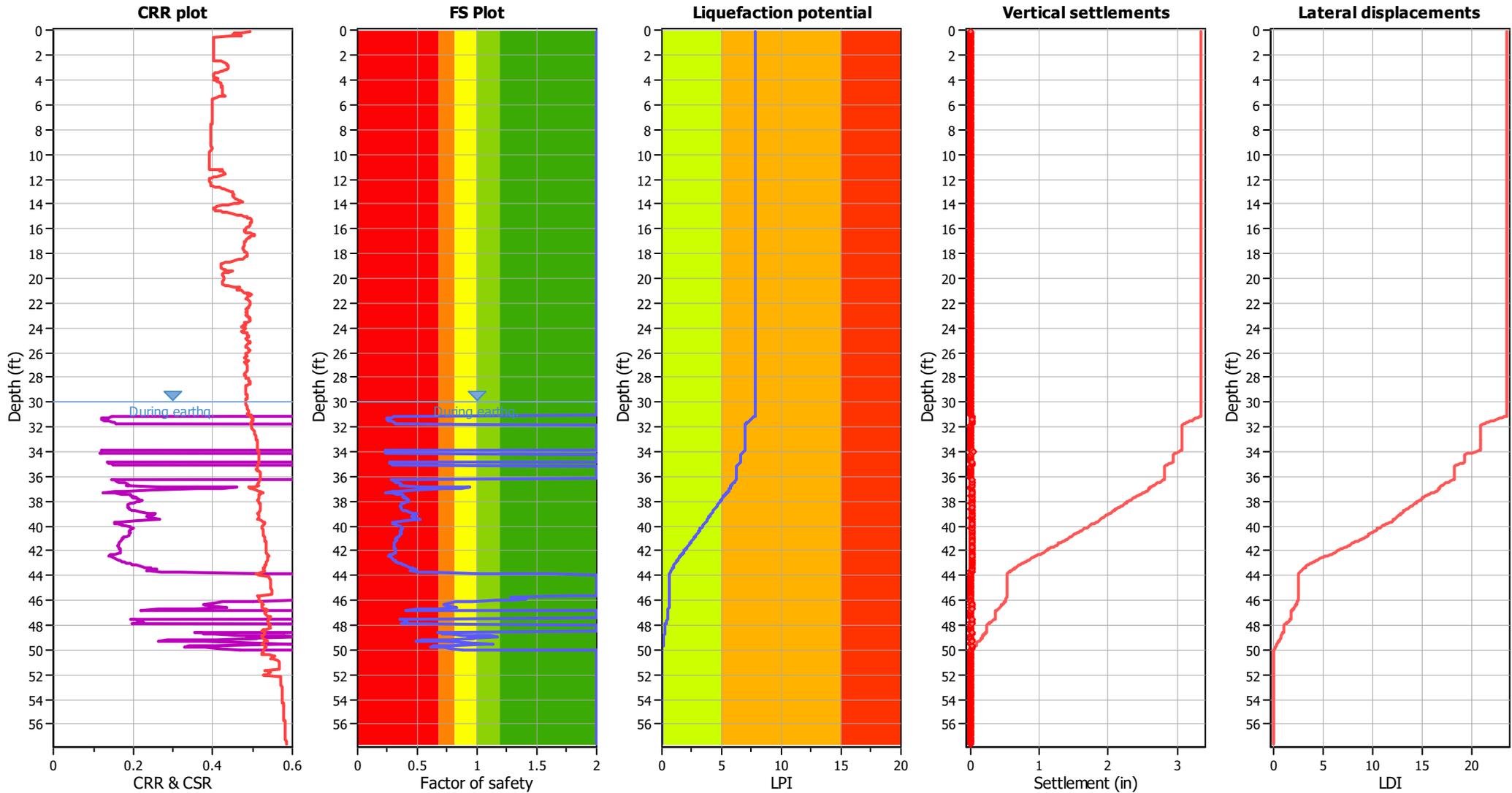
Liquefaction analysis overall plots (intermediate results)



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_f applied:	Yes
Earthquake magnitude M_w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

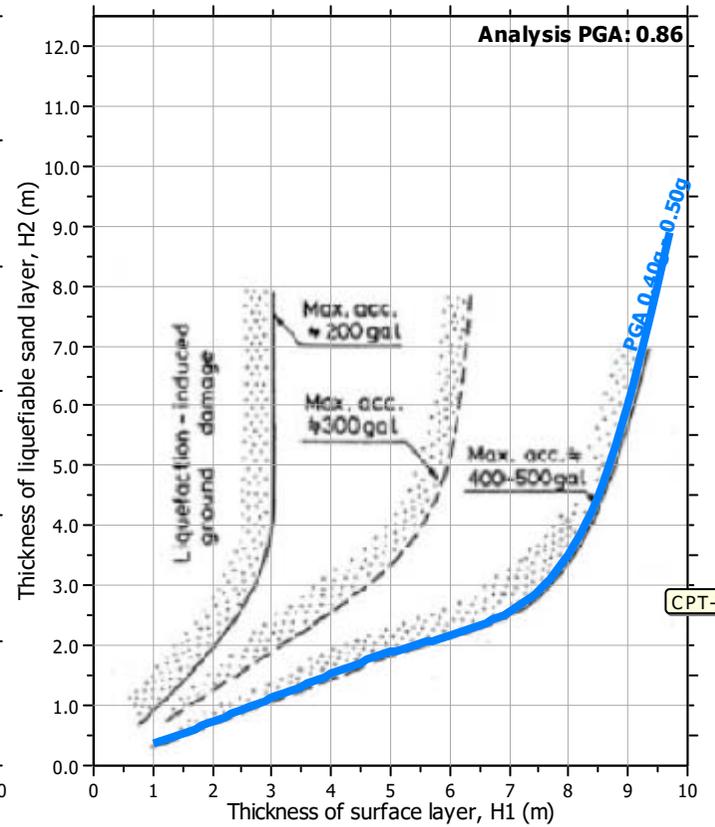
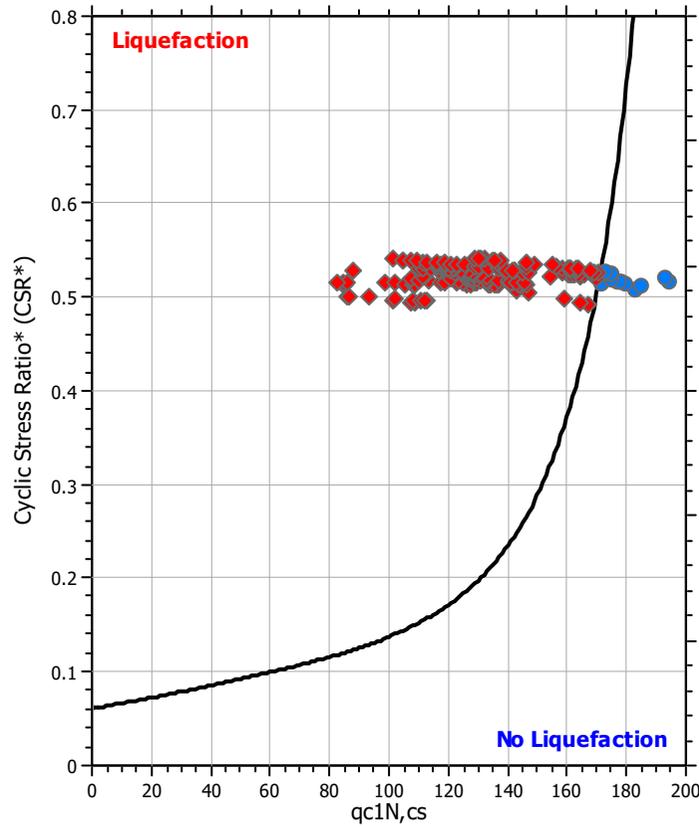
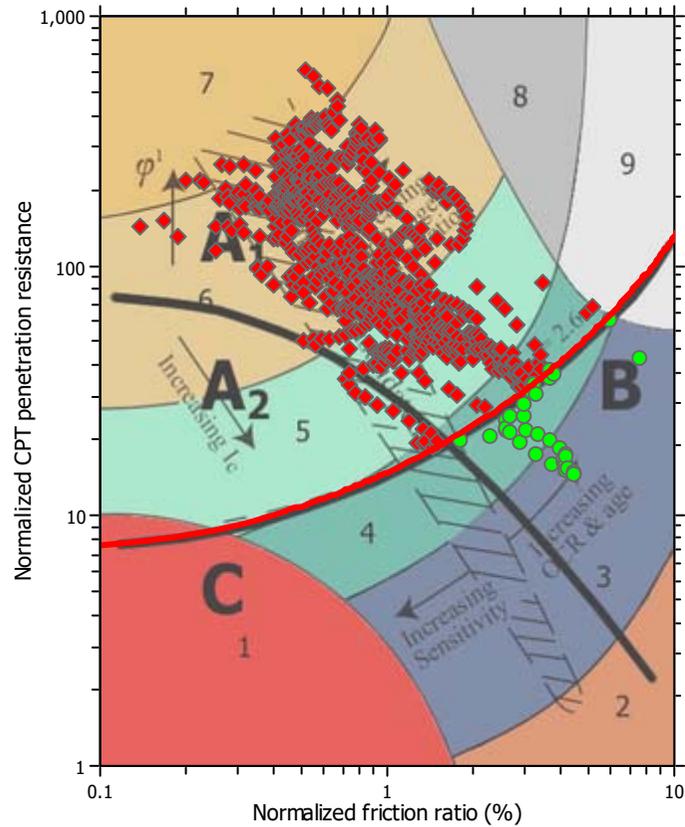
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liq. are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

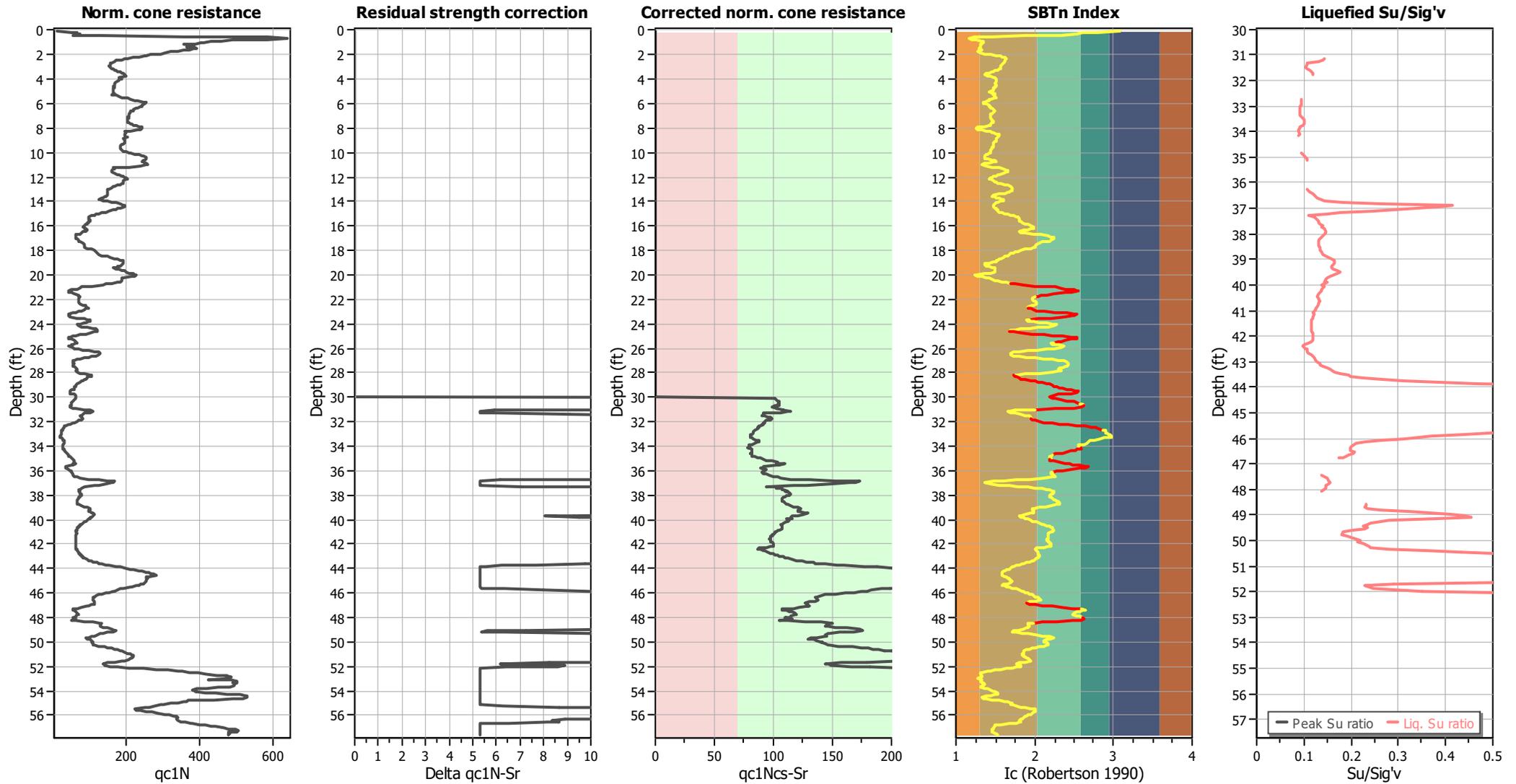
Liquefaction analysis summary plots



Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

Check for strength loss plots (Idriss & Boulanger (2008))

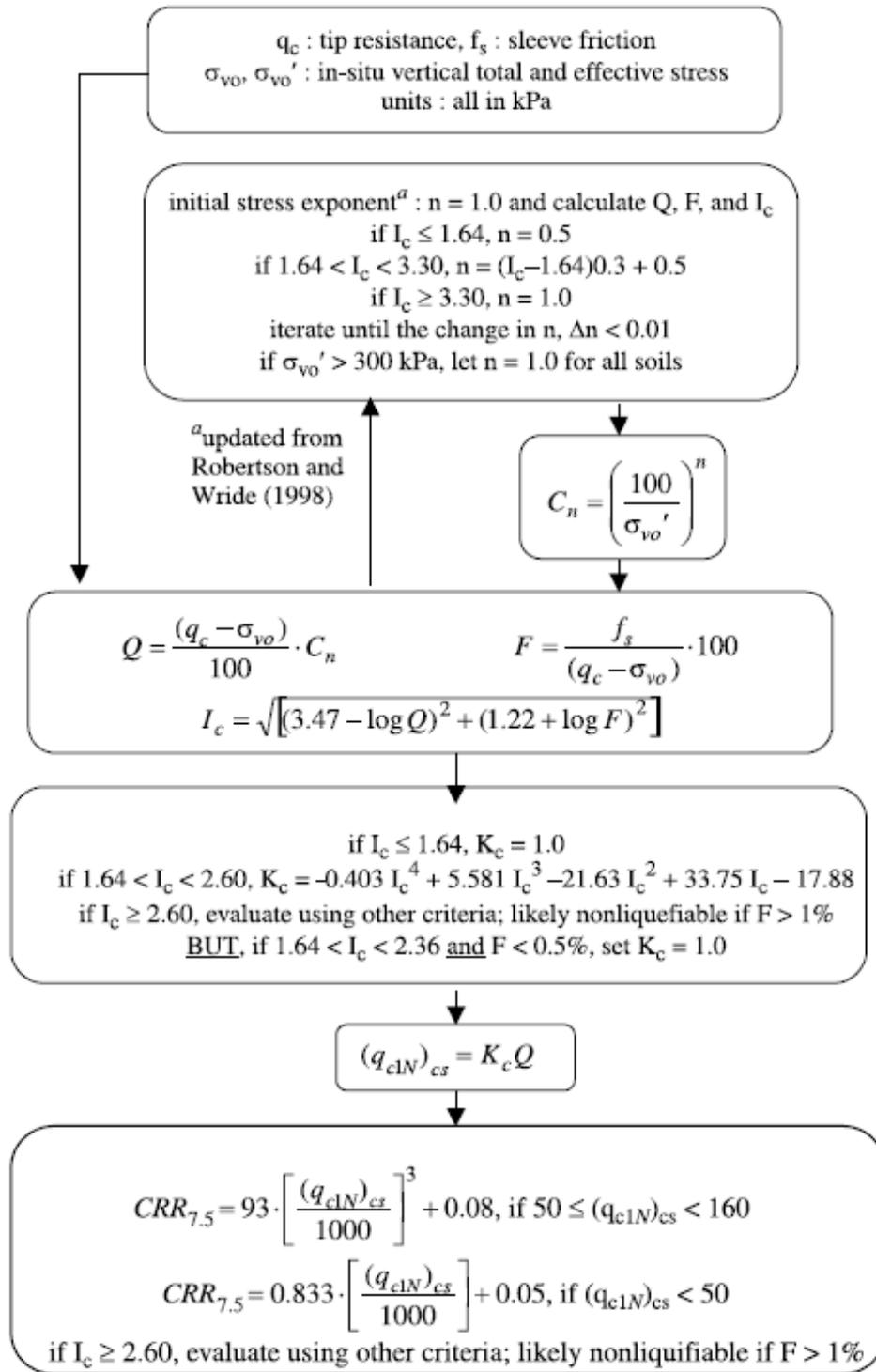


Input parameters and analysis data

Analysis method:	B&I (2014)	Depth to GWT (erthq.):	30.00 ft	Fill weight:	N/A
Fines correction method:	B&I (2014)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K _σ applied:	Yes
Earthquake magnitude M _w :	6.90	Unit weight calculation:	Based on SBT	Clay like behavior applied:	Sands only
Peak ground acceleration:	0.86	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	65.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

Procedure for the evaluation of soil liquefaction resistance, NCEER (1998)

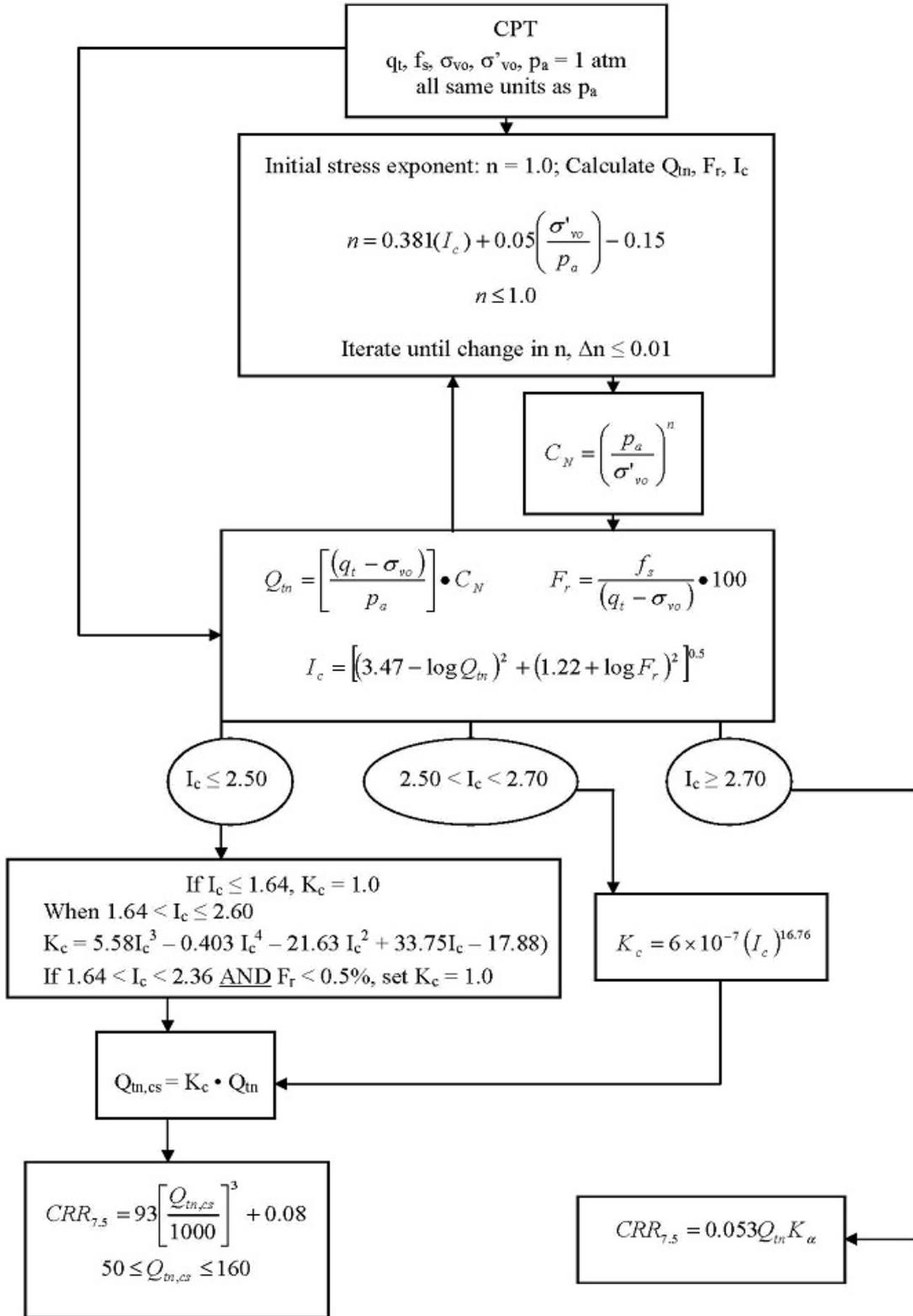
Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. The procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart¹:



¹ "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

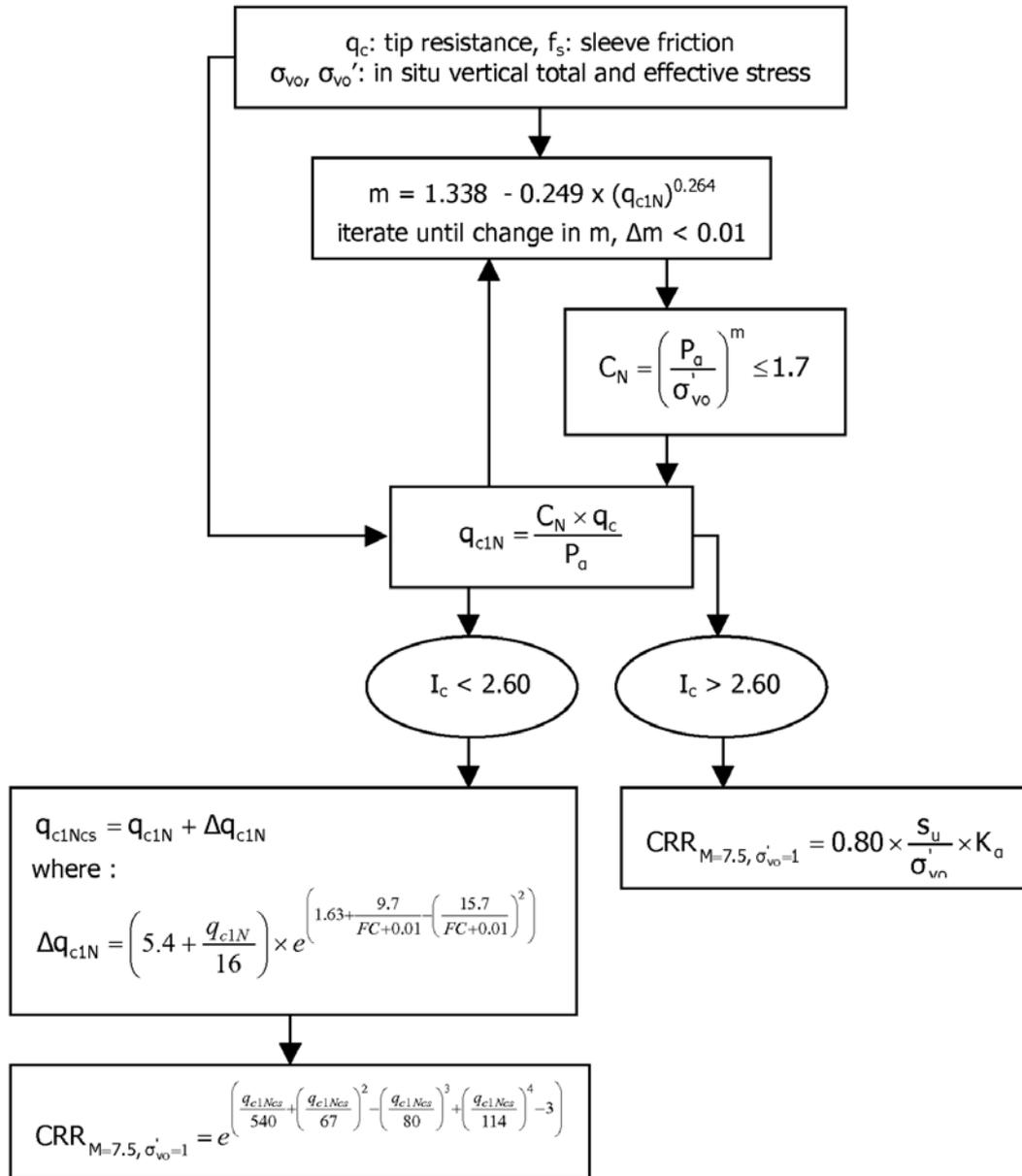
Procedure for the evaluation of soil liquefaction resistance (all soils), Robertson (2010)

Calculation of soil resistance against liquefaction is performed according to the Robertson & Wride (1998) procedure. This procedure used in the software, slightly differs from the one originally published in NCEER-97-0022 (Proceedings of the NCEER Workshop on Evaluation of Liquefaction Resistance of Soils). The revised procedure is presented below in the form of a flowchart¹:

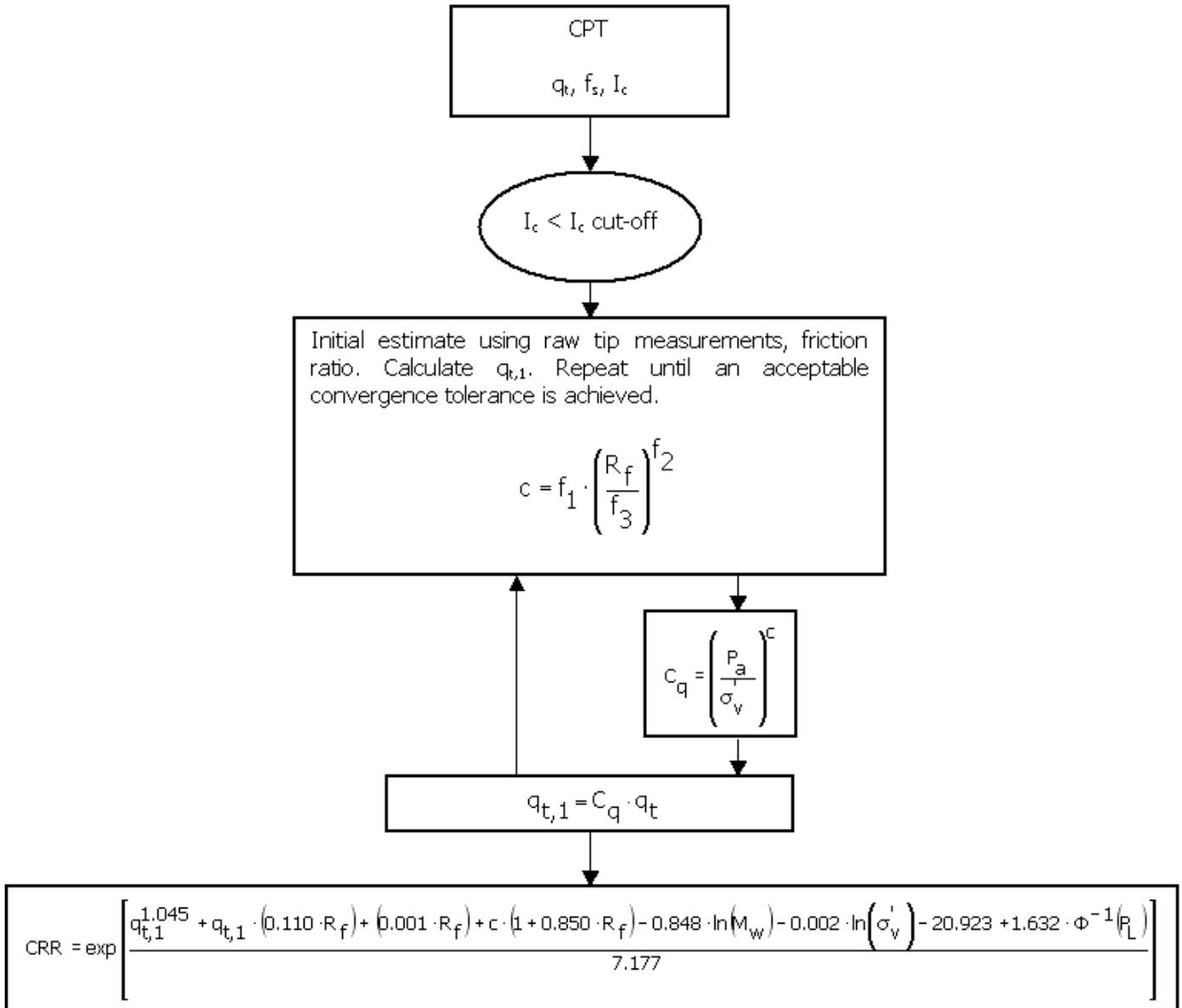


¹ P.K. Robertson, 2009. "Performance based earthquake design using the CPT", Keynote Lecture, International Conference on Performance-based Design in Earthquake Geotechnical Engineering – from case history to practice, IS-Tokyo, June 2009

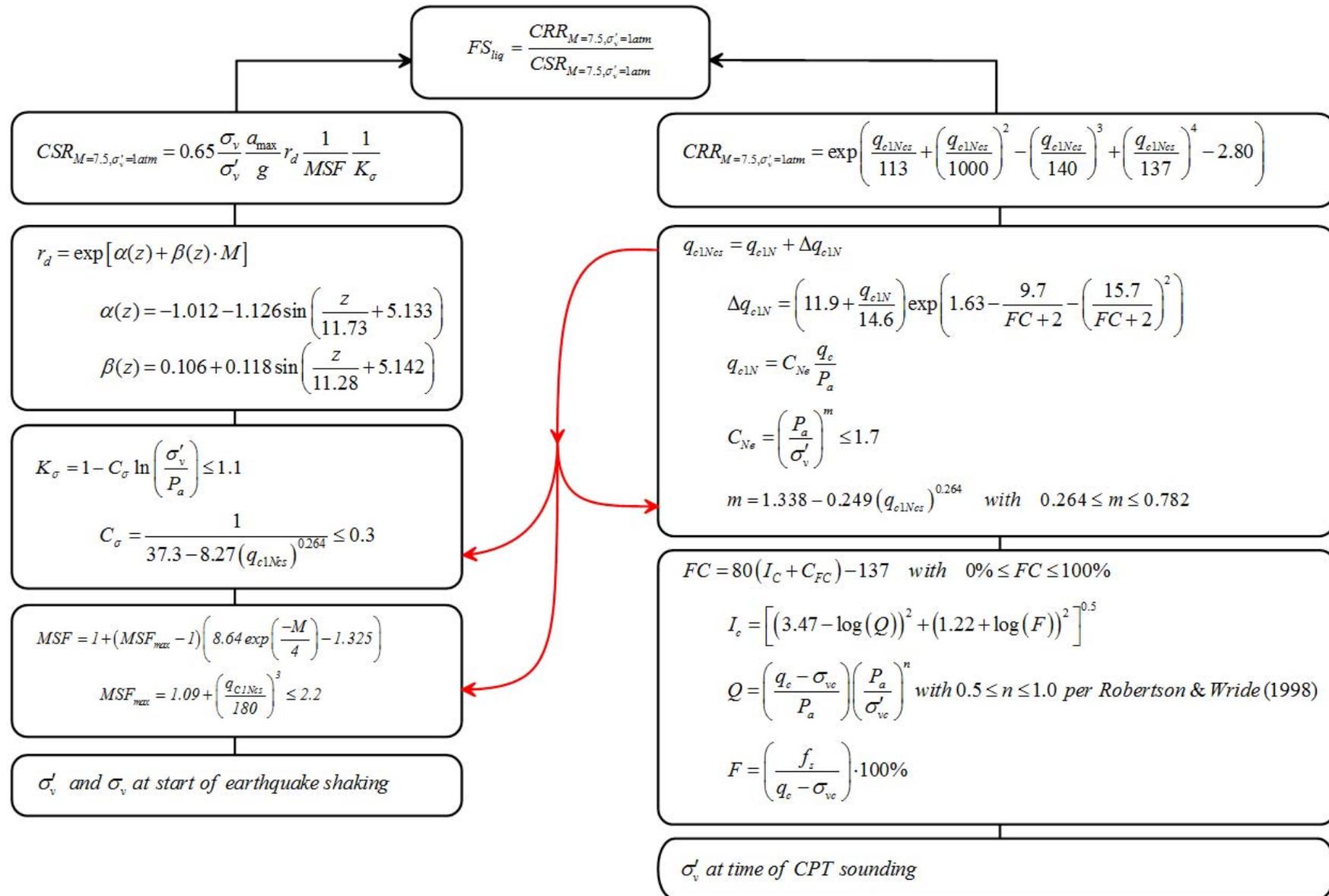
Procedure for the evaluation of soil liquefaction resistance, Idriss & Boulanger (2008)



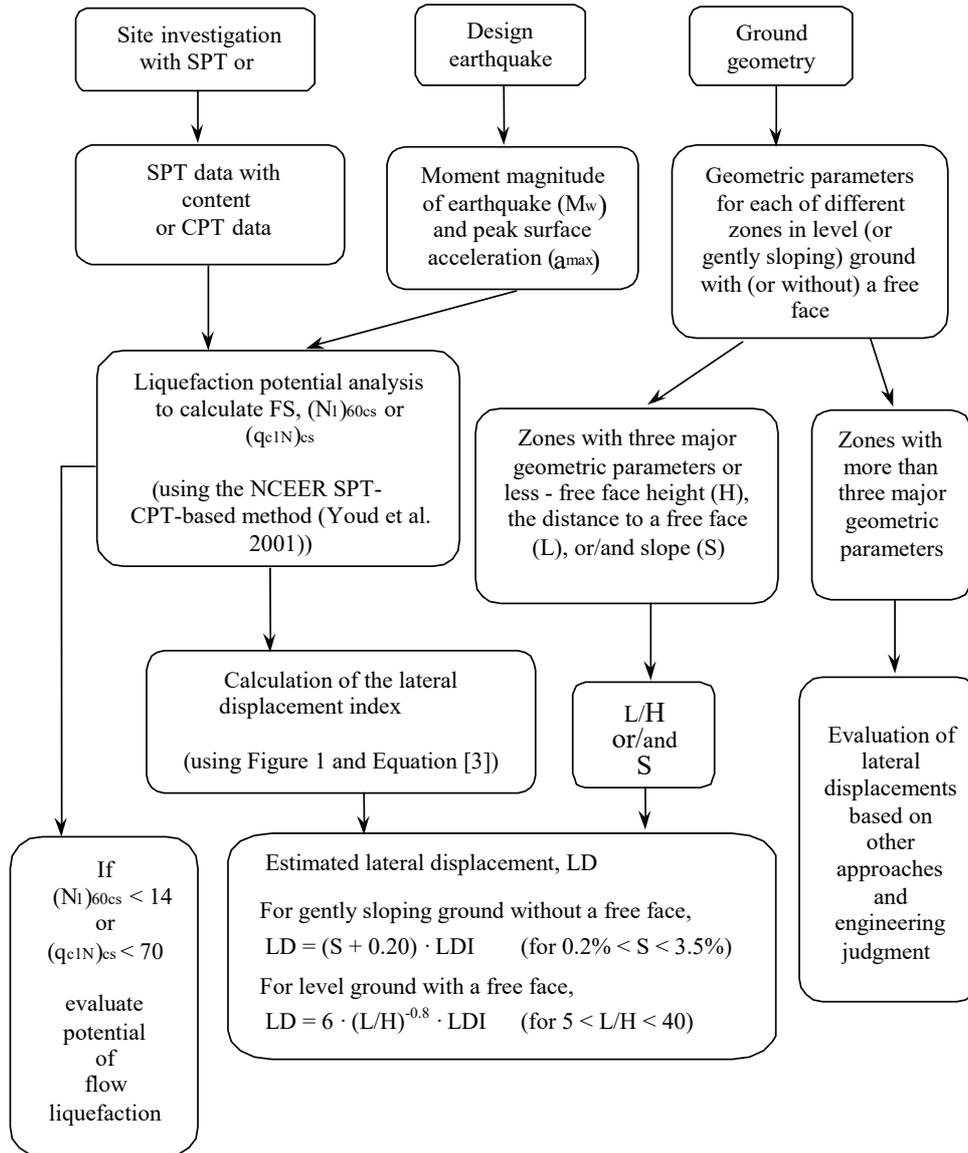
Procedure for the evaluation of soil liquefaction resistance (sandy soils), Moss et al. (2006)



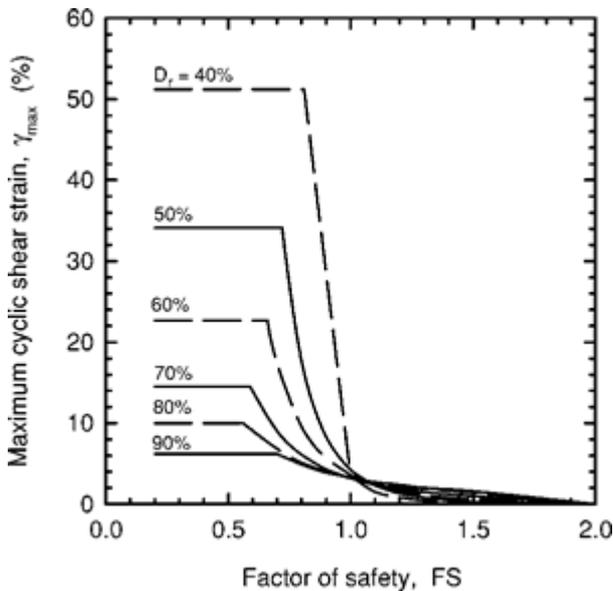
Procedure for the evaluation of soil liquefaction resistance, Boulanger & Idriss(2014)



Procedure for the evaluation of liquefaction-induced lateral spreading displacements



¹ Flow chart illustrating major steps in estimating liquefaction-induced lateral spreading displacements using the proposed approach



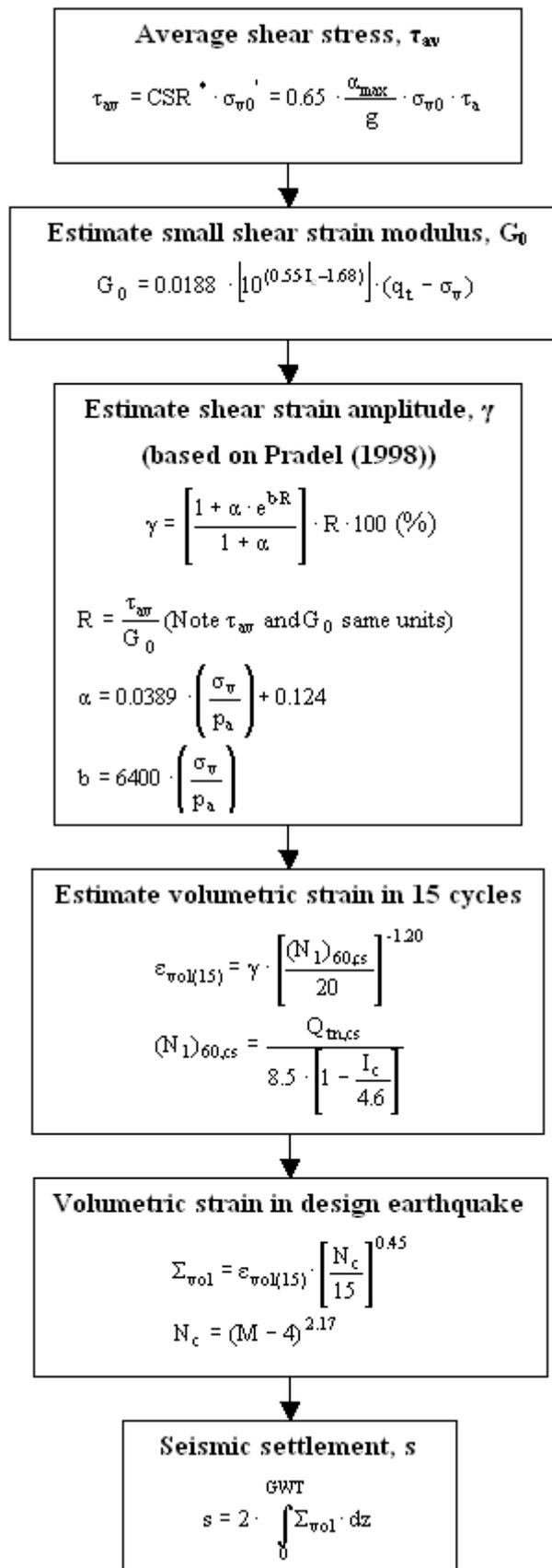
¹ Figure 1

$$LDI = \int_0^{Z_{max}} \gamma_{max} dz$$

¹ Equation [3]

¹ "Estimating liquefaction-induced ground settlements from CPT for level ground", G. Zhang, P.K. Robertson, and R.W.I. Brachman

Procedure for the estimation of seismic induced settlements in dry sands



Robertson, P.K. and Lisheng, S., 2010, "Estimation of seismic compression in dry soils using the CPT" FIFTH INTERNATIONAL CONFERENCE ON RECENT ADVANCES IN GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS, Symposium in honor of professor I. M. Idriss, San Diego, CA

Liquefaction Potential Index (LPI) calculation procedure

Calculation of the Liquefaction Potential Index (LPI) is used to interpret the liquefaction assessment calculations in terms of severity over depth. The calculation procedure is based on the methodology developed by Iwasaki (1982) and is adopted by AFPS.

To estimate the severity of liquefaction extent at a given site, LPI is calculated based on the following equation:

$$\mathbf{LPI} = \int_0^{20} (10 - 0,5z) \times F_L \times d_z$$

where:

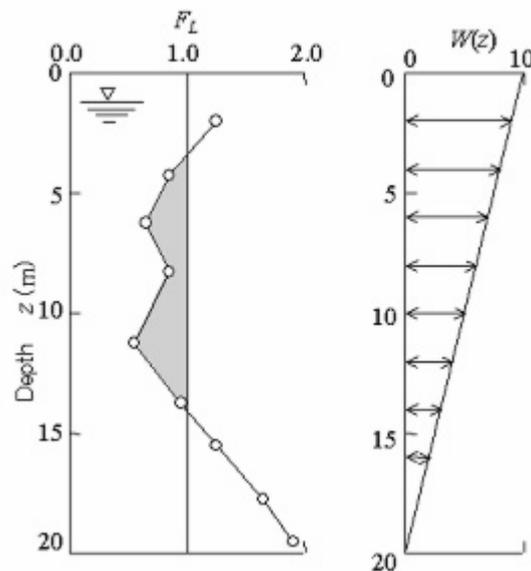
$F_L = 1 - F.S.$ when F.S. less than 1

$F_L = 0$ when F.S. greater than 1

z depth of measurement in meters

Values of LPI range between zero (0) when no test point is characterized as liquefiable and 100 when all points are characterized as susceptible to liquefaction. Iwasaki proposed four (4) discrete categories based on the numeric value of LPI:

- LPI = 0 : Liquefaction risk is very low
- $0 < LPI \leq 5$: Liquefaction risk is low
- $5 < LPI \leq 15$: Liquefaction risk is high
- LPI > 15 : Liquefaction risk is very high



Graphical presentation of the LPI calculation procedure

Shear-Induced Building Settlement (Ds) calculation procedure

The shear-induced building settlement (Ds) due to liquefaction below the building can be estimated using the relationship developed by Bray and Macedo (2017):

$$\begin{aligned} \ln(D_s) = & c_1 + c_2 * LBS + 0.58 * \ln\left(\tanh\left(\frac{HL}{6}\right)\right) + \\ & 4.59 * \ln(Q) - 0.42 * \ln(Q)^2 - 0.02 * B + \\ & 0.84 * \ln(CAVdp) + 0.41 * \ln(Sa1) + \varepsilon \end{aligned}$$

where Ds is in the units of mm, c1= -8.35 and c2= 0.072 for LBS ≤ 16, and c1= -7.48 and c2= 0.014 otherwise. Q is the building contact pressure in units of kPa, HL is the cumulative thickness of the liquefiable layers in the units of m, B is the building width in the units of m, CAVdp is a standardized version of the cumulative absolute velocity in the units of g-s, Sa1 is 5%-damped pseudo-acceleration response spectral value at a period of 1 s in the units of g, and ε is a normal random variable with zero mean and 0.50 standard deviation in Ln units. The liquefaction-induced building settlement index (LBS) is:

$$LBS = \sum W * \frac{\varepsilon_{shear}}{z} dz$$

where z (m) is the depth measured from the ground surface > 0, W is a foundation-weighting factor wherein W = 0.0 for z less than Df, which is the embedment depth of the foundation, and W = 1.0 otherwise. The shear strain parameter (ε_{shear}) is the liquefaction-induced free-field shear strain (in %) estimated using Zhang et al. (2004). It is calculated based on the estimated Dr of the liquefied soil layer and the calculated safety factor against liquefaction triggering (FSL).

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- R. E. S. Moss, R. B. Seed, R. E. Kayen, J. P. Stewart, A. Der Kiureghian, K. O. Cetin, CPT-Based Probabilistic and Deterministic Assessment of In Situ Seismic Soil Liquefaction Potential, Journal of Geotechnical and Geoenvironmental Engineering, Vol. 132, No. 8, August 1, 2006
- I. M. Idriss and R. W. Boulanger, 2008. Soil liquefaction during earthquakes, Earthquake Engineering Research Institute MNO-12
- Jonathan D. Bray & Jorge Macedo, Department of Civil & Environmental Engineering, Univ. of California, Berkeley, CA, USA, Simplified procedure for estimating liquefaction-induced building settlement, *Proceedings of the 19th International Conference on Soil Mechanics and Geotechnical Engineering, Seoul 201*

Unified Hazard Tool



Please do not use this tool to obtain ground motion parameter values for the design code reference documents covered by the [U.S. Seismic Design Maps web tools](#) (e.g., the International Building Code and the ASCE 7 or 41 Standard). The values returned by the two applications are not identical.

^ Input

Edition

Dynamic: Conterminous U.S. 2014 (u...

Spectral Period

Peak Ground Acceleration

Latitude

Decimal degrees

34.0822

Time Horizon

Return period in years

2475

Longitude

Decimal degrees, negative values for western longitudes

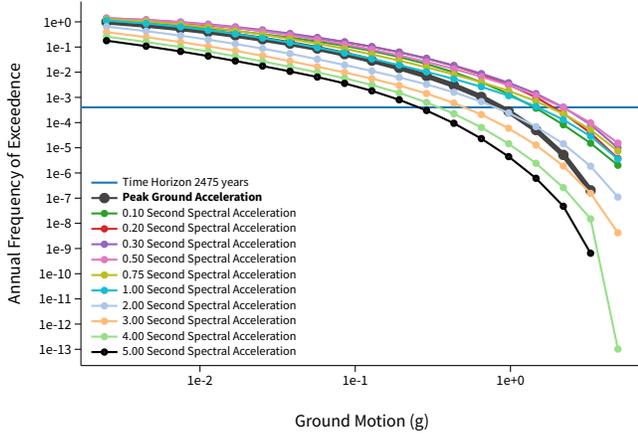
-118.0739

Site Class

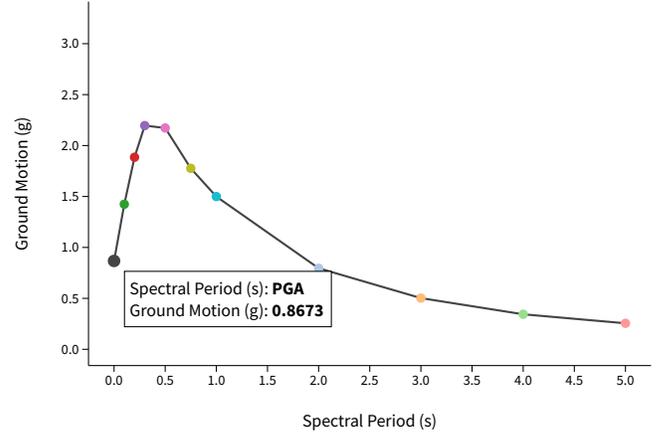
259 m/s (Site class D)

^ Hazard Curve

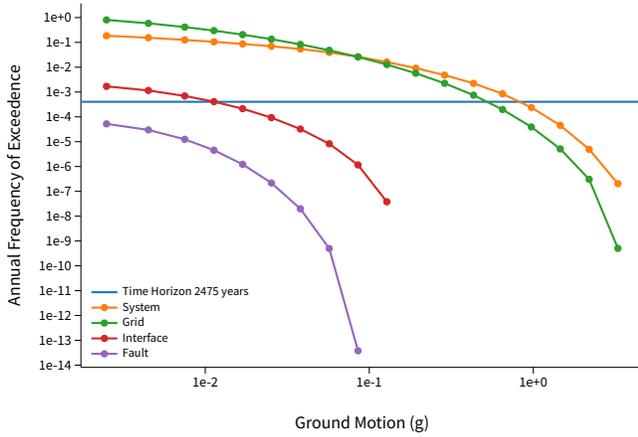
Hazard Curves



Uniform Hazard Response Spectrum



Component Curves for Peak Ground Acceleration

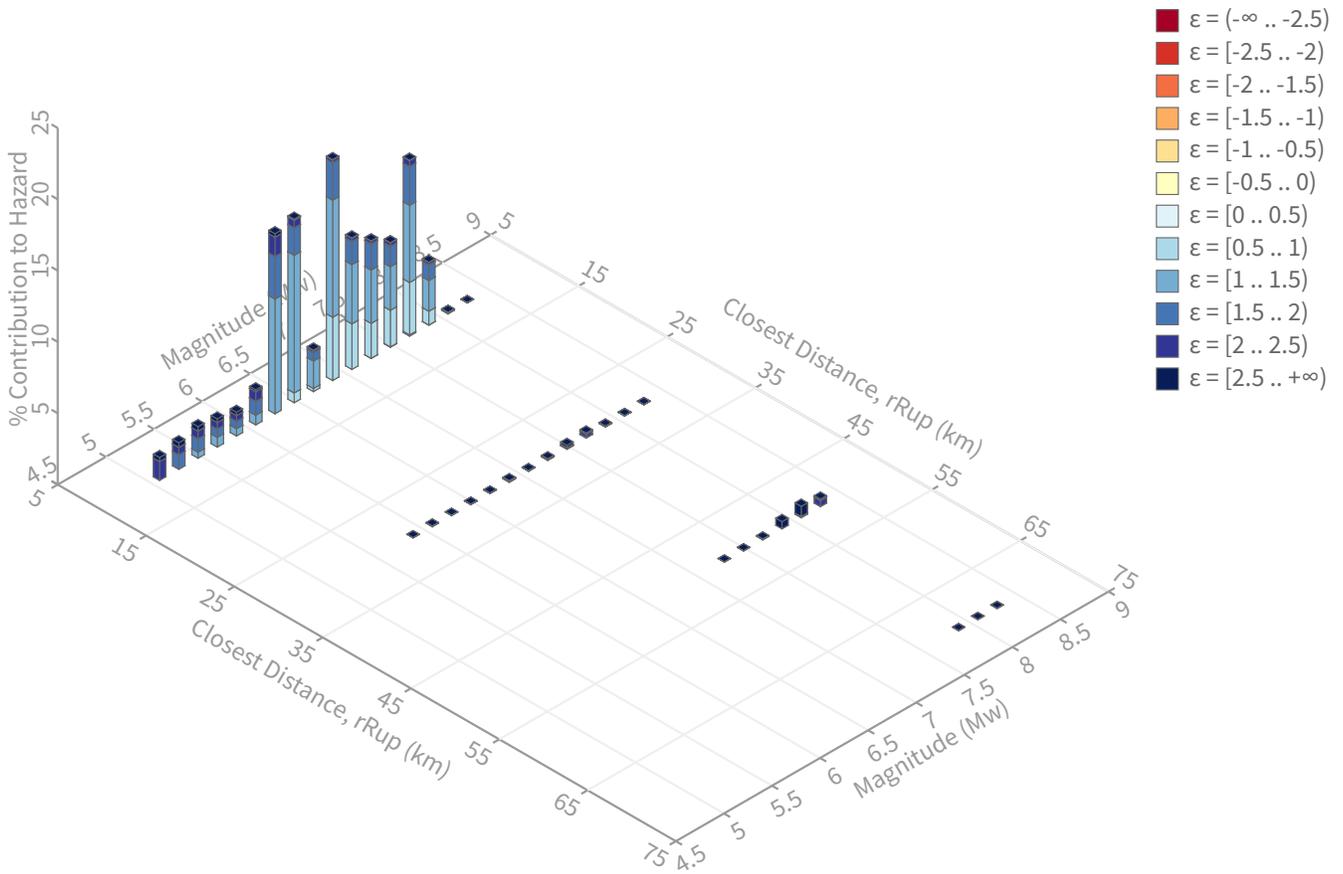


[View Raw Data](#)

^ Deaggregation

Component

Total



Summary statistics for, Deaggregation: Total

Deaggregation targets

Return period: 2475 yrs

Exceedance rate: 0.0004040404 yr⁻¹

PGA ground motion: 0.8673417 g

Recovered targets

Return period: 2927.0011 yrs

Exceedance rate: 0.0003416466 yr⁻¹

Totals

Binned: 100 %

Residual: 0 %

Trace: 0.07 %

Mean (over all sources)

m: 6.89

r: 9.22 km

ε₀: 1.41 σ

Mode (largest m-r bin)

m: 6.9

r: 7.12 km

ε₀: 1.23 σ

Contribution: 15.47 %

Mode (largest m-r-ε₀ bin)

m: 6.53

r: 5.88 km

ε₀: 1.21 σ

Contribution: 9.65 %

Discretization

r: min = 0.0, max = 1000.0, Δ = 20.0 km

m: min = 4.4, max = 9.4, Δ = 0.2

ε: min = -3.0, max = 3.0, Δ = 0.5 σ

Epsilon keys

ε0: [-∞ .. -2.5)

ε1: [-2.5 .. -2.0)

ε2: [-2.0 .. -1.5)

ε3: [-1.5 .. -1.0)

ε4: [-1.0 .. -0.5)

ε5: [-0.5 .. 0.0)

ε6: [0.0 .. 0.5)

ε7: [0.5 .. 1.0)

ε8: [1.0 .. 1.5)

ε9: [1.5 .. 2.0)

ε10: [2.0 .. 2.5)

ε11: [2.5 .. +∞]

Deaggregation Contributors

Source Set ↴ Source	Type	r	m	ϵ_0	lon	lat	az	%
UC33brAvg_FM31	System							44.16
Elysian Park (Upper) [0]		4.74	6.47	1.24	118.097°W	34.077°N	254.95	15.21
Raymond [1]		5.81	7.17	1.31	118.083°W	34.132°N	351.05	7.76
Puente Hills [2]		11.08	7.30	1.04	118.113°W	33.963°N	195.37	3.64
Elysian Park (Upper) [1]		9.74	7.18	1.14	118.169°W	34.072°N	262.92	3.48
Whittier alt 1 [7]		9.62	6.85	1.66	118.046°W	33.999°N	164.53	3.26
Sierra Madre [3]		11.56	7.73	1.56	118.061°W	34.185°N	5.73	1.92
Compton [1]		18.33	7.23	1.61	118.257°W	33.805°N	208.74	1.68
Verdugo [0]		6.91	7.47	1.26	118.124°W	34.127°N	316.86	1.05
UC33brAvg_FM32	System							41.61
Elysian Park (Upper) [0]		4.74	7.03	1.06	118.097°W	34.077°N	254.95	12.49
Raymond [1]		5.81	7.18	1.30	118.083°W	34.132°N	351.05	8.15
Puente Hills (Santa Fe Springs) [0]		10.99	6.94	1.12	118.023°W	33.950°N	162.37	4.43
Whittier alt 2 [6]		9.78	7.10	1.35	118.046°W	33.998°N	164.80	3.13
Puente Hills (LA) [0]		8.00	7.16	0.91	118.116°W	33.990°N	201.01	2.39
Puente Hills (Coyote Hills) [1]		11.98	7.26	1.15	118.044°W	33.915°N	171.69	2.39
Compton [1]		18.33	7.31	1.57	118.257°W	33.805°N	208.74	1.84
Sierra Madre [3]		11.56	7.76	1.55	118.061°W	34.185°N	5.73	1.83
UC33brAvg_FM32 (opt)	Grid							7.41
PointSourceFinite: -118.074, 34.114		6.23	5.63	1.69	118.074°W	34.114°N	0.00	2.00
PointSourceFinite: -118.074, 34.114		6.23	5.63	1.69	118.074°W	34.114°N	0.00	2.00
UC33brAvg_FM31 (opt)	Grid							6.82
PointSourceFinite: -118.074, 34.114		6.28	5.59	1.71	118.074°W	34.114°N	0.00	1.78
PointSourceFinite: -118.074, 34.114		6.28	5.59	1.71	118.074°W	34.114°N	0.00	1.78

APPENDIX F

**GEOLOGIC HAZARDS EVALUATION AND
SITE SPECIFIC GROUND MOTION HAZARD ANALYSIS**



GEOLOGIC HAZARDS REPORT
ROSEMEAD ADULT REGIONAL EDUCATION COMPLEX EXPANSION
4105 ROSEMEAD BOULEVARD
CITY OF ROSEMEAD, CALIFORNIA

Project No. 223822-1

May 16, 2022

Prepared for:

MTGL, Inc.
2992 E. La Palma Avenue, Suite A
Anaheim, CA 92806

Consulting Engineering Geology & Geophysics

P.O. Box 1090, Loma Linda, CA 92354 • 909 796-4667

MTGL, Inc.
2992 E. La Palma Avenue, Suite A
Anaheim, CA 92806

Attention: Mr. Issac Chun

Regarding: Geologic Hazards Report
Rosemead Adult Regional Education Complex Expansion
4105 Rosemead Boulevard
City of Rosemead, California
MTGL Project No. 6920A08

INTRODUCTION

At your request, this firm has prepared a geologic hazards report for the proposed Rosemead Adult Regional Education Complex Expansion project located at 4105 Rosemead Boulevard, Rosemead, California, as referenced above. The purpose of this study was to evaluate the existing geologic conditions of the property and any corresponding potential geologic and/or seismic hazards, with respect to the proposed development from a geologic standpoint. The scope of services provided for this evaluation included the following:

- **Review of available published and unpublished geologic/seismic data in our files pertinent to the site, including the provided site-specific boring logs.**
- **Field reconnaissance of the site, including observations of the exploratory borings.**
- **Performing a seismic surface-wave survey by a licensed State of California Professional Geophysicist that included one traverse for shear-wave velocity analysis purposes.**
- **Evaluation of the local and regional tectonic setting and historical seismic activity, including performing a site-specific CBC ground motion analysis.**
- **Preparation of this report presenting our findings, conclusions, and recommendations from a geologic standpoint.**

Accompanying Maps and Appendices

- Plate 1 - Regional Geologic Map
- Plate 2 - Seismic Hazards Zone Map
- Plate 3 - Seismic Line Location Map
- Appendix A - Shear-Wave Survey
- Appendix B - Site-Specific Ground Motion Analysis
- Appendix C - References

PROJECT SUMMARY

Based on the information that has been provided, we understand that a 10,000± square foot expansion of the existing two-story adult education center is proposed. Since this report will be appended into the geotechnical report prepared by MTG_L, Inc., some descriptive sections such as site description, proposed development, etc., have been purposely omitted as they are described in detail in the main geotechnical report. No grading plans were available for this evaluation, and no subsurface exploration was performed by this firm. Our work included a review of available geologic and geotechnical data in our files along with performing a field reconnaissance, observation of the exploratory borings during drilling, and conducting a site-specific seismic shear-wave survey. Additionally, we also reviewed the provided boring logs that were drilled on May 10, 2022.

This report has been prepared utilizing the suggested “Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals, and Essential Services Buildings” (CGS Note 48, 2019), along with the Geologic portion of the “*Factors to Be Included in the Geological and Environmental Hazards Report*,” which is included as Appendix H of the “School Site Selection and Approval Guide,” prepared by the School Facility Planning Division, California Department of Education (2021), and the Geohazard Reports requirements outlined by the DSA (2021).

GEOLOGIC SETTING

The subject property is located in southwestern California, within a natural geomorphic province known as the Peninsular Ranges. The Peninsular Ranges is generally characterized by steep elongated ranges and valleys that trend northwesterly. The northern end of this province includes the Los Angeles Basin, which is a northwest-trending alluvial lowland plain about 50 miles long and 20 miles wide. The Los Angeles Basin is, in turn, comprised of several structural blocks or subdivisions which are separate by major zones of faulting or flexures in the basement rock.

More specifically, the site is included within the Northeastern Block, which is a triangular-shaped wedge approximately 35 miles long from northwest to southeast. This block is generally bounded by the Cucamonga Fault to the north, the Whittier Fault to the southwest, and the Chino Fault to the east. The block contains a very thick (as much as 13,000 feet) sequence of Miocene volcanic and sedimentary rock, as partially exposed in the San Jose and Puente Hills. Regionally, the site is located within the southern portion of the San Gabriel Valley, which is bounded on the north by the San Gabriel Mountains. The San Gabriel Valley is a broad piedmont plain that slopes downward from the base of the San Gabriel Mountains to Whittier Narrows, the lowest point of the area. In the San Gabriel Valley, there is as much as 6,000 feet of Quaternary age sedimentary rocks. These deposits have accumulated generally as flood and fan deposits originating from the San Gabriel Mountains. The depth of these alluvial deposits locally is not known.

Locally, the subject site is shown to be surficially mantled by Quaternary age (Holocene) undivided sand and gravel alluvial fan and valley deposits (Tan, 2000), as shown on Plate 1 (map symbol Qy_{ag}). These surficial materials are in turn presumably underlain by progressively older alluvial-type deposits at depth. Subsurface exploratory boring excavations performed by MTG_L (2022) indicates the subject site locally to be underlain predominantly by interbedded moist, medium dense to dense silty sand, sand with some silt and/or clay, along with scattered gravels throughout, to a depth of at least 51½ feet.

FAULTING

There are at least forty-four major late Quaternary active/potentially active faults that are located within a 100-kilometer (62-mile) radius of the subject school site (Blake, 1989-2000a). Of these, there are no known active faults that traverse the site based on available published literature, nor was there any surficial geomorphic features that are suggestive of faulting. The subject site is not located within a State of California "Alquist-Priolo Earthquake Fault Zone" for fault rupture hazard (California Geological Survey, 2018).

The nearest mapped (zoned) "active" fault by the State of California is for the East Montebello Fault, located approximately 1.9± miles to the southwest (C.G.S., 2017), as shown on the Seismic Hazards Map, Plate 2. This zoned portion of the fault (zoned in 1991) is 1½± miles in length and is believed to be the northwestern-most extension of the active Whittier Fault Zone (Yeats, 2004) and also is located along the epicenter of the October 1, 1987 M5.9 Whittier Narrows Earthquake. However, there is a mapped trace of this fault (not currently zoned by the State) that is extended northwestward and shown to traverse approximately 1.8± miles to the southwest, as indicated on the Regional Geologic Map, Plate 1, for reference.

The Whittier Fault is a 38-kilometer long right-lateral, strike-slip fault with an estimated maximum moment magnitude of M_w 6.9, and an associated slip-rate of 2.5 ±1 mm/year (Cao et al., 2003 and Petersen et al., 2008). The "maximum moment" (M_w/M_{MAX}) earthquake is the maximum earthquake that is specific to that source based on estimated rupture dimensions for that segment of the design fault.

However, for seismic design purposes, we are considering that a cascading effect of rupture will occur along the entire length of the Elsinore Fault Zone (which includes the Whittier, Glen Ivy, Temecula, Julian, and Coyote Mountain Faults segments collectively) rather than just the Whittier segment. Based on the recently published rupture-model data (Petersen et al., 2008), the total rupture area of these combined faults is 3,841.7 square kilometers and has an associated Maximum Moment Magnitude (M_w) of 7.8. Other nearby faults include the Raymond Fault, located 3.4± miles to the north and the Elysian Park Thrust Fault located 1.8± miles to the southwest. The Elysian Park Fault is shown to terminate against the East Montebello Fault and does not continue eastward beneath the site.

GROUNDWATER

The site lies within the southwest boundaries of the Main San Gabriel Groundwater Basin (California Department of Water Resources, 2004), where subsurface flow is directed southerly through the Whittler Narrows to the southeast of the site. The San Gabriel Groundwater Basin is bounded on the northwest by the Raymond Fault, the bedrock of the San Gabriel Mountains to the north, the bedrock high between San Dimas and La Verne on the east, and the low hills on the southern periphery of the valley. This basin receives the majority of groundwater as runoff and deep percolation from the San Gabriel Mountains to the north. The water-bearing sediments in this basin are predominantly comprised of unconsolidated to semi-consolidated alluvium that has been derived predominantly as outwash from the San Gabriel Mountains to the north.

Based on seismic hazard mapping performed by the California Geological Survey (1998), as shown on the Seismic Hazards Zone Map, Plate 2, the subject site is shown to be located within the boundary of a liquefaction hazard zone, which indicates that groundwater has been historically as shallow as $50\pm$ feet in depth. Mapping by the California Division of Mines & Geology (1998) indicates that high groundwater levels have been as shallow at 30 to $40\pm$ feet in depth in the general vicinity.

Groundwater data provided by the California Department of Water Resources (2022b), indicates the closest measured well to be located approximately $1\pm$ mile to the southwest (State Well No. 01S12W24J001S). This water-level data indicates that during the years of 2012 to 2017, groundwater levels ranged between a depth of around 25 to $52\pm$ feet. It was noted that at the time of drilling, groundwater was not encountered within any of the exploratory excavations performed by MTGL (2022) to a depth of at least $51\frac{1}{2}$ feet locally.

GROUND MOTION ANALYSIS

According to California Geological Survey Note 48 (CGS, 2019), a site-specific ground motion analysis is required for the subject site (CBC, 2019, Section 1613A and also as required by ASCE 7-16, Chapter 21), the detailed results of which are presented within Appendix B. Additionally, a seismic shear-wave survey was conducted for this study by our firm as presented within Appendix A of this report, for purposes of determining the Site Classification and V_{S30} input values for the ground motion analysis.

Geographically, the proposed construction area is centrally located at Latitude 34.0822 and Longitude -118.0739 (World Geodetic System of 1984 coordinates). The mapped spectral acceleration parameters, coefficients, and other related seismic parameters, were evaluated using the California's Office of Statewide Health Planning and Development Seismic Design Maps (OSHPD, 2022) and the California Building Code criteria (CBC, 2019), with the site-specific ground motion analysis being performed following Section 21 of the ASCE 7-16 Standard (2017). The results of this site-specific analysis have been summarized and are tabulated below:

TABLE 1 – SUMMARY OF SEISMIC DESIGN PARAMETERS

Factor or Coefficient	Value
S_s	1.967g
S₁	0.711g
F_a	1.0
F_v	1.7
S_{DS}	1.260g
S_{D1}	0.950g
S_{MS}	1.897g
S_{M1}	1.422g
T_L	8 Seconds
MCE_G PGA	0.86g
Shear-Wave Velocity (V₁₀₀)	1,128.8 ft/sec
Site Classification	D
Risk Category	III

FLOODING

According to the Federal Emergency Management Agency, the subject site is not located within the boundaries of a 100-year flood (Community Panel No. 06037C1675F, August 26, 2008, not printed). The site is shown to be located within “Zone X,” which is defined as “Areas determined to be outside the 0.2% annual chance floodplain.” However, during peak periods of rainfall heavy runoff could be anticipated and should be properly evaluated by the project civil engineer.

HISTORIC SEISMICITY

A computerized search, based on Southern California historical earthquake catalogs, has been performed using the programs EQSEARCH (Blake, 1989-2021) and the ANSS Comprehensive Earthquake Catalog (U.S.G.S., 2022a). The following table and discussion summarize the known historic seismic events ($\geq M4.0$) that have been estimated and/or recorded during this time period of 1800 to May 2022 within a 100-kilometer (62-mile) radius of the site.

TABLE 2 - HISTORIC SEISMIC EVENTS; 1800-2022 (100-kilometer radius)

<u>Richter Magnitude (M)</u>	<u>No. of Events</u>
4.0 - 4.9	461
5.0 - 5.9	54
6.0 - 6.9	13
7.0 - 7.9	1
8.0+	0

It should be noted that pre-instrumental seismic events (generally before 1932) have been estimated from isoseismal maps (Topozada, et al., 1981 and 1982). These data have been compiled generally based on the reported intensities throughout the region, thus focusing in on the most likely epicentral location. Instrumentation beyond 1932 has greatly increased the accuracy of locating earthquake epicenters.

A summary of the historic earthquake data is as follows:

- The closest recorded notable earthquake epicenter (magnitude 4.0 to 4.9) is a M4.1 event that occurred on October 1, 1987, located approximately 1± miles to the southwest.
- The nearest estimated significant historic earthquake epicenter (pre-1932) was approximately 2± miles to the northeast (August 11, 1855, M6.3).
- The nearest recorded significant historic earthquake epicenter was a M5.9 event located approximately 1½ miles south-southwest of the site, which occurred on October 1, 1987.
- The largest estimated historical earthquake magnitude within a 62-mile radius of the site is a M7.0 event of September 24, 1827 (approximately 53 miles west).
- The largest recorded historical earthquake was the M6.7 Northridge event, located approximately 28 miles to the northwest (January 17, 1994).
- The largest estimated ground acceleration estimated to have been experienced at the site was 0.467g which resulted from the M6.3 event of August 11, 1855, located approximately 2± miles northeast of the site.

An Earthquake Epicenter Map which includes magnitudes 4.0 and greater within a 100-kilometer radius (blue circle) of the site (blue dot in center) has been included below as Figure 1. This map was prepared using the ANSS Comprehensive Earthquake Catalog (U.S.G.S., 2022a) of instrumentally recorded events from the period of 1932 to May 2022, in turn overlain on Google™ Earth imagery (2022).

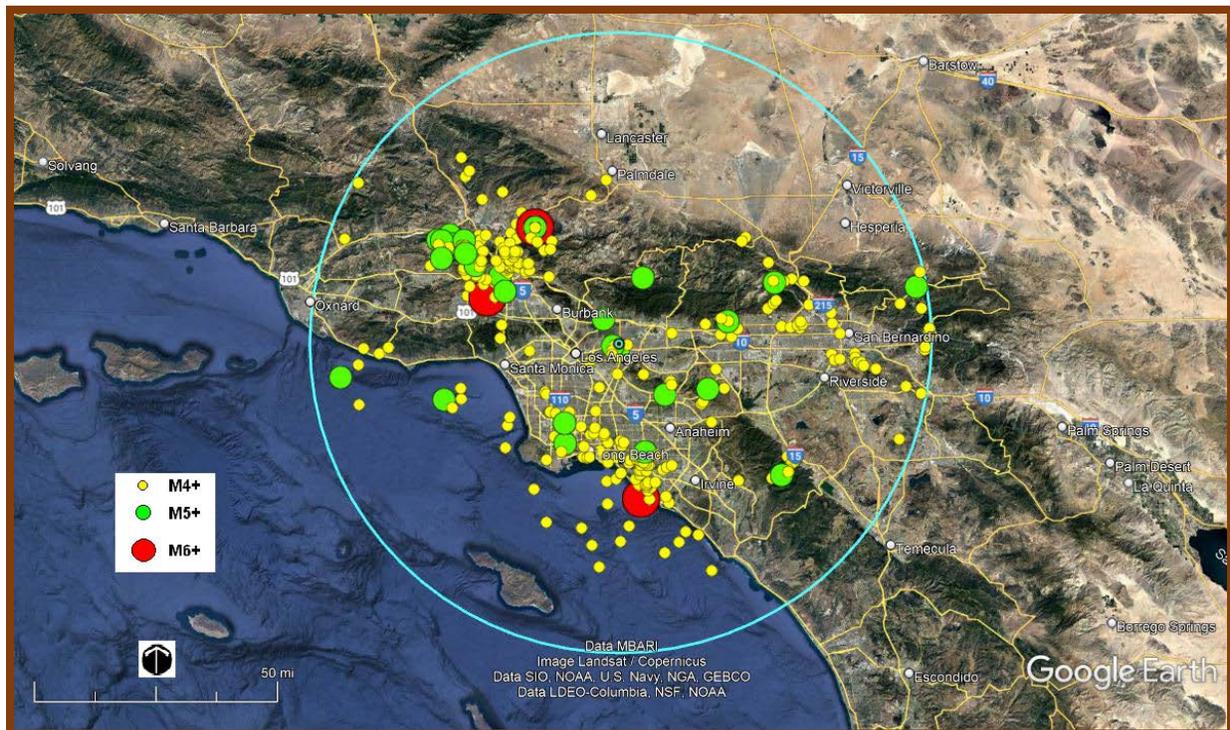


FIGURE 1- Earthquake Epicenter Map; M4.0+ (1932 to present) within a 100-km radius.

SECONDARY SEISMIC HAZARDS

Secondary permanent or transient seismic hazards that are generally associated with severe ground shaking during an earthquake include ground rupture, liquefaction, seiches or tsunamis, flooding (water storage facility failure), ground lurching/lateral spreading, landsliding, rockfalls, and seismically-induced settlement. These hazards are discussed below.

Ground Rupture-

Ground rupture is generally considered most likely to occur along pre-existing faults. Since no known active faults are believed to traverse the subject site, the probability of ground rupture is considered very low.

Tsunamis-

Based on the far distance of large, open bodies of water and the elevation of the site with respect to sea level, the possibility of seiches/tsunamis is considered nil. Additionally, mapping by the California Geological Survey (2014) does not indicate the site to be located within a tsunami inundation zone.

Rockfalls-

Since no large rock outcrops are present at or adjacent to the site, the possibility of rockfalls during seismic shaking is nil.

Liquefaction-

In general, liquefaction is a phenomenon that occurs where there is a loss of strength or stiffness in the soils from repeated disturbances of saturated cohesionless soil that can result in the settlement of buildings, ground failures, or other related hazards. The main factors contributing to this phenomenon are: 1) cohesionless, granular soils having relatively low densities (usually of Holocene age); 2) shallow groundwater (generally less than 40 feet); and 3) moderate-high seismic ground shaking. Mapping by the California Geological Survey (2017), as presented on Plate 2, indicates the subject site to be located within a zone of potential liquefaction. Additionally, according to the City of Rosemead General Plan (2010; Figure 5-5, Areas Susceptible to Earthquake-Induced Liquefaction & Landslides) and the California Division of Mines and Geology (1998), historic high groundwater levels of between 30 to 40± feet are locally shown. Due to the presence of unconsolidated alluvial sediments and the historic high ground water levels, there may be a potential for liquefaction to occur.

Landsliding-

Due to the relatively low-lying relief of the site, landsliding due to seismic shaking is considered nil. Additionally, mapping by the California Geological Survey (2017), as presented on the Seismic Hazards Map, Plate 2 and the City of Rosemead General Plan (2010; Figure 5-5, Areas Susceptible to Earthquake-Induced Liquefaction & Landslides), the site is not shown to be located within a potential landslide zone.

Ground Lurching/Lateral Spreading-

Ground lurching is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or scarps as a result of seismic activity, forming irregular ground surface cracks. The potential for lateral spreading or lurching is highest in areas underlain by soft, saturated materials, especially where bordered by steep banks or adjacent hard ground. Since the subject site is located along a relatively flat-lying alluvial plain with no adjacent steep slopes, the potential for lateral spreading and/or ground lurching appears to be nil.

Flooding (Water Storage Facility Failure)-

According to the City of Rosemead General Plan (2010; Figure 5-7, Dam Failure Inundation Areas), the subject site is not shown to be located within the limits of flooding due to catastrophic dam failure. Additionally, the site is also not shown to be within any flood inundation limits as mapped by the California Department of Water Resources (2022a). No other nearby water-storage facilities are present that would impact the subject site in case of catastrophic failure.

Seismically-Induced Settlement-

Seismically-induced settlement generally occurs within areas of loose, granular soils. Since the site is underlain by predominantly medium dense to dense fine- to coarse-grained alluvial sediments, based on the subsurface data and SPT blow counts obtained in the exploratory boring excavations performed by MTGL (2022), the potential for seismically-induced settlement is considered low.

OTHER GEOLOGIC HAZARDS

There are other potential geologic hazards not necessarily associated with seismic activity that occur statewide. These hazards include; natural hazardous materials (such as methane gas, hydrogen-sulfide gas, and tar seeps); Radon-222 gas (EPA, 1993); naturally occurring asbestos; volcanic hazards (Martin, 1982); and regional subsidence. Of these hazards, there are none that appear to impact the site.

CONCLUSIONS AND RECOMMENDATIONS

General:

Based on our review of available pertinent published and unpublished geologic/seismic literature (including the site-specific boring log data), the proposed 10,000± square foot expansion of the existing two-story adult education center appears to be feasible from a geologic standpoint, providing our recommendations are considered during planning and construction.

Conclusions:

1. Based on available published geologic data, the site is locally mantled by Quaternary age (Holocene) undivided sand and gravel alluvial fan and valley deposits, with presumably older alluvial deposits at depth. Review of the provided boring logs, the site shown to be locally underlain by interbedded moist, medium dense to dense silty sand, sand with some silt and/or clay, along with scattered gravels throughout, to a depth of at least 51½ feet.
2. Subsurface exploration by MTGL did not encounter groundwater during subsurface exploration to a depth of at least 51½ feet. Data provided by various sources indicate that historic groundwater levels have been as shallow as 30 to 40± feet in depth within the vicinity of the site. Shallow groundwater conditions are not expected to impact the site or the proposed construction.
3. Based on our literature research, no active faults are known to traverse the subject site. The nearest zoned active fault zoned by the State of California is the East Montebello Fault, which is located approximately 1.9± miles to the southwest. The nearest mapped fault is shown to traverse approximately 1.8± miles to the southwest, which is the northwestern-most extension of this fault, although is not currently zoned as active locally.
4. Based on our research, field reconnaissance, and the geologic and geotechnical data compiled during this study, there may be a potential for liquefaction to occur. There do not appear to be any other secondary seismic hazards that are expected to occur within the subject site based on our study and review of available published literature.

5. The primary geologic hazard that exists at the site is that of ground shaking, which accounts for nearly all earthquake losses. Moderate to severe ground shaking could be anticipated during the life of the proposed construction.

Recommendations:

1. It is recommended that all structures be designed to at least meet the current California Building Code provisions in the latest 2019 CBC edition and the ASCE Standard 7-16, where applicable. However, it should be noted that the building code is intended as a minimum construction design and is often the maximum level to which structures are designed. It is the responsibility of both the property owner and project structural engineer to determine the risk factors with respect to using CBC minimum design values for the proposed facilities. When considering that a cascading rupture event could occur along the entire length of the Elsinore Fault Zone, which includes the East Montebello Fault (northern-most extension of the zone), the resulting maximum moment magnitude earthquake is estimated to be $M_w 7.8$, which should be used for seismic design purposes.
2. The potential for liquefaction should be properly evaluated by the project Geotechnical Engineer. Appropriate site-specific mitigation measures, should be implemented as recommended, if warranted.

CLOSURE

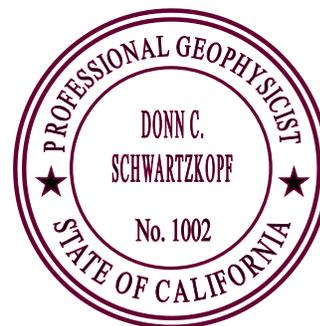
Our conclusions and recommendations are based on an interpretation of available existing geologic/seismic data. No subsurface exploration was performed by this firm for this evaluation. We make no warranty, either express or implied. Should conditions be encountered at a later date or more information becomes available that appear to be different than those indicated in this report, we reserve the right to reevaluate our conclusions and recommendations and provide appropriate mitigation measures, if warranted. If this report is not understood, it is the responsibility of the owner, contractor, engineer, and/or governmental agency, etc., to contact this office for further clarification.

Respectfully submitted,
TERRA GEOSCIENCES

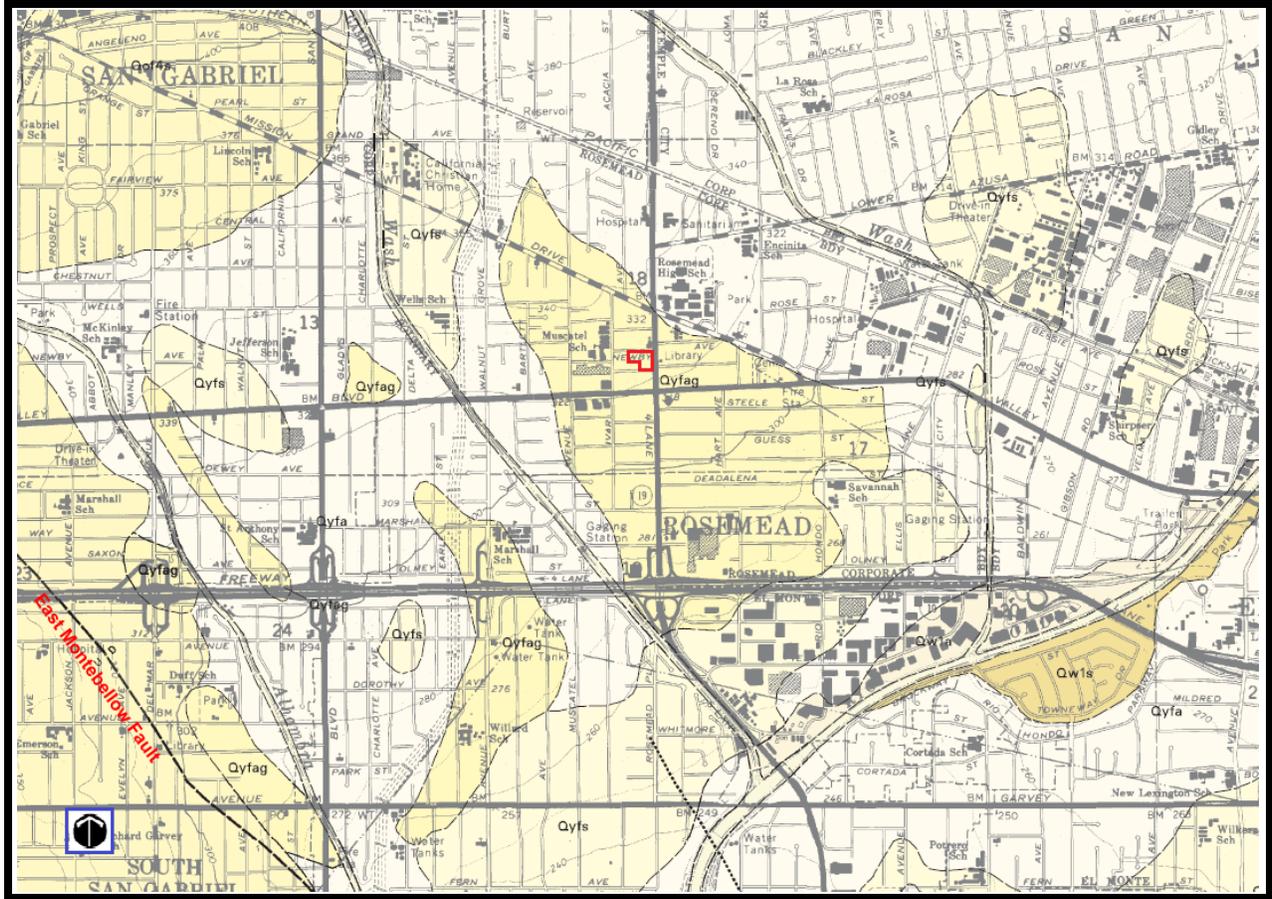


Donn C. Schwartzkopf
Certified Engineering Geologist
CEG 1459

Professional Geophysicist
PGP 1002



REGIONAL GEOLOGIC MAP

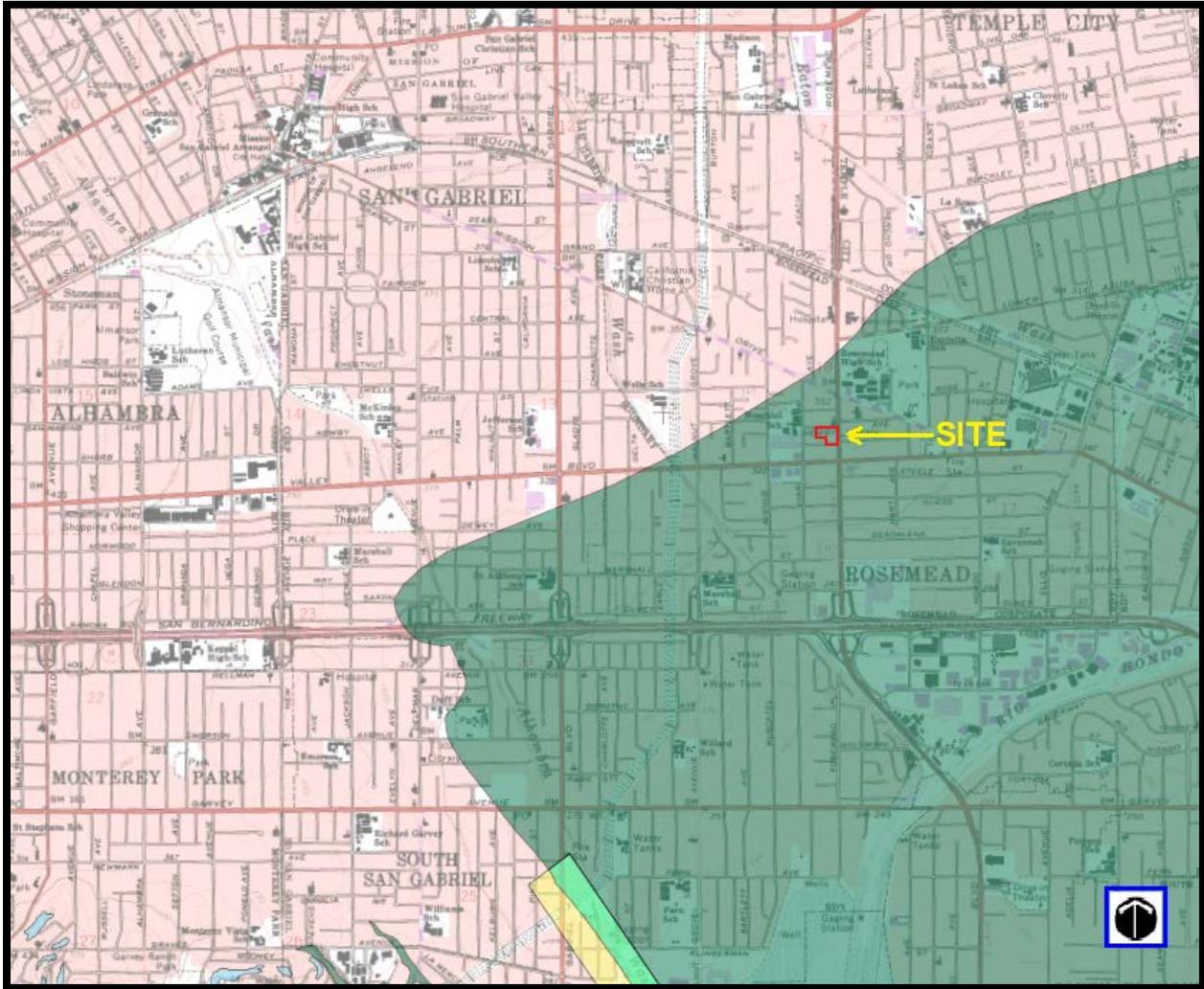


BASE MAP: Tan, 2000, C.D.M.G. Open-File Report 98-12, Scale 1: 24,000; Site outlined in red.

PARTIAL LEGEND

Qyfa	YOUNGER ALLUVIUM	Undivided sandy alluvial fan and valley deposits (Holocene).
Qyfad	YOUNGER ALLUVIUM	Undivided sand and gravel alluvial fan and valley deposits (Holocene).
—	GEOLOGIC CONTACT	Solid where well to approximately located, dashed where poorly located or inferred.
— ·····	FAULT	Solid where accurately located, dashed where approximate, dotted where concealed.

SEISMIC HAZARDS ZONE MAP



BASE MAP: C.G.S. Earthquake/Seismic Hazard Zones Map (1999/2017), Scale 1: 24,000.

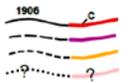
LEGEND

EARTHQUAKE FAULT ZONES



Earthquake Fault Zones

Zone boundaries are delineated by straight-line segments; the boundaries define the zone encompassing active faults that constitute a potential hazard to structures from surface faulting or fault creep such that avoidance as described in Public Resources Code Section 2621.5(a) would be required.



Active Fault Traces

Faults considered to have been active during Holocene time and to have potential for surface rupture: Solid Line in Black or Red where Accurately Located; Long Dash in Black or Solid Line in Purple where Approximately Located; Short Dash in Black or Solid Line in Orange where Inferred; Dotted Line in Black or Solid Line in Rose where Conceded. Query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

SEISMIC HAZARD ZONES



Liquefaction Zones

Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



Earthquake-Induced Landslide Zones

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



Overlapping Liquefaction and Earthquake-Induced Landslide Zones
Areas that lie within zones of required investigation for both liquefaction and earthquake-induced landslides.

OVERLAPPING EARTHQUAKE FAULT AND SEISMIC HAZARD ZONES



Overlap of Earthquake Fault Zone and Liquefaction Zone
Areas that are covered by both Earthquake Fault Zone and Liquefaction Zone.

SEISMIC LINE LOCATION MAP



Base Map: Google™ Earth imagery (2022); Site boundary approximated by red outline; Seismic Line SW-1 indicated by blue line.

APPENDIX A

SHEAR-WAVE SURVEY



SHEAR-WAVE SURVEY

Methodology

The fundamental premise of this survey uses the fact that the Earth is always in motion at various seismic frequencies. These relatively constant vibrations of the Earth's surface are called microtremors, which are very small with respect to amplitude and are generally referred to as background "noise" that contain abundant surface waves. These microtremors are caused by both human activity (i.e., cultural noise, traffic, factories, etc.) and natural phenomenon (i.e., wind, wave motion, rain, atmospheric pressure, etc.) which have now become regarded as useful signal information. Although these signals are generally very weak, the recording, amplification, and processing of these surface waves has greatly improved by the use of technologically improved seismic recording instrumentation and recently developed computer software. For this application, we are mainly concerned with the Rayleigh wave portion of the seismic signals, which is also referred to as "ground roll" since the Rayleigh wave is the dominant component of ground roll.

For the purposes of this study, there are two ways that the surface waves were recorded, one being "active" and the other being "passive." Active means that seismic energy is intentionally generated at a specific location relative to the survey spread and recording begins when the source energy is imparted into the ground (i.e., MASW survey technique). Passive surveying, also called "microtremor surveying," is where the seismograph records ambient background vibrations (i.e., MAM survey technique), with the ideal vibration sources being at a constant level. Longer wavelength surface waves (longer-period and lower-frequency) travel deeper and thus contain more information about deeper velocity structure and are generally obtained with passive survey information. Shorter wavelength (shorter-period and higher-frequency) surface waves travel shallower and thus contain more information about shallower velocity structure and are generally collected with the use of active sources. For the most part, higher frequency active source surface waves will resolve the shallower velocity structure and lower frequency passive source surface waves will better resolve the deeper velocity structure. Therefore, the combination of both of these surveying techniques provides a more accurate depiction of the subsurface velocity structure.

The assemblage of the data that is gathered from these surface wave surveys results in development of a dispersion curve. Dispersion, or the change in phase velocity of the seismic waves with frequency, is the fundamental property utilized in the analysis of surface wave methods. The fundamental assumption of these survey methods is that the signal wavefront is planar, stable, and isotropic (coming from all directions) making it independent of source locations and for analytical purposes uses the spatial autocorrelation method (SPAC). The SPAC method is based on theories that are able to detect "signals" from background "noise" (Okada, 2003). The shear wave velocity (V_s) can then be calculated by mathematical inversion of the dispersive phase velocity of the surface waves which can be significant in the presence of velocity layering, which is common in the near-surface environment.

Field Procedures

One seismic shear-wave survey traverse (SW-1) was performed within the northern portion of the project site area, as approximated on the Seismic Line Location Map (see Plate 3) for reference. For data collection, the field survey employed a twenty-four channel Geometrics StrataVisor™ NZXP model signal-enhancement refraction seismograph. This survey employed both active (MASW) and passive (MAM) source methods to ensure that both quality shallow and deeper shear-wave velocity information was recorded (Park et al., 2005). Both the MASW and MAM survey lines used the same linear geometry array that consisted of a 161-foot-long spread using a series of twenty-four 4.5-Hz geophones that were spaced at regular seven-foot intervals. For the MASW survey, the ground vibrations were recorded using a one second record length at a sampling rate of 0.5-milliseconds. Two seismic records were obtained using a 25-foot offset from the beginning and the end of the survey line, utilizing a 16-pound sledge-hammer as the energy source to produce the seismic waves. Each of these shot points used multiple shots (stacking) to improve the signal to noise ratio of the data.

The MAM survey did not require the introduction of any artificial seismic sources and only background ambient noise was recorded. The ambient ground vibrations were recorded using a thirty-two second record length at a two-millisecond sampling rate with 20 separate seismic records being obtained for quality control purposes. The seismic-wave forms and associated frequency spectrum that were displayed on the seismograph screen were used to assess the recorded seismic wave data for quality control purposes in the field. The acceptable records were digitally recorded on the in-board seismograph computer and subsequently transferred to a flash drive so that they could be subsequently transferred to our office computer for analysis.

Data Processing

For analysis and presentation of the shear-wave profile and supportive illustrations, this study used the SeisImager/SW™ computer software program developed by Geometrics, Inc. (2009). Both the active (MASW) and passive (MAM) survey results were combined for this analysis (Park et al., 2005). The combined results maximize the resolution and overall depth range in order to obtain one high resolution V_s curve over the entire sampled depth range. These methods economically and efficiently estimate one-dimensional subsurface shear-wave velocities using data collected from standard primary-wave (P-wave) refraction surveys, however, it should be noted that surface waves by their physical nature cannot resolve relatively abrupt or small-scale velocity anomalies.

Processing of the data proceeded by calculating the dispersion curve from the input data which subsequently created an initial shear-wave model based on the observed data. This initial model was then inverted in order to converge on the best fit of the initial model and the observed data, creating the final shear-wave model (Seismic Line SW-1) as presented within this appendix.

Data Analysis

Data acquisition went very smoothly and the quality was considered to be good. Analysis revealed that the average shear-wave velocity (“weighted average”) in the upper 100 feet of the subject survey area is **1,128.8** feet per second (343.8 meters/sec) as shown on the shear-wave model for Seismic Line SW-1, as presented within this appendix. This average velocity classifies the underlying soils to that of Site Class “**D**” (Stiff Soil), which has a velocity range from 600 to 1,200 ft/sec (ASCE, 2017; Table 20.3-1).

The “weighted average” velocity is computed from a formula that is used by the ASCE (2017; Section 20.4, Equation 20.4-1) to determine the average shear-wave velocity for the upper 100 feet of the subsurface (V100) and is as follows:

$$V_{100'} = 100 / [(t_1/v_1) + (t_2/v_2) + \dots + (t_n/v_n)]$$

Where $t_1, t_2, t_3, \dots, t_n$, are the thicknesses for layers 1, 2, 3, ..., n , up to 100 feet, and $v_1, v_2, v_3, \dots, v_n$, are the seismic velocities (feet/second) for layers 1, 2, 3, ..., n . The shear-wave model displays these calculated layers and associated velocities (feet/second) to a depth of 173 feet where locally sampled. The associated Dispersion Curves (for both the active and passive methods) which show the data quality and picks, along with the resultant combined dispersion curve model are also included within this appendix for reference purposes.

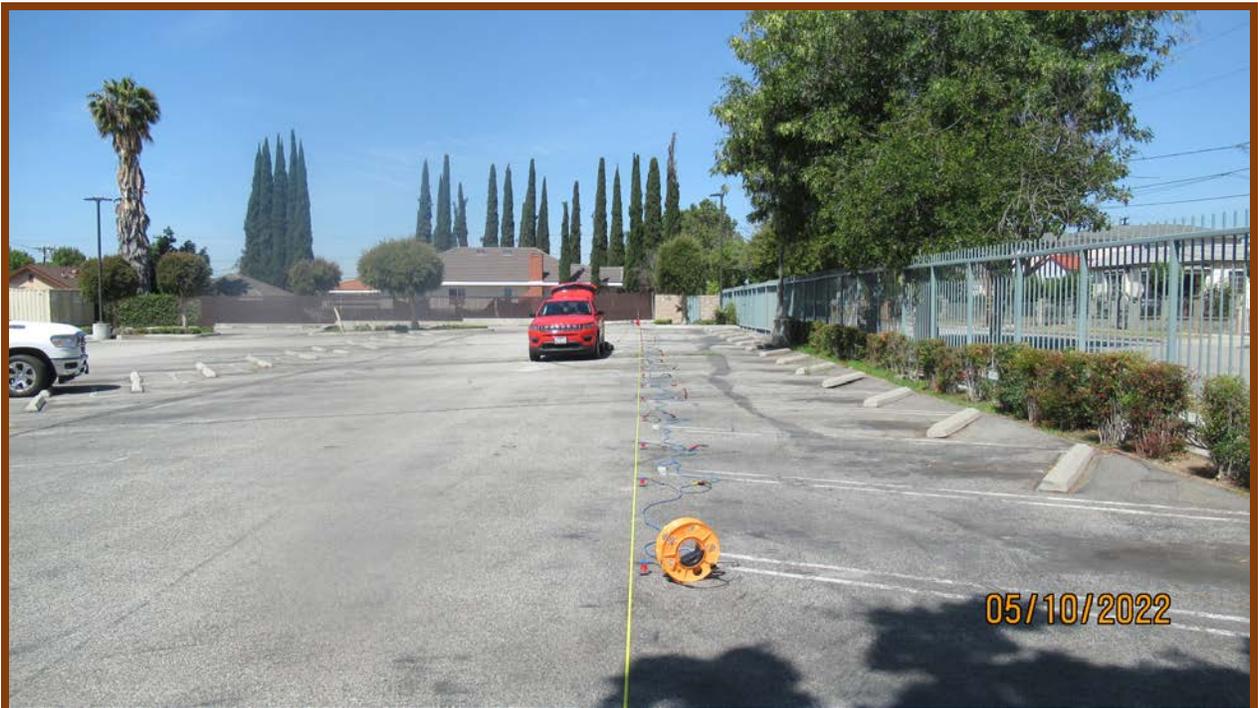
Limitations

This survey was performed using “state of the art” geophysical equipment, techniques, and computer software. We make no warranty, either expressed or implied. It should be understood that when using these theoretical geophysical principles and techniques, sources of error are possible in both the data obtained and in the interpretation. Compared with traditional borehole shear-wave surveys of which use vertical body waves, the sources of error (if present) using horizontal surface waves for this project are not believed to be greater than 15 percent.

SURVEY LINE PHOTOGRAPHS

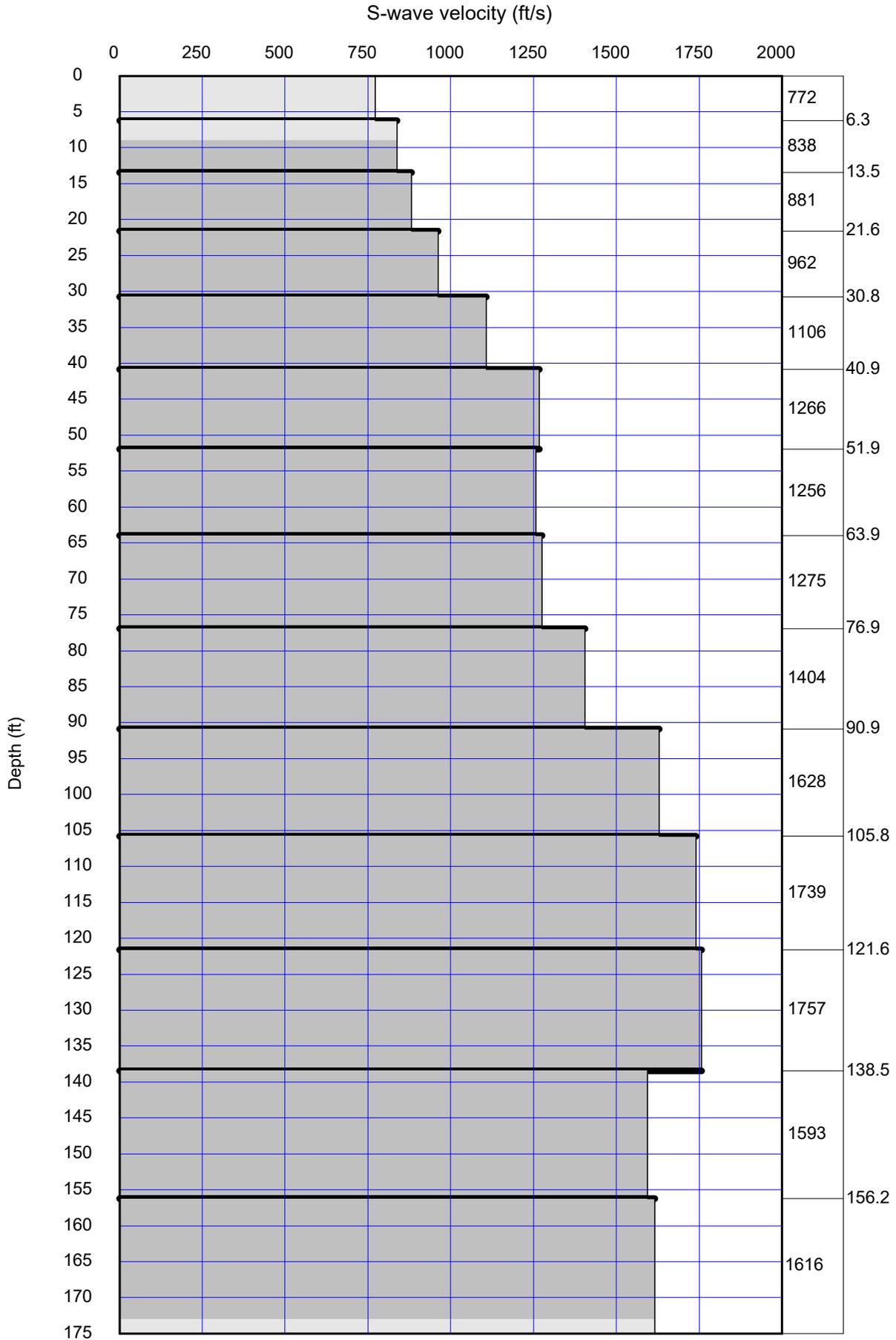


View looking east along Seismic Line SW-1.



View looking west along Seismic Line SW-1.

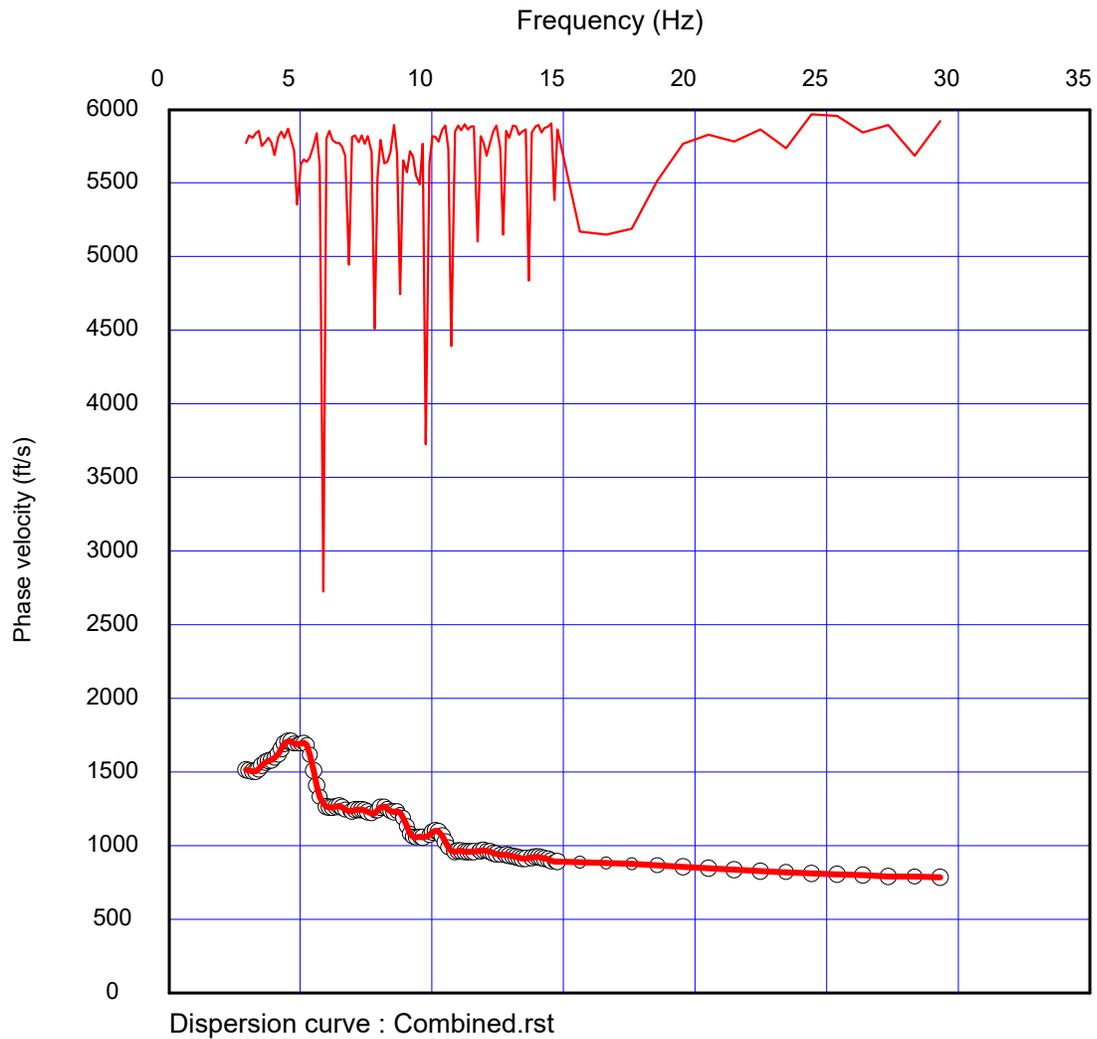
SEISMIC LINE SW-1



S-wave velocity model (inverted): Final.rst

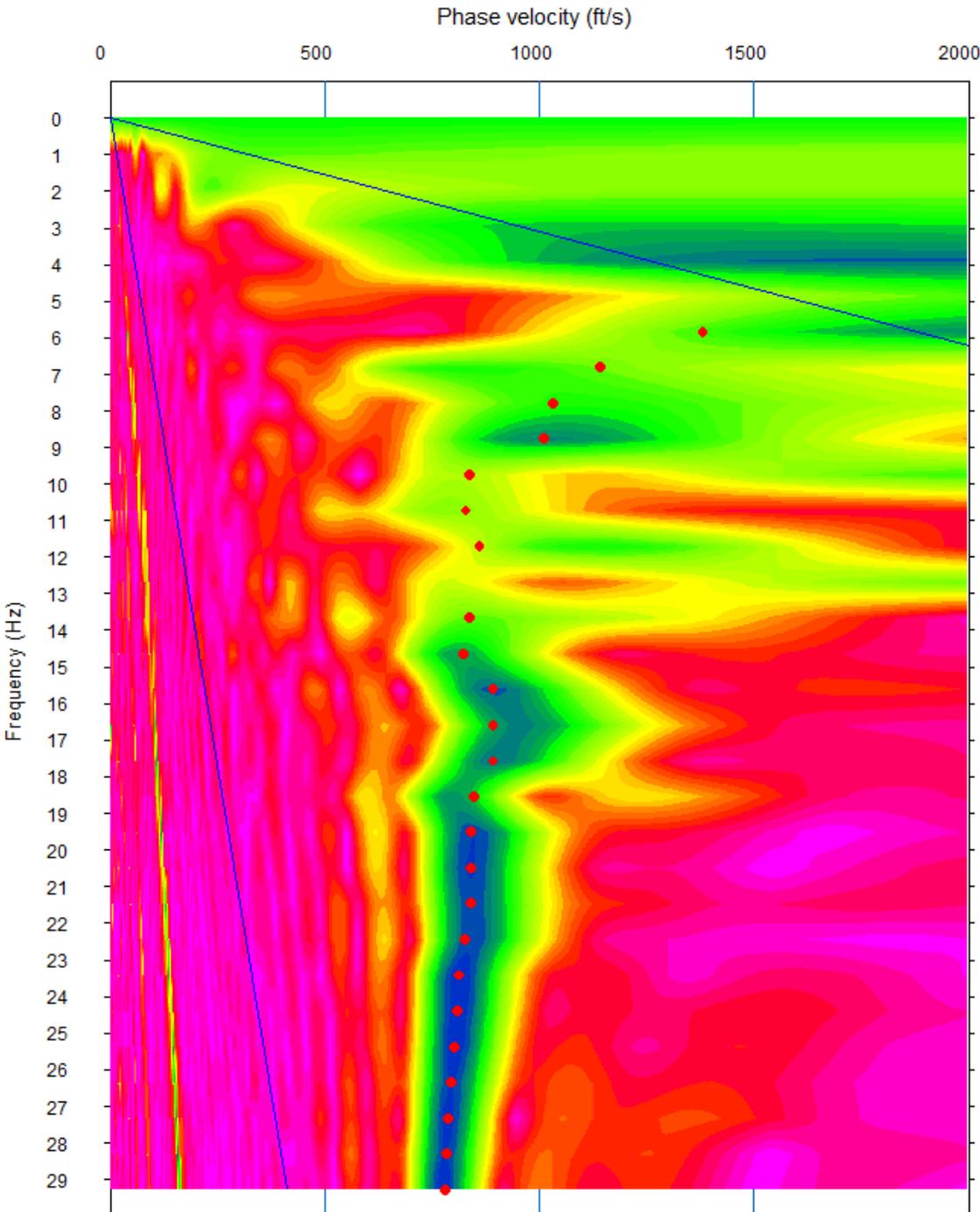
Average Vs 100ft = 1128.8 ft/sec

SEISMIC LINE SW-1



COMBINED DISPERSION CURVE

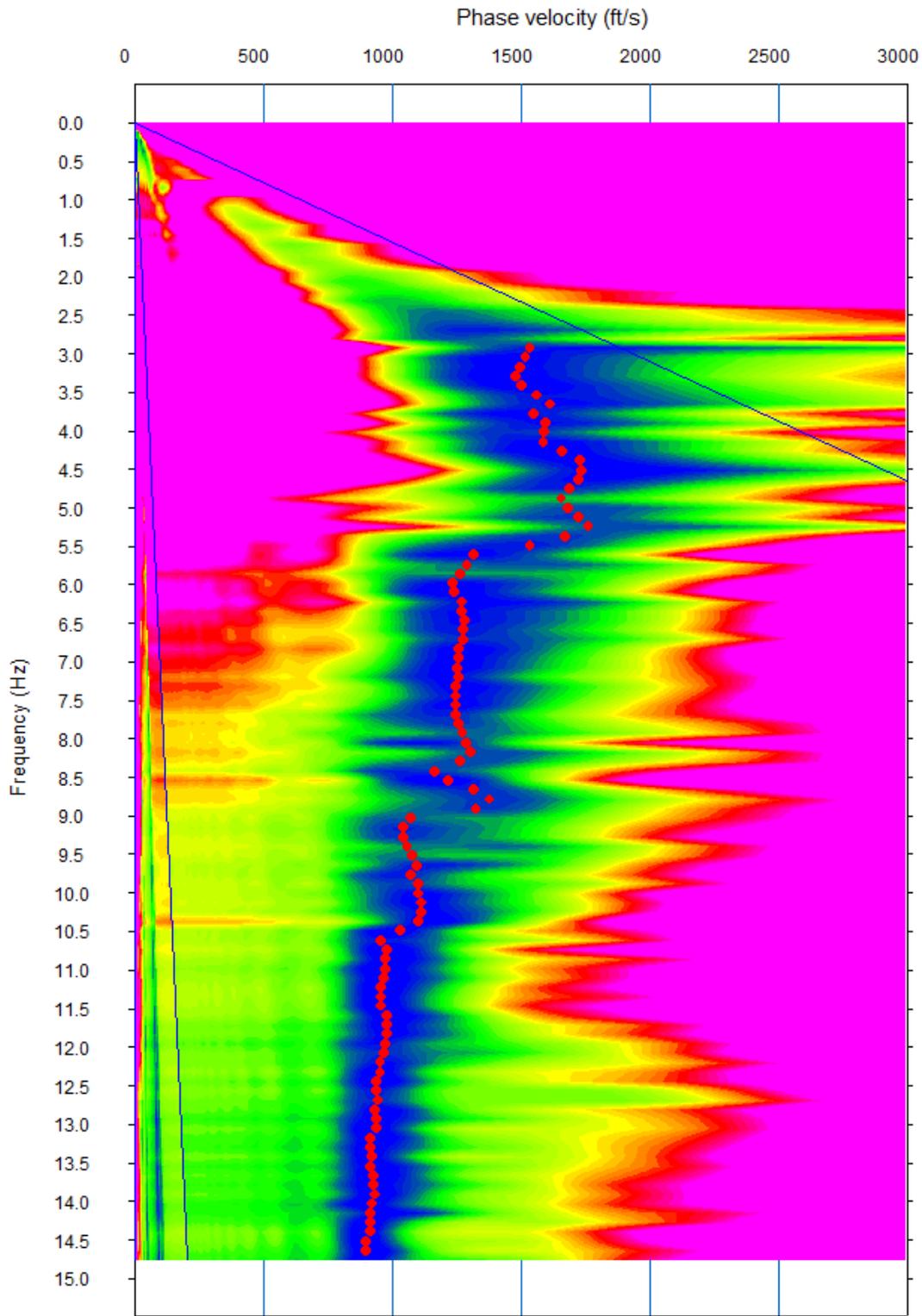
SEISMIC LINE SW-1



Dispersion Curve: Active.dat

ACTIVE DISPERSION CURVE

SEISMIC LINE SW-1



PASSIVE DISPERSION CURVE

APPENDIX B

SITE-SPECIFIC GROUND MOTION ANALYSIS



SITE-SPECIFIC GROUND MOTION ANALYSIS

A detailed summary of the site-specific ground motion analysis, which follows Section 21 of the ASCE Standard 7-16 (2017) and the 2019 California Building Code is presented below, with the Seismic Design Parameters Summary included within this appendix following the summary text.

◆ Mapped Spectral Acceleration Parameters (CBC 1613A.2.1)-

Based on maps prepared by the U.S.G.S (Risk-Adjusted Maximum Considered Earthquake (MCE_R) Ground Motion Parameter for the Conterminous United States for the 0.2 and 1-second Spectral Response Acceleration (5% of Critical Damping; Site Class B/C), a value of **1.967g** for the 0.2 second period (S_s) and **0.711g** for the 1.0 second period (S_1) was calculated (ASCE 7-16 Figures 22-1, 22-2 and CBC 1613A.2.1).

◆ Site Classification (CBC 1613A.2.2 & ASCE 7-16 Chapter 20)-

Based on the site-specific measured shear-wave value of 1,128.8 feet/second (343.8 m/sec), the soil profile type used should be Site Class “D.” This Class is defined as having the upper 100 feet (30 meters) of the subsurface being underlain by “Stiff Soil” with average shear-wave velocities of 600 to 1,200 feet/second (180 to 360 meters/second), as detailed within Appendix A.

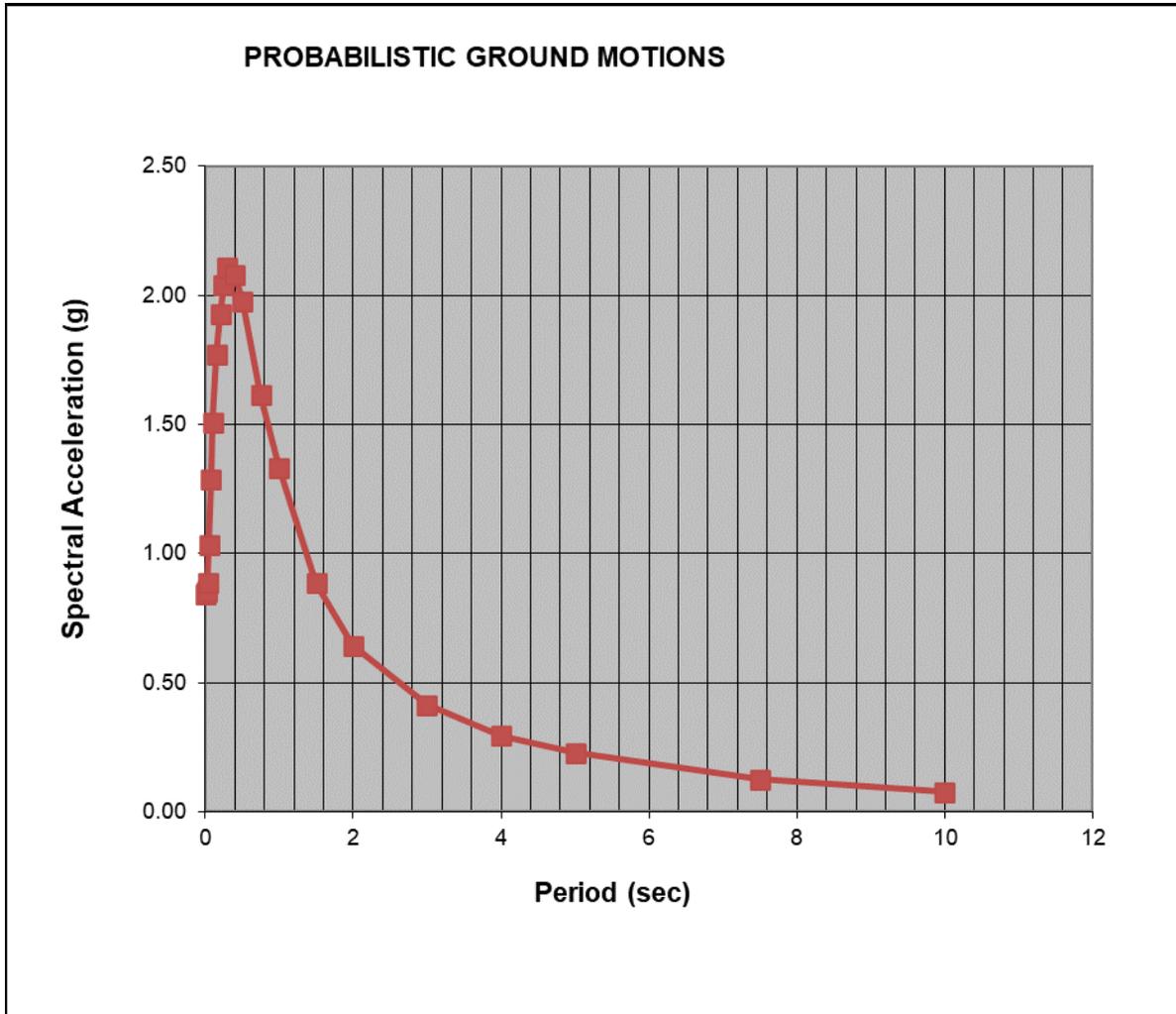
◆ Site Coefficients (CBC 1613A.2.3)-

Based on CBC Tables 1613A.2.3(1) and 1613A.2.3(2), the site coefficient $F_a = 1.0$ and $F_v = 1.7$, respectively.

◆ Probabilistic (MCE_R) Ground Motions (ASCE 7 Section 21.2.1)-

Per Section 21.2.1.1 (**Method 1**), the probabilistic MCE spectral accelerations shall be taken as the spectral response accelerations in the direction of maximum response represented by a five percent damped acceleration response spectrum that is expected to achieve a one percent probability of collapse within a 50-year period.

The probabilistic analysis included the use of the Open Seismic Hazard Analysis (OpenSHA). The selected Earthquake Rupture Forecast (ERF) was UCERF3 along with a Probability of Exceedance of 2% in 50 Years. The average of four Next Generation Attenuation West-2 Relations (2014 NGA) were utilized to produce a response spectrum. These included Chiou & Youngs (2014), Abrahamsom et al. (2014), Campbell & Bozorgnia (2014), Boore et al. (2014), and Campbell & Bozorgnia (2014). The Probabilistic Risk Targeted Response Spectrum was determined as the product of the ordinates of the probabilistic response spectrum and the applicable risk coefficient (C_R). These values were then modified to produce a spectrum based upon the maximum rotated components of ground motion. The resulting MCE_R Response Spectrum is indicated below:



◆ **Deterministic Spectral Response Analyses (ASCE 7 Section 21.2.2)-**

The deterministic MCE_R response acceleration at each period shall be calculated as an 84th-percentile 5 percent damped spectral response acceleration in the direction of maximum horizontal response computed at that period. The largest such acceleration calculated for the characteristic earthquakes on all known active faults within the region shall be used. Analyses were conducted using the average of four Next Generation Attenuation West-2 Relations (2014 NGA), including Chiou & Youngs (2014), Abrahamsom et al. (2014), Boore et al. (2014), and Campbell & Bozorgnia (2014).

Based on our review of the Fault Section Database within the Uniform California Earthquake Rupture Forecast (UCERF 3; Field et al., 2013) and the location of the nearest and largest regional fault with respect to the subject site, the Puente Hills Blind Thrust and the Whittier Fault (northern segment of the Elsinore Fault Zone), were used for this analysis. The Puente Hills Blind Thrust Fault controlled the design spectrum for periods up to 0.40 seconds, with the Whittier Fault controlling the spectrum from a period of 0.5 seconds and beyond.

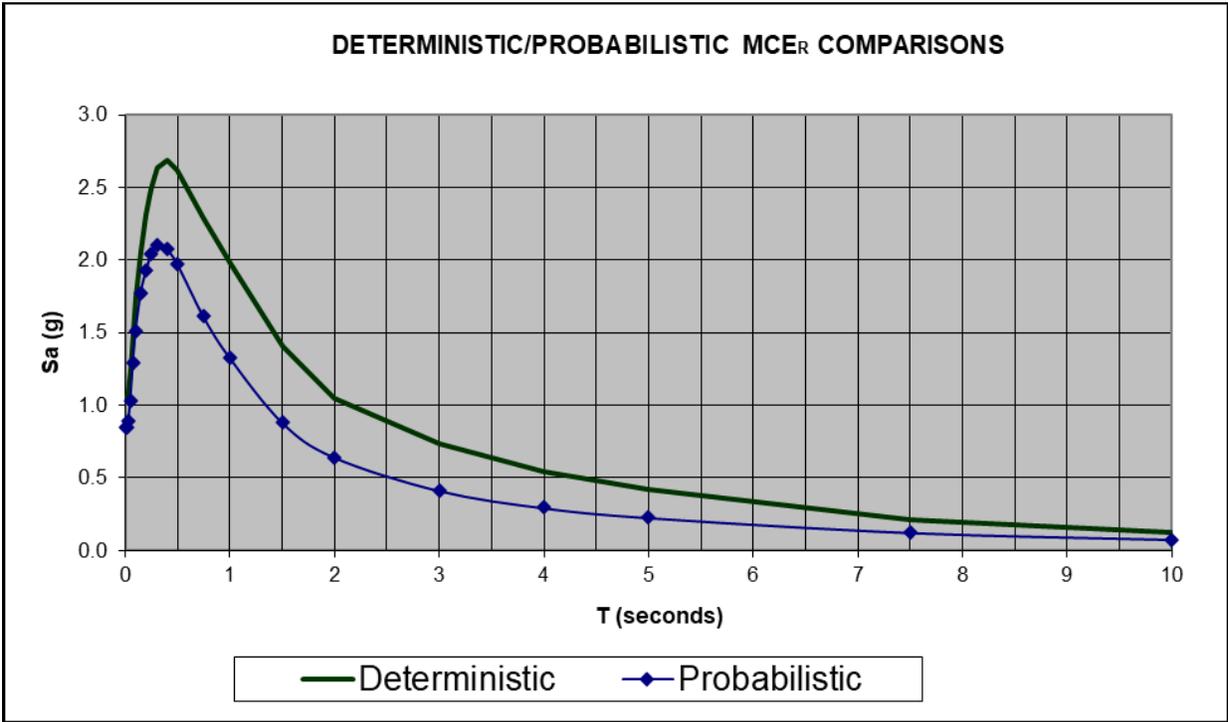
◆ **Site Specific MCE_R (ASCE 7 Section 21.2.3)-**

The site-specific MCE_R spectral response acceleration at any period, S_{aM}, shall be taken as the lesser of the spectral response accelerations from the probabilistic ground motions of Section 21.2.1 and the deterministic ground motions of Section 21.2.2. The deterministic ground motions were compared with the probabilistic ground motions that were determined in accordance with Section 21.2.1. These results are tabulated below:

Comparison of Deterministic MCE_R Values with Probabilistic MCE_R Values - Section 21.2.3

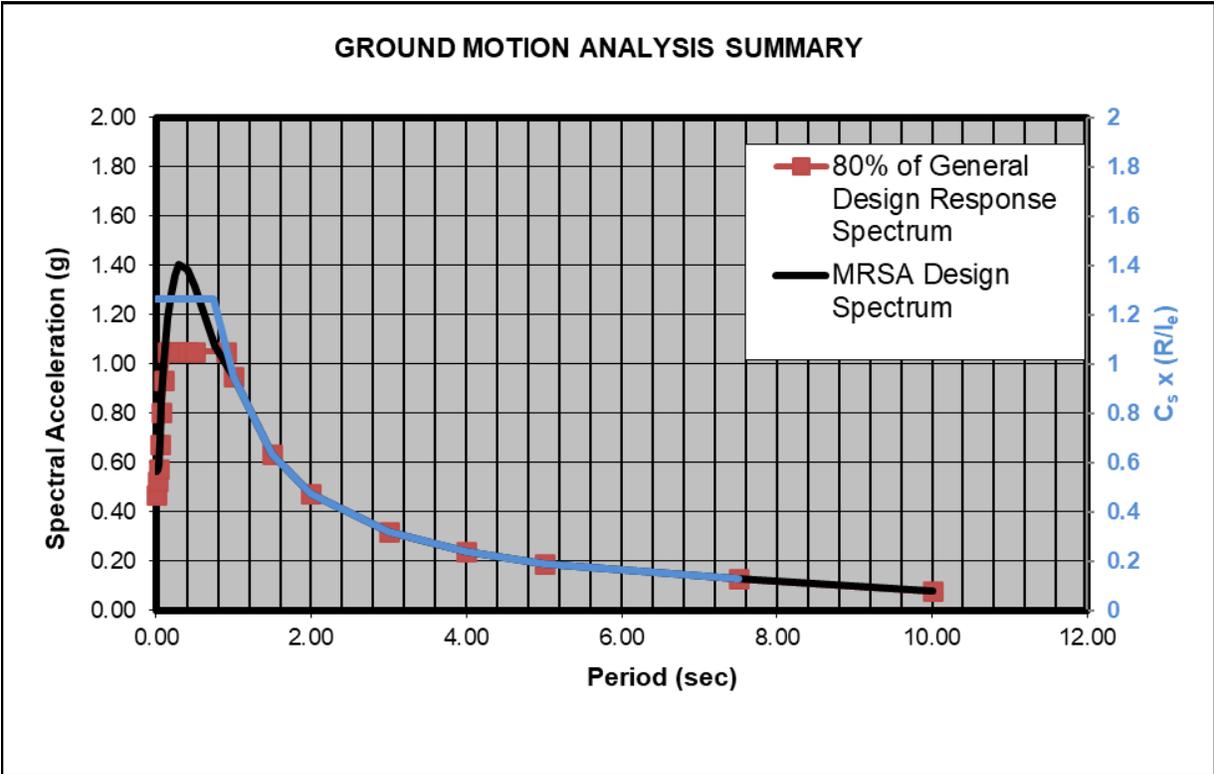
Period	Deterministic	Probabilistic	Lower Value (Site Specific MCE _R)	Governing Method
T	MCE _R	MCE _R		
0.010	1.05	0.84	0.84	Probabilistic Governs
0.020	1.06	0.85	0.85	Probabilistic Governs
0.030	1.09	0.89	0.89	Probabilistic Governs
0.050	1.25	1.03	1.03	Probabilistic Governs
0.075	1.50	1.29	1.29	Probabilistic Governs
0.100	1.75	1.51	1.51	Probabilistic Governs
0.150	2.06	1.77	1.77	Probabilistic Governs
0.200	2.31	1.93	1.93	Probabilistic Governs
0.250	2.49	2.04	2.04	Probabilistic Governs
0.300	2.63	2.11	2.11	Probabilistic Governs
0.400	2.68	2.08	2.08	Probabilistic Governs
0.500	2.62	1.97	1.97	Probabilistic Governs
0.750	2.28	1.61	1.61	Probabilistic Governs
1.000	1.98	1.33	1.33	Probabilistic Governs
1.500	1.41	0.88	0.88	Probabilistic Governs
2.000	1.05	0.64	0.64	Probabilistic Governs
3.000	0.73	0.41	0.41	Probabilistic Governs
4.000	0.54	0.29	0.29	Probabilistic Governs
5.000	0.42	0.23	0.23	Probabilistic Governs
7.500	0.22	0.12	0.12	Probabilistic Governs
10.000	0.13	0.08	0.08	Probabilistic Governs

These comparisons are plotted in the following diagram:



◆ **Design Response Spectrum (ASCE 7 Section 21.3)-**

In accordance with Section 21.3, the Design Response Spectrum was developed by the following equation: $S_a = 2/3S_{aM}$, where S_{aM} is the MCE_R spectral response acceleration obtained from Section 21.1 or 21.2. The design spectral response acceleration shall not be taken less than 80 percent of S_a . These are plotted and compared with 80% of the CBC Spectrum values in the following diagram:



◆ **Design Acceleration Parameters (ASCE 7 Section 21.4)-**

Where the site-specific procedure is used to determine the design ground motion in accordance with Section 21.3, the parameter S_{DS} shall be obtained from the site-specific spectra at a period of 0.2 s, except that it shall not be taken less than 90 percent of the peak spectral acceleration, S_a , at any period larger than 0.2 s. The parameter S_{D1} shall be taken as the greater of the products of $S_a * T$ for periods between 1 and 5 seconds. The parameters S_{MS} , and S_{M1} shall be taken as 1.5 times S_{DS} and S_{D1} , respectively. The values so obtained shall not be less than 80 percent of the values determined in accordance with Section 11.4.4 for S_{MS} , and S_{M1} and Section 11.4.5 for S_{DS} and S_{D1} .

◆ **Site Specific Design Parameters -**

For the 0.2 second period (S_{DS}), a value of 1.26g was computed, based upon the average spectral accelerations. The maximum average acceleration for any period exceeding 0.2 seconds was 1.40g occurring at $T=0.30$ seconds. This was multiplied by 0.9 to produce a value of 1.26g making this the applicable value. A value of 0.95g was calculated for S_{D1} at a period of 1 second (ASCE 7-16, 21.4). For the MCE_R 0.2 second period, a value of 1.897g (S_{MS}) was computed, along with a value of 1.422g (S_{M1}) for the MCE_R 1.0 second period was also calculated (ASCE 7-16, 21.2.3).

◆ **Site-Specific MCE_G Peak Ground Accelerations (ASCE 7 Section 21.5)-**

The probabilistic geometric mean peak ground acceleration (2 percent probability of exceedance within a 50-year period) was calculated as 0.86g. The deterministic geometric mean peak ground acceleration (largest 84th percentile geometric mean peak ground acceleration for characteristic earthquakes on all known active faults within the site region) was calculated as 0.95g. The site-specific MCE_G peak ground acceleration was calculated to be **0.86g**, which was determined by using the lesser of the probabilistic (0.86g) or the deterministic (0.95g) geometric mean peak ground accelerations, but not taken as less than 80 percent of PGA_M (i.e., $0.94g \times 0.80 = 0.75g$).

SEISMIC DESIGN PARAMETERS SUMMARY

Project: Rosemead Adult Regional Education Co Latitude: 34.0822
 Project #: 223822-1 Longitude: -118.0739
 Date: 5/13/22

CALIFORNIA BUILDING CODE CHAPTER 16/ASCE7-16

Mapped Acceleration Parameters per ASCE 7-16, Chapter 22

S_s	= 1.967	Figure 22-1
S_1	= 0.711	Figure 22-2

Site Class per Table 20.3-1

Site Class = D - Stiff Soil

Site Coefficients per ASCE 7-16 CHAPTER 11

F_a	= 1	Table 11.4-1	= 1	For Site Specific Analysis per ASCE7-16 21.3
F_v	= 1.7	Table 11.4-2	= 2.50	For Site Specific Analysis per ASCE7-16 21.3

Mapped Design Spectral Response Acceleration Parameters

S_{Ms}	= 1.967	Equation 11.4-1	= 1.967	For Site Specific Analysis per ASCE7-16 21.3
S_{M1}	= 1.209	Equation 11.4-2	= 1.778	For Site Specific Analysis per ASCE7-16 21.3

S_{DS}	= 1.311	Equation 11.4-3
S_{D1}	= 0.806	Equation 11.4-4

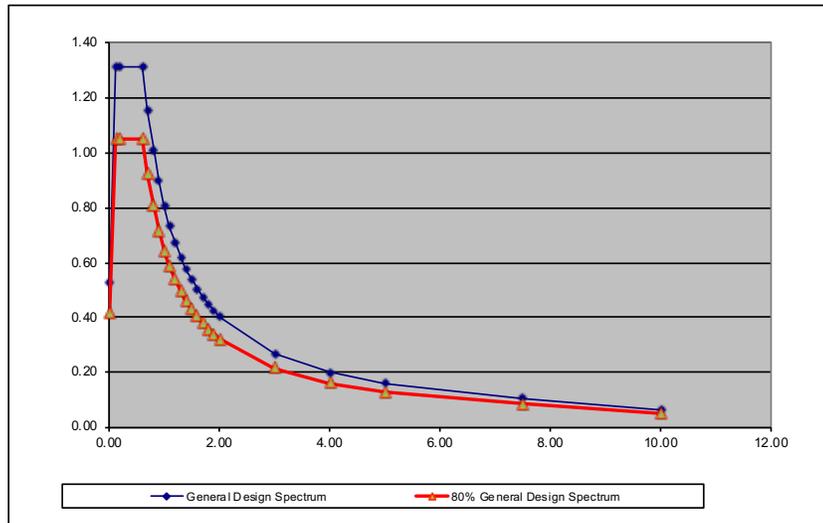
T_0	= 0.123	sec
T_S	= 0.614	sec
T_L	= 8	sec
PGA	= 0.851	g
F_{PGA}	= 1.1	
C_{RS}	= 0.889	
C_{R1}	= 0.891	

From Fig 22-12

From Table 11.8-1
Figure 22-17

Figure 22-18

Period (T)	S_a (ASCE7-16 - 11.4.6)	80% General Design Spectrum
0.01	0.53	0.42
0.12	1.31	1.05
0.20	1.31	1.05
0.61	1.31	1.05
0.70	1.15	0.92
0.80	1.01	0.81
0.90	0.90	0.72
1.00	0.81	0.64
1.10	0.73	0.59
1.20	0.67	0.54
1.30	0.62	0.50
1.40	0.58	0.46
1.50	0.54	0.43
1.60	0.50	0.40
1.70	0.47	0.38
1.80	0.45	0.36
1.90	0.42	0.34
2.00	0.40	0.32
3.00	0.27	0.21
4.00	0.20	0.16
5.00	0.16	0.13
7.50	0.11	0.09
10.00	0.06	0.05



ASCE 7-16 - RISK-TARGETED MAXIMUM CONSIDERED EARTHQUAKE GROUND MOTION ANALYSIS

Use Maximum Rotated Horizontal Component?* (Y/N) y

Presented data are the average of Chiou & Youngs (2014), Abrahamson et. al. (2014), Boore et. al (2014) and Campbell & Bozorgnia (2014) NGA West-2 Relationships Earthquake Rupture Forecast - UCERF3 FM 3.1

PROBABILISTIC MCER per 21.2.1.1 Method 1

Risk Coefficients taken from Figures 22-18 and 22-19 of ASCE 7-16

OpenSHA data

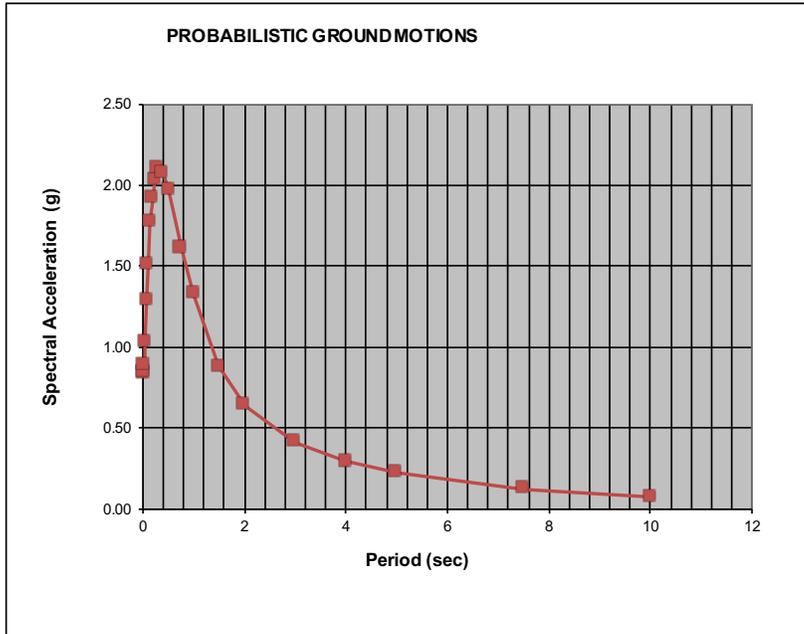
2% Probability Of Exceedance in 50 years

Maximum Rotated Horizontal Component determined per ASCE7-16

T	Sa 2% in 50	MCER
0.01	0.95	0.84
0.02	0.96	0.85
0.03	1.00	0.89
0.05	1.16	1.03
0.08	1.45	1.29
0.10	1.70	1.51
0.15	1.99	1.77
0.20	2.17	1.93
0.25	2.29	2.04
0.30	2.37	2.11
0.40	2.34	2.08
0.50	2.22	1.97
0.75	1.81	1.61
1.00	1.49	1.33
1.50	0.99	0.88
2.00	0.72	0.64
3.00	0.46	0.41
4.00	0.33	0.29
5.00	0.25	0.23
7.50	0.14	0.12
10.00	0.09	0.08

S _s =	2.17	1.93
S ₁ =	1.49	1.33
PGA	0.86 g	

Risk Coefficients:		
C _{RS}	0.889	Figure 22-18 Get from Mapped Values
C _{R1}	0.891	Figure 22-19
Fa=	1	Table 11.4-1 Per ASCE7-16 - 21.2.3
Is Sa _(max) <1.2XFa?	NO	If "YES", Probabilistic Spectrum prevails

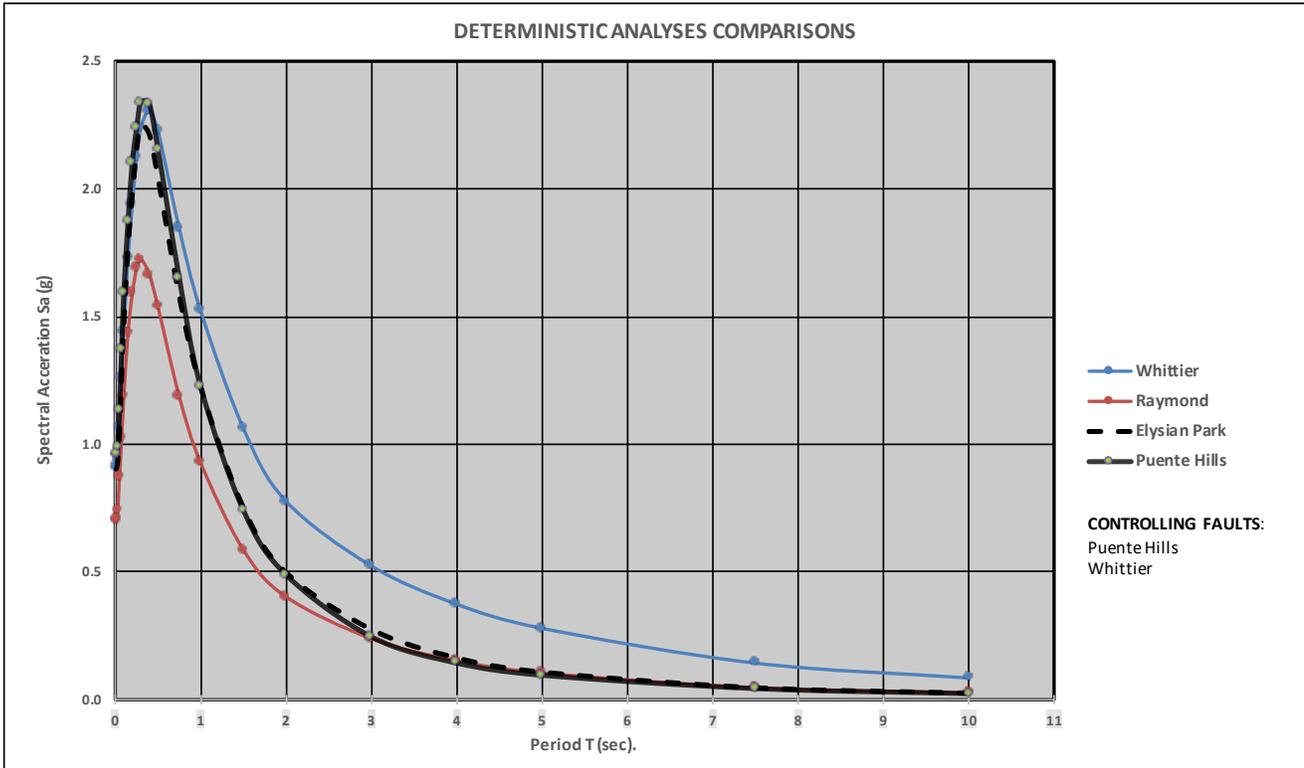


DETERMINISTIC MCE per 21.2.2

Preliminary Assessment:

Four faults contribute to the hazard

Fault	Distance (km)
Whittier	2.90
Raymond	5.40
Elysian Park	0.80
Puente Hills	15.00



Input Parameters		Whittier	Raymond	Elysian Park	Puente Hills
Fault					
M	= Moment magnitude	7.8	6.8	6.7	7
R_{RUP}	= Closest distance to coseismic rupture (km)	2.9	5.4	3.2	10.8
R_{JB}	= Closest distance to surface projection of coseismic rupture (km)	2.9	5.4	2.7	0
R_x	= Horizontal distance to top edge of rupture measured perpendicular to strike (km)	2.9	5.4	0.8	15
U	= Unspecified Faulting Flag (Boore et.al.)	0	0	0	0
F_{RV}	= Reverse-faulting factor: 0 for strike slip, normal, normal-oblique; 1 for reverse, reverse-oblique and thrust	0	0	1	1
F_{NM}	= Normal-faulting factor: 0 for strike slip, reverse, reverse-oblique and thrust; 1 for normal and normal-oblique	0	0	0	0
F_{HW}	= Hanging-wall factor: 1 for site on down-dip side of top of rupture; 0 otherwise, used in AS08 and CY08	0	0	1	1
Z_{TOR}	= Depth to top of coseismic rupture (km)	0	0	3	5
δ	= Average dip of rupture plane (degrees)	90	79	50	25
V_{S30}	= Average shear-wave velocity in top 30m of site profile	343.8	343.8	343.8	343.8
F_{Measured}		1	1	1	1
Z_{1.0}	= Depth to Shear Wave Velocity of 1.0 km/sec (km)	0.3	0.3	0.3	0.3
Z_{2.5}	= Depth to Shear Wave Velocity of 2.5 km/sec (km)	2.2	2.2	2.2	2.2
Site Class		D	D	D	D
W (km)	= Fault rupture width (km)	14.6	15.9	15.7	18.9
F_{AS}	= 0 for mainshock; 1 for aftershock	0	0	0	0
σ	=Standard Deviation	1	1	1	1

Deterministic Summary - Section 21.2.2 (Supplement 1)

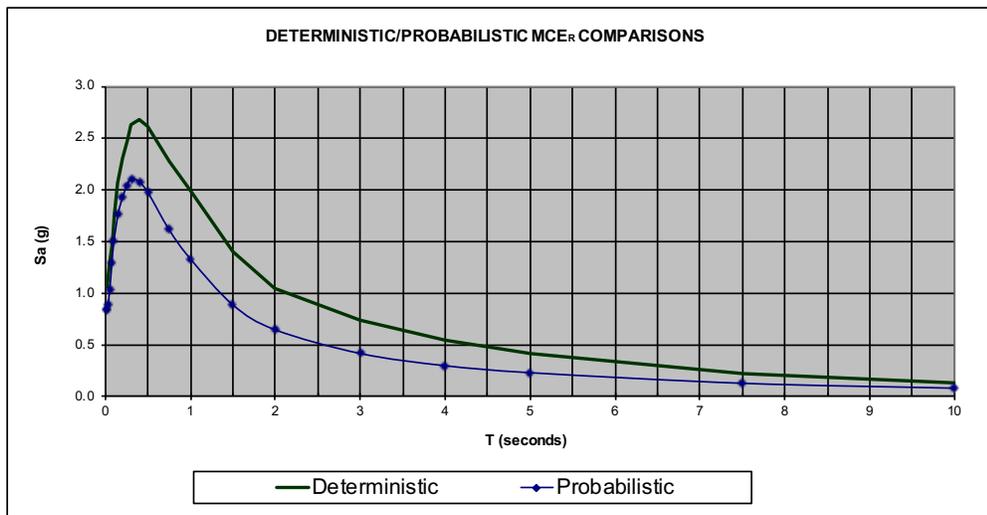
T	Whittier	Raymond	Elysian Park	Puente Hills	Maximum S _a (Average)	Corrected* S _a (per ASCE7-16)	Scaled S _a (Average)	Controlling Fault
0.010	0.91	0.70	0.90	0.96	0.96	1.05	1.05	Puente Hills
0.020	0.92	0.71	0.91	0.96	0.96	1.06	1.06	Puente Hills
0.030	0.94	0.74	0.94	0.99	0.99	1.09	1.09	Puente Hills
0.050	1.06	0.87	1.05	1.13	1.13	1.25	1.25	Puente Hills
0.075	1.26	1.02	1.27	1.37	1.37	1.50	1.50	Puente Hills
0.100	1.44	1.18	1.47	1.59	1.59	1.75	1.75	Puente Hills
0.150	1.73	1.44	1.77	1.87	1.87	2.06	2.06	Puente Hills
0.200	1.94	1.59	1.98	2.10	2.10	2.31	2.31	Puente Hills
0.250	2.12	1.69	2.15	2.24	2.24	2.49	2.49	Puente Hills
0.300	2.24	1.72	2.25	2.34	2.34	2.63	2.63	Puente Hills
0.400	2.31	1.66	2.21	2.33	2.33	2.68	2.68	Puente Hills
0.500	2.23	1.54	2.05	2.16	2.23	2.62	2.62	Whittier
0.750	1.84	1.19	1.58	1.65	1.84	2.28	2.28	Whittier
1.000	1.52	0.93	1.23	1.23	1.52	1.98	1.98	Whittier
1.500	1.06	0.59	0.75	0.74	1.06	1.41	1.41	Whittier
2.000	0.78	0.40	0.50	0.49	0.78	1.05	1.05	Whittier
3.000	0.52	0.24	0.28	0.25	0.52	0.73	0.73	Whittier
4.000	0.37	0.15	0.16	0.14	0.37	0.54	0.54	Whittier
5.000	0.28	0.10	0.11	0.10	0.28	0.42	0.42	Whittier
7.500	0.14	0.05	0.05	0.04	0.14	0.22	0.22	Whittier
10.000	0.09	0.03	0.03	0.02	0.09	0.13	0.13	Whittier
PGA	0.90	0.70	0.90	0.95	0.95		0.95	g
Max Sa=	2.68							
Fa=	1.00	Per ASCE7-16 21.2.2						
1.5XFa=	1.5							
Scaling Factor=	1.00							

* Correction is the adjustment for Maximum Rotated Value if Applicable

SITE SPECIFIC MCE_R - Compare Deterministic MCE_R Values (S_a) with Probabilistic MCE_R Values (S_a) per 21.2.3

Presented data are the average of Chiou & Youngs (2014), Abrahamson et. al. (2014), Boore et. al (2014) and Campbell & Bozorgnia (2014) NGA West-2 Relationships

Period	Deterministic	Probabilistic	Lower Value (Site Specific MCE _R)	Governing Method
T	MCE _R	MCE _R		
0.010	1.05	0.84	0.84	ProbabilisticGoverns
0.020	1.06	0.85	0.85	ProbabilisticGoverns
0.030	1.09	0.89	0.89	ProbabilisticGoverns
0.050	1.25	1.03	1.03	ProbabilisticGoverns
0.075	1.50	1.29	1.29	ProbabilisticGoverns
0.100	1.75	1.51	1.51	ProbabilisticGoverns
0.150	2.06	1.77	1.77	ProbabilisticGoverns
0.200	2.31	1.93	1.93	ProbabilisticGoverns
0.250	2.49	2.04	2.04	ProbabilisticGoverns
0.300	2.63	2.11	2.11	ProbabilisticGoverns
0.400	2.68	2.08	2.08	ProbabilisticGoverns
0.500	2.62	1.97	1.97	ProbabilisticGoverns
0.750	2.28	1.61	1.61	ProbabilisticGoverns
1.000	1.98	1.33	1.33	ProbabilisticGoverns
1.500	1.41	0.88	0.88	ProbabilisticGoverns
2.000	1.05	0.64	0.64	ProbabilisticGoverns
3.000	0.73	0.41	0.41	ProbabilisticGoverns
4.000	0.54	0.29	0.29	ProbabilisticGoverns
5.000	0.42	0.23	0.23	ProbabilisticGoverns
7.500	0.22	0.12	0.12	ProbabilisticGoverns
10.000	0.13	0.08	0.08	ProbabilisticGoverns



DESIGN RESPONSE SPECTRUM per Section 21.3

DESIGN ACCELERATION PARAMETERS per Section 21.4 (MRSA)

Period	$2/3 * MCE_R$	80% General Design Response Spectrum (per ASCE 7-16 23.3-1)	Design Response Spectrum	TXSa
0.01	0.56	0.47	0.56	
0.02	0.57	0.52	0.57	
0.03	0.59	0.57	0.59	
0.05	0.69	0.68	0.69	
0.08	0.86	0.80	0.86	
0.10	1.00	0.93	1.00	
0.15	1.18	1.05	1.18	
0.20	1.28	1.05	1.28	
0.25	1.36	1.05	1.36	
0.30	1.40	1.05	1.40	
0.40	1.38	1.05	1.38	
0.50	1.32	1.05	1.32	
0.75	1.08	1.05	1.08	
1.00	0.89	0.95	0.95	0.95
1.50	0.59	0.63	0.63	0.95
2.00	0.43	0.47	0.47	0.95
3.00	0.28	0.32	0.32	0.95
4.00	0.20	0.24	0.24	0.95
5.00	0.15	0.19	0.19	0.95
7.50	0.08	0.13	0.13	
10.00	0.05	0.08	0.08	

Highest value of S_a for any period exceeding 0.2 sec. = 1.40
 90% of Highest Value = 1.26
 80% of Mapped S_{DS} = 1.05
Maximum TXSa from $T=1s-5s$ = 0.95
 80% of Mapped S_{D1} = 0.64

S_{DS} =	1.26
S_{D1} =	0.95
T_s =	0.75

S_{MS} =	1.897
S_{M1} =	1.422

PGA Determination:

Site Coefficient F_{PGA} = 1.1

Mapped PGA_M = 0.85 Figure 22-7

PGA_M = 0.94 g

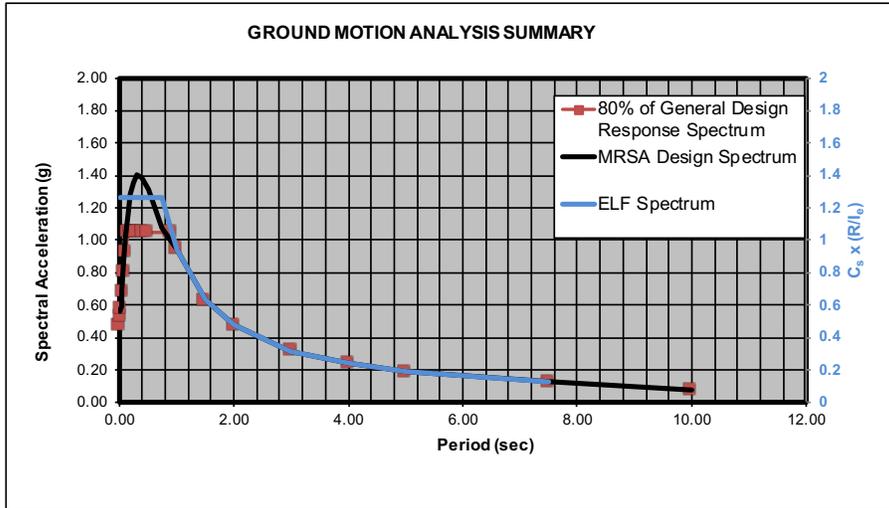
Deterministic PGA = 0.95 g

Probabilistic PGA = 0.86 g

Lesser of Deterministic/Probabilistic = 0.86 g

80% of PGA_M = 0.75 g

MCE_G PGA = 0.86 g



APPENDIX C

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REFERENCES

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EL MONTE UNION HIGH SCHOOL DISTRICT
Rosemead Adult Education and Transition Center
Addition/Modernization

SPECIAL
CONDITIONS

SPECIAL CONDITIONS

A TIME OF PERFORMANCE: The work shall be commenced on the date stated in the District's Notice to Proceed (which date will be not less than ten (10) consecutive calendar days from and after the date of the (Preliminary) Notice of Award and shall be completed within five hundred and forty-seven, (547) consecutive calendar days from and after the date stated in such notice to proceed, **and in accordance with the scheduled dates as specified below.** In addition, the District and Construction Manager will control ten (10) rain days and five (5) quiet/testing days outside of the five hundred and forty-seven, (547) contract days. The District will have ownership of these rain and quiet days. District and Contractor each hereby stipulate that the stated performance period is accepted as reasonable and that no other performance period shall be acceptable unless accepted in writing. (See **Section 8.1** of General Conditions.)

Work under this contract shall be scheduled and coordinated in compliance with the following:

- 1) The contractor acknowledges that it fully understands the Project work to be performed has been scheduled by the District for a specific time period. In addition, the Contractor acknowledges that it fully understands that scheduling has been established for this Project in order to promote the best usage of school facilities and to timely provide an appropriate learning environment for students to the fullest extent possible. With these understandings in mind, pursuant to **Section 14.1** of the General Conditions regarding the District's Right to Terminate Contract, it is acknowledged and understood by the Contractor that it is a substantial violation of the Contract for the Contractor to fail to provide all submittals in the time specified and identified. Furthermore, it is acknowledged and understood by the Contractor that it is a substantial violation of the Contract for the Contractor to fail to provide a full work crew or properly skilled workers with proper and sufficient materials and equipment from the first day of Project work scheduled as specified in the District's Notice to Proceed.

If the site will not be available after the Notice to Proceed date, Contractor shall utilize this time period for administrative tasks and initial mobilization and shall coordinate such activities with District.

B LIQUIDATED DAMAGES:

Liquidated Damages – Submittals: If the District does not receive technical submittals, contract, bonds, and certificates of insurance within the scheduled time period established in

Article 3 – Liquidated Damages of the General Conditions, the agreed liquidated damages is Five Thousand Dollars (\$5,000.00) per day for each calendar day the start date is delayed.

Liquidated Damages – Time of Completion: The Contractor shall forfeit and pay to the District the amount of per diem Liquidated Damages set forth in the Contract Agreement, for every day beyond the Contract Time, as adjusted, or Milestone, the Work is achieved. Any such Liquidated Damages are automatically and without notice of any kind forfeited by Contractor upon the accrual of each day of delay as established in **Section 8.4.**

- C. DOCUMENTS FURNISHED:** A digital copy of drawings and specifications to be furnished to Contractor free of charge. Additional copies of the drawings are the responsibility of the contractor.
- D. BONDS:** Contractor shall provide (i) a bid bond in the amount of ten (10%) of the contract price; (ii) a payment bond in the total amount of bid or as specified in the Information to Bidders; and (iii) a performance bond in the amount of one hundred percent (100%) of the contract price or as specified in the Information for Bidders.
- E. EXECUTED COPIES:** The number of executed copies of the Agreement, the Performance Bond, and the Payment Bond for Public Works required is **one(1)**.
- F. LICENSE CLASSIFICATION:** Each bidder shall be a licensed Contractor pursuant to the Business and Professions Code and shall be licensed in the following classification: GC with an **B license**.
- G. CONTRACTOR PROVIDED TEMPORARY FACILITIES FOR DISTRICT USE AND RESPONSIBLE FOR MOBILIZATION AND DE-MOBILIZATION ALL OF THE FOLLOWING AS A MINIMUM.**

1. **Field Office Trailer** – Contractor shall provide a Jobsite modern trailer expressly for the use of the Project Inspector, Construction Manager, and the District in accordance with Specification 01 50 00 Temporary Facilities and Controls. The trailer must be set with power, restrooms, and internet connection within (5) days from Notice to Proceed (NTP). The trailer shall be utilized by the CM, IOR and District for (547) calendar days from the date of Notice to Proceed.
2. **Dual Office Trailer – Minimum of 12’x56’ ft.**
3. Office Trailer to include (2) offices, consisting of a single office at each end of the trailer with a conference room in the center and restroom.
4. Trailer to be weather tight, newer built with white walls finishes, durable and high quality with lighting, electrical outlets, communications capabilities, heating, cooling, and ventilating equipment. VCT to be used for flooring, NO CARPET. Interior paneled walls to be white. **Trailer to be submitted to CM for approval prior to placing the order.**
5. Contractor to provide wireless and hardwired Wi-Fi and Wi-Fi connection to all electronic devices. Contractor shall ensure District, TELACU CM, DSA PI, and all other project parties are connected to the supplied Wi-Fi and wired network.
6. Location to be determined by the Project Manager / District.
7. Office Furniture – Contractor shall provide the following furnishings:
 - a) Three (3) Office Desks with drawers approximately 30”x60”
 - b) Three (3) Office Chairs with caster wheels and arm rests
 - c) Basyx – 633802 or equal
 - d) Best Choice Products – SKY1987 or equal
 - e) Four (4) 36”x18”x54” Steel Lateral Filing Cabinets with 3 drawers
 - f) Uline H-2169 or equal
 - g) (1)96”x48” Conference Table
 - h) Thirteen (13) Conference Chairs with casters and arm rests

- i) Staples Carder 24115D or equal
 - j) Three (3) Plan Tables
 - k) Flash Furniture Adjustable Drawing and Drafting Table NANJN2433 or equal
 - l) Provide and Install three (3) 4'x 8' Whiteboards with 3 sets of accessories, accessories to be markers, erasers, and liquid spray cleaner.
 - m) Multifunction Printer Xerox WC7830 or approved equal - 8.5"x11" and 11"x17" Color Printing, Scanning, and Copying Capabilities. Contractor to include set up of printing and scanning capabilities on CM, IOR and District computers
 - n) Contractor to provide maintenance and Ink Replacement throughout project duration
 - o) Contractor to provide paper – 8 ½" x 11" and 11"x17" as required for the project duration
 - p) 24 Lineal Ft of Shelving to be installed by Contractor Sparklett's Pure Water Dispenser or equal and Service or for project duration
 - q) Contractor to provide a 65" TV to be mounted by the GC in the CM's construction trailer and utilized for all construction meetings. TV is to be purchased as described here: - LG - 65" Class - LED - UK6090PUA Series - 2160p - Smart - 4K UHD TV or approved equal and provide webcam compatible with TV for Video Conference Calls. Contractor will need to provide CM/District with the ability to connect virtual meetings.
 - r) Contractor to provide webcam compatible with TV for Video Conference Calls.
 - s) Contractor to provide the ability to connect Teams/Zoom meetings on this TV/webcam set up inside the conference room to have virtual OAC meetings.
 - t) One (1) new Staples 15 sheet Cross Cut paper shredder
 - u) Contractor to provide floor mat's at each trailer entrance
 - v) All utilities to be connected and maintained by Contractor in accordance with 01 50 00 Temporary Facilities and Controls.
8. Contractor shall provide internet access with wireless router located in office trailer for Project Inspector, TELACU CM and District use for the duration of the project. Interruption of internet capability shall be for no more than 4 hours. District will be reimbursed for lost work and productivity due to loss of internet capabilities to their trailer.
9. Contractor shall provide any and all permits, fees, and property insurance required.
10. Cleaning - Contractor shall provide basic weekly cleaning service for trailer including floors, windows, restroom, etc.
11. Dust Control – Contractor shall take precautions to limit construction dust by watering soils prior to performing earthwork activities.
12. Contractor shall provide and maintain project fence and windscreen.
13. There shall be **no limit of fence moves**, nor any cost to the District to move the fence as needed or requested.

Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for the construction purposes. Connection to the Construction Managers field office trailer. All cost associated for the relocation of "Temporary Facilities and Controls" as required to complete scope of work at temporary trailer laydown area to be provided by the Contractor. Contractor to provide and maintain a VIP Single Flushing restroom which will be separate from the construction trailer. Contractor shall provide temporary facilities for all work force as per OSHA standards.

H SAFETY/SECURITY: Each Contractor shall complete Job Site Orientation with the Construction Manager prior to starting contracted work. Site safety and security is the responsibility of the Contractor per **Article 10.1**, Protection of Persons and Property until achievement of Substantial Completion. The Contractor is to conduct safety meetings once per week with the Contractor's employees, subcontractors and any tiers thereof. **Minutes of the safety meetings are to be submitted to the Construction Manager ("CM") on that date's Daily Report, prior to approval of monthly pay requests.** In addition, the General Contractor must provide the CM and Inspector of Record with a copy of its safety plan, SWPPP Plan, MSDS sheets/binder, and copies of safety plans.

The General Contractor shall be responsible for all security measures and pay for same for all their stored materials, tools, equipment and all ongoing installations until the project is turned over to the.

The General Contractor shall furnish, install, maintain and monitor a closed-circuit television (CCTV) system with an adequate quantity of cameras in order to monitor security for the entire construction and material storage areas. A minimum of four cameras per site are to be provided.

Be advised that the District security team will not police the Contractor's material and equipment.

The General Contractor is required to keep the school site and the construction zone in a clean, safe and secure condition.

I CLOSEOUT DOCUMENTATION: General Contractor will coordinate with Construction Manager and all General Contractors to provide the following closeout documentation in addition to those referenced in the General Conditions and Project Specifications. General Contractor will assemble and submit closeout documentation from all General Contractors through Construction manager as outlined below:

- (3) Complete sets of all applicable warranties; to be originals with wet signatures.
- (4) USB Memory Drives containing all approved submittals; to be scanned in color.
- (3) Complete sets of operation and maintenance manuals; to be properly bound, itemized/divided.

AS-BUILT DRAWINGS: General Contractor shall maintain a clean, undamaged set of contract drawings and shop drawings, in addition to maintaining one complete set of record drawings in the Construction Manager's/Inspector of Record's office. Prior to approval of monthly pay requests, Construction Manager, the Inspector of Record, and the Architect will verify the as-built drawings and updating of project record drawings in the CM trailer.

The General Contractor shall be monetarily responsible for reproduction of the final record set of drawings (as-builts) for all category scopes of work at the conclusion of the project. The District reserves the right to procure this work and forward a deductive change order to the General Contractor for all applicable costs and provide Closeout Documents as specified above.

- (1) Complete sets of colored (red-lined) as-built drawings (inclusive of ALL category scopes of work).
- (3) As-Built Drawing USB Memory Drives (inclusive of ALL category scopes of work); to be scanned in color.

J WARRANTY: In addition to all applicable manufacturers' warranties required per the Technical Specifications, all General Contractors as well as all subcontractors shall utilize the attached

workmanship/installation warranty form and deliver a completed warranty form for their portion of the work to the CM prior to final payment.

K DEFINITIONS: General Conditions Article 1 Definitions are hereby supplemented as follows:

- 1) Substantial Completion: The date upon which all items of work have been provided and are considered complete by the Contractor. The Inspector of Record and the Construction Manager shall also concur that all items of work have been provided. Or, if mutually agreed between the District and the Contractor, the date upon which the District takes occupancy of the facility. Partial occupancy per Article 2.5.1 shall not be considered Occupancy for the purpose of establishing the date of Substantial Completion. The District shall not be obligated to Occupy the facility if all items of work have not been completed. Alternatively, the date upon which the District accepts the work shall be considered the date of substantial completion.
- 2) Final Completion: The date when all punch list items have been cleared by the Inspector of Record and all other contractual requirements, including but not limited to, all testing, inspections, reports, record documents, site work, software, programming, and any incomplete Change Order documents have been completed to the satisfaction of the Construction Manager, District and Architect in accordance with **Article 9.9.2**.
- 3) Construction Period: Beginning on and including the Notice to Proceed date and ending on and including the Final Completion Date as indicated in the original Contract Schedule as amended from time to time by appropriate Change Order

L INSPECTIONS: The Contractor shall be responsible to request inspection of any and all aspects of work completed as per plans and/or deemed necessary per the Construction Manager. The Construction Manager shall determine the maximum number of crews that can safely work on the job for the purposes of determining whether any back charges would be due. The Contractor is obligated to plan any work that requires continuous inspection in such a way that the total duration of that activity is reduced to the minimum in an effort to restrain the cost of continuous inspection to the Owner.

M UTILITY CONNECTION REQUIREMENTS: General Conditions **Article 9.9.2** is hereby supplemented as follows: In addition to any punch lists and inspections performed by the Owner, Architect or Construction Manager, the Contractor shall obtain and complete a punch list for any Work within the public right of way or work performed on public utilities from each jurisdiction's inspector. Corrective work shall be completed according to the instructions of each jurisdiction's inspector whether or not those instructions are consistent with the original approved contract documents. The Contractor shall cause all corrective work to be completed, to the satisfaction of each inspector, at no additional charge to the Owner.

N MISCELLANEOUS PROVISIONS:

All trades excavating or working in existing landscaped areas shall be responsible for repairing any damage to irrigation and plants. Plants shall be avoided and protected.

No material storage in fire lane. Vehicles/machinery parked in fire lane must have spotters assigned to watch and secure the vehicle. Failure to follow this requirement will force the towing of the vehicle.

No personal vehicles onsite; all personal vehicles (including General Contractor and tiered subcontractor vehicles) must park offsite. Failure to follow this requirement will force the towing of the vehicle.

Contractor shall at all times while on District premises exercise caution and maintain a vehicle speed of no more than five (5) MPH, and obey all posted traffic signs and signals.

All areas of work may not be available at the same time and may require more than one move-on by the General Contractor and tiered subcontractors to complete an item of work.

All General Contractors will supply a CPM project schedule outlining the planned approach to complete the project within the time period stated in the contract. This CPM schedule will be updated by the General Contractors and submitted to the CM every month prior to approval of payment. The CM reserves the right to update, modify, revise and otherwise change the project schedule to accommodate the best interests of the District at any time during course of construction. Although the CM will make every effort to accommodate all Prime and Subcontractors in a fair and productive manner, no construction schedule is without challenges. Prime and Subcontractors shall conform to these schedule revisions immediately, cooperatively and without any additional cost to the District or CM. Likewise, all Prime and Subcontractors shall provide regular and timely schedule input and provide adequate resources required to meet schedule requirements in a cooperative and proactive manner. In as much as possible, CM shall accommodate this Prime and Subcontractor input as far as it works for the Owner and all other Prime and Subcontractors so that the CM schedule will ultimately prevail.

- O. EXISTING CONDITIONS:** It is the responsibility of all General Contractors to provide all necessary protection of the existing finishes, furniture, structure, and general site conditions. In the event that any of the existing conditions are damaged or removed during the course of work, the contractor is responsible to restore or replace the impacted area/item to its preconstruction condition or rating. This includes but is not limited to; t- grid, ceiling tile, walls, floors, furniture, fire rated walls, structural members, curbs, roofing systems, lighting, concrete, asphalt, landscape, etc.
- P. TEMPORARY FACILITIES and CONTROLS:** Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for the construction purposes. Connection to the Construction Managers field office trailer. All cost associated for the relocation of "Temporary Facilities and Controls" as required to complete scope of work at temporary trailer laydown area to be provided by the Contractor. Provide and maintain temporary a (VIP) toilets facilities to the Construction Managers trailer. Contractor shall provide temporary facilities for all work force as per OSHA standards.
- Q. HOUSE KEEPING:** It is the Contractor responsibility to maintain a clean site and work environment. In the event that the site housekeeping is unsatisfactory to the District or CM, it is the responsibility to correct the issue. The CM and District reserve the right to have the Contractor provide two laborers perform general housekeeping for a minimum two hours a week, at no additional cost, if the Contractor does not correct the issue within one week of a formal notice.
- R. CONSTRUCTION SOFTWARE:** The CONSTRUCTION MANAGER will provide access to a web-based Project Document Control system (Procore) that will be utilized by the DISTRICT, CONTRACTOR, CONSTRUCTION MANAGER and ARCHITECT for the purposes of transmitting and filing all project documents. The CONTRACTOR shall be required to familiarize themselves with Procore Construction Software and free training sessions will be available prior to the start of construction for the purposes of transmission of Meeting Minutes, RFIs, Submittals, and Daily Reports. CONSTRUCTION MANAGER to coordinate online training session(s) through Procore for use and instruction. CONTRACTOR to ensure digital upload of PDF files are clear and legible. Any PCOs may be provided via email to the CONSTRUCTION MANAGER with the ARCHITECT carbon copied. At the close of each working day, the CONTRACTOR shall submit a daily report to the CONSTRUCTION

MANAGER documenting the name of all subcontractors, the quantity of workers for each subcontractor, the hours worked, the work performed, and any operating equipment Procure will be set up and run as individual projects for DSA tracking and Project Documentation purposes.

S. PRE-CONSTRUCTION/PRE-INSTALLATION MEETINGS: All General Contractors will be required to participate in Pre-Construction/Preinstallation Meetings as scheduled by the Construction Manager. The intent of these meetings is to coordinate between the various General Contractors and their subcontractors to avoid conflict between trades prior to work being installed. These meetings should have in attendance at minimum the project foreman and PM, or other authority capable of making decisions with potential financial impact. Attendance at these is mandatory.

- 1) All contractors and subcontractors are responsible for their own means of communication including, but not limited to, telephone, cell phone, fax machine. At no time are the Owner's communication systems to be used.
- 2) All General Contractors and sub-contractors' personal vehicles, as well as work vehicles and equipment, are the responsibility of the individual and/or company. Any damage that occurs to the vehicles and/or equipment while on the Owner's property is not the responsibility of the Owner and, therefore, any said claims for damages will not be acknowledged.
- 3) Only personnel working on the contract will be allowed to enter the site. No transient vendors, portable food service entities or others will be allowed to enter the campus. Non-compliance with any of the above-stated rules of conduct by any contractor or subcontractor may be sufficient grounds for immediate removal from the job site and termination of the contract. Subcontractor input as far as it works for the Owner and all other Prime and Subcontractors so that the CM schedule will ultimately prevail.

T. EXISTING CONDITIONS: It is the responsibility of all General Contractors to provide all necessary protection of the existing finishes, furniture, structure, and general site conditions. In the event that any of the existing conditions are damaged or removed during the course of work, the contractor is responsible to restore or replace the impacted area/item to its preconstruction condition or rating. This includes but is not limited to; t- grid, ceiling tile, walls, floors, furniture, fire rated walls, structural members, curbs, roofing systems, lighting, concrete, asphalt, landscape, etc.

U. HOUSE KEEPING: It is the Contractor responsibility to maintain a clean site and work environment. In the event that the site housekeeping is unsatisfactory to the District or CM, it is the responsibility to correct the issue. The CM and District reserve the right to have the Contractor provide two laborers perform general housekeeping for a minimum two hours a week, at no additional cost, if the Contractor does not correct the issue within one week of a formal notice.

V. PRE-CONSTRUCTION/PRE-INSTALLATION MEETINGS: All General Contractors will be required to participate in Pre-Construction/Preinstallation Meetings as scheduled by the Construction Manager. The intent of these meetings is to coordinate between the various General Contractors and their subcontractors to avoid conflict between trades prior to work being installed. These meetings should have in attendance at minimum the project foreman and PM, or other authority capable of making decisions with potential financial impact. Attendance at these is mandatory.

- 1) All contractors and subcontractors are responsible for their own means of communication including, but not limited to, telephone, cell phone, fax machine. At no time are the Owner's

communication systems to be used.

- 2) All General Contractors and sub-contractors' personal vehicles, as well as work vehicles and equipment, are the responsibility of the individual and/or company. Any damage that occurs to the vehicles and/or equipment while on the Owner's property is not the responsibility of the Owner and, therefore, any said claims for damages will not be acknowledged.
- 3) Only personnel working on the contract will be allowed to enter the site. No transient vendors, portable food service entities or others will be allowed to enter the campus.
- 4) Non-compliance with any of the above-stated rules of conduct by any contractor or subcontractor may be sufficient grounds for immediate removal from the job site and termination of the contract.

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SUPPLEMENTARY SPECIAL CONDITIONS

A. ADMINISTRATION OF THE CONTRACT:

The Construction Manager will assist the District with administration of the Contract as hereinafter described.

The Construction Manager will be a District representative during construction and until final payment approval to the Contractor. The Construction Manager will advise and consult with the District. The Construction Manager is not authorized to amend any of the Contract Documents or order changes in the Work which require a Change Order. The District must approve all Change Orders to the Contract. All communications from the Contractor to the District or the Architect shall be directed through the Construction Manager. All communications to the Contractor from the District or the Architect shall be directed through the Construction Manager unless otherwise directed by the Construction Manager.

The Construction Manager shall at all times have access to the Work wherever it is in preparation and progress. The Contractor shall provide facilities for such access so that the Construction Manager may perform the Construction Manager's functions under the Contract Documents.

The Construction Manager as well as the Architect shall have the authority to reject Work that does not conform to the Contract Documents, and to require special inspection or testing. Whenever, in the Construction Manager's opinion, it is considered necessary or advisable for the implementation of the intent of the Contract Documents, the Construction Manager will have authority to require special inspection or testing of the Work whether or not such Work is then fabricated, installed or completed. The Construction Manager shall have the authority to suspend or stop the Work, in whole or in part, if the Contractor fails to correct defective Work as required or fails to carry out the Work or to supply a sufficient amount of skilled labor or suitable materials or equipment in such a way that assures that the Work will be completed in accordance with the Contract Documents. The Construction Manager shall also have the right to suspend the Work, in whole or in part, for such periods as Construction Manager may deem necessary to coordinate the Work with the work of the District or separate contractors or for conditions considered unfavorable for the suitable prosecution of the Work. The Construction Manager shall give the Contractor notice of any such suspension and the Contractor shall immediately comply with the orders of the Construction Manager and shall not resume the Work until so ordered by the Construction Manager.

B. GENERAL CONTRACTOR'S ON-SITE MINIMUM STAFFING:

General Contractor to provide as a minimum on-site staffing per each 8hrs. work day to be as follows:

1. (1) Full time Project Manager
2. (1) Full time Project Engineer
3. (1) Full time Superintendent

C. DISTRICT'S RIGHT TO CARRY OUT THE WORK

If the General Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, including, but not limited to:

1. Failure to supply adequate workers on the entire Project or any part thereof;
2. Failure to supply a sufficient quantity of materials;
3. Failure to perform any provision of this Contract;
4. Failure to comply with safety requirements, or due to General Contractor is creation of an unsafe condition;
5. In the case of bona fide emergency;
6. Failure to order materials in a timely manner;

7. Failure to prepare deferred-approval items or shop drawings in a timely manner;
8. Failure to comply with General Contractor's schedule which would result in a delay to the critical path;
9. Failure to comply with the Subletting and Subcontracting Fair Practices, Public Contract Code section 4100, et seq.

If the General Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails (within a forty-eight (48) period after receipt of written notice or a shorter time period expressly stated in the written notice from the District in an emergency situation) to commence and continue correction of such default with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have, including those set forth in Article 4.17.5 after providing forty-eight (48) hour written notice to General Contractor and Surety. If during this forty-eight (48) hour period, Surety personally delivers notice to District that it intends to perform such work, District shall allow Surety seven (7) days to perform. In such case, the General Contractor will be invoiced the cost of correcting such deficiencies, including compensation for additional services and expenses made necessary by such default, or neglect. The invoice amount shall be deducted from the next payment due the General Contractor. If payments then or thereafter due the General Contractor are not sufficient to cover such amounts, the General Contractor shall pay the difference to the District.

D. CLEANING UP

1. General Contractor at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment.
2. General Contractor shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a lawful manner. Should trash and debris become an identified hazard to students and staff, the General Contractor, after written notice from the Construction Manager shall immediately remove such a hazard. Upon failure to remove said hazard within 48 hours of written notice, The District will remove said hazard and issue a deductive change order to the General Contractor's contract for the cost to perform such work.
3. General Contractor shall remove rubbish and debris resulting from the Work on a daily basis. General Contractor shall maintain the structures and Site in a clean and orderly condition at all times until acceptance of the Project by the District.
4. General Contractor shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day.

E. RULES OF DOCUMENT INTERPRETATION

In the event of conflict within the drawings, the following rules shall apply:

- (a) General Notes, when identified as such, shall be incorporated into other portions of Drawings.
- (b) Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.
- (c) Larger scale drawings shall take precedence over smaller scale drawings.
- (d) At no time shall the General Contractor base construction on scaled drawings. Specifications shall govern as to materials, workmanship, and installation procedures.

If General Contractor observes that drawings and specifications are in conflict, General Contractor shall, within five (5) days, notify the Architect or Construction Manager in writing for the purposes of obtaining an interpretation of the Contract Documents.

In the case of conflict or inconsistencies, the order of precedence shall be as follows:

- (a) General Conditions take precedence over Drawings and Specifications.
- (b) Special Conditions take precedence over General Conditions.
- (c) The Agreement shall take precedent over the Special Conditions.
- (d) In the case of disagreement or conflict between or within standards, specifications, and drawings, the more stringent, higher quality, and greater quantity of Work shall apply.

F. RULES OF CONDUCT

Each contractor, subcontractor, architect, engineer or consultant, when performing work on the project, shall adhere to the following rules of conduct:

1. Professional and courteous conduct is expected and will be displayed at all times.
2. Interaction with students, staff, and/or other visitors is prohibited with the exception of designated administrators.
3. The use of profanity and/or disparaging language will not be tolerated and will result in removal from the site.
4. All contractors and subcontractors will be issued a badge/sticker by the Owner or designee, as an individual means of identification. The badge/sticker is to be worn at all times while on the Owner's property. The badge/sticker will be visibly noticeable and located on the front of the individual's shirt. All badges/stickers are required to be returned to the Owner or designee at the completion of the project as part of the final pay application requirements.
5. All contractors and subcontractors:
 1. Shall remain in the immediate vicinity of his/her work and will not stray to other areas of the property that do not involve their company's scope of work. All restroom facilities, including student and staff, are not to be used.
 2. Vehicles must be parked each day in the designated area prior to the start of the school day and removed after the end of the school day. If for some unforeseen reason a vehicle needs to be removed during school hours, the vehicle shall have lights and flashers engaged, and a "spotter," provided by the contractor and/or subcontractor, leading the vehicle off of the Owner's property. At no time will the vehicle exceed 5 mph. Contractor shall obey all posted traffic signs as well as signal lights.
 3. General Contractor shall provide and coordinate with the District's Construction Manager all traffic and pedestrian control for Contractor's own operations, including that of suppliers. Any special permits for this requirement will be the contractor's responsibility.
 4. General Contractor shall maintain minimum of five-man hours per week for site cleanup for the duration of the project.
6. The Owner's property is a drug-free workplace. This policy shall be strictly enforced.
7. Alcoholic beverages are prohibited from being brought on or consumed on any portion of the Owner's property.
8. The use of any tobacco products on the Owner's property is strictly prohibited.
9. Any lewd, obscene or otherwise indecent acts, words, or behavior by any contractor or subcontractor shall not be tolerated.
10. All contractors and subcontractors shall conform to a dress code whereby:
 1. No clothing that contains violent, suggestive derogatory, obscene, or racially based material may be worn. This interpretation will be made by the Owner or designee.

2. Garments, accessories or personal grooming artifacts with slogans, graphics, or pictures promoting drugs, alcohol, tobacco, or any other controlled substances that are prohibited to minors will not be allowed.
3. Tank top/mid-drift shirts and shorts of any kind are not allowed while on the Owner's property.

All contractors and subcontractors are responsible for their own means of communication including, but not limited to, telephone, cell phone, fax machine. At no time are the Owner's communication systems to be used.

All contractors and subcontractors' personal vehicles, as well as work vehicles and equipment, are the responsibility of the individual and/or company. Any damage that occurs to the vehicles and/or equipment while on the Owner's property is not the responsibility of the Owner and, therefore, any said claims for damages will not be acknowledged.

Only personnel working on the contract will be allowed to enter the site. No transient vendors, portable food service entities or others will be allowed to enter the campuses.

Non-compliance with any of the above-stated rules of conduct by any contractor or subcontractor may be sufficient grounds for immediate removal from the job site and termination of the contract.

G. SAFETY BARRIERS AND SAFEGUARDS

1. General Contractor shall erect and maintain a 6' temporary construction fence around each building during construction as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.
2. General Contractors shall also as necessary relocate such safety barriers to maintain safe path of travel for staff and students throughout the course of construction.
3. General Contractors shall also provide maps showing such relocations and timing of them. Upon Written notice of deficiencies in safety barriers, General Contractors shall immediately remedy such a hazard. The District shall have the right to remedy such a hazard within 48 hours of written notice to the Contractor and forwarding a deductive change order for the cost of the remedy.
4. The General Contractor shall be responsible for all security measures and pay for same for all their stored materials, tools, equipment and all ongoing installations until the project is turned over to the District. Be advised that the District security team will not police the Contractor's material and equipment.
5. The General Contractor shall furnish, install, maintain and monitor a closed-circuit television (CCTV) system with an adequate quantity of cameras in order to monitor security for the entire construction and material storage areas. A minimum of four cameras per site are to be provided

H. TEMPORARY FACILITIES and CONTROLS

1. Provide and pay for all electrical power, lighting, water, heating and cooling, and ventilation required for the construction purposes.
2. Connection to the Construction Managers field office trailer. All cost associated for the relocation of "Temporary Facilities and Controls" as required to complete scope of work at temporary trailer laydown area to be provided by the Contractor.
3. Provide and maintain temporary a (VIP) toilets facilities to the Construction Managers trailer. Contractor shall provide temporary facilities for all work force as per OSHA standards.
4. Provide barriers to prevent unauthorized entry to all construction areas, to prevent access to areas

that could be hazardous to workers or public and to protect existing facilities and adjacent properties from damages from construction operations.

I. OWNER TRAINING SPECIFICATIONS

It is the responsibility of the contractor to provide training to the owner and site personnel on all new equipment or systems installed during the course of the project. The contractor will provide a 1-hour training session covering the maintenance and operations of the specified equipment or system.

The contractor will provide the CM with a training schedule at least ten (10) business days prior to the first planned training. The owner has the right to accept or reschedule these trainings at their discretion. The Contractor will provide two hard copies of the Operations and Maintenance manuals. The O&M manuals will be turned over to the CM with the training schedule. Videos of the trainings will be taken and submitted to the District by the associated General Contractor.

END OF SECT

CONTINUITY OF WORK AGREEMENT
BY AND BETWEEN
EL MONTE UNION HIGH SCHOOL DISTRICT
AND
LOS ANGELES AND ORANGE COUNTIES
BUILDING AND CONSTRUCTION TRADES COUNCIL
AND THE SIGNATORY CRAFT COUNCILS AND UNIONS

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EL MONTE UNION HIGH SCHOOL DISTRICT
CONTINUITY OF WORK AGREEMENT
FOR MODERNIZATION WORK AND NEW CONSTRUCTION

This Continuity of Work Agreement (hereinafter, "Agreement") is entered into this 12th day of June, 2024 by and between the Board of Trustees of the El Monte Union High School District, and its successors or assigns, (hereinafter the "District"), the Los Angeles/Orange Counties Building and Construction Trades Council (hereinafter the "Council"), and the signatory Craft Councils and Unions signing this Agreement (hereinafter together with the Council, collectively, the "Union" or "Unions"). This Agreement establishes the labor relations Policies and Procedures for the District and for the craft employees represented by the Unions engaged in the District's Improvement Projects funded through and resulting from the passage of Measure "HS". The District, Council and Unions are hereinafter referred to herein, as the context may require, as "Party" or "Parties."

It is understood by the Parties to this Agreement that if this Agreement is acceptable to the District, it will become the policy of the District for the Project Work to be contracted exclusively to Contractors who agree to execute and be bound by the terms of this Agreement, directly or through the Letter of Assent (a form of which is attached as "Attachment A"), and to require each of its subcontractors, of whatever tier, to become bound. The District shall include, directly or by incorporation by reference, the requirements of this Agreement in the advertisement of and/or specifications for each and every contract for Project Work to be awarded by the District.

It is further understood that the District shall actively administer and enforce the obligations of this Agreement to ensure that the benefits envisioned from it flow to all signatory Parties, the Contractors and crafts persons working under it, and the residents and students of the District. The District shall therefore designate a "Project Labor Coordinator," either from its own staff or an independent contractor acting on behalf of the District, to monitor compliance with this Agreement; assist, as the authorized representative of the District, in developing and implementing the programs referenced herein, all of which are critical to fulfilling the intent and purposes of the Parties and this Agreement; and to otherwise implement and administer this Agreement. For such purposes, each Contractor recognizes and appoints the Project Labor Coordinator, its successors or assigns, as its agent; and together with District and the Unions, the Project Labor Coordinator shall be considered a "negotiating party" of this Agreement.

The term "Apprentice" as used in this Agreement shall mean those employees registered and participating in Joint Labor/Management Apprenticeship Programs approved by the Division of Apprenticeship Standards, Department of Industrial Relations of the State of California.

The term "Contractor" as used in this Agreement includes any individual, firm, partnership, or corporation, or combination thereof, including joint ventures, which as an independent Contractor has entered into a contract with the District with respect to the Project Work, or with another Contractor as a subcontractor of whatever tier utilized by such Contractors for Project Work.

The term “Joint Labor/Management Apprenticeship Program” as used in this Agreement means a joint Union and Contractor administered apprenticeship program certified by the Division of Apprenticeship Standards, Department of Industrial Relations of the State of California.

The term “Letter of Assent” as used in this Agreement means the document that each Contractor (of any tier) must sign and submit to the Project Labor Coordinator and the Council, before beginning any Project Work, which formally binds them to adherence to all the forms, requirements and conditions of this Agreement, in the form attached hereto as Attachment A.

The term “Modernization” as used in this Agreement means the modification of a permanent structure that is at least 25 years old, or in the case of a portable classroom, that is at least 20 years old, that will enhance the ability of the structure to achieve educational purposes, as is defined in Education Code section 17070.15.

The term “Project” or “Project Work” as used in this Agreement, which is more specifically defined and set forth in Section 2.2, means the District’s new construction projects or modernization projects, funded through and resulting from the passage of Measure “HS.” Project Work shall not include “Maintenance Work,” which means all of the following: routine, recurring, and usual work for the preservation or protection of any District owned or operated facility for its intended purpose; minor repainting; or landscape maintenance, including mowing, watering, trimming, pruning, planting, replacement of plants, and servicing of irrigation and sprinkler systems.

The term “Schedule A Agreements” as used in this Agreement means the local collective bargaining agreements of the signatory Unions having jurisdiction over the Project Work and which have signed this Agreement.

The term “Subscription Agreement” means the contract between a Contractor and a Union’s Labor/Management Trust Fund(s) that allows the Contractor to make the appropriate fringe benefit contributions in accordance with the terms of Schedule A Agreements.

The Union and all Contractors agree to abide by the terms and conditions of this Agreement and agree that this Agreement represents the complete understanding of the Parties. No Contractor is or will be required to sign or otherwise become a party to any other collective bargaining agreement with a signatory Union as a condition of performing work within the scope of this Agreement.

The Parties agree that this Agreement will be made available to, and will fully apply to, any successful bidder for Project Work, without regard to whether that successful bidder performs work at other sites on either a union or non-union basis. This Agreement shall not apply to any work of any Contractor other than that on Project Work specifically covered by this Agreement in “Attachment F – List of Covered Projects.”

The use of masculine or feminine gender or titles in this Agreement should be construed as including both genders and not as gender limitations unless the Agreement clearly requires a

different construction. Further, the use of Article titles and/or Section headings are for information only, and carry no legal significance.

ARTICLE 1 INTENT AND PURPOSE

Section 1.1 Background The District wishes to utilize the most modern, efficient and effective procedures for construction, including assurances of a sufficient supply of skilled craft persons, and the elimination of disruptions or interference with Project Work, and to this end, adopts this Agreement in the best interests of the students, parents, District staff, and the taxpayers of the District to meet the District's goal that the Project work be completed on time and within budget.

Section 1.2 Identification and Retention of Skilled Labor and Employment of District Residents Project Work scheduled to be performed will require large numbers of craft personnel and other supporting workers. It is therefore the explicit understanding and intention of the Parties to this Agreement to use the opportunities provided by the extensive amount of work to be covered by this Agreement to identify and promote, through cooperative efforts, programs and procedures (which may include, for example, programs to prepare persons for entrance into formal apprenticeship programs, or outreach programs to the community describing opportunities available as a result of the Project Work), the interest and involvement of District residents in the construction industry; assist them in entering the construction trades, and through utilization of the joint labor/management sponsored apprenticeship programs, provide training opportunities for those District residents and other individuals wishing to pursue a career in construction. Further, with assistance of the Project Labor Coordinator, the District, the Contractors, the Unions and their affiliated regional and national organizations, will work jointly to promptly develop and implement procedures for the identification of craft needs, the scheduling of work to facilitate the utilization of available craft workers, and the securing of services of craft workers in sufficient numbers to meet the high demands of the Project Work to be undertaken.

Section 1.3 Encouragement of Small Local Business The Project Work will provide many opportunities for local small business enterprises to participate as Contractors or suppliers, and the Parties therefore agree that they will cooperate with all efforts of the District, the Project Labor Coordinator, and other organizations retained by the District for the purpose, to encourage and assist the participation of local small businesses in Project Work. Each Party agrees that it shall employ demonstrable efforts to encourage utilization in an effort to achieve such goals. This may include, for example, participation in outreach programs, education and assistance to businesses not familiar with working on a project of this scope, and the encouragement of local residents to participate in Project Work through programs and procedures jointly developed to prepare and encourage such local residents for apprenticeship programs and formal employment on the Project Work through the referral programs sponsored and/or supported by the Parties to this Agreement. Further, the Parties shall ensure that the provisions of this Agreement do not inadvertently establish impediments to participation of such small local businesses and residents of the District.

Section 1.4 Project Cooperation The Parties recognize that the construction to take place under this Agreement involves unique and special circumstances which dictate the need for the Parties to develop specific procedures to promote high quality, rapid and uninterrupted construction methods and practices. The smooth operation and successful and timely completion of the Project Work is vitally important to the parents and the students of the District. The Parties therefore agree that maximum cooperation among all Parties involved is required; and that with construction work of this magnitude, with multiple Contractors and crafts performing work on multiple sites of over an extended period of time, it is essential that all Parties work in a spirit of harmony and cooperation, and with an overriding commitment to maintain the continuity of Project Work. Further, the Parties recognize that an Act of God or on Act of War could require the District to partially or fully suspend Project Work. The Parties shall fully cooperate with any request by the District to redirect their equipment, skills and expertise to support the District's efforts necessitated by such events.

Section 1.5 Workers' Compensation Carve-out Further, the Parties recognize the potential which the Project Work may provide for the implementation of a cost-effective workers' compensation system, as permitted by revised California Labor Code Section 3201.5, and it is understood that the District is in an ongoing review of the value of such a program. Should the District request, the Union Parties agree to meet and negotiate in good faith with representatives of the District for the development, and subsequent implementation, of an effective program involving improved and revised dispute resolution and medical care procedures for the delivery of workers' compensation benefits and medical coverage as permitted by the California Labor Code.

Section 1.6 Peaceful Resolution of All Disputes In recognition of the special needs of the Project Work and to maintain a spirit of harmony, labor-management peace and stability during the term of this Project Labor Agreement, the Parties agree to establish effective and binding methods for the settlement of all misunderstandings, disputes and grievances; and in recognition of such methods and procedures, the Unions agree not to engage in any strike, slowdowns or interruptions or disruption of Project Work, and the Contractors agree not to engage in any lockout.

Section 1.7 Binding Agreement on Parties and Inclusion of Local Residents and Business By executing this Agreement, the District, Council, Unions and Contractors agree to be bound by each and all of the provisions of this Agreement, and pledge that they will work together to adopt, develop and implement processes and procedures which are inclusive of Local Residents and the residents and businesses of the District.

ARTICLE 2 SCOPE OF THE AGREEMENT

Section 2.1 General This Agreement shall apply and is limited to all of the District's Project Work, as specified in Section 2.2 of this Article, performed by those Contractor(s) of whatever tier that have contracts awarded for such work, for the development of the District's facilities which, jointly, constitute the Project, and have been designated by the District for new construction or modernization.

Section 2.2 Specific The Project Work covered by this Agreement is defined and limited to:

- (a) Those Projects listed on Attachment F; and
- (b) The work to be bid out is to be paid for using Measure “HS” bond proceeds; and
- (c) All repair, renovation, rehabilitation, upgrade and improvement work, as well as new construction or modernization, pursuant to prime multi-trade contracts that exceed \$500,000.00 and all subcontracts arising from these prime contracts; and
- (d) All repair, renovation, rehabilitation, upgrade and improvement work, as well as new construction or modernization, pursuant to specialty contracts that exceed \$150,000.00, and all subcontracts arising from these specialty contracts; and
- (e) It is understood by the Parties that the District may at any time, and at its sole discretion, add additional projects under this Agreement not set forth in subsections (a) and (b), above.

Notwithstanding anything contained herein, this Agreement shall in no way limit the District’s right to terminate, modify or rescind an Agreement for Project Work in its sole and absolute discretion. The District has the sole discretion and right to combine, consolidate, cancel, terminate or take other action regarding an agreement for Project Work as the District deems necessary or desirable in its sole and absolute discretion. Nothing in this Agreement shall in any way restrict the District’s right to reject any or all bids submitted in connection with Project Work and let the work in any other manner permitted by applicable law and not otherwise involving the application of this Agreement and/or the execution of an agreement for Project Work. Consistent with the foregoing, the District shall have the right to reject a bid submitted in connection with a contract for Project Work if such bid represents the one, single bid received by the District for the contract in question.

Section 2.3 Exclusions Items specifically excluded from the Scope of this Agreement include the following:

- (a) Work awarded by the District: (i) prior to the full execution of this; or (ii) after the expiration or termination of this Agreement; notwithstanding, that work covered under the previous Continuity of Work Agreement entered into by the parties shall remain covered under that agreement until completed;
- (b) Work which does not fall within the definition of the terms “Project” or “Project Work” as set forth in this Agreement;
- (c) Work of non-manual employees, including but not limited to: superintendents; teachers; supervisors; staff engineers; time keepers, mail carriers, clerks, office workers,

messengers; guards, safety personnel, emergency medical and first aid technicians; and other professional, engineering, architectural, administrative, supervisory and management employees;

(d) Equipment and machinery owned or controlled and operated by the District;

(e) All off-site manufacture and handling of materials, equipment or machinery; provided, however, that lay down or storage areas for equipment or material and manufacturing (prefabrication) sites, dedicated solely to the Project or Project Work, and the movement of materials or goods between locations on a Project site are within the scope of this Agreement;

(f) All employees of the District, Project Labor Coordinator, design teams (including, but not limited to architects, engineers and master planners), or any other consultants for the District (including, but not limited to, Project managers and construction managers and their employees were not engaged in Project Work) and their sub-consultants, and other employees or consultants of professional service organizations, not performing manual labor within the scope of this Agreement; provided, however, that it is understood and agreed that, unless employed by an excluded party identified above, Surveyors, Building/Construction Inspectors and Field Soils and Materials Testers (collectively "Inspectors") are a covered craft under the CWA. (This inclusion applies to the scope of work defined in the State of California Wage Determination for said Craft. Every Inspector performing under the Wage classification of Surveyor, Building/Construction Inspector and Field Soils and Material Testers under a professional services agreement or a construction contract shall be bound to all applicable requirements of the CWA.) Project Work as defined by this Agreement shall be performed pursuant to the terms and conditions of this Agreement regardless of the manner in which the work was awarded. Nothing in this section will be construed to include the Department of State Architects-certified inspector [Inspector of Record (IOR)] who is required by state law as included under the scope of this Agreement;

(g) Any work performed on or near or leading to or into a site of work covered by this Agreement and undertaken by state, county, city or other governmental bodies, or their Contractors; or by public utilities, or their Contractors; and/or by the District or its Contractors (for work for which is not within the scope of this Agreement);

(h) Off-site maintenance of leased equipment and on-site supervision of such work;

(i) Work by employees of a manufacturer or vendor necessary to maintain such manufacturer's or vendor's warranties or guaranty (This shall not apply to construction equipment);

(j) Non-construction support services contracted by the District, Project Labor Coordinator, or Contractor in connection with this Project; and

(k) Laboratory work for testing.

Section 2.4 Awarding of Contracts

(a) The District and/or the Contractors, as appropriate, have the absolute right to award contracts or subcontracts on this Project to any Contractor notwithstanding the existence or non-existence of any agreements between such Contractor and any Union Parties, provided only that such Contractor is willing, ready and able to execute and comply with this Project Labor Agreement should such Contractor be awarded work covered by this Agreement.

(b) It is agreed that all Contractors and subcontractors of whatever tier, who have been awarded contracts for work covered by this Agreement, shall be required to accept and be bound to the terms and conditions of this Project Labor Agreement, and shall evidence their acceptance by the execution of the Letter of Assent as set forth in Attachment A hereto, prior to the commencement of work. At the time that any Contractor enters into a subcontract with any subcontractor of any tier providing for the performance on the construction contract, the Contractor shall provide a copy of this Agreement to said subcontractor and shall require the subcontractor, as a part of accepting the award of a construction subcontract, to agree in writing in the form of a Letter of Assent to be bound by each and every provision of this Agreement prior to the commencement of work on the Project. No Contractor or subcontractor shall commence Project Work without having first provided a copy of the Letter of Assent as executed by it to the Project Labor Coordinator and to the Council forty-eight (48) hours before the commencement of Project Work, or within forty-eight (48) hours after the award of Project Work to that Contractor (or subcontractor), whichever occurs later. Further, Contractors not signatory to the established Joint Labor/Management Trust Fund Agreements, as described in the Schedule A Agreement(s) for the craft workers in their employ, shall sign a "Subscription Agreement" with the appropriate Joint Labor/Management Trust Funds covering the work performed under this Agreement before work is commenced on the Project.

(c) The District agrees that to the extent permitted by law and consistent with the economy and efficiency of construction and operation, it will use its best efforts to purchase materials, equipment and supplies which will not create labor strife. Under all circumstances, however, the District shall retain the absolute right to select the lowest reliable and responsible bidder for the award of contracts on all Projects.

Section 2.5 Coverage Exception This Agreement shall not apply if the District receives funding or assistance from any Federal, State, local or other public entity for the Construction Contract if a requirement, condition or other term of receiving that funding or assistance, at the time of the awarding of the contract, is that the District not require, bidders, contractors, subcontractors or other persons or entities to enter into an agreement with one or more labor organizations or enter into an agreement that contains any of the terms set forth herein. The District agrees that it will make every effort to establish the enforcement of this Agreement with any governmental agency or granting authority.

Section 2.6 Schedule A's

(a) The provisions of this Agreement, including the Schedule A's, (which are the local collective bargaining agreements of the signatory Unions having jurisdiction over the work

on the Project, as such may be changed from time-to-time and which are incorporated herein by reference) shall apply to the work covered by this Agreement, notwithstanding the provisions of any other local, area and/or national agreement which may conflict with or differ from the terms of this Agreement. However, such does not apply to work performed under the National Cooling Tower Agreement, the National Stack Agreement, the National Transit Division Agreement (NTD), or within the jurisdiction of the International Union of Elevator Constructors, except that Articles dealing with Work Stoppages and Lock-Outs, Work Assignments and Jurisdictional Disputes, and Settlement of Grievances and Disputes shall apply to such work. It is specifically agreed that no later agreement shall be deemed to have precedence over this Agreement unless signed by all Parties signatory hereto who are then currently employed or represented at the Project. Where a subject covered by the provisions of this Agreement is also covered by a Schedule A, the provisions of this Agreement shall apply. Where a subject is covered by a provision of a Schedule A and not covered by this Agreement, the provisions of the Schedule A shall prevail. Any dispute as to the applicable source between this Agreement and any Schedule A for determining the wages, hours of working conditions of employees on this Project shall be resolved under the procedures established in Article 10.

(b) It is understood that this Agreement, together with the referenced Schedule A's, constitutes a self-contained, stand-alone agreement and by virtue of having become bound to this Project Labor Agreement, the Contractor will not be obligated to sign any other local, area or national collective bargaining agreement as a condition of performing work within the scope of this Agreement (provided, however, that the Contractor may be required to sign a "Subscription Agreement" with the appropriate Joint Labor/Management Trust Funds covering the work performed under this Agreement before work is commenced on the Project, as set forth above). It shall be the responsibility of the prime Contractor to have each of its subcontractors sign the documents with the appropriate Craft Union prior to the subcontractor beginning Project Work.

Section 2.7 Binding Signatories Only This Agreement shall only be binding on the signatory Parties hereto, and shall not apply to the parents, affiliates, subsidiaries, or other ventures of any such Party.

Section 2.8 Other District Work This Agreement shall be limited to the Project Work within the Scope of this Agreement, referenced in Section 2.2 above. Nothing contained herein shall be interpreted to prohibit, restrict, or interfere with the performance of any other operation, work or function not covered by this Agreement, which may be performed by district Employees or contracted for by the District for its own account, on its property or in and around a Project site.

Section 2.9 Separate Liability It is understood that the liability of the Contractor(s) and the liability of the separate Unions under this Agreement shall be several and not joint. The Unions agree that this Agreement does not have the effect of creating any joint employment status between or among the District or Project Labor Coordinator and/or any Contractor.

Section 2.10 Completed Project Work As areas of Project Work are accepted by the District, this Agreement shall have no further force or effect on such items or areas except where the Contractor is directed by the District or its representatives to engage in repairs, modification, check-out and/or warranties functions required by its contract(s) with the District.

ARTICLE 3
UNION RECOGNITION AND EMPLOYMENT

Section 3.1 Recognition The Contractor recognizes the Council and the signatory local Unions as the exclusive bargaining representative for the employees engaged in Project Work.

Section 3.2 Contractor Selection of Employees The Contractor shall have the right to determine the competency of all employees, the number of employees required, the duties of such employees within their craft jurisdiction, and shall have the sole responsibility for selecting employees to be laid off, consistent with Section 3.3 and Section 4.3, below. The Contractor shall also have the right to reject any applicant referred by a Union for any reason, subject to any reporting pay required by Section 6.6; provided, however, that such right is exercised in good faith and not for the purpose of avoiding the Contractor's commitment to employ qualified workers through the procedures endorsed in this Agreement.

Section 3.3 Referral Procedures

(a) For signatory Unions now having a job referral system contained in a Schedule A, the Contractor agrees to comply with such system, and it shall be used exclusively by such Contractor, except as modified by this Agreement. Such job referral system will be operated in a nondiscriminatory manner and in full compliance with federal, state, and local laws and regulations which require equal employment opportunities and non-discrimination. All of the foregoing hiring procedures, including related practices affecting apprenticeship, shall be operated so as to consider the goals of the District to encourage employment of Local Residents and utilization of small local businesses on the Project, and to facilitate the ability of all Contractors to meet their employment needs.

(b) The local Unions will exert their best efforts to recruit and refer sufficient numbers of skilled craft workers to fulfill the labor requirements of the Contractor, including specific employment obligations to which the Contractor may be legally and/or contractually obligated; and to refer apprentices as requested to develop a larger, skilled workforce. The local Unions will work with their affiliated regional and national unions, and jointly with the Project Labor Coordinator and others designated by the District, to identify and refer competent craft persons as needed for Project Work, and to identify and hire individuals, particularly residents of the District, for entrance into joint labor/management apprenticeship programs, or to participation in other identified programs and procedures to assist individuals in qualifying and becoming eligible for such apprenticeship programs, all maintained to increase the available supply of skilled craft personnel for Project Work and future construction of maintenance work to be undertaken by the District.

(c) The Union shall not knowingly refer an employee currently employed by a Contractor on Project Work to any other Contractor.

(d) The Parties are aware of the District's policy that Contractors and other employers shall not employ, on Project Work when minors may be present on or around the site of such Project Work during working hours, a person who would not be eligible for employment by the

District under Education Code section 45123. The Parties shall endeavor to employ persons under this Article in compliance with this policy, and the Contractors agree to remove such an individual in their employ from the particular Project site at the request of the District or the Project Labor Coordinator.

Section 3.4 Non-Discrimination in Referral, Employment, and Contracting: The Unions and Contractors agree that they will not discriminate against any employee or applicant for employment in hiring and dispatching on the basis of race, color, religion, sex, gender, national origin, age, membership in a labor organization, sexual orientation, political affiliation, marital status or disability. Further, it is recognized that the District has certain policies, programs, and goals for the utilization of local small business enterprises. The Parties shall jointly endeavor to assure that these commitments are fully met, and that any provisions of this Agreement which may appear to interfere within a local small business enterprises successfully bidding for work within the scope of this Agreement shall be carefully reviewed, and adjustments made as may be appropriate and agreed upon among the Parties, to ensure full compliance with the spirit and letter of the District's policies and commitment to its goals for the significant utilization of local small businesses as direct Contractors or suppliers Project Work.

Section 3.5 Employment of Local Residents

(a) In recognition of the District's mission to serve the residents residing in and around the geographic area serviced by the District the Unions and Contractors agree that, to the extent allowed by law, and as long as they possess the requisite skills and qualifications, the Unions will exert their best efforts to refer and/or recruit sufficient numbers of skilled craft "Local Residents," as defined herein, to fulfill the requirements of the Contractors. In recognition of the fact that the communities surrounding Project Work will be impacted by the construction of the Project Work, the parties agree to support the hiring of workers from the residents of these surrounding areas. Towards that end, the Parties hereby establish a goal that 30% of construction labor hours worked on the Project shall be from the following categories of qualified area residents, listed in priority order: : (1) individuals residing in those first tier zip codes within an eight (8) mile radius of the District's headquarters, along with Veterans and students and former students of the District who have successfully completed the Building Trades Multi-Craft Core Curriculum Pre-Apprenticeship Program (MC3 Program), regardless of where they reside; (2) individuals residing within the zip codes covering the territorial boundaries of any city bordering on the geographical area covered within such eight mile radius, as reflected on the list of U.S. Postal Service zip codes attached hereto as Attachment "C"; and (3) individuals residing within the remainder of the County of Los Angeles; and (4) other individuals who have completed a MC3 Program, regardless of where they reside. For dispatch purposes, employees described in this Section 3.5 (a) shall be referred to as "Local Residents." Construction labor hours worked by core employees, as defined in Section 3.7, shall not be included in any consideration or calculation of construction labor hours worked on the Project for purposes of the 30% Local Resident goal.

(b) A goal of 30% of all of the labor hours performed on Project Work shall be from workers residing with the area described in (a) above. To facilitate the dispatch of Local Residents, all Contractors will be required to utilize the Craft Employee Request Form whenever

they are requesting the referral of any employee from a Union referral list for any covered Project Work, a sample of which is attached as Attachment D. When Local Residents are requested by the Employers, the Unions will refer such workers regardless of their place in the Unions' hiring halls' list and normal referral procedures.

(c) The Project Labor Coordinator shall work with the Unions and Contractors in the administration of this local residency preference; and the Contractors and Unions shall cooperate by maintaining adequate records to demonstrate to the Project Labor Coordinator that such preferences have been pursued. As part of this process, and in order to facilitate the contract administration procedures, as well as appropriate benefit fund coverage, all Contractors shall require their "core work force" and any other persons employed other than through the referral process, to register with the appropriate hiring hall, if any. The Project Labor Coordinator shall also assist in coordinating efforts between the Parties subject to Article 22, including, but not limited to, the Union and the Outreach Committee, to further endeavor to achieve the local hire goal in this Section, in addition to the obligations set forth in Article 22.

Section 3.6 Helmets to Hardhats The Employers and the Unions recognize a desire to facilitate the entry into the building and construction trades of veterans who are interested in careers in the building and construction industry. The employers and Unions agree to utilize the services of the Center for Military Recruitment, Assessment and Veterans Employment (hereinafter "Center") and the Center's "Helmets to Hardhats" program to serve as a resource for preliminary orientation, assessment of construction aptitude, referral to apprenticeship programs or hiring halls, counseling and mentoring, support network, employment opportunities and other needs as identified by the Parties. For purposes of this Agreement the term "Eligible Veteran" shall have the same meaning as the term "veteran" as defined under Title 5, Section 2108(1) of the United States Code as the same may be amended or re-codified from time to time. It shall be the responsibility of each qualified Local Resident to provide the Unions with proof of his/her status as an Eligible Veteran.

The Unions and Employers agree to coordinate with the Center to create and maintain an integrated database of veterans interested in working on this Project and of apprenticeship and employment opportunities for this Project. To the extent permitted by law, the Unions will give credit to such veterans for bona fide, provable past experience.

Section 3.7 Core Employees

(a) Except as otherwise provided in separate collective bargaining agreement(s) to which the Contractor is signatory, Contractors may employ, as needed, first, a member of his core workforce, then an employee through a referral from the appropriate Union hiring hall, then a second core employee, then a second employee through the referral system, and so on until a maximum of five (5) core employees are employed in the Contractor's workforce, thereafter, all additional employees shall be requisitioned from the craft hiring hall in accordance with Section 3.3. In the laying off of employees, the number of core employees shall not exceed one-half plus one of the workforce for an employer with 10 or fewer employees, assuming the remaining employees are qualified to undertake the work available. This provision applies only to employees not currently working under a current Schedule A Agreement and is not intended to

limit the transfer provisions of the Schedule A Agreement of any trade. As part of this process, and in order to facilitate the contract administration procedures, as well as appropriate fringe benefit fund coverage, all Contractors shall require their core employees and any other persons employed other than through the referral process, to register with the appropriate Union hiring hall, if any, prior to their first day of employment at a Project site.

(b) The core work force is comprised of those employees whose names appeared on the Contractor's active payroll for sixty (60) of the one hundred (100) working days immediately before award of Project Work to the Contractor; who possess any license required by state or federal law for the Project Work to be performed; who have worked at least two-thousand (2,000) hours in the construction craft in which they are employed, during the prior four (4) years; and who have the ability to safely perform the basic functions of the applicable trade.

(c) Prior to each Contractor performing any work on the Project, each Contractor shall provide a list of his core employees to the Project Labor Coordinator and the Council. Failure to do so will prohibit the Contractor from using any core employees. Upon request by any Party to this Agreement, the Contractor hiring any core employee shall provide satisfactory proof (i.e., payroll records, quarterly tax records, driver's license, voter registration, postal address and such other documentation) evidencing the core employee's qualification as a core employee to the Project Labor Coordinator and the Council.

Section 3.8 Time for Referral If any Union's registration and referral system does not fulfill the requirements for specific classifications of covered employees requested by any Contractor within forty-eight (48) hours (excluding Saturdays, Sundays and holidays), that Contractor may use employment sources other than the Union registration and referral services, and may employ applicants meeting such standards from any other available source. The Contractors shall inform the Union of any applicants hired from other sources within 48 hours of such applicant being hired, and such applicants shall register with the appropriate hiring hall, if any.

Section 3.9 Lack of Referral Procedure If a signatory local Union does not have a job referral system as set forth in Section 3.3 above, the Contractors shall give the Union equal opportunity to refer applicants. The Contractors shall notify the Union of employees so hired, as set forth in Section 3.5.

Section 3.10 Union Membership Employees are not required to become or remain Union members or pay Union dues or fees as a condition of performing work on covered Project Work. However, Contractors shall make and transmit all deductions for Union dues, fees, and assessments that have been authorized by employees in writing in accordance with the applicable MLA. Nothing in this Section 3.10 is intended to supersede independent requirements of the applicable MLA as to those Contractors otherwise signatory to such MLAs and as to the employees of those Contractors who are performing work on covered Project Work.

Section 3.11 Individual Seniority Except as provided in Section 4.3, individual seniority shall not be recognized or applied to employees working on the Project; provided, however, that group

and/or classification seniority in a Union's Schedule A as of the effective date of this Agreement shall be recognized for purposes of layoffs.

Section 3.12 Foremen The selection and number of craft foreman and/or general foreman shall be the responsibility of the Contractor. All foremen shall take orders exclusively from the designated Contractor representatives. Craft foreman shall be designated as working foreman at the request of the Contractors.

Section 3.13 District Security Requirements The Parties are aware of the District's policy that Contractors and other employers shall not employ a person who would not be eligible for employment by the District under Education Code Section 45123. All persons working on Project Work, including all employees hired by a Contractor (or referred by a Signatory Union) to work on Project Work shall be required to comply with all criminal background check certification requirements and policies of District for those persons who may come in contact with, or work in close proximity to, minors in the course of performing work on a Project. Contractors shall be responsible for ensuring that all necessary criminal background checks are administered and completed in accordance with such certification requirements and policies of the District for employees hired by the Contractor who may come in contact with, or work in close proximity to, minors in the course of performing work on a Project. Contractors may refuse to employ any person who declines to comply with District's background check requirements or who otherwise is determined to be disqualified from participating in Project Work because of a disqualifying conviction. Similarly, District may ban or order the immediate removal of any person disqualified from working in the presence of, or in close proximity to, minors.

ARTICLE 4 UNION ACCESS AND STEWARDS

Section 4.1 Access to Project Sites Authorized representatives of the Union shall have access to Project Work, provided that they do not interfere with the work of employees and further provided that such representatives fully comply with posted visitor, security and safety rules.

Section 4.2 Stewards

(a) Each signatory local Union shall have the right to dispatch a working journeyman as a steward for each shift, and shall notify the Contractor in the writing of the identity of the designated steward or stewards prior to the assumption of such person's duties as steward. Such designated steward or stewards shall not exercise any supervisory functions. There will be no non-working stewards. Stewards will receive the regular rate of pay for their respective crafts.

(b) In addition to his/her work as an employee, the steward should have the right to receive, but not to solicit, complaints or grievances and to discuss and assist in the adjustment of the same with the employee's appropriate supervisor. Accordingly, each steward should be concerned only with the employees of the steward's Contractor and, if applicable,

subcontractor(s), and not with the employees of any other Contractor. A Contractor will not discriminate against the steward in the proper performance of his/her Union duties.

(c) When a Contractor has multiple, non-contiguous work locations at one site, the Contractor may request, and the Union shall appoint, such additional working stewards as the Contractor requests to provide independent coverage of one or more such locations. In such cases, a steward may not service more than one work location without the approval of the Contractor.

(d) The stewards shall not have the right to determine when overtime shall be worked or who shall work overtime.

Section 4.3 Steward Layoff/Discharge The relevant Contractor agrees to notify the appropriate Union twenty-four (24) hours before the layoff of a steward, except in the case of disciplinary discharge for just cause. If the steward is protected against such layoff by the provisions of the applicable Schedule A, such provisions shall be recognized when the steward possesses the necessary qualifications to perform the remaining work. In any case in which the steward is discharged or disciplined for just cause, the appropriate Union will be notified immediately by the Contractor, and such discharge or discipline shall not become final (subject to any later filed grievance) until twenty-four (24) hours after such notice have been given.

Section 4.4 Employees on Non-Project Work On work where the personnel of the District or personnel employed by the any other employer not a Party to this Agreement may be working in close proximity to the construction activities covered by this Agreement, the Union agrees that the Union representatives, stewards, and individual workers will not disrupt or in any way interfere with such personnel.

ARTICLE 5 WAGES AND BENEFITS

Section 5.1 Wages All employees covered by this Agreement shall be classified in accordance with work performed and paid by the Contractors the hourly wage rates for those classifications in compliance with the applicable prevailing wage rate determination established pursuant to applicable law. If a prevailing rate increases under law, the Contractor shall pay that rate as of its effective date under the law. Notwithstanding Section 2.6(a), Contractors directly signatory to one or more of the Schedule A Agreements are required to pay all of the wages set forth in those Schedule A Agreements without reference to the forgoing.

Section 5.2 Benefits

(a) Contractors shall pay contributions to the established employee benefit funds in the amounts designated in the appropriate Schedule A and make all employee authorized deductions in the amounts designated in the appropriate Schedule A; provided, however, that the Contractor and Union agree that only such bona fide employee benefits as accrue to the direct benefit of the employees (such as pension and annuity, health and welfare, vacation, apprenticeship, training funds, etc.) shall be included in this requirement and required to be paid

by the Contractor on the Project; and provided further, however, that such contributions shall not exceed the contribution amounts set forth in the applicable prevailing wage determination. Notwithstanding Section 2.6(a), Contractors directly signatory to one or more of the Schedule A Agreements are required to make all contributions set forth in those Schedule A Agreements without reference to the forgoing. Bona fide jointly-trusted benefit plans or authorized employee deduction programs established or negotiated under the applicable Schedule A or by the Parties to this Agreement during the life of this Agreement may be added.

(b) The Contractor adopts and agrees to be bound by the written terms of the applicable, legally established, trust agreement(s) specifying the detailed basis on which payments are to be made into, and benefits paid out of, such trust funds for its employees. The Contractor authorizes the Parties to such trust funds to appoint trustees and successor trustees to administer the trust funds and hereby ratifies and accepts the trustees so appointed as if made by the Contractor.

(c) Each Contractor and subcontractor is required to certify to the Project Labor Coordinator that it has paid all benefit contributions due and owing to the appropriate Trust(s) prior to the receipt of its final payment and/or retention. Further, upon timely notification by a Union to the Project Labor Coordinator, the Project Labor Coordinator shall work with any prime Contractor or subcontractor who is delinquent in payments to assure that proper benefit contributions are made, to the extent of requesting the District or the prime Contractor to withhold payments otherwise due such Contractor, until such contributions have been made or otherwise guaranteed.

Section 5.3 Wage Premiums Wage premiums, including but not limited to pay based on height of work, hazard pay, scaffold pay, and special skills shall not be applicable to work under this Agreement, except to the extent provided for in any applicable prevailing wage determination.

Section 5.4 Compliance with Prevailing Wage Laws The Parties agree that the Project Labor Coordinator shall monitor the compliance by all Contractors and subcontractors with all applicable federal and state prevailing wage laws and regulations, and that such monitoring shall include Contractors engaged in what would otherwise be Project Work but for the exceptions to Agreement coverage in Article 2, Section 2.2. All complaints regarding possible prevailing wage violations shall be referred to the Project Labor Coordinator for processing, investigation and resolution, and if not resolved within thirty calendar days, may be referred by any party to the state labor commissioner.

ARTICLE 6 HOURS OF WORK, OVERTIME, SHIFTS AND HOLIDAYS

Section 6.1 Hours of Work Eight (8) hours per day between the hours of 6:00 a.m. and 5:30 p.m., plus one-half (½) hour unpaid lunch approximately mid-way through the shift, shall constitute the standard workday. Forty (40) hours per week shall constitute a regular week's work. The work week will start on Sunday and conclude on Saturday. The foregoing provisions of this Article are applicable unless otherwise provided in the applicable prevailing wage

determination, or unless changes are permitted by law and such are agreed upon by the Parties. Nothing herein shall be construed as guaranteeing any employee eight (8) hours per day or forty (40) hours per week, or a Monday through Friday work standard work schedule.

Section 6.2 Place of Work Employees shall be at their place of work (as designated by the Contractor), at the starting time and shall remain at their place of work, performing their assigned functions, until quitting time. The place of work is defined as the gang or tool box or equipment at the employee's assigned work location or the place where the foreman gives instructions. The Parties reaffirm their policy of a fair day's work for a fair day's wage. There shall be no pay for time not worked unless the employee is otherwise engaged at the direction of the Contractor.

Section 6.3 Overtime Overtime shall be paid in accordance with the requirements of the applicable prevailing wage determination. There shall be no restriction on the Contractor's scheduling of overtime or the nondiscriminatory designation of employees who will work overtime. There shall be no pyramiding of overtime (payment of more than one form of overtime compensation for the same hour) under any circumstances.

Section 6.4 Shifts and Alternate Work Schedules

(a) Alternate starting and quitting time and/or shift work may be performed at the option of the Contractor upon three (3) days' prior notice to the affected Union(s), unless a shorter notice period is provided for in the applicable Schedule A, and shall continue for a period of not less than five (5) working days. Saturdays and Sundays, if worked, may be used for establishing the five (5) day minimum work shift. If two shifts are worked, each shall consist of eight (8) hours of continuous work exclusive of a one-half (½) hour non-paid lunch period, for eight (8) hours pay. The last shift shall start on or before 6:00 p.m. The first shift starting at or after 6:00 a.m. is designated as the first shift, with the second shift following.

(b) Contractors, the Council and the Union recognize the economic impact upon the District and District residents of the massive Project being undertaken by the District and agree that all Parties to this Agreement desire and intend Project Work to be undertaken in a cost efficient and effective manner to the highest standard of quality and craftsmanship. Recognizing the economic conditions, the Parties agree that, except to the extent permitted by law, employees performing Project Work shall not be entitled to any differentials or additional pay based upon the shift or work schedule of the employees. Instead, all employees working on Project Work shall be paid at the same base rate regardless of shift or work schedule worked.

(c) Because of operational necessities, the second shift may, at the District's direction, be scheduled without the preceding shift having been worked. It is recognized that the District's operations and/or mitigation obligations may require restructuring of normal work schedules. Except in an emergency or when specified in the District's bid specification, the Contractor shall give affected Union(s) at least three (3) days' notice of such schedule changes.

Section 6.5 Holidays Recognized holidays on this Project shall be those set forth and governed by the prevailing wage determination(s) applicable to this Project, unless or until such may be, and are, revised by mutual agreement of the Parties to this Agreement.

Section 6.6 Show-up Pay

(a) Except as otherwise required by State law, Employees reporting for work and for whom no work is provided, except when given prior notification not to report to work, shall receive two (2) hours pay at the regular straight time hourly rate. Employees who are directed to start work shall receive four (4) hours of pay at the regular straight time hourly rate. Employees who work beyond four (4) hours shall be paid for actual hours worked. Whenever reporting pay is provided for employees, they will be required to remain at the Project Site and available for work for such time as they receive pay, unless released earlier by the principal supervisor of the Contractor(s) or his/her designated representative. Each employee shall furnish his/her Contractor with his/her current address and telephone number, and shall promptly report any changes to the Contractor.

(b) An employee called out to work outside of his/her shift shall receive a minimum of two (2) hours pay at the appropriate rate. This does not apply to time worked as an extension of (before or after) the employee's normal shift.

(c) When an employee leaves the job or work location of his/her own volition, or is discharged for cause or is not working as a result of the Contractor's invocation of Article XII, Section 12.3, the employee shall only be paid for actual time worked.

Section 6.7 Meal Periods The Contractor will schedule a meal period of no more than one-half hour duration at the work location at approximately mid-point of the schedule shift; provided, however, that the Contractor may, for efficiency of the operation, establish a schedule which coordinates the meal periods of two or more crafts. An employee may be required to work through his meal period because of an emergency or a threat to life or property, or for such other reasons as are in the applicable Schedule A, and if he is so required, he shall be compensated in the manner established in the applicable Schedule A.

Section 6.8 Make-up Days To the extent permitted by the applicable general wage determination, when an employee has been prevented from working for reasons beyond the control of the employer, including, but not limited to inclement weather or other natural causes, during the regularly scheduled work week, a make-up day may be worked on a non-regularly scheduled work day for which an employee shall receive eight (8) hours pay at the straight time rate of pay or any premium rate required for such hours under the prevailing wage law.

**ARTICLE 7
WORK STOPPAGES AND LOCK-OUTS**

Section 7.1 No Work Stoppages or Disruptive Activity The Council and the Unions signatory hereto agree that neither they, and each of them, nor their respective officers or agents or representatives, shall incite or encourage, condone or participate in any strike, walk-out, slow-

down, picketing, observing picket lines or other activity of any nature or kind whatsoever, for any cause or dispute whatsoever with respect to or any way related to Project Work, or which interferes with or otherwise disrupts, Project Work, or with respect to or related to the District or Contractors or subcontractors, including, but not limited to, economic strikes, unfair labor practice strikes, safety strikes, sympathy strikes and jurisdictional strikes whether or not the underlying dispute is arbitrable. Any such actions by the Council, or Unions, or their members, agents, representatives or the employees they represent shall constitute a violation of this Agreement. The Council and the Union shall take all steps necessary to obtain compliance with this Article and neither should be held liable for conduct for which it is not responsible.

Section 7.2 Employee Violations The Contractor may discharge any employee violating Section 7.1 above and any such employee will not be eligible for rehire under this Agreement.

Section 7.3 Standing to Enforce The District, the Project Labor Coordinator, or any Contractor affected by an alleged violation of Section 7.1 shall have standing and the right to enforce the obligations established therein.

Section 7.4 Expiration of Schedule A's If the Schedule A Agreement, or any local, regional, and other applicable collective bargaining agreements expire during the term of the Project, the Union(s) agree that there shall be no work disruption of any kind as described in Section 7.1 above as a result of the expiration of any such agreement(s) having application on this Project and/or failure of the involved Parties to that agreement to reach a new contract. Terms and conditions of employment established and set at the time of bid shall remain established and set. Otherwise, to the extent that such agreement does expire and the Parties to that agreement have failed to reach concurrence on a new contract, work will continue on the Project on one of the following two (2) options, both of which will be offered by the Unions involved to the Contractors affected:

(a) Each of the Unions with a contract expiring must offer to continue working on the Project under interim agreements that retain all the terms of the expiring contract, except that the Unions involved in such expiring contract may each propose wage rates and employer contribution rates to employee benefit funds under the prior contract different from what those wage rates and employer contributions rates were under the expiring contracts. The terms of the Union's interim agreement offered to Contractors will be no less favorable than the terms offered by the Union to any other employer or group of employers covering the same type of construction work in Los Angeles County.

(b) Each of the Unions with a contract expiring must offer to continue working on the Project under all the terms of the expiring contract, including the wage rates and employer contribution rates to the employee benefit funds, if the Contractor affected by that expiring contract agrees to the following retroactive provisions: if a new Schedule A Agreement, local, regional or other applicable labor agreement for the industry having application at the Project is ratified and signed during the term of this Agreement and if such new labor agreement provides for retroactive wage increases, then each affected Contractor shall pay to its employees who performed work covered by this Agreement at the Project during the hiatus between the effective dates of such expired and new labor agreements, an amount equal to any such retroactive wage

increase established by such new labor agreement, retroactive to whatever date is provided by the new labor agreement for such increase to go into effect, for each employee's hours worked on the Project during the retroactive period. All Parties agree that such affected Contractors shall be solely responsible for any retroactive payment to its employees.

(c) Some Contractors may elect to continue to work on the Project under the terms of the interim agreement option offered under paragraph (a) above and other Contractors may elect to continue to work on the Project under the retroactivity option offered under paragraph (b) above. To decide between the two options, Contractors will be given one week after the particular labor agreement has expired or one week after the Union has personally delivered to the Contractors in writing its specific offer of terms of the interim agreement pursuant to paragraph (a) above, whichever is the later date. If the Contractor fails to timely select one of the two options, the Contractor shall be deemed to have selected option (b).

Section 7.5 No Lockouts Contractors shall not cause, incite, encourage, condone or participate in any lock-out of employees with respect to Project Work during the term of this Agreement. The term "lock-out" refers only to a Contractor's exclusion of employees in order to secure collective bargaining advantage, and does not refer to the discharge, termination or layoff of employees by the Contractor for any reason in the exercise of rights pursuant to any provision of this Agreement, or any other agreement, nor does "lock-out" include the District's decision to stop, suspend or discontinue any Project Work or any portion thereof for any reason.

Section 7.6 Best Efforts to End Violations

(a) If a Contractor contends that there is any violation of this Article or Section 8.3, it shall notify, in writing, the Executive Secretary of the Council, the Senior Executive of the involved Union(s) and the Project Labor Coordinator. The Executive Secretary and the leadership of the involved Union(s) will immediately instruct, order and use their best efforts to cause the cessation of any violation of the relevant Article.

(b) If the Union contends that any Contractor has violated this Article, it will notify that the Contractor and the Project Labor Coordinator, setting forth the facts which the Union contends violate the Agreement, at least twenty-four (24) hours prior to invoking the procedures of Section 7.8. The Project Labor Coordinator shall promptly order the involved Contractor(s) to cease any violation of the Article.

Section 7.7 Withholding of services for failure to pay wages and fringe benefits

Notwithstanding any provision of this Agreement to the contrary, it shall not be a violation of this Agreement for any Union to withhold the services of its members (but not the right to picket) from a particular Contractor who:

(a) fails to timely pay its weekly payroll; or

(b) fails to make timely payments to the Union's Joint Labor/Management Trust Funds in accordance with the provisions of the applicable Schedule A Agreements. Prior to

withholding its members services for the Contractor's failure to make timely payments to the Union's Joint Labor/Management Trust Funds, the Union shall give at least ten (10) days (unless a lesser period of time is provided in the Union's Schedule A Agreement, but in no event less than forty-eight (48) hours) written notice of such failure to pay by registered or certified mail, return receipt requested, and by facsimile transmission to the involved Contractor. The Union shall meet with the involved Contractor within the ten (10) day period and exercise best efforts to resolve the dispute.

(c) Upon the payment of the delinquent Contractor of all monies due and then owing for wages and/or fringe benefit contributions, the Union shall immediately direct its members to promptly return to work and the Contractor shall return all such members back to work.

Section 7.8 Expedited Enforcement Procedure Any party, including the District, which the Parties agree is a Party to the Agreement for purposes of this Article and an intended beneficiary of this Article, or the Project Labor Coordinator, may institute the following procedures, in lieu of, or in addition to, any other action at law or equity, when a breach of Section 7.1 or 7.5, above, or Section 8.3 is alleged.

(a) The Party invoking this procedure shall notify the permanent arbitrator next in sequence from the list of neutral arbitrators mutually agreed to by the Parties under Attachment B (hereinafter, the "Permanent Neutral Arbitrators"). The Parties agree these shall be the permanent neutral arbitrators under this procedure. In the event that none of the Permanent Neutral Arbitrators are available for a hearing within twenty-four (24) hours, the Party invoking the procedure shall have the option of delaying the proceedings until one of the Permanent Neutral Arbitrators is available, or the Parties shall make a joint request of the State Mediation and Conciliation Service of the California Department of Industrial Relations (hereinafter, "SMCS")¹ for a list of five (5) qualified neutral arbitrators with labor and employment expertise reasonably related to the nature of the dispute. The Parties shall select a neutral arbitrator from the SMCS list by striking one name from the list in succession until only one name remains. If any of the Permanent Neutral Arbitrators ask to be relieved from their status as a Permanent Neutral Arbitrator, the Parties shall mutually select a new Permanent Neutral Arbitrator by again submitting a joint request to the SMCS for a list of five (5) qualified arbitrators with the new arbitrator selected by striking names from the list until only one name remains. Expenses incurred in arbitration shall be borne equally by the Parties involved in the arbitration and the decision of the arbitrator shall be final and binding on the Parties, provided, however, that the arbitrator shall not have the authority to alter, amend, add to, or delete from, the provisions of this Agreement in any way. Notice to the arbitrator shall be by the most expeditious means available, with notices to the Parties alleged to be in violation, and to the Council if it is a Union alleged to be in violation. For purposes of this Article, written notice may be given by email, hand delivery or overnight mail and will be deemed effective upon receipt.

(b) Upon receipt of said notice, the arbitrator named above or his/her alternate shall sit and hold a hearing within twenty-four (24) hours if it is contended that the violation still

¹ As of the effective date of this Agreement, the offices of the SMCS can be contacted at the following address and/or by means of the following e-mail address and facsimile number: 1515 Clay Street, Suite 2206, Oakland, California 94612, E-mail: SMCSInfo@dir.ca.gov , Facsimile Number: (510) 873-6475.

exists, but not sooner than twenty-four (24) hours after notice has been dispatched to the Executive Secretary and the Senior Official(s) as required by Section 7.6, as above.

(c) The arbitrator shall notify the Parties of the place and time chosen for this hearing. Said hearing shall be completed in one session, which, with appropriate recesses at the arbitrator's discretion, shall not exceed 24 hours, unless otherwise agreed upon by all Parties. A failure of any Party or Parties to attend said hearings shall not delay the hearing of evidence or the issuance of any award by the arbitrator.

(d) The sole issue at the hearing shall be whether or not a violation of Sections 7.1 or 7.5, above, or Section 8.3 has in fact occurred. The arbitrator shall have no authority to consider any matter in justification, explanation or mitigation of such violation or to award damages, (except for damages as set forth in 7.8 below) which issue is reserved for court proceedings, if any. The award shall be issued in writing within three (3) hours after the close of the hearing, and may be issued without an opinion. If any Party desires a written opinion, one shall be issued within fifteen (15) days, but its issuance shall not delay compliance with, or enforcement of, the Award. The arbitrator may order cessation of the violation of the Article and other appropriate relief, and such award shall be served on all Parties by hand or registered mail upon issuance.

(e) Such award shall be final and binding on all Parties and may be enforced by any court of competent jurisdiction upon the filing of this Agreement and all other relevant documents referred to herein above in the following manner. Written notice of the filing of such enforcement proceedings shall be given to the other Party. In any judicial proceeding to obtain a temporary order enforcing the arbitrator's award as issued under Section 7.7(d) of this Article, all Parties waive the right to a hearing and agree that such proceedings may be ex parte. Such agreement does not waive any Party's right to participate in a hearing for a final order of enforcement. The court's order or orders enforcing the arbitrator's award shall be served on all Parties by hand or by delivery to their address as shown on this Agreement (for a Union), as shown on their business contract for work under this Agreement (for a Contractor) and to the representing Union (for an employee), by certified mail by the Party or Parties first alleging the violation.

(f) Any rights created by statute or law governing arbitration proceedings inconsistent with the above procedure or which interfere with compliance hereto are hereby waived by the Parties to whom they accrue.

(g) The fees and expenses of the arbitrator shall be equally divided between the Party or Parties initiating this procedure and the respondent Party or Parties.

ARTICLE 8 WORK ASSIGNMENTS AND JURISDICTIONAL DISPUTES

Section 8.1 Assignment of Work The assignment of work will be solely the responsibility of the Contractor performing the work involved; and such work assignments will be in accordance with the Plan for the Settlement of Jurisdictional Disputes in the Construction Industry (the "Plan") currently in effect, or any successor plan.

Section 8.2 The Plan All jurisdictional disputes between or among Building and Construction Trades Unions and Contractors, shall be settled and adjusted according to the Plan, or any other plan or method of procedures that may be adopted in the future by the Building and Construction Trades Department. Decisions rendered shall be final, binding and conclusive on the Contractors and Union.

(a) If a dispute arising under this Article involves the Western States Regional Council of Carpenters or any of its subordinate bodies, an Arbitrator shall be chosen by the procedures specified in Article V, Section 5, of the Plan from a list composed of John Kagel, Robert Hirsch, and Thomas Pagan, and the Arbitrator's hearing on the dispute shall be held at the offices of the Trades Council within 14 days of the selection of the Arbitrator. All other procedures shall be as specified in the Plan.

Section 8.3 No Work Disruption Over Jurisdiction All jurisdictional disputes shall be resolved without the occurrence of any strike, work stoppage, disruption, or slowdown of any nature, and the Contractor's assignments shall be adhered to until the dispute is resolved. Individuals violating this section shall be subject to immediate discharge.

Section 8.4 Pre-Job Conferences As provided in Article 16, each Contractor will conduct a pre-job conference with the appropriate affected Union(s) prior to commencing work. The Council and the Project Labor Coordinator shall be advised in advance of all such conferences and may participate if they wish.

Section 8.5 Resolution of Jurisdictional Disputes If any actual or threatened strike, sympathy strike, work stoppage, slow down, picketing, hand-billing or otherwise advising the public that a labor dispute exists, or interference with the progress of Project Work by reason of a jurisdictional dispute or disputes occurs, the Parties shall exhaust the expedited procedures set forth in the Plan, if such procedures are in the plan then currently in effect, or otherwise as in Article 7 above.

ARTICLE 9 MANAGEMENT RIGHTS

Section 9.1 Contractor and District Rights The Contractors and the District have the sole and exclusive right and authority to oversee and manage construction operations on Project Work without any limitations unless expressly limited by a specific provision of this Agreement or a Schedule A agreement. In addition to the following and other rights of the Contractors enumerated in this Agreement, the Contractors expressly reserve their management rights and all the rights conferred upon them by law. The Contractor's rights include, but are not limited to, the right to:

- (a) Plan, direct and control operations of all work;
- (b) Hire, promote, transfer and layoff their own employees, respectively, as deemed appropriate to satisfy work and/or skill requirements;

(c) Promulgate and require all employees to observe reasonable job rules and security and safety regulations;

(d) Discharge, suspend or discipline their own employees for just cause;

(e) Utilize, in accordance with District approval, any work methods, procedures or techniques, and select, use and install any types or kinds of materials, apparatus or equipment, regardless of source of manufacture or construction; assign and schedule work at their discretion; and

(f) Assign overtime, determine when it will be worked and the number and identity of employees engaged in such work, subject to such provisions in the applicable Schedule A(s) requiring such assignments be equalized or otherwise made in a nondiscriminatory manner.

Section 9.2 Specific District Rights In addition to the following and other rights of the District enumerated in this Agreement, the District expressly reserves its management rights and all the rights conferred on it by law. The District's rights (and those of the Contractor Administrator on its behalf) include but are not limited to the right to:

(a) Inspect any construction site or facility to ensure that the Contractor follows the applicable safety and other work requirements;

(b) Require Contractors to establish a different work week or shift schedule for particular employees as required to meet the operational needs of the Project Work at a particular locations or in order to accommodate the instructional programs and pupil control problems at various project sites where school may be in session during periods of construction activity;

(c) At its sole option, terminate, delay and/or suspend any and all portions of the Project Work at any time; prohibit some or all work on certain days or during certain hours of the day to accommodate the ongoing operations of the District's educational facilities and/or to mitigate the effect of ongoing Project Work on businesses and residents in the neighborhood of the Project site; and/or require such other operational or schedule changes it deems necessary, in its sole judgment, to effectively maintain its primary mission and remain a good neighbor to those in the area of its facilities. (In order to permit the Contractors and Unions to make appropriate scheduling plans, the District will provide the Project Labor Coordinator, and the affected Contractor(s) and Union(s) with reasonable notice of any changes it requires pursuant to this section; provided, however, that if notice is not provided in time to advise employees not to report for work, show-up pay shall be due pursuant to the provision of Article 6, Section 6.6);

(d) Approve any work methods, procedures and techniques used by Contractors whether or not these methods, procedures or techniques are part of industry practices or customs; and

(e) Investigate and process complaints, through its Project Labor Coordinator, in the matter set forth in Articles 7 and 10.

Section 9.3 Use of Materials There should be no limitations or restriction by Union upon a Contractor's choice of materials or design, nor, regardless of source or location, upon the full use and utilization, of equipment, machinery, packaging, precast, prefabricated, prefinished, or preassembled materials, tools or other labor saving devices, subject to the application of the State Public Contracts and Labor Codes as required by law in reference to offsite construction. Generally, the onsite installation or application of such items shall be performed by the craft having jurisdiction over such work. The District and its Project Labor Coordinator shall advise all Contractors of, and enforce as appropriate, the off-site application of the prevailing wage law as it affects Project Work.

Section 9.4 Special Equipment, Warranties and Guaranties

(a) It is recognized that certain equipment of a highly technical and specialized nature may be installed at Project Work sites. The nature of the equipment, together with the requirements for manufacturer's warranties, may dictate that it be prefabricated pre-piped and/or pre-wired and that it be installed under the supervision and direction of the District's and/or manufacturer's personnel. The Unions agree that such equipment is to be installed without incident.

(b) The Parties recognize that the Contractor will initiate from time to time the use of new technology, equipment, machinery, tools, and other labor-savings devices and methods of performing Project Work. The Union agrees that they will not restrict the implementation of such devices or work methods. The Unions will accept and will not refuse to handle, install or work with any standardized and/or catalogue: parts, assemblies, accessories, prefabricated items, preassembled items, partially assembled items, or materials whatever their source of manufacture or construction.

(c) If any disagreement between the Contractor and the Unions concerning the methods of implementation or installation of any equipment, or device or item, or method of work, arises, or whether a particular part or pre-assembled item is a standardized or catalog part or item, the work will precede as directed by the Contractor and the Parties shall immediately consult over the matter. If the disagreement is not resolved, the affected Union(s) shall have the right to proceed through the procedures set forth in Article 10.

Section 9.5 No Less Favorable Treatment The Parties expressly agree that Project Work will not receive less favorable treatment than that on any other project which the Unions, Contractors and employees work.

**ARTICLE 10
SETTLEMENT OF GRIEVANCES AND DISPUTES**

Section 10.1 Cooperation and Harmony on Site

(a) This Agreement is intended to establish and foster continued close cooperation between management and labor. The Council shall assign a representative to this Project for the purpose of assisting the local Unions, and working with the Project Labor Coordinator, together

with the Contractors, to complete the construction of the Project economically, efficiency, continuously and without any interruption, delays or work stoppages.

(b) The Project Labor Coordinator, the Contractors, Unions, and employees collectively and individually, realize the importance to all Parties of maintaining continuous and uninterrupted performance Project Work, and agree to resolve disputes in accordance with the grievance provisions set forth in this Article or, as appropriate, those of Article 7 or 8.

(c) The Project Labor Coordinator shall oversee the processing of grievances under this Article and Articles 7 and 8, including the scheduling and arrangements of facilities for meetings, selection of the arbitrator from the agreed-upon panel to hear the case, and any other administrative matters necessary to facilitate the timely resolution of any dispute; provided, however, it is the responsibility of the principal parties to any pending grievance to insure the time limits and deadlines are met.

Section 10.2 Processing Grievances Any questions arising out of and during the term of this Agreement involving its interpretation and application, which includes applicable provisions of the Schedule A's, but not jurisdictional disputes or alleged violations of Section 7.1 and 7.4 and similar provisions, shall be considered a grievance and subject to resolution under the following procedures.

Step 1. Employee Grievances When any employee subject to the provisions of this Agreement feels aggrieved by an alleged violation of this Agreement, the employee shall, through his local Union business representative or, job steward, within ten (10) working days after the occurrence of the violation, give notice to the work site representative of the involved Contractor stating the provision(s) alleged to have been violated. A business representative of the local Union or the job steward and the work site representative of the involved Contractor shall meet and endeavor to adjust the matter within ten (10) working days after timely notice has been given. If they fail to resolve the matter within the prescribed period, the grieving party may, within ten (10) working days thereafter, pursue Step 2 of this grievance procedure, provided the grievance is reduced to writing, setting forth the relevant information, including a short description thereof, the date on which the alleged violation occurred, and the specific provision(s) of the Agreement alleged to have been violated. Grievances and disputes settled at Step 1 shall be non-precedential except as to the parties directly involved.

Union or Contractor Grievances Should the Union(s) or any Contractor have a dispute with the other Party(ies) and, if after conferring within ten (10) working days after the disputing Party knew or should have known of the facts or occurrence giving rise to the dispute, a settlement is not reached within five (5) working days, the dispute shall be reduced to writing and processed to Step 2 in the same manner as outlined in ~~1(a)~~ above for the adjustment of an employee complaint.

Step 2. The business manager of the involved local Union or his designee, together with the site representative of the involved Contractor, and the labor relations representative of the Project Labor Coordinator, shall meet within seven (7) working days of the referral of the dispute to this second step to arrive at a satisfactory settlement thereof. If the Parties fail to reach an

agreement, the dispute may be appealed in writing in accordance with the provisions of Step 3 within seven (7) calendar days after the initial meeting at Step 2.

Step 3. (a) If the grievance had been submitted but not resolved under Step 2, either the Union or Contractor Party may request in writing to the Project Labor Coordinator (with copy (ies) to the other Party (ies)) within seven (7) calendar days after the initial Step 2 meeting, that the grievance be submitted to the arbitrator next in order from the List of Neutral Arbitrators attached to this Agreement. The decision of the arbitrator shall be final and binding on all Parties and the fee and expenses of such arbitrations shall be borne equally by the involved Contractor(s) and the involved Union(s).

(b) Failure of the grieving Party to strictly adhere to the time limits established herein shall render the grievance null and void, irrespective of any pre-existing practice between the Parties set forth in other contracts or agreements separate and apart from this Agreement which may have otherwise permitted a grieving Party to deviate from, or otherwise not strictly adhere to, the time limits established for processing grievances. The time limits established herein may be extended only by written consent of the Parties involved at the particular step where the extension is agreed upon. The arbitrator shall have the authority to make decisions only on issues presented and shall not have the authority to change, amend, add to or detract from any of the provisions of this Agreement.

(c) The fees and expenses incurred by the arbitrator, as well as those jointly utilized by the Parties (i.e., conference room, court reporter, etc.) in arbitration, shall be divided equally by the Parties to the arbitration, including Union(s) and Contractor(s) involved.

Section 10.3 Limit on Use of Procedures Procedures contained in this Article shall not be applicable to any alleged violation of Articles 7 or 8, with a single exception that any employee discharged for violation of Section 7.2, or Section 8.3, may resort to the procedures of this Article to determine only if he/she was, in fact, engaged in that violation.

Section 10.4 Notice The Project Labor Coordinator (and the District, in the case of any grievance regarding the Scope of this Agreement), shall be notified by the involved Contractor of all actions at Steps 2 and 3, and further, the Project Labor Coordinator shall, upon its own request, be permitted to participate fully as a party in all proceedings at such steps.

ARTICLE 11 REGULATORY COMPLIANCE

Section 11.1 Compliance with All Laws The Council and all Unions, Contractors, subcontractors and their employed shall comply with all applicable federal and state laws, ordinances and regulations including, but not limited to, those relating to safety and health, employment and applications for employment. All employees shall comply with the safety regulations established by the District, the Project Labor Coordinator or the Contractor. Employees must promptly report any injuries or accidents to a supervisor.

Section 11.2 Monitoring Compliance The Parties agree that the District shall require, and that the Project Labor Coordinator and Council shall monitor, compliance by all Contractors and subcontractors with all federal and state laws regulation that, from time to time may apply to Project Work. It shall be the responsibility of both the Council and the Project Labor Coordinator (on behalf of the District) to investigate or monitor compliance with these various laws and regulations. The Council may recommend to the Project Labor Coordinator and/or the District procedures to encourage and enforce compliance with these laws and regulations.

Section 11.3 Prevailing Wage Compliance The Council or Union shall refer all complaints regarding any potential prevailing wage violation to the Project Labor Coordinator, who on its own, or with the assistance of the District's labor compliance program, shall process, investigate and resolve such complaints, consistent with Article 5, Section 5.4. The Council or Union, as appropriate, shall be advised in a timely manner with regard to the facts and resolution, if any, of any complaint. It is understood that this Section does not restrict any individual rights as established under the State Labor Code, including the rights of an individual to file a complaint with the State Labor Commissioner.

Section 11.4 Violations of Law Based upon a finding of violation by the District of a federal and state law, and upon notice to the Contractor that it or its subcontractors is in such violation, the District, in the absence of the Contractor or subcontractor remedying such violation, shall take such action as it is permitted by law or contract to encourage that Contractor to come into compliance, including, but not limited to, assessing fines and penalties and/or removing the offending Contractor from Project Work. Additionally, in accordance with the Agreement between the District and the Contractor, the District may cause the Contractor to remove from Project Work any subcontractor who is in violation of state or federal law.

ARTICLE 12 SAFETY AND PROTECTION OF PERSON AND PROPERTY

Section 12.1 Safety

(a) It shall be the responsibility of each Contractor to ensure safe working conditions and employee compliance with any safety rules contained herein or established by the District, the Project Labor Coordinator or the Contractor. It is understood that employees have an individual obligation to use diligent care to perform their work in a safe manner and to protect themselves and the property of the Contractor and the District.

(b) Employees shall be bound by the safety, security and visitor rules established by the Contractor, the Project Labor Coordinator and/or the District. These rules will be published and posted. An employee's failure to satisfy his/her obligations under this section will subject him/her to discipline, up to and including discharge.

(c) The Parties adopt the Los Angeles/Orange Counties Building and Construction Trades Council Approved Drug and Alcohol Testing Policy, a copy of which is attached hereto as Attachment E, which shall be the policy and procedure utilized under this Agreement.

Section 12.2 Inspection The inspection of incoming shipments of equipment, machinery, and construction materials of every kind shall be performed at the discretion of the Contractor by individuals of its choice.

Section 12.3 Suspension of Work for Safety A Contractor may suspend all or a portion of the job to protect the health and safety of employees. In such cases, employees will be compensated only for the actual time worked; provided, however, that where the Contractor requests employees to remain at the site and be available for work, the employees will be compensated for stand-by time at their basic hourly rate of pay.

Section 12.4 Water and Sanitary Facilities The Contractor shall provide adequate supplies of drinking water and sanitary facilities for all employees as required by state law or regulation.

ARTICLE 13 TRAVEL AND SUBSISTENCE

Travel expenses, travel time, subsistence allowances, zone rates and parking reimbursements shall be paid in accordance with the applicable Schedule A Agreement unless superseded by the applicable prevailing wage determination.

ARTICLE 14 APPRENTICES

Section 14.1 Importance of Training The Parties recognize the need to maintain continuing support of the programs designed to develop adequate numbers of competent workers in the construction industry, the obligation to capitalize on the availability of the local work force in the area served by the District, and the opportunities to provide continuing work under the construction program. To these ends, the Parties will facilitate, encourage, and assist local residents, District graduates, and District students to commence and progress in Labor/Management Apprenticeship and/or training programs in the construction industry leading to participation in such apprenticeship programs. The District, the Project Labor Coordinator, other District consultants, and the Council, will work cooperatively to identify, or establish and maintain, effective programs and procedures for persons interested in entering the construction industry and which will help prepare them for the formal joint labor/management apprenticeship programs maintained by the signatory Unions.

Section 14.2 Use of Apprentices

(a) Apprentices used on Projects under this Agreement shall be registered in Joint Labor Management Apprenticeship Programs approved by the State of California. Apprentices may comprise up to thirty percent (30%) of each craft's work force at any time, unless the standards of the applicable joint apprenticeship committee confirmed by the Division of Apprenticeship Standards ("DAS"), establish a lower maximum percentage, and where such is the case, the applicable Union should use its best efforts with the Joint Labor Management apprenticeship committee and, if necessary, the DAS to permit up to thirty percent (30%) apprentices on the Project.

(b) The Unions agree to cooperate with the Contractor in furnishing apprentices as requested up to the maximum percentage. The apprentice ratio for each craft shall be in compliance, at a minimum, with the applicable provisions of the Labor Code relating to utilization of apprentices. The District shall encourage such utilization, and, both as to apprentices and the overall supply of experienced workers, the Project Labor Coordinator will work with the Council to assure appropriate and maximum utilization of apprentices and the continuing availability of both apprentices and journey persons.

(c) The Parties agree that apprentices will not be dispatched to Contractors working under this Agreement unless there is a journeyman working on the Project where the apprentice is to be employed who is qualified to assist and oversee the apprentice's progress through the program in which he is participating.

(d) All apprentices shall work under the direct supervision of a journeyman from the trade in which the apprentice is indentured. A journeyman shall be defined as set forth in the California Code of Regulations, Title 8 [apprenticeship] section 205, which defines a journeyman as a person who has either completed an accredited apprenticeship in his or her craft, or has completed the equivalent of an apprenticeship in length and content of work experience and all other requirements in the craft which has workers classified as journeyman in the apprenticeable occupation. Should a question arise as to a journeyman's qualification(s) under this subsection, the Contractor shall provide adequate proof evidencing the worker's qualification(s) as a journeyman to the Construction Manager and the Council.

Section 14.3 Joint Subcommittee on Training and Apprenticeship To carry out the intent and purposes of this Article, a subcommittee of the Labor Management Committee established pursuant to Article 17 shall be established, jointly chaired by a designee of the District and a designee of the Council, to oversee the identification and/or effective development of procedures and programs leading to the full utilization of apprenticeship programs, and to work with representatives of each signatory craft's joint apprenticeship committee ("JAC") and representatives of the District's technical schools to establish appropriate criteria for recognition by such JAC's of the educational and work experience possessed by District students and graduates toward qualifying for entry or advanced level in the apprenticeship programs under the direction under such JAC's. The Subcommittee will meet as necessary at the call of the joint chairs to promptly facilitate its purposes in an expeditious manner as soon as this Agreement becomes effective. In addition to the joint chairs, the membership of the committee will consist of at least three representatives of the signatory local Unions and three representatives of Contractors signatory to this Agreement and experienced in overseeing and participating in joint labor management apprenticeship programs (or organizations to which the Contractors belong).

ARTICLE 15 WORKING CONDITIONS

Section 15.1 Meal and Rest Periods There will be no non-working times established during working hours except as may be required by applicable state law or regulations. Meal periods and Rest periods shall be as provided for in Wage Order 16. Individual coffee containers

will be permitted at the employees' work location; however, there will be no organized coffee breaks.

Section 15.2 Work Rules The District, the Project Labor Coordinator, and/or relevant Contractor shall establish such reasonable work rules as they deem appropriate and not inconsistent with this Agreement. These rules will be posted at the work sites by the Contractor and may be amended thereafter as necessary. Failure to observe these rules and regulations by employees may be grounds for discipline up to an including discharge.

Section 15.3 Emergency Use of Tools and Equipment There should be no restrictions on the emergency use of any tools by any qualified employee or supervisor, or on the use of any tools or equipment for the performance of work within the jurisdiction, provided the employee can safely use the tools and/or equipment involved and complies with any and all applicable governmental rules and regulations.

Section 15.4 Access Restrictions for Cars Recognizing the nature of the work being conducted on the site, employee access by a private automobile may be limited to certain roads and/or parking areas.

ARTICLE 16 PRE-JOB CONFERENCES

Section 16.1 Pre-Job Conferences

(a) Each Contractor will conduct a pre-job conference with the appropriate affected Union(s) prior to commencing work. The Council and the Construction Manager shall be advised in advance of all such conferences and may participate if they wish. All work assignments should be disclosed by the Contractor at a pre-job conference held in accordance with industry practice. Should there be any formal jurisdictional dispute raised under Article VIII, the Construction Manager shall be promptly notified.

(b) Each Contractor shall provide to the Unions, by no later than the date of the pre-job conference, a list of their core employees which they intend on using on this Project.

ARTICLE 17 LABOR/MANAGEMENT COOPERATION

Section 17.1 Joint Committee The Parties to this Agreement may establish, by a written mutual agreement, a six (6) person Joint Administrative Committee (JAC). If established, this JAC shall be comprised of three (3) representatives selected by the District and three (3) representatives selected by the Council to monitor compliance with the terms and conditions of this Agreement. Each representative shall designate an alternate who shall serve in his or her absence for any purpose contemplated by this Agreement.

Section 17.2 Functions of Joint Committee If established, the JAC shall meet on a schedule to be determined by the JAC or at the call of the joint chairs, to discuss the

administration of the Agreement, the progress of the Project, general labor management problems that may arise, and any other matters consistent with this Agreement. Substantive grievances or disputes arising under Articles 7, 8 or 10 shall not be reviewed or discussed by this JAC, but shall be processed pursuant to the provisions of the appropriate Article. The Project Labor Coordinator shall be responsible for the scheduling of the meetings, the preparation of the agenda topics for the meetings, with input from the Unions the Contractors and the District. Notice of the date, time and place of meetings, shall be given to the JAC members at least three (3) days prior to the meeting. The District should be notified of the meetings and invited to send a representative(s) to participate. The Project Labor Coordinator shall prepare quarterly reports on apprentice utilization and the training and employment of Local Residents, in furtherance of the local hire goal set forth under Section 3.5, and a schedule of Project Work and estimated number of craft workers needed. The Committee or an appropriate subcommittee, may review such reports and make any recommendations for improvement, if necessary, including increasing the availability of skilled trades, and the employment of local residents or other individuals who should be assisted with appropriate training to qualify for apprenticeship programs.

Section 17.3 Subcommittees The JAC may form subcommittees to consider and advise the full JAC with regard to safety and health issues affecting the Project and other similar issues affecting the overall Project, including any workers compensation program initiated under this Agreement.

Section 17.4 Third-Party Construction Project Management Notwithstanding any JAC or any subcommittee formed pursuant to this Article, the District may nonetheless contract with a third-party construction project management group, company, and/or consultant for the same or similar purposes and functions described in this Article and other related construction project management services.

ARTICLE 18 SAVINGS AND SEPARABILITY

Section 18.1 Savings Clause It is not the intention of the District, the Project Labor Coordinator, Contractor or the Union Parties to violate any laws governing the subject matter of this Agreement. The Parties hereto agree that in the event any provision of this Agreement is finally held or determined to be illegal or void as being in contravention of any applicable law or regulation, the remainder of the Agreement shall remain in full force and effect unless the part or parts so found to be void are wholly inseparable from the remaining portions of this Agreement. Further, the Parties agree that if and when any provision(s) of this Agreement is finally held or determined to be illegal or void by a court of competent jurisdiction, the Parties will promptly enter into negotiations concerning the substantive effect of such decision for the purposes of achieving conformity with the requirements of any applicable laws and the intent of the Parties hereto. If the legality of this Agreement is challenged and any form of injunctive relief is granted by any court, suspending temporarily or permanently the implementation of this Agreement, then the Parties agree that all Project Work that would otherwise be covered by this Agreement should be continued to be bid and constructed without application of this Agreement so that there is no delay or interference with the ongoing planning, bidding and construction of any Project Work.

Section 18.2 Effect of Injunctions or Other Court Orders The Parties recognize the right of the District to withdraw, at its absolute discretion, the utilization of the Agreement as part of any bid specification should a Court of competent jurisdiction issue any order, or any applicable statute which could result, temporarily or permanently in delay of the bidding, awarding and/or construction on the Project. Notwithstanding such an action by the District, or such court order or statutory provision, the Parties agree that the Agreement shall remain in full force and the fact on covered Project Work to the maximum extent legally possible.

ARTICLE 19 WAIVER

Section 19.1 Limited Waiver A waiver of or a failure to assert any provisions of this Agreement by any or all of the Parties hereto shall not constitute a waiver of such provision for the future. Any such waiver shall not constitute a modification of the Agreement or change in the terms and conditions of the Agreement and shall not relieve, excuse or release any of the Parties from any of their rights, duties or obligations hereunder.

ARTICLE 20 AMENDMENTS

Section 20.1 Written Amendments The provisions of this Agreement can be renegotiated, supplemented, rescinded or otherwise altered only by mutual agreement in writing, hereafter signed by the negotiating Parties hereto.

ARTICLE 21 DURATION OF THE AGREEMENT

Section 21.1 Duration

(a) This Agreement shall be effective from the date signed by all Parties (“Effective Date”) and shall remain in effect until all the Projects covered under Attachment F are completed. Any covered Project Work awarded during the term of this Agreement shall continue to be covered hereunder, until completion of the Project, notwithstanding the expiration date of this Agreement.

(b) This Agreement may be extended by mutual written agreement of the Parties in accordance with Article 20.

Section 21.2 Turnover and Final Acceptance of Completed Work

(a) Construction of any phase, portion, section, or segment of Project Work shall be deemed complete when such phase, portion, section or segment has been turned over to the District by the Contractor, and the District has accepted such phase, portion, section, or segment. As areas and systems of the Project are inspected and construction-tested and/or approved and accepted by the District or third parties with the approval of the District, the Agreement shall

have no further force or effect on such items or areas, except when the Contractor is directed by the District to complete repairs or modifications required by its contract(s) with the District.

(b) Notice of each final acceptance received by the Contractor will be provided to the Council with the description of what portion, segment, etc. has been accepted. Final acceptance may be subject to a “punch” list, and in such case, the Agreement will continue to apply to each such item on the list until it is completed to the satisfaction of the District and Notice of Acceptance is given by the District or its representative to the Contractor. At the request of the Union, complete information describing any “punch” list work, as well as any additional work required of a Contractor at the direction of the District pursuant to subsection (a) above, involving otherwise turned-over and completed facilities which have been accepted by the District, will be available from the Project Labor Coordinator.

ARTICLE 22 COMMUNITY WORKFORCE PROGRAM

Section 22.1 Community Workforce Programs. The Parties support the development of increased numbers of skilled construction workers comprised of Local Residents, as defined by Section 3.5, to meet the labor needs of covered Project Work specifically and the requirements of the local construction industry generally. To these ends, the Parties agree to endeavor in good faith and exercise best efforts with respect to the establishment of a work opportunities program for Local Residents, the primary goals of which shall be to maximize construction work opportunities for Local Residents in accordance with Section 3.5. Accordingly, the Union specifically agrees to:

(a) Encourage the referral and utilization, to the extent permitted by law and hiring hall practices of qualified Local Residents as journeymen, apprentices on covered Project Work and entrance into such qualified apprenticeship and training programs as may be operated by the signatory Unions; and

(b) Assist Local Residents, including the District’s high school students and District graduates, in contacting pre-apprenticeship programs that utilize the Building Trades multi-craft core curriculum (MC3) and the Apprenticeship Training Committees for the crafts and trades in which they are interested. The Unions shall assist Local Residents who are seeking Union jobs on the Project and Union membership in assessing their work experience and giving them credit for provable past experience in their relevant craft or trade, including experience gained working for non-union Contractors. The Unions shall put on their rolls qualified bona fide Local Residents for work on this Project; and

(c) The Union shall, if requested by the District, provide the Outreach Committee and/or Project Labor Coordinator with monthly progress reports detailing the number and residence (zip code) of individuals who have been contacted, recruited, or otherwise participated in any training, apprenticeship, or pre-apprenticeship programs. These monthly reports shall also detail whether such individuals reside in zip codes/areas which comport with the goals set forth in Section 3.5; and

(d) Support local events and programs designed to recruit and develop adequate numbers of qualified workers in the construction industry; and

(e) Work cooperatively with the District, the Project Labor Coordinator, and other District consultants to identify, or establish and maintain, effective programs, events and procedures for persons interested in entering the construction industry; and

(f) Participate in District-sponsored or -affiliated job fairs, career days, and outreach events, and if requested, provide speakers to participate in these activities and events; and

(g) The Council and the Unions agree that each year they will provide access and pathways to apprenticeship programs to District graduates and District students, including adult education students; and

(h) Allow tours of their JACs for Local Area Residents, District students, and District graduates, as requested; and

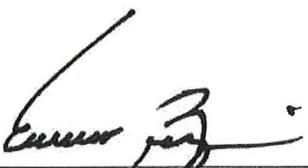
(i) Provide a contact information list for all Union representatives and Joint Apprenticeship Committee representatives; and

(j) Support local events and programs designed to recruit and develop adequate numbers of competent workers in the construction industry

IN WITNESS whereof the Parties have caused this Continuity of Work Agreement to be executed as of the date and year above stated.

EL MONTE UNION HIGH
SCHOOL DISTRICT

LOS ANGELES/ORANGE COUNTIES
BUILDING & CONSTRUCTION
TRADES COUNCIL

By: 

[Title]
SUPERINTENDENT

By: 

Ernesto Medrano,
Executive Secretary

LOS ANGELES/ORANGE COUNTIES BUILDING AND CONSTRUCTION TRADES
COUNCIL CRAFT UNIONS AND DISTRICT COUNCILS

Asbestos Heat & Frost Insulators (Local 5)

DocuSigned by:
Mike Patterson
8C2221009E91D4...

Boilermakers (Local 92)

DocuSigned by:
Luis Miramontes
F3A5638E9F8E48F...

Bricklayers & Allied Craftworkers (Local 4)

DocuSigned by:
Luis Alcala
E7A7F857E2E486...

Cement Masons (Local 600)

DocuSigned by:
Ricardo Gonzalez
59C2DDBFF7F442...

Electricians (Local 11)

DocuSigned by:
[Signature]
41ABFAE4F17481...

Elevator Constructors (Local 18)

DocuSigned by:
Chris Dolerty
315888357E7418...

Gunitite Workers (Local 345)

DocuSigned by:
Ed Ivan (Gunitite #345)
237F9087A3B5408...

Iron Workers (Reinforced – Local 416)

DocuSigned by:
Frankie Jimenez
5E8E6225F94468...

Iron Workers (Structural – Local 433)

DocuSigned by:
[Signature]
C14173C23E81CC...

District Council of Laborers

DocuSigned by:
Jon Priado
95151D0758AB44A...

Laborers (Local 300)

DocuSigned by:
SERGIO RILSON
9D9620D1C3F8449...

Laborers (Local 1184)

DocuSigned by:
[Signature]
B569A3D2C62940C...

Operating Engineers (Local 12)

Operating Engineers (Local 12)

Operating Engineers (Local 12)

Painters & Allied Trades DC 36

DocuSigned by:
Ernesto Toscano
2378C055A07401...

Pipe Trades (Local 250)

DocuSigned by:
Ben Clayton
B9F3A453E0A494...

Pipe Trades (Local 345)

DocuSigned by:
Ricardo Perez
82C14FFD8F5F484...

Pipe Trades (Plumbers Local 398)

DocuSigned by:
[Signature]
18C0A041DBDC44A...

Pipe Trades (Sprinkler Fitters Local 709)

DocuSigned by:
Todd Golden
8D8ACFF29135497...

Plasterers (Local 200)

DocuSigned by:
Christian Blancourt
44A53707BA3143B...

Plaster Tenders Local (1414)

Signed by:
Jose Sanchez
8D5D489AFEB4A7...

Roofers & Waterproofers (Local 36)

Signed by:
Cliff Smith
873508B8EB14C8...

Sheet Metal Workers (Local 105)

DocuSigned by:
Steve Hinson
D5C88122A8E151F...

Teamsters (Local 986)

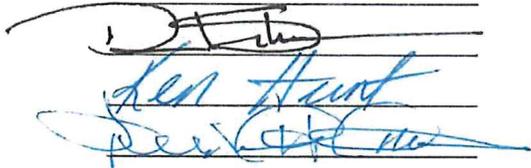
DocuSigned by:
Caesar Bonas
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Western States Regional Council of
Carpenters

Signed by:
Josh Kaper
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LOS ANGELES/ORANGE COUNTIES BUILDING AND CONSTRUCTION TRADES
COUNCIL CRAFT UNIONS AND DISTRICT COUNCILS

- Asbestos Heat & Frost Insulators (Local 5) _____
- Boilermakers (Local 92) _____
- Bricklayers & Allied Craftworkers (Local 4) _____
- Cement Masons (Local 600) _____
- Electricians (Local 11) _____
- Elevator Constructors (Local 18) _____
- Gunitite Workers (Local 345) _____
- Iron Workers (Reinforced – Local 416) _____
- Iron Workers (Structural – Local 433) _____
- District Council of Laborers _____
- Laborers (Local 300) _____
- Laborers (Local 1184) _____
- Operating Engineers (Local 12) _____
- Operating Engineers (Local 12) _____
- Operating Engineers (Local 12) _____
- Painters & Allied Trades DC 36 _____
- Pipe Trades (Local 250) _____
- Pipe Trades (Local 345) _____
- Pipe Trades (Plumbers Local 398) _____
- Pipe Trades (Sprinkler Fitters Local 709) _____
- Plasterers (Local 200) _____
- Plaster Tenders Local (1414) _____
- Roofers & Waterproofers (Local 36) _____
- Sheet Metal Workers (Local 105) _____
- Teamsters (Local 986) _____
- Western States Regional Council of
Carpenters _____



ATTACHMENT A – LETTER OF ASSENT

To be signed by all contractors awarded work covered by the Continuity of Work Agreement prior to commencing Project Work

[Contractor's Letterhead]
Project Labor Coordinator
C/O El Monte Union High School District
1234 address
City, state, zip code
Attn: _____

Re: Continuity of Work Agreement – New Construction and Modernization Projects Funded by Measure HS – Letter of Assent

To whom it may concern:

This is to confirm that [name of company] agrees to be party to and bound by the El Monte Union High School District Continuity of Work Agreement effective June 12, 2024, as such Agreement may, from time to time, be amended by the negotiating parties or interpreted pursuant to its terms. Such obligation to be a party and bound by this Agreement shall extend to all work covered by the agreement undertaken by this Company on the project and this Company shall require all of its contractors and subcontractors of whatever tier to be similarly bound for all work within the scope of the Agreement by signing and furnishing to you an identical letter of assent prior to their commencement of work.

Sincerely,

[Name of Construction Company]

By: [_____] Name and Title of Authorized Executive

[Copies of this letter must be submitted to the Project Labor Coordinator and to the Council, consistent with Article II, Section 2.4(b).]

ATTACHMENT B – LIST OF MUTUAL ARBITRATORS

1. Najeeb Khoury
2. Sara Adler
3. David Weinberg
4. Andrea Dooley
5. Mark Burstein
6. Chris Cameron
7. Fred Horowitz

ATTACHMENT C – LIST OF ZIP CODES

Tier 2: 8 Mile Radius

90601 Whittier, CA	91770 Rosemead, CA	91182 Pasadena, CA
90606 Whittier, CA	91775-San Gabriel, CA	91184 Pasadena, CA
90640 Montebello, CA	91776 San Gabriel, CA	91185 Pasadena, CA
90660 Pico Rivera, CA	91780 Temple City, CA	91189 Pasadena, CA
91006 Arcadia, CA	91790 West Covina, CA	91199 Pasadena, CA
91007 Arcadia, CA	91801 Alhambra, CA	91714 City of Industry, CA
91008 Duarte, CA	91803 Alhambra, CA	91716 City of Industry, CA
91010 Duarte, CA	90607 Whittier, CA	91734 El Monte, CA
91016 Monrovia, CA	90608 Whittier, CA	91735 El Monte, CA
91030 South Pasadena, CA	90609 Whittier, CA	91747 La Puente, CA
91101 Pasadena, CA	90661 Pico Rivera, CA	91749 La Puente, CA
91104 Pasadena, CA	90662 Pico Rivera, CA	91756 Monterey Park CA
91106 Pasadena, CA	91009 Duarte, CA	91771 Rosemead, CA
91107 Pasadena, CA	91017 Monrovia, CA	91772 Rosemead, CA
91108 San Marino, CA	91025 Sierra Madre, CA	91778 San Gabriel, CA
91121 Pasadena, CA	91031 South Pasadena, CA	91793 West Covina, CA
91123 Pasadena, CA	91066 Arcadia, CA	91797 Pomona, CA
91125 Pasadena, CA	91077 Arcadia, CA	91802 Alhambra, CA
91188 Pasadena, CA	91102 Pasadena, CA	91804 Alhambra, CA
91706 Baldwin Park, CA	91109 Pasadena, CA	91896 Alhambra, CA
91715 City of Industry, CA	91110 Pasadena, CA	91899 Alhambra, CA
91731 El Monte, CA	91114 Pasadena, CA	
91732 El Monte, CA	91115 Pasadena, CA	
91733 South. El Monte, CA	91116 Pasadena, CA	
91744 La Puente, CA	91117 Pasadena, CA	
91745 Hacienda Heights, CA	91118 San Marino, CA	
91746 La Puente, CA	91124 Pasadena, CA	
91754 Monterey Park, CA	91126 Pasadena, CA	
91755 Monterey Park, CA	91129 Pasadena, CA	

ATTACHMENT D

**EL MONTE UNION HIGH SCHOOL DISTRICT
CRAFT REQUEST FORM**

TO THE CONTRACTOR: Please complete and submit this form to the applicable union to request craft workers that fulfill the hiring requirements for this project. After submitting your request, please call the Local to verify receipt and substantiate their capacity to furnish workers as specified below. Please keep copies for your records.

The El Monte Union High School District Continuity of Work Agreement, under Section 3.5, establishes a goal that 30% of all construction labor hours worked on the Project shall be from the following categories of qualified area residents, listed in priority order: (1) individuals residing in those first tier zip codes within an eight (8) mile radius of the District’s headquarters, veterans, regardless of where they reside; and current and former students of the District who have completed a MC3 Program, regardless of where they reside; (2) individuals residing within the zip codes covering the territorial boundaries of any city bordering on the geographical area covered within such eight mile radius, as reflected on the list of U.S. Postal Service zip codes attached hereto as Attachment “C”; (3) individuals residing within the remainder of the County of Los Angeles; and (4) all other MC3 graduates, regardless of where they reside. For dispatch purposes, employees described above shall be referred to as “Local Residents.”

TO THE UNION: Please complete the “Union Use Only” section on the next page and return this form to the requesting Contractor. Be sure to retain a copy of this form for your records.

CONTRACTOR USE ONLY

To: Union Local # _____ **Fax#** () _____ **Date:** _____

Cc: Community Workforce Coordinator

From: Company: _____ **Issued By:** _____

Contact Phone: () _____ **Contact Fax:** () _____

PLEASE PROVIDE ME WITH THE FOLLOWING UNION CRAFT WORKERS.

Craft Classification (i.e., plumber, painter, etc.)	Journeyman or Apprentice	Local Resident or General Dispatch	Number of workers needed	Report Date	Report Time
TOTAL WORKERS REQUESTED = _____					

Please have worker(s) report to the following work address indicated below:

Project Name: _____ **Site:** _____ **Address:** _____

Report to: _____ **On-site Tel:** _____ **On-site Fax:** _____

Comment or Special Instructions: _____

UNION USE ONLY

Date dispatch request received:
Dispatch received by:
Classification of worker requested:
Classification of worker dispatched:

WORKER REFERRED

Name:		
Date worker was dispatched:		
Is the worker referred a:		(check all that apply)
JOURNEYMAN	Yes _____	No _____
APPRENTICE	Yes _____	No _____
LOCAL RESIDENT	Yes _____	No _____
GENERAL DISPATCH FROM OUT OF WORK LIST	Yes _____	No _____

[This form is not intended to replace a Local Union's Dispatch or Referral Form normally given to the employee when being dispatched to the jobsite.]

ATTACHMENT E

LOS ANGELES/ORANGE COUNTIES BUILDING AND CONSTRUCTION TRADES COUNCIL APPROVED DRUG AND ALCOHOL TESTING POLICY

(rev. December 2019)

The Parties recognize the problems which drug and alcohol abuse have created in the construction industry and the need to develop drug and alcohol abuse prevention programs. Accordingly, the Parties agree that in order to enhance the safety of the workplace and to maintain a drug and alcohol-free work environment, individual Employers may require applicants or employees to undergo drug and alcohol testing.

1. It is understood that the use, possession, transfer or sale of illegal drugs, narcotics, or other unlawful substances, as well as being under the influence of alcohol and the possession or consuming alcohol is absolutely prohibited while employees are on the Employer's job premises or while working on any jobsite in connection with work performed under the Continuity of Work Agreement ("CWA").
2. No Employer may implement a drug testing program which does not conform in all respects to the provisions of this Policy.
3. No Employer may implement drug testing at any jobsite unless written notice is given to the Union setting forth the location of the jobsite, a description of the project under construction, and the name and telephone number of the Project Supervisor. Said notice shall be addressed to the office of each Union signing the CWA. Said notice shall be sent by email or by registered mail before the implementation of drug testing. Failure to give such notice shall make any drug testing engaged in by the Employer a violation of the CWA, and the Employer may not implement any form of drug testing at such jobsite for the following six months.
4. An Employer who elects to implement drug testing pursuant to this Agreement shall require all employees on the Project to be tested. With respect to individuals who become employed on the Project subsequent to the proper implementation of a valid drug testing program, such test shall be administered upon the commencement of employment on the project, whether by referral from a Union Dispatch Office, transfer from another project, or another method. Individuals who were employed on the project prior to the proper implementation of a valid drug testing program may only be subjected to testing for the reasons set forth in paragraphs 5(g)(1) through 5(g)(3) and paragraphs 6(a) through 6(e) of this Policy. Refusal to undergo such testing shall be considered sufficient grounds to deny employment on the project.
5. The following procedure shall apply to all drug testing:
 - a. The Employer may request urine samples only. The applicant or employee shall not be observed when the urine specimen is given. An applicant or employee, at his or her sole option, shall, upon request, receive a blood test in lieu of a urine test. No employee of the

Employer shall draw blood from a bargaining unit employee, touch or handle urine specimens, or in any way become involved in the chain of custody of urine or blood specimens. A Union Business Representative, subject to the approval of the individual applicant or employee, shall be permitted to accompany the applicant or employee to the collection facility to observe the collection, bottling, and sealing of the specimen.

b. An employer may request an applicant to perform an alcohol breathalyzer test, at a certified laboratory only and cutoff levels shall be those mandated by applicable state or federal law.

c. The testing shall be done by a laboratory approved by the Substance Abuse & Mental Health Services Administration (SAMHSA), which is chosen by the Employer and the Union.

d. An initial test shall be performed using the Enzyme Multiplied Immunoassay Technique (EMIT). In the event a question or positive result arises from the initial test, a confirmation test must be utilized before action can be taken against the applicant or employee. The confirmation test will be by Gas Chromatography/Mass Spectrometry (GC/MS). Cutoff levels for both the initial test and confirmation test will be those established by SAMHSA. Should these SAMHSA levels be changed during the course of this Agreement or new testing procedures are approved, then these new regulations will be deemed as part of this existing Agreement. Confirmed positive samples will be retained by the testing laboratory in secured long-term frozen storage for a minimum of one year. Handling and transportation of each sample must be documented through strict chain of custody procedures.

e. In the event of a confirmed positive test result the applicant or employee may request, within forty-eight (48) hours, a sample of his/her specimen from the testing laboratory for purposes of a second test to be performed at a second laboratory, designated by the Union and approved by SAMHSA. The retest must be performed within ten (10) days of the request. Chain of custody for this sample shall be maintained by the Employer between the original testing laboratory and the Union's designated laboratory. Retesting shall be performed at the applicant's or employee's expense. In the event of conflicting test results the Employer may require a third test.

f. If, as a result of the above testing procedure, it is determined that an applicant or employee has tested positive, this shall be considered sufficient grounds to deny the applicant or employee his/her employment on the project.

g. No individual who tests negative for drugs pursuant to the above procedure and becomes employed on the project shall again be subjected to drug testing with the following exceptions:

1. Employees who are involved in industrial accidents resulting in damage to plant, property or equipment or injury to him/her or others may be tested for drug or alcohol pursuant to the procedures stated hereinabove.

2. The Employer may test employees following thirty (30) days advance written notice to the employee(s) to be tested and to the applicable Union. Notice to the applicable Union shall be as set forth in paragraph 3 above and such testing shall be pursuant to the procedures stated hereinabove.

3. The Employer may test an employee where the Employer has reasonable cause to believe that the employee is impaired from performing his/her job. Reasonable cause shall be defined as being aberrant or unusual behavior, the type of which is a recognized and accepted symptom of impairment (i.e., slurred speech, unusual lack of muscular coordination, etc.). Such behavior must be actually observed by at least two persons, one of whom shall be a supervisor who has been trained to recognize the symptoms of drug abuse or impairment and the other of whom shall be the Job Steward. If the Job Steward is unavailable or there is no Job Steward on the project the other person shall be a member of the applicable Union's bargaining unit. Testing shall be pursuant to the procedures stated hereinabove. Employees who are tested pursuant to the exceptions set forth in this paragraph and who test positive will be removed from the Employer's payroll.

h. Applicants or employees who do not test positive shall be paid for all time lost while undergoing drug testing. Payment shall be at the applicable wage and benefit rates set forth in the applicable Union's Master Labor Agreement. Applicants who have been dispatched from the Union and who are not put to work pending the results of a test will be paid waiting time until such time as they are put to work. It is understood that an applicant must pass the test as a condition of employment. Applicants who are put to work pending the results of a test will be considered probationary employees.

6. The Employers will be allowed to conduct periodic jobsite drug testing on the Project under the following conditions:

a. The entire jobsite must be tested, including any employee or subcontractor's employee who worked on that project three (3) working days before or after the date of the test;

b. Jobsite testing cannot commence sooner than fifteen (15) days after start of the work on the project;

c. Prior to start of periodic testing, a Business Representative will be allowed to conduct an educational period on company time to explain periodic jobsite testing program to affected employees;

d. Testing shall be conducted by a SAMHSA certified laboratory, pursuant to the provisions set forth in paragraph 5 hereinabove.

e. Only two (2) periodic tests may be performed in a twelve (12) month period.

7. It is understood that the unsafe use of prescribed medication, or where the use of

prescribed medication impairs the employee's ability to perform work, is a basis for the Employer to remove the employee from the jobsite.

8. Any grievance or dispute which may arise out of the application of this Agreement shall be subject to the grievance and arbitration procedures set forth in the CWA.

9. The establishment or operation of this Policy shall not curtail any right of any employee found in any law, rule or regulation. Should any part of this Agreement be found unlawful by a court of competent jurisdiction or a public agency having jurisdiction over the parties, the remaining portions of the Agreement shall be unaffected, and the parties shall enter negotiations to replace the affected provision.

10. Present employees, if tested positive, shall have the prerogative for rehabilitation program at the employee's expense. When such program has been successfully completed the Employer shall not discriminate in any way against the employee. If work for which the employee is qualified exists, he/she shall be reinstated.

11. The Employer agrees that results of urine and blood tests performed hereunder will be considered medical records held confidential to the extent permitted or required by law. Such records shall not be released to any persons or entities other than designated Employer representatives and the applicable Union. Such release to the applicable Union shall only be allowed upon the signing of a written release and the information contained therein shall not be used to discourage the employment of the individual applicant or employee on any subsequent occasion.

12. The Employer shall indemnify and hold the Union harmless against any and all claims, demands, suits, or liabilities that may arise out of the application of this Agreement and/or any program permitted hereunder.

13. Employees who seek voluntary assistance for substance abuse may not be disciplined for seeking such assistance. Requests from employees for such assistance shall remain confidential and shall not be revealed to other employees or management personnel without the employee's consent. Employees enrolled in substance abuse programs will be subject to all Employer rules, regulations and job performance standards with the understanding that an employee enrolled in such a program is receiving treatment for an illness.

14. The parties agree to develop and implement a drug abuse prevention and testing program for all apprentices entering the industry.

15. This Memorandum of Understanding shall constitute the only Agreement in effect between the parties concerning drug and alcohol abuse, prevention and testing. Any modifications thereto must be accomplished pursuant to collective bargaining negotiations between the parties.

APPENDIX A: SPECIMEN REPORTING CRITERIA

Initial Test Analyte	Initial Test Cutoff ²	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Marijuana metabolites (THCA) ³	50 ng/ml ⁴	THCA	15 ng/ml
Cocaine metabolite (Benzoylecgonine)	150ng/ml ³	Benzoylecgonine	100 ng/ml
Codeine/ Morphine	2000 ng/ml	Codeine Morphine	2000 ng/ml 2000 ng/ml
Hydrocodone/ Hydromorphone	300 ng/ml	Hydrocodone Hydromorphone	100 ng/ml 100 ng/ml
Alcohol	0.02%	Ethanol	0.02%
Oxycodone/ Oxymorphone	100 ng/ml	Oxycodone Oxymorphone	100 ng/ml 100 ng/ml
6-Acetylmorphine	10 ng/ml	6-Acetylmorphine	10 ng/ml
Phencyclidine	25 ng/ml	Phencyclidine	25 ng/ml
Amphetamine/ Methamphetamine	500 ng/ml	Amphetamine Methamphetamine	250ng/ml 250 ng/ml
MDMA ⁵ /MDA ⁶	500 ng/ml	MDMA MDA	250ng/ml 250 ng/ml

² For grouped analytes (i.e., two or more analytes that are in the same drug class and have the same initial test cutoff):

Immunoassay: The test must be calibrated with one analyte from the group identified as the target analyte. The cross-reactivity of the immunoassay to the other analyte(s) within the group must be 80 percent or greater; if not, separate immunoassays must be used for the analytes within the group.

Alternate technology: Either one analyte or all analytes from the group must be used for calibration, depending on the technology. At least one analyte within the group must have a concentration equal to or greater than the initial test cutoff or, alternatively, the sum of the analytes present (i.e., equal to or greater than the laboratory's validated limit of quantification) must be equal to or greater than the initial test cutoff.

³ An immunoassay must be calibrated with the target analyte, 9-tetrahydrocannabinol-9- carboxylic acid (THCA).

⁴ **Alternate technology (THCA and benzoylecgonine):** The confirmatory test cutoff must be used for an alternate technology initial test that is specific for the target analyte (i.e., 15 ng/ml for THCA, 100 ng/ ml for benzoylecgonine).

⁵ Methylenedioxymethamphetamine (MDMA)

⁶ Methylenedioxyamphetamine (MDA)

Initial Test Analyte	Initial Test Cutoff	Confirmatory Test Analyte	Confirmatory Test Cutoff Concentration
Barbiturates	300 ng/ml	Barbiturates	200 ng/ml
Benzodiazepines	300 ng/ml	Benzodiazepines	300 ng/ml
Methadone	300 ng/ml	Methadone	100 ng/ml
Methaqualone	300 ng/ml	Methaqualone	300 ng/ml
Propoxyphene	300 ng/ml	Propoxyphene	100 ng/ml

**SIDE LETTER OF AGREEMENT
TESTING POLICY FOR DRUG ABUSE**

It is hereby agreed between the parties hereto that an Employer who has otherwise properly implemented drug testing, as set forth in the Testing Policy for Drug Abuse, shall have the right to offer an applicant or employee a "quick" drug screening test. This "quick" screen test shall consist either of the "ICUP" urine screen or similar test or an oral screen test. The applicant or employee shall have the absolute right to select either of the two "quick" screen tests, or to reject both and request a full drug test.

An applicant or employee who selects one of the "quick" screen tests, and who passes the test, shall be put to work immediately. An applicant or employee who fails the "quick" screen test, or who rejects the "quick" screen tests, shall be tested pursuant to the procedures set forth in the Testing Policy for Drug Abuse. The sample used for the "quick" screen test shall be discarded immediately upon conclusion of the test. An applicant or employee shall not be deprived of any rights granted to them by the Testing Policy for Drug Abuse as a result of any occurrence related to the "quick" screen test.

ATTACHMENT F – LIST OF COVERED PROJECTS

- Arroyo High School modernization and new construction
- El Monte High School modernization and new construction
- Rosemead High School modernization
- Adult Transition Center new construction