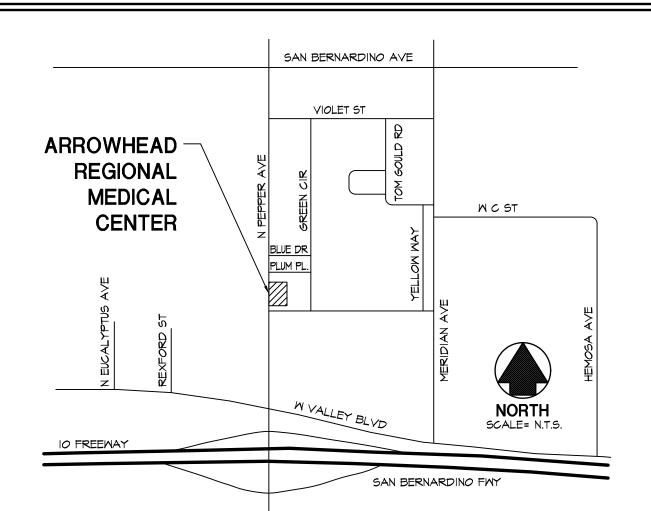
ELEVATOR MODERNIZATION ELEVATORS 1 & 2



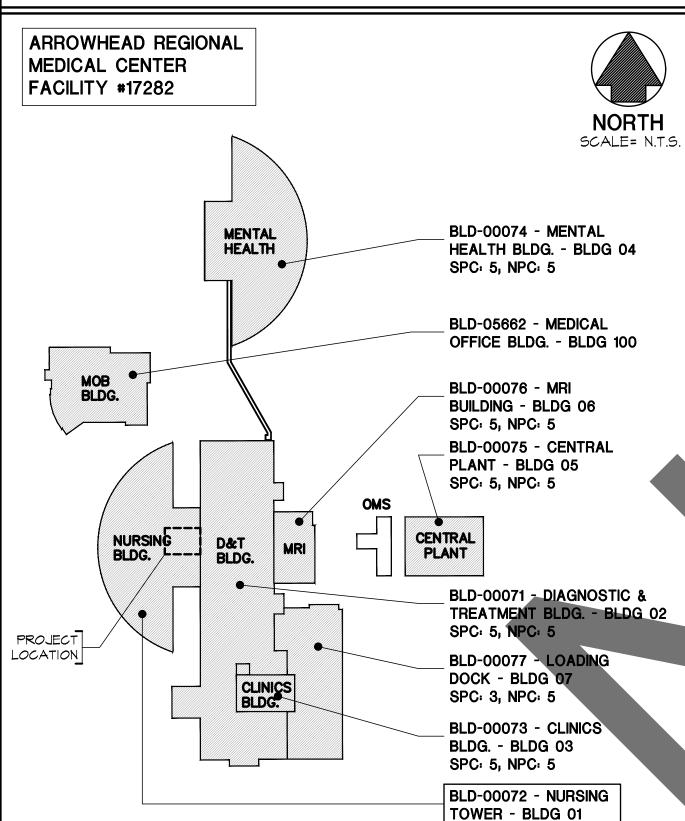
400 N. PEPPER AVE. COLTON CA. 92324 SAN BERNARDINO COUNTY, CALIFORNIA WBSE* 10.10.1057

VICINITY MAP

PROJECT DATA



MAP



SPC: 5, NPC: 5

APPLICABLE CODES: PER 2019 CBC CHAPTER 35 1 PART I, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CCR BASED ON THE 2018 INTERNATIONAL BUILDING CODE (IBC) CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CCR BASED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC)

- CALIFORNIA MECHANICAL CODE (CMC)
 PART 4, TITLE 24, CCR BASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC) CALIFORNIA PLUMBING CODE (CPC)
- BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) CALIFORNIA ENERGY CODE (CEC)
- PART 6, TITLE 24, CCR CALIFORNIA HISTORICAL BUILDING CODE (CHBC) PART 8, TITLE 24, CCR
- CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CCR
- BASED ON THE 2018 INTERNATIONAL FIRE CODE (IFC) CALIFORNIA EXISTING BUILDING CODE (CEBC)
 PART 10, TITLE 24, CCR
 BASED ON THE 2018 INTERNATIONAL BUILDING CODE
- CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN) 2016 NFPA 101 LIFF SAFETY STANDARDS CODE (CRSC)
- THE JOINT COMMISSION REQUIRES REFERENCE TO THE FOLLOWING CODES: NFPA 99 HEALTHCARE FACILITIES CODE

NFPA IOI LIFE SAFETY CODE **NEW AND EXISTING CONSTRUCTION**

TYPE I-A, THE BUILDING IS FULLY SPRINKLERED BY AUTOMATIC FIRE SPRINKLER SYSTEM

BUILDING HEIGHT:

SIX STORY BUILDING - 105'-0" ROOF HEIGHT

CONSTRUCTION TYPE: TYPE I-A

EXISTING BUILDING ELEMENTS FULLY SPRINKLERED EXTERIOR BEARING WALLS (PREC) T CONC. WAL INTERIOR BEARING WALLS (NONE) STRUCTURAL FRAME (CONC. COLUMNS W/ CONC. BEAMS INTERIOR NON-LOAD BEARING PARTITIONS (20 GA STL. STI SHAFT ENCLOSURES FLOORS (CONCRETE SLAB) 2 HR. ROOFS (CONCRETE SLAB)

SB 1953 **STATUS**:

OCCUPANCY CLASSIFICATION:

1-2 (HOSPITAL)

DEFERRED APPROVALS: (THE FOLLOWING ARE DEFERRED APPROVALS THAT REQUIRE HCAI INSTALLATION LOCATION & DETAILS OF ELEVATOR CONTROL PANEL IN FIRE

CERTIFICATION OF EQUIPMENT AND NONSTRUCTURAL COMPONENTS

ACCORDANCE WITH 2019 CBC, SECTION 1705.13.2, "SEISMIC CERTIFICATION OF NONSTRUCTURAL COMPONENTS" - THE FOLLOWING ARE COMPONENTS THAT REQUIRE SPECIAL SEISMIC

NONE

PROJECT AREAS ARE THE ELEVATOR | & 2 SHAFT AREAS AT THE GROUND, IST, 2ND, 3RD, 4TH, 5TH, 6TH FLOORS, AND ROOF PENTHOUSE, 230 S.F. PER FLOOR; TOTAL AREA = 1,610 S.F.

DESCRIPTION OF WORK:

MODERNIZATION OF ELEVATORS | & 2 INCLUDING REPLACEMENT OF AND UPGRADES TO EXISTING DIGITAL CONTROLS, DRIVE SYSTEM, MOTOR, INFANT SECURITY INTERFACE, PROGRAMMING, LIGHTING, POSITION INDICATORS, PANELS, BUTTONS, AND CAB FINISHES.

INDEX TO DRAWINGS

TITLE SHEET - INDEX TO DRAWINGS .2 GENERAL NOTES

AI.I SITE PLAN - PATH OF TRAVEL AI.2 2ND, 3RD, \$ 4TH FLOOR PATH OF TRAVEL

AI.3 5TH, 6TH & PENTHOUSE FLOOR PATH OF TRAVEL A2.1 GROUND, IST, 2ND AND 3RD FLOOR PLANS A22 4TH, 5TH, 6TH AND PENTHOUSE FLOOR PLANS A23 TEMPORARY WALL FLOOR PLAN & DETAILS, AND VI

EXISTING ELEVATOR INTERIOR ELEVATIONS A2.4 LIFE SAFETY FLOOR PLANS

A2.5 LIFE SAFETY FLOOR PLANSA3.1 SPECIFICATIONS
A3.1 SPECIFICATIONS

A3.2 SPECIFICATIONS A3.3 SPECIFICATIONS

EO.I ELECTRICAL COVERSHEET

EO.2 SINGLE LINE DIAGRAM E2.I GROUND, IST, 2ND, AND 3RD DEMOLITION PLANS

E2.2 GROUND, IST 2ND, AND 3RD REMODEL PLANS E2.3 4TH, 5TH, 6TH, AND PENTHOUSE DEMOLITION PLANS

E2.4 4TH, 5TH, 6TH, AND PENTHOUSE REMODEL PLANS E3.I DETAILS

SYMBOL LEGEND

COLUMN LINES, GRID LINES LETTERS IN ONE DIRECTION NUMBERS IN OTHER DIRECTION

PORTION IS THE SIDE SHOWN RE UNSHOWN PORTION IS DRAWN ELEVATION SECTION/ELEVATION ICATION SHEET WHERE SECTION/ELEVATION IS DRAWN

DENTIFICATION T WHERE DETAIL IS DRAWN

GLAZING SYMBOL REVISION CLOUD AROUND REVISED

AREA REVISION NUMBER ROOM IDENTIFICATION INTERIOR ELEVATION

- ROOM NUMBER WORK POINT, CONTROL POINT

ELEVATION IDENTIFICATION

OR DATUM POINT

GENERAL NOTES

EQUIPMENT ANCHORAGE

ANCHORAGE AND SUPPORTS OF ALL EQUIPMENT TO BE INSTALLED, AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY 2019 CBC SECTION 1617A.1.18 ASCE 7, SECTION 13.1.4. I. FURNITURE (EXCEPT STORAGE CABINETS AS NOTED IN TABLE 13.5-1 OF ASCE 7). 2. TEMPORARY OR MOVEABLE EQUIPMENT

a) EQUIPMENT SHALL BE ANCHORED IF IT IS PERMANENTLY ATTACHED TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER FOR THE PURPOSES OF THIS REQUIREMENT, "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS

EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING A FLEXIBLE CABLE. LOCATED 4 FEET (1.22 M) OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY OBILE EQUIPMENT SHALL BE RESTRAINED WHEN NOT IN USE AND IS STORED, UNLESS THE VENT IS STORED IN A STORAGE ROOM THAT DOES NOT HOUSE HAZARDOUS MATERIALS OR ANY SYSTEMS OR FIXED EQUIPMENT THAT CAN BE AFFECTED BY MOBILE EQUIPMENT LACKING

MOVABLE EQUIPMENT SHALL BE ANCHORED BY DETACHABLE ANCHORS OR RESTRAINTS IN A MANNER APPROVED BY THE ENFORCEMENT AGENCY, WHEN UTILITIES AND SERVICES AT THE EQUIPMENT HAVE FLEXIBLE CONNECTIONS TO ALLOW FOR NECESSARY MOVEMENT.

d) MOBILE EQUIPMENT HEAVIER THAN 400 POUNDS THAT HAS A CENTER OF MASS LOCATED 4 FEET (1.22 M) OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE EQUIPMENT SHALL BE RESTRAINED IN A MANNER APPROVED BY THE ENFORCEMENT AGENCY WHEN NOT IN USE AND IS STORED, UNLESS THE EQUIPMENT IS STORED IN AN EQUIPMENT STORAGE ROOM

RETE ARCHITECTURAL, MECHANICAL AND ELECTRICAL COMPONENTS AND FIXED EQUIPMENT IN SEISMIC CATEGORY D, E OR F THAT ARE POSITIVELY ATTACHED TO THE STRUCTURE AND ANCHORAGE IS LIHE PLANS, PROVIDED THAT EITHER

E COMPONENT WEIGHS 400 POUNDS (1780 N) OR LESS, THE CENTER OF MASS IS LOCATED 4 FEET I (1.22 M) OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORTS THE COMPONENT, AND FLEXIBLE CONNECTIONS ARE PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED

DUCTWORK, PIPING AND CONDUIT EXCEPTION: SPECIAL SEISMIC CERTIFICATION REQUIREMENTS OF THIS CODE IN ACCORDANCE WITH SECTION 1705A.13.3 SHALL BE APPLICABLE.

b) THE COMPONENT WEIGHS 20 POUNDS (89 N) OR LESS OR, IN THE CASE OF A DISTRIBUTED SYSTEM, 5 LB/FT (73 NM) OR LESS.

EXCEPTION: THE ENFORCEMENT AGENCY SHALL BE PERMITTED TO REQUIRE ATTACHMENTS FOR EQUIPMENT WITH HAZARDOUS CONTENTS TO BE SHOWN ON CONSTRUCTION DOCUMENTS IRRESPECTIVE

INSTALLATION OF POST INSTALLED ANCHORS

WHEN INSTALLING DRILLED-IN ANCHORS AND/OR POWDER DRIVEN PINS IN EXISTING NON-PRESTRESSED REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. WHEN INSTALLING THEM INTO EXISTING PRE-STRESSED CONCRETE (PRE- OR POST-TENSIONED) LOCATE THE PRESTRESSED TENDONS BY USING A NON-DESTRUCTIVE METHOD PRIOR TO INSTALLATION. EXERCISE EXTREME CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE TENDONS DURING INSTALLATION. MAINTAIN A MINIMUM CLEARANCE OF ONE INCH BETWEEN THE REINFORCEMENT AND THE DRILLED-IN ANCHOR AND/OR PIN

. FIRE SPRINKLERS : 🔼

SPACING AND DETAILS OF THE SUPPORT AND BRACING OF FIRE SPRINKLER PIPING SHALL COMPLY WITH THE 2016 EDITION OF NFPA 13 AND CHAPTER 13 OF ASCE 7 AS MODIFIED BY THE CBC 2019, SECTION 1617A AND STATE FIRE MARSHAL AMENDMENTS.

. LATERAL FORCE DESIGN CRITERIA

PER 2019 CBC SECTION 1603A.1.5, THE FOLLOWING INFORMATION RELATED TO SEISMIC LOADS FOR EQUIPMENT ANCHORAGE DESIGN SHALL BE AS NOTED BELOW: SEISMIC IMPORTANCE FACTOR:

RISK CATEGORY: MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss = 2.05S = .813 4. SITE CLASS: 5. SPECTRAL RESPONSE COEFFICIENTS = 1.64 = NULL

6. SEISMIC DESIGN CATEGORY:

F. INFECTION CONTROL: PROVIDE AND INSTALL BARRICADES OF THE SAME MATERIAL AND RATED ASSEMBLIES (SELF CLOSING AND POSITIVE LATCHING DOORS) AS REQUIRED FOR THE PERMANENT INSTALLATION (HARD BARRICADE). WHERE NO RATING IS REQUIRED BARRICADES MAY BE CONSTRUCTED OF FIRE RESISTANT 4 MIL PLASTIC

- SHEETS, VISQUEEN, (SOFT BARRICADE) MADE AIR TIGHT. 2. BARRICADES ARE TO PREVENT UNAUTHORIZED ENTRY INTO THE CONSTRUCTION AREA AND TO PERMIT THE OWNER THE CONTINUED USE OF THE ADJACENT AREAS. BARRICADES SHALL BE AIR TIGHT SO AS NO DUST, CONTAMINATED AIR, FUMES, GASES, AND ODORS WILL BE ALLOWED IN CORRIDORS OR ANY OTHER OWNER OCCUPIED AREAS.
- 3. PROVIDE CONTAMINATION CONTROL FLOOR MATS (STICKY MATS) AT THE ACCESS TO THE CONSTRUCTION AREA TO PREVENT THE TRACKING OF CONSTRUCTION DUST.
- 4. MAINTAIN NEGATIVE AIR PRESSURE (A MAGNEHELIC GAUGE READING OF -.IO) CONTINUOUSLY AND UNINTERRUPTED FOR THE DURATION OF THE CONSTRUCTION. THE NEGATIVE AIR PRESSURE MAY BE ACHIEVED BY PORTABLE FANS WITH HEPA FILTERS, OR OTHER FAN UNITS TO FACILITATE THE VENTILATION OF THE ENCLOSED CONSTRUCTION AREA. UNITS SHALL BE SET UP TO EXHAUST DIRECTLY TO THE OUTSIDE. WHERE IT IS NOT POSSIBLE TO EXHAUST TO THE OUTSIDE, FILTERED AIR MAY BE RE-CIRCULATED WITHIN THE CONSTRUCTION AREA.
- 5. PROVIDE VISQUEEN BARRICADES PRIOR TO THE ERECTION OF HARD BARRICADES AND PRIOR TO REMOVING THEM. VACUM AREA WITH HEPA VACUM AFTER REMOVING THE HARD BARRICADE AND PRIOR TO REMOVING THE SOFT BARRICADE. CARE SHOULD BE TAKEN NOT TO TRANSMIT DUST ON THE VISQUEEN INTO ADJACENT AREAS.

POLICY INTENT NOTICE:

THE INTENT OF THE CONSTRUCTION DRAWINGS IS TO RECONSTRUCT THE HOSPITAL BUILDING IN ACCORDANCE WITH THE 2019 CALIFORNIA BUILDING STANDARDS CODE (CBSC). SHOULD ANY CONDITION DEVELOP NOT COVERED BY THE APPROVED CONSTRUCTION DOCUMENTS, WHEREIN THE FINISHED WORK WILL NOT COMPLY WITH THE 2019 CBSC, AMENDED CONSTRUCTION DOCUMENTS DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY HCAI BEFORE ROCEEDING WITH THE WORK.

ALL REPORTS, PLANS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES AND OTHER DOCUMENTS AND INSTRUMENTS INCLUDING ALL DOCUMENTS ON ELECTRONIC MEDIA, PREPARED BY MARKS ARCHITECTS, INC. (MAI) AS INSTRUMENTS OF SERVICE SHALL REMAIN THE PROPERTY OF MAI. MAI SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING

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DESIGN PROFESSIONALS OF RECORD

ARCHITECT OF RECORD

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ELECTRICAL ENGINEER OF RECORD

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HKA ELEVATOR CONSULTANTING

23211 SOUTH POINTE DRIVE LAGUNA HILLS, CA 92653 (714) 427-6810

ELEVATOR CONSULTANT

ELEVATOR MODERNIZATION ELEVATORS 1 & 2

ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE. COLTON, CA. 92324

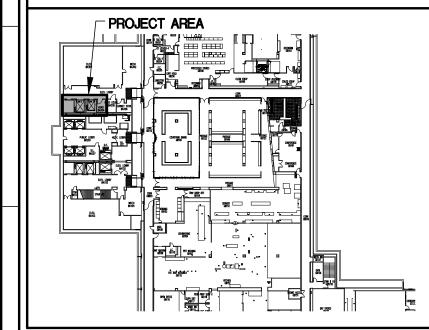
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Department of Health Care Access and Information

HCAI # S222026-36-00



REFERENCE PLAN



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IND GS GS

NOVEMBER 30, 2022

REVISIONS

HCAI PLAN CHECK-01.31.23

marks architects

73121 fred waring drive palm desert, ca 92260 760-327-6800

HCAI PLAN CHECK-04.25.23

| GENERAL REQUIREMENTS

- I. ALL DISTANCES, DATA AND EXISTING STRUCTURES AND UTILITIES ABOVE OR BELOW THE GROUND, WITHIN THE LIMITS OF THIS PROJECT SHALL BE CHECKED BY THE CONTRACTOR. IN CASE OF CONFLICT, THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY IN ORDER THAT CLARIFICATION MAY BE MADE.
- PRIOR TO START OF WORK, THE CONTRACTOR SHALL CAREFULLY INSPECT AND VERIFY ALL CONDITIONS SHOWN ON THE CONTRACT DRAWINGS, IF WORK CAN NOT BE PERFORMED AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY. WORK PERFORMED AFTER SUCH DISCOVERY UNLESS AUTHORIZED BY THE ARCHITECT SHALL BE DONE AT THE CONTRACTOR'S RISK.
- 3. DETAILS ARE INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING THE WORK, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT THE OVERALL DIMENSIONS OR CONDITIONS AND SHALL BE INCLUDED AS PART OF THE WORK.
- 4. DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. SPECIFIC NOTES ON DETAILS APPLY TO SIMILAR CONDITIONS UNLESS SPECIFICALLY NOTED OTHERWISE.
- 5. $\,$ THE CONTRACTOR SHALL PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES AND POSITIONS OF ALL EQUIPMENT, MOUNTINGS, ATTACHMENTS AND CONDUIT RELATING TO THE WORK.
- 6. THE CONTRACTOR SHALL PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES AND POSITIONS OF OPENINGS IN WALLS NECESSARY TO THE INSTALLATION OF THE WORK.
- 7. ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED FROM EACH OTHER TO PREVENT DIELECTRIC
- 8. LEGAL EXITS SHALL BE ACCESSIBLE AT ALL TIMES. WHERE AISLES MAY OCCUR LEADING TO EXITS, THEY SHALL HAVE A CLEAR WIDTH AS SHOWN ON THE DRAWINGS CLEARANCE.
- 9. DISCREPANCIES BETWEEN PLANS AND SPECIFICATIONS, LARGE AND SMALL DETAILS OR VARIOUS SECTIONS OF THE DRAWINGS, SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT FOR RESOLUTION. FAILURE TO DO SO MAY MAKE THE CONTRACTOR RESPONSIBLE FOR THE COST OF CORRECTING AND/OR REMOVING WORK PLACED INCORRECTLY.
- IO, ITEMS OF EXISTING WORK, INDICATED TO REMAIN UPON COMPLETION OF THE CONTRACT, BUT WHICH REQUIRE REMOVAL TO COMPLETE THE WORK, SHALL BE CAREFULLY REMOVED AND REPLACED UPON COMPLETION. THE REPLACED WORK SHALL MATCH ITS CONDITION AT THE START OF THE WORK UNLESS OTHERWISE REQUIRED BY THE DRAWINGS.
- CHANGES IN PLANS AND SPECIFICATIONS, OTHER THAN THOSE NECESSARY FOR CORRECTIONS MADE AFTER SUBMISSION FOR HCAI APPROVAL SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT IN
- 12. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR CHANGE ORDER APPROVED BY HCAI, AS REQUIRED BY TITLE 24, CCR.
- 13. A PROJECT INSPECTOR EMPLOYED BY THE OWNER SHALL PROVIDE CONTINUOUS INSPECTION OF THIS WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN PART I, TITLE 24, CCR.
- 14. THE SIZES, LOCATION FOR MOUNTINGS AND ATTACHMENTS AND LOCATIONS OF UTILITY CONNECTIONS FOR EACH ITEM OF EQUIPMENT SHOWN ON THE DRAWINGS ARE FOR ILLUSTRATION ONLY. ALL CAN VARY FROM MANUFACTURER TO MANUFACTURER AND ARE DEPENDENT ON THE EXACT MANUFACTURERS MODEL FURNISHED. THE CONTRACTOR SHALL PROVIDE AND COORDINATE EXACT DIMENSIONS RELATING TO THE

SIZE OF EACH ITEM OF EQUIPMENT, THE LOCATIONS OF ALL MOUNTINGS AND ATTACHMENTS FOR EACH

ANCHORAGE OF ALL EQUIPMENT TO BE INSTALLED, AS A PART OF THIS PROJECT SHALL BE DETAILED ON THESE PLANS, EXCEPT FOR THE FOLLOWING:

ITEM OF EQUIPMENT AND FOR ALL UTILITY CONNECTIONS TO EACH ITEM OF EQUIPMENT.

SUPPORTS AND ATTACHMENTS OF ALL EQUIPMENT TO BE INSTALLED AS A PART OF THIS PROJECT SHALL BE DETAILED ON CONSTRUCTION DOCUMENTS, EXCEPT THOSE EXEMPT BY THE 2019 CBC SECTION 1617A.I.18.

EQUIPMENT SUPPORTS AND ATTACHMENTS SHALL BE APPROVED BY THE APPROPRIATE RESPONSIBLE DESIGN PROFESSIONAL OF RECORD (RDP) AND HCAI AS A PART OF FIELD REVIEWS/OBSERVATIONS. THE INSPECTOR OF RECORD (IOR) SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED. 2019 SECTIONS 107 AND 1617A.

- A. EQUIPMENT WEIGHING LESS THAN 400 POUNDS SUPPORTED DIRECTLY ON THE FLOOR OR ROOF.
- B. FURNITURE (EXCEPT STORAGE CABINETS AS NOTED IN TABLE 13.5-1).
- TEMPORARY OR MOVABLE EQUIPMENT (EXCEPT AS NOTED IN TABLE 16A-0).
- EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUPPORTED BY VIBRATION ISOLATORS. EQUIPMENT WEIGHING LESS THAN 20 POUNDS SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

PERMANENT EQUIPMENT MUST BE SUPPORTED AND ANCHORED AND THE ANCHORAGE SHALL BE APPROVED BY THE APPROPRIATE DESIGN PROFESSIONAL OF RECORD AND HCAI AS A PART OF FIELD REVIEWS/OBSERVATIONS, THE INSPECTOR OF RECORD SHALL ASSURE THAT THE ABOVE REQUIREMENTS ARE ENFORCED.

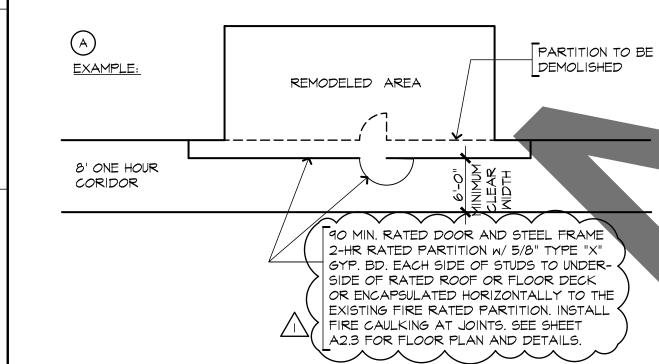
16. PIPES, DUCTS AND CONDUITS SHALL BE SUPPORTED AND BRACED EITHER PER THE APPROPRIATE HCAI PRE-APPROVED SYSTEMS OR PROVIDE CALCULATIONS AND DETAILS CONFORMING TO ASCE 7 SECTION 13.6 AS MODIFIED BY THE CBC 2019 SECTION 1617A. THE CHOSEN PRE-APPROVED SYSTEM SHALL BE SHOWN ON THE PLANS AND SEOR SHALL PROVIDE CALCULATIONS SHOWING THE ADAPTABILITY OF THE CHOSEN SYSTEM AND ADEQUACY OF THE SUPPORTING STRUCTURE

FIRE PROTECTION - LIFE SAFETY

- 17. ALL FIRE RESISTIVE ASSEMBLIES FOR PROTECTION OF OPENINGS SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE.
- 18. ALL VOIDS AND PENETRATIONS IN CEILINGS OR WALLS, INCLUDING RECESSED LIGHTS, MECHANICAL DUCTS, ACCESS OPENINGS, ETC., SHALL BE RATED AS REQUIRED BY CODE.
- 19. PROVIDE FIRE EXTINGUISHERS AND CABINETS AND PORTABLE FIRE EXTINGUISHERS WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR AND AT ALL MECHANICAL AND ELECTRICAL ROOMS AND AS DIRECTED BY THE FIRE MARSHALL. TYPE OF FIRE EXTINGUISHER SHALL BE 2A-108C-5, 5 POUND MULTI-PURPOSE TYPE.
- 20. THE FACILITY MUST MAINTAIN ITS REGULAR SERVICES, INCLUDING EXITS, DURING THE PERIOD THIS WORK IS IN PROGRESS.
- 21. FIRE RATED SEPARATIONS SHALL BE MAINTAINED DURING CONSTRUCTION AND DEMOLITION, PER CFC SECTION 3301 (MEET REQUIREMENTS OF HCAI CAN 9-3301).

THE USE OF VISQUEEN OR SIMILAR TYPE OF MATERIAL AS A TEMPORARY CONSTRUCTION BARRIER WHERE A FIRE SEPARATION IS REQUIRED SHALL NOT BE PERMITTED. A TEMPORARY BARRIER SHALL MEET THE SAME FIRE RATING AS WOULD THE PERMANENT PARTITION.

WHERE A TEMPORARY PARTITION IS PLACED ACROSS A CORRIDOR OR IN ANY WAY BLOCKS AN EXIT OR CREATES A DEAD END, APPROVED PLANS SHOWING THESE CONDITIONS SHALL BE APPROVED BY HCAI FIRE MARSHAL AND A REPRESENTATIVE OF THE LOCAL FIRE DEPARTMENT.



DURING CONSTRUCTION, A FIRE WATCH WILL BE REQUIRED IF ANY REQUIRED FIRE RATED SEPARATOR IS NOT IN FULL COMPLIANCE WITH THE GOVERNING LOCAL AND STATE REGULATIONS.

22. INTERIOR WALL AND CEILING FINISH MATERIALS SHALL BE CLASSIFIED IN ACCORDANCE WITH ASTM E 84 OR UL 723. SUCH INTERIOR FINISH MATERIALS SHALL BE GROUPED IN THE FOLLOWING CLASSES IN ACCORDANCE WITH THEIR FLAME SPREAD AND SMOKE-DEVELOPED INDEXES. PER CBC SECTION 803.1.1

SMOKE DEVELOPED INDEX 0-450

CLASS A: FLAME SPREAD INDEX: 0-25; SMOKE DEVELOPED INDEX 0-450. CLASS B: FLAME SPREAD INDEX: 26-75; SMOKE DEVELOPED INDEX 0-450

CLASS C: FLAME SPREAD INDEX: 76-200;

FIRE SAFETY DURING CONSTRUCTION. ALTERATION AND DEMOLITION FOR NEW CONSTRUCTION AND ADDITIONS

- 23. FIRE EXTINGUISHERS-SHALL BE PROVIDED FOR BUILDINGS UNDER CONSTRUCTION AS REQUIRED BY THE HCAI FIRE MARSHAL AND THE LOCAL FIRE AUTHORITY.
- 24. COMBUSTIBLE DEBRIS SHALL NOT BE ALLOWED TO ACCUMULATE WITHIN THE BUILDING.
- 25. ACCESS TO BUILDINGS FOR THE PURPOSE OF FIRE FIGHTING SHALL BE PROVIDED. CONSTRUCTION MATERIAL SHALL NOT BLOCK ACCESS TO BUILDINGS, HYDRANTS OR FIRE APPLIANCES.
- 26. CUTTING AND WELDING OPERATIONS SHALL BE IN ACCORDANCE WITH THE GENERAL SAFETY RULES OF SECTION 49.107 OF THE FIRE CODE.
- 27. EXISTING FIRE PROTECTION SYSTEMS SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES DURING ALTERATIONS AND CONSTRUCTION.
- 28. EXISTING FIRE-RESISTIVE ASSEMBLIES AND CONSTRUCTION SHALL BE MAINTAINED.
- 29. PLASTIC FILM WHEN USED FOR DUST PROTECTION, SHALL BE FLAME RESISTANT.
- 30. FIRE PROTECTION OF STRUCTURAL MEMBERS SHALL BE REPAIRED/REPLACED IN ACCORDANCE WITH CALIFORNIA BUILDING CODE.
- 31. FIRE SAFETY DURING WELDING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CALIFORNIA FIRE CODE.

REPAIR AND WELDING PROCEDURES SHALL BE REVIEWED AND APPROVED BY THE HCAI FIRE MARSHAL AND LOCAL FIRE AUTHORITY HAVING JURISDICTION IN ACCORDANCE WITH CALIFORNIA FIRE CODE.

SUCH REVIEW SHALL INCLUDE BUT NOT NECESSARILY BE LIMITED TO:

- METHOD AND LOCATION OF CYLINDER STORAGE
- * USE AND LOCATION OF ELECTRICAL GENERATORS AND ASSOCIATED FUEL SUPPLY
- PROVISION OF FRESH AIR SUPPLY AND EXHAUST SYSTEMS
- PROVISION OF NONCOMBUSTIBLE SHIELDS
- FIRE WATCH PROCEDURES
- SCHEDULING OF WORK PROCEDURES FOR NOTIFYING FIRE DEPARTMENT OF WHERE AND WHEN WELDING IS SCHEDULED.
- 32. FIRE SPRINKLER, STANDPIPE AND FIRE ALARM SYSTEMS SHALL BE MAINTAINED OPERATIONAL AT ALL TIMES. WHEN IT IS NECESSARY TO SHUT DOWN A SYSTEM OR A PORTION OF A SYSTEM, A FIRE WATCH SHALL BE PROVIDED PER THE CALIFORNIA FIRE CODE.
- . THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE PRESSURE DIFFERENTIAL OF 0.01 INCH (2.49 PA) OF WATER OR AS OTHERWISE PERMITTED BY 2019 CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBRANE PENETRATION PROTECTION AND OTHER PERMITTED MEANS AND METHO OF PENETRATION PROTECTION SHALL BE SUBMITTED TO HCAI FIELD FIRE MARSHAL FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. PER 2019 C.B.C. SECTIONS 107.2.1 AND 714.

NOISE AND DUST CONTROL

- 34. THE HOSPITAL IS OPEN 24 HOURS A DAY AND SHALL BE KEPT IN OPERATION THROUGHOUT THE CONSTRUCTION PERIOD. ANY WORK THAT WILL DISRUPT THE MEDICAL OPERATIONS SHALL BE COORDINATED WITH OWNER THROUGH THE OWNER REPRESENTATIVE. NOISY WORK, ACTIVITIES CAUSING VIBRATION AND/OR SIMILAR DISRUPTED ACTIONS SHALL BE SCHEDULED AT TIMES ACCEPTABLE TO THE OWNER.
- 35. EXERCISE CAUTION TO PREVENT GENERATION OF UNNECESSARY NOISE LEVELS TO MINIMUM POSSIBLE. I NOT EXCEED CAL/OSHA STANDARDS AT ANY TIME. DISCONTINUE NOISE PRODUCING OPERATIONS, WHEN REQUESTED BY THE OWNER, AND RESCHEDULE AT A MUTUALLY ACCEPTABLE TIME.
- 36. DO NOT USE IMPACT TOOLS, SUCH AS JACK HAMMERS, INSIDE THE BUILDING WHEN IT IS OPENED TO THE
- 37. MOUNT ROLLING EQUIPMENT ON PNEUMATIC TIR
- 38. EQUIP INTERNAL COMBUSTION ENGINES WITH SUITABLE MUFFLERS. DO NOT USE INTERNAL COMBUSTION ENGINES IN ENCLOSED SPACES, INCLUDING THE BUILDING, WITHOUT THE OWNER'S WRITTEN APPROVAL
- 39. ALL DUST, NOISE AND ODORS SHALL BE CONTROLLED PER OWNER'S REQUIREMENT'S. ANY WORK THAT WILL DISPUPT THE MEDICAL OPERATIONS SHALL BE COORDINATED WITH OWNER THROUGH THE OWNER
- 40. THE PROJECT AREA SHALL BE ISOLATED FROM ADJACENT OCCUPIED SPACES DURING CONSTRUCTION USING BARRIERS, AIR DISTRIBUTION AND MATERIAL HANDLING.
- 41. BARRIERS SHALL BE TIGHTLY SEALED WITH TAPE FROM WALL, FLOOR TO STRUCTURE ABOVE OR ACOUSTICAL CEILING WHERE SUSPENDED CEILING WILL NOT BE DISTURBED
- ITECT ASSUMES NO RESPONSIBILITY RELATING TO ANY HAZARDOUS OR TOXIC MATERIALS, 5 ASBESTOS, AND ASSUMES NO RESPONSIBILITY FOR ITS EXISTENCE OR REMOVAL THE OWNER AKE ACTION FOR DIRECTLY CONTACTING WITH A CONSULTANT OR SPECIALIST FOR SUCH, ED BY THE STATE OF CALIFORNIA, SHOULD THOSE SERVICES BE REQUIRED ON THE PROJECT.
- 43. NO PRODUCTS CONTAINING ASBESTOS IN ANY FORM SHALL BE USED ON ANY PART OF THE WORK.

INFECTION CONTROL REQUIREMENTS

- IN CONTROL IS CRITICAL IN ALL AREAS OF ALL FACILITIES. CONSTRUCTION ACTIVITIES CAUSING GE OF EXISTING DUST, OR CREATING NEW DUST, MUST BE CONDUCTED IN TIGHT ENCLOSURES CUTTING OFF ANY FLOW OF PARTICLES INTO PATENT AREAS.
- THE HOSPITAL REQUIRES THAT ANY SUBCONTRACTOR, MATERIAL SUPPLIER, VENDOR, EMPLOYEE, OR AGENT BE BOUND BY THESE SAME REQUIREMENTS. BEFORE ANY CONSTRUCTION ON SITE BEGINS. THE CONTRACTOR'S ON-SITE MANAGEMENT TEAM SHALL ATTEND A MANDATORY MEETING HELD BY THE HOSPITAL'S REPRESENTATIVES, FOR INSTRUCTION ON PRECAUTIONS TO BE TAKEN.
- HE CONSTRUCTION SITE SHALL BE MAINTAINED UNDER NEGATIVE PRESSURE AT ALL TIMES AND A GAUGE ALE AT THE BARRICADE ENTRANCE SHALL READ O.OI INCH W.G. HEPA EQUIPPED AIR FILTRATION MACHINES SHALL BE CONNECTED TO EMERGENCY POWER IF AVAILABLE, AND SHALL RUN CONTINUOUSLY FOR THE DURATION OF THE PROJECT, THE AIR FILTRATION (NEGATIVE PRESSURE) EQUIPMENT SHALL BE HAUSTED TO THE EXTERIOR OF THE BUILDING WHENEVER POSSIBLE AND ONLY AFTER ALL OPTIONS HAVE BEEN CONSIDERED OF EXHAUSTING TO THE OUTSIDE SHALL THERE BE THE RECIRCULATION OF THE HEPA FILTRATED AIR WITHIN THE INTERIOR OF THE SPACE.
- 4. THE HOSPITAL'S PLANT MANAGER, SAFETY OFFICER, INFECTION CONTROL NURSE, FACILITIES DEPARTMENT OR PLANT MANAGER'S DESIGNEE MAY MODIFY PERFORMANCE REQUIREMENTS FOR CERTAIN ACTIVITIES. FACILITIES, ENGINEERING AND INFECTION CONTROL MUST REVIEW ANY MODIFICATIONS MADE BY THE CONTRACTOR. ANY MODIFICATIONS MADE BY THE CONTRACTOR DOES NOT RELIEVE THE CONTRACTOR OF COMPLIANCE WITH PROPER INFECTION CONTROL PROCEDURES.

- 5. THE CONTRACTOR WILL SUBMIT A WRITTEN REPORT OF INFECTION CONTROL PROCEDURES PRIOR TO STARTING ANY WORK. THIS REPORT WILL INCLUDE THE LOCATION AND DETAILS OF BARRIERS, AND THE MEANS IN WHICH THEY PLAN TO OBTAIN THE NEGATIVE PRESSURIZATION.
- 6. THE CONTRACTOR WILL SUBMIT PRODUCT DATA FOR PRODUCTS USED IN INFECTION CONTROL PROGRAM. ONLY PRODUCTS APPROVED BY THE HOSPITAL'S INFECTION CONTROL COMMITTEE SHALL BE USED. IT IS THE CONTRACTOR'S RESPONSIBILITY TO HAVE MSDS SHEETS ON ALL PRODUCTS USED. COPIES OF MSDS MUST BE PROVIDED TO THE SAFETY OFFICER.
- 7. THE HOSPITAL'S INFECTION CONTROL DEPARTMENT IN COLLABORATION WITH ENGINEERING DEPARTMENT AND SAFETY OFFICER WILL MONITOR INDOOR AIR QUALITY (PARTICULATE AND BIOLOGICALS) IN THE VICINITY OF CONSTRUCTION WORK AT THE BEGINNING, END, AND/OR AS NEEDED. PROJECTS WILL BE EVALUATED TO DETERMINE THE NEED TO CONDUCT INDOOR AIR SAMPLING. WHENEVER SAFE LEVELS ARE EXCEEDED, THE CONTRACTOR WILL BE NOTIFIED IMMEDIATELY FOR CORRECTIVE ACTIONS.
- 8. AN INFECTION CONTROL PERMIT IS REQUIRED FOR THIS PROJECT. THE INFECTION CONTROL CONSTRUCTION PERMIT FORM WILL BE OBTAINED FROM THE HOSPITAL'S INFECTION CONTROL DEPARTMENT AND/OR ENGINEERING DEPARTMENT AND COMPLETED BY THE CONSTRUCTION COMPANY RCH INFECTION CONTROL AND OR DESIGNEE MUST SIGN THE COMPLETED PERMIT PRIOR TO BEGINNING ANY DEMOLITION, RENOVATION OR CONSTRUCTION WORK. THE PERMIT SHALL BE DISPLAYED AT ENTRANCE TO WORK AREA DURING ENTIRE CONSTRUCTION PERIOD.
- 9. COMPLETE ALL CRITICAL BARRIERS OR IMPLEMENT CONTROL CUBE METHOD BEFORE CONS
- 10. SEAL HOLES, PIPES, CONDUITS, AND PUNCTURES APPROPRIATELY.
- II. VACUUM WORK AREA WITH HEPA FILTERED VACUUMS,

GENERAL CONSTRUCTION NOTES

CAN 9-3301.

AND CAN 9-1404.5.

2019 C.F.C. SECTION 3311.2 AND CAN 9-3301.

PRIOR TO CONSTRUCTION STARTING HCAI FIELD FIRE MARSHAL AND LOCAL FIRE

AUTHORITY SHALL REVIEW AND APPROVE THE MEANS OF EGRESS AND HOW IT

WILL BE MAINTAINED DURING CONSTRUCTION IN THE EXIT ACCESS CORRIDOR. PER

DEMOLITION AND RECONSTRUCTION WILL OCCUR WITHIN ONE SINGLE 8-HOUR SHIFT,

SUBJECT TO THE PRIOR REVIEW AND APPROVAL OF THIS APPROACH BY THE HCAI

FIELD FIRE MARSHAL. WORK MAY NOT PROCEED UNTIL THAT APPROVAL HAS

BEEN OBTAINED. IN THE EVENT THE WORK CANNOT BE COMPLETED IN THAT

SINGLE SHIFT, A RATED TEMPORARY BARRIER OF THE SAME FIRE-RESISTANCE

RATING OF THE WALL SHALL BE PROVIDED. PER 2019 C.F.C. SECTION 703.1 AND

WHERE A REQUIRED FIRE PROTECTION SYSTEM IS OUT OF SERVICE THE LOCAL

FIRE JURISDICTION AND HCAI SHALL BE NOTIFIED. A FIRE WATCH SHALL BE

PROVIDED UNTIL THE SYSTEM IS OPERABLE. WHEN A FIRE WATCH IS REQUIRED

PERSONNEL SHALL BE PROVIDED WITH AN APPROVED MEANS FOR NOTIFYING THE

FIRE DEPARTMENT AND THE ONLY DUTY OF THE FIRE WATCH PERSONNEL IS TO

WATCH FOR THE OCCURRENCE OF FIRE. PER 2019 C.F.C. SECTIONS 901.7 \$ 3304.5

- 12. WET MOP AREA WITH DISINFECTANT (QUATERNARY AMMONIUM).
- 13. REMOVE BARRIER MATERIAL CAREFULLY TO MINIMIZE SPREADING OF DIRT AND DEBRIS ASSOCIATED WITH CONSTRUCTION.
- 14. CONTAIN CONSTRUCTION WASTE BEFORE TRANSPORT IN TIGHTLY COVERED CONTAINERS.
- 15. COVER TRANSPORT RECEPTACLE OR CARTS. WIPE DOWN GART PRIOR TO LEAVING THE CONSTRUCTION

1910A.5 TESTS FOR POST-INSTALLED ANCHORS IN CONCRETE. WHEN POST-INSTALLED EU OF CAST-IN PLACE BOLTS, THE INSTALLATION ANCHORS ARE USED IN L VERIFICATION TEST LOADS, FREQUENCY, AND ACCEPTANCE CRITERIA SHALL BE IN ACCORDANCE WITH THIS SECTIO

1910A.5.1 GENERAL. TEST LOADS OR TORQUES AND ACCEPTANCE CRITERIA SHALL BE SHOWN ON THE CONSTRUCTION DOCUMENTS.

IF ANY ANCHOR FAILS TESTING, ALL ANCHORS OF THE SAME TYPE SHALL BE TESTED, WHICH ARE INSTALLED BY THE SAME TRADE, NOT PREVIOUSLY TESTED UNTIL TWENTY (20) CONSECUTIVE ANCHORS PASS, THEN RESUME THE INITIAL TEST FREQUENCY.

1910A.5.2 TESTING PROCEDURE. TEST PROCEDURE SHALL BE AS PERMITTED BY AN APPROVED TEST REPORT USING CRITERIA ADOPTED IN THIS CODE. ALL POST-INSTALLED ANCHORS SHALL BE TENSIONED TE EXCEPTION:

DRQUE CONTROLLED POST-INSTALLED ANCHORS SHALL BE PERMITTED TO BE TESTED TORQUE BASED ON APPROVED TEST REPORT USING CRITERIA ADOPTED IN THIS

TORQUE CONTROLLED POST-INSTALLED ANCHORS AND SCREW TYPE ANCHORS SHALL MITTED TO BE TESTED USING TORQUE BASED ON AN APPROVED TEST REPORT USING CRITERIA ADORTED IN THIS COL

MANUFACTURER'S RECOMMENDATION FOR TESTING MAY BE APPROVED ENFORCEMENT AGENCY, BASED ON AN APPROVED TEST REPORT USING ERIA ADOPTED IN THIS CODE.

1910A.5.3 TEST FREQUENCY. WHEN POST-INSTALLED ANCHORS ARE USED FOR SILL PLATE BOLTING APPLICATIONS, IO PERCENT OF THE ANCHORS SHALL BE TESTED.

NHÈN POST-INSTALLED ANCHORS ARE USED FOR OTHER STRUCTURAL APPLICATIONS, L SUCH ANCHORS SHALL BE TESTED.

WHEN POST-INSTALLED ANCHORS ARE USED FOR NONSTRUCTURAL APPLICATIONS SUCH AS EQUIPMENT ANCHORAGE, 50 PERCENT OR ALTERNATE BOLTS IN A GROUP, INCLUDING AT LEAST ONE-HALF THE ANCHORS IN EACH GROUP, SHALL BE TESTED.

THE TESTING OF THE POST-INSTALLED ANCHORS SHALL BE DONE IN THE PRESENCE OF THE SPECIAL INSPECTOR AND A REPORT OF THE TEST RESULTS SHALL BE SUBMITTED TO THE ENFORCEMENT AGENCY.

EXCEPTIONS:

- I. UNDERCUT ANCHORS THAT ALLOW VISUAL CONFIRMATION OF FULL SET SHALL NOT REQUIRE TESTING.
- 2. WHERE THE FACTORED DESIGN TENSION ON ANCHORS IS LESS THAN 100 LBS AND THOSE ANCHORS ARE CLEARLY NOTED ON THE APPROVED CONSTRUCTION DOCUMENTS, ONLY 10 PERCENT OF THOSE ANCHORS SHALL BE TESTED
- 3. WHERE ADHESIVE ANCHOR SYSTEMS ARE USED TO INSTALL REINFORCING DOWEL BARS IN HARDENED CONCRETE, ONLY 25 PERCENT OF THE DOWELS SHALL BE TESTED IF ALL OF THE FOLLOWING CONDITIONS ARE MET:
- a. THE DOWELS ARE USED EXCLUSIVELY TO TRANSMIT SHEAR FORCES ACROSS JOINTS BETWEEN EXISTING AND NEW CONCRETE.
- b. THE NUMBER OF DOWELS IN ANY ONE MEMBER EQUALS OR EXCEEDS 12.
- c. THE DOWELS ARE UNIFORMLY DISTRIBUTED ACROSS SEISMIC FORCE RESISTING MEMBERS (SUCH AS SHEAR WALLS, COLLECTORS AND DIAPHRAGMS).
- d. ANCHORS TO BE TESTED SHALL BE SELECTED AT RANDOM BY THE SPECIAL INSPECTOR/INSPECTOR OF RECORD (IOR). 4. TESTING OF SHEAR DOWELS ACROSS COLD JOINTS IN SLABS ON GRADE, WHERE
- THE SLAB IS NOT PART OF THE LATERAL FORCE-RESISTING SYSTEM SHALL NOT BE REQUIRED. 5. TESTING IS NOT REQUIRED FOR POWER ACTUATED FASTENJERS USED TO ATTACH

TRACKS OF INTERIOR NON-SHEAR WALL PARTITIONS FOR SHEAR ONLY, WHERE

THERE ARE AT LEAST THREE FASTENERS PER SEGMENT OF TRACK.

1910A.5.4 TEST LOADS. REQUIRED TEST LOADS SHALL BE DETERMINED BY ONE OF THE

FOLLOWING METHODS: I. TWICE THE MAXIMUM ALLOWABLE TENSION LOAD OR ONE AND A QUARTER ($|rac{1}{4}$ ") TIMES THE MAXIMUM DESIGN STRENGTH OF ANCHORS AS PROVIDED IN AN APPROVED EVALUATION REPORT USING CRITERIA ADOPTED IN THIS CODE OR DETERMINED IN ACCORDANCE WITH CHAPTER 17 OF ACI 318.

STRENGTH OF THE ANCHOR ELEMENT (=0.8A se fya). 2. THE MANUFACTURER'S RECOMMENDED INSTALLATION TORQUE BASED ON APPROVED TEST REPORT USING CRITERIA ADOPTED IN THIS CODE.

TENSION TEST LOAD NEED NOT EXCEED 80 PERCENT OF THE NOMINAL YIELD

1910A.5.5 TEST ACCEPTANCE CRITERIA. ACCEPTANCE CRITERIA FOR POST-INSTALLED ANCHORS SHALL BE BASED ON APPROVED TEST REPORT USING CRITERIA ADOPTED IN THIS CODE. FIELD TEST SHALL SATISFY FOLLOWING MINIMUM REQUIREMENTS.

I. HYDRAULIC RAM METHOD:

ANCHORS TESTED WITH A HYDRAULIC JACK OR SPRING LOADED DEVICES SHALL MAINTAIN THE TEST LOAD FOR A MINIMUM OF 15 SECONDS AND SHALL EXHIBIT NO DISCERNIBLE MOVEMENT DURING THE TENSION TEST, E.G., AS EVIDENCED BY LOOSENING OF THE WASHER UNDER THE NUT.

FOR ADHESIVE ANCHORS, WHERE OTHER THAN BOND IS BEING TESTED, THE TESTING APPARATUS SUPPORT SHALL NOT BE LOCATED WITHIN 1.5 TIMES THE ANCHOR'S EMBEDMENT DEPTH TO AVOID RESTRICTING THE CONCRETE SHEAR CONE TYPE FAILURE MECHANISM FROM OCCURRING.

2. TORQUE WRENCH METHOD:

TORQUE-CONTROLLED POST-INSTALLED ANCHORS TESTED WITH A CALIBRATED TORQUE WRENCH MUST ATTAIN THE SPECIFIED TORQUE WITHIN 1/2 TURN OF THE NUT OR ONE QUARTER (1/4) TURN OF THE NUT FOR A 3/8 INCH SLEEVE ANCHOR ONLY.

SCREW-TYPE ANCHORS TESTED WITH A CALIBRATED TORQUE WITHIN ONE-QUARTER (1/4) TURN OF THE SCREW AFTER INITIAL SEATING OF THE SCREW HEAD.

ELEVATOR MODERNIZATION ELEVATORS 1 & 2

FOR THE ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE.

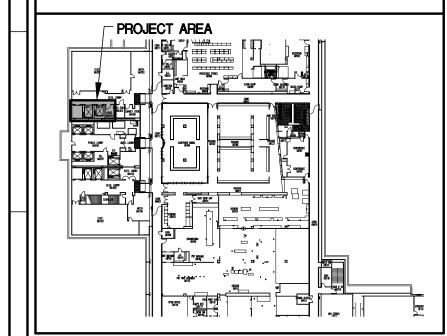
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COLTON, CA. 92324

Department of Health Care Access and Information HCAI # S222026-36-00



REFERENCE PLAN



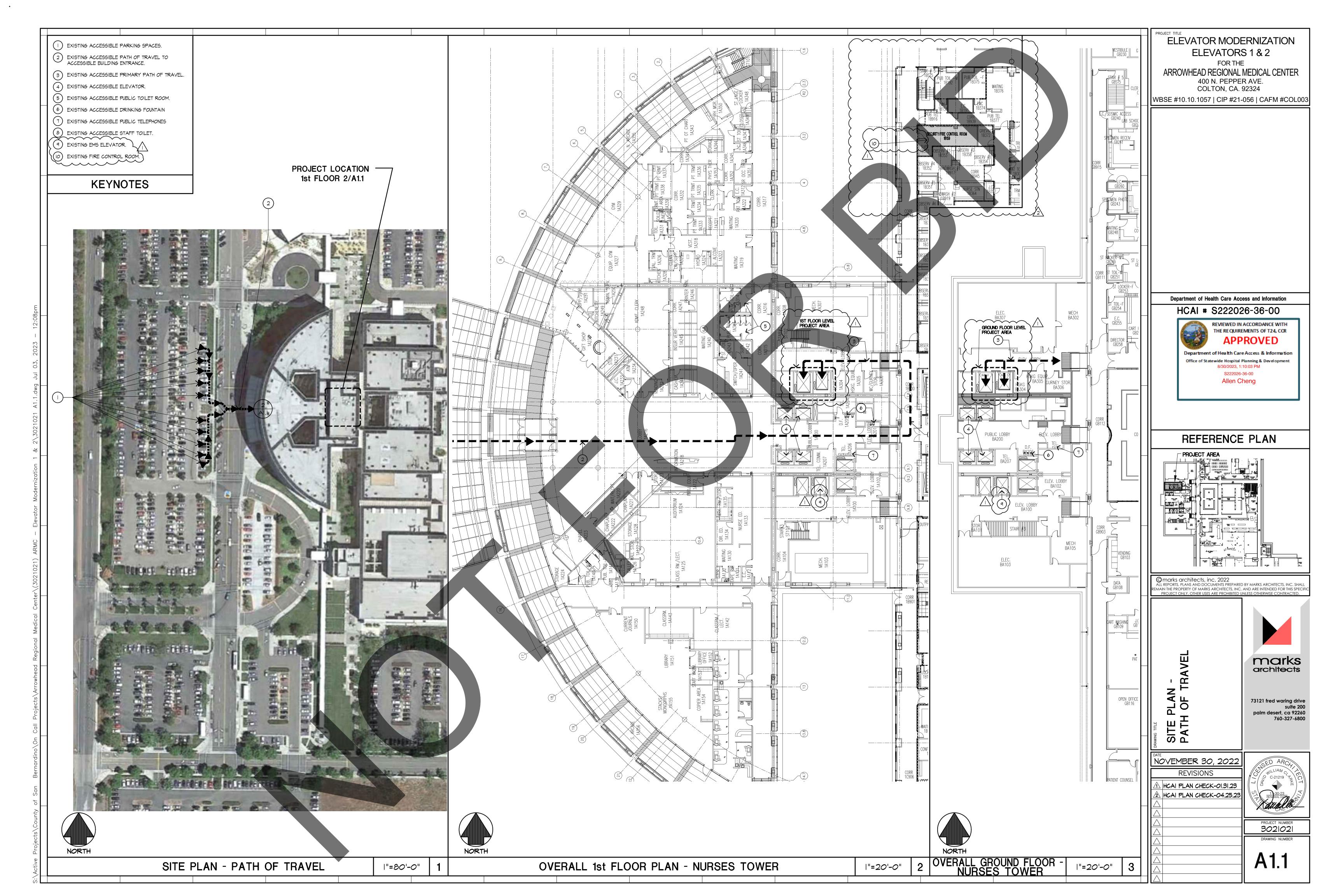
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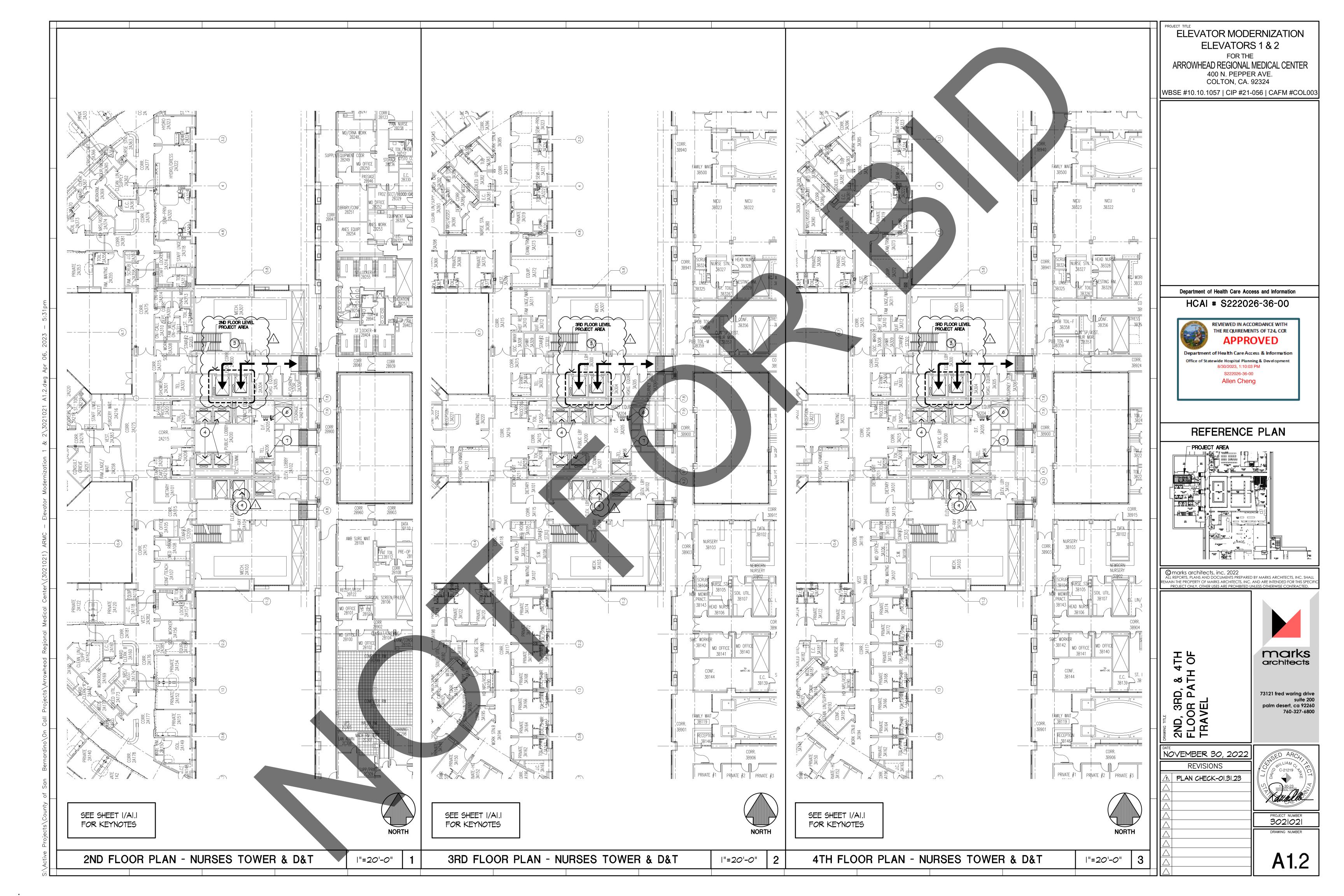
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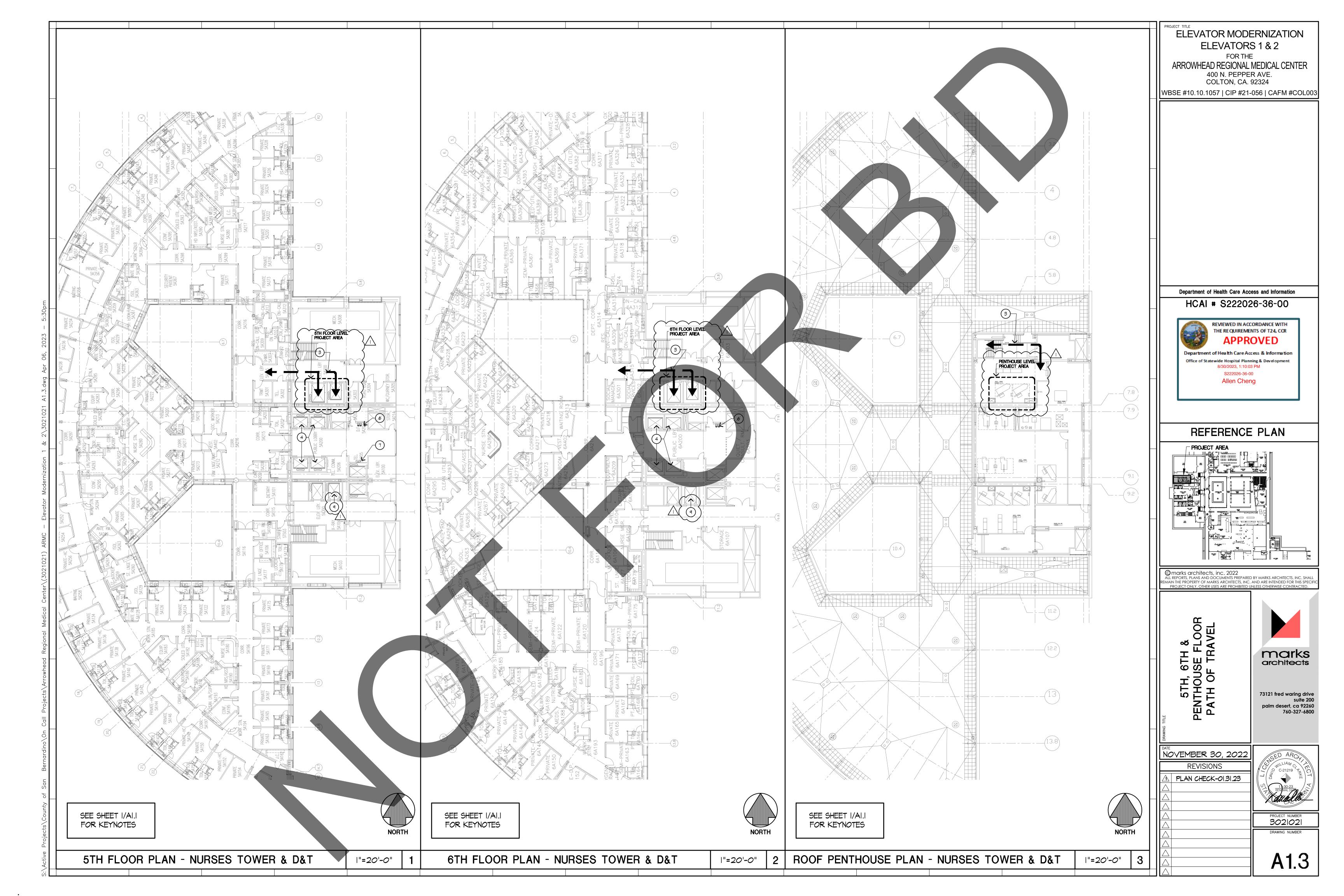
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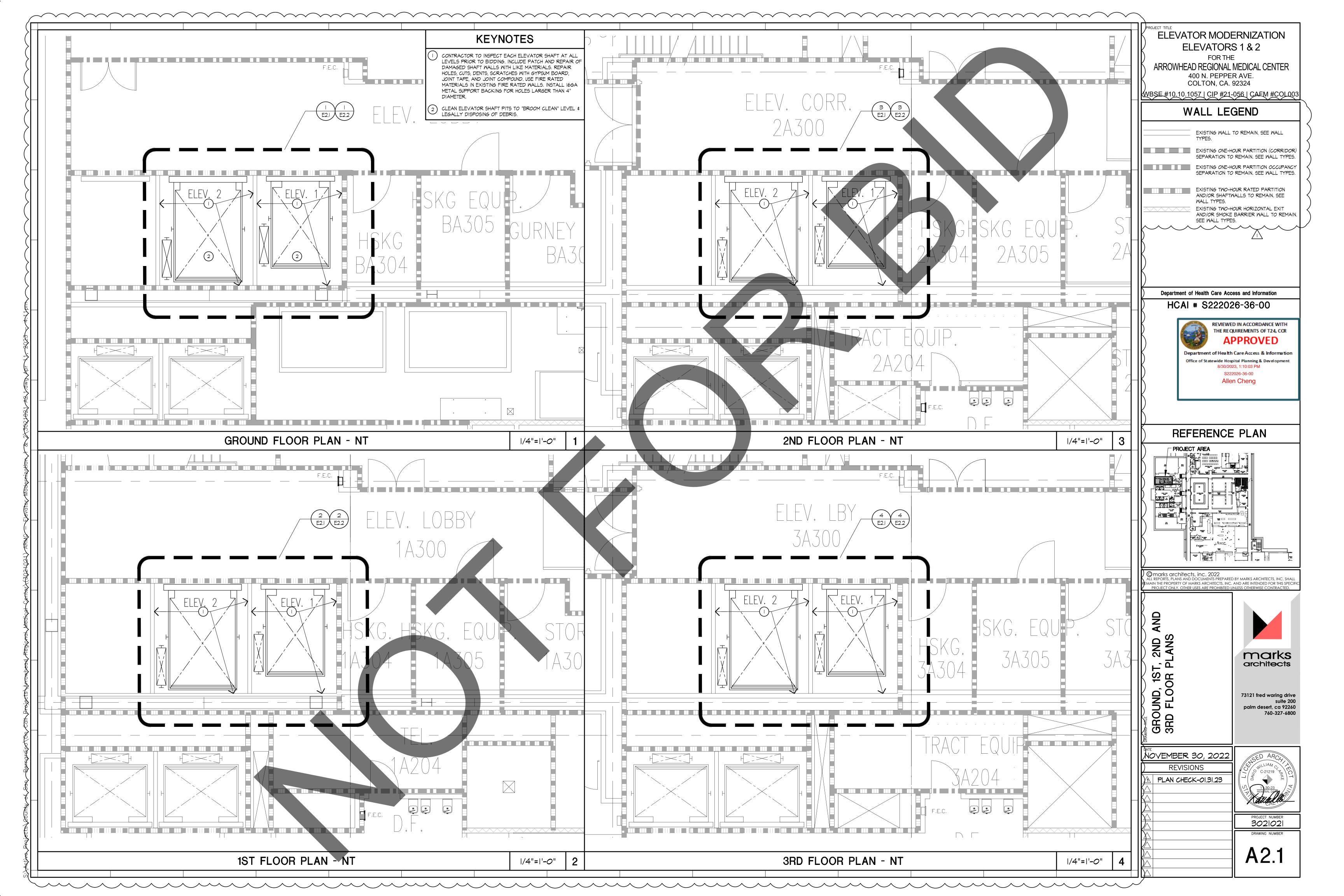
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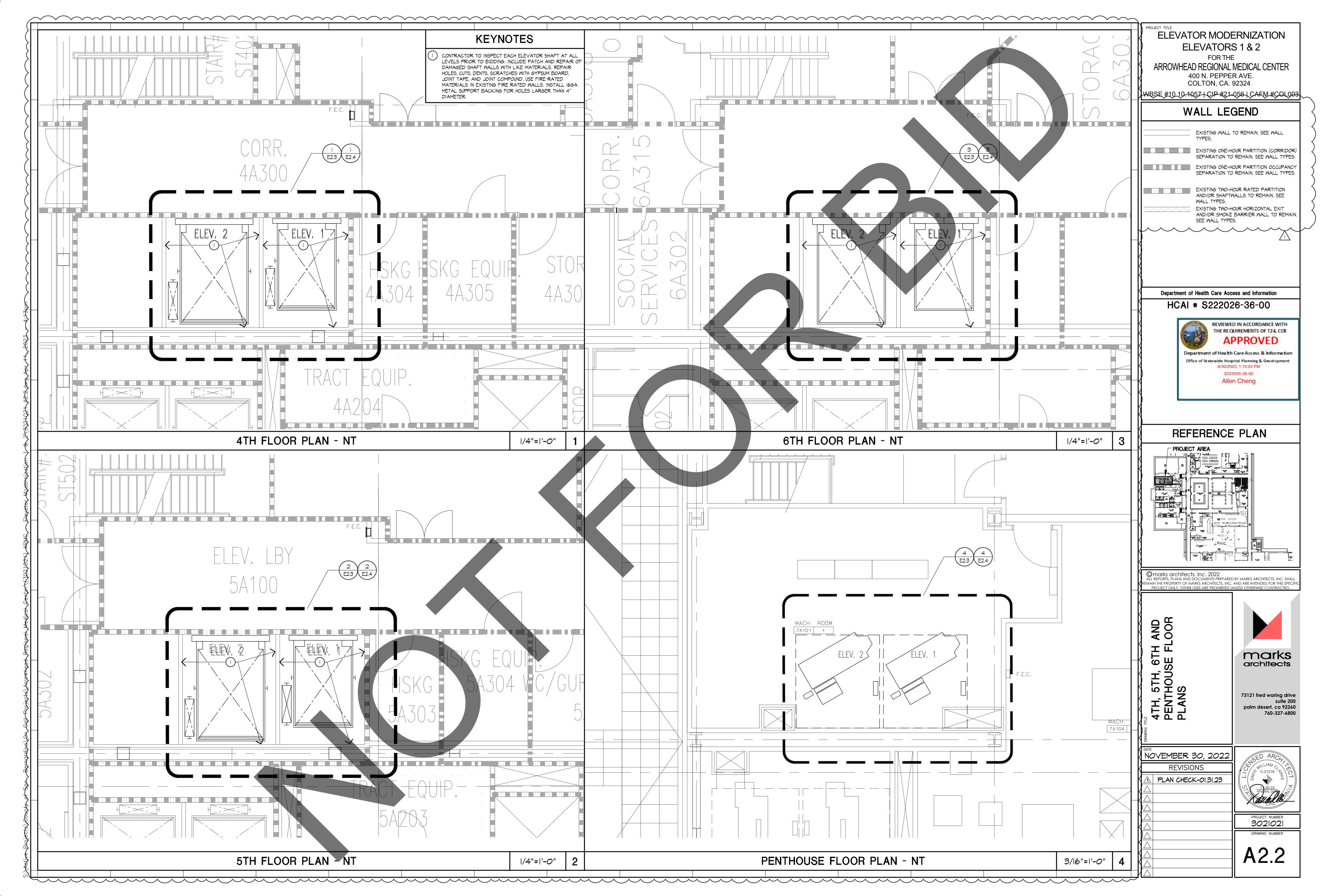
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speakers and fireman's phone jack to each car in the car canopy or as directed by the MODERNIZATION OF ELEVATORS Owner and/or local code authority. Note phone jacks are not permitted in corridor call

3) Provide fire proofing as required by lode code authority.

4) Fire life safety contractor shall be onsite to pre-test each elevator prior to the

required inspection and shall be onsite for all required inspections.

2. Barricades for protection of open hoistways during construction. 3. Barricades: Full height self-closing self-locking barricades for protection of open hoistways during construction.

a. Provide lobby signage for modernization impact and lobby kickoff building.

4. Temporary screens: Contractor shall provide code compliant hoistway screening between

elevators before construction starts and remove at completion of project. 5. Painting: Field painting of prime-finish items constituting final finishes.

6. Card readers: Including wire from machine room j-box to car top j-box, interfacing with elevator controls and installation in elevator car, connection in machine room and testing of system. Note card reader panel is not allowed inside the machine room. Contractor shall coordinate with sub-contractors to complete all required work at no additional cost to the Owner.

7. Closed circuit T.V: Including wire from machine room j-box to elevator car top j-box, connection in machine room and testing. Car top and machine j-box and labeled. Contractor shall coordinate with sub-contractors to complete all required work at no additional cost to the Owner.

8. Contractor shall coordinate and perform all pretesting of all building systems prior to inspection at no additional cost to the Owner.

1.5 QUALITY ASSURANCE:

A. Qualifications of Contractors:

1. General: The entire elevator installation shall be installed and maintained by the acceptable Contractors listed or as qualified by addendum. No portion of the work shall be subcontracted unless qualified and accepted by addendum.

2. Submit list of at least three (3) projects representing equivalent equipment that has been operational for at least five (5) years. Include owner's name, contact person and telephone

3. Installer's qualifications: Installer must be a licensed, certified conveyance mechanic in the state where installation is located.

4. Personnel list: Contractor shall, at time of bid, submit to Owner's Representative for review and approval a complete organization chart that depicts Contractor's "Project Team" exclusively assigned and dedicated to the modernization and maintenance for this project. The chart shall include, but not be limited to, administrative personnel, managers, supervisors, mechanics, apprentices, and all others who shall provide the requirements, services, and obligations of this contract. Personnel quantities, resumes, certification, titles, labor affiliations, exact roles and responsibilities and reporting structures under this contract shall be included.

5. Maintenance qualifications: Contractor must be a licensed elevator contractor in the state where installation is located.

6. Serviceman qualifications: All Contractor's mechanics that shall be assigned to this project, shall have been in the elevator business or trade for a minimum of ten (10) years with continuous and past experience in the preventative maintenance, repair, modernization, inspection and testing of elevator equipment of similar characteristics to those included in this project.

a. Manufacturer's qualifications: The design, engineering and manufacture of major elevator components such as machines, motors, motor drive units, controllers, door operators, safeties, governors, selectors, etc. shall be from manufactures that have been in the business for the last ten (10) years. Equipment proposed must have a history of successful operation under similar conditions for the last five (5) years.

b. Directly employ sufficient competent personnel within twenty-five (25) miles of project to handle construction and maintenance duties.

c. Maintain local stock of parts adequate for replacement on permanent or emergency basis.

d. Be able to respond to trouble calls within one (1) hour during normal business hours and two (2) hours after normal business hours.

e. Be able to respond to entrapments within thirty (30) minutes during normal business hours and one (1) hour after normal business hours.

7. Approved company uniforms shall be worn at all times. Names shall be visible at all times. 8. Approved company identification shall be visible at all times.

B. Sub-contractors:

1. Contractor shall be solely responsible for any and all of the work done by his sub-contractor or other employees and all orders or instructions from the Owner's Representative shall be through him to them. It shall be Contractor's duty to see that all of his sub-contractors commence th work properly at the proper time, and carry it on with due diligence so that they do not delay or injure either work or materials; and that all damage caused by them or their workmen is prope made good by them or by himself at his cost. Contractor shall submit names of his sub-contractors for approval by the Owner's Representative.

2. The use of sub-contractors is to be limited to work outside the scope of elevator construction work; for example, patching, painting, coring of walls, marble work and refinishing.

C. Elevator cabs and entrances:

1. Manufactured or rehabilitated by one of the following or accepted equal: a. Elevator manufacturer

b. Citylift

c. Travertine

d. Sterling Corporation

D. Quality of work and workmanship:

1. When completed, the installation shall be modern in all respect

2. All components specified as new shall be provided as new. All components specified to be retained may be provided as new at Contractor's option subject to approval of Owner's Representative. All retained components are to be examined, cleaned, adjusted, repaired and/or replaced with new parts. Contractor must be willing to accept all retained equipment on full maintenance without prorating.

3. All work performed shall be conducted in a workmanship type manner.

E. Requirements of regulatory agencies:

1. Codes: In accordance with the latest applicable edition requirements of the following and as

a. A.D.A.: Americans with Disabilities Act b. ASME: American Society of Mechanical Engineers - AI7.1; Safety Code for Elevators and

Escalators

c. CBC: Title 24; California Building Codes d. CCR: Title 8; California Code of Regulations

National Electric Code / NFP/

IBC: International Building Code All local codes and Amendments and Administration, which govern

Requirements of the Department of Health Care Access and Information (HCAI). Refer to "SUBMITTALS" for deferred approval for hospitals.

mits, Inspections, and Taxes:

range and pay for inspections by governing authorities. ain and post operating permits per applicable code.

ge and pay for all applicable taxes.

G. Safety Policies and Practices:

Installation and maintenance contractors are required to follow their company's safety practices

. Installation and maintenance contractors are required to follow all practices and policies of the building management

3. Installation and maintenance contractors are required to follow governing authorities' safety tices and policies.

1.6 SUBMITTALS

1. Submit three copies of the following prior to ordering any materials:

ayouts. Plan of machinery and hoistway spaces showing new equipment and existing equipment; nclude impact and static loads imposed on building structure and clearances around equipment.

b. Details: Submit details of cab shell and interiors, fixtures, and entrances.

c. Data: Indicate on layouts or separate data sheets; machine spaces heat release, power requirements, conduit runs outside of hoistways and machine rooms, car and counterweight roller guides, control systems, motor drive units and door operators.

d. Provide all structural submittals with an active California Professional Engineer stamp and

e. Controllers, machines, door operators, and all major components.

B. Samples: 1. Provide samples of materials and finishes exposed to public view and additional, if specifically requested, 6 inch x 6 inch panels, 12 inch lengths or full size if smaller, as applicable.

1. Submit the following to architect and engineer for approval prior to submitting to HCAI for

a. Submit data for 15 pounds per foot quide rails minimum or heavier. b. Submit data for 3/8-inch-thick steel for quide rail brackets minimum or heavier.

1) Submit details showing bracket support spacing and method of attachment. 2) Submit splice plate details with locations at a maximum of 20% of span from support

c. Submit details of quide shoe retainer plates located under quide shoes on top and bottom of counterweight and car.

d. Submit details of machinery tie-down supports.

e. Submit calculations justifying the above design prepared and signed by Structural Engineer registered in the state where installation is located.

f. The above is to be used as a quideline, contractor is required to provide as required to comply with all current HCAI regulations.

q. Provide all structural submittals with an active California Professional Engineer stamp and signature.

1.7 CONTRACT AND PROGRESS PAYMENTS

A. Contract:

1. Contractor to agree and execute Owner's contract with all related documents for this project. Contract will be based on approval of the Owner and/or Owner's representative.

1. Progress payments will be based on a mutually agreed upon schedule of values payment schedule. Initial deposit shall not exceed 20% upon award or letter of intent/contract.

2. Note: All payments are less 5% retention.

C. Retention: 1. Retention will be paid at completion of Consultant's punch-list. Owner and Owner's Representative reserves the right to reduce Contractor's retention amount to pay/compensate for any additional inspection or compliance reviews required due to Contractor's failure to

D. Contract Change Orders:

1. Contractor shall submit all change orders to both Owner and Owner's Representative for review and approval. Change Orders shall not be approved without both signatures.

E. Performance and Payment Bond: 1. Quote cost to provide a corporate surety performance and payment bond in the amount of 100% of the modernization contract including one (1) year warranty maintenance for which the

Contractor will pay the premium.

2. This bond will guarantee faithful performance of the contract and shall also guarantee payme of wages for services engaged and of bills contracted for materials, supplies and equipment used in the execution of this contract

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING:

A. Delivery and storage

Protect equipment during transportation, erection and construction. Store under cover to orevent damage due to weather conditions. Replace damaged materials. Storage space on site will not be available, if off-site storage is required, Contractor shall be responsible for all related costs. Additionally, if onsite storage is provided and a storage container and or fencing s required to properly secure and store all equipment, it shall be provided at no cost to the

Owner's Representative has the first right of refusal to retain any elevator components that are to be removed and modernized with new equipment. All removed components shall remain property of the Owner's Representative, until the Owner's Representative notifies Contractor, in

g, of removed components that Owner's Representative would like to retain. All remaining evator equipment not to be retained by the Owner's Representative or reused by Contractor all be promptly removed from the building by Contractor at no cost to the Owner's ntative, and become the property of Contractor

2. Contractor shall make every attempt to recycle removed elevator equipment. Contractor shall correct any damage to building surfaces and surrounding areas if damaged during removal of this equipment, at no cost to the Owner's Representative.

9 SCHEDULING AND SEQUENCING: A. Schedule:

1. Submit construction schedule with bid indicating time required from award of contract to;

b. Equipment fabrication and delivery to site

c. Installation and testing per elevator

d. Final acceptance of all elevators

2. Contractor shall be responsible for scheduling related work with other sub-contractors to avoid omissions and delays in job progress. Elevators shall not be removed from service, without prior approval, until all equipment has been manufactured and delivered to the project site for all

elevators. Sequence:

. Mork under this contract shall be done in the following sequence. Any change to this must be approved by the Owner's Representative. Complete all work for each sequence before

proceeding with the next. a. Sequence (1) One: Elevator Nos. 1 - 2

C. Building operations: 1. The building will remain in operation during the execution of this contract. Cooperate with building management in scheduling work in such a way as not to cause interruption of or interference with the building operations.

D. Electrical shutdowns:

1. Temporary electrical shutdowns will not be allowed except for brief periods to be scheduled outside normal hours and at least forty-eight (48) hours in advance and approved by Owner's Representative.

I.IO WARRANTY:

A. Guarantee and Warranty:

1. Provide special project warranty, signed by Contractor, Installer and Manufacturer, agreeing to replace/repair/restore defective materials and workmanship of all work performed which may develop within one (1) year from final date of completion and acceptance of the entire installation. "Defective" is hereby defined to include, but not by way of limitation, operation or control system failures, performances below required minimums, excessive wear, unusual deterioration or aging of materials or finishes, unsafe conditions, the need for excessive maintenance, abnormal noise or vibration and similar unusual, unexpected and unsatisfactory conditions.

I.II ALTERNATES:

SPECIFICATIONS

A. Alternate No. 1; Continuing full maintenance contract:

1. Quote cost and submit proposal for full maintenance contract for a period of five (5) years after expiration of 12-month maintenance provided with this new installation. 2. Proposal shall be based on:

a. Examinations, replacements and callback service as specified for maintenance under this

b. Per Owner's Vertical Transportation Agreement

PART 2 - PRODUCTS

2.1 DESCRIPTION OF SYSTEMS:

4. Stops:

A. Elevator Nos. | \$ 2: I. Type: 5000 Pou 2. Capacity: 350 FPM 3. Speed:

5. Opening Existina 6. Travel: 7. Control: VVVF/AC

. Operation: New Microprocessor, Selective Collective Group Automatic Machine Location Overhead

opecial Operations: oendent Service Provide New

Fire Emergency Service c. Standby Emergency Power Provide New, w / New Selection panel d. Anti-Nuisance Service rovide New

e. Tenant Securi f. Code Blue Provide New, as applicable to code q. Seismic Operat

Provide New . Door Operation: Provide New 13. Guide Rails Retain 4. Guide Shoe Provide New 15. Hoist Ropes

Provide New, Provide Rope Lubricators Provide New 16.Governor 17. Buffers: Provide New Retain 18. Counter, Provide New Retain Provide New Frame & Platforms: Retain

Provide New Machines: 24. Controllers: Provide New Provide New, Regenerative 25. Motor Drive Units: 26. Car Operating Panels: Provide New

27. Car Position Indicators: Provide New 28. Hall Position Indicators: Provide New Provide New 29. Service Cabinet: Provide New 30.Communications: 31. Hall Button Stations: Provide New 32. Hall Lanterns: Provide New 33. Guard Control Station: Provide New 34. Life Safety Control Panel: Provide New 35. Machine Room Monitor Panel: Provide New

36. Disabled Access Requirements: Provide New, as required Provide New 37. Wiring: Retain 38. Car Enclosure: Retain 39. Hoistway Entrances:

40. Miscellaneous Items: a. Key Operated Hoistway Access Provide New Provide New as applicable to code b. Seismic Requirements c. Card Reader Provisions

d. Clean hoistways, machine rooms and equipment; paint machine room floor, pit floor, car top, and all existing metal work Provide New, Mount in machine room e. Ascending car protection

Provide New

Provide New

2.2 MATERIALS:

A. Aluminum: Alloy and temper best suited for anodizing finish specified.

B. Nickel silver: CDA Alloy 796, leaded nickel silver.

C. Plywood: PS-I, A-D exterior Grade Douglas Fir, fire retardant treated.

D. Sheet steel: ASTM A366, uncoated, pickled, free from defects.

f. Top of car guardrail

E. Stainless steel: ASTM A167; type 302 or 304.

2.3 EINISHES: $igl\langle \mathsf{A}.\ \mathsf{All}\ \mathsf{Interior}\ \mathsf{Finishes}\ \mathsf{shall}\ \mathsf{comply}\ \mathsf{with}\ \mathsf{2019}\ \mathsf{CBC},\ \mathsf{Chapter}\ \mathsf{8}.$

B. Exposed-to-view surfaces:

1. Provide as follows unless otherwise specified.

a. Aluminum: Clear anodized finish b. Nickel silver: Satin brushed finish.

1) Shop prime: Degrease clean of foreign substances and apply one coat of corrosion inhibiting primer compatible with finish paint selected. Hoistway items visible to public shall be painted one additional coat of black paint.

2) Finish paint: Three coats baked enamel; sand each coat smooth; color as selected. d. Stainless steel: 1) Plain: Satin, directional polish, No. 4 finish unless otherwise specified.

2) Patterned: Rigidized Metal's No. 5 ML, Ardmore Textured Metals No. 5- SM or approved

1) Prime surfaces: Use same paint as factory for field touch-up.

2) Finish painted surfaces: Refinish whole panel with shop prime and finish paint as specified

B. Non-exposed-to-view surfaces:

e. Touch-up:

c. Sheet steel:

Degrease or remove any rust and shop paint manufacturer's standard corrosion inhibiting primer.

2.4 AUTOMATIC OPERATION: A. General operation of individual elevators:

I. Provide a non-proprietary diagnostic microprocessor-controlled dispatching system, based on real time calculations, designed to monitor all types of traffic and sufficiently flexible so that it can be modified to accommodate changes in traffic patterns.

2. Serial link communications: Provide a distributed processing network consisting of localized processors located in machine rooms, car stations, hall stations and top of car to allow system to make fast decisions based on data shared by the processor involved in the different operations of the elevators. For group dispatch operations, all elevators in the group shall be capable of acting as a group common dispatcher as the need arises.

ELEVATOR MODERNIZATION ELEVATORS 1 & 2 FOR THE

ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE. COLTON, CA. 92324

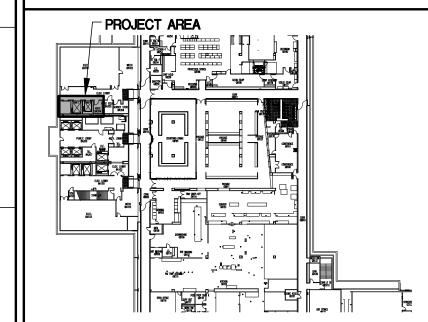
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3. Fault diagnostic system: Provide Owner's Representative with all hardware such as on-board LED diagnostics, hand held device or laptop computer, as standard with manufacturer, and supporting software documentation. Diagnostic system shall be capable of determining faults most difficult to find, as well as be capable of performing all code required testing. 4. The system shall be flexible, irrespective of the number of elevators in normal service.

I. Provide an "on-demand" hall call response system that will continuously scan the hall calls and assign the closest elevator in time to respond to that call. The system shall be capable of

2. A car with no car calls registered arriving at a floor where both "up" and "down" hall calls are registered shall respond to the hall call in the direction of travel and illuminate the appropriate lantern. If no car call is registered for that direction, the lantern shall be extinguished, the lantern for the other direction shall light and the car shall respond to the call in that direction. The

3. The system shall be capable of monitoring hall and car calls to monitor coincidental calls. The cars will continuously scan the whole system to determine the closest elevator in time taking into

a. Should a car be delayed from leaving a floor for any reason, other cars shall respond to the

b. Provide each car with an adjustable load-weighing device, which will immediately dispatch cars

a. After each group of elevators have been placed in regular service and the building

substantially occupied, the elevators shall be regularly observed under normal operating conditions and minor adjustments shall be made as found necessary to ensure that the

for the division between each zone to be raised or lowered if found necessary due to uneven distribution of traffic between the zones and/or staffing requirements.

I. Provide key-operated hoistway access device and car top operating device. Key switches shall

I. Independent service operation shall be provided so that, by means of a switch located in the car service cabinet, the car can be removed from automatic operation and be operated by an attendant. The attendant shall have full control of the starting, stopping and direction of car

2. The car shall respond to car buttons only. The hall signals for the car on independent service shall

I. Provide a complete Voice Annunciation Unit (including the Device, the Wiring to the elevator cab, Speaker and Control System Software designed to include a Voice Annunciation Interface). The Annunciator shall announce the floor number and the intended direction of travel.

1. Provide "anti-nuisance service" whereby all car calls will be cancelled if the load- weighing device detects that an abnormal number of calls are registered given the number of passengers in the

 Provide special emergency service to comply with current ASME and CCR Title 8, CBC Title 24, 2. Provide Phase I recall switch at main floor elevator lobby and fire control life safety room. Interlock recall switches to prevent simultaneous activation in accordance with CCR, Title 8,

Division I, Chapter 4, Subchapter 6, Elevator Safety Orders per 2019 CBC Section 3003.2. 3. Key switches at main floor shall be integrated in hall button station with engraved instructions. 4. Provide Phase II emergency in-car operation in accordance with CCR, Title 8, Division I, Chapter 4, Subchapter 6, Elevator Safety orders per 2014 etas section 3003.2.

1. Provide seismic operation in accordance with ASME and CCR Title 8, CBC Title 24, IBC, and local

2. Provide a dual ring and string, continuously monitoring type counterweight displacement device for

3. Provide a seismic switch device measuring both horizontal and vertical accelerations for each group of elevators located per manufacturer's recommendations. 4. Provide a Sensor Switch to be installed on the Governor Rope/Sheave per 2019 CBC, Section

5. Include a Travel Speed reduction or "go slow" speed (max. of 150 FPM) required once the Seismic

General: The standby power system is sized to operate one elevator in each group simultaneously.

controllers, all elevators will shut down, and all car lights, etc., will be extinguished. 3. When emergency power comes onto the line, power for lighting car fan and alarm bell shall be automatically transferred and all cars on automatic operation shall be sequentially returned one at

4. After all cars are parked at main floor, one car of each group shall resume normal operation.

selection of desired elevator to operate on emergency power. 6. When normal power fails and emergency power is used, or when normal power is restored, the elevator manufacturer shall provide all circuitry necessary, including time delay or auxiliary relays required to accomplish safe, continuous elevator operation. The cars will start in sequence, not

7. Fire service and derailment devices shall be operable when system is on emergency power

Arrange control system to enable and disable car call buttons as follows: a. Function, which locks out all cars in a group so that all car buttons are inoperative, except

b. Function, which is programmed and integrated to respond accordingly when the alarm is

c. Function which locks out any selected car button for all elevators in a group serving that

d. Tenant security operations can be overridden by cars on independent, any special emergency

e. Provide Infant security wire and device information as shown on Security sketch. Included as a supplement to the specifications. Provide IDEC Relays and sockets as shown on IDEC cut-sheet, included as a supplement to

the specifications. q. During an active alarm the any elevator that is on that same floor that the alarm was triggered the elevator is to remain/stay on that floor with the doors open. All other

elevators will bypass the floor. h. For the Staff Elevators: ARMC has requested that we add/have prewiring for the card

readers/access controls on the outside in the elevator lobbies on each floor. The intent being that staff needs swipe their badge in order to call the elevator. i. Please note that part of the sequence of operations we will need to provide Fire and Code

Blue override options that will supersede/take priority over an infant alarm ovent.

Code blue emergency service:

Provide a momentary spring return actuated key switch with pilot light in hall station at each floor for each elevator group. Provide blue bezel with white letters marked "CODE BLUE". Pilot lights

shall illuminate upon activation of switch and extinguish when call is answered. 2. Provide an illuminating sign in each elevator which reads "ELEVATOR CAPTURED FOR HOSPITAL EMERGENCY". Letters shall be 1/4-inch-high, visible only when illuminated and shall flash red when that elevator is captured by the commandeering key switch in hall station. Provide a pulsating

buzzer to draw passenger attention to flashing sign. 3. Operation of any switch shall capture the nearest elevator of that group, return it to that floor without answering any other registered car or hall calls and hold it with doors open for an adjustable period of time from 30 to 90 seconds. If a car call is not registered within this period, 4. Provide a two-position key switch removable in "off" position only in each car station. Provide blue bezel with white letters marked "CODE BLUE"

5. To commandeer the captured elevator, the attendant shall operate the hospital emergency key in the car and register a call for any floor desired. The elevator shall proceed to that floor destination, automatically open the doors and stand at the floor until the key is removed. Key removable in "off" position only.

2.6 DOOR OPERATION:

B. Door operator

A. Passenger type:

appreciably.

. Provide door times available as specified under "Design Criteria." 2. Car and hoistway doors shall open and close simultaneously, quietly and smoothly; door movement shall be cushioned at both limits of travel. Door operation shall not cause cars to move

3. Door hold open times shall be readily and independently adjustable when car stops for a car or hall call. Main floor door hold times shall be adjustable independent of other floors.

4. Provide closed loop regulated speed performance, onboard diagnostics, adjustable times, nudging, and test switches

Provide new heavy-duty master type solid state closed loop door operators mounted on car enclosure utilizing minimum 12-quage support angles to isolate from direct mounting of operator on

2. Pre-approved closed loop heavy duty door operators:

a. GAL MOVFR II 3. Provide code compliant door weight data tag.

C. Car Hangers and Tracks:

I. Provide all new door tracks and hanger assemblies. Sheave type with two-point suspension. Steel sheaves with flanged groove and resilient sound-absorbing tires. Minimum 3-inch diameter for hoistway. Manufacturer's heavy-duty tracks and ball or roller bearings with adjustable up thrusts. Provide new relating cables.

D. Car Clutch:

1. Provide new.

E. Car Hanger headers:

Provide new; minimum 3/16-inch-thick extending from strut to strut.

F. Gate Switch:

1. Provide all new. G. Door restrictor:

. Provide new, door restrictor device compatible with new door equipment.

H. Door Protection:

Remove existing door protection devices and provide new electronic optical 3D scanning type:

a. Provide a door protective system which does not rely on physical contact with a person or object to inhibit door movement or initiate door reversal.

b. Pre-approved optical door sensors:

1) Adams GateKeeper Max 2) Formula Systems

3) Janus Pana Chrome 3D, with voice annunciation

4) Tritronics Leading Edge

c. The system shall be able to detect a 2-inch diameter rod introduced at any position within the

door movement and between the height of 2 inches and 63 inches above sill level. d. Detection of intrusion into the protected area shall cause the doors, if fully open, to be held

in the open position and, if closing, to reverse to fully open position. e. If doors are prevented from closing for an adjustable period of 15 to 45 seconds or upon activation of fire emergency service, they shall proceed to close at reduced speed and a loud buzzer shall sound. Door closing force shall not exceed 2-1/2 ft.-1b. when door

f. For side-opening doors, the detector for the strike jamb side shall be recessed, flush with strike jamb.

Provide an illuminated door hold button, operation of which will hold the doors open for a predetermined and adjustable period of 20 to 90 seconds. Sound warning buzzer 5 seconds prior to expiration of time. Normal operation shall be resumed upon:

a. Expiration of door hold time. b. Operation of door close button in car.

re-opening device is not in operation.

c. Operation of any floor button in car.

2.7 SIGNALS AND OPERATING FIXTURES:

1. Provide signals and fixtures as shown and specified. Location and arrangement of fixtures shall comply with disabled access requirements.

a. Service and Freight Elevator Buttons: Provide vandal-resistant stainless-steel minimum I inch diameter mechanical buttons with integral illumination. Buttons shall be raised 1/8 inch from surrounding surface with square shoulders. Operation of car or hall button shall cause button to illuminate.

b. Switches: Toggle type typically or key operated where noted. c. Provide five (5) keys for each elevator keyed device, with proper labeled identification upon

d. Cabinets: Provide with pulls, concealed hinges and doors mounted flush with hairline joints to adjacent surface.

e. Arrangement: Arrangement of fixtures shall generally conform to that specified, but components may be rearranged, if desired, subject to Owner's Representative's approval.

f. Engraving: Of size indicated; color backfill with epoxy paint in contrasting color as selected. No applied engraved plates.

g. Lamps: Miniature LED type. . Audible Chimes: Electronic adjustable audible chimes; bell type gong not acceptable.

Provide floor passing signal of the adjustable electronic audible chime type. Tactile Markings: Provide raised Braille and alpha characters, numerals or symbols adjacent to operating buttons and devices used by the public according to local codes. Indications may be engraved directly on faceplates or separate plates flush mounted with hairline joints and concealed mechanical fasteners. Plates shall be of same size and shape as buttons or

integral "fishtail" type. k. Acceptable manufacturers: EPCO, ERM, MAD, or INNOVATION, fixtures with 5/8" engraved identifications. Operation of car or hall button shall cause button to illuminate. Response of

car to car or hall call shall cause corresponding button to extinguish. tes: Provide of material and finish as indicated and specified; 1/8-inch minimum ness with sharp edges relieved. Faceplates shall be sized to cover holes left by removal of existing fixtures where new fixtures are provided and provided with engraved fire

ign, per A17.1. New faceplates shall cover all existing holes or Contractor shall patch at no n. Audible chimes: Electronic adjustable audible chimes from 75 to 85 dB in elevator lobby 3'-0"

above floor and 3'-0" away from elevator entrance; bell type gong not acceptable. eneral: Provide buttons numbered to conform to floors served and the following:

ocate top operating button at 48 inches above floor. e emergency stop switch and illuminated alarm button in bottom row at 35 inches above

de "Door Open", "Door Close", and "Door Hold" buttons located above emergency stop and alarm of same design as car button.

Provide touchless operation for each floor button in the Car Operating Panel.

. All signage required by local codes shall be engraved and painted as directed by Owner's f. Provide fire emergency features, per code. Provide FEO-FI key switch for fire service unless local code requires different.

Make provisions for card readers. 2. Elevator Nos. | \$ 2: Provide two new panels per car; integrate cabinets, buttons and engraving into hinged single piece faceplate mounted to side wall adjacent to strike jamb.

3. Provide touchless operation for each floor button. C. Car position indicators:

Provide car position indicators with 2 inch indications corresponding to floor designations with

a. Provide new digital alpha numeric type segmented LED readout indicator with minimum two-inch high indications mounted integral with each car operating panel. D. Service cabinet:

1. Provide new cabinet, door with a lock and concealed hinge as an integral part of car operating panel mounted with flush hairline joints. Cabinet door shall be provided with a flush glazed window of required size to hold elevator-operating permit, mounted horizontally. Service cabinet shall

a. Independent service switch

b. Two-speed ventilation switch (Hi-Off-Low)

c. Light switch as applicable d. Inspection switch, key operated

e. Duplex GFI convenience outlet f. Buzzers as required

g. Constant pressure test switch for emergency car lighting h. Card reader over-ride switch-key operated

E. Communication equipment:

I. Provide a complete new communication system in compliance with all ADA Regulations, Building Code Regulations 2019, and ASME AIT.I Regulations, consisting of a combination speaker/microphone, amplifier, texting capabilities, two way visual communication, yes and no buttons, automatic dialer with 4 number rollover capability and matching car station push button with telephone symbol to activate system and acknowledgment lights. Mount in car operating panel, wire to machine room and program automatic dialer as directed by Owner's Representative.

F. Hall button fixtures:

I. Each fixture shall contain buttons, which light to indicate hall call registration and extinguish when call is answered. Provide intermediate fixtures with two buttons and terminal fixtures with one. Engrave fire-exiting instructions on faceplates. Provide minimum of two fasteners at top and bottom of faceplate

a. Elevator Nos. | \$ 2: Provide elevators with one riser of hall button stations.

G. Hall position indicators: 1. Provide with indications corresponding to floor designations with matching direction arro

a. Provide new digital alphanumeric type segmented LED readout indicator with minimum twohigh indications. Combine with hall lantern.

1. Provide with single chime for up and double chime for down direction. Lantern illuminates white up and red for down. As car approaches floor, lantern shall illuminate and chime approximately seconds prior to doors opening to indicate next direction of travel. Chime sound level shall be at 10 decibels over ambient

a. Provide manufacturer's standard hall lanterns with equilateral triangular custom projecting

Remote control stations: 1. Provide new indicator and control panels with wiring from elevator hoistways to and between

remote stations as specified. a. Engrave operating instructions for controls, indicators, elevator numbers and floors served by each elevator or group of elevators.

b. Provide all conduit runs as needed. c. Manufacturer's Elevator Monitoring System utilizing LCD device and keyboard is preferred providing all features specified can be incorporated.

d. Machine Room and Remote-Control Stations: Provide indicator and control panels with wiring from elevator hoistways to and between remote stations as specified. Engrave operating instructions for controls, indicators, elevator numbers and floors served by each elevator group of elevators. Coordinate quantity and size of conduit runs as specified under "Related Work Included in Other Sections". Provide manufacturer's system utilizing LCD device and

keyboard incorporating all features specified. I) Guard's Lobby Elevator Monitoring System: Locate as directed. Include the following devices for each elevator or group of elevators as applicable.

Display showing status, position and direction of each elevator. Function to call and shut down each car at lobby with doors closed. Function to place cars on independent service operation and call car to lobby and

d) Function for tenant security operation as specified under Special Operations. e) Function for swing service operation as specified under Special Operations.

Duilding Emergency Personnel Communication System with instructions. afety Control Station: Locate in Fire Control Room as indicated; size panel to suit space lole and design as approved. Include the following for each elevator or group of elevators as

showing status position and direction of each elevator.

position fire key switch with visual indication. Interlock with lobby key switch to prevent c. Display reading EMERGENCY POWER to illuminate as soon as main power fails. Manual selection switches for each car and display indicating which cars are operating on standby

A compartment containing properly identified keys to operate all fire service switches. Provide tags with legible instructions on each key. Lock on compartment shall be subject to

house master key or fire department key per local codes. e. Building Emergency Personnel Communication System with instructions.

K. Disabled access requirements: Provide to meet local codes having jurisdiction including handrail and button configuration. a. Car operating panels: Provide raised Braille and alpha characters, numerals or symbols to

directly on faceplates or separate plates flush mounted with hairline joints and concealed mechanical fasteners. Plates shall be of same size and shape as buttons. Raised characters shall be white on a black background with Braille designations directly below the character. Provide "star" at main egress landing. Entrances: Provide raised Braille and alpha characters, numerals or symbols similar to those

the left of operating buttons and devices used by the public. Indications may be engraved

for car stations of size required by governing authority. Locate on each entrance jamb at 60 inches above floor indicating floor designation. Material and finish of plates shall be white on black. Braille designation shall be to the bottom of the raised character. Provide "star" at main egress landing. Provide mounting means similar to those on car panels.

c. Entrances: Provide plate with elevator number for first floor entrance. Character shall be a minimum of 4 inches. Material and finish of plates shall be white on black.

park with doors open.

L. Medical emergency elevator:

1. Conform to current code requirements. 2. The identification symbol (Star of Life) shall be fabricated from material and finish matching hall

button stations and mounted with concealed mechanical fasteners. Submit samples. 3. Local jurisdictional authority shall designate the medical emergency elevator.

I. Provide all necessary wiring and 25% spares between cars and controllers and to all remote-control stations; minimum of eight. Furnish shielded wires in cables for all communications card readers, cameras, digital displays, and speakers. Include four additional pairs of shielded spares and two RG-6 coaxial cables or equivalent, for each car. Electrical wire runs will be free of splices or connection unless at designated junction points.

E. Stop switch:

1. Use minimum number of traveling cables. Include shielded wires and spares as noted above. Cord thoroughly and protect cables from rubbing against hoistways or car items. Provide with steel

cable core and properly anchored to relieve strain on individual conductors. 2. All traveling cables shall be wired from machine to elevator, without junction box or spliced connections.

I. All wiring shall be neatly terminated, tied within a junction box and properly marked as to its

2. If junction boxes are used, NEC approved terminal strips shall be used and properly identified. 3. No splices shall be allowed. 4. Install new hoistway gutter in each hoistway that currently does not have hoistway gutter installed.

I. Provide on top of each car to be actuated by corresponding alarm button or emergency stop

D. Work light and GFCI convenience outlet: 1. Provide on top of car with protective plastic lamp guard. 2. Provide LED type.

I. Provide in each pit. Provide NEMA 4 enclosure. 2. Provide on each top of car.

G. Auxiliary disconnect switches: **SPECIFICATIONS**

Provide as required in remote controller rooms or at remote equipment not in view of mainline switches; include all wiring and conduit.

1. Provide provisions for closed circuit television camera in elevators. Run from elevator car top to outside of the elevator machine room, as directed by Owner at no additional cost to the Owner.

2.9 CAR ENCLOSURES

A. General: 1. Fabricate finish work smooth and free from warps, buckles, squeaks and rattles; joints lightproof.

No visible fastenings except as indicated. 2. All elevators shall be weighed before work begins to determine actual weight of car enclosures. Contractor shall keep a log of all equipment and weight removed and added to the suspension system. Contractor is responsible for complying with all applicable ASME and local codes. elevators shall be weighed at the completion of the project. Provide all documentation to the verning authority and Owner's Representative for permanent record.

Provide new crosshead data as required by ASME and local code authorities.

B. Emergency

1. Provide an emergency car lighting unit mounted on top of car, battery driven and self-rechargeable. Upon outage of normal power the unit shall, within 5 seconds, light two lamps as part of normal car lighting. The unit shall have sufficient capacity to keep the lights in continuous operation for four hours and the alarm bell for one hour. Provide a readily accessible means for testing the unit in service cabinet. Light fixtures mounted in car front returns or operating panels

are not acceptable. Numinate lights directly over car operating panels. ain existing shell enclosure and rehabilitate as follows (All Interior Finishes shall comply with 2019) Car operating panels: Provide new, stainless steel #4

Provide new, plastic laminate, color to be selected by owner. Transom: Clad, stainless steel #4

Retain, provide code compliant switch

Provide new, CA 2019 CBC Chapter IIB compliant, stainless steel #4 . Hand rails: 5. Ceiling and ligh Provide a suspended ceiling fabricated from stainless steel No. 4 finish

applied to particle board. Provide multiple equally spaced low-voltage LED down lights in ceiling with appropriate dimmer switch controls located in service cabinet.

Light fixtures to provide uniform illumination of 25 foot-candles at handrail Provide new, two-speed squirrel cage exhaust blower (MVS-UVHC or equal) with sound isolation mounting on canopy. Low Speed 399 CFM with maximum 50 dB sound level; High Speed 613 CFM with maximum 60 dB sound level.

Provide new, stainless steel #4

Provide new, "Altro" Stronghold 30 sheet vinyl (ASTM E648 = CLASS 1; ASTM) 8. Car Doors: 9. Finish flooring: E662 (450), verify color with Owner Provide one set of heavy quilted protection pads for each group of 10. Protective pads: elevators. Pads shall cover all walls with cutout sections for car operating

panels. Provide pads with studs, S-hooks, or rubber-coated 'J' type hooks sewn into top of pad for mounting on top of removable panels. 2.10 HOISTWAY ENTRANCES

1. Retain existing. Modify for new door tracks, reinforce and refinish.

1. Retain existing or provide new as specified. B. Hangers and Tracks:

1. Provide all new door tracks and hanger assemblies. Sheave type with two-point suspension. Steel sheaves with flanged groove and resilient sound-absorbing tires. Minimum 2-1/2-inch diameter for hoistway, 3 inch for car. Manufacturer's heavy-duty tracks and ball or roller bearing with adjustable up thrusts. Provide new relating cables.

1. Retain existing, clean and paint. a. Provide rubber door stops

D. Struts:

1. Provide new cable relating torsion spring mechanical type or broken arm jack knife type as required for door assembly. Provide Smart Tork Spirators.

F. Dust and hanger covers: . Retain existing, clean and refinish with black paint. Replace damaged and missing dust covers.

G. Fascia, toe and head quards: 1. Retain existing, modify to comply with code, refinish with black paint and refasten for greater

operation of the car until doors are locked in the close position as defined by the Code and shall prevent opening of doors at landing from corridor side unless car is at rest at landing in leveling zone or, hoistway access switch is used. Provide all new type "SF" high temperature wiring for

H. Interlocks:

 Pick-up roller assemblies: 1. Provide all new pick-up roller assemblies as required for door operating equipment furnished.

Provide all new. Equip each hoistway door with a tamper-proof interlock which shall prevent

. Provide new, door restrictor device compatible with new door equipment.

I. Provide new, stainless steel, full length of sill. L. Limit Switches:

1. Provide new M. Frames:

a. Size:

 Retain existing N. Hoistway doors: I. Retain existing, re-hang to remove all twists, provide two new gibs per panel and one fire gib per

panel which will remain engaged in sill if guiding member is destroyed. 2. Provide new full height astragals and missing or damaged non-vision wings matching finish of door panels. Contractor must use the original reinforcing on existing hoistway and car doors for mounting hangers, pickup rollers, drive vanes, etc. If original reinforcing is not reusable for drive vanes and pickup rollers, Contractor shall furnish new reinforcing (minimum of 1/4" thick plate) welded to the door face. A minimum of four (4) 5/16" threaded bolts is to be used for attachment to the reinforcing plate. Where slotted holes are provided in the attachment block, a 1/4" dowel pin is to be fitted after doors locks are set up.

4' - 0" wide by 7' - 0" high.

O. Passenger Elevator Entrance Schedule: I. Elevator No. I:

b. Type: Center opening, Single speed c. Frames: l) Main floor: 2) Typical floors: d. Doors: Main floor: 2) Typical floors: e. Sills: 1) Main floor: Provide new Typical floors: Provide new 2. Elevator No. 2: 6' - 0" wide by 7' - 0" high.

a. Size: b. Type: Center opening, Two speed c. Frames:

Provide new

1) Main floor: 2) Typical floors: d. Doors: 1) Main floor: Typical floors: e. Sills:

l) Main floor:

2) Typical floors: N.T.S. ELEVATOR MODERNIZATION ELEVATORS 1 & 2

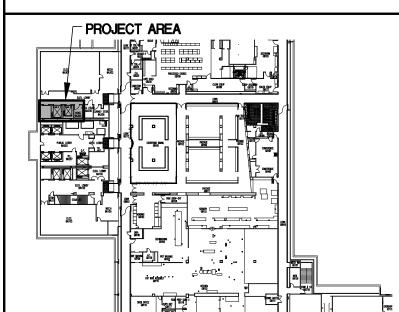
FOR THE ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE. COLTON, CA. 92324

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d. Paint counterweight frame and sub-weights black.

over sheave, jaws and exposed gears (if applicable).

b. Provide bi-directional and over-speed switches

I. Retain. Strip down completely and clean all components. Replace worn operating jaws, arms and

a. Provide new governor device that is compatible with safety gear with protective covering

springs, if applicable, and reassemble. Test its operation with governor device.

H. Safeties:

Car governor:

Provide new.

b. Motion time: Start of motion to stop of motion as measured in both directions for a typical one floor run under any loading condition. After make-up of hoistway door interlock, initiate movement a. Acceleration and deceleration: Starting and stopping shall be smooth and comfortable, without Elevator shall start movement within .5 seconds of fully closed doors. Stopping upon operation of movement of the elevators. The start/acceleration pattern shall be adjusted to reflect the spring loaded to provide continuous contact with rail surfaces. Balance car to insure equal quide blocking and supports. For deep walk-in pits, provide platforms with access ladders for servicing a. Oil Type: Oil buffers, spring return type with switches. Pistons shall be fully protected by bluing

2. Install Rope Lubricators. One lubricator shall be provided per elevator and remain as part of the b. Provide retainer plates to meet seismic code requirements. c. Secure weight to provide noise free operation at full speed in both directions.

c. A certificate must be obtained from Code Authorities that the new governor is acceptable for operation of the existing car safety gear d. Provide code compliant taq. J. Governor tail weight: Provide new. a. Frame shall be ratchet or tension type held under 200 pounds tension. K. Car frame and platform: 1. Retain existing car frame and platform. a. Replace rubber isolation supports. b. Static balance weight to be added as required. c. Clean down and tighten frame bolts. L. Sheaves: Provide new deflecting, an 2:1 car and 2:1 counterweight sheaves having ball or roller bearings. Provide seismic rope retainers as required. M. Top of Car Guardrail: I. Install top of car guard rail complying with OSHA specifications. Must be able to withstand a 200-pound load in any direction, must be 42" - 45" high from floor to top of rail. Posts must not exceed 8-foot centers and must have a mid-rail. The mid-rail must be at least I" x 6". The top rail and posts must be at least 2" x 4" and must have a 4" high toe board strong enough to stop tools and material from sliding or rolling over the edge. The material must be good, not defective, and not have splinters. May use l_2^{\perp} steel pipe or 2" x 2" x 3/8" for posts, top and mid-rail. Other materials of equal or greater strength may be substituted. The guard rail design must have Professional Engineer certification. 2.13 MACHINE ROOM EQUIPMENT A. General: 1. Provide equipment to fit existing space and structural limitations. Coordinate related electrical, structural and mechanical. B. Traction machines: 1. Provide new aearless machines a. General: Provide machines with heavy structural steel bedplates and PMSM or AC motors rated for 30 minute 50 degree Centigrade or better. b. Gearless Traction: Provide manufacturer's standard double wrap or single wrap traction machines as approved with 1:1 or 2:1 roping. Approved Machines: a) Elevator Contractor b) Hollister Whitney c) Imperial d) Torin e) or approved equal C. Ascending car protection: Provide new ascending car protection that detects an ascending car over-speed condition at a speed not greater than 10% higher than the speed at which the car governor is set to trip. Mount a. If the over-speed detection means requires electrical power for its functioning: 1) A loss of electrical power to the ascending car over-speed detection and control means shall cause the immediate activation of the emergency brake. 2) The occurrence of a single ground, or the failure of any mechanically operated switch shall not render the detection means inoperative. 3) Provide means to stop car if unintended motion occurs. 4) Provide any structural and code modifications to accommodate ascending car motion de∨ice. D. Controller: Provide non-proprietary diagnostic control system from approved manufacturer; overload relays in identical to those on wiring diagrams adjacent to each component. relevant requirements of National Electric Code and ASME AI7.5. b. Main contactors or starter switches shall be horsepower rated and are not to be mounted \angle directly to the steel cabinets, to ensure quiet operation of controllers. electrical vibration noise to the steel cabinet. d. The controllers must be properly shielded from line feeder pollution. E. Power Conversion and Regulation Unit: l. General: performance standards herein specified shall be provided. car to rest in event of power failure or safety device operation. d. Controllers shall not have failure modes which results in full power being applied to drive machine operation in event of phase reversal, phase failure or low voltage which might result in

three legs of power circuit and in loop circuit; cabinets with NEMA-1 enclosures and doors arranged with locks or mechanical latches. Provide permanently marked symbols or letters a. The controller wiring shall be carried out in a neat and workmanlike manner in accordance with

c. Where SCR drive control is provided, noise suppression wye-delta isolation transformers are to be connected between the A.C. feeders to the SCR drive and a D.C. L/C filter between the hoist motor and drive. These transformers are to be mounted in an isolated manner to

a. Variable Voltage Variable Frequency (VVVF/AC) control optional with manufactur b. All circuitry shall be as approved by the enforcing code. Operation shall be quiet and the

c. Design system to control starting and stopping and to prevent damage to motor F overload or excess current and to automatically disconnect power supply. Apply brake and bring

e. Controllers shall provide adequate EMC to reject a 500 kHz to 1500 MHz RF signal at a power level 100 watts and a distance of 1 meter. Need to add frequency requirements. 2. Variable Voltage Variable Frequency (VVV

a. Provide system to convert 3 phase, 60 Hz, A.C. building power supply to a fixed D.C. voltage and then invert from D.C. voltage to a variable voltage, variable frequency, distortion-free, smooth A.C. current output to the A.C. hoist motor. The carrier frequency shall be above 10,000 b. Motor speed shall be controlled by varying the frequency input to the motor; torque shall be

controlled by varying the voltage to the motor. c. System shall be provided with necessary devices to insure quiet operation not exceeding noise level specified in "Design Criteria" and to protect building system power line against line voltage

I. Provide all structural steel machine and sheave beams with dead end hitch plates, bearing plates, ors and blocking as required to support equipment.

EXECUTION:

transients.

stall per manufacturer's requirements, those of regulatory agencies and as specified.

elded Construction: vide welded connections for installation of elevator work where bolted connections are not red for subsequent removal or for normal operation, adjustments, inspection, maintenance and

ement of worn parts. 2. Comply with AMS standards for workmanship and for qualifications of welding operators.

Mount rotating and vibrating elevator equipment and components on vibration- absorption mounts, designed to effectively prevent transmission of vibrations to structure and thereby, eliminate sources of structure-borne noise from elevator system.

Lubricate operating parts of systems as recommended by manufacturer. Hazardous Disposal Certification: Contractor to provide oil and hazardous waste removal documentation per required EPA

standards. Provide copy of documentation to Owner.

I. Coordinate alignment of hoistway entrances with elevator guide rails, for accurate alignment of entrances with cars. Where possible, delay final adjustment of sills and doors until car is operable in shaft. Reduce clearances to minimum, safe workable dimensions at each landing.

pits shall not compromise waterproofing.

2. Align guide rails plumb and parallel with maximum deviation of 1/16 inch. Anchorage of guide rails in

G. Graphics:

I. Provide graphics visible to public as selected by Owner's Representative. H. Manufacturer's nameplates:

Manufacturer's nameplates, trademarks or logos not permitted on surfaces visible to public.

Cleaning of the installation: I. After the installation of each elevator has been completed and immediately prior to the carrying out of the tests, the machine room and all equipment therein, the elevator hoistways including outside of car and all ledges and similar areas, the elevator pit and equipment therein, and all door hanger runners, quides, tracks and sills shall be thoroughly cleaned down, preferably with vacuum cleaning equipment, and all dust, fluff, dirt, grit, excessive oil and grease and rubbish shall be removed from site.

J. Finish painting after tests:

After satisfactory completion of the tests, any damage to the paint work shall be made good and the installation re-cleaned, if necessary, after which at least one final coat of gloss oil resistant or enamelized paint shall be applied by brushing or spraying in Contractor's customary colors to all the existing and new equipment in the machine room and also to such items in the hoistway or elsewhere which have received only a primer coat.

2. Painting shall be performed either during normal working hours or after hours at no additional cost to the Owner.

K. Painting of machine room floor and pit floors:

1. After the completion of the entire installation, the floor of each machine room and pit areas sha be thoroughly cleaned down and brush painted with one coat of traffic paint having oil resistant properties. Pit floors shall be painted after the completion of the waterproofing. Owner's Representative will advise the color.

2. Painting shall be performed either during normal working hours or after hours at no ad to the Owner.

3.2 NOISE CONTROL

A. General: 1. Contractor, in the preparation and the execution of the work, shall recognize the particular and mandatory requirements of the remodeling project due to the character of the work and the use occupancy of the building.

2. Contractor shall perform all noisy work as directed by Owner's Representative.

B. Building operations:

Noise and vibration generated by this construction for this work may, at times, create a problem for the operations of the building. In the event the noise produced by the construction work conflicts with the building function, Contractor, at the request of the Owner's Representative, shall reduce or stop the noise.

2. All disruptive work including removal of old materials and deliveries of new materials shall be done on overtime at no additional cost to Owner.

3. All disruptive work will be performed after hours at no additional cost to Owner

I. The noise level shall be measured on the "A" Scale of a sound level meter as follows: a. With the meter located 3' - 0" from the nearest staff work station to the elevator lobby, the sound level shall not exceed 65 dk b. With the meter located 3' - O" from outside of each machine room door at floor level, sound level shall not exceed 70 db.

c. With the meter located 3' - 0" from any hoistway door at any level, the sound level shall not exceed 70 db.

D. Types of noise generating work: eavy demolition (concrete walls and floors).

grinding, chipping, pounding, sanding and cutting of holes and core drilling.

addition to the required after hours work listed earlier in the specifications, contractor shall Jude 240-crew hours of additional overtime to be used at the Owner's discretion. Contractor hall provide a monthly tracking log of the after-hours used per month. Once the project is omplete, the Owner shall be credited the unused hours at the contractor's after hour's contractual

3.3 FIELD QUALITY CONTROL:

A. Regulatory agencies inspection:

completion of elevators, Contractor shall provide instruments, weights and personnel to t test required by regulatory agencies. Contractor shall submit a complete report the results of the tests.

B. Examination and testing:

When installation is ready for final acceptance, notify and assist Owner's Representative in making a walk-through inspection of entire installation to assure workmanship and equipment complies with contract documents. Provide equipment to perform the following tests:

a. One-hour heat and run test with full load in car. Perform for one car of each duty.

1) Stop car at each floor in each direction. 2) Verify that temperatures do not exceed manufacturer's motor ratings.

3) Performance and leveling tests shall be made before and after heat and run test.

b. Check and verify operation of all safety features and special operations. 1) Measure horizontal acceleration.

2) Measure acoustical output levels in machine room, lobbies and cars.

Make corrections to defects or discrepancies at no cost to Owner's Representative. Should discrepancies be such that re-examination and retesting is required, Contractor shall pay for all costs including those of Owner's Representative's fees.

Final acceptance of the installation will be made only after all corrections are complete, final submittals and certificates received and the Owner's Representative is satisfied and the installation is complete in all respects. Final payment will not be made until the above is completed.

3.4 INSTRUCTIONS:

A. Instruct Owner's personnel in proper use of each system.

3.5 PROJECT RECORD DOCUMENTS:

A. As-built drawings:

1. Contractor shall maintain at the job site a separate and complete set of contract drawings which will be used solely for the purpose of recording changes made in any portion of the work during the course of construction, regardless of the reason for such change.

2. Changes, as they occur, will be marked on the record set of drawings on a daily basis.

3. The monthly payment will be withheld until the Owner's Representative has verified that "as-built" corrections are current. Before final payment is authorized, Contractor shall certify that all changes in the work are included on the drawings and will deliver such to the Owner's Representative.

B. Record drawings:

1. Contractor shall prepare "as-built" drawings in duplicate of any changes to electrical work on prints supplied by the Owner's Representative. During the course of construction, actual locations to scale shall be shown for all runs of mechanical and electrical work, installed in walls and floors or otherwise concealed. This shall cover all piping, electrical wiring; whether in conduit or cable, duct work, etc. shall be located, in addition, by dimension. All services shall be identified in ink on

2. In addition, Contractor shall keep a complete record copy of the plans and specifications for the use in preparing "as-built" plans and specifications at the end of the job. Contractor shall sign and date the prints and deliver them to the Owner's Representative.

3.6 MAINTENANCE:

A. General:

Provide complete continuing maintenance on entire elevator equipment during regular working hours on regular working days from award of contract, through construction and for a period of twelve (12) months after completion and acceptance of all elevators.

Include systematic examination, adjustment, and lubrication of elevator equipment whenever required and replacement of defective parts with parts of same manufacture as required for proper operation. Contractor not responsible for repairs to car enclosures, door panels, frames, sills or platform flooring resulting from normal usage or misuse, accidents and negligence for which Contractor is not responsible.

Examinations shall be performed twice monthly expending a minimum of one and one-half hours per unit per visit performing preventative maintenance service.

C. Performance standards:

a. Maintain the performance standard set forth in this Specification and maintain correct operation of the dispatchina sustem.

b. Prior to commencement of work and at completion of work, Contractor shall conduct a ride analysis using an accelerometer on each elevator to document the ride conditions. nooth starting and stopping, smooth riding qualities and accurate leveling at all

D. Call-backs:

1. In event of failures, provide 24-hour call-back service billed at bonus time rates only to Owner.

ould any elevator become inoperative, repair within 24 hours of notification of such failure. Breakdown of major components shall be completed and service restored within 72 hours. Failure to comply with above, Owner's Representative may order the work done by other

actors at Contractor's expens 3. Devices repaired or replaced by others shall, nevertheless, become provided with maintenance by Contractor who shall become completely responsible for correct operation of such devices for lifetime of this contract

a. Hoist ropes, governor ropes, machine work, and/or any major components that require to have an additional elevator out of service during the modernization, the contractor will repair and/or replace at contractors' expense at a time designated by the Owner at no expense to the Owner. This work may need to be completed after normal business hours.

iollow-up test:

Test all safety devices and emergency operations at 6 month intervals or oftener and submit written report on each test. Make tests at times which do not interfere with building operation.

Maintenance mat Expendable Parts: The Elevator Contractor shall provide a metal cabinet in at least one machine room on project premises containing the following expendable parts required for prompt

moved upon expiration of maintenance period. no field replaceable resistors of each type installed.

b. One set hanger sheaves for car and hoistway doors. Two relays and relay bases of each type installed.

Ten lamps of each type installed.

e. Car and hall buttons with identical graphics installed; six for manufacturer's standard buttons,

replacement. Parts used for routine maintenance shall be replenished and stored in machine room

to ensure an adequate supply is available. Parts and cabinet shall become Owner's property and

one of each type for special buttons. f. Ten fuses of each type installed.

g. Any other parts required for prompt replacement.

h. Lubricants and cleaners of all types used for maintenance.

2. Replacement parts: Keep the following parts in a warehouse within twenty-five (25) miles of the project premises.

a. One door operator motor of each type used

b. Transformers of each type installed

c. Two complete door interlocks d. Complete Motor Drive Unit

e. Parts for door protective devices

f. Hall and car button modules

g. Such other parts as are needed to insure prompt replacement in event of elevator shutdown such as spare control boards for computer-operated systems. H. Maintenance data:

1. Submit three sets of complete and accurate maintenance data specific for each elevator at the midpoint of the project. Final acceptance and final payment will not be made until approved and

a. Manuals: Describe proper use and maintenance, inspection, and testing of equipment. All error codes and description of the codes will be part of the documents. It should also include lubrication points, types of lubricants used and frequency of lubricant application.

b. Provide information for all of the switches and functions that were installed.

c. Parts catalogs: Complete listing of all parts of equipment and components used in the d. Wiring diagrams: One laminated set mounted in machine room, one reproducible set delivered to Owner's Representative. Wiring diagrams shall be as built, specific for this installation, and

reference identification on drawings shall match points identified on terminals of controllers. e. Maintenance tool and software manuals: Provide maintenance tools, dongles, and supporting software documentation required for the complete maintenance of the entire system including diagnostics, adjusting, and testing. Maintenance tool may be hand held or built into control system and shall be of the type not requiring recharging or reprogramming nor of the automatic destruct type. The tool and supporting software may be programmed to operate only with this project's identification serial numbering

1. Quotation: Base bid shall include cost of maintenance and materials as described above.

J. Warranty Closeout:

1. Should Owner and/or Owner's representative be required to perform a second verification site visit because failure of completion of the Correction / Deficiency List, Contractor shall compensate Owner and/or Owner's Representative for any costs incurred by the second and any subsequent verification site visits, on a per site visit basis.

2. Failure of Contractor to complete any items on the Correction / Deficiency List within the stated time shall be cause for the assessment of liquidated damages including Owner procuring services from another elevator contractor with costs to be reimbursed to Owner by Contractor.

END OF SECTION

ELEVATOR MODERNIZATION ELEVATORS 1 & 2 FOR THE

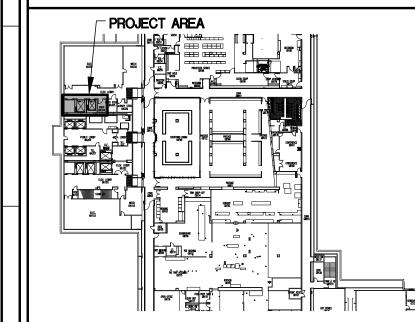
ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE. **COLTON, CA. 92324**

HCAI # S222026-36-00

Department of Health Care Access and Information



REFERENCE PLAN



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marks architects 73121 fred waring drive suite 200 palm desert, ca 92260

NOVEMBER 30, 2022 REVISIONS

3021021

760-327-6800

A3.3

SPECIFICATIONS

2. THE CONTRACTOR SHALL VISIT THE SITE INCLUDING ALL AREAS INDICATED ON THE DRAWINGS. HE SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS, OR A BID, AND BY SUBMITTING A BID, ACCEPTS THE CONDITIONS UNDER WHICH HE

JURISDICTION. WHERE THE CODES HAVE DIFFERENT LEVELS OF

REQUIREMENTS. THE MOST STRINGENT RULE SHALL APPLY.

- SHALL BE REQUIRED TO PERFORM HIS WORK. 3. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COMPLETE SET OF CONTRACT DOCUMENTS, ADDENDA, DRAWINGS AND SPECIFICATIONS. HE SHALL CHECK THE DRAWINGS OF THE OTHER TRADES AND SHALL CAREFULLY READ THE ENTIRE SPECIFICATIONS AND DETERMINE HIS RESPONSIBILITIES. FAILURE TO DO SO SHALL NOT RELEASE THE CONTRACTOR FROM DOING THE WORK IN COMPLETE ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
- 4. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, FEES, CHARGES, AND INCIDENTAL COSTS NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY STATE, COUNTY AND LOCAL GOVERNMENTAL AGENCIES.
- 5. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH OTHER TRADES AT THE SITE. ANY COSTS TO INSTALL WORK TO ACCOMPLISH SAID COORDINATION WHICH DIFFERS FROM THE WORK AS SHOWN ON THE DRAWINGS SHALL BE INCURRED BY THE CONTRACTOR. ANY DISCREPANCIES, AMBIGUITIES OR CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT DURING BID TIME FOR CLARIFICATION. ANY SUCH CONFLICTS NOT CLARIFIED PRIOR TO BID SHALL BE SUBJECT TO THE INTERPRETATION OF THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER. BUILDING AUTHORITY.
- 6. THE CONTRACTOR SHALL PROVIDE AND KEEP UP-TO-DATE A COMPLETE RECORD SET OF DRAWINGS. THESE PRINTS SHALL BE CORRECTED DAILY AND SHOW EVERY CHANGE FROM THE ORIGINAL DRAWINGS. THIS SET OF DRAWINGS SHALL BE KEPT ON THE JOB SITE AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSTRUED AS AUTHORIZATION FOR THE CONTRACTOR TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE. UPON COMPLETION OF THE WORK, A SET OF REPRODUCIBLE CONTRACT DRAWINGS SHALL BE OBTAINED FROM THE ARCHITECT AND ALL CHANGES AS NOTED ON THE RECORD SET OF DRAWINGS SHALL BE INCORPORATED THEREON WITH BLACK INK IN A NEAT, LEGIBLE, UNDERSTANDABLE AND PROFESSIONAL MANNER. FAILURE TO KEEP RECORD DRAWINGS UP-TO-DATE SHALL CONSTITUTE CAUSE FOR WITHHOLDING OF PROGRESS PAYMENTS.
- 7. IN SOME INSTANCES, IT MAY BE NECESSARY TO DEFER WORK IN CERTAIN AREAS AND LOCATIONS UNTIL SUCH TIME AS EXISTING FACILITIES CAN BE TEMPORARILY OR PERMANENTLY REARRANGED BY THE OWNER. THEREFORE, WHENEVER IT BECOMES NECESSARY FOR THE CONTRACTOR TO PERFORM WORK UNDER THIS CONTRACT IN EXISTING AREAS IN WHICH THE OWNER'S WORK IS BEING PERFORMED. THE CONTRACTOR SHALL ADVISE THE ARCHITECT AND THE OWNER RELATIVE TO THIS REQUIREMENT AND SHALL FOLLOW CLOSELY THE DIRECTIVE ISSUED BY THE ARCHITECT INSOFAR AS TIME AND PROCEDURE ARE CONCERNED. THE CONTRACTOR SHALL INCLUDE IN HIS BID ALL PREMIUM TIME TO WHICH HE MAY BE SUBJECTED FOR P ERFORMING WORK IN SUCH PROCEDURE AND AT SUCH TIMES AS MAY BE NECESSARY TO CAUSE THE LEAST INTERFERENCE WITH THE OPERATIONS OF THE OWNER.
- 8. ALL INTERRUPTION OF ELECTRICAL POWER SHALL BE KEPT TO A MINIMUM. HOWEVER, WHEN AN INTERRUPTION IS NECESSARY. THE SHUTDOWN MUST BE COORDINATED WITH THE OWNER AND ARCHITECT 14 CALENDAR DAYS PRIOR TO THE OUTAGE. ANY OVERTIME PAY SHALL BE INCLUDED IN THE CONTRACTOR'S BID. WORK IN EXISTING SWITCHBOARDS OR PANELBOARDS SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVING ACCESS PANELS OR DOORS.
- 9. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE TEMPORARY POWER FACILITIES AND CONNECTIONS FOR ALL FEEDERS OR SYSTEMS BEING DISCONNECTED IN ORDER TO MAINTAIN SYSTEMS IN OPERATION OR WHERE SAID FEEDERS OR SYSTEMS REQUIRE EMERGENCY STANDBY POWER.
- 10. SHOP DRAWINGS SHALL BE SUBMITTED AS PER CONTRACT SPECIFICATION.
- 11. AFTER ALL REQUIREMENTS OF THE SPECIFICATIONS AND/OR THE DRAWINGS HAVE BEEN FULLY COMPLETED, REPRESENTATIVES OF THE OWNER AND BUILDING AUTHORITY WILL INSPECT THE WORK. THE CONTRACTOR SHALL PROVIDE COMPETENT PERSONNEL TO DEMONSTRATE THE OPERATION OF ANY ITEM OR SYSTEM TO THE FULL SATISFACTION OF EACH REPRESENTATIVE. FINAL ACCEPTANCE OF THE WORK WILL BE MADE BY THE OWNER AFTER RECEIPT OF APPROVAL AND RECOMMENDATION OF ACCEPTANCE FROM EACH
- 12. THE CONTRACTOR SHALL FURNISH A ONE YEAR WRITTEN GUARANTEE OF MATERIALS AND WORKMANSHIP FROM THE DATE OF SUBSTANTIAL COMPLETION.
- 13. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH THE MECHANICAL, FIRE PROTECTION AND PLUMBING DRAWINGS FOR DUCTS, LINES AND EQUIPMENT.
- 14. ALL EQUIPMENT MOUNTED ON ROOF FOR CONNECTION OF HVAC EQUIPMENT SHALL BE MOUNTED ON UNISTRUT STANDS UTILIZING APPROVED PITCH POCKETS, FLASHING, ETC.
- 15. ALL FINAL CONNECTIONS TO OWNER FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR.
- 16. COORDINATE WITH OTHER TRADES AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. SUPPLY POWER AND MAKE CONNECTION TO MOTORS AND EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS AS INDICATED ON THE SINGLE LINE DIAGRAM, ELECTRICAL DRAWINGS, AND DRAWINGS OF OTHER TRADES. REVIEW THE DRAWINGS OF OTHER TRADES FOR CONTROL DIAGRAMS, SIZE AND LOCATION OF EQUIPMENT. DISCONNECT SWITCHES, STARTERS. WIRING, CONTROLS, AND CONDUIT FOR MECHANICAL AND PLUMBING OPERATIONS SHALL BE PROVIDED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING MANUFACTURER'S SHOP DRAWINGS PRIOR TO ROUGHING IN ALL CONDUIT TO THIS EQUIPMENT.
- 17. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENINGS IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAWCUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE UL
- 18. CONNECTIONS TO VIBRATING EQUIPMENT AND SEISMIC SEPARATIONS: LIQUID-TIGHT FLEXIBLE STEEL CONDUIT IN DRY INTERIOR
- LIQUID TIGHT FLEXIBLE STEEL CONDUIT IN AREAS EXPOSED TO WEATHER, DAMP LOCATIONS, CONNECTIONS TO TRANSFORMER ENCLOSURES AND FINAL CONNECTIONS TO MOTORS. PROVIDE SEPARATE INSULATED EQUIPMENT GROUNDING CONDUCTOR IN FLEXIBLE CONDUIT RUNS. MAXIMUM LENGTH SHALL BE SIX FEET
- UNLESS OTHERWISE NOTED. 19. EQUIPMENT OUTLETS, CONDUIT, WIRE, AND CONNECTION METHODS IN HVAC AIR-PLENUMS SHALL BE APPROVED FOR USE IN PLENUMS AND
- SHALL CONFORM TO THE CEC. 20. ROUTE EXPOSED CONDUIT AND CONDUIT ABOVE ACCESSIBLE CEILING SPACES PARALLEL AND PERPENDICULAR TO WALLS AND ADJACENT

- 21. CONDUIT SHALL NOT BE INSTALLED IN ANY FLOOR SLAB. CONDUIT SHALL BE INSTALLED CONCEALED IN THE CEILING SPACE, CONCEALED IN WALLS, OR 18" BELOW BOTTOM SLAB ON GRADE UNLESS NOTED **OTHERWISE**
- 22. THE CONTRACTOR SHALL STRATEGICALLY LOCATE BOXES, ETC., IN AN ACCESSIBLE CEILING SPACE OR PROVIDE AN ACCESS PANEL FOR INACCESSIBLE CEILING SYSTEMS.
- 23. COORDINATE REQUIRED ACCESS DOORS IN NON-ACCESSIBLE CEILINGS TO SUIT FIELD CONDITIONS. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ACCESS DOORS SHALL BE PROVIDED IN OTHER SECTIONS OF THE SPECIFICATIONS. ACCESS DOORS SHALL HAVE A FIRE RATING EQUAL TO
- THE CEILING ASSEMBLY IN WHICH THEY ARE INSTALLED. 24. WHENEVER A DISCREPANCY IN QUANTITY OR SIZE OF CONDUIT, WIRE EQUIPMENT DEVICES, CIRCUIT BREAKERS, GROUND FAULT PROTECTION SYSTEMS, ETC. (ALL MATERIALS), ARISES ON THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ALL MATERIAL AND SERVICES REQUIRED BY THE STRICTEST CONDITIONS NOTED ON THE DRAWINGS OR IN THE SPECIFICATIONS TO ENSURE COMPLETE AND OPERABLE SYSTEMS AS REQUIRED BY THE OWNER AND ARCHITECT/ENGINEER.
- 25. UTILITY PENETRATIONS OF ANY KIND IN FIRE AND SMOKE PARTITIONS AND CEILING ASSEMBLIES, SHALL BE FIRESTOPPED AND SEALED WITH AN APPROVED MATERIAL SECURELY INSTALLED. STEEL ELECTRICAL OUTLET BOXES WHICH DO NOT EXCEED 16 SQUARE INCHES IN AREA, NEED NOT BE PROTECTED IN ONE HOUR OR TWO HOUR FIRE RATED WALLS, PARTITIONS, CEILINGS, OR AREA SEPARATION UNLESS THEY:
- OCCUR ON OPPOSITE SIDES OF THE WALL WITHIN 24 INCH HORIZONTAL DISTANCE OF ONE ANOTHER. IN THIS CASE, ONLY ONE OUTLET BOX NEED TO PROTECTED BY AN APPROVED FIRESTOP MATERIAL OR DETAIL TO
- CORRECT THIS CONDITION. OCCUR IN COMBINATION WITH OUTLET BOXES OF ANY SIZE SUCH THAT THE AGGREGATE AREA OF UNPROTECTED OUTLET BOXES EXCEEDS 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL AREA. IN THIS CASE, ONLY A SUFFICIENT NUMBER OF OUTLET BOXES NEED BE PROTECTED BY AN APPROVED MATERIAL OR DETAIL TO DECREASE THE AGGREGATE AREA OF UNPROTECTED UTILITY BOXES TO LESS THAN 100 SQUARE INCHES IN ANY 100 SQUARE FEET OF WALL.

STEEL ELECTRICAL OUTLET BOXES WHICH EXCEED 16 SQUARE INCHES IN AREA, AND ALL OTHER STEEL UTILITY OUTLET BOXES REGARDLESS OF SIZE, SHALL BE PROTECTED BY AN APPROVED FIRESTOP MATERIAL AS LISTED OR EQUAL.

FIRESTOPPING MATERIAL: MPP-1 MOLDABLE PUTTY PADS 3M CONTRACTOR PRODUCTS MINNEAPOLIS, MN **FSP FIRESTOP PUTTY PADS HEVI-**DUTY NELSON PRODUCTS TULSA,

> FLAMESAFE FSP 1077 FIRESTOP INTERNATIONAL PROTECTIVE COATINGS

OAKHURST, NJ STEEL UTILITY BOXES WHICH EXCEED 100 SQUARE INCHES IN AREA SHALL BE PROTECTED BY ENCASEMENT. UTILITY AND ELECTRICAL OUTLETS OR BOXES SHALL BE SECURELY FASTENED TO THE STUD OF FRAMING OF THE WALL, PARTITION OR CEILING ASSEMBLY. THE OPENING IN THE GYPSUM BOARD FACING SHALL BE CUT SO THAT THE CLEARANCE BETWEEN THE BOX AND THE GYPSUM BOARD DOES NOT EXCEED 1/8 INCH. IN SMOKE WALLS OR PARTITIONS, THE 1/8 INCH CLEARANCE SHALL BE FILLED WITH AN APPROVED FIRE-RATED

- 26. REFER TO SINGLE LINE DIAGRAM AND FEEDER SCHEDULES FOR CONDUIT AND CONDUCTOR SIZE TO PANELS, TRANSFORMERS, MECHANICAL AND PLUMBING EQUIPMENT, ETC. CONDUIT RUNS MAY NOT BE SHOWN ON DRAWINGS, BUT ARE PART OF THIS CONTRACT.
- 27. ALL CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM SIZE, TYPE THHN/THWN THERMOPLASTIC, 600 VOLT, 75 DEGREES CELSIUS WET AND 90 DEGREES CELSIUS DRY AND UL LISTED UNLESS NOTED OTHERWISE. CONDUCTORS #12 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS # 10 AWG AND LARGER SHALL BE STRANDED
- 28. MAXIMUM NUMBER OF CONDUCTORS IN OUTLET OR JUNCTION BOXES SHALL CONFORM TO THE CALIFORNIA ELECTRICAL CODE, ARTICLE 314.16(A), BUT IN NO CASE SHALL CONTAIN MORE THAN THE FOLLOWING NUMBER OF #12 AWG CONDUCTORS FOR THE SIZE OF BOX INDICATED. THE MINIMUM SIZE OUTLET OR JUNCTION BOX PERMITTED IN A WALL IS FOUR INCHES SQUARE BY 1-1/2 INCHES DEEP.
 - SQ. BY 1-1/2" D = 9 CONDUCTORSSQ. BY 2-1/8" D = 13 CONDUCTORS 4 11/16" SQ. BY 1-1/2" D = 11 CONDUCTORS
- 4 11/16" SQ. BY 2-1/8" D = 18 CONDUCTORS ALL OUTLET BOXES CONTAINING MORE THAN ONE DEVICE SHALL BE GANGED. TWO DEVICES DOUBLE GANGED, MINIMUM.
- 29. WHERE MULTI-HOMERUNS ARE INDICATED ON DRAWINGS INDICATING THE SAME PANELBOARD CIRCUIT NUMBER, PROVIDE JUNCTION BOX ABOVE ACCESSIBLE CEILING AND ROUTE ONE SET OF WIRES
- CIRCUIT BREAKERS. 30. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS. DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED. OUTLETS NOT INDICATED ON ARCHITECTURAL ELEVATIONS SHALL BE COORDINATED WITH THE ARCHITECT PRIOR TO ROUGH-IN. UNLESS OTHERWISE NOTED, MOUNT ELECTRICAL DEVICES
- AT THE FOLLOWING HEIGHTS: WALL SWITCH +4'-0" SET VERTICALLY TO TOP OF DEVICE CONVENIENCE RECEPTACLE +1'-6" SET VERTICALLY TO CENTER OF DEVICE.
- MOUNTING HEIGHTS OF ALL DEVICES AND EQUIPMENT ARE FROM FINISHED FLOOR TO CENTER OF DEVICES AND EQUIPMENT UNLESS OTHERWISE NOTED. BOXES INSTALLED IN LOCATIONS NOT APPROVED BY THE ARCHITECT SHALL BE RELOCATED AS DIRECTED BY THE ARCHITECT AT NO
- 31. DRAWINGS ARE GRAMMATIC ONLY. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND RDINATED WITH OTHER SECTIONS. DO NOT SCALE THE RAWINGS FOR LOCATIONS OF ANY ELECTRICAL, AL, STRUCTURAL, CIVIL, OR MECHANICAL ITEMS OR
- FEATURE S 32. RIGID GALVANIZED STEEL CONDUIT SHALL BE FULL WEIGHT THREADED TYPE ALUMINUM OR STEEL. ELECTRICAL METALLIC TUBING (EMT) MAY BE USED IN WALLS OR CEILING SPACES WHERE NOT SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 40 MAY BE INSTALLED BENEATH SLAB OR BELOW GRADE. FLEXIBLE STEEL CONDUIT MAY BE USED AT FIXTURE AND OUTLET CONNECTIONS WITH NO RUNS LONGER THAN SIX FEET. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE PROVIDED IN L CONDUIT RUNS.

ID GALVANIZED STEEL CONDUIT FITTINGS SHALL BE THREADED AND ROUGHLY GALVANIZED. ELECTRICAL METALLIC TUBING (EMT) IT FITTINGS SHALL BE STEEL, RAINTIGHT THREADLES'S SSION TYPE. DIE CAST, SET SCREW, OR INDENTER TYPES ARE CCEPTABLE. FLEXIBLE STEEL CONDUIT FITTINGS SHALL BE MALLEABLE IRON CLAMP SOUEEZE TYPE OR STEEL TWIST-IN TYPE WINSULATED THROAT. SET SCREW TYPE IS NOT ACCEPTABLE.

34. THROUGH-PENETRATIONS AND MEMBRANE PENETRATIONS SHALL BE ROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM OR MEMBRANE PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH ASTM E 814 OR UL 1479, WITH A MINIMUM POSITIVE JRE DIFFERENTIAL OF 0.01 INCH (2.49 Pa) OF WATER OR OTHERWISE PERMITTED BY 2019 CBC, SECTION 714. LISTED THROUGH-PENETRATION FIRESTOP SYSTEM AND MEMBRANE PENETRATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE INSTALLATION DETAILS FOR LISTED SYSTEMS. LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS, MEMBER PENETRATION PROTECTION AND OTHER PERMITTED MEANS AN $oldsymbol{\mathbb{R}}$ METHODS OF PENETRATION PROTECTION SHALL BE SUBMITTED TO HCAI FIELD FIRE MARSHAL FOR REVIEW AND APPROVAL PRIOR TO

DEMOLITION NOTES

- IN GENERAL, THE DEMOLITION PLAN SHOWS ALL EXISTING EQUIPMENT TO BE REMOVED; HOWEVER, ELECTRICAL EQUIPMENT, WHETHER SHOWN ON THIS DRAWING OR NOT THAT IS LOCATED IN REMOVED WALLS, FLOORS OR CEILINGS, SHALL BE REMOVED UNLESS OTHERWISE NOTED.
- IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO DISCONNECT AND REMOVE ALL EXISTING RECEPTACLES, FIRE ALARM, DEVICES, ETC., AFFECTED BY THE REMODELED AREA. THIS WILL INCLUDE REROUTING, OR THE EXTENSION OF, EXISTING CONDUIT AND FEEDERS A ND CABLING WHERE NECESSARY TO MAINTAIN THE CONTINUITY OF EXISTING EQUIPMENT REMAINING.
- ALL CIRCUIT NUMBERS AND EXISTING CONDUIT HOMERUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING RECORD DRAWINGS. IT IS THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF HOMERUNS, AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED.
- IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL AND LOW VOLTAGE SYSTEMS. EQUIPMENT, ETC., REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF REROUTING CONDUIT, WIRING, ETC., AS REQUIRED.
- ALL ELECTRICAL DEVICES, ETC., THAT ARE REMOVED, SHALL BE REMOVED COMPLETELY, INCLUDING CONDUIT AND WIRING BACK TO THE
- DEVICE, ETC., REMAINING IN SERVICE. 6. EXISTING CIRCUITS WHICH ARE REMOVED AND NOT REUSED SHALL BE
- IDENTIFIED ON THE PANEL SCHEDULE AS "SPARE". THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO REMOVAL OF EXISTING ELECTRICAL EQUIPMENT, AND TURN OVER REMOVED EQUIPMENT THAT THE OWNER REQUESTS IN AN "AS-FOUND" CONDITION. EQUIPMENT THAT IS TO BE TURNED OVER SHALL BE
- BOXED AND TAGGED TO IDENTIFY THE SPECIFIC EQUIPMENT. 8. WHERE NEW CIRCUITS ARE SHOWN TO EXISTING PANELS, INSTALL NEW BREAKERS (MINIMUM 20 AMP, SINGLE POLE) AS CALLED FOR ON DRAWINGS. IDENTIFY EACH NEW CIRCUIT ON PANEL SCHEDULE.
- 9. EXISTING CONDUIT MAY BE REUSED IF ADEQUATELY SIZED, BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS BE REUSED.
- 10. IN SOME INSTANCES, IT MAY BE NECESSARY FOR THE ELECTRICAL CONTRACTOR TO TEMPORARILY RELOCATE, REROUTE, ETC., EXISTING ELECTRICAL EQUIPMENT. THIS SHALL BE DONE SO THAT THE SYSTEMS IN ALL PHASES (THOSE COMPLETED AND THOSE YET TO BEGIN), ARE IN COMPLETE, OPERABLE, CONDITION AS CONSTRUCTION PROCEEDS THROUGH EACH PHASE.
- 11. ALL ABANDONED OUTLETS SHALL BE COVERED AND PATCHED TO MAT THE FINISH OF SURROUNDING WALL OR CEILING TO THE OF THE OWNER.

TAG:

PANEL '###

PANEL '###

MX-#/MS-#

<u>/CB-#/CS-#</u>

IPC-#

<u>CB-#</u>

<u>CB-#</u>

OS-#/FDS-#/DSS-#

DESCRIPTION:

CONDUIT

TYPICAL

ABOVE FINISHED FLOOR

NORMALLY CLOSED

NOT IN CONTRACT

NORMALLY OPEN

SOLENOID VALVE

GROUND FAULT INTERRUPTER

UNLESS OTHERWISE NOTED

SYMBOL:

ABBR:

GFI

N.C.

NIC

N.O.

TYP

UON

ELECTRICAL SYMBOL LIST

SECTION

26 28 16

ELECTRICAL ABBREVIATION KEY

DESCRIPTION:

JUNCTION BOX

26 24 16 PANELBOARD - RECESS MOUNT

ISC/STA SCHEDULE

CTRICAL CONNECTION

MOMENTARY PUSHBUTTON OPERATOR

MANUAL SWITCH / STARTER / COMBINATION

TARTER/ CIRCUIT BREAKER. REFER TO

CIRCUIT BREAKER - SURFACE MOUNTED.

DISCONNECT. REFER TO DISC/STA SCHEDULE

CIRCUIT BREAKER - FLUSH MOUNTED.

PANELBOARD - SURFACE MOUNT

INTEGRATED POWER CENTER

TRANSFORMER. REFER TO

TRANSFORMER SCHEDULE

PACKAGED POWER CENTER

REFER TO DISC/STA SCHEDULE

REFER TO DISC/STA SCHEDULE

ELECTRICAL SHEET INDEX ELECTRICAL CO ND AND 3RD DEMOLITION PLAN GROUND, 18 ST. 2ND AND 3RD REMODEL PLANS GROUND H, 6TH AND PENTHOUSE DEMOLITION PLANS HAND PENTHOUSE REMODEL PLANS DETAIL **GRAND TOTAL:**

APPLICABLE CODES

CONTRACTOR SHALL COMPLY WITH APPLICABLE CODES AND LOCAL AMENDMENTS.

CALIFORNIA ADMINISTRATIVE CODE (CAC) ART 1, TITLE 24, CALIFORNIA CODÈ OF REGULATIONS (CCR) 19 CALIFORNIA BUILDING CODE (CI

2, TITLE 24, CCR D ON THE 2018 INTERNATIONAL BUILDING CODE (IBC)

IFORNIA ELECTRICAL CODE (CEC) ED ON THE 2017 NATIONAL ELECTRICAL CODE (NEC)

VICAL CODE (CMC) ASED ON THE 2018 UNIFORM MECHANICAL CODE (UMC)

ALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CC

BASED ON THE 2018 UNIFORM PLUMBING CODE (UPC) CALIFORNIA ENERGY CODE (CEC)

PART 6. TITLE 24.

CALIFORNIA HIS TORICAL BUILDING CODE (CHBC) PART 8. TITLE 24, CCR

IIA FIRE CODE (CFC) PART 9. TITLE 24. CCR ON THE 2018 INTERNATIONAL FIRE CODE (IFC)

CALIFORNIA EXISTING BUILDING CODE (CEBC) 10, TITLE 24, CCR

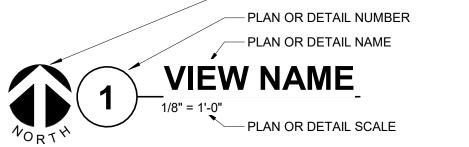
2019 CALIFORNIA REFERENCED STANDARDS CODE (CRSC)

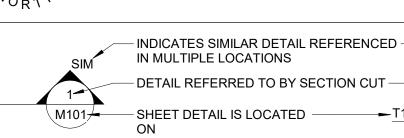
BASED ON THE 2018 INTERNATIONAL BUILDING 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN) PART 11, TITLE 24, CCR

PART 12, TITLE 24, CCR 2019 NTPA 72 2019 NPPA 99 HEALTHCARE FACILITIES CODE

2019 NFPA 101 LIFE SAFETY CODE

VIEW KEY 1 INDICATES NOTE USED TO DESCRIBE NAME — LEVEL NAME ADDITIONAL INFORMATION ABOUT - HEIGHT ABOVE WORK REQUIRED, SPECIFIC TO THE PROJECT 0'-0" SHEET AND/OR DETAIL INDICATES DIRECTION OF TRUE NORTH





LINE TYPE AND TAG KEY:

NEW WORK BY THIS CONTRACTOR (WIDE LINE)

---- EXISTING TO BE REMOVED (SHORT DASHED PATTERN) — — NEW UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

EXISTING TO REMAIN OR WORK BY OTHERS (NARROW LINE)

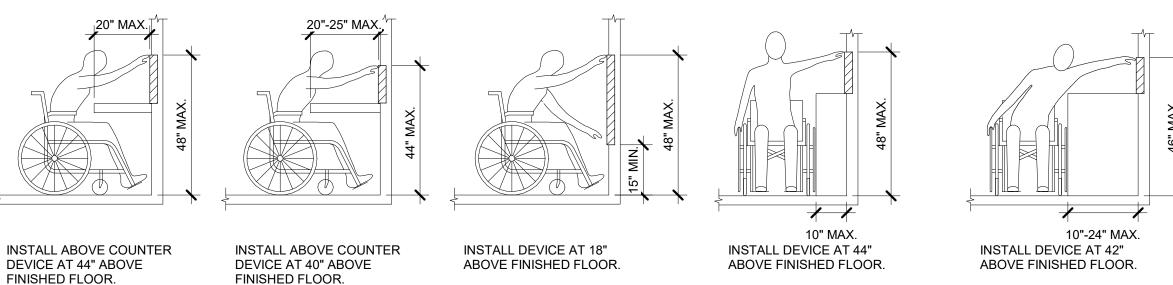
EXISTING ---- EXISTING TO BE REMOVED BY OTHERS (SHORT DASHED PATTERN) — — EXISTING UNDERFLOOR OR UNDERGROUND (LONG DASHED PATTERN)

HALFTONING DOES NOT MODIFY SCOPE.

TAGS WITH DASH 'E' INDICATES THE REFERENCED OBJECT IS EXISTING

UNDERLINED TAG INDICATES OBJECT IS IN-SCOPE. IF NEW, ADDITIONAL INFORMATION IS AVAILABLE IN A SCHEDULE, MATERIAL LIST, OR SYMBOL LIST

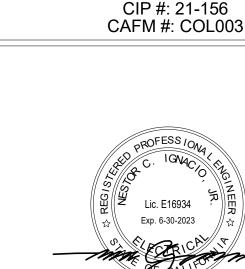
INDICATES AN EXISTING SYSTEM'S POINT OF CONNECTION/REMOVAL

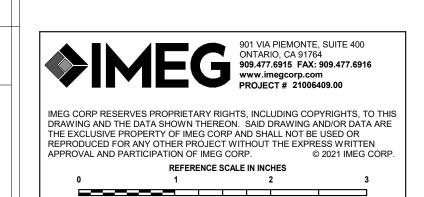


ADA GUIDELINES - FRONT ACCESS

ADA GUIDELINES - SIDE ACCESS

ADA STANDARDS FOR ACCESSIBLE DESIGN





ELEVATOR MODERNIZATION 1 & 2

ARROWHEAD REGIONAL MEDICAL CENTER

400 N. PEPPER AVE

COLTON, CA. 92324

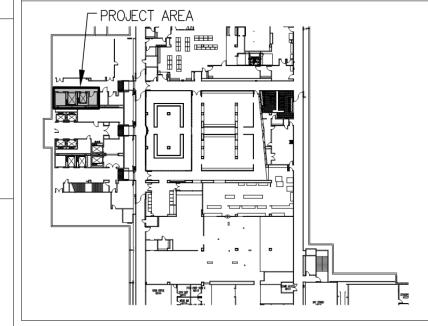
WBSE #: 10.10.1057

Office of Statewide Health Planning and Development

HCAI # S222026-36-00



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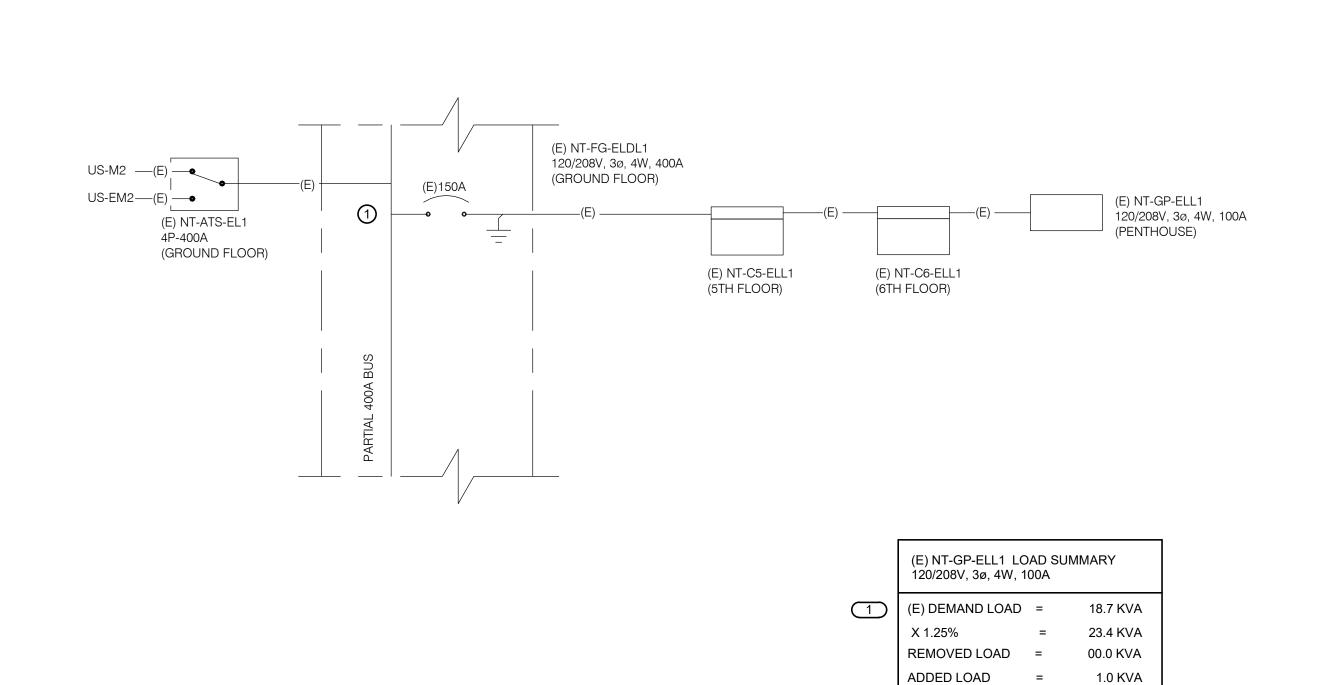
NOVEMBER 30, 2022

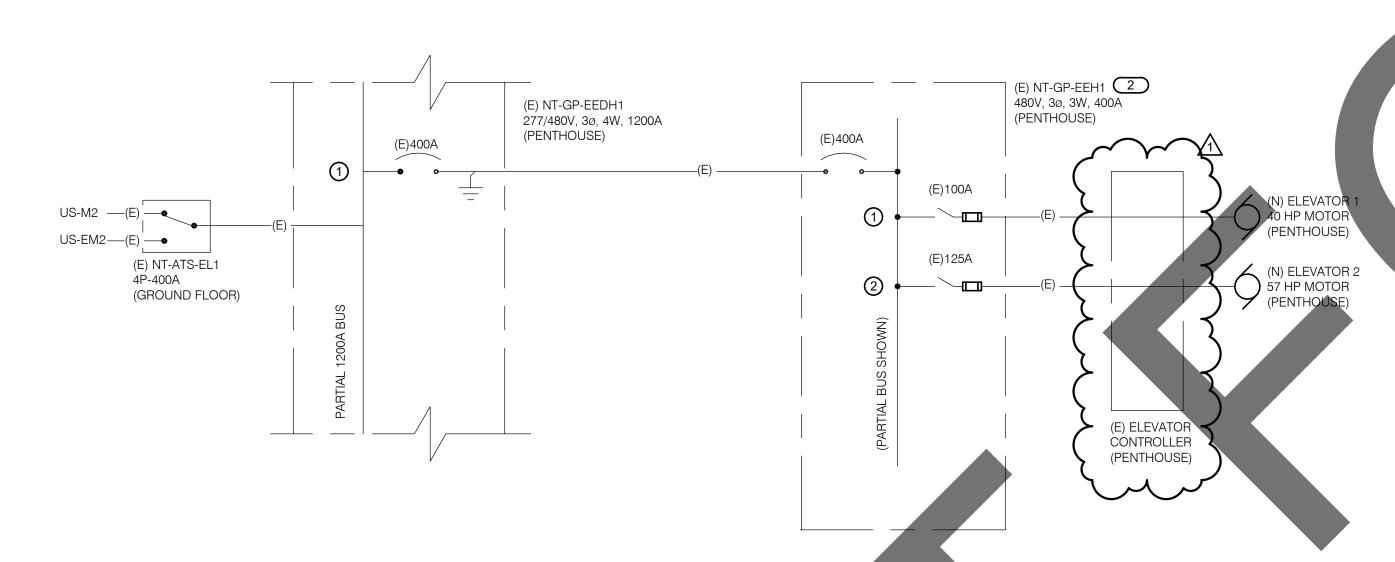
REVISIONS

ШÖ

1/31/23 HCAI COMMENTS

DRAWING NUMBER





1.0 KVA

24.4 KVA 67.8 A

TOTAL LOAD

	(E) NT-GP-EEDH1 L 277/480V, 3ø, 4W, 1	UMMARY	
1	(E) DEMAND LOAD	=	234.3 KVA
	X 1.25%	=	292.9 KVA
2	REMOVED LOAD	=	107.2 KVA
	ADDED LOAD	=	107.2 KVA
	TOTAL LOAD	= =	292.9 KVA 352.5 A

1. ELECTRICAL LOAD READING PERFORMED BETWEEN 11/02/2021 THRU 12/02/2021.

2. THE EXISTING ELEVATOR MOTOR WAS REPLACED WITH A NEW ELEVATOR MOTOR WITH THE SAME 40 AND 57 MOTOR HORSE POWER RATINGS. NO CHANGE IN ELECTRICAL LOAD WAS MADE IN THE PROJECT.



EXISTING PANEL NT-GP-ELL1 LIFE SAFETY BRANCH

MOUNTING: SURFACE **ENCLOSURE**: NEMA PB 1 FED FROM: 0 A/0P @ LOCATION:

VOLTS: 120/208 \ GROUND BUS PHASE: 3

WIRE: 4 SCCR: 65 kA ISC UNKNOWN 0.00 kA

NOTES:

K E Y	CKT NO.	LOAD DESCRIPTION	OCI AMPS			WIRE SIZE N	- 4	VD %		A	1	В	C		VD %		WIRE SIZE N	Н		CPD AMPS	LOAD DESCRIPTION	CKT NO.	K E Y
<u> </u>	1	SPARE SPARE	20 A	1					0	0									1	20 A	SPARE SPARE	2	<u> </u>
	3	SPARE	20 A	1	-							0				 			1	20 A		4	
	5	SPARE	20 A	1									0	0		-	-	_	1	20 A	SPARE	6	
	7	SPARE	20 A	1	<				0	0									1	20 A	SPARE	8	
	9	SPARE	20 A	1	-	_					0	0							1	20 A	SPARE	10	
	11	SPARE	20 A	1	1								0	0					1	20 A	SPARE	12	
	13	SPARE	20 A	1				/	0	0									1	20 A	SPARE	14	
	15	SPARE	20 A	1		7		Y			0	0							1	20 A	SPARE	16	
	17	SPARE	20 A	1									0	0					1	20 A	SPARE	18	
	19	SPARE	20 A	1					0	0									1	20 A	SPARE	20	
	21	SPARE	20 A	1				4			0	0							1	20 A	SPARE	22	
	23	SPARE	20 A	1									0	0					1	20 A	SPARE	24	
	25	SPACE							0	0											SPACE	26	
	27	SPACE									0	0									SPACE	28	
	29	SPACE											0	0							SPACE	30	
	31	SPACE							0	0											SPACE	32	
	33	SPACE									0	0									SPACE	34	
	35	SPACE					1						0	0							SPACE	36	
	37	SPACE							0	0											SPACE	38	
	39	SPACE									0	0									SPACE	40	
1=	41	SPACE											0	0							SPACE	42	
						To	tal L	oad:	0.0	0 kVA	0.00	kVA	0.00	kVA									

		LOAD SUN	IMARY					
LOAD CLASSIFICATION	CONNECTED LOAD	DEMAND FACTOR	ESTIMATED DEMAND	TOTALS*				
				TOTALS				
				TOTAL CONNECTED LOAD:	0.00 kVA			
				TOTAL ESTIMATED DEMAND LOAD:	0 kVA			
				TOTAL CONNECTED AMPS:	0.00 A			
				TOTAL ESTIMATED DEMAND AMPS:	0 A			

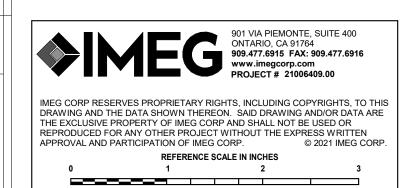
0.00

AL DEMAND CALCS SUBTRACT ANY REDUNDANT LOAD AND THE SMALLER OF ANY NONCOINCIDENT HVAC LOADS. THIS CALC IS DONE AT EACH PANEL. **CIRCUIT KEY NOTES:**

ELEVATOR MODERNIZATION 1 & 2 FOR THE

ARROWHEAD REGIONAL MEDICAL CENTER 400 N. PEPPER AVE. COLTON, CA. 92324 WBSE #: 10.10.1057 CIP #: 21-156 CAFM #: COL003



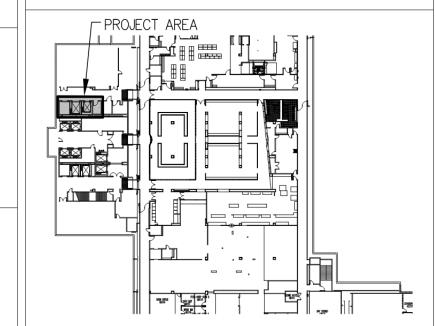


Office of Statewide Health Planning and Development

HCAI # S222026-36-00



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73121 fred waring drive suite 200 palm desert, ca 92260 760-327-6800

DATE	NOVEMBER 30, 2022							
	RE	VISIONS						
<u>_</u> î_	1/31/23	HCAI COMMENTS						
_								

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