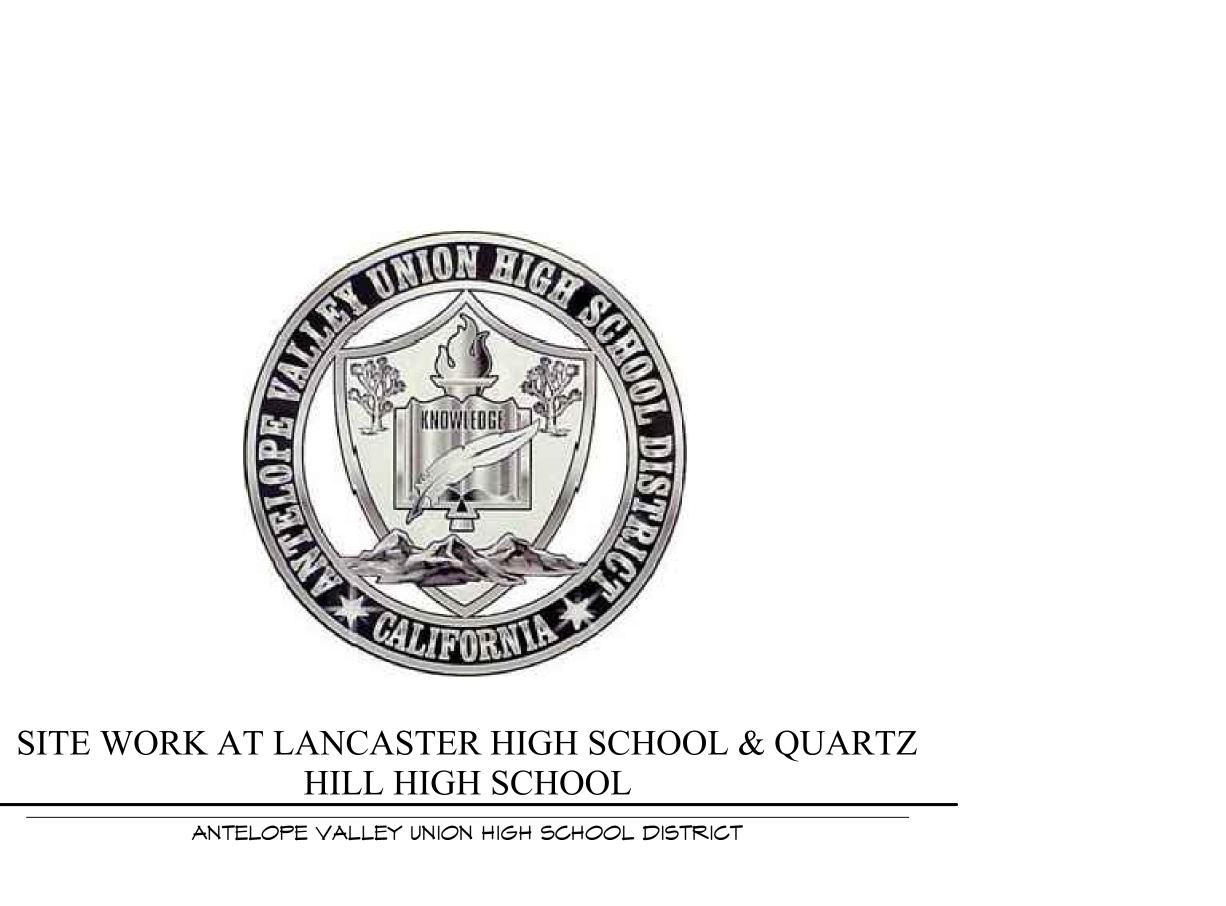
# **BID #4/23-24**



SHEET INDEX SHEET TITLE NUMBER BID SET BID SET - COVER SHEET LANCASTER HIGH SCHOOL SHEET TITLE NUMBER REVISIONS GENERAL COVER SHEET GRADING IMPROVEMENT PLAN GRADING IMPROVEMENT PLAN ARCHIECTURAL LOCAL FIRE AUTHORITY REVIEW OVERALL SITE PLAN ENLARGED SITE PLANS ENLARGED ACCESSIBLE PARKING ELECTRICAL GENERAL NOTES, SYMBOL LIST AND SITE PLAN ELECTRICAL DETAILS DEMOLITION AND REMODEL POWER SITE PLAN ELECTRICAL SPECIFICATIONS SECTION 26 00 00 QUARTZ HILL HIGH SCHOOL SHEET SHEET TITLE NUMBER **GENERAL** COVER SHEET CIVIL GRADING IMPROVEMENT PLAN GRADING IMPROVEMENT PLAN ARCHIECTURAL LOCAL FIRE AUTHORITY REVIEW OVERALL SITE PLAN ENLARGED DEMO SITE PLAN ENLARGED NEW SITE PLAN DETAILS ELECTRICAL GENERAL NOTES, SYMBOL LIST, SITE PLAN & DETAILS DEMOLITION AND REMODEL POWER SITE PLAN ELECTRICAL SPECIFICATIONS SECTION 26 00 00 ARCHITECT PROJECT ADDRESS: LANCASTER HIGH SCHOOL 44701 32ND ST W LANCASTER, CA 93536 QUARTZ HILL HIGH SCHOOL 6040 M AVE L LANCASTER, CA 93536 PROJECT ARCHITECT: PROJECT OWNER: FF&J ARCHITECTS INC. ANTELOPE VALLEY UNION HIGH 19153 TOWN CENTER DR., SUITE 101 SCHOOL DISTRICT APPLE VALLEY. CA. 92308 176 HOLSTON DR. LANCASTER, CA 93535-4531 (760) 240-6211 (661) 942-8496 PROJECT MANAGER: RICK SIMPER CONTACT: ARCHITECT OF RECORD: SCOTT FISH GINO BASTIANON A&F ENGINEERING GROUP, INC. JT ENGINEERING 33336 N. AGUA DULCE CYN. RD. #103 AGUA DULCE, CA. 91390 9320 BASELINE RD., SUITE C RANCHO CUCAMONGA, CA. 91701 (909) 941-3008 (661) 268-8899 CONTACT: CONTACT: LUIS E. FLORES JOHN JACOB PROJECT DIRECTORY SITE DEMOLITION INCLUDES:
DEMO OF EXISTING ASPHALT AND CONCRETE PAVING & OTHER RELATED SITE NEW SITE WORK INCLUDES: NEW ASPHALT AND CONCRETE PAVING FOR PATH OF TRAVEL UPGRADES. NEW CHAIN LINK FENCING AND ACCESSIBLE GATES & OTHER RELATED SITE NEW BUILDING 'S.S.#1', TYPE AND SQUARE FOOTAGE: NEW 40'X60' SHADE STRUCTURE (OWNER FURNISHED AND INSTALLED -CONTRACTOR TO COORDINATE INSTALLATION)

SCOPE OF WORK

**GENERAL** 

#### DIMENSIONS ARE FROM FACE OF WALL OR CENTER LINE OF COLUMNS, MULLIONS & STUDS UNLESS OTHERWISE NOTED.

- 2. EQUIPMENT SHOWN DOTTED IS NOT IN THIS CONTRACT.
- THE CONTRACTOR SHALL REVIEW THE PLANS AND SITE AND COORDINATE ALL THE WORK REQUIRED FOR THE PROJECT.
- 4. THE CONTRACTOR SHALL TAKE DUE NOTE THAT THE DRAWINGS IDENTIFIED AS ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING # MECHANICAL ARE FOR COORDINATION OF TRADES AND ARE NOT TO BE INTERPRETED AS EXCLUSIVE WORK ONLY. ALL TRADES ARE TO VERIFY WITH ALL DRAWINGS FOR ALL REQUIRED WORK.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ANY AND ALL EXISTING UTILITY LINES OR STRUCTURES WITHIN AND ADJACENT TO DEMOLITION OR CONSTRUCTION AREA, WHETHER SHOWN OR NOT SHOWN HEREIN.
- 6. THE CONTRACTOR SHALL INSPECT EXISTING SITE CONDITIONS, AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY LAND DISTURBANCE. CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGE TO ANY PUBLIC OR NON-PUBLIC UTILITY. THE CONTRACTOR SHALL REVIEW PLANS AS REQUIRED FOR COORDINATION OF THE NEW MORK WITH EXISTING CONDITIONS.
- THE CONTRACTOR SHALL OBTAIN ALL CLEARANCES REQUIRED FOR ALL WORK (DEMOLITION, RELOCATION AND NEW MORK) SUCH AS(BUT NOT LIMITED TO) REMOVAL OF STRUCTURES, TREES, TURF AREAS, WEEDS, CURBS, GUTTERS AND RELOCATION AND/OR REMOVAL OF EXISTING UTILITIES ON- AND OFF-SITE AS MAY BE REQUIRED.
- 8. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY, INCLUDING UTILITY FEES. THE OWNER WILL REIMBURSE THE CONTRACTOR THE ACTUAL DOCUMENTED COST OF SUCH PERMITS, LICENSES AND FEES, WITH NO OVERHEAD OR PROFIT ADDED.
- 9. THE CONTRACTOR SHALL LEAVE THE CONSTRUCTION AREAS CLEAN AND FREE OF ALL DEBRIS. ALL SUCH DEBRIS SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 10. DUST SHALL BE CONTROLLED AS REQUIRED BY LOS ANGELES COUNTY DUST CONTROL POLICIES.
- 11. NO WORK WHATSOEVER SHALL BE STARTED WITHOUT FIRST NOTIFYING THE OWNER, AND ARCHITECT. REFER TO THE PROJECT
- 12. UNLESS SPECIFIED ON THE STRUCTURAL / ARCHITECTURAL DRAWINGS, ANY ALTERATION OR MODIFICATIONS TO A STRUCTURAL ELEMENT BY CUTTING, DRILLING, BORING, BRACING WELDING, ETC. SHALL HAVE WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO START OF WORK.
- 13. ALL WORK SHALL CONFORM TO THE 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- 14. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDNANCES.

#### **DEMOLITION & PATCHING**

- 15. DEMOLITION INDICATED IS FOR THE CONVENIENCE OF THE CONTRACTOR AND MAY NOT INDICATE THE FULL EXTENT OF DEMOLITION REQUIRED FOR THE PERFORMANCE OF THE CONTRACT. CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE SCOPE OF DEMOLITION WORK REQUIRED.
- . PATCH AND REPAIR EXISTING SURFACES AS REQUIRED DUE TO DEMOLITION OR PERFORMANCE OF NEW CONSTRUCTION. ALL NEW

AGGREGATE BASE

ABOVE

..EXISTING

ELEV..

EMMF

EN...

FRP...

F.E.C...

FHMS..

FHMS...

..ELECTRICAL

..ELEVATION

EXPANSION JOINT

FIRE EXTINGUISHER

..FINISH FLOOR

FLOOR DRAIN

...FOUNDATION

FIRE ALARM

..ELECTRICALLY MELDED MIRE

..FIBERGLASS REINFORCED

.FIRE EXTINGUISHER CABINET

FLATHEAD MACHINE SCREW

....FLOOR SINK / FINISH SURFACE

.. FLATHEAD MOOD SCREM

EXTERIOR

FABRIC

....END NAIL

PANELS

...FOOTING

FUR/FURR.....FURRING

**ABBREVIATIONS** 

- MORK SHALL MATCH EXISTING IN KIND, QUALITY, AND FINISH, UNLESS NOTED OR SPECIFIED OTHERWISE.
- 17. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

#### FIRE / LIFE SAFETY

- 18. ALL PENETRATIONS THROUGH FIRE RESISTIVE WALL OR FLOOR ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH UBC STANDARD 7-5 (ASTM E814)
- 19. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND OBSERVE FIRE SAFETY REGULATIONS DURING CONSTRUCTION, ALTERATIONS, DEMOLITION AND ASBESTOS REMOVAL AS NOTED IN 2019 CFC, CHAPTER 33, & CBC, CHAPTER 33.
- 20. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH 2019 CFC, CHAPTER 33, & CBC, CHAPTER 33.

#### DIVISION OF THE STATE ARCHITECT

- 21. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, T-24, C.C.R
- 22. A PROJECT INSPECTOR WITH A CLASS 2 CERTIFICATION FROM THE DIVISION OF THE STATE ARCHITECT, EMPLOYED BY THE SCHOOL DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, T-24 C.C.R.
- 23. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- 24. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE WORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISH WORK SHALL COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).
- 25. WHENEVER DSA FINDS ANY CONSTRUCTION WORK IS BEING PERFORMED IN A MANNER CONTRARY TO THE PROVISIONS OF CALIFORNIA BUILDING CODE AND THAT WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING, THE DEPARTMENT OF GENERAL SERVICES, STATE OF CALIFORNIA, IS AUTHORIZED TO ISSUE A STOP WORK ORDER PER SECTION 4-334.1 CALIFORNIA ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR.)
- 26. TITLE 24, PARTS 1-5 AND 9 MUST BE KEPT ON SITE DURING CONSTRUCTION.
- 27. ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING MATERIALS INSTALLATION TO COMPLY WITH APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS.
- 28. THE PROJECT INSPECTOR (PI) SHALL WITNESS AND VERIFY GROUNDING.



NEW SHADE STRUCTURE AND RELATED SITE WORK AT LANCASTER HIGH SCHOOL

ANTELOPE VALLEY UNION HIGH SCHOOL DISTRIC

- DETAIL REFERENCE

- DETAIL REFERENCE

SECTION REFERENCE

\x-xx<del>/-</del>-

TITLE 24		Sheet List Table			
PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020*	SHEET NUMBER	SHEET TITLE			
2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR* 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR		GENERAL			
(2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA AMENDMENTS)	C5	COVER SHEET			
2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR		CIVIL			
(2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR	C-1	GRADING IMPROVEMENT PLAN			
(2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS)	C-2	GRADING IMPROVEMENT PLAN			
2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS)	ARCHITECTURAL				
2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR	AO.1	LOCAL FIRE AUTHORITY REVIEW			
2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR	A-1	OVERALL SITE PLAN			
(2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR	A-2	ENLARGED SITE PLANS			
(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA	A-3	ENLARGED ACCESSIBLE PARKING			
AMENDMENTS)  2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11,	AD-1	DETAILS			
TITLE 24 CCR		ELECTRICAL			
2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR	EO.1	GENERAL NOTES SYMBOL LIST AND SITE PLAN			
TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS 2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS	EO.2	ELECTRICAL DETAILS			
(PER 2019 CBC PART 2 CH 35)	E1.1	DEMOLITION AND REMODEL POWER SITE PLAN			
NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004 ASME A17.1 BY ADOPTION	E2.1	ELECTRICAL SPECIFICATIONS SECTION 26 00 00			
	SHADE STRUCTURE				
APPLICABLE NFPA STD. (PARTIAL LIST)	P.C. T-1.0	P.C. TITLE SHEET			
PARTIAL LIST OF APPLICABLE STANDARDS	P.C. T-2.0	TRUCTURE PROVIDED BY OWNER AND INSTALLED			
NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)2016 EDITION		BY SHADE STRUCTURE MANUFACTURER			
NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE	24.1-1000	PRODUCT INFORMATION			
SYSTEMS (CA AMENDED)		DETAILS			
NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS2017 EDITION	24.3 <b>-2</b> 000	REACTIONS			

.2017 EDITION TOTAL SHEETS: 18

License Number

SHEET INDEX

Statement of General Conformance

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

(Application No. \_\_03-122266

The drawings or sheets listed on the cover or index sheet FOR SHADE STRUCTURE ☐ This drawing, page of specifications/calculations

have been prepared by other design professionals or consultants who are licensed and/or authorized to prepare such drawings in this state. It has been examined by me for:

- 1) design intent and appears to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications prepared by me, and
- 2) coordination with my plans and specifications and is acceptable for incorporation into the construction of this project.

The Statement of General Conformance "shall not be construed as relieving me of my rights, duties, and responsibilities under Sections 17302 and 81138 of the Education Code and Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. (Title 24, Part 1, Section 4-317 [b])

N	I find that:	All drawings or sheets listed on This drawing or page	the cover or index sheet	FOR SHADE STRUCTURE
,	intent, and	rmance with the project design nated with the project plans and 10/28/2022	intent, and	formance with the project desig
	Signature	Date	Signature	Date
)	Architect or Engineer d		Architect or Engineer for this portion of the	delegated responsibility work
	GINO C. BASTI	ANON		
	Print Name		Print Name	
	C-27564	6/23		

License Number

**Expiration Date** 

NEM BUILDING 'S.S.#1', TYPE AND SQUARE FOOTAGE

DPE OF WORK	
PROJECT ADDRESS: ANDCASTER HIGH SCHOOL 14701 32ND ST W, ANDCASTER, CA 93536	PROJECT OWNER:  ANTELOPE VALLEY UNION HIGH SCHOOL DISTRICT 44811 NORTH SIERRA HIGHWAY LANCASTER, CA 93534 (661) 952-2287 CONTACT: MAT HAVENS
PROJECT ARCHITECT: F&I ARCHITECTS INC. 9153 TOWN CENTER DR., SUITE 101 APPLE VALLEY. CA. 92308	

(760) 240-6211 PROJECT MANAGER RICK SIMPER ARCHITECT OF RECORD GINO BASTIANON

FLOOD DESIGN

1. FEMA FIRM PANEL #: 06037C0410F <u>MIND</u> RISK CATEG*O*RY 2. EFFECTIVE DATE: 9/26/2008 ASCET-16 EXPOSURE FACTOR C 3. FLOOD ZONE: ZONE X SEISMIC RISK CATEGORY <u>GEOTECH</u> SITE IS NOT WITHIN A MAPPED SITE CLASS LIQUEFACTION HAZARD ZONE 0.6 \*NULL

1.2 \*NULL SDC \*NULL 1.2 \*NULL 0.888 0.881 PGA 0.618 1.2 PGAM 0.741 1.696 1.909 SSD 1.5 SIRT 0.706 **S1UH** 0.801 S1D 0.6 PGAd 0.618 \*SEE SECTION 11.4.8

P.T.N: 64246-102

AND R HIG November, 2022 DRAMN ANT21-01e

IDENTIFICATION STAMP

DIV. OF THE STATE ARCHITEC

REVIEWED FOR

SS 🗹 FLS 🗹 ACS 🗹

04/18/2023

APP: 03-122266 INC:

DATE:

REVISIONS

ARCHITECT

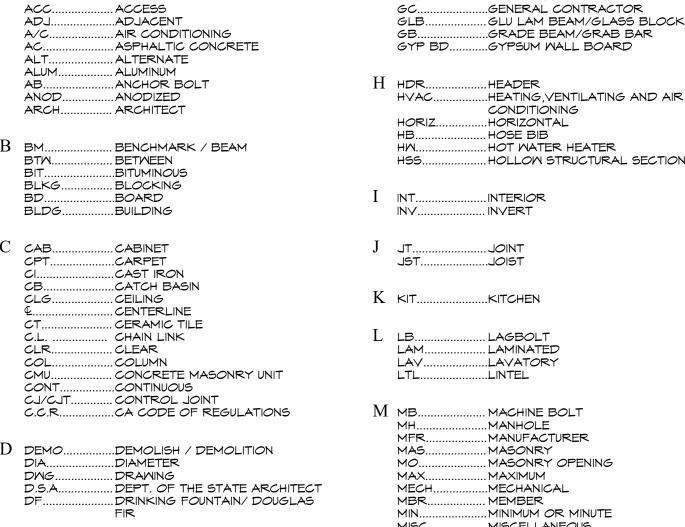
ELATED SCHOOL

**Expiration Date** 

KREN. 6-2023

## GENERAL NOTES

A AB..



G 6A...

. HOLLOW STRUCTURAL SECTION

.GAGE/GAUGE

. GALVANIZE

- MISC . MISCELLANEOUS MOD. .MODULE (LAR) N NRC.. NOISE REDUCTION COEFFICIENT ..NOMINAL NOT IN CONTRACT
- NOT TO SCALE NTS... .NUMBER . NEM
- O 0/c... ...ON CENTER .OPPOSITE OUTSIDE DIAMETER .OVAL-HEAD MACHINE BOLT OVAL-HEAD MOOD SCREW .OVERHEAD OWNER FURNISHED CONTRACTOR INSTALLED
- R RPA. RAISED PLANTER AREA RADIUS REFRIGERATOR REG. REGISTER RETURN RETURN AIR GRILL RAG REVISION ROOF DRAIN ROOM ROUGH OPENING S schd.. SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE STAINLESS STEEL STANDARD STORAGE

POINT OF CONNECTION

POUNDS PER SQUARE INCH

. POLYVINYL CHLORIDE (PIPE)

PLANTER AREA

PROPERTY LINE

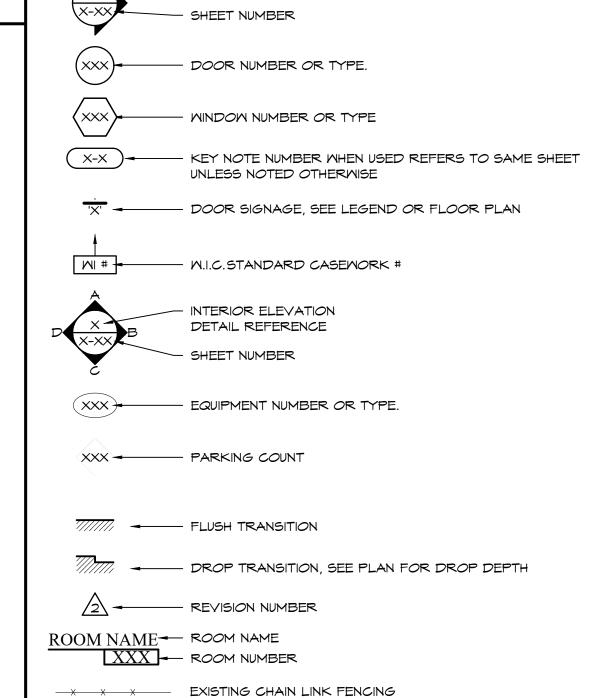
PANIC HARDWARE

PROPOSED

.. QUARRY TILE

0 ат....

- STORM DRAIN ...STRUCTURAL STRUCT TELEPHONE TELEVISION TOOL JOINT TONGUE & GROOVE TOP OF SHEATHING TUBE STEEL TYPICAL .UNDERCUT
- UNDERGROUND ...UNLESS NOTED OTHERWISE U.N.O... V VERT. VINYL COMPOSITION TILE
- W Mc... ...WATER CLOSET ..MITH M/O.... .. WITHOUT ...WROUGHT IRON



-X X NEW CHAIN LINK FENCING

- \* - - \* - - \* - - DEMO CHAIN LINK FENCING

------- DEMO TUBE STEEL FENCING

---- POT---- POT- PATH OF TRAVEL

SCOPE OF WORK

JT ENGINEERING 33336 N. AGUA DULCE CYN. RD. #103 AGUA DULCE, CA. 91390 (661) 268-8899 CONTACT: JOHN JACOB

PROJECT DIRECTORY

A&F ENGINEERING GROUP, INC. 9320 BASELINE RD., SUITE C RANCHO CUCAMONGA, CA. 91701 (909) 941-3008 CONTACT:

**SYMBOLS** 

CS

NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED).. NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS. NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING

NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION... 2016 EDITION NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE

..2013 EDITION NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED). EDITION NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA

..2016 EDITION NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES. .2016 EDITION NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA

..2015 EDITION UL 300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT .. ..2005 (R2010) UL 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES ... ..2003 EDITION UL 521 - STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING

JL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING,

..2017 EDITION AND GRANDSTANDS.. FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBC

(SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80. SEE CALIFORNIA BUILDING CODE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

ALL PARTS OF THE 2019 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2020 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2019 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS JANUARY 8, 2019 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 8, 2019.

## CODE REFERENCES

SITE DEMOLITION INCLUDES: DEMO OF EXISTING ASPHALT AND CONCRETE PAVING.

NEW ASPHALT AND CONCRETE PAVING FOR PATH OF TRAVEL UPGRADES. NEW CHAIN LINK FENCING AND ACCESSIBLE GATES

NEW 40'X60' SHADE STRUCTURE.

FUNDING SOURCE: ESSER II AND ESSER III

**ELECTRICAL** 

LUIS E. FLORES

SITE SPECIFIC DESIGN CRITERIA

- 1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO LISTED BUILDING CODES, ALL APPLICABLE STATE AND MUNICIPAL ORDINANCES, CONTRACT DOCUMENTS. SPECIFICATIONS AND ALL OTHER RULES AND REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT THAT TWO OR MORE REGULATIONS CONFLICT, THE MORE RESTRICTIVE SHALL GOVERN.
- THE CONTRACTOR AND ALL ITS SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR REVIEWING, UNDERSTANDING AND FOLLOWING ALL GENERAL NOTES THROUGHOUT THE PROJECT. ALL ITEMS STATED UNDER GENERAL NOTES ARE PART OF THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INCLUDING AND TAKING INTO CONSIDERATION ALL GENERAL NOTES AND HOW IT AFFECTS THEIR CONSTRUCTION, SEQUENCING AND/OR BID. ANY QUESTIONS REGARDING GENERAL NOTES THROUGHOUT THE PROJECT SHALL BE ADDRESSED BY MEANS OF REQUEST FOR INFORMATION DURING THE BID PHASE. ANY ITEMS THAT HAVE NOT BEEN ACCOUNTED FOR AFTER AWARD OF BID THAT ARE STATED IN GENERAL NOTES, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE
- 3. DETAILS DESIGNATED AS TYPICAL ON DETAIL SHEETS ARE APPLICABLE THROUGHOUT PROJECT WHEREVER THE DESCRIBED CONDITION OCCURS AND MAY OR MAY NOT BE SPECIFICALLY REFERENCED ON ARCHITECTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THESE DETAILS AND UNDERSTANDING EXTENT OF THEIR APPLICATION PRIOR TO PERFORMING WORK.
- 4. DIMENSIONS: ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. ALL DIMENSIONS ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXISTING TO REMAIN EQUIPMENT, STRUCTURES, FINISHES, AND SERVICES WHICH MAY BE DISTURBED THROUGH CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL EXERCISE CARE TO PROTECT ANY EXISTING ITEMS THAT MAY BE DAMAGED THROUGH CONSTRUCTION ACTIVITIES. IF SUCH DOCUMENTS WERE DISTURBED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND RETURN THE DAMAGED OR DISTURBED ITEMS TO THEIR PREVIOUS CONDITION AT NO COST TO THE OWNER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.
- 7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & SITE CONDITIONS BEFORE STARTING WORK, SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS OR BETWEEN THE CONTRACT DOCUMENTS & EXISTING CONDITIONS, NOTIFY THE ARCHITECT AT ONCE FOR INSTRUCTION ON HOW TO PROCEED.
- 8. THE CONTRACTOR SHALL CONFINE HIS OPERATION ON THE SITE TO AREAS PERMITTED BY OWNER.
- 9. THE JOBSITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER AND SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH AND

DEBRIS AS A RESULT OF HIS OPERATION.

- 10. UPON COMPLETION OF EACH PHASE OF THE WORK AND AT SUCH TIMES AS DIRECTED BY THE OWNER, REMOVE ALL SURPLUS MATERIAL, TOOLS AND DEBRIS AND LEAVE THE SITE IN A CLEAN AND NEAT CONDITION.
- 11. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, OR PATCHING OF HIS WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY & SHALL NOT ENDANGER ANY OTHER WORK BY CUTTING, EXCAVATING, OR OTHERWISE ALTERING THE TOTAL WORK OR ANY PART OF IT. ALL PATCHING, REPAIRING AND REPLACING OF MATERIALS AND SURFACES, CUT OR DAMAGED IN EXECUTION OF WORK, SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR
- 12. WORK SHALL BE PERFORMED ACCORDING TO EDITION OF THE STANDARD SPECIFICATION AND PLANS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK AND S.P.P.W.C.), THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND CITY
- 13. NO WORK SHALL BE STARTED WITHOUT A PRE-CONSTRUCTION MEETING WITH THE OWNER AND INSPECTOR OF RECORD.
- 14. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES AND TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES AND IMPROVEMENTS FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.
- 15. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE CIVIL ENGINEER.
- 16. IMPORTANT NOTICE SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE ANY "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER, CALL UNDERGROUND SERVICE ALERT TOLL FREE @ 1-800-422-4133, TWO WORKING
- 17. ANY IMPROVEMENT(S) TO BE CONSTRUCTED WITHIN PUBLIC RIGHT-OF-WAY WILL REQUIRE SEPARATE CONSTRUCTION PERMIT AND INSPECTION FROM THE GOVERNING AGENCY(IES). CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL APPLICABLE PERMITS AND PAYING ANY REQUIRED FEES.
- 18. FILLS SHALL BE COMPACTED THROUGHOUT TO AT LEAST 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D 1557.
- 19. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ALL GRADE STAKES UNTIL AUTHORIZED BY SURVEYOR TO REMOVE.
- 20. CONTRACTOR SHALL RESTORE LIKE FOR LIKE, TO THE SATISFACTION OF THE OWNER/ARCHITECT, ALL AREAS DAMAGED OR DISTURBED AS A RESULT OF WORK PERFORMED PURSUANT TO THESE PLANS AT HIS/HERS OWN EXPENSE.
- 21. FIELD DENSITY MAY BE DETERMINED BY THE NUCLEAR DENSITY METHOD A.S.T.M. D2922 & D3017 PROVIDED NOT LESS THAN 10% OF THE REQUIRED DENSITY TESTS UNIFORMLY DISTRIBUTED ARE BY THE SAND-CONE METHOD. THE METHOD OF DETERMINING FIELD DENSITY AND LOCATION AND APPROXIMATE ELEVATION SHALL BE SHOWN IN THE COMPACTION REPORT. OTHER METHODS MAY BE USED IF RECOMMENDED BY THE SOILS ENGINEER AND APPROVED IN ADVANCE BY THE
- 22. CRUSHED AGGREGATE BASE MATERIAL SHALL CONFORM TO SUBSECTION 200-2.2 OF STANDARD SPECIFICATIONS AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION USING MECHANICAL COMPACTING EQUIPMENT.
- 23. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES CONDUITS, OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE PROPERTY INSOFAR AS IT MAY BE AFFECTED BY THESE OPERATIONS. ALL COSTS FOR PROTECTING, REMOVING, AND RESTORING EXISTING IMPROVEMENTS SHALL BE BORNE BY THE CONTRACTOR.
- 24. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE IN EFFECT AT ALL TIMES.
- 25. THE CONTRACTOR SHALL VERIFY ALL JOINT ELEVATIONS PRIOR TO THE REMOVAL OF PAVEMENT, CURB, GUTTER, SIDEWALK AND/OR SLOPE GRADING. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO REMOVALS WITHIN THE AREA OF THE DISCREPANCIES.
- 26. DUST SHALL BE CONTROLLED BY WATERING TO THE SATISFACTION OF THE
- 27. WHERE THE IRRIGATION SYSTEM IN CONFLICT WITH NEW WORK NEEDS TO BE RELOCATED OR REPLACED, CONTRACTOR SHALL COORDINATE THE WATER SHUT OFF OR ANY ELECTRICAL RELATED WORK WITH OWNER 48 HOURS PRIOR COMMENCING THE WORK.



KNOW WHAT'S BELOW. CALL BEFORE YOU DIG DIAL TOLL FREE

#### **GENERAL GRADING NOTES**

- APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.

28. ALL EXPOSED P.C.C. CORNERS SHALL BE ROUNDED WITH 1/2" RADIUS.

29. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE

**GENERAL GRADING NOTES** 

- 30. CONTRACTOR TO CALCULATE HIS/HER OWN EARTHWORK QUANTITIES FOR BIDDING PURPOSES.
- 31. FOR JOINTS AT NEW CURB AND SIDEWALK REFER TO S.P.P.W.C. STD. PLAN NO. 32. IF WORK IS COMMENCED DURING RAINY SEASON, CONTRACTOR SHALL SATISFY

CITY EROSION CONTROL REQUIREMENTS AND INSTALL APPROPRIATE BMPS.

## BEST MANAGEMENT PRACTICES (BMPs) FOR CONSTRUCTION ACTIVITIES

STORM WATER POLLUTION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES: MINIMUM WATER QUALITY PROTECTION REQUIREMENTS FOR ALL DEVELOPMENT CONSTRUCTION PROJECTS

THE FOLLOWING IS INTENDED AS MINIMUM NOTES OR AS AN ATTACHMENT FOR BUILDING AND GRADING PLANS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF SIZE.

- 1. EVERY EFFORT SHALL BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
- 2. ERODED SEDIMENTS AND OTHER POLLUTANTS SHALL BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
- 3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS SHALL BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND
- 4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS SHALL BE STORED IN ACCORDANCE WITH THEIR LISTING AND SHALL NOT CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS SHALL BE PROTECTED FROM THE WEATHER. SPILLS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS SHALL NOT BE WASHED INTO THE DRAINAGE
- 5. EXCESS OR WASTE CONCRETE SHALL NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS
- 6. TRASH AND CONSTRUCTION-RELATED SOLID WASTES SHALL BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL
- 7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY. ACCIDENTAL DEPOSITIONS SHALL BE SWEPT UP IMMEDIATELY AND SHALL NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- 8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION SHALL BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- 9. THE FOLLOWING BMP'S AS OUTLINED IN, BUT NOT LIMITED TO, THE "BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORMWATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA", THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY CITY INSPECTORS).

#### **EROSION CONTROL**

EC1 - SCHEDULING EC2 - PRESERVATION OF EXISTING

- VEGETATION EC3 - HYDRAULIC MULCH EC4 - HYDROSEEDING
- EC5 SOIL BINDERS EC6 - STRAW MULCH EC7 - GEOTEXTILES & MATS
- EC8 WOOD MULCHING EC9 - EARTH DIKES AND DRAINAGE
- SWALES. EC10 - VELOCITY DISSIPATION DEVICES
- EC11 SLOPE DRAINS TEMPORARY SEDIMENT CONTROL
- SE2 SEDIMENT BASIN SE3 - SEDIMENT TRAP SE4 - CHECK DAM
- SF5 FIBER ROLLS
- SE6 GRAVEL BAG BERM - STREET SWEEPING AND VACUUMING
- SE8 SANDBAG BARRIER
- SE9 STRAW BALE BARRIER SE10 - STORM DRAIN INLET PROTECTION

## WIND EROSION CONTROL

WE1 - WIND EROSION CONTROL

## EQUIPMENT TRACKING CONTROL

TC1 - STABILIZED CONSTRUCTION ENTRANCE/EXIT TC2 - STABILIZED CONSTRUCTION ROADWAY

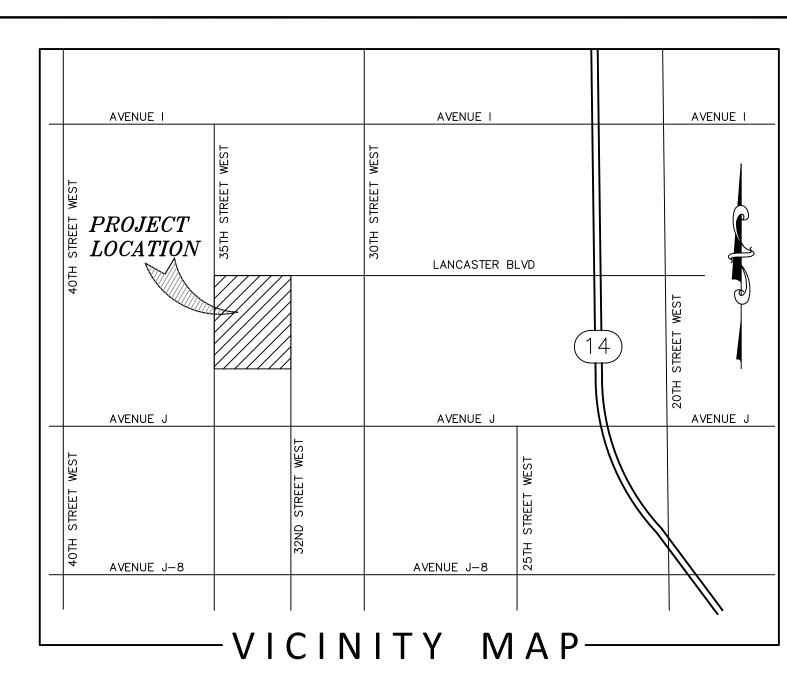
## TC3 - ENTRANCE / OUTLET TIRE WASH

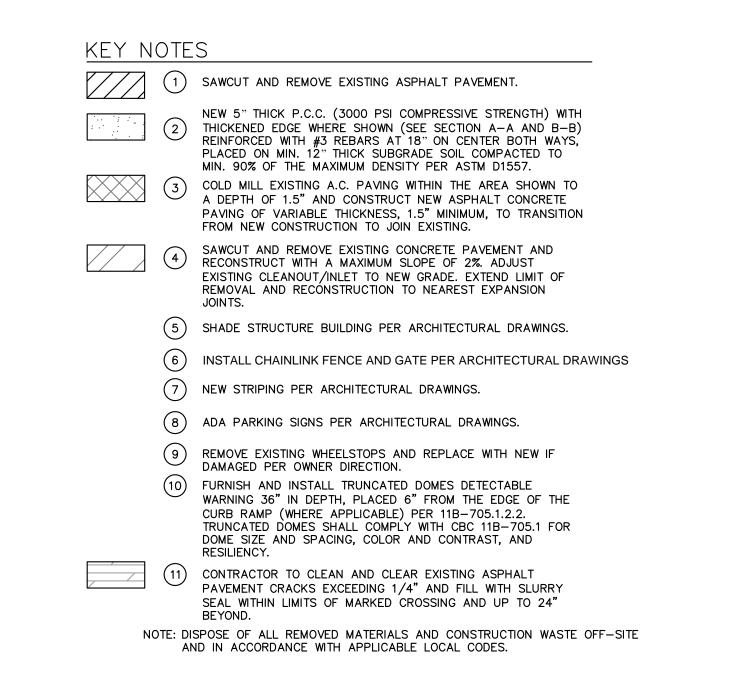
#### NON-STORMWATER MANAGEMENT

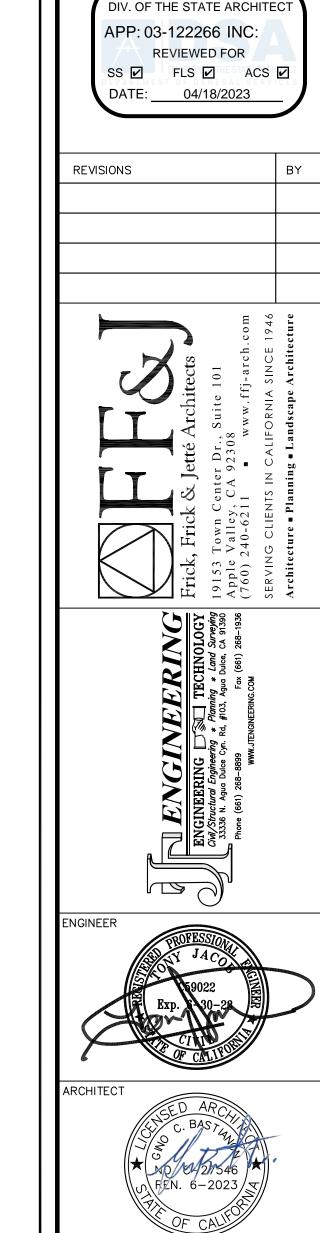
- NS1 WATER CONSERVATION PRACTICES NS2 - DEWATERING OPERATIONS NS3 - PAVING AND GRINDING OPERATIONS
- NS4 TEMPORARY STREAM CROSSING NS5 - CLEAR WATER DIVERSION
- NS6 ILLICIT CONNECTION / DISCHARGE NS7 - POTABLE WATER / IRRIGATION NS8 - VEHICLE AND EQUIPMENT CLEANING
- NS9 VEHICLE AND EQUIPMENT FUELING NS10 - VEHICLE AND EQUIPMENT
- MAINTENANCE NS11 - PILE DRIVING OPERATIONS NS12 - CONCRETE CURING
- NS13 CONCRETE FINISHING NS14 - MATERIAL AND EQUIPMENT USE
- NS15 DEMOLITION ADJACENT TO WATER
- NS16 TEMPORARY BATCH PLANTS WASTE MANAGEMENT & MATERIAL
- POLLUTION CONTROL WM1 - MATERIAL DELIVERY AND STORAGE
- WM2 MATERIAL USE WM3 - STOCKPILE MANAGEMENT
- WM4 SPILL PREVENTION AND CONTROL WM5 - SOLID WASTE MANAGEMENT WM6 - HAZARDOUS WASTE MANAGEMENT
- WM7 CONTAMINATION SOIL MANAGEMENT WM8 - CONCRETE WASTE MANAGEMENT
- MANAGEMENT WM10 - LIQUID WASTE MANAGEMENT

# WM9 - SANITARY/SEPTIC WASTE

#### LEGEND (WHERE APPLICABLE) EXISTING SPOT ELEVATION ANGLE POINT FINISH SURFACE BEGINNING OF CURVE GB GRADE BREAK BLDG BUILDING GROUND SHOT BUILDING LINE BOTTOM OF X GAS VALVE CENTER LINE HP HIGH POINT EX. CURB & GUTTER CONCRETE CORNER RSR RISER CONCRETE EDGE SCRL CE SCORE LINE EX. CONCRETE PAVING CONCRETE CONC SDMH STORM DRAIN MANHOLE DROP INLET DRAIN SGN SIGN POST — — — X— — — X— EX. CHAIN LINK FENCE SMH SEWER MANHOLE END OF CURVE EX. WI FENCE STRP EG EDGE OF GUTTER STRIPING X X NEW CHAIN LINK FENCE ELEC ELECTRICAL TOP OF CURB EDGE OF PAVEMENT TCC TOP OF CURB CORNER EΡ EX. SIGN EPB ELECTRICAL PULL BOX TD TRUNCATED DOMES TOP OF WALL EXISTING TEMPORARY BENCHMARK EX. TW FCE CHAINLINK FENCE TX TOP OF X FINISH FLOOR VLT VAULT FIRE HYDRANT WATER METER WATER VALVE FLOW LINE FACE OF WALL FOW PB PULL BOX

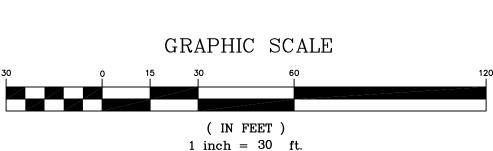


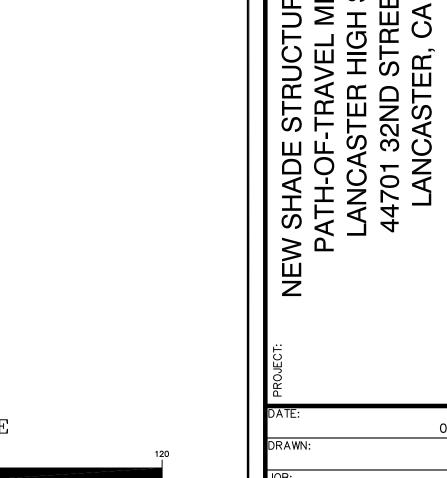




IDENTIFICATION STAMP







02/25/2022 JT2316

AT LEAST TWO DAYS BEFORE YOU DIG. UNDERGROUND SERVICE ALERT (USA)

DING

02/25/2022

JT2316

APP: 03-122266 INC:

REVISIONS

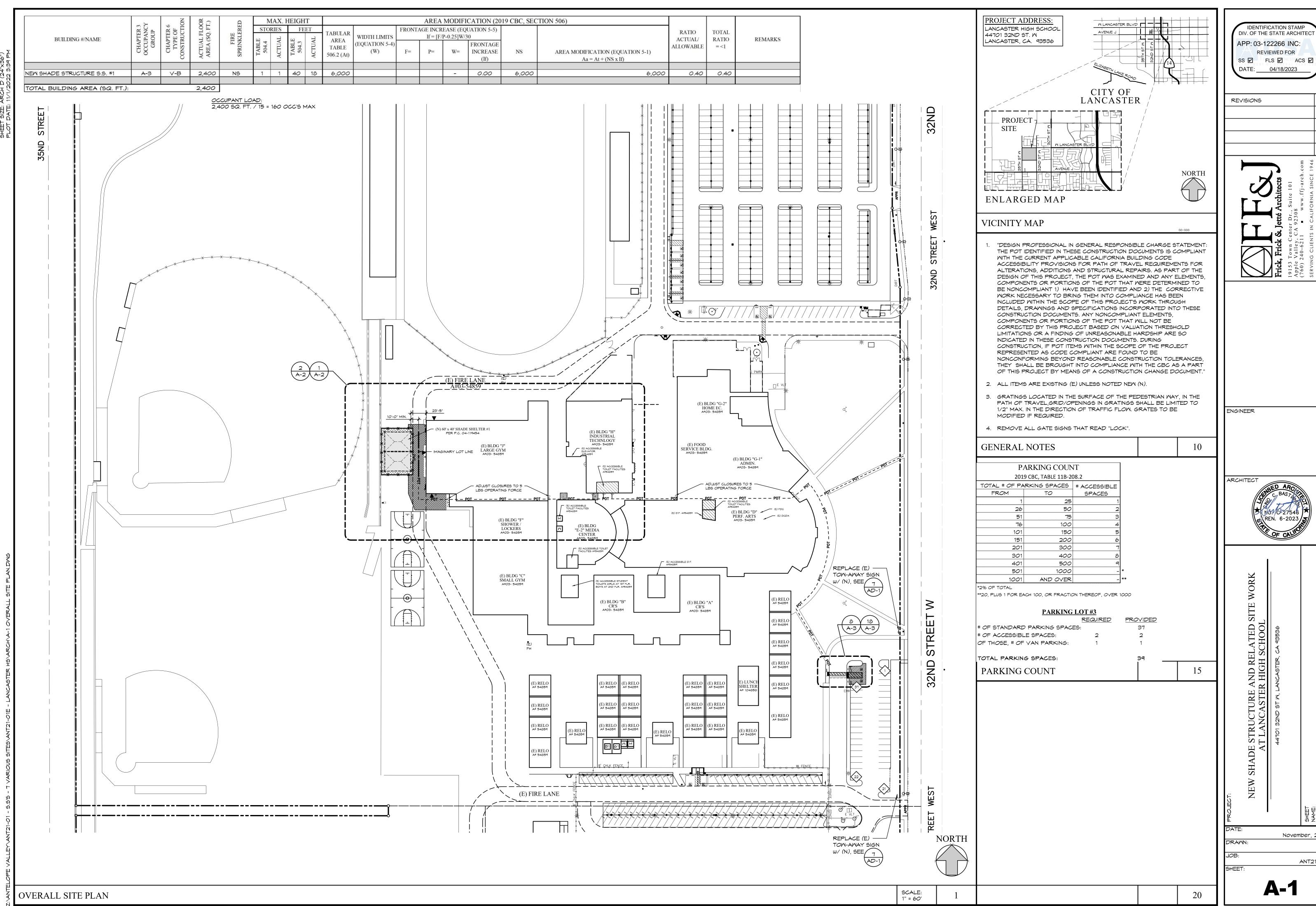
REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITEC APP: 03-122266 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 04/18/2023 REVISIONS ENGINEER ARCHITECT TURE AND RELATED ASTER HIGH SCHOOL

BID SET

November, 2022

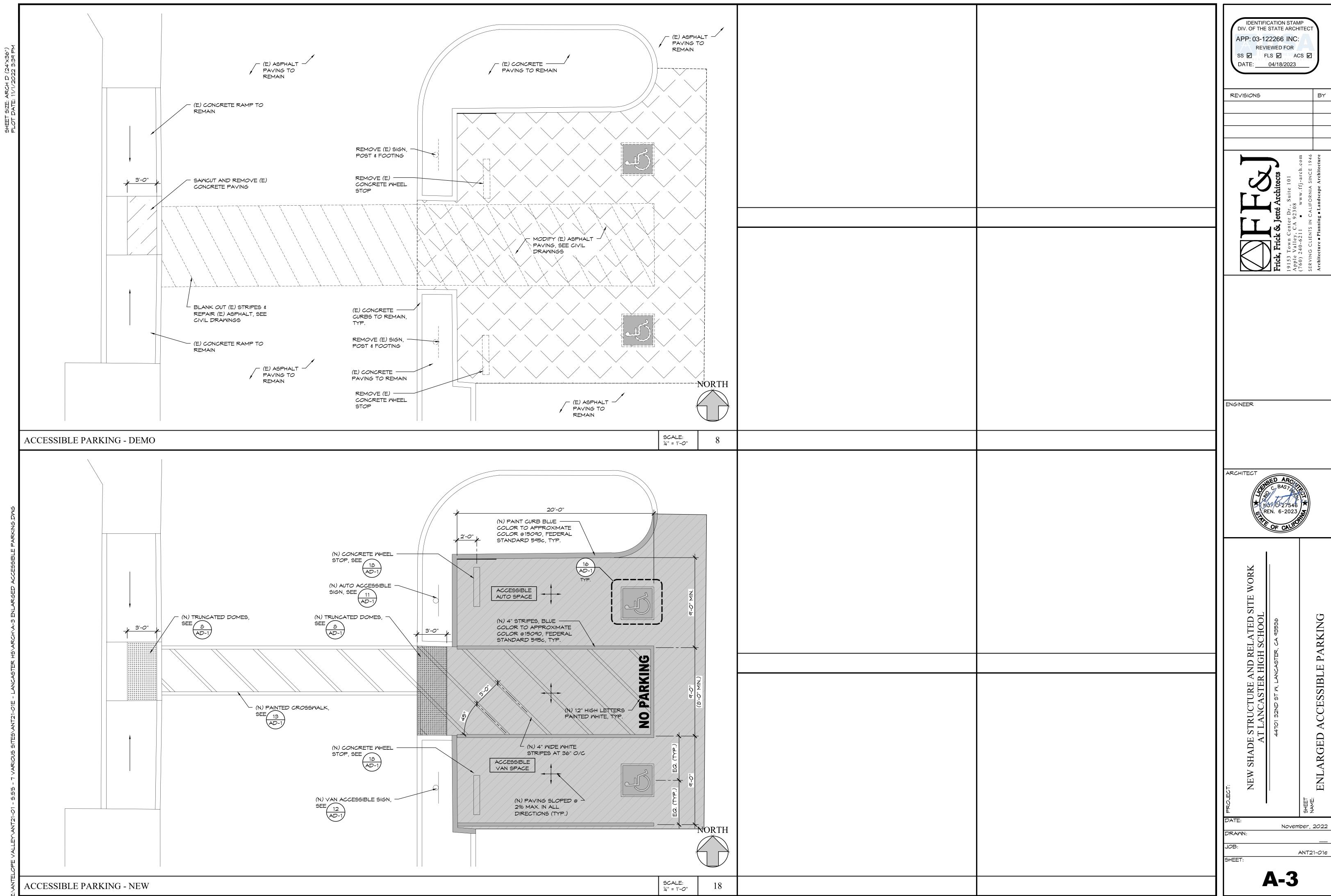
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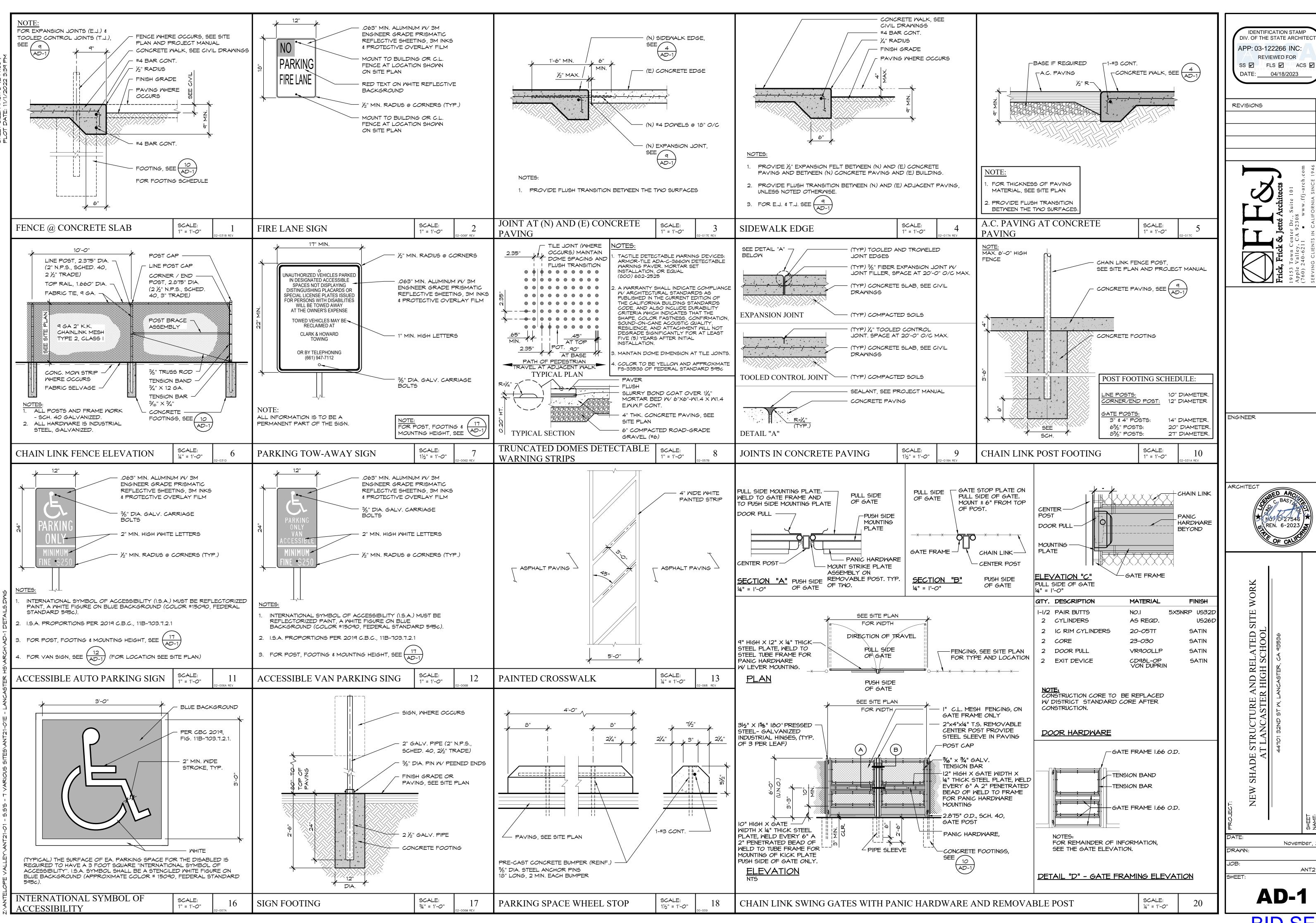
November, 2022

ANT21-01e

BID SET



**BID SET** 



ANT21-01e AD-1

November, 2022

REN. 6-2023

REVIEWED FOR

## GENERAL NOTES

- ALL COMMUNICATIONS WORK SHALL BE COORDINATED WITH THE COMMUNICATION SYSTEMS EQUIPMENT MANUFACTURER AND THE SCHOOL DISTRICT MAINTENANCE DEPARTMENT PRIOR TO ROUGH -IN AND INSTALLATION OF ANY AND ALL COMMUNICATION SYSTEM DEVICES AND RELATED CONDUIT AND WIRE.
- THE CONTRACTOR SHALL SECURE AND PAY FOR PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY THE LOCAL GOVERNMENT AGENCIES AND THE UTILITY COMPANIES.
- 3. NO CONDUIT SHALL BE RUN HORIZONTALLY IN CONCRETE FLOOR SLABS.
- 4. ALL FINAL CONNECTIONS TO OWNER-FURNISHED EQUIPMENT SHALL BE MADE BY THIS CONTRACTOR.
- MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.

- 1. ALL PERMANENT EQUIPMENT AND COMPONENTS. 2. TEMPORARY, OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING FLEXIBLE CABLE.
- 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENTS IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE, THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT
- DIRECTLY SUPPORT THE COMPONENT. B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA, THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 1-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER.), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS, THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

- MP\_MD\_PP\_EX OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECTS SPECIFIC NOTES AND DETAILS.
- MP\_MD\_PP\_E\_ OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL
- 6. THIS CONTRACTOR SHALL COORDINATE ALL LINE AND LOW YOLTAGE COMPONENTS AND WIRING TYPES TO, MATCH EXISTING SYSTEMS, WITH THE SCHOOL DISTRICT PRIOR TO BID AND INCLUDE ALL COSTS FOR A COMPLETE OPERABLE SYSTEM EXPANSION.
- 1. ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH EXISTING FINISH.
- IDENTIFICATION NAME PLATES FOR PANELS AND SWITCHBOARDS/DISTRIBUTION PANEL FEEDER CIRCUIT BREAKERS SHALL MATCH THE NOMENCLATURE PROVIDED BY THE OWNER AT THE END OF THE CONTRACT.
- 9. ALL EXTERIOR MOUNTED EQUIPMENT SHALL BE WEATHERPROOF AND PROVIDED IN A WEATHERPROOF ENCLOSURE.
- 10. INSTALL RACEWAY SYSTEMS AS FOLLOWS:
  - A. RIGID GALVANIZED STEEL IN ALL OUTDOOR LOCATIONS AND IN INDOOR LOCATIONS WHERE SUBJECT TO PHYSICAL DAMAGE.
- B. I.M.C. OR E.M.T. IN ALL INDOOR AREAS.
- C. FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO LIGHT FIXTURES, MOTORS, YIBRATING ELECTRICAL EQUIPMENT AND HORIZONTAL RUNG IN WOOD STUD WALLS.
- D. PYC CONDUIT FOR UNDERGROUND RUNS. USE 20 MIL PYC TAPED RIGID STEEL RISER ELBOWS AND RISERS FOR CONDUIT STUB-UPS.
- E. USE COMPRESSION TYPE FITTINGS FOR ALL METALLIC CONDUIT.
- F. 3/4" CONDUIT MINIMUM FOR UNDERGROUND INSTALLATIONS, 3/4" CONDUIT MINIMUM INDOORS,
- 11. ALL WIRING SHALL BE COPPER.
- PROVIDE THE OWNER AND THIS ENGINEER WITH ONE SET OF ELECTRICAL "AS-BUILTS" AT THE COMPLETION OF JOB.
- CONDUIT ROUTING INDICATED ON THESE PLANS IS DIAGRAMMATIC. ACTUAL ROUTING OF CONDUITS SHALL BE COORDINATED IN THE FIELD TO AVOID INTERFERENCE WITH OTHER UTILITIES AND TRADES. THE CONTRACTOR SHALL INSTALL ALL CONDUIT, JUNCTION/PULL BOXES, ETC., AS REQUIRED FOR A COMPLETE SYSTEM IN FULL COMPLIANCE WITH ALL APPLICABLE CODES.

- 14. ELECTRICAL CONTRACTOR SHALL PERFORM ALL WORK IN STRICT ACCORDANCE WITH GOVERNING CODES.
- 15. ALL EQUIPMENT SHALL BE NEW AND BEAR A "UL" LABEL U.O.N.,
- 16. COMPLETE ELECTRICAL INSTALLATION SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF TWO (2) YEARS - U.O.N...
- 17. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO BID DATE, TO VERIFY ALL EXISTING CONDITIONS TO BE ENCOUNTERED IN THE INSTALLATION OF ALL NEW EQUIPMENT, FIXTURES DEVICES, FEEDERS, ETC.. EXACT INSTALLATION METHOD AND REQUIREMENTS SHALL BE VERIFIED AND DETERMINED PRIOR TO BID DATE. CONTRACTORS SHALL IMMEDIATELY NOTIFY THIS ENGINEER OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT SHOWN ON THESE DRAWINGS. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED.
- 18. ALL EQUIPMENT ELECTRICAL CHARACTERISTICS, LOCATIONS, AND CONNECTION REQUIREMENTS SHALL BE VERIFIED PRIOR TO ANY ROUGH-IN WORK.
- 19. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, CUTTING, PATCHING AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM TO PENETRATE FOR HIS WORK. ALL OPENINGS MADE SHALL BE SEALED TO MEET THE RATED INTEGRITY OF THE PARTICULAR WALL, FLOOR OR CEILING.
- 20. THE CONTRACTOR SHALL STRATEGICALLY LOCATE JUNCTION BOXES AND PULL BOXES, ETC., IN ACCESSIBLE CEILING SPACES. PROVIDE ACCESS PANELS WHERE JUNCTION/PULL BOXES ARE LOCATED IN INACCESSIBLE CEILING SPACES. COORDINATE LOCATION OF REQUIRED ACCESS PANELS PRIOR TO ROUGH-IN.
- 21. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

## REFERENCES & ABBREVIATIONS

DETAIL REFERENCE MCB MAIN CIRCUIT BREAKER KEYNOTE REFERENCE FULL LOAD AMPS CONDUIT ABOVE FINISH FLOOR U.O.N. UNLESS OTHERWISE NOTED VOLTS

GROUND FAULT INTERRUPTER

CONDUIT ONLY W/PULL ROPE Д WEATHER PROOF

CU.

EM. EMERGENCY

GROUND COPPER VERIFY LOCATION M.L.O. MAIN LUGS ONLY ABOVE COUNTER E or (E) EXISTING TO REMAIN NIGHT LIGHT

# SYMBOL LIST

CONDUIT RUN ABOYEGROUND, 3/4" MINIMUM.

---- UNDERGROUND CONDUIT. I" PYC MINIMUM.

BRANCH CIRCUIT PANELBOARD, FLUSH OR SURFACE MOUNTED AS INDICATED. CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #12 WIRES CONTAINED THEREIN. TWO #12 ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN.

NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #12.

CONDUIT HOME RUN TO PANELBOARD. LETTER AND NUMERALS INDICATES ELECTRICAL PANEL AND CIRCUIT NUMBER.

CONDUIT TURNED DOWN.

EXISTING TO REMAIN.

(N) NEW EQUIPMENT.

WEATHERPROOF

DETAIL CALLOUT E4X

 $\Rightarrow$ 

DUPLEX RECEPTACLE, WITH GROUND FAULT INTERRUPTER (20 AMP, 120V., 3W, WALL PLATE TO MATCH DEVICE) MTD. AT +18".

#### APPLICABLE CODES

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS, AND THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 24, INCLUSIVE OF: 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), C.C.R. TITLE 24, PART 1

2019 CALIFORNIA BUILDING CODE (CBC), C.C.R. TITLE 24, PART 2, BASED ON 2018 INTERNATIONAL BUILDING CODE. 2019 CALIFORNIA ELECTRICAL CODE (CEC), C.C.R. TITLE 24, PART 3, BASED ON 2011 NATIONAL ELECTRICAL CODE

2019 CALIFORNIA MECHANICAL CODE (CMC), C.C.R. TITLE 24, PART 4, BASED ON 2018 UNIFORM MECHANICAL CODE

2019 CALIFORNIA PLUMBING CODE (CPC), C.C.R. TITLE 24, PART 5, BASED ON 2018 UNIFORM PLUMBING CODE (UPC).

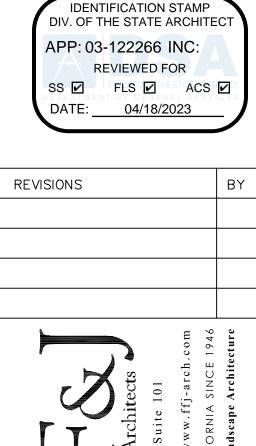
2019 CALIFORNIA ENERGY CODE, C.C.R. TITLE 24, PART 6.

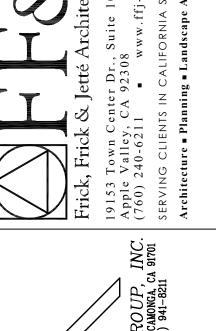
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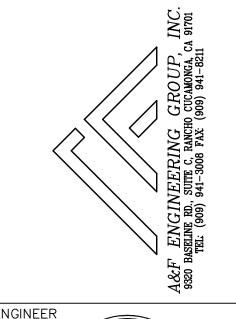
BUILDING CODE. 2019 CALIFORNIA REFERENCED STANDARDS CODE, C.C.R.

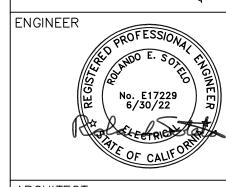
PART 10, BASED ON 2018 INTERNATIONAL EXISTING

TITLE 24, PART 12.

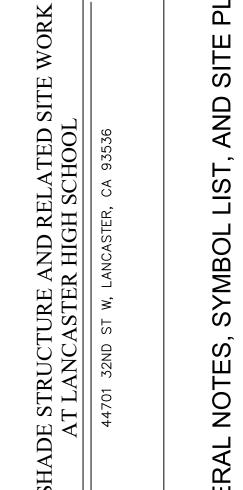


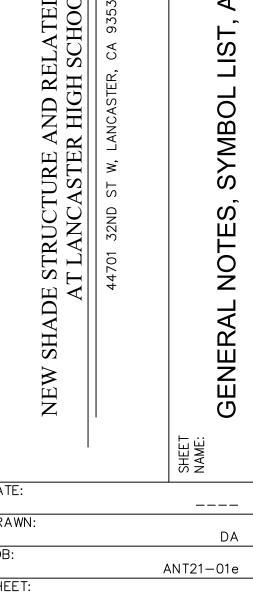










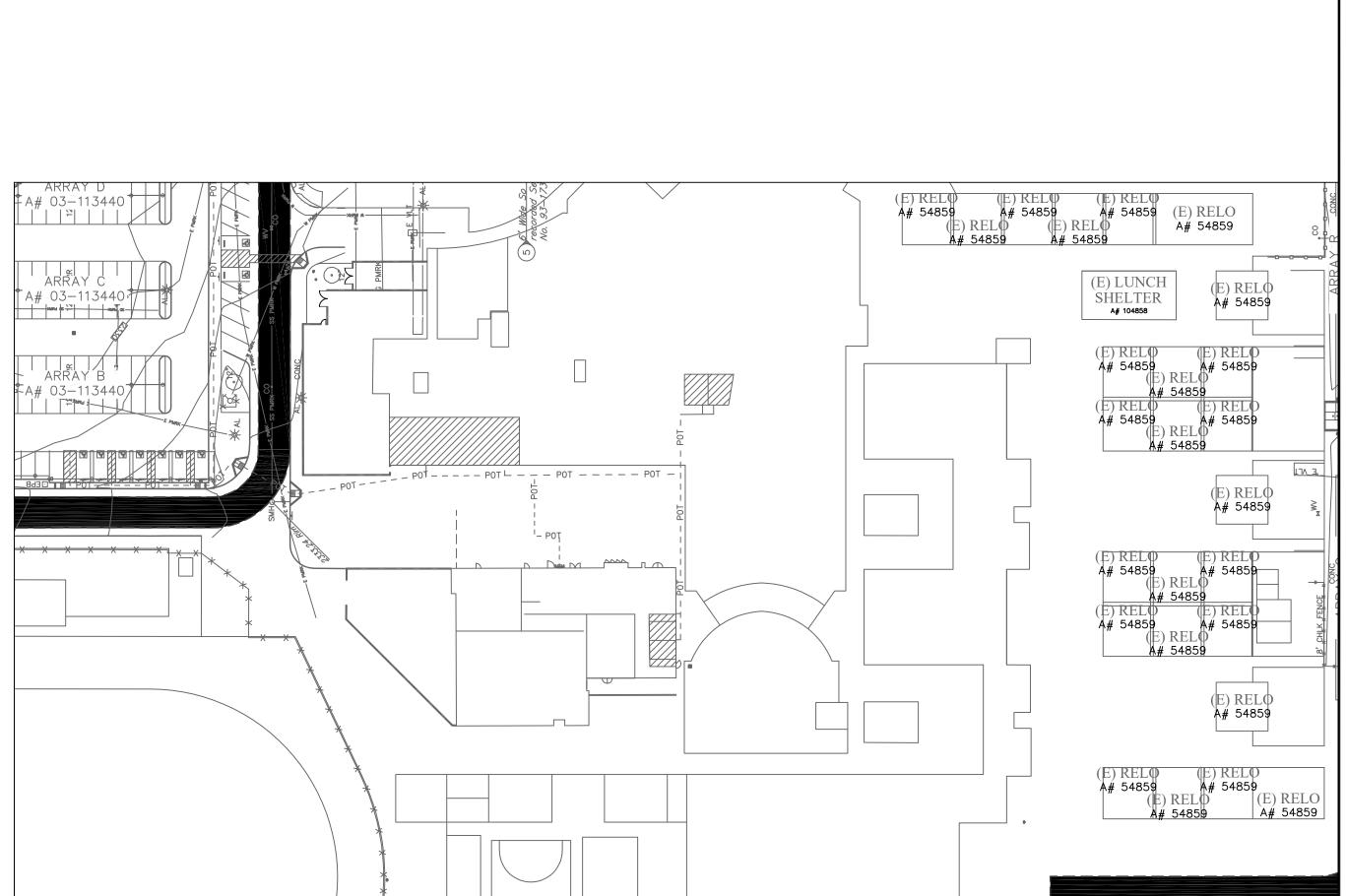


**NORTH** 

1'=60"

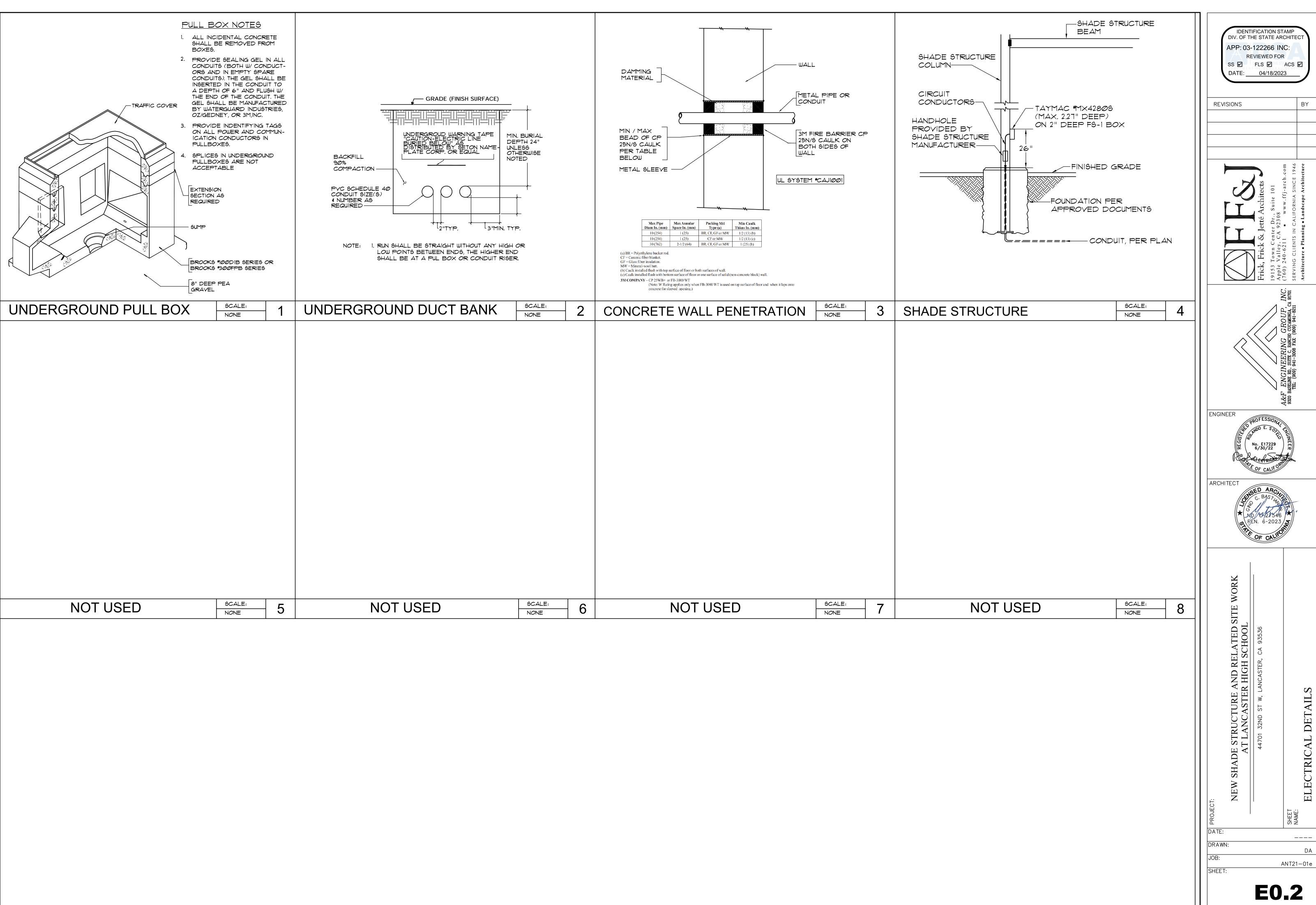
**OVERALL SITE PLAN** 

**BID SET** 



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# <u>Plan notes</u>

- 1) REFER TO DRAWING EØ.1 SINGLE LINE DIAGRAM FOR POWER CONDUIT SIZE AND WIRE QUANTITIES.
- 2 CONDUIT AND WIRE INDICATED ON THE SINGLE LINE DIAGRAM, WHETHER SHOWN ON THIS DRAWING OR NOT, SHALL BE A PART OF THIS CONTRACT AND THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE REQUIRED ROUTING TO MEET THE INTENT OF THESE PLANS AND SPECIFICATIONS.
- 3 CONDUIT ROUTING INDICATED ON THESE PLANS IS DIAGRAMMATIC. ACTUAL ROUTING OF UNDERGROUND CONDUITS SHALL BE COORDINATED IN THE FIELD TO AVOID INTERFERENCE WITH OTHER UTILITIES AND TRADES.
- IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REQUIRED CLEARANCES BETWEEN UNDERGROUND ELECTRICAL CONDUITS AND FOOTINGS. CONDUIT STUB-UPS SHALL NOT BE INSTALLED IN FOOTINGS, EXACT METHOD FOR STUBBING-UP CONDUITS AT FOOTING LOCATIONS SHALL BE COORDINATED IN THE FIELD WITH THE GENERAL CONTRACTOR AND THE ARCHITECT.
- (5) REFER TO DRAWING EØ.I, GENERAL NOTES, FOR ADDITIONAL REQUIREMENTS.

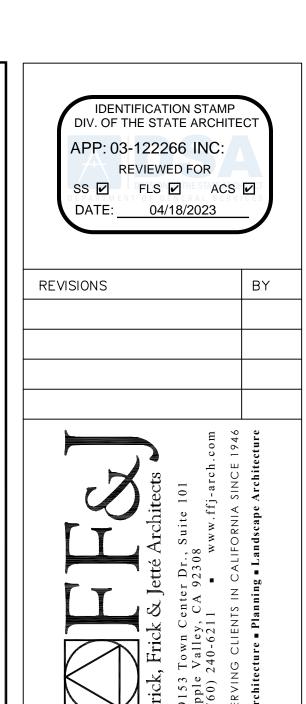
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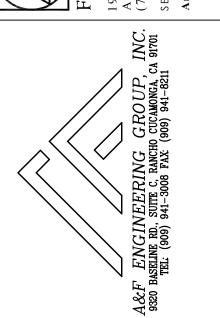
- \* = INDICATES EXISTING LOAD TO REMAIN. LOAD BASED ON FULL LOAD RATING OF CIRCUIT BREAKER.
- $\Delta$  = INDICATES NEW LOAD AND NEW CIRCUIT BREAKER AT EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING IN MANUFACTURER AND DUTY TYPE.

UNDERGROUND PULLBOX SCHEDULE
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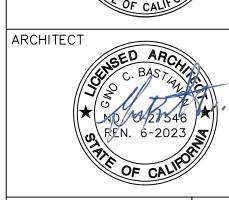
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I.D.	SIZE	COVER	COVER I.D.			
PI	2' × 3'	TRAFFIC COVER	POWER			
SCHEDU	LE NOTES:					

1. 2'x 3' UNDERGROUND PULLBOXES SHALL BE BROOKS \* 100DPB SERIES, OR APPROVED EQUAL. PROVIDE WITH BOLT-DOWN TRAFFIC COVERS.









	NEW SHADE STRUCTURE AND RELATED SITE WORK	AT LANCASTER HIGH SCHOOL	44701 32ND ST W, LANCASTER, CA 93536		SHEET NAME:	DEMOLITION AND REMODEL POWER SITE PLAN
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#### **SECTION 26 00 00**

#### GENERAL ELECTRICAL REQUIREMENTS

#### PART 1 - GENERAL

#### 1.1 SCOPE

A. Work of this section includes everything necessary for or incidental to completing the electrical work, to provide a complete and operable electrical system, except as here in specifically excluded.

#### 1.2 GENERAL REQUIREMENTS

- A. Electrical System Characteristics: 208/120V. 3PH, 4W
- B. Guarantee: Furnish a written guarantee for a period of one- year from date of acceptance.
- C. Codes and Regulations: Workdone under this Section shall comply with the latest edition of the following: California Electrical Code, State of California Title 24, State Building Standards, Occupational Safety and Health Administration (OSHA) requirements, State of California Title 17 and to all local codes having jurisdiction. In the case where the codes have different levels of requirements, the most stringent rule shall apply.
- D. Wherever a discrepancy in quantity or size of conduit, wire, equipment, devices, circuit breakers, etc., (all materials), arises on the Drawing and/or Specifications, the Contractor shall be responsible for providing and installing all material and services required by the strictest condition noted on Drawings and/or in Specifications to insure complet and operable systems as required by the Owner and Engineer.
- E. The General and Supplementary Conditions, as well as Special Conditions apply in addition to items in the Electrical Section. Special attention is directed to the following sections:
- 1. Drawings and Specifications at the site.
- Shop drawings and samples.
- Record drawings.
- 4. Cutting and Patching
- Cleaning up.
- Guarantee
- Tests.
- F. Additional Work: Refer to Mechanical and Plumbing specifications for additional Electrical requirements.
- G. Provide minimum of twenty percent (20%) spare receptacle size specified on plan.

#### H. Testing:

- Scan a. Infrascan test of the existing power distribution system affected by the building addition (i.e. panels, switchboards) and the new branch circuit panels shall be required b. Infrascan certified reports shall be submitted on completion to the Owner and
- c. Scans shall be performed by an independent testing laboratory with total connected loads in operation.

a. New branch circuit - phase, neutral and ground conductors. b. New insulated bonding conductors.

complying systems to proper and safe operation.

required to penetrate for work under this contract.

- 3. All circuits shall be tested for continuity and circuit integrity. Adjustments shall be
- made for circuits not complying with testing criteria. 4. Grounding System: Shall be tested by an independent testing laboratory to meet resistance specified in Part 3.1, D.3 of these Specifications. It shall be this

Contractor's responsibility to make adjustments, as required, to upgrade non

All certified testing reports shall be submitted to the Owner at completion of project

## I. All Core Cutting, Drilling, and Patching:

- 1. For the installation of work under this Section, the aforementioned shall be performed under this Section of the Specifications and the Concrete section of the
- 2. No holes will be allowed in any structural members without the written approval of the Structural Engineer.
- 3. For penetrations of concrete slabs or concrete footings, the work will be as directed in the Concrete Section of Specifications.
- 4. The contractor shall be responsible for patching and repairing surfaces where he is
- 5. Penetrations shall be sealed to meet the rated integrity of the surface required to be patched and repaired. The patched surface shall be painted or finished to match the

## J. Verifying Drawings and Job Conditions:

- 1. This Contractor shall examine all Drawings and Specifications in a manner to be fully cognizant of all work required under this Section.
- 2. This Contractor shall visit the site and verify existing conditions. Where existing conditions differ from Drawings, adjustment shall be made and allowances included for all necessary equipment to complete all parts of the Drawings and Specifications.

## K. Shop Drawings:

- 1. Drawings shall be submitted in six (6) bound sets accompanied by Letter of Transmittal, which shall give a list of the number and dates of the drawings submitted. Drawings shall be complete in every respect and bound in sets.
- 2. The Drawings submitted shall be marked with the name of the project, numbered consecutively and bear the approval of the Contractor as evidence that the Drawings have been checked by the Contractor. Any Drawings submitted without this approval will be returned to the Contractor for resubmission.
- 3. If the shop drawings show variations from the requirements of the Contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variations in his letter of transmittal. If the substitution is accepted, the Contractor shall be responsible for proper adjustment which may be caused by the substitution. Samples shall be submitted when requested.
- 4. Shop drawings shall be submitted on the following but not limited to:
- a. Panel/Distribution panels and circuit breakers.
- b. Pull and Junction boxes.
- c. Wire/Cable.
- d. Conduit and fittings. e. Conduit supports.
- L. Drawings of Record: The Contractor shall provide and keep up- to-date, a complete record set of blueprints. These shall be corrected daily and show every change from the original Drawings. This set of prints 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 General Contractor and all changes as noted on the record set of prints shall be incorporated thereon with black ink in a neat, legible, understandable and professional manner. Refer to the Supplementary General Conditions for complete requirements.

#### 1.3 WORK IN COOPERATION WITH OTHER TRADES

- A. Examine the Drawings and Specifications and determine the work to be performed by the site utilities contractor, electrical, mechanical, plumbing, building contractor and other trades. Provide the type and amount of electrical materials and equipment necessary to place this work in proper operation, completely wired, tested and ready for use. This shall include all conduit, wire, disconnects, relays, and other devices for the required operation sequence of all electrical, mechanical and other systems or equipment.
- B. Provide power and control circuits, conduit and wire as indicated on the Mechanical and Plumbing drawings as required for complete and operable systems.
- C. The electrical contractor shall be responsible for obtaining back boxes for all communication/signal system devices/equipment from the low voltage contractor's for rough-in. He shall coordinate the delivery of the backboxes to avoid building construction delays. In the event that the backboxes are not delivered as scheduled, the electrical contractor shall be responsible for installing the correct backboxes, patching and refinishing walls disturbed by the installation of the subject backboxes.

#### 1.4 TESTING AND ADJUSTMENT

- A. Upon completion of all electrical work, this Contractor shall test all circuits, switches, motors, breakers, motor starter(s) and their auxiliary circuits and any other electrical items to insure perfect operation of all electrical equipment.
- B. Equipment and parts in need of correction and discovered during such testing shall be immediately repaired or replaced with all new equipment and that part of the system shall then be retested. All such replacement or repair shall be done at no additional cost to the
- C. All circuit shall be tested for continuity and circuit integrity. Adjustments hall be made for circuits not complying with testing criteria.
- D. All certified testing reports shall be submitted to the Engineer at completion of project.

#### 1.5 IDENTIFICATION

A. Identification nameplates shall be Micarta 1/8" thick and of approved size, with bevelled edges and engraved white letters 1/4" high minimum on black background. Nameplates shall be provided for all circuits in the distribution switchboards, and selector switches. Inscriptions on equipment shall be identical to those indicated in panels and/or motor control centers and other similar devices. Each nameplate shall be provided with drillings and suitable mounting screws corresponding to finish of the nameplate. The inscriptions in each nameplate shall be as indicated on the Drawings.

#### 1.6 MAINTENANCE, SERVICING, INSTRUCTION MANUALS AND WIRINGDIAGRAMS

- A. Prior to final acceptance of the job, the Electrical Contractor shall furnish to the Owner at least four (4) copies of operating and maintenance and servicing instructions, as well as four (4) complete wiring diagrams for the following item(s) or equipment:
- Circuit breakers.
- Receptacles
- B. All wiring diagrams shall specifically cover the system supplied. Typical drawings will not be accepted. Two (2) copies shall be presented to the Electrical Engineer and four (4) copies to the Owner.

#### 1.7 ELECTRICAL CONTRACTOR'S RESPONSIBILITY

- A. It shall be the Electrical Contractor's responsibility to obtain æomplete set of Drawings and Specifications. He shall check the Drawings of the other trades and shall carefully read the entire Specifications and determine his responsibilities.
- B. The contractor shall be responsible for reviewing the plans and specifications to ensure each room, where electrical line or low voltage equipment is to be installed, has sufficient space to accommodate the system cabinets, equipment and terminations while maintaining code mandated clearances about said equipment. The contractor shall identify problem areas prior to bid, include all costs required for corrective measures in his bid and submit alternate equipment and materials suitable for the installation to the Arcnitect/Engineer for acceptance as part of the product subnttal process

## 1.8 FINAL INSPECTION AND ACCEPTANCE

- A. After all requirements of the Specifications and/or the Drawings have been fully completed, representatives of the Owner will inspect the work. Contractor shall provide competent personnel to demonstrate the operation of any item or system to the full satisfaction of each representative.
- B. Final acceptance of the work will be made by the Owner after receipt of approval and recommendation of acceptance from each representative.

## 1.9 RECORD DRAWINGS

A. Contractor shall furnish one set of reproducible record drawings before final payment of

## 1.10 SUBSTITUTIONS

- A. Substitution to specified equipment shall be submitted and received by the Engineer fifteen (15) days after the bid date for review and approval.
- B. To receive consideration, requests for substitutions must be accompanied by documentary proof of its equality with the specified material. Documentary proof shall be in letter form and identify the specified values/materials alongside proposed equal values/materials. In addition,catalog brochures and samples must be included in the submittal.
- C. In the event that authorization is given for a substitute equal to bid, after award of contract the Contractor shall submit to the Engineer certified quotations from suppliers of both the specified and proposed equal material for price comparison and delivery dates.
- D. In the event of cost reduction, the Owner will be credited with 100 percent of the
- reduction, arranged by Change Order. E. The Contractor warrants that substitutions proposed for specified items will fully perform
- F. Substitutions or requests for substitution shall not be accepted and rejected for failure to comply with items A-E above.

## PART 2 - PRODUCTS

the functions required.

## 2.1 MATERIALS

- A. Materials and Equipment: All electrical materials and equipment shall be new and shall be listed by Underwriter's Laboratories and bear their label, or listed and certified by a nationally recognized testing authority where UL does not have an approval. Custom made equipment must have complete test data submitted by the manufacturer attesting to its safety. In addition, the materials and equipment shall comply with the requirements of the following:
- 1. American Society of Testing Materials (ASTM).
- Insulated Cable Engineers Association (ICEA).
- National Electrical Manufacturer's Association (NEMA).
- 4. National Fire Protection Association (NFPA).
- American National Standard Institute (ANSI)

#### B. Panelboards - Breaker Circuit

- Branch circuit panelboads shall be of the dead front safety type equipped with thermal magnetic bolt-on type 40 deg C. circuit breakers. Panels shall be suitable for the disaggregation of loads with provisions for the installation of future current transformer (CT's). Enclosure shall be minimum 20" wide (Eaton split-bus type panel) or 30" wide (not split-bus) and 5-3/4" deep unless otherwise noted on plan. Refer to panel schedule for ratings and quantity of circuits to be provided. Panels shall be provided with copper busses. Branch circuit panelboards shall be Eaton or approved equal Siemens, Square D or General Electric to match the main switchboard manufacturer. Equipment manufactured by third party OEM is not acceptable.
- Circuit breakers shall be fully rated to provide the symmetrical interrupting capacity indicated on the single line diagram. Circuit breakers shall be the number of poles and current capacity as indicated on the panel schedule with terminals/lugs UL listed for 75°C. Circuit breakers shall be fully coordinated to ensure a local fault does not trip any upstream circuit breaker.
- 3. Trims shall have doors equipped with flush type combination lock and catch, two milled type keys supplied with each panel. All locks shall be keyed alike and each door shall have a plastic covered directory frame with a typed identification card of all circuit and panel numbers for branch circuit panelboards and engraved lamacoid nameplates for power distribution panelboards.
- Provide nameplate for all panelboards, 1/8" thick, Micarta or Lamacoid plate of approved size, with bevelled edges and engraved white letters on black background. Install nameplates on exterior trim of panel, above the panel door. Provide Arc-Fault warning labels on panel fronts.
- 5. All wiring shall be neatly arranged and laced together.
- 6. All circuit breakers shall be provided with a device for locking circuit breaker in "OFF"
- 7. Refer to Painting Section of these Specifications for all panel finish. Panel shall be primered for painting.
- 8. Neutral and Ground bus bars shall be full size, rectangular in cross section constructed of copper and interconnections.
- Where indicated on plan, panels housing time clocks and contactors for control of lighting shall be provided with an auxiliary section. Panel shall consist of a twection panelboard with two boxes and one trim/cover, each with their own door/lock.
- 10. Refer to Section 26 05 73 for additional requirements. Panelboards and the overcurrent protective device coordination study must be submitted concurrently. A Panelboard submittal that does not include the overcurrent protective device coordination study will be considered incomplete and returned as "rejected."

#### C. Conduit:

- Rigid conduit shall be full weight threaded type aluminum or steel, except where specifically required to be steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the hot dip, metallizing or sherardizing process.
- Galvanized Rigid Conduit (GRC), shall be full weight threaded type aluminum or steel, except where specifically required to be steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the hot dip, metallizing, or sherardizing process.
- 3. Intermediate Metal Conduit (IMC), shall be hot-dipped galvanized in accordance with UL 1242 and meeting Federal Specification WWC-581 (latest revision).
- 4. Electrical Metallic Tubing (EMT), shall be zinc coated steel with baked enamel or plastic finish on inside surfaces.
- steel strips wound spirally with interlocking edges to provide greatest flexibility with maximum strength. Interior surfaces shall be smooth and offer minimum drag to pulling in conductors. Used only as directed by the Engineer.

Flexible metal conduit shall be constructed of aluminum or hot - dipped galvanized

- 6. Liquid-tight conduit (Seal-Tite) shall be galvanized steel flexible conduit as above except with moisture and oil-proof jacket, pre-cut lengths and factory installed fittings. For outdoor installations and motorconnection.
- 7. Non-Metallic Conduit:
- a. Polyvinyl chloride (PVC) rigid conduit, Schedule 40, Type II for underground b. Conduit and fitting shall be produced by the same manufacturer.

## D. Fittings:

- 1. Condulet type fittings shall be smooth inside and out, taper threaded with integral insulating bushing and of the shapes, sizes and types required to facilitate installation or removal of wires and cables from the conduit and tubing system. These fitting shall be of metal, smooth inside and out, thoroughly galvanized, and sherardized cadmium
- 2. Metallic condulet covers shall have the same finish as the fitting and shall be provided for the opening of each fitting where conductor do not pass through the
- 3. Connector, coupling, locknut, bushings and caps used with rigid conduit shall be steel, threaded and thoroughly galvanized. Bushings shall be insulated.
- 4. EMT fittings, connectors and couplings, shall be steel, zinc or cadmium plated, raintight, threadless, compression or tap - on multiple point, steel locking ring type with
- Flexible steel conduit connectors shall be or malleable iron clamp or squeeze type or steel twist-in type with insulated throat. The finish shall be zinc or cadmium plating.
- 6. Die cast, set screw or indenter type fittings are not acceptable.
- 7. Conduit unions shall be "Erickson" couplings, or approved equal. The use of running threads will not be permitted.

## . 600 Volt Conductors - Wire and Cable:

- 1. All conductors shall be copper. SimPull type or equal
- 2. Type THHN/THWN thermoplastic, 600 volt, UL approved, dry and wet locations, for conductor sizes up to and including #4 AWG.
- 3. Type XHHW cross-linked synthetic polymer, 600 volt, UL approved, for dry and wet locations, for conductor sizes #2 AWG. and above.
- 4. Cross-linked synthetic polymer, XHHW, 600 volts, UL approved, for installation underground, in concrete or masonry.
- Wire and cable shall be new, manufactured not more than six (6) months prior to installation, shall have size, type of insulation, voltage rating and manufacturer's name permanently marked on outer covering at regular intervals.
- 6. Wire and cable shall be factory color coded by integral pigmentation with a separate color for each phase and neutral. Each system shall be color coded and it shall be maintained throughout.
- 7. Systems Conductor Color Coding:
- a. Power 208/120V, 3PH, 4W: (1) Phase A = Black (2) Phase B = Red (3) Phase C = Blue

= White

b. Ground Conductors:

(4) Neutral

(1) Green

- 8. All color coding for #8 conductor and above shall be as identified above, utilizing phase tape at each termination.
- 9. No conductors carrying 120 volt or more shall be smaller than #12 AWG.

#### F. Junction and Pullboxes:

- 1. For interior dry locations, boxes shall be galvanized one piece drawn steel, knockout type, with removable, machine screw secured covers.
- 2. For outside, damp or interior/exterior surface mounted locations, boxes shall be heavy cast aluminum or cast iron with removable, gasketed, non-ferrous machine screw secured covers.
- 3. All boxes shall be sized for the number and sizes of conductors and conduits entering the box and equipped with plaster rings where required. Each conductor shall be terminated at an insulated, barriered terminal connector and completely identified with an engraved fiber identification marker, Electrovert or Underwriter's Safety Device Company.

#### Outlet Boxes:

heavy cast aluminum or cast iron with threaded hubs; covers shall be watertight with gaskets and no

1. For surface mounting or exposure to wet or damp locations, outlet boxes shall be

20 ampere, three wire grounding type, 120 volt, Hubbell Bryant # GF - 5362-I, with steel

#### H. Receptacles: 1. Weatherproof receptacle shall be industrial heavy duty type, ground fault interrupter,

J . Painting: 1. Terminal cabinets, panels, junction boxes, pull boxes, etc., and conduit installed outdoors and in public view shall be painted with colors selected by the Architect to match the subject exterior surface. Refer to painting section of the specifications for

lockable lift cover U.L. listed for "wet" locations when in operation.

## K. Seismic Design and Anchoring of Electrical Equipment:

. Seismic anchorage of electrical equipment shall conform to C.C.R. Title 24, 2019 CBC with California Amendments. Anchorage details for roof/floor mounted equipment shall be as shown on plans

#### PART 3 - EXECUTION

3.1 PREPARATION AND INSTALLATON

additional requirements.

- A. Installation of Conduit and Outlet Boxes:
- 1. All conduit exposed or installed in concrete and masonry, shall be galvanized rigid
- steel conduit (GRC), or intermediate metal conduit (IMC). 2. Rigid conduit may be installed under floor slabs, under concrete sidewalls and as noted on the Drawings. Rigid conduit installed under slabs shall be 1" trade size

minimum and shall be wrapped with 20 mil. polyvinyl chloride plastic tape.

- 3. All conduit except as hereinafter specified, installed in concrete or masonry walls, or damp or hazardous location, or subject to mechanical injury shall be heavy wall, threaded, galvanized rigid steel conduit (GRC), or intermediate metal conduit (IMC).
- 4. Intermediate metal conduit (IMC), is approved for use in all locations as approved for GRC or EMT and in accordance with Article 345 of CEC and UL Information card
- 5. MC cable is not allowed.
- 6. Conduit shall be run so as not to interfere with other piping fixtures or equipment.
- 7. The ends of all conduit shall be cut square, carefully reamed out to full size and shall

8. No running threads will be permitted in locations exposed to the weather, in concrete

- or underground. Special union fittings shall be used in these locations. 9. Underground conduit shall be, unless otherwise indicated, Schedule 40 PVC (polyvinyl chloride) installed at depth of not less than 24" below grade, concrete encased with a minimum of 3" concrete envelope and 2" minimum between conduits. Conduit separation shall be maintained using plastic spacers located at 10'- 0" intervals. Where power and communication/signal conduits are run in a common trench a (12") inch minimum separation shall be maintained between power and communication/signal conduits. The grounding wire in plastic conduit shall be rated in
- for conduits installed under the building slab (building footprint). 12. All underground or imbedded conduit shall be 1" minimum trade size for steel and for
- 13. Where underground power feeder conduit runs stub up, conduit shall transition to GRC underground. The contractor shall use GRC elbows and GRC risers wrapped in 20 mil. PVC tape for stub - ups. Conduit stub - ups for branch circuits and low voltage

accordance with Article 250 of 2016 CEC. Conduit encasement will not be required

systems shall be PVC.

smoothly rounded insulating surface.

- 10. PVC conduit shall not be run above ground. 11. Where underground conduit runs penetrate floor slab, conduit shall terminate 6"
- above finished floor with a grounding bushing. 12. Where conductors enter a raceway in a cabinet, pull box, junction box, or auxiliary gutter, the conductors shall be protected by a plastic bushing type fitting providing a
- 15. All conduit underground, in masonry and concrete walls, and where concealed under floor slabs shall have joints painted with thread compound prior to makeup. No conduit shall be installed horizontally in concrete walls or floors.
- 16. All conduit shall be supported at intervals not less than 6'- 0" and within 12" from any outlet and at each side of bends and elbows. Conduit supports shall be galvanized, heavy stamped, one hole conduit clamp properly secured.
- 17. Seismic Conduit Support:

GRC (3" and larger)

a. All conduit shall be supported in such a manner that it is securely attached to the structure of the building. Attachment is to be capable of supporting the tributary weight of conduit and contents in any direction. Maximum spacing of support

and braces are to be as follows: **CONDUIT TYPE** MAXIMUM SPACING EMT. IMC 10'-0" GRC (3/4" thru 1 ½") 10'-0" 16'-0" GRC (2" thru 21/2")

18. All conduit runs shall be installed parallel or perpendicular to walls, structural members, or intersection of vertical planes and ceilings. Field made bends and offset shall be avoided where possible. Crushed or deformed raceway shall not be

20'-0"

19. Open knockouts in outlet boxes only where required for inserting conduit.

- 20. All boxes installed outdoors shall be suitable for outdo or installations, gasketed, screw cover and painted as directed by the Architect with weatherproof paint to
- 21. All conduit entries to outdoor mounted panels, cabinets, boxes, etc., shall be made using Myers "SCRU-TITE" hubs Series ST.
- 22. All conduit shall have a 200 lb test poly propylene pull line left in place for future use in all runs tagged with a plastic tag at terminating end indicating the location of the
- opposite end of the conduit. B. Installation of 600 Volt Conductors:
- 1. All line and low voltage wire shall be installed in conduit.
- 2. All line voltage circuits and feeder wires shall be continuous from the service point to terminal or farthest outlet. No joints shall be made except in pull, junction or outlet boxes, or in panel or switchboard gutters.
- 3. Thoroughly clean all conduit and wire ways and see that all parts are perfectly dry before pulling any wires. No joint shall be made except in pull, junction or outlet boxes, or in panel or switchboard gutters.

#### Joints in 600 Volt Conductors:

- 1. Joints in 600 volt conductors smaller than No. 4 AWG shall be made with Scotchlok spring type connectors. Wires No 4 AWG and larger shall be joined together with approved type of pressure connector and taped with #33 3M tape, three (3) layers minimum to provide insulation not less than that of conductor. Connections to switch or busbar shall be made with one-piece copper lugs. Splicing of all 600 volt or less in-line connections #2 AWG through 350 MCM shall be made with 3M brand PST
- 2. Joints/splices shall be done in junction or pull boxes.

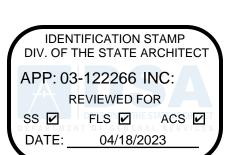
#### D. Grounding:

- 1. Provide grounding for entire electric installation as shown on plans and as required by applicable codes. Included as requiring grounding are:
- Conduit. b. Neutral or identified conductors of interior wiring system. c. Non-current carrying metal parts of fixed equipment.
- 2. Grounding and bonding conductors shall be sized per the latest edition of the California Code of Regulations, Title 24, State of California and CEC.
- 3. Provide and install an equipment grounding conductor in all feeder and branch circuit

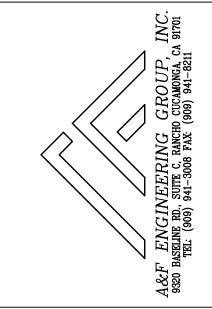
4. Building grounding system resistance to ground shall not exceed 25 ohm

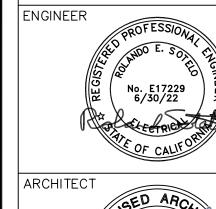
E. Prefabricated Equipment: Installation of all prefabricated items and equipment shall conform to the requirements of the manufacturer's specifications and installation instruction pamphlets. Where code requirements affect installation of materials and equipment, the more stringent requirements, code or manufacturer's instructions and/or specifications, shall govern the work.

END OF SECTION



ΒY REVISIONS





26 SECTION MENTS SITE S M 4 2

DATE

DRAWN:

SHEET:

# TRICAL

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ANT21-01e

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DA

# **GENERAL**

- DIMENSIONS ARE FROM FACE OF WALL OR CENTER LINE OF COLUMNS, MULLIONS & STUDS UNLESS OTHERWISE NOTED.
- 2. EQUIPMENT SHOWN DOTTED IS NOT IN THIS CONTRACT.
- 3. THE CONTRACTOR SHALL REVIEW THE PLANS AND SITE AND COORDINATE ALL THE WORK REQUIRED FOR THE PROJECT.
- THE CONTRACTOR SHALL TAKE DUE NOTE THAT THE DRAWINGS IDENTIFIED AS ARCHITECTURAL, STRUCTURAL, ELECTRICAL, PLUMBING # MECHANICAL ARE FOR COORDINATION OF TRADES AND ARE NOT TO BE INTERPRETED AS EXCLUSIVE WORK ONLY. ALL TRADES ARE TO VERIFY WITH ALL DRAWINGS FOR ALL REQUIRED WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ANY AND ALL EXISTING UTILITY LINES OR STRUCTURES WITHIN AND ADJACENT TO DEMOLITION OR CONSTRUCTION AREA, MHETHER SHOWN OR NOT SHOWN HEREIN.
- 6. THE CONTRACTOR SHALL INSPECT EXISTING SITE CONDITIONS, AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES PRIOR TO ANY LAND DISTURBANCE. CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGE TO ANY PUBLIC OR NON-PUBLIC UTILITY. THE CONTRACTOR SHALL REVIEW PLANS AS REQUIRED FOR COORDINATION OF THE NEW WORK WITH EXISTING CONDITIONS.
- THE CONTRACTOR SHALL OBTAIN ALL CLEARANCES REQUIRED FOR ALL WORK (DEMOLITION, RELOCATION AND NEW WORK) SUCH AS(BUT NOT LIMITED TO) REMOVAL OF STRUCTURES, TREES, TURF AREAS, MEEDS, CURBS, GUTTERS AND RELOCATION AND/OR REMOVAL OF EXISTING UTILITIES ON- AND OFF-SITE AS MAY BE REQUIRED.
- 8. THE CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND LICENSES NECESSARY, INCLUDING UTILITY FEES. THE OWNER WILL REIMBURSE THE CONTRACTOR THE ACTUAL DOCUMENTED COST OF SUCH PERMITS, LICENSES AND FEES, WITH NO OVERHEAD OR PROFIT ADDED.
- THE CONTRACTOR SHALL LEAVE THE CONSTRUCTION AREAS CLEAN AND FREE OF ALL DEBRIS. ALL SUCH DEBRIS SHALL BE LEGALLY DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
- 10. DUST SHALL BE CONTROLLED AS REQUIRED BY LOS ANGELES COUNTY DUST CONTROL POLICIES.
- 11. NO WORK WHATSOEVER SHALL BE STARTED WITHOUT FIRST NOTIFYING THE OWNER, AND ARCHITECT. REFER TO THE PROJECT
- 12. UNLESS SPECIFIED ON THE STRUCTURAL / ARCHITECTURAL DRAWINGS ANY ALTERATION OR MODIFICATIONS TO A STRUCTURAL ELEMENT BY CUTTING, DRILLING, BORING, BRACING WELDING, ETC. SHALL HAVE WRITTEN APPROVAL BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO START OF WORK.
- 13. ALL WORK SHALL CONFORM TO THE 2019 EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
- 14. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDNANCES.

#### **DEMOLITION & PATCHING**

- 15. DEMOLITION INDICATED IS FOR THE CONVENIENCE OF THE CONTRACTOR AND MAY NOT INDICATE THE FULL EXTENT OF DEMOLITION REQUIRED FOR THE PERFORMANCE OF THE CONTRACT. CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE SCOPE OF DEMOLITION WORK REQUIRED.
- 6. PATCH AND REPAIR EXISTING SURFACES AS REQUIRED DUE TO DEMOLITION OR PERFORMANCE OF NEW CONSTRUCTION. ALL NEW

AGGREGATE BASE

AIR CONDITIONING

ASPHALTIC CONCRETE

BENCHMARK / BEAM

ABOVE

**ACCESS** 

.ADJACENT

ALTERNATE

ALUMINUM ANCHOR BOLT

..ANODIZED

. BETMEEN

BITUMINOUS

.BLOCKING

BUILDING

BOARD

.CABINET

CARPET

CAST IRON

.CENTERLINE

CHAIN LINK

...CONTINUOUS

.. CONTROL JOINT

CLEAR

COLUMN

...DIAMETER

..DRAMING

CERAMIC TILE

. CONCRETE MASONRY UNIT

...CA CODE OF REGULATIONS

..DEMOLISH / DEMOLITION

DEPT. OF THE STATE ARCHITECT

DRINKING FOUNTAIN/ DOUGLAS

CATCH BASIN

ARCHITECT

MORK SHALL MATCH EXISTING IN KIND, QUALITY, AND FINISH, UNLESS NOTED OR SPECIFIED OTHERWISE.

#### 17. NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION WORK HAVE BEEN APPROVED BY DSA.

#### FIRE / LIFE SAFETY

- 18. ALL PENETRATIONS THROUGH FIRE RESISTIVE WALL OR FLOOR ASSEMBLIES SHALL BE PROTECTED BY AN APPROVED PENETRATION FIRESTOP SYSTEM INSTALLED AS TESTED IN ACCORDANCE WITH UBC STANDARD 7-5 (ASTM E814)
- 19. CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS AND OBSERVE FIRE SAFETY REGULATIONS DURING CONSTRUCTION, ALTERATIONS, DEMOLITION AND ASBESTOS REMOVAL AS NOTED IN 2019 CFC, CHAPTER 33, & CBC, CHAPTER 33.
- 20. FIRE SAFETY DURING DEMOLITION AND CONSTRUCTION SHALL COMPLY WITH 2019 CFC, CHAPTER 33, & CBC, CHAPTER 33.

#### DIVISION OF THE STATE ARCHITECT

- 21. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE BY AN ADDENDA OR CONSTRUCTION CHANGE DOCUMENT (CCD) APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, T-24, C.C.R
- 22. A PROJECT INSPECTOR WITH A CLASS 2 CERTIFICATION FROM THE DIVISION OF THE STATE ARCHITECT, EMPLOYED BY THE SCHOOL DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, T-24 C.C.R.
- 23. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
- 24. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS THAT THE MORK OF THE ALTERATION, REHABILITATION OR RECONSTRUCTION IS TO BE IN ACCORDANCE WITH TITLE 24, CCR. SHOULD ANY EXISTING CONDITIONS SUCH AS DETERIORATION OR NON-COMPLYING CONSTRUCTION BE DISCOVERED WHICH IS NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN THE FINISH WORK SHALL COMPLY WITH TITLE 24, CCR, A CONSTRUCTION CHANGE DOCUMENT (CCD), OR A SEPARATE SET OF PLANS AND SPECIFICATIONS, DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. (SECTION 4-317(c), PART 1, TITLE 24, CCR).
- 25. WHENEVER DSA FINDS ANY CONSTRUCTION WORK IS BEING PERFORMED IN A MANNER CONTRARY TO THE PROVISIONS OF CALIFORNIA BUILDING CODE AND THAT WOULD COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING, THE DEPARTMENT OF GENERAL SERVICES, STATE OF CALIFORNIA, IS AUTHORIZED TO ISSUE A STOP WORK ORDER PER SECTION 4-334.1 CALIFORNIA ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR.)
- 26. TITLE 24, PARTS 1-5 AND 9 MUST BE KEPT ON SITE DURING CONSTRUCTION.
- 27. ALL STRUCTURAL, ARCHITECTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING MATERIALS INSTALLATION TO COMPLY WITH APPLICABLE CODES, STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS.
- 28. THE PROJECT INSPECTOR (PI) SHALL WITNESS AND VERIFY GROUNDING.



NEW SHADE STRUCTURE AND RELATED SITE WORK AT QUARTZ HILL HIGH SCHOOL

ANTELOPE VALLEY UNION HIGH SCHOOL DISTRICT

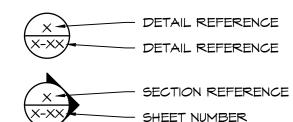
PROJECT ADDRESS: QUARTZ HILL HIGH SCHOOL 6040 M AVE. L, LANDCASTER, CA 93536

PROJECT ARCHITECT FF&J ARCHITECTS INC. 19153 TOWN CENTER DR., SUITE 101 APPLE VALLEY. CA. 92308 (760) 240-6211

PROJECT MANAGER RICK SIMPER ARCHITECT OF RECORD: GINO BASTIANON

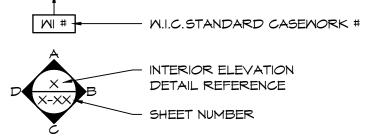
JT ENGINEERING 33336 N. AGUA DULCE CYN. RD. #103 AGUA DULCE, CA. 91390 (661) 268-8899 CONTACT: JOHN JACOB

ELECTRICAL A&F ENGINEERING GROUP, INC. 9320 BASELINE RD., SUITE C RANCHO CUCAMONGA, CA. 91701



WINDOW NUMBER OR TYPE

X DOOR SIGNAGE, SEE LEGEND OR FLOOR PLAN



- DROP TRANSITION, SEE PLAN FOR DROP DEPTH

ROOM NAME - ROOM NAME XXX - ROOM NUMBER

**SYMBOLS** 

-X X X EXISTING CHAIN LINK FENCING

-\*--\*-- DEMO CHAIN LINK FENCING

---- POT---- POT- PATH OF TRAVEL

TITLE 24 PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2020\* 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR\* 2019 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2019 CALIFORNIA

2019 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2017 NATIONAL ELECTRICAL CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2018 IAPMO UNIFORM MECHANICAL CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 IAPMO UNIFORM PLUMBING CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR 2019 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR

(2018 INTERNATIONAL EXISTING BUILDING CODE AND 2019 CALIFORNIA AMENDMENTS) 2019 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR

2019 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 CCR

TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2016 ASME A17.1/CSA B44-13 SAFETY CODE FOR ELEVATORS AND ESCALATORS (PER 2019 CBC PART 2 CH 35) 2010 ADA STANDARD FOR ACCESSIBLE DESIGN NOTE: CAL/OSHA ELEVATOR UNIT ENFORCES CCR TITLE 8 AND USES THE 2004

#### APPLICABLE NFPA STD. (PARTIAL LIST)

PARTIAL LIST OF APPLICABLE STANDARDS

ASME A17.1 BY ADOPTION

SYSTEMS

AMENDMENTS)

NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA ...2016 EDITION NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE

SYSTEMS (CA AMENDED). ...2016 EDITION OTAL SHEETS: 17 NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING ..2017 EDITION NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING

NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION... .2016 EDITION NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE

..2013 EDITION NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED).

NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA ..2016 EDITION AMENDED)

NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING .2016 EDITION NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA

.2015 EDITION L 300 - STANDARD FOR FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF COMMERCIAL COOKING EQUIPMENT. ..2005 (R2010 \_ 464 - AUDIBLE SIGNALING DEVICES FOR FIRE ALARM AND SIGNALING SYSTEMS, INCLUDING ACCESSORIES .. ..2003 EDITION

UL 521 - STANDARD FOR HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING .1999 EDITION JL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING

IMPAIRED .2002 (R2010 ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING,

FOR A COMPLETE LIST OF APPLICABLE NFPA STANDARDS REFER TO 2019 CBG (SFM) CHAPTER 35 AND CALIFORNIA FIRE CODE CHAPTER 80.

SEE CALIFORNIA BUILDING CODE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS.

ALL PARTS OF THE 2019 CALIFORNIA BUILDING CODE BECOME EFFECTIVE JANUARY 1, 2020 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2019 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10) IS JANUARY 8, 2019 AND THE EFFECTIVE DATE FOR THE USE OF THE CALIFORNIA ADMINISTRATIVE CODE (TITLE 24, PART 1, CHAPTER 4) IS JANUARY 8, 2019.

## **CODE REFERENCES**

SITE DEMOLITION INCLUDES:
DEMO OF EXISTING ASPHALT AND CONCRETE PAVING.

NEW ASPHALT AND CONCRETE PAVING FOR PATH OF TRAVEL UPGRADES. NEW CHAIN LINK FENCING AND ACCESSIBLE GATES

NEW BUILDING 'S.S.#1', TYPE AND SQUARE FOOTAGE NEM 30'X80' SHADE STRUCTURE.

FUNDING SOURCE: ESSER II AND ESSER III

specifications.

general responsible charge

GINO C. BASTIANON

Signature

Print Name

C-27564

## SHEET INDEX

MIND RISK CATEGORY FLOOD DESIGN 1. FEMA FIRM PANEL #: 06037C0415F 2. EFFECTIVE DATE: ASCET-16 9/26/2008 95 MPH EXPOSURE FACTOR C 3. FLOOD ZONE: ZONE X SEISMIC RISK CATEGORY GEOTECH SITE IS NOT WITHIN A MAPPED SITE CLASS D LIQUEFACTION HAZARD ZONE 1.852 0.772 2.223 \*NULL 1.482 \*NULL \*NULL 1.2 \*NULL 0.879 0.873 0.803 1.2 0.964 2.219 2.524 1.852 0.953 1.092

SHEET LIST TABLE

**GENERAL** 

CIVII

ARCHITECTURAI

ELECTRICAL

SHADE STRUCTURE

BY SHADE STRUCTURE MANUFACTURER

**Statement of General Conformance** 

FOR ARCHITECTS/ENGINEERS WHO UTILIZE PLANS,

] The drawings or sheets listed on the cover or index sheet SHADE STRUCTURE

authorized to prepare such drawings in this state. It has been examined by me for:

Code of Regulations and the project specifications prepared by me, and

The Statement of General Conformance "shall not be construed as relieving me of my rights,

🛮 is/are in general conformance with the project design 📗 is/are in general conformance with the project design

04/29/2022

**Expiration Date** 

duties, and responsibilities under Sections 17302 and 81138 of the Education Code and

Sections 4-336, 4-341 and 4-344" of Title 24, Part 1. (Title 24, Part 1, Section 4-317 [b])

have been prepared by other design professionals or consultants who are licensed and/or

design intent and appears to meet the appropriate requirements of Title 24, California

☑ All drawings or sheets listed on the cover or index sheet SHADE STRUCTURE

intent, and

License Number

specifications

for this portion of the work

has/have been coordinated with the project plans and

Expiration Date

Architect or Engineer delegated responsibility

2) coordination with my plans and specifications and is acceptable for incorporation into

INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED

DESIGN PROFESSIONALS AND/OR CONSULTANTS

DOS FORM 103 SAMPLE FORM

PRODUCTINFORMATION

03-122267

This drawing, page of specifications/calculations

the construction of this project.

X has/have been coordinated with the project plans and

Architect or Engineer designated to be in

(Application No.

DEMOLITION AND REMODEL POWER SITE PLAN

ELECTRICAL SPECIFICATIONS SECTION 26 00 00

ADE STRUCTURE PROVIDED BY OWNER AND INSTALLED ---

GENERAL NOTES SYMBOLS LIST SITE PLAN AND DETAILS

GRADING IMPROVEMENT PLAN

GRADING IMPROVEMENT PLAN

LOCAL FIRE AUTHORITY REVIEW

ENLARGED DEMO SITE PLAN

ENLARGED NEW SITE PLAN

OVERALL SITE PLAN

DETAILS

P.C. TITLE SHEET

DETAILS

REACTIONS

COVER SHEET

SHEET TITLE

SHEET

**NUMBER** 

P.C. T-1.0

P.C. T-2.0

P.C. T-2.1

24.1-1000

24.1-1001

24.3-2000

2017 EDITION

P.T.N: 64246-104

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023

REVISIONS

ARCHITECT REN. 6-2023

SF

DRAMN

CS

**GENERAL NOTES** ADJ ANOD ARCH BTW.... BLKG. BLDG. C CAB... COL. CONT. D DEMO.. DMG... D.S.A. ELEC.. ELEV. EMMF. EN... FA.. F.E.C... FHMS. FHMS. FUR/FURR.....FURRING

**ABBREVIATIONS** 

..FIRE ALARM PANELS FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FLATHFAD MACHINE SCREW FLATHEAD WOOD SCREW FLOOR DRAIN ...FOUNDATION

..ELECTRICAL N NRC. ...ELEVATION **FXTFRIOR** ELECTRICALLY WELDED WIRE FABRIC EXPANSION JOINT ...END NAIL

FINISH FLOOR ..FIBERGLASS REINFORCED

....FLOOR SINK / FINISH SURFACE

0 0/0... ON CENTER .OPPOSITE OUTSIDE DIAMETER OHMS. OVERHEAD OWNER FURNISHED CONTRACTOR INSTALLED

H HDR... .HEADER ...HEATING, VENTILATING AND AIR HVAC.. CONDITIONING HORIZ. .HORIZONTAL .HOSE BIB HOT WATER HEATER .HOLLOW STRUCTURAL SECTION INTERIOR . INVERT .JOIST ....KITCHEN

.GAGE/GAUGE

GENERAL CONTRACTOR

..GRADE BEAM/GRAB BAR

...GYPSUM WALL BOARD

.GLU LAM BEAM/GLASS BLOCK

. GALVANIZE

GYP BD.....

.LAGBOLT L lb... LAMINATED LAV.. LAVATORY LINTEL М мв.... MACHINE BOLT

MANHOLE .MANUFACTURER MAS.. .MASONRY . MASONRY OPENING . MAXIMUM ..MECHANICAL . MEMBER MINIMUM OR MINUTE

. MISCELLANEOUS MOD. .MODULE (LAR) NOISE REDUCTION COEFFICIENT ..NOMINAL NOT IN CONTRACT NOT TO SCALE

.NUMBER . NEW ..OVAL-HEAD MACHINE BOLT OVAL-HEAD WOOD SCREW

..POINT OF CONNECTION PLANTER AREA POUNDS PER SQUARE INCH PROPERTY LINE PROPOSED . PANIC HARDWARE . POLYVINYL CHLORIDE (PIPE) .. QUARRY TILE О ат...

R rpa.... RAISED PLANTER AREA .RADIUS REF. REFRIGERATOR .REGISTER REG RETURN RETURN AIR GRILL REVISION ROOF DRAIN ROOM

. ROUGH OPENING S SCHD. ..SCHEDULE SECTION SHEET SIMILAR SPECIFICATION SQUARE STAINLESS STEEL STANDARD STL....

STORM DRAIN STRUCT STRUCTURAL .TELEPHONE TELEVISION TOOL JOINT TONGUE & GROOVE .TOP OF SHEATHING TUBE STEEL TYPICAL

STORAGE

UNDERCUT UNDERGROUND U.N.O.. UNLESS NOTED OTHERWISE VERTICAL

. VINYL COMPOSITION TILE ..WATER CLOSET .. MITHOUT M/O... ..WROUGHT IRON



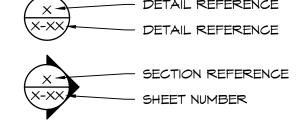
(909) 941-3008 CONTACT: LUIS E. FLORES

PROJECT OWNER:

SCHOOL DISTRICT

ANTELOPE VALLEY UNION HIGH

PROJECT DIRECTORY



DOOR NUMBER OR TYPE.



X-X )- KEY NOTE NUMBER WHEN USED REFERS TO SAME SHEET UNLESS NOTED OTHERWISE

- EQUIPMENT NUMBER OR TYPE.

XXX - PARKING COUNT

- FLUSH TRANSITION

/2\ ----- REVISION NUMBER

-X X NEW CHAIN LINK FENCING

------- DEMO TUBE STEEL FENCING

SCOPE OF WORK

SIRT S1UH S1D 0.772 0.803 PGAd

\*SEE SECTION 11.4.8

SITE SPECIFIC DESIGN CRITERIA

October, 2022 ANT21-01g

#### **GENERAL GRADING NOTES**

- 1. ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO LISTED BUILDING CODES, ALL APPLICABLE STATE AND MUNICIPAL ORDINANCES. CONTRACT DOCUMENTS. SPECIFICATIONS AND ALL OTHER RULES AND REGULATIONS HAVING JURISDICTION OVER THIS PROJECT. IN THE EVENT THAT TWO OR MORE REGULATIONS CONFLICT, THE MORE RESTRICTIVE SHALL GOVERN.
- 2. THE CONTRACTOR AND ALL ITS SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR REVIEWING, UNDERSTANDING AND FOLLOWING ALL GENERAL NOTES THROUGHOUT THE PROJECT. ALL ITEMS STATED UNDER GENERAL NOTES ARE PART OF THE CONTRACT DOCUMENTS. CONTRACTOR IS RESPONSIBLE FOR INCLUDING AND TAKING INTO CONSIDERATION ALL GENERAL NOTES AND HOW IT AFFECTS THEIR CONSTRUCTION, SEQUENCING AND/OR BID. ANY QUESTIONS REGARDING GENERAL NOTES THROUGHOUT THE PROJECT SHALL BE ADDRESSED BY MEANS OF REQUEST FOR INFORMATION DURING THE BID PHASE. ANY ITEMS THAT HAVE NOT BEEN ACCOUNTED FOR AFTER AWARD OF BID THAT ARE STATED IN GENERAL NOTES, SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE
- 3. DETAILS DESIGNATED AS TYPICAL ON DETAIL SHEETS ARE APPLICABLE THROUGHOUT PROJECT WHEREVER THE DESCRIBED CONDITION OCCURS AND MAY OR MAY NOT BE SPECIFICALLY REFERENCED ON ARCHITECTURAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THESE DETAILS AND UNDERSTANDING EXTENT OF THEIR APPLICATION PRIOR TO PERFORMING WORK.
- 4. DIMENSIONS: ALL DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. ALL DIMENSIONS ARE TO FACE OF FINISH UNLESS NOTED OTHERWISE.
- 5. THE CONTRACTOR IS RESPONSIBLE FOR ALL EXISTING TO REMAIN EQUIPMENT, STRUCTURES, FINISHES, AND SERVICES WHICH MAY BE DISTURBED THROUGH CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL EXERCISE CARE TO PROTECT ANY EXISTING ITEMS THAT MAY BE DAMAGED THROUGH CONSTRUCTION ACTIVITIES. IF SUCH DOCUMENTS WERE DISTURBED, THE CONTRACTOR SHALL NOTIFY THE OWNER AND RETURN THE DAMAGED OR DISTURBED ITEMS TO THEIR PREVIOUS CONDITION AT NO COST TO THE OWNER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ACCURATE PLACEMENT OF ALL NEW CONSTRUCTION ON THE SITE.
- 7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS & SITE CONDITIONS BEFORE STARTING WORK. SHOULD A DISCREPANCY APPEAR IN THE CONTRACT DOCUMENTS OR BETWEEN THE CONTRACT DOCUMENTS & EXISTING CONDITIONS, NOTIFY THE ARCHITECT AT ONCE FOR INSTRUCTION ON HOW TO PROCEED.
- 8. THE CONTRACTOR SHALL CONFINE HIS OPERATION ON THE SITE TO AREAS PERMITTED BY OWNER.
- 9. THE JOBSITE SHALL BE MAINTAINED IN A CLEAN, ORDERLY CONDITION FREE OF DEBRIS AND LITTER AND SHALL NOT BE UNREASONABLY ENCUMBERED WITH ANY MATERIALS OR EQUIPMENT. EACH SUBCONTRACTOR IMMEDIATELY UPON COMPLETION OF EACH PHASE OF HIS WORK SHALL REMOVE ALL TRASH AND DEBRIS AS A RESULT OF HIS OPERATION.
- 10. UPON COMPLETION OF EACH PHASE OF THE WORK AND AT SUCH TIMES AS DIRECTED BY THE OWNER, REMOVE ALL SURPLUS MATERIAL, TOOLS AND DEBRIS AND LEAVE THE SITE IN A CLEAN AND NEAT CONDITION.
- 11. THE CONTRACTOR SHALL DO ALL CUTTING, FITTING, OR PATCHING OF HIS WORK THAT MAY BE REQUIRED TO MAKE ITS SEVERAL PARTS FIT TOGETHER PROPERLY & SHALL NOT ENDANGER ANY OTHER WORK BY CUTTING, EXCAVATING, OR OTHERWISE ALTERING THE TOTAL WORK OR ANY PART OF IT. ALL PATCHING, REPAIRING AND REPLACING OF MATERIALS AND SURFACES, CUT OR DAMAGED IN EXECUTION OF WORK, SHALL BE DONE WITH APPLICABLE MATERIALS SO THAT SURFACES REPLACED WILL, UPON COMPLETION, MATCH SURROUNDING SIMILAR
- 12. WORK SHALL BE PERFORMED ACCORDING TO EDITION OF THE STANDARD SPECIFICATION AND PLANS FOR PUBLIC WORKS CONSTRUCTION (GREENBOOK AND S.P.P.W.C.), THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND CITY CODE REQUIREMENTS.
- 13. NO WORK SHALL BE STARTED WITHOUT A PRE-CONSTRUCTION MEETING WITH THE OWNER AND INSPECTOR OF RECORD.
- 14. THE CONTRACTOR SHALL PROVIDE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES AND TAKE ALL NECESSARY AND PROPER PRECAUTIONS TO PROTECT ADJACENT PROPERTIES AND IMPROVEMENTS FROM ANY AND ALL DAMAGE THAT MAY OCCUR FROM STORM WATER RUNOFF AND/OR DEPOSITION OF DEBRIS RESULTING FROM ANY AND ALL WORK.
- 15. NO REVISIONS SHALL BE MADE TO THESE PLANS WITHOUT THE APPROVAL OF THE CIVIL ENGINEER.
- 16. IMPORTANT NOTICE SECTION 4216/4217 OF THE GOVERNMENT CODE REQUIRES A DIG ALERT IDENTIFICATION NUMBER BE ISSUED BEFORE ANY "PERMIT TO EXCAVATE" WILL BE VALID. FOR YOUR DIG ALERT I.D. NUMBER. CALL UNDERGROUND SERVICE ALERT TOLL FREE @ 1-800-422-4133, TWO WORKING DAYS BEFORE YOU DIG.
- 17. ANY IMPROVEMENT(S) TO BE CONSTRUCTED WITHIN PUBLIC RIGHT-OF-WAY WILL REQUIRE SEPARATE CONSTRUCTION PERMIT AND INSPECTION FROM THE GOVERNING AGENCY(IES). CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL APPLICABLE PERMITS AND PAYING ANY REQUIRED FEES.
- 18. FILLS SHALL BE COMPACTED THROUGHOUT TO AT LEAST 90% OF MAXIMUM DRY DENSITY AS DETERMINED BY A.S.T.M. SOIL COMPACTION TEST D 1557.
- 19. CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING ALL GRADE STAKES UNTIL AUTHORIZED BY SURVEYOR TO REMOVE.
- 20. CONTRACTOR SHALL RESTORE LIKE FOR LIKE, TO THE SATISFACTION OF THE OWNER/ARCHITECT, ALL AREAS DAMAGED OR DISTURBED AS A RESULT OF WORK PERFORMED PURSUANT TO THESE PLANS AT HIS/HERS OWN EXPENSE.
- 21. FIELD DENSITY MAY BE DETERMINED BY THE NUCLEAR DENSITY METHOD A.S.T.M. D2922 & D3017 PROVIDED NOT LESS THAN 10% OF THE REQUIRED DENSITY TESTS UNIFORMLY DISTRIBUTED ARE BY THE SAND-CONE METHOD. THE METHOD OF DETERMINING FIELD DENSITY AND LOCATION AND APPROXIMATE ELEVATION SHALL BE SHOWN IN THE COMPACTION REPORT. OTHER METHODS MAY BE USED IF RECOMMENDED BY THE SOILS ENGINEER AND APPROVED IN ADVANCE BY THE
- 22. CRUSHED AGGREGATE BASE MATERIAL SHALL CONFORM TO SUBSECTION 200-2.2 OF STANDARD SPECIFICATIONS AND SHALL BE COMPACTED TO 95% RELATIVE COMPACTION USING MECHANICAL COMPACTING EQUIPMENT.
- 23. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR FURTHER ASSUMES ALL LIABILITY AND RESPONSIBILITY FOR THE UTILITY PIPES CONDUITS. OR STRUCTURES SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PUBLIC AND PRIVATE PROPERTY INSOFAR AS IT MAY BE AFFECTED BY THESE OPERATIONS. ALL COSTS FOR PROTECTING, REMOVING, AND RESTORING EXISTING IMPROVEMENTS SHALL BE BORNE BY THE CONTRACTOR.
- 24. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE IN
- 25. THE CONTRACTOR SHALL VERIFY ALL JOINT ELEVATIONS PRIOR TO THE REMOVAL OF PAVEMENT, CURB, GUTTER, SIDEWALK AND/OR SLOPE GRADING. ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER OF RECORD PRIOR TO REMOVALS WITHIN THE AREA OF THE DISCREPANCIES.
- 26. DUST SHALL BE CONTROLLED BY WATERING TO THE SATISFACTION OF THE
- 27. WHERE THE IRRIGATION SYSTEM IN CONFLICT WITH NEW WORK NEEDS TO BE RELOCATED OR REPLACED, CONTRACTOR SHALL COORDINATE THE WATER SHUT OFF OR ANY ELECTRICAL RELATED WORK WITH OWNER 48 HOURS PRIOR COMMENCING THE WORK.

#### **GENERAL GRADING NOTES**

- 28. ALL EXPOSED P.C.C. CORNERS SHALL BE ROUNDED WITH 1/2" RADIUS.
- 29. ALL EXPORT OF MATERIAL FROM THE SITE MUST GO TO A PERMITTED SITE APPROVED BY THE BUILDING OFFICIAL OR A LEGAL DUMPSITE. RECEIPTS FOR ACCEPTANCE OF EXCESS MATERIAL BY A DUMPSITE ARE REQUIRED AND MUST BE PROVIDED TO THE BUILDING OFFICIAL UPON REQUEST.
- 30. CONTRACTOR TO CALCULATE HIS/HER OWN EARTHWORK QUANTITIES FOR BIDDING PURPOSES.
- 31. FOR JOINTS AT NEW CURB AND SIDEWALK REFER TO S.P.P.W.C. STD. PLAN NO.
- 32. IF WORK IS COMMENCED DURING RAINY SEASON, CONTRACTOR SHALL SATISFY CITY EROSION CONTROL REQUIREMENTS AND INSTALL APPROPRIATE BMPS.

#### BEST MANAGEMENT PRACTICES (BMPs) FOR CONSTRUCTION ACTIVITIES

STORM WATER POLLUTION CONTROL REQUIREMENTS FOR CONSTRUCTION ACTIVITIES: MINIMUM WATER QUALITY PROTECTION REQUIREMENTS FOR ALL DEVELOPMENT CONSTRUCTION PROJECTS

THE FOLLOWING IS INTENDED AS MINIMUM NOTES OR AS AN ATTACHMENT FOR BUILDING AND GRADING PLANS AND REPRESENT THE MINIMUM STANDARDS OF GOOD HOUSEKEEPING THAT MUST BE IMPLEMENTED ON ALL CONSTRUCTION SITES REGARDLESS OF SIZE.

- 1. EVERY EFFORT SHALL BE MADE TO ELIMINATE THE DISCHARGE OF NON-STORMWATER FROM THE PROJECT SITE AT ALL TIMES.
- 2. ERODED SEDIMENTS AND OTHER POLLUTANTS SHALL BE RETAINED ON SITE AND MAY NOT BE TRANSPORTED FROM THE SITE VIA SHEETFLOW, SWALES, AREA DRAINS, NATURAL DRAINAGE COURSES, OR WIND.
- 3. STOCKPILES OF EARTH AND OTHER CONSTRUCTION-RELATED MATERIALS SHALL BE PROTECTED FROM BEING TRANSPORTED FROM THE SITE BY THE FORCES OF WIND
- 4. FUELS, OILS, SOLVENTS, AND OTHER TOXIC MATERIALS SHALL BE STORED IN ACCORDANCE WITH THEIR LISTING AND SHALL NOT CONTAMINATE THE SOIL AND SURFACE WATERS. ALL APPROVED STORAGE CONTAINERS SHALL BE PROTECTED FROM THE WEATHER. SPILLS SHALL BE CLEANED UP IMMEDIATELY AND DISPOSED OF IN A PROPER MANNER. SPILLS SHALL NOT BE WASHED INTO THE DRAINAGE
- 5. EXCESS OR WASTE CONCRETE SHALL NOT BE WASHED INTO THE PUBLIC RIGHT-OF-WAY OR ANY OTHER DRAINAGE SYSTEM. PROVISIONS SHALL BE MADE TO RETAIN CONCRETE WASTES ON SITE UNTIL THEY CAN BE DISPOSED OF AS
- 6. TRASH AND CONSTRUCTION-RELATED SOLID WASTES SHALL BE DEPOSITED INTO A COVERED RECEPTACLE TO PREVENT CONTAMINATION OF RAINWATER AND DISPERSAL
- 7. SEDIMENTS AND OTHER MATERIALS MAY NOT BE TRACKED FROM THE SITE BY VEHICLE TRAFFIC. THE CONSTRUCTION ENTRANCE ROADWAYS SHALL BE STABILIZED SO AS TO INHIBIT SEDIMENTS FROM BEING DEPOSITED INTO THE PUBLIC RIGHT-OF-WAY. ACCIDENTAL DEPOSITIONS SHALL BE SWEPT UP IMMEDIATELY AND SHALL NOT BE WASHED DOWN BY RAIN OR OTHER MEANS.
- 8. ANY SLOPES WITH DISTURBED SOILS OR DENUDED OF VEGETATION SHALL BE STABILIZED SO AS TO INHIBIT EROSION BY WIND AND WATER.
- 9. THE FOLLOWING BMP'S AS OUTLINED IN, BUT NOT LIMITED TO, THE "BEST MANAGEMENT PRACTICE HANDBOOK, CALIFORNIA STORMWATER QUALITY TASK FORCE, SACRAMENTO, CALIFORNIA", THE LATEST REVISED EDITION, MAY APPLY DURING THE CONSTRUCTION OF THIS PROJECT (ADDITIONAL MEASURES MAY BE REQUIRED IF DEEMED APPROPRIATE BY CITY INSPECTORS).

#### EROSION CONTROL

- EC1 SCHEDULING
- EC2 PRESERVATION OF EXISTING VEGETATION
- EC3 HYDRAULIC MULCH EC4 - HYDROSEEDING
- EC5 SOIL BINDERS
- FC6 STRAW MULCH
- EC7 GEOTEXTILES & MATS EC8 - WOOD MULCHING EC9 - EARTH DIKES AND DRAINAGE
- EC10 VELOCITY DISSIPATION DEVICES EC11 - SLOPE DRAINS

## TEMPORARY SEDIMENT CONTROL

- SE2 SEDIMENT BASIN - SEDIMENT TRAP
- SE4 CHECK DAM
- SE5 FIBER ROLLS SE6 - GRAVEL BAG BERM
- STREET SWEEPING AND VACUUMING SE8 - SANDBAG BARRIER
- SE9 STRAW BALE BARRIER SE10 - STORM DRAIN INLET PROTECTION
- WIND EROSION CONTROL

## WE1 - WIND EROSION CONTROL

## **EQUIPMENT TRACKING CONTROL**

- TC1 STABILIZED CONSTRUCTION
- ENTRANCE/EXIT

- TC3 ENTRANCE / OUTLET TIRE WASH
- NON-STORMWATER MANAGEMENT
- NS1 WATER CONSERVATION PRACTICES NS2 - DEWATERING OPERATIONS
- NS3 PAVING AND GRINDING OPERATIONS
- NS4 TEMPORARY STREAM CROSSING
- NS6 ILLICIT CONNECTION / DISCHARGE NS7 - POTABLE WATER / IRRIGATION NS8 - VEHICLE AND EQUIPMENT CLEANING
- NS9 VEHICLE AND EQUIPMENT FUELING NS10 - VEHICLE AND EQUIPMENT

MAINTENANCE

- NS11 PILE DRIVING OPERATIONS NS12 - CONCRETE CURING
- NS13 CONCRETE FINISHING
- NS14 MATERIAL AND EQUIPMENT USE
- NS15 DEMOLITION ADJACENT TO WATER NS16 - TEMPORARY BATCH PLANTS
- WASTE MANAGEMENT & MATERIAL
- POLLUTION CONTROL
- WM1 MATERIAL DELIVERY AND STORAGE WM2 - MATERIAL USE
- WM3 STOCKPILE MANAGEMENT WM4 - SPILL PREVENTION AND CONTROL WM5 - SOLID WASTE MANAGEMENT
- WM6 HAZARDOUS WASTE MANAGEMENT WM7 - CONTAMINATION SOIL MANAGEMENT WM8 - CONCRETE WASTE MANAGEMENT
- WM9 SANITARY/SEPTIC WASTE MANAGEMENT
- WM10 LIQUID WASTE MANAGEMENT TC2 - STABILIZED CONSTRUCTION ROADWAY

# BENCHMARK:

A TEMPORARY BENCHMARK WAS SET WITH A NAIL AND SHINER AT THE TOP OF THE FLAG POLE CONCRETE CORNER AT TBM#1, APPROXIMATELY 40' NORTH OF THE ADMINISTRATION AND LIBRARY BUILDING. ADDITIONAL TEMPORARY BENCHMARK WAS SET WITH A D60 NAIL ON ASPHALT AT

TBM#2, APPROXIMATELY 13.4' WEST AND 21.8' NORTH OF THE LITTLE GYM.

## **LEGEND** (WHERE APPLICABLE)

- EXISTING SPOT ELEVATION BUILDING LINE — — EX. CURB & GUTTER
- — × — × EX. CHAIN LINK FENCE EX. WI FENCE NEW CHAIN LINK FENCE EX. SIGN TEMPORARY BENCHMARK

BLDG

EG

ELEC

EPB

EX.

FCE

EDGE OF GUTTER

CHAINLINK FENCE

FINISH FLOOR

FIRE HYDRANT

FACE OF WALL

FLOW LINE

ELECTRICAL

**EXISTING** 

ANGLE POINT FINISH SURFACE BEGINNING OF CURVE GB GRADE BREAK BUILDING GROUND SHOT BOTTOM OF X GAS VALVE CENTER LINE HIGH POINT CONCRETE CORNER RSR RISER CONCRETE EDGE SCRL SCORE LINE CONCRETE SDMH DROP INLET DRAIN SGN SIGN POST END OF CURVE SMH SEWER MANHOLE

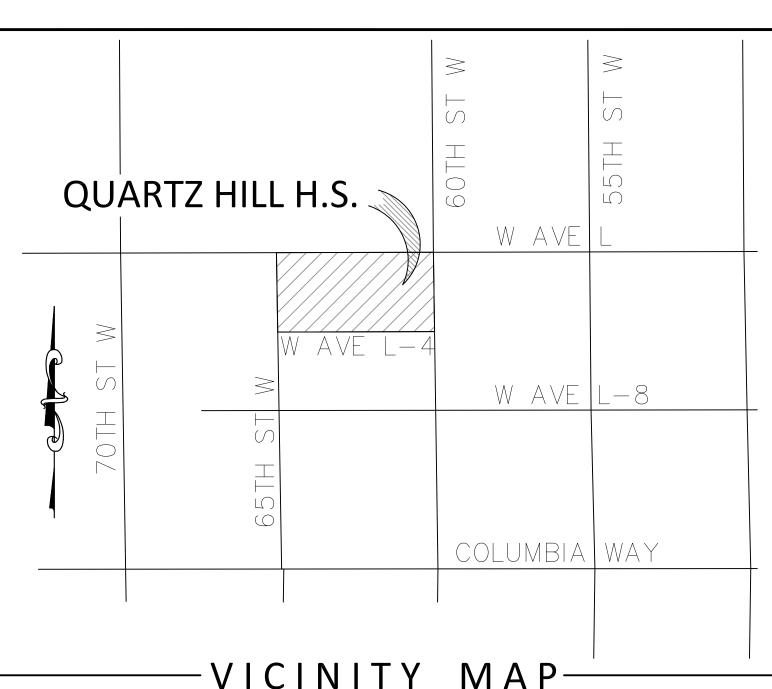
PB

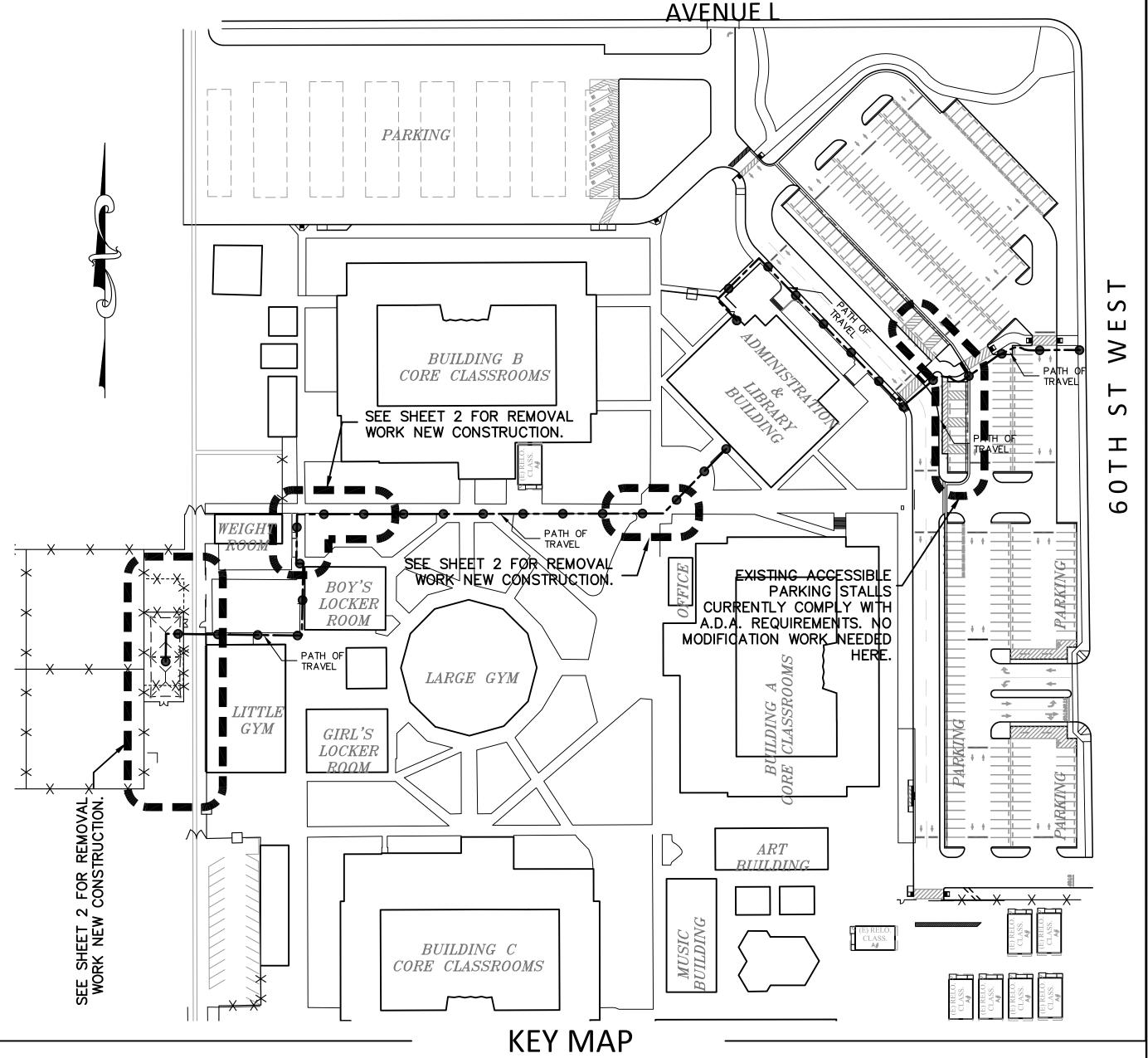
STORM DRAIN MANHOLE STRP STRIPING TOP OF CURB TCC TOP OF CURB CORNER EDGE OF PAVEMENT ELECTRICAL PULL BOX TD TRUNCATED DOMES

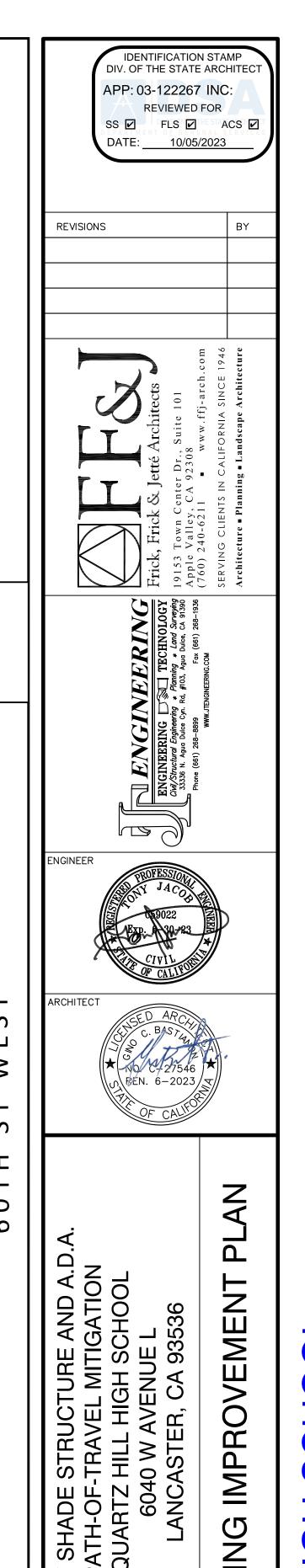
WATER VALVE

PULL BOX









04/18/2022

JT2316

QUARTZ HILL HIGH SCHOOL

RID SE

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: **REVIEWED FOR** SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023 REVISIONS ARCHITECT

BID SET

October, 2022

ANT21-01g

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023

REVISIONS

October, 2022

ANT21-01g

STRUCTURE AND RELATED SITE QUARTZ HILL HIGH SCHOOL October, 2022 ANT21-01g

**IDENTIFICATION STAMP** 

REVIEWED FOR

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023 REVISIONS ENGINEER ARCHITECT REN. 6-2023 WORK

October, 2022

ANT21-01g

**IDENTIFICATION STAMP** DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: REVIEWED FOR SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023 **REVISIONS** ARCHITECT REN. 6-2023 LA' SC SF October, 2022 DRAMN

**BID SET** 

AD-1

ANT21-01g

## **GENERAL NOTES**

- ALL COMMUNICATIONS WORK SHALL BE COORDINATED WITH THE COMMUNICATION SYSTEMS EQUIPMENT MANUFACTURER AND THE SCHOOL DISTRICT MAINTENANCE DEPARTMENT PRIOR TO ROUGH -IN AND INSTALLATION OF ANY AND ALL COMMUNICATION SYSTEM DEVICES AND RELATED CONDUIT AND WIRE.
- 2. THE CONTRACTOR SHALL SECURE AND PAY FOR PERMITS AND FEES NECESSARY FOR EXECUTION AND COMPLETION OF ELECTRICAL WORK, INCLUDING ALL CHARGES BY THE LOCAL GOVERNMENT AGENCIES AND THE UTILITY COMPANIES.
- 3. NO CONDUIT SHALL BE RUN HORIZONTALLY IN CONCRETE FLOOR SLABS.
- 4. ALL FINAL CONNECTIONS TO OWNER-FURNISHED EQUIPMENT SHALL BE MADE BY THIS CONTRACTOR.
- 5. MEP COMPONENT ANCHORAGE NOTE

ALL MECHANICAL, PLUMBING, AND ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1617A.1.18 THROUGH 1617A.1.26 AND ASCE 7-16 CHAPTER 13, 26 AND 30.

- 1. ALL PERMANENT EQUIPMENT AND COMPONENTS.
  2. TEMPORARY, OR MOVABLE EQUIPMENT THAT IS PERMANENTLY ATTACHED (E.G. HARD WIRED) TO THE BUILDING UTILITY SERVICES SUCH AS ELECTRICITY, GAS OR WATER. "PERMANENTLY ATTACHED" SHALL INCLUDE ALL ELECTRICAL CONNECTIONS EXCEPT PLUGS FOR 110/220 VOLT RECEPTACLES HAVING FLEXIBLE
- 3. TEMPORARY, MOVABLE OR MOBILE EQUIPMENT WHICH IS HEAVIER THAN 400 POUNDS OR HAS A CENTER OF MASS LOCATED 4 FEET OR MORE ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENTS IS REQUIRED TO BE RESTRAINED IN A MANNER APPROVED BY DSA.

THE FOLLOWING MECHANICAL AND ELECTRICAL COMPONENTS SHALL BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT DEMONSTRATE DESIGN COMPLIANCE WITH THE REFERENCES NOTED ABOVE. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED DUCTWORK, PIPING, AND CONDUIT. FLEXIBLE CONNECTIONS MUST ALLOW MOVEMENT IN BOTH TRANSVERSE AND LONGITUDINAL DIRECTIONS:

- A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVING CENTER OF MASS LOCATED 4 FEET OR LESS ABOVE THE ADJACENT FLOOR OR ROOF LEVEL THAT DIRECTLY SUPPORT THE COMPONENT
- DIRECTLY SUPPORT THE COMPONENT.

  B. COMPONENTS WEIGHING LESS THAN 20 POUNDS, OR IN THE CASE OF DISTRIBUTED SYSTEMS, LESS THAN 5 POUNDS PER FOOT, WHICH ARE SUSPENDED FROM A ROOF OR FLOOR OR HUNG FROM A WALL.

THE ANCHORAGE OF ALL MECHANICAL, ELECTRICAL AND PLUMBING COMPONENTS SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND ACCEPTANCE BY DSA. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE

PIPING, DUCTWORK, AND ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-16 SECTION 13.3 AS DEFINED IN ASCE 7-16 SECTIONS 13.6.5, 13.6.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1617A.1.24, 1617A.1.25, AND 1617A.1.26

THE METHOD OF SHOWING BRACING AND ATTACHMENTS TO THE STRUCTURE FOR THE IDENTIFIED DISTRIBUTION SYSTEM ARE AS NOTED BELOW. WHEN BRACING AND ATTACHMENTS ARE BASED ON A PREAPPROVED INSTALLATION GUIDE (E.G., OSHPD OPM FOR 2013 CBC OR LATER.), COPIES OF THE BRACING SYSTEM INSTALLATION GUIDE OR MANUAL SHALL BE AVAILABLE ON THE JOBSITE PRIOR TO THE START OF AND DURING THE HANGING AND BRACING OF THE DISTRIBUTION SYSTEMS. THE STRUCTURAL ENGINEER OF RECORD SHALL VERIFY THE ADEQUACY OF THE STRUCTURE TO SUPPORT THE HANGER AND BRACE LOADS.

MECHANICAL PIPING (MP), MECHANICAL DUCTS (MD), PLUMBING PIPING (PP), ELECTRICAL DISTRIBUTION SYSTEM (E):

MP MD PP EX - OPTION I: DETAILED ON THE APPROVED DRAWINGS WITH PROJECTS SPECIFIC NOTES AND DETAILS.

MP MD PP E - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL

- 6. THIS CONTRACTOR SHALL COORDINATE ALL LINE AND LOW VOLTAGE COMPONENTS
  AND WIRING TYPES TO, MATCH EXISTING SYSTEMS, WITH THE SCHOOL DISTRICT PRIOR
  TO BID AND INCLUDE ALL COSTS FOR A COMPLETE OPERABLE SYSTEM EXPANSION.
- 1. ALL EXPOSED CONDUIT SHALL BE PAINTED TO MATCH EXISTING FINISH.
- 8. IDENTIFICATION NAME PLATES FOR PANELS AND SWITCHBOARDS/DISTRIBUTION PANEL FEEDER CIRCUIT BREAKERS SHALL MATCH THE NOMENCLATURE PROVIDED BY THE OWNER AT THE END OF THE CONTRACT.
- 9. ALL EXTERIOR MOUNTED EQUIPMENT SHALL BE WEATHERPROOF AND PROVIDED IN A WEATHERPROOF ENCLOSURE.
- 10. INSTALL RACEWAY SYSTEMS AS FOLLOWS:
- A. RIGID GALVANIZED STEEL IN ALL OUTDOOR LOCATIONS AND IN INDOOR LOCATIONS WHERE SUBJECT TO PHYSICAL DAMAGE.
- B. IM.C. OR E.M.T. IN ALL INDOOR AREAS.
- C. FLEXIBLE METAL CONDUIT FOR FINAL CONNECTIONS TO LIGHT FIXTURES, MOTORS, VIBRATING ELECTRICAL EQUIPMENT AND HORIZONTAL RUNS IN WOOD STUD WALLS.
- D. PYC CONDUIT FOR UNDERGROUND RUNS, USE 20 MIL PYC TAPED RIGID STEEL RISER ELBOWS AND RISERS FOR CONDUIT STUB-UPS.
- E. USE COMPRESSION TYPE FITTINGS FOR ALL METALLIC CONDUIT.
- F. 3/4" CONDUIT MINIMUM FOR UNDERGROUND INSTALLATIONS. 3/4" CONDUIT MINIMUM INDOORS.
- 11. ALL WIRING SHALL BE COPPER.
- 12. PROVIDE THE OWNER AND THIS ENGINEER WITH ONE SET OF ELECTRICAL
- "AS-BUILTS" AT THE COMPLETION OF JOB.
- 13. CONDUIT ROUTING INDICATED ON THESE PLANS IS DIAGRAMMATIC. ACTUAL ROUTING OF CONDUITS SHALL BE COORDINATED IN THE FIELD TO AVOID INTERFERENCE WITH OTHER UTILITIES AND TRADES. THE CONTRACTOR SHALL INSTALL ALL CONDUIT, JUNCTION/PULL BOXES, ETC., AS REQUIRED FOR A COMPLETE SYSTEM IN FULL COMPLIANCE WITH ALL APPLICABLE CODES.

## 14. ELECTRICAL CONTRACTOR SHALL PERFORM ALL WORK IN STRICT ACCORDANCE WITH GOVERNING CODES.

- 15. ALL EQUIPMENT SHALL BE NEW AND BEAR A "UL" LABEL U.O.N..
- 16. COMPLETE ELECTRICAL INSTALLATION SHALL BE GUARANTEED IN WRITING FOR A PERIOD OF TWO (2) YEARS U.O.N..
- 17. ELECTRICAL CONTRACTOR SHALL VISIT SITE PRIOR TO BID DATE, TO VERIFY ALL EXISTING CONDITIONS TO BE ENCOUNTERED IN THE INSTALLATION OF ALL NEW EQUIPMENT, FIXTURES DEVICES, FEEDERS, ETC.. EXACT INSTALLATION METHOD AND REQUIREMENTS SHALL BE VERIFIED AND DETERMINED PRIOR TO BID DATE. CONTRACTORS SHALL IMMEDIATELY NOTIFY THIS ENGINEER OF ANY REQUIRED MODIFICATIONS WHICH ARE NOT SHOWN ON THESE DRAWINGS. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED.
- 18. ALL EQUIPMENT ELECTRICAL CHARACTERISTICS, LOCATIONS, AND CONNECTION REQUIREMENTS SHALL BE VERIFIED PRIOR TO ANY ROUGH-IN WORK.
- 19. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO DO ALL CORING, CUTTING,
  PATCHING AND REFINISHING OF WALLS AND SURFACES WHEREVER IT IS NECESSARY FOR HIM
  TO PENETRATE FOR HIS WORK. ALL OPENINGS MADE SHALL BE SEALED TO MEET THE RATED
  INTEGRITY OF THE PARTICULAR WALL, FLOOR OR CEILING.
- 20. THE CONTRACTOR SHALL STRATEGICALLY LOCATE JUNCTION BOXES AND PULL BOXES, ETC., IN ACCESSIBLE CEILING SPACES. PROVIDE ACCESS PANELS WHERE JUNCTION/PULL BOXES ARE LOCATED IN INACCESSIBLE CEILING SPACES. COORDINATE LOCATION OF REQUIRED ACCESS PANELS PRIOR TO ROUGH-IN.
- 21. UNLESS SPECIFICALLY SHOWN ON THESE PLANS NO STRUCTURAL MEMBER SHALL BE CUT, DRILLED, NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT.

# SYMBOL LIST

--- UNDERGROUND CONDUIT. I" PVC MINIMUM.

CONDUCTORS IN LIEU OF #12.

B-1,3-j

CONDUIT HOME RUN TO PANELBOARD. LETTER AND NUMERALS INDICATES

ELECTRICAL PANEL AND CIRCUIT NUMBER.

CONDUIT TURNED DOWN.

EXECUTED EXISTING CONDUIT TO BE RE-USED. CONDUCTORS TO BE DISCONNECTED AND REMOVED.

DUPLEX RECEPTACLE, WITH GROUND FAULT INTERRUPTER (20 AMP, 120Y., 3W, WALL PLATE TO MATCH DEVICE) MTD. AT +18".

E) EXISTING TO REMAIN.

(N) NEW EQUIPMENT.

JP WEATHERPROOF.

X DETAIL CALLOUT

 $\bigcirc$  JUNCTION BOX.

#### APPLICABLE CODES

ALL APPLICABLE LAWS AND REGULATIONS, AND THE REQUIREMENTS OF THE CALIFORNIA CODE OF REGULATIONS (C.C.R.), TITLE 24, INCLUSIVE OF: 2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), C.C.R.

2019 CALIFORNIA ADMINISTRATIVE CODE (CAC), C.C.R.
TITLE 24, PART I
2019 CALIFORNIA BUILDING CODE (CBC), C.C.R. TITLE 24,

ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH

PART 2, BASED ON 2018 INTERNATIONAL BUILDING CODE.
2019 CALIFORNIA ELECTRICAL CODE (CEC), C.C.R. TITLE 24,
PART 3, BASED ON 2011 NATIONAL ELECTRICAL CODE
(NEC).

2019 CALIFORNIA MECHANICAL CODE (CMC), C.C.R. TITLE 24, PART 4, BASED ON 2018 UNIFORM MECHANICAL CODE (UMC).

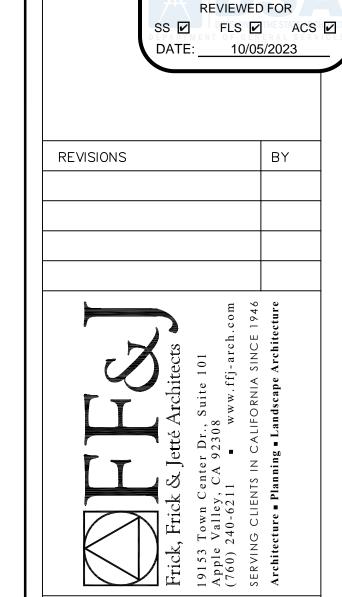
2019 CALIFORNIA PLUMBING CODE (CPC), C.C.R. TITLE 24,

PART 5, BASED ON 2018 UNIFORM PLUMBING CODE (UPC).
2019 CALIFORNIA ENERGY CODE, C.C.R. TITLE 24, PART 6.

2019 CALIFORNIA FIRE CODE (CFC), C.C.R. TITLE 24, PART 9, BASED ON 2018 INTERNATIONAL FIRE CODE.

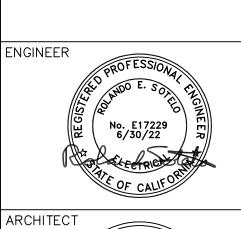
2019 CALIFORNIA EXISTING BUILDING CODE, C.C.R. TITLE 24, PART 10, BASED ON 2018 INTERNATIONAL EXISTING BUILDING CODE.

2019 CALIFORNIA REFERENCED STANDARDS CODE, C.C.R. TITLE 24, PART 12.

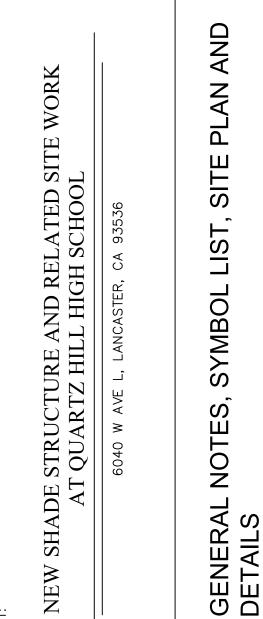


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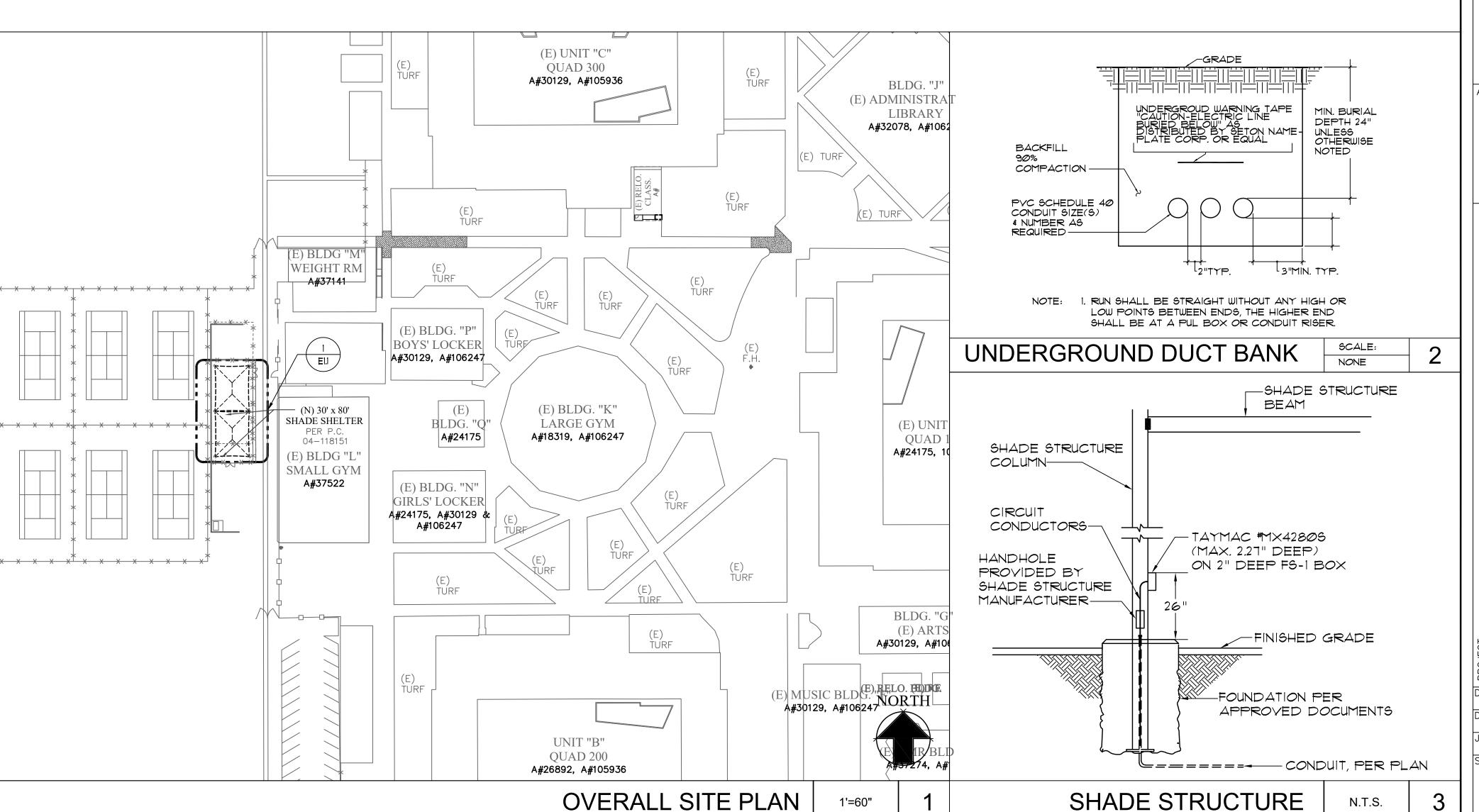






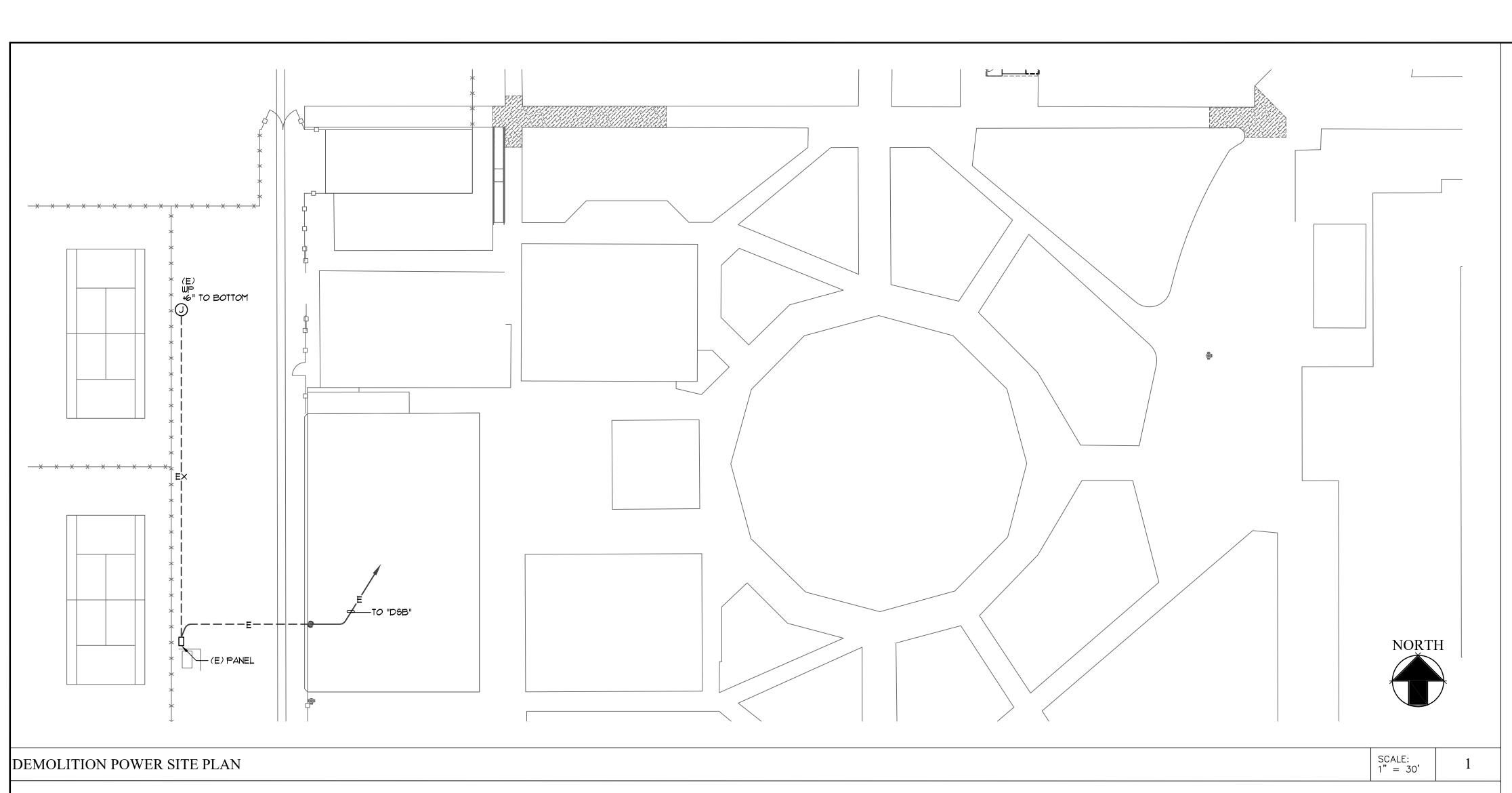
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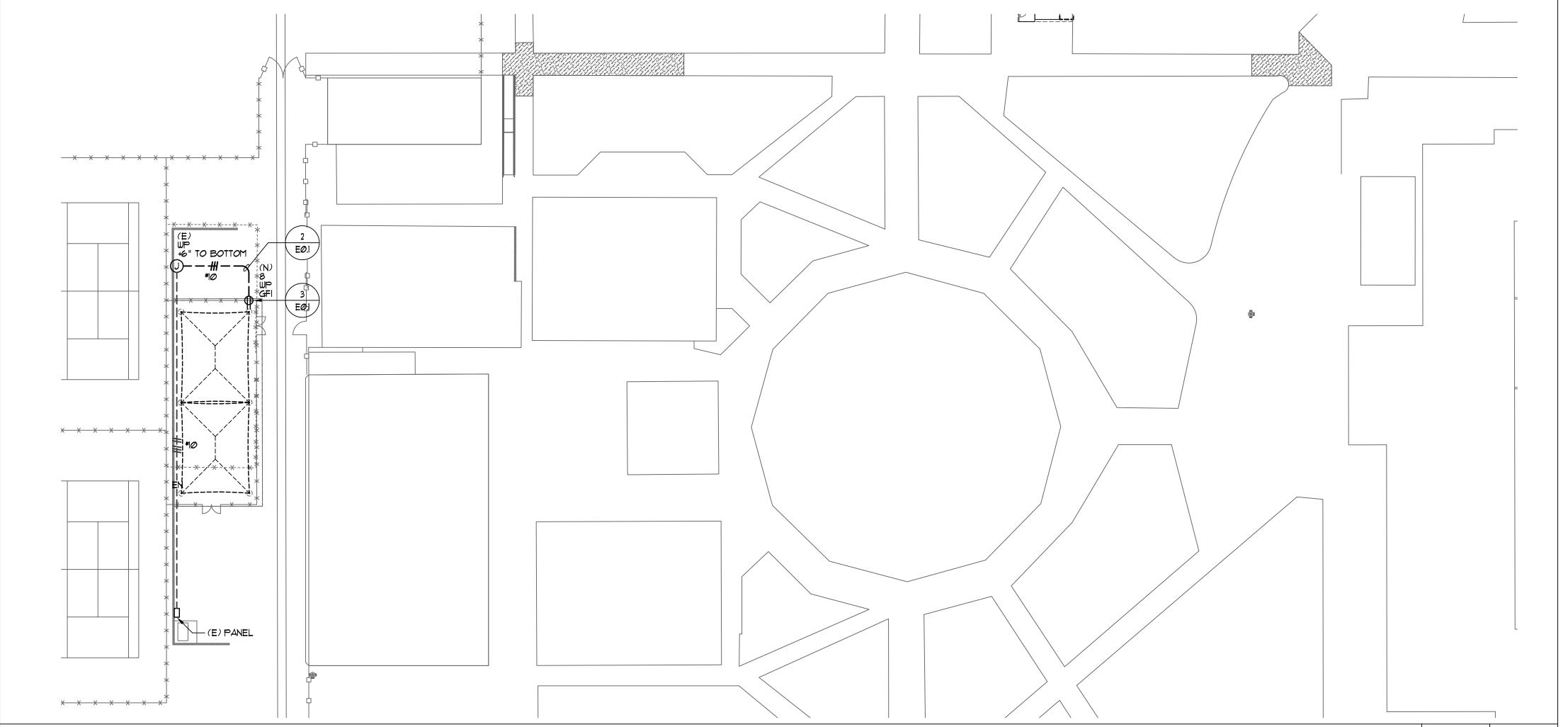


# <u>PLAN NOTES</u>

- REFER TO DRAWING EØ.I SINGLE LINE DIAGRAM FOR POWER CONDUIT SIZE AND WIRE QUANTITIES.
- CONDUIT AND WIRE INDICATED ON THE SINGLE LINE DIAGRAM, WHETHER SHOWN ON THIS DRAWING OR NOT, SHALL BE A PART OF THIS CONTRACT AND THE RESPONSIBILITY OF THIS CONTRACTOR TO PROVIDE REQUIRED ROUTING TO MEET THE INTENT OF THESE PLANS AND SPECIFICATIONS.
- CONDUIT ROUTING INDICATED ON THESE PLANS IS DIAGRAMMATIC. ACTUAL ROUTING OF UNDERGROUND CONDUITS SHALL BE COORDINATED IN THE FIELD TO AVOID INTERFERENCE WITH OTHER UTILITIES AND TRADES.
- 4 IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO MAINTAIN REQUIRED CLEARANCES BETWEEN UNDERGROUND ELECTRICAL CONDUITS AND FOOTINGS. CONDUIT STUB-UPS SHALL NOT BE INSTALLED IN FOOTINGS, EXACT METHOD FOR STUBBING-UP CONDUITS AT FOOTING LOCATIONS SHALL BE COORDINATED IN THE FIELD WITH THE GENERAL CONTRACTOR AND THE ARCHITECT.
- REFER TO DRAWING EØ.1, GENERAL NOTES, FOR ADDITIONAL REQUIREMENTS.

	PANEL	:								SCA:	EXISTIN	١G
VOLTAGE 208/120V-4-WIRE BUS SIZE										MOUNT:	SURFA	CE
	LOCATION: MECH. YARD				CC	PPER :	ENTRY:					
	DESCRIPTION	СКТ	BKR	Р	LTS	REC	MSC	MTR	A-VA	B-VA	C-VA	AMF
	MAIN CIRCUIT BREAKER	1	100	3					9600			
	W/ CKT 1	3								9600		
	W/ CKT 1	5									9600	
	EXISTING LOAD	7	30	2					2880			
	W/ CKT 7	9								2880		
	EXISTING LOAD	11	20	1							1920	
_			SUB TOTAL VOLT/AMPS:						12480	12480	11520	
	SPACE	2	20	1								
	SPACE	4	20	1								
	SPACE	6	20	1								
	SHADE STRUCTURE RECPT.	8	20	1		1			180			
	EXISTING LOAD	10	15	1						1400		
	EXISTING LOAD	12	15	1							1400	
-					SUB	TOTAL	.VOLT	'AMPS:	180	1400	1400	
		·	P/	NE	_SUB	TOTAL	.VOLT	'AMPS:	12660	13880	12920	
						TOTA	L LCL/F	PHASE:	0	0	0	
	CONNECTED: 39460	:				TOTAL	.VOLT	'AMPS:	12660	13880	12920	
	25% OF MTR:	VA			T-	DTAL/	AMPS/F	PHASE:	106	116	108	
	25% OF LCL: 0	VA										
	CALCULATED: 39460	VA	#	10	9.53	AVER	RAGEA	MPS				

- st = Indicates existing load to remain. Based on full load rating of of circuit breaker.
- $\triangle$  = INDICATES NEW LOAD AND NEW CIRCUIT BREAKER AT EXISTING SPACE. NEW CIRCUIT BREAKER TO MATCH EXISTING IN MANUFACTURER AND



REMODEL POWER SITE PLAN

#### **SECTION 26 00 00**

#### GENERAL ELECTRICAL REQUIREMENTS

#### PART 1 - GENERAL

#### 1.1 SCOPE

A. Work of this section includes everything necessary for or incidental to completing the electrical work, to provide a complete and operable electrical system, except as here in specifically

#### 1.2 GENERAL REQUIREMENTS

- A. Electrical System Characteristics: 208/120V. 3PH, 4W.
- B. Guarantee: Furnish a written guarantee for a period of one- year from date of acceptance.
- C. Codes and Regulations: Workdone under this Section shall comply with the latest edition of the following: California Electrical Code, State of California Title 24, State Building Standards, Occupational Safety and Health Administration (OSHA) requirements, State of California Title 17 and to all local codes having jurisdiction. In the case where the codes have different levels of requirements, the most stringent rule shall apply.
- D. Wherever a discrepancy in quantity or size of conduit, wire, equipment, devices, circuit breakers, etc., (all materials), arises on the Drawing and/or Specifications, the Contractor shall be responsible for providing and installing all material and services required by the strictest condition noted on Drawings and/or in Specifications to insure complet and operable systems as required by the Owner and Engineer.
- E. The General and Supplementary Conditions, as well as Special Conditions apply in addition to items in the Electrical Section. Special attention is directed to the following sections:
- 1. Drawings and Specifications at the site.
- 2. Shop drawings and samples
- Record drawings.
- 4. Cutting and Patching.
- Cleaning up.
- Guarantee.
- Tests.
- F. Additional Work: Refer to Mechanical and Plumbing specifications for additional Electrical
- G. Provide minimum of twenty percent (20%) spare receptacle size specified on plan.
- H. Testing:
- Scan:
- a. Infrascan test of the existing power distribution system affected by the building addition (i.e. panels, switchboards) and the new branch circuit panels shall be
- b. Infrascan certified reports shall be submitted on completion to the Owner and
- c. Scans shall be performed by an independent testing laboratory with total connected loads in operation.
- Megger:
- a. New branch circuit phase, neutral and ground conductors. b. New insulated bonding conductors.

made for circuits not complying with testing criteria.

- 3. All circuits shall be tested for continuity and circuit integrity. Adjustments shall be
- 4. Grounding System: Shall be tested by an independent testing laboratory to meet resistance specified in Part 3.1, D.3 of these Specifications. It shall be this Contractor's responsibility to make adjustments, as required, to upgrade non complying systems to proper and safe operation.
- 5. All certified testing reports shall be submitted to the Owner at completion of project
- I. All Core Cutting, Drilling, and Patching:
- 1. For the installation of work under this Section, the aforementioned shall be performed under this Section of the Specifications and the Concrete section of the
- 2. No holes will be allowed in any structural members without the written approval of the Structural Engineer.
- 3. For penetrations of concrete slabs or concrete footings, the work will be as directed in the Concrete Section of Specifications.
- 4. The contractor shall be responsible for patching and repairing surfaces where he is required to penetrate for work under this contract.
- 5. Penetrations shall be sealed to meet the rated integrity of the surface required to be patched and repaired. The patched surface shall be painted or finished to match the existing surface.
- J. Verifying Drawings and Job Conditions:
- 1. This Contractor shall examine all Drawings and Specifications in a manner to be fully cognizant of all work required under this Section.
- 2. This Contractor shall visit the site and verify existing conditions. Where existing conditions differ from Drawings, adjustment shall be made and allowances included for all necessary equipment to complete all parts of the Drawings and Specifications.

## K. Shop Drawings:

- 1. Drawings shall be submitted in six (6) bound sets accompanied by Letter of Transmittal, which shall give a list of the number and dates of the drawings submitted. Drawings shall be complete in every respect and bound in sets.
- 2. The Drawings submitted shall be marked with the name of the project, numbered consecutively and bear the approval of the Contractor as evidence that the Drawings have been checked by the Contractor. Any Drawings submitted without this approval will be returned to the Contractor for resubmission.
- 3. If the shop drawings show variations from the requirements of the Contract because of standard shop practice or other reasons, the Contractor shall make specific mention of such variations in his letter of transmittal. If the substitution is accepted, the Contractor shall be responsible for proper adjustment which may be caused by the substitution. Samples shall be submitted when requested.
- 4. Shop drawings shall be submitted on the following but not limited to:
- a. Panel/Distribution panels and circuit breakers.
- b. Pull and Junction boxes.
- c. Wire/Cable.
- d. Conduit and fittings.
- e. Conduit supports.
- . Drawings of Record: The Contractor shall provide and keep up- to-date, a complete record set of blueprints. These shall be corrected daily and show every change from the original Drawings. This set of prints 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 General Contractor and all changes as noted on the record set of prints shall be incorporated thereon with black ink in a neat, legible, understandable and professional manner. Refer to the Supplementary General Conditions for complete requirements.

#### 1.3 WORK IN COOPERATION WITH OTHER TRADES

- A. Examine the Drawings and Specifications and determine the work to be performed by the site utilities contractor, electrical, mechanical, plumbing, building contractor and other trades. Provide the type and amount of electrical materials and equipment necessary to place this work in proper operation, completely wired, tested and ready for use. This shall include all conduit, wire, disconnects, relays, and other devices for the required operation sequence of all electrical, mechanical and other systems or equipment.
- B. Provide power and control circuits, conduit and wire as indicated on the Mechanical and Plumbing drawings as required for complete and operable systems.
- C. The electrical contractor shall be responsible for obtaining back boxes for all communication/signal system devices/equipment from the low voltage contractor's for rough-in. He shall coordinate the delivery of the backboxes to avoid building construction delays. In the event that the backboxes are not delivered as scheduled, the electrical contractor shall be responsible for installing the correct backboxes, patching and refinishing walls disturbed by the installation of the subject backboxes.

#### 1.4 TESTING AND ADJUSTMENT

- A. Upon completion of all electrical work, this Contractor shall test all circuits, switches, motors, breakers, motor starter(s) and their auxiliary circuits and any other electrical items to insure perfect operation of all electrical equipment.
- B. Equipment and parts in need of correction and discovered during such testing shall be immediately repaired or replaced with all new equipment and that part of the system shall then be retested. All such replacement or repair shall be done at no additional cost to the
- C. All circuit shall be tested for continuity and circuit integrity. Adjustments hall be made for circuits not complying with testing criteria.
- D. All certified testing reports shall be submitted to the Engineer at completion of project.

#### 1.5 IDENTIFICATION

A. Identification nameplates shall be Micarta 1/8" thick and of approved size, with bevelled edges and engraved white letters 1/4" high minimum on black background. Nameplates shall be provided for all circuits in the distribution switchboards, and selector switches. Inscriptions on equipment shall be identical to those indicated in panels and/or motor control centers and other similar devices. Each nameplate shall be provided with drillings and suitable mounting screws corresponding to finish of the nameplate. The inscriptions in each nameplate shall be as indicated on the Drawings.

#### 1.6 MAINTENANCE, SERVICING, INSTRUCTION MANUALS AND WIRINGDIAGRAMS

- A. Prior to final acceptance of the job, the Electrical Contractor shall furnish to the Owner at least four (4) copies of operating and maintenance and servicing instructions, as well as four (4) complete wiring diagrams for the following item(s) or equipment:
- Circuit breakers.
- Receptacles
- B. All wiring diagrams shall specifically cover the system supplied. Typical drawings will not be accepted. Two (2) copies shall be presented to the Electrical Engineer and four (4) copies to the Owner.

#### 1.7 ELECTRICAL CONTRACTOR'S RESPONSIBILITY

- A. It shall be the Electrical Contractor's responsibility to obtain æomplete set of Drawings and Specifications. He shall check the Drawings of the other trades and shall carefully read the entire Specifications and determine his responsibilities.
- B. The contractor shall be responsible for reviewing the plans and specifications to ensure each room, where electrical line or low voltage equipment is to be installed, has sufficient space to accommodate the system cabinets, equipment and terminations while maintaining code mandated clearances about said equipment. The contractor shall identify problem areas prior to bid, include all costs required for corrective measures in his bid and submit alternate equipment and materials suitable for the installation to the Architect/Engineer for acceptance as part of the product submttal process.

## 1.8 FINAL INSPECTION AND ACCEPTANCE

- A. After all requirements of the Specifications and/or the Drawings have been fully completed, representatives of the Owner will inspect the work. Contractor shall provide competent personnel to demonstate the operation of any item or system to the full satisfaction of each representative.
- B. Final acceptance of the work will be made by the Owner after receipt of approval and recommendation of acceptance from each representative.

## 1.9 RECORD DRAWINGS

A. Contractor shall furnish one set of reproducible record drawings before final payment of

## 1.10 SUBSTITUTIONS

- A. Substitution to specified equipment shall be submitted and received by the Engineer fifteen (15) days after the bid date for review and approval.
- B. To receive consideration, requests for substitutions must be accompanied by documentary proof of its equality with the specified material. Documentary proof shall be in letter form and identify the specified values/materials alongside proposed equal values/materials. In addition,catalog brochures and samples must be included in the submittal.
- C. In the event that authorization is given for a substitute equal to bid, after award of contract the Contractor shall submit to the Engineer certified quotations from suppliers of both the specified and proposed equal material for price comparison and delivery dates.
- D. In the event of cost reduction, the Owner will be credited with 100 percent of the
- reduction, arranged by Change Order.
- E. The Contractor warrants that substitutions proposed for specified items will fully perform
- the functions required F. Substitutions or requests for substitution shall not be accepted and rejected for failure to
- comply with items AE above.

## 2.1 MATERIALS

PART 2 - PRODUCTS

- A. Materials and Equipment: All electrical materials and equipment shall be new and shall be listed by Underwriter's Laboratories and bear their label, or listed and certified by a nationally recognized testing authority where UL does not have an approval. Custom made equipment must have complete test data submitted by the manufacturer attesting to its safety. In addition, the materials and equipment shall comply with the requirements of the following:
- American Society of Testing Materials (ASTM).
- 2. Insulated Cable Engineers Association (ICEA).
- 3. National Electrical Manufacturer's Association (NEMA).
- 4. National Fire Protection Association (NFPA). 5. American National Standard Institute (ANSI).

#### B. Panelboards - Breaker Circuit

- 1. Branch circuit panelboads shall be of the dead front safety type equipped with thermal magnetic bolt-on type 40 deg C. circuit breakers. Panels shall be suitable for the disaggregation of loads with provisions for the installation of future current transformer (CT's). Enclosure shall be minimum 20" wide (Eaton split-bus type panel) or 30" wide (not split-bus) and 5-3/4" deep unless otherwise noted on plan. Refer to panel schedule for ratings and quantity of circuits to be provided. Panels shall be provided with copper busses. Branch circuit panelboards shall be Eaton or approved equal Siemens, Square D or General Electric to match the main switchboard manufacturer. Equipment manufactured by third party OEM is not acceptable.
- 2. Circuit breakers shall be fully rated to provide the symmetrical interrupting capacity indicated on the single line diagram. Circuit breakers shall be the number of poles and current capacity as indicated on the panel schedule with terminals/lugs UL listed for 75°C. Circuit breakers shall be fully coordinated to ensure a local fault does not trip any upstream circuit breaker.
- 3. Trims shall have doors equipped with flush type combination lock and catch, two milled type keys supplied with each panel. All locks shall be keyed alike and each door shall have a plastic covered directory frame with a typed identification card of all circuit and panel numbers for branch circuit panelboards and engraved lamacoid nameplates for power distribution panelboards.
- 4. Provide nameplate for all panelboards, 1/8" thick, Micarta or Lamacoid plate of approved size, with bevelled edges and engraved white letters on black background. Install nameplates on exterior trim of panel, above the panel door. Provide Arc-Fault warning labels on panel fronts.
- 5. All wiring shall be neatly arranged and laced together.
- 6. All circuit breakers shall be provided with a device for locking circuit breaker in "OFF"
- 7. Refer to Painting Section of these Specifications for all panel finish. Panel shall be primered for painting
- 8. Neutral and Ground bus bars shall be full size, rectangular in cross section constructed of copper and interconnections.

9. Where indicated on plan, panels housing time clocks and contactors for control of

lighting shall be provided with an auxiliary section. Panel shall consist of a tweetion panelboard with two boxes and one trim/cover, each with their own door/lock. 10. Refer to Section 26 05 73 for additional requirements. Panelboards and the overcurrent protective device coordination study must be submitted concurrently . A Panelboard

submittal that does not include the overcurrent protective device coordination study will

1. Rigid conduit shall be full weight threaded type aluminum or steel, except where specifically required to be steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the hot dip, metallizing or

be considered incomplete and returned as "rejected."

metallizing, or sherardizing process.

- sherardizing process. 2. Galvanized Rigid Conduit (GRC), shall be full weight threaded type aluminum or steel, except where specifically required to be steel. Steel conduit shall be protected by overall zinc coating to inside and outside surfaces, applied by the hot dip,
- 3. Intermediate Metal Conduit (IMC), shall be hot-dipped galvanized in accordance with UL 1242 and meeting Federal Specification WWC-581 (latest revision).
- 4. Electrical Metallic Tubing (EMT), shall be zinc coated steel with baked enamel or plastic finish on inside surfaces.
- 5. Flexible metal conduit shall be constructed of aluminum or hot dipped galvanized steel strips wound spirally with interlocking edges to provide greatest flexibility with maximum strength. Interior surfaces shall be smooth and offer minimum drag to pulling in conductors. Used only as directed by the Engineer.
- 6. Liquid-tight conduit (Seal-Tite) shall be galvanized steel flexible conduit as above except with moisture and oil-proof jacket, pre-cut lengths and factory installed fittings. For outdoor installations and motorconnection.
- 7. Non-Metallic Conduit:
  - a. Polyvinyl chloride (PVC) rigid conduit, Schedule 40, Type II for underground installation only. b. Conduit and fitting shall be produced by the same manufacturer.

- 1. Condulet type fittings shall be smooth inside and out, taper threaded with integral insulating bushing and of the shapes, sizes and types required to facilitate installation or removal of wires and cables from the conduit and tubing system. These fitting shall be of metal, smooth inside and out, thoroughly galvanized, and sherardized cadmium
- 2. Metallic condulet covers shall have the same finish as the fitting and shall be provided for the opening of each fitting where conductor do not pass through the
- 3. Connector, coupling, locknut, bushings and caps used with rigid conduit shall be steel, threaded and thoroughly galvanized. Bushings shall be insulated.
- 4. EMT fittings, connectors and couplings, shall be steel, zinc or cadmium plated, raintight, threadless, compression or tap - on multiple point, steel locking ring type with
- 5. Flexible steel conduit connectors shall be or malleable iron clamp or squeeze type or steel twist-in type with insulated throat. The finish shall be zinc or cadmium plating.
- 6. Die cast, set screw or indenter type fittings are not acceptable.
- 7. Conduit unions shall be "Erickson" couplings, or approved equal. The use of running threads will not be permitted.

## E. 600 Volt Conductors - Wire and Cable

- 1. All conductors shall be copper. SimPull type or equal
- 2. Type THHN/THWN thermoplastic, 600 volt, UL approved, dry and wet locations, for conductor sizes up to and including #4 AWG.
- 3. Type XHHW cross-linked synthetic polymer, 600 volt, UL approved, for dry and wet locations, for conductor sizes #2 AWG. and above.
- 4. Cross-linked synthetic polymer, XHHW, 600 volts, UL approved, for installation underground, in concrete or masonry.
- installation, shall have size, type of insulation, voltage rating and manufacturer's name permanently marked on outer covering at regular intervals.

5. Wire and cable shall be new, manufactured not more than six (6) months prior to

- 6. Wire and cable shall be factory color coded by integral pigmentation with a separate color for each phase and neutral. Each system shall be color coded and it shall be maintained throughout.
- 7. Systems Conductor Color Coding:
- a. Power 208/120V, 3PH, 4W: (1) Phase A (2) Phase B = Red (3) Phase C = Blue

(4) Neutral = White

- b. Ground Conductors:
- (1) Green

- 8. All color coding for #8 conductor and above shall be as identified above, utilizing phase tape at each termination.
- 9. No conductors carrying 120 volt or more shall be smaller than #12 AWG.

#### F. Junction and Pullboxes:

- 1. For interior dry locations, boxes shall be galvanized one piece drawn steel, knockout type, with removable, machine screw secured covers.
- 2. For outside, damp or interior/exterior surface mounted locations, boxes shall be heavy cast aluminum or cast iron with removable, gasketed, non-ferrous machine screw secured covers.
- 3. All boxes shall be sized for the number and sizes of conductors and conduits entering the box and equipped with plaster rings where required. Each conductor shall be terminated at an insulated, barriered terminal connector and completely identified with an engraved fiber identification marker, Electrovert or Underwriter's Safety Device Company.

#### G. Outlet Boxes:

1. For surface mounting or exposure to wet or damp locations, outlet boxes shall be heavy cast aluminum or cast iron with threaded hubs; covers shall be watertight with gaskets and no

#### H. Receptacles:

1. Weatherproof receptacle shall be industrial heavy duty type, ground fault interrupter, 20 ampere, three wire grounding type, 120 volt, Hubbell Bryant # GF - 5362-I, with steel lockable lift cover U.L. listed for "wet" locations when in operation.

- 1. Terminal cabinets, panels, junction boxes, pull boxes, etc., and conduit installed outdoors and in public view shall be painted with colors selected by the Architect to match the subject exterior surface. Refer to painting section of the specifications for additional requirements.
- K. Seismic Design and Anchoring of Electrical Equipment:
- 1. Seismic anchorage of electrical equipment shall conform to C.C.R. Title 24, 2019 CBC with California Amendments. Anchorage details for roof/floor mounted equipment shall be as shown on plans

#### PART 3 - EXECUTION

#### 3.1 PREPARATION AND INSTALLATION

- A. Installation of Conduit and Outlet Boxes:
- 1. All conduit exposed or installed in concrete and masonry, shall be galvanized rigid steel conduit (GRC), or intermediate metal conduit (IMC).
- noted on the Drawings. Rigid conduit installed under slabs shall be 1" trade size minimum and shall be wrapped with 20 mil. polyvinyl chloride plastic tape. 3. All conduit except as hereinafter specified, installed in concrete or masonry walls, or

2. Rigid conduit may be installed under floor slabs, under concrete sidewalls and as

damp or hazardous location, or subject to mechanical injury shall be heavy wall, threaded, galvanized rigid steel conduit (GRC), or intermediate metal conduit (IMC).

4. Intermediate metal conduit (IMC), is approved for use in all locations as approved for

GRC or EMT and in accordance with Article 345 of CEC and UL Information card

- #DYBY.
- 5. MC cable is not allowed.
- 6. Conduit shall be run so as not to interfere with other piping fixtures or equipment. 7. The ends of all conduit shall be cut square, carefully reamed out to full size and shall be shouldered in fitting.
- 8. No running threads will be permitted in locations exposed to the weather, in concrete
- or underground. Special union fittings shall be used in these locations. 9. Underground conduit shall be, unless otherwise indicated, Schedule 40 PVC (polyvinyl chloride) installed at depth of not less than 24" below grade, concrete encased with a minimum of 3" concrete envelope and 2" minimum between conduits. Conduit separation shall be maintained using plastic spacers located at 10'- 0" intervals. Where power and communication/signal conduits are run in a common trench a (12") inch minimum separation shall be maintained between power and communication/signal conduits. The grounding wire in plastic conduit shall be rated in accordance with Article 250 of 2016 CEC. Conduit encasement will not be required
- for conduits installed under the building slab (building footprint). 12. All underground or imbedded conduit shall be 1" minimum trade size for steel and for
- 13. Where underground power feeder conduit runs stub up, conduit shall transition to GRC underground. The contractor shall use GRC elbows and GRC risers wrapped in 20 mil. PVC tape for stub - ups. Conduit stub-ups for branch circuits and low voltage systems shall be PVC.
- 10. PVC conduit shall not be run above ground.
- 11. Where underground conduit runs penetrate floor slab, conduit shall terminate 6"
- above finished floor with a grounding bushing. 12. Where conductors enter a raceway in a cabinet, pull box, junction box, or auxiliary gutter, the conductors shall be protected by a plastic bushing type fitting providing a
- smoothly rounded insulating surface. 15. All conduit underground, in masonry and concrete walls, and where concealed under floor slabs shall have joints painted with thread compound prior to makeup. No

conduit shall be installed horizontally in concrete walls or floors.

- 16. All conduit shall be supported at intervals not less than 6'- 0" and within 12" from any outlet and at each side of bends and elbows. Conduit supports shall be galvanized, heavy stamped, one hole conduit clamp properly secured.
- 17. Seismic Conduit Support:
- a. All conduit shall be supported in such a manner that it is securely attached to the structure of the building. Attachment is to be capable of supporting the tributary weight of conduit and contents in any direction. Maximum spacing of support
- **CONDUIT TYPE** MAXIMUM SPACING EMT, IMC 10'-0" GRC (3/4" thru 1 ½") 10'-0" 16'-0" GRC (2" thru 21/2")

and braces are to be as follows:

GRC (3" and larger)

installed.

18. All conduit runs shall be installed parallel or perpendicular to walls, structural members, or intersection of vertical planes and ceilings. Field made bends and offset shall be avoided where possible. Crushed or deformed raceway shall not be

20'-0"

19. Open knockouts in outlet boxes only where required for inserting conduit.

- 20. All boxes installed outdoors shall be suitable for outdo or installations, gasketed, screw cover and painted as directed by the Architect with weatherproof paint to match building.
- 21. All conduit entries to outdoor mounted panels, cabinets, boxes, etc., shall be made using Myers "SCRU-TITE" hubs Series ST.
- 22. All conduit shall have a 200 lb test poly propylene pull line left in place for future use in all runs tagged with a plastic tag at terminating end indicating the location of the opposite end of the conduit.

#### B. Installation of 600 Volt Conductors:

- 1. All line and low voltage wire shall be installed in conduit.
- 2. All line voltage circuits and feeder wires shall be continuous from the service point to terminal or farthest outlet. No joints shall be made except in pull, junction or outlet boxes, or in panel or switchboard gutters.
- 3. Thoroughly clean all conduit and wire ways and see that all parts are perfectly dry before pulling any wires. No joint shall be made except in pull, junction or outlet boxes, or in panel or switchboard gutters.

#### C. Joints in 600 Volt Conductors:

Conduit.

- 1. Joints in 600 volt conductors smaller than No. 4 AWG shall be made with Scotchlok spring type connectors. Wires No 4 AWG and larger shall be joined together with approved type of pressure connector and taped with #33 3M tape, three (3) layers minimum to provide insulation not less than that of conductor. Connections to switch or busbar shall be made with one-piece copper lugs. Splicing of all 600 volt or less in-line connections #2 AWG through 350 MCM shall be made with 3M brand PST
- 2. Joints/splices shall be done in junction or pull boxes.

## D. Grounding:

- 1. Provide grounding for entire electric installation as shown on plans and as required by applicable codes. Included as requiring grounding are:
- Non-current carrying metal parts of fixed equipment. 2. Grounding and bonding conductors shall be sized per the latest edition of the California Code

b. Neutral or identified conductors of interior wiring system.

- of Regulations, Title 24, State of California and CEC. 3. Provide and install an equipment grounding conductor in all feeder and branch circuit
- 4. Building grounding system resistance to ground shall not exceed 25 ohm
- E. Prefabricated Equipment: Installation of all prefabricated items and equipment shall conform to the requirements of the manufacturer's specifications and installation instruction pamphlets. Where code requirements affect installation of materials and equipment, the more stringent requirements, code or manufacturer's instructions and/or specifications, shall govern the work.

**END OF SECTION** 

IDENTIFICATION STAMP DIV. OF THE STATE ARCHITEC APP: 03-122267 INC: **REVIEWED FOR** SS 🗹 FLS 🗹 ACS 🗹 DATE: 10/05/2023

ENGINEER ARCHITECT

**REVISIONS** 

00 26 ATIONS SECTION REQUIREMENTS RE AND RELATED SITE HILL HIGH SCHOOL

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