HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

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D.S.A. Application #01-118981 File # 49-47

ABBREVIATIONS

CFCI - CONTRACTOR FURNISH CONTRACTOR INSTALL
CFOI - CONTRACTOR FURNISH OWNER INSTALL
OFCI - OWNER FURNISH CONTRACTOR INSTALL
OFOI - OWNER FURNISH OWNER INSTALL

A/C - AIR CONDITIONING
AB - ANCHOR BOLT
AC - ASPHALT CONCRETE
ACC - ACCESSIBLE
ACOUS - ACOUSTIC
ACP - ASPHALT CONCRETE PAVING
ACT - ACOUSTICAL CEILING TILE
AD - AREA DRAIN
ADA - AMERICANS W/ DISABILITIES ACT
ADJ - ADJUSTABLE
AFF - ABOVE FINISHED FLOOR
AGG - AGGREGATE
AHJ - AUTHORITY HAVING JURISDICTION
ALT - ALTERNATE
ALUM - ALUMINUM
APPROX - APPROXIMATE
ARCH - ARCHITECT
ASPH - ASPHALT

BD - BOARD
BFC - BELOW FINISHED CEILING
BFD - BACK FLOW DEVICE
BITUM - BITUMINOUS
BLD - BOLLARD
BLDG - BUILDING
BLK - BLOCK
BLKG - BLOCKING
BM - BEAM
BOT - BOTTOM
BRG - BEARING
BRK - BRICK
BRZ - BRONZE
BTWN - BETWEEN
BUR - BUILT-UP ROOFING

C - COMPACT
CAB - CABINET
CB - CATCH BASIN
CEM - CEMENT
CERT - CERAMIC TILE
CH - CHASE
CI - CAST IRON
CIR - CIRCLE
CJ - CONSTRUCTION JOINT
CLG - CEILING
CLGJ - CEILING JOIST
CLKG - CAULKING
CLO - CLOSET
CLR - CLEAR
CLRSTY - CLERESTORY
CLS - CLOSURE
CMU - CONCRETE MASONRY UNIT
CNTR - COUNTER
CO - CLEAN OUT
COL - COLUMN
COMB - COMBINATION
COMP - COMPOSITION
CONC - CONCRETE
CONN - CONNECTION
CONST - CONSTRUCTION
CONT - CONTINUOUS
COR - CORRIDOR
CP - CEMENT PLASTER
CPT - CARPET
CPTT - CARPET TILE
CRKT - CRICKET
CTR - CENTER
CW - COLD WATER

D - DRAIN
DBL - DOUBLE
DCA - DOUBLE CHECK VALVE ASSEMBLY
DEMO - DEMOLISH
DEPT - DEPARTMENT
DF - DOUGLAS FIR
DIA - DIAMETER
DIAG - DIAGONAL
DIM - DIMENSION
DISP - DISPOSAL
DIV - DIVISION
DN - DOWN
DO - DOOR OPENING
DR - DOOR
DRF - DRINKING FOUNTAIN
DRWR - DRAWER
DS - DOWN SPOUT
DT - DRAIN TILE
DTL - DETAIL
DW - DISHWASHER
DWS - DETECTABLE WARNING STRIP

(E) - EXISTING
E - EAST
EA - EACH
EB - EXPANSION BOLT
EE - EACH END
EF - EXHAUST FAN
EJ - EXPANSION JOINT
ELEC - ELECTRICAL
ELEV - ELEVATION
EN - EDGE NAIL
ENCL - ENCLOSURE
EP - EDGE OF PAVEMENT
EQ - EQUAL
EQUIV - EQUIVALENT
ES - EACH SIDE
EVA - EMERGENCY VEHICLE ACCESS
EW - EACH WAY
EX - EXIT
EXP - EXPANSION
EXPO - EXPOSURE
EXT - EXTERIOR
EXTN - EXTENSION

F - FACE
FA - FIRE ALARM
FB - FACE BRICK
FBD - FIBERBOARD
FBELL - FIRE BELL
FBO - FURNISHED BY OTHER
FCP - FIBER CEMENT PANEL
FD - FLOOR DRAIN

FDC - FIRE DEPARTMENT CONNECTION
FDN - FOUNDATION
FE - FIRE EXTINQUISHER
FEC - FIRE EXTINQUISHER CABINET
FF - FINISH FLOOR
FG - FINISH GRADE
FGL - FIBERGLASS
FH - FIRE HYDRANT
FHMS - FLAT HEAD MACHINE SCREW
FHORN - FIRE HORN
FHS - FIRE HOSE STATION
FHWS - FLAT HEAD WOOD SCREW
FIN - FINISH
FIXT - FIXTURE
FJ - FLOOR JOIST
FLR - FLOOR
FLSH - FLASHING
FN - FACE NAIL
FNC - FENCE
FOB - FACE OF BUILDING
FOC - FACE OF CONCRETE
FOF - FACE OF FINISH
FOM - FACE OF MASONRY
FOS - FACE OF STUD
FR - FIRE RETARDANT
FTG - FOOTING
FUT - FUTURE

GA - GAUGE
GALV - GALVANIZED
GB - GRAB BAR
GD - GARBAGE DISPOSAL
GE - GRATE ELEVATION
GL - GLASS
GLB - GLUE LAMINATED BEAM
GND - GROUND
GR - GRADE
GSM - GALVANIZED SHEET METAL
GYP BD - GYPSUM BOARD

HB - HOSE BIB
HC - HOLLOW CORE
HDR - HEADER
HDWD - HARDWOOD
HDWE - HARDWARE
HGT - HEIGHT
HM - HOLLOW METAL
HORZ - HORIZONTAL
HP - HIGH POINT
HR - HOUR
HSS - HOLLOW STRUCTURAL STEEL
HTG - HEATING
HVAC - HEATING, VENTILATION & AIR CONDITIONING
HW - HOT WATER

ID - INSIDE DIAMETER
INSUL - INSULATION
INT - INTERIOR
INV - INVERT
IRR - IRRIGATION

JAN - JANITOR
JH - JOIST HANGER
JST - JOIST
JT - JOINT

KIT - KITCHEN

LAB - LABORATORY
LAM - LAMINATE
LAV - LAVATORY
LB - LAG BOLT
LH - LEFT HAND
LL - LIVE LOAD
LN - LENGTH
LP - LOW POINT
LSL - LAMINATED STRAND LUMBER
LT - LIGHT
LTG - LIGHTING
LVR - LOUVER
LW - LIGHTWEIGHT

MAT - MATERIAL
MAX - MAXIMUM
MB - MACHINE BOLT
MC - MEDICINE CABINET
MECH - MECHANICAL
MED - MEDIUM
MFR - MANUFACTURER
MH - MANHOLE
MIN - MINIMUM
MIR - MIRROR
MISC - MISCELLANEOUS
MO - MASONRY OPENING
MOD - MODULAR
MR - MOISTURE RESISTANT
MTD - MOUNTED
MTL - METAL

(N) - NEW
N - NORTH
NA NOT APPLICABLE
NAT - NATURAL
NIC - NOT IN CONTRACT
NO - NUMBER
NOM - NOMINAL
NR - NON-RATED
NTS - NOT TO SCALE

O/ - OVER
OA - OVERALL
OBS - OBSCURE
OC - ON CENTER
OD - OUTSIDE DIAMETER
OFD - OVERFLOW DRAIN
OFF - OFFICE
OFS - OUTSIDE FACE OF STUD
OHWS - OVAL HEAD WOOD SCREW
OPP - OPPOSITE
OVFL - OVERFLOW

P - PAINT
PCF - POUNDS PER CUBIC FOOT
PEN - PANEL EDGE NAIL
PERF - PERFORATED
PIR - POLYISOCYNURATE
PIV - POST INDICATOR VALVE
PL - PLATE
PLAM - PLASTIC LAMINATE
PLAS - PLASTER
PLF - POUNDS PER LINEAR FOOT
PLNT - PLANTER

PLWD - PLYWOOD
PMF - PRESSED METAL FRAME
PR - PAIR
PROP - PROPERTY
PRPT - PARAPET
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PSL - PARALLEL STRAND LUMBER
PSTA - PULL STATION
PT - POINT
PTD - PAPER TOWEL DISPENSER
PTDF - PRESSURE TREATED DOUGLAS FIR
PTN - PARTITION
PTR - PAPER TOWER RECEPTACLE
PUR - POLYURETHANE
PVC - POLYVINYL-CHLORIDE
PVMT - PAVEMENT

QT - QUARRY TILE

RAD - RADIUS
RAH - ROOF ACCESS HATCH
RB - RESILIENT BASE
RCP - REFLECTED CEILING PLAN
RD - ROOF DRAIN
RDWD - REDWOOD
REF - REFERENCE
REFR - REFRIGERATOR
REINF - REINFORCING
RES - RESILIENT
RGD - RIGID
RH - RIGHT HAND
RHMS - ROUND HEAD METAL SCREW
RHWS - ROUND HEAD WOOD SCREW
RO - ROUGH OPENING
RW - ROCK WOOL
RWL - RAIN WATER LEADER

S - SOUTH
SAB - SOUND ATTENUATING BATTS
SAD - SEE ARCHITECTURAL DRAWINGS
SAFF - SELF ADHERED FLEXIBLE FLASHING
SASM - SELF ADHERED SHEET MEMBRANE
SBLKG - SOLID BLOCKING
SC - SOLID CORE
SCD - SEE CIVIL DRAWINGS
SD - STORM DRAIN
SDISP - SOAP DISPENSER
SEAL SEALANT
SECT - SECTION
SED - SEE ELECTRICAL DRAWINGS
SF - SQUARE FOOT (FEET)
SHR - SHOWER
SHT - SHEET
SHTF - SHEET FLOW
SHTG - SHEATHING
SIM - SIMILAR
SING - SINGLE
SL - SLIDING
SLD - SEE LANDSCAPE DRAWINGS
SLP - SLOPE
SMD - SEE MECHANICAL DRAWINGS
SMS - SHEET METAL SCREW
SOG - SLAB ON GRADE
SP - SOUNDPROOF
SPEC - SPECIFICATION
SQ - SQUARE
SS - SANITARY SEWER
SSD - SEE STRUCTURAL DRAWINGS
SSTL - STAINLESS STEEL
STA - STATION
STD - STANDARD
STL - STEEL
STO - STORAGE
STRUC - STRUCTURAL
SUSP - SUSPENDED

T&B - TOP AND BOTTOM
T&G - TONGUE & GROOVE
TEL - TELEPHONE
TEMP - TEMPERED
TER - TERRAZZO
THK - THICK
TJ - TOOL JOINT
TKBD - TACKBOARD
TN - TOE NAIL
TOC - TOP OF CURB
TOPL - TOP OF PLATE
TOPVMT - TOP OF PAVEMENT
TOS - TOP OF STEEL
TOSOG - TOP OF SLAB ON GRADE
TOW - TOP OF WALL
TPD - TOILET PAPER DISPENSER
TPO - THERMOPLASTIC POLYOLEFIN
TRN - TRANSOM
TS - TUBE STEEL
TV - TELEVISION
TYP - TYPICAL

UNF - UNFINISHED
UON - UNLESS OTHERWISE NOTED
UR - URINAL

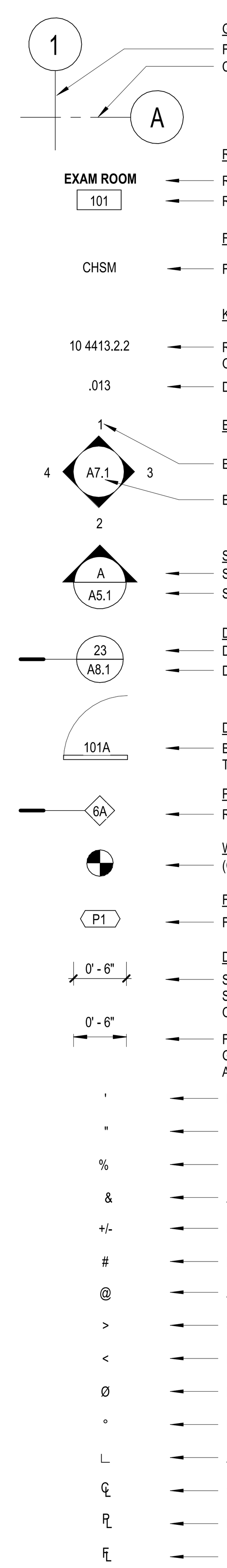
VCT - VINYL COMPOSITION TILE
VERT - VERTICAL
VEST - VESTIBULE
VG - VERTICAL GRAIN
VIF - VERIFY IN FIELD
VT - VINYL TILE
VTR - VENT TO ROOF
VWC - VINYL WALL COVERING

W - WEST
W/ - WITH
W/O - WITHOUT
WAB - WATER RESISTIVE BARRIER
WC - WATER CLOSET
WD - WOOD
WDW - WINDOW
WF - WASH FOUNTAIN
WH - WATER HEATER
WP - WATER PROOF
WR - WATER RESISTANT
WRB - WATER RESISTIVE BARRIER
WT - WEIGHT
WWF - WELDED WIRE FABRIC

XFMR - TRANSFORMER

YD - YARD

SYMBOLS



GRID LINE INDICATION
FACE OF
CENTER OF

ROOM IDENTIFICATION
ROOM NAME
ROOM NUMBER

FURNITURE / EQUIPMENT IDENTIFICATION
FURNITURE / EQUIPMENT CODE

KEYNOTE & DRAWING NOTE IDENTIFICATION
REFERENCE KEYNOTE - SEE SCHEDULE ON SHEETS & SPECIFICATIONS
DRAWING NOTE - SEE SCHEDULE ON SHEETS

ELEVATION
ELEVATION VIEW NUMBER
ELEVATION SHEET

SECTION
SECTION NUMBER
SECTION SHEET

DETAIL
DETAIL NUMBER
DETAIL SHEET

DOOR NUMBER
BY ROOM NUMBER - REFER TO DOOR SCHEDULE

PARTITION TYPE INDICATOR
REFER TO PARTITION LEGEND

WORK POINT
(CONTROL or DATUM POINT)

FINISH INDICATOR
FINISH CODE

DIMENSIONS
STANDARD DIMENSION - FACE OF STUD WHERE APPLIED TO WALLS OR PARTITIONS, U.N.O.

FINISH TO FINISH DIMENSION - FACE OF GYP., OR DIMENSIONAL FINISH WHERE APPLIED TO WALLS OR PARTITIONS, U.N.O.

INCHES
FEET
PERCENT
AND
PLUS OR MINUS
NUMBER
AT
GREATER THAN
LESS THAN
DIAMETER
DEGREE
ANGLE
CENTERLINE
PROPERTY LINE
FLOOR LINE

APPLICABLE CODES

BUILDING CODES AND STANDARDS

2019 CALIFORNIA ADMINISTRATIVE CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 1)

2019 CALIFORNIA BUILDING CODE, VOLUMES 1 & 2 (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2)
(BASED ON 2015 INTERNATIONAL BUILDING CODE)

2019 CALIFORNIA ELECTRICAL CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 3)
(BASED ON 2014 NATIONAL ELECTRICAL CODE)

2019 CALIFORNIA MECHANICAL CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 4)
(BASED ON 2015 IAPMO UNIFORM MECHANICAL CODE)

2019 CALIFORNIA PLUMBING CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 5)
(BASED ON 2015 IAPMO UNIFORM PLUMBING CODE)

2019 CALIFORNIA ENERGY CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 6)

2019 CALIFORNIA FIRE CODE (CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 9)
(BASED ON 2015 INTERNATIONAL FIRE CODE)

2019 CALIFORNIA REFERENCE STANDARDS CODE
(CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 12)

TITLE 19, CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

NATIONAL REFERENCE STANDARDS

AISC 341-10 SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS

AF&PA NDS-2012 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION
WITH 2012 SUPPLEMENT & ADDENDUM

ACI-318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

NFPA 10, 2013 EDITION, STANDARD FOR PORTABLE FIRE EXTINGUISHERS

NFPA 13, 2013 EDITION, INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS
(W/ AMMENDMENTS PER CBC CH 35)

NFPA 14, 2013 EDITION, INSTALLATION OF STANDPIPE, PRIVATE HYDRANT AND HOSE SYSTEMS
(W/ AMMENDMENTS PER CBC CH 35)

NFPA 17, 2013 EDITION, DRY CHEMICAL EXTINGUISHING SYSTEMS

NFPA 17-A, 2013 EDITION, WET CHEMICAL EXTINGUISHING SYSTEMS

NFPA 24, 2013 EDITION, INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES
(W/ AMMENDMENTS PER CBC CH 35)

NFPA 72, 2013 EDITION, NATIONAL FIRE ALARM CODE
(W/ AMMENDMENTS PER CBC CH 35)

ADA (AMERICANS WITH DISABILITIES ACT, 1990) 2010 EDITION

2010 ADA STANDARDS FOR ACCESSIBLE DESIGN (APPENDIX A OF 28 CFR PART 36)

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
(W/ AMMENDMENTS PER CBC CH 35)

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13 - STANDARD FOR THE INSTALLATION OF SPRINKLER SYSTEMS (CA AMENDED)	-2016 EDITION
NFPA 14 - STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEMS (CA AMENDED)	-2016 EDITION
NFPA 17 - STANDARD FOR DRY CHEMICAL EXTINGUISHING SYSTEMS	-2017 EDITION
NFPA 17A - STANDARD FOR WET CHEMICAL EXTINGUISHING SYSTEMS	-2017 EDITION
NFPA 20 - STANDARD FOR THE INSTALLATION OF STATIONARY PUMPS FOR FIRE PROTECTION	-2016 EDITION
NFPA 22 - STANDARD FOR WATER TANKS FOR PRIVATE FIRE PROTECTION	-2013 EDITION
NFPA 24 - STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES (CA AMENDED)	-2016 EDITION
NFPA 72 - NATIONAL FIRE ALARM AND SIGNALING CODE (CA AMENDED)	-2016 EDITION
NFPA 80 - STANDARD FOR FIRE DOORS AND OTHER OPENING PROTECTIVES	-2016 EDITION
NFPA 2001 - STANDARD ON CLEAN AGENT FIRE EXTINGUISHING SYSTEMS (CA AMENDED)	-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 SYSTEMS	-1999 EDITION
UL 1971 - STANDARD FOR SIGNALING DEVICES FOR THE HEARING IMPAIRED	-2002 (R2010)
ICC 300 - STANDARD FOR BLEACHERS, FOLDING AND TELESCOPIC SEATING, AND GRANDSTANDS	-2017 EDITION

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.

SUMMARY OF WORK

- DEMOLISH EXISTING SHADE STRUCTURE, CONCRETE SEATWALL, STEPS AND RAILING AS NOTED ON PLANS.
- CONSTRUCTION OF A 6,233 SF CONCRETE CISTERN FOR RAINWATER HARVESTING WHICH WILL PROVIDE IRRIGATION WATER FOR THE PROPOSED REBUILING OF THE EXISTING ATHLETIC FIELD. THE SEMI-SUBGRADE CISTERN HAS A STORAGE CAPACITY OF 517,500 GALLONS WHICH IS AVAILABLE TO LOCAL FIRE DEPARTMENT AS SURPLUS.
- LANDSCAPE IMPROVEMENTS INCLUDE A GREEN ROOF ON THE CISTERN LID, CAST-IN-PLACE SEATING WALLS, NEW WALKING PATHS AND PLANTING AREAS, SITE FURNITURE INCLUDES TWO NEW DRINKING FOUNTAINS, AND THREE NEW PIECES OF PLAYGROUND EQUIPMENT.
- ELECTRICAL WORK INCLUDES NEW POWER FOR PUMPROOM EQUIPMENT, CONTROLS, AND PEDESTAL RECEPTACLES, AS WELL AS NEW CONDUIT FOR FUTURE SITE LIGHTING.
- NO MECHANICAL WORK IS PERFORMED

PROJECT TEAM

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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. 01-118981 File No. 49-47)

■ The drawings or sheets listed on the cover or index sheet
☐ 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))*

I find that: ■ All drawings or sheets listed on the cover or index sheet
☐ This drawing or page

■ is/are in general conformance with the project design, and ■ has/have been coordinated with the project plans and specifications.	☐ is/are in general conformance with the project design intent, and ☐ has/have been coordinated with the project plans and specifications.
[signature] 09/14/21 **Signature** **Date** **Architect or Engineer designated to be in general responsible charge**	**Signature** **Date** **Architect or Engineer delegated responsibility for this portion of the work**
DON TOMASI **Print Name**	**Print Name**
C-14948 10/31/2021 **License Number** **Expiration Date**	**License Number** **Expiration Date**

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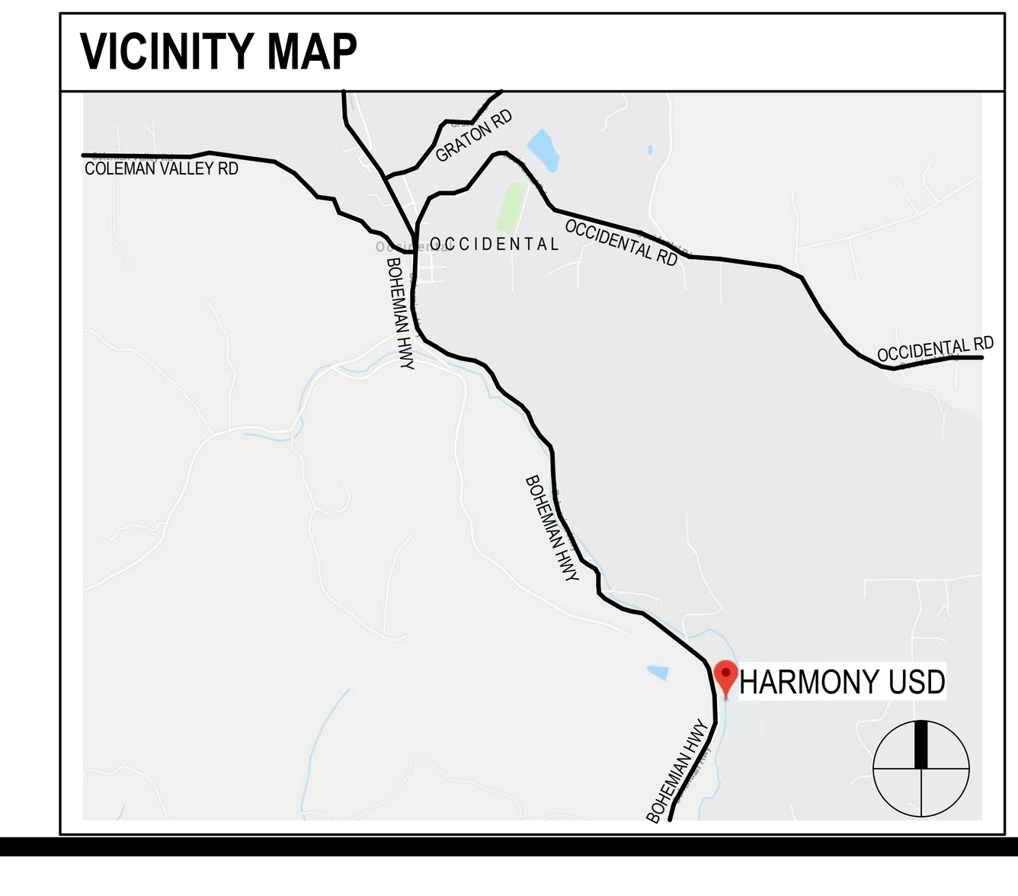
PROJECT NOTES

2019 CALIFORNIA CODE OF REGULATIONS (CCR), TITLE 24, PART 1 ADMINISTRATIVE CODE REQUIREMENTS, CHAPTER 4 (PARTIAL LISTING ONLY)

1. A COPY OF CALIFORNIA CODE OF REGULATIONS, TITLE 24, PARTS 1 THROUGH 5, SHALL BE KEPT ON THE JOB SITE AT ALL TIMES.
2. ALL CONSTRUCTION CHANGE DOCUMENTS AND ADDENDA TO BE SIGNED BY THE ARCHITECT, STRUCTURAL ENGINEER (WHEN APPLICABLE), DELEGATED PROFESSIONAL ENGINEER, AND OWNER AND APPROVED BY DSA BEFORE PROCEEDING WITH THE WORK. CCR, TITLE 24, PART 1, SECTION 4-338 AND DSA IR A-6.
3. ALL TESTS TO CONFORM TO THE REQUIREMENTS OF CCR, TITLE 24, PART 1, SECTION 4-335 AND APPROVED FORM DSA 103 "LIST OF REQUIRED STRUCTURAL INSPECTIONS AND SPECIAL INSPECTIONS.
4. TESTS OF MATERIALS AND TESTING LABORATORY SHALL BE IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTION 4-335 AND THE DISTRICT SHALL EMPLOY AND PAY THE LABORATORY. COSTS OF RE-TEST MAY BE BACK CHARGED TO THE CONTRACTOR, SEE SPECIFICATIONS.
5. DSA SHALL BE NOTIFIED AT THE START OF CONSTRUCTION AND PRIOR TO THE PLACEMENT OF CONCRETE PER CCR, TITLE 24, PART 1, SECTION 4-331.
6. INSPECTOR SHALL BE APPROVED BY DSA AND EMPLOYED BY THE OWNER. INSPECTION SHALL BE IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTIONS 4-333(b) AND 4-342.
7. SUPERVISION OF CONSTRUCTION BY DSA SHALL BE IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTION 4-334.
8. CONTRACTOR, INSPECTOR, ARCHITECT, AND ENGINEERS SHALL SUBMIT VERIFIED REPORTS IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTIONS 4-336 AND 4-343.
9. THE ARCHITECT AND THE STRUCTURAL ENGINEER SHALL PERFORM THEIR DUTIES IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTIONS 4-333(a) AND 4-341.
10. THE CONTRACTOR SHALL PERFORM HIS DUTIES IN ACCORDANCE WITH CCR, TITLE 24, PART 1, SECTION 4-343.
11. THE INTENT OF THE DRAWINGS AND SPECIFICATIONS, AS DESCRIBED IN THE SUMMARY OF WORK,IS TO BE IN ACCORDANCE WITH CCR, TITLE 24, CALIFORNIA CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS WHEREIN FINISHED WORK WILL NOT COMPLY WITH CCR, TITLE 24, A CONSTRUCTION CHANGE DOCUMENT DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT BEFORE PROCEEDING WITH THE WORK.
12. COMPLIANCE WITH CFC CH 33 FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION, AND CBC CH 33 SAFEGUARDS DURING CONSTRUCTION WILL BE ENFORCED. SEE ALSO SPECIFICATON DIV. 1.
13. SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE SUBMITTED AS CONSTRUCTION CHANGE DOCUMENTS OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION OR INSTALLATION.
14. MATERIALS AND THEIR INSTALLATION SHALL COMPLY WITH APPLICABLE CODES, STANDARDS AND MANUFACTURERS RECOMMENDATIONS.
15. PER CBC 11B-104.1 "ALL DIMENSIONS ARE SUBJECT TO CONVENTIONAL INDUSTRY TOLERANCES EXCEPT WHERE THE REQUIREMENT IS STATED AS A RANGE WITH SPECIFIC MINIMUM AND MAXIMUM END POINTS."

VICINITY MAP



AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
f: 707.525.5616
tlcd.com

CONSULTANT:

STAMP:

LICENSED ARCHITECT
DONALD C. TOMASI
C-14948
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS
1935 BOHEMIAN HIGHWAY OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-118981
TLCD PROJECT NUMBER: 19046
DATE: 09/14/21
DRAWN BY: ST
CHECKED BY: RJ

TITLE SHEET

G-001

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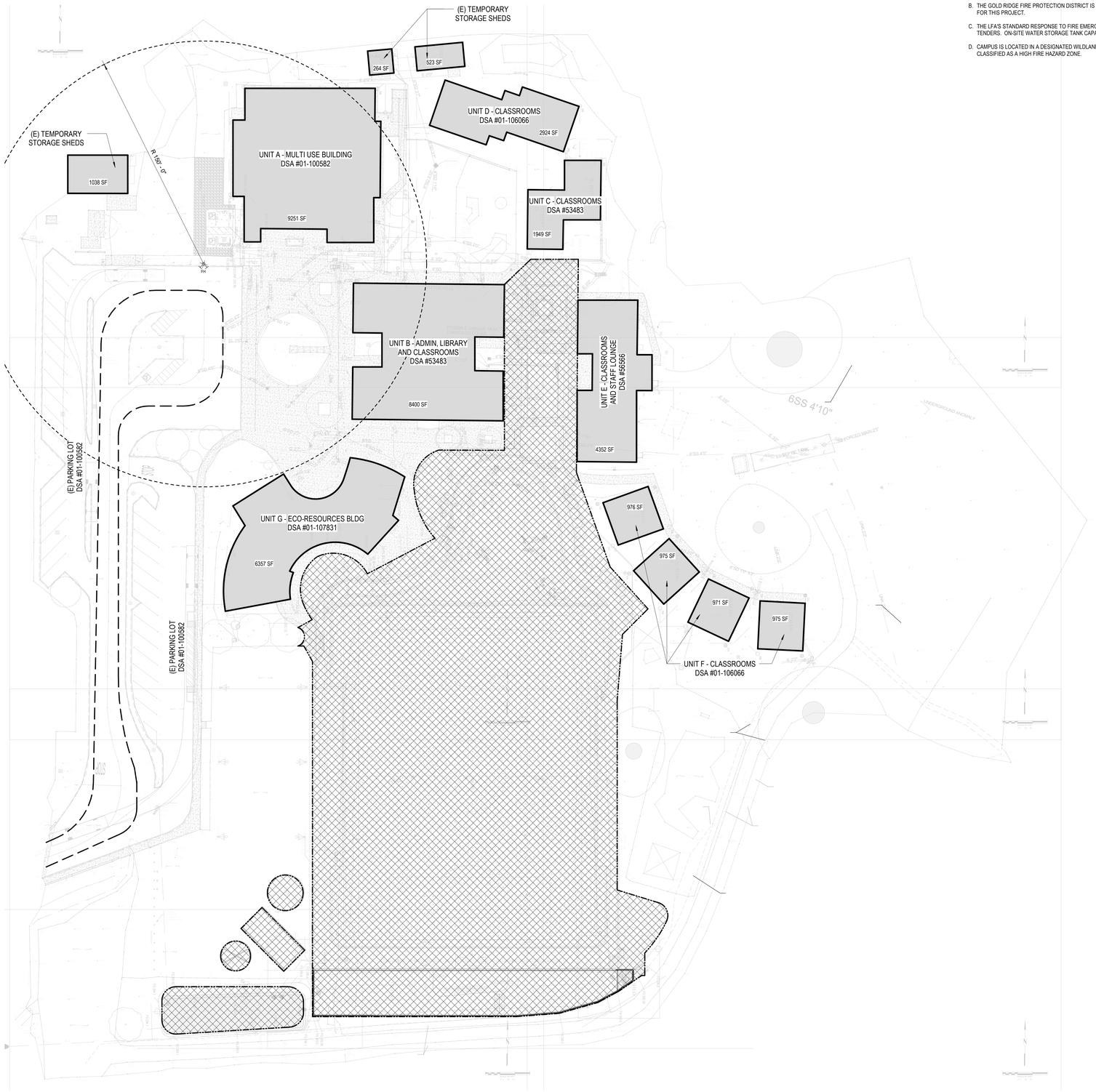

1 FIRE ACCESS SITE PLAN
1" = 30'-0"

GENERAL CODE COMPLIANCE NOTES

A. CODE COMPLIANCE ANALYSIS IS BASED ON 2019 CBC.

B. THE GOLD RIDGE FIRE PROTECTION DISTRICT IS THE LOCAL FIRE AUTHORITY (LFA) FOR THIS PROJECT.

C. THE LFA'S STANDARD RESPONSE TO FIRE EMERGENCIES IS TO BRING WATER TENDERS. ON-SITE WATER STORAGE TANK CAPACITY IS 517,500 GALLONS.

D. CAMPUS IS LOCATED IN A DESIGNATED WILDLAND URBAN INTERACE (WUI) AND IS CLASSIFIED AS A HIGH FIRE HAZARD ZONE.

SITE CODE ANALYSIS LEGEND

NOTE:
1. SCD AND SLD FOR ADDITIONAL INFORMATION IN CIVIL / LANDSCAPE PACKAGE
2. SSD FOR ADDITIONAL INFORMATION REGARDING CISTERN STRUCTURAL DESIGN

PREVIOUS AND FUTURE PHASES, NIC

SCOPE OF WORK

FH FIRE HYDRANT

(E) EMERGENCY VEHICLE ACCESS (E.V.A.) PATH, PER FIRE PROTECTION DISTRICT STANDARDS.
10' WIDE CLEAR DRIVEABLE SURFACE
12" OF ROCK TO HS-20 STANDARD ACCEPTABLE FOR 40K LB CODE REQUIREMENT
12' WIDE AND 15' VERTICAL CLEARANCE FROM TREES ALONG ACCESS ROAD

DESIGN PROFESSIONAL IN GENERAL RESPONSIBILITY CHARGE STATEMENT:

THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS IS COMPLIANT WITH THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE ACCESSIBILITY PROVISIONS FOR **PATH OF TRAVEL REQUIREMENTS FOR ALTERATIONS, ADDITIONS AND STRUCTURAL REPAIRS**. AS PART OF THE DESIGN OF THIS PROJECT, THE POT WAS EXAMINED AND ANY ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WERE DETERMINED TO BE NONCOMPLIANT 1) HAVE BEEN IDENTIFIED AND 2) THE CORRECTIVE WORK NECESSARY TO BRING THEM INTO COMPLIANCE HAS BEEN INCLUDED WITHIN THE SCOPE OF THIS PROJECT'S WORK THROUGH DETAILS, DRAWINGS AND SPECIFICATIONS INCORPORATED INTO THESE CONSTRUCTION DOCUMENTS. ANY NONCOMPLIANT ELEMENTS, COMPONENTS OR PORTIONS OF THE POT THAT WILL NOT BE CORRECTED BY THIS PROJECT BASED ON VALUATION THRESHOLD LIMITATIONS OR A FINDING OF UNREASONABLE HARDSHIP ARE SO INDICATED IN THESE CONSTRUCTION DOCUMNETS.

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

DSA **810**

FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or DSA Publications webpages.

To facilitate the Division of the State Architect's (DSA) fire and life safety plan review of project site conditions, DSA requires the design professional to provide the following information at time of project submittal for projects consisting of construction of a new campus, construction of new building(s), additions to existing buildings, and for site alternate design means for fire department emergency vehicle access, and fire suppression water supply.

Information associated with compliance items 1 through 3 below is to be provided for all project types indicated above. Information associated with items 4 through 7 is to be completed when an alternate means is utilized. Acknowledgement by the school district and signature from the Local Fire Authority (LFA) is only required when an alternate design means is being requested.

The Project Information and Fire & Life Safety Information sections are to be completed for all projects and imaged onto the fire access site plan. When an alternate design/means is proposed, all sections on pages 1 and 2 are to be completed and imaged on the fire access site plan.

For additional information refer to the instructions at the end of this form and DSA Policy *PL 09-01: Fire Flow for Buildings*.

PROJECT INFORMATION	
School District/Owner:	Harmony Union School District
Project Name/School:	Harmony Elementary School Field and Playground Improvements
Project Address:	1935 Bohemian Highway Occidental, CA 95465

FIRE & LIFE SAFETY INFORMATION				
1.	Has a fire hydrant flow test been performed within the past 12 months? *(If yes, provide a copy of the test data.)*	Yes ☐		No ☑
2.	Was the fire hydrant water flow test performed as part of this LFA review?	Yes ☐		No ☑
3.	Is the project located within a designated fire hazard severity zone (FHSZ) as established by Cal-Fire? *(If yes, indicate FHSZ classification below.)*	Yes ☑		No ☐
	Refer to the following website for FHSZ locations: http://egis.fire.ca.gov/FHSZ/	Moderate ☐	High ☑	Very High ☐
	Wildland Interface Area (WIFA) *(If any designations are checked, project design must meet the requirements of CBC Chapter 7A.)*			WIFA ☑

CONDITION MEANS AND METHODS RESOLUTION		ALTERNATE ACCEPTED			
		Yes	No	N/A	N/R
4.	Emergency vehicle access roadways do not meet CFC requirements.	X			
4a.	**Acceptable Alternate:** Emergency vehicle and personnel access as proposed by the project architect is acceptable for providing fire suppression and protection of life and property.			X	
5.	**Fire Hydrants:** Number and spacing does not meet CFC requirements.			X	
5a.	**Acceptable Alternate:** Number of fire hydrants and spacing as proposed by the project architect is acceptable for fire suppression and protection of life and property.			X	
6.	**Fire Hydrants:** Water flow and pressure are less than CFC minimum.			X	
6a.	**Acceptable Alternate:** The available flow and pressure is acceptable for providing fire suppression and protection of life and property.			X	
7.	Location of fire department connection(s) serving fire sprinkler systems or standpipe systems does not meet CFC requirements.			X	
7a.	**Acceptable Alternate:** The location of fire department connection serving the fire sprinkler system and/or standpipe system is acceptable for providing fire suppression and protection of life and property.			X	

School District Acceptance of Acceptable Design Alternates

By signing this form, the school district acknowledges and accepts the proposed design as an alternative to California Building Code (CBC) and California Fire Code (CFC) minimum requirements, as indicated by one or more of the conditions indicated at items 4a, 5a, 6a or 7a, for providing fire and life safety protection of life and property.

Accepted by: Matthew Morgan DocuSigned by: Title: Superintendent / Principal

Signature: Matthew Morgan E36AA20A8BFC4B8... Date: 5/27/2020

LOCAL FIRE AUTHORITY (LFA) INFORMATION	
LFA Agency Name:	Gold Ridge Fire Protection District
LFA Review Official:	Darrin DeCarli
Title: Battalion Chief	Work Phone: (707) 823-1084
Work Email:	darrindecarli@goldridgefire.org

LFA Reviewer's Signature: Date: 5/21/20

AGENCY APPROVAL STAMP:

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CONSULTANT:

STAMP:

LICENSED ARCHITECT JOSHUA C. TOMSIC C-14948 STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981
TLCD PROJECT NUMBER:
19046
DATE:
09/14/21
DRAWN BY:
-
CHECKED BY:
-

OVERALL SITE PLAN - FIRE ACCESS

G-002

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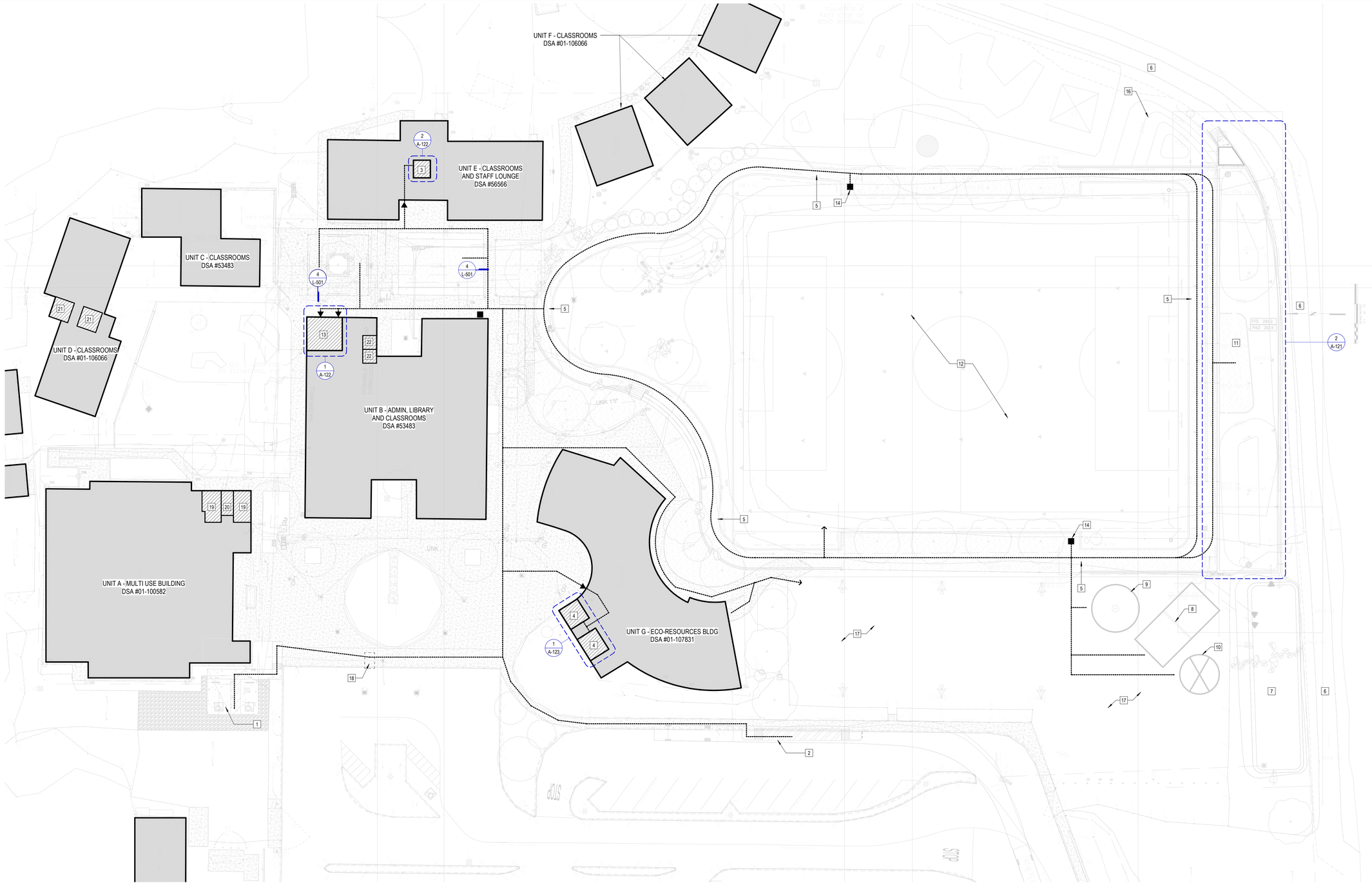


SITE CODE ANALYSIS LEGEND

- ACCESSIBLE RESTROOMS
- ACCESSIBLE DRINKING FOUNTAINS
- FIRE HYDRANT
- ACCESSIBLE BUILDING ENTRANCE
- (SP) STANDARD ACCESSIBLE PARKING SPACE
- (VP) VAN ACCESSIBLE PARKING SPACE

POT - ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER-FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" IF BEVELED AT 1:2 MAX SLOPE, OR VERTICAL LEVEL CHANGES NOT EXCEEDING 1/4" MAX AND AT LEAST 48" IN WIDTH. SURFACE IS STABLE, FIRM, AND SLIP RESISTANT. CROSS SLOPE DOES NOT EXCEED 1:48 AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 1:20, UNLESS OTHERWISE INDICATED. ACCESSIBLE ROUTE OF TRAVEL SHALL BE MAINTAINED FREE OF OVERHANGING OBSTRUCTIONS TO 80" MINIMUM AND PROTRUDING OBJECTS GREATER THAN 4" PROJECTION FROM WALL AND ABOVE 27" AND LESS THAN 80". ARCHITECT SHALL VERIFY THAT THERE ARE NO BARRIERS IN THE ROUTE OF TRAVEL.

CBC 2019 REFERENCES:
LEVEL CHANGES 11B-303, SLOPES 11B-403.3, PROTRUDING OBJECTS 11B-307

DRAWING NOTES

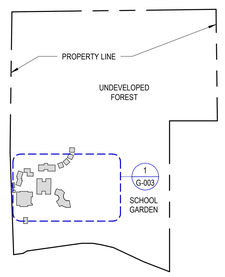
1. NEW ACCESSIBLE PARKING STALLS
2. NEW ACCESSIBLE LOADING ZONE, SEE C-100
3. (E) ACCESSIBLE STAFF RESTROOMS, DSA #56566
4. (E) ACCESSIBLE PUBLIC RESTROOMS, DSA #01-107831
5. NEW SEMI-PERMEABLE WALKING/RUNNING PATH
6. (E) EMERGENCY VEHICLE PATH
7. NEW BIORETENTION AREA
8. NEW CONCRETE WALL & LINES FOR WALL BALL
9. NEW BUCKET BALL COURT
10. NEW TETHERBALL COURT
11. NEW STAGE AREA
12. NEW SPORTS FIELD
13. (E) ACCESSIBLE STUDENT RESTROOMS, DSA #53483
14. NEW HI-LO DRINKING FOUNTAIN, SEE 3/L-503
16. EARTH MOUND, SCD & SLD
17. (E) ASPHALT PAVING
18. NEW BUS DROPOFF LOCATION
19. (E) STUDENT RESTROOM, DSA #01-100582
20. (E) SHOWER ROOM, DSA #01-100582
21. (E) STUDENT TOILET ROOM, DSA #01-106066
22. (E) STUDENT TOILET ROOM, DSA #53483

PARKING CALCULATIONS

ACCESSIBLE PARKING CBC 2019 TABLE 11B- 208.2

PARKING PROVIDED		
	REQ.	PROVIDED
TOTAL PARKING	N/A	33
ACCESSIBLE PARKING	2	2*

1 VAN SPACE (1 PER 6) PROVIDED PER CBC 2019 SEC. 11B-208.2.4



2 OVERALL SITE PLAN
1" = 400'-0"

1 ACCESSIBILITY SITE PLAN
1" = 20'-0"

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JOSHUA C. TOMSIC
C-14948
RENEWAL 08/31/2023
STATE OF CALIFORNIA

REVISIONS:

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-116981

TLCD PROJECT NUMBER
19046

DATE:
09/14/21

DRAWN BY:
Author

CHECKED BY:
Checker

ENLARGED SITE PLAN - ACCESSIBILITY

G-003

GENERAL NOTES

1. WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
2. SHOULD IT APPEAR THAT THE WORK OUTLINED ON THESE PLANS IS NOT SUFFICIENTLY DETAILED OR SPECIFIED IN THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE OWNER BEFORE PROCEEDING WITH THE WORK IN QUESTION AND REQUEST CLARIFICATION.
3. EXISTING UTILITIES AND UNDERGROUND FACILITIES INDICATED ARE FOR INFORMATION ONLY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATION AND DEPTH WITH THE APPROPRIATE AGENCIES AND /OR FIELD INVESTIGATION.
4. THE CONTRACTOR OR ANY SUBCONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT ONE CALL PROGRAM 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 811. EXCAVATION IS DEFINED AS REMOVING MATERIAL 18 INCHES OR MORE BELOW EXISTING GRADE.
5. THE CONTRACTOR SHALL ADJUST TO FINAL GRADE EXISTING AND/OR NEW MANHOLES, CURB INLETS, CATCH BASINS, VALVES, VAULTS, MONUMENT COVERS, AND OTHER CASTINGS WITHIN THE WORK AREA TO FINAL GRADE IN PAVEMENT AND LANDSCAPE AREAS, UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL POST ON SITE EMERGENCY TELEPHONE NUMBERS FOR AMBULANCE, POLICE, FIRE DEPARTMENTS, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.
7. 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 MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
8. CONTRACTOR SHALL COMPLY WITH STATE, COUNTY AND CITY LAWS AND ORDINANCES; AND REGULATIONS OF THE DEPARTMENT OF INDUSTRIAL RELATIONS, OSHA AND INDUSTRIAL ACCIDENT COMMISSION RELATING TO SAFETY AND CHARACTER OF WORK, EQUIPMENT AND LABOR PERSONNEL.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING DUST CONTROL 24-HOUR PER DAY. DUST CONTROL MEASURES SHALL BE APPLIED AS NECESSARY, OR AS DIRECTED BY HARMONY UNION SCHOOL DISTRICT TO PREVENT THE TRANSPORT OFF-SITE OF ANY DUST OR OTHER AIRBORNE NUISANCE.
10. TREE PROTECTION FENCING SHALL BE PROVIDED AT THE DRIP LINE AROUND TREES TO REMAIN. ANY EXCAVATION REQUIRED WITHIN THE TREE PROTECTION ZONE SHALL BE BY HAND EXCAVATION OR AIR ONLY AND THE CONTRACTOR SHALL AVOID DAMAGE TO THE TREE'S ROOTS. WHEN CUTTING ROOTS IS UNAVOIDABLE, THE CONTRACTOR SHALL FOLLOW THE RECOMMENDATIONS OF THE PROJECT ARBORIST.
11. TRUCKS HAULING DIRT AND DEBRIS SHALL BE COVERED TO REDUCE WINDBLOWN DUST SPILLS.
12. ON-SITE STOCKPILES OF IMPORTED AND EXCAVATED MATERIAL TO BE LEFT IN PLACE FOR MORE THAN 24 HOURS SHALL BE COVERED AND WATERED TO PREVENT DUST AND RUNOFF.
13. DURING CONSTRUCTION, THE PUBLIC STREETS SHALL BE CLEANED AS OFTEN AS REQUIRED TO REMOVE ACCUMULATION OF MUD AND DEBRIS RESULTING FROM CONSTRUCTION. IF IMPORT OR EXPORT OF DIRT IS NECESSARY, THE CONTRACTOR SHALL OBTAIN AN APPROVAL FOR THE HAULING ROUTE FROM THE COUNTY. THE HAULING ROUTES SHALL BE STRICTLY ADHERED TO BY THE CONTRACTOR AND SUBCONTRACTORS.
14. STORAGE OF CONSTRUCTION MATERIAL AND EQUIPMENT ON CITY STREETS WILL NOT BE PERMITTED.
15. CONSTRUCTION EQUIPMENT, TOOLS, ETC. SHALL NOT BE CLEANED OR RINSED INTO A STREET, GUTTER, OR STORM DRAIN.
16. TRAFFIC CONTROL SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
17. THE CONTRACTOR SHALL MAINTAIN THE WORKSITE AND ADJACENT AREAS IN A CLEAN AND ORGANIZED MANNER THROUGHOUT THE PROJECT DURATION.
18. THE CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING SITE FEATURES/STRUCTURES NOT SPECIFICALLY SHOWN TO BE REMOVED. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL MITIGATION TO DAMAGED SITE FEATURES/STRUCTURES.
19. THE COST OF PROTECTION AND/OR REPAIR OF THE CONTRACTOR'S WORK AS AFFECTED BY STORMWATER DURING A STORM EVENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY UNTIL THE IMPROVEMENTS HAVE BEEN ACCEPTED BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT PROPERTIES OR IMPROVEMENTS AS A RESULT OF NOT PROTECTING SUCH AREAS FROM STORMWATER FLOWING BEYOND THE WORK AREA.
20. THE COST OF CORRECTIVE WORK REQUIRED FOR COMPLETION AND/OR ACCEPTANCE OF THE WORK NECESSITATED BECAUSE OF UNSATISFACTORY WORKMANSHIP OR MATERIALS OR DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
21. THE WORK SITE SHALL BE CLEANED AND LEFT FREE OF CONSTRUCTION WASTE AND RUBBISH OF ANY NATURE BY THE CONTRACTOR AT THE END OF EACH WORK DAY.
22. ARTICLE V OF THE SONOMA COUNTY, CALIFORNIA MUNICIPAL CODE SHALL BE FOLLOWED FOR AREAS UNDER CONSTRUCTION. CONTACT THE RESPONDING FIRE DEPARTMENT FOR SPECIFIC REQUIREMENTS FOR BUILDINGS UNDER CONSTRUCTION.
23. THE CONTRACTOR SHALL ABIDE BY THE RULES AND REGULATIONS OF THE STATE OF CALIFORNIA CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATIONS AND TRENCHES.

SURVEY

1. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED ON HARMONY SCHOOL TOPO MAP SURVEY PERFORMED OCTOBER, 2019, BY BRELJE & RACE CONSULTING ENGINEERS, (707) 576-1322, SEE TOPOGRAPHIC SURVEY FOR CONTROL POINTS PROVIDED BY SURVEYOR. GRADES ENCOUNTERED ON-SITE MAY VARY FROM THOSE SHOWN. CONTRACTOR SHALL REVIEW THE PLANS AND SPECIFICATIONS AND CONDUCT FIELD INVESTIGATIONS TO VERIFY EXISTING CONDITIONS AT THE PROJECT SITE.
2. CONSTRUCTION STAKING SHALL BE PERFORMED BY A LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA.
3. BASIS OF BEARINGS: CALIFORNIA COORDINATE SYSTEM NAD 83 ZONE II, EPOCH 2010.00, HAVING A CONVERGENCE ANGLE OF -0°35'14" AS DETERMINED LOCALLY BY THE LINE BETWEEN CONTINUOUS GLOBAL POSITIONING SYSTEMS STATION P183 AND STATION P197 BEING NORTH 64°44'56" EAST. TO OBTAIN GEODETIC BEARINGS, ROTATE THE GRID BEARINGS SHOWN HEREON CLOCKWISE BY THE MAPPING ANGLE OF 0°35'14". ALL DISTANCES SHOWN AS GROUND DISTANCES. TO OBTAIN GRID DISTANCES, MULTIPLY THE DISTANCES SHOWN HEREON BY THE COMBINED GRID FACTOR OF 0.9998798. SAID MAPPING ANGLE AND COMBINED FACTOR WERE CALCULATED AT CONTROL POINT #1, ELEVATION 296.296 (NAVD88). N=1904616.743 E=6294725.790
4. BENCH MARK DATUM: NATIONAL GEODETIC SURVEY MARKER "JT9465" - A METAL ROD 2,200 FEET SOUTHERLY FROM THE JUNCTION OF BODEGA HIGHWAY AND BOHEMIAN HIGHWAY, 125.7 FT NORTH OF A FENCE CORNER, 77.1 FT SOUTH OF THE CENTER OF A PAVED DRIVEWAY MARKED "RASPBERRY LANE" AND 39.0 FT SOUTHEAST OF THE CENTERLINE OF THE HIGHWAY. ELEVATION=202.09 FEET (NAVD 88).

GEOTECHNICAL REPORT

THE CONTRACTOR SHALL FAMILIARIZE HIMSELF OR HERSELF WITH THE GEOTECHNICAL REPORT, ENTITLED GEOTECHNICAL INVESTIGATION AND GEOLOGIC HAZARD EVALUATION, PROJECT NUMBER 13141.01, JANUARY 15, 2020, BY BRUNSING ASSOCIATES, INC. AND KEEP A COPY OF THIS REPORT ON SITE. THE GEOTECHNICAL REPORT IS AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND ALL EARTHWORK SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS CONTAINED THEREIN.

ABBREVIATIONS

AB	AGGREGATE BASE	NFC	NOT FOR CONSTRUCTION
AC	ASPHALT CONCRETE	NTS	NOT TO SCALE
AD	AREA DRAIN	OC	ON CENTER
ADA	AMERICANS WITH DISABILITIES ACT	(P)	PROPOSED
BLDG	BUILDING	PA	PLANTED AREA
BS	BOTTOM OF STEP	PG&E	PACIFIC GAS AND ELECTRIC
BW	BOTTOM OF WALL / BACK OF WALK	PIV	POST INDICATOR VALVE
CB	CATCH BASIN	PL	PROPERTY LINE
CF	CUBIC FEET	POC	POINT OF CONNECTION
CL	CENTERLINE	PRW	PRESSURIZED RAINWATER
CO	CLEAN OUT	PUE	PUBLIC UTILITY EASEMENT
CONC	CONCRETE	PVMT	PAVEMENT
CONF	CONFORM	R, RAD	RADIUS
CY	CUBIC YARDS	RC	RELATIVE COMPACTION
DI	DRAINAGE INLET	RCP	REINFORCED CONCRETE PIPE
DS	DOWN SPOUT	REQ'D	REQUIRED
DW	DOMESTIC WATER	RET	RETAINING
E	EAST	RIM	TOP OF STRUCTURE GRATE/ COVER
(E)	EXISTING	RW	RAINWATER
EB	ELECTRICAL BOX	RWL	RAINWATER LEADER
EG	EXISTING GRADE ELEVATION	S	SLOPE
EL, ELEV	ELEVATION	SAP	SEE ARCHITECTURAL PLANS
ELEC	ELECTRIC	SCO	SOFTSCAPE CLEANOUT
EP	EDGE OF PAVEMENT	SD	STORM DRAIN
EVA	EMERGENCY VEHICLE ACCESS	SDE	SHERWOOD DESIGN ENGINEERS
FC	FACE OF CURB	SDMH	STORM DRAIN MANHOLE
FF	FIRST FLUSH	SF	SQUARE FEET
FFE	FINISHED FLOOR ELEVATION	SLP	SEE LANDSCAPE PLANS
FG	FINISH GRADE	SPRK	FW SPRINKLER LINE
FH	FIRE HYDRANT	SQ	SQUARE
FL	FLOWLINE	SS	SANITARY SEWER
FS	FINISH SURFACE	SSCO	SANITARY SEWER CLEAN OUT
FT	FEET	SSMH	SANITARY SEWER MANHOLE
FW	FIRE WATER	SSP	SEE STRUCTURAL PLANS
G	GAS	STD	STANDARD
GB	GRADE BREAK	SW	SIDEWALK
GM	GAS METER	TB	TOP OF BANK
GV	GATE VALVE	TBD	TO BE DETERMINED
HB	HOSE BIB	TBM	TEMPORARY BENCHMARK
HDPE	HIGH-DENSITY POLYETHYLENE	TBR	TO BE REMOVED
HP	HIGH POINT/ HINGE POINT	TC	TOP OF CURB
HT	HEIGHT	TEL	TELEPHONE
INV	INVERT OF PIPE OR CHANNEL	TEMP	TEMPORARY
IRR	IRRIGATION	TG	TOP OF GRATE
JB	JUNCTION BOX	TOP	TOP OF PIPE
JP	JOINT POLE	TS	TOP OF STEP
LA	LANDSCAPE ARCHITECT	TW	TOP OF WALL
LF	LINEAR FEET	TYP	TYPICAL
LP	LIGHT POLE / LOW POINT	UG	UNDERGROUND
LT	LEFT	UON	UNLESS OTHERWISE NOTED
MAX	MAXIMUM	VERT	VERTICAL
ME	MEAN ELEVATION	VIF	VERIFY IN FIELD
MH	MANHOLE	W	WATER
MIN	MINIMUM	WALK	WALKWAY/SIDEWALK
N	NORTH	WM	WATER METER
		WS	WATER SERVICE

SHEET INDEX

C-000 COVER SHEET
C-100 GRADING PLAN
C-200 RAINWATER HARVESTING PLAN
C-300 CISTERN ELEVATIONS AND DETAILS
C-400 NOT USED
C-500 DETAILS
C-501 DETAILS
C-502 DETAILS

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PARTNER FIRM LOGO
TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
f: 707.525.5616
tlcd.com

CONSULTANT:
SHERWOOD DESIGN ENGINEERS
625 2nd Street, Suite 202
Petaluma, CA 94952
www.sherwoodengineers.com

STAMP:

REGISTERED PROFESSIONAL ENGINEER
JIMMY A. GALVEZ
EXP: 06/30/22
C-75568
CIVIL
STATE OF CALIFORNIA

SCALE:
0 1"
Note: If this graphic scale does not equal 1", this sheet has been modified from its original size.

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

SDE PROJECT NUMBER:
19-190

DATE:
09/07/21

DRAWN BY:
AJ/GF

CHECKED BY:
CC/CN

COVER SHEET

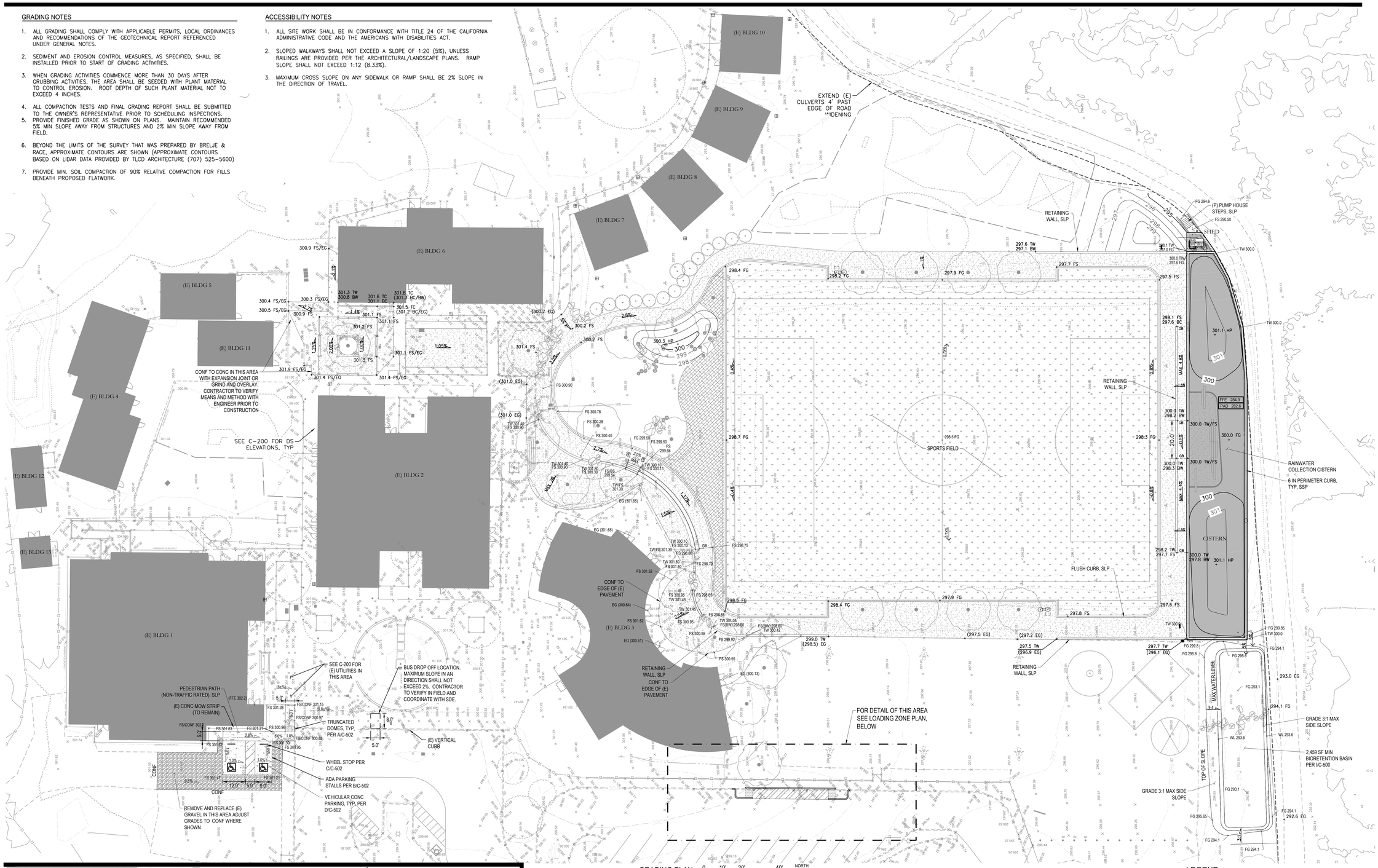
DRAWING NO.
C-000

GRADING NOTES

1. ALL GRADING SHALL COMPLY WITH APPLICABLE PERMITS, LOCAL ORDINANCES AND RECOMMENDATIONS OF THE GEOTECHNICAL REPORT REFERENCED UNDER GENERAL NOTES.
2. SEDIMENT AND EROSION CONTROL MEASURES, AS SPECIFIED, SHALL BE INSTALLED PRIOR TO START OF GRADING ACTIVITIES.
3. WHEN GRADING ACTIVITIES COMMENCE MORE THAN 30 DAYS AFTER GRUBBING ACTIVITIES, THE AREA SHALL BE SEEDED WITH PLANT MATERIAL TO CONTROL EROSION. ROOT DEPTH OF SUCH PLANT MATERIAL NOT TO EXCEED 4 INCHES.
4. ALL COMPACTION TESTS AND FINAL GRADING REPORT SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE PRIOR TO SCHEDULING INSPECTIONS.
5. PROVIDE FINISHED GRADE AS SHOWN ON PLANS. MAINTAIN RECOMMENDED 5% MIN SLOPE AWAY FROM STRUCTURES AND 2% MIN SLOPE AWAY FROM FIELD.
6. BEYOND THE LIMITS OF THE SURVEY THAT WAS PREPARED BY BRELJE & RACE, APPROXIMATE CONTOURS ARE SHOWN (APPROXIMATE CONTOURS BASED ON LIDAR DATA PROVIDED BY TLCD ARCHITECTURE (707) 525-5600)
7. PROVIDE MIN. SOIL COMPACTION OF 90% RELATIVE COMPACTION FOR FILLS BENEATH PROPOSED FLATWORK.

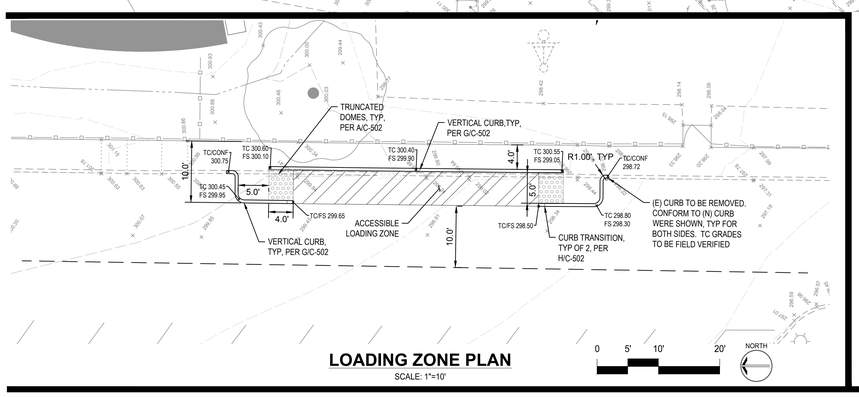
ACCESSIBILITY NOTES

1. ALL SITE WORK SHALL BE IN CONFORMANCE WITH TITLE 24 OF THE CALIFORNIA ADMINISTRATIVE CODE AND THE AMERICANS WITH DISABILITIES ACT.
2. SLOPED WALKWAYS SHALL NOT EXCEED A SLOPE OF 1:20 (5%), UNLESS RAILINGS ARE PROVIDED PER THE ARCHITECTURAL/LANDSCAPE PLANS. RAMP SLOPE SHALL NOT EXCEED 1:12 (8.33%).
3. MAXIMUM CROSS SLOPE ON ANY SIDEWALK OR RAMP SHALL BE 2% SLOPE IN THE DIRECTION OF TRAVEL.



GRADING PLAN

SCALE: 1" = 20'



LOADING ZONE PLAN

SCALE: 1"=10'

EARTHWORK VOLUMES* (CUBIC YARDS)		
PROJECT LOCATION	CUT	FILL
SITE WORK	1,940	4,340
TOP OF CISTERN	0	200
2' OVEREXCAVATION	470	470
NET	2,600	

Underground Service Alert

CALL BEFORE YOU DIG

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EARTHWORK NOTES

1. FILL VOLUME ESTIMATES FOR THE CISTERN GREEN ROOF ARE DETERMINED BASED ON FINISHED GRADES OF THE SOIL MOUNDS AND THE TOP OF THE GREEN ROOF MEDIA AND STRUCTURAL TOPPING SLAB LAYERS (SLP & SSP).
2. EARTHWORK VOLUME ESTIMATES ARE BASED ON EXISTING GRADES FROM SURVEY DO NOT ACCOUNT FOR PAVEMENT, CONCRETE, OR OTHER FLATWORK SECTIONS WITH THICKNESS THAT WOULD BE DEMOLISHED.
3. SHERWOOD DESIGN ENGINEERS IS NOT AN ENGINEERING CONTRACTOR, NOR SHOULD OUR RENDERING OF CUT AND FILL EARTHWORK VOLUMES BE CONSIDERED EQUIVALENT TO THE NATURE AND EXTENT OF SERVICE AN ENGINEERING CONTRACTOR WOULD PROVIDE. THIS ESTIMATE IS BASED SOLELY ON OUR OWN ANALYSIS, WHICH IS AS ACCURATE AS THE INFORMATION PROVIDED TO US IN REGARDS TO EXISTING TOPOGRAPHY AND OUR GRADING STRATEGY REPRESENTED. THIS ANALYSIS WILL NOT REFLECT THE LOCALIZES SITE CONDITIONS NOT REPRESENTED ON THE TOPOGRAPHIC SURVEY, NOR DOES IT TAKE INTO EFFECT FACTORS SUCH AS SHRINKAGE, SWELL, LOSS DURING TRANSPORT AND SUBSIDENCE, UNLESS OTHERWISE STATED ON QUANTITY TABLES. THE EARTHWORK VOLUME ANALYSIS ALONE SHOULD NOT BE USED FOR BID PURPOSES AS OTHER FACTORS THAT WILL DEPEND ON OBSERVATION BY THE GEOTECHNICAL ENGINEER REPRESENTATIVE MAY AFFECT THE FINAL EARTHWORK QUANTITIES.

LEGEND

FG 100.00	SPOT ELEVATION
1.0%	HARDSCAPE SLOPE
1.0%	SOFTSCAPE SLOPE
FFE 100.0	FINISH FLOOR ELEVATION
PAD 100.0	PAD ELEVATION
	(P) GRAVEL
	(P) CONCRETE
100	(P) MAJOR CONTOUR
102	(P) MINOR CONTOUR
100	(E) MAJOR CONTOUR
102	(E) MINOR CONTOUR

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

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REGISTERED PROFESSIONAL ENGINEER
JAMY A. GALVEZ
EXP: 06/30/22
C-75568
CIVIL
STATE OF CALIFORNIA

SCALE:

0 1"

Note: if this graphic scale does not equal 1", this sheet has been modified from its original size.

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

SDE PROJECT NUMBER:
19-190

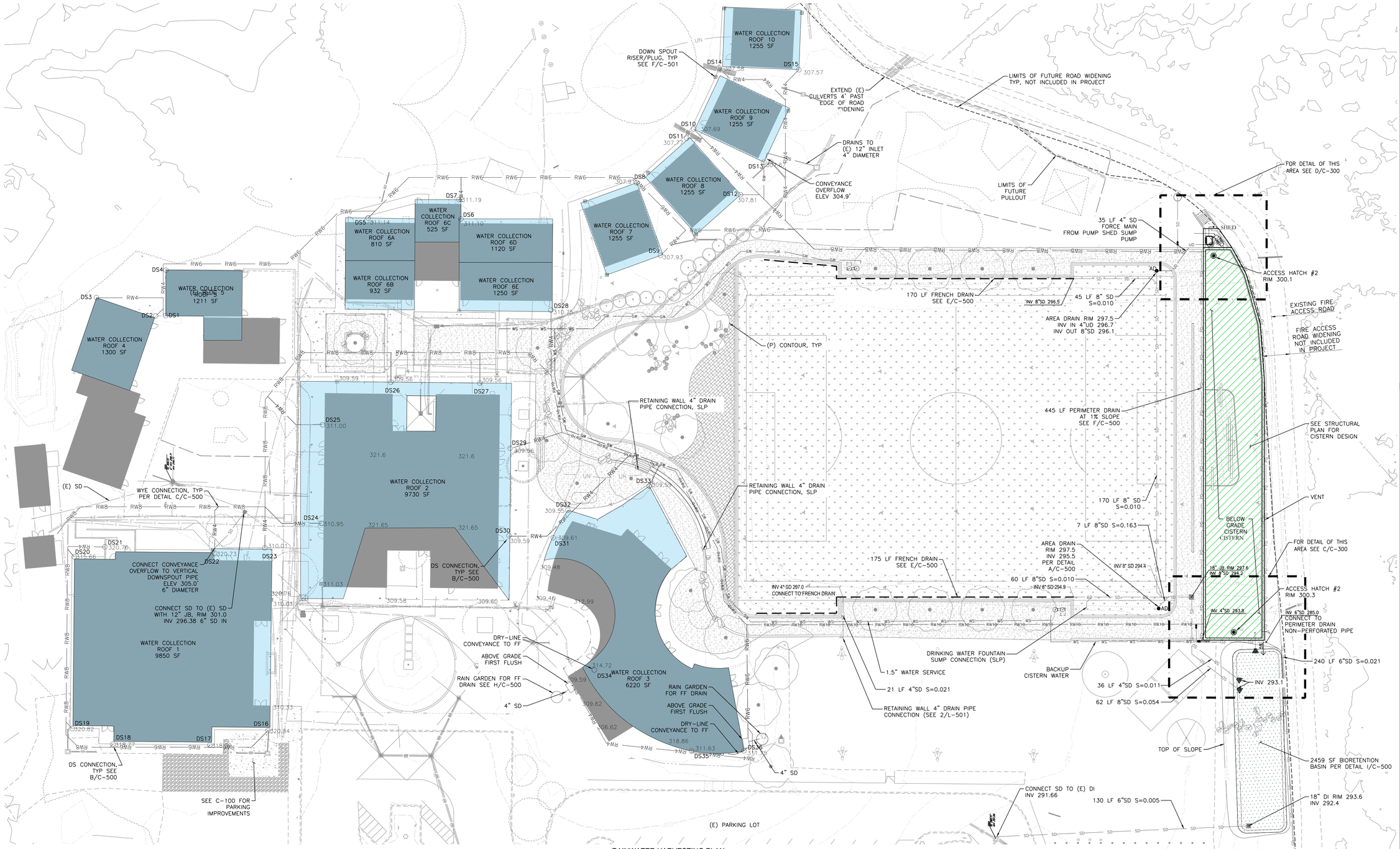
DATE:
09/07/21

DRAWN BY:
AJ/GF

CHECKED BY:
CC/CN

GRADING PLAN

DRAWING NO.:
C-100



RAINWATER HARVESTING PLAN

SCALE: 1" = 20'

DESIGN SCOPE

THESE PLANS SUMMARIZE A RAINWATER HARVESTING SYSTEM WHICH WILL PROVIDE IRRIGATION WATER FOR THE PROPOSED SPORTS FIELD, INCIDENTAL LANDSCAPE AND FUTURE GREEN ROOF. THE ROOF SURFACES ARE DESIGNED TO COLLECT 544,000 GALLONS OF RAINWATER IN A 25.8" DROUGHT YEAR. THE SEMI-SUBGRADE CISTERN HAS A STORAGE CAPACITY OF 517,500 GALLONS, WHICH WILL MEET THE ANNUAL IRRIGATION DEMAND OF 526,000 GALLONS. STORED RAINWATER WILL ACT AS STREAMFLOW ENHANCEMENT FOR NEARBY SALMON CREEK BY AVOIDING EXTRACTIONS FROM THE SCHOOL'S ALLUVIAL WELL. EXCESS RAINWATER RUNOFF AND OTHER SITE DRAINAGE WILL BE CONVEYED TO A BIORETENTION AREA FOR FURTHER TREATMENT AND INFILTRATION.

DRAINAGE NOTES

1. CONTRACTOR TO PROVIDE STORM DRAIN PIPES OF SIZE, LENGTH AND SLOPE INDICATED ON THE DRAWINGS. UNLABELED PIPES ARE [4]-INCH DIAMETER AT [0.3%] MIN SLOPE, LENGTH AS SCALED, UNLESS OTHERWISE NOTED. BIORETENTION BASINS SHALL BE CONSTRUCTED PER DETAILS PROVIDED AND CONSTRUCTED TO SHAPE, DIMENSIONS AND DETENTION VOLUMES INDICATED. PONDING SURFACE DEPTHS AND FREEBOARD REQUIRE LEVEL GRADES AT TOP AND TOE OF SWALE AND BASIN EMBANKMENTS. NO ADJUSTMENTS TO GRADES ARE ALLOWED WITHOUT EXPRESS WRITTEN DIRECTION FROM THE ENGINEER.
2. SOILS INCORPORATED INTO BIOSWALES AND BIORETENTION BASINS SHALL BE AS SPECIFIED AND APPROVED BY THE ENGINEER WITHOUT EXCEPTION.
3. THE CONTRACTOR IS RESPONSIBLE TO OPERATE AND MAINTAIN ALL DRAINAGE STRUCTURES AND FEATURES UNTIL FINAL ACCEPTANCE BY THE OWNER. FEATURES SUCH AS BIOSWALES AND OTHER LOW-IMPACT DEVELOPMENT (LID) ELEMENTS SHALL NOT BE USED FOR IMPOUNDMENT OR EROSION/SEDIMENT CONTROL DURING CONSTRUCTION UNLESS THOROUGHLY PROTECTED FROM SILT-UP OR CLOGGING. CLEAN UP OR REPLACEMENT OF SOILS IMPACTED BY CONSTRUCTION ACTIVITIES OR RUNOFF PRIOR TO HAND-OVER SHALL BE REPLACED PER ORIGINAL DESIGN AT THE CONTRACTOR'S EXPENSE.
4. ALL RAINWATER PIPES MUST MAINTAIN A 0.5% MINIMUM SLOPE FROM THE PIPE INVERTS TO THE CISTERN INVERT.
5. ALL PIPES MUST MAINTAIN A MINIMUM OF 2 FEET OF COVERAGE.

DOWN SPOUT SCHEDULE

Down Spout	Cut Elev	Approx Ground Elev	Approx Length of Pipe to be Replaced
#	[FT]	[FT]	[FT]
1	307.4	300.3	7.1
2	307.4	300.3	7.1
3	307.4	300.4	7.0
4	307.4	300.3	7.1
5	307.3	301.3	6.0
6	307.3	299.8	7.5
7	307.3	300.3	7.0
8	307.0	299.1	7.9
9	307.0	297.9	9.1
10	307.0	298.9	8.1
11	307.0	298.9	8.1
12	307.0	297.2	9.8
13	307.0	296.9	10.1
14	307.0	298.8	8.2
15	307.0	297.1	9.9
16	309.0	302.1	6.9
17	309.0	302.1	6.9
18	309.0	302.0	7.0
19	309.0	302.1	6.9
20	309.0	302.0	7.0
21	309.0	302.0	7.0
22	309.0	302.0	7.0
23	309.0	302.1	6.9
24	308.6	301.7	6.9
25	308.6	301.7	6.9
26	308.6	301.6	7.0
27	308.6	301.6	7.0
28	308.6	301.1	7.5
29	308.6	301.5	7.1
30	308.6	301.6	7.0
31	307.6	301.5	6.1
32	307.6	301.5	6.1
33	308.6	301.3	7.3
34	314.0	301.6	12.4
35	309.0	301.0	8.0
36	308.6	301.0	7.60

LEGEND

- RAINWATER CONVEYANCE-3IN — RW4 RW4
- RAINWATER CONVEYANCE-4IN — RW4 RW4
- RAINWATER CONVEYANCE-6IN — RW6 RW6
- RAINWATER CONVEYANCE-8IN — RW8 RW8
- RAINWATER CONVEYANCE-10IN — RW10 RW10
- (P) STORM DRAIN LINE — SD SD
- (P) WATER SERVICE — WS WS
- (P) PERIMETER DRAIN — PD PD
- (E) STORM DRAIN — SD SD
- (E) ELECTRICAL — E E
- (E) GAS — GAS GAS
- MANHOLE
- JUNCTION BOX
- AREA DRAIN
- DOWNSPOUT — DS
- RAINWATER COLLECTION SURFACE
- CISTERN
- (P) BIORETENTION

AGENCY APPROVAL STAMP:

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DATE: 09/21/2021

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SCALE:

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REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

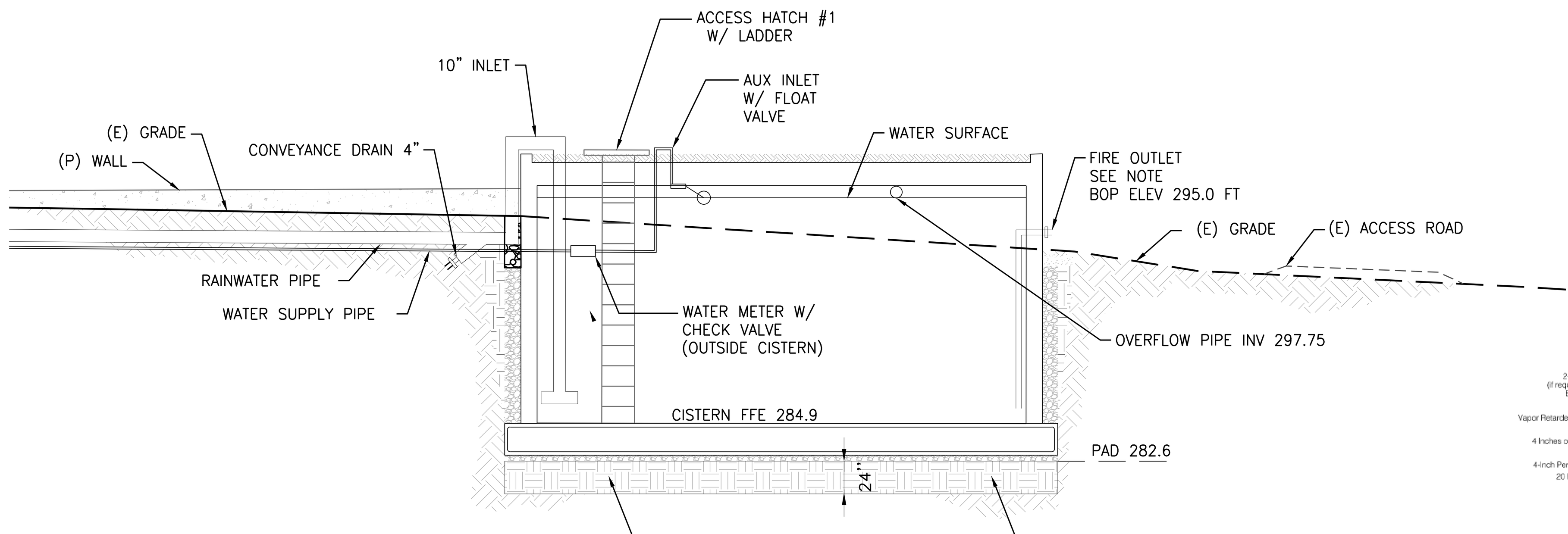
1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-116981
SDE PROJECT NUMBER: 19-190
DATE: 09/07/21
DRAWN BY: AJ/GF
CHECKED BY: CC/CN

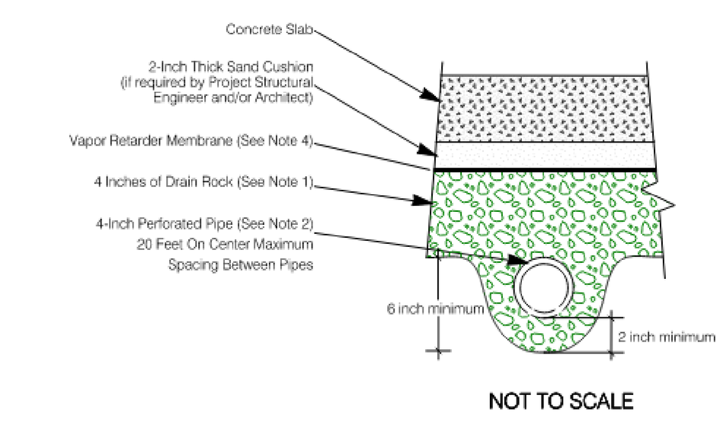
WATER MANAGEMENT PLAN

DRAWING NO.
C-200



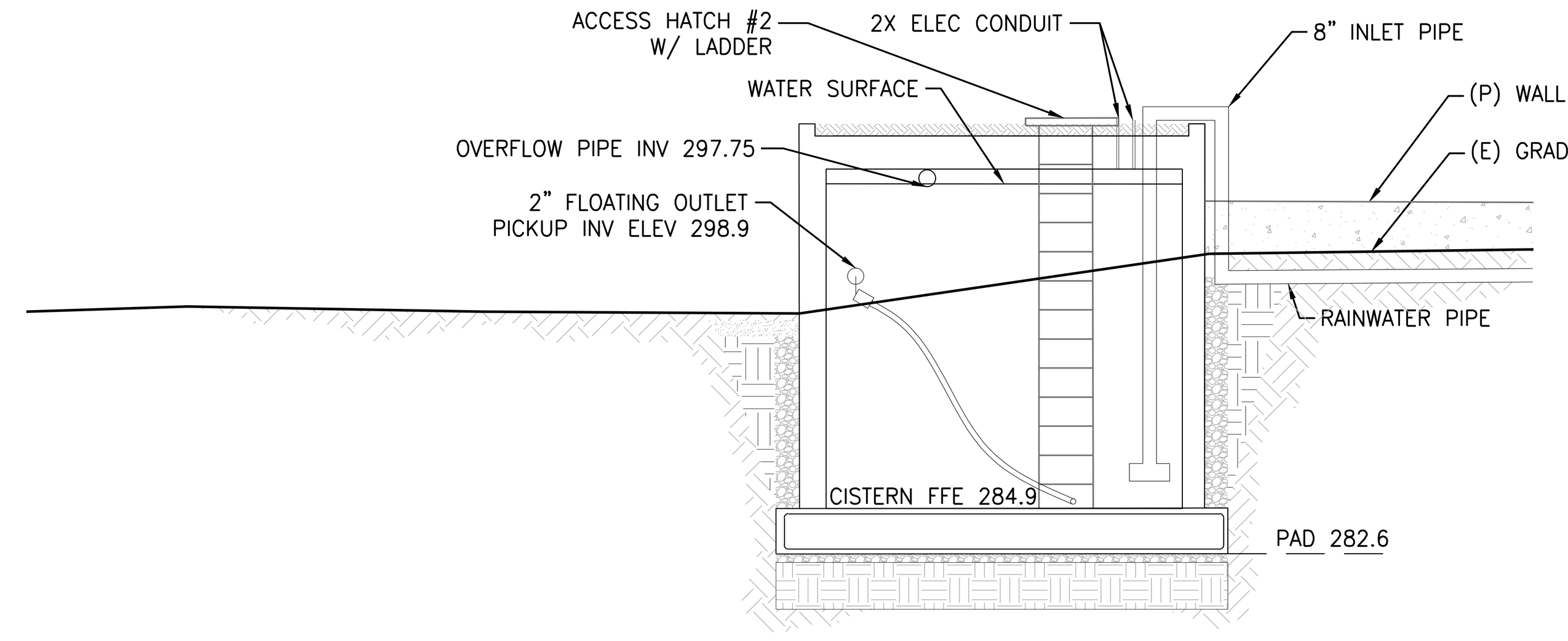
NOTE

FIRE OUTLET 4" FITTING HAS DOWNPIPE WITH ANTI-VORTEX BAFFLE TO 4" OFF BOTTOM OF CISTERN. OUTSIDE OF CISTERN EQUIPPED WITH 4" GV AND 4" FIRE HOSE THREADED FITTING.



UNDERSLAB DRAINAGE DETAILS
HARMONY IMPROVEMENTS PROJECT
1935 Bohemian Highway
Occidental, Sonoma County, California
PLATE 33

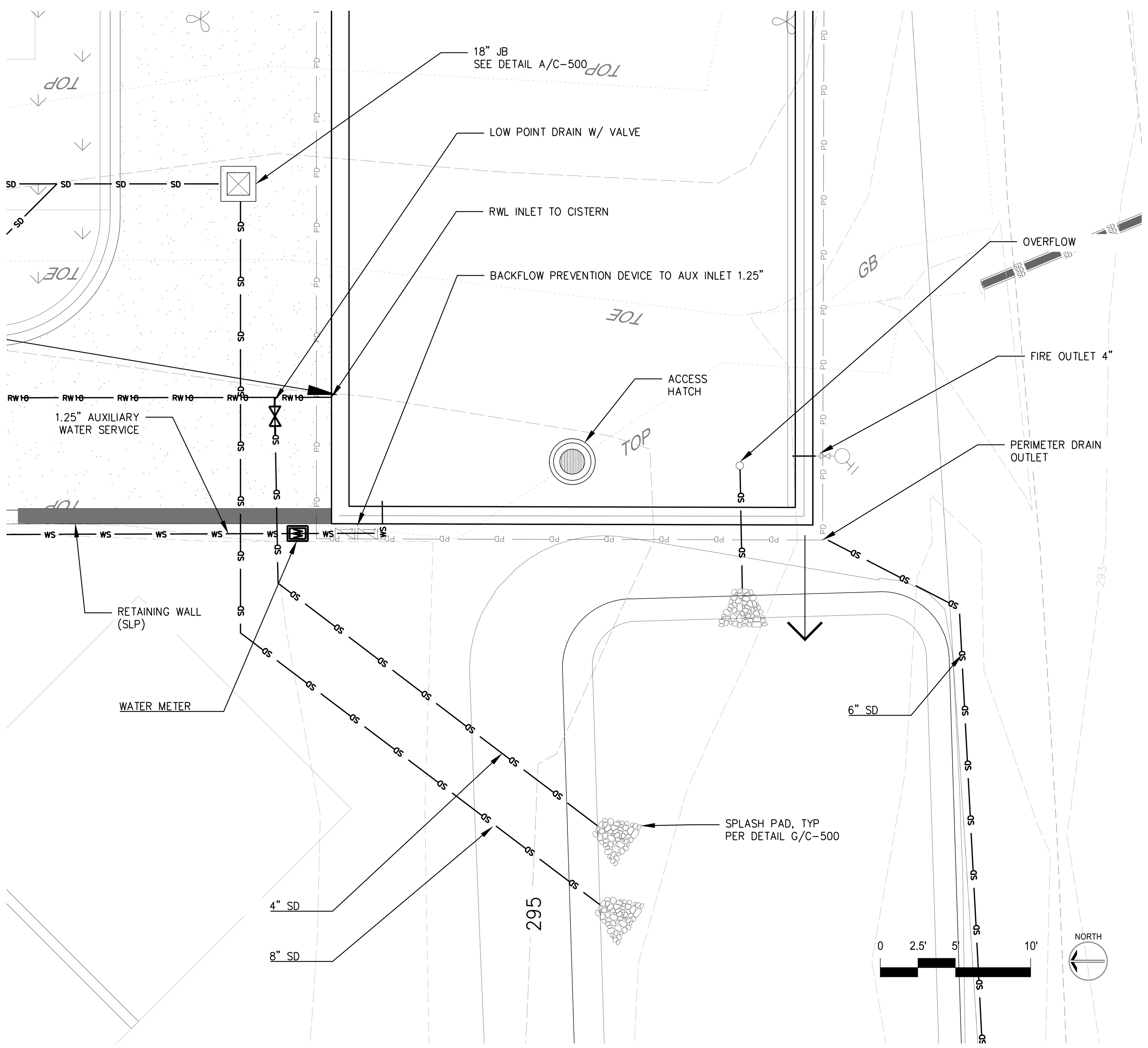
A CISTERN WEST ELEVATIONS
SCALE: NTS



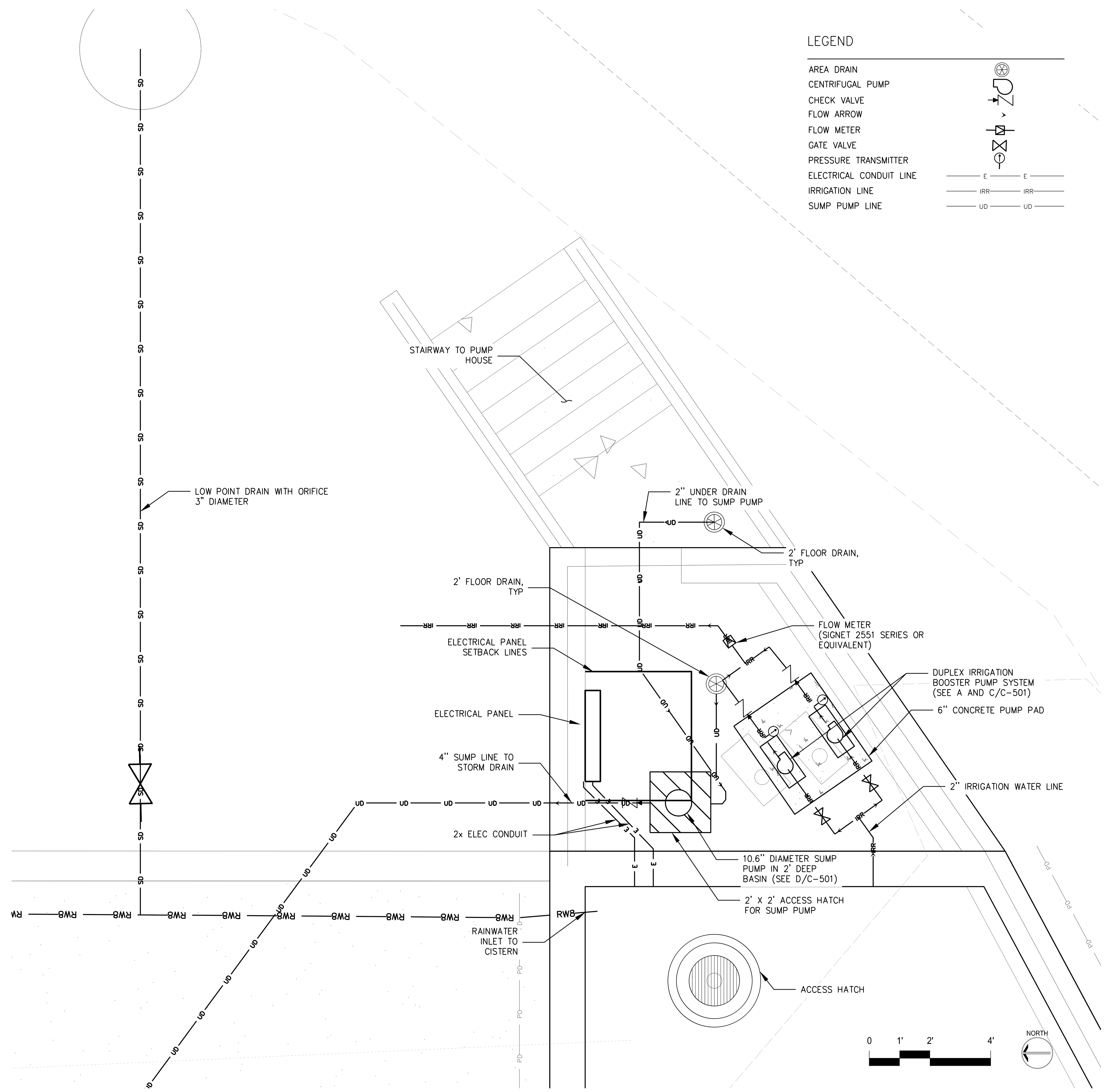
B CISTERN EAST ELEVATIONS
SCALE: NTS

LEGEND

- AREA DRAIN
- CENTRIFUGAL PUMP
- CHECK VALVE
- FLOW ARROW
- FLOW METER
- GATE VALVE
- PRESSURE TRANSMITTER
- ELECTRICAL CONDUIT LINE — E —
- IRRIGATION LINE — IRR —
- SUMP PUMP LINE — UD —



C BIORETENTION CONNECTION PLAN
SCALE: 1" = 5'



D IRRIGATION PUMP SHED LAYOUT AND SCHEMATIC
SCALE: 1" = 2'

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STATE OF CALIFORNIA

SCALE:
0 1"
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REVISIONS

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

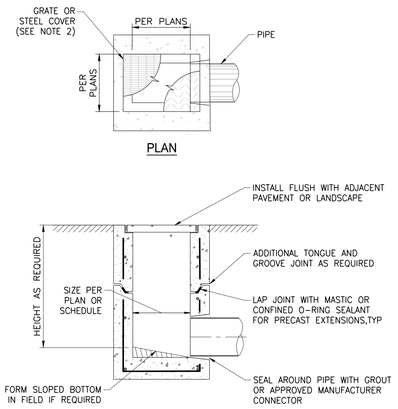
1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

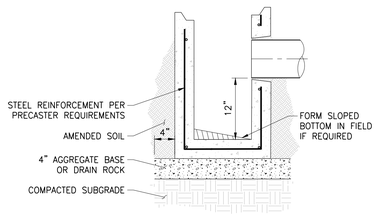
HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981
SDE PROJECT NUMBER
19-190
DATE
09/07/21
DRAWN BY
AJ/GF
CHECKED BY
CC/CN

CISTERN ELEVATIONS AND DETAILS

DRAWING NO.
C-300

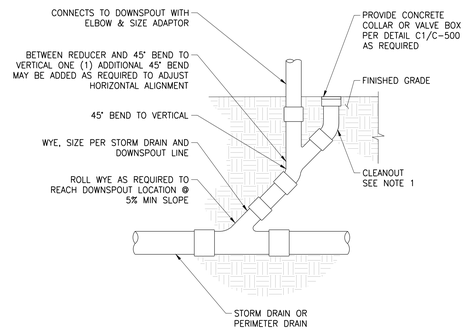




NOTES

1. CATCH BASIN/JUNCTION BOXES SHALL BE SQUARED UNLESS OTHERWISE NOTED.
2. CATCH BASINS SHALL BE FURNISHED WITH CAST IRON GRATE OR STEEL GRATE PER SPECIFICATION. JUNCTION BOXES SHALL BE FURNISHED WITH GALVANIZED STEEL, BOLT DOWN CHECKERED PLATE LIDS. FRAMES FOR GRATES AND LIDS SHALL BE GALVANIZED STEEL.
3. PROVIDE 12" DEEP SUMP BELOW OUTLET INVERT WHERE NOTED ON PLANS OR IN SCHEDULE.

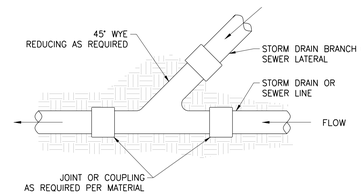
A CATCH BASIN/JUNCTION BOX
DR-013 SCALE: NTS



NOTES

1. CLEAN OUT MAY BE LOCATED
   A. GRADE IN PAVEMENT
   B. ABOVE GRADE IN LANDSCAPE AREA
   C. OR PER ARCHITECTURAL PLANS
2. IF DRAIN IS INSTALLED PRIOR TO DOWNSPOUT, PROVIDE RISER TO MIN 3" ABOVE FINISHED GRADE AND CAP.

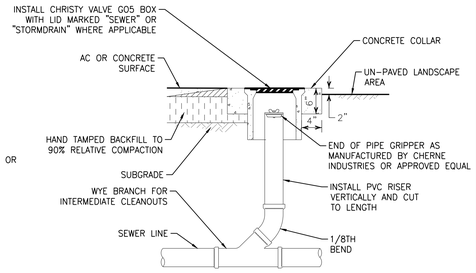
B DOWNSPOUT CONNECTION
DR-036 SCALE: NTS



NOTES

1. WHEN INSTALLED ON EXISTING STORM DRAIN, OR SANITARY SEWER REMOVE PIPE AS REQUIRED TO INSERT WYE.
2. CONNECT WYE WITH CALDER COUPLINGS OR APPROVED EQUIVALENT.

C WYE CONNECTION 45 DEGREES
UT-018 SCALE: NTS



NOTES

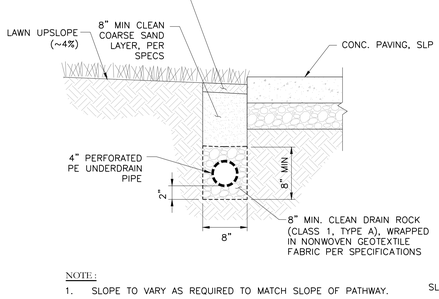
1. SLOPE FINISH GRADE OR SURFACE AWAY FROM CLEANOUT.
2. CONCRETE LIDS ARE ACCEPTABLE FOR USE IN NON VEHICULAR TRAFFIC AREAS, WHILE METAL LIDS MUST BE USED IN TRAFFIC AREAS.
3. ALL CLEANOUT BOX LIDS SHALL BE LABELED "STORM" OR "SEWER" AS APPROPRIATE.
4. BRING TO SURFACE WITH TEMPORARY PLUG. AFTER ALL BACKFILL IS COMPLETE AND SUB-GRADE ESTABLISHED IN AREAS TO BE PAVED, THE FINAL RISER PIPE AND BOX SHALL BE INSTALLED AS SHOWN.

C1 CLEANOUT
UT-031 SCALE: NTS

NOTES

1. FOR WATER USE WASHED SAND AND FOR STORM DRAIN AND SANITARY SEWER USE GRANULAR FILL MATERIAL, 3/4" CRUSHED ROCK FOR BEDDING, HAUNCHING AND INITIAL BACKFILL MATERIAL. SAND MATERIAL SHALL BE COMPACTED TO 90% PROCTOR DENSITY. REFER TO PROJECT SPECIFICATIONS ACCORDINGLY.
2. FINAL BACKFILL SHALL CONSIST OF EXCAVATED NATIVE SOIL WHERE SUITABLE FOR FILL, COMPACTED TO 90% PROCTOR DENSITY IN NON-TRAFFIC AREAS. IF EXCAVATED MATERIAL IS NOT SUITABLE, USE IMPORTED GRANULAR MATERIAL. 3/4" CRUSHED ROCK AS APPROVED BY GEOTECHNICAL ENGINEER.
3. BACKFILL SHALL BE PLACED IN LAYERS NOT TO EXCEED 8" MAXIMUM.
4. FOR WATER AND FIRE WATER MAINS INSTALL SINGLE STRAND 12" COPPER WIRE.
5. REMOVE A MINIMUM 6" OF PAVEMENT SURFACE BEYOND EDGE OF TRENCH WHEN INSTALLING UTILITY UNDER EXISTING SURFACE WHERE APPLICABLE PER PLAN.

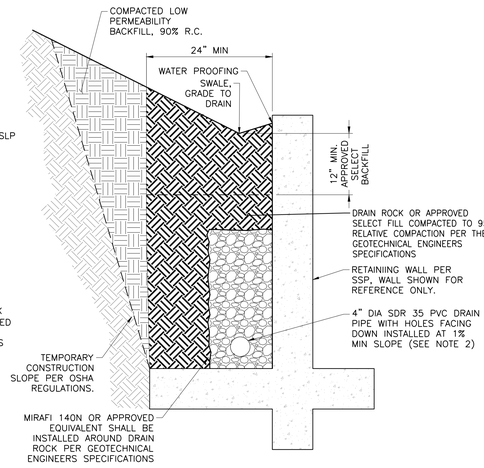
D UTILITY TRENCH
UT-013 SCALE: NTS



NOTE:

1. SLOPE TO VARY AS REQUIRED TO MATCH SLOPE OF PATHWAY.
2. DEPTH TO VARY AS REQUIRED TO PROVIDE POSITIVE DRAINAGE OF UNDERDRAIN PIPE TO STORM DRAIN CONNECTION.

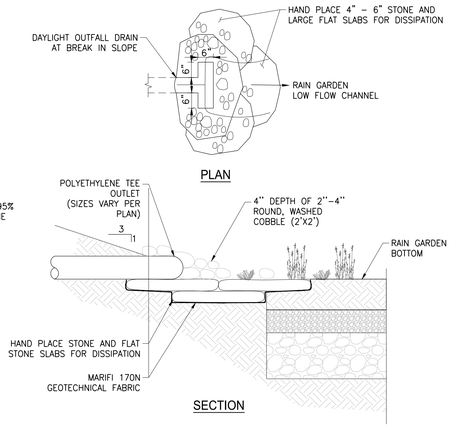
E FRENCH DRAIN
DR-062 SCALE: NTS



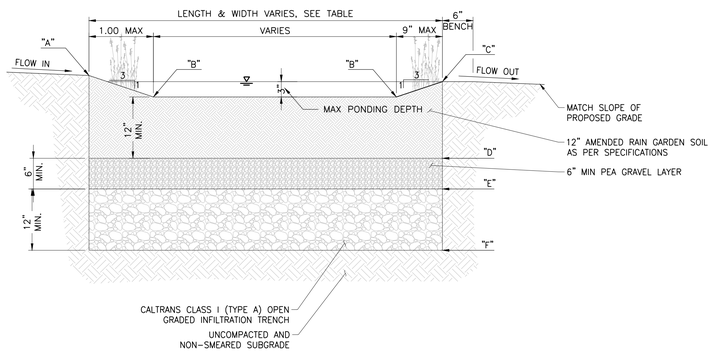
NOTES

1. SELECT FILL LOCATION, DEPTH, AND MATERIAL SHALL BE SPECIFIED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
2. PERIMETER DRAIN SHALL DAYLIGHT TO THE STORM DRAIN SYSTEM WHERE NOTED ON SHEET C-400.

F TYPICAL RETAINING WALL
DR-059 SCALE: NTS



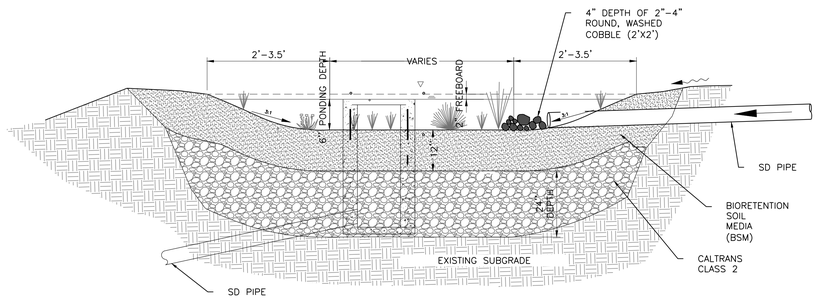
G SPLASH PAD
TR-006 SCALE: NTS



NOTES

1. SEE LANDSCAPE PLAN FOR RAIN GARDEN PLANTINGS.
2. SUBGRADE SHALL NOT BE SMEARED. HAND RAKE PRIOR TO CLASS I TYPE A INSTALLATION TO ENSURE MAXIMUM INFILTRATION.
3. SEE SPECS FOR SOIL INFORMATION.

H RAIN GARDEN
TR-005 SCALE: NTS



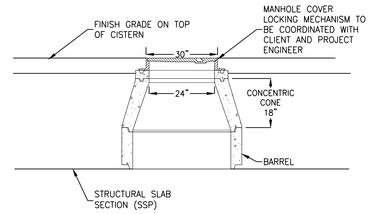
BIORETENTION DESIGN NOTES:

1. ADDITIONAL DESIGN GUIDANCE PROVIDED IN BIORETENTION TECHNICAL SPECIFICATIONS DOCUMENT.
2. BIORETENTION SOIL MEDIA (BSM) SPECIFICATION PER BIORETENTION TECHNICAL SPECIFICATIONS.
3. MULCH PER BIORETENTION TECHNICAL SPECIFICATIONS.

BIORETENTION CONSTRUCTION NOTES:

1. SCARIFY SUBGRADE BEFORE INSTALLING BIORETENTION AREA AGGREGATE AND BSM.
2. FACILITY EXCAVATION TO ALLOW FOR SPECIFIED SOIL AND MULCH DEPTHS TO ACHIEVE FINISHED ELEVATIONS ON CIVIL PLANS.
3. COMPACT EACH 6" LIFT OF BSM WITH LANDSCAPE ROLLER OR BY LIGHTLY WETTING. IF WETTING, ALLOW TO DRY OVERNIGHT BEFORE PLANTING.
4. DO NOT WORK WITHIN BIORETENTION AREA DURING RAIN OR UNDER WET CONDITIONS.
5. KEEP HEAVY MACHINERY OUTSIDE BIORETENTION AREA LIMITS.

I TYPICAL BIORETENTION BASIN
SCALE: NTS



MANHOLE COMPONENTS CONFORM TO CURRENT SPECIFICATIONS, ASTM C-478 AND AASHTO M199.

FLAT TOPS AND BASE SLABS ARE DESIGNED FOR AASHTO HS-20 WHEEL LOADING.

J ACCESS HATCH
SCALE: NTS

P:\2019\19-190_HSD\03_Design\01_CAD\03_CD\C-500 - DETAILS - CD.dwg(C-500 DETAILS - CD Andrey Ivanov,9/9/2021 7:56:57 PM,ARCH full bleed E1 (30.00 x 42.00 Inches),1:1

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REGISTERED PROFESSIONAL ENGINEER
JIMMY A. GALVEZ
EXP: 06/30/22
C-75568
CIVIL
STATE OF CALIFORNIA

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Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

SDE PROJECT NUMBER:
19-190

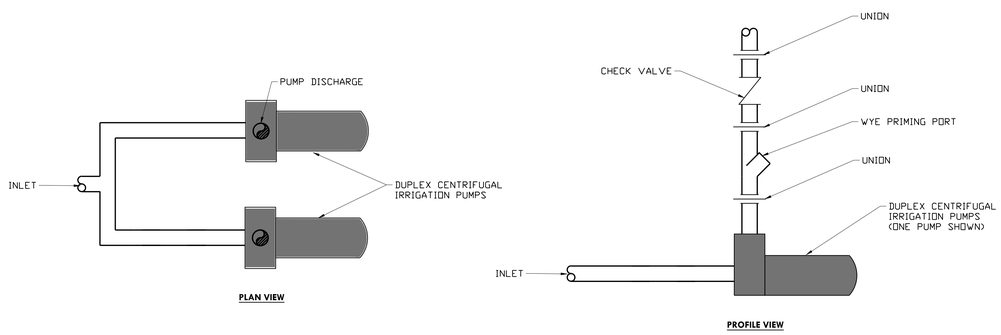
DATE:
09/07/21

DRAWN BY:
AJ/GF

CHECKED BY:
CC/CN

DETAILS

DRAWING NO.:
C-500

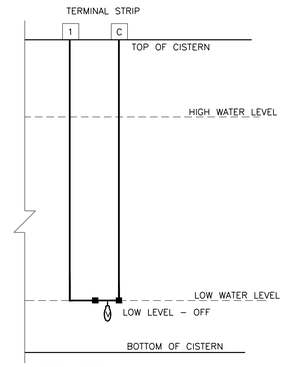


NOTES:

1. ALL PIPING SHALL BE SCH 80 PVC UON
2. ALL VALVES SHALL BE INSTALLED SO THAT THEY CAN BE EASILY REMOVED FOR MAINTENANCE.
3. TRUE UNION VALVES CAN REPLACE THE UNION – VALVE – UNION CONFIGURATION.

A TYPICAL IRRIGATION PUMP INSTALLATION SCHEMATIC

SCALE: NTS

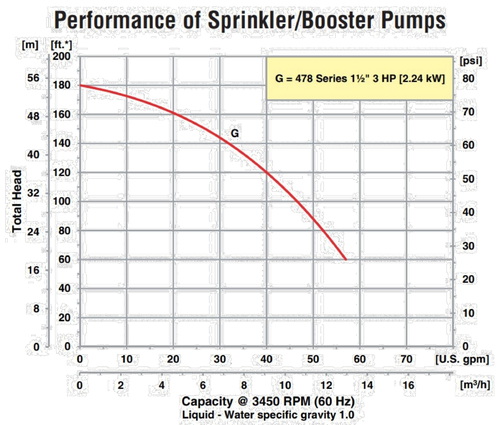


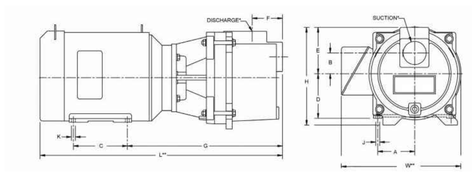
GENERAL NOTES

1. THIS FLOAT TURNS OFF THE PUMP WHEN LOWERED. WHEN THIS FLOAT IS LIFTED, THE PUMP WILL BE ENGAGED.

B LOW LEVEL FLOAT ARRANGEMENT

SCALE: NTS



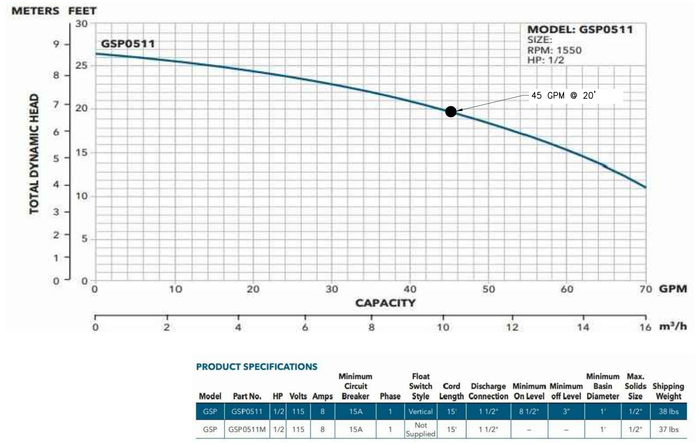


Model	Curve	HP	PH	ENC	Voltage @ 60 Hz ±	SUC*	DIS*	A	B	C	D	E	F	G	J	K	L**	W**	H	Ship Wt. (Lbs.)
4782-95	G	3	1	ODP	115/230	1½	1½	2.2 [5.5]	2.1 [5.3]	2.9 [7.3]	4.4 [11.1]	4.7 [11.9]	3.1 [7.8]	6.6 [16.7]	0.5 [1.2]	0.7 [1.7]	19.7 [50.0]	8.0 [20.3]	9.1 [23.1]	91
4786-99		3	3	TEFC	230/460	1¼	1¼	2.2 [5.5]	2.1 [5.3]	2.9 [7.3]	4.4 [11.1]	4.7 [11.9]	3.1 [7.8]	6.6 [16.7]	0.5 [1.2]	0.7 [1.7]	19.9 [50.5]	8.0 [20.3]	9.1 [23.1]	86

C SELF-PRIMING IRRIGATION/BOOSTER PUMP

AMT 478 SERIES 1 1/2" 3HP PUMP

SCALE: NTS

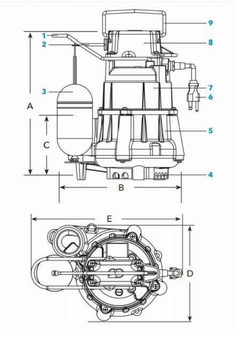


PRODUCT SPECIFICATIONS

Model	Part No.	HP	Volts	Amps	Minimum Circuit Breaker	Phase	Float Switch Style	Cord Length	Discharge Connection	Minimum On Level	Minimum off Level	Minimum Basin Diameter	Max. Solids Size	Shipping Weight
GSP	GSP0511	1/2	115	8	15A	1	Vertical	15'	1 1/2"	8 1/2"	3"	1'	1/2"	38 lbs
GSP	GSP0511M	1/2	115	8	15A	1	Not Supplied	15'	1 1/2"	–	–	1'	1/2"	37 lbs

DIMENSIONS

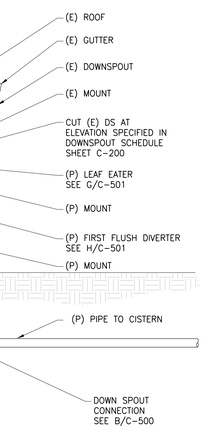
	A	B	C	D	E
GSP0511	12"	10.6"	5"	7.4"	10.6"
GSP0511M	12"	9.4"	5"	7.4"	9.4"



D SUMP PUMP

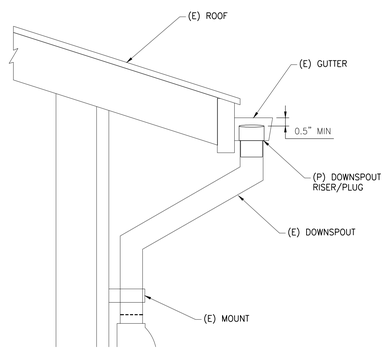
GSP0511 CAST IRON SUMP AND EFFLUENT PUMP WITH MECHANICAL SWITCH COUPLED WITH SOLID FLOAT

SCALE: NTS



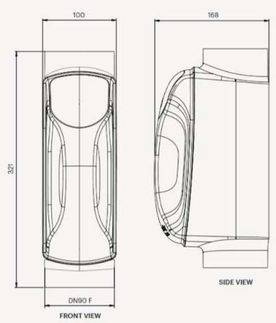
E DOWNSPOUT MODIFICATION

SCALE: NTS



F DOWN SPOUT RISER/PLUG

SCALE: NTS



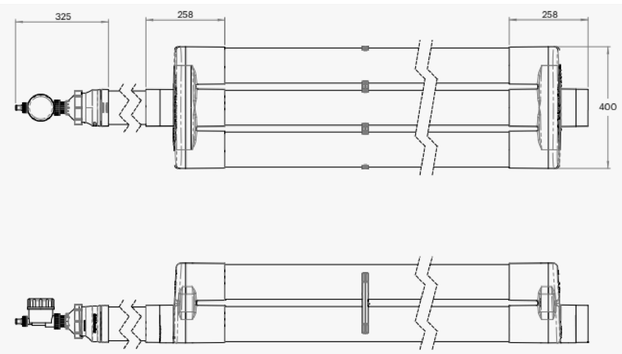
ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

Pipe Fitment

RHSL01	DN90 F (socket)	90mm pipe fits inside

G LEAF EATER SLIMLINE

SCALE: NTS



Pipe Fitment

WDIG10	DN100 F	Fits over 100mm / 4" pipe

ALL DIMENSIONS IN MM UNLESS OTHERWISE STATED.

H FIRST FLUSH DIVERTER

SCALE: NTS

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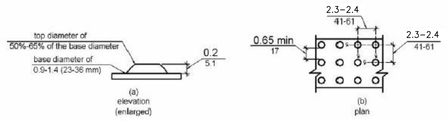
DETAILS

DRAWING NO.:

C-501

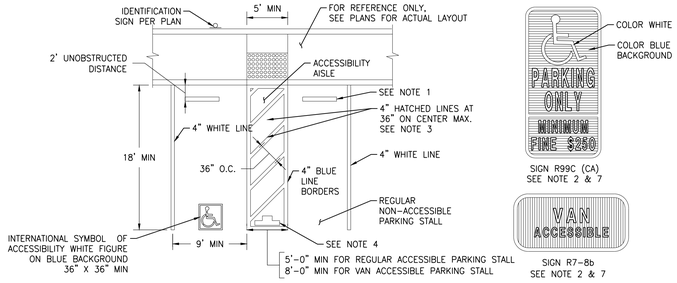


NOTES

1. DOMES SHALL CONFORM TO ALL REQUIREMENTS OF THE AMERICAN DISABILITIES ACT.
2. DOME SIZE: TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 0.9 INCH (23 MM) MINIMUM AND 1.4 INCHES (36 MM) MAXIMUM, A TOP DIAMETER OF 50% OF THE BASE DIAMETER MINIMUM TO 65% OF THE BASE DIAMETER MAXIMUM, AND A HEIGHT OF 0.2 INCH (5.1 MM).
3. DOME SPACING: TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6 INCHES (41 MM) MINIMUM AND 2.4 INCHES (61 MM) MAXIMUM, AND A BASE-TO-BASE SPACING OF 0.65 INCH (17 MM) MINIMUM, MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
4. DETECTABLE WARNING SURFACES COLOR BE YELLOW PER CBC 11B-705

A TRUNCATED DOMES

SCALE: NTS



SIGN R99C (CA)
SEE NOTE 2 & 7

SIGN R7-8b
SEE NOTE 2 & 7

UNAUTHORIZED VEHICLES PARKED IN DESIGNATED ACCESSIBLE SPACES NOT DISPLAYING DISTINGUISHING PLACARDS OR SPECIAL LICENSE PLATES ISSUED FOR PERSONS WITH DISABILITIES WILL BE TOWED AWAY AT THE OWNER'S EXPENSE

TOWED VEHICLES MAY BE RECLAIMED AT OCCIDENTAL TOWING #1 SYLVANIA HEIGHTS CAMP MEEKER, CA 95419

OR BY TELEPHONING (707) 874-3535

SIGN R100B (CA)
SEE NOTE 8

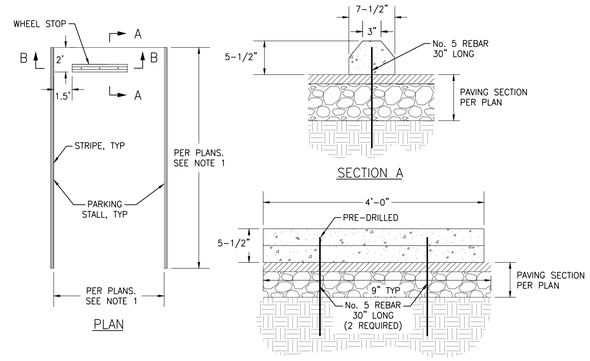
PERPENDICULAR ACCESSIBLE PARKING

NOTES

1. IN EACH PARKING STALL, A CURB OR WHEEL STOP SHALL BE PROVIDED AND LOCATED TO PREVENT ENCROACHMENT OF VEHICLES OVER THE REQUIRED WIDTH OF WALKWAYS.
2. WHERE SIGN R99C (CA) OR SIGN R7-8b ARE INSTALLED, THE BOTTOM OF THE SIGN OR PLAQUE PANEL SHALL BE A MINIMUM OF 7' ABOVE THE SURROUNDING SURFACE.
3. BLUE PAINT, INSTEAD OF WHITE MAY BE USED FOR MARKING ACCESSIBILITY AISLES IN AREAS WHERE SNOW MAY CAUSE WHITE MARKINGS TO NOT BE VISIBLE.
4. THE WORDS "NO PARKING" SHALL BE PAINTED IN WHITE LETTERS NO LESS THAN 1' HIGH AND LOCATED SO THAT IT IS VISIBLE TO TRAFFIC ENFORCEMENT OFFICIALS. SEE CALIFORNIA BUILDING CODE SECTION 11B-502.3.3 FOR DETAILS OF THE "NO PARKING" PAVEMENT MARKING.
5. PARKING SPACES AND ACCESS AISLES SHALL BE LEVEL WITH SURFACE SLOPES NOT EXCEEDING 1.5% IN ALL DIRECTIONS.
6. ACCESSIBLE PARKING ONLY SIGN SHALL BE SIGN R99C (CA) OR SIGN R99 (CA) WITH PLAQUE R99B (CA).
7. PARKING IDENTIFICATION SIGNS SHALL BE REFLECTORIZED WITH A MINIMUM AREA OF 70 SQUARE INCHES.
8. ADDITIONAL SIGN R100B SHALL BE POSTED IMMEDIATELY ADJACENT TO THE ONSITE ACCESSIBLE PARKING AND VISIBLE FROM EACH PARKING SPACE. THE SIGN SHALL NOT BE LESS THAN 17 INCHES WIDE BY 22 INCHES HIGH. LETTERS MUST BE CLEARLY SHOWN WITH A MINIMUM HEIGHT OF 1 INCH.

B ADA PARKING STALL

SCALE: NTS

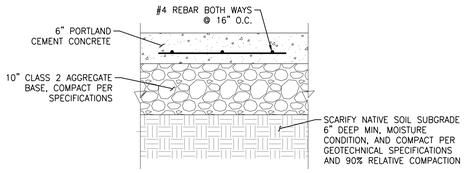


NOTES

1. SEE PARKING STALL STRIPING DETAILS FOR PARKING STALL DIMENSIONS AND LAYOUT.
2. REBAR EMBEDMENT TO BE MIN 6" BELOW AB SECTION.
3. FOR WHEEL STOPS INSTALLED IN GRAVEL PARKING BAY, EMBED REBAR 24" MIN.

C CONCRETE WHEEL STOP

SCALE: NTS



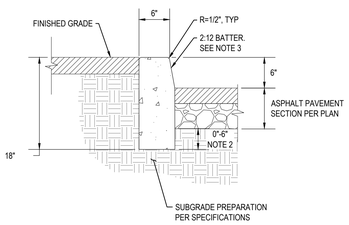
VEHICULAR CONCRETE PAVEMENT WITH REBAR SECTION

NOTES

1. IF VEHICULAR CONCRETE PAVEMENT IS TO BE INSTALLED ADJACENT TO LANDSCAPE, AGGREGATE BASE LAYER SHALL EXTEND 6" BEYOND PORTLAND CEMENT LAYER BELOW LANDSCAPE.
2. WHERE TYPICAL ASPHALT SECTION INSTALL IS OVER ENCOUNTERED UNSUITABLE SOILS, GEOGRID MAY BE INSTALLED BETWEEN THE SUBGRADE AND SUBBASE AS PER SPECIFICATIONS.

D VEHICULAR CONCRETE PAVEMENT SECTION

SCALE: NTS



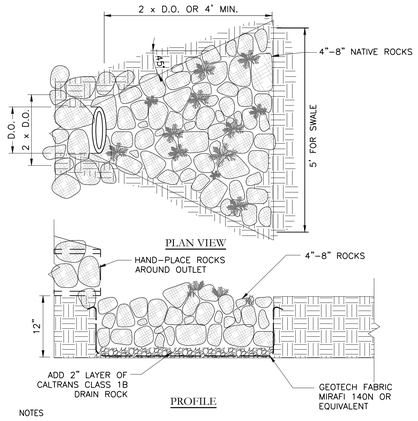
NOTES

1. SEE ASPHALT CONCRETE PAVEMENT, CONCRETE PAVEMENT AND CONCRETE SIDEWALK DETAILS FOR ADJACENT PAVEMENT SECTIONS, SEE LANDSCAPE ARCHITECT PLANS FOR ADJACENT LANDSCAPING.
2. CURB TO EXTEND 6" BELOW DEPTH OF PAVEMENT SECTION WHEN BASE MATERIAL IS AGGREGATE BASE.
3. AT CONTRACTOR OPTION, BATTER ON FACE OF CURB CAN EXTEND FULL DEPTH OF CURB.
4. CONCRETE MIX PER SPECIFICATIONS.

G VERTICAL CURB

SF-00-000

SCALE: NTS

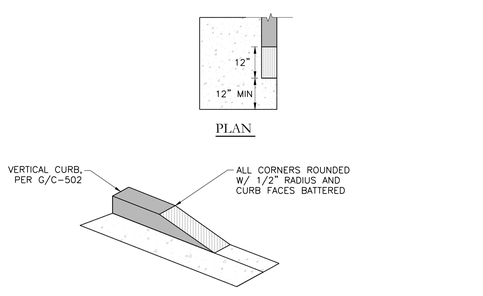


NOTES

1. INITIAL WIDTH OF STONE APRON SHALL BE AT A MINIMUM EQUAL TO TWICE THE OUTLET PIPE DIAMETER (D.O.).
2. AT A MINIMUM THE APRON SHALL FAN OUT AT 2:1 (LONGITUDINAL:LATERAL) UP TO AN ULTIMATE WIDTH EQUAL TO THAT OF THE RECEIVING SWALE; IN THE CASE OF A RAINGARDEN, FOUR (4) TIMES THE OUTLET PIPE DIAMETER.
3. ALL STONE PLACEMENT TO BE APPROVED BY ENGINEER IN THE FIELD.

E RIPRAP AT CULVERT OUTLET

SCALE: NTS

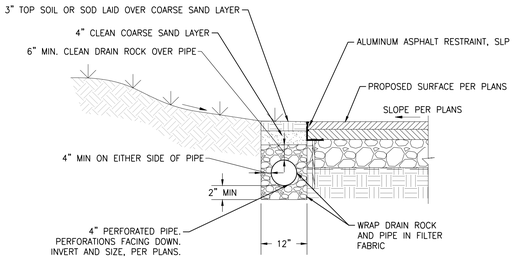


NOTES

1. SEE GRADING PLAN FOR CURB TRANSITION LOCATIONS.
2. TRANSITION LENGTH FROM TOP OF CURB TO FLUSH CURB OR FINISHED SURFACE ELEVATION SHALL BE TWO TIMES THE CURB HEIGHT.

H CURB TRANSITION

SCALE: NTS

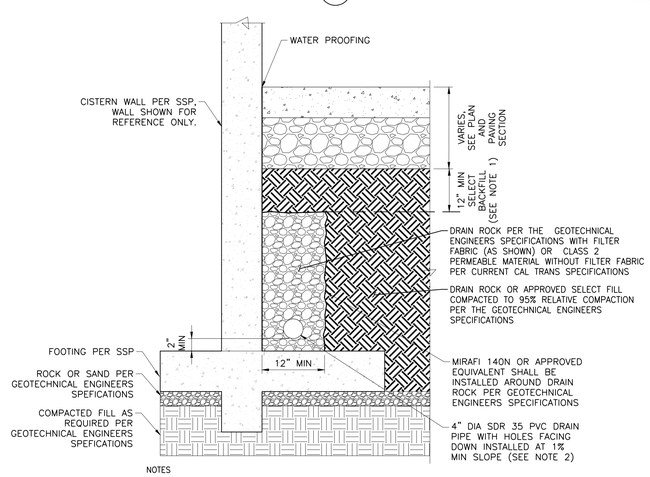


NOTES

1. SLOPE TO VARY AS REQUIRED, TO DRAIN.
2. PREFABRICATED DRAINAGE SYSTEMS MAY BE USED IN LIEU OF PERFORATED PIPE.

F EDGE DRAIN / LANDSCAPE PERIMETER DRAIN

SCALE: NTS



NOTES

1. SELECT FILL LOCATION, DEPTH, AND MATERIAL SHALL BE SPECIFIED AND APPROVED BY THE GEOTECHNICAL ENGINEER.
2. PERIMETER DRAIN SHALL DAYLIGHT TO THE STORM DRAIN SYSTEM PER PLAN ON SHEET C-400.

I CISTERN & PERIMETER DRAIN

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DRAWING NO.

C-502

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BOULDER SCHEDULE

QTY.	BOULDER	BOULDER SIZE
7	Extra-Large	48-60"W / 48-52" H
11	Large	48-60" W / 24-36" H
17	Medium	24-36" W / 16-20" H
17	Small	Double-head Size

NOTES:

1. The quantities above should be verified with what is available on site/salvageable from the parking lot and other boulders previously observed on site.
2. New boulders to be Sonoma Fieldstone. Contractor to submit imagery/samples for review.
3. Boulders shall be from a local source no further than 50 miles from the site.

ACCESSIBLE ASSEMBLY 1 CALC.

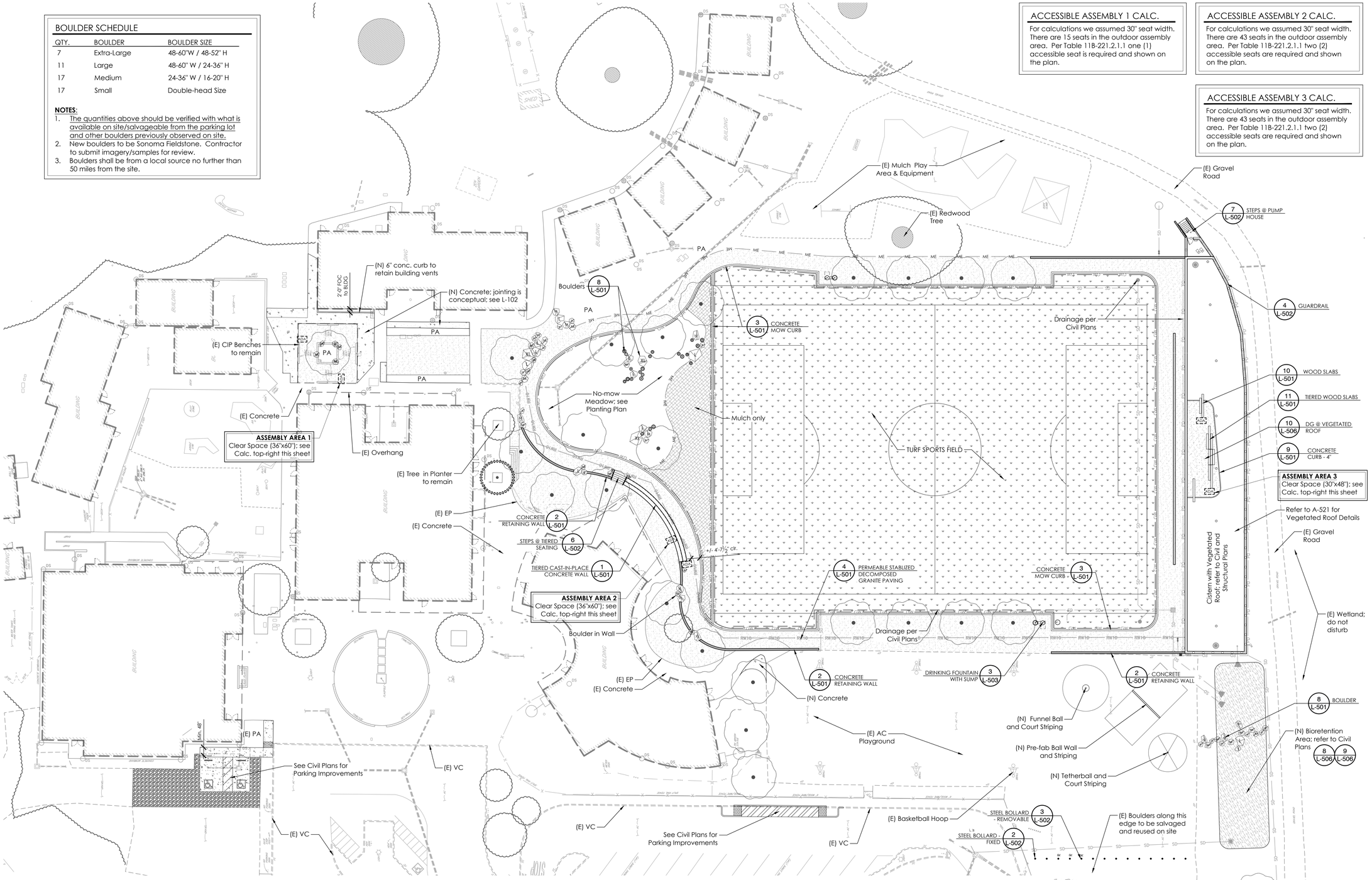
For calculations we assumed 30" seat width. There are 15 seats in the outdoor assembly area. Per Table 11B-221.2.1.1 one (1) accessible seat is required and shown on the plan.

ACCESSIBLE ASSEMBLY 2 CALC.

For calculations we assumed 30" seat width. There are 43 seats in the outdoor assembly area. Per Table 11B-221.2.1.1 two (2) accessible seats are required and shown on the plan.

ACCESSIBLE ASSEMBLY 3 CALC.

For calculations we assumed 30" seat width. There are 43 seats in the outdoor assembly area. Per Table 11B-221.2.1.1 two (2) accessible seats are required and shown on the plan.



MATERIALS LEGEND

TURF SPORTS FIELD
Refer to Planting Plan.

PEDESTRIAN CONCRETE PAVING
Color & Finish: Gray with light broom finish to match existing as best as possible. Jointing per L-102. Refer also to details.
12 L-501 / 1 L-502

PERMEABLE STABILIZED DECOMPOSED GRANITE
D.G. Select with natural Stabilizer(R) binder
Concrete Mow Curb per Plans & Details
Gopher Wire per Plans & Details
3 L-501 / 4 L-501 / 7 L-501

CONCRETE RETAINING WALL
Color: Davis - Pebble Finish: Top-cast 15 & Euro-tard 15
Boulders integrated into wall per Plan
2 L-501

METAL EDGING
Refer to Detail
5 L-501

TIERED CAST-IN-PLACE CONCRETE WALL
Color: Davis - Pebble
Finish: Top-cast 15 & Euro-tard 15
1 L-501

STEPS with HANDRAILS
Color: Davis - Pebble
Finish: Top-cast 15 & Euro-tard 15
6 L-502 / 8 L-502

BOULDERS
See Boulder Schedule this sheet for quantities. See details for more information. Locate in field with L.A.
8 L-501

WOOD SLABS
Place per Plan. Refer to Details
10 L-501 / 11 L-501

DRINKING FOUNTAIN WITH SUMP (determine sump location in field)
Model: 4405M with SS collar for embed mounting
Color: Green
Mfr: Most Dependable Fountains, Inc.
Install per manufacturer specifications. Refer to Civil Plans.
Place cantilevered accessible height per plan
Contact: Most Dependeable Fountains (901) 867-0039
3 L-503

TETHERBALL
Mfr.: BCI Burke
Product: Tetherball 590-0003 with sleeve (590-0034)
Install per manufacturer's specifications and details. Court striping to be 2" white painted striping - dimensions to match existing tetherball court markings per national/official standards.
Contact: Caroline O'Neal, Specified Play Equipment (408) 246-7389
2 L-503

PRE-FAB BALL WALL
DSA Pre-approved 16'w x 8'h wall
Mfr.: L.A. Steelcraft
Product: BW16-8S with (3) supports Color: Green
Contact: Jeff Whitman, NorCal Outdoor Supply (925) 984-5486
1 L-503 / - L-507 / - L-508

FUNNEL BALL
Mfr.: BCI Burke
Product: Classic Funnel Ball Game 590-0062 with sleeve (590-0034)
Install per manufacturer's specifications and details.
2 L-503

PLANTING AREA
Refer to Planting Plan and Details.
PA

STEEL BOLLARD
Mfr: Calpipe
Model: #IBP/F06080 Security Bollard
Fixed
Removable, External Pad Locking
Color: Yellow
2 L-502 / 3 L-502

REFER TO LAYOUT PLAN FOR MINOR DIMENSIONING AND ADDITIONAL DETAILS

REFER TO CIVIL PLANS FOR GRADING & DRAINAGE

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CONSULTANT:
QUADRIGA
landscape architecture and planning, inc.
SACRAMENTO | SANTA ROSA
707.546.3561 | www.quadrigainc.com

STAMP:

REGISTERED LANDSCAPE ARCHITECT CHRISTINE TALBOT #5226 12/31/2021 RENEWAL DATE STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

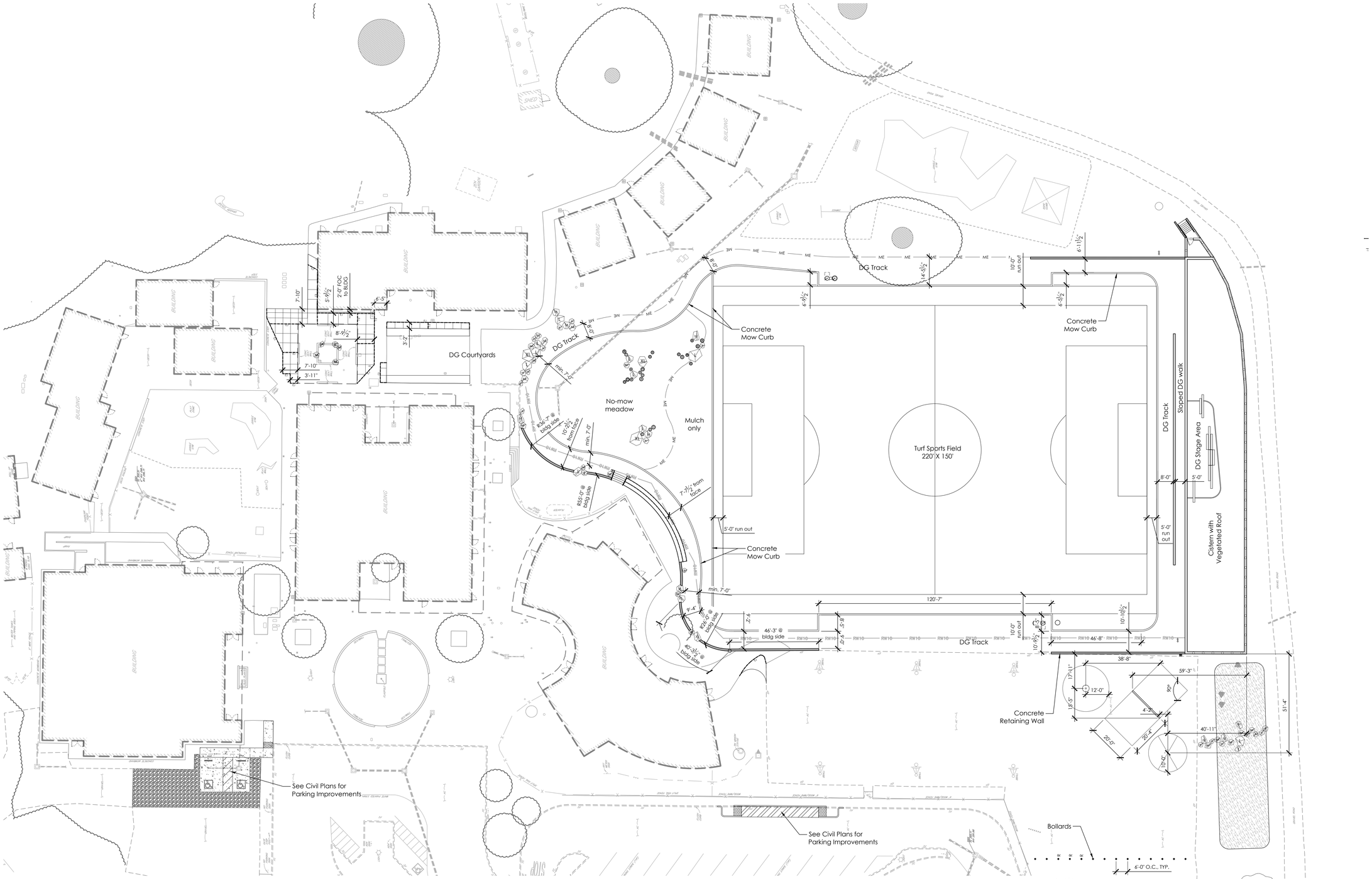
1935 BOHEMIAN HIGHWAY OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-118981
TLCD PROJECT NUMBER: 19046
DATE: 09/07/2021
DRAWN BY: Brett Kordenbrock
CHECKED BY: Christine Talbot
QUADRIGA PROJECT NUMBER: 19-1678

MATERIALS PLAN

L-101



LAYOUT LEGEND

PEDESTRIAN CONCRETE PAVING — 12/L-501, 1/L-502

Color & Finish: Gray with light broom finish to match existing as best possible. Jointing is conceptual; extend from adjacent jointing and corners of (E) & (N) concrete features. Refer to details.

CONCRETE MOW CURB — 3/L-501

Concrete Mow Curb per Plans & Details

CONCRETE RETAINING WALL — 2/L-501

Color: Davis - Pebble Finish: Top-cast 15 & Euro-tard 15
Large Boulders integrated into wall per Plan

METAL EDGING — 5/L-501

Refer to Detail

TIERED CAST-IN-PLACE CONCRETE WALL — 1/L-501

Color: Davis - Pebble
Finish: Top-cast 15 & Euro-tard 15

STEPS with HANDRAILS — 6/L-502, 8/L-502

Color: Davis - Pebble
Finish: Top-cast 15 & Euro-tard 15

BOULDERS — 8/L-501

See Boulder Schedule on L-101 for quantities. See details for more information. Locate in field with L.A.

REFER TO MATERIALS PLAN FOR PAVING, FURNISHINGS, FINISHES, AND DETAILS

REFER TO CIVIL PLANS FOR GRADING & DRAINAGE

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
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LAYOUT PLAN

L-102

IRRIGATION LEGEND

ALL IRRIGATION EQUIPMENT SERVICED BY THE CISTERN WATER SYSTEM IS TO BE MARKED FOR RECLAIMED/RECYCLE WATER WITH PURPLE CAPS, COVERS, PIPES AND OTHER NECESSARY APPURTENANCES.

SYMBOL	MANUFACTURER/MODEL	ARC	PSI	GPM	RADIUS	DETAIL
A	Hunter MP3000 PROS-06-PRS40-CV-F-R	360	40	3.64	30'	7/L-505
B	Hunter MP3000 PROS-06-PRS40-CV-F-R	90-210	40	Varies	30'	7/L-505
B	Hunter MP3500 PROS-06-PRS40-CV-F-R	90-210	40	Varies	35'	7/L-505
C	Hunter PCB-R	360	25	0.25	3'	6/L-505
D	Hunter PCB-R	360	25	0.50	3'	5/L-505
E	Hunter RZWS-SLEEVE-36-CV-R	360	25	0.50	3'	5/L-505
F	Temporary Spray Head Location - utilize (E) spray heads for full coverage of **temporary irrigation** area. Use only campus well water for this application. Heads in meadow mix area to be flush with grade per detail. Heads at bioretention to be on-grade per details.					7/L-505 8/L-505 9/L-505

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	DETAIL
	Hunter ICZ-101-25-LF-R Drip Control Zone Kit. 1" ICV Globe Valve with 1" HY100 filter system. Pressure Regulation: 25psi, Flow Range: .5 GPM to 15 GPM. 150 mesh stainless steel screen. Reclaimed purple filter cover.	10/L-504
	Area to Receive Dripline - **LOW WATER USE** Netafim TLHCVXR-053-18-NP Techline HCVXR Pressure Compensating Landscape Dripline with Check Valve and Anti-Siphon feature. For Reclaimed Water only. 0.53 GPH emitters at 18" O.C. Dripline laterals spaced at 18" apart, with emitters offset for triangular pattern. 17mm.	11/L-504 12/L-504 14/L-504
	Area to Receive **Temporary Irrigation** from well system. Reconfigure existing heads and incorporate salvaged headsto provide full coverage of temporary irrigation area for establishment period only.	8/L-505 9/L-505
	Hunter ICV-G-FS-R 1", 1-1/2", 2", and 3" Plastic Electric Remote Control Valves, Globe Configuration, with NPT Threaded Inlet/Outlet, for Commercial/Municipal Use. With Filter Sentry Factory Installed Option, and Reclaimed Water ID, Purple Handle.	9/L-504
	Hunter HQ-33DLRC-R Quick coupler valve, purple locking rubber cover for reclaimed water use, red brass and stainless steel, with 3/4" NPT inlet, 2-piece body.	8/L-504
	Nibco T-113-K - Line Size Class 125 bronze gate shut off valve with purple handle, same size as mainline pipe diameter at valve location.	7/L-504
MV	Buckner-Superior 3000-RW - line size Normally Closed Brass Master Valve that Provides Dirty Water Protection. With Purple Cross Handle for Reclaimed Water Use.	1/L-504
C	Existing Hunter Controller Verify zone operation as best as possible before construction commences. Modify zone operation and supply lines as needed for new and existing planting areas.	
IC	Hunter IC-1800-PED-SS Modular Controller, 18 stations, Outdoor Model, Stainless Steel Cabinet. Commercial Use. With two ICM-600 modules included. Locate in field with Landscape Architect.	5/L-504
WS	Hunter WSS w/WS-GUARD Wireless Solar Sync ET/Rain/Freeze sensor with guard/cover. Connect to Hunter I-Core Controller. Install high on cistern wall. Confirm location with Landscape Architect. Includes battery and rubber module cover, and mount bracket.	1/L-504
FS	Hunter HFS-158 Flow Sensor for use with ACC controller, 1-1/2" Sch. 80 Sensor Body, 24 VAC, 2 amp.	1/L-504
EZ	EZ-FLO Fertilizing Systems EZ010-FX - tank capacity = 9.4gal One system feeds all zones, drip or sprinkler. Install directly in the irrigation system main line after the back flow preventer. Provide gopher control Critter-MAX, per specifications.	2/L-504
TR	Transmitter Signet Flow Transmitter 8550 with (1) non-resetable totalizer and at least (1) resetable totalizer. Connect to Magmeter per manufacturer specifications. Mount in lockable S.S. weatherproof box on cistern for observation by faculty and students. Locate with Architect and Landscape Architect.	5/L-504
PR	Pump Relay (PR) Hunter PSR-53 for 3-phase pump. Coordinate installation with pump install, see civil plans	5/L-504
WM	Water Meter - 3-2551-P-0-2 Signet Magmeter 2551 with permanent and resettable totalizers. Coordinate with transmitter above. Install per mfr. specs. and in non-flooding area outside pump house in a S.S. watertight, below-grade enclosure. Confirm operation and spec with Landscape Architect to ensure intent of meter is met by District.	5/L-504
POC	Irrigation Point of Connection After pumps (per Civil Plans). Ensure min. 30gpm & 62psi are supplied from pumps; refer to Civil Plans for details.	
	Existing Irrigation Mainline	
	Existing Irrigation Mainline extension Match existing size and material	
	Proposed Mainline (from Cistern) - Schedule 40 PVC	3/L-504
	Pipe Sleeve: PVC Schedule 40 Sleeve under all hardscape/paving areas Min. 4" for laterals; min. 6" for mainline	4/L-504

Valve Callout
- # — Valve Number
- # — Valve Flow
- #" — Valve Size

ALL IRRIGATION EQUIPMENT SERVICED BY THE CISTERN WATER SYSTEM IS TO BE MARKED FOR RECLAIMED/RECYCLE WATER WITH PURPLE CAPS, COVERS, PIPES, SIGNAGE/PLAQUES, AND OTHER NECESSARY APPURTENANCES.

MWELO CALCULATIONS - cistern source

ETWU (Estimated Total Water Use) *Annual Gallons Required*

Valve #	Plant Type (Hydrozone)	Plant Factor	Irrigation Method	Irrigation Efficiency	ETAF (PF/IE)	Area (ft²)	ETAF x Area	ETWU (Eto)(0.62)(ETAF)(Area)
C1	Turf	0.50	Spray	0.81	0.62	4,818	2,974	58,084
C2	Turf	0.50	Spray	0.81	0.62	4,991	3,081	60,169
C3	Turf	0.50	Spray	0.81	0.62	5,365	3,312	64,678
C4	Turf	0.50	Spray	0.81	0.62	4,162	2,569	50,175
C5	Turf	0.50	Spray	0.81	0.62	5,244	3,237	63,219
C6	Turf	0.50	Spray	0.81	0.62	3,396	2,096	40,941
C7	Turf	0.50	Spray	0.81	0.62	3,592	2,217	43,304
C8	Turf	0.50	Spray	0.81	0.62	4,662	2,878	56,203
C9	Turf	0.50	Spray	0.81	0.62	4,570	2,821	55,094
C10	Low	0.30	In-line Drip	0.81	0.37	1,985	735	14,358
C11	Low	0.30	In-line Drip	0.81	0.37	2,475	917	17,903
					0.59	**45,260**	**26,837**	**524,127**

MAWA (Maximum Applied Water Allowance) *Annual Gallons Allowed*

	Eto	0.62	ETAF	Area (ft²)	MAWA (Eto)(0.62)(ETAF)(Area)
	31.5	0.62	0.45	45,260	**397,768**

The ETWU (524,127 gallons) is greater than the MAWA (397,768 gallons). However, this design complies with California MWELO requirements as it uses only reclaimed/harvested rain water for the field and vegetated roof irrigation.

NOTE ON CISTERN-BASED IRRIGATION SYSTEM DESIGN:
Typical high water using turf would have a plant factor closer to 0.80. With the selected Delta Bluegrass 90/10 Fescue, high efficiency MP Rotator heads, weather sensing technology, and aggressive irrigation schedule this project is designed to realize a 36% reduction in water use over a tradition irrigation system and sports field application or 295,120 gallons of water saved per year.

MWELO CALCULATIONS - well water source

ETWU (Estimated Total Water Use) *Annual Gallons Required*

Valve #	Plant Type (Hydrozone)	Plant Factor	Irrigation Method	Irrigation Efficiency	ETAF (PF/IE)	Area (ft²)	ETAF x Area	ETWU (Eto)(0.62)(ETAF)(Area)
W1	Tree-M	0.50	Tree Bubbler	0.81	0.62	261	161	3,147
W2	Low	0.30	Shrub Bubbler	0.81	0.37	1,106	410	8,000
W3	Med	TEMPORARY						
W4	Tree-M	0.50	Tree Bubbler	0.81	0.62	162	100	1,953
W5	Low	0.30	In-line Drip	0.81	0.37	2,458	909	17,762
					0.17	**3,987**	**671**	**30,861**

MAWA (Maximum Applied Water Allowance) *Annual Gallons Allowed*

	Eto	0.62	ETAF	Area (ft²)	MAWA (Eto)(0.62)(ETAF)(Area)
	31.5	0.62	0.45	3,987	**35,040**

The ETWU (30,861 gallons) is greater than the MAWA (35,040 gallons). This design uses well water as a source. This design complies with California MWELO requirements for irrigation and planting design.

HYDROZONE SUMMARY TABLES

Hydrozone	Valve	Irrigaiton Method	Area (sq. ft.)	% of Landscape Area
Medium	C1	MP Rotator	4,818	11%
Medium	C2	MP Rotator	4,991	11%
Medium	C3	MP Rotator	5,365	12%
Medium	C4	MP Rotator	4,162	9%
Medium	C5	MP Rotator	5,244	12%
Medium	C6	MP Rotator	3,396	8%
Medium	C7	MP Rotator	3,592	8%
Medium	C8	MP Rotator	4,662	10%
Medium	C9	MP Rotator	4,570	10%
Low	C10	Drip Irrigation	1,985	4%
Low	C11	Drip Irrigation	2,475	5%
		Medium	**40,800**	**90%**
		Low	**4,460**	**10%**
		TOTAL	**45,260**	**100%**

Hydrozone	Valve	Irrigaiton Method	Area (sq. ft.)	% of Landscape Area
Medium	W1	Tree Bubbler	261	7%
Low	W2	Shrub Bubbler	1,106	28%
Medium	W3	Temporary	-	0%
Medium	W4	Tree Bubbler	162	4%
Low	W5	Drip Irrigation	2,458	62%
		Medium	**423**	**11%**
		Low	**3,564**	**89%**
		TOTAL	**3,987**	**100%**

IRRIGATION SCHEDULE - cistern water source

Location: Sebastopol **Eto:** 31.5 **Soil Type:** Loam **Cycles per Week:** 3 days per week

Station	GPM	Soil Type	Plant Type	Area SF	Irrigation Type	Kc (PF)	IE	Precip Rate	No. of Cycles	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total In/Yr
										MINUTES PER CYCLE AT 100% ET												
C1	19.2	0.7	Turf	4,818	Spray	0.5	0.81	0.38	1	4.7	8.2	14.7	22.7	29.7	33.9	35.8	31.6	24.3	16.1	7.7	4.4	19.44
C2	20.8	0.7	Turf	4,991	Spray	0.5	0.81	0.40	1	4.5	7.8	14.1	21.7	28.4	32.4	34.2	30.2	23.3	15.4	7.4	4.2	19.44
C3	24.0	0.7	Turf	5,365	Spray	0.5	0.81	0.43	1	4.2	7.3	13.1	20.2	26.5	30.2	31.9	28.1	21.7	14.4	6.9	4.0	19.44
C4	14.6	0.7	Turf	4,162	Spray	0.5	0.81	0.34	1	5.3	9.3	16.7	25.8	33.7	38.5	40.6	35.9	27.6	18.3	8.8	5.0	19.44
C5	24.2	0.7	Turf	5,244	Spray	0.5	0.81	0.44	1	4.0	7.1	12.7	19.6	25.6	29.3	30.9	27.3	21.0	13.9	6.7	3.8	19.44
C6	13.7	0.7	Turf	3,396	Spray	0.5	0.81	0.39	1	4.6	8.1	14.6	22.4	29.3	33.5	35.3	31.2	24.0	15.9	7.6	4.4	19.44
C7	15.4	0.7	Turf	3,592	Spray	0.5	0.81	0.41	1	4.3	7.6	13.7	21.1	27.6	31.5	33.3	29.3	22.6	15.0	7.2	4.1	19.44
C8	20.3	0.7	Turf	4,662	Spray	0.5	0.81	0.42	1	4.3	7.5	13.5	20.8	27.2	31.0	32.7	28.9	22.3	14.8	7.1	4.1	19.44
C9	20.5	0.7	Turf	4,570	Spray	0.5	0.81	0.43	1	4.2	7.3	13.1	20.2	26.4	30.1	31.8	28.0	21.6	14.3	6.9	3.9	19.44
C10	7.8	0.7	Low	1,985	In-line Drip	0.3	0.81	0.38	1	2.9	5.0	9.0	13.9	18.2	20.7	21.9	19.3	14.9	9.9	4.7	2.7	11.67
C11	9.7	0.7	Low	2,475	In-line Drip	0.3	0.81	0.38	1	2.9	5.0	9.0	13.9	18.2	20.7	21.9	19.3	14.9	9.9	4.7	2.7	11.67

Note: During Maintenance Period irrigation times may be incrased by 20% to allow for establishment of newly planted material

IRRIGATION SCHEDULE - well water source

Location: Sebastopol **Eto:** 31.5 **Soil Type:** Loam **Cycles per Week:** 3 days per week

Station	GPM	Soil Type	Plant Type	Area SF	Irrigation Type	Kc (PF)	IE	Precip Rate	No. of Cycles	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total In/Yr
										MINUTES PER CYCLE AT 100% ET												
W1	14.5	0.7	Tree-M	261	Tree Bubbler	0.50	0.81	5.35	1	0.3	0.6	1.1	1.6	2.1	2.4	2.6	2.3	1.7	1.2	0.6	0.3	19.44
W2	11.3	0.7	Low	1,106	Shrub Bubbler	0.30	0.81	0.98	1	1.1	1.9	3.5	5.3	7.0	8.0	8.4	7.4	5.7	3.8	1.8	1.0	11.67
W3	Temp	0.7	Med	Temporary																		
W4	9.0	0.7	Tree-M	162	Tree Bubbler	0.50	0.81	5.35	1	0.3	0.6	1.1	1.6	2.1	2.4	2.6	2.3	1.7	1.2	0.6	0.3	19.44
W5	9.6	0.7	Low	2,458	In-line Drip	0.30	0.81	0.38	1	2.9	5.0	9.0	13.9	18.1	20.7	21.9	19.3	14.9	9.9	4.7	2.7	11.67

Note: During Maintenance Period irrigation times may be incrased by 20% to allow for establishment of newly planted material

IRRIGATION NOTES

1. The Landscape Contractor shall inspect the site and verify conditions and dimensions prior to construction.
2. Install irrigation system in accordance with all local codes and ordinances.
3. See details and specifications for procedures, material and installation requirements.
4. Prior to cutting into soil, locate all cables, conduits, sewers, and other utilities or architectural features that are commonly encountered underground and take proper precautions not to damage or disturb such improvements. Any damage made during the installation of the irrigation system of the aforementioned items shall be repaired and/or replaced to the satisfaction of the Owner at the Contractor's own expense.
4. Contractor to minimize disturbance to existing tree roots on site. Cut minor roots (less than 2" in diameter) of trees indicated to remain in a clean and careful manner where such roots obstruct installation of new construction. If any roots greater than 2" are encountered stop work and contact the Owner's representative immediately.
5. The irrigation design is diagrammatic. All piping, valves, etc., shown within paved areas are for design clarification only and shall be installed in planting areas. Main and valves shall be installed in shrub/ground cover areas only. Avoid conflicts with utilities, new planting, new site or architectural elements.
7. All valves shall be placed in Carson 1419B-12B, or equal, green valve box. All valve boxes shall be located in groundcover areas whenever possible, and shall be bolted.
8. Station operation times shall not exceed the soil's infiltration rate as determined by the soils report.
9. All lateral end runs shall be 3/4" size unless otherwise noted.
10. Where pipe sizes have been omitted or there is a conflict, refer to the lateral pipe sizing chart for sizes.
11. Install one spare common and two spare control wires from each controller in a continuous loop through each valve box connected to that controller for future use.
12. Contractor shall coordinate sleeving for irrigation piping with Paving Contractor prior to paving installation. It is the contractor's responsibility for providing appropriate sleeving under hardscape. At each mainline sleeve, provide a separate, appropriate-size sleeve for control/common wiring.
13. The landscape Contractor shall coordinate his work with other trades involved (I.E. Grading, Plumbing and Electrical Contractors).
14. Contractor shall verify all locations and function of existing irrigation equipment and points of connection that are to remain or to connect to new irrigation systems, upon notification of award of contract. Contractor to immediately notify Landscape Architect if any discrepancies are found between plans and existing irrigation conditions.

POINT OF CONNECTION #1 - FIELD IRRIGATION System Operating Flow & Pressure

Maximum flow: 26 GPM
Static Design Pressure: 62psi
Normal Operating Pressure: 40 psi
Available Pressure from the Cistern Pump house should be 62psi - refer to Civil Drawings for more information. Contractor to confirm pressure at Irrigation Point of Connection (P.O.C.) prior to the installation of any irrigation equipment.

LATERAL SIZING GUIDE

CIRCUIT GPM	PIPE SIZE	PIPE CLASS
0-8 GPM	3/4"	SCH. 40 PVC
9-15 GPM	1"	SCH. 40 PVC
16-30 GPM	1-1/2"	SCH. 40 PVC
31-50 GPM	2"	SCH. 40 PVC
51-70 GPM	2-1/2"	SCH. 40 PVC
71-110 GPM	3"	SCH. 40 PVC

DRIP SUPPLY/EXHAUST HEADER SIZING GUIDE

ZONE FLOW	HEADER SIZE	HEADER TYPE
0-5 GPM	1/2"	PVC
5-8 GPM	3/4"	PVC
8-13 GPM	1"	PVC

CONTROL WIRE SIZING GUIDE

Control/ Common Wire	No. 14	No. 12	No. 10	No. 8
No. 14	1700'	2000'	2400'	2700'
No. 12		2700'	3300'	3800'
No. 10			4800'	5200'
No. 8				6700'

STATEMENT OF COMPLIANCE

I have complied with the criteria of the California Department of Water Resources Model Water Efficient Landscape Ordinance as established by Chapter 2.7, Title 23 of the 2015 California Building Code and have applied them for the efficient use of water in the landscape design plan.

PREPARER NAME: Christine Talbot
PREPARER SIGNATURE:
PROFESSIONAL LICENSE: #5226

REFER TO L-503 & L-504 FOR IRRIGATION DETAILS

REFER TO CIVIL PLANS FOR:
- **GRADING, DRAINAGE, AND UTILITY WORK,**
- **CISTERN AND IRRIGATION SUPPLY PUMP DETAILS**

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APP: 01-118981 INC:
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DATE: 09/21/2021

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REGISTERED LANDSCAPE ARCHITECT
CHRISTINE TALBOT
#5226
09/30/2021
RENEWAL DATE
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS
1935 BOHEMIAN HIGHWAY OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981
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19046
DATE:
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DRAWN BY:
Brett Kordenbrock
CHECKED BY:
Christine Talbot
QUADRIGA PROJECT NUMBER:
19-1678

IRRIGATION CALCULATIONS LEGEND & NOTES

L-103

POINT OF CONNECTION #1 - FIELD IRRIGATION
System Operating Flow & Pressure

Maximum flow: 26 GPM
Static Design Pressure: 62psi
Normal Operating Pressure: 40 psi
Available Pressure from the Cistern Pump house should be 62psi - refer to Civil Drawings for more information. Contractor to confirm pressure at Irrigation Point of Connection (P.O.C.) prior to the installation of any irrigation equipment.

EXTEND (E) CULVERTS 4' PAST EDGE OF ROAD WIDENING

(E) Redwood Clump to Remain. Hand trench within dripline

All Tree bubblers on one valve from (E) well supply mainline

Laterals are diagrammatic. Place in sleeve if placed under hardscape/DG

(E) Gravel Road

(N) Controller

(N) Weather Station on top of wall

(N) Pump Relay in Pump House

Bring Mainline up internal to pump house and penetrate pump house roof to supply valves; seal all penetrations watertight; see Arch Details

Cap pipe and remove (E) spray heads in (N) hardscape and planting areas

All Shrub bubblers on one valve from (E) well supply mainline

(E) Concrete

Cap pipe and remove (E) spray heads in (N) hardscape and planting areas

Jack and Bore to (E) Planter

Replace and relocate (E) valves to adjacent planting area; reuse wire for new zones. Stop service to existing field and modify laterals/supply lines as needed to service new irrigation zones as shown.

Reconfigure existing head layout to create full coverage in temporary irrigation zone.

Place Mainline between back of goal and D.G. track

Remove all (E) spray heads in (N) sports turf area

Irrigated vegetated roof (cistern water)

Zone C10

Zone C11

Place vegetated roof valves in mounded areas to fully conceal valve boxes

(E) Gravel Road

(E) Wetland, DND

(E) MAINLINE FROM (E) PUMP/WELL

(E) MAINLINE FROM (E) PUMP/WELL APPROXIMATE LOCATION

(E) Point of connection at well for irrigation of non-field plantings

(E) Controller in janitor closet; verify zone operation before construction. Run new wire from existing controller to replaced valves.

Approximate location of (E) Mainline

(E) Tree to Remain

(E) Irrigation Valve - move to adjacent planting area; confirm zone operation with Landscape Architect. Revise zone as needed to service new planting area.

Laterals are diagrammatic. Place in sleeve if placed under hardscape/DG

All Tree bubblers on one valve from (E) well supply mainline

Bioretention

See Civil Plans for Parking Improvements

Repair all (E) irrigation where utility work occurs; refer to Civil Plans for Grading and Drainage

See Civil Plans for Parking Improvements

Bioretention Area

(E) Gravel Parking

REFER TO L-103 FOR LEGEND & CALCULATIONS

REFER TO L-503 & L-504 FOR IRRIGATION DETAILS

REFER TO CIVIL PLANS FOR:
- **GRADING, DRAINAGE, AND UTILITY WORK,**
- **CISTERN AND IRRIGATION SUPPLY PUMP DETAILS**

SCALE: 1" = 20'-0"

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REGISTERED LANDSCAPE ARCHITECT CHRISTINE TALBOT #5226 12-31-2021 SACRAMENTO CALIFORNIA STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/07/2021

DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

IRRIGATION PLAN

L-104

PLANT LEGEND

TREES	CODE	BOTANICAL / COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ACE BLZ	Acer x freemanii `Jeffsred` TM / Autumn Blaze Maple	36"box	Medium		8
	CER WES	Cercis occidentalis / Western Redbud Multi-trunk	15 gal	Very Low		2
	GIN AUT	Ginkgo biloba `Autumn Gold` TM / Maidenhair Tree	36"box	Medium		3
	GIN SEN	Ginkgo biloba `Princeton Sentry` / Princeton Sentry Gingko	24"box	Medium		3
	QUE LOB	Quercus lobata / Valley Oak	36"box	Low		6
	TIL GRE	Tilia cordata `Greenspire` / Greenspire Littleleaf Linden	24"box	Medium		2

SCREENING TREE/SHRUB	CODE	BOTANICAL / COMMON NAME	SIZE	WATER USE	SPACING	QTY
	COR NUT	Cornus nuttallii / Multi-stem Western Flowering Dogwood	24"box	Medium		3
	COR CAL	Corylus cornuta californica / Western Hazelnut	15 gal	Low		13

SHRUBS	CODE	BOTANICAL / COMMON NAME	SIZE	WATER USE	SPACING	QTY
	ACH SON	Achillea millefolium `Sonoma Coast` / Sonoma Coast Yarrow	1 gal	Low	Per Plan	53
	ACH COR	Achillea x `Coronation Gold` / Coronation Gold Yarrow	1 gal	Low	Per Plan	60
	ARC MON	Arctostaphylos hookeri `Monterey Carpet` / Hooker`s Manzanita	1 gal	Low	Per Plan	26
	ARC DOU	Arctostaphylos x `John Dourley` / John Dourley Manzanita	1 gal	Low	Per Plan	27
	BID GMR	Bidens ferulifolia `Goldmarie` / Goldmarie Beggarticks	1 gal	Low	Per Plan	82
	CAR NUD	Carex nudata / California Black-flowering Sedge	4" pot	Low	Per Plan	276
	CAR TES	Carex testacea / Orange Sedge	4" pot	Low	Per Plan	133
	CAR TUM	Carex tumulicola / Berkeley Sedge	1 gal	Low	Per Plan	221
	CEA JO3	Ceanothus x `Joyce Coulter` / Joyce Coulter	1 gal	Low	Per Plan	7
	CHO ELC	Chondropetalum tectorum `El Campo` / Cape Rush	1 gal	Low	Per Plan	19
	DAU CAR	Daucus carota / Queen Anne`s Lace	4" pot	Low	Per Plan	37
	DIC CAP	Dichelostemma capitatum / Blue-Dicks	4" pot	Very Low	Per Plan	76
	ELY GLA	Elymus glaucus / Blue Wildrye	1 gal	Low	Per Plan	20
	FES PHI	Festuca californica `Phil`s Silver` / California Fescue	1 gal	Low	Per Plan	38
	IRI COA	Iris douglasiana `Pacific Coast Hybrids` / PCH Iris	4" pot	Low	Per Plan	62
	JUN ELK	Juncus patens `Elk Blue` / Spreading Rush	1 gal	Low	Per Plan	68
	RUM CRI	Rumex crispus / Sour Dock	4" pot	Low	Per Plan	19
	SED ANG	Sedum x `Angelina` / Angelina Sedum	4" pot	Low	Per Plan	91
	SED JOY	Sedum x `Autumn Joy` / Autumn Joy Sedum	1 gal	Low	Per Plan	29
	STI PUL	Stipa pulchra / Purple Needle Grass	4" pot	Very Low	Per Plan	41

SHRUB AREAS	CODE	BOTANICAL / COMMON NAME	SIZE	WATER USE	SPACING	QTY
	LUP BIC	Lupinus bicolor / Miniature Lupine	Seed	Low	Seed	152 sf

SPORTS TURF

Delta Bluegrass 90/10 Tall Fescue Bluegrass Mix
Place as sod. Refer to specifications and manufacturer's specifications for install and maintenance. Gopher wire to be installed per details.

3 L-501 7 L-501

MEADOW MIX

Meadow Mix
Supplier: Larner Seeds
Mix: 40% Coast of California Wildflower Seed Mix
60% Golden State Native Erosion Control Mix
Apply as hydroseed. Provide temporary irrigation per Irrigation Plan.

MULCH ONLY

Depth varies; refer to Details and Specifications

8 L-501 7 L-506

PLANTING NOTES

1. The plant list is provided for the convenience of the Contractor. The Contractor shall verify all plant counts and if a discrepancy exists, the plan shall govern.
2. Substitution of specified plant material shall not be made unless otherwise approved by the Landscape Architect. Same genus different species substitutions are acceptable provided the variety is similar in growth habit to the specified plant and water use is the same. Example: Escallonia "Terry" could sub for "Red Elf". Rhaphiolepis can not substitute for Escallonia as they have different water use requirements. Certificates of compliance will not be completed for projects which exceed the water use of specified plant materials until conformance with the water efficient landscape requirements is achieved.
3. Finish grade in planting areas shall be 3" below the top of adjacent curbs, walks or paved areas. Finish grade shall be smooth and even prior to installation of 3" bark mulch. All landscape areas not covered with live material shall be covered with 3" of bark mulch.
4. Planting areas shall be kept clean and free from all waste materials such as concrete, asphaltic waste, lumber or other such materials. Waste materials shall be removed by excavation of the soil. Replace with clean native top soil.
5. See details and specifications for procedures, material, and installation requirements.
6. Imported top soil (if required) shall be fertile, friable sandy loam of uniform composition. Clay particles shall not exceed 9% by volume. The soil shall be free from subsoil, refuse, roots, rocks over 1" in diameter or other deleterious material. The imported soil shall be capable of sustaining healthy plant life, native top soil shall be used where available prior to importing soil. A soils report shall be provided for all imported top soils, per specifications.
7. Adjacent streets, sidewalks and other areas shall be kept free of mud, dirt or similar nuisances resulting from earthwork operations.
8. Any damaged or destroyed landscaping shall be replaced to the satisfaction of the Owner's Representative.
9. For best results, native plant materials should not have their roots disturbed. For plastic cans, remove bottom of can, place in plant pit and cut sides to remove.
10. Soil sample reports shall be reviewed by Landscape Architect prior to amending soils, per specifications. Remove any lime-treated soils prior to planting installation.
11. Two (2) agronomy test sites are shown per plan with symbol (field and bioretention). Conduct soil agronomy testing per specifications.

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CHRISTINE TALBOT
#5226
12/31/2021
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STATE OF CALIFORNIA

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/07/2021

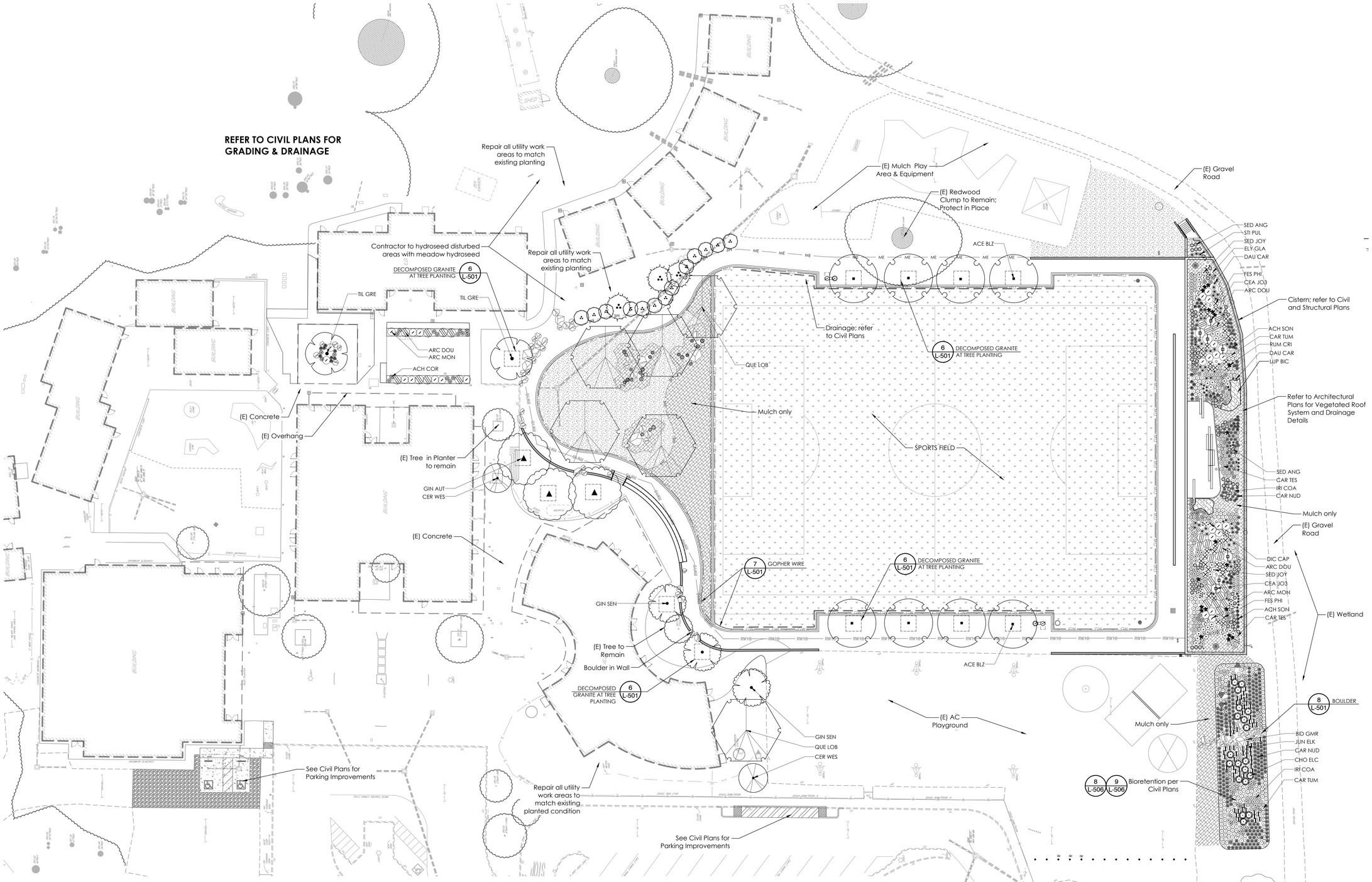
DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

PLANT LEGEND & NOTES

L-105



PLANT LEGEND

REFER TO L-105 FOR PLANT LIST

SPORTS TURF

Delta Bluegrass 90/10 Tall Fescue Bluegrass Mix
Place as sod. Refer to specifications and manufacturer's specifications for install and maintenance. Gopher wire to be installed per details. 3 L-501 7 L-501

MEADOW MIX

Supplier: Larner Seeds
Mix: 40% Coast of California Wildflower Seed Mix @ 1# per 1,000sf
60% Golden State Native Grass Erosion Control Mix @ 1# per 2,000sf
Apply as Hydroseed.

MULCH ONLY

Depth and type varies - min. 3" arbor mulch in all PA's; refer to Details and Specifications for more information. 8 L-501 7 L-506

BOULDERS

See Boulder Schedule on L-101 for quantities. Refer to Materials & Layout Plan. 8 L-501

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REVISIONS:

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

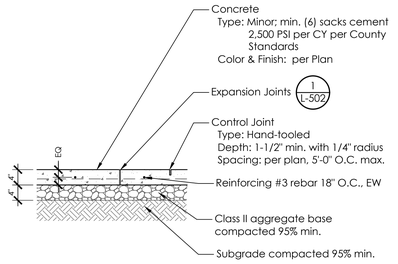
1935 BOHEMIAN HIGHWAY OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-118981
TLCD PROJECT NUMBER: 19046
DATE: 09/07/2021
DRAWN BY: Brett Kordenbrock
CHECKED BY: Christine Talbot
QUADRIGA PROJECT NUMBER: 19-1678

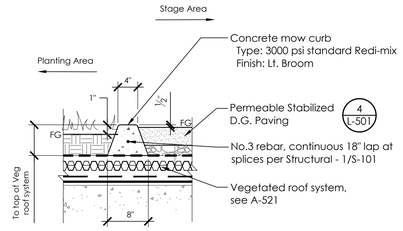
PLANTING PLAN

L-106



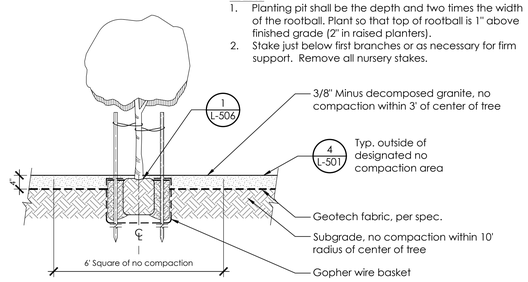
NOTES:
1. Install expansion joints where new paving meets existing paving, walls, and doors per details.
2. Create EJ's in all new paving per plan and details, no further than 18' apart
3. Contractor to submit a 4x4 panel sample of each concrete finish to Landscape Architect for approval.

12 PEDESTRIAN CONCRETE PAVING
NOT TO SCALE — P-IN-HAR-68



NOTES:
1. Install fiber expansion joint in curb; 12'-0" o.c. max.
2. Install fiber expansion joint between header and adjacent hardscape and/or building.
3. Install tooled score joints; 12'-0" o.c. max. or at changes of direction.
4. Refer to Structural Plans (1/S-101) for reinforcing details (laps, splice, radii).

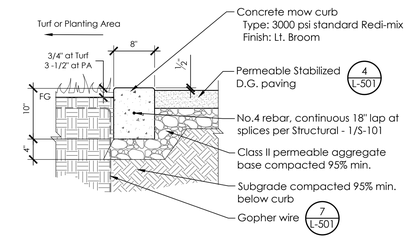
9 CONCRETE CURB - 4"
NOT TO SCALE — P-IN-HAR-80



NOTES:
1. Planting pit shall be the depth and two times the width of the rootball. Plant so that top of rootball is 1" above finished grade (2" in raised planters).
2. Stake just below first branches or as necessary for firm support. Remove all nursery stakes.

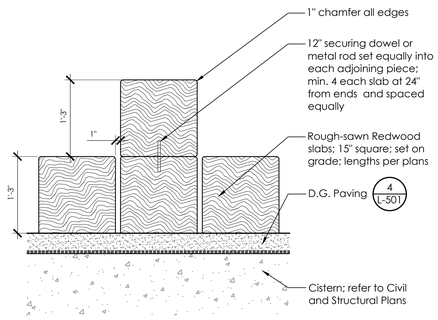
INSTALLATION NOTES:
1. Mix decomposed granite and stabilizer thoroughly on site, moisten as required.
2. Place over prepared subgrade in two 2" lifts and do not compact.
3. Contractor to provide positive drainage throughout surfaced area.
4. Contractor to submit sample of decomposed granite for approval by Landscape Architect.

6 DECOMPOSED GRANITE AT TREE PLANTING
NOT TO SCALE — P-IN-HAR-02

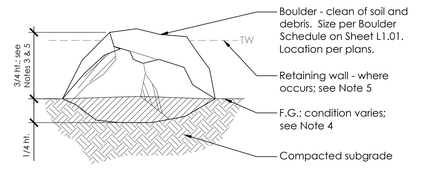


NOTES:
1. Install fiber expansion joint in curb; 12'-0" o.c. max.
2. Install fiber expansion joint between header and adjacent hardscape and/or building.
3. Install tooled score joints; 12'-0" o.c. max. or at changes of direction.
4. Refer to Structural Plans (1/S-101) for reinforcing details (laps, splice, radii).

3 CONCRETE MOW CURB
NOT TO SCALE — P-IN-HAR-03

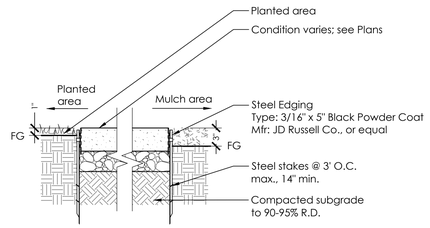


11 TIERED WOOD SLABS
DO NOT SCALE — P-IN-HAR-28



NOTES:
1. Review approach for large groupings of boulders with Landscape Architect - some areas are for informal seating and require specific sizes to accommodate uses.
2. Boulders shall be buried to depth such that the slopes of the sides of the boulder are positive.
3. Large boulders immediately adjacent to pathways/hardscape should be placed so that their top is 18-27" above F.G. for informal seating. Refer to Materials and Layout Plans.
4. Where boulders are grouped in No-Mow Meadow area, provide min. 5' walk-on bark mulch 42" beyond boulder at F.G.
5. Where embedded within retaining wall, ensure height of boulder is min. 2" above TW. Provide EJ's at all boulder/wall interfaces.
6. Refer to Civil Plans for Grading and Drainage.

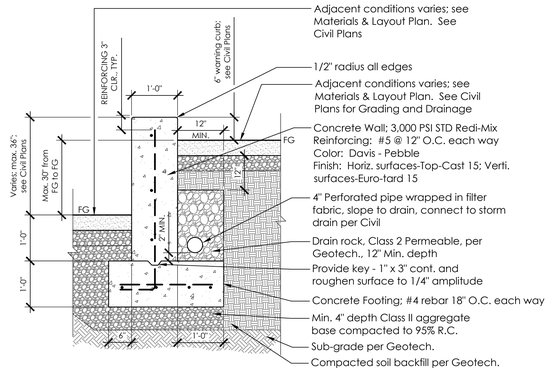
8 BOULDER
NOT TO SCALE — P-IN-HAR-31



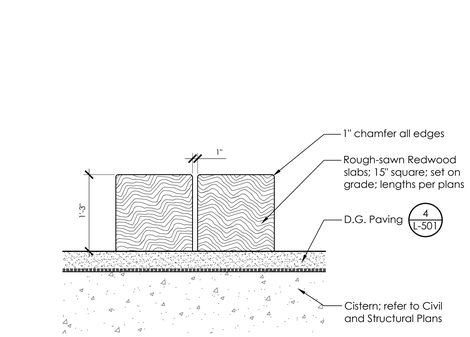
NOTES:
1. Compact grades adjacent to edging to avoid settling.
2. Corners - Cut base of edging up half way and form a continuous corner.
3. Stake on inside of planting area when adjacent to lawn area.

5 METAL EDGING
NOT TO SCALE — P-IN-HAR-17

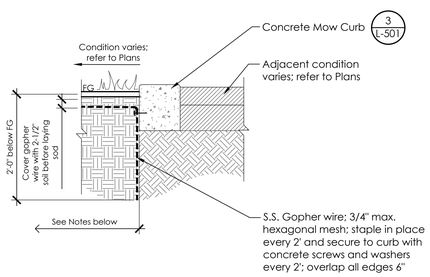
NOTES:
1. Contractor to provide 3' x 3' mock-up of wall including all associated elements for review. Mock-up to be reviewed by Landscape Architect before construction begins.
2. Place boulders in field with Landscape Architect per Plan before wall construction. Where walls extend above top of boulders form work is to conform/slope to these boulders.
3. Refer to Civil Plans for Grading and Drainage.
4. Refer to Structural Plans (1/S-101) for reinforcing details (laps, splice, radii).



2 CONCRETE RETAINING WALL
DO NOT SCALE — P-IN-HAR-19

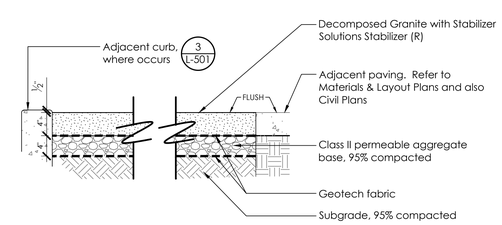


10 WOOD SLABS
DO NOT SCALE — P-IN-HAR-27



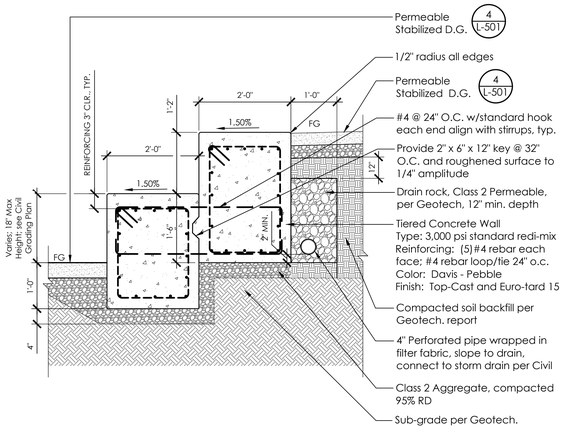
GOPHER WIRE EXTENTS
TURF FIELD: Cover entire horizontal area per Plans at specified depth above
NO-MOW AREAS: Extend 10' horiz. from mow curbs at areas outside of turf field
PLANTING AREAS (PA): place around perimeter of PA to 2'-0" depth below FG
IRRIGATION TRENCHES: Line all trenches for mainlines and laterals. Staple in place. Line bottoms of all valve boxes on terra firma.
TREES & SCREENING SHRUBS NOT IN PLANTING AREAS: Use appropriately sized baskets for each tree/screening shrub.

7 GOPHER WIRE
NOT TO SCALE — P-IN-HAR-26



NOTES:
1. Refer to Civil Plans for Grading and Drainage.
2. Do not allow decomposed granite to dry during installation. Mist lightly with a hose end and spray head as necessary or cover with a plastic tarp.
3. Between pours, stop at an area that looks intentional. Be careful not to overlap existing compacted material.
4. Provide positive drainage throughout surface area.
5. Slow curing of stabilizer is important to avoid cracking, moisten entire newly installed area while avoiding puddling.
6. Install Stabilizer Solutions Stabilizer (R) product per manufacturer's recommendations and specifications.

4 PERMEABLE STABILIZED DECOMPOSED GRANITE PAVING
DO NOT SCALE — P-IN-HAR-12



NOTES:
1. Contractor to provide 3' x 3' mock-up of wall including all associated elements for review. Mock-up to be reviewed by Landscape Architect before construction begins.
2. Refer to Civil Plans for Grading and Drainage.
3. Refer to Structural Plans (1/S-101) for reinforcing details (laps, splice, radii).
4. Ratio Calc for temp/shrikage per SEOR: 5*2*0.2in^2/(24in*42in) = 0.002

1 TIERED CAST-IN-PLACE CONCRETE WALL
DO NOT SCALE — P-IN-HAR-16

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

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OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

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TLCD PROJECT NUMBER:
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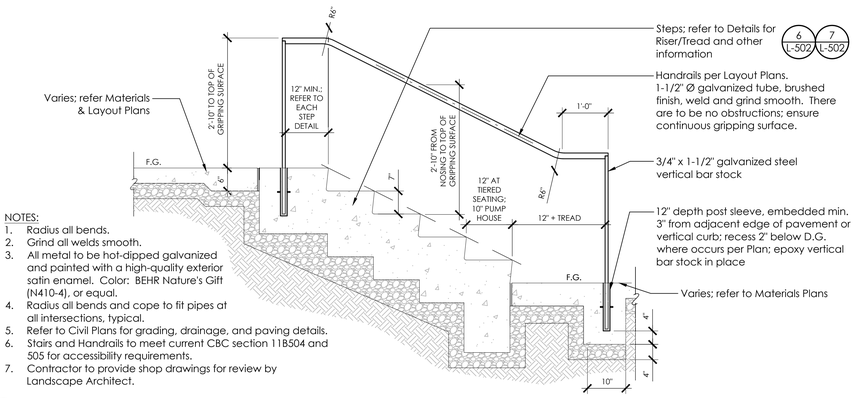
DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

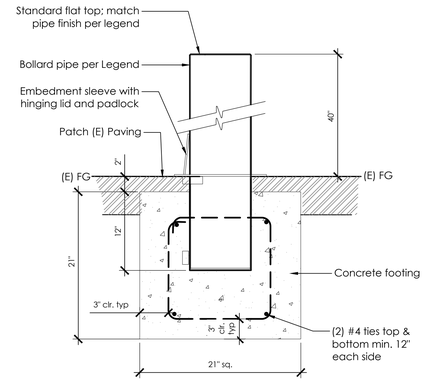
SITE DETAILS

L-501

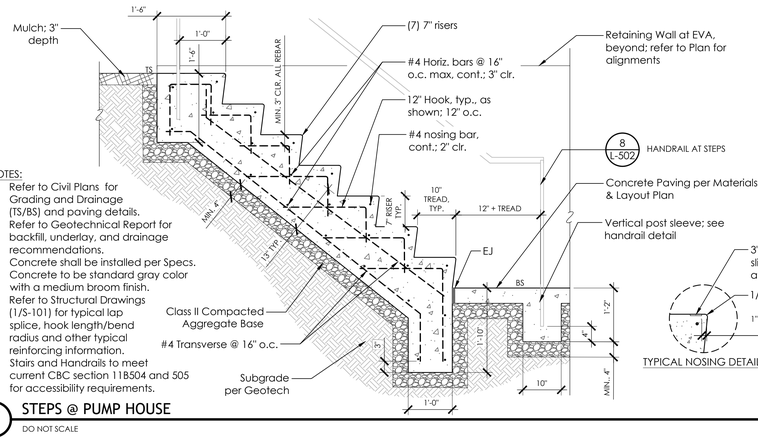


NOTES:
1. Radius all bends.
2. Grind all welds smooth.
3. All metal to be hot-dipped galvanized and painted with a high-quality exterior satin enamel. Color: BEHR Nature's Gift (N410-4), or equal.
4. Radius all bends and cope to fit pipes at all intersections, typical.
5. Refer to Civil Plans for grading, drainage, and paving details.
6. Stairs and Handrails to meet current CBC section 11B504 and 505 for accessibility requirements.
7. Contractor to provide shop drawings for review by Landscape Architect.

8 HANDRAIL AT STEPS
DO NOT SCALE

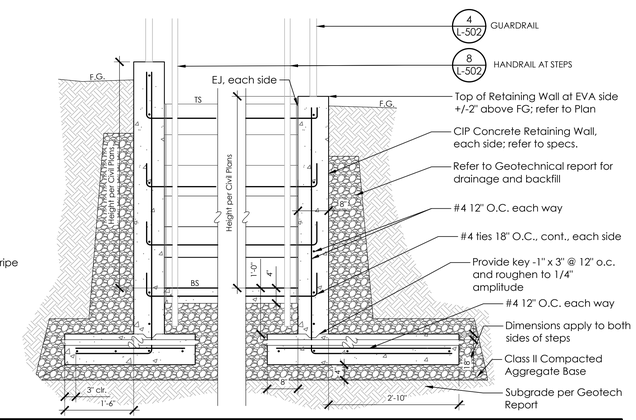


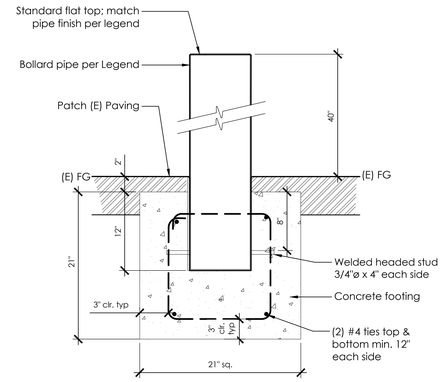
3 STEEL BOLLARD - REMOVABLE
DO NOT SCALE P-IN-HAR-29



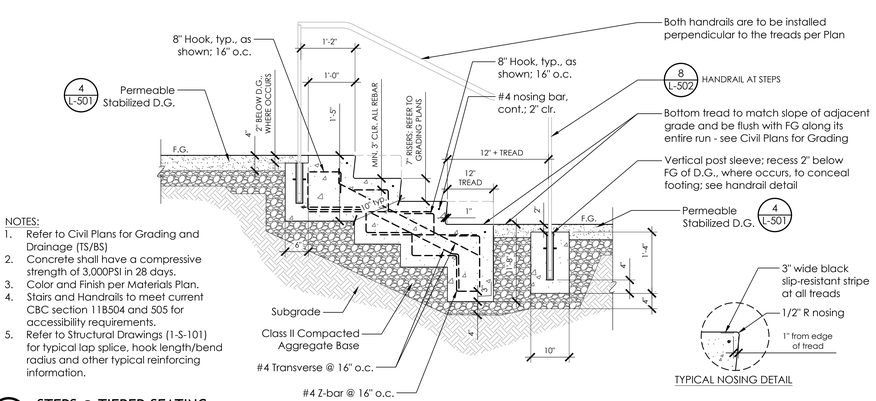
NOTES:
1. Refer to Civil Plans for Grading and Drainage (TS/BS) and paving details.
2. Refer to Geotechnical Report for backfill, underlay, and drainage recommendations.
3. Concrete shall be installed per Specs.
4. Concrete to be standard gray color with a medium broom finish.
5. Refer to Structural Drawings (1/S-101) for typical lap splice, hook length/bend radius and other typical reinforcing information.
6. Stairs and Handrails to meet current CBC section 11B504 and 505 for accessibility requirements.

7 STEPS @ PUMP HOUSE
DO NOT SCALE





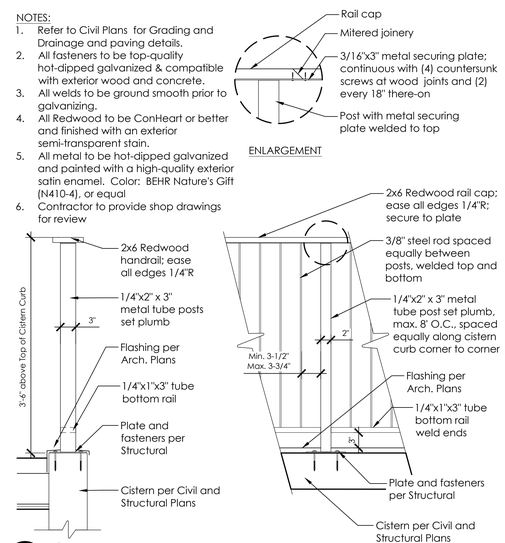
2 STEEL BOLLARD - FIXED
DO NOT SCALE P-IN-HAR-24



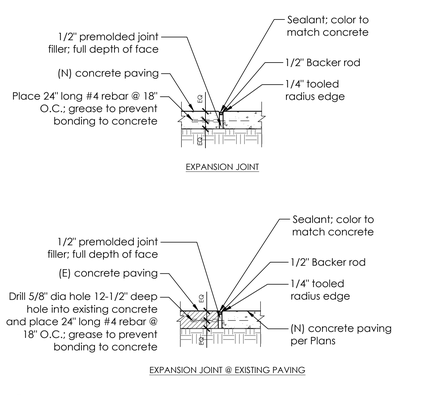
NOTES:
1. Refer to Civil Plans for Grading and Drainage (TS/BS)
2. Concrete shall have a compressive strength of 3,000PSI in 28 days.
3. Color and Finish per Materials Plan.
4. Stairs and Handrails to meet current CBC section 11B504 and 505 for accessibility requirements.
5. Refer to Structural Drawings (1-S-101) for typical lap splice, hook length/bend radius and other typical reinforcing information.

6 STEPS @ TIERED SEATING
DO NOT SCALE

NOTES:
1. Refer to Civil Plans for Grading and Drainage and paving details.
2. All fasteners to be top-quality hot-dipped galvanized & compatible with exterior wood and concrete.
3. All welds to be ground smooth prior to galvanizing.
4. All Redwood to be ConHeart or better and finished with an exterior semi-transparent stain.
5. All metal to be hot-dipped galvanized and painted with a high-quality exterior satin enamel. Color: BEHR Nature's Gift (N410-4), or equal
6. Contractor to provide shop drawings for review



4 GUARDRAIL
DO NOT SCALE P-IN-HAR-21



1 EXPANSION JOINTS
NOT TO SCALE P-IN-HAR-67

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
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CONSULTANT:
QUADRIGA
landscape architecture and planning, inc.
SACRAMENTO | SANTA ROSA
707.546.3561 | www.quadrigainc.com

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REGISTERED LANDSCAPE ARCHITECT CHRISTINE TALBOT #5226 12/31/2021 RENEWAL DATE STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

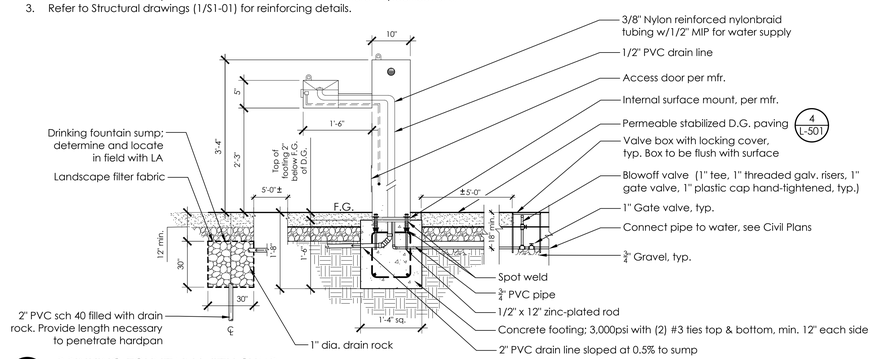
HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-118981
TLCD PROJECT NUMBER: 19046
DATE: 09/07/2021
DRAWN BY: Brett Kordenbrock
CHECKED BY: Christine Talbot
QUADRIGA PROJECT NUMBER: 19-1678

SITE DETAILS

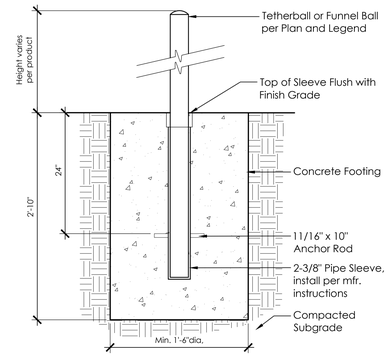
L-502

NOTES:
1. Refer to Civil Plans for supply and drainage.
2. Installation to be completed in accordance with manufacturer's specifications.
3. Refer to Structural drawings (1/S1-01) for reinforcing details.



3 DRINKING FOUNTAIN WITH SUMP
NOT TO SCALE P-IN-HAR-20

NOTE:
Install per manufacturer's details. See Layout Plan for Manufacturer and Model of Tether Ball and Funnel Ball equipment.



2 TETHERBALL & FUNNELBALL POST FOOTING
DO NOT SCALE P-IN-HAR-81

REFER TO SHEETS L-507 & 508 FOR PRE-CHECK STRUCTURAL DRAWINGS

Structural Calculations and checklists have been provided in a supplmental package - Pre-Check Ball Wall Structural Calculations_V2.pdf

1 PRE-FAB BALL WALL
NOT TO SCALE P-IN-HAR-82

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HARMONY UNION SCHOOL DISTRICT

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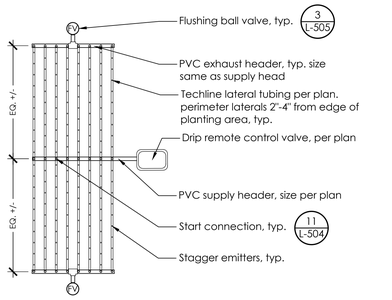
09/07/2021
DRAWN BY:
Brett Kordenbrock
CHECKED BY:
Christine Talbot
QUADRIGA PROJECT NUMBER:
19-1678

SITE DETAILS

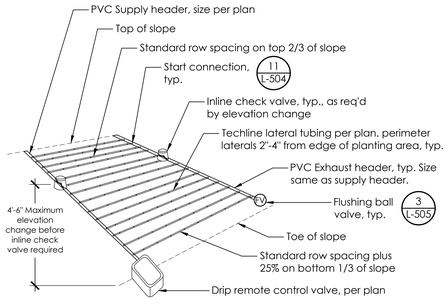
L-503



NOTES:
1. Affix all lines to ground using soil staples every 3' from drip valve.
2. Techline cv emitters are pressure compensating and have check valves.
3. See legend for emitter and row spacing.
4. Install check valves on supply and exhaust headers where elevation meets/exceeds 4-1/2' & as needed to prevent low-head drainage.

14 TECHLINE LINEAR LAYOUT

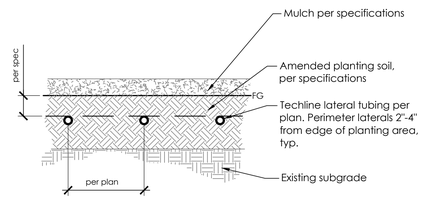
NOT TO SCALE P-IN-HAR-50



NOTES:
1. Affix all lines to ground using soil staples every 3' from drip valve.
2. Techline CV emitters are pressure compensating and have check valves.
3. See legend for emitter and row spacing.
4. Install check valves on supply and exhaust headers where elevation meets/exceeds 4-1/2' & as needed to prevent low-head drainage.
5. Align Techline CV laterals parallel to contours of the slope.

13 DRIPLINE LAYOUT FOR SLOPES

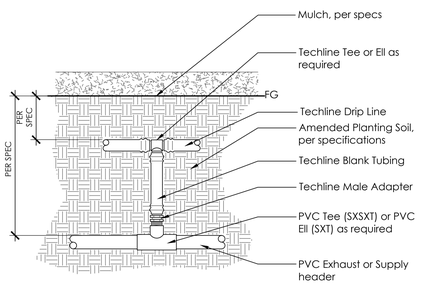
NOT TO SCALE P-IN-HAR-49



NOTE:
Install techline tubing 4" below finish grade, staple in place, per layout detail, then backfill with amended planting soil, per planting specifications.

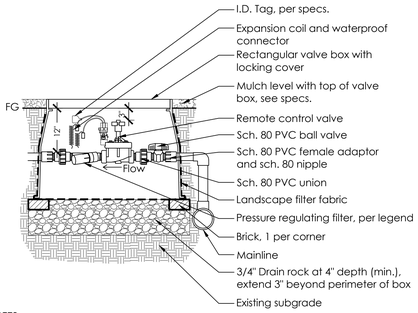
12 TECHLINE SUBGRADE INSTALLATION

NOT TO SCALE P-IN-HAR-53



11 TECHLINE START CONNECTION

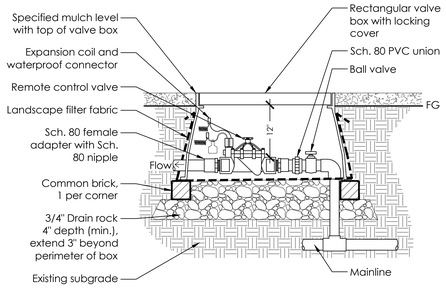
NOT TO SCALE P-IN-HAR-48



NOTES:
1. Filter position as shown preferred to minimize debris in housing when servicing. Filter may be mounted horizontally or upside-down if needed due to space constraints.
2. Supply PVC Sch. 80 nipples as required.
3. Supply jumbo valve box and/or housing extensions as required to fit equipment.
4. Each RCV to receive a permanent metal tag with controller and station number.

10 REMOTE CONTROL VALVE - DRIP

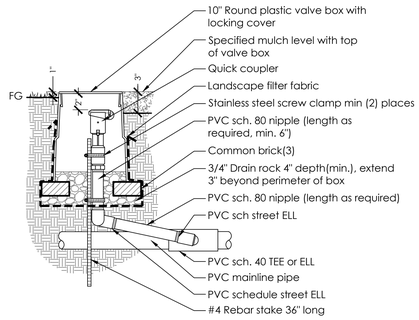
NOT TO SCALE P-IN-HAR-37



NOTE:
Each RCV to receive a permanent metal tag with controller and station number.

9 REMOTE CONTROL VALVE

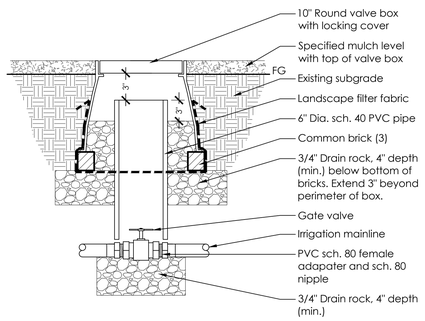
NOT TO SCALE P-IN-HAR-32



NOTES:
1. Furnish fittings and piping nominally sized identical to nominal quick coupling valve inlet size.
2. All PVC threads shall have Teflon tape, except at ELL to ELL or ELL to TEE connections.

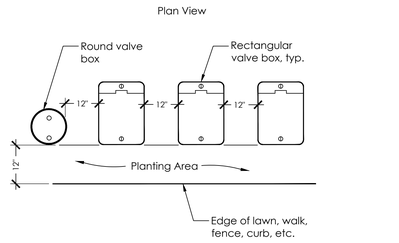
8 QUICK-COUPLING VALVE - REBAR

NOT TO SCALE P-IN-HAR-34



7 GATE VALVE

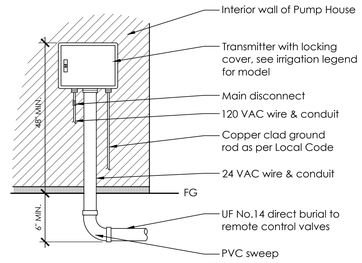
NOT TO SCALE P-IN-HAR-33



Notes:
1. Center boxes over valves.
2. Set boxes in ground cover/shrub area where possible.
3. Set boxes parallel to each other and perpendicular to edge of hardscape.
4. Valve box shall be Pantone 512 for reclaimed water.

6 VALVE BOX DETAIL

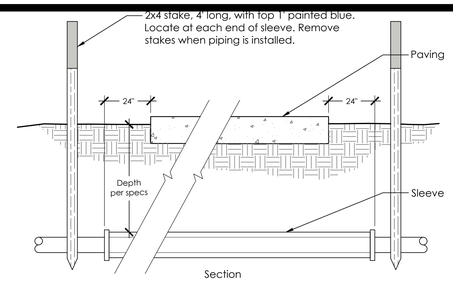
NOT TO SCALE P-IN-HAR-35



NOTE:
All wiring to be installed as per local code

5 IRRIGATION EQUIPMENT WALL MOUNT

NOT TO SCALE P-IN-HAR-55



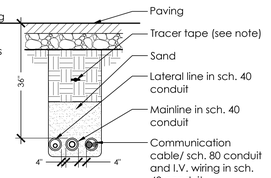
Notes:
1. All pipe and fittings to be sch. 40 PVC, see plan for location.
2. Sleeves to be large enough to accept the pipe and fittings to be encased.
3. Provide a separate sleeve for each lateral or main crossing.
4. Provide a separate sleeve for control wire.
5. Tape all ends with duct tape to prevent entry of soil.

4 SLEEVE DETAIL

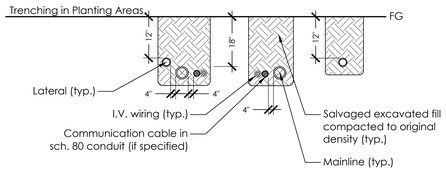
NOT TO SCALE P-IN-HAR-39

Trenching Under Vehicular Paving

Note:
1. Install tracer tape in trenches above mainline and control wires.
2. Sand backfill required in trenches with rocky terrain and under pavement. Pipe shall have a (min.) bedding of 2" under and 12" over of sand.
3. Snake all pipe in trenches to allow for expansion and contraction.

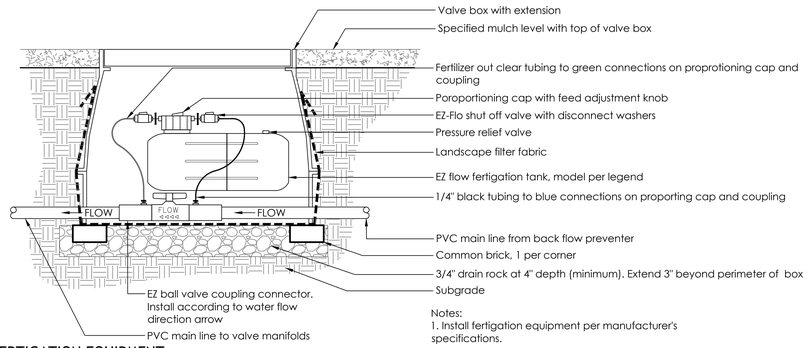


Trenching in Planting Areas



3 PIPE AND TRENCHING

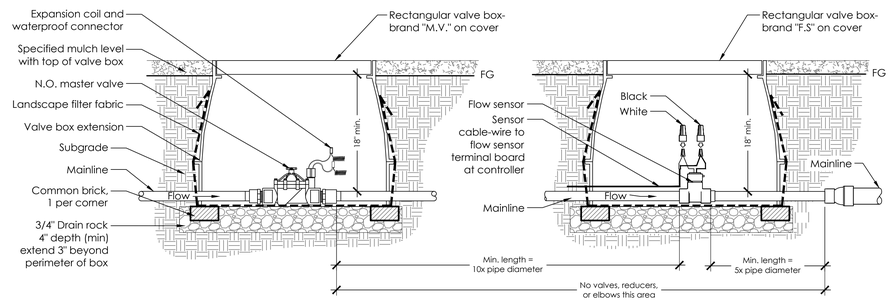
NOT TO SCALE P-IN-HAR-38



Notes:
1. Install fertigation equipment per manufacturer's specifications.

2 FERTIGATION EQUIPMENT

DO NOT SCALE P-IN-HAR-43



NOTES:
1. Connect master valve to the last station in the controller.
2. Route flow sensor cable in 1" PVC conduit from flow sensor to controller enclosure.

1 MASTER VALVE AND FLOW SENSOR

NOT TO SCALE P-IN-HAR-41

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DSA PROJECT NUMBER:
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09/07/2021

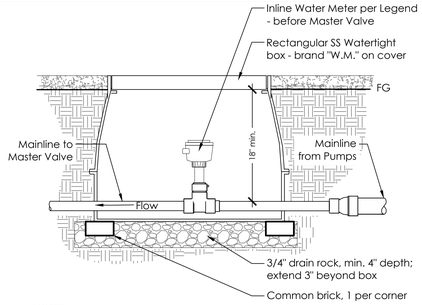
DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

IRRIGATION DETAILS

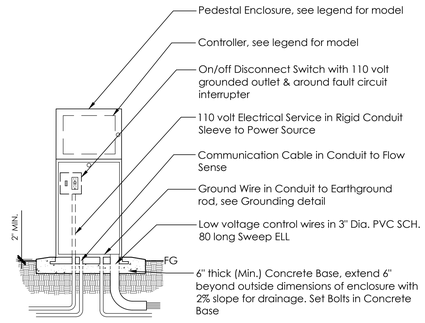
L-504



NOTES:
1. Install per Mfr. specifications with mfr. fittings as required in waterproof box - seal all penetrations per mfr. specifications.
2. If the box cannot be located in a non-floodable area please consult Civil Engineer and Landscape Architect.

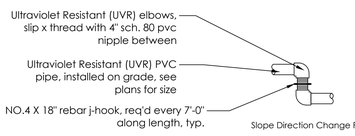
11 WATER METER

NOT TO SCALE — P-IN-HAR-71

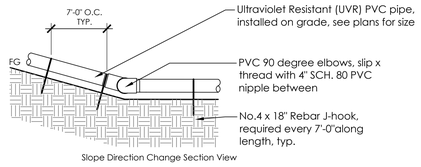


10 CONTROLLER AND PEDESTAL

NOT TO SCALE — P-IN-HAR-69



Slope Direction Change Plan View

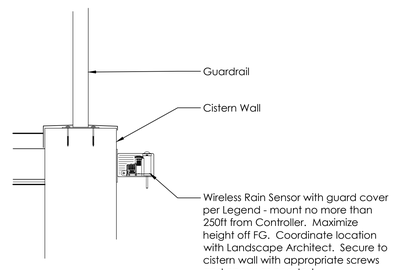


Slope Direction Change Section View

NOTE:
1. All PVC pipe and fittings installed on grade to be ultraviolet resistant (uvr).
2. Use teflon tape on all threaded fittings.

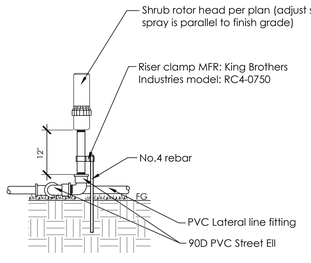
9 LATERAL LINE ON GRADE

NOT TO SCALE — P-IN-HAR-64



12 RAIN SENSOR/SHUT-OFF

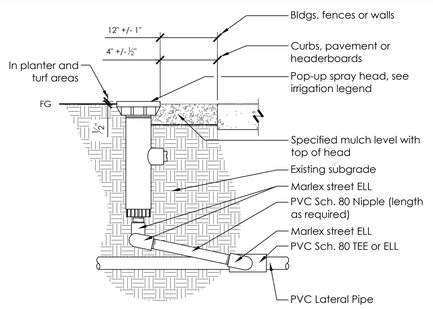
NOT TO SCALE — P-IN-HAR-70



NOTE:
Riser to be 12" min from edge of curbs, headers, etc.

8 ROTOR ON RISER - ON GRADE

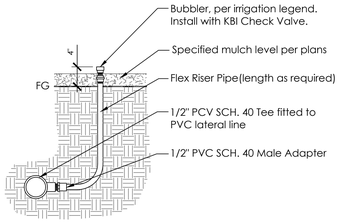
NOT TO SCALE — P-IN-HAR-63



Notes:
1. All PVC threads shall have Teflon tape, except at ELL to ELL or ELL to TEE connections.
2. Install sprinkler heads 3" minimum from all walks, curbs and headers, or 24" minimum from non-permeable surfaces indicated on irrigation plans.

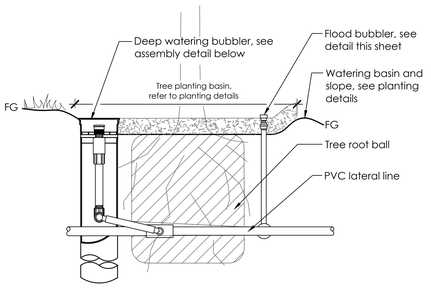
7 POP-UP SPRAY HEAD

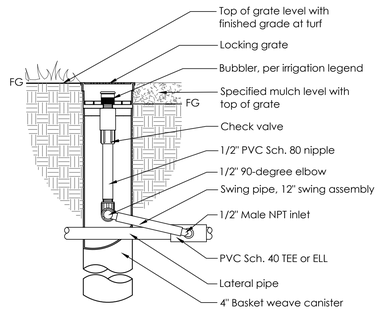
NOT TO SCALE — P-IN-HAR-40



6 BUBBLER ON FLEX RISER

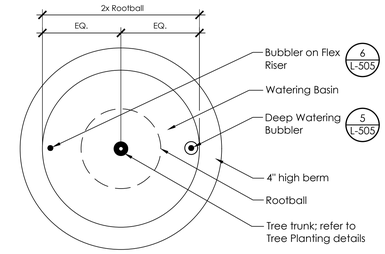
NOT TO SCALE — P-IN-HAR-58





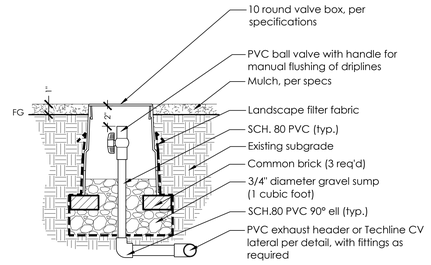
5 DEEP WATERING AND SURFACE TREE BUBBLER

NOT TO SCALE — P-IN-HAR-57



4 DEEP WATERING TREE BUBBLER LAYOUT

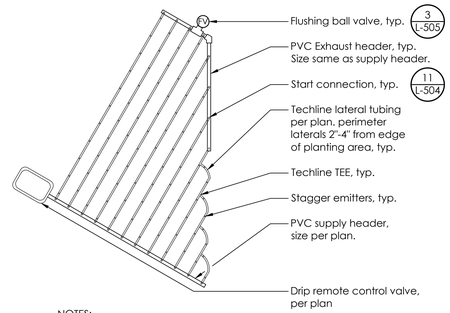
NOT TO SCALE — P-IN-HAR-56



NOTE:
Locate flushing ball valves as shown on techline cv layout details, and at low points as req'd by manufacturer.

3 TECHLINE FLUSH VALVE

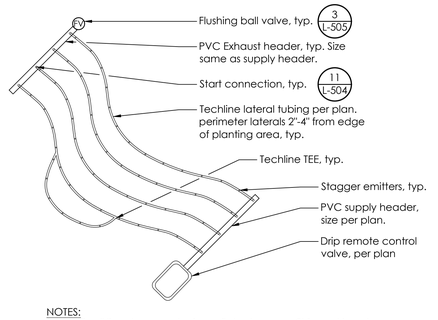
NOT TO SCALE — P-IN-HAR-42



NOTES:
1. Affix all lines to ground using soil staples every 3' from drip valve.
2. Techline CV emitters are pressure compensating and have check valves.
3. See legend for emitter and row spacing.
4. Install check valves on supply and exhaust headers where elevation meets/exceeds 4-1/2' & as needed to prevent low-head drainage.

2 LAYOUT FOR IRREGULAR AREAS - TRIANGULAR

NOT TO SCALE — P-IN-HAR-47



NOTES:
1. Affix all lines to ground using soil staples every 3' from drip valve.
2. Techline CV emitters are pressure compensating and have check valves.
3. See legend for emitter and row spacing.
4. Install check valves on supply and exhaust headers where elevation meets/exceeds 4-1/2' & as needed to prevent low-head drainage.

1 DRIPLINE LAYOUT FOR IRREGULAR AREAS - CURVES

NOT TO SCALE — P-IN-HAR-46

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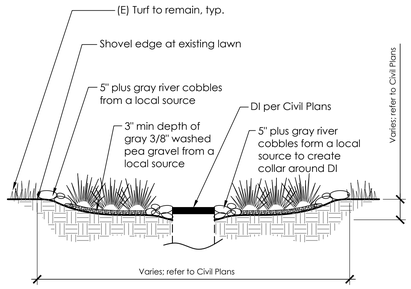
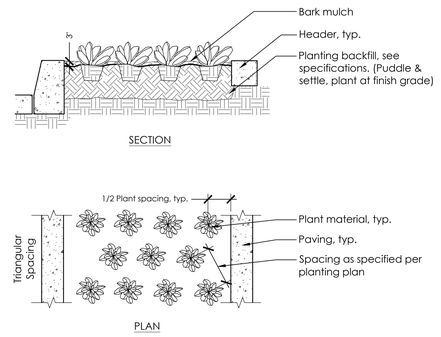


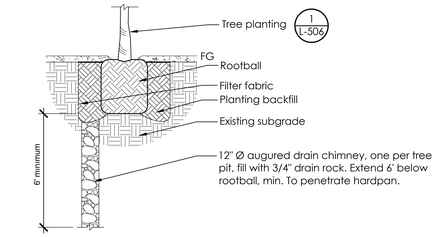
9 BIOSWALE SECTION AT DRAIN INLET

NOT TO SCALE P-IN-HAR-59



6 GROUNDCOVER PLANTING

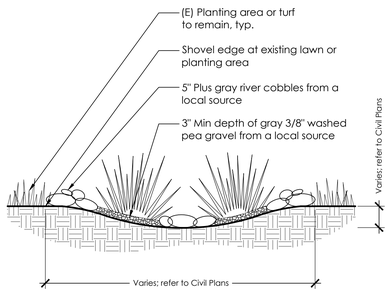
NOT TO SCALE P-IN-HAR-60



NOTES:
1. Drainage required only for tree pits failing tree pit drainage test as described in the specifications.
2. Contractor to repeat tree pit drainage test after installation of drain chimney to ensure proper drainage.

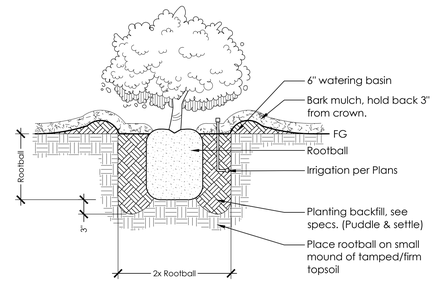
3 TREE PIT DRAINAGE CHIMNEY

NOT TO SCALE P-IN-HAR-05



8 TYPICAL BIOSWALE SECTION

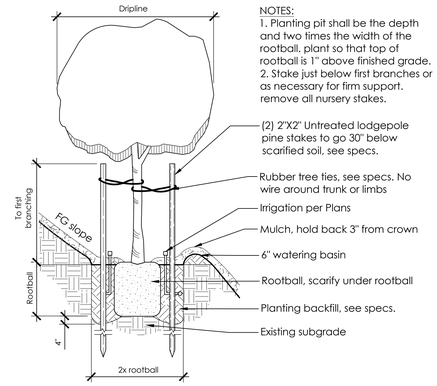
NOT TO SCALE P-IN-HAR-15



NOTE:
Planting pit shall be the depth and two times the width of the root ball. Plant so that top of rootball is 1" above finished grade. Remove all nursery stakes.

5 SHRUB PLANTING

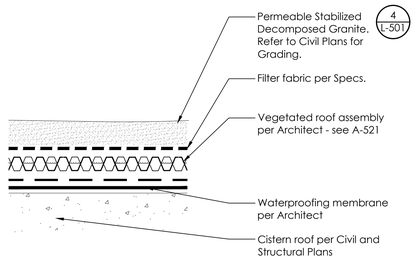
NOT TO SCALE P-IN-HAR-08



NOTES:
1. Planting pit shall be the depth and two times the width of the rootball. plant so that top of rootball is 1" above finished grade.
2. Stake just below first branches or as necessary for firm support. remove all nursery stakes.

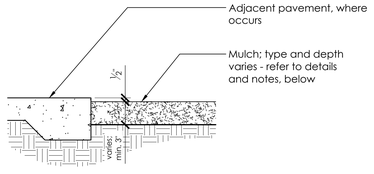
2 TREE PLANTING ON SLOPE

NOT TO SCALE P-IN-HAR-44



10 DG @ VEGETATED ROOF

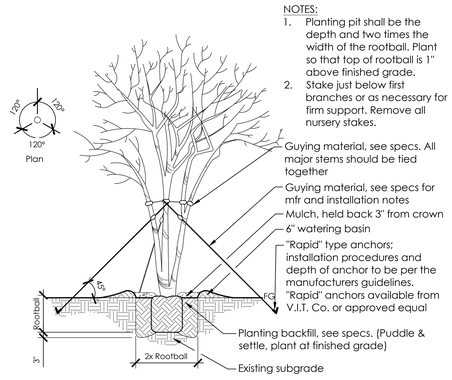
NOT TO SCALE P-IN-HAR-78



NOTES:
1. All areas where boulders are grouped are to receive min. 5" walk-on bark mulch where D.G. is not present per Materials & Layout Plans. See also, Boulder Detail 8/L-501.
2. Min. 3" depth arbor mulch from a local source to be used in planting areas - see specifications.

7 MULCH

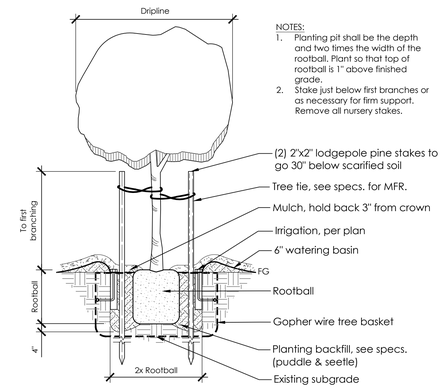
NOT TO SCALE P-IN-HAR-14



NOTES:
1. Planting pit shall be the depth and two times the width of the rootball. Plant so that top of rootball is 1" above finished grade.
2. Stake just below first branches or as necessary for firm support. Remove all nursery stakes.

4 MULTI-TRUNK TREE GUYING

NOT TO SCALE P-IN-HAR-07



NOTES:
1. Planting pit shall be the depth and two times the width of the rootball. Plant so that top of rootball is 1" above finished grade.
2. Stake just below first branches or as necessary for firm support. Remove all nursery stakes.

1 TREE PLANTING WITH IRRIGATION

NOT TO SCALE P-IN-HAR-10

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
f: 707.525.5616
tlcd.com

CONSULTANT:
QUADRIGA
landscape architecture and planning, inc.
SACRAMENTO | SANTA ROSA
707.546.3561 | www.quadriga-inc.com

STAMP:

REGISTERED LANDSCAPE ARCHITECT CHRISTINE TALBOT #5226 12-31-2021 RENEWAL DATE CALIFORNIA STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/07/2021

DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

PLANTING DETAILS

L-506

L.A. STEELCRAFT - BALL WALL

(Harmony Elementary School, 1935 Bohemian Highway, Occidental, CA 95465)

DRAWING ORGANIZATION

THE ORGANIZATION OF THESE DRAWINGS IS NOT INTENDED TO CONTROL THE DIVISION OF WORK AMONG SUBCONTRACTORS. IT SHALL BE THE GENERAL CONTRACTORS RESPONSIBILITY TO DIVIDE THE WORK.

IT IS THE INTENT OF THE PLANS AND SPECIFICATIONS TO COVER ALL THINGS REQUIRED TO MAKE COMPLETE AND OPERATIVE SYSTEMS. CONTRACTOR IS TO FURNISH ALL LABOR, MATERIALS, TRANSPORTATION, EQUIPMENT, AND ANY OTHER MISCELLANEOUS SERVICES REQUIRED TO COMPLETE THE PROJECT. ANYTHING WHICH MAY BE REASONABLY CONSTRUCED AS A NECESSARY PART OF THE PROJECT IS TO BE INCLUDED WHETHER SPECIFICALLY SHOWN, MENTIONED OR NOT. THE ARCHITECT WILL GIVE ANY INTERPRETATIONS NECESSARY FOR THE CONTRACTOR TO PROPERLY ESTIMATE THE PROJECT.

CONTRACTOR'S STATEMENT OF RESPONSIBILITY

THE DESIGN/BUILD CONTRACTORS SHALL BE FULLY AND SOLELY RESPONSIBLE AND LIABLE FOR ALL DESIGN, ENGINEERING AND CONSTRUCTION FOR HIS/HER PHASE OF THE WORK AS INDICATED ON THESE DOCUMENTS. BY THE ACT OF COMMENCING WORK ON THIS PROJECT, OR BY THEIR SIGNATURES ON DRAWINGS INCLUDED HEREIN OR TO BE SUBMITTED SEPARATELY FOR THIS PROJECT. EACH CONTRACTOR HAS DIRECTLY AND INDIRECTLY ASSUMED FULL RESPONSIBILITY FOR THE DESIGN, ENGINEERING AND CONSTRUCTION OF HIS WORK INCLUDING, BUT NOT LIMITED TO, ACCURACY, COMPLETENESS AND COMPLIANCE WITH ALL APPLICABLE CODES AND ORDINANCES AND THE REQUIREMENTS OF THE OWNER AND/OR TENANT.

CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR THE COST OF ALL INSPECTIONS AND TESTS INDICATED ON THE PLANS AND SPECIFICATIONS, RECOMMENDED BY THE SOILS REPORT AND/OR REQUIRED BY ANY GOVERNMENT AGENCY. CONTRACTOR SHALL PROVIDE PROTECTION AS NECESSARY PER CITY AND LOCAL CODE REQUIREMENTS. CONTRACTOR SHALL PROVIDE FIRE EXTINGUISHER'S AND ANY REQUIRED SIGNAGE AS DIRECTED BY THE LOCAL FIRE DEPARTMENT.

IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY ALL FIELD MEASUREMENTS AND CONDITIONS FOR CONFORMANCE WITH THE PLANS SHOULD THE CONTRACTOR FIND ANY ERRORS, OMISSIONS OR DISCREPANCIES IN THE PLANS WITH RESPECT TO THE FIELD OBSERVATIONS OR OTHER PARTS OF THE PLANS THE ERRORS, OMISSIONS OR DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ARCHITECT. THE CONTRACTOR AND ARCHITECT SHALL RESOLVE ALL ERRORS, OMISSIONS AND DISCREPANCIES BEFORE COMMENCING THAT PORTION OF THE WORK. DIMENSIONS GOVERN ANY DISCREPANCES. ALL CHANGES TO THE PLANS SHALL REQUIRE THE APPROVAL OF THE OWNER AND PROJECT ARCHITECT.

CODES, RULES, AND REGULATION

ALL WORK AND MATERIAL SHALL BE PERFORMED AND INSTALLED IN COMPLIANCE WITH THE FOLLOWING CODES AS ADOPTED AND AMENDED BY THE LOCAL GOVERNING AGENCY. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

LIST OF 2016 CALIFORNIA CODE OF REGULATIONS (C.C.R.): APPLICABLE CODE AS OF JAN. 1 2017

- PART 1 2016 CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE, TITLE 24 C.C.R.
- PART 2 2016 CALIFORNIA BUILDING CODE, TITLE 24 C.C.R. (2015 INTERNATIONAL BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH CALIFORNIA AMENDMENTS)
- PART 3 2016 CALIFORNIA ELECTRIC CODE, TITLE 24 C.C.R. (2014 NATIONAL ELECTRICAL CODE OF THE NATIONAL FIRE PROTECTION ASSOCIATION, NFPA)
- PART 4 2016 CALIFORNIA MECHANICAL CODE, TITLE 24 C.C.R. (2015) UNIFORM MECHANICAL CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
- PART 5 2016 CALIFORNIA PLUMBING CODE, TITLE 24 C.C.R. (2015) UNIFORM PLUMBING CODE OF THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS, IAPMO)
- PART 6 2016 CALIFORNIA ENERGY CODE, TITLE 24 C.C.R.
- PART 7 *CURRENTLY VACANT*
- PART 8 2016 CALIFORNIA HISTORICAL BUILDING CODE, TITLE 24 C.C.R.
- PART 9 2016 CALIFORNIA FIRE CODE, TITLE 24 C.C.R. (2015) INTERNATIONAL FIRE CODE OF THE INTERNATIONAL CODE COUNCIL)
- PART 10 2016 CALIFORNIA EXISTING BUILDING CODE, TITLE 24 C.C.R. (2015 INTERNATIONAL EXISTING BUILDING CODE OF THE INTERNATIONAL CODE COUNCIL, WITH AMENDMENTS)
- PART 11 2016 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN CODE), TITLE 24 C.C.R.
- PART 12 2016 CALIFORNIA REFERENCED STANDARDS CODE, TITLE 24 C.C.R.

NOTE: WHERE WORK OF A HIGHER DEGREE IS INDICATED ON THE PLANS OR IN THE SPECIFICATIONS, THE MOST STRINGENT REQUIREMENT SHALL GOVERN.

GENERAL NOTES:

1. EACH SUBCONTRACTOR SHALL VISIT THE SITE AND INSPECT THE PREMISES TO BE IMPROVED AND SHALL VERIFY THE WORK TO BE DONE, THE EXISTING CONDITIONS, AND SHALL NOTIFY THE GENERAL CONTRACTOR OF ANY AND ALL DISCREPANCIES PRIOR TO SUBMITTING BID AND STARTING OF ANY WORK. GENERAL CONTRACTOR SHALL NOTIFY THE OWNER OF ANY AND ALL DISCREPANCIES PRIOR TO SUBMITTING BID AND STARTING OF ANY WORK.
2. ALL WORK SHALL BE DONE IN THE BEST WORKMANLIKE MANNER AND MUST BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL LOCAL GOVERNING AGENCIES. FURTHERMORE, ALL WORK SHALL MEET WITH THE APPROVAL OF THE OWNER.
3. WRITTEN DIMENSIONS ON THESE DRAWINGS SHALL HAVE PRECEDENCE OVER SCALED DIMENSIONS. CONTRACTORS SHALL VERIFY AND BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS ON THE JOB, AND ASSOCIATED DESIGN & ENGINEERING, INC. OR THEIR AGENTS SHALL BE NOTIFIED OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN BY THESE DRAWINGS. SHOP DETAILS SHALL BE REVIEWED BY ASSOCIATED DESIGN & ENGINEERING, INC. BEFORE PROCEEDING WITH FABRICATION.
4. THIS SET OF DRAWINGS, DESIGN AND/OR SPECIFICATION ARE THE EXCLUSIVE PROPERTY OF ASSOCIATED DESIGN & ENGINEERING, INC. ITS ACCEPTANCE CONSTITUTES AN AGREEMENT THAT IT SHOULD BE TREATED AS A STRICTLY CONFIDENTIAL DOCUMENT TO BE USED FOR NOT PURPOSE OTHER THAN TO AID IN THE ASSEMBLY, CONSTRUCTION OR OPERATION OF THE UNITS OR SYSTEMS SHOWN FOR THIS SPECIFIC PROJECT ONLY, OR AS OTHERWISE EXPRESSLY AUTHORIZED IN WRITING BY ASSOCIATED DESIGN & ENGINEERING, INC.: THAT IT IS TO BE RETURNED UPON REQUEST; AND IS NOT TO BE COMMUNICATED, DISCLOSED, OR COPIED, EXCEPT AS EXPRESSLY AUTHORIZED IN WRITING BY ASSOCIATED DESIGN & ENGINEERING, INC. ASSOCIATED DESIGN & ENGINEERING, INC. EXPRESSLY RESERVES ITS COMMONLAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO A THIRD PARTY WITHOUT FIRST OBTAINING THE WRITTEN PERMISSION AND CONSENT OF ASSOCIATED DESIGN & ENGINEERING, INC. IN THE EVENT OF UNAUTHORIZED REUSE OF THESE PLANS BY A THIRD PARTY, THE THIRD PARTY SHALL HOLD ASSOCIATED DESIGN & ENGINEERING, INC. HARMLESS AND SHALL BEAR THE FINANCIAL RESPONSIBILITY OF ASSOCIATED DESIGN'S LEGAL COSTS.
5. A JOB CARD IS REQUIRED TO BE VISIBLE FROM THE STREET, IT IS UNDERSTOOD THAT IF NO JOB CARD IS OBSERVED NO INSPECTION WILL TAKE PLACE.
6. ALL MATERIALS, EQUIPMENT AND SYSTEMS CALLED FOR ON PLANS AND IN THESE SPECIFICATIONS SHALL BE INSTALLED IN STRICT COMPLIANCE WITH THE MANUFACTURER'S LATEST SPECIFICATIONS.
7. CONTRACTORS SHALL MAINTAIN THE PREMISES IN A CLEAN AND ORDERLY CONDITION AT ALL TIMES AND SHALL REMOVE ALL UNUSED MATERIALS AND DEBRIS, AND LEAVE PREMISES IN A CLEAN CONDITION.
8. ANY SUBSTITUTIONS TO THE MATERIALS AND/OR EQUIPMENT SPECIFIED MUST BE APPROVED BY THE OWNER. CONTRACTOR SHALL SUBMIT REQUEST FOR SUBSTITUTIONS AT THE TIME OF BID SUBMISSION. PRIOR TO START OF CONSTRUCTION, THE GENERAL CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE PLANS AND SPECIFICATIONS.
9. ANY DISCREPANCIES OR ERRORS SHALL BE CALLED TO THE ATTENTION OF THE ARCHITECT FOR CORRECTIONS BEFORE THE WORK EFFECTED THEREBY IS BIDDED OR EXECUTED. THE WORK SHALL COMPLY IN EVERY RESPECT WITH CURRENT GOVERNING LAWS, UNIFORM BUILDING CODE AND ORDINANCES. ALL AGENCIES AND UTILITY COMPANYS SHALL BE GIVEN NECESSARY NOTICES RELATING TO THE WORK. CONTRACTOR SHALL OBTAIN AND PAY FOR ANY PERMITS OR NOTICES. ALL TESTING AND INSPECTION SERVICES SHALL BE PAID DIRECTLY BY THE OWNER.
10. SANITARY TOILET IS REQUIRED ON-SITE DURING CONSTRUCTION (2016 CBC 3305.1)
11. PORTABLE FIRE EXTINGUISHERS SHALL COMPLY WITH (2016 CBC 906 AND THE 2016 CFC 2005 & 906).

NOTES

1. COMPLETE SPECIFICATIONS FOR THIS PC INCLUDES THE "WET SIGNED" STRUCTURAL DRAWINGS SHEETS C1.0 AND A1.0 AND THE CALCULATIONS PACKAGE A SEPARATE DOCUMENT WITH THE FOLLOWING TABLE OF CONTENTS.

ELEVATION DIAGRAM

DESIGN ASSUMPTIONS

LATERAL DESIGN LOADING (WIND / SEISMIC)

FREE STANDING WALL LOADING (ASCE 7-10)

COLUMN/POST DESIGN CALCULATIONS

FOOTING DESIGN CALCULATIONS

SPANDREL AND CONNECTION DESIGN CALCULATIONS

COLUMN EMBEDMENT INTO FOOTING

MISCELLANEOUS CALCULATION SUPPORT DOCUMENTS

- APPENDIX 'A' - CEMCO STUD
- APPENDIX 'B' - MISCELLANEOUS STRUCTURAL TUBING
- APPENDIX 'C' - TEK SELF-TAPPING SCREW DATA
- APPENDIX 'D' - DART SELF-TAPPING SCREW DATA
- APPENDIX 'E' - STRUCTURAL TESTS AND INSPECTIONS (DSA-103)
- APPENDIX 'F' - PAINTS AND SEALANTS

THIS PC APPROVAL IS LIMITED TO THE L.A. STEELCRAFT BALL WALL AS DETERMINED ON THIS COVER SHEET AND A1.O. THE DISTRICT (OWNER) IS RESPONSIBLE FOR THE SUBMITTAL TO D.S.A. AND THE APPROVAL BY D.S.A. OF THE SITE PLAN WHICH LOCATES THIS PC APPROVED BALL WALL ON THE PARTICULAR SITE.

2. ALL WORK SHALL CONFORM TO THE LATEST EDITION TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR) AND 2016 CALIFORNIA BUILDING CODE (CBC).
3. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CHANGE ORDERS APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338, PART 1, TITLE 24, CCR.
4. A 'DSA CERTIFIED' PROJECT INSPECTOR EMPLOYED BY THE 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, CALIFORNIA BUILDING STANDARDS ADMINISTRATIVE CODE (PART 1, TITLE 24, CCR)
5. THE EXCAVATION OF THE FOOTINGS SHALL BE INSPECTED BY A GEOTECHNICAL ENGINEER EMPLOYED BY THE DISTRICT (OWNER).
6. THE CONTRACTOR SHALL KEEP THE PROJECT ARCHITECT INFORMED OF CONSTRUCTION PROGRESS SO THAT CONSTRUCTION REVIEW CAN BE SCHEDULED AT THE PROPER CONSTRUCTION STAGE.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SCHEDULING ALL SPECIFIED INSPECTIONS AND TESTING WITH THE INSPECTION/TESTING AGENCY. SEE SPECIFICATIONS FOR REQUIRED INSPECTIONS AND TESTINGS REQUIRED.
8. SPECIAL INSPECTION OF THE WELDING IS REQUIRED BY AN AWS CERTIFIED INSPECTOR EMPLOYED BY THE DISTRICT (OWNER).
9. A PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) SHALL INSPECT ALL WORK. DSA CERTIFIED INSPECTOR FOR SITE CLASS 3.
10. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE SCHOOL BOARD SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
11. LATERAL RESISTING SYSTEM - EQUIVALENT LATERAL FORCE PROCEDURE
    FOUNDATION - CAST IN PLACE PIERS
    TESTING & INSPECTIONS PER TABLE PROVIDED
    SEE DSA FORM 103, APPENDIX E OF SUPPORT DOCUMENTS
12. FIRE SPRINKLERS NOT REQUIRED.
13. BALL WALL:
    ASCE 7-10: NON-BUILDING STRUCTURE
    SIGNS & BILLBOARDS w/ CANTILEVERED COLUMNS (ASCE 7-10, TABLE 15.4.2)
14. DESIGN CRITERIA:
    WIND: 110 MPH, EXP. C, RISK CATEGORY II
    Cf VARIES (Cf MAX=2.64), 50 PSF MAX. (ASD = 30.0 PSF). [VARIES]
    SEISMIC: I=1.0, RISK CAT. I (OTHER STRUCTURES) [WIND GOVERNS DESIGN]
    S_s=2.98 MAX., S_1=1.30 MAX.
    SITE CLASS D (FOR MAX LOAD)
    SDS=1.99, SD1=1.30
    SEISMIC DESIGN CATEGORY E
    (SEE NOTE 13 FOR STRUCTURAL SYSTEM)
    BASE SHEAR=.581K
    C_s=.663 R=3.0
    BASE AT GROUND LEVEL
15. ALLOWABLE SOIL PRESSURES
    DL + LL 1000 PSF
    LATERAL 100 PCF/ 200PCF (1)
    (1)[CBC 2016, SEC. 1806A.3.4]

TITLE 24, PART 2 (2016 CBC) - VOLUME 2 OF 2

TESTS AND INSPECTION REQUIREMENTS	CBC SECTION
FOUNDATION & RETAINING WALLS	
CHAPTER 18A	
1. INSPECTION:	
• PIER FOUNDATIONS	1705A.3.5
CONCRETE	
CHAPTER 19A	
1. MATERIALS	
• PORTLAND CEMENT	1705A.3.2; 1903A.1
• CONCRETE AGGREGATES	1705A.3.2; 1903A.5
• REINFORCING BARS (TESTS OF REINFORCING BARS MAY BE WAIVED BY THE STRUCTURAL ENGINEER WITH THE APPROVAL OF THE SITE DSA INSPECTOR, PROVIDED THAT VERIFIABLE CERTIFIED MILL TEST REPORTS ARE PROVIDED FOR EA. SHIPMENT OF SUCH REINFORCEMENT.) SHIPMENT OF SUCH REINFORCEMENT.)	1705A.3.2; 1903A.1
2. QUALITY	
• PROPORTIONS OF CONCRETE	1903A.1
• STRENGTH TESTS OF CONCRETE	1705A.3; 1903A.1
3. INSPECTION	
• JOB SITE	1903A.1 (ACI 318-14, SEC. 26.5)
• BATCH PLANT (** THE USE OF NRMCA WILL BE ACCEPTABLE IN LIEU OF COMPONENT MATERIALS TESTING IF APPROVED BY SITE DSA INSPECTOR.)	1705A.3.3.1
STEEL	
CHAPTER 22A	
1. MATERIALS	
• STRUCTURAL STEEL	2205A.1
• COLD FORMED STEEL	2210A.1
• IDENTIFICATION	2203A.1
2. QUALITY	
• TESTS OF STRUCTURAL AND COLD FORMED STEEL	2211A.1
• NON-DESTRUCTIVE WELD TESTS	1704A.3.1
3. INSPECTION	
• SHOP FABRICATION	1704A.2; 1704A.3
WOOD	
CHAPTER 23	
1. MATERIALS	
• LUMBER AND PLYWOOD	2303.1

IDENTIFICATION STAMP
03 119359
PRE-CHECK (PC) DOCUMENT
CODE: LATEST CCR EDITION AND 2016 CBC
A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

SCOPE OF WORK

BALL WALL PC FOR CONSTRUCTION ANYWHERE IN CALIFORNIA WITH A SITE SPECIFIC DSA APPROVED SITE PLAN LOCATING THE BALL WALL ON THE SCHOOL SITE FOR EACH WALL SOLD TO BE CONSTRUCTED.

PC SHEET INDEX

C1.O COVER SHEET

A1.O STRUCTURAL PLAN

PROJECT TEAM

OWNER
SITE SPECIFIC PROJECT ARCHITECT

STRUCTURAL ENGINEER
ASSOCIATED DESIGN AND ENGINEERING, INC.
351 WEST CROMWELL AVE., SUITE #108
FRESNO, CA 93711
559-431-2389
FAX 431-2074
CONTACT: MICHAEL JUNDT, SE

MANUFACTURER OF BALL WALL
L.A. STEELCRAFT PRODUCTS
P.O. BOX 90365 - PASADENA, CA 91103
PH: 626-798-7401 FAX 626-798-1482

PROVIDE THE SPECIAL INSPECTIONS FOR THE FOLLOWING AREAS OF WORK:

	AREA OF INSPECTION	ACTIVE	N/A
1	STRUCTURAL FIELD WELD (not required for this project)		X
2	STRUCTURAL STEEL SHOP FAB. (PERIODIC @ CLIPS) (PER 2016 CBC, TABLE 1705A.2.1 ITEM 5.a.2 OR 1705A.2.1 ITEM 5.a.5)	X	
3	STEEL MILL REPORT VERIFICATION (PER 2016 CBC, TABLE 1705A.2.1 ITEM 3.c)	X	
4	TESTING FOR 3000 PSI CONCRETE STRENGTH @ 28 DAYS (PER 2016 CBC, TABLE 1705A.3 ITEM 6)	X	
5	CONCRETE PLACEMENT & REINFORCEMENT PLACEMENT OBSERVATION (PER 2016 CBC, TABLE 1705A.3 ITEMS 1 & 12)	X	

NOTE: "X" INDICATES INSPECTION, NOT APPLICABLE OR ACTIVE

	GENERAL NOTES
1	PRE-CHECK (PC) DOCUMENT CODE: LATEST CCR EDITION AND 2016 CBC
2	A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED
3	LOCATION ON SITE SHALL NOT OBSTRUCT FIRE APPARATUS ACCESS ROUTES. [CFC 503.4]
4	THE PLANS ARE NOT FOR CONSTRUCTION WITHOUT A DSA APPLICATION NUMBER.
5	ALL SPECIFIC BALL WALL APPLICATIONS FOR EACH SITE MUST BE ACCOMPANIED BY A STATEMENT OF STRUCTURAL TESTS (DSA-103 FORM) FOR THE SPECIFIC SCHOOL SITE.

BALL WALL COVER SHEET
BW16-12S (STANDARD 16' SECTION 8' EXPANDIBLE)

(PC# 03-119359)

L.A. STEELCRAFT

JAMES QUINN A.I.A. C 9269
MICHAEL D. JUNDT R.S.E. S3396

architecture engineering planning
ASSOCIATED DESIGN & ENGINEERING INC.
351 W. CROMWELL AVE. SUITE 108 FRESNO, CALIFORNIA 93711 PH. (559) 431-2389 FAX (559) 431-2074

REVISIONS

PLOT DATE: 11/26/2019

SHEET C1.0

JOB NO. E17010 012

DATE 01-28-19

M:\Engineering\2017\E17010 LA_Steelcraft Ball Wall\E17010-012 Harmony School\Dwgs\E17010-012 Harmony Elementary School.aec
LAST SAVED --) 6/18/2020 12:43 PM

NOTES:
1. Install per manufacturer's specifications.
2. See Layout Plan for Manufacturer and Model.
3. Refer to Pre-Check Ball Wall Structural Calculations_V2.pdf package for more information and pre-check structural calcs and details.

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
f: 707.525.5616
tlcd.com

CONSULTANT:

QUADRIGA
landscape architecture and planning, inc.
SACRAMENTO | SANTA ROSA
707.546.3561 | www.quadriga-inc.com

STAMP:

REVISIONS

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/07/2021

DRAWN BY:
Brett Kordenbrock

CHECKED BY:
Christine Talbot

QUADRIGA PROJECT NUMBER:
19-1678

BALL WALL STRUCTURAL DRAWINGS

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APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

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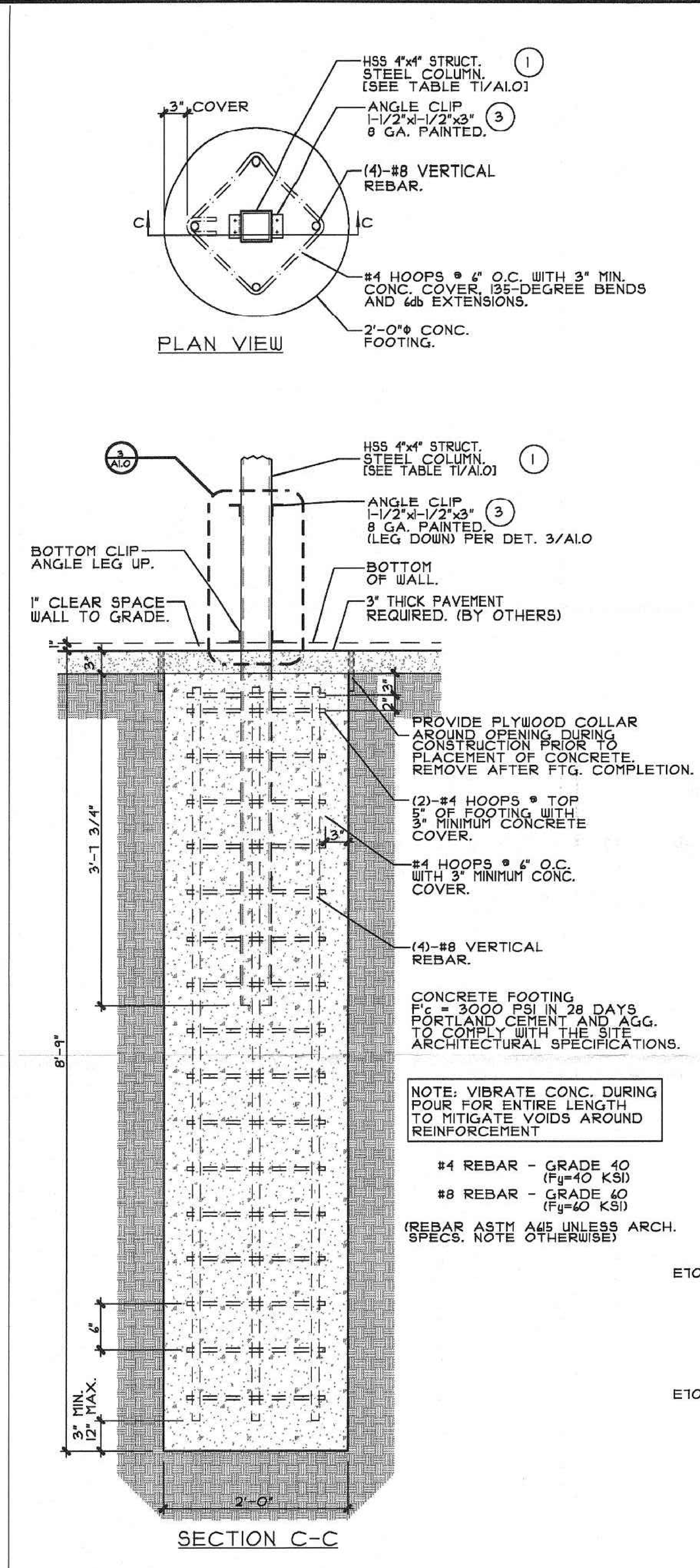
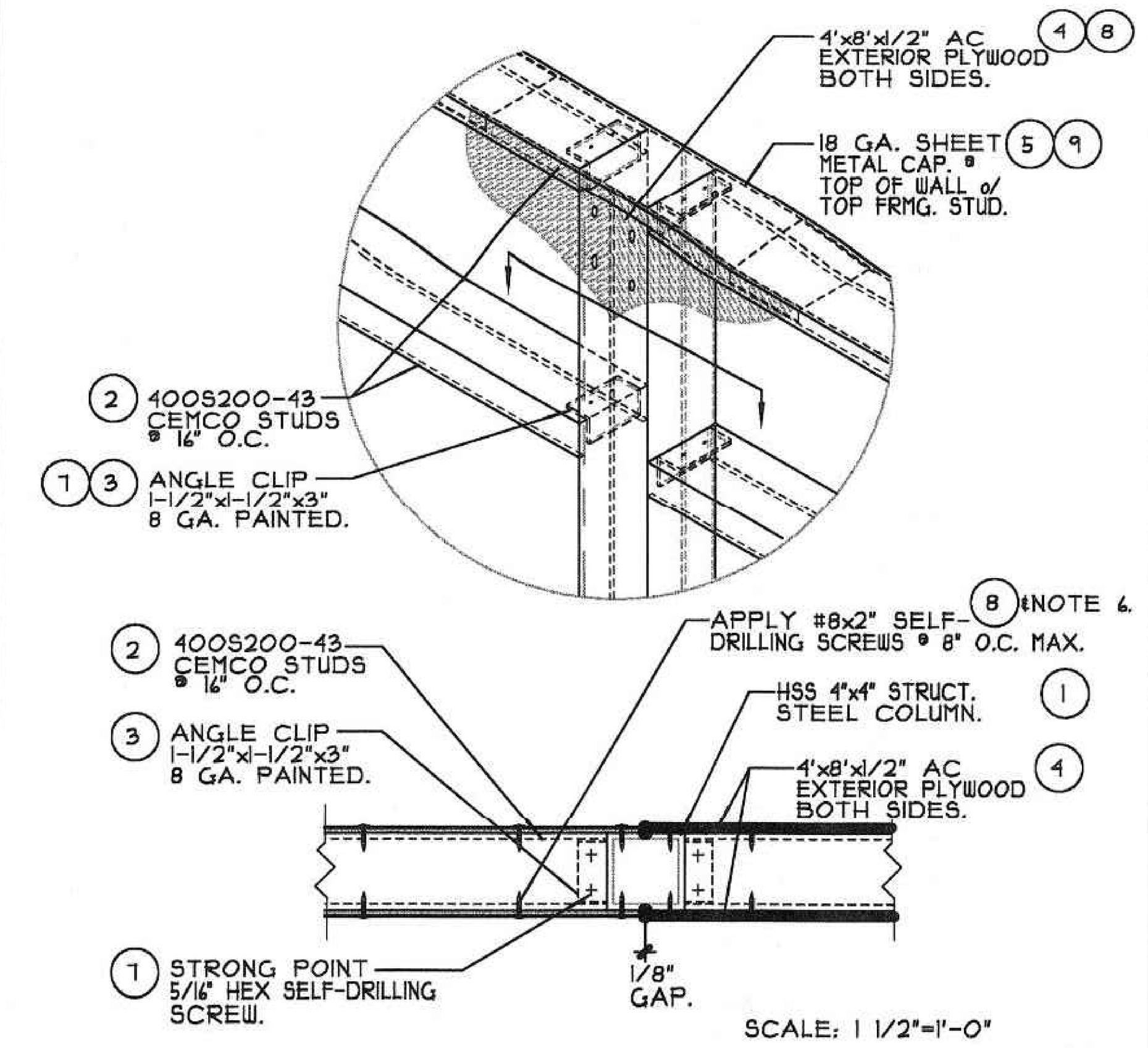
STAMP:

REVISIONS

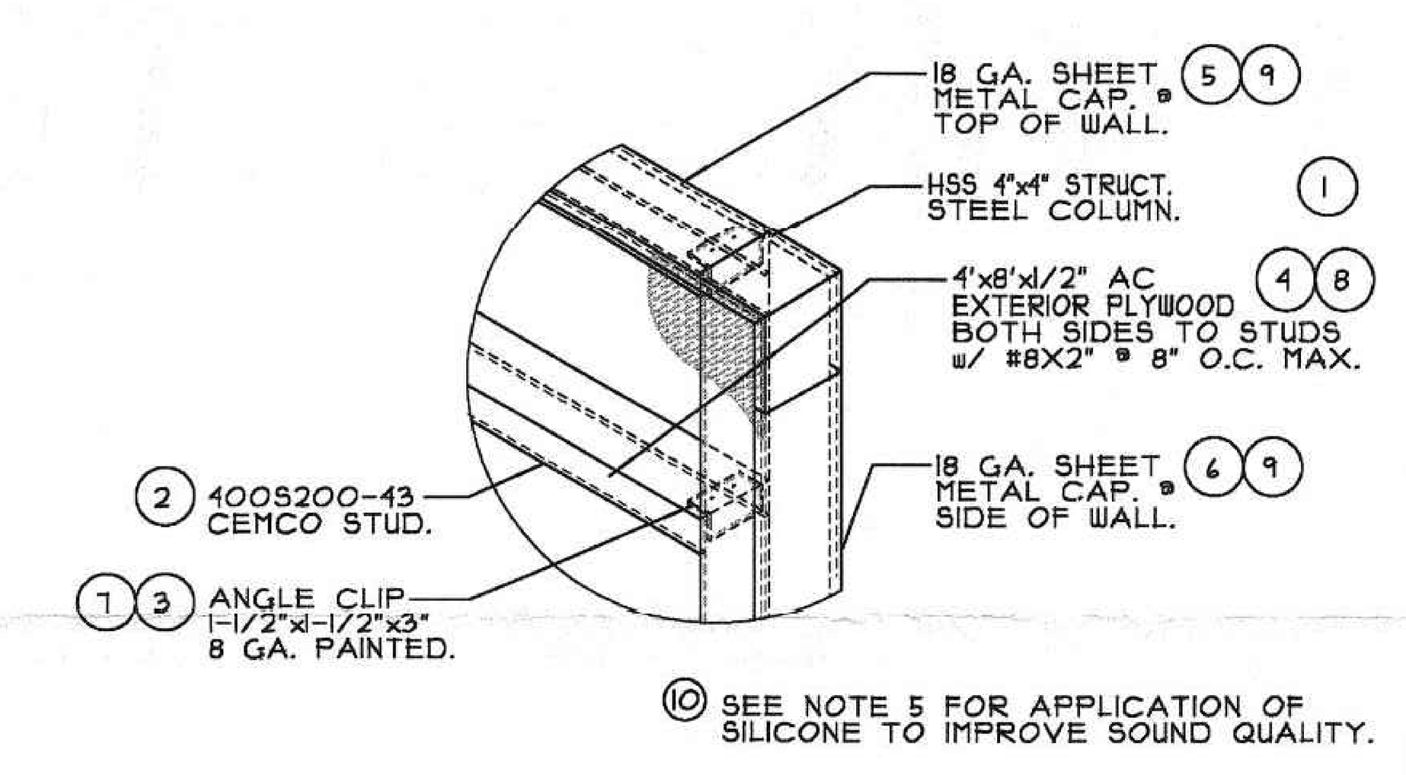
Number	Date	Description



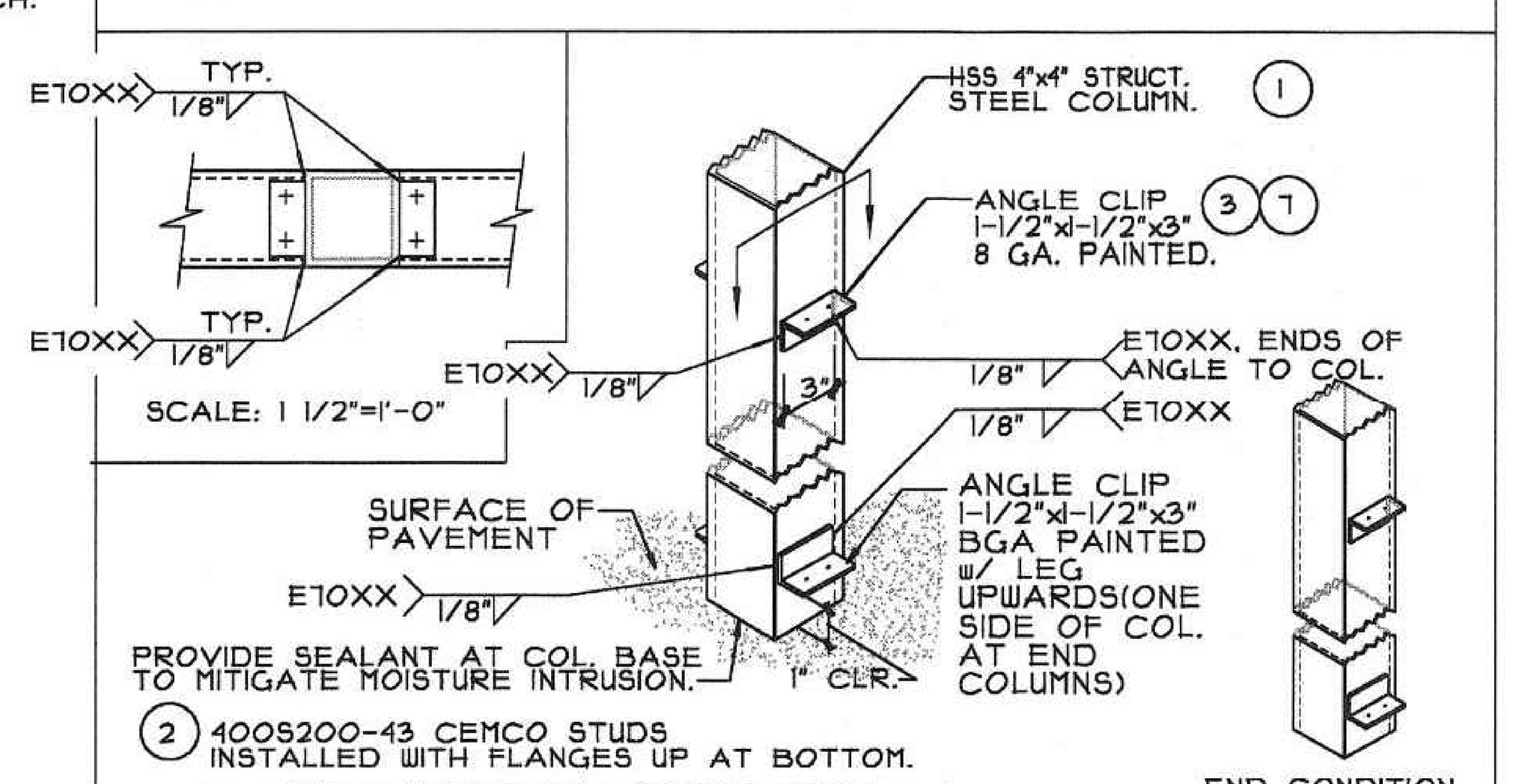
4 FOOTING PLAN/SECTION
SCALE: 1"=1'-0"



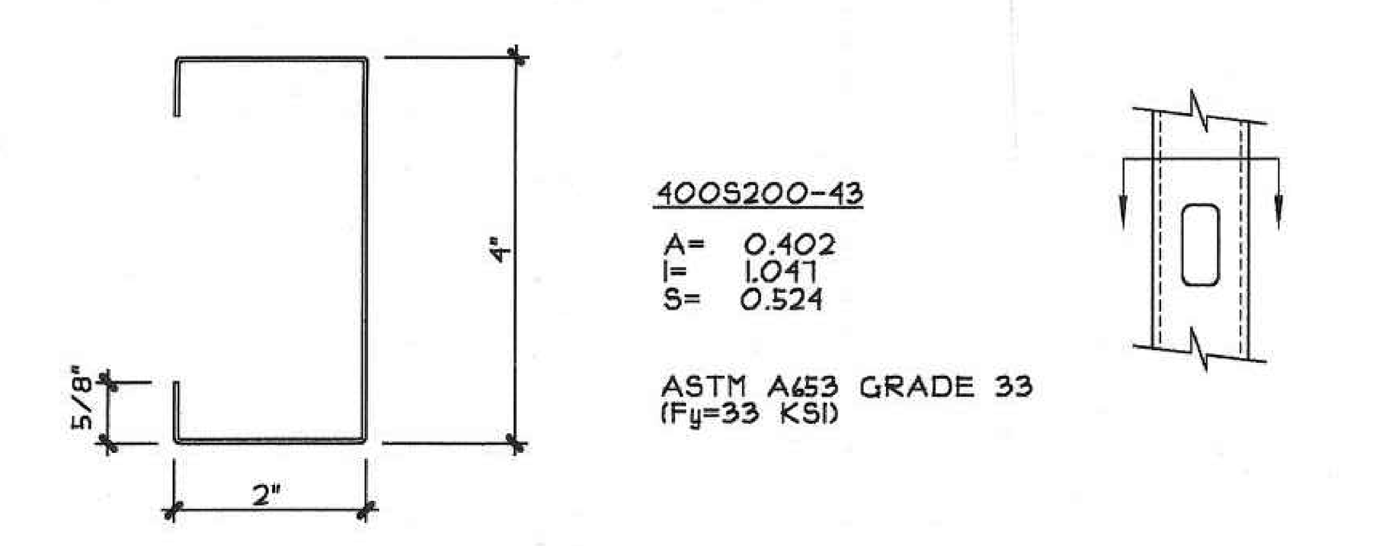
1 TOP CENTER CONDITION
SCALE: N.T.S.



2 CORNER CONDITION
SCALE: N.T.S.



3 INTERMEDIATE CONDITION
SCALE: N.T.S.
(WELD WITH E70XX ELECTRODE TYP.)



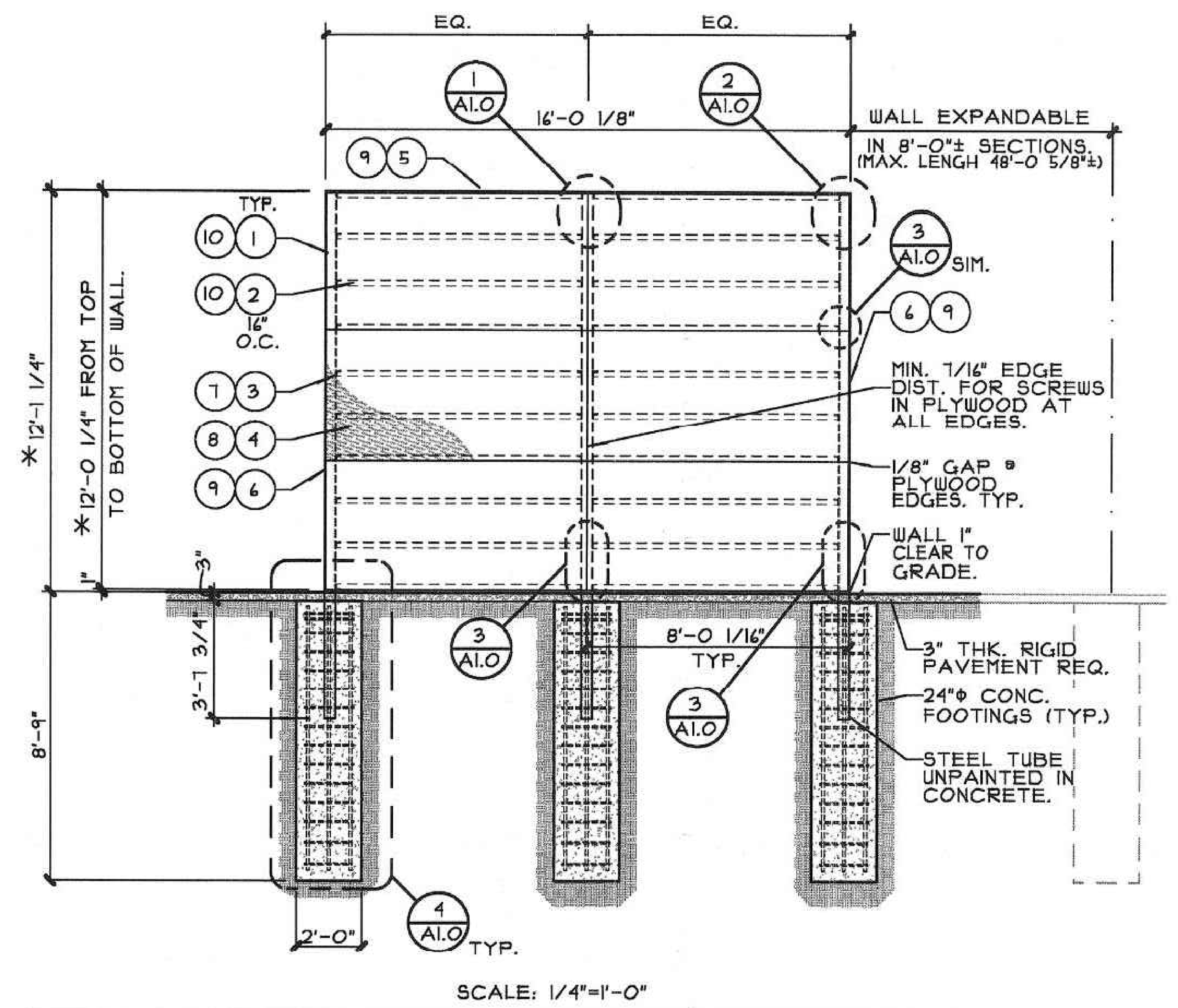
5 WALL GIRT/C-STUD SECTION
SCALE: N.T.S.

CEMCO DATA SHEET IS IN MISCELLANEOUS CALCULATION SUPPORT DOCUMENTS - APPENDIX A

T1 BALL WALL COLUMN SIZE CHART

WALL Ht. (FT.)	WALL I.D.	WALL LENGTH (FT.)	REQUIRED COLUMN SIZE
8	BW16-8S THRU BW48-8S	8, 16 THRU 48	HSS 4"x4"x5/16" STRUCT. TUBE x 12'-0" LONG.
10	BW16-10S THRU BW40-10S	8, 16 THRU 40	HSS 4"x4"x5/16" STRUCT. TUBE x 14'-0" LONG.
	BW48-10S	48	HSS 4"x4"x3/8" STRUCT. TUBE x 14'-0" LONG.
12	BW16-12S	8, 16	HSS 4"x4"x5/16" STRUCT. TUBE x 16'-0" LONG.
	BW24-12S	24	HSS 4"x4"x3/8" STRUCT. TUBE x 16'-0" LONG.
	BW32-12S THRU BW40-12S	32 THRU 40	HSS 4"x4"x1/2" STRUCT. TUBE x 16'-0" LONG.
	BW48-12S	N/A	NOT INCLUDED IN THIS PRE-CHECK PLAN.

COLUMN NOTES: 1. ALL STRUCTURAL STEEL COLUMNS TO BE ASTM A500 GRADE B (F_y = 46ksi)
2. ALL COLUMNS ARE PAINTED WITH AN OIL BASED PRIMER.



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

ITEM	QUANT.	PART.NO	DESCRIPTION	WT. (LBS.)
1	3	F02BW458	HSS 4"x4"x5/16" STRUCT. TUBE x 16'-0" LONG. PAINTED w/OIL BASE PRIMER. [FOR WALL SHOWN, SEE COLUMN TABLE BELOW FOR OTHER WALL CONDITIONS.]	540
			HSS 4"x4"x3/8" AND HSS 4"X4"x1/2" STRUCT. TUBE x 16'-0" LONG. MAX. PAINTED WITH OIL BASE PRIMER PER TABLE. [DET. T1/A1.0]	1032
2	20	P02BW418	400S200-43 CEMCO STUD x 7'-6" LONG. GALVANIZED. @ 16" O.C. (ICC-ESR 3016)	140
3	40	P02BW801	1-1/2"x1-1/2"x3" 8 GA. CLIP, A36 STEEL. RUST INHIBITING OIL-BASE PRIMER PAINT	20
4	12	P08BW408	4'x8'x1/2" AC EXTERIOR PLYWOOD, 16 OC SPAN RATING, EXTERIOR GRADE. (BOTH SIDES)	960
5	1	F02BW160	18 GA. SHEET METAL CAP x 16'-0" LONG. GALVANIZED.	40
6	2	F02W121	18 GA. SHEET METAL CAP x 12'-0" LONG. GALVANIZED.	35
7	75	P01BW101	STRONG-POINT SCREWS: #12-24x7/8" 4 POINT ZINC PLATED SELF DRILLING SCREW (ESR-3528)	5
8	1100	P01BW102	PRIME SOURCE PRO-TWIST #8x2" SELF DRILLING ZINC PLATED OUTDOOR SCREW. PLYWD. TO FRAME, SEE NOTE 6 BELOW FOR SPACING REQUIREMENT. (ESR-1408)	5
9	75	P01BW103	PANHEAD No.10x1/2" LONG. PLATED. CAP AND SIDES TO PLYWOOD. (ESR-1408)	5
10	1	P01BW988	TUBE OF SILICONE (SILICON MEETING IS808 & UL NO. E36952 OR SCS1001, ASTM C920)	-
			TOTAL WEIGHT OF ALL INCLUDED MATERIALS.	1,750

DRAWING NOT TO SCALE
*NOTE: FOR 8' HT & 10' HT USE SAME DESIGN WITH LOWER 4 FOOT OR 2 FOOT OF WALL OMITTED.
** AC EXTERIOR PLYWOOD FOR SMOOTH EXTERIOR SURFACE.

1. THERE ARE THREE SQUARE STEEL POSTS. ONE HAS "CLIPS" ON BOTH SIDES AND TWO HAVE CLIPS ON ONE SIDE ONLY. THE ONE WITH CLIPS ON BOTH SIDES IS THE CENTER POST AND THE OTHER TWO ARE THE END POSTS. FOR 8 FT. WALL, THERE ARE TWO SQ. END STEEL POSTS.
2. DIG THREE FOOTINGS AS SHOWN ON THIS SHEET. PLACE THE PROPER POST INTO THE FOOTING HOLE AND SUPPORT THEM IN A PLUMB AND LEVEL POSITION AT THE PROPER SPACING. BE SURE THEY ARE PROPERLY ALIGNED AND AT THE PROPER HEIGHT ABOVE FINISHED GRADE. THE BOTTOM OF THE BOTTOM "CLIP" HAS TO BE 1 INCH ABOVE THE HIGHEST FINISHED GRADE. IF THE POSTS ARE NOT PLUMB AND TOPS AT THE SAME ELEVATION, YOU WILL HAVE PROBLEMS COMPLETING THE INSTALLATION.
3. POUR 3000 PSI CONCRETE (CBC §1905A.1.1) INTO THE FOOTING HOLES WITH REINFORCEMENT WAIT 36 HOURS BEFORE PROCEEDING. PROVIDE STANDARD AGGREGATE MIX WITH MAX. 1" AGGREGATE SIZE.
4. ATTACH THE LIGHT GAGE METAL STUDS BY INSTALLING (2)-5/16" HEX A/F 4-POINT SELF-DRILLING SCREWS, (ESR-3528), THROUGH THE STUD INTO THE "CLIPS". ALL STUDS EXCEPT THE BOTTOM STUD SHOULD HAVE THE FLAT SIDE UP. (2) SCREWS PER CLIP IS NECESSARY.
5. APPLY A "DAB" OF SILICONE CAULKING TO THE FACE OF THE STUDS & COL. AT APPROXIMATELY 10" ON CENTER. THIS IS TO IMPROVE THE SOUND QUALITY OF THE WALL WHEN USED.
6. ATTACH THE PLYWOOD SHEETS TO THE FRAME. MAKE SURE THE OVERLAY IS TO THE OUTSIDE OF THE WALL. USE THE PRO-TWIST SCREWS, #8x2" (ESR-1408) WITH PLATED SCREW SPACING AT 8" O.C. MAX. (4" O.C. MIN SPACING)
7. SCREW THE SHEET METAL CAPS TO THE TOP AND SIDES WITH THE #10x1/2" PANHEAD SCREWS @ 12" O.C. TO COMPLETE THE INSTALLATION. (ESR-1408)
8. PAINT SURFACES WITH TWO COATS PROPER PAINT. (DO NOT PAINT OVER MILL I.D. #'S UNTIL INSPECTION HAS OCCURED). PAINT IS NOT SUPPLIED BY L.A. STEELCRAFT.

PRE-CHECK (PC) DOCUMENT
CODE: LATEST CCR EDITION AND 2016 CBC

A SEPARATE PROJECT APPLICATION FOR CONSTRUCTION IS REQUIRED

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
03 119359

BALL WALL
COVER SHEET
BW16-12S (STANDARD 16' SECTION 8' EXPANDIBLE)

JAMES QUINN A.I.A. C 9269
MICHAEL D. JUNDT R.S.E. S3396

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L.A. STEELCRAFT (PC# 03-119359)

architecture
engineering
planning

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STATE OF CALIFORNIA

REVISIONS	
PLOT DATE:	10\17\2018
SHEET	A1.0
JOB NO.	E17010 012
DATE	10-17-18

BALL WALL
STRUCTURAL PLAN

F:\Engineering\2017\E17010 LA_Steelcraft Ball Wall\E17010-012 Harmony School\Dwgs\E17010-012 Harmony Elementary School.sec
LAST SAVED --> 6/18/2020 12:45 PM

NOTES:
1. Install per manufacturer's specifications.
2. See Layout Plan for Manufacturer and Model.
3. Refer to Pre-Check Ball Wall Structural Calculations_V2.pdf package for more information and pre-check structural calcs and details.

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

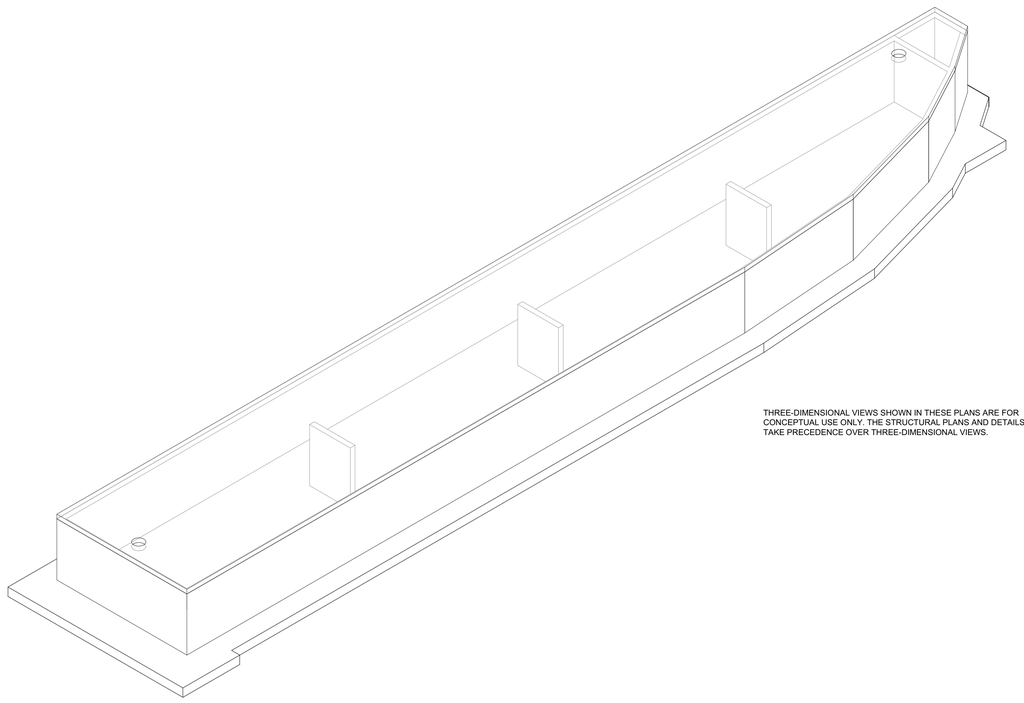
HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981
TLCD PROJECT NUMBER
19046
DATE
09/07/2021
DRAWN BY
Brett Kordenbrock
CHECKED BY
Christine Talbot
QUADRIGA PROJECT NUMBER
19-1678

BALL WALL STRUCTURAL DRAWINGS

ABBREVIATIONS

AB	ANCHOR BOLT	GALV	GALVANIZED	PTDF	PRESSURE TREATED
ABV	ABOVE	GB	GRADE BEAM		DOUGLAS FIR
AC	AIR CONDITIONING	GLB	GLUE LAMINATED BEAM	PT	POINT
ADJ	ADJACENT	GR	GRADE	R	RADIUS
ADDL	ADDITIONAL	HD	HOLD DOWN	RBS	REDUCED BEAM SECTION
ALT	ALTERNATE	HDG	HOT-DIP GALVANIZED	RFTR	RAFTER
ALUM	ALUMINUM	HDR	HEADER	REF	REFERENCE
ARCH	ARCHITECT	HGR	HANGER	REINF	REINFORCING
@	AT	HK	HOOK	REQD	REQUIRED
BLDG	BUILDING	HORIZ	HORIZONTAL	REV	REVISION
BLK/BLKG	BLOCK/BLOCKING	HS	HIGH STRENGTH	REV	REVISION
BLW	BELOW	HSB	HIGH STRENGTH BOLT	RF	ROOF
BM	BEAM	HSFB	HIGH STRENGTH	RWD	REDWOOD
BN	BOUNDARY NAIL		FRICTION BOLT	S	AMERICAN STANDARD BEAM
BOT	BOTTOM	HSG	HIGH STRENGTH GROUT	SAD	SEE ARCHITECTURAL
BRG	BEARING	HSH	HORIZONTAL SLOTTED		DRAWINGS
BTWN	BETWEEN		HOLE	SB	SOLD BLOCK
BU	BUILT-UP	HSS	HOLLOW STRUCTURAL	SC	SLIP CRITICAL
C	CHANNEL,		SECTION	SCBF	SPECIAL CONCENTRIC
	AMERICAN STANDARD	HT	HEIGHT		BRACED FRAME
	CHANNEL	ID	INSIDE DIAMETER	SCD	SEE CIVIL DRAWINGS
CANT	CANTILEVER	IJ	I SHAPED WOOD BUILT	SCHED	SCHEDULE
CB	CARRIAGE BOLT		UP TRUSS	SED	SEE ELECTRICAL DRAWINGS
CFS	COLD FORMED STEEL	INT	INTERIOR	SEOR	STRUCTURAL ENGINEER OF
CIP	CAST IN PLACE	JST	JOIST		RECORD
CGL	CERTIFIED GLUED LUMBER	JT	JOINT	SFRS	SEISMIC FORCE RESISTING
CJ	CONTROL JOINT	KP	KING POST		SYSTEM
CL	CENTER LINE		KING POST CRIPPLE	SHTG	SHEATHING
CJP	COMPLETE JOINT	Lb or #	POUNDS	SIM	SIMILAR
	PENETRATION	LGMF	LIGHT GAGE METAL	SKYLT	SKYLIGHT
CLG	CEILING		FRAMING	SLD	SEE LANDSCAPE DRAWINGS
CLR	CLEAR	LGMFC	LIGHT GAGE METAL	SMF	SPECIAL MOMENT FRAME
COL	COLUMN		FRAMING CONTRACTOR	SMS	SHEET METAL SCREW
COLL	COLLECTOR	LL	LIVE LOAD	SMD	SEE MECHANICAL DRAWINGS
CONC	CONCRETE	LLH	LONG LEG HORIZONTAL	SOG	SLAB ON GRADE
CONN	CONNECTION	LLV	LONG LEG VERTICAL	SPCG	SPACING
CONT	CONTINUOUS	LOC	LOCATION	SPD	SEE PLUMBING DRAWINGS
COORD	COORDINATE/	LS	LAG SCREW	SPEC	SPECIFICATION
	COORDINATION	LSL	LAMINATED STRAND LUMBER	SQ	SQUARE
CMU	CONCRETE MASONRY UNIT	LVL	LAMINATED VENEER LUMBER	SS	SELECT STRUCTURAL
CSK	COUNTERSINK	MAX	MAXIMUM		or STAINLESS STEEL
CW	CUT WASHER	MB	MACHINE BOLT	STGR	STAGGERED
DBA	DEFORMED BAR ANCHOR	MBM	METAL BUILDING	STD	STANDARD
DBL	DOUBLE		MANUFACTURER	STIFF	STIFFENER
DCW	DEMAND CRITICAL WELD	MC	MISCELLANEOUS CHANNEL	STL	STEEL
DF	DOUGLAS FIR	MECH	MECHANICAL	STRUCT	STRUCTURAL
DIA or Ø	DIAMETER	MEZZ	MEZZANINE	SW	SHEAR WALL
DIAG	DIAGONAL	MF	MOMENT FRAME	SYM	SYMMETRICAL
DIM	DIMENSION	MFR	MANUFACTURER	T&B	TOP AND BOTTOM
DJ	DOWEL JOINT	MIN	MINIMUM	T&G	TONGUE AND GROOVE
DL	DEAD LOAD	MISC	MISCELLANEOUS	THK	THICK
DN	DOWN	MW	MALLEABLE IRON WASHER	THRD	THREADED
DO	DITTO	MTL	METAL	THRU	THROUGH
DWG	DRAWING	(N)	NEW	TL	TOTAL LOAD
DWL	DOWEL	NIC	NOT IN CONTRACT	TOC	TOP OF CONC
EA	EACH	NO or #	NUMBER	TOC	TOP OF CONCRETE
EE	EACH END	NS	NEAR SIDE	TOF	TOP OF FRAMING
EF	EACH FACE	NSG	NON-SHRINK GROUT	TOM	TOP OF MASONRY
ELEC	ELECTRICAL	NTS	NOT TO SCALE	TOP	TOP OF PLYWOOD
ELEV	ELEVATOR/ELEVATION	OI	OVER	TOS	TOP OF STEEL
EMBED	EMBEDMENT	oc	ON CENTER	TOT	TOTAL
EQ	EQUAL	OD	OUTSIDE DIAMETER	TU	TILT UP
EQUIP	EQUIPMENT	OH	OPPOSITE HAND	TYP	TYPICAL
EW	EACH WAY	OPNG	OPENING	UNO	UNLESS NOTED OTHERWISE
EW	EACH WAY	OPP	OPPOSITE	VERT	VERTICAL
EXIST or (E)	EXISTING	OVS	OVERSIZED	VIF	VERIFY IN FIELD
EXP	EXPANSION	OW	OTHERWISE	VSH	VERTICAL SLOTTED HOLE
EXT	EXTERIOR	OWT	OPEN WEB TRUSS	W	WIDE FLANGE STEEL BEAM
FDN	FOUNDATION	℄	PLATE or PROPERTY LINE	W/	WITH
FIN	FINISH	PA	POST ABOVE	W/O	WITHOUT
FG	FINISH GRADE	PDP	POWDER DRIVEN PINS	WD	WOOD
FLI	FERRULE LOOP INSERT	PEN	PANEL EDGE NAIL	WHS	WELDED HEADED STUD
FN	FACE NAIL	PERP	PERPENDICULAR	WO	WOOD
FN	FACE NAIL	PES	PANEL EDGE SCREWS	WP	WORK POINT/WATERPROOF
FOC	FACE OF CONCRETE	PJP	PARTIAL JOINT PENETRATION	WS	WOOD SCREW
FOM	FACE OF MASONRY	PLF	POUNDS PER LINEAR FOOT	WT	WEIGHT
FOS	FACE OF STUD	PNL	PANEL	WTS	WELDED THREADED STUD
FRMG	FRAMING	PSF	POUNDS PER SQUARE FOOT	WWR	WELDED WIRE
FS	FAR SIDE	PSI	POUNDS PER SQUARE INCH		REINFORCEMENT
FTG	FOOTING	PSL	PARALLEL STRAND LUMBER		
GA	GAGE or GAUGE	PTB	PANEL TIE BAR		



THREE-DIMENSIONAL VIEWS SHOWN IN THESE PLANS ARE FOR CONCEPTUAL USE ONLY. THE STRUCTURAL PLANS AND DETAILS TAKE PRECEDENCE OVER THREE-DIMENSIONAL VIEWS.

E MATERIAL DATA

(INFORMATION SHOWN IS FOR STRUCTURAL DESIGN REFERENCE ONLY. SEE THE PROJECT SPECIFICATIONS FOR ALL MATERIAL SPECIFICATIONS.)

CONCRETE 28-DAY MINIMUM DESIGN STRENGTH:
- F'_c = 3,000 PSI FOUNDATIONS
- F'_c = 4,000 PSI WALLS
- F'_c = 4,000 PSI TOPPING SLAB

REINFORCING STEEL:
ASTM A615 GRADE 60 OR A706 GRADE 60 (F_y = 60,000 PSI) (SEE SPECS FOR REINFORCING AT WALL)

STRUCTURAL STEEL (UNO):
PLATES - ASTM A36 (F_y = 36,000 PSI)

FASTENERS:
MACHINE BOLTS SHALL BE ASTM A307 GRADE A
ANCHOR RODS SHALL BE ASTM F1554 GR 36 UNO
ARC-WELDING ELECTRODES SHALL BE E70

SHEET INDEX

S-001	GENERAL NOTES
S-101	TYPICAL CONCRETE DETAILS
S-102	LOADING DIAGRAMS
S-201	FOUNDATION PLAN
S-202	ROOF FRAMING PLAN
S-301	DETAILS
S-302	DETAILS

A DESIGN CRITERIA

DESIGN CRITERIA: 2019 CALIFORNIA CODE OF REGULATIONS, TITLE 24, PART 2 (CBC)
ROOF LIVE LOAD: 100 PSF
RISK CATEGORY: III
WIND DATA: ULTIMATE WIND SPEED (3 SEC GUST) IN MPH: 98
WIND EXPOSURE: C
INTERNAL WIND PRESSURE COEFFICIENT (GCPI) = ±0.18
COMPONENTS AND CLADDING DESIGN PRESSURES FOR SYSTEMS DESIGNED BY OTHERS SHALL COMPLY WITH THE "ASCE 7" DESIGN STANDARD

EARTHQUAKE DATA: SEISMIC IMPORTANCE FACTOR, I_E: 1.25
MAPPED SPECTRAL RESPONSE ACCELERATIONS: S_S = 1.50; S_1 = 0.60
SITE CLASS: D
SPECTRAL RESPONSE COEFFICIENTS: S_{DS} = 1.00; S_{D1} = 0.680
SEISMIC DESIGN CATEGORY: D
SEISMIC FORCE RESISTING SYSTEM: SPECIAL REINFORCED CONCRETE SHEAR WALLS (BEARING)
RESPONSE MODIFICATION FACTOR: R = 3.0 (PER ACI 350.3-06)
DESIGN BASE SHEAR: 1085k (ULTIMATE, E-W)
2217k (ULTIMATE, N-S)
SEISMIC RESPONSE COEFFICIENTS: C_s = 1.000 (ULTIMATE)
C_s = 0.181 (ULTIMATE, N-S)
C_s = 0.005 (ULTIMATE, E-W)
C_s = 0.400 (ULTIMATE)

ANALYSIS PROCEDURE USED: ACI 350.3-06

MAXIMUM ANTICIPATED STORY DRIFT = 0.015 X HEIGHT

SCOPE: NEW 1-STORY CONCRETE CISTERN WITH A MAT SLAB, CAST-IN-PLACE WALLS, AND A HOLLOW CORE PRECAST PRESTRESSED PLANK ROOF.

B GENERAL NOTES

1. REFER TO SHEET S-101 FOR STANDARD DETAILS OF CONSTRUCTION. REFER TO THE PROJECT SPECIFICATIONS FOR MATERIALS AND METHODS.
2. BUILDING DIMENSIONS SHOWN ARE FOR GENERAL REFERENCE ONLY. SEE ARCHITECTURAL DRAWINGS (SAD) FOR ALL ACTUAL BUILDING DIMENSIONS. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER SO CLARIFICATION CAN BE MADE PRIOR TO COMMENCING WORK.
3. STRUCTURAL DRAWINGS SHALL NOT BE SCALED. ALL DIMENSIONS AND FIT SHALL BE DETERMINED AND VERIFIED BY THE CONTRACTOR PRIOR TO COMMENCING WORK.
4. DETAILS NOT FULLY OR SPECIFICALLY SHOWN SHALL BE OF SAME NATURE AS OTHER SIMILAR CONDITIONS.
5. REFER TO ARCHITECTURAL DRAWINGS FOR SIDEWALK SLABS AND DIMENSIONS.
6. COORDINATION OF MECHANICAL, ELECTRICAL, PLUMBING, AND SITE UTILITY SYSTEMS WITH THE STRUCTURAL SYSTEM IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. USE DETAILS 2/S-101 AND 11/S-101, AT CONDITIONS WHERE THESE DETAILS DO NOT APPEAR TO APPLY, NOTIFY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. AT CONDITIONS WHERE FIELD MODIFICATIONS OF MECHANICAL, ELECTRICAL, PLUMBING, OR SITE UTILITIES AFFECT STRUCTURAL SYSTEMS, NOTIFY STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
7. VERIFY WEIGHTS AND LOCATIONS OF MECHANICAL UNITS WITH MECHANICAL ENGINEER PRIOR TO PLACEMENT. UNITS VARYING OVER 10% IN WEIGHT SHALL BE REVIEWED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION (MECHANICAL WEIGHTS SHOWN ARE MAXIMUM). CONTRACTOR TO VERIFY MECHANICAL UNIT SIZES AND WEIGHTS AS INSTALLED PRIOR TO INSTALLATION OF SPECIAL FRAMING TO ENSURE CORRECT PLACEMENT UNDER CURBS, ETC.
8. SHORING AND BRACING DESIGN, MATERIALS AND INSTALLATION SHALL BE PROVIDED BY THE GENERAL CONTRACTOR, AND SHALL BE ADEQUATE FOR ALL LOADS. LEAVE IN PLACE AS LONG AS MAY BE REQUIRED FOR SAFETY AND UNTIL FINAL STRUCTURAL CONSTRUCTION IS COMPLETED. THE CONTRACTOR SHALL ENGAGE A LICENSED CIVIL OR STRUCTURAL ENGINEER TO PROVIDE SHORING.
9. SPECIAL INSPECTIONS ARE REQUIRED PER THE TESTING AND INSPECTION FORM.
10. VEHICULAR TRAFFIC, HEAVY EQUIPMENT AND MATERIAL STAGING SHALL NOT BE ALLOWED ADJACENT TO ANY RETAINING/BASEMENT WALL, NEW OR EXISTING WITHIN A HORIZONTAL DISTANCE EQUAL TO THE WALL HEIGHT MEASURED FROM THE BOTTOM OF FOOTING OR 5'-0" WHICHEVER IS GREATER, UNLESS APPROVED BY THE STRUCTURAL ENGINEER OR NOTED OTHERWISE. WITHIN THIS ZONE, ONLY HAND-OPERATED EQUIPMENT ("WHACKERS", VIBRATORY PLATES, OR PNEUMATIC COMPACTORS) SHALL BE USED TO COMPACT THE BACKFILL SOILS.
11. NOTIFY ZFA FOR GENERAL REVIEW OF:
    - MINIMUM FOOTING SIZE AND REINFORCING STEEL.
    - RETAINING WALLS AND REINFORCING.

    NOTIFY ZFA FOR REVIEW PRIOR TO COVERING ABOVE LISTED WORK. PROVIDE 2 WORKING DAYS MINIMUM SCHEDULING NOTICE PRIOR TO REVIEW DATE.

C FOUNDATION NOTES

1. FOUNDATION DESIGN PRESSURES ARE:

   SHALLOW FOOTINGS:
   DEAD LOAD + LIVE LOAD = 1,500 PSF
   DEAD LOAD + LIVE LOAD + LATERAL = 2,500 PSF
2. ALL SOILS WORK SHALL BE DONE IN ACCORDANCE WITH THE SPECIFICATIONS, THE REQUIREMENTS OF THE GEOTECHNICAL REPORT NOTED BELOW AND CHAPTER 18A OF THE CBC, TITLE 24, PART 2. ALL FOUNDATIONS SHALL BEAR ON FIRM, UNDISTURBED, NATIVE SOILS OR ENGINEERED FILL AT OR EXCEEDING DEPTHS SHOWN ON THE DRAWINGS. ENGINEERED FILL TO BE COMPACTED PER GEOTECHNICAL REPORT. INCREASE FILL AND OR FOOTING DEPTH AS REQUIRED BY GEOTECHNICAL ENGINEER. ALL FOOTING EXCAVATIONS SHALL BE AS NEAT AS PRACTICABLE. MAXIMUM OVER EXCAVATION IN WIDTH SHALL BE LESS THAN 12 INCHES OR 25% OF FOOTING WIDTH, WHICH EVER IS LESS. 6 INCHES MAXIMUM PER SIDE. LARGER OVER-EXCAVATIONS IN WIDTH SHALL BE FILLED WITH ADDITIONAL REINFORCED CONCRETE AS DIRECTED BY THE ENGINEER, OR FORMWORK SHALL BE PROVIDED. OVER-EXCAVATIONS IN DEPTH MAY BE FILLED WITH LEAN CONCRETE OR COMPACTED APPROVED BACKFILL. ALL LOOSE SOILS SHALL BE REMOVED FROM EXCAVATIONS PRIOR TO PLACEMENT OF REINFORCING OR CONCRETE. ALL UNFORMED FOUNDATIONS SHALL BE EXCAVATED AND FORMED PER 10/S-101. GEOTECHNICAL REPORT BY:

   BRUNSING ASSOCIATES, INC
   REPORT NO. 13141.01
   DATED: JANUARY 15, 2020 & APRIL 22, 2020 (UPDATE)
3. WHERE BOTTOM OF ADJACENT FOOTINGS ARE DIFFERENT PROVIDE STEPPED FOOTING PER 4/S-101.
4. REFER TO ARCHITECTURAL DRAWINGS FOR INSERTS.
5. DO NOT UNDERCUT EXISTING FOUNDATIONS. NOTIFY ENGINEER FOR REVIEW AND POSSIBLE REVISIONS, IF EXISTING FOUNDATION CONDITIONS ARE NOT AS SHOWN.
6. TOP OF FOOTING ELEVATIONS TO BE DETERMINED BY THE CONTRACTOR BASED ON INFORMATION FROM THE CIVIL DRAWINGS, GEOTECHNICAL REPORT, LANDSCAPE, ETC.
7. TYPICAL SLAB: OVER VAPOR RETARDER (PER SPECIFICATIONS) AND 4" MINIMUM FREE DRAINING COMPACTED CRUSHED ROCK ON SUBGRADE PER THE GEOTECHNICAL RECOMMENDATIONS, AND AS APPROVED BY THE GEOTECHNICAL ENGINEER. DO NOT DRIVE CONCRETE TRUCKS OR LARGE SCREED MACHINES ON VAPOR RETARDER WITHOUT ADDITIONAL BUFFER MATERIAL AND APPROVAL FROM THE STRUCTURAL ENGINEER.

D SPANCRETE

STRUCTURAL SPECIFICATIONS

HOLLOW CORE PRECAST PRESTRESSED PLANK (HCP)
1. HOLLOW CORE PLANKS (HCP) AS SHOWN AND DETAILED ARE MANUFACTURED BY KIE-CON INC, PHONE (925) 754-9494, ICC ESR-2660 WITH STRAND F_u = 250 TO 270KSI LOW RELAXATION, F'_c CONCRETE = 4,000 PSI MINIMUM.
2. DESIGN LOADS ARE AS SHOWN. CAMBER PLANK FOR ZERO (MINUS) DEFLECTION AT FULL DEAD LOAD.
3. LAYOUT PLAN AS SHOWN ON PLAN. FIELD OR SHOP RIP PLANK TO 20" MINIMUM WIDTHS AS REQUIRED.
4. PRIOR TO FABRICATION, SUBMIT SHOP DRAWINGS TO ARCHITECT/ENGINEER FOR REVIEW.
5. HCP AND TOPPING SLAB PER PLAN AND 6/S-301.

TLCDARCHITECTURE
520 Third St. #250
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CONSULTANT:

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santa rosa ca 95404
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707.526.0992

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

STAMP:

REGISTERED PROFESSIONAL ENGINEER
CHRIS S. WARNER
No. 54613
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

PROJECT NUMBER:
19511

DATE:
09/07/2021

ENGINEER:
NBB

PROJECT MANAGER:
CSW

GENERAL NOTES

S-001

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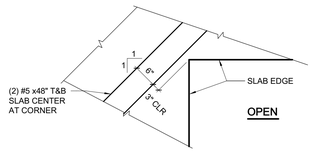
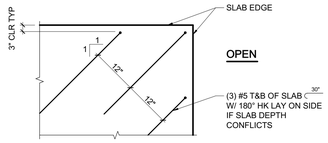
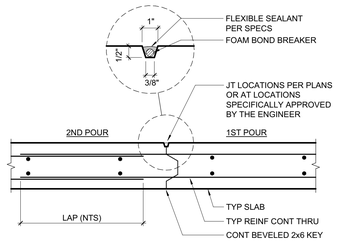


INSIDE SLAB CORNER - PLAN VIEW

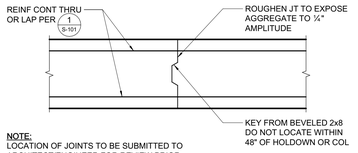


12 OUTSIDE & INSIDE SLAB CORNER - PLAN VIEW
3/4" = 1'-0"



STRUCT SLAB CONSTRUCTION JOINT

13 STRUCTURAL SLAB CONSTRUCTION JOINT
1 1/2" = 1'-0"

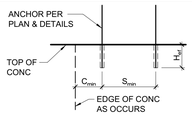


NOTE:
LOCATION OF JOINTS TO BE SUBMITTED TO ARCHITECT/ENGINEER FOR REVIEW PRIOR TO PLACEMENT OF CONCRETE

8 FOOTING CONSTRUCTION JOINT
3/4" = 1'-0"

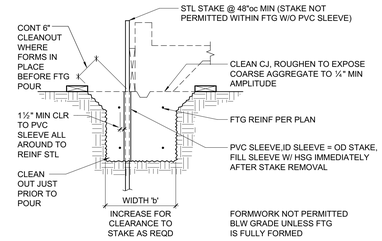
ADHESIVE ANCHOR IN 2500 PSI MIN CONCRETE

ADHESIVE TYPE	ANCHOR		PILOT HOLE	MIN EMBED UNO H_{ef}	MIN EDGE DISTANCE C_{min}	MIN SPCG S_{min}	MIN CONC DEPTH H_{min}
	THRD ROD	REBAR					
SIMPSON SET-XP (ICC-ESR 2508)	⅜"ø	#3	½"ø	3"	1¾"	3"	H_{ef} + 2½"
	½"ø	#4	⅝"ø	4"	1¾"	3"	H_{ef} + 3½"
	⅝"ø	#5	¾"ø	5"	1¾"	3"	H_{ef} + 3½"
	¾"ø	#6	⅞"ø	6"	1¾"	3"	H_{ef} + 4⅛"
	⅞"ø	#7	1"ø	7"	1¾"	3"	H_{ef} + 4"
	1"ø	#8	1⅛"ø	8"	1¾"	3"	H_{ef} + 5⅛"
	1⅛"ø	#10	1⅜"ø	10"	2¾"	6"	H_{ef} + 6⅛"
HILTI HIT-HY 200R (ICC-ESR 3187)	⅜"ø	N/A	⅞"ø	3"	1¾"	1⅞"	H_{ef} + 1¼"
	N/A	#3	½"ø	3"	1¾"	1⅝"	
	½"ø	N/A	⅝"ø	4"	1¾"	2½"	
	N/A	#4	⅝"ø	4"	1¾"	2½"	
	⅝"ø	#5	¾"ø	5"	1¾"	3⅛"	H_{ef} + 1½"
	¾"ø	#6	⅞"ø	6"	1¾"	3⅝"	H_{ef} + 1¾"
	⅞"ø	#7	1"ø	7"	1¾"	4⅜"	H_{ef} + 2"
	1"ø	#8	1⅛"ø	8"	1¾"	5"	H_{ef} + 2⅛"
	N/A	#9	1⅛"ø	9"	1¾"	5⅝"	H_{ef} + 2⅜"
	1⅛"ø	N/A	1⅜"ø	10"	1¾"	6⅛"	
	N/A	#10	1½"ø	10"	1¾"	6¼"	H_{ef} + 3"



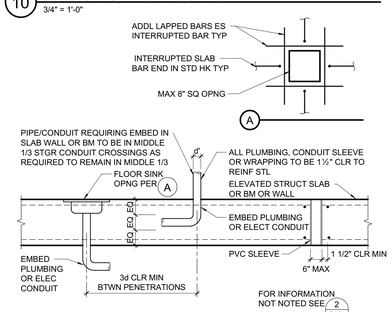
NOTES:
1. INSTALL ADHESIVE ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING, AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN DRILLING HOLES IN EXISTING CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
4. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705A AND THE REQUIREMENTS OF THE ICC REPORTS. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND ADHESIVE INJECTION. TEST ANCHORS IN ACCORDANCE W/ CBC SECTION 1910A.5. SEE DRAWINGS FOR SPECIFIC TENSION TEST LOADS FOR ANCHORS.

9 ADHESIVE ANCHOR IN CONCRETE
3/4" = 1'-0"

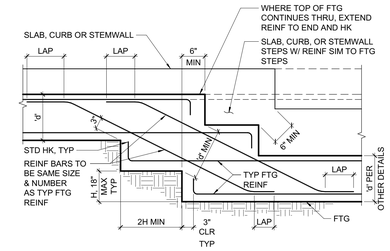


NOTE:
FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED THE FOUNDATION TRENCH WALLS ARE STABLE AS DETERMINED BY THE GEOTECHNICAL ENGINEER SUBJECT TO THE APPROVAL OF THE AUTHORITY HAVING JURISDICTION.

10 FORMWORK STAKES AT FOOTING
3/4" = 1'-0"

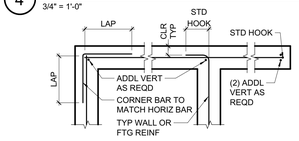


11 PIPE PENETRATIONS IN STRUCTURAL SLAB
3/4" = 1'-0"

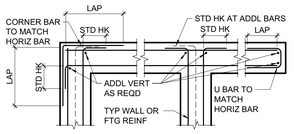


NOTE:
REMOVE ALL EARTH LOOSENED DURING EXCAVATION AND FILL W/ CONCRETE.

4 STEPPED FOOTING
3/4" = 1'-0"



PLAN VIEW - SINGLE LAYER

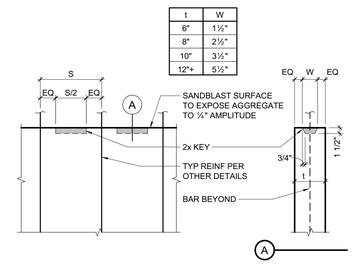


PLAN VIEW - 2 OR MORE LAYERS

NOTE:
FOOTING REINFORCING AT CORNER AND INTERSECTION TO BE SIMILAR

5 TYPICAL CORNER, INTERSECTION AND END REINFORCING
3/4" = 1'-0"

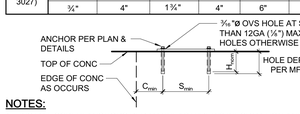
t	W
6"	1½"
8"	2½"
10"	3½"
12"+	5½"



6 TYPICAL CONCRETE KEY
3/4" = 1'-0"

SCREW ANCHOR IN 2500 PSI MIN CONCRETE

ANCHOR TYPE	ANCHOR AND PILOT HOLE DIA	MINIMUM EMBEDMENT H_{nom}	MINIMUM EDGE DIST C_{min}	MINIMUM SPCG S_{min}	MINIMUM CONCRETE THICKNESS H_{min}	MIMIMUM INSTALL TORQUE (FT-LB)	MAXIMUM INSTALL TORQUE (FT-LB)
SIMPSON TITEN HD (ICC-ESR 2713)	¼"	1⅝"	1½"	1½"	3¼"	10	24
	⅜"	2½"	1¾"	3"	4"	10	50
	½"	3¼"	1¾"	3"	5"	10	65
	⅝"	4"	1¾"	3"	6"	10	100
	¾"	5⅛"	1¾"	3"	8¾"	20	150
HILTI KH-EZ (ICC-ESR 3027)	¼"	1⅝"	1½"	1½"	3¼"	10	18
	⅜"	2½"	1½"	3"	4"	10	40
	½"	3"	1¾"	3"	4¾"	10	45
	⅝"	3¾"	1¾"	4"	5"	10	85
	¾"	4"	1¾"	4"	6"	20	95



NOTES:
1. INSTALL SCREW ANCHORS PER MANUFACTURER'S INFORMATION AND ICC REPORT INSTRUCTIONS. SPECIAL INSPECTION IS REQUIRED PER SECTION 1705A OF THE CBC AND THE REQUIREMENTS OF THE ICC REPORTS. INSTALLED ANCHORS SHALL BRING CONNECTED PLIES INTO FIRM CONTACT, MEETING THE INSTALL TORQUE BUT NOT EXCEEDING THE MAXIMUM INSTALL TORQUE.
2. CONTRACTOR TO VERIFY MINIMUM EDGE DISTANCES, SPACING AND THICKNESS ARE IN ACCORDANCE W/ SCHEDULE PRIOR TO INSTALLING ANCHOR.
3. HOLES TO BE DRILLED W/ ROTARY DRILL ONLY. WHEN INSTALLING DRILLED-IN ANCHORS IN EXISTING REINFORCED CONCRETE, USE CARE AND CAUTION TO AVOID CUTTING OR DAMAGING THE EXISTING REINFORCING BARS. MAINTAIN A REASONABLE CLEARANCE BETWEEN REINFORCEMENT AND THE DRILLED-IN ANCHOR. FILL ABANDONED HOLES W/ HIGH STRENGTH GROUT.
4. THE SPECIAL INSPECTOR SHALL PERFORM PERIODIC/CONTINUOUS INSPECTION IN ACCORDANCE WITH TABLE 1705.3. THE SPECIAL INSPECTOR SHALL INSPECT ANCHOR TYPE, ANCHOR DIMENSIONS, HOLE CLEANLINESS, EMBEDMENT DEPTH, CONCRETE TYPE, CONCRETE COMPRESSIVE STRENGTH, DRILL BIT DIAMETER, HOLE DEPTH, EDGE DISTANCE(S), ANCHOR SPACING(S), CONCRETE THICKNESS, AND TIGHTENING TORQUE.
5. TEST ANCHORS IN ACCORDANCE W/ CBC SECTION 1910A.5.

7 SCREW ANCHOR IN CONCRETE
3/4" = 1'-0"

MINIMUM BAR LAPS FOR REINFORCING STEEL CONCRETE STRENGTH: 3000 PSI OR GREATER - (STAGGER SPLICES)

SIZE	LAP LENGTH	SIZE	LAP LENGTH	SIZE	LAP LENGTH
#3	12"	#6	34"	#9	86"
#4	24"	#7	56"	#10	105"
#5	34"*	#8	70"	#11	126"

(CLASS B TOP BAR)
BAR SPCG SHALL NOT BE LESS THAN 4x BAR DIA OR 4".

* WHERE COVER NOT LESS THAN 1½", #5 LAP LENGTH = 28"

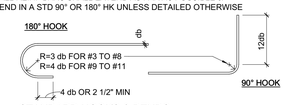
CONC COVER FOR REINF STL ..... 'CLR'

CAST AGAINST EARTH OR GR ..... 3"

EXPOSED TO EARTH (FORMED) OR WEATHER
#5 & SMALLER ..... 1½"
#6 & LARGER ..... 2"

NOT EXPOSED TO EARTH OR WEATHER
#5 & SMALLER ..... 1"
#6 & LARGER, & ALL BM STIRRUPS, COL TIES & SPIRALS ..... 1½"

ALL REINF BARS SHALL EXTEND AS FAR AS POSSIBLE & END IN A STD 90° OR 180° HK UNLESS DETAILED OTHERWISE

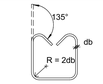


STANDARD HOOKS & BENDS

COL BAR & STRUCT OFFSET

135° STIRRUP
TIES #3, #4, #5

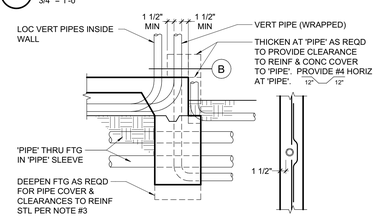
SPLICE



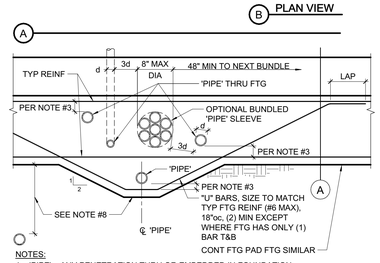
STIRRUP
#3, #4, #5

CROSSTIE
#3, #4, #5

1 TYPICAL REINFORCING DETAILS (f'c = 3000psi MIN)
3/4" = 1'-0"

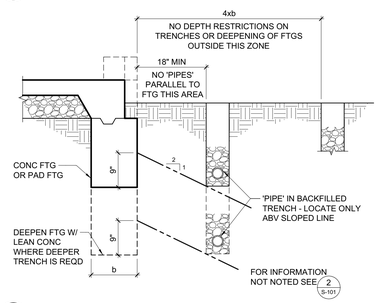


B PLAN VIEW



NOTES:
1. 'PIPE' = ANY PENETRATION THRU OR EMBEDDED IN FOUNDATION.
2. ALL PIPES THROUGH FOOTINGS TO BE WRAPPED OR SLEEVED AS FOLLOWS:
   a. SLEEVES: PROVIDE 1" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE, UNO. SEAL SLEEVE ENDS W/ MASTIC OR PLASTIC BITUMINOUS CEMENT.
   b. WRAPPED VERTICAL PIPES: PROVIDE ¼" NOMINAL SHEET FOAM W/ (3) WRAPS MINIMUM, UNO.
   c. WRAPPED HORIZONTAL PIPES: PROVIDE ¼" NOMINAL SHEET FOAM W/ (8) WRAPS MINIMUM, UNO.
   d. UNDERGROUND FIRE LINES 4" AND LARGER:
      1. SLEEVES: PROVIDE 2" MIN CLEAR ALL AROUND O.D. PIPE TO I.D. SLEEVE. SEAL ENDS PER ABOVE.
      2. WRAPPED: PROVIDE ¼" NOMINAL SHEET FOAM W/ (16) WRAPS MINIMUM.
3. WRAPPED AND SLEEVED PIPES SHALL HAVE 1½" MIN CLEAR TO REINF STEEL. MINIMUM CONCRETE COVER AT PIPES TO BE 3".
4. CLEARANCE BETWEEN 'PIPES' TO BE 3d MIN TYP W/ A MAXIMUM OF (8) PIPES PER 48". GROUPS OF PIPES MAY BE BUNDLED AS SHOWN, EXCEPT IN PAD FOOTINGS.
5. NO 'PIPE' TO RUN PARALLEL IN FOOTINGS, STEM OR CURB.
6. PVC CONDUIT ('PIPE') EMBEDDED IN CURB/STEM MAY BE WIRE TIED TO HORIZONTAL REINF.
7. NO HORIZONTAL PIPES ALLOWED THROUGH FOOTING WITHIN 2'-0" EACH SIDE OF HOLDOWNS OR STEEL COLUMNS. NO VERTICAL PIPES ALLOWED IN FOOTINGS AT BRACED FRAMES.
8. PROVIDE 18" MIN OF COMPACTED FILL ABOVE PIPES UP TO 12"ø, FOR LARGER PIPES INCREASE COMPACTED FILL DEPTH 1'-0" FOR EACH 6" INCREASE IN PIPE DIAMETER. OTHERWISE DEEPEN FOOTING AS SHOWN.

2 PIPES THRU FOOTING
3/4" = 1'-0"



3 TRENCHING ADJACENT TO FOOTING
3/4" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
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CONSULTANT:

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1212 fourth street | suite z
santa rosa ca 95404
zfa job no. 19511
zfa.com
707.526.0992

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REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS
1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

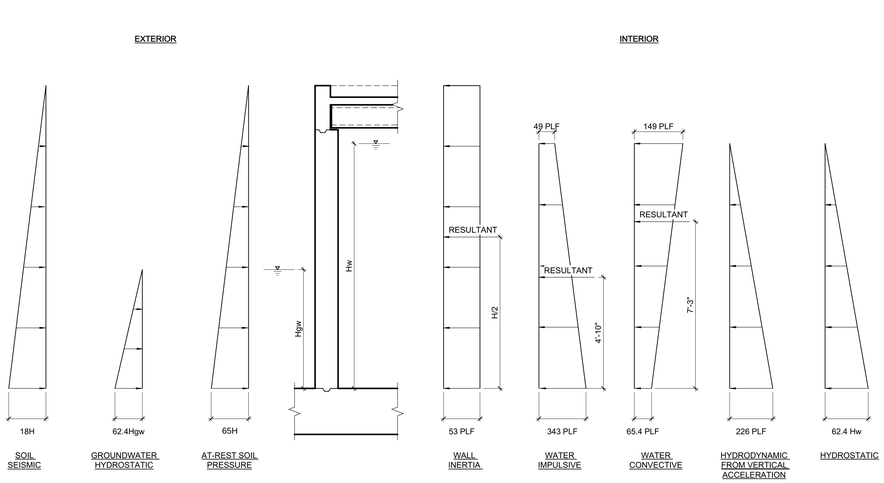
DSA PROJECT NUMBER
01-118981
PROJECT NUMBER:
19511
DATE:
09/07/2021
ENGINEER:
NBB
PROJECT MANAGER:
CSW

TYPICAL CONCRETE DETAILS

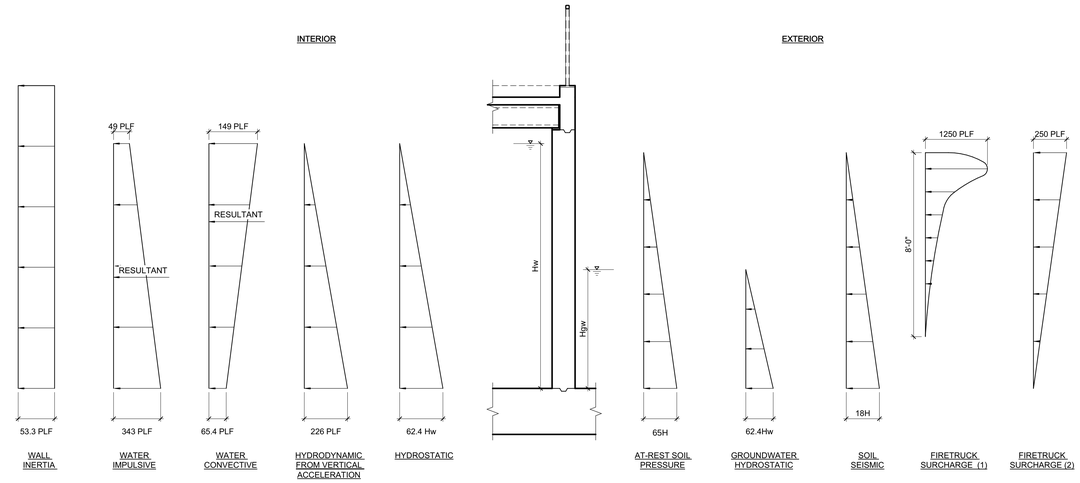
S-101

9/3/2021 9:58:50 AM \\zfa.com\SR\Projects\2019\19511 Harmony Fields Project\Drawings\19511_HARMONY_S01.vt

NORTH WALL - LEADING* HALF OF TANK
SEISMIC EVENT IN NORTH-SOUTH DIRECTION

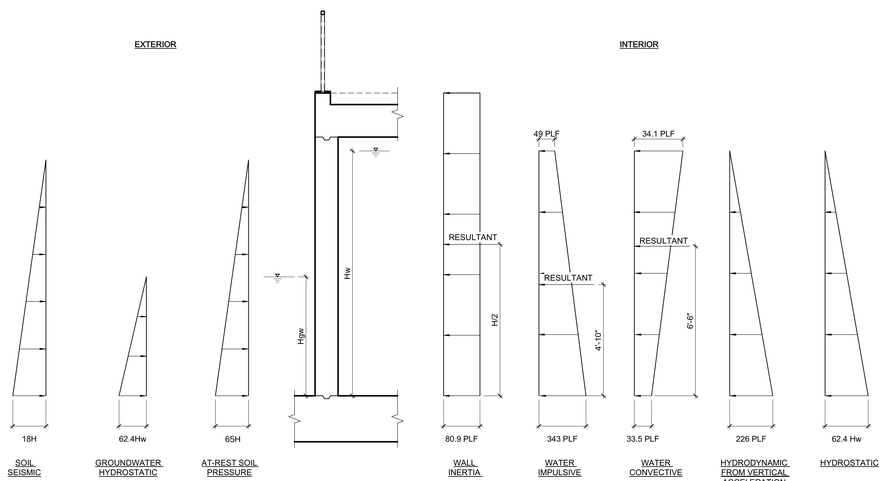


SOUTH WALL - TRAILING* HALF OF TANK
SEISMIC EVENT IN NORTH-SOUTH DIRECTION

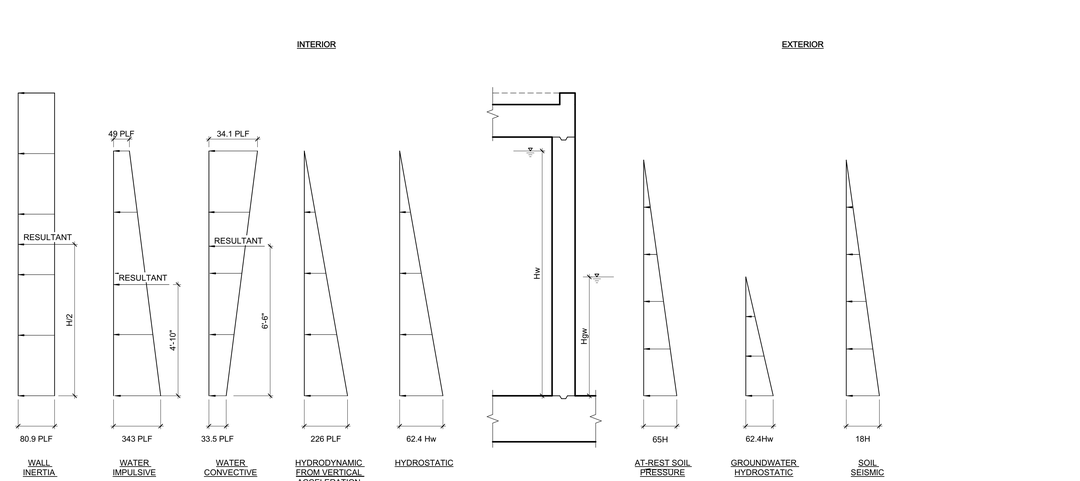


NOTE: THIS IS NOT FOR CONSTRUCTION, THIS IS FOR REFERENCE ONLY

WEST WALL - LEADING* HALF OF TANK
SEISMIC EVENT IN EAST-WEST DIRECTION



EAST WALL - TRAILING* HALF OF TANK
SEISMIC EVENT IN EAST-WEST DIRECTION



*NOTE: LEADING HALF AND TRAILING HALF DESIGNATIONS SWITCH BASED ON DIRECTION OF SEISMIC EVENT BEING INVESTIGATED

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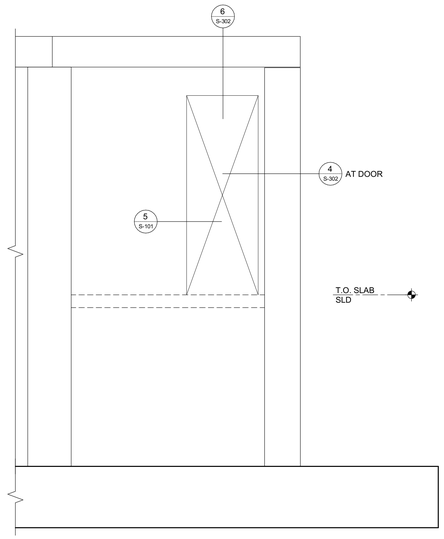
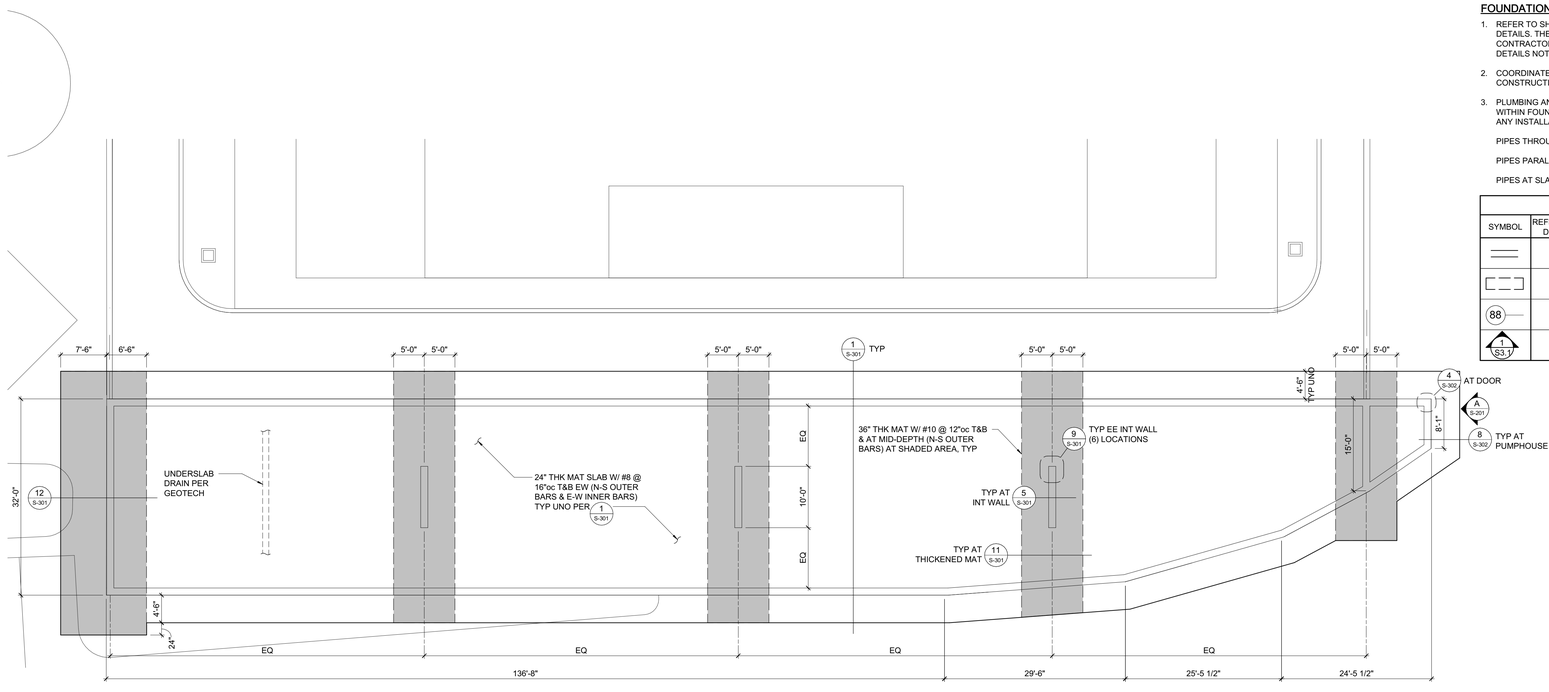
PROJECT MANAGER:
CSW

LOADING DIAGRAMS

S-102



A EAST WALL ELEVATION
1/2" = 1'-0"



NORTH

FOUNDATION PLAN
1" = 10'-0"

FOUNDATION PLAN NOTES:

1. REFER TO SHEETS S-001, S-101, AND S-301 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAILS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. PLUMBING AND ELECTRICAL CONDUIT AND GROUND STRAP SHALL NOT BE LAID WITHIN FOUNDATIONS. NOTIFY STRUCTURAL ENGINEER/ARCHITECT PRIOR TO ANY INSTALLATION NOT CONFORMING TO THESE DETAILS.

   PIPES THROUGH FOOTINGS SHALL BE PER 2/S-101.

   PIPES PARALLEL TO FOOTINGS SHALL BE PER 3/S-101.

   PIPES AT SLAB ON GRADE SHALL BE PER 11/S-101.

PLAN LEGEND		
SYMBOL	REFERENCE DETAIL	DESCRIPTION
		INDICATES CONCRETE WALL.
		INDICATES FOUNDATION.
88		INDICATES GRIDLINE.
1 / S3		INDICATES ELEVATION.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

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REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER S. WARNER
S.E. No. S4813
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

PROJECT NUMBER:
19511

DATE:
09/07/2021

ENGINEER:
NBB

PROJECT MANAGER:
CSW

FOUNDATION PLAN

S-201

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9/3/2021 9:58:51 AM

INDICATES CAST IN PLACE SLAB W/ REINF PER DETAILS

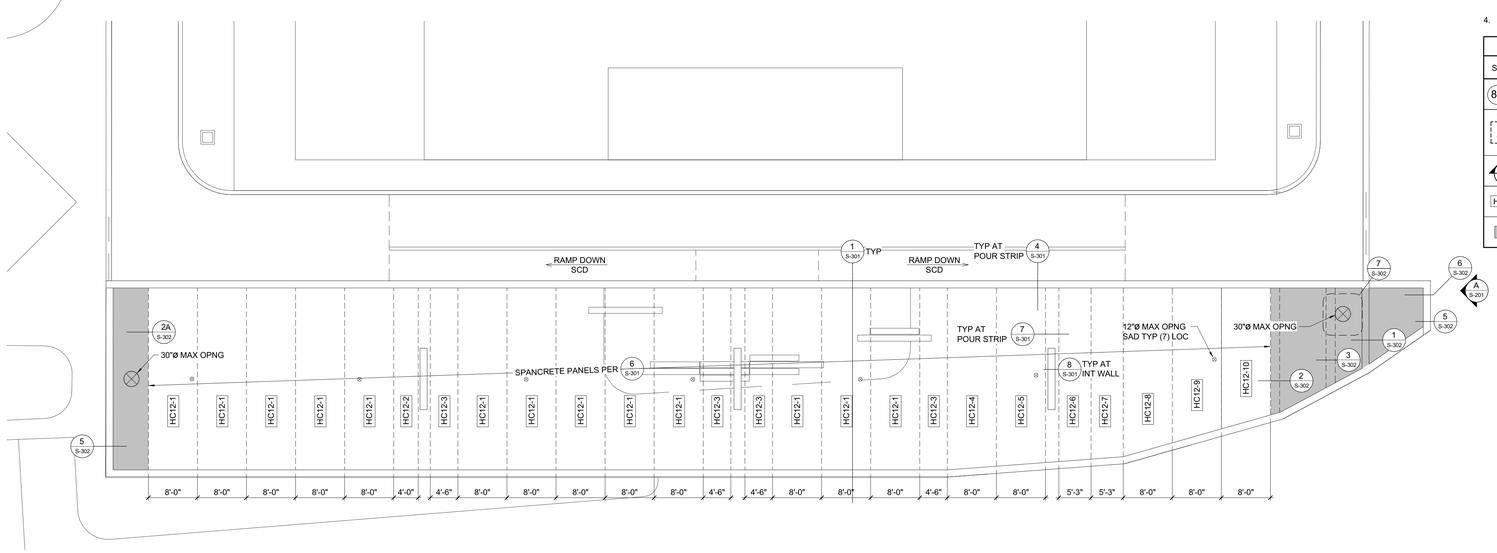
INDICATES #4 @ 16" oc EW ADDL AT ℄ TOPPING SLAB

INDICATES TYP TOPPING SLAB REINF PER 6/S-301

NOTE: ADDED BARS TO EXTEND A LAP LENGTH BEYOND BOUNDARIES SHOWN ON DIAPHRAGM PLAN

DIAPHRAGM PLAN

1" = 20'-0"



ROOF PLAN

1" = 10'-0"

FRAMING PLAN NOTES:

1. REFER TO SHEETS S-001, S-101, AND S-301 FOR GENERAL NOTES AND TYPICAL DETAILS. THE FOLLOWING DETAIL REFERENCES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. ALL GENERAL NOTES AND TYPICAL DETAIL SHEETS NOTED ABOVE ARE APPLICABLE AND SHALL BE FOLLOWED.
2. COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION. NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
3. SEE ARCHITECTURAL DRAWINGS FOR EDGE OF SLAB, FACE OF WALL, ETCETERA.
4. SEE ARCHITECTURAL DRAWINGS FOR TOP OF SLAB ELEVATION.

PLAN LEGEND		
SYMBOL	REFERENCE DETAIL	DESCRIPTION
88		INDICATES GRIDLINE.
MU 1,000#		INDICATES APPROXIMATE LOCATION, SIZE AND MAXIMUM WEIGHT OF MECHANICAL UNIT. SEE MECHANICAL DRAWINGS FOR ANCHORAGE AND ADDITIONAL INFORMATION.
1 S3.1		INDICATES ELEVATION.
HC##-#	6/S-301	INDICATES SPANCRETE PANEL.
		INDICATES CAST IN PLACE SLAB, SEE DETAILS.

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

PROJECT NUMBER:
19511

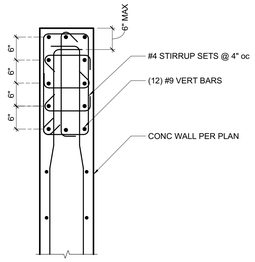
DATE:
09/07/2021

ENGINEER:
NBB

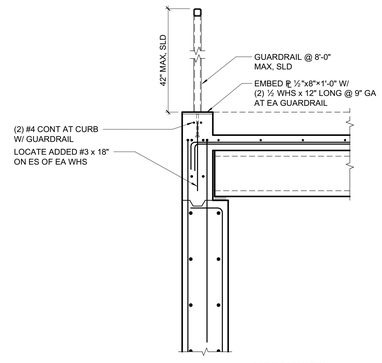
PROJECT MANAGER:
CSW

ROOF FRAMING PLAN

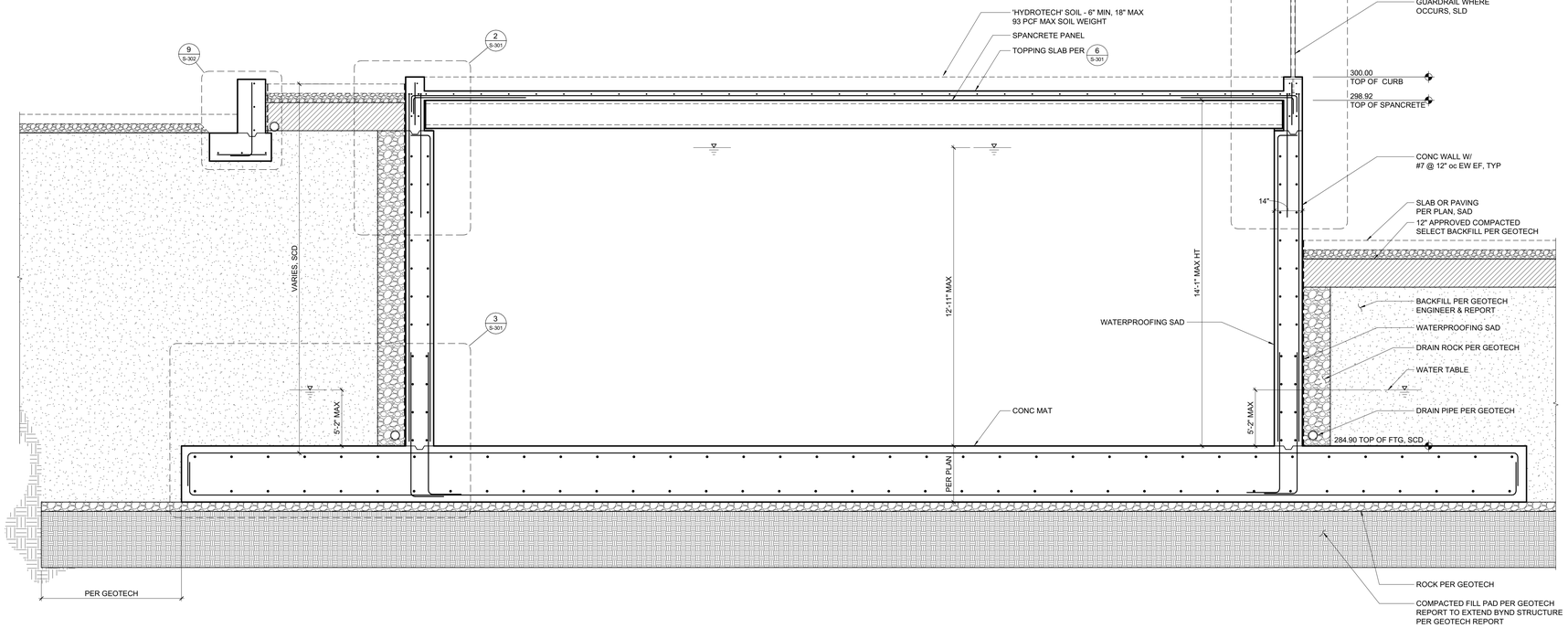
S-202



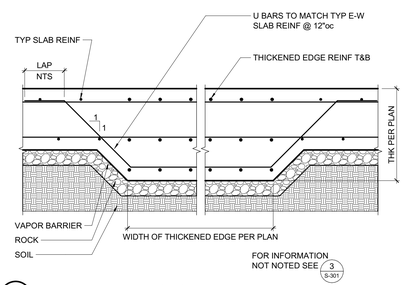
9 PLAN VIEW AT BOUNDARY ELEMENT
3/4" = 1'-0"



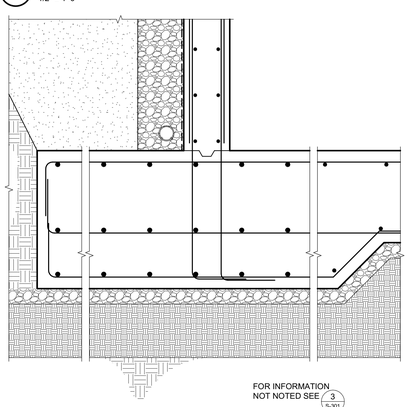
10 EXTERIOR WALL W/ GUARDRAIL
3/4" = 1'-0"



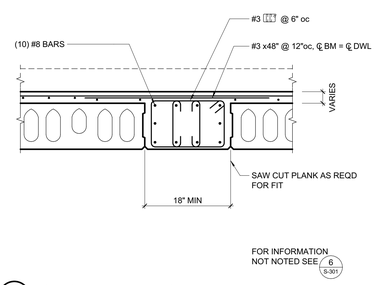
1 FULL CISTERN SECTION
NOT TO SCALE



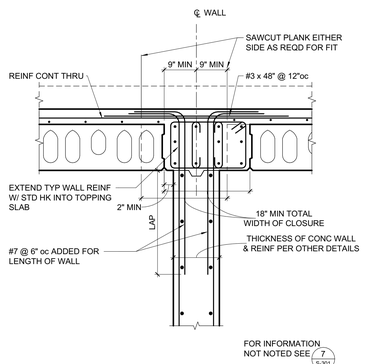
11 SECTION AT MAT TRANSITION
1/2" = 1'-0"



12 BOTTOM OF EXTERIOR WALL
3/4" = 1'-0"

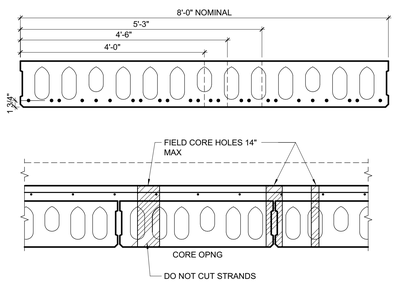


7 POUR STRIP BETWEEN HCPS
3/4" = 1'-0"

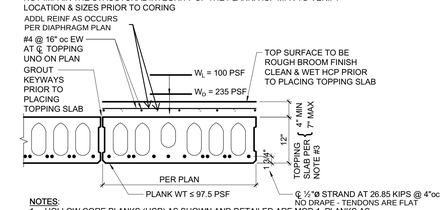


8 HCP TO CIP WALL
3/4" = 1'-0"

HOLLOW CORE PANEL DESIGNATION	MAX LENGTH (FT)	MAX WIDTH (FT)
HC12-1	31'-0"	8'-0"
HC12-2	31'-0"	4'-0"
HC12-3	31'-0"	4'-6"
HC12-4	31'-0"	8'-0"
HC12-5	29'-1"	8'-0"
HC12-6	28'-6"	5'-3"
HC12-7	27'-11"	5'-3"
HC12-8	27'-7"	8'-0"
HC12-9	25'-3"	8'-0"
HC12-10	23'-0"	8'-0"

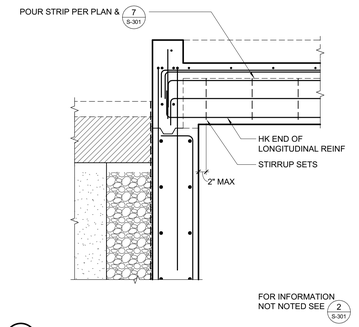


CORE HOLES MAY BE DRILLED FOR PIPES AND CONDUITS SUBJECT TO A DESIGN CHECK AND CAREFUL LAYOUT SO THAT THE SECTION REMOVED WILL NOT IMPAIR THE STRUCTURAL INTEGRITY OF THE PLANK. HCP MFR TO VERIFY LOCATION & SIZES PRIOR TO CORING

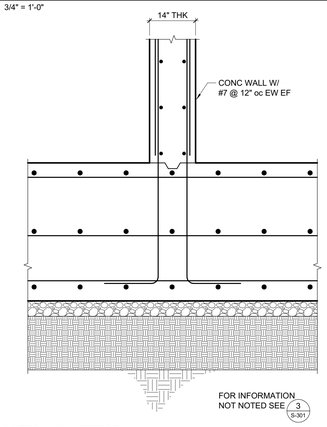


NOTES:
1. HOLLOW CORE PLANKS (HCP) AS SHOWN AND DETAILED ARE MOD 1. PLANKS AS MANUFACTURED BY KIE-CON INC. (925) 754-9494 (KIECON.COM) ICC-ESR REPORT 2660 WITH:
   A. F_{pu} STRAND = 270 KSI
   B. f'_c CONCRETE = 4000 PSI
2. DESIGN LOADS SHOWN DO NOT INCLUDE PLANK SELF WEIGHT.
3. TOPPING SLAB VARIES IN DEPTH PER ARCHITECTURAL DRAINAGE PLAN & IS TO BE BASED ON F'_c = 4000 PSI. DESIGN TO BE BASED ON THE MINIMUM DEPTH.
4. LAYOUT PLANK AS SHOWN ON PLAN. FIELD OR SHOP RIP PLANK TO 20" MIN WIDTHS AS REQUIRED.
5. SEE SPECIFICATIONS.

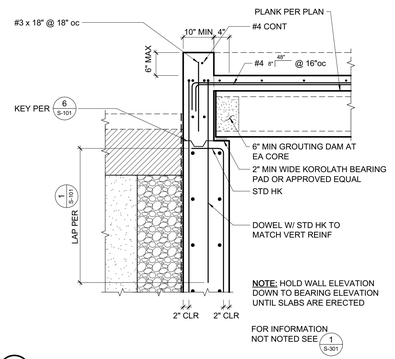
6 HOLLOW CORE PRECAST PRESTRESSED PLANK (HCP) DESIGN CRITERIA
3/4" = 1'-0"



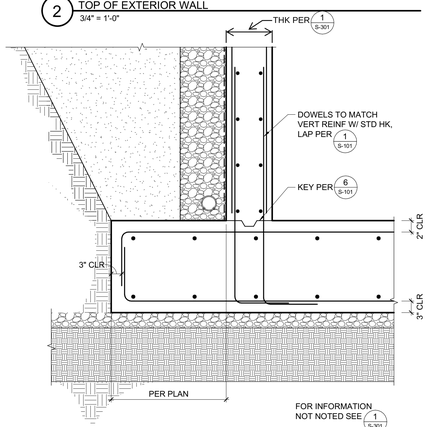
4 POUR STRIP TO CIP WALL
3/4" = 1'-0"



5 BOTTOM OF INTERIOR WALL
3/4" = 1'-0"



2 TOP OF EXTERIOR WALL
3/4" = 1'-0"



3 BOTTOM OF EXTERIOR WALL
3/4" = 1'-0"

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707.526.0992

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REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS
1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981
PROJECT NUMBER:
19511
DATE:
09/07/2021
ENGINEER:
NBB
PROJECT MANAGER:
CSW

DETAILS

S-301

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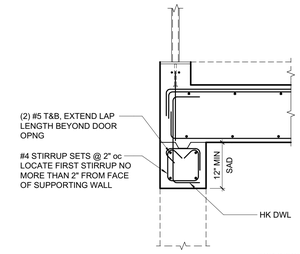
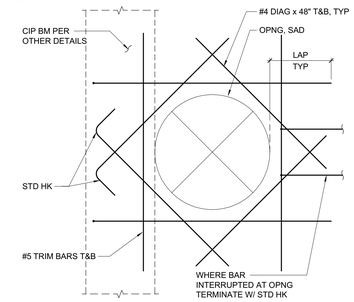
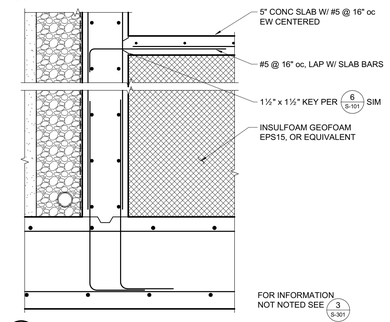


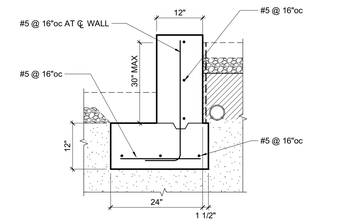
6 SECTION AT COUPLING BEAM
3/4" = 1'-0"



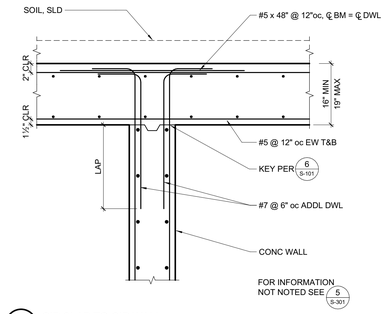
7 PLAN VIEW AT OPNG IN CIP SLAB
3/4" = 1'-0"



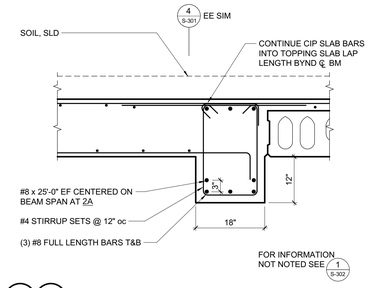
8 SECTION AT PUMPHOUSE
3/4" = 1'-0"



9 RETAINING WALL
3/4" = 1'-0"

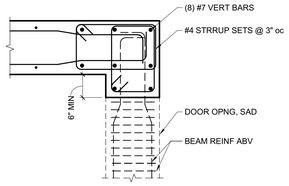


1 CIP SLAB TO CIP WALL
3/4" = 1'-0"



2 2A CIP SLAB TO CIP BEAM
3/4" = 1'-0"

3 CIP SLAB TO CIP BEAM
3/4" = 1'-0"



4 PLAN DETAIL AT EAST WALL CORNER
3/4" = 1'-0"

5 CIP SLAB TO CIP WALL
3/4" = 1'-0"

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN WAY
OCCIDENTAL, CA 95465

HARMONY UNITED SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981
PROJECT NUMBER:
19511
DATE:
09/07/2021
ENGINEER:
NBB
PROJECT MANAGER:
CSW

DETAILS

S-302

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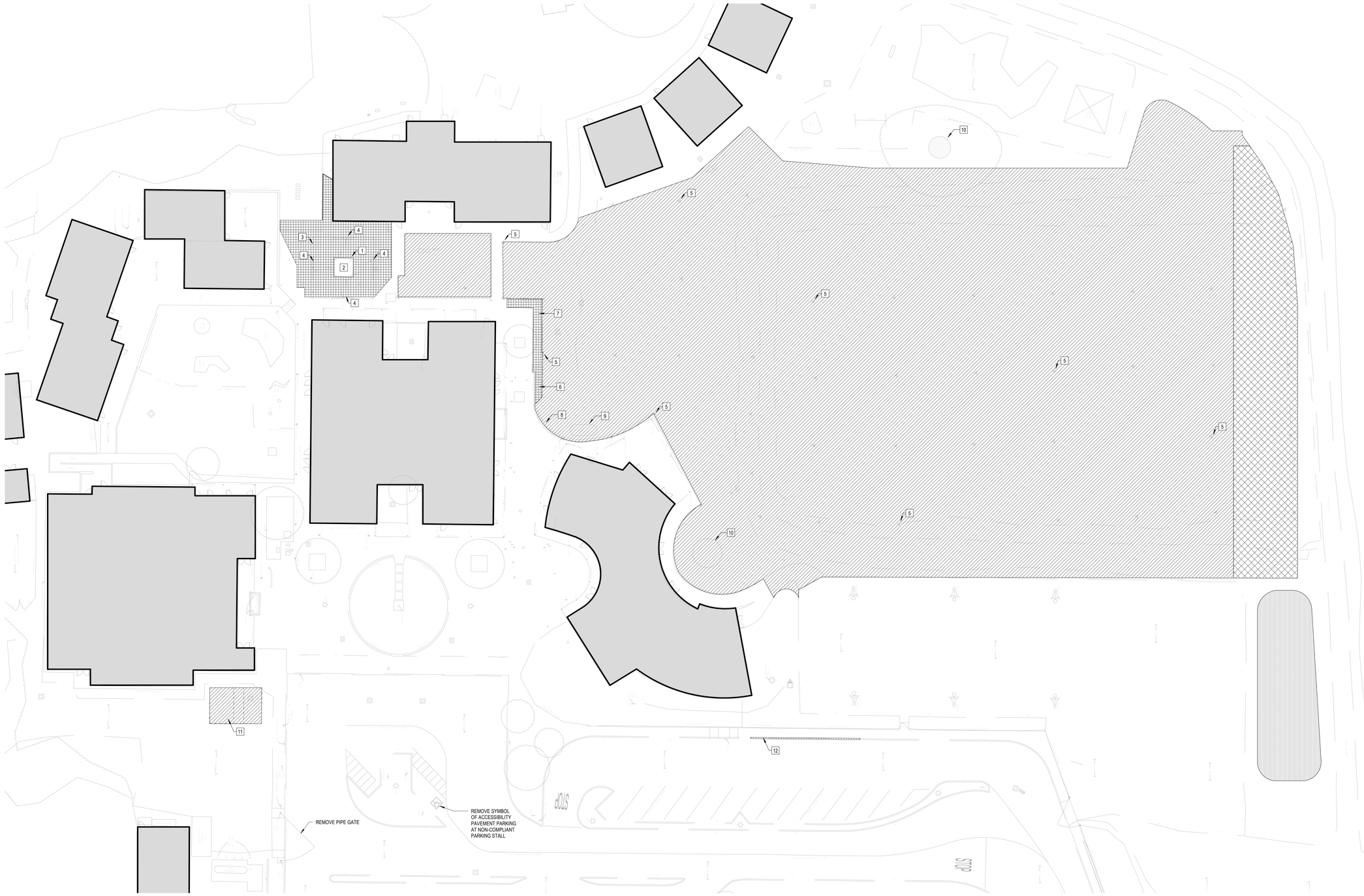

1 DEMOLITION SITE PLAN
1" = 20'-0"

GENERAL NOTES - DEMOLITION

A. CONTRACTOR TO COORDINATE DEMOLITION WORK SEQUENCE.

B. DEMOLITION DRAWINGS REPRESENT EXISTING CONDITIONS BASED ON LIMITED EXISTING DRAWINGS AND SITE OBSERVATIONS. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING BUILDING AND SITE CONDITIONS.

C. DEMOLITION DRAWINGS GENERALLY INDICATE EXISTING SCOPE OF WORK TO BE DEMOLISHED AND ARE NOT INTENDED TO LIMIT OR FULLY DEFINE THE SCOPE OF WORK TO BE REMOVED IN ORDER TO ACCOMPLISH SCOPE OF NEW CONSTRUCTION. WHERE THESE CONDITIONS OCCUR OUTSIDE OF THE DEMOLITION LIMITS, AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AS PART OF THE NEW CONSTRUCTION SCOPE OF WORK.

D. CONTRACTOR SHALL NOTIFY OWNER OF ANY CONFLICTS BETWEEN EXISTING CONSTRUCTION AND CONSTRUCTION DOCUMENTS.

E. CONTRACTOR SHALL MAINTAIN ALL REQUIRED EXITS UNOBSTRUCTED, ILLUMINATED AND PROTECTED FROM CONSTRUCTION ACTIVITIES.

F. CONTRACTOR TO CLEAN AREAS ADJACENT TO DEMOLITION AREA OF DUST, DIRT AND DEBRIS CAUSED BY DEMOLISHED MATERIALS. DO NOT ALLOW DEMOLISHED MATERIALS TO ACCUMULATE ON-SITE. TRANSPORT DEMOLISHED MATERIALS AND LEGALLY DISPOSE OF THEM.

G. THE LOCATIONS OF UNDERGROUND OBSTRUCTIONS SHOWN ON THE PLANS ARE APPROXIMATE ONLY AND SHOULD NOT BE TAKEN AS FINAL OR ALL INCLUSIVE. THE CONTRACTOR IS CAUTIONED THAT THE PLANS MAY NOT INCLUDE ALL EXISTING UTILITIES AND THAT THE OWNER, THE CITY OF OCCIDENTAL, AND THE ARCHITECT ASSUME NO RESPONSIBILITY FOR OBSTRUCTIONS WHICH MAY BE COUNTERED.

H. EXPOSE ALL EXISTING UTILITIES INCLUDING SEWERS AND STORM DRAINS PRIOR TO ANY TRENCHING TO ALLOW THE ENGINEER TO VERIFY THE GRADE AND ALIGNMENT OF THE UTILITIES. THE ENGINEER WILL NOT MARK ANY GRADE STAKES UNTIL AFTER THE EXACT LOCATION OF ALL EXISTING UTILITIES HAS BEEN VERIFIED.

J. VERIFY PG&E SERVICE POINT LOCATION AND EXISTING SITE LIGHTING AND IRRIGATION WIRING PRIOR TO INSTALLATION OR RELOCATION OF SITE LIGHTING OR IRRIGATION CONTROLLERS.

K. CONTRACTOR SHALL RECOGNIZE THAT ALL UNDERGROUND FACILITIES (POWER, IRRIGATION, STORM WATER DRAINAGE, ETC) SHALL BE COORDINATED AND CONSTRUCTED PRIOR TO P PLACEMENT OF BASEROCK AND PAVING.

DEMOLITION DRAWING NOTES

1. REMOVE (E) CONCRETE SEAT WALL.
2. REMOVE (E) GRAVEL AND PREP AREA FOR NEW PLANTING, SLD.
3. REMOVE ENTIRE (E) SHADE STRUCTURE AND ASSOCIATED COLUMNS.
4. (E) CONCRETE SEAT WALL TO REMAIN, PROTECT DURING CONSTRUCTION.
5. CAP PIPE AND REMOVE (E) SPRAY HEADS WITHIN LIMIT OF DEMOLITION, SLD FOR MORE INFOMATION.
6. REMOVE (E) CONCRETE STEPS AND METAL HANDRAIL.
7. REMOVE (E) CONCRETE RAMP.
8. REMOVE (E) WOOD FENCE.
9. REMOVE (E) PLANTER.
10. (E) TREE TO REMAIN, PROTECT DURING CONSTRUCTION.
11. REMOVE GRAVEL AND/OR SOIL AND PLANTINGS FOR (N) CONCRETE PAVING.
12. REMOVE (E) CURBS AND AJACENT ASPHALT PAVING FOR (N) ACCESSIBLE LOADING ZONE.

DEMOLITION LEGEND

- EXISTING CONSTRUCTION TO BE REMOVED
- EXISTING CONSTRUCTION TO REMAIN
- REMOVE (E) CONCRETE PAVING AND PREP AREA FOR REGRADING AND NEW CONCRETE PAVING, SCD & SLD
- REMOVE (E) VEGETATION AND PREP AREA FOR REGRADING AND NEW PLANTING AND/OR PAVING, SCD & SLD
- REMOVE (E) VEGETATION, EXCAVATE AND PREP AREA FOR NEW CISTERN, SCD
- REMOVE (E) VEGETATION AND PREP AREA FOR REGRADING AND NEW BIOSWALE, SCD & SLD

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AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
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DATE: 09/21/2021

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CONSULTANT:

STAMP:

LICENSED ARCHITECT
RICHARD C. TOMES
No. 14948
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/14/21

DRAWN BY:
Author

CHECKED BY:
Checker

ENLARGED SITE PLAN - DEMOLITION

A-101

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CONSULTANT:

STAMP:

REVISIONS:

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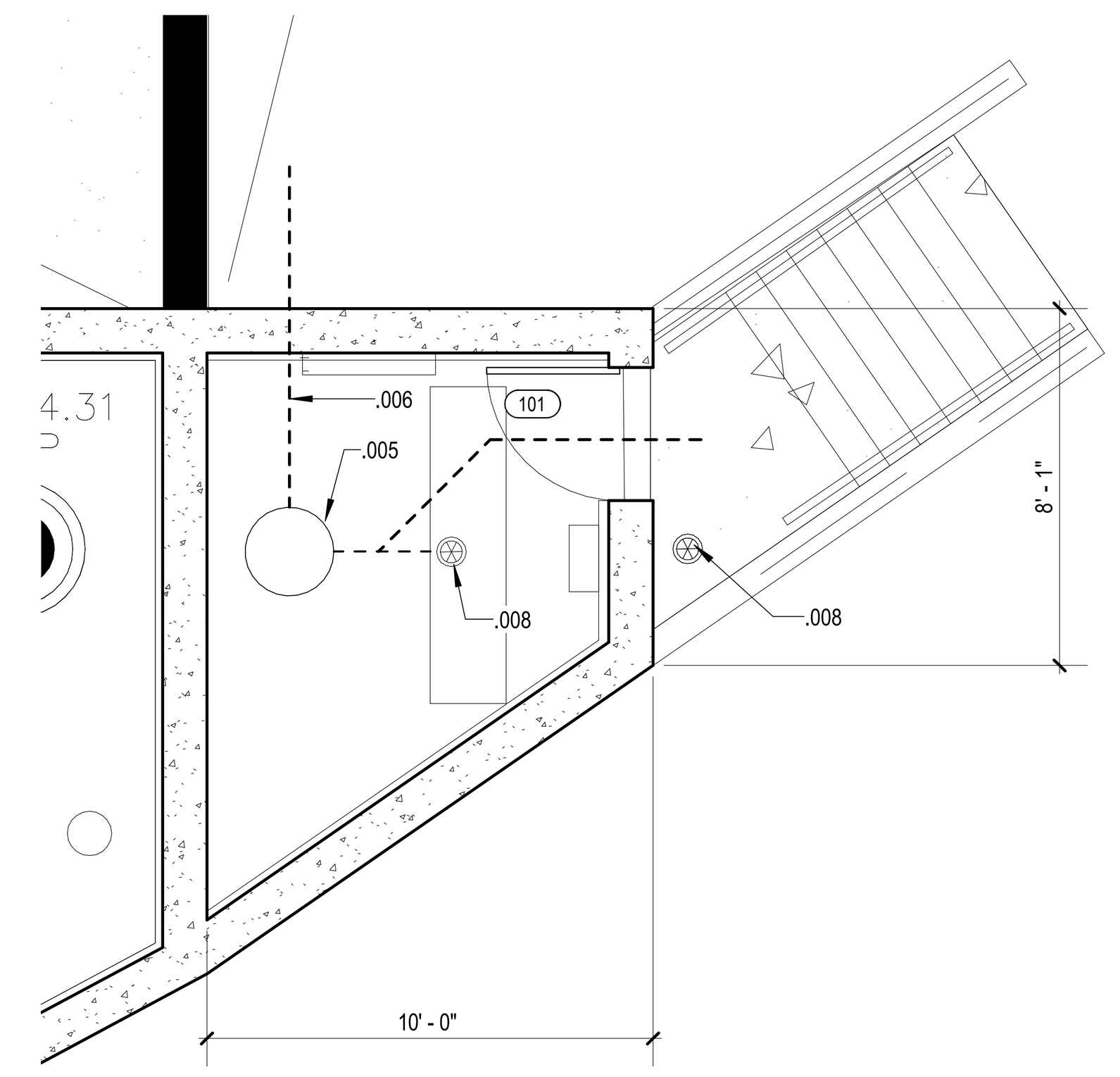
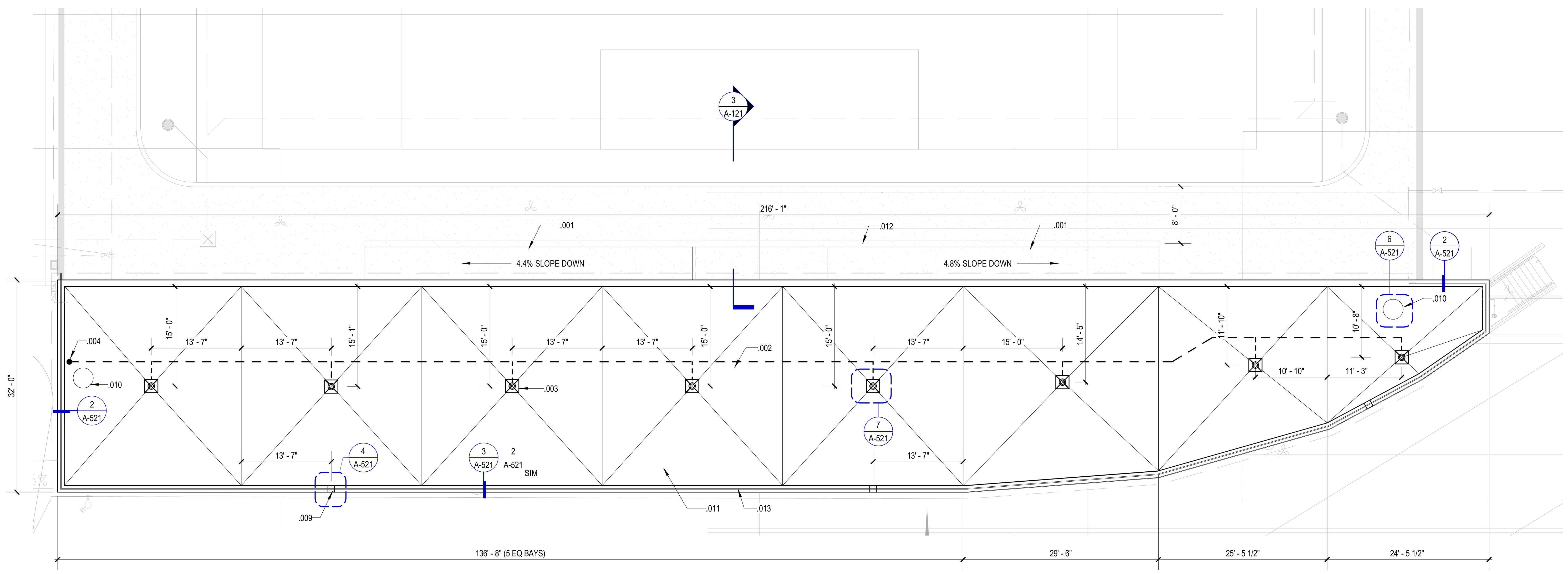
DRAWING NOTES

.001	SLOPED WALKING SURFACE, MAX SLOPE LESS THAN 5%,MAX CROSS SLOPE LESS THAN 2.083%, SCD
.002	5" HORIZ RAINWATER PIPING LOCATED BELOW CISTERN ROOF, SLOPE 1/8" PER FOOT MIN TO LEADER
.003	2" ROOF DRAIN, TYP
.004	5" LEADER. DISCHARGE STORM WATER INTO BIORETENTION AREA, SCD
.005	SUMP, SCD FOR SUMP PUMP INFORMATION
.006	4" DISCHARGE LINE W/ CHECK VALVE
.008	2" FLOOR DRAIN
.009	4" X 8" SCUPPER
.010	MANHOLE COVER, SCD
.011	TOPPING SLAB, SLOPE 1/4" PER FOOT MIN TO ROOF DRAIN
.012	WARNING CURB, SLD
.013	GUARDRAIL, SLD & SSD



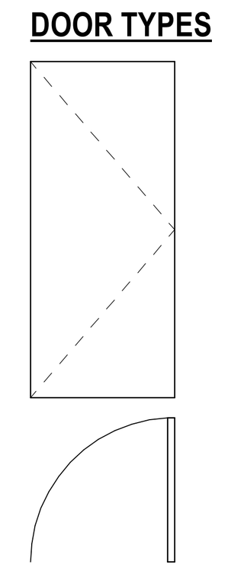
1 PUMP HOUSE - FLOOR PLAN
1/4" = 1'-0"



2 CISTERN - ROOF DRAINAGE PLAN
1" = 10'-0"

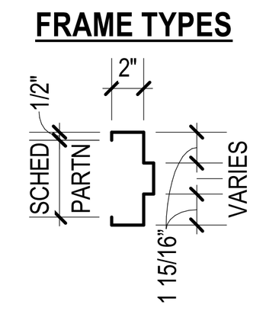
DOOR SCHEDULE																
					MATERIALS AND FINISHES					DETAILS						
NUMBER	WIDTH	HEIGHT	DOOR TYPE	FRAME TYPE	DOOR MATERIAL	FRAME MATERIAL	DOOR FINISH	FRAME FINISH	DOOR RATING	HEAD	JAMB	SILL	HARDWARE	SIGNAGE	COMMENTS
101	3' - 0"	6' - 8"	A1	1	HM	HM	P	P	NR	10/A-521	11/A-521	12/A-521	1	-	

DOOR TYPES



A1
FLUSH
SINGLE

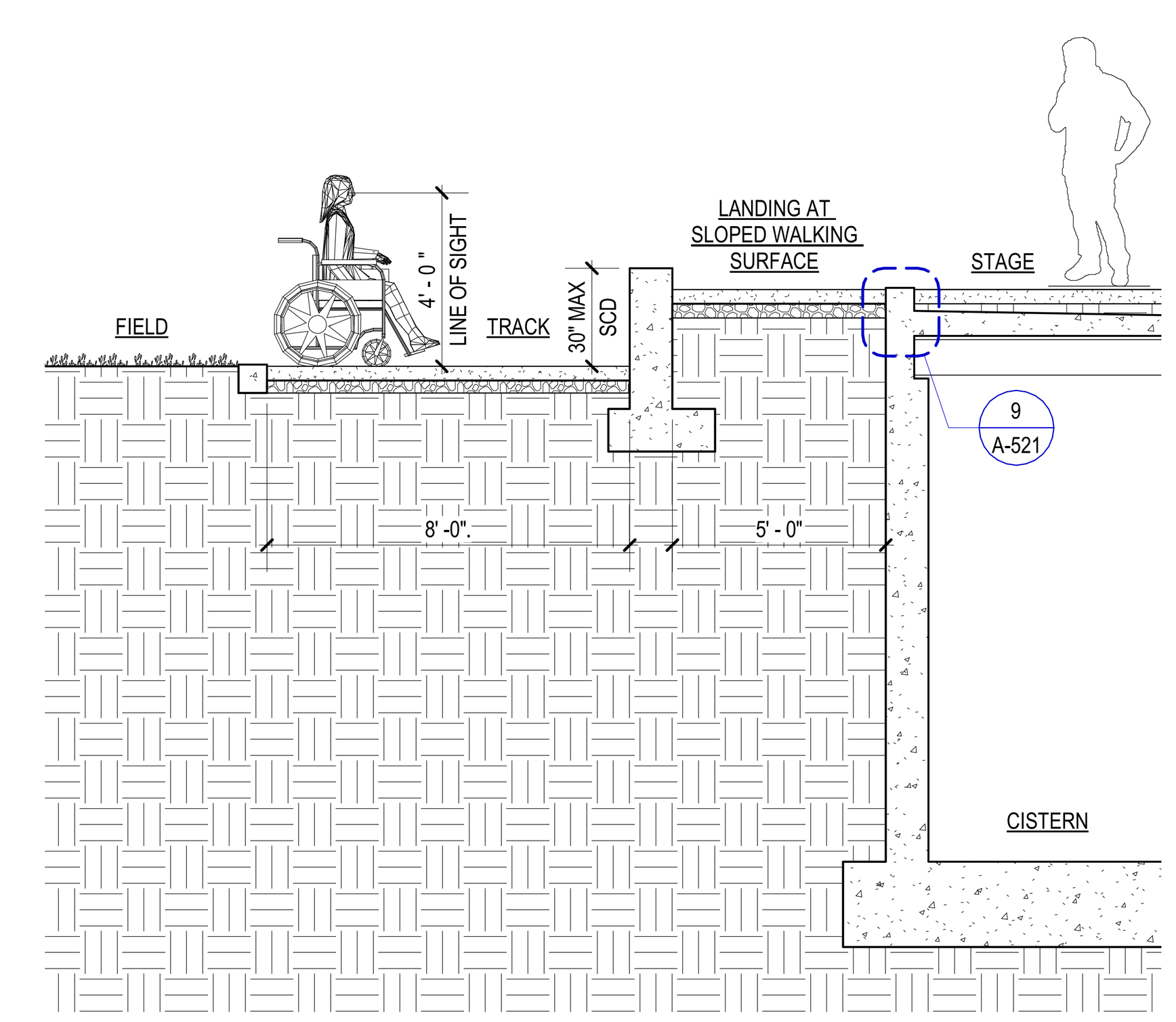
FRAME TYPES



1
TYPICAL - HOLLOW
METAL

HARDWARE GROUP 1

3 HINGE	T4A3386 X NRP	US32D	MCKINNEY
1 LOCKSET	L153R 626 E 2 3/4 S ANSI	626	GENERAL LOCK
1 DOOR CLOSER	351 P10	EN	SARGENT
1 KICK PLATE	K1050 10" HIGH 4BE CSK	US32D	ROCKWOOD
1 DOOR STOP	463	US32D	ROCKWOOD
1 THRESHOLD	PER DETAIL X FHSL14		PEMKO
1 RAIN DRIP	346C		PEMKO
1 GASKETING	244D HEAD & JAMBS		PEMKO
1 GASKETING	315CN		PEMKO



3 CISTERN - SECTION AT TRACK
1/4" = 1'-0"

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/14/21

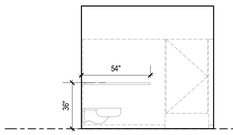
DRAWN BY:
Author

CHECKED BY:
Checker

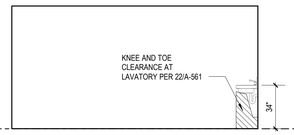
CISTERN PLANS, SECTION AND DOOR SCHEDULE

A-121

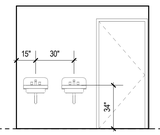
9/13/2021 11:18:20 AM



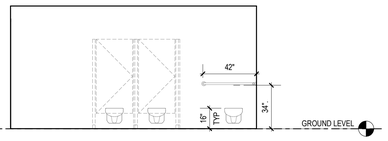
6 UNIT B - (E) GIRLS RESTROOM - A
1/4" = 1'-0"



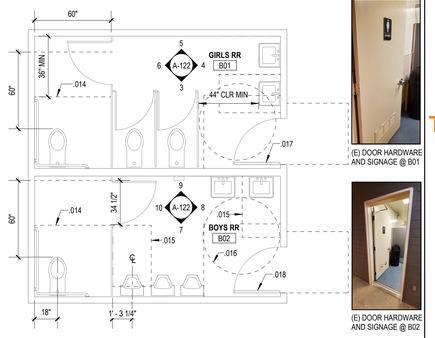
5 UNIT B - (E) GIRLS RESTROOM - B
1/4" = 1'-0"



4 UNIT B - (E) GIRLS RESTROOM - C
1/4" = 1'-0"



3 UNIT B - (E) GIRLS RESTROOM - D
1/4" = 1'-0"

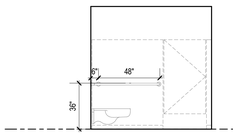


(E) DOOR HARDWARE AND SIGNAGE @ B01

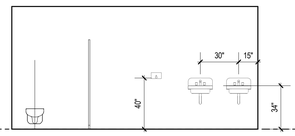
(E) DOOR HARDWARE AND SIGNAGE @ B02

1 UNIT B - (E) RESTROOM PLANS
1/4" = 1'-0"

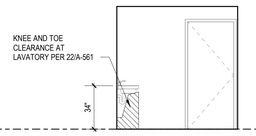
NOTE: RESTROOM LAYOUTS ARE BASED ON RECENT SITE MEASUREMENT.



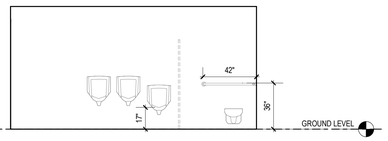
10 UNIT B - (E) BOYS RESTROOM - A
1/4" = 1'-0"



9 UNIT B - (E) BOYS RESTROOM - B
1/4" = 1'-0"



8 UNIT B - (E) BOYS RESTROOM - C
1/4" = 1'-0"



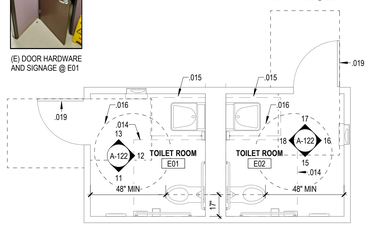
7 UNIT B - (E) BOYS RESTROOM - D
1/4" = 1'-0"

DRAWING NOTES

.014	56"X60" CLEAR SPACE
.015	30"X48" CLEAR SPACE
.016	60" TURNING CIRCLE
.017	PROVIDE RESTROOM SIGNAGE TYPE B PER 24/A-561
.018	PROVIDE RESTROOM SIGNAGE TYPE C PER 24/A-561
.019	PROVIDE RESTROOM SIGNAGE TYPE D PER 24/A-561

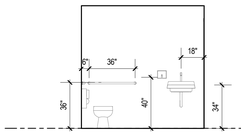
(E) DOOR HARDWARE AND SIGNAGE @ E01

(E) DOOR HARDWARE AND SIGNAGE @ E02

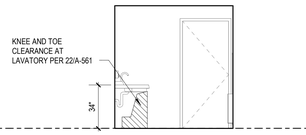


2 UNIT E - (E) RESTROOM PLANS
1/4" = 1'-0"

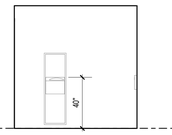
NOTE: RESTROOM LAYOUTS ARE BASED ON RECENT SITE MEASUREMENT.



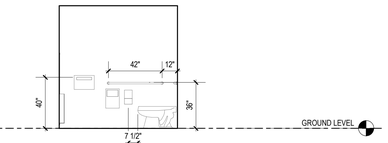
18 UNIT E - (E) TOILET ROOM 2 - A
1/4" = 1'-0"



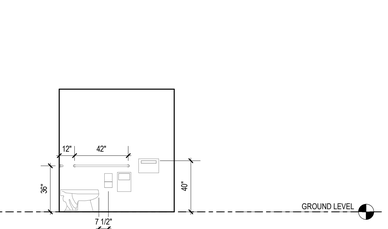
17 UNIT E - (E) TOILET ROOM 2 - B
1/4" = 1'-0"



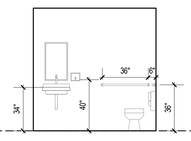
16 UNIT E - (E) TOILET ROOM 2 - C
1/4" = 1'-0"



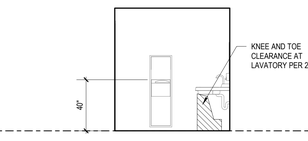
15 UNIT E - (E) TOILET ROOM 2 - D
1/4" = 1'-0"



13 UNIT E - (E) TOILET ROOM 1 - B
1/4" = 1'-0"



12 UNIT E - (E) TOILET ROOM 1 - C
1/4" = 1'-0"



11 UNIT E - (E) TOILET ROOM 1 - D
1/4" = 1'-0"

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
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tlcd.com

CONSULTANT:

STAMP:

LICENSED ARCHITECT
JOSHUA D. C. TOMKIN
C-14948
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/14/21

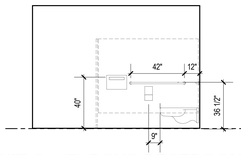
DRAWN BY:
Author

CHECKED BY:
Checker

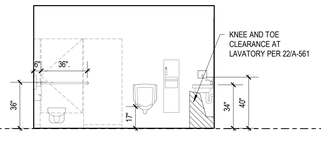
ENLARGED RESTROOM PLANS

A-122

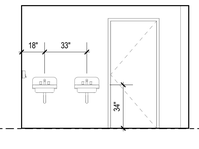
9/13/2021 11:18:22 AM



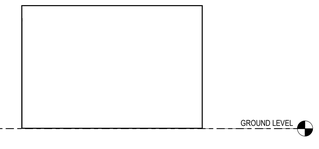
5 UNIT G - (E) BOYS RESTROOM - A
1/4" = 1'-0"



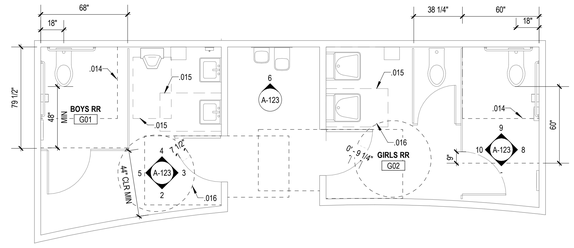
4 UNIT G - (E) BOYS RESTROOM - B
1/4" = 1'-0"



3 UNIT G - (E) BOYS RESTROOM - C
1/4" = 1'-0"



2 UNIT G - (E) BOYS RESTROOM - D
1/4" = 1'-0"



1 UNIT G - (E) RESTROOMS PLANS
1/4" = 1'-0"

NOTE: RESTROOM LAYOUTS ARE BASED ON RECENT SITE MEASUREMENT.

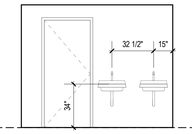
(E) DOOR HARDWARE AND SIGNAGE @ G01

(E) DOOR HARDWARE AND SIGNAGE @ G02

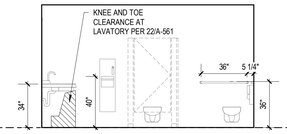
DEMOLITION DRAWING NOTES

DRAWING NOTES

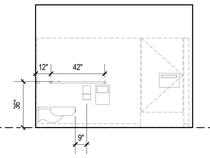
.014	56"X60" CLEAR SPACE
.015	30"X48" CLEAR SPACE
.016	60" TURNING CIRCLE



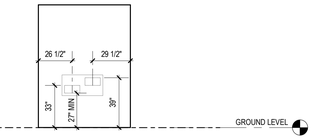
10 UNIT G - (E) GIRLS RESTROOM - A
1/4" = 1'-0"



9 UNIT G - (E) GIRLS RESTROOM - B
1/4" = 1'-0"



8 UNIT G - (E) GIRLS RESTROOM - C
1/4" = 1'-0"



6 UNIT G - (E) DRINKING FOUNTAIN
1/4" = 1'-0"

9/13/2021 11:22:06 AM

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
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tlcd.com

CONSULTANT:

STAMP:

LICENSED ARCHITECT
JOSHUA C. TOMSIC
C-14948
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER:
01-118981

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19046

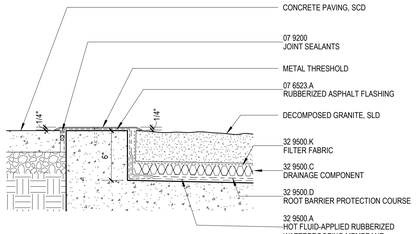
DATE:
09/14/21

DRAWN BY:
Author

CHECKED BY:
Checker

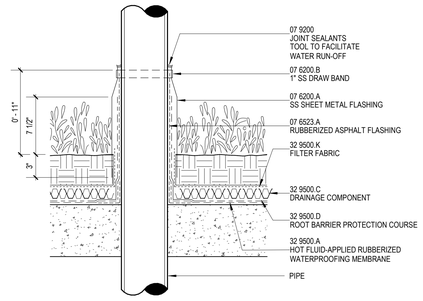
ENLARGED RESTROOM PLANS

A-123



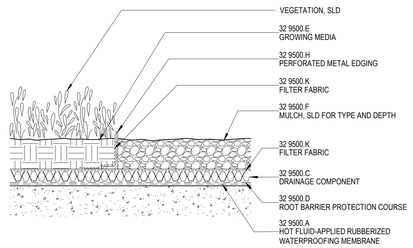
9 RAMP LANDING TRANSITION

1 1/2" = 1'-0"



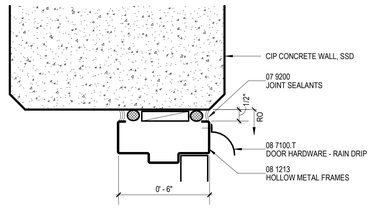
5 PIPE PENETRATION

1 1/2" = 1'-0"



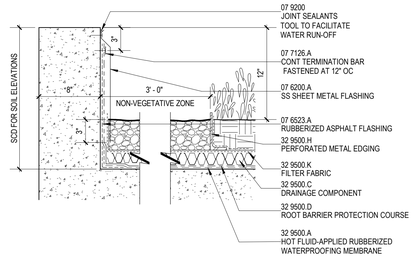
1 VEGETATED ROOF SYSTEM COMPONENTS

1 1/2" = 1'-0"



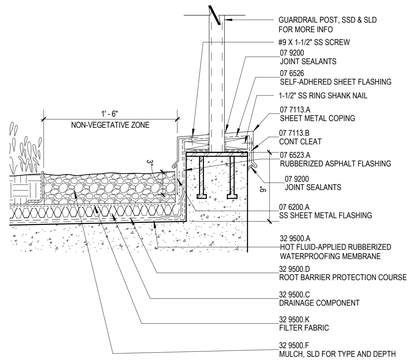
10 DOOR HEAD DETAIL

3" = 1'-0"



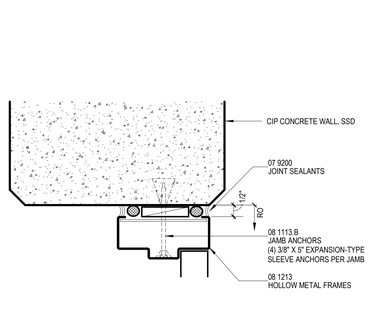
6 MANHOLE CURB

1 1/2" = 1'-0"



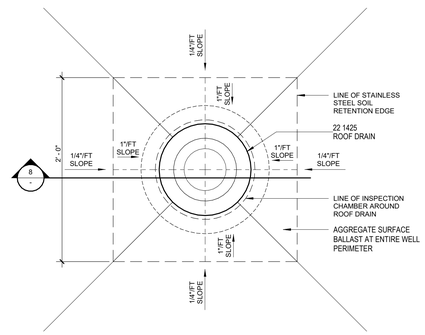
2 GUARDRAIL POST DETAIL

1 1/2" = 1'-0"



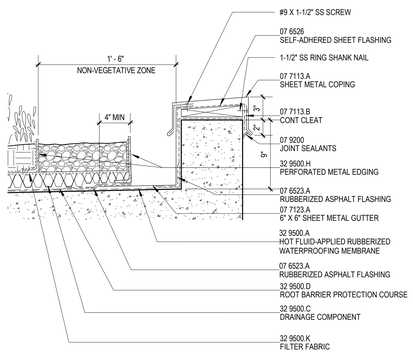
11 DOOR JAMB DETAIL

3" = 1'-0"



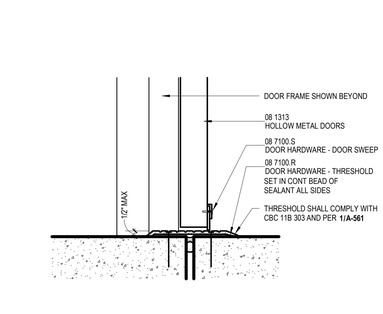
7 ROOF DRAIN PLAN

1 1/2" = 1'-0"



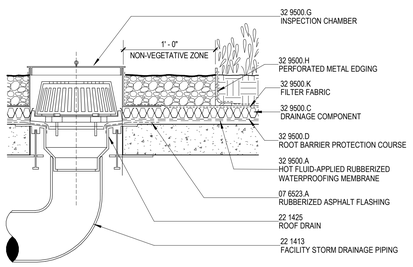
3 OVERFLOW GUTTER DETAIL

1 1/2" = 1'-0"



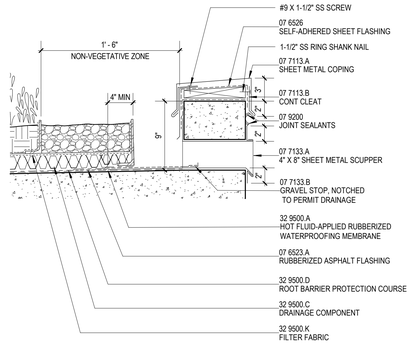
12 EXTERIOR THRESHOLD

3" = 1'-0"



8 ROOF DRAIN SECTION

1 1/2" = 1'-0"



4 SCUPPER DETAIL

1 1/2" = 1'-0"

9/13/2021 11:18:24 AM

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
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f: 707.525.5616
tlcd.com

CONSULTANT:

STAMP:

REVISIONS:

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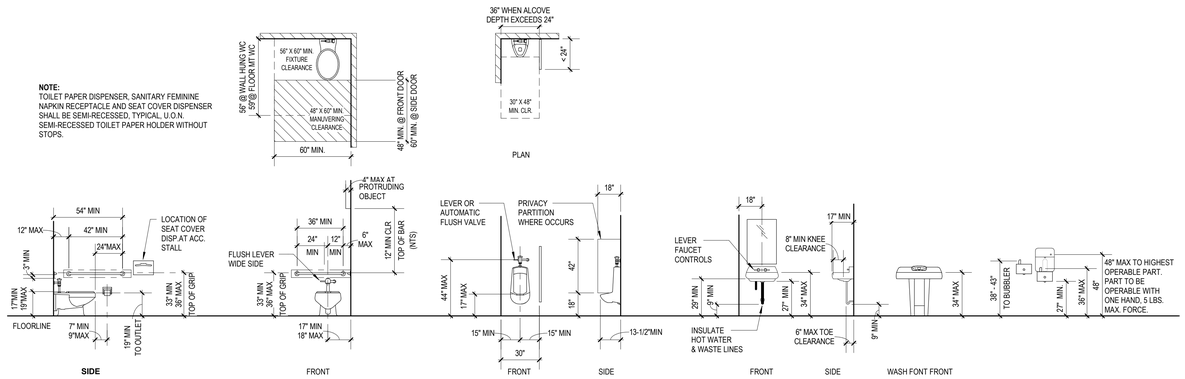
Author

CHECKED BY:
Checker

EXTERIOR DETAILS

A-521



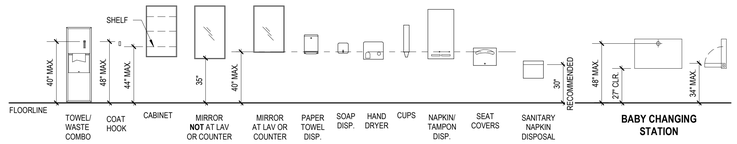
WATER CLOSET - WALL OR FLOOR MOUNTED TOILET
2016 CBC 11B-604

ACCESSIBLE URINAL
2016 CBC 11B-605

LAVATORY / WASH FONT
2016 CBC 11B-606

DRINKING FOUNTAIN
2016 CBC 11B-602

PLUMBING FIXTURES



BABY CHANGING STATION

ACCESSORIES
2016 CBC 11B-603.5

NOTES:

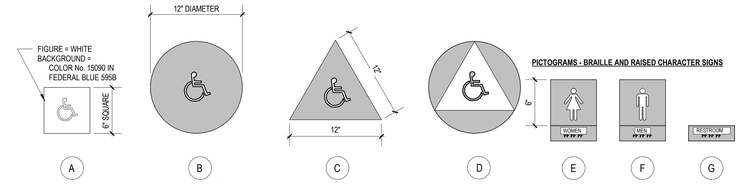
1. THIS DIAGRAM ILLUSTRATES THE SPECIFIC CODE REQUIRMENTS AND IS INTENDED AS AN AID FOR BUILDING DESIGN AND CONSTRUCTION. NOT ALL ITEMS SHOWN ARE NECESSARILY INCLUDED IN THIS PROJECT. SEE INTERIOR ELEVATIONS.
2. DIMENSIONS NOTED APPLY UNLESS NOTED OTHERWISE ELSEWHERE.
3. REFER TO SPECIFICATIONS FOR TYPE OF ACCESSORIES REQUIRED.
4. PROVIDE SOLID BACKING FOR ALL ACCESSORIES.
5. ELEVATIONS SHOWN HEREIN REPRESENT TYPICAL REQUIREMENTS. SEE ELSEWHERE FOR PROJECT SPECIFIC VARIATIONS.
6. INSTALLATION OF ALL SANITARY FACILITIES ACCESSIBLE TO THE DISABLED SHALL COMPLY WITH 2019 CBC CHAPTER 11B AND 2010 ADA.
7. SURFACE OR SEMI-SURFACE MOUNTED ACCESSORIES, FLUSH VALVES, OR OTHER OBSTRUCTIONS SHALL BE NO CLOSER THAN 1-1/2" TO THE TANGENT OF THE GRAB BARS OR HANDRAILS. MIIN. 12" CLR. ABOVE GRAB BARS OR HANDRAILS.

22 ACCESS - TYPICAL MOUNTING HEIGHTS

1/4" = 1'-0"

SIGNAGE NOTES:

1. ALL SIGNS ARE TO CONFORM TO 2019 CBC CHAPTER 11B-703
2. SIGNAGE IDENTIFYING EXITS AND PERMANENT ROOMS AND SPACES SHALL HAVE BOTH RAISED CHARACTERS AND BRAILLE MESSAGES. ALL BRAILLE COMPONENTS SHALL BE AN INTEGRAL PART OF THE SIGN. APPLIED STRIPS ARE NOT ACCEPTABLE.
3. THE SIGNS INDICATED ARE FOR CONCEPT & CONTENT ONLY. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING EXACT LAYOUT & CONTENT) TO THE ARCHITECT FOR REVIEW.
4. SEE DOOR SCHEDULE FOR SIGN SCHEDULE.
5. SIGNS SHALL HAVE A NON-GLARE FINISH.
6. SIGNS SHALL BE CENTERED +/-1" ON CENTERLINE OF DOOR. COLORS SHALL BE DISTINCTLY DIFFERENT FROM AND CONTRAST 70% TO THE COLOR OF THE DOOR.
7. FOR ADDITIONAL INFORMATION SEE BRAILLE NOTES, RAISED CHARACTER NOTES AND PICTOGRAM NOTES BELOW.
8. CODE-GOVERNED SIGNS SHALL BE FIELD INSPECTED PER 11-B 703.1.1.2.



ISA
(INTERNATIONAL SYMBOL OF ACCESSIBILITY)
AT BUILDING ENTRANCES

WOMEN'S / GIRL'S
DOORWAYS LEADING INTO SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 1/4" THICK AND 12" IN DIAMETER

MEN'S / BOY'S
DOORWAYS LEADING INTO SANITARY FACILITIES SHALL BE IDENTIFIED BY AN EQUILATERAL TRIANGLE 1/4" THICK WITH EDGES 12" LONG AND VERTEX POINTING UPWARD

UNISEX
DOORWAYS LEADING INTO SANITARY FACILITIES SHALL BE IDENTIFIED BY A CIRCLE 1/4" THICK AND 12" IN DIAMETER WITH AN EQUILATERAL TRIANGLE 1/4" THICK WITH VERTEX POINTING UPWARD WITHIN THE 12" DIAMETER. COLOR OF TRIANGLE TO CONTRAST A MINIMUM OF 70% WITH THE COLOR OF THE CIRCLE.

RAISED CHARACTERS NOTES

DEPTH:
1/32" MINIMUM ABOVE BACKGROUND
CASE:
UPPERCASE
STYLE:
SANS SERIF
PROPORTIONS:
CHARACTERS TO BE SELECTED FROM FONTS WHERE WIDTH OF UPPERCASE 'O' IS 60% MIN. AND 110% MAX. OF THE HEIGHT OF THE UPPERCASE 'I'.
CHARACTER HEIGHT:
5/8" MIN. / 2" MAX. MEASURED VERTICALLY FROM BASELINE OF CHARACTER, BASED ON THE HEIGHT OF UPPERCASED 'I'.
STROKE THICKNESS:
STROKE THICKNESS OF UPPERCASE LETTER 'I' SHALL BE 15% MAX. OF THE HEIGHT OF THE CHARACTER.
CHARACTER SPACING:
MEASURED BETWEEN THE TWO CLOSEST POINTS OF ADJACENT RAISED CHARACTERS.
AT RECTANGULAR CROSS SECTIONS - 1/8" MIN.
AND 4 TIMES CHARACTER STROKE WIDTH MAX.
AT OTHER CROSS SECTIONS - 1/16" MIN. AND 4 TIMES CHARACTER STROKE WIDTH MAX. SEPARATED FROM RAISED BORDERS & DECORATIVE ELEMENTS 3/8" MIN.
LINE SPACING:
SPACING BETWEEN BASELINE OF SEPARATE LINES OF RAISED CHARACTERS TO BE 135% MIN. AND 170% MAX. OF THE RAISED CHARACTER HEIGHT.
FORMAT:
TEXT SHALL BE IN HORIZONTAL FORMAT

PICTOGRAM NOTES

FIELD AREA:
6" MIN HEIGHT. CHARACTERS AND BRAILLE NOT TO BE LOCATED WITHIN THE PICTOGRAM FIELD

FINISH AND CONTRAST:
FINISH TO BE NON-GLARE. PICTOGRAMS SHALL CONTRAST WITH FIELD, EITHER LIGHT PICTOGRAM ON DARK FIELD OR DARK PICTOGRAM ON LIGHT FIELD.
TEXT DESCRIPTORS:
PICTOGRAMS TO HAVE TEXT DESCRIPTORS LOCATED DIRECTLY BELOW FIELD.

BRAILLE NOTES

BRAILLE SHALL BE CONTRACTED (GRADE 2)

DIMENSIONS:
PER TABLE 11B-703.3.1
CAPITALIZATION:
INDICATION OF UPPERCASE LETTER OR LETTERS SHALL ONLY BE USED BEFORE THE FIRST WORD OF SENTENCES, PROPER NOUNS & NAMES, INDIVIDUAL LETTERS OF THE ALPHABET, INITIALS, AND ACRONYMS.
POSITION:
BRAILLE SHALL BE POSITIONED BELOW CORRESPONDING TEXT IN A HORIZONTAL FORMAT, FLUSH LEFT OR CENTERED. IF TEXT IS MULTI-LINED, BRAILLE SHALL BE POSITIONED BELOW THE ENTIRE TEXT. BRAILLE SHALL BE SEPARATED 3/8" MIN. AND 1/2" MAX. FROM ANY OTHER TACTILE CHARACTERS AND 3/8" MIN. FROM RAISED BORDERS AND DECORATIVE ELEMENTS.
INSTALLATION HEIGHT:
TACTILE CHARACTERS ON SIGNS SHALL BE LOCATED 48" MIN. A.F.F., MEASURED FROM THE BASELINE OF THE LOWEST BRAILLE CELLS AND 60" MAX. A.F.F. MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS.
INSTALLATION LOCATION:
WHERE PROVIDED, THE TACTILE SIGN SHALL BE LOCATED ALONGSIDE THE DOOR AT THE LATCH SIDE. AT DOUBLE DOORS WITH ONE ACTIVE LEAF, THE SIGN SHALL BE LOCATED ON THE INACTIVE LEAF. AT DOUBLE DOORS WITH TWO ACTIVE LEAFS, THE SIGN SHALL BE LOCATED TO THE RIGHT OF THE RIGHT HAND DOOR. WHERE NO WALL SPACE IS AVAILABLE AT THE LATCH SIDE OF SINGLE DOOR OR RIGHT OF DOUBLE DOORS, SIGNS SHALL BE LOCATED ON THE NEAREST ADJACENT WALL. SIGNS SHALL BE LOCATED SUCH THAT A CLEAR FLOOR SPACE 18"MIN. BY 18" MIN. CENTERED ON THE TACTILE CHARACTERS IS PROVIDED BEYOND THE DOOR SWING. WHERE PERMANENT IDENTIFICATION SIGNS ARE PROVIDED THEY SHALL BE PROVIDED ON THE APPROACH SIDE OF THE DOOR AS ONE ENTERS THE ROOM OR SPACE. SIGNS THAT IDENTIFY EXITS SHALL BE LOCATED ON THE APPROACH SIDE AS ONE EXITS THE ROOM OR SPACE.

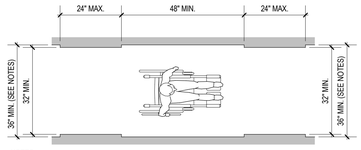
BRAILLE DIMENSIONS 2016 CBC TABLE 11B-703.3.1

MEASUREMENT RANGE	MIN. IN INCHES MAX. IN INCHES
DOT BASE DIAMETER	0.059 TO 0.063
DISTANCE BETWEEN TWO DOTS IN SAME CELL*	0.100
DISTANCE BETWEEN CORRESONDING DOTS IN ADJACENT CELLS *	.0300
DOT HEIGHT	0.025 TO 0.037
DISTANCE BETWEEN CORRESPONDING DOTS FROM ONE CELL DIRECTLY BELOW*	0.395 TO 0.400

* MEASURED CENTER TO CENTER

24 ACCESS - SIGNAGE

1 1/2" = 1'-0"

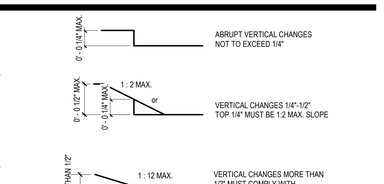


NOTES:

1. 44" MIN. FOR WALKING SURFACES IN CORRIDORS SERVING OCCUPANT LOAD OF 10 OR MORE.
2. 48" MIN. FOR SIDEWALKS AND WALKS.
3. 36" MIN. FOR AISLES WITH SERVING ELEMENTS ON ONESIDE ONLY. 44" MIN. FOR AISLE WITH SERVING ELEMENTS ON BOTH SIDES.
4. THE CLEAR WIDTH FOR ACCESSIBLE ROUTES TO ACCESSIBLE TOILET COMPARTMENTS SHALL BE 44".
5. FOR ADDITIONAL INFORMATION REFER TO CBC 11B-403

6 ACCESS - ROUTE CLEAR WIDTH

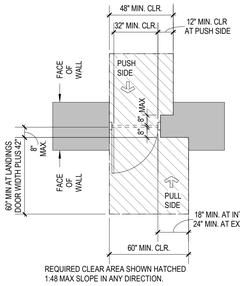
1/4" = 1'-0"



NOTE:
FOR ADDITIONAL INFORMATION REGARDING ACCESSIBLE ROUTES REFER TO CBC 11B DIV. 4

1 ACCESS - ACCESSIBLE ROUTES

1 : 1

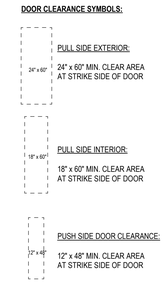


REQUIRED CLEAR AREA SHOWN HATCHED
1:48 MAX SLOPE IN ANY DIRECTION.

NOTES:

1. DOOR REQUIREMENTS REFER TO CBC 11B-404
2. CLEAR OPENING SI MEASURED BETWEEN THE DOOR AND THE STOP WITH THE DOOR OPEN 90°
3. CLEAR AREA IS MEASURED FROM THE STRIKE EDGE OF GATE OR DOOR IN ITS CLOSED POSITION AND ARE MEASURED FROM FACE OF FINISH.
4. CLEAR AREA IS REQUIRED WHERE DEPTH OF JAMB IS 8" OR MORE AS MEASURED PERPENDICULAR FROM FACE OF DOOR AT STRIKE SIDE TO ADJACENT FACE OF WALL.
5. MINIMUM CLEAR AREA IS REQUIRED WHERE DOOR OR GATE IS EQUIPPED WITH BOTH A LATCH AND A CLOSER.
6. CHANGES IN LEVEL PER CBC 11B-303. VERTICAL - NOT TO EXCEED 1/4" WITHOUT EDGE TREATMENT. BEVELED - CHANGES BETWEEN 1/4" MIN. AND 1/2" MAX. SHALL BE BEVELED WITH 1:2 MAX. SLOPE.
7. FLOOR TRANSITIONS TO BE CENTERED AT CENTERLINE OF THE DOOR, U.O.N. SEE

DOOR CLEARANCE SYMBOLS:



7 ACCESS- DOOR CLEARANCES

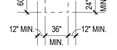
1/4" = 1'-0"

TURNING SPACE (CBC 11B-304):

PER CBC 603.2.3 DOOR MAY ENCROACH INTO THE TURNING SPACE BY 12" MAX.

CIRCULAR:
5'-0" CLEAR TURN-AROUND AREA.

T-SHAPED:
T-SHAPED WITHIN A 60" SQUARE.



CLEAR FLOOR OR GROUND SPACE (CBC 11B-305.3):

PER CBC 603.2.3 DOOR MAY ENCROACH INTO THE TURNING SPACE BY 12" MAX.

30"MIN. x 48" MIN. CLEAR AREA IN FRONT OF ACCESSIBLE ELEMENTS. 1:48 SLOPE MAX.

CLEAR FLOOR OR GROUND SPACE AT ALCOVE (CBC 11B-305.7):

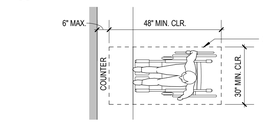
ALCOVE FORWARD APPROACH:

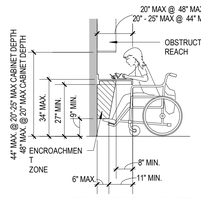
ALCOVE PARALLEL APPROACH:

NOTE FOR DOOR CLEARANCES SEE

3 ACCESS - TURNING & FLOOR CLEARANCES

1/8" = 1'-0"



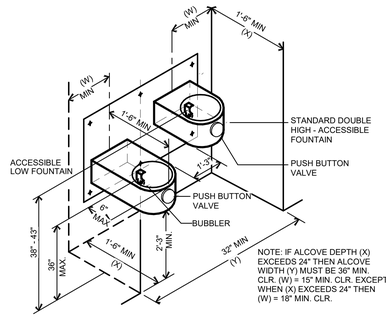


NOTES:

1. ALL DIMENSIONS FROM FACE OF FINISH.
2. ADJACENT AND REAR WALLS OF OPEN KNEE SPACE TO BE FINISHED.
3. EXTEND BASE CONTINUOUSLY AT PERIMETER OF KNEE SPACE.
4. EXTEND FINISH FLOORING CONTINUOUSLY INTO KNEE SPACE.
5. NO SHARP OR COURSE SURFACES. ALL SURFACES SHALL BE FINISHED SMOOTH.
6. FOR ADDITIONAL INFORMATION, SEE CBC 11B-306 & 11B-308

4 ACCESS - TOE & KNEE CLEARANCE

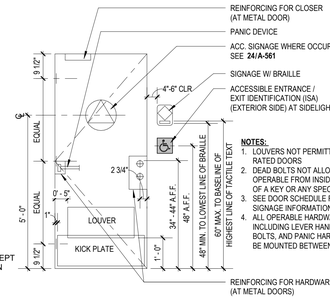
1/4" = 1'-0"



NOTE: IF ALCOVE DEPTH (X) EXCEEDS 24" THEN ALCOVE WIDTH (Y) MUST BE 36" MIN. CLR. (W) = 15" MIN. CLR. EXCEPT WHEN (X) EXCEEDS 24" THEN (W) = 18" MIN. CLR.

10 DRINKING FOUNTAIN ALCOVE

1/2" = 1'-0"



NOTES:

1. LOUVERS NOT PERMITTED AT RATED DOORS
2. DEAD BOLTS NOT ALLOWED UNLESS OPERABLE FROM INSIDE WITHOUT USE OF A KEY OR ANY SPECIAL KNOWLEDGE
3. SEE DOOR SCHEDULE FOR ADDITIONAL SIGNAGE INFORMATION.
4. ALL OPERABLE HARDWARE INCLUDING LEVER HANDLES, DEAD BOLTS, AND PANIC HARDWARE SHALL BE MOUNTED BETWEEN 34"-44" A.F.F.

5 ACCESS - DOOR SIGNAGE

1/2" = 1'-0"

AGENCY APPROVAL STAMP:

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-118981 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 09/21/2021

TLCDARCHITECTURE
520 Third St. #250
Santa Rosa, CA 95401
o: 707.525.5600
f: 707.525.5616
tlcd.com

CONSULTANT:

STAMP:

LICENSED ARCHITECT
JOSHUA C. TOMSIC
14948
RENEWAL 08/31/2022
STATE OF CALIFORNIA

REVISIONS:

Number	Date	Description

HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

TLCD PROJECT NUMBER:
19046

DATE:
09/14/21

DRAWN BY:
Author

CHECKED BY:
Checker

ACCESSIBILITY DETAILS

A-561

9/13/2021 11:18:25 AM

ELECTRICAL EQUIPMENT ANCHORAGE

ELECTRICAL ANCHORAGE NOTES:

ALL ELECTRICAL COMPONENTS SHALL BE ANCHORED AND INSTALLED PER THE DETAILS ON THE DSA APPROVED CONSTRUCTION DOCUMENTS. WHERE NO DETAIL IS INDICATED, THE FOLLOWING COMPONENTS SHALL BE ANCHORED OR BRACED TO MEET THE FORCE AND DISPLACEMENT REQUIREMENTS PRESCRIBED IN THE 2019 CBC, SECTIONS 1616A.1.18 THROUGH 1616A.1.26 AND ASCE 7-10, 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.
3. MOVABLE EQUIPMENT WHICH IS STATIONED IN ONE PLACE FOR MORE THAN 8 HOURS AND 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 COMPONENT ARE REQUIRED TO BE ANCHORED WITH TEMPORARY ATTACHMENTS.

THE FOLLOWING ELECTRICAL SHALL BE BE POSITIVELY ATTACHED TO THE STRUCTURE, BUT THE ATTACHMENT NEED NOT BE DETAILED ON THE PLANS. THESE COMPONENTS SHALL HAVE FLEXIBLE CONNECTIONS PROVIDED BETWEEN THE COMPONENT AND ASSOCIATED CONDUIT.

A. COMPONENTS WEIGHING LESS THAN 400 POUNDS AND HAVE A 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 WALL.

FOR THOSE ELEMENTS THAT DO NOT REQUIRE DETAILS ON THE APPROVED DRAWINGS, THE INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE OR STRUCTURAL ENGINEER DELEGATED RESPONSIBILITY AND THE DSA DISTRICT STRUCTURAL ENGINEER. THE PROJECT INSPECTOR WILL VERIFY THAT ALL COMPONENTS AND EQUIPMENT HAVE BEEN ANCHORED IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.

ELECTRICAL DISTRIBUTION SYSTEM BRACING NOTE:

ELECTRICAL DISTRIBUTION SYSTEMS SHALL BE BRACED TO COMPLY WITH THE FORCES AND DISPLACEMENTS PRESCRIBED IN ASCE 7-10 SECTION 13.3 AS DEFINED IN ASCE 7-10 SECTION 13.6.5.6, 13.6.7, 13.6.8, AND 2019 CBC, SECTIONS 1616A.1.24, 1616A.1.25, AND 1616A.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 (eg., SMACNA OR OSHPD OPM), 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.

ELECTRICAL DISTRIBUTION SYSTEMS ARE:
[X] - OPTION 1: DETAILED ON THE APPROVED DRAWINGS WITH PROJECT SPECIFIC NOTES AND DETAILS.
[ ] - OPTION 2: SHALL COMPLY WITH THE APPLICABLE OSHPD PRE-APPROVAL (OPM #).

LIGHT FIXTURES:

ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. A MINIMUM OF TWO SCREWS OR APPROVED FASTENERS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.

SURFACE-MOUNTED LIGHT FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES. THE CLAMPING DEVICE SHALL COMPLETELY SURROUND THE SUPPORTING CEILING RUNNER AND BE MADE OF STEEL WITH A MINIMUM THICKNESS OF #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SLACK SAFETY WIRE SHALL BE CONNECTED FROM EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER OR EXCEED 56 LB. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.

LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.

LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS TO THE STRUCTURE ABOVE. EXCEPTION: ALL LIGHT FIXTURES GREATER THAN TWO BY FOUR FEET WEIGHING LESS THAN 56 LBS. SHALL HAVE A #12 GAGE SLACK SAFETY WIRE AT EACH CORNER.

ALL LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE HANGER WIRES (ONE AT EACH CORNER) ATTACHED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE OR OTHER APPROVED HANGERS. THE FOUR (4) TAUT #12 GAGE WIRES OR OTHER APPROVED HANGERS, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, SHALL BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE FIXTURE.

ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A.F.G.	ABOVE FINISHED GRADE
C	CONDUIT
C.O.	CONDUIT ONLY
CU	COPPER
E.C.	ELECTRICAL CONTRACTOR
E	EMERGENCY LIGHT FIXTURE ON EMERGENCY GENERATOR OR INVERTER, SWITCHABLE, U.O.N.
EM	EMERGENCY LIGHT FIXTURE WITH BATTERY PACK, SWITCHABLE
EMS	ENERGY MANAGEMENT SYSTEM
(E)	EXISTING
EQPT	EQUIPMENT
(ER)	EXISTING EQUIPMENT TO BE RELOCATED
(EX)	EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED
EXT	EXTERIOR
GFI	GROUND FAULT CIRCUIT INTERRUPTING TYPE RECEPTACLE
LV	LOW VOLTAGE
MCB	MAIN CIRCUIT BREAKER
MFR	MANUFACTURER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
(N)	NEW
N.E.C.	NATIONAL ELECTRICAL CODE
NEU	NEUTRAL
N.I.E.C.	NOT IN ELECTRICAL CONTRACT
O.A.H.	OVERALL HEIGHT
O.F.C.I.	OWNER FURNISHED, CONTRACTOR INSTALLED
P	INDICATES FIXTURES ON PHOTOCELL CONTROL
PNL	PANEL
S.A.D.	SEE ARCHITECTURAL DRAWINGS
TC	INDICATES FIXTURES ON TIMECLOCK CONTROL
TELE	TELEPHONE
U.O.N.	UNLESS OTHERWISE NOTED
WP	WEATHER PROOF, NEMA 3R
WPIU	WEATHER PROOF WHILE IN USE

SYMBOLS LIST

ALL SWITCH AND CONTROL MOUNTING HEIGHTS OF 48" SHALL BE TO TOP OF THE DEVICE BOX. ALL RECEPTACLES WITH MOUNTING HEIGHT OF UP TO 18" SHALL BE NO LOWER THAN 15" TO BOTTOM OF THE DEVICE BOX, TYPICAL, U.O.N.

- CONDUIT AND WIRE CONCEALED IN CEILING OR WALL
- CONDUIT AND WIRE CONCEALED IN OR UNDER SLAB OR UNDERGROUND
- CONDUIT AND WIRE RUN EXPOSED
- CROSSMARKS INDICATE QUANTITY OF #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR (INCLUDED BUT NOT INDICATED), NO HASHMARKS INDICATES (2) #12 CONDUCTORS PLUS PARITY SIZED GROUND CONDUCTOR, U.O.N.
- GROUND WIRE
- (#10) WIRE SIZE 10 AWG FOR ALL CONDUCTORS, INCLUDING GROUND WIRE, THROUGHOUT THE COMPLETE CIRCUIT
- FLEXIBLE METALLIC CONDUIT
- HOMERUN TO PANELBOARD OR TERMINAL BOARD, AS NOTED ON PLANS
- COMPLETE CONNECTION OF EQUIPMENT
- CONDUIT STUBBED OUT, CAPPED AND MARKED
- CONDUIT TURNED UP
- CONDUIT TURNED DOWN
- G #4/0 COPPER GROUNDING ELECTRODE CONDUCTOR, U.O.N.
- AC-1 MECHANICAL EQUIPMENT DESIGNATION - SEE MECHANICAL PLANS
- 3 / E-6 DETAIL DESIGNATION - SEE DETAIL 3, SHEET E-6
- 1 NUMBERED SHEET NOTE
- 30A 3P CIRCUIT BREAKER. NUMBER INDICATES 30A 3-POLE
- 1504N FEEDER SIZE - SEE POWER SINGLE LINE DIAGRAMS & FEEDER SCHEDULE
- MAIN SWITCHBOARD, DISTRIBUTION PANEL OR MOTOR CONTROL CENTER
- FLUSH MOUNTED PANELBOARD, 6'-6" TO TOP
- SURFACE MOUNTED PANELBOARD, 6'-6" TO TOP
- FUSED EQUIPMENT DISCONNECT SWITCH WITH FUSE SIZE AS RECOMMENDED BY EQUIPMENT MANUFACTURER
- MOTOR DISCONNECT SWITCH; HORSEPOWER RATED, NON FUSE
- COMBINATION MAGNETIC MOTOR STARTER & MOTOR CIRCUIT PROTECTOR
- MAGNETIC MOTOR STARTER
- VFD VARIABLE FREQUENCY DRIVE, FURNISHED BY MECHANICAL, INSTALLED & CONNECTED COMPLETE BY ELECTRICAL
- MOTOR WITH FLEXIBLE CONDUIT CONNECTION AND DISCONNECT
- T TRANSFORMER
- CONCRETE PULLBOX, SIZE AS REQUIRED OR SHOWN - CHRISTY OR EQUAL WITH LABELED LID PER USE
- COPPER GROUND ROD
- J FLUSH CEILING MOUNTED JUNCTION BOX, U.O.N.
- J FLUSH WALL MOUNTED JUNCTION BOX, UP 18" U.O.N.
- 20A 3PG 125V DUPLEX RECEPTACLE, UP 18" U.O.N.
- 20A 3PG 125V DUPLEX RECEPTACLE, WEATHERPROOF, UP 18" U.O.N.
- GFI 20A 3PG 125V DUPLEX RECEPTACLE, GROUND FAULT CIRCUIT INTERRUPTER TYPE, UP 18" U.O.N.
- AA1 LUMINAIRE
- WALL MOUNTED LUMINAIRE
- $a LINE VOLTAGE SINGLE POLE TOGGLE SWITCH, LETTER ADJACENT INDICATES RESPECTIVE ZONE CONTROLLED, UP 48" U.O.N.
- $m LINE VOLTAGE MOTOR RATED TOGGLE SWITCH INSTALLED AT EQPT SHOWN
- aOSb WALL MOUNTED SWITCH TYPE INFRARED OCCUPANCY SENSOR; UP 48" U.O.N.; SINGLE OR DUAL AS NOTED BY LETTERS ADJACENT. SET TO FIXED 20 MINUTE TIME DELAY AND MAX SENSITIVITY

CALIFORNIA GREEN BUILDING STANDARDS COMPLIANCE

ALL EXTERIOR LUMINAIRES SPECIFIED IN THESE CONTRACT DOCUMENTS COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA ENERGY CODE AND THE CALIFORNIA GREEN BUILDING STANDARDS CODE, SECTION A5.106.8 LIGHT POLLUTION REDUCTION. EXTERIOR LUMINAIRES COMPLY WITH BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS AS DEFINED IN IESNA TM-15-11 AND BUG RATINGS DO NOT EXCEED THE MAXIMUM ALLOWABLE RATINGS FOR THIS PROJECT.

GENERAL NOTES

1. PRIOR TO BID THE CONTRACTOR SHALL VISIT THE SITE TO ADEQUATELY DETERMINE ALL PRE-EXISTING CONDITIONS. BY THE ACT OF SUBMITTING A BID, THE CONTRACTOR WILL BE DEEMED TO HAVE COMPLIED WITH THE FOREGOING, TO HAVE ACCEPTED SUCH CONDITIONS, AND TO HAVE MADE ALLOWANCES THEREFORE IN PREPARING THE BID.
2. PROVIDE PARITY SIZED GREEN GROUND WIRE IN ALL POWER CONDUITS, BRANCH CIRCUITS (LIGHTING & POWER) AND HOMERUNS. PROVIDE ADDITIONAL ISOLATED GROUND, GREEN WITH YELLOW STRIPE, TO ALL ISOLATED GROUND RECEPTACLES.
3. PROVIDE PULLROPE IN ALL EMPTY CONDUITS THROUGHOUT THE PROJECT.
4. COORDINATE TRENCHING WITH OWNER AND OTHER TRADES BEFORE BEGINNING WORK.
5. ALL CONDUIT PENETRATIONS THROUGH FIRE-RATED WALLS AND FLOORS SHALL BE SEALED AND EQUIPPED WITH U.L. LISTED FIRE PENETRATION ASSEMBLIES TO MAINTAIN FIRE SEPARATION RATING.
6. MAINTAIN "AS-BUILT" RECORDS AT ALL TIMES, SHOWING EXACT LOCATION OF ALL UNDERGROUND AND/OR CONCEALED CONDUITS AND SERVICES INSTALLED UNDER THIS CONTRACT, INCLUDING CIRCUIT IDENTIFICATION WHERE APPLICABLE. PROVIDE OWNER WITH "AS-BUILT" DOCUMENTS AS INDICATED IN THE SPECIFICATIONS, AND/OR CALLED FOR IN THE SPECIFICATIONS.
7. DRAWINGS INDICATE THE LOCATION(S) OF DEVICES, AND EQUIPMENT, AND THE CIRCUIT NUMBER AND PANEL DESIGNATED TO SUPPLY THEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETELY CONNECTING ALL ELECTRICAL DEVICES TO CIRCUITS INDICATED ON THE DRAWINGS.
8. UNLESS OTHERWISE NOTED, ALL WORK SHOWN ON DRAWINGS IS NEW AND TO BE PROVIDED AND INSTALLED COMPLETE UNDER THIS CONTRACT.
9. ALL EQUIPMENT GROUNDING SHALL CONFORM TO ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE, LATEST EDITION.
10. ALL EXTERIOR CONDUIT ABOVE GRADE, INCLUDING ALL ROOF MOUNTED CONDUIT, SHALL BE GALVANIZED RIGID STEEL. COAT ALL EXPOSED THREADS WITH GALVANIZING PAINT. PAINT ALL SURFACE MOUNTED RACEWAYS AND PULLBOXES TO MATCH SURROUNDING CONDITIONS, AS DIRECTED BY THE ARCHITECT.
11. ALL ELECTRICAL WORK SHALL BE CARRIED OUT IN ACCORDANCE WITH THE LATEST EDITION OF THE N.E.C., AS WELL AS STATE, AND LOCAL CODES AND REQUIREMENTS.
12. ALL CONDUIT SHALL BE CONCEALED, UNLESS OTHERWISE NOTED.
13. EQUIPMENT OVERLOADS AND FUSES SHALL BE PROVIDED AND INSTALLED AS PER NAME PLATE ON THE EQUIPMENT ACTUALLY PROVIDED.
14. USE FLEXIBLE CONDUIT FOR ALL MOTOR, TRANSFORMER, CONNECTIONS, AND CONNECTIONS BETWEEN TWO SEPARATE STRUCTURES AND FOR ALL FINAL CONNECTIONS TO "CRITICAL EQUIPMENT" AS DEFINED IN SPECIFICATIONS. MINIMUM 1/2" DIAMETER, LIQUID TIGHT TYPE USED OUTDOORS AND IN ALL WET LOCATIONS; PROVIDE WITH CODE-SIZE (MINIMUM #12) BARE GROUND WIRE IN ALL FLEXIBLE CONDUIT.
15. PROVIDE A DEDICATED NEUTRAL CONDUCTOR FOR ALL BRANCH CIRCUITS FEEDING OUTLETS AS NOTED ON THE DRAWINGS.
16. ALL CONDUIT CONNECTORS TO OUTLET OR JUNCTION BOXES SHALL HAVE INSULATED THROATS (MANUFACTURED AS AN INTEGRAL PART OF THE CONNECTOR). AFTER-MARKET INSERTABLE THROATS ARE NOT ACCEPTABLE.
17. ALL CIRCUITS IN ALL JUNCTION BOXES AND DEVICES SHALL BE CLEARLY IDENTIFIED BY MEANS OF "EZ" NUMBERING TAGS OR EQUIVALENT, TO IDENTIFY THE CIRCUIT NUMBER OR RELAY SUPPLYING THE CONDUCTOR. ALL JUNCTION BOXES SHALL BE LABELED PER SPECIFICATIONS.
18. FOR OUTDOOR 15 AND 20-AMPERE, 125 AND 250-VOLT RECEPTACLES: RECEPTACLES LOCATED IN "WET" LOCATIONS SHALL HAVE "IN-USE" TYPE WEATHERPROOF COVER PLATES PROVIDED AND INSTALLED; RECEPTACLES LOCATED IN "DAMP" LOCATIONS SHALL HAVE "IN-USE" TYPE WEATHERPROOF COVER PLATES IN LOCATIONS DEEMED TO BE "IN-USE" WITH CORD AND PLUG ATTACHED.

LIST OF DRAWINGS

E-001 SYMBOLS LIST, GENERAL NOTES & LIST OF DRAWINGS
E-101 SITE PLAN - ELECTRICAL
E-701 DETAILS

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HARMONY ELEMENTARY SCHOOL FIELD AND PLAYGROUND IMPROVEMENTS

1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER
01-118981

TLCD PROJECT NUMBER:
19046

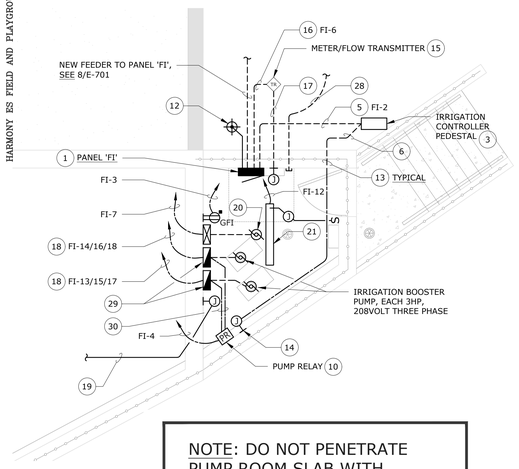
DATE:
09/07/21

DRAWN BY:
LN/TV

CHECKED BY:
PJC

SYMBOLS LIST, GENERAL NOTES & LIST OF DRAWINGS

E-001

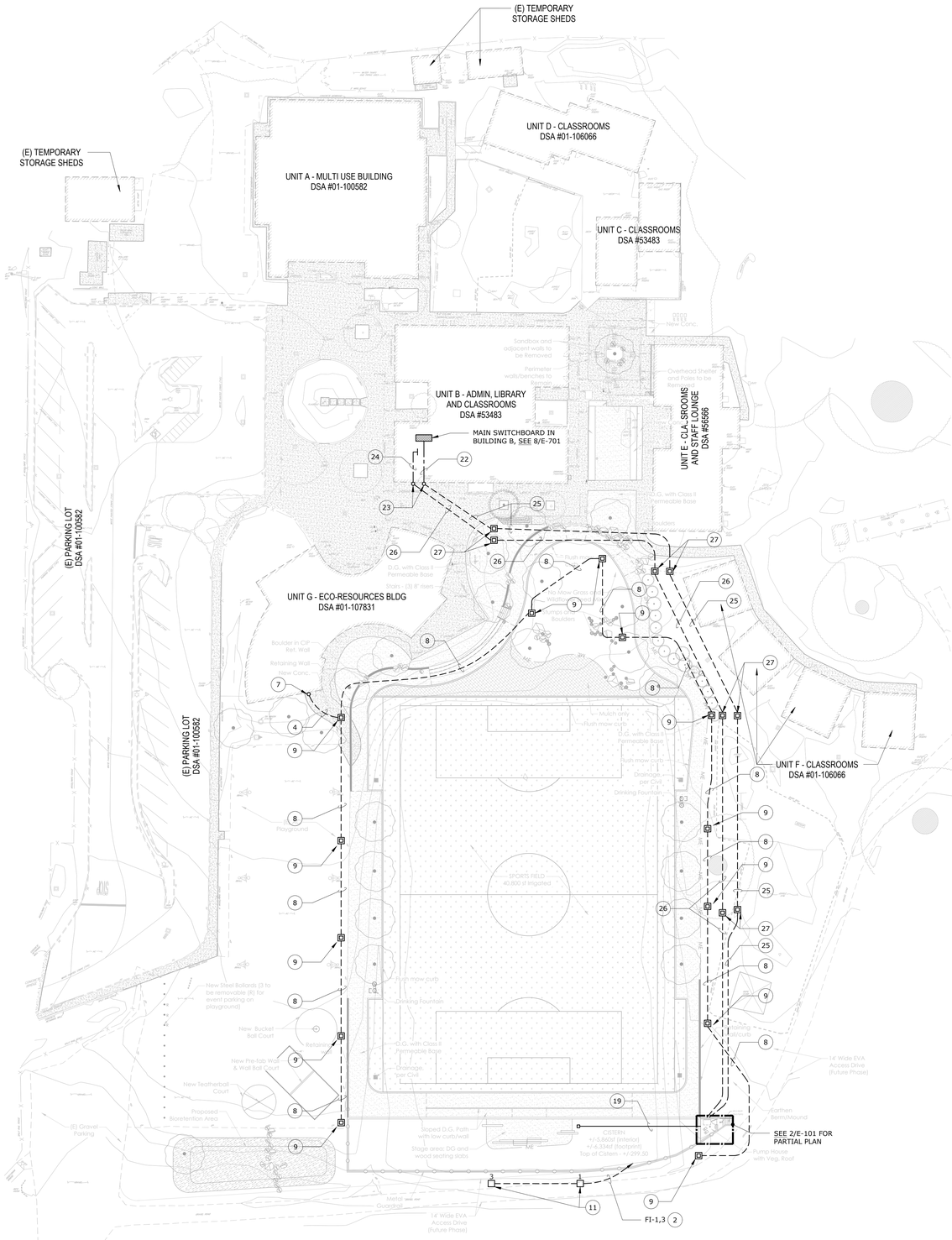


NOTE: DO NOT PENETRATE PUMP ROOM SLAB WITH CONDUITS OR GROUND RODS

PARTIAL PLAN PUMP ROOM - ELECTRICAL

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

2 / E-101



SITE PLAN - ELECTRICAL

SCALE: 1" =30'-0"

1 / E-101

REF. NORTH

NUMBERED SHEET NOTES

1. PROVIDE AND INSTALL NEW PANEL 'FI', SEE 8/E-701.
2. PROVIDE AND INSTALL 4#10, 1#10G IN 3/4" CONDUIT TO PANEL 'FI'. ROUTE CONDUITS OUTSIDE OF CISTERN AREA.
3. SEE LANDSCAPE DRAWINGS FOR LOCATION.
4. PROVIDE AND INSTALL (2) 1-1/4" CONDUITS FROM PULLBOX TO STUB UP AT BUILDING FOR FUTURE SITE LIGHTING USE.
5. PROVIDE AND INSTALL (2)#12 & (1)#12G IN 3/4" CONDUIT TO IRRIGATION CONTROLLER.
6. PROVIDE AND INSTALL (2) 1" CONDUITS WITH PULLROPE TO IRRIGATION CONTROLLER FOR PUMP CONTROLS USE AND DATA LINE USE
7. STUB CONDUIT UP AT WALL FOR FUTURE EXTENSION TO UNIT G PANEL.
8. PROVIDE AND INSTALL 1-1/4" CONDUIT WITH PULL ROPE FOR FUTURE SITE LIGHTING USE.
9. PROVIDE AND INSTALL PULLBOX, CHRISTY N9 WITH CONCRETE COVER FOR FUTURE SITE LIGHTING. COORDINATE LOCATION.
10. PROVIDE AND INSTALL 120VOLT BRANCH CIRCUIT TO THE PUMP START RELAY, COORDINATE LOCATION PRIOR TO ROUGH-IN.
11. PROVIDE AND INSTALL RECEPTACLE PEDESTALS AT STAGE, SEE 4/E-701, COORDINATE LOCATIONS PRIOR TO ROUGH-IN. COORDINATE LOCATION PRIOR TO ROUGH-IN. DO NOT INSTALL ABOVE CISTERN.
12. PROVIDE AND INSTALL GROUND ROD, SEE 7/E-701 AND 8/E-701. DO NOT INSTALL IN PUMP ROOM FLOOR.
13. SEAL ALL UNDERGROUND CONDUITS PASSING THRU PUMP ROOM WALL.
14. INSTALL J-BOX WITH CONDUITS FROM IRRIGATION CONTROLLER ADJACENT TO PUMP START RELAY.
15. SEE LANDSCAPE AND CIVIL DRAWINGS FOR LOCATION.
16. PROVIDE AND INSTALL (2)#12, & (1)#12G IN 3/4" CONDUIT TO METER/FLOW TRANSMITTER.
17. PROVIDE AND INSTALL 1" CONDUIT WITH PULLROPE TO METER/FLOW TRANSMITTER TO PUMP ROOM J-BOX.
18. PROVIDE AND INSTALL (3)#10, (1)#10G IN 3/4" CONDUIT.
19. PROVIDE AND INSTALL (2) 3/4" CONDUITS FOR WIRING TO CISTERN FOR CONTROLS. SEE CIVIL DRAWINGS.
20. SUMP PUMP, 0.5HP, 120VOLT.
21. PROVIDE AND INSTALL NEW LIGHT FIXTURE 4FOOT LED STRIP LIGHT, FROSTED ROUNDED LENS WITH WIDE DISTRIBUTION, METALUX4SNLED-4-LD5-415L-LW-UNV-L830-CD-1-4-WG/SNF-4FT NONDIMING, 120VOLTS 35W.
22. ROUTE FEEDERS ON ROOF TO ELECTRICAL ROOM. USE RIGID GALVANIZED STEEL CONDUIT. COORDIATE ROUTING.
23. RIGID GALVANIZED CONDUITS TO RISE UP TO ROOF AND CONTINUE TO ELECTRICAL ROOM. PAINT CONDUIT TO MATCH WALL.
24. ROUTE CONDUITS TO TELECOM RACK. USE RIGID GALVANIZED STEEL CONDUIT.
25. PROVIDE AND INSTALL NEW FEEDERS FROM BUILDING 'B' MAIN SWITCHBOARD TO PUMP ROOM PANEL 'FI', SEE 8/E-701.
26. PROVIDE AND INSTALL (2) 1-1/2" CONDUITS WITH PULLROPES FROM BUILDING 'B' TELECOM RACK TO PUMP ROOM FOR FUTURE USE.
27. PROVIDE AND INSTALL (2) PULLBOXES ONE FOR POWER FEEDERS AND ONE FOR TELECOM CONDUITS. EACH BOX TO BE CHRISTY N36 TYPE. COORDINATE LOCATIONS.
28. PROVIDE TELECOM CONDUITS FROM PUMP ROOM TO BUILDING B TELECOM ROOM, SEE NOTE 26 ABOVE.
29. SEE 9/E-701 FOR COMBINATION STARTER / CONTROL DIAGRAM.
30. CONTROL WIRING IN 3/4" CONDUIT TO STARTERS FROM PUMP RELAY TO STARTERS, SEE 9/E-701.

NOTES:
1. DO NOT ROUTE CONDUITS WITHIN OR BELOW BIO RETENTION AREAS.
2. SEE 1/E-701 FOR TYPICAL TRENCH DETAILS.

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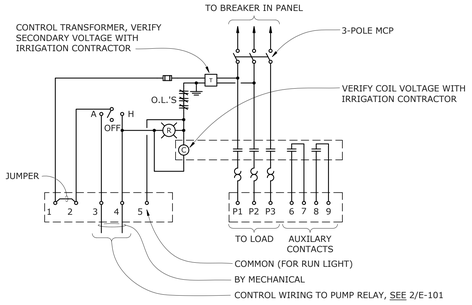
1935 BOHEMIAN HIGHWAY
OCCIDENTAL, CA 95465

HARMONY UNION SCHOOL DISTRICT

DSA PROJECT NUMBER: 01-118981
TLCD PROJECT NUMBER: 19046
DATE: 09/07/21
DRAWN BY: LN/TV
CHECKED BY: PJC

SITE PLAN - ELECTRICAL

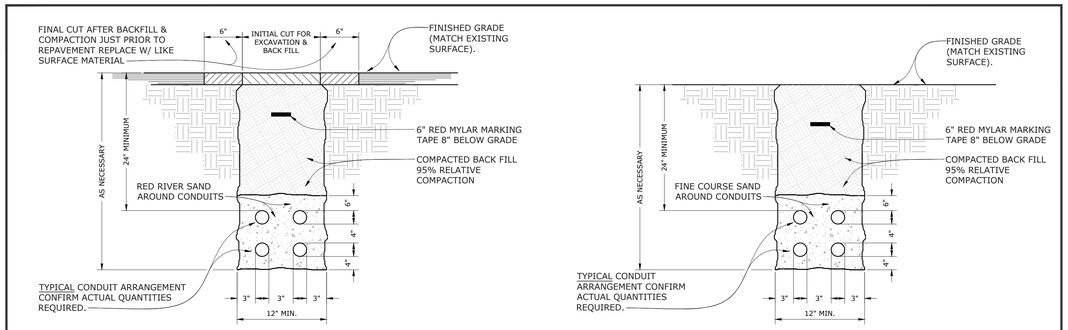
E-101



COMBINATION MOTOR STARTER / CONTROL DIAGRAM - 3Ø EQUIPMENT

5 E-701

SCALE: NONE
FILE: L:\DETAILS\POWER\STARTERS\PSTAR002 (MODIFIED FOR 219090)



TYPICAL TRENCH SECTIONS

1 E-701

SCALE: NONE
FILE: L:\POWER\TRENCH\PTREN005 (MODIFIED FOR 219090)

PANEL FI

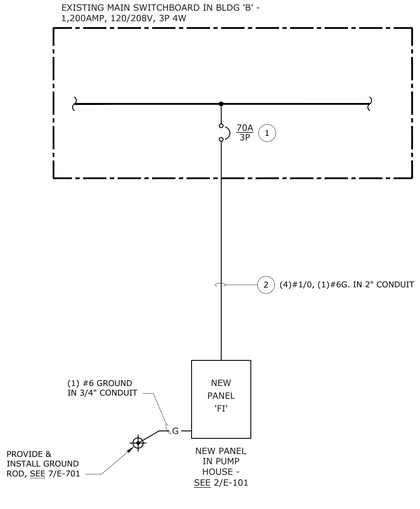
VOLTS:	120 / 208
PHASE:	3 PH
WIRE:	4 W
BUSSING:	100A
POLES:	24P
MAIN BRKR:	70A MCB
FEEDER:	SEE SINGLE LINE
CONDUIT:	SEE SINGLE LINE
MOUNTED:	SURFACE
AIC RATING:	10 KAIC

LOAD DESCRIPTION	TYPE	A	B	C	BRKR.	CKT.	CKT.	BRKR.	A	B	C	TYPE	LOAD DESCRIPTION
PEDESTAL RECEPTACLES	R	0.36			20/1	1	2	20/1	0.10			M	IRRIGATION CONTROLLER
PEDESTAL RECEPTACLES	R		0.36		20/1	3	4	20/1		0.05		M	PUMP RELAY
PUMP ROOM RECEPTACLE	R			0.18	20/1	5	6	20/1			0.05	M	METER/FLOW TRANSMITTER
SUMP PUMP	M	1.20			15/1	7	8	20/1					SPARE
SPARE					20/1	9	10	20/1					SPARE
SPARE					20/1	11	12	20/1			0.20	L	LIGHTING
	M	1.30				13	14		1.30			M	
BOOSTER PUMP	M		1.30		20/3	15	16	20/3		1.30		M	BOOSTER PUMP
	M			1.30		17	18				1.30	M	
SPARE					20/1	19	20	20/1					SPACE
SPARE					20/1	21	22	20/1					SPACE
SOARE					20/1	23	24	20/1					SPACE
		2.86	1.66	1.48					1.40	1.35	1.55		

DEMAND LOAD SUMMARY	CONN. KVA	DEMAND FACTOR	DEMAND KVA
TYPE "M": NON-CONTINUOUS / MISC. LOADS	9.20	100%	9.20
TYPE "L": LIGHTING / CONTINUOUS LOADS	0.20	125%	0.25
TYPE "R": RECEPTACLES (FIRST 10KVA)	0.90	100%	0.90
TYPE "R": RECEPTACLES (OVER 10KVA)	0.00	50%	0.00
TYPE "H": HVAC / MECHANICAL LOADS	0.00	100%	0.00
TOTALS:	10.30		10.35

PHASE A: 4.26 **KVA**
PHASE B: 3.01 **KVA**
PHASE C: 3.03 **KVA**

35.50 **MAX AMPS / PHASE**



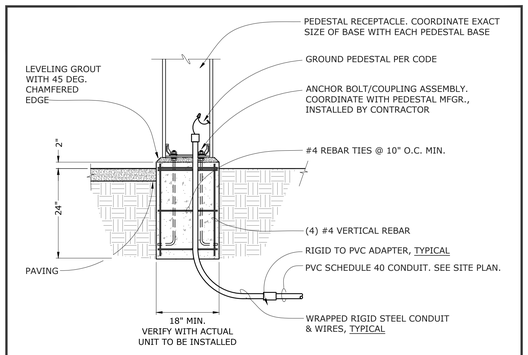
NOTES:

1. PROVIDE AND INSTALL NEW CIRCUIT BREAKER IN EXISTING MAIN SWITCHBOARD. CIRCUIT BREAKER SHALL MATCH EXISTING.
2. PROVIDE AND INSTALL NEW FEEDER TO PANEL 'FI', SEE E-101. FEEDER SIZE INCREASED FOR VOLT DROP.

SINGLE LINE DIAGRAM - POWER

8 E-701

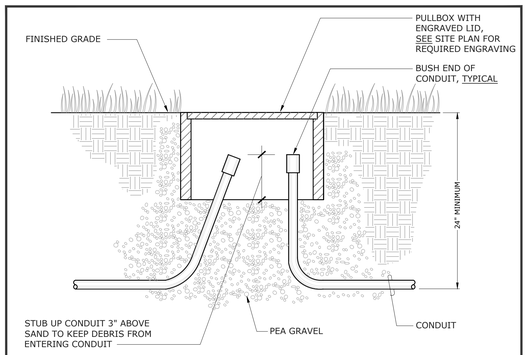
SCALE: NONE



PEDESTAL BASE

5 E-701

SCALE: NONE
FILE: (MODIFIED FOR 219090)



PULLBOX/CONDUIT INSTALLATION DETAIL

2 E-701

SCALE: NONE
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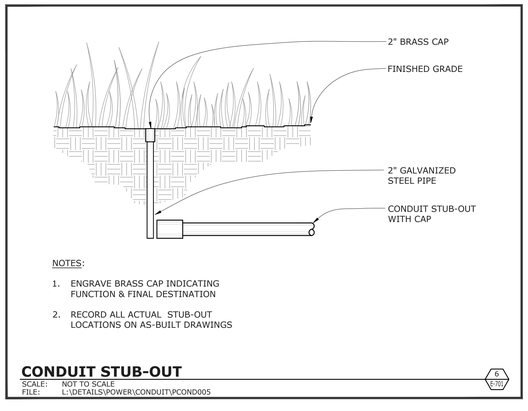


NOTES:

1. ENGRAVE BRASS CAP INDICATING FUNCTION & FINAL DESTINATION
2. RECORD ALL ACTUAL STUB-OUT LOCATIONS ON AS-BUILT DRAWINGS

CONDUIT STUB-OUT

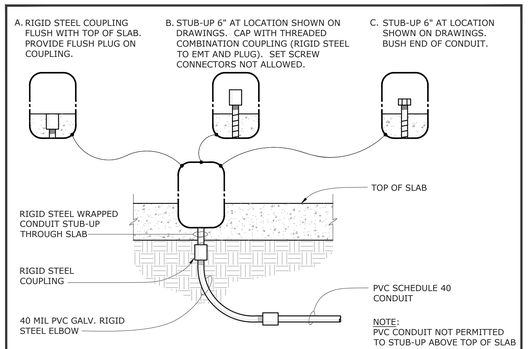
6 E-701

SCALE: NOT TO SCALE
FILE: L:\DETAILS\POWER\CONDUIT\PCOND005

A. RIGID STEEL COUPLING FLUSH WITH TOP OF SLAB. PROVIDE FLUSH PLUG ON COUPLING.

B. STUB-UP 6" AT LOCATION SHOWN ON DRAWINGS. CAP WITH THREADED COMBINATION COUPLING (RIGID STEEL TO EMT AND PLUG). SET SCREW CONNECTORS NOT ALLOWED.

C. STUB-UP 6" AT LOCATION SHOWN ON DRAWINGS. BUSH END OF CONDUIT.



CONDUIT STUB-UP DETAILS

3 E-701

SCALE: NONE
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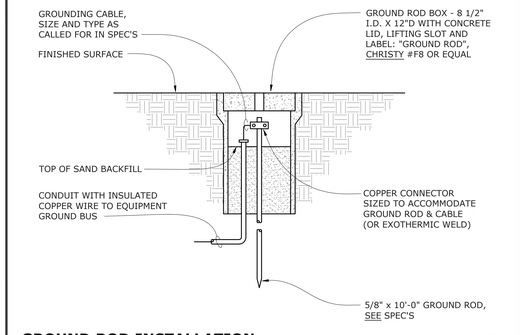
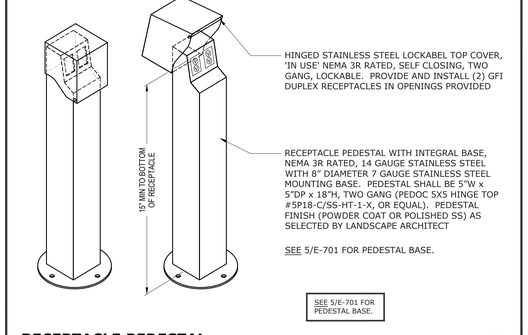


GROUND ROD INSTALLATION

7 E-701

SCALE: NONE
FILE: L:\DETAILS\POWER\GROUND\PGROU002A



RECEPTACLE PEDESTAL

4 E-701

SCALE: NOT TO SCALE
FILE: L:\DETAILS\POWER\PEDESTALS\PPEDE001 (MODIFIED FOR 219090)

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