IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

SUN VALLEY ELEMENTARY SCHOOL

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DSA SUBMITTAL

Project Number: 1123-0020
Issue Date: November 22, 2023

APPLICATION NO: 01-121319, INCREMENT 1

CGS review and acceptance of the geohazard report is required prior to DSA stamp approval of the INC_1 construction documents per DSA IR A-4. Backchecks may begin but cannot be completed prior to receipt of the acceptance letter.

multistudio

Abbreviations

A	
@	AT
A/C	AIR CONDITION(ING) (ED)
A/C UNIT	AIR CONDITIONING UNIT
AB	ANCHOR BOLT
ABBVR	
ACC	ACCESSIBLE
ACCU	AIR COOLED CONDENSING UNIT
ACI	AMERICAN CONCRETE INSTITUTE
ACOUS INSUL	ACOUSTICAL INSULATION
ACOUS PNL	ACOUSTICAL PANEL
ACST	ACOUSTIC
ACT	ACOUSTICAL CEILING TILE
ADA	AMERICANS WITH DISABILITIES ACT
ADDL	ADDITIONAL
ADDM	ADDENDUM
ADH	ADHESIVE
ADJ	ADJUSTABLE, ADJACENT
AE	ARCHITECT/ ENGINEER
AFF	ABOVE FINISHED FLOOR
AGGR	AGGREGATE
AHJ	AUTHORITIY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANNODIZED
APC	ACOUSTICAL PANEL CEILING
ARCH	ARCHITECT(URAL)
ASL	ABOVE STRUCTURAL LEVEL
AWT	ACOUSTICAL WALL TREATMENT
B	
B BD	BASE BOARD
B/B	BACK-TO-BACK
BAT	BATTEN
BD	BOARD
BDRM	BEDROOM
BITUM	BITUMINOUS
BLDG	BUILDING
BLKG	BLOCKING
BM	BENCHMARK, BEAM
BOT	BOTTOM
BRG	BEARING
BRZ	BRONZE
BSMT	BASEMENT
BTWN	BETWEEN
BUR	BUILT-UP ROOFING
BW	BOTH WAYS
C	
CAB	CABINET
CB	CARRIAGE BOLT, CATCH BASIN
CCTV	CLOSED-CIRCUIT TELEVISION
CD	CONSTRUCTION DOCUMENTS, CONTRACT DOCUMENTS
CEM	CEMENT
CERT	CERTIFY, CERTIFICATE, CERTIFICATION
CF/CI	CONRACTOR FURNISHED/ CONTRACTOR INSTALLED
CF/OI	CONTRACTOR FURNISHED/ OWNER INSTALLED
CG	CORNER GUARD
CH	COAT HOOK
CHBD	CHALK BOARD
CHEM	CHEMICAL
CI	CAST IRON
CIP	CAST-IN-PLACE
CJ	CONTROL JOINT, CONSTRUCTION JOINT
CL	CENTER LINE
CLG	CEILING
CLO	CLOSET
CLR	CLEAR
CLRM	CLASSROOM
CMU	CONCRETE MASONRY UNIT
CNR	CORNER
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CONF	CONFERENCE
CONN	CONNECT(ION)
CONSTR	CONSTRUCTION
CONT	CONTINUOUS
CONTR	CONTRCT(OR)
COORD	COORDINATE, COORDINATION
CORR	CORRIDOR
CPT	CARPET
CSK	COUNTERSINK
CSWK	CASEWORK
CT	CERAMIC TILE
CTR	CENTER
CTRL	CONTROL
CU	CUBIC
CUH	CABINET UNIT HEATER
CUST	CUSTODIAL
CW	COLD WATER, CASEMENT WINDOW
D	
D	DEEP, DEPTH
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DEPT	DEPARTMENT
DET	DETAIL
DF	DRINKING FOUNTAIN
DH	DOUBLE HUNG
DIA or Ø	DIAMETER
DIFF	DIFFERENCE
DIM	DIMENSION
DIR	DIRECTION
DISP	DISPENSER
DIST	DISTANCE
DIV	DIVIDE, DIVISION
DL	DEAD LOAD
DMPF	DAMPPROOFING
DMPR	DAMPER
DN	DOWN
DO	DITTO
DOC	DOCUMENT
DOZ	DOZEN
DR	DOOR
DS	DOWNSPOUT
DSGN	DESIGN
DT	DRAIN TILE
DW	DISH WASHER
DWG	DRAWING
E	
E	EAST
EA	EACH
EC	ELECTRICAL CONTRACTOR
EF	EACH FACE
EIFS	EXTERIOR INSULATION AND FINISH SYSTEM
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRIC(AL)
ELEM	ELEMENTARY
ELEV	ELEVATOR
ENAM	ENAMEL
ENCL	ENCLOSURE
ENGR	ENGINEER
ENVIR	ENVIRONMENT
EOS	EDGE OF SLAB
EP	ELECTRIC PANEL
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPS	EXPANDED POLYSTYRENE BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ETC	ET CETERA
ETR	EXISTING TO REMAIN
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXC	EXCAVATE
EXH	EXHAUST
EXIST	EXISTING
EXP	EXPAND, EXPANSION
EXT	EXTERIOR
F	
F/F	FACE-TO-FACE
FA	FIRE ALARM
FAAP	FIRA ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FCU	FAN COIL UNIT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FIN	FINISH
FIXT	FIXTURE
FLOUR	FLOURESCENT
FLR	FLOOR
FNDN	FOUNDATION
FO	FINISHED OPENING
FRIS	FIRE RESISTIVE JOINT SYSTEM
FRP	FIBERGLASS REINFORCED PLASTIC
FRTW	FIRE RETARDANT TREATED WOOD
FT	FOOT, FEET
FTG	FOOTING
FURN	FURNITURE
FW	FIRE WALL
FWC	FABRIC WALL COVERING
G	
GA	GAGE
GAL	GALLON
GALV	GALVANIZED
GALV STL	GALVANIZED STEEL
GB	GRAB BAR
GC	GENERAL CONTRACTOR
GEN	GENERAL, GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFRC	GLASS FIBER RINFORCED CONCRETE
GFRG	GLASS FIBER REINFORCED GYPSUM
GL	GLASS, GROUND LEVEL
GL BLK	GLASS BLOCK
GLU LAM	GLUED LAMINATED BEAM
GLZ	GLAZING
GWT	GLAZED WALL TILE
GYM	GYMNASIUM
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GYP PLAS	GYPSUM PLASTER
H	
HB	HOSE BIBB
HC	HANDICAP, HOLLOW CORE
HCP	HANDICAPPED
HD	HEAVY DUTY
HDW	HARDWARE
HDWD	HARDWOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZON
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HW	HOT WATER
HYD	HYDRANT
I	
ID	INSIDE DIAMETER
IN	INCHES
INCAND	INCANDESCENT
INCL	INCLUDE
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
INTERM	INTERMEDIATE
J	
JAN	JANITOR
JAN CLO	JANITOR CLOSET
JNT	JOINT
JR	JUNIOR
JST	JOIST
K	
KD	KNOCK DOWN
KIP	1000 POUNDS
KIT	KITCHEN
KO	KNOCK OUT
KPL	KICK PLATE
L	
L	LITER, ANGLE
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LBL	LABEL
LBS	POUND
LD	LOAD
LF	LINEAR FEET
LH	LATENT HEAT, LEFT HAND
LIB	LIBRARY
LIN	LINEAR
LKR	LOCKER
LKR RM	LOCKER ROOM
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LT	LINOLEUM TILE, LIGHT
LTG	LIGHTING
M	
MACH	MATCHLINE
MACH RM	MACHINE ROOM
MAHOG	MAHOGANY
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB or MKR BD	MARKERBOARD
MC	MECHANICAL CONTRACTOR
MDF	MEDIUM DENSITY FIBERBAORD
MDO	MEDIUM DENSITY OVERLAY
ME	MATCH EXISTING
MECH	MECHANICAL
MECH RM	MECHANICAL ROOM
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	MILIMETER
MO	MASONRY OPENING
MOD BIT	MODIFIED BITUMEN
MTD	MOUNTED
MTL	METAL, MATERIAL
MULL	MULLION
N	
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO or #	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
O	
O/A	OVERALL
O/O	OUT TO OUT
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF/ OI	OWNER FURNISHED/ OWNER INSTALLED
OF/CI	OWNER FURNISEHD/ CONTRACTOR INSTALLED
OFF	OFFICE
OH	OVERHANG
OH DR	OVERHEAD DOOR
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL, OPTIMUM
OTS	OPEN TO STRUCTURE
P	
PA	PUBLIC ADDRESS
PAR	PARALLEL
PART	PARTIAL
PAT	PATTERN
PC	PLUMBING CONTRACTOR
PERF	PERFORATED
PERIM	PERIMETER
PL	PLATE, PROPERTY LINE
PL GL	PLATE GLASS
PLAM	PLASTIC LAMINATE
PLAS	PLASTER, PLASTIC
PLBG	PLUMBING
PLYWD	PLYWOOD
PNL	PANEL
POL	POLISHED
POLY	POLYETHYLENE (PLASTIC)
PORC	PORCELAIN
PORT	PORTABLE
POS	POSITIVE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PREFIN	PREFINISHED
PRELIM	PRELIMINARY
PRKG	PARKING
PROJ	PROJECT
PROP	PROPERTY
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POST TENSIONED
PTD	PAPER TOWER DISPENSER
PTN	PARTITION
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
Q	
QT	QUARRY TILE
QTR	QUARTER
QTY	QUANTITY
R	
R	RISER, RADIUS, HEAT
	RESISTANCE
RA	RETURN AIR
RAD	RADIATOR
RB	RUBBER BASE, RESILIENT BASE
RC	ROOFING CONTRACTOR
RCP	REFLECTED CEILING PLAN
RD	ROOF DRAIN
REC	RECESSED
REC RM	RECREATION ROOM
REF	REFRIGERATOR
REG	REGISTER, REGULATION
REINF	REINFORCE
REQD	REQUIRED
RESIL	RESILIENT
REV	REVISION
RFG	ROOFING
RFI	REQUEST FOR INFORMATION
RFP	REQUEST FOR PROPOSAL
RH	RIGHT HAND, ROOF HATCH
RM	ROOM
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RTF	RUBBER TILE FLOOR
RTU	ROOF TOP UNIT
RV	ROOF VENT
RW	RESCUE WINDOW
RWB	RUBBER WALL BASE
S	
S	SOUTH
S.C.D.	SEE CIVIL DWGS
S.E.D.	SEE ELETRICAL DWGS
S.L.D.	SEE LANDSCAPE DWGS
S.S.D.	SEE STRUCTURAL DWGS
SAB	SOUND ATTENUATION BATTS
SAN	SANITARY
SC	SOLID CORE, SHADING COEFFICIENT
SCHED	SCHEDULE
SD	SOAP DISPENSER
SECT	SECTION
SF	SQUARE FOOT, SAFETY FACTOR
SGT	STRUCTURAL GLAZED TILE
SHR	SHOWER
SHT	SHEET
SIM	SIMILAR
SND	SANITARY NAPKIN DISPENSER
SOG	SLAB ON GRADE
SPC	SUSPENDED PLASTER CEILING
SPEC	SPECIFICATION(S)
SPKR	SPEAKER
SQ	SQUARE
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STOR	STORAGE
STRM	STOREROOM
STRUCT	STRUCTURAL
SUB	SUBSTITUTE
SUB FL	SUBFLOOR
SUSP	SUSPENDED
SUSP CLG	SUSPENDED CEILING
SV	SAFETY VALVE, SHEET VINYL
SWBD	SWITCHBOARD
SY	SQUARE YARD
SYM	SYMBOL
SYS	SYSTEM
T	
T	TREAD
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TB	THROUGH BOLT, TOWEL BAR
TECH	TECHNICAL, TECHNOLOGY
TEL	TELEPHONE
TEMP	TEMPORARY, TEMPERATURE
TERR	TERRAZZO
THERM	THERMAL
THK	THICKNESS
THRU	THROUGH
TK BD	TACK BOARD
TMPD	TEMPERED
TMPD GL	TEMPERED GLASS
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING, TOP OF FLOOR, TOP OF FRAME
TOM	TOP OF MASONRY
TOPO	TOPOGRAPHY
TOS	TOP OF STEEL
TPD	TOILET PAPER DISPENSER
TV	TELEVISION
TYP	TYPICAL
U	
U	HEAT TRANSFER COEFFICIENT
UC	UNDERCUT
UGND	UNDERGROUND
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNFIN	UNFINISH(ED)
UNO	UNLESS NOTED OTHERWISE
UTIL	UTILITY
UV	UNIT VENTILATOR
V	
V	VOLT
VAR	VARIES, VARIATION
VB	VINYL BASE
VCT	VINYL COMPOSITE TILE
VENT	VENTILATION
VERT	VERTICAL
VEST	VESTIBULE
VIF	VERIFY IN FIELD
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VR	VAPOR RETARDER
VUH	VERTICAL UNIT HEATER
VWC	VERTICAL WALL COVERING
W	
W	WATT, WEST
W/	WITH
W/O	WITHOUT
W/W	WALL TO WALL
WB	WOOD BASE
WC	WALL COVERING, WATER CLOSET
WD	WOOD
WDW	WINDOW
WF	WIDE FLANGE
WH	WATER HEATER, WALL HUNG
WI	WROUGHT IRON
WM	WIRE MESH
WP	WATER PROOFING, WEATHERPROOF
WR	WATER REPELENT, WEATHER RESISTANT
WSCT	WAINSCOT
WT	WEIGHT
WUI	WILDLAND URBAN INTERFACE ZONE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
X	
X	BY
Y	
YD	YARD

Graphic Symbols

01 GENERAL

NEW WALL

EXISTING WALL TO BE REMOVED

EXISTING WALL

BUILDING SECTION

WALL SECTION

DETAIL SECTION

DETAIL REFERENCE

EXTERIOR ELEVATION TAG

INTERIOR ELEVATION TAG

BREAK LINE

ROOM TAG

INTERIOR PARTITION TYPE SYMBOL

WINDOW TYPE SYMBOL

BENCHMARK/SPOT ELEV. SYMBOL

COLUMN LINE/GRID INDICATOR

REVISION INDICATOR

DOOR TAG

FLOOR LEVEL SYMBOL

CEILING HEIGHT SYMBOL

NORTH ARROWS

PLAN NORTH

TRUE NORTH

DIMENSION

ALIGN TWO WALLS OR OBJECTS

Materials Graphics

02 SITE CONSTRUCTION

EARTH (existing)

EARTH (backfill)

DRAINAGE FILL

03 CONCRETE

CAST-IN-PLACE CONCRETE

PRECAST CONCRETE

04 MASONRY

BRICK

CONCRETE MASONRY UNITS

GLASS BLOCK

STONE

CAST STONE

GROUT

05 METALS

ALUMINUM

STEEL

06 WOODS AND PLASTICS

CONTINUOUS WOOD

INTERMITTENT WOOD

FINISH WOOD

HARDBOARD

MEDIUM DENSITY FIBER BOARD (MDF)

PARTICLE BOARD

PLYWOOD

SOLID SURFACE MATERIAL

07 THERMAL & MOISTURE PROTECTION

BATT INSULATION

LOOSE FILL INSULATION

RIGID FOAM INSULATION

MINERAL WOOL INSULATION

08 GLAZING

GLASS

09 FINISHES

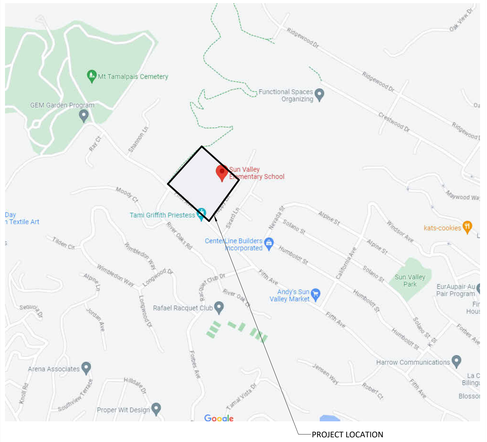
LATH AND PLASTER

GYPSUM BOARD

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE STATEMENT: THE POT IDENTIFIED IN THESE CONSTRUCTION DOCUMENTS MEETS THE REQUIREMENTS OF THE CURRENT APPLICABLE CALIFORNIA BUILDING CODE (CBC) 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 WITH THE CBC HAVE BEEN IDENTIFIED AND 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 INDICATED IN THESE CONSTRUCTION DOCUMENTS.

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

SITE LOCATION MAP



Index of Drawings

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. 01-121319 **File No.** 21-39**)**

☒ The drawings or sheets listed on the cover or index sheet except the G, AS, AD & LS Sheets
☐ 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 certify that: ☒ All drawings or sheets listed on the cover or index sheet ☐ This drawing or page

☒ is/are in general conformance and ☒ have been coordinated	☐ is/are in general conformance and ☐ have been coordinated
11/22/2023	
Signature **Date**	**Signature** **Date**
Architect or Engineer designated to be in general responsible charge	**Architect or Engineer delegated responsibility for this portion of the work.**
Lauren Maass	
Print Name	**Print Name**
C25994 01-2025	
License Number **Expiration Date**	**License Number** **Expiration Date**

General Architectural Drawing Notes:

1. VERIFY DIMENSIONS AND EXISTING CONDITIONS BEFORE COMMENCING WORK. REPORT DISCREPANCIES TO THE ARCHITECT PRIOR TO PROCEEDING WITH AFFECTED WORK.
2. BUILDING FLOOR PLAN DIMENSIONS ARE REFERENCED FROM STRUCTURAL GRID, FACE OF CONCRETE, FACE OF MASONRY, OR FACE OF FINISHED SURFACE, UNLESS NOTED OTHERWISE.
3. REFLECTED CEILING PLAN DIMENSIONS ARE REFERENCED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE. CEILING HEIGHTS ARE DIMENSIONED FROM FLOOR TO FINISHED CEILING HEIGHT.
4. CASEWORK, PLUMBING FIXTURES, TOILET PARTITIONS, AND OTHER FIXTURES AND EQUIPMENT ARE DIMENSIONED FROM FINISHED SURFACES UNLESS NOTED OTHERWISE.
5. DIMENSIONS NOTED AS "FIELD VERIFY" SHALL BE CHECKED AT THE SITE BY THE CONTRACTOR AND REVIEWED WITH THE ARCHITECT BEFORE INCORPORATING INTO THE WORK.
6. DIMENSIONS NOTED AS "CLEAR" REQUIRE SPECIFIC COORDINATION BETWEEN DISCIPLINES AND/OR MANUFACTURERS.
7. DRAWINGS NOTED AT "N.T.S." ARE NOT TO SCALE.
8. DO NOT SCALE DRAWING. WRITTEN DIMENSIONS TAKE PRECEDENCE. IF CLARIFICATION IS REQUIRED IN ORDER TO DETERMINE THE INTENT OF THE CONTRACT DOCUMENTS, CONTACT THE ARCHITECT.
9. NOTES OR DIMENSIONS LABELED "TYPICAL" SHALL APPLY TO SITUATIONS THAT ARE THE SAME OR SIMILAR.

General Materials & Equipment Notes:

1. PROVIDE GALVANIC PROTECTION BETWEEN DISSIMILAR METALS.
2. INSTALL PIPING AND CONDUIT TIGHT TO WALLS, COLUMNS AND ROOF DECK.
3. SEAL ALL PIPE OR CONDUIT PENETRATIONS WITH APPROPRIATE SEALANT. PROVIDE FIRE SEALANT AT RATED PARTITIONS.
4. PLYWOOD AND WOOD BLOCKING SHALL BE FIRE RESISTANT.
5. DO NOT CUT OR DRILL ANY STRUCTURAL MEMBER, OTHER THAN DESCRIBED ON THE STRUCTURAL DRAWINGS, WITHOUT WRITTEN APPROVAL FROM THE STRUCTURAL ENGINEER.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

SUN VALLEY ELEMENTARY SCHOOL

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DSA Application: 01-121319
Project Number: 1123-0020

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Issue Date: November 22, 2023

Revisions

NUMBER	DESCRIPTION	DATE

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

LICENSED ARCHITECT
LAUREN M. MAASS
NO. C25994
REN.01-2025
STATE OF CALIFORNIA

INDEX OF DRAWINGS GENERAL PROJECT NOTES INC 1

G001

DSA SUBMITTAL

12 CORRIDOR FIRE RESISTANCE RATING

TABLE 1020.1 - CORRIDOR FIRE RESISTANCE RATING

OCCUPANCY	OCCUPANCY LOAD SERVED BY CORRIOR	REQUIRED FIRE-RESISTANCE RATING (hours) WITH SPRINKLER SYSTEM
A, B, S	GREATER THAN 30	0-HR
E	GREATER THAN 10	0-HR
A-3	GREATER THAN 100	0-HR

13 PARKING REQUIREMENTS:

NO NEW PARKING IN SCOPE. ACCESSIBILITY UPGRADES TO EXISTING PARKING ONLY.
24 EXISTING PARKING SPACES. 1 ACCESSIBLE SPOT REQUIRED, 2 PROVIDED

14 EXTERIOR WALL OPENINGS

TABLE 705.8: MAXIMUM AREA OF EXTERIOR WALL OPENINGS BASED ON FIRE SEPARATION DISTANCE AND DEGREE OF OPENING PROTECTION

DEGREE OF OPENING PROTECTION: UNPROTECTED (SPRINKLERED BUILDING)

FIRE SEPARATION DISTANCE (feet)	0-3 FT	3-5 FT	5-10 FT	10-15 FT	15-20 FT	20+ FT
ALLOWABLE AREA	NOT PERMITTED	15%	25%	45%	75%	NO LIMIT

15 EXIT REQUIREMENTS

CBC CHAPTER 30

AREA OF REFUGE: NOT REQUIRED

MAX. TRAVEL DISTANCES:

EXIT ACCESS TRAVEL DISTANCES (TABLE 1017.2)
ALLOWABLE MAXIMUM:
OCCUPANCY A,B, E, S-1 = 200'-0" WITHOUT SPRINKLER SYSTEM

COMMON PATH OF EGRESS TRAVEL (TABLE 1006.2.1)
ALLOWABLE MAXIMUM:
OCCUPANCY E = 75'-0" WITH OR WITHOUT SPRINKLER SYSTEM

DEAD ENDS (CBC 1020.4.2)
NOT APPLICABLE

16 SIGNAGE

- EXIT SIGNAGE PER CBC 1013
- TACTILE EXIT SIGNS PER CBC 1013.4

17 FIRE HAZARD AND SEVERITY ZONE

PROJECT IS LOCATED IN SAN RAFAEL WILDLAND URBAN INTERFACE ZONE

18 FIRE FLOW REQUIREMENTS

FIRE AREA FOR NEW BUILDING:	4,175 SF
REQUIRED FIRE WATER FLOW:	1,750 GPM (CFC TABLE BB105.1)
AVAILABLE FLOW AT 20 PSI:	2143 GPM (TEST DATA ON C900)
TEST DATE:	11/22/22
REQUIRED FIRE FLOW DURATION:	2 HR (CFC TABLE BB105.1)
MINIMUM HYDRANTS REQUIRED:	1 (CFC TABLE CC105.1)
MAX. DIST. FROM STREET/ROAD FRONTAGE TO HYDRANT:	250 FT (CFC TABLE CC105.1)
AVERAGE HYDRANT SPACING:	500 FT (CFC TABLE CC105.1)

SEE CIVIL FOR FLOW TEST SHOWING AVAILABLE WATER AT 20 PSI

09 FIRE RESISTANCE RATINGS

	TABLE 601 AND 602
FIRE RESISTIVE RATINGS:	
STRUCTURAL FRAME	0 HR
BEARING WALLS	
EXTERIOR	0 HR*
INTERIOR	0 HR*
ALL OTHER CONSTRUCTION SYSTEMS	0 HR

EXTERIOR WALLS FIRE RESISTANCE RATING:

TABLE 705.5: FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE

FIRE SEPARATION	TYPE OF CONSTRUCTION	GROUP A, B, E, F-2, I, R, S-2, U (HOUR)
X <= 5	ALL	1-HR
5 <= X < 10	V-A & V-B	1-HR
10 <= X < 30	V-A V-B	1-HR 0-HR
X <= 30	ALL	0-HR

10 MEANS OF EGRESS

USE	OCCUPANT LOAD FACTOR (SF/OCC) CBC TABLE 1004.1.2	
CLASSROOM	20	NET
UTILITY, STORAGE, MECHANICAL, ELECTRICAL	300	GROSS

EGRESS WIDTH FACTOR IN INCHES:
ALL BUILDINGS
NON-STAIR EGRESS COMPONENTS: 0.2

CORRIDOR FIRE RATING PER TABLE 1020.1: NA (NO CORRIDORS)

11 FIRE PROTECTION SYSTEMS

FIRE PROTECTION DESIGN SHALL COMPLY WITH THE LATEST EDITIONS OF THE LISTED CODES AND STANDARDS IN SECTION 04, THIS SHEET.

CONSTRUCTION TYPE: TYPE V-B FOR NEW BUILDINGS

FIRE ALARM SYSTEM: PROJECT WILL HAVE FIRE ALARM SYSTEM PER 2022 CBC CHAPTER 9 AND INSTALLED IN ACCORDANCE WITH 2022 NFPA 13 & 72

EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM (EVACS): EVACS ARE DESIGNED IN ACCORDANCE WITH NFPA 72

AUTOMATIC SMOKE DETECTION: GROUP E: PER CBC 907.2.3.6.1

CARBON MONOXIDE DETECTION: PER CBC 915

STANDPIPE SYSTEM: NEW CONSTRUCTION WILL NOT REQUIRE STANDPIPES AS BUILDINGS ARE NOT MORE THAN 35 FEET ABOVE GRADE PLANE AND ARE ONLY ONE STORY.

PORTABLE FIRE EXTINGUISHERS: REQUIRED TO BE PROVIDED IN LOCATIONS AS REQ'D BY CFC SECTIONS 906 & CCR TITLE 19 DIVISION 1 CHAPTER 3

FIRE DEPARTMENT CONNECTIONS: REQUIRED TO BE INSTALLED IN ACCORDANCE WITH SECTION 912 AND NFPA 14 AND WHERE APPROVED BY DSA AND SAN RAFAEL FIRE DEPARTMENT.

FIRE DEPARTMENT KEY BOXES: KNOX BOXES TO BE PROVIDED IN ACCORDANCE WITH SAN RAFAEL FIRE DEPARTMENT.

ROOF ASSEMBLIES/COVERINGS: ALL ROOF ASSEMBLIES AT TYPE V-B CONSTRUCTION TO BE CLASS-A MINIMUM DUE TO WUI ZONE REQUIREMENTS

SHADE STRUCTURE CODE ANALYSIS

CONSTRUCTION TYPE: ALL SHADE STRUCTURES CONSTRUCTED OR INSTALLED ON CAMPUSES LOCATED WITHIN A DESIGNATED HAZARDOUS FIRE AREA SHALL BE CONSTRUCTED OF NONCOMBUSTIBLE OR IGNITION RESISTANT MATERIALS AS REQUIRED IN CBC CHAPTER 7A

OCCUPANCY: A-2 (SHADE STRUCTURE USED FOR DINING)

SEPERATION: 20 FT MIN FROM ALL BUILDINGS, PER PC DWGS

HEIGHT: 15'-10" MAX PER PC DWGS

OCCUPANT LOAD: 18" OF LINEAR BENCH/OCCUPANT

FIRE SPRINKLERS: SPRINKLERS NOT REQUIRED FOR FREE-STANDING SHADE STRUCTURE

FIRE ALARM: OCCUPANTS OF SHADE STRUCTURE SHALL BE CAPABLE OF HEARING CAMPUS FIRE ALARM SIGNAL.

SIGNAGE: SHADE STRUCTURES SHALL BE PROVIDED W/SIGNS THAT READ "COOKING PROHIBITED" AND "NOT TO BE USED FOR STORAGE."

05 CONSTRUCTION TYPE

BLDG A, B, C	(E) CLASSROOM BUILDINGS W/ADMIN WING, CONSTRUCTION TYPE V-N, NON-SPRINKLERED
BLDG D	(E) CLASSROOM BUILDING, CONSTRUCTION TYPE V-B, SPRINKLERED
MPR	(E) MUTLI-PURPOSE BUILDING, CONSTRUCTION TYPE V-B, SPRINKLERED
TK BUILDING	(N) TK CLASSROOM BUILDING, CONSTRUCTION TYPE V-B, NON-SPRINKLERED - SEE INC TWO FOR TK BUILDING SCOPE.

06 OCCUPANCY CLASSIFICATION

THIS PROJECT IS A MIXED-USE, NON-SEPARATED OCCUPANCY IN ACCORDANCE WITH CBC SECTION 508.3, CONSISTING WITH THE FOLLOWING OCCUPANCIES:

CLASSROOM	E
STORAGE/ ELECTRICAL/ IDF	S-2
PRIMARY USE:	E: CLASSROOMS

07 OCCUPANCY SEPARATION

THE PROJECT IS DESIGNED FOR THE NON-SEPARATED USE PROVISION

THE MOST RESTRICTIVE REQUIREMENTS OF CBC CHAPTERS 5 AND 9 WILL APPLY DUE TO THE NON-SEPARATED MIXED-USE APPROACH (PER CBC SECTION 508.3).

08 BUILDING HEIGHT NUMBER OF STORIES & AREA

ALLOWABLE BUILDING AREA, HEIGHT & STORY TABULATION

EXISTING BLDGS ARE NOT PART OF SCOPE AND ARE SHOWN ONLY TO CALCULATE THE SIZE OF THE SAFETY DISPERSAL AREA.

BLDG #	AREA (SF)	# OCCUPANTS
A	7,622	179
B	2,883	116
C	4,785	187
D	6,906	528
MPR	8,202	367
TOTAL	30,398	1,377

01 DEFERRED SUBMITTALS

NO DEFERRED SUBMITTAL

02 PROJECT DESCRIPTION

INCREMENT ONE:
- TK PLAY YARD
- ACCESSIBILITY UPGRADES TO EXISTING PARKING LOT.
- TWO (2) NEW PRE-CHECKED LUNCH SHADE STRUCTURES (DSA #04-121917) AND ASSOCIATED SITE WORK.
- RELOCATION OF UTILITIES UNDER NEW BUILDING LOCATION.
- RELOCATION OF EXISTING PLAY STRUCTURE
- NEW FIRE ACCESS TO WHOLE SITE

INCREMENT TWO:
NEW CONSTRUCTION OF A 4,160 SF TRANSITIONAL KINDERGARTEN (TK) BUILDING PER PC #02-121689, INCLUDING BUILDING PAD AND NECESSARY PREP. THREE CLASSROOMS, EACH WITH A DOUBLE OCCUPANCY RESTROOM.

03 PROJECT ADDRESS

75 HAPPY LN, SAN RAFAEL, CA 94901

04 APPLICABLE CODES & AGENCIES

1. THE CALIFORNIA BUILDING CODE -- TITLE 24 AS ADOPTED BY THE CALIFORNIA BUILDING STANDARDS COMMISSION. (2022)
   - 2022 CA BUILDING STANDARDS ADMINISTRATIVE CODE
   - 2022 CALIFORNIA BUILDING CODE
   - 2022 CALIFORNIA HISTORIC BUILDING CODE
   - 2022 CALIFORNIA ELECTRICAL CODE
   - 2022 CALIFORNIA MECHANICAL CODE
   - 2022 CALIFORNIA PLUMBING CODE
   - 2022 CALIFORNIA ENERGY CODE
   - 2022 CALIFORNIA FIRE CODE
   - 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
   - 2022 CALIFORNIA REFERENCE STANDARDS CODE
   - CCR TITLE 19. PUBLIC SAFETY: DIVISION 1. STATE FIRE MARSHAL
   - 2022 NFPA 13 – STANDARD FOR THE INSTALLATION OF FIRE SPRINKLERS*
   - 2019 NFPA 14 – STANDARD FOR THE INSTALLATION OF STANDPIPE AND HOSE SYSTEM*
   - 2019 NFPA 24 – STANDARD FOR THE INSTALLATION OF PRIVATE FIRE SERVICE MAINS AND THEIR APPURTENANCES*
   - 2013 NFPA 25 – CALIFORNIA EDITION, INSPECTIONS, TESTING & MAINTENANCE OF WATER BASED FIRE PROTECTION SYSTEMS
   - 2022 NFPA 72 – NATIONAL FIRE ALARM AND SIGNALING CODE*
   - 2016 NFPA 80 - FIRE AND OTHER OPENING PROTECTIVES
2. THE CALIFORNIA ADMINISTRATIVE CODE, TITLE 19 (INDUSTRIAL RELATIONS, PUBLIC SAFETY)
3. THE CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT
4. THE CALIFORNIA ENVIRONMENTAL QUALITY ACT, LATEST EDITION
5. REQUIREMENTS OF THE REGIONAL WATER QUALITY BOARD
6. PUBLIC CONTRACT CODE, SECTIONS 10700 ET SEQ. (CALIFORNIA SATE CONTRACT LAW)
7. STATE/LOCAL HEALTH DEPARTMENTS (REGARDING FOOD SERVICES, POOLS, ETC.)
8. AIR QUALITY MANAGEMENT DISTRICT REGULATIONS
9. AMERICANS WITH DISABILITIES ACT (ADA), TITLE II, ADAS & ACCESIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG) 2010 ADA STANDARDS FOR ACCESSIBLE DESIGN
10. LOCAL PUBLIC AGENCY STANDARDS.
11. ASHRAE INDOOR AIR QUALITY STANDARD 62-1989.

1.4 DSA SUPPLEMENTARY CONDITIONS:

1. THE FOLLOWING INFORMATION FROM PART ONE, TITLE 24 CCR SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS:
   - ALL ADDENDA AS PER SECTION 4-338, PART 1, SHALL BE SIGNED BY ARCHITECT, STRUCTURAL ENGINEER OR PROFESSIONAL ENGINEER AND APPROVED BY DSA.
   - ALL CONSTRUCTION CHANGE DOCUMENT MUST BE SIGNED BY ALL OF THE FOLLOWING, PRIOR TO COMMENCEMENT OF WORK CHANGES:
     A. A/E OF RECORD
     B. STRUCTURAL ENGINEER (WHEN APPLICABLE)
     C. DELEGATED PROFESSIONAL ENGINEER (WHEN APPLICABLE) AND APPROVED BY DSA
2. ALL SUBSTITUTIONS AFFECTING DSA REGULATED ITEMS SHALL BE CONSIDERED AS A CONSTRUCTION CHANGE DOCUMENT OR ADDENDA, AND SHALL BE APPROVED BY DSA PRIOR TO FABRICATION AND INSTALLATION. (IR A-6) (SECTION 4-338(c), PART 1). SUBSTITUTIONS SHALL BE FOR ANY MATERIAL, SYSTEM OR PRODUCT THAT WOULD OTHERWISE BE REGULATED BY DSA.

3. CONTRACTOR SHALL SUBMIT VERIFIED REPORT PER SECTION 4-336 AND 4-343 (C)ADMINISTRATION OF CONSTRUCTION PER PART I, TITLE 24, C.C.R.,
   A. DUTIES OF ARCHITECT, STRUCTURAL ENGINEER, OR PROFESSIONAL ENGINEER PER SECTION 4-333 (a) AND 4-341
   B. DUTIES OF CONTRACTOR PER SECTION 4-343
   C. VERIFIED REPORTS PER SECTION 4-336
4. A COPY OF PART 1 THROUGH 5 OF TITLE 24 SHALL BE KEPT AND AVAILABLE IN THE FIELD DURING CONSTRUCTION. PROJECT SHALL COMPLY WITH PARTS 1 THRU 6 AND 9 OF TITLE 24
5. DSA SHALL BE NOTIFIED ON START OF CONSTRUCTION PER SECTION 4-331
6. SUPERVISION BY DSA PER SECTION 4-334
7. DSA IS NOT SUBJECT TO ARBITRATION
8. CHANGES TO THE APPROVED DRAWINGS AND SPECIFICATIONS SHALL BE MADE BY ADDENDA OR CONSTRUCTION CHANGE DOCUMENT, TO BE APPROVED BY DSA AS REQUIRED BY SECTION 4-338, PART 1, TITLE-24, C.C.R.
9. A PROJECT INSPECTOR, EMPLOYED BY THE OWNER, AND APPROVED BY THE DIVISION-3 DSA, SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK, AS REQUIRED BY DSA. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1. TITLE-24 C.C.R
10. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE REQUIRED TESTS AND INSPECTIONS FOR THE PROJECT.
11. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD ABD ACCESS REQUIREMENTS AND ENVIROMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES.
12. FIRE SAFETY DURING CONSTRUCTION & DEMOLITION WILL BE ENFORCED IN ACCORDANCE WITH CBC & CFC CHAPTER 33.

GENERAL NOTES:

1. DIMENSIONS ARE TAKEN FROM FINISH FACE OF WALL UNLESS OTHERWISE INDICATED. THE INTENT OF THE CONTRACT DOCUMENTS IS TO INCLUDE ALL ITEMS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK BY THE CONTRACTOR. THE CONTRACT DOCUMENTS ARE COMPLEMENTARY, AND WHAT IS REQUIRED BY ONE SHALL BE AS BINDING AS IF REQUIRED BY ALL; PERFORMANCE BY THE CONTRACTOR SHALL BE REQUIRED ONLY TO THE EXTENT CONSISTENT WITH THE CONTRACT DOCUMENTS AND REASONABLY INFERABLE FROM THEM AS BEING NECESSARY TO PRODUCE THE INDICATED RESULTS.
2. ORGANIZATION OF THE SPECIFICATIONS INTO DIVISIONS, SECTIONS AND ARTICLES, AND ARRANGEMENT OF DRAWINGS SHALL NOT CONTROL THE CONTRACTOR IN DIVIDING THE WORK AMONG SUBCONTRACTORS OR IN ESTABLISHING THE EXTENT OF WORK TO BE PERFORMED BY ANY TRADE.
3. DRAWINGS, SPECIFICATIONS, GENERAL AND SUPPLEMENTARY CONDITIONS ARE ESSENTIAL PARTS OF THE CONTRACT. IN THE EVENT OF ANY DISCREPANCY BETWEEN A DRAWING AND FIGURES WRITTEN THEREON, THE FIGURES, UNLESS OBVIOUSLY INCORRECT, ARE TO GOVERN OVER SCALED DIMENSIONS. IN THE CASE OF ANY DISCREPANCY BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE SPECIFICATIONS ARE TO GOVERN. IF THERE IS A DISCREPANCY BETWEEN LARGE AND SMALL SCALE DETAILS, THE LARGER SCALE DETAILS ARE TO GOVERN. SUPPLEMENTARY CONDITIONS SHALL GOVERN OVER SPECIFICATIONS, DRAWINGS AND GENERAL CONDITIONS. THE CONTRACTOR SHALL ADVISE THE ARCHITECT OF ANY DISCREPANCIES OR CONFLICTS BETWEEN CONTRACT DOCUMENTS AS SOON AS THEY ARE DISCOVERED.
4. NOTWITHSTANDING THE ABOVE, IN THE CASE OF INCONSISTENCY BETWEEN DRAWINGS AND SPECIFICATIONS, OR WITHIN EITHER DOCUMENT NOT CLARIFIED BY ADDENDUM OR BY ARCHITECT'S SUPPLEMENTAL INSTRUCTION, THE BETTER QUALITY OR GREATER QUANTITY SHALL BE PROVIDED.
5. DRAWINGS SHALL NOT BE SCALED TO DETERMINE DIMENSIONS. IF DIMENSIONS APPEAR TO BE INSUFFICIENT OR INCORRECT, THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ARCHITECT.
6. WHENEVER CONTRACT DOCUMENTS REASONABLY IMPLY MATERIALS OR INSTALLATION AS NECESSARY TO PRODUCE THE INTENDED RESULTS, BUT DO NOT FULLY DETAIL OR SPECIFY SUCH MATERIALS, THE CONTRACTOR SHALL PROVIDE THE MATERIALS AND LABOR REQUIRED FOR INSTALLATION NONETHELESS.
7. PROVIDE ALL WORK INDICATED UNLESS SPECIFICALLY INDICATED AS "NOT IN CONTRACT" (NIC), "FURNISHED BY OTHERS" (FBO) OR "EXISTING".
8. CONTRACT DOCUMENTS ARE INTENDED TO CONVEY DESIGN INTENT ONLY. PROVIDE PRODUCTS COMPLETE WITH ACCESSORIES, TRIM, FINISH, FASTENERS, AND OTHER ITEMS NEEDED FOR A COMPLETE INSTALLATION AND INDICATED USE AND EFFECT.
9. THESE NOTES ARE NOT INTENDED TO LIMIT THE RESPONSIBILITIES OF THE CONTRACTOR AS DEFINED ELSEWHERE IN THE CONTRACT DOCUMENTS.

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APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

SUN VALLEY ELEMENTARY SCHOOL

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer:
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: November 22, 2023

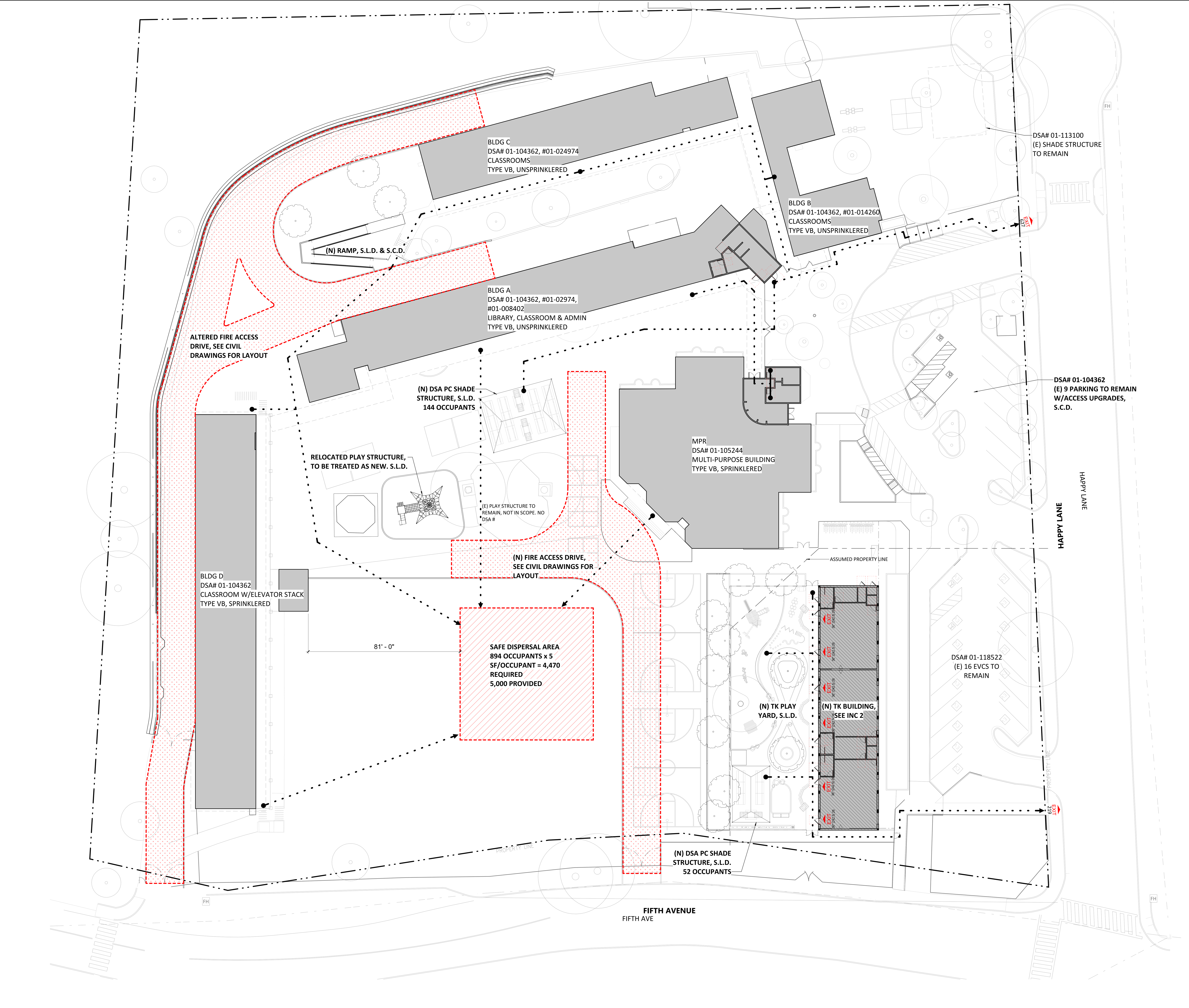
Revisions

NUMBER	DESCRIPTION	DATE
AS001	Revision 1	12/31/2006

CODE ANALYSIS INC 1

LS100

DSA SUBMITTAL



Code Analysis A3

1" = 20'-0"

General Notes (Code Plans):

1. ALL WORK, MATERIALS, AND METHODS SHALL BE IN CONFORMANCE WITH THE CODES, ORDINANCES AND REGULATIONS OF ALL GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
2. CONTRACTOR SHALL PROVIDE AND IS SOLELY RESPONSIBLE AND LIABLE FOR PUBLIC AND EMPLOYEE PROTECTION AS NECESSARY AND AS REQUIRED BY THE CODES, INCLUDING EXTERIOR PEDESTRIAN AND TRAFFIC BARRIERS. ALL WORK SHALL CONFORM TO ORDINANCES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AT THE PROJECT LOCATION.
3. THE SIZE, TYPE, QUANTITY, AND LOCATION OF ALL TEMPORARY FIRE EXTINGUISHERS SHALL BE DETERMINED BY THE AUTHORITY HAVING JURISDICTION.
4. COORDINATE LOCATION OF KNOX BOX WITH ARCHITECT, OWNER'S REPRESENTATIVE, AND THE AUTHORITY HAVING JURISDICTION IN THE FIELD.

Code Plan Legend:

Egress Path of Travel — Distance to Exit: 100'; Common Path of Travel Distance: 50' CPT

Egress Point — EXIT 0" |0| 50 — Opening width; Allowable # of Occupants; Required # of Occupants

Stair Egress — Stair 1: 240 | 200 (Allowable | Actual Occupants); 48" | 40" (Actual | Minimum Width)

Occupancy Tag — Room name, B: 200 SF = 2P (Occupancy Group; Area; Occupant Load)

Fire Extinguisher Radius — 75' Typ

Fire Hydrant (Existing to Remain) — FH

SITE PLAN ANNOTATION LEGEND

EXISTING DSA APPROVED BUILDING TO REMAIN. SEE PLAN FOR DSA A#

NEW TRANSITIONAL KINDERGARTEN BUILDING. SEE INCREMENT #2 FOR BUILDING, SLAB, & PREP

NEW SITE ELEMENT, SEE CIVIL, LANDSCAPE AND ELECTRICAL DWGS AS CALLED OUT ON PLAN. U.N.O.

EXISTING SITE ELEMENT TO REMAIN, U.O.N.

PROPERTY LINE

EXISTING TREE TO REMAIN, S.L.D.

ACCESSIBLE PATH OF TRAVEL 48" MIN CLR. TYP. 60" CLR TO PLAY EQUIPMENT

EV (E) EVCS TO REMAIN, NOT IN SCOPE

PARKING CALCULATION PER TABLE 11B-208.2:
9 PARKING SPOTS
1 STANDARD ACCESSIBLE REQUIRED, 1 PROVIDED
1 VAN ACCESSIBLE REQUIRED, 1 PROVIDED.

(E) EVCS COUNT (SEPERATE FROM PARKING):
16 TOTAL EVCS
SPACES DO NOT MEET ACCESSIBILITY STANDARDS, NOT IN SCOPE.

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architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer:
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: November 22, 2023

Revisions

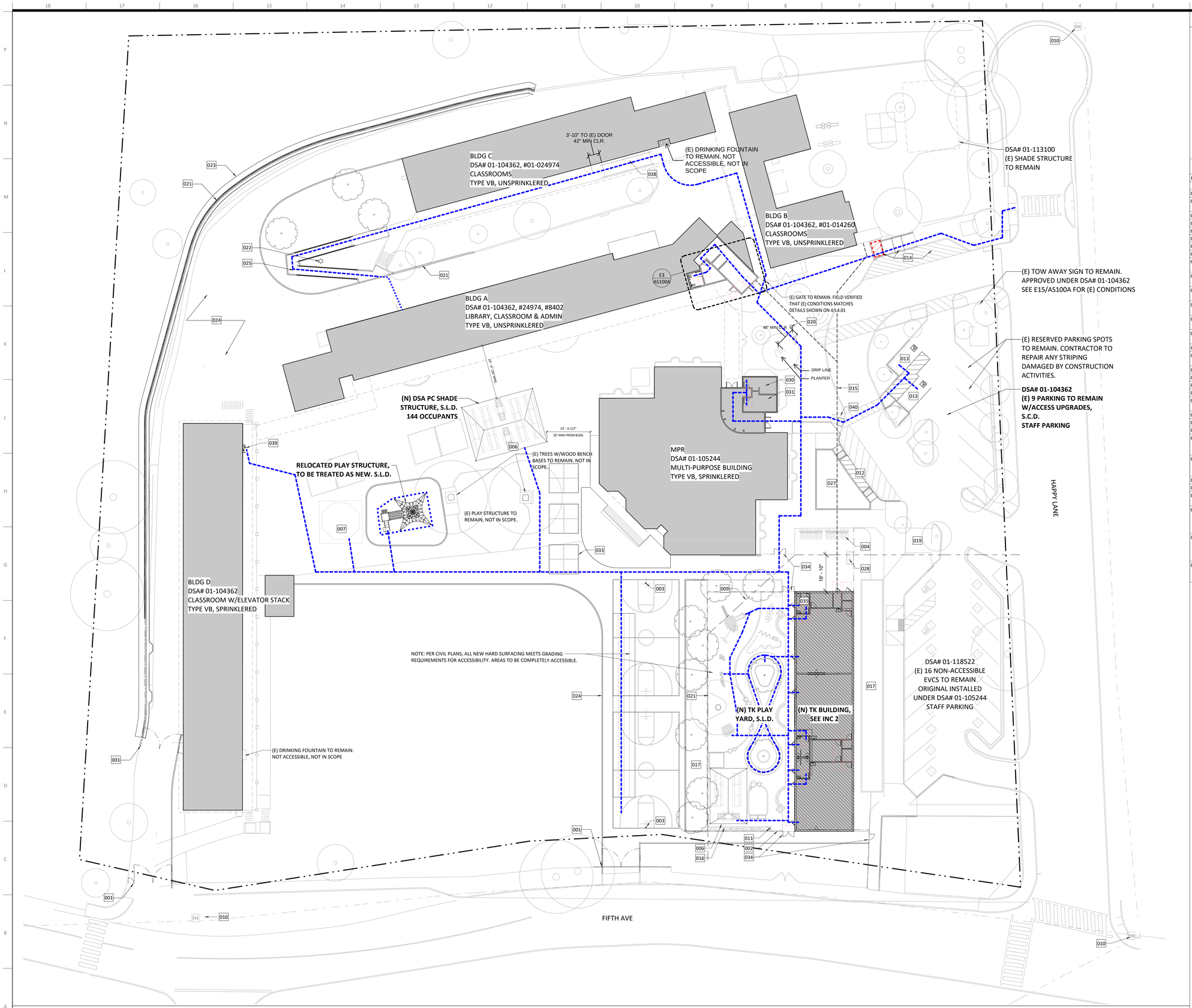
NUMBER	DESCRIPTION	DATE

LICENSED ARCHITECT
LAUREN M. MAASS
NO. C25994
REN. 01–2025
STATE OF CALIFORNIA

LIFE SAFETY PLAN INC 1

LS101

DSA SUBMITTAL



Architectural Site Plan - Increment 1 A3

1" = 20'-0"

General Notes (Site Plan):

1. COORDINATE ALL SPOT ELEVATIONS AND DIMENSIONS WITH CIVIL/LANDSCAPE/STRUCTURAL DRAWINGS
2. PROVIDE POSITIVE DRAINAGE OF 1% MINIMUM / 2% MAXIMUM AT ALL EXTERIOR PAVED PEDESTRIAN AREAS SUCH AS SIDEWALKS, PATIOS, STAIRS, ETC. UNLESS NOTED OTHERWISE
3. PROVIDE POSITIVE DRAINAGE AWAY FROM THE
4. BUILDING OF 5% FOR A DISTANCE OF 10 FEET UNLESS NOTED OTHERWISE.
5. FINISH GRADE SLOPES SHALL BE NO STEEPER THAN 1 FOOT VERTICAL IN 3 FEET HORIZONTAL UNLESS NOTED OTHERWISE.
6. THIS SITE IS LOCATED WITHIN THE SAN RAFAEL WUI ZONE

Keynote Legend (Sheet)

Key Value	Keynote Text
001	(INC 1) (N) 20' CHAIN LINK FIRE GATE, SEE SPECS
002	(INC 1) (N) CHAIN LINK FENCE AROUND TK PLAY YARD, S.L.D.
003	(INC 1) (N) BASKETBALL POST AND STRIPING, S.L.D.
004	(INC 1) (N) SITE BICYCLE RACK, S.L.D.
006	(INC 1) (N) SHADE STRUCTURE (#04-121917), S.L.D.
007	(INC 1) RELOCATED GAGA PIT, OFCI
009	IMAGINARY PROPERTY LINE
010	(E) FIRE HYDRANT TO REMAIN
011	(INC 1) (N) HOSE BIBB AT MUDD KITCHEN. S.L.D., SEE SPECS
012	(INC 1) (E) ACCESSIBLE DROP-OFF AND LOADING AREA, MODIFIED PER CIVIL, S.C.D
013	(INC 1) ACCESSIBLE PARKING SPACE WITH TYP. SIGNAGE, S.C.D.
014	(INC 1) MODIFIED BUS DROP-OFF AREA W/5'x8' ALIGHTING AREA, ORIGINAL DSA #01-104362, S.C.D.
015	(INC 1) UTILITY TRENCHES FOR FIRE ALARM, POWER, AND EMS. S.E.D., SEE SPECS
016	(INC 1) SURFACE DRAIN FROM MUD KITCHEN TO BIORETENTION. S.L.D., SEE SPECS
017	(INC 1) BIORETENTION AREA, S.L.D., SEE SPECS
019	(E) TRASH AND RECYCLING ENCLOSURE TO REMAIN, #01-104362
020	(E) FLAG POLE TO REMAIN, #01-105244
021	(INC 1) (N) RETAINING WALL, S.C.D., SEE SPECS
022	(INC 1) (N) SITE LIGHT POLE, S.E.D., SEE SPECS
023	(INC 1) (N) CHAIN LINK FENCING, S.L.D., SEE SPECS
024	(INC 1) (N) ASPHALT PAVING AND CURB, S.C.D. FOR EXTENTS, SEE SPECS
025	(INC 1) (N) RAMP, S.C.D., SEE SPECS
027	(INC 1) (N) LANDSCAPED AREA, S.L.D., SEE SPECS
028	(INC 1) (N) BIKE LOCKER AND PAD, S.L.D., SEE SPECS
030	(INC 1) (E) FEMALE STUDENT RESTROOMS TO REMAIN. SEE A#01-105244 EXISTING DRAWINGS_V2, SHEETS A2.1, A5.1 & A9.2.
031	(INC 1) (E) MALE STUDENT RESTROOMS TO REMAIN. SEE A#01-105244 EXISTING DRAWINGS_V2, SHEETS A2.1, A5.1 & A9.2.
033	(INC 1) (N) FOUR SQUARE STRIPING, TYP., S.L.D.
034	(INC 1) (N) GATE PER LANDSCAPE, TYP.
035	(INC 2) (N) TK STUDENT RESTROOMS. SEE INCREMENT 2
038	(E) RAMP TO REMAIN, DSA#01-104362 (INC 01). SEE (E) DRAWINGS, SHEETS A1.3 & A1.5 FOR RAMP INFORMATION. S.C.D. FOR CURRENT GRADES. SEE H11/AS100A FOR HANDRAIL SCOPE
039	(INC 1) (N) DRINKING FOUNTAIN W/FRONT APPROACH IN (E) LOCATION. HAWS MODEL 1117L-1920, NO BOTTLE FILLER. SEE L15/AS100A FOR REQUIREMENTS.
040	(INC 1) (E) CURB RAMP W/(N) MODIFICATIONS PER CIVIL DRAWINGS. ORIGINALLY INSTALLED UNDER DSA# 01-104362 (INC 01).

SITE PLAN ANNOTATION LEGEND

- EXISTING DSA APPROVED BUILDING TO REMAIN. SEE PLAN FOR DSA A#
- NEW TRANSITIONAL KINDERGARTEN BUILDING. SEE INCREMENT #2 FOR BUILDING, SLAB, & PREP
- NEW SITE ELEMENT, SEE CIVIL, LANDSCAPE AND ELECTRICAL DWGS AS CALLED OUT ON PLAN. U.N.O.
- EXISTING SITE ELEMENT TO REMAIN, U.O.N.
- PROPERTY LINE
- EXISTING TREE TO REMAIN, S.L.D.
- ACCESSIBLE PATH OF TRAVEL 48" MIN CLR. TYP. 60" CLR ALONG PLAY EQUIPMENT
- EV (E) EVCS TO REMAIN, NOT IN SCOPE

PARKING CALCULATION PER TABLE 11B-208.2:
9 PARKING SPOTS
1 STANDARD ACCESSIBLE REQUIRED, 1 PROVIDED
1 VAN ACCESSIBLE REQUIRED, 1 PROVIDED.

(E) EVCS COUNT (SEPERATE FROM PARKING):
16 TOTAL EVCS
SPACES DO NOT MEET ACCESSIBILITY STANDARDS, NOT IN SCOPE.

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APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

SUN VALLEY ELEMENTARY SCHOOL

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
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www.jlcbuild.com

civil engineer:
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structural engineer:
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cost estimator:
Cumming
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San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: November 22, 2023

Revisions

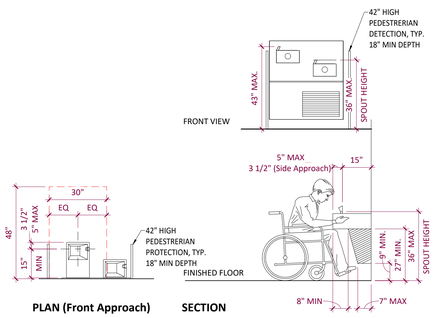
NUMBER	DESCRIPTION	DATE

LICENSED ARCHITECT
LAUREN M. MAASS
NO. C25994
REN.01-2025
STATE OF CALIFORNIA

ARCHITECTURAL SITE PLAN INC 1

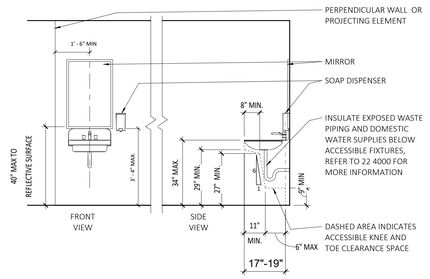
AS100

DSA SUBMITTAL



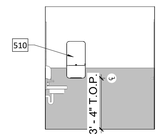
Drinking Fountain Guidelines L15

3/8" = 1'-0"



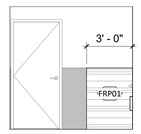
Lavatory Guidelines L11

3/8" = 1'-0"



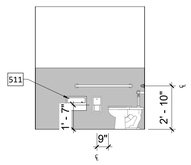
Int Elev - RR North L9

1/4" = 1'-0"



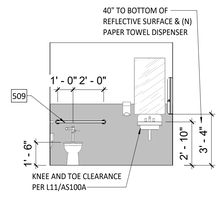
Int Elev - RR East L7

1/4" = 1'-0"



Int Elev - RR South L5

1/4" = 1'-0"



Int Elev - RR West L3

1/4" = 1'-0"

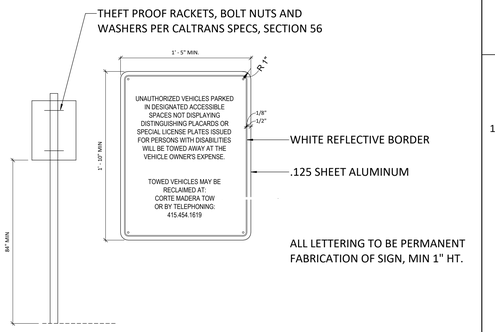
General Notes (Interior Elevations):

1. REFER TO FINISH LEGEND/SCHEDULE FOR COMPLETE LISTING OF FINISHES
2. REFER TO PROJECT STANDARDS FOR INSTALLATION INFORMATION FOR ACCESSORIES, TOILET FIXTURES, ETC.
3. REFER TO PROJECT STANDARDS FOR DEVICES FOR TYPICAL INSTALLATION INFORMATION.
4. AT GYP SOFFIT CONTROL JOINTS, CONTINUE CONTROL JOINT UP BOTH VERTICAL FACES OF SOFFIT.

Keynote Legend (Sheet)

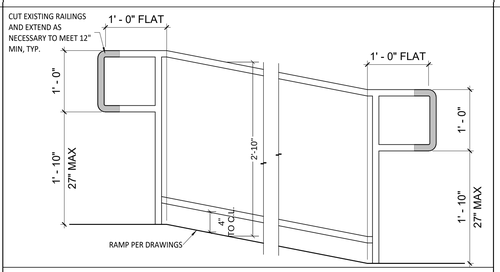
Key Value	Keynote Text
509	(102800) GRAB BAR, SEE SPECS
510	(102800) PAPER TOWEL DISPENSER, SEE SPECS
511	(102800) SEAT COVER DISPENSER, SEE SPECS
D9	REMOVE (E) CABINETRY, REPLACE FRP WALL FINISH AS NECESSARY
D10	REMOVE TOILET ROOM ACCESSORIES, PATCH (E) FRP AS NECESSARY, PREPARE FOR NEW

NOTE: NO DEMOLITION SHALL BEGIN UNTIL PLANS INCLUDING THE DEMOLITION HAVE BEEN APPROVED BY DSA.



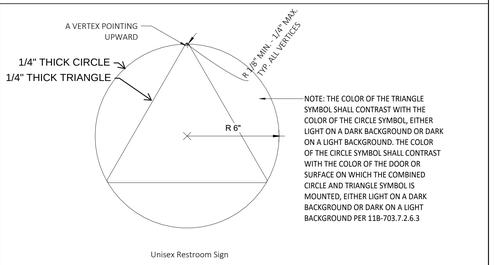
(E) Tow Away Sign to Remain E15

1 1/2" = 1'-0"



HANDRAIL EXTENSIONS H11

1" = 1'-0"



Unisex Restroom Sign

Restroom Signage E11

3" = 1'-0"

DOOR HARDWARE NOTES, AS VERIFIED IN FIELD:

DH1) EXISTING ACCESSIBLE DOOR OR GATE LEAF WIDTH ARE A MINIMUM 36" WIDE AND CAPABLE OF MAXIMUM 5LB. FORCE OPERATION PER 11B-404.2.9.

DH2) EXISTING HARDWARE HAS 5LB. MAXIMUM UNLATCHING FORCE PER 11B-404.2.7 AND 11B-309.4. THIS REQUIREMENT APPLIES TO ALL DOOR HARDWARE, INCLUDING EXIT DEVICES.

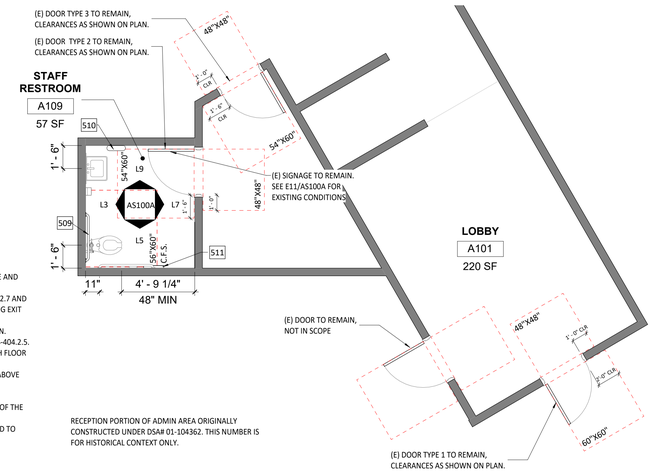
DH3) UNLATCHING OF ANY DOOR DOES NOT REQUIRE MORE THAN ONE OPERATION.

DH4) ACCESSIBLE THRESHOLD OR THRESHOLD CONDITION ARE COMPLIANT W/ 11B-404.2.5.

DH5) ON THE PUSH-SIDE OF THE DOOR, SURFACE IS SMOOTH WITHIN 10" OF FINISH FLOOR OR GROUND, FOR FULL WIDTH OF DOOR PER 11B-404.2.10.

DH6) IN-DOOR GLAZING AND VISION LIGHTS HAVE BOTTOM EDGE MAXIMUM 43" ABOVE THE FINISH FLOOR OR GROUND SURFACE PER 11B-404.2.11

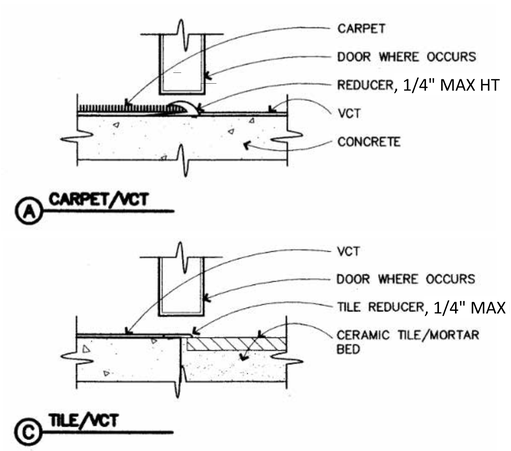
DH7) HARDWARE COMPLIES WITH SFM STANDARD 12-10-3, SECTION 12-10-302:
-CROSS BARS FOR EXIT DEVICES SHALL EXTEND ACROSS NOT LESS THAN HALF OF THE DOOR OR GATE WIDTH.
-ENDS OF CROSS BARS SHALL BE CURVED, GUARDED OR OTHERWISE DESIGNED TO PREVENT CATCHING ON CLOTHING DURING EGRESS.

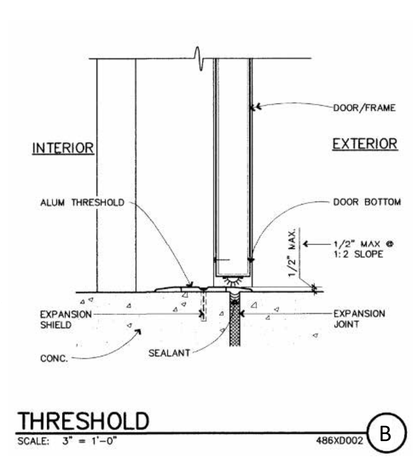


RECEPTION PORTION OF ADMIN AREA ORIGINALLY CONSTRUCTED UNDER DSA# 01-104362. THIS NUMBER IS FOR HISTORICAL CONTEXT ONLY.

Enlarged Floor Plan - Adult Use Restroom E3

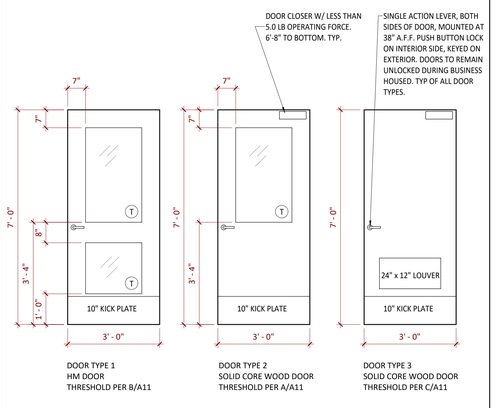
1/4" = 1'-0"





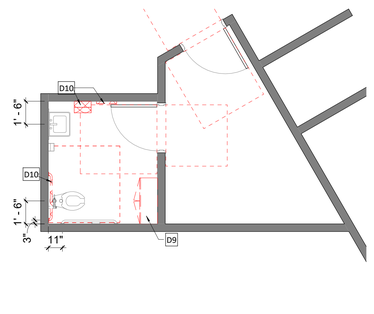
Existing Thresholds A11

3" = 1'-0"



Existing Door Types A7

1/2" = 1'-0"



Enlarged Floor Plan - Adult Use Restroom Demo A3

1/4" = 1'-0"

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Issue Date: November 22, 2023

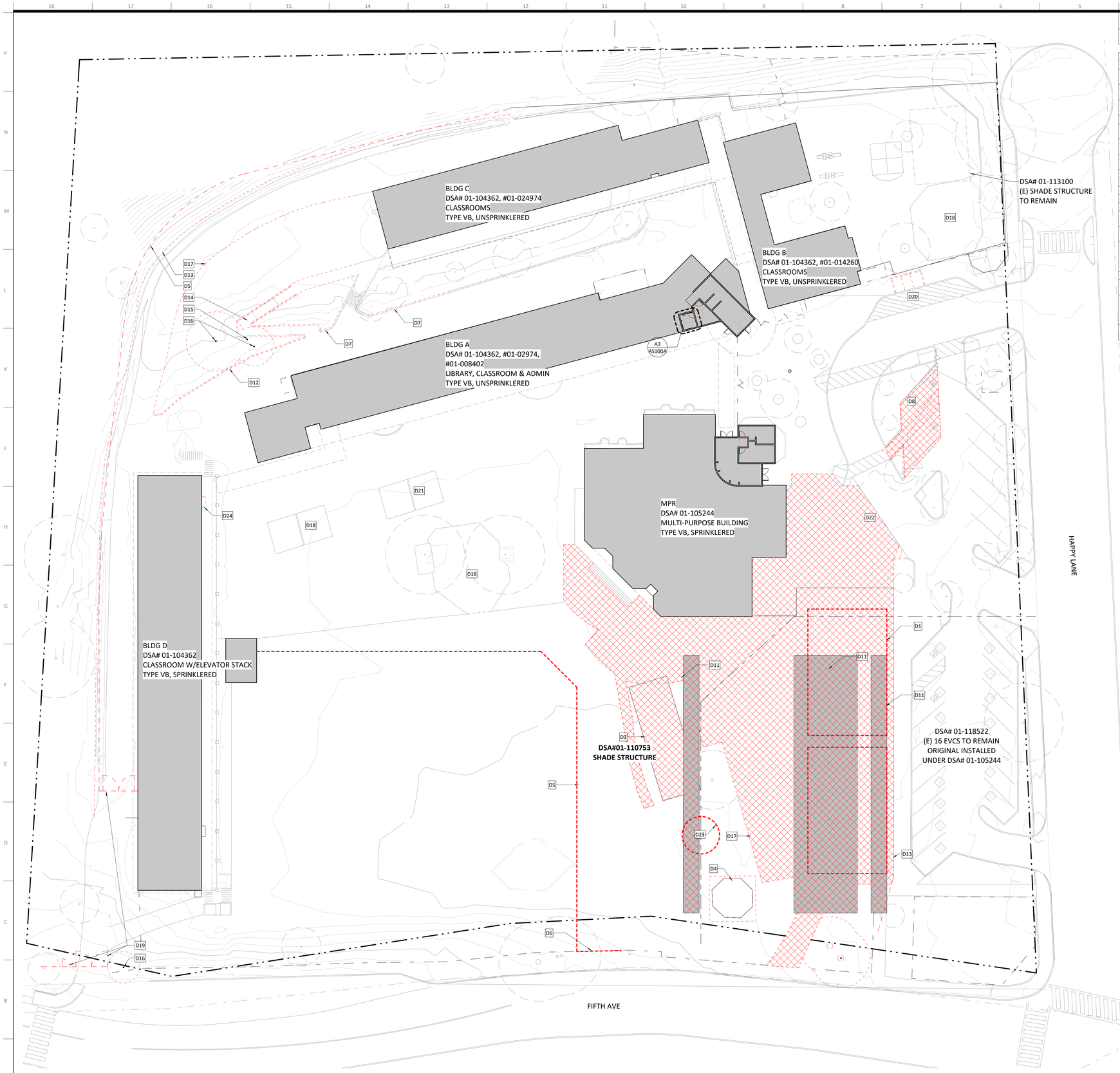
Revisions

NUMBER	DESCRIPTION	DATE

INCREMENT ONE RESTROOMS

AS100A

DSA SUBMITTAL



Keynote Legend (Sheet)

Key Value	Keynote Text
D1	REMOVE BASKETBALL HOOP STRUCTURE, TYP.
D3	REMOVE SHADE STRUCTURE, #01-110753
D4	REMOVE GAGA PIT, SALVAGE AND RELOCATE PER PROPOSED LANDSCAPE PLAN
D5	APPROX. LIMIT OF EARTH TO BE DISTURBED BY NEW CONSTRUCTION, S.C.D. FOR EXTENTS AND FULL SCOPE.
D6	REMOVE PORTION OF EXISTING FENCE, PREPARE FOR NEW.
D7	APPROX. LIMIT OF WALL TO BE REMOVED, S.C.D.
D8	ADJUST (E) STAFF ACCESSIBLE PARKING STALLS AND WALKWAYS PER CIVIL, S.C.D.
D11	APPROX. AREA OF EXCAVATION - SEE INC 2 FOR BUILDING FOUNDATION INFORMATION & GRADING
D12	APPROX. EXTENT OF CURB TO BE DEMOLISHED FOR (N) FIRE ACCESS LANE. S.C.D.
D13	REMOVE (E) FENCE. S.L.D.
D14	REMOVE (E) RAMP, S.C.D.
D15	REMOVE (E) LIGHT POLE, PREPARE FOR (N). S.E.D.
D16	REMOVE (E) TREE, S.L.D.
D17	APPROX. LIMIT OF HARDSCAPE TO BE REMOVED, S.C.D.
D18	(E) PLAY EQUIPMENT TO REMAIN IN PLACE. NO DSA #, NOT PART OF SCOPE.
D19	(E) GATE TO BE REMOVED, #01-104362. S.L.D. FOR REPLACEMENT SCOPE.
D20	(E) BUS DROP-OFF #01-104362. PARALLEL RAMP TO BE REMOVED AND MODIFIED TO CREATE ACCESSIBLE STUDENT DROP-OFF AREA. S.C.D. FOR FULL SCOPE AT THIS AREA.
D21	(E) BALL WALL TO REMAIN IN PLACE, #01-104362.
D22	(E) STUDENT DROP-OFF AREA TO RENOVATED TO MAKE ACCESSIBLE. S.C.D.
D23	REMOVE (E) PLAY STRUCTURE, SALVAGE AND RELOCATE PER PROPOSED LANDSCAPE PLAN. NO DSA #, PLAY STRUCTURE TO BE TREATED AS NEW IN PROPOSED DRAWINGS.
D24	REMOVE (E) DRINKING FOUNTAIN AND PREPARE AREA FOR NEW.

DEMO SITE PLAN LEGEND

- EXISTING DSA APPROVED BUILDING TO REMAIN. SEE PLAN FOR DSA A#
- EXISTING SITE ELEMENT TO REMAIN, U.O.N.
- PROPERTY LINE
- EXISTING TREE TO REMAIN, S.L.D.
- AREA TO BE DEMOLITIONED. SEE KEYNOTES FOR FULL SCOPE
- APPROX. AREA TO BE EXCAVATION. SEE KEYNOTES FOR FULL SCOPE.
- ELEMENT TO BE DEMOLISHED, SEE PLANS AND KEYNOTES FOR FULL SCOPE
- EV (E) EVCS TO REMAIN, NOT IN SCOPE

NO DEMOLITION SHALL BEGIN UNTIL THIS SUBMITTAL HAS BEEN APPROVED BY DSA.

General Notes (Demolition):

1. THIS DEMOLITION PLAN OUTLINES THE SCOPE OF THE WORK INVOLVED FOR THE DEMOLITION PHASE OF THIS PROJECT. CONTRACTOR SHALL ALSO REFER TO THE DRAWINGS FOR THE CONSTRUCTION OF THE NEW ADDITION FOR ADDITIONAL INFORMATION.
2. EXISTING CONDITIONS INFORMATION WAS OBTAINED FROM DOCUMENTS AND INFORMATION SUPPLIED TO THE ARCHITECT, THE CONTRACTOR IS TO VERIFY EXACT LOCATIONS, SIZES, ELEVATIONS, ETC. AND REPORT ANY DISCREPANCIES TO THE ARCHITECT
3. ARCHITECTURAL DEMO SHEETS INTEND TO CAPTURE THE OVERALL SCOPE OF SITE DEMOLITION. CONTRACTOR IS TO REVIEW ALL DRAWINGS WITHIN THIS SET TO CAPTURE MORE DETAILED SCOPE ITEMS.
4. IF SUSPECTED HAZARDOUS MATERIALS ARE ENCOUNTERED STOP WORK IMMEDIATELY AND NOTIFY OWNER. DO NOT RESUME WORK UNTIL DIRECTED BY THE OWNER.
5. ALL FURNITURE WILL BE REMOVED OR RELOCATED BY THE OWNER AS NECESSARY PRIOR TO THE DEMOLITION WORK OF THIS PROJECT. CONTRACTOR SHALL COORDINATE WITH OWNER AS REQUIRED.
6. REMOVE EXISTING CONSTRUCTION TO THE EXTENT INDICATED ON THE DRAWINGS. SHOULD ANY DAMAGE OCCUR TO ANY EXISTING CONSTRUCTION TO REMAIN ON SITE, THE CONTRACTOR SHALL REPAIR THE DAMAGE.
7. CONTRACTOR IS TO VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO DEMOLITION ACTIVITIES.
8. CONTRACTOR SHALL PROTECT ALL EXISTING CONSTRUCTION NOTED TO REMAIN FROM DAMAGE AND SOILING DURING DEMOLITION. REMOVE DEBRIS REGULARLY AS NECESSARY TO ELIMINATED INTERFERENCE WITH ROADS, STREET, WALKS, AND ALL OTHER ADJACENT FACILITIES.
9. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION OF TEMPORARY DUST AND NOISE PROOF PARTITION BETWEEN CONSTRUCTION AREA AND ADJACENT PROPERTIES AS NECESSARY
10. NOTIFY THE BUILDING OWNER OF ANY MATERIALS, FIXTURES, ETC. THAT ARE TO BE REMOVED THAT ARE DEEMED SALVAGEABLE TURN OVER ANY REQUESTED ITEMS TO THE BUILDING OWNER IN GOOD CONDITION.
11. ALL DEMOLITION MATERIALS NOT CLAIMED BY THE OWNER, OR TO BE REUSED ON SITE, ARE TO BE DISPOSED OF OFF SITE AS PER LOCAL REGULATIONS AT THE CONTRACTOR'S EXPENSE. ITEMS TO BE REUSED SHOULD BE STORED ONSITE UNTIL THEY ARE REUSED.
12. THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE ON A DAILY BASIS.
13. MAINTAIN THE INTEGRITY OF ALL EXISTING RATED WALLS, FIRE SEAL ANY PENETRATIONS WITH U.L. APPROVED ASSEMBLY.
14. WHEN UNANTICIPATED MECHANICAL, ELECTRICAL, OR STRUCTURAL ELEMENTS THAT CONFLICT WITH THE INTENDED FUNCTION OR DESIGN ARE ENCOUNTERED, DETERMINE THE NATURE AND EXTENT OF THE CONFLICT AND NOTIFY THE ARCHITECT IMMEDIATELY FOR RESOLUTION.
15. PROTECT EXISTING SITE IMPROVEMENTS AND LANDSCAPING TO REMAIN. INCLUDING BUT NOT LIMITED TO EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING, OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIAL OR EXCAVATED MATERIAL WITHIN DRIP LINES.
16. CONTRACTOR SHALL PROVIDE TRAFFIC HANDLING MEASURES AS NECESSARY TO PROTECT THE GENERAL PUBLIC AT ALL TIMES, AND AS REQUIRED BY THE CITY.
17. DO NOT INTERRUPT EXISTING UTILITIES, EXCEPT WHEN AUTHORIZED IN WRITING BY AUTHORITIES HAVING JURISDICTION. PROVIDE TEMPORARY SERVICES DURING INTERRUPTIONS TO EXISTING UTILITIES, AS ACCEPTABLE TO GOVERNING AUTHORITIES.
18. WHEN UTILITY SERVICES ARE REQUIRED TO BE REMOVED, RELOCATED, OR ABANDONED, PROVIDE BYPASS CONNECTIONS TO MAINTAIN CONTINUITY OF SERVICE BEFORE PROCEEDING WITH DEMOLITION.
19. CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL UTILITY COMPANIES INCLUDING BUT NOT LIMITED TO THE FOLLOWING: ELECTRIC, GAS, WATER, TELEPHONE, STORM SEWER, AND SANITARY SEWER FOR FIELD LOCATION OF ALL UNDERGROUND AND OVERHEAD UTILITY LINES. PRIOR TO COMMENCEMENT WITH ANY DEMOLITION WORK, CONTRACTOR SHALL IDENTIFY ALL ELECTRICAL CIRCUITS SERVICING THE AREA INVOLVED WITH THIS DEMOLITION. THOSE CIRCUITS SHALL THEN BE LOCKED OUT AND TAGGED OUT IF THEY DO NOT SERVICE ANY OF THE REMAINING BUILDING. THOSE CIRCUITS WHICH ARE IDENTIFIED TO SERVICE BOTH THE AREA TO BE DEMOLISHED AND THE REMAINING BUILDING SHALL BE SPLIT SO AS TO KILL ALL ELECTRICAL POWER TO THE AREA TO BE DEMOLISHED WHILE MAINTAINING POWER TO THE REMAINDER OF THE BUILDING.
20. CONTRACTOR TO PATCH/REPAIR ALL HOLES IN WALLS, FLOORS, &/ OR CEILINGS, AS REQUIRED. PAINT TO MATCH ADJACENT WALL/CEILING.
21. EXISTING WALLS (OR PORTIONS OF WALLS) TO BE REMOVED SHALL BE CUT FLUSH WHERE INTERSECTING WITH WALLS TO REMAIN. REMAINING WALLS TO BE PATCHED AND FINISHED SMOOTH.
22. WHERE EXISTING INTERIOR WALLS ARE REPLACED OR REMOVED, REMOVE MEP SYSTEMS BACK TO PANEL OR MECHANICAL ROOM OR FARTHEST POSSIBLE POINT WITHOUT DISTURBING EXISTING CONSTRUCTION, REMOVE EXISTING MECHANICAL EQUIPMENT, RELOCATE POWER PER MEP DRAWINGS
23. REFER TO MEP DRAWINGS FOR DEMOLITION OF MEP SYSTEMS TO IDENTIFY WORK REQUIRED BY THIS CONTRACTOR WHICH MAY AFFECT DEMOLITION AND/OR REPAIRS OF ARCHITECTURAL ELEMENTS. COORDINATE WITH RELATED SUBS THE EXTENT OF ALL DEMOLITION WORK.
24. PROTECT ALL EXISTING WINDOW TREATMENTS TO REMAIN UNLESS NOTED OTHERWISE.
25. WHERE EXISTING FINISH FLOOR OR WALL FINISH IS REMOVED, PREPARE SURFACE TO RECEIVE NEW FINISH AND ANY NECESSARY SUBSTRATES
26. REMOVE ANY EXISTING VINYL MATERIALS IN ACCORDANCE WITH EPA STANDARDS, NOTIFY ARCHITECT & OWNER OF ANY ADDITIONAL ASBESTOS CONTAINING MATERIALS DISCOVERED BEFORE PROCEEDING WITH WORK, PROTECT INTERIOR CONSTRUCTION TO REMAIN DURING DEMOLITION AND CONSTRUCTION.

Site - Demo Plan A3

1" = 20'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

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www.ccorpusa.com

Issue Date: November 22, 2023

Revisions

NUMBER	DESCRIPTION	DATE

DEMOLITION SITE PLAN
INC 1

AD100

DSA SUBMITTAL

IDENTIFICATION STAMP
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APP: 01-121319 INC: 1
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SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

I. GENERAL NOTES

1. ON-SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THESE NOTES.
2. ON-SITE PLANS ARE ACCURATE FOR ON-SITE IMPROVEMENTS.
3. OFF-SITE WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF SAN RAFAEL STANDARD DETAILS AND SPECIFICATIONS. OFF-SITE WORK INCLUDES PUBLIC IMPROVEMENTS IN CITY RIGHT OF WAY, INCLUSIVE OF PUBLIC EASEMENTS.
4. THE CONTRACTOR SHALL GIVE THE OWNER TWO (2) WORKING DAYS ADVANCE NOTICE FOR INSPECTION SERVICES.
5. CONSTRUCTION STAKING SHALL BE DONE BY A CIVIL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA.
6. CONTRACTOR SHALL REQUEST STAKING SERVICES AT LEAST TWO (2) WORKING DAYS PRIOR TO THE DATE STAKING IS REQUIRED.
7. REVISIONS TO THESE PLANS MUST BE REVIEWED AND APPROVED IN WRITING BY THE CIVIL DESIGN ENGINEER PRIOR TO CONSTRUCTION OF AFFECTED ITEMS, REVISIONS SHALL BE ACCURATELY SHOWN ON REVISED PLANS.
8. STANDARD CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO MONDAY THROUGH FRIDAY, BETWEEN 7:00 A.M. AND 5:00 P.M. ON SITE, AND BETWEEN 8:00 A.M. AND 5:00 P.M. IN THE CITY RIGHT-OF-WAY. NO CONSTRUCTION ACTIVITY SHALL TAKE PLACE ON SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS WITHOUT THE PRIOR WRITTEN APPROVAL FROM THE OWNER AND CITY OF SAN RAFAEL. CONTRACTOR TO VERIFY THE ABOVE TIMES AND DAYS WITH THE SUN VALLEY ELEMENTARY SCHOOL AND THE CITY OF SAN RAFAEL.
9. PERMANENT MONUMENTS DISTURBED DURING THE PROCESS OF CONSTRUCTION SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE BEFORE ACCEPTANCE OF THE IMPROVEMENTS BY THE ENGINEER.
10. THE CONTRACTOR SHALL RESTORE TO THEIR PREVIOUS CONDITION OR REPLACE WALLS, FENCES, SERVICES, UTILITIES, AND PAVEMENT & CURB MARKINGS IMPROVEMENTS OR FEATURES OF WHATEVER NATURE WHICH ARE DAMAGED DUE TO THE CONTRACTOR'S WORK.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN APPROVAL FROM THE CITY BEFORE COMMENCING WORK. THE CONTRACTOR SHALL ALSO PROVIDE FLAGMEN, CONES OR BARRICADES, AS NECESSARY, TO CONTROL TRAFFIC AND PREVENT HAZARDOUS CONDITIONS. TRAFFIC CONTROL MEASURES SHALL BE PER CA MUTCD AND CITY REQUIREMENTS. THE CONTRACTOR SHALL LEAVE A 24-HOUR EMERGENCY TELEPHONE NUMBER WITH POLICE, FIRE AND PUBLIC WORKS DEPARTMENTS, AND KEEP THEM INFORMED DAILY OF DETOURS.
12. EXISTING PUBLIC AND PRIVATE PEDESTRIAN WALKWAYS, BIKEPATHS & ACCESSIBLE ACCESS PATHWAYS SHALL BE MAINTAINED DURING CONSTRUCTION TO THE SATISFACTION OF THE CITY ENGINEER AND OWNER.
13. TRENCHES SHALL NOT BE LEFT OPEN OVERNIGHT. CONTRACTOR SHALL BACKFILL TRENCHES, OR PLACE STEEL PLATING OR HOT-MIX ASPHALT AS REQUIRED TO PROTECT OPEN TRENCHES AT THE END OF EVERY WORK DAY.
14. PRIOR TO FINAL PREPARATION OF THE SUBGRADE AND PLACEMENT OF BASE MATERIALS FOR PAVED AREAS, UNDERGROUND UTILITY MAINS SHALL BE INSTALLED AND SERVICE CONNECTIONS STUBBED OUT. STUB-OUTS SHALL BE INSTALLED IN A MANNER WHICH WILL NOT DISTURB THE PAVEMENT, CURB AND GUTTER AND WALKS WHEN SERVICE CONNECTIONS ARE MADE.
15. EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEATHED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT EXISTING IMPROVEMENTS WILL BE FULLY PROTECTED FROM DAMAGE. DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEATHING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL COMPLETE NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, AND/OR STRUCTURE IS FIVE (5) FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL PROVIDE SHEATHING, SHORING AND BRACING IN CONFORMANCE WITH THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL COMPLY WITH OSHA REQUIREMENTS.
16. THE CONTRACTOR SHALL PROVIDE DUST CONTROL FOR THE ENTIRE PROJECT SITE. PROVIDE DUSTY CONTROL PER INDUSTRY STANDARD PRACTICE.
17. DURING CONSTRUCTION, THE CITY STREETS SHALL BE CLEANED AS OFTEN AS REQUIRED TO REMOVE ACCUMULATION OF MUD AND DEBRIS RESULTING FROM CONSTRUCTION AND/OR AS REQUIRED BY THE CITY OF SAN RAFAEL, WHICHEVER IS MORE RESTRICTIVE. IF IMPORT OR EXPORT OF DIRT IS NECESSARY, LOADS SHALL BE COVERED AND PROVIDED WITH A MINIMUM OF A 2' FREEBOARD. THE CONTRACTOR SHALL OBTAIN A DIRT HAULING PERMIT IF REQUIRED.
18. 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 DISTRICT AND DESIGN TEAM, BEFORE PROCEEDING WITH THE WORK IN QUESTION AND REQUEST CLARIFICATION.
19. WHEN SPECIFICATIONS OR STANDARDS FROM DIFFERENT AUTHORITIES DIFFER FOR THE SAME SUBJECT MATTER, NOTIFY DISTRICT AND DESIGN TEAM AND REQUEST CLARIFICATION.
20. UPON SATISFACTORY COMPLETION OF THE WORK, THE WORK SITE SHALL BE CLEANED UP AND LEFT WITH A SMOOTH AND NEATLY GRADED SURFACE FREE OF CONSTRUCTION WASTE AND RUBBISH OF ANY NATURE BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AND OWNER.
21. ARTICLE 87 OF THE UFC SHALL BE FOLLOWED FOR AREAS UNDER CONSTRUCTION. CONTACT THE LOCAL FIRE AUTHORITY FOR SPECIFIC REQUIREMENTS FOR BUILDINGS UNDER CONSTRUCTION.
22. THE CONTRACTOR SHALL COORDINATE HIS WORK WITH PG&E, AT&T, CABLE TV FACILITIES, SAN RAFAEL CITY ELEMENTARY SCHOOL DISTRICT & THE CITY OF SAN RAFAEL.
23. THE CONTRACTOR SHALL OBTAIN THE APPROPRIATE PERMIT FOR ANY WORK WITHIN THE CITY RIGHT-OF-WAY (INCLUSIVE OF PUBLIC EASEMENTS).
24. THE CONTRACTOR SHALL BE AWARE THAT DEWATERING ACTIVITIES SHALL COMPLY WITH THE CONDITIONS OF THE BAY AREA REGIONAL WATER QUALITY CONTROL BOARD GENERAL PERMIT FOR CONSTRUCTION SITES.
25. THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT AT (800) 642-2444 AT LEAST TWO (2) WORKING DAYS PRIOR TO THE START OF WORK TO VERIFY THE LOCATION OF EXISTING UNDERGROUND UTILITIES. THE UTILITIES SHOWN ON THE PLANS ARE BASED UPON RECORD INFORMATION. HOWEVER, THE CIVIL DESIGN ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY OR ACTUAL LOCATIONS.
26. THE CONTRACTOR SHALL ABIDE BY THE RULES AND REGULATIONS OF THE STATE OF CALIFORNIA CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATIONS AND TRENCHES.
27. THE CONTRACTOR SHALL ADJUST TO FINAL GRADE EXISTING AND/OR NEW MANHOLES, CURB INLETS, CATCH BASINS, VALVES, MONUMENT COVERS, AND OTHER CASTINGS WITHIN THE WORK AREA TO FINAL GRADE IN PAVEMENT AND LANDSCAPE AREAS, UNLESS NOTED OTHERWISE.
28. THE CONTRACTOR SHALL MEET AND FOLLOW NPDES REQUIREMENTS IN EFFECT AT THE TIME OF CONSTRUCTION.
29. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING DEMOLITION WORK, WORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY (SCA) AND/OR THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY. THE OWNER HAS ENGAGED SOPA TO PERFORM SUCH ROLES.
30. THE CONTRACTOR SHALL POST ON SITE EMERGENCY TELEPHONE NUMBERS FOR CITY ENGINEER, AMBULANCE, POLICE, FIRE DEPARTMENTS, SUN VALLEY ELEMENTARY SCHOOL AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOB SITE.
31. COORDINATE LAYOUT OF UTILITIES WITH STRUCTURAL DRAWINGS TO KEEP LINES OUT OF ZONE OF INFLUENCE WHERE POSSIBLE. SEE STRUCTURAL DRAWINGS AND GEOTECHNICAL REPORT FOR REQUIREMENTS WHERE LINES MUST BE PLACED IN ZONE OF INFLUENCE.

II. LAYOUT NOTES

1. DISTANCES, LENGHTS AND DIMENSIONS ARE PROVIDED IN FOOT AND DECIMALS UNLESS OTHERWISE NOTED.
2. CURB RETURN RADII AND CURB DATA ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
3. CURB INLET TIES AREA PROVIDED TO CENTER OF STRUCTURE AT FACE OF CURB UNLESS OTHERWISE NOTED.
4. MANHOLE TIES AREA PROVIDED TO CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
5. PAVEMENT STRIPING IS DIMENSIONED TO CENTER OF LINE UNLESS OTHERWISE NOTED.

III. EXISTING CONDITIONS

1. EXISTING TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS BASED ON TOPOGRAPHIC SURVEYS AS SHOWN ON:

   "TOPOGRAPHIC SURVEY - SUNVALLEY ELEMENTARY SCHOOL", DATED AUGUST 30, 2023 PERFORMED BY UNDERWOOD & ROSENBLUM, INC.

   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. INFORMATION REGARDING EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES SHOWN ON THESE PLANS WAS TAKEN FROM RECORD DATA KNOWN TO THE DESIGN ENGINEER AND IS NOT MEANT TO BE A FULL CATALOG OF EXISTING CONDITIONS. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THIS TOPOGRAPHIC SURVEY ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. A REASONABLE EFFORT HAS BEEN MADE TO LOCATE AND DELINEATE ALL KNOWN UNDERGROUND UTILITIES. HOWEVER, THE ENGINEER CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THIS SURVEY. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS AS REQUIRED TO VERIFY THE LOCATION AND ELEVATION OF EXISTING SUBSURFACE IMPROVEMENTS AND UTILITIES (WHETHER SHOWN ON THESE PLANS OR NOT) PRIOR TO THE COMMENCEMENT OF WORK. CONTRACTOR SHALL NOTIFY THE CIVIL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS IN THE FIELD AND INFORMATION SHOWN ON THESE PLANS.
3. ELEVATIONS AND LOCATIONS OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO START OF CONSTRUCTION AFFECTING SAID LINES.

IV. GRADING

1. GRADING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND THE REQUIREMENTS AND RECOMMENDATIONS CONTAINED IN:

   "GEOTECHNICAL ENGINEERING & GEOHAZARDS STUDY, SUN VALLEY ELEMENTARY SCHOOL - TRANSITIONAL KINDERGARTEN CLASSROOM, SAN RAFAEL, CALIFORNIA", DATED AUGUST 28, 2023, PREPARED BY ATLAS TECHNICAL CONSULTANTS LLC.

   "SUPPLEMENTAL GEOTECHNICAL ENGINEERING STUDY - SUN VALLEY ELEMENTARY SCHOOL - NORTHERN RETAINING WALL, SAN RAFAEL CITY SHOOLS, 75 HAPPY LANE, SAN RAFAEL, CALIFORNIA 94901, ATLAS PROJECT NO. 91-65807-PWB" DATED FEBRUARY 8, 2024, PREPARED BY ATLAS TECHNICAL CONSULTANTS LLC.

   AND "SUPPLEMENTAL GEOTECHNICAL RECOMMENDATIONS - BIORETENTION RETAINING WALLS AND SHADE STRUCTURE FOUNDATIONS, SUN VALLEY ES TRANSITIONAL KINDERTGARTEN CLASSROOM, SAN RAFAEL CITY SCHOOLS, 75 HAPPY LANE, SAN RAFAEL, CALIFORNIA 94901, ATLAS PROJECT NO. 91-65807-PWA" DATED NOVEMBER 21, 2023 REVISED MARCH 19, 2024, PREPARED BY ATLAS TECHNICAL CONSULTANTS LLC.
2. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO CONFORM TO THE LINES, GRADES, SECTIONS, AND DIMENSIONS AS SET FORTH ON THESE PLANS. GRADED AREAS SHALL CONFORM TO THE VERTICAL ELEVATIONS SHOWN WITHIN TOLERANCE OF ONE-TENTH OF A FOOT IN LANDSCAPED AREAS AND TWO-HUNDREDTHS OF A FOOT IN HARDSCAPED OR PAVED AREAS. WHERE GRADED AREAS DO NOT CONFORM TO THESE TOLERANCES, THE CONTRACTORS SHALL BE REQUIRED TO DO CORRECTIVE GRADING, AT NO EXTRA COST TO THE OWNER.

V. UTILITIES

1. BEFORE DISCONNECTING UTILITY SERVICE TO ANY ESTABLISHMENT, CONTRACTOR SHALL GIVE ADVANCE NOTICE TO ESTABLISHMENT BEFORE THEIR UTILITY SHUT DOWN, MAKE ARRANGEMENTS WITH THOSE ESTABLISHMENTS FOR A SCHEDULED SHUT DOWN AND COORDINATE DATE OF SHUT DOWN, DURATION, INCONVENIENCE, DELAYS, ETC. WITH A REPRESENTATIVE OF THE CITY AND/OR RESPECTIVE UTILITY AGENCY.

VI. WATER NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING SERVICES FOR THOSE FACILITIES INSTALLED BY THE CONTRACTOR UNTIL SUCH TIME AS THE WORK HAS BEEN OFFICIALLY ACCEPTED BY THE ENGINEER. THE MARKING, LABELING AND TIMING OF SUCH LOCATIONS SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF UNDERGROUND SERVICE ALERT.
2. PRIOR TO MAKING FINAL CONNECTIONS TO THE EXISTING WATER SYSTEM, NEWLY INSTALLED WATER PIPELINES, VALVES, AND FITTINGS SHALL BE FLUSHED, STERILIZED AND TESTED BY THE CONTRACTOR, AND SHALL PASS BACTERIA AND OTHER WATER QUALITY REQUIREMENTS BEFORE PUT INTO SERVICE. (REFER TO THE PROJECT SPECIFICATIONS FOR TESTING AND STERILIZATION REQUIREMENTS.) CONTRACTOR SHALL SUPPLY MATERIALS, LABOR, AND EQUIPMENT REQUIRED TO DISINFECT THE PIPELINES AND APPURTENANCES. THE CONTRACTOR SHALL FURNISH A COMPLETE REPORT TO THE OWNER.
3. ON-SITE LANDSCAPE IRRIGATION SYSTEMS SHALL BE PER THE IRRIGATION PLANS.

VII. SANITARY SEWER NOTES

1. THE ON-SITE PRIVATE SANITARY SEWER SYSTEM SHALL BE PROVIDED BY THE CONTRACTOR IN ACCORDANCE WITH THESE PLANS AND CITY DETAILS AND SPECIFICATIONS.
2. SEWER LATERAL (SL) PERMIT SHALL BE OBTAINED BY THE CONTRACTOR FOR NEW OR ABANDONED SEWER LATERALS.

VIII. RECORD DRAWINGS

1. CONTRACTOR SHALL KEEP ACCURATE AS-BUILT DRAWINGS WHICH SHOW THE FINAL LOCATION, ELEVATION AND DESCRIPTION OF WORK. CONTRACTOR SHALL ALSO NOTE THE LOCATION AND ELEVATION OF EXISTING IMPROVEMENTS ENCOUNTERED. RECORD DRAWINGS SHALL BE "REDLINED" ON A SET OF PRINTS. THE REDLINED PRINTS SHALL BE DELIVERED TO THE CONSTRUCTION MANAGER.

IX.STATEMENT OF RESPONSIBILITY

1. 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, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD DESIGN PROFESSIONAL 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 DESIGN PROFESSIONAL.
2. 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.

X. UNAUTHORIZED CHANGES AND USES

1. THE CIVIL DESIGN ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

BASIS OF BEARINGS

THE BEARING N33°52'11"E SHOWN AS THE CENTER LINE OF SHANNON LN. ON THE RECORD OF SURVEY RECORDED IN BOOK 2005 OF MAPS AT PAGE 116 WAS TAKEN AS THE BASIS OF BEARINGS FOR THIS TOPOGRAPHIC SURVEY.

BENCHMARK

REFERENCED BKF TOPO, 161933 SRHS (SCRIBED 'X', LOCATION SHOWN HEREON, ELEVATION 8.09 FEET [DATUM NAVD 88 BY GPS OBSERVATIONS UTILIZING THE CALIFORNIA SURVEY & DRAFTING SUPPLY VSN].

SHEET INDEX

SHT NO	
C100	NOTES, LEGENDS, AND ABBREVIATIONS
C200	EXISTING CONDITIONS
C201	DEMOLITION PLAN
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C303	GRADING ENLARGEMENT PLAN
C304	CROSS SECTIONS
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C801	EROSION CONTROL DETAILS
C900	FIRE ACCESS PLAN

ABBREVIATIONS

SYMBOL	DESCRIPTION
@	AT
AB	AGGREGATE BASE
AC	ASPHALT CONCRETE
AD	AREA DRAIN
BFP	BACK FLOW PREVENTER
BLDG	BUILDING
BS	BOTTOM OF SLOPE/STAIR
BW	BACK OF WALK
BOW	BOTTOM OF WALL
CB	CATCH BASIN
CIP	CAST IRON PIPE
C&G	CURB AND GUTTER
CONC	CONCRETE
CL, ℄	CENTERLINE
COMM	COMMUNICATION
CR	CURB RAMP
CY	CUBIC YARDS
DI	DROP/DRAINAGE INLET
DW	DOMESTIC WATER
DWY	DRIVEWAY
(E), EX.	EXISTING
E	EAST
ELEC	ELECTRIC
ELB	ELECTRIC BOX
ELL	ELBOW
FC	FACE OF CURB
FDC	FIRE DEPARTMENT CONNECTION
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FS	FINISHED SURFACE
FW	FIRE WATER
G	GAS
GB	GRADE BREAK
GR	GRATE
GV	GATE/GAS VALVE
HP	HIGH POINT
INV	INVERT
IRR	IRRIGATION
JT	JOINT TRENCH
JP	JOINT POLE
L	LENGTH
LP	LOW POINT
LT	LEFT
LF	LINEAR FEET
MH	MANHOLE
N	NORTH
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OVERHEAD
(P)	PROPOSED

SYMBOL	DESCRIPTION
PB	PULL BOX
P/L, ⅊	PROPERTY LINE
PLT	PLANTER
PRC	POINT OF REVERSE CURVE
PM	PARKING METER
PVC	POLYVINYL CHLORIDE
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RET	RETAINING
RIM	RIM ELEVATION
RT	RIGHT
RTG	RIM TO GRADE
R/W, R.O.W.	RIGHT OF WAY
S	SOUTH
SAD	SEE ARCHITECTURAL DRAWINGS
SCH	SCHEDULE
SDCB	STORM DRAIN CATCH BASIN
SD	STORM DRAIN
SDCO	STORM DRAIN/SUBDRAIN CLEANOUT
SDMH	STORM DRAIN MANHOLE
SED	SEE ELECTRICAL DRAWINGS
SF	SQUARE FEET
SFD	SEE FIRE PROTECTION DRAWINGS
SL	STREETLIGHT
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SS	SANITARY SEWER
SSCO	SANITARY SEWER CLEANOUT
SSMH	SANITARY SEWER MANHOLE
SSD	SEE STRUCTURAL DRAWINGS
STA	STATION
STD	STANDARD
SW	SIDEWALK
TB	TOP OF BERM
TC	TOP OF CURB
TEL	TELEPHONE
TG	TOP OF GRATE
TH	THRESHOLD
TRANS	TRANSFORMER
TS	TOP OF SLOPE/STAIR
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
U.O.N.	UNLESS OTHERWISE NOTED
VC	VERTICAL CURB
VERT	VERTICAL
VG	VALLEY GUTTER
W	WEST
W, WL	WATERLINE
W/	WITH
WM	WATER METER
WMB	WATER METER BOX
WV	WATER VALVE
XFMR	TRANSFORMER

LEGEND

	PROPOSED	EXISTING
PROPERTY LINE		
EASEMENT		
CENTERLINE		
CONTOUR LINE		360
SANITARY SEWER LINE	SS	SS
ELECTRIC LINE	E	E
GAS LINE	G	G
OVERHEAD UTILITY LINE	OH	OH
STORM DRAIN LINE		SD
SANITARY SEWER LINE	SS	SS
TELECOMM LINE		COM
TV LINE	TV	
WATER LINE	W	
SUBDRAIN LINE		
STORM DRAIN DROP INLET		
CATCH BASIN (SLD)		
MANHOLE		
AREA DRAIN (SLD)		
TRENCH DRAIN/ SLOTTED DRAIN (SLD)		
ENERGY DISSIPATOR		
CLEANOUT	CO●	
SPOT ELEVATION ON GRADE		× 101.11

ENGINEER'S STATEMENT

THESE IMPROVEMENT PLANS HAVE BEEN PREPARED UNDER MY DIRECTION.

Brian Scott 04/19/2024
BRIAN K. SCOTT DATE
P.E. NO. 61034
BKF ENGINEERS

REGISTERED PROFESSIONAL ENGINEER BRIAN K. SCOTT No. C61034 CIVIL STATE OF CALIFORNIA

ENGINEER OF WORK

I HEREBY DECLARE THAT I AM THE CIVIL ENGINEER OF WORK FOR THIS PROJECT AND THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THIS PROJECT AS DEFINED IN SECTION 6703 OF THE STATE OF CALIFORNIA, BUSINESS & PROFESSIONAL CODES, AND THAT THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS.

Jonathan Tang 04/19/2024
JONATHAN TANG DATE
P.E. NO. 67726
BKF ENGINEERS

REGISTERED PROFESSIONAL ENGINEER JONATHAN TANG No. C67726 CIVIL STATE OF CALIFORNIA

811 Know what's **below.** **Call** before you dig.

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 19, 2024

Revisions

NUMBER	DESCRIPTION	DATE

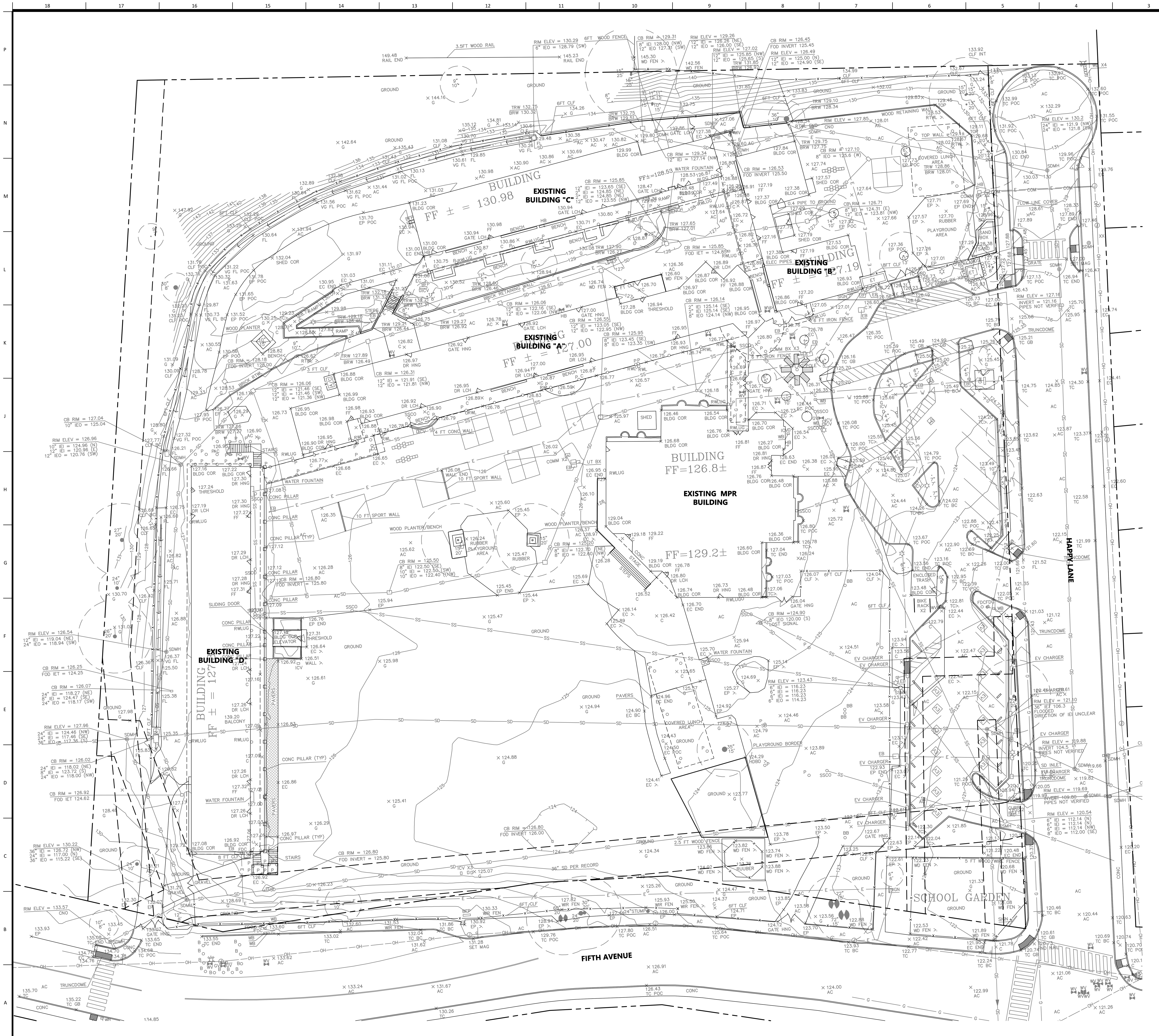
UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

REGISTERED PROFESSIONAL ENGINEER JONATHAN TANG No. C67726 CIVIL STATE OF CALIFORNIA

Notes, Legends, and Abbreviations

C100

DSA BACKCHECK



EXISTING BOUNDARY AND TOPOGRAPHY NOTES:

1. EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS ARE BASED ON A BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY UNDERWOOD & ROSENBLUM INC., DATED AUGUST 30, 2023.

2. EXISTING UTILITIES ON THE SURFACE SHOWN ON THESE PLANS HAVE BEEN LOCATED BY FIELD SURVEY. ALL UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE FROM FIELD SURVEY OF PAINT MARKINGS BY OTHERS, AND FROM VARIOUS RECORD INFORMATION FROM UTILITY COMPANIES. THE SURVEYOR/ENGINEER DOES NOT ASSUME RESPONSIBILITY FOR THEIR COMPLETENESS.

2. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, STRUCTURES AND SERVICES BEFORE COMMENCING THE WORK. THE LOCATIONS OF UTILITIES, STRUCTURES AND SERVICES SHOWN SHALL BE DEEMED TO BE APPROXIMATE ONLY. ALL DISCREPANCIES BETWEEN WHAT IS SHOWN AND THE ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DISTRICT'S REPRESENTATIVE PRIOR TO ANY WORK. CONTRACTOR SHALL RECORD ALL UTILITY MARKINGS ON A SEPARATE SET OF DRAWINGS.

3. CONTRACTOR SHALL LOCATE AND VERIFY/AS-BUILT ALL EXISTING UTILITIES AND RECORD ON A SEPARATE PLAN NOTING DEPTH AND BENCHMARKING HORIZONTAL LOCATION OFF EXISTING IMPROVEMENTS TO REMAIN.

4. THE SITE IS LOCATED WITHIN THE FEDERAL EMERGENCY MANAGEMENT AGENCY'S (FEMA'S) FLOOD INSURANCE RATE MAP (FIRM) NUMBER 06041C0456F, EFFECTIVE DATE MARCH 16, 2016. THE FIRM SHOWS THAT THE PROJECT SITE IS WITHIN IN FLOOD HAZARD ZONE X, DESIGNATED AS AREAS OF MINIMAL FLOOD HAZARD; AREAS OF 0.2% ANNUAL CHANCE FLOOD HAZARD, AREAS OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTHS LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE MILE.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

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San Rafael, CA 94901

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architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
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www.ccorpusa.com

Issue Date: April 19, 2024

Revisions

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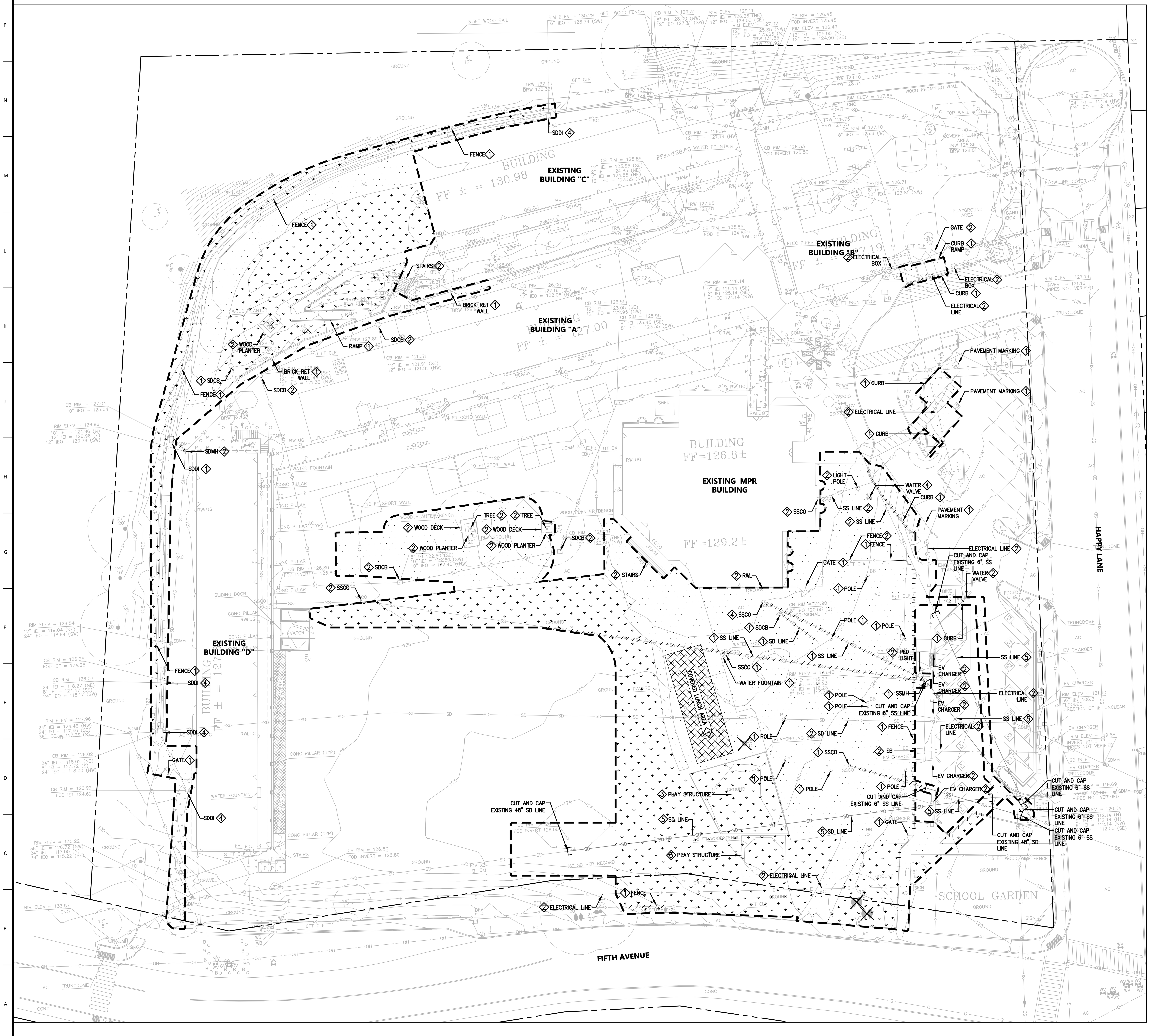
REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Existing Conditions

C200

DSA BACKCHECK



DEMOLITION NOTES:

1. CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT 811 OR (800) 227–2600 AT LEAST TWO (2) WORKING DAYS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, EXCAVATION OR GRADING WORK.
2. EXISTING SUBSURFACE UTILITIES SHOWN ON THESE PLANS WERE TAKEN FROM RECORD INFORMATION KNOWN TO THE ENGINEER. THESE PLANS ARE NOT MEANT TO BE A FULL CATALOG OF EXISTING SUBSURFACE CONDITIONS. CONTRACTOR SHALL CONDUCT A FULL CATALOG OF EXISTING SUBSURFACE CONDITIONS. CONTRACTOR SHALL CONDUCT FIELD INVESTIGATIONS TO VERIFY ALL LOCATIONS AND ELEVATIONS OF EXISTING SUBSURFACE UTILITIES, WHETHER SHOWN ON PLANS OR NOT.
3. DEMOLISH EXISTING STRUCTURES, UTILITIES, AND OTHER FEATURES WITHIN THE LIMIT OF DEMOLITION AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION WITHIN THE LIMITS OF THE PROPOSED PROJECT AND WHERE APPLICABLE ON THESE PLANS.
4. ALL HARDSCAPE WITHIN THE LIMITS OF DEMOLITION AS INDICATED IS TO BE DEMOLISHED, REMOVED AND/OR RECYCLED UNLESS OTHERWISE NOTED.
5. CONTRACTOR SHALL REMOVE ALL EXISTING UNDERLYING UNDOCUMENTED FILL WHERE ENCOUNTERED, AS WELL AS ANY OTHER DELETERIOUS MATERIALS WITHING THE LIMITS OF DEMOLITION PER THE GEOTECHNICAL REPORT.
6. CONTRACTOR SHALL REPLACE ANY DAMAGED STRUCTURE, PAVEMENT, CURB OR SIDEWALK THAT IS SAID TO REMAIN AND IS DAMAGED DURING THE COURSE OF CONSTRUCTION.
7. CONTRACTOR TO COORDINATE WITH PG&E FOR ALL TEMPORARY POWER CONNECTIONS AND REQUIREMENTS.
8. REMOVE ALL INTERIOR FENCING, FENCE POSTS FOUNDATIONS, AND OTHER LANDSCAPING FEATURES WHERE APPLICABLE.
9. AN APPROVED TEMPORARY FENCE SHALL BE INSTALLED ALONG THE LIMITS OF DEMOLITION PRIOR TO DEMOLITION WHERE REQUIRED. GATES SHALL BE KEPT LOCKED DURING NON–WORKING HOURS.
10. CONTRACTOR SHALL PROVIDE EMERGENCY VEHICULAR ACCESS TO THE SITE.
11. THE CONTRACTOR SHALL PROCEED WITH DUE CAUTION DURING ALL UNDERGROUND OPERATIONS AND SHALL REPAIR OR REPLACE ALL UTILITIES DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER AND/OR AFFECTED AGENCIES.
12. ALL TRENCHING WITHIN STREETS SHALL BE BACKFILLED AND PATCHED UPON UTILITY LINE REMOVAL TO THE SATISFACTION OF THE DISTRICT AND CITY OF SAN RAFAEL.
13. SEE LANDSCAPE PLAN FOR TREE REMOVAL. CONFIRM WITH OWNER AND LANDSCAPE ARCHITECT PRIOR TO REMOVAL.
14. TREES AND SHRUBS DESIGNATED FOR REMOVAL SHALL HAVE ROOTBALLS AND ANY ROOTS GREATER THAN 1/2 INCH DIAMETER REMOVED.
15. DO NOT PLACE RECYCLED CONCRETE, AC, AB OR OTHER MATERIALS IN PROPOSED LANDSCAPE AREAS.
16. ALL LIGHTS SHOWN TO BE REMOVED SHALL BE DELIVERED TO THE DISTRICT.
17. EXISTINGS UTILITIES TO BE ABANDONED SHALL BE PLUGGED AT ENDS WITH CONCRETE OR SAND–CEMENT SLURRY PER GEOTECHNICAL RECOMMENDATIONS. EXISTING UTILITIES TO BE ABANDONED WITH DIAMETERS LARGER THAN 4" SHALL BE COMPLETELY GROUTED WITH FLOWABLE SAND–CEMENT OR CLSM PER GEOTECHNICAL RECOMMENDATIONS.

DEMOLITION LEGEND:

HARDSCAPE TO BE DEMOLISHED AND REMOVED (INCLUDING AC PAVEMENT, AB, SIDEWALK, PLANTERS, MISC. CONCRETE)

LANDSCAPE TO BE DEMOLISHED, TREES AND SHRUBS SHALL BE MULCHED (2" MAX CHIP SIZE) AND STOCKPILED FOR REUSE, TOP SOIL TO BE STRIPED AND STOCKPILED FOR REUSE

BUILDING/STRUCTURE, SLAB AND FOUNDATION TO BE DEMOLISHED

EXISTING UTILITY TO BE DEMOLISHED AND REMOVED

EXISTING CURB TO BE DEMOLISHED AND REMOVED

LIMITS OF DEMOLITION

EXISTING TREE TO BE REMOVED

DEMOLITION SYMBOLS:

1 TO BE REMOVED
2 TO REMAIN, PROTECT IN PLACE
3 SALVAGE, STORE, AND RELOCATE
4 TO REMAIN, ADJUST TO FINISH GRADE
5 TO BE ABANDONED, SEE NOTE 17

IDENTIFICATION STAMP
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multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

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255 Shoreline Dr. #200
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www.ccorpusa.com

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Revisions

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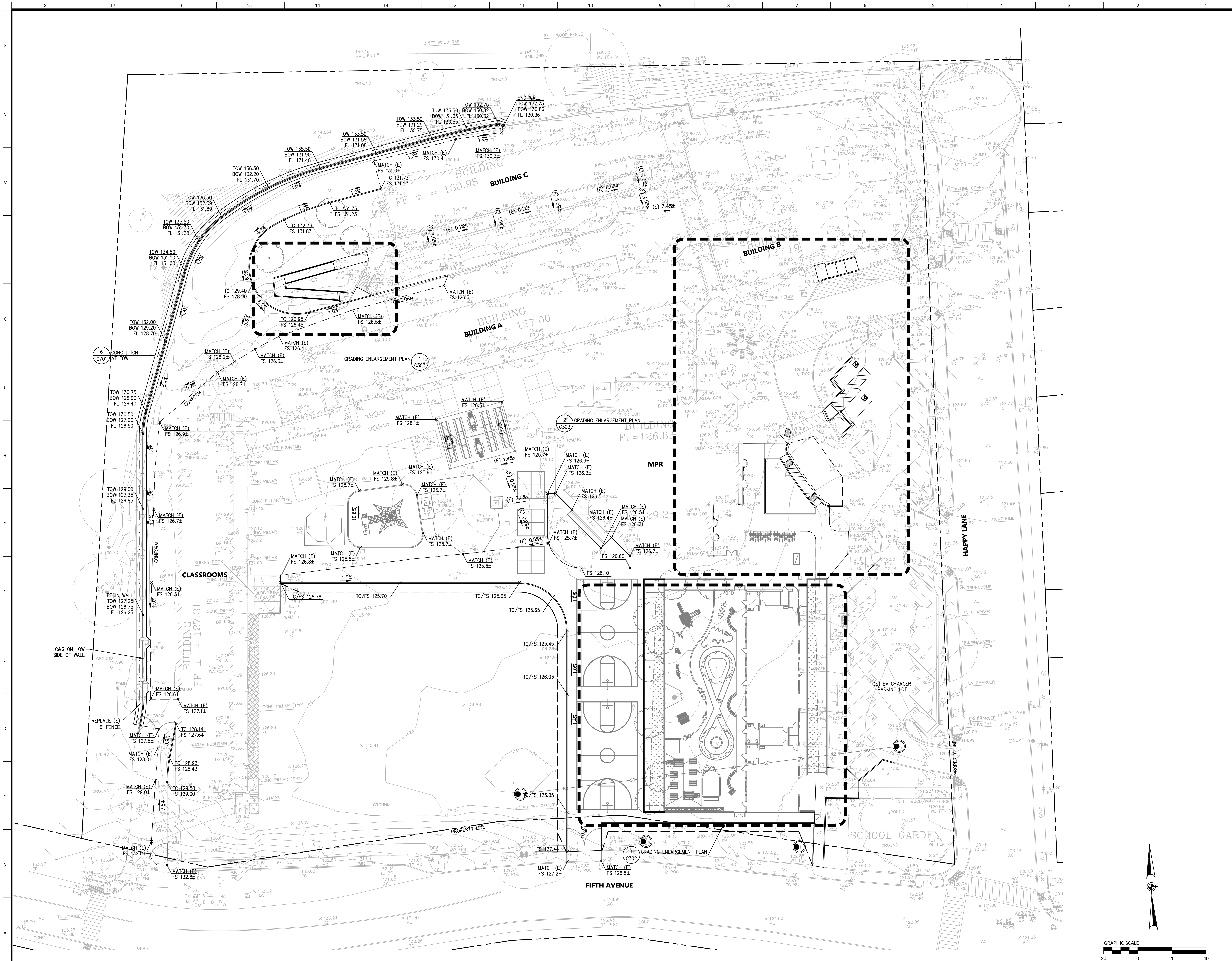
REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Demolition Plan

C201

DSA BACKCHECK



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JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Grading Plan
C300
DSA BACKCHECK

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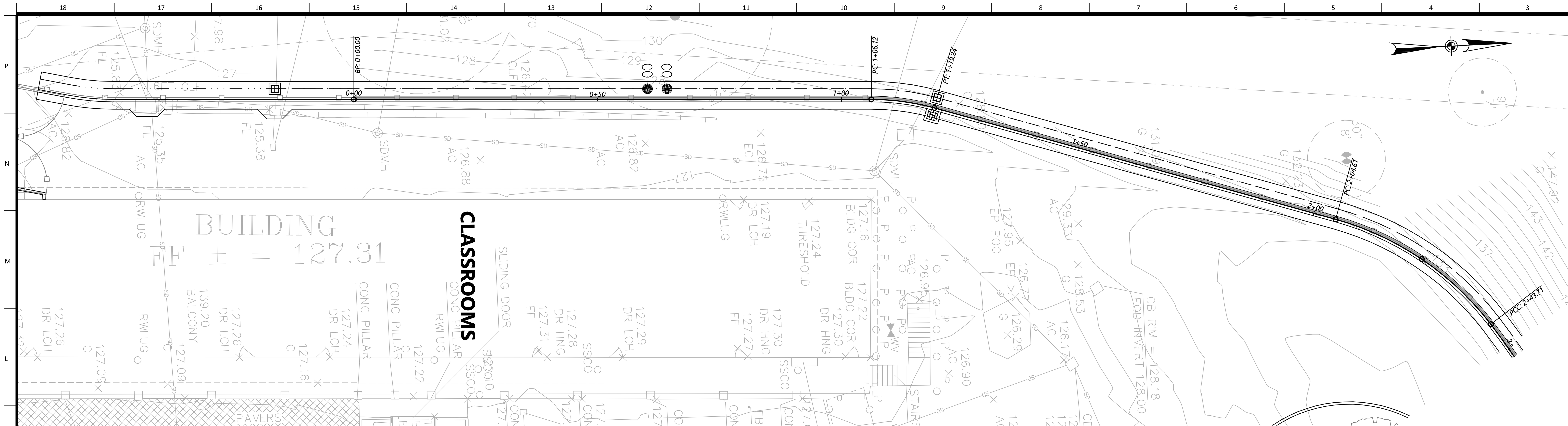

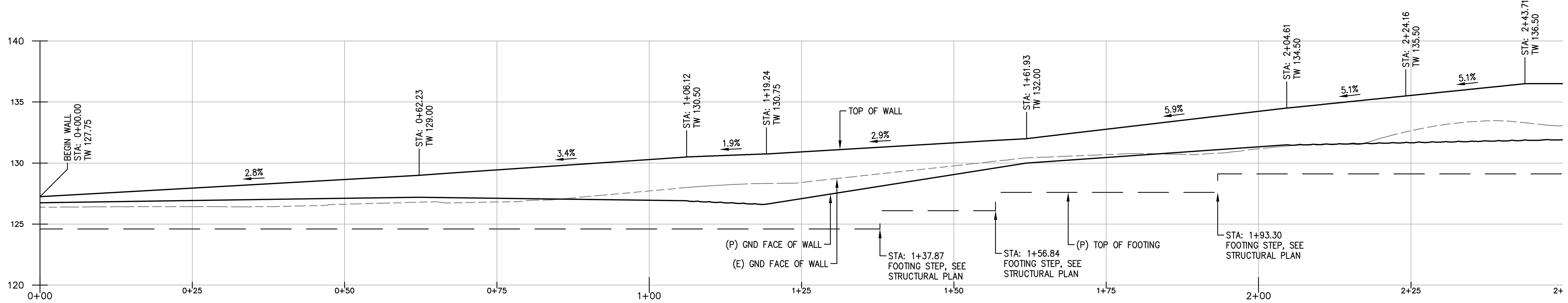

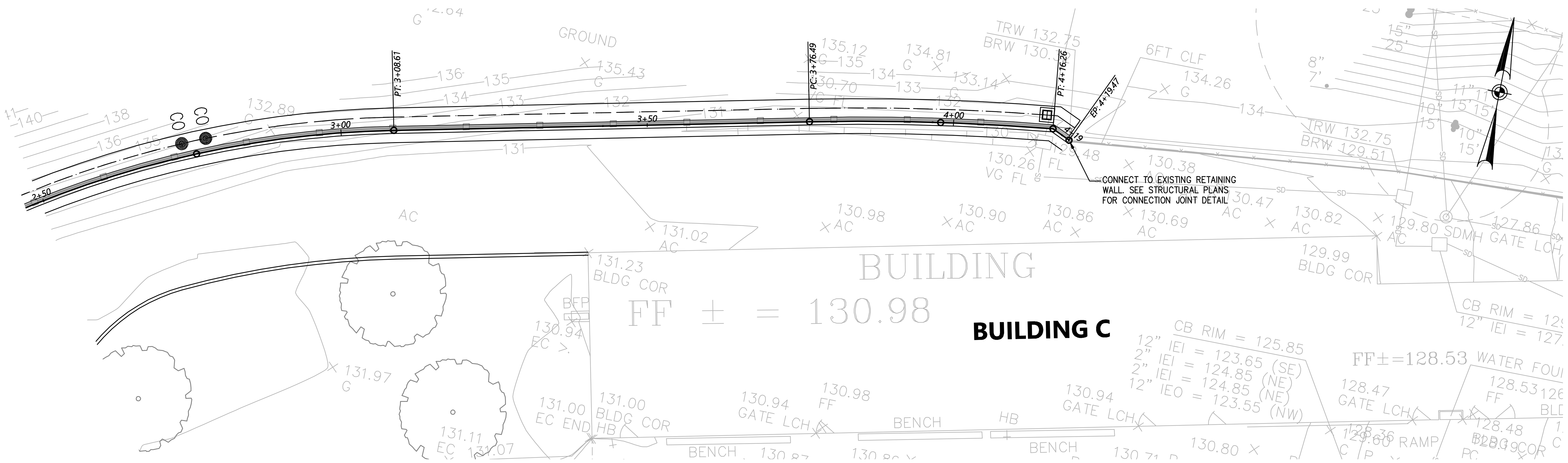

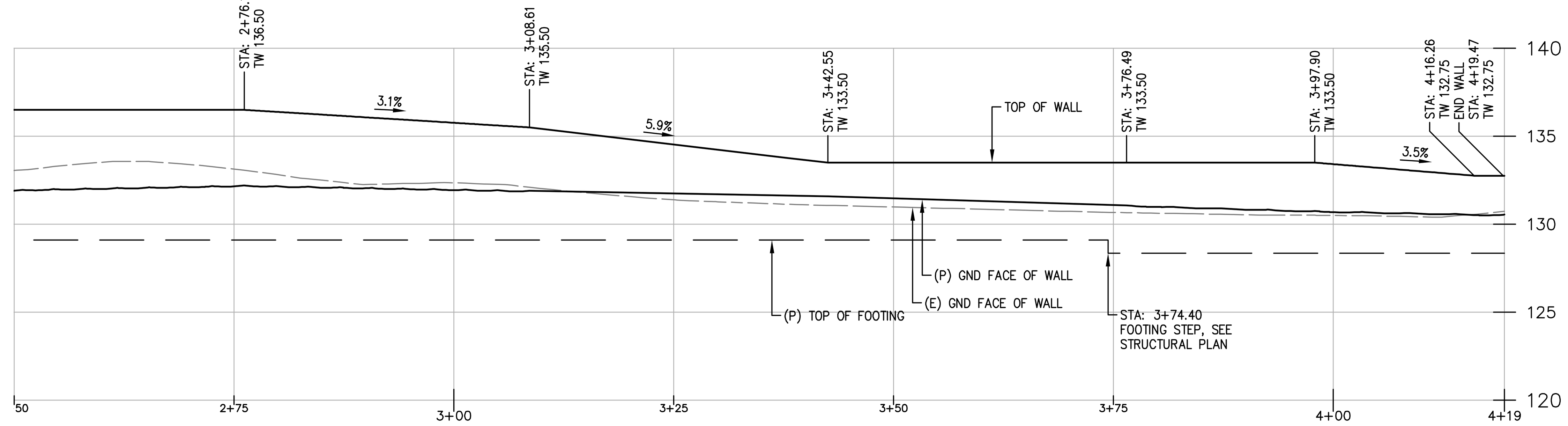

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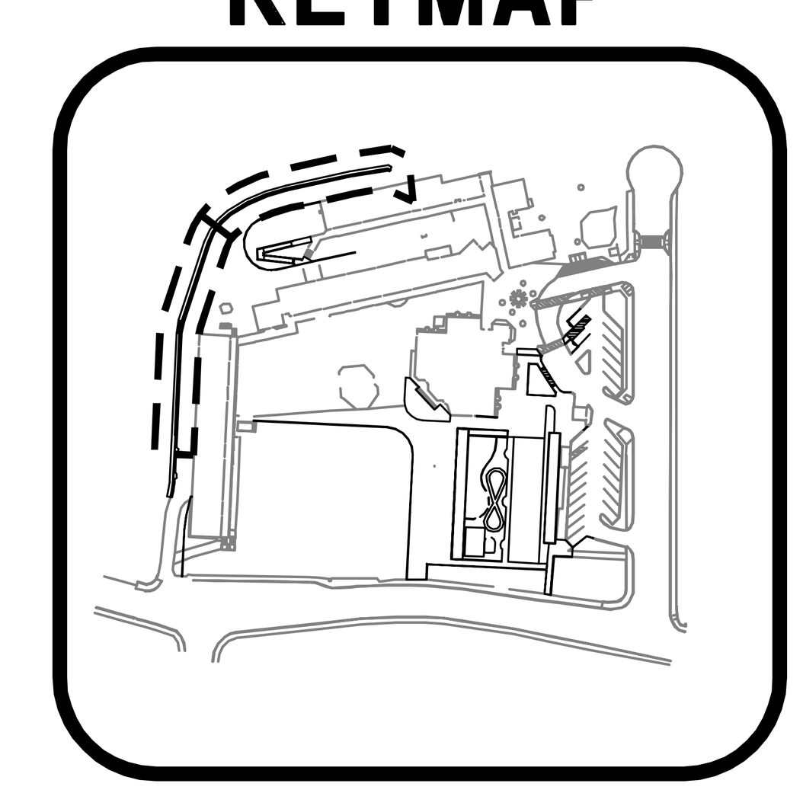
KEYMAP



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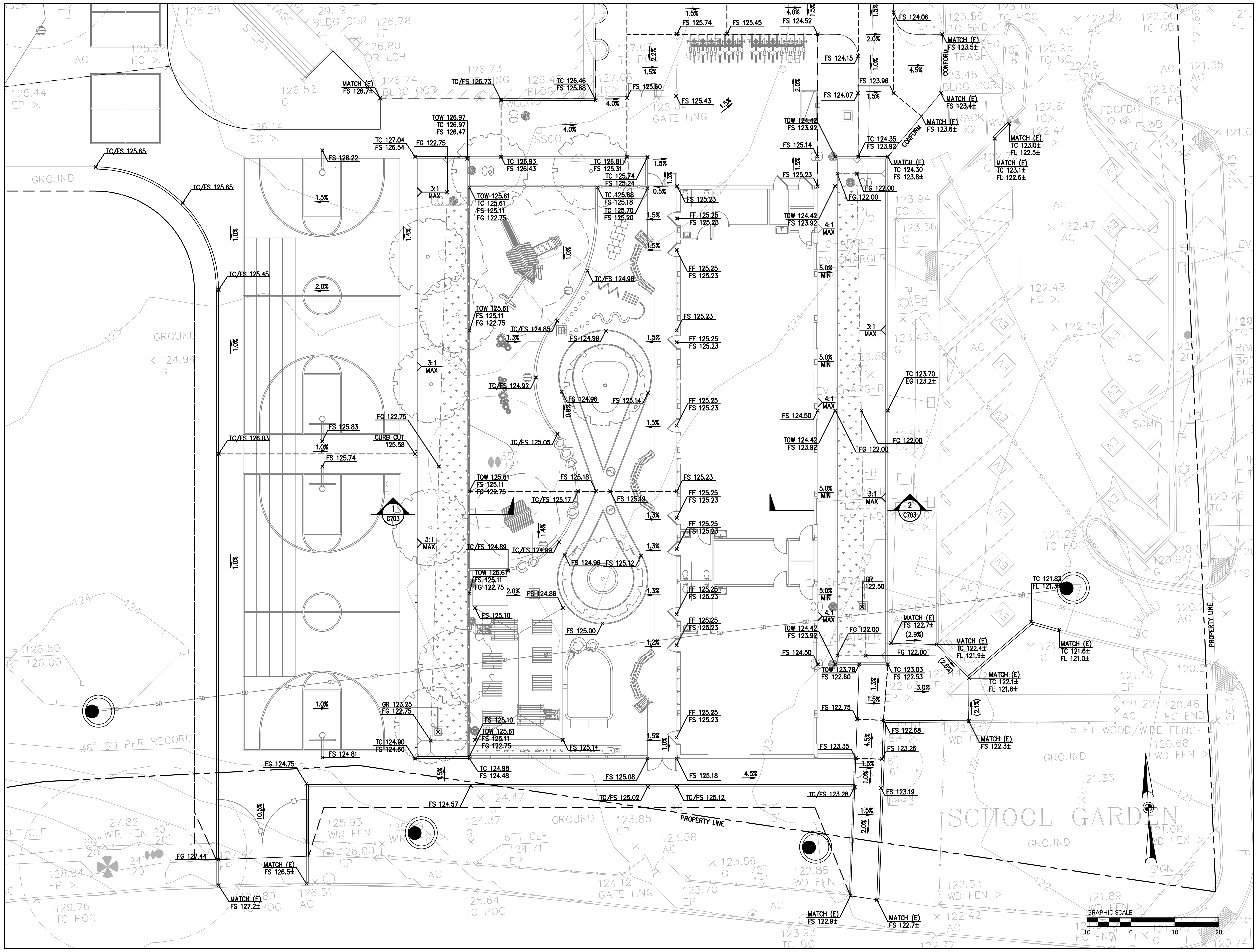
REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Retaining Wall Layout and Profile

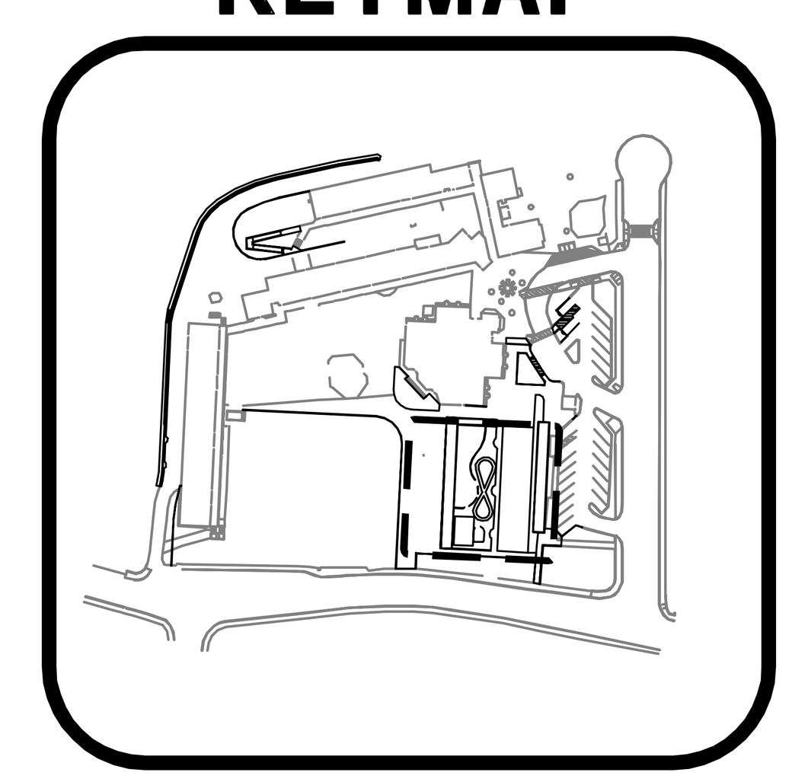
C301

DSA BACKCHECK



ENLARGEMENT PLAN – 1
SCALE: 1: = 10'

KEYMAP



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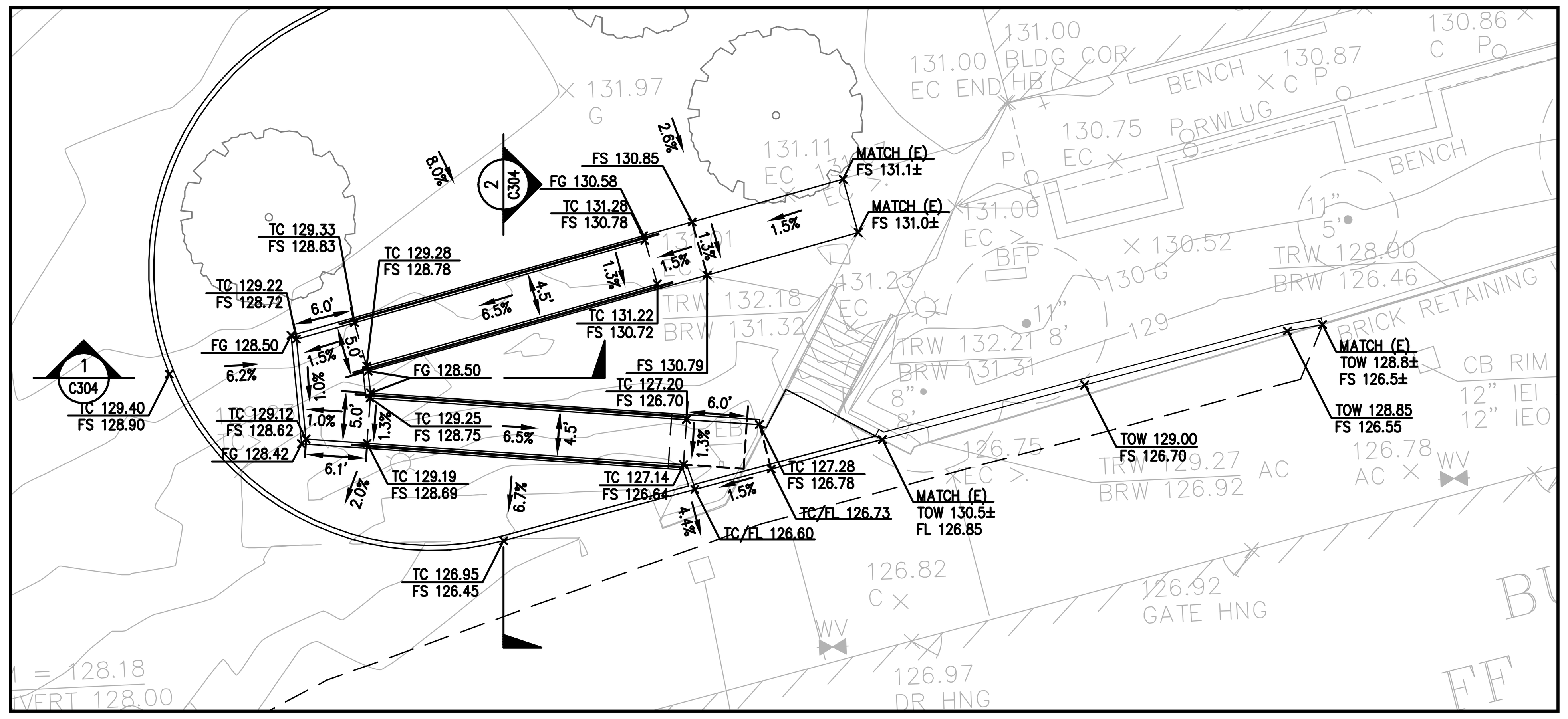
REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

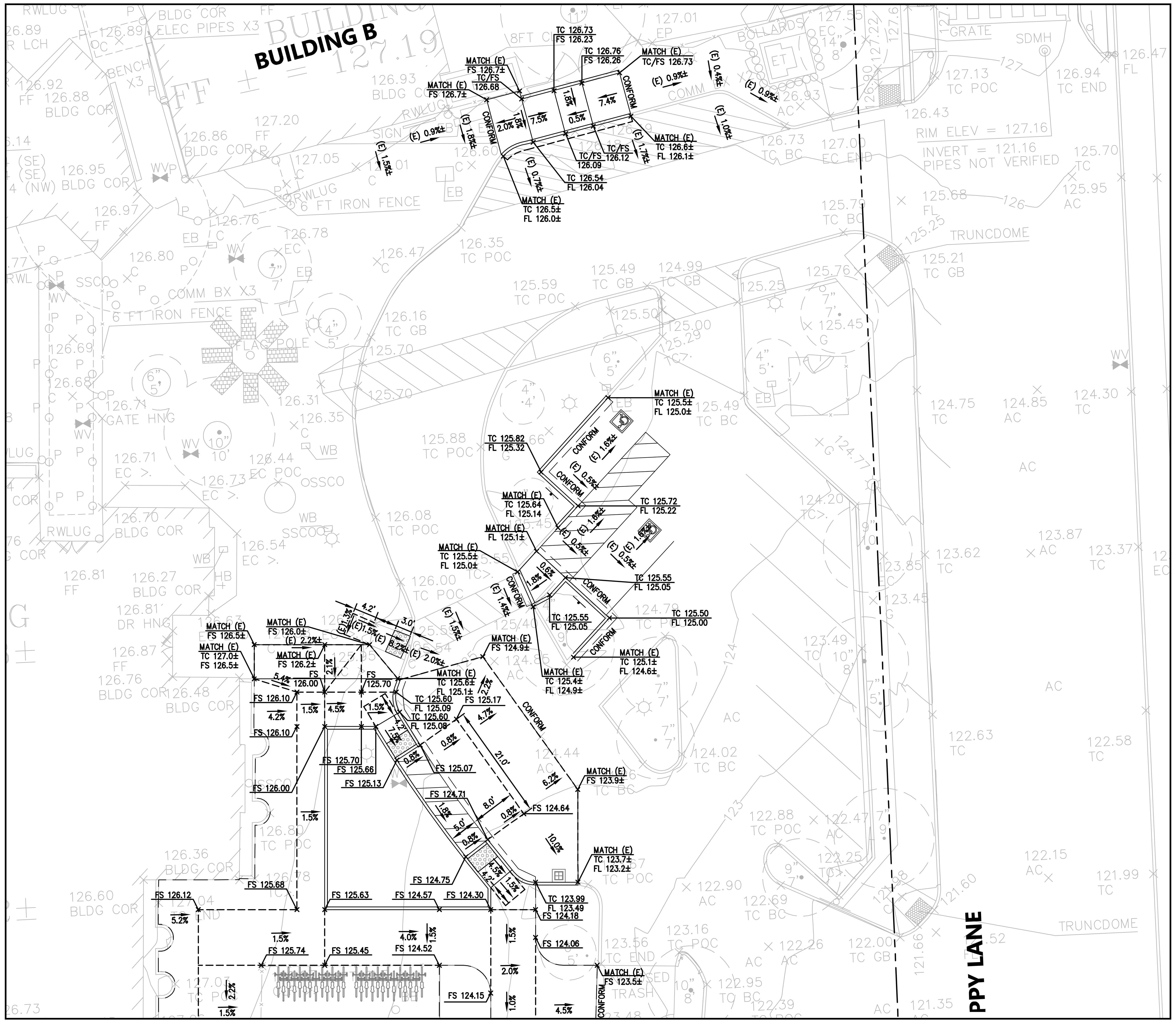
Grading Enlargement Plan

C302

DSA BACKCHECK

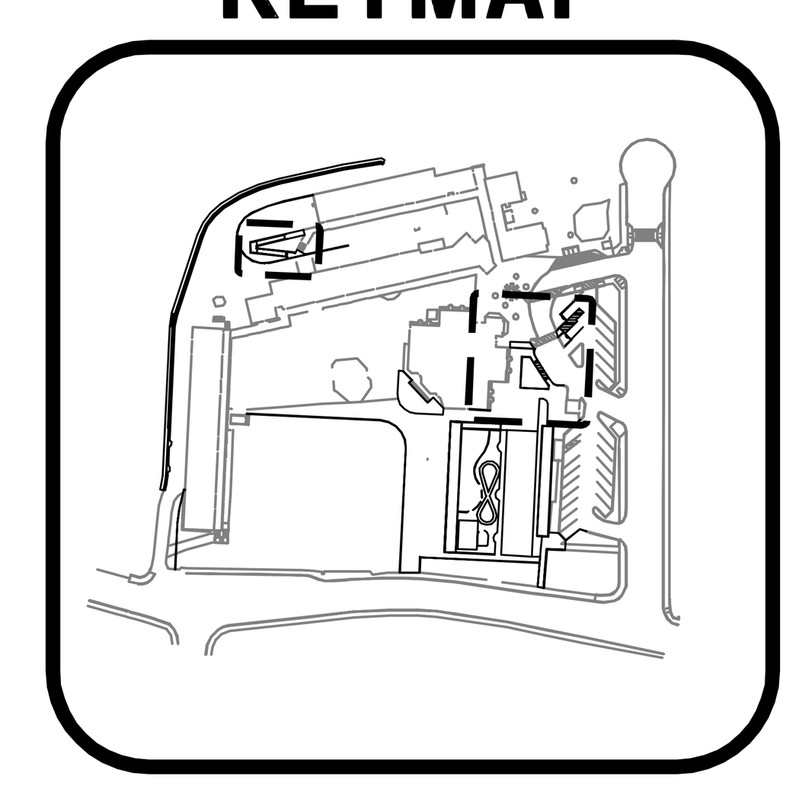


ENLARGEMENT PLAN – 1
SCALE: 1" = 10'



ENLARGEMENT PLAN – 2
SCALE: 1" = 10'

KEYMAP



GRAPHIC SCALE
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multistudio
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Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
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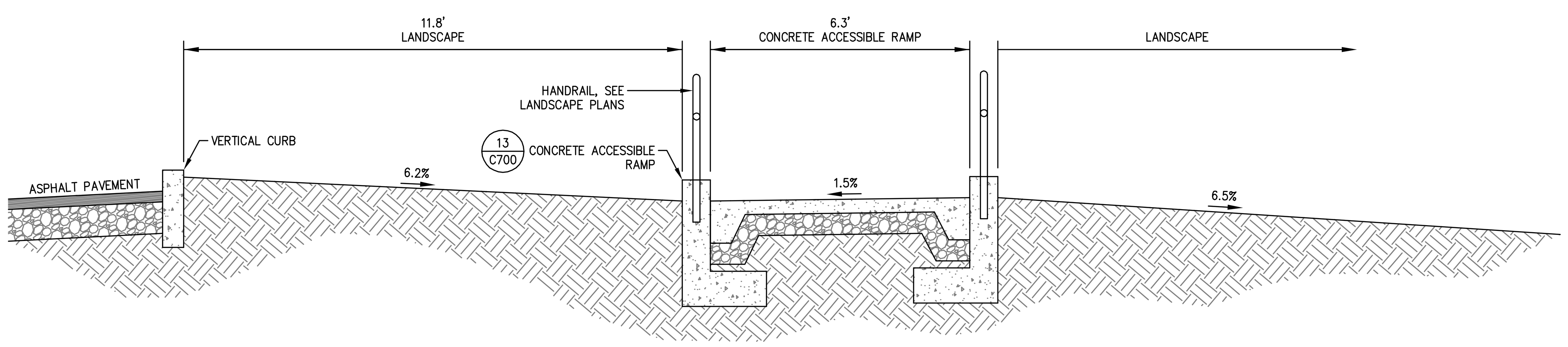
REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Grading Enlargement Plan

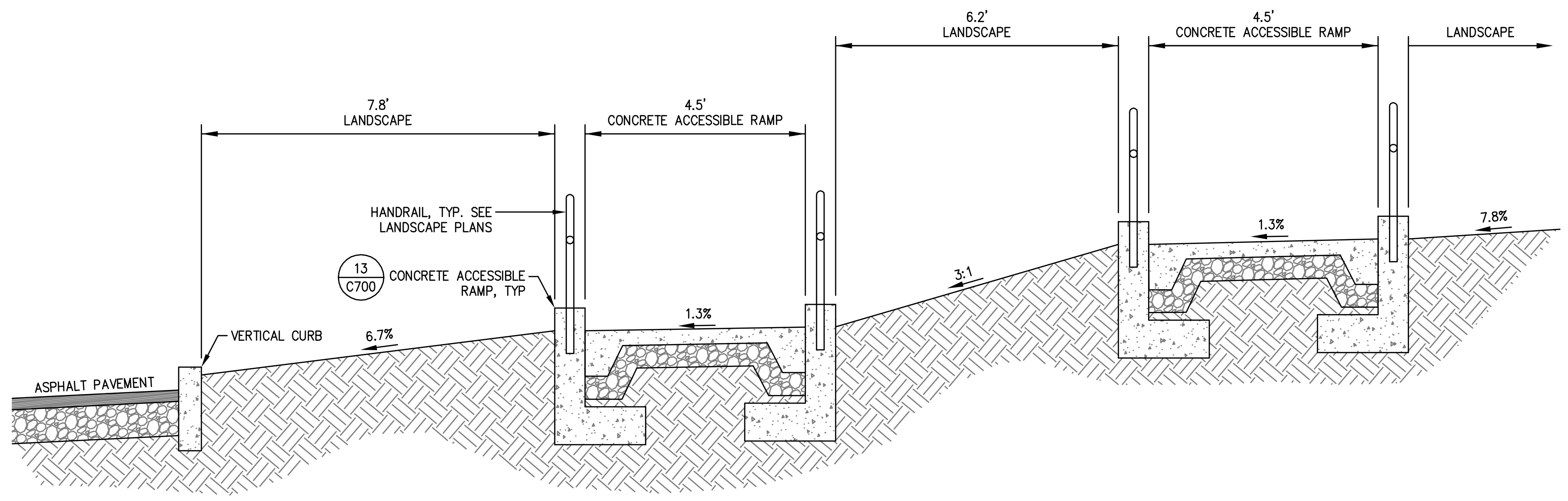
C303

DSA BACKCHECK



SECTION 1

SCALE: 1" = 2'



SECTION 2

SCALE: 1" = 2'

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REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
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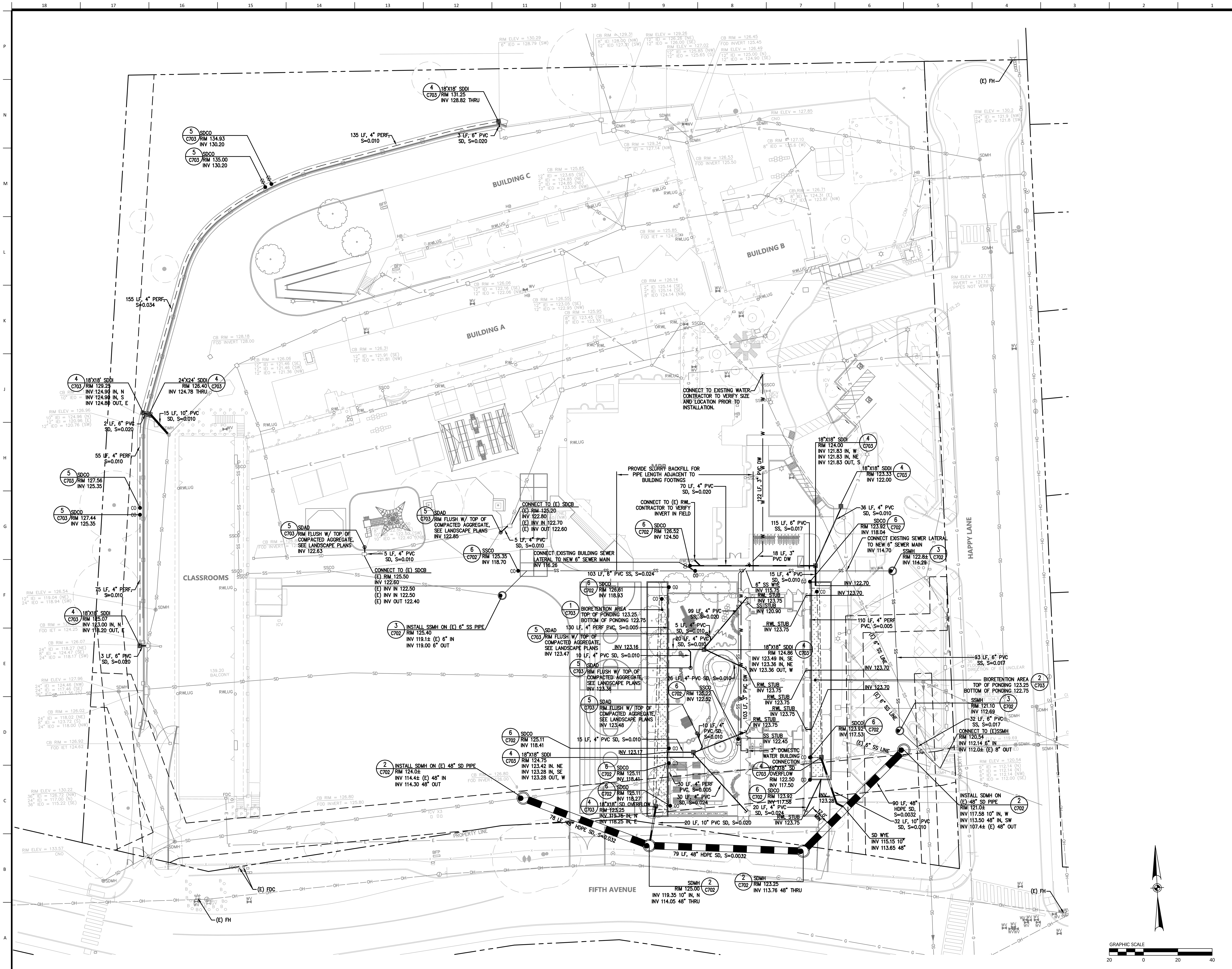
CIVIL
STATE OF CALIFORNIA

CROSS SECTIONS
C304
DSA BACKCHECK

DRAWING NAME: K:\2023\230230_Multistudio_and_San_Rafael_City_Schools\ENG-L\Sheets\TK\SVE-TK-C304.dwg (00)
PLOT TIME: 04-19-24 12:03pm PLOTTED BY: tlam



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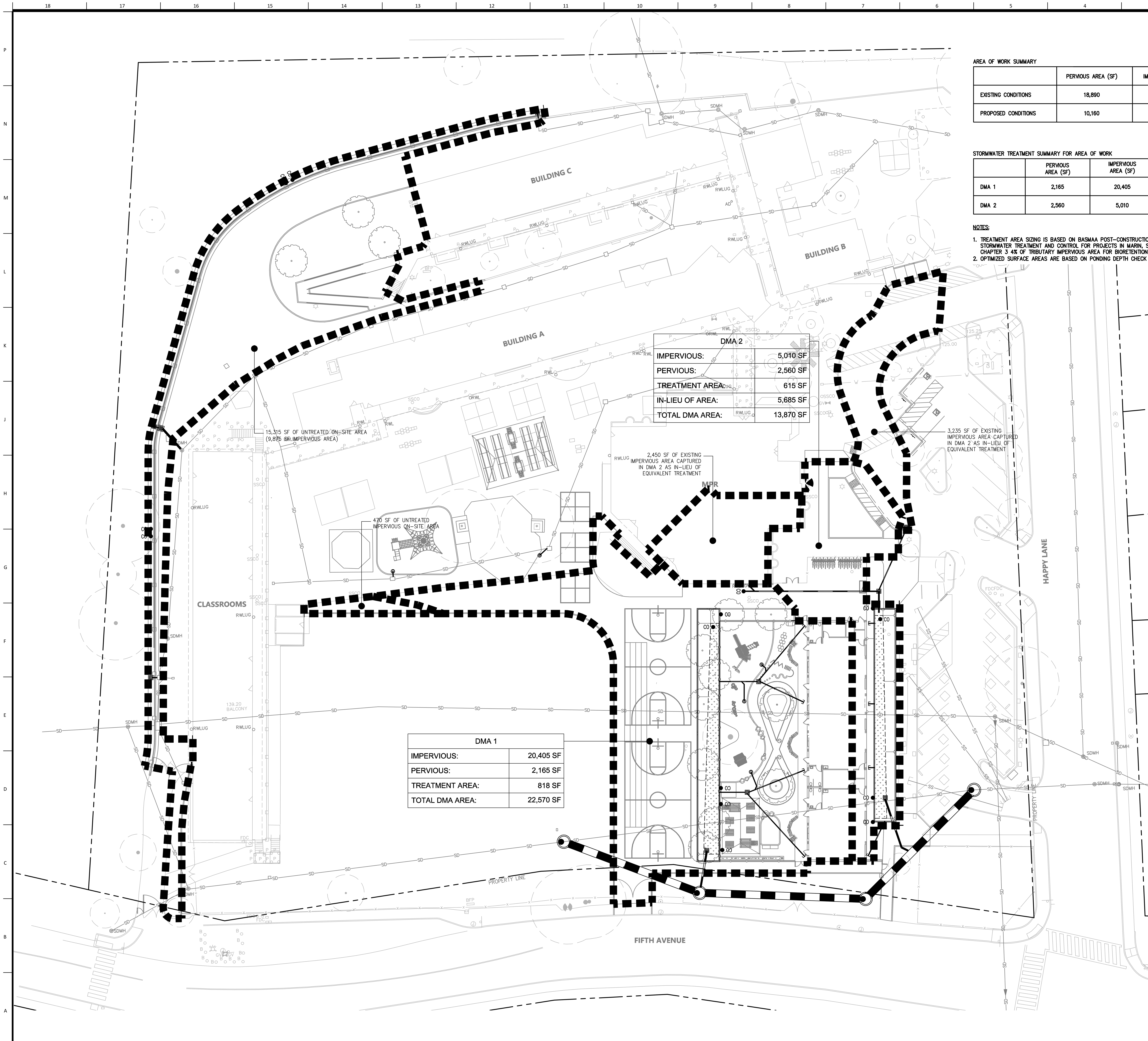
No. C67726
CIVIL
STATE OF CALIFORNIA

Utility Plan
C400
DSA BACKCHECK



DMA 2	
IMPERVIOUS:	5,010 SF
PERVIOUS:	2,560 SF
TREATMENT AREA:	615 SF
IN-LIEU OF AREA:	5,685 SF
TOTAL DMA AREA:	13,870 SF

DMA 1	
IMPERVIOUS:	20,405 SF
PERVIOUS:	2,165 SF
TREATMENT AREA:	818 SF
TOTAL DMA AREA:	22,570 SF

AREA OF WORK SUMMARY

	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	TOTAL AREA (SF)
EXISTING CONDITIONS	18,890	27,030	45,920
PROPOSED CONDITIONS	10,160	35,760	45,920

STORMWATER TREATMENT SUMMARY FOR AREA OF WORK

	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	REQUIRED TREATMENT AREA (SF)	PROVIDED TREATMENT AREA (SF)
DMA 1	2,165	20,405	816	818
DMA 2	2,560	5,010	200	615

NOTES:

1. TREATMENT AREA SIZING IS BASED ON BASMAA POST-CONSTRUCTION MANUAL – DESIGN GUIDANCE FOR STORMWATER TREATMENT AND CONTROL FOR PROJECTS IN MARIN, SONOMA, NAPA, AND SOLANO COUNTIES, CHAPTER 3 4% OF TRIBUTARY IMPERVIOUS AREA FOR BIORETENTION AREAS.
2. OPTIMIZED SURFACE AREAS ARE BASED ON PONDING DEPTH CHECK FOR EACH TREATMENT AREA TO BE 6" MAX.

LEGEND

DMA BOUNDARY

BIORETENTION AREA

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856.776.3897
www.ccorpusa.com

Issue Date: April 19, 2024

Revisions

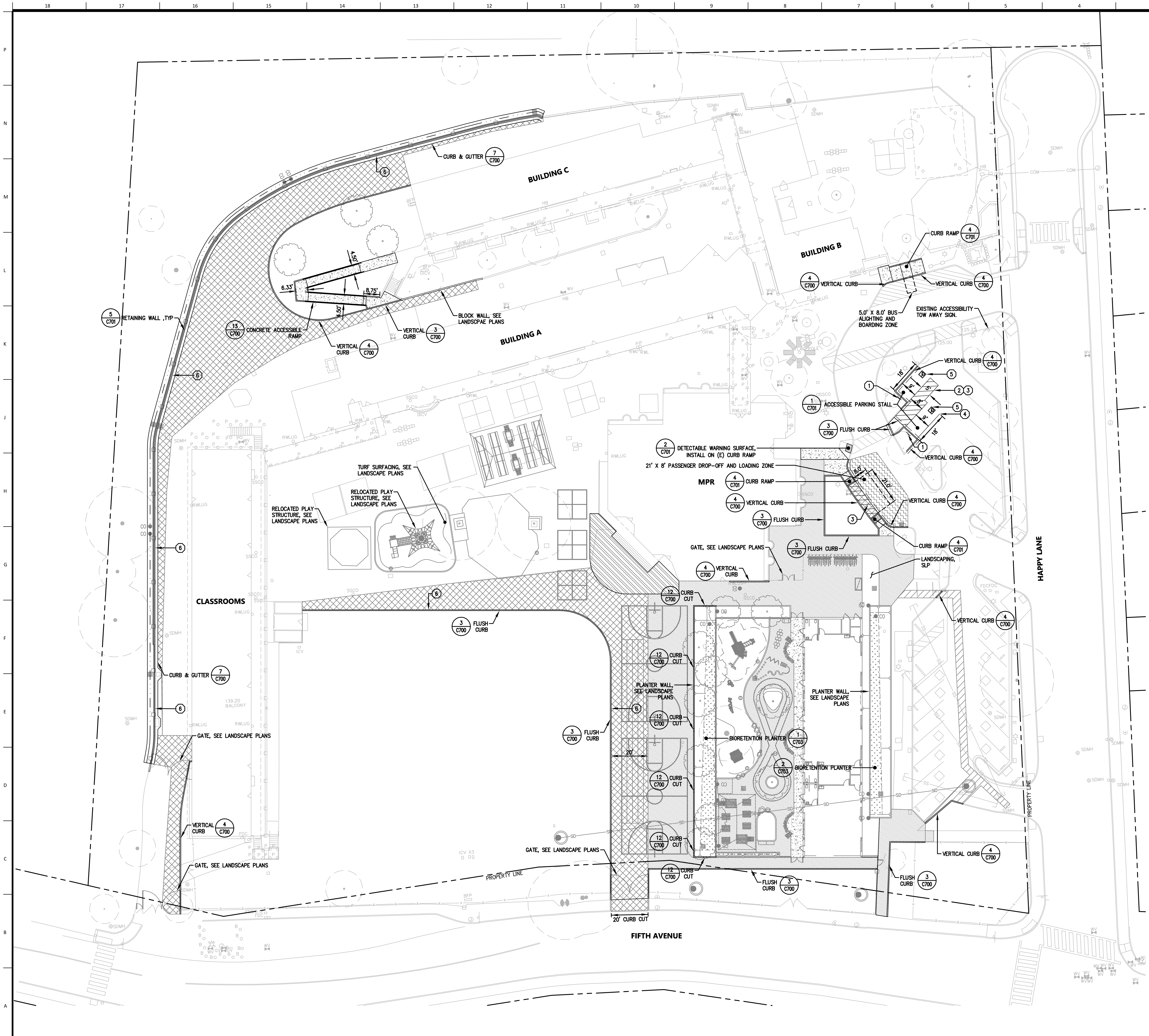
NUMBER	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Stormwater Control Plan

C500

DSA BACKCHECK



STRIPING AND SIGNAGE NOTES:

1. ALL SIGNS AND SIGN CODE REFERENCES SHALL BE IN ACCORDANCE WITH THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 2014 EDITION.
2. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH CALTRANS STANDARD PLANS, 2018 EDITION.
3. ALL SIGNS, SIGN CODE REFERENCES, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE 2022 CALIFORNIA BUILDING CODE.

MARKING, SIGNING, & STRIPING LEGEND:

SYMBOL	DESCRIPTION
1	ACCESSIBILE SIGN, SEE DETAIL 1 ON SHEET C7.01
2	4 INCH BLUE STRIPING AT PERIMETER OF ACCESSIBLE AISLES
3	4 INCH WHITE DIAGONAL STRIPING AT 3' ON CENTER
4	4 INCH BLUE STRIPING FOR ACCESSIBLE PARKING STALLS
5	INTERNATIONAL SYMBOL OF ACCESSIBILITY, SEE DETAIL 1 ON SHEET C7.01
6	PAINT CURB RED WITH STENCILED 3" WHITE LETTERS "NO PARKING FIRE LANE" EVERY 50' O.C.

PAVING LEGEND:

- VEHICULAR ASPHALT PAVEMENT 2.5" AC OVER 8.5" CLASS II AB
- CONCRETE PAVEMENT 6" PCC OVER 6" CLASS II AB
- PEDESTRIAN ASPHALT PAVEMENT 1.5" AC OVER 4.0" CLASS II AB
- PEDESTRIAN CONCRETE PAVEMENT 4.0" PCC WITH #4 REBAR AT 24" O.C. EACH WAY OVER 6.0" CLASS II AB
- ASPHALT CONCRETE PAVING REGRADE REMOVE EXISTING AC, PLACE NEW AB OVER EXISTING AB AND RECOMPACT, PLACE 2" AC OVER COMPACTED AB TO FINISH GRADES SHOWN ON PLAN.
- UTILITY TRENCHING SEE DETAIL 1, SHEET C6.02

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

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civil engineer:
BKF Engineers
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Redwood City, CA 94065
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www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
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cost estimator:
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REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Horizontal Control, Paving, Signing and Striping Plan

C600

DSA BACKCHECK

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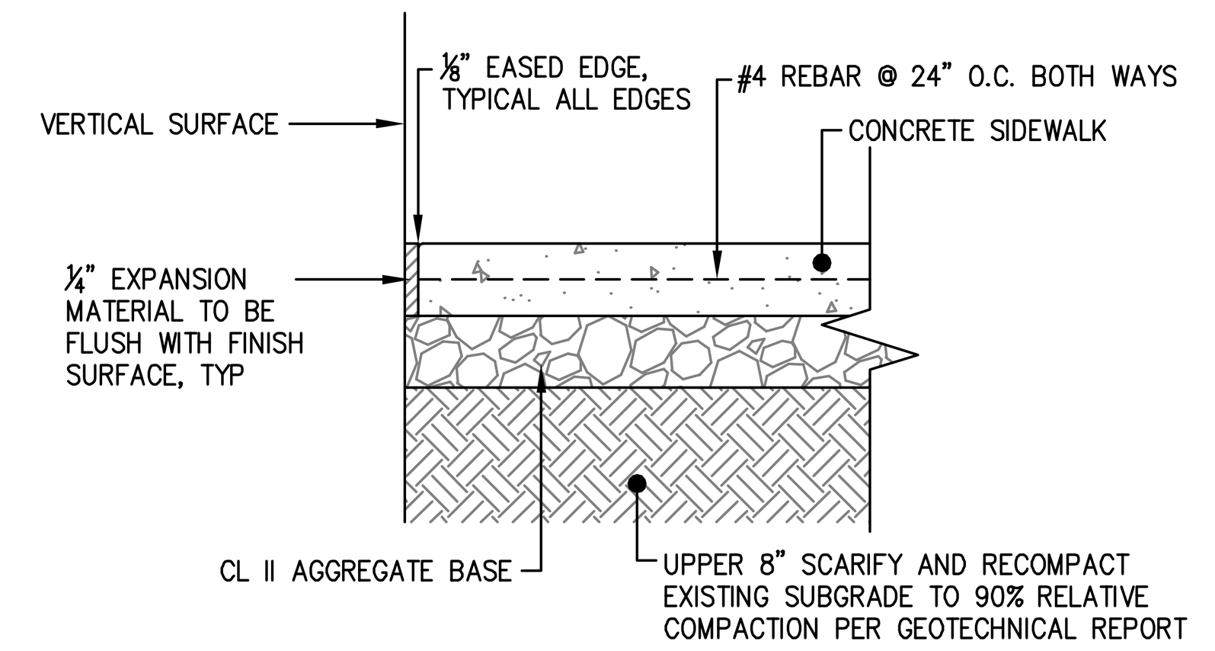
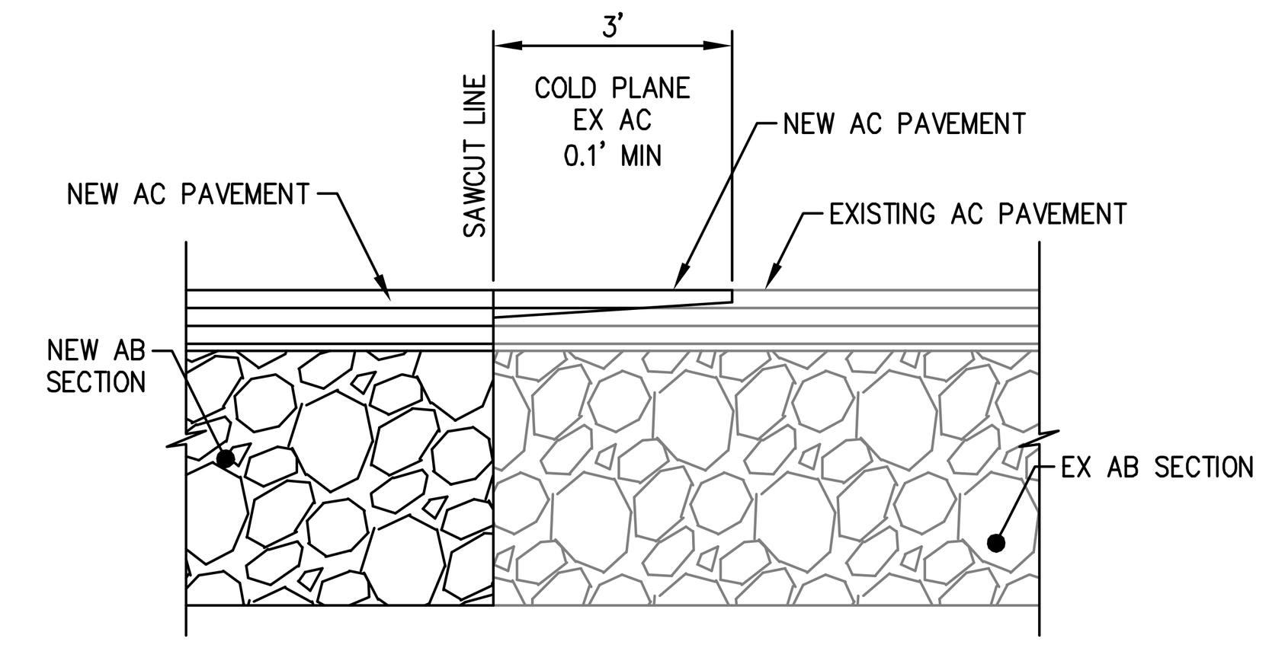


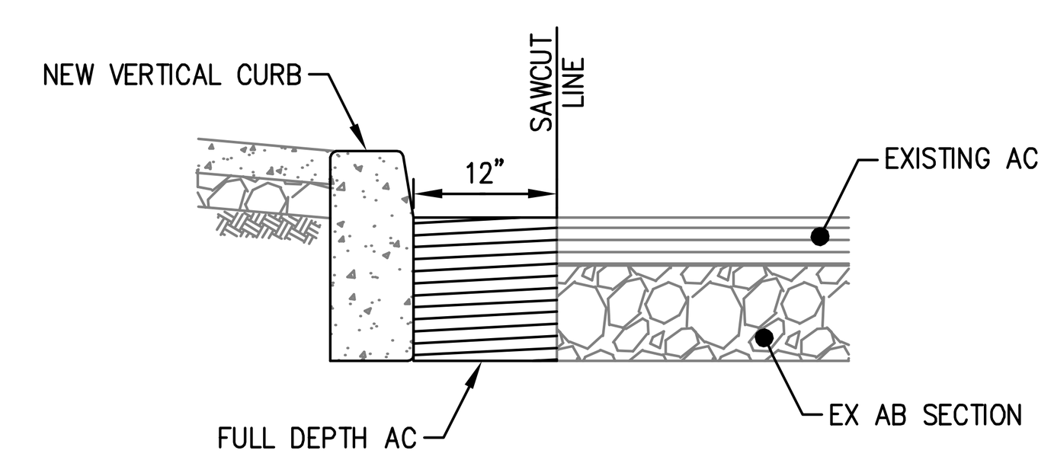
NOTES:

1. PROVIDE EXPANSION JOINT @ ALL VERTICAL SURFACES

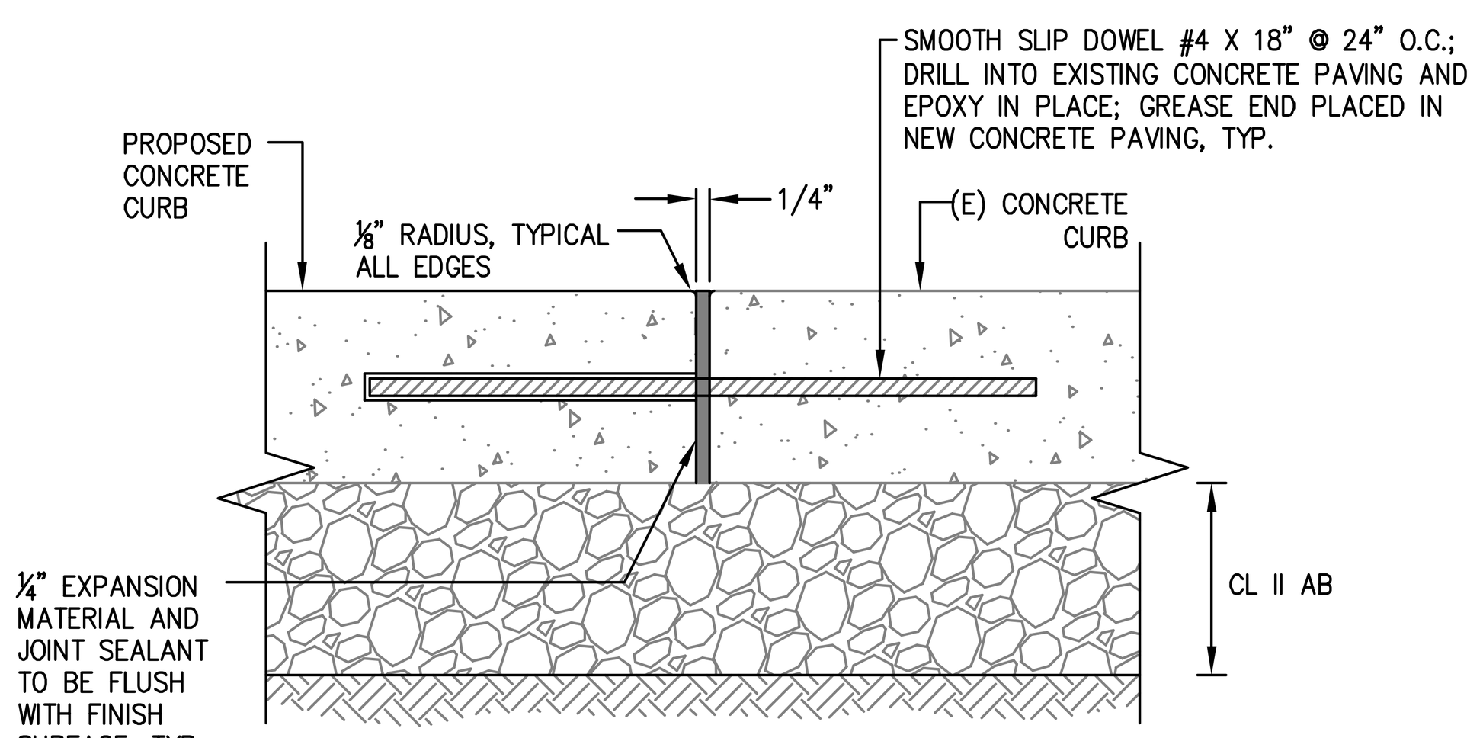
11 EXPANSION JOINT AT VERTICAL SURFACE
NTS



7 PAVEMENT CONFORM
NTS



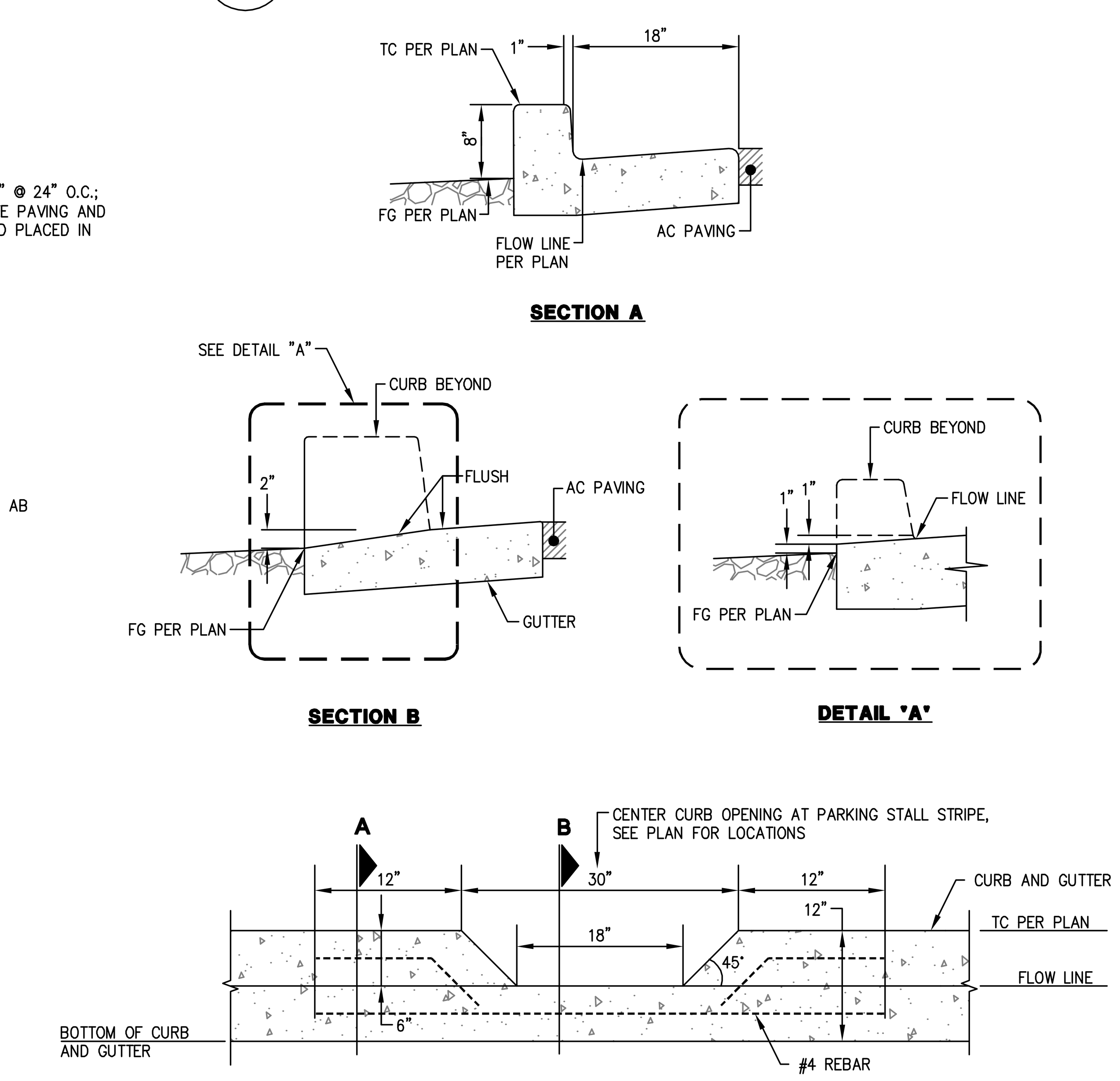
8 PAVEMENT CONFORM WITH VERTICAL CURB
NTS



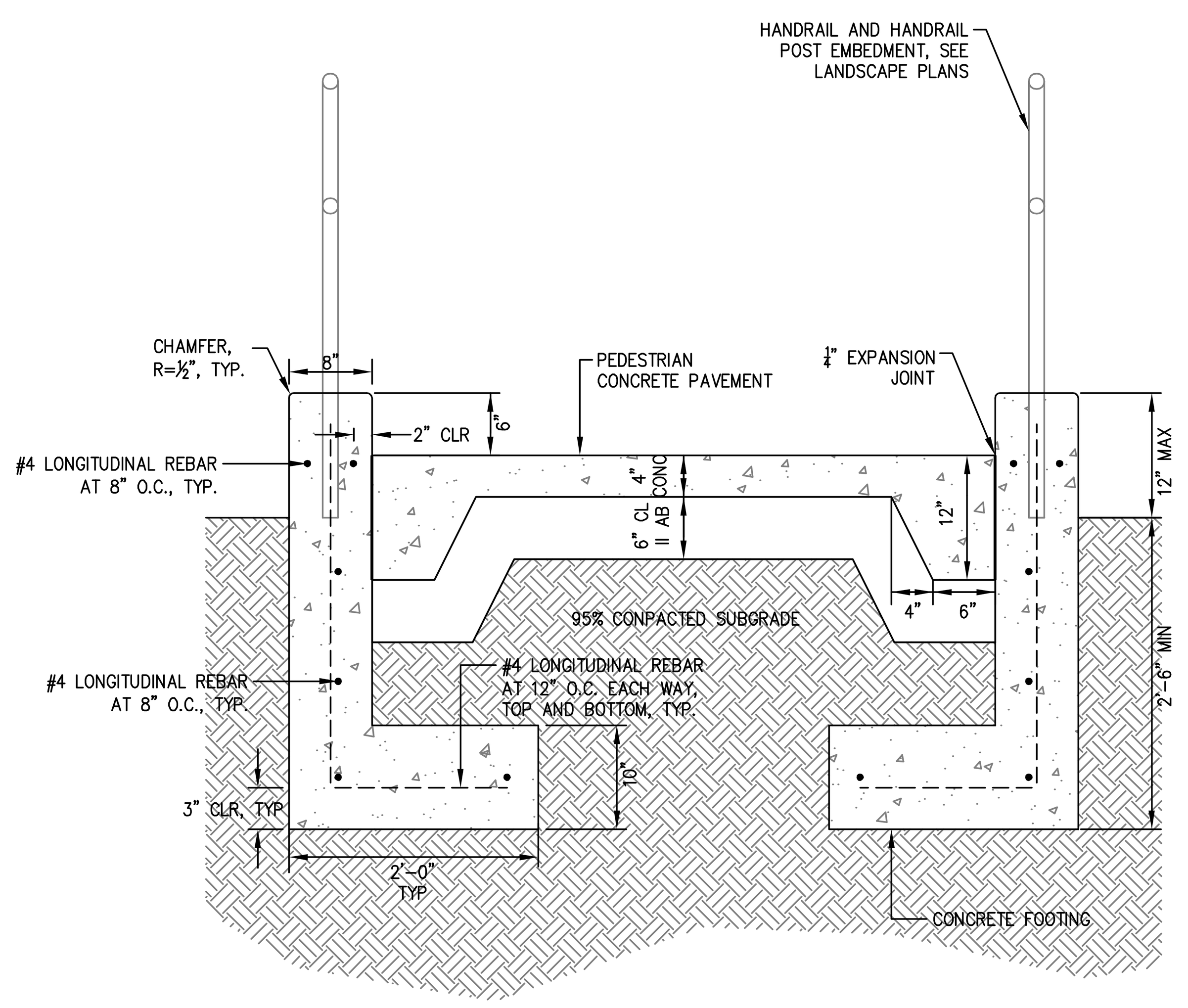
NOTES:

1. PROVIDE EXPANSION JOINT AT ALL VERTICAL SURFACES AND BACKS OF CURB.

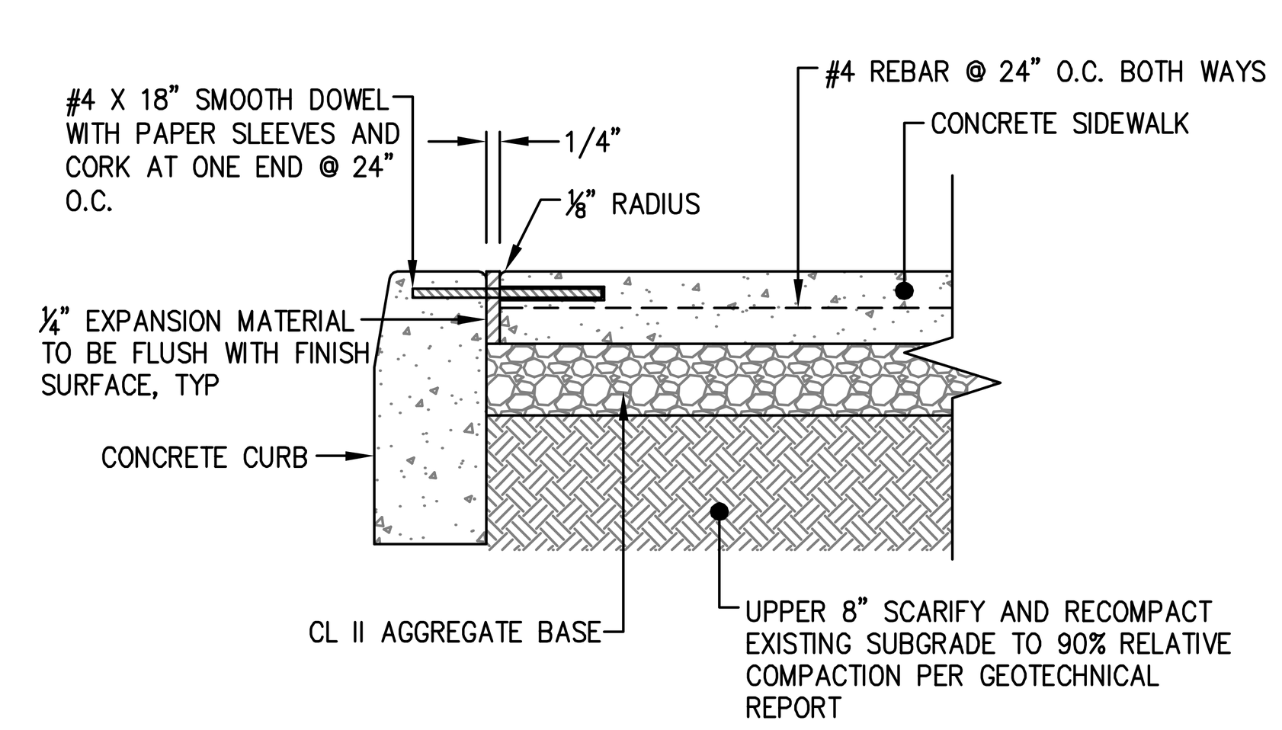
12 NEW CURB TO EXISTING CURB CONNECTION
NTS



9 CURB CUT
NTS



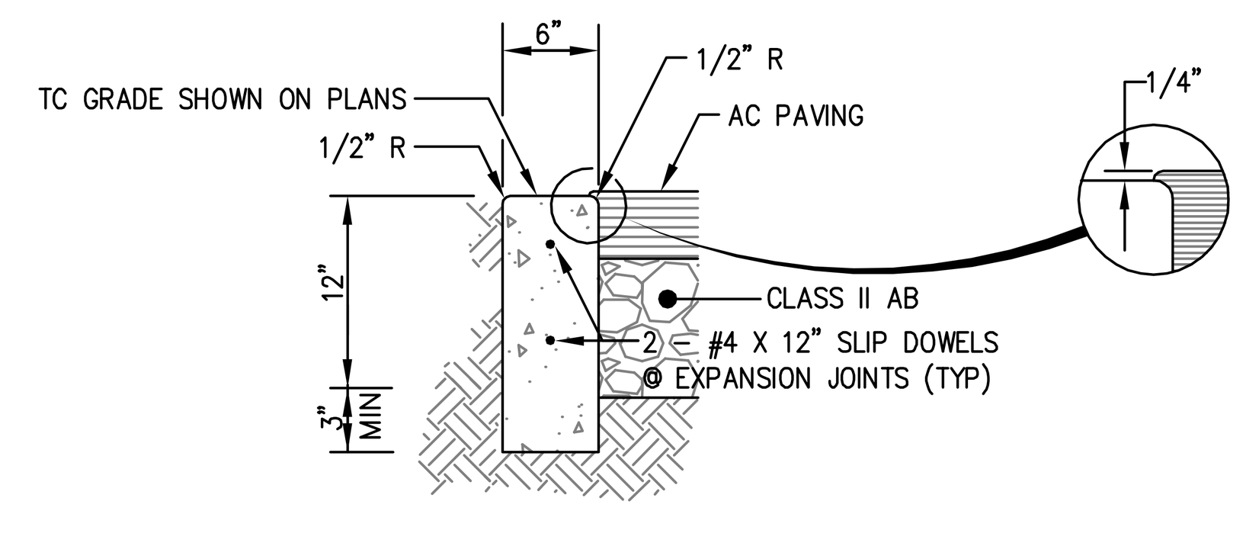
13 CONCRETE ACCESIBLE RAMP
NTS



NOTES:

1. PROVIDE EXPANSION JOINT AT ALL VERTICAL SURFACES AND BACKS OF CURB.
2. SEE DETAIL 11 ON SHEET C7.00 FOR EXPANSION JOINT AT VERTICAL SURFACE.

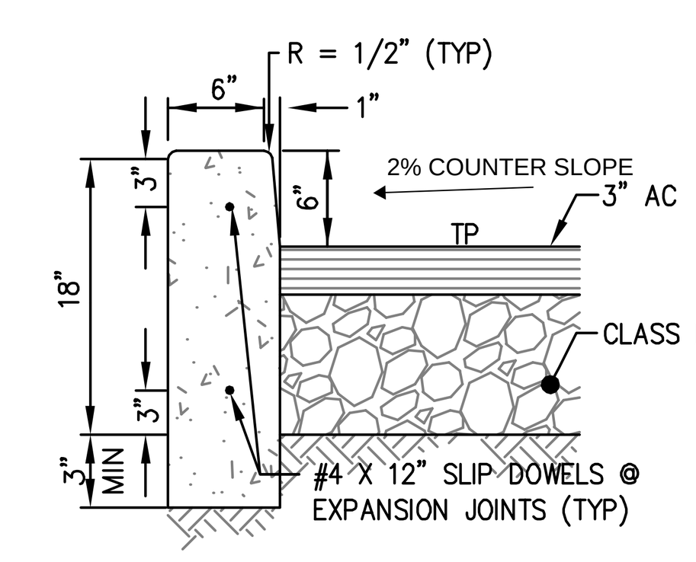
10 EXPANSION JOINT AT CURB
NTS



NOTES:

1. CONCRETE CURBS SHALL BE EMBEDDED AT LEAST 3 INCHES BELOW SOIL SUBGRADE (BELOW THE BOTTOM OF THE AGGREGATE BASE SECTION) IN ANY AREAS WHERE IRRIGATED LANDSCAPE AREAS ARE ADJACENT TO AC PAVEMENTS.

3 FLUSH CURB
NTS



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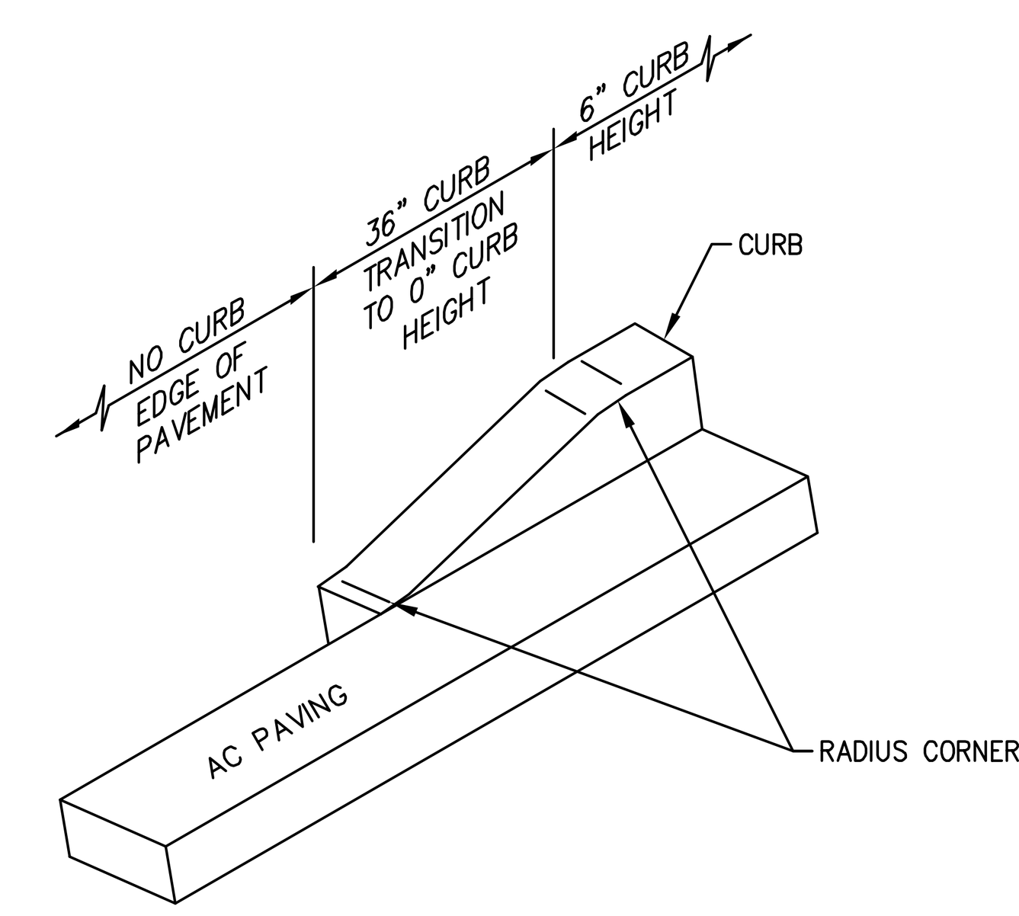
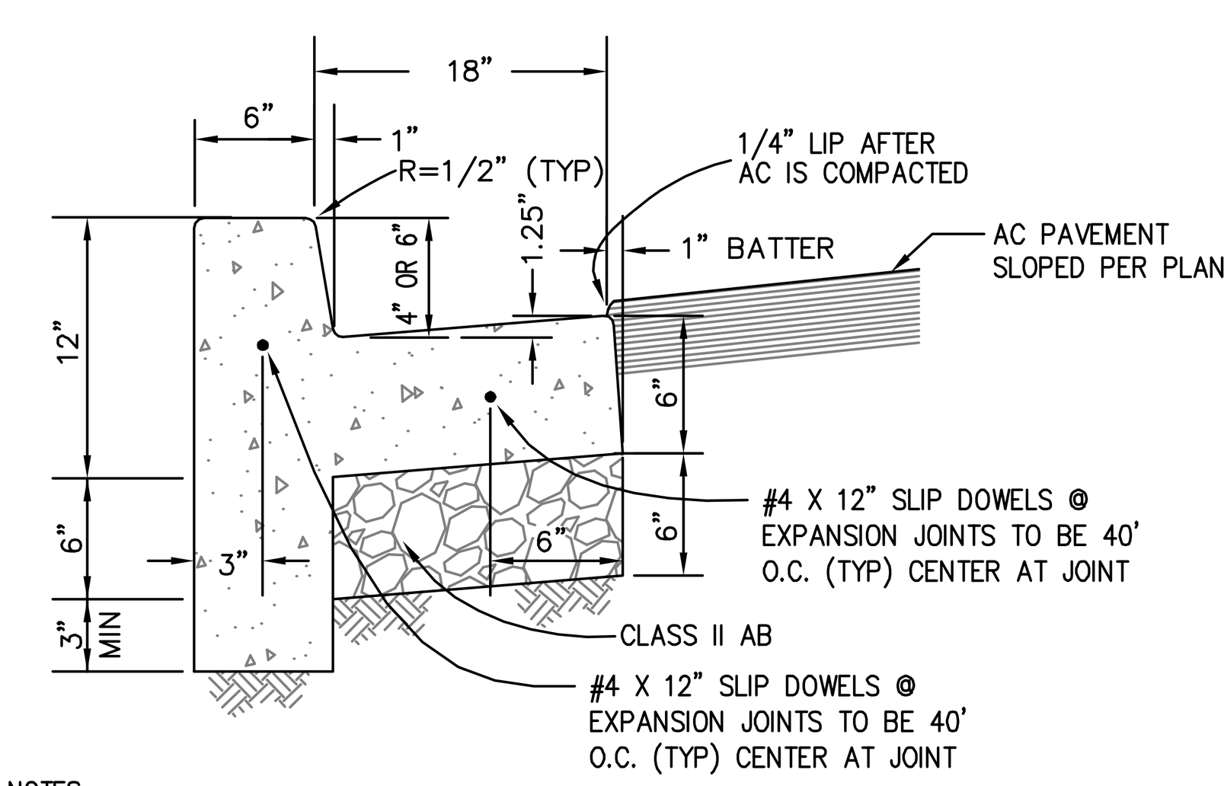
4 VERTICAL CURB
NTS



5 6" TO 0" CURB TRANSITION
NTS



NOTES:

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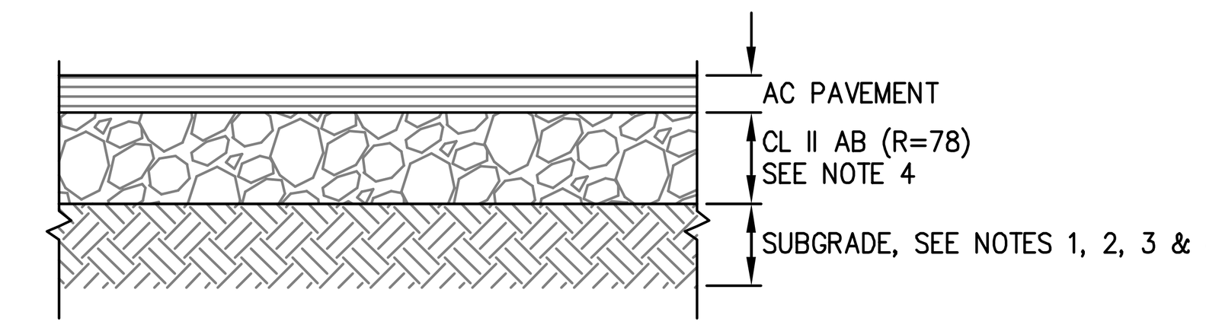
6 CURB & GUTTER
NTS



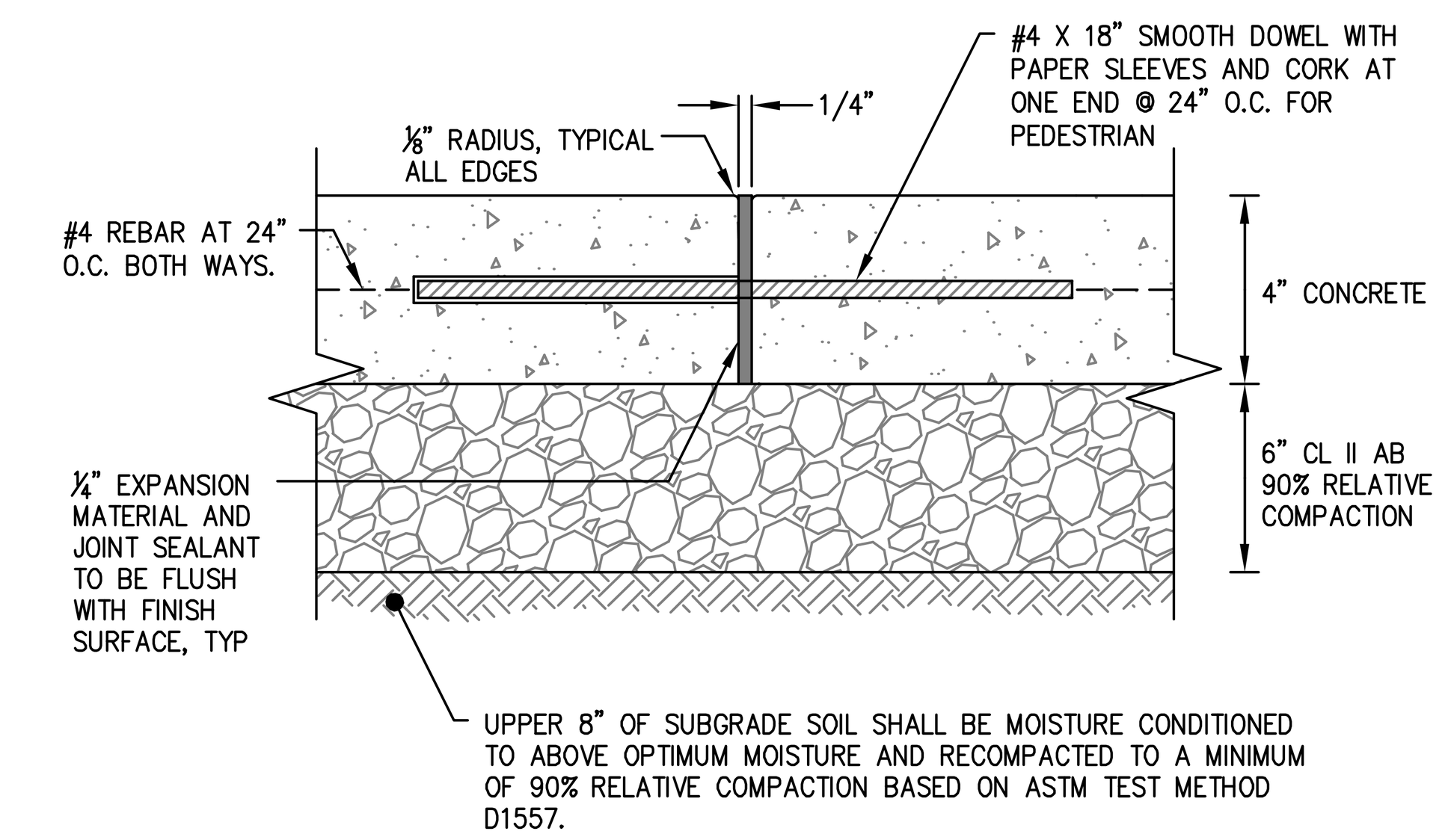
AC PAVEMENT SECTION DESIGN

LOCATION	AC	CL II AB	TI
VEHICULAR ASPHALT PAVING	2.5"	8.5"	4.5
PEDESTRIAN ASPHALT WALKWAY	1.5"	4.0"	–

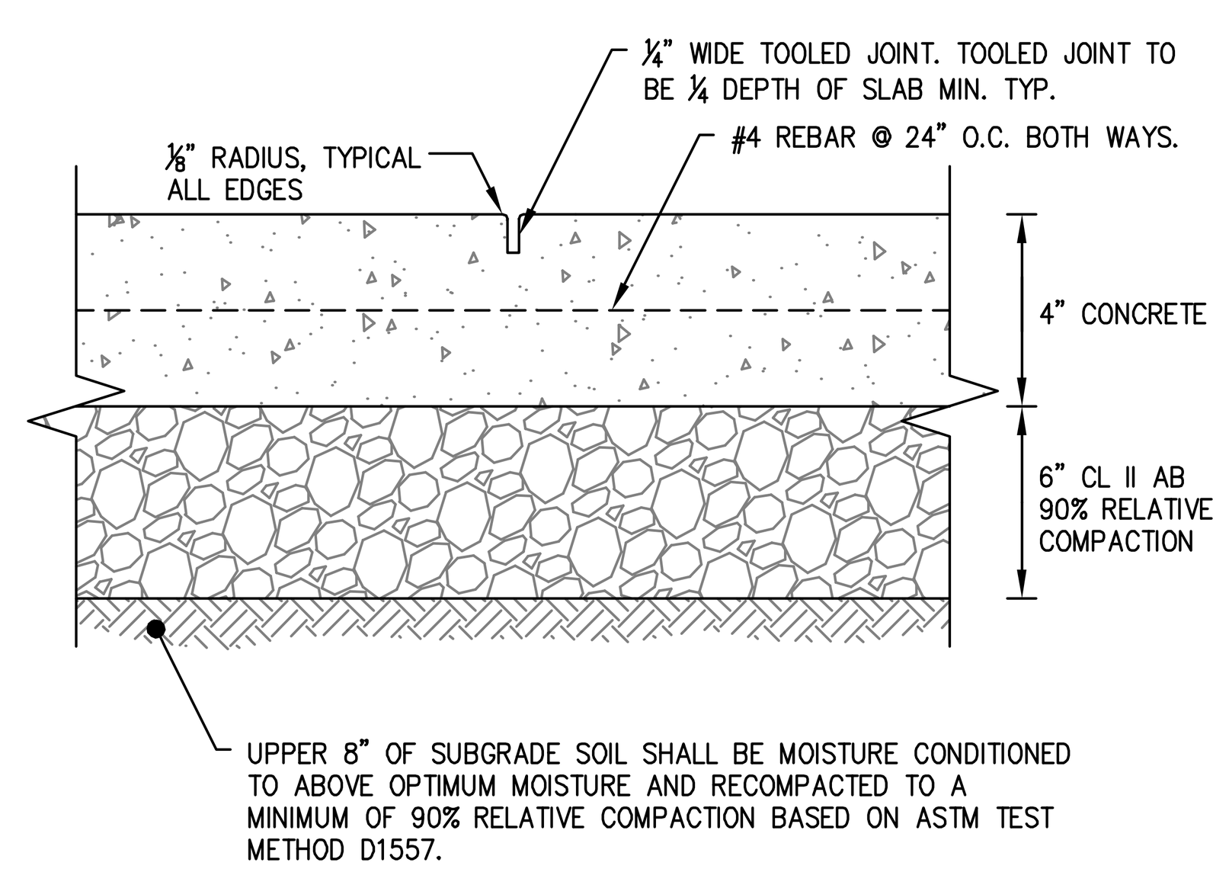
NOTES:

1. THE UPPER TWELVE INCHES OF PARKING LOT SUBGRADE SHALL BE SCARIFIED, MOISTURE CONDITIONED TO ABOVE OPTIMUM MOISTURE CONTENT, AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION, PER GEOTECHNICAL RECOMMENDATIONS.
2. THE UPPER TWELVE INCHES OF SELECT FILL SHALL BE MOISTURE CONDITIONED TO NEAR OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION, PER GEOTECHNICAL RECOMMENDATIONS.
3. THE SUBGRADE SHALL BE STATICALLY ROLLED WITH A HEAVY, SMOOTH DRUM ROLLER TO PROVIDE A SMOOTH FIRM SURFACE, PER GEOTECHNICAL RECOMMENDATIONS.
4. ANY UNSTABLE OR PUMPING SUBGRADE AREAS SHOULD BE SUBEXCAVATED AND PLUGGED WITH BASEROCK OR OVERLAIN WITH A STABILIZING FABRIC SUCH AS MIRAFI 600X. FABRIC INSTALLATION SHOULD BE PERFORMED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE METHOD AND EXTENT OF ANY REQUIRED STABILIZATION WORK SHALL BE EVALUATED BY THE GEOTECHNICAL ENGINEER.
5. CLASS II AGGREGATE BASE SHALL HAVE AN R-VALUE OF AT LEAST 78 AND CONFORM TO THE REQUIREMENTS OF SECTION 26-1.02A OF THE LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS. THE AGGREGATE BASE MATERIAL SHALL BE PLACED IN THIN LIFTS IN A MANNER TO PREVENT SEGREGATION. THE AGGREGATE BASE SHALL ALSO BE UNIFORMLY MOISTURE CONDITIONED AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION TO PROVIDE A SMOOTH, UNYIELDING SURFACE.
6. ASPHALT CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 39 OF THE LATEST EDITION OF CALTRANS STANDARD SPECIFICATIONS.

1 AC PAVEMENT SECTION DESIGN
NTS



EXPANSION JOINT
(EJ)



SCORE JOINT (SJ)

NOTES:

1. INTERRUPT REINFORCING STEEL AT EXPANSION JOINT.
2. LOCATE COLD JOINTS ONLY AT EXPANSION JOINT OR SCORE JOINT LOCATIONS AS INDICATED ON LAYOUT PLAN. LOCATE COLD JOINTS AT EXPANSION JOINTS WHERE POSSIBLE. IF COLD JOINTS ARE LOCATED AT SCORE JOINT LOCATIONS AS SHOWN ON LAYOUT PLAN, REBAR CAN BE EXTENDED THROUGH THE JOINT AND STEEL DOWELS CAN BE ELIMINATED.

2 PEDESTRIAN CONCRETE PAVEMENT
NTS

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modular fabricator:
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civil engineer:
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structural engineer:
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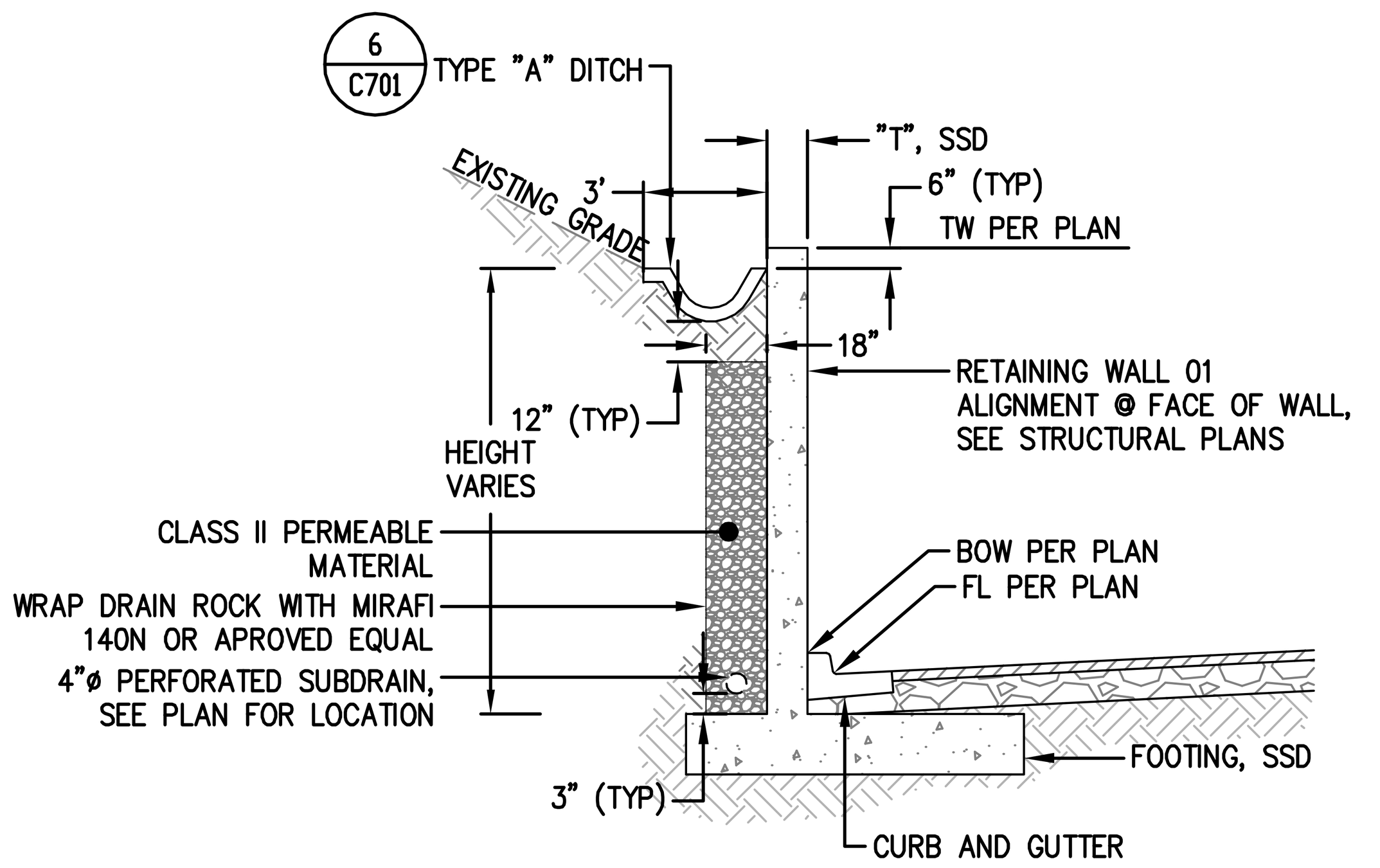
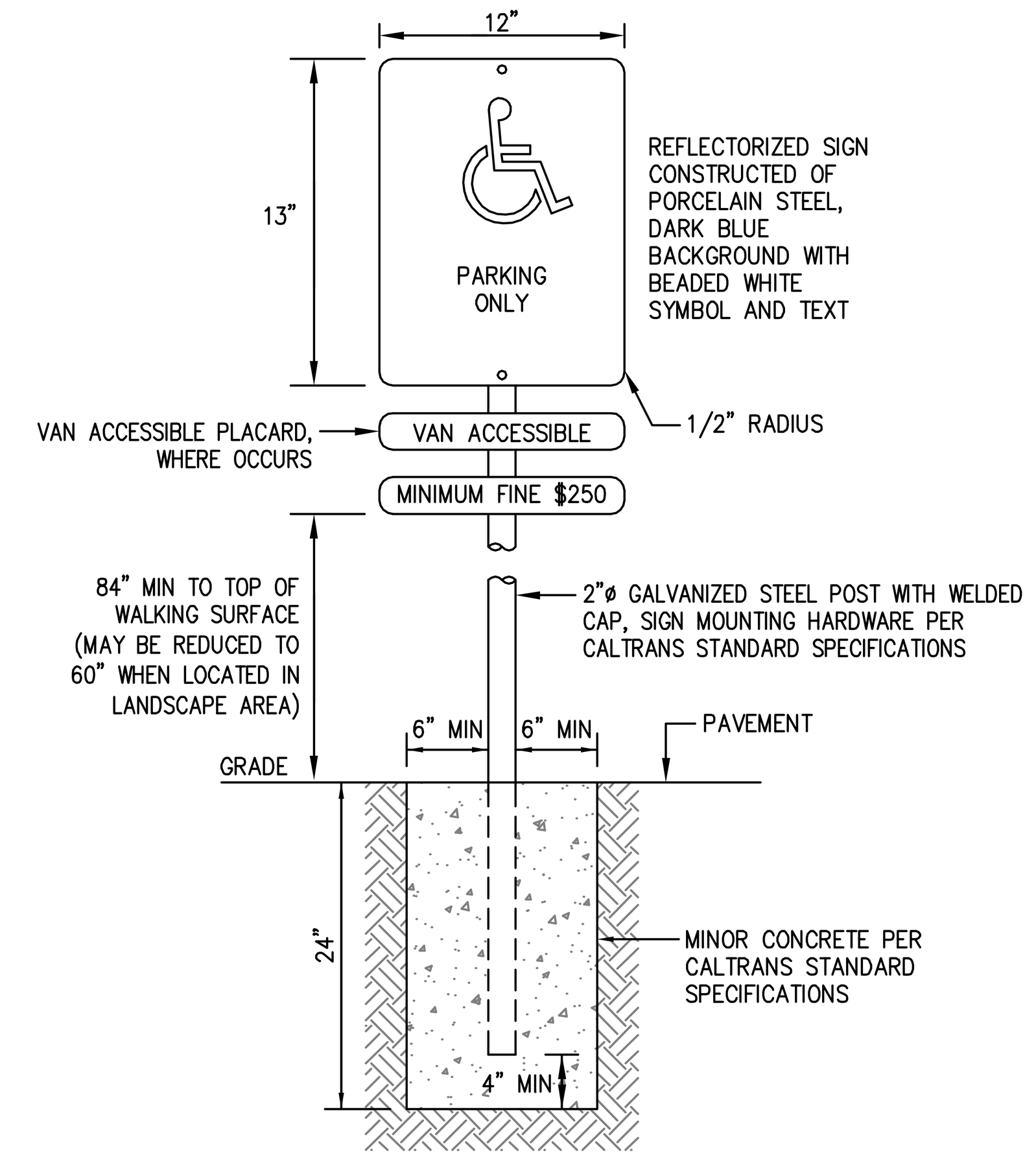
Construction Details
C700
DSA BACKCHECK

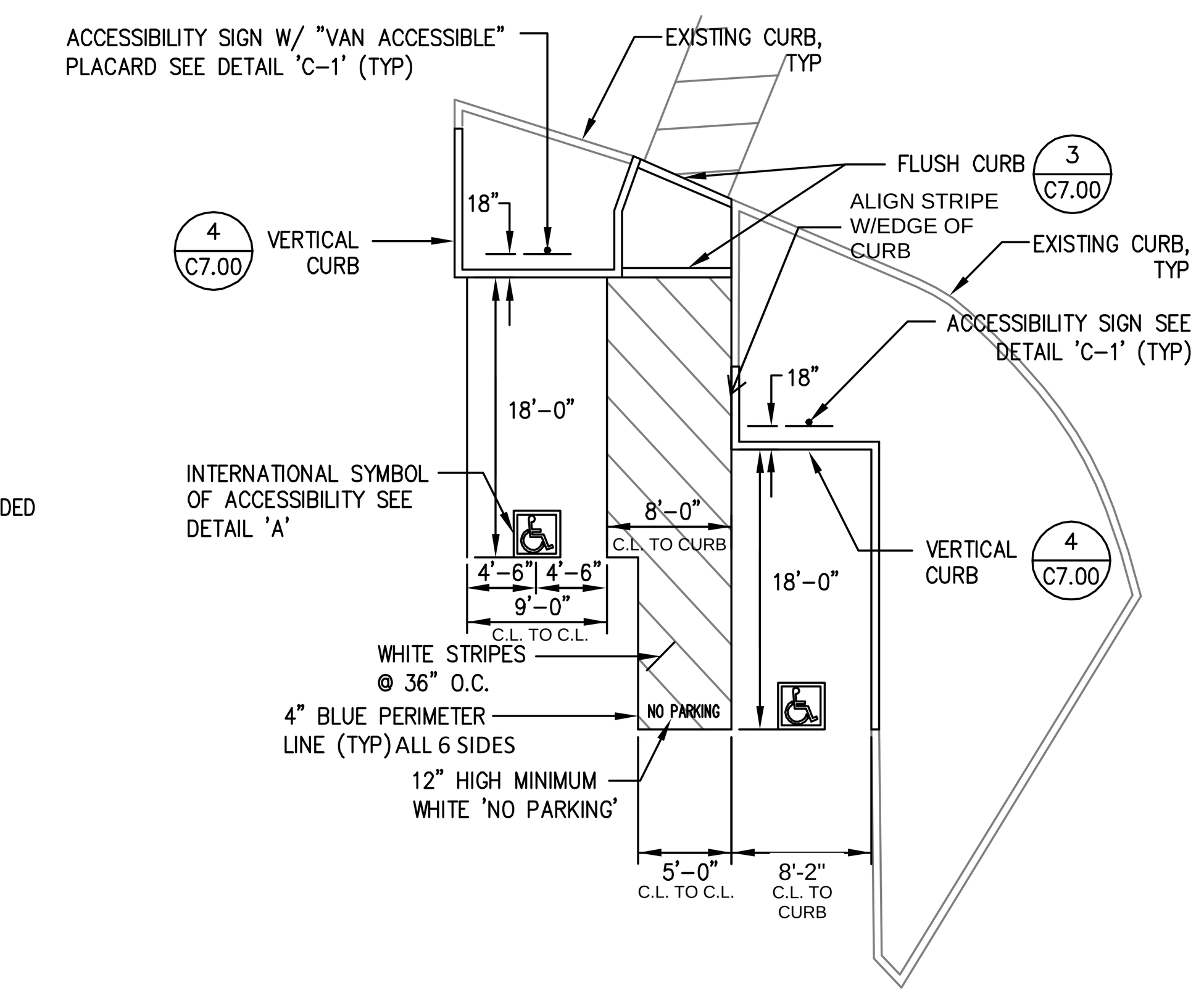
DRAWING NAME: K:\2023\230230_MultiStudio_and_San_Rafael_City_Schools\ENG\Sheets\TK\SVE-TK-C700.dwg (00)
PLOT TIME: 04-19-24 12:03pm PLOTTED BY: tkim



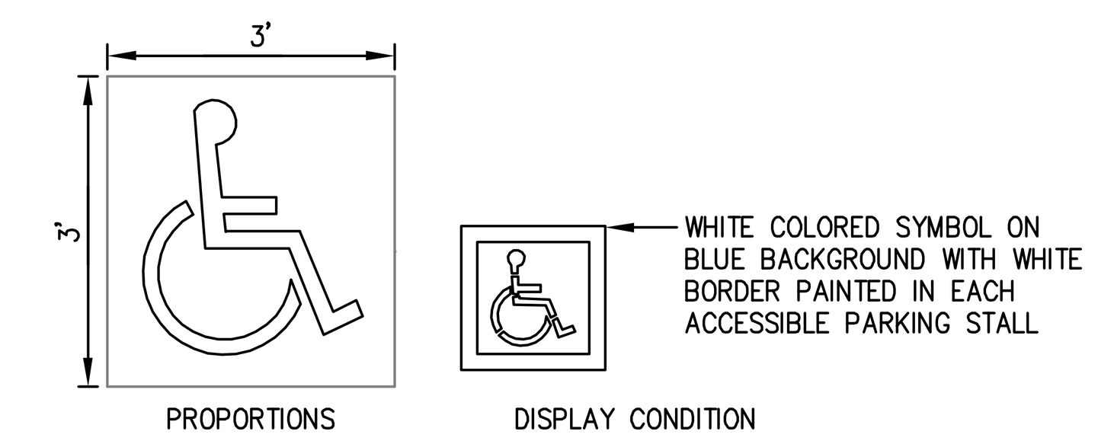
5 — TYPICAL CROSS SECTION - RETAINING WALL 01
STA. 1+00 TO 4+19
N.T.S.



ACCESSIBILITY SIGN
DETAIL 'C-1'



PARKING STALLS

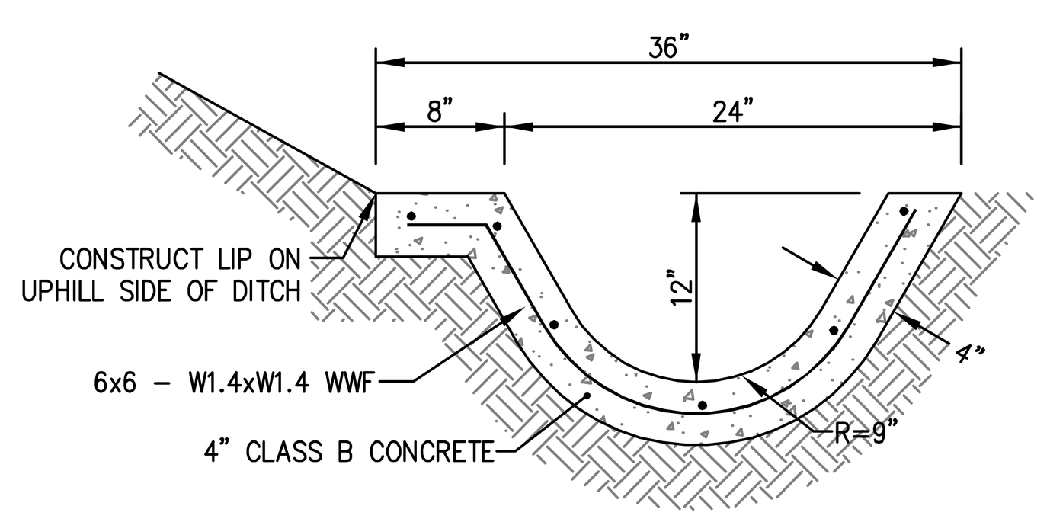


INTERNATIONAL SYMBOL OF ACCESSIBILITY

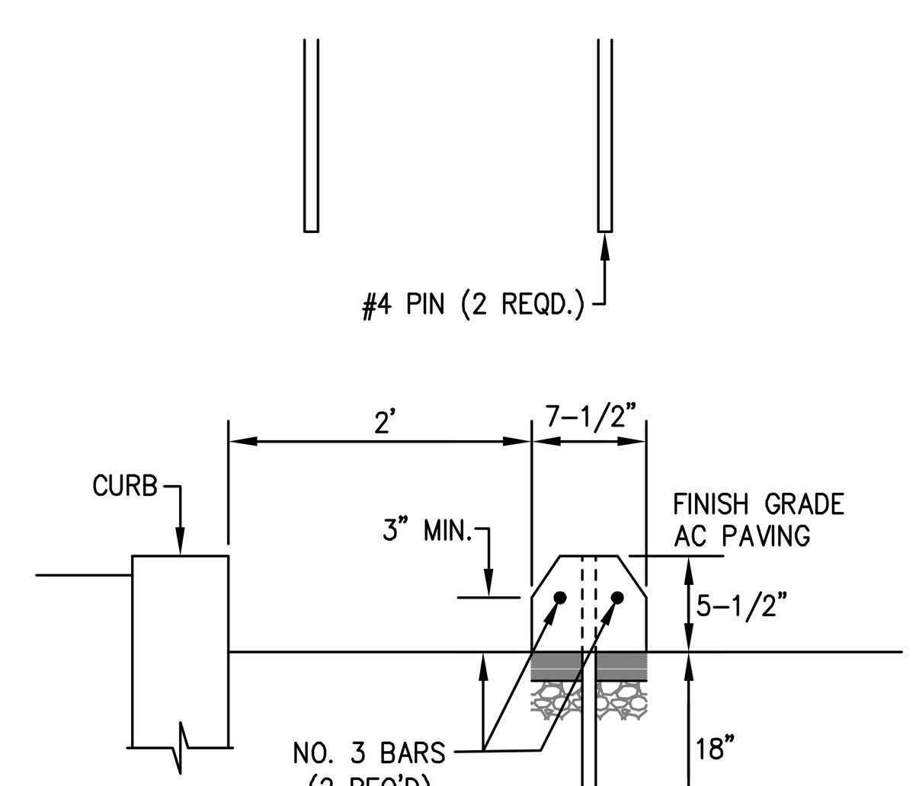
NOTES:

1. EACH PARKING SPACE RESERVED FOR PERSONS WITH DISABILITIES SHALL BE IDENTIFIED BY A REFLECTORIZED SIGN PERMANENTLY POSTED IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL OR SPACE, CONSISTING OF A PROFILE VIEW OF A WHEELCHAIR OCCUPANT IN WHITE ON DARK BLUE BACKGROUND. THE SIGN SHALL NOT BE SMALLER THAN 70 SQUARE INCHES IN AREA AND WHEN IN A PATH OF TRAVEL, SHALL BE POSTED AT A MINIMUM HEIGHT OF 84 INCHES FROM THE BOTTOM OF THE SIGN TO THE PARKING SPACE FINISHED GRADE. SIGNS MAY ALSO BE CENTERED ON THE WALL AT THE INTERIOR OF THE PARKING SPACE AT A MINIMUM HEIGHT OF 60 INCHES FROM THE PARKING SPACE FINISHED GRADE, GROUND, OR SIDEWALK.
2. ALL PARKING STALL AND ACCESS AISLE WIDTHS ARE TAKEN FROM THE CENTER LINE OF THE STRIPING.
3. AN ADDITIONAL SIGN SHALL ALSO BE POSTED IN A CONSPICUOUS PLACE, AT EACH ENTRANCE TO THE OFF- STREET, PARKING FACILITY, OR IMMEDIATELY ADJACENT TO AND VISIBLE FROM EACH STALL. THE SIGN SHALL NOT BE LESS THAN 17 INCHES X 22 INCHES IN SIZE, LETTERING NOT LESS THAN 1 INCH IN HEIGHT, WHICH CLEARLY AND CONSPICUOUSLY STATES THE FOLLOWING:
4. CONTRACTOR SHALL COORDINATE LOCATION OF SIGN WITH TRUSTEE'S REPRESENTATIVE.
5. VAN STALLS SHALL BE DESIGNATED BY AN ADDITIONAL SIGN STATING "VAN ACCESSIBLE" MOUNTED BELOW THE REFLECTORIZED SIGN.

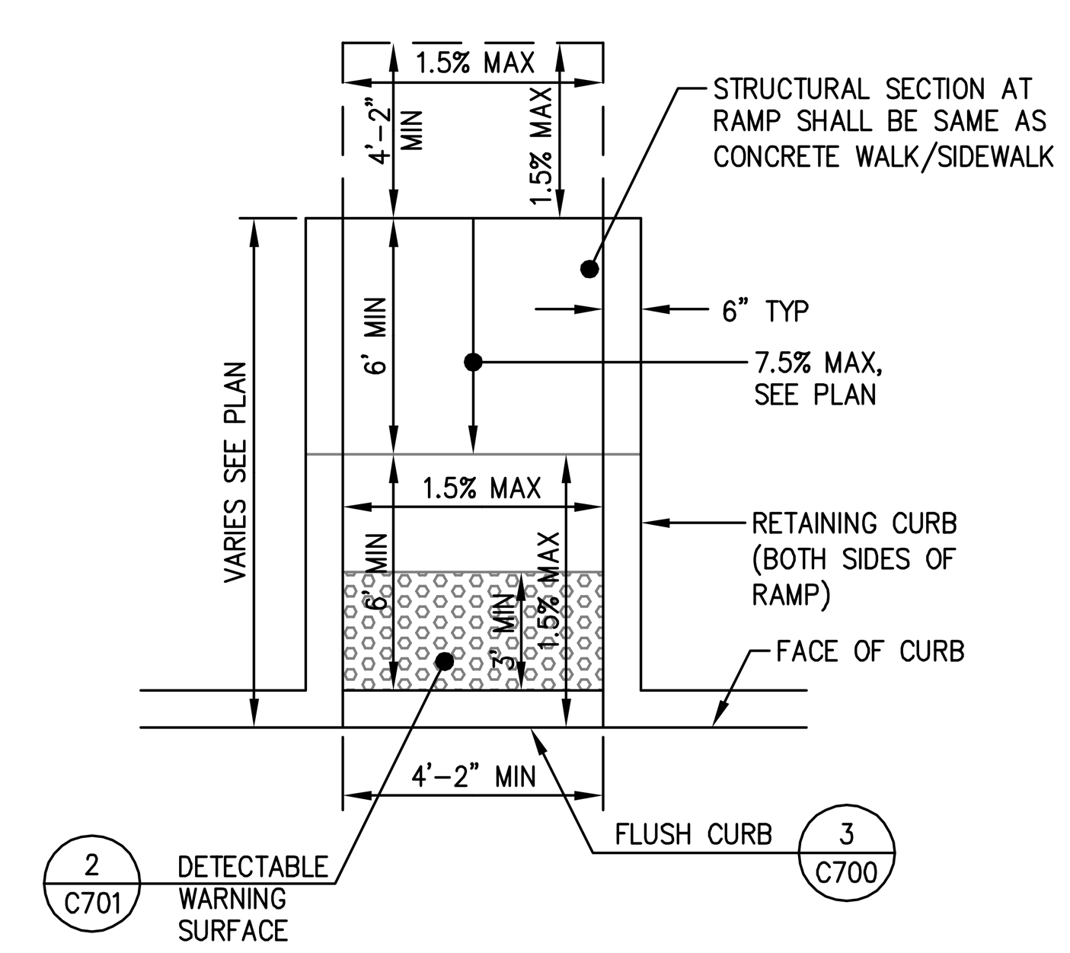
1 — ACCESSIBLE PARKING STALLS
NTS



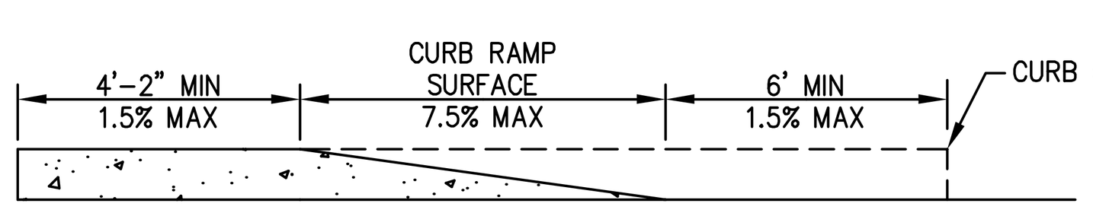
6 — TYPE A DITCH
NTS



3 — WHEEL STOP
NTS



CASE F CURB RAMP

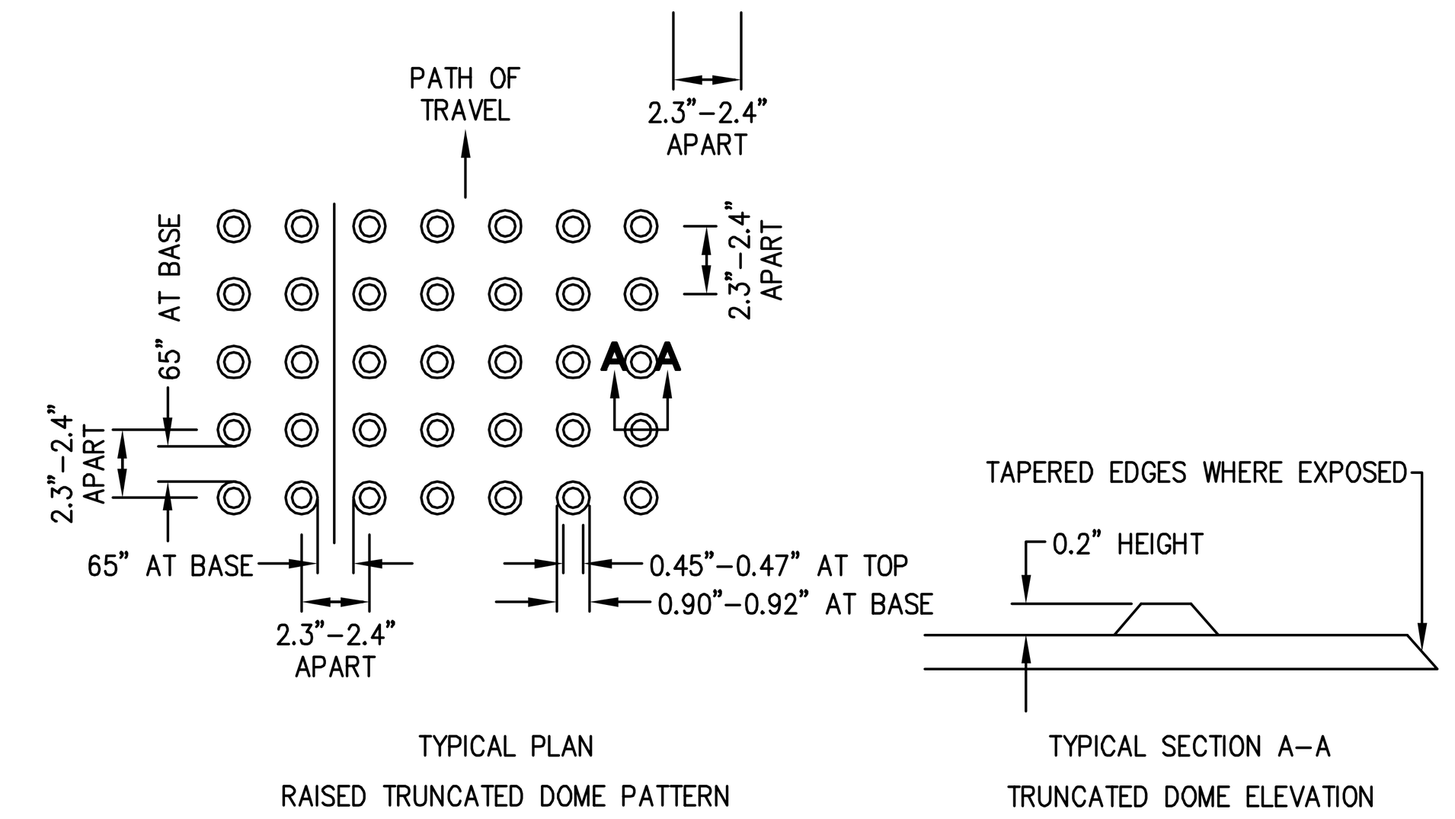


CASE F - SIDE ELEVATION

NOTES:

1. A "CURB RAMP" IS DEFINED AS THE ENTIRE CONCRETE SURFACE AREA WHICH INCLUDES THE RAMP AND THE FLARED SIDES. THE "RAMP" IS DEFINED AS THE 4-'2" WIDE MINIMUM CENTER PORTION INCLUDING THE DETECTABLE SURFACE, AND SHALL LIE IN A SLOPED PLANE OF 7.5% MAXIMUM AND CROSS SLOPE NOT TO EXCEED 1.5%. THE "FLARED SIDE" IS DEFINED AS THE AREA ON EITHER SIDE OF THE RAMP AND SHALL LIE ON A SLOPED PLANE OF 9% MAXIMUM MEASURED ALONG THE CURB. THE CURB RAMP SURFACES SHALL HAVE A SURFACE FLATNESS TOLERANCE OF 1/4" PER 10-FOOT STRAIGHT EDGE MAXIMUM.
2. WHEN VERTICAL OBSTRUCTIONS ARE PRESENT NEAR THE CURB AT THE END OF THE FLARED SIDE, OR WHEN THE CURB RAMP IS DIAGONAL TO THE CURB THAT WILL RESULT IN AN EXTREMELY LONG FLARED SIDE SURFACE, THEN THE AFFECTED FLARED SIDE MAY BE CUT AND TERMINATED PERPENDICULAR TO THE CURB, PROVIDED THAT THE REQUIRED SLOPE IS ACHIEVED ON EACH OF THE RESULTING PLANES.
3. A LEVEL LANDING OF 4'-2" MINIMUM DEPTH, 1.5% MAXIMUM CROSS SLOPE, SHALL BE PROVIDED AT THE LOWER END OF THE RAMP AND OVER THE FULL WIDTH OF THE RAMP TO ALLOW SAFE EGRESS. THE ALGEBRAIC SUM OF THE OPPOSING SLOPES BETWEEN TWO ADJACENT SURFACES SHALL NOT EXCEED 9.33%.
4. THE BOTTOM OF THE RAMP SHALL BE FLUSH WITH THE LOWER LANDING (NO HALF-INCH LIP).
5. A LEVEL LANDING 4'-2" DEEP MINIMUM, 1.5% MAXIMUM CROSS SLOPE IN EACH DIRECTION, SHALL BE PROVIDED AT THE UPPER END OF EACH CURB RAMP TO ALLOW SAFE EGRESS FROM THE RAMP SURFACE. THE WIDTH OF THE LEVEL LANDING SHALL BE AT LEAST AS WIDE AS THE WIDTH OF THE RAMP.
6. NO NEW VERTICAL OBSTRUCTIONS MAY BE LOCATED IN THE CURB RAMP.
7. NEW UTILITY BOXES SHALL NOT BE PLACED WITHIN THE RAMP.
8. THE SURFACE OF THE CURB RAMP AND DETECTABLE SURFACE MATERIAL SHALL BE STABLE, FIRM AND SLIP RESISTANT. THE CONCRETE CURB RAMP SURFACE SHALL BE BROOM FINISHED TRANSVERSE TO THE AXIS OF THE RAMP AND SHALL BE SLIGHTLY ROUGHER THAN THE FINISH ON THE ADJACENT SIDEWALK SURFACE. ALL CURB RAMP SURFACES SHALL BE SLIP RESISTANT, INCLUDING CONCRETE OR OTHER APPROVED SURFACE MATERIALS, AND THE DETECTABLE WARNING MATERIAL MEASURED AT THE TOP OF DOMES SURFACES AND THE SURFACE BETWEEN DOMES. SLIP RESISTANCE SHALL BE MEASURED IN ACCORDANCE WITH ASTM C1028 AND SHALL ACHIEVE A STATIC COEFFICIENT OF FRICTION OF 0.8 OR GREATER, WET OR DRY.
9. THE DEPTH OF THE COMBINED CONCRETE CURB AND GUTTER SHALL BE EQUAL TO THE DEPTH OF THE EXISTING PAVEMENT STRUCTURAL SECTION OR 6 INCHES, WHICHEVER IS GREATER.
10. THE RAMP CENTER LINE AND PATH OF TRAVEL MUST BE PARALLEL TO THE CROSSWALK. THE FULL WIDTH OF THE RAMP SHALL LIE WITHIN THE CROSSWALK AREA. IT IS DESIRABLE THAT THE LOCATION OF THE RAMP BE AS CLOSE AS POSSIBLE TO THE CENTER OF THE CROSSWALK.

4 — CURB RAMP
NTS



NOTES:

1. CAST IN PLACE DETECTABLE/TACTILE WARNING SURFACE TILES SHALL BE VITRIFIED POLYMER COMPOSITE WITH ALUMINUM OXIDE CAST-IN-PLACE TILES BY ARMOR-TILE, OR APPROVED EQUAL. EXISTING ENGINEERED AND FIELD TESTED PRODUCTS, WHICH HAVE BEEN IN SUCCESSFUL SERVICE FOR A PERIOD OF THREE YEARS ARE SUBJECT TO COMPLIANCE WITH SPECIFIED TILES, AND MAY BE INCORPORATED IN THE WORK IF THEY MEET OR EXCEED THE TEST CRITERIA AND CHARACTERISTICS OF THE ABOVE SPECIFIED TILE. COLOR SHALL BE YELLOW (CONFORMING TO FEDERAL STANDARD 595C, COLOR NO. 33538). SUBMIT PRODUCT DATA FOR APPROVAL. INSTALL PER MANUFACTURER'S SPECIFICATION.
2. THE EDGE OF THE DETECTABLE WARNING SURFACE NEAREST THE STREET SHALL BE BETWEEN 6" AND 8" FROM THE GUTTER FLOWLINE.

2 — DETECTABLE WARNING SURFACE
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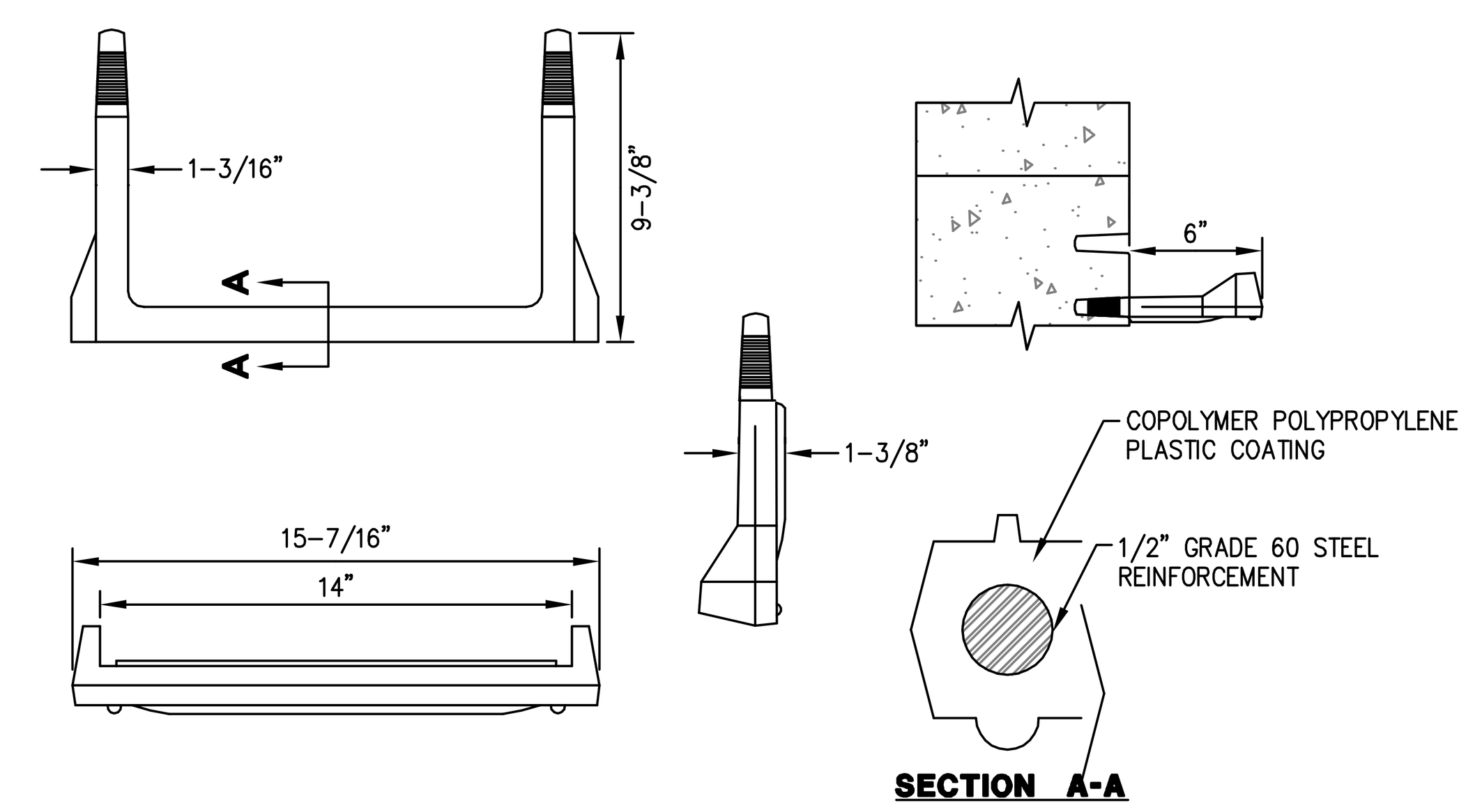
Revisions

NUMBER	DESCRIPTION	DATE

Construction Details

C701

DSA BACKCHECK

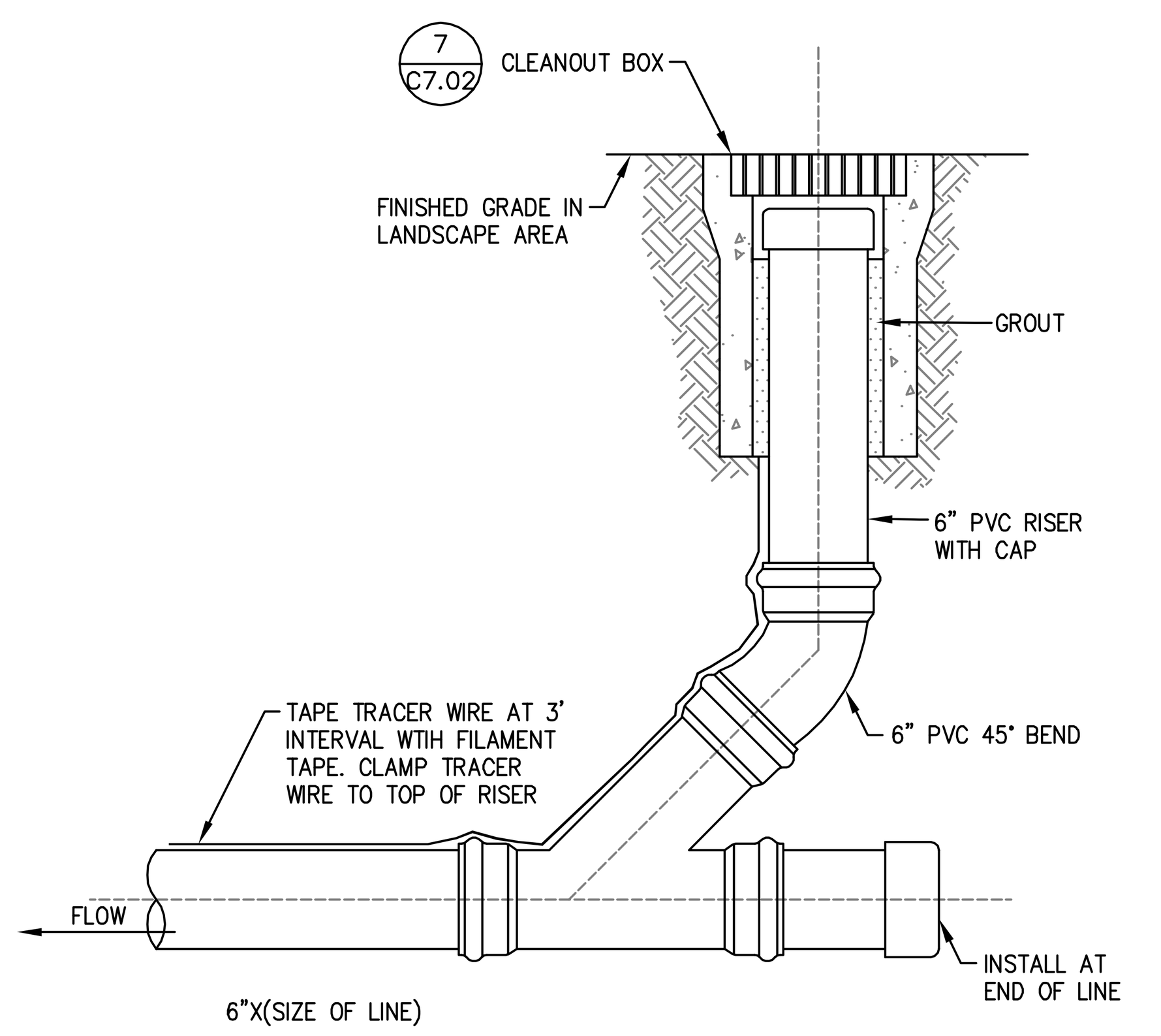


NOTES:

1. STEPS TO BE CAST IN PLACE DURING MANUFACTURE OF PRECAST PIPE RINGS.
2. INSERT STEPS THROUGH FORMWORK PRIOR TO POURING CAST-IN-PLACE STRUCTURES.
3. STEPS ARE AS MANUFACTURED BY M.A. INDUSTRIES, INC. OR EQUAL.

5 - MANHOLE STEP FOR PRECAST MANHOLE

NTS

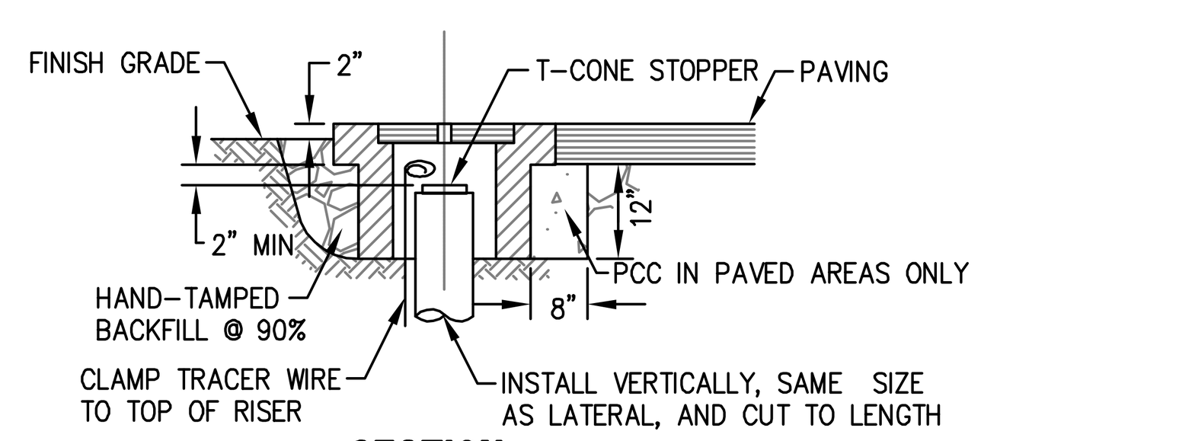


NOTES:

1. ALL PVC PIPE TO BE SDR 26.

6 - CLEANOUT

NTS



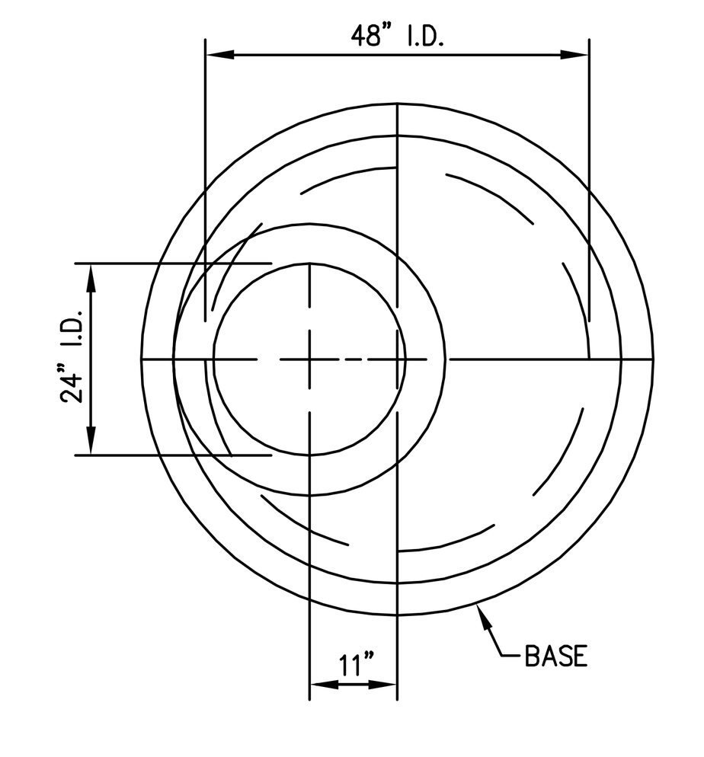
SECTION

NOTES:

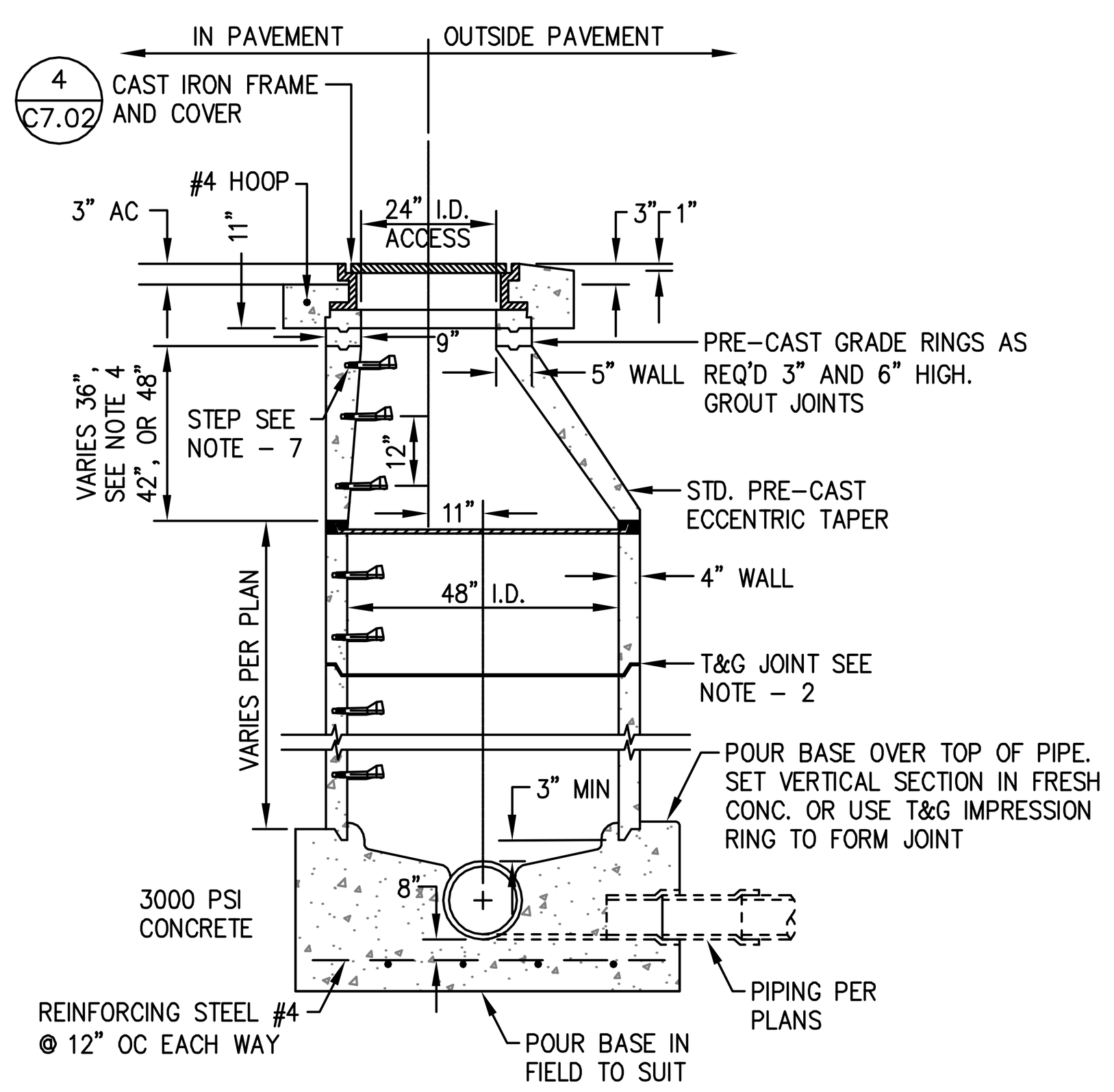
1. PROVIDE STEEL TRAFFIC COVER FOR BOX WHEN INSTALLED IN LOCATION SUBJECT TO VEHICULAR LOADING.
2. CHRISTY CONCRETE TYPE F8 METER BOX WITH F8D LID, MARKED "SEWER" OR "STORM".
3. TAPE TRACER WIRE AT 3' INTERVAL WITH FILAMENT TAPE.
4. LATERAL AND RISER SHALL BE AWWA C-906, OR 11 HDPE.
5. TO CONNECT NEW WYE TO EXISTING CLAY LATERAL, USE RUBBER COUPLING WITH CONTINUOUS STAINLESS STEEL BAND.

7 - CLEANOUT BOX

NTS



PLAN VIEW



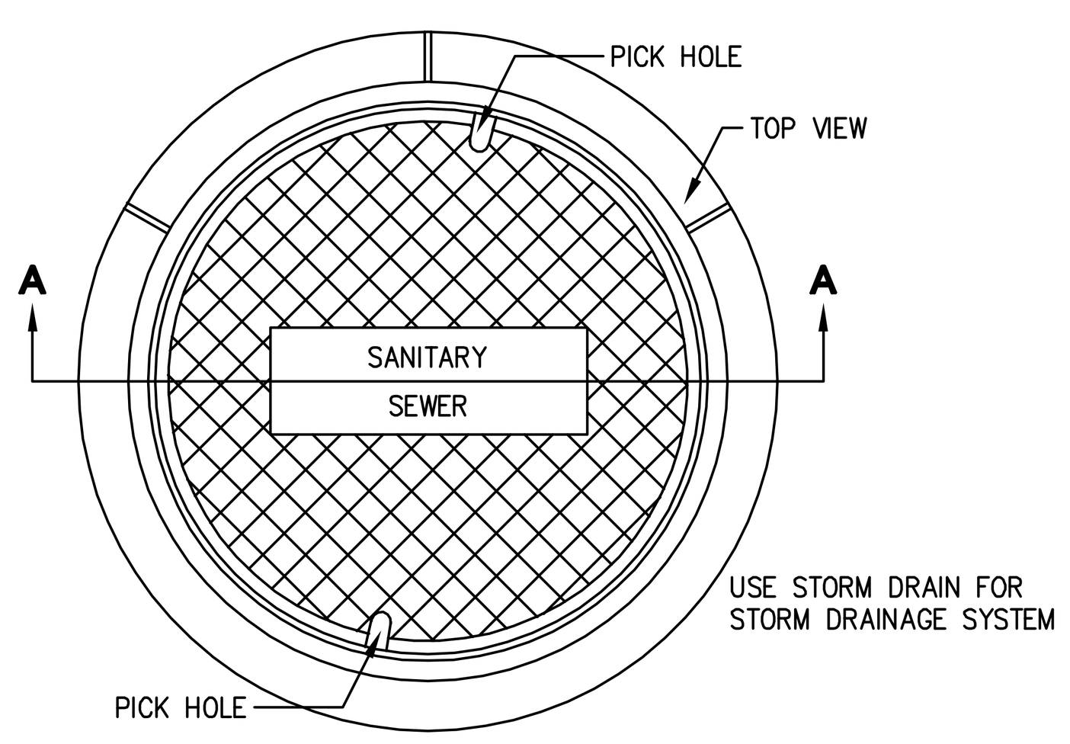
SECTION

NOTES:

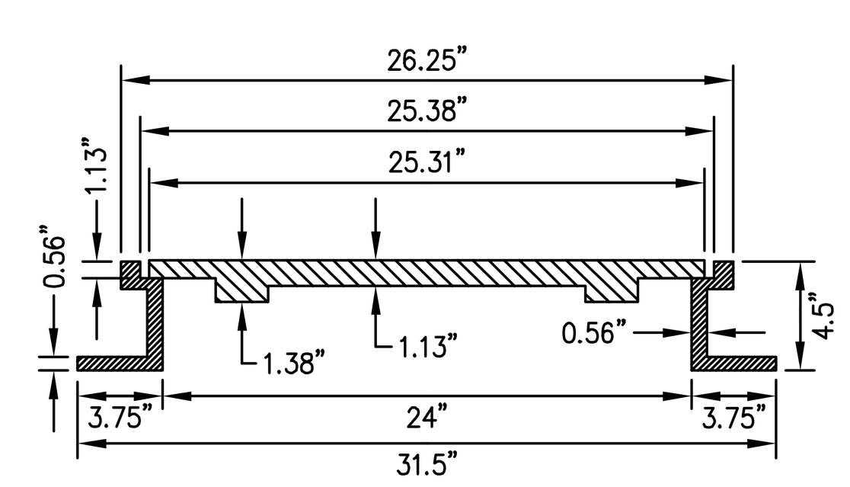
1. PRE-CAST MANHOLE MATERIAL SHALL BE MANUFACTURED TO ASTM SPECIFICATION C478.
2. GROUT JOINTS WITH 1:3 MORTAR MIX OR USE RAM-NEK JOINT COMPOUND.
3. A 36" TAPER MAY BE COMBINED WITH A 12" VERTICAL TO FORM A 48" TAPER SECTION.
4. ALL CONCRETE JOINTS SHALL BE LEANED, WETTED, AND MORTARED PRIOR TO SETTING THE NEXT SECTION. THE JOINTS SHALL BE PACKED, TOWELLED AND BRUSHED WHILE THE MORTAR IS PLASTIC.
5. MANHOLE SHALL BE SET TO GRADE SUBSEQUENT TO PLACING AC OR RCC.
6. XYPEX CONCENTRATE/CRYSTALLINE COATING ON INTERIOR CONCRETE SURFACES.
7. STEPS NOT REQUIRED IN MANHOLES 3.5 FEET OR LESS IN DEPTH.

3 - MANHOLE [PIPES 6" TO 21"]

NTS



PLAN



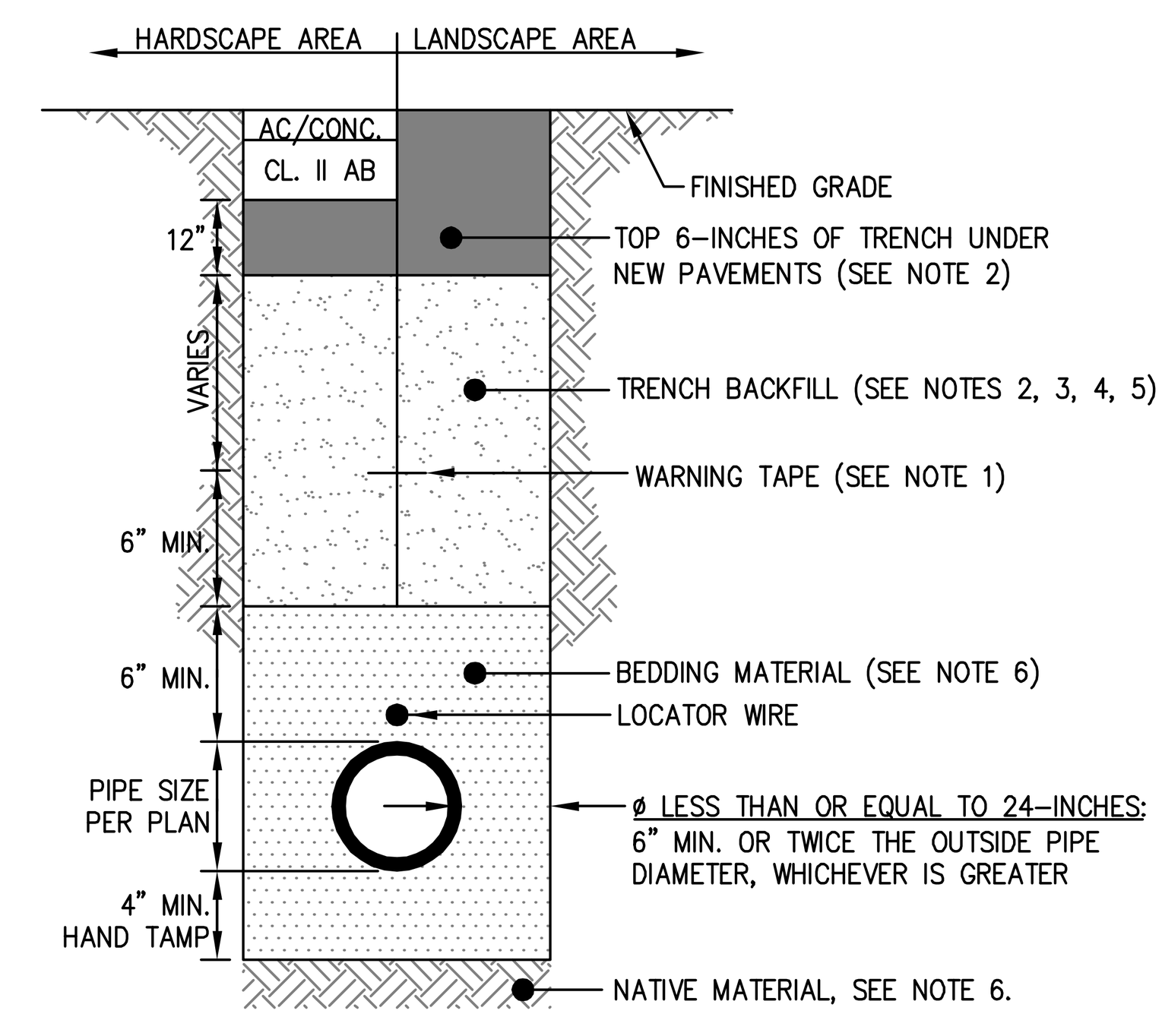
SECTION A-A

NOTES:

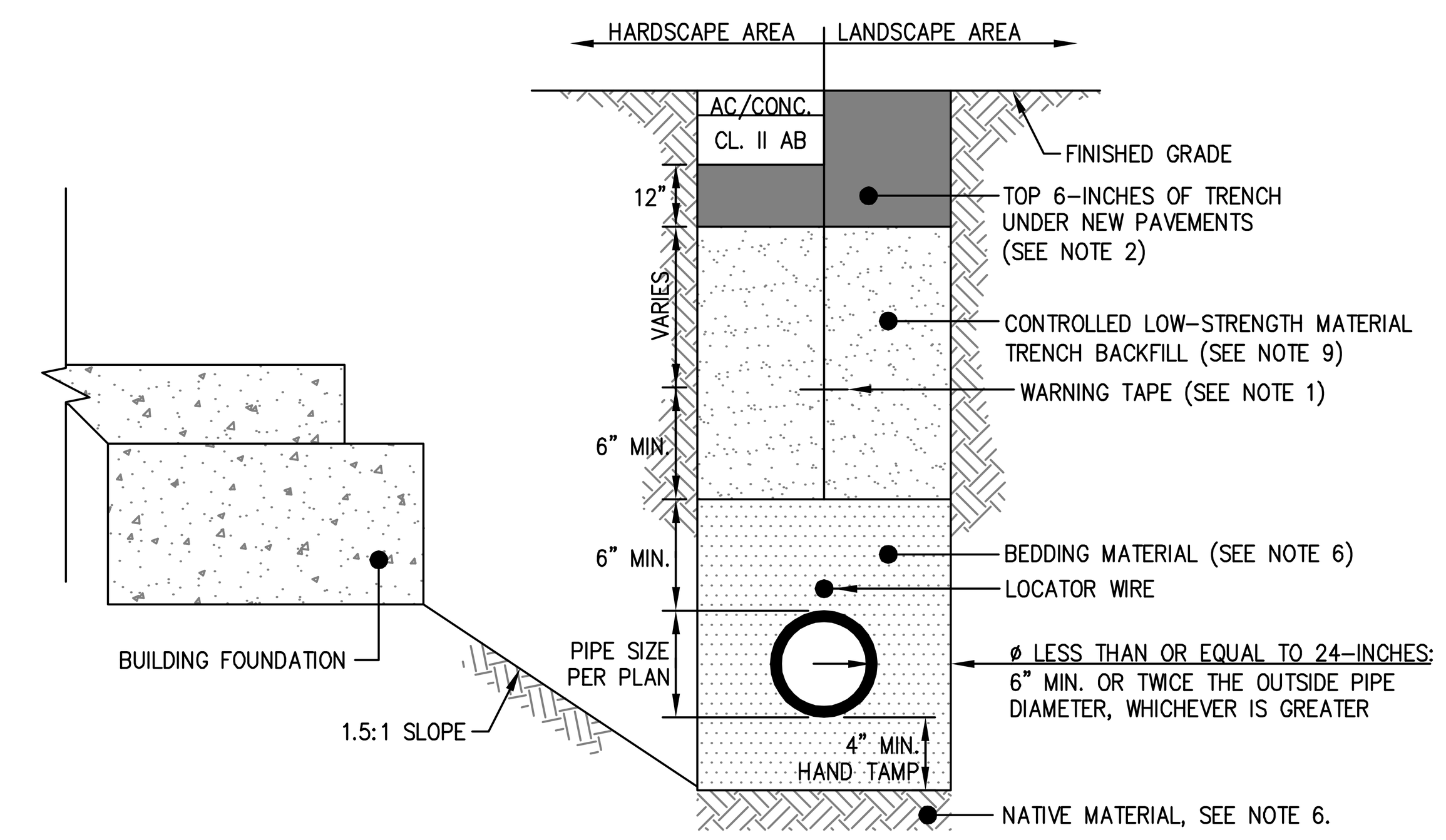
1. ALL MATERIAL USED IN MANUFACTURING SHALL CONFORM TO A.S.T.M. A48, CLASS 30.
2. ALL CASTINGS TO BE COMPLETELY CLEANED AND PAINTED WITH ASPHALTIC VARNISH, AFTER MANUFACTURE.
3. USE CAST IRON PHOENIX P-1090, D&L SUPPLY A-1024, OR EQUAL.

4 - MANHOLE FRAME AND COVER

NTS



TYPICAL UTILITY TRENCH



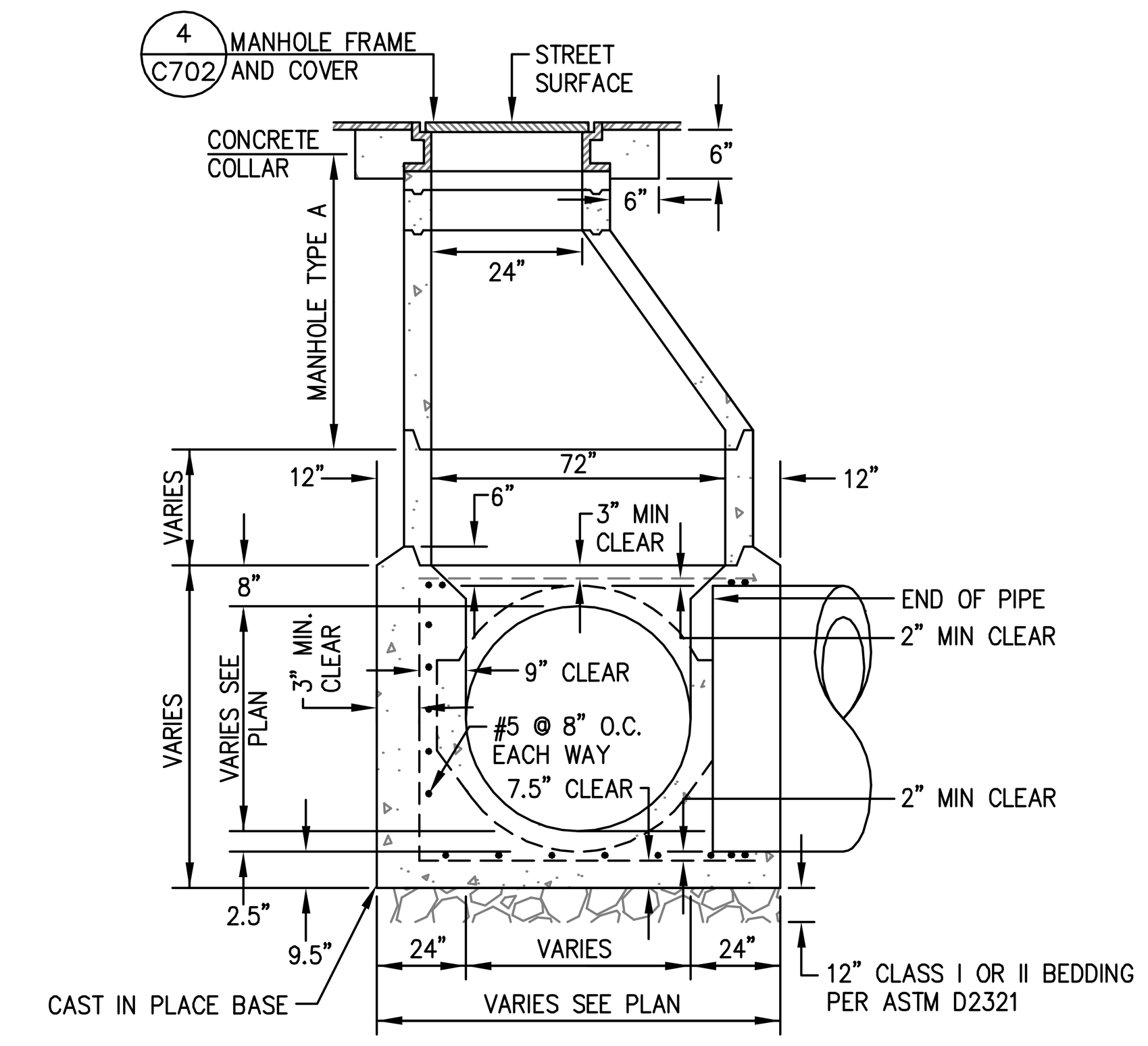
ADJACENT TO BUILDING FOUNDATION

NOTES:

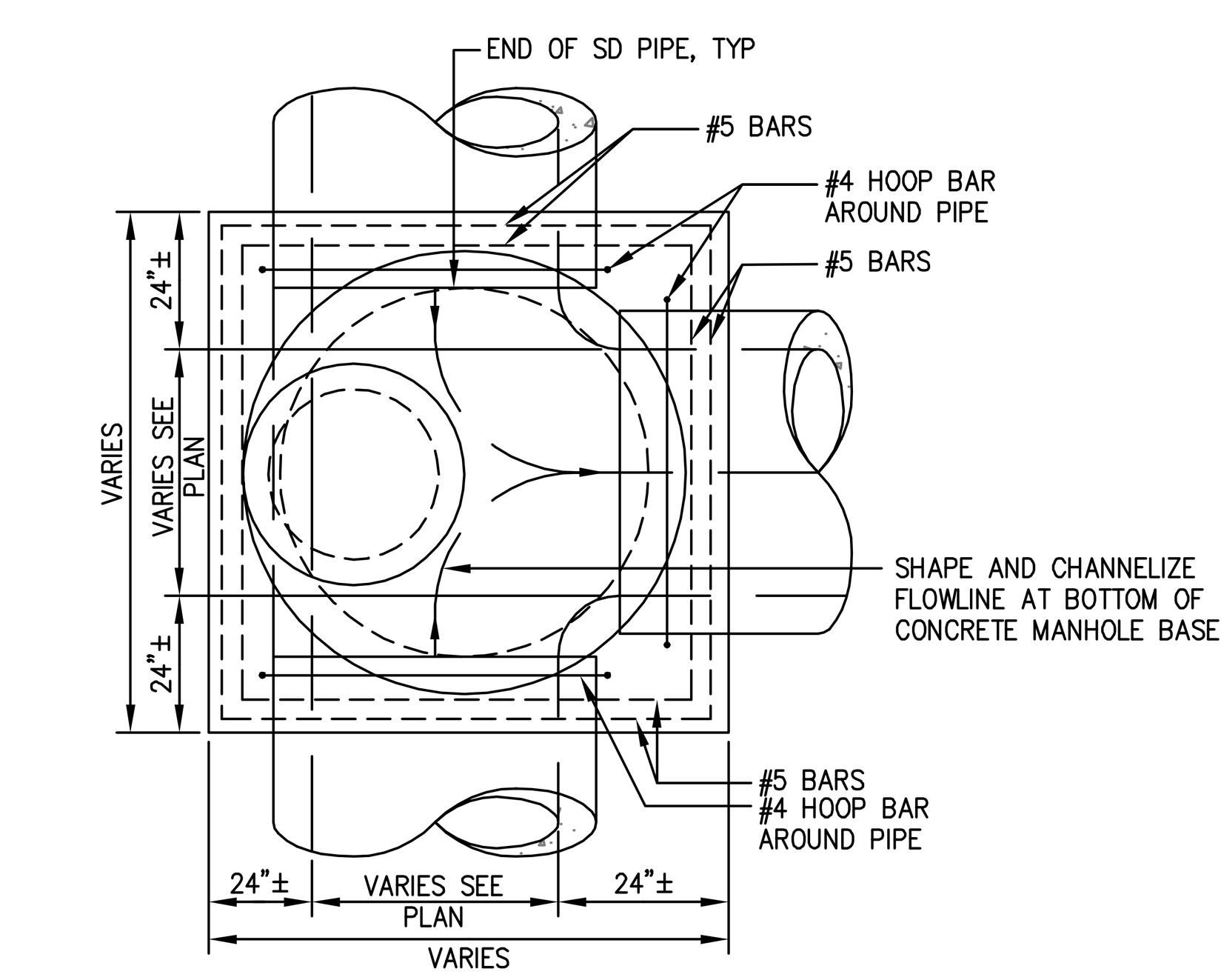
1. PLACE WARNING TAPE 12" ABOVE PIPE.
2. UTILITY TRENCHES SHALL BE BACKFILLED WITH ENGINEERED FILL PLACED IN LIFTS NOT EXCEEDING EIGHT INCHES IN UNCOMPACTED THICKNESS, EXCEPT THICKER LIFTS MAY BE USED WITH THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
3. IN PAVEMENT AREAS, THE UPPER TWELVE INCHES OF TRENCH BACKFILL SHALL BE MOISTURE CONDITIONED TO ABOVE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION FOR BACKFILL CONSISTING OF ON-SITE SOILS, PER GEOTECHNICAL RECOMMENDATIONS. THE UPPER TWELVE INCHES OF SELECT BACKFILL SHALL BE MOISTURE CONDITIONED TO NEAR OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION, PER GEOTECHNICAL RECOMMENDATIONS.
4. BACKFILL CONSISTING OF ON-SITE SOILS AND SELECT BACKFILL SHALL BE MOISTURE CONDITIONED TO ABOVE OPTIMUM MOISTURE CONTENT AND COMPACTED TO AT LEAST 90 PERCENT RELATIVE COMPACTION, PER GEOTECHNICAL RECOMMENDATIONS.
5. WATER JETTING TO ACHIEVE THE REQUIRED LEVEL OF BACKFILL COMPACTION SHALL NOT BE PERMITTED, PER GEOTECHNICAL RECOMMENDATIONS.
6. UTILITY LINES SHALL BE PROPERLY BEDDED AND SHADED WITH GRANULAR MATERIAL, SAND OR PEA GRAVEL. THE BEDDING LAYER SHALL BE AT LEAST 4 INCHES THICK AND THE UTILITY LINES SHALL BE SHADED WITH THE GRANULAR MATERIALS TO A MINIMUM OF 6 INCHES ABOVE THE UTILITY LINE. THE BEDDING AND SHADING LAYERS SHALL BE COMPACTED USING A VIBRATORY COMPACTOR BEFORE SUBSEQUENT BACKFILL IS PLACE, PER GEOTECHNICAL RECOMMENDATIONS.
7. ALL ASPECTS OF UTILITY TRENCHING SHALL BE PERFORMED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER'S FIELD REPRESENTATIVES.
8. THIS DETAIL IS APPLICABLE FOR STORMDRAIN, SANITARY SEWER, DOMESTIC WATER, AND FIRE WATER UTILITIES ONLY.
9. THE PORTION OF THE UTILITY TRENCH (EXCLUDING BEDDING) THAT IS BOTTOMED BELOW THE 1.5:1 LINE CAN BE BACKFILLED WITH CONTROLLED LOW-STRENGTH MATERIAL WITH A 28-DAY UNCONFINED COMPRESSIVE STRENGTH OF AT LEAST 100 POUNDS PER SQUARE INCH OR CLASS II AB BASE COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION.

1 - TRENCH DETAIL

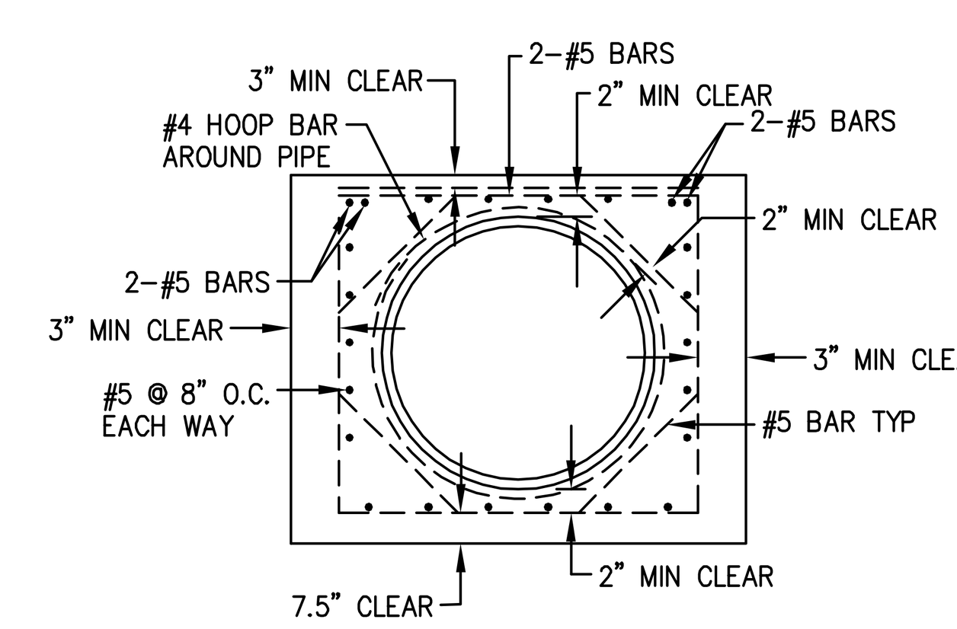
NTS



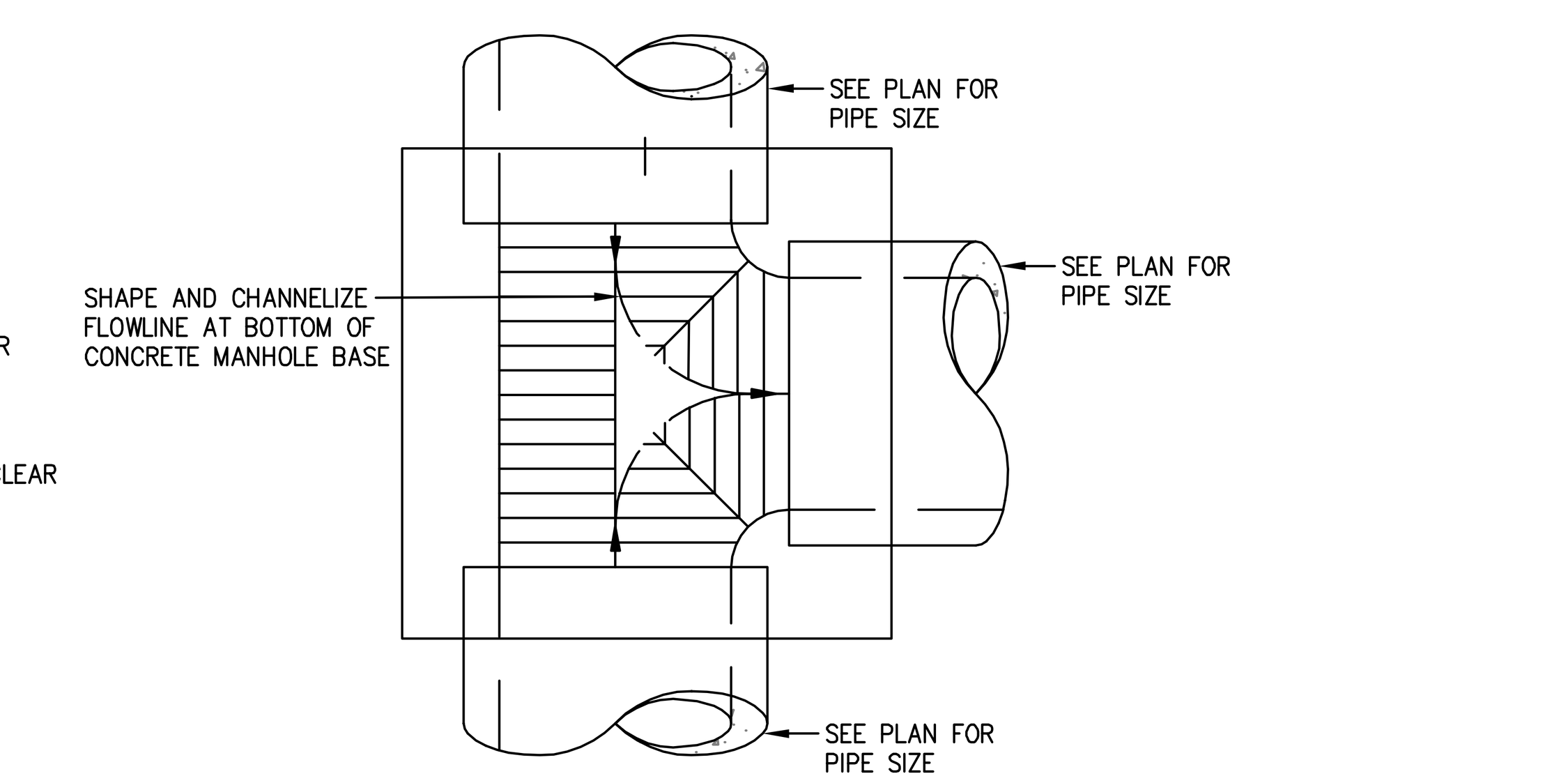
SECTION



PLAN CASE 3



STEEL PLACEMENT SECTION



PLAN VIEW CHANNELIZATION

NOTES:

1. CONCRETE SHALL BE CLASS A.
2. PRECAST MANHOLE STRUCTURES SHALL BE FABRICATED IN AN APPROVED PCI CERTIFIED PLANT.
3. ALL MANHOLES LOCATED IN AREAS OF VEHICULAR TRAFFIC SHALL BE HS20-44 RATED WITH RATING MARKED ON THE STRUCTURE.
4. ALL JOINTS SHALL BE MADE WATERTIGHT WITH NEOPRENE GASKETS OR RAM-NECK.
5. MINIMUM CROWN ELEVATIONS OF SMALLER DIAMETER INLET PIPE SHALL BE NO LESS THAN THE CROWN ELEVATION OF THE OUTLET PIPE WITHOUT APPROVAL OF THE CITY ENGINEER.
6. LAY PIPE THROUGH MANHOLE WHEN POSSIBLE.
7. TOP OF PIPE TO BE REMOVED WITHIN MANHOLE. TRIM TO NEAT LINE AND FINISH OFF WITH GROUT TO LEAVE A SMOOTH FINISH.
8. PROVIDE A MINIMUM OF TWO MANHOLE RINGS/JOINTS AT ALL ENTRY POINTS TO MANHOLES.
9. REINFORCED CONCRETE MANHOLE SECTIONS SHALL BE PRECAST, AND SHALL CONFORM TO ASTM C-478.
10. REINFORCING BARS SHALL BE LOW-ALLOY STEEL DEFORMED BARS CONFORMING TO THE REQUIREMENTS IN ASTM DESIGNATION: A 706/A 706 M, EXCEPT THAT DEFORMED OR PLAN BILLET-STEEL BARS CONFORMING TO THE REQURIEMENTS IN ASTM DESIGNATION: A 615/A 615 M, GRADE 40 MIN.
9. SHAPE AND CHANNELIZE ALL STRUCTURES WITH TROWEL FOR SMOOTH TRANSITION.
10. PROVIDE #4 HOOP BAR AROUND ALL PIPES AT INLETS/OUTLETS AT WALLS OF STRUCTURES.

2 - MANHOLE [PIPE 36" AND GREATER]

NTS

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multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

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Issue Date: April 19, 2024

Revisions

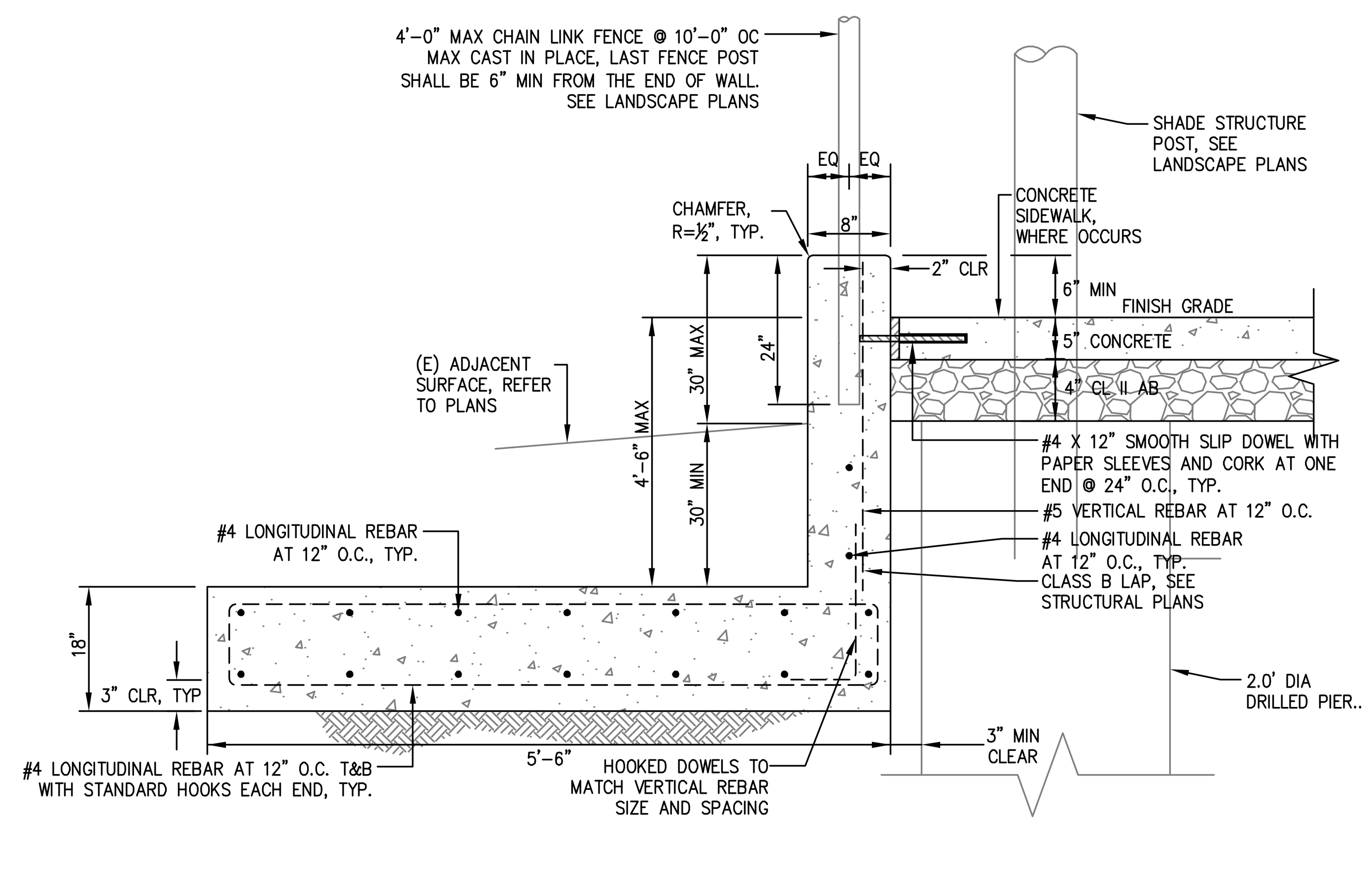
NUMBER	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

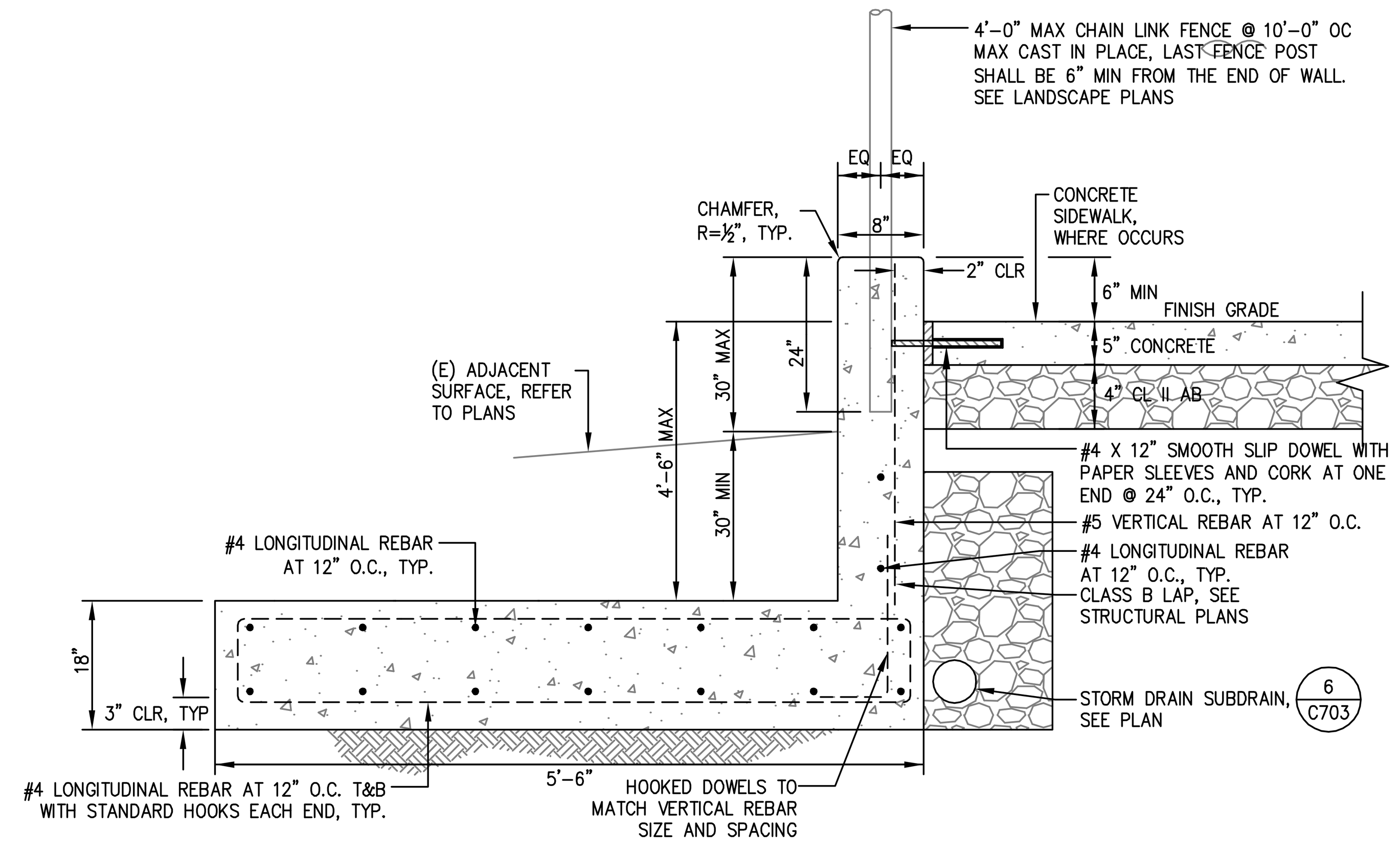
Construction Details

C702

DSA BACKCHECK



RETAINING WALL AT COLUMN

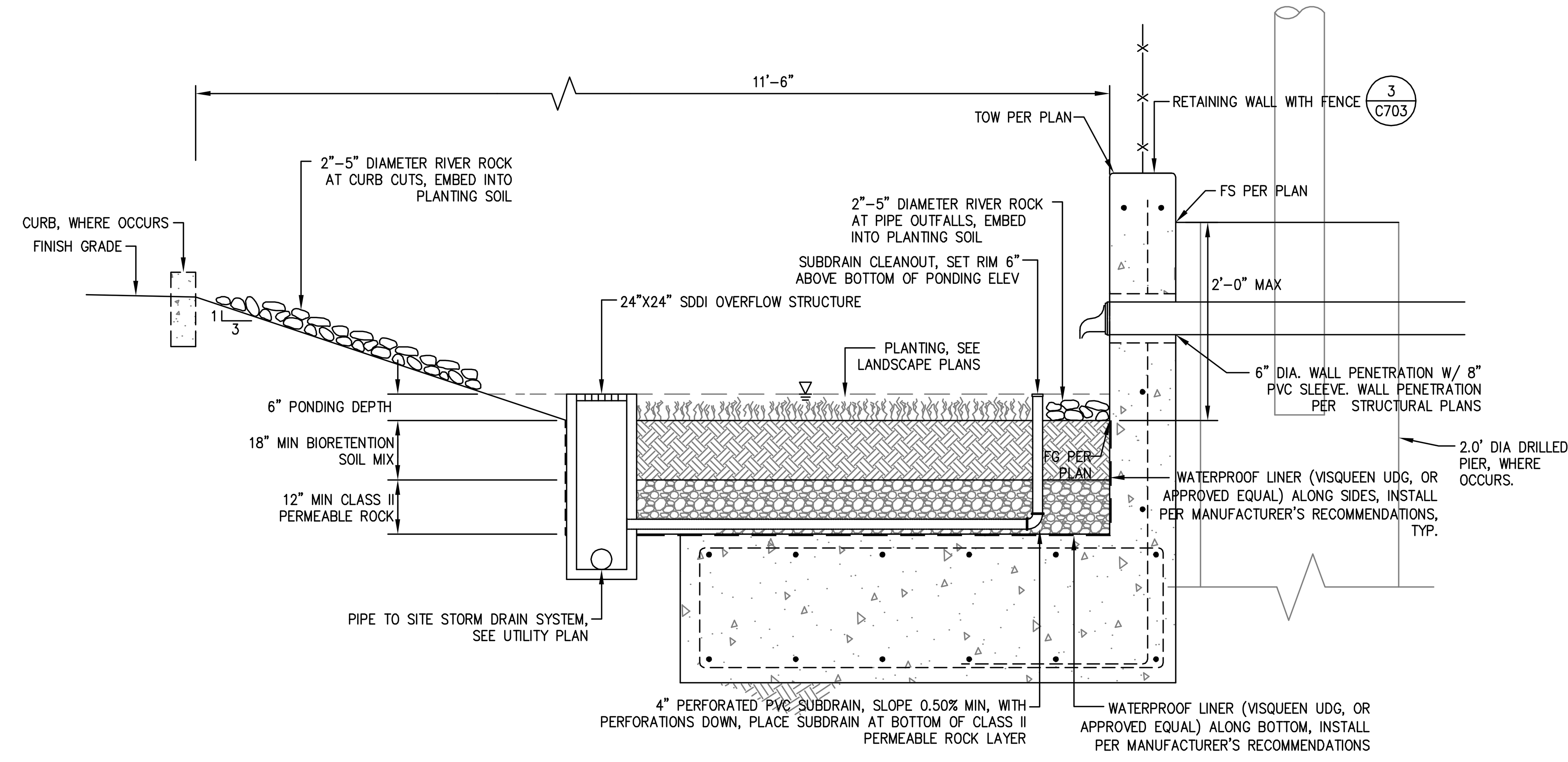


RETAINING WALL W/ SUBDRAIN

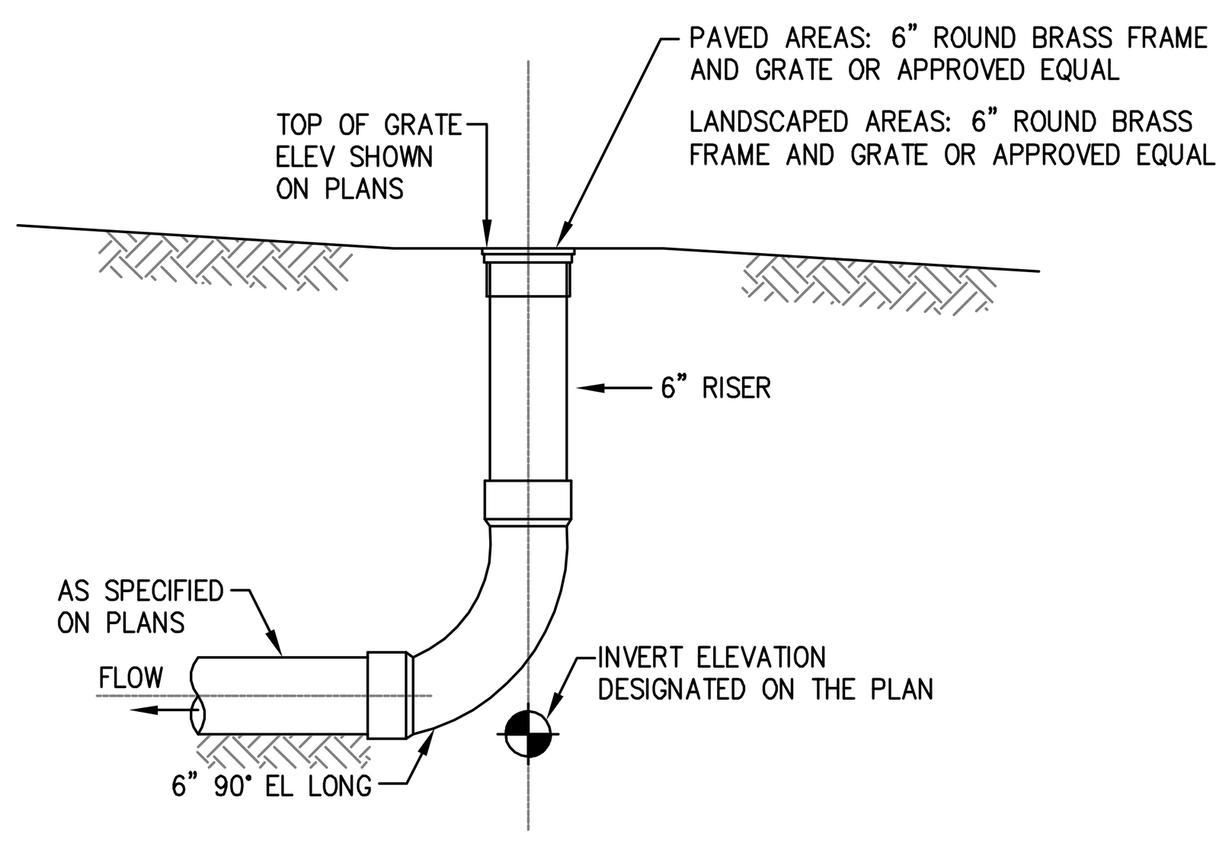
NOTES:

1. CONCRETE CURB SHALL BE 1 POUR.
2. PROVIDE EXPANSION JOINTS AT 16' O.C. SPACING.
3. PROVIDE EXPANSION JOINTS AT EACH LOCATION WHERE AN ELEVATION STEP OCCURS BETWEEN CHANGING CURB TYPES.
4. EXPANSION JOINTS SHALL BE INSTALLED WITH A ¾" CHAMFER BUILT INTO THE FORM WORK, IN ADDITION TO THE FIBER EXPANSION JOINT MATERIAL.
5. ALL EXPANSION JOINTS SHALL BE SEALED PER SPECIFICATION.
6. NO SCORE JOINTS ARE REQUIRED IN TALL CURBS.
7. FINISH SHALL BE MEDIUM SANDBLAST - TOP AND SIDES.
8. SUBDRAIN SHALL BE LOCATED 12" HORIZONTAL CLEARANCE FROM ADJACENT STRUCTURES.

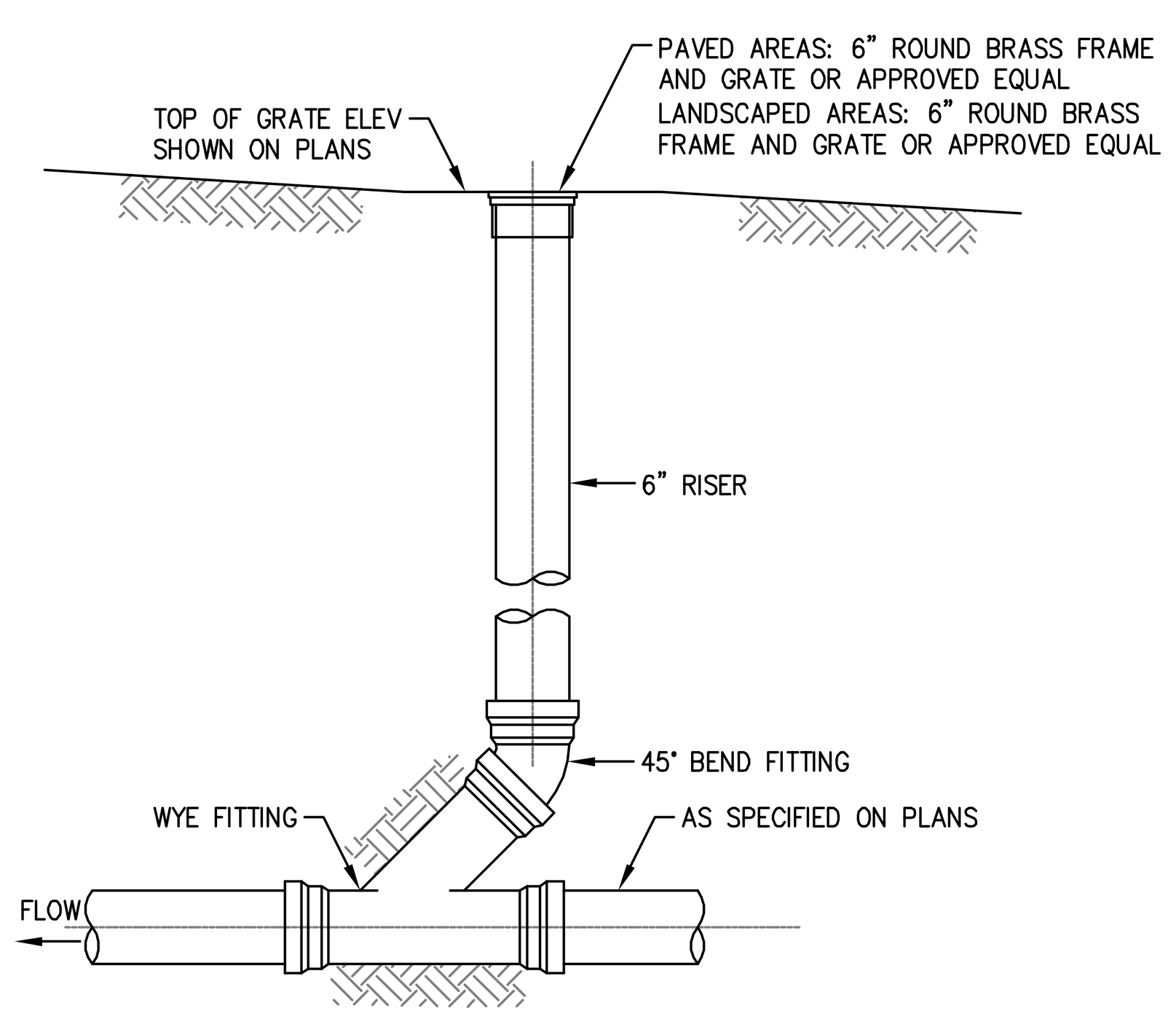
3 - RETAINING WALL WITH FENCE
NTS



1 - TYPICAL LINED BIORETENTION AREA - CASE A
SCALE: 1"=1'



END OF LINE

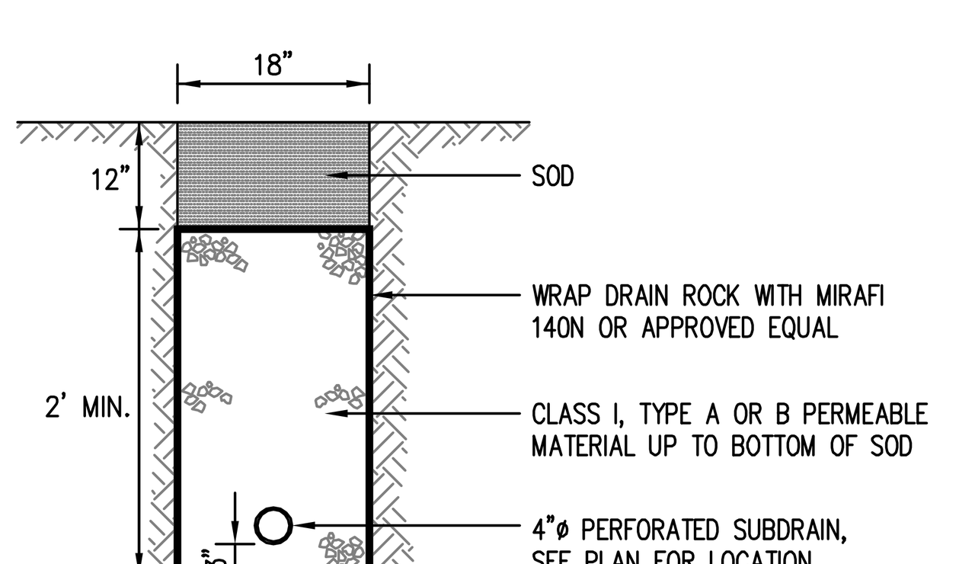


IN-LINE

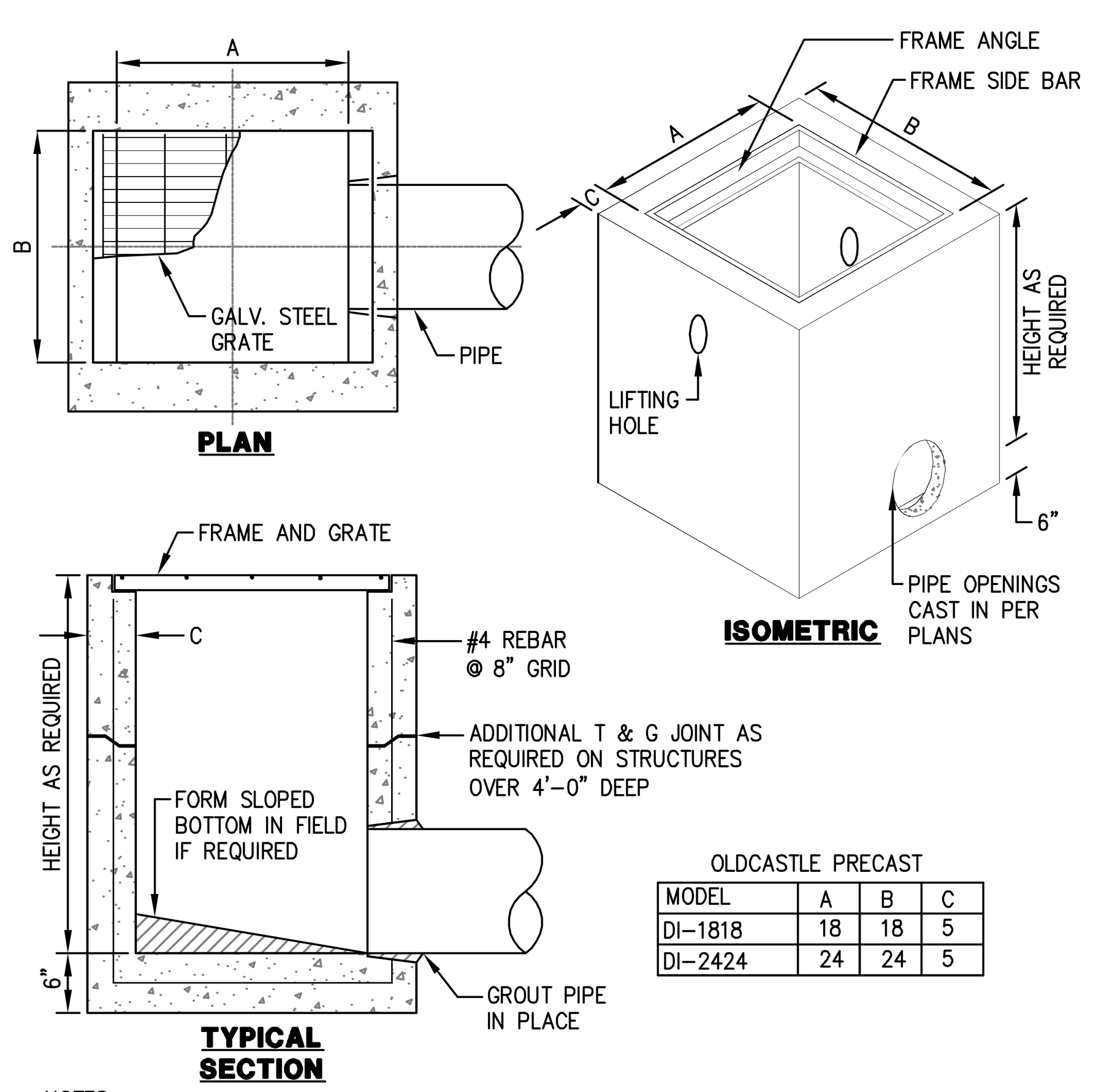
NOTE:

1. ALL GRATES SHALL BE ADA COMPLIANT WITH 1/2" MAXIMUM OPENING.
2. AREA DRAIN GRATES WITHIN PAVED AREAS SHALL BE H-20 RATED.
3. ALL GRATES TO BE BOLT DOWN TYPE.

5 - STORM DRAIN AREA DRAIN
NTS



6 - STORM DRAIN SUBDRAIN
NTS



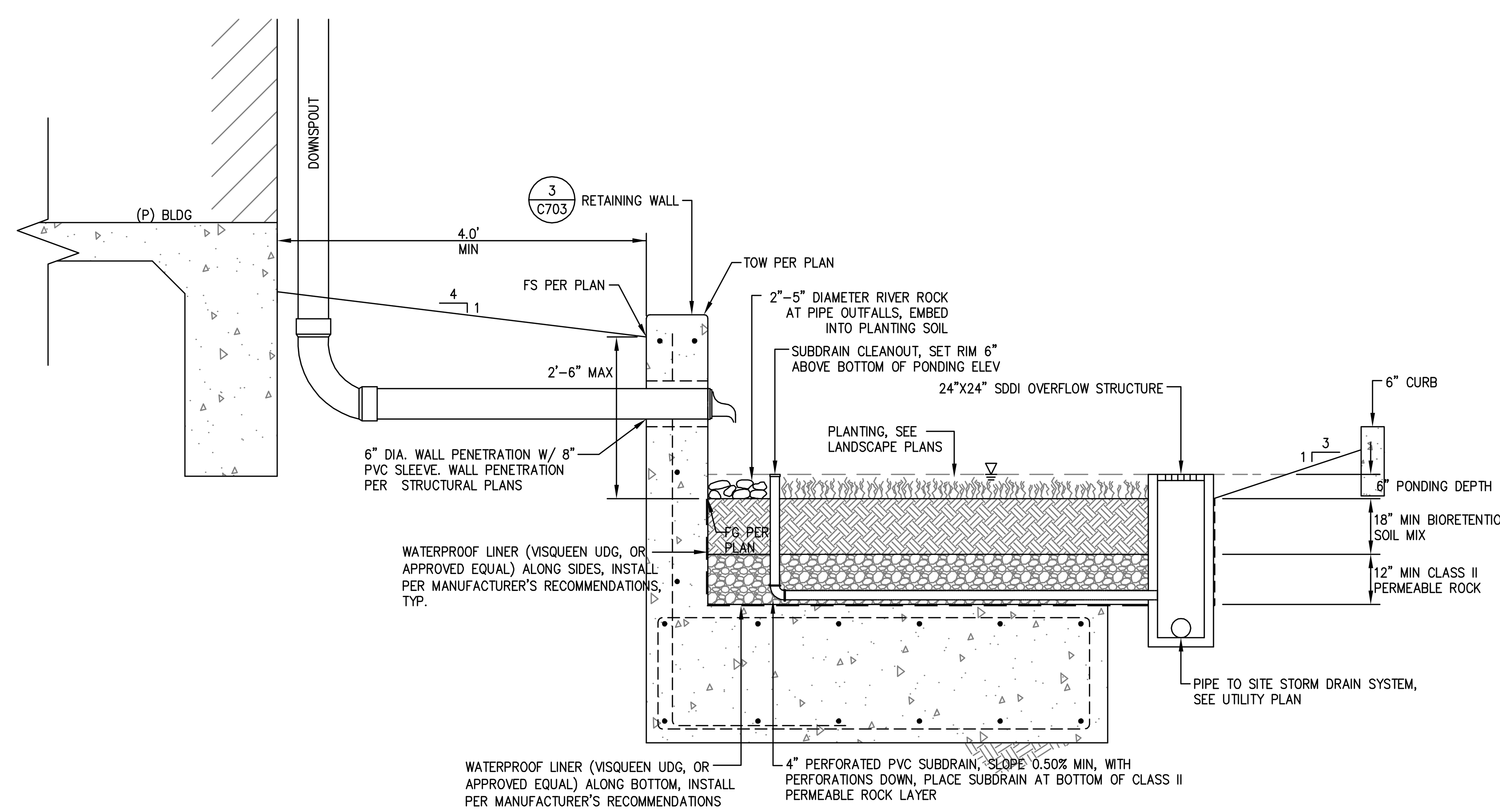
OLDCASTLE PRECAST

MODEL	A	B	C
DI-1818	18	18	5
DI-2424	24	24	5

NOTES:

1. DROP INLETS, FRAMES, AND GRATES SHALL BE OLDCASTLE PRECAST OR APPROVED EQUAL.
2. AN ENGINEERED PRECAST DROP INLET UNIT CAN BE USED AS AN ALTERNATE.
3. DROP INLETS LOCATED IN TRAFFIC AREAS SHALL HAVE FRAMES AND GRATES RATED FOR AASHTO H20 LOADING. FRAMES AND GRATES SHALL BE OLDCASTLE TRAFFIC GRATE AND MATCH INLET SIZE.
4. GRATE SLOT OPENING 1/2" MAX AT PEDESTRIAN CIRCULATION AND PLAY AREAS. FRAMES AND GRATES SHALL BE OLDCASTLE ADA PEDESTERIAN GRATES AND MATCH INLET SIZE
5. GRATES OUTSIDE OF PEDESTRIAN CIRCULATION AND PLAY AREAS SHALL BE OLDCASTLE PEDESTRIAN (NON-TRAFFIC) GRATES AND MATCH INLET SIZE

4 - DROP INLET
NTS



2 - TYPICAL LINED BIORETENTION AREA - CASE B
SCALE: 1"=1'

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Revisions

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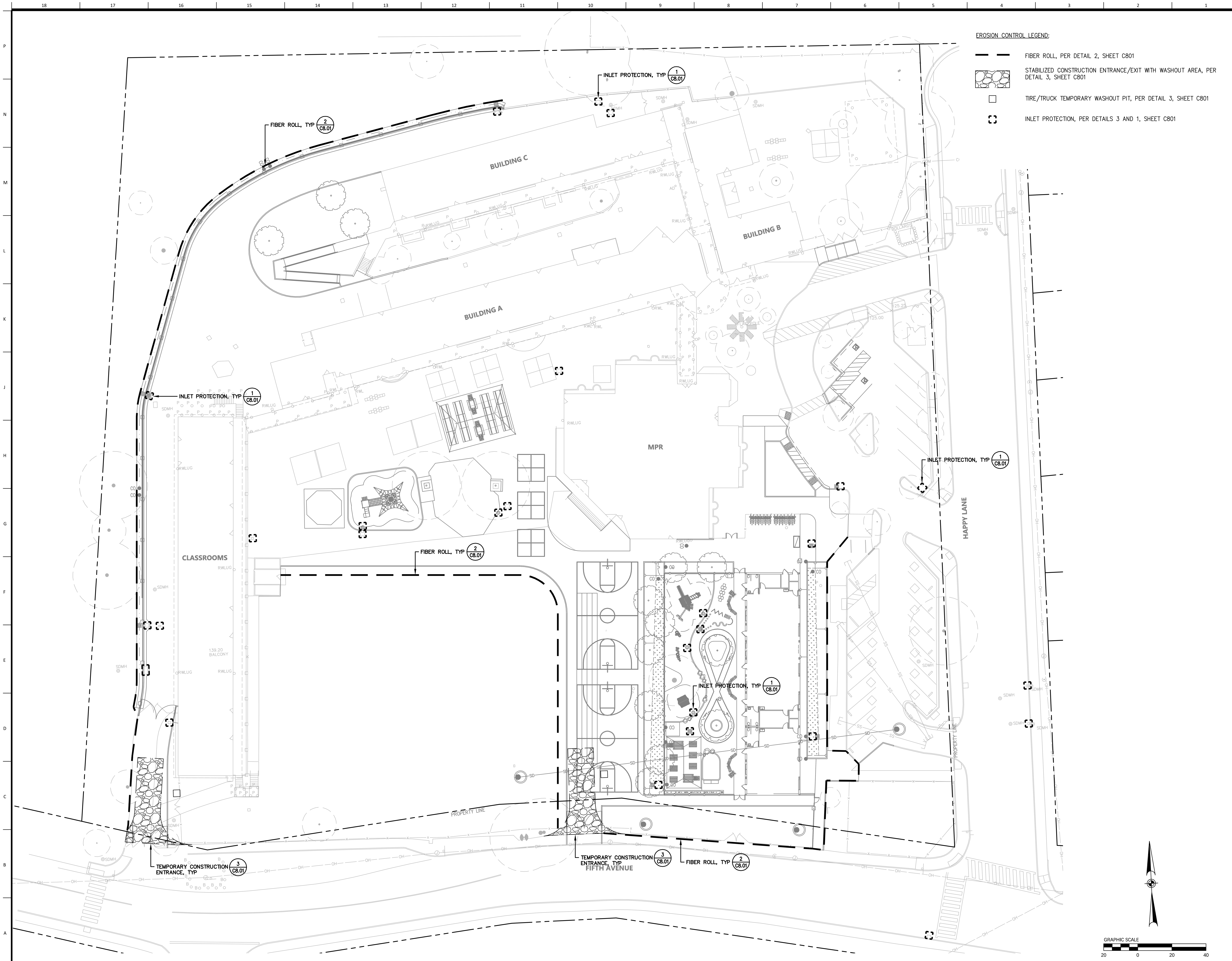
REGISTERED PROFESSIONAL ENGINEER JONATHAN TANG No. C87726 CIVIL STATE OF CALIFORNIA

Construction Details

C703

DSA BACKCHECK



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REGISTERED PROFESSIONAL ENGINEER
JONATHAN TANG
No. C67726
CIVIL
STATE OF CALIFORNIA

Erosion Control Plan

C800

DSA BACKCHECK

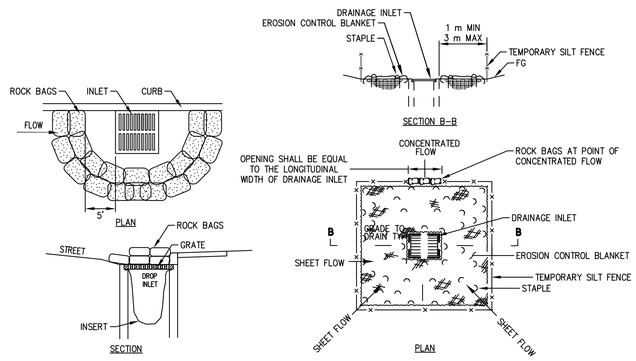
DRAWING NAME: K:\2023\230230_MultiStudio_and_San_Rafael_City_Schools\ENG-L\Sheets\TK\SVE-TK-C800.dwg (00)
PLOT TIME: 04-19-24 12:04pm PLOTTED BY: burn

EROSION CONTROL NOTES

1. THE PROJECT WILL DISTURB MORE THAN ONE ACRE OF LAND AND IS THEREFORE SUBJECT TO THE STATE'S CONSTRUCTION GENERAL PERMIT. THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO THE REQUIREMENTS OF THE PROJECT SPECIFIC SWPPP AT ALL TIMES.
   1.1. WDID No. : XXXXXXXXX
2. EROSION CONTROL MEASURES SHALL CONFORM TO ABAG STANDARDS, CITY STANDARDS AND THE APPROVAL OF THE CITY'S ENGINEERING DEPARTMENT.
3. ALL MATERIALS NECESSARY FOR THE APPROVED EROSION CONTROL MEASURES SHALL BE ON SITE BY SEPTEMBER 15TH AND IN PLACE BY OCTOBER 1ST.
4. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE RAINY SEASON, OR FROM OCTOBER 1ST THROUGH APRIL 30TH, WHICHEVER IS LONGER.
5. IN THE EVENT OF RAIN, ALL GRADING WORK IS TO CEASE IMMEDIATELY AND THE SITE IS TO BE SEALED IN ACCORDANCE WITH THE APPROVED EROSION CONTROL MEASURES AND APPROVED EROSION CONTROL PLAN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHECKING AND REPAIRING EROSION CONTROL SYSTEMS AFTER EACH STORM.
7. PROJECTS MUST HAVE ALL CUT AND FILL SLOPES PROTECTED BY AND DISTURBED AREAS BY ONE OF THE FOLLOWING MEASURES OR THE COMBINATION OF THEM: TEMPORARY SEEDING AND MULCHING, PERMANENT SEEDING AND MULCHING, HYDROMULCHING-HYDROSEEDING, EROSION CONTROL BLANKETS/GEOTEXTILES, AND FIBER ROLLS;
8. ANY AREAS OF DISTURBED SOIL SHALL BE SEEDED OR REPLANTED TO THE SATISFACTION OF THE CITY ENGINEER PRIOR TO OCTOBER 1ST, OR FINAL INSPECTION, WHICHEVER IS SOONER.
9. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED AS DETERMINED BY CITY'S ENGINEERING DEPARTMENT OR BUILDING OFFICIALS.
10. PROJECTS SHALL PREVENT ANY ACCUMULATION OR DEPOSIT OF DIRT, MUD, SAND, ROCKS, GRAVEL OR DEBRIS ON THE SURFACE OF ANY STREET, ALLEY OR PUBLIC PLACE OR IN ANY PUBLIC STORM DRAIN SYSTEM.

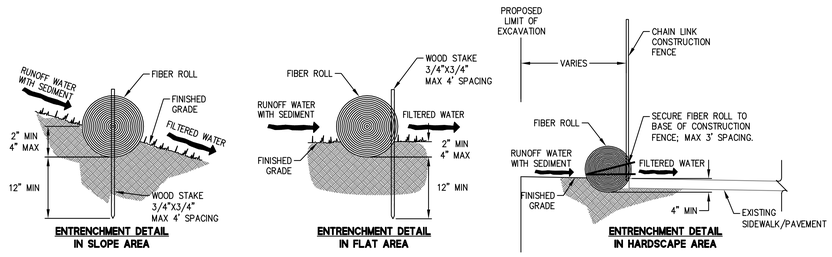
ADDITIONAL EROSION CONTROL NOTES

1. THIS PLAN MAY NOT COVER ALL THE SITUATIONS OR PHASES THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. IN GENERAL, THE CONTRACTOR IS RESPONSIBLE FOR KEEPING SEDIMENT STORM RUNOFF FROM LEAVING THE SITE. SEDIMENT ROLLS AND SILT FENCES SHALL BE USED BY THE CONTRACTOR ON AN AS NEEDED BASIS TO INHIBIT SILT FROM LEAVING THE SITE AND ENTERING THE STORM DRAIN SYSTEM. TEMPORARY EROSION CONTROL DEVICES SHOWN ON THE GRADING PLAN WHICH INTERFERE WITH THE WORK SHALL BE RELOCATED OR MODIFIED WITH THE INSPECTOR SO DIRECTS AS THE WORK PROGRESSES.
2. EROSION CONTROL FACILITIES SHALL BE MAINTAINED DAILY. THESE FACILITIES SHALL CONTROL AND CONTAIN EROSION-CAUSED SILT DEPOSITS AND PROVIDE FOR THE SAFE DISCHARGE OF SILT FREE STORM WATER INTO EXISTING AND PROPOSED STORM DRAIN FACILITIES.
3. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL SUB-CONTRACTORS AND SUPPLIERS ARE AWARE OF ALL STORM WATER QUALITY MEASURES & IMPLEMENT SUCH MEASURES. FAILURE TO COMPLY WITH THE APPROVED CONSTRUCTION WILL RESULT IN THE ISSUANCE OF CORRECTION NOTICES, CITATIONS AND/OR A PROJECT STOP ORDER.
4. THE SITE SHALL BE MAINTAINED SO AS TO MINIMIZE SEDIMENT LADEN RUNOFF TO ANY STORM DRAIN SYSTEM.
5. IF EXISTING DRIVEWAY IS REMOVED DURING CONSTRUCTION, THE CONTRACTOR SHALL PLACE DRAIN ROCK AS A GRAVEL ROADWAY (8" MINIMUM THICKNESS FOR THE FULL WIDTH AND LENGTH OF SITE EGRESS AREA AS DEFINED IN THESE PLANS) AT THE ENTRANCE TO THE SITE.
6. DURING THE RAINY SEASON, ALL PAVED AREAS ARE TO BE KEPT CLEAR OF EARTH MATERIAL AND DEBRIS. THE SITE IS TO BE MAINTAINED SO AS TO MINIMIZE SEDIMENT RUNOFF TO ANY STORM DRAIN SYSTEM.
7. DURING PERIODS WHEN STORMS ARE FORECAST:
   A. EXCAVATED SOILS SHOULD NOT BE PLACED IN STREETS OR ON PAVED AREA.
   B. ANY EXCAVATED SOILS SHOULD BE REMOVED FROM THE SITE BY THE END OF THE DAY.
   C. WHERE STOCKPILING IS NECESSARY, USE A TARPAULIN OR SURROUND THE STOCKPILED MATERIAL WITH FIBER ROLLS, GRAVEL SEDIMENT BARRIER, SILT FENCE OR OTHER RUNOFF CONTROLS.
   D. USE INLET CONTROLS AS NEEDED (E.G. BLOCK & GRAVEL SEDIMENT BARRIER FOR STORM DRAIN ADJACENT TO THE PROJECT OR STOCKPILED SOIL.
8. THOROUGHLY SWEEP ALL PAVED AREAS EXPOSED TO SOIL EXCAVATION AND PLACEMENT.
9. STAND-BY CREWS SHALL BE ALERTED BY THE PERMIT APPLICANT OR CONTRACTOR FOR EMERGENCY WORK DURING RAINSTORMS.
10. AFTER OCTOBER 1ST TO APRIL 15TH, ALL EROSION CONTROL MEASURES WILL BE INSPECTED DAILY AND AFTER EACH STORM. BREACHES IN DIKES AND TEMPORARY SWALES WILL BE REPAIRED AT THE CLOSE OF EACH DAY AND WHENEVER RAIN IS FORECAST.
11. AS A PART OF THE EROSION CONTROL MEASURES, UNDERGROUND STORM DRAIN FACILITIES SHALL BE INSTALLED COMPLETE AS SHOWN ON THE IMPROVEMENT PLANS.
12. BORROW AREAS AND TEMPORARY STOCKPILES SHALL BE PROTECTED WITH APPROPRIATE EROSION CONTROL MEASURES TO THE SATISFACTION OF THE CITY ENGINEER.
13. SANDBAGS SHALL BE STOCKPILED ON SITE AND PLACED AT INTERVALS SHOWN ON EROSION CONTROL PLANS WHEN THE RAIN FORECAST IS 40% OR GREATER, OR WHEN DIRECTED BY THE INSPECTOR.
14. SANDBAGS REFERRED TO IN THE PRECEDING ITEMS MUST BE FULL. APPROVED SANDBAG FILL MATERIALS ARE SAND, DECOMPOSED GRANITE, AND/OR GRAVEL, OR OTHER MATERIALS APPROVED BY THE INSPECTOR.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFETY OF VEHICLES OPERATING IN ROADWAY ADJACENT TO EROSION CONTROL FACILITIES.
16. AFTER RAINSTORMS CONTRACTOR SHALL CHECK FOR AND REMOVE SEDIMENT TRAPPED BY SANDBAGS AT STAGING AREA. REPLACE SANDBAGS IF DETERIORATION IS EVIDENT.
17. DUST CONTROL SHOULD BE PRACTICED ON ALL CONSTRUCTION SITES WITH EXPOSED SOIL AS NEEDED. IT IS IMPORTANT IN WINDY OR WIND-PRONE AREAS. DUST CONTROL IS CONSIDERED A TEMPORARY MEASURE AND AS AN INTERMEDIATE TREATMENT BETWEEN SITE DISTURBANCE AND CONSTRUCTION, PAVING, OR REVEGETATION.



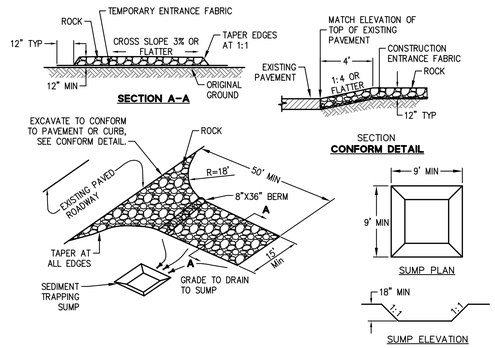
FOR PAVED AREAS — FOR LANDSCAPED AREAS

1 **DROP INLET PROTECTION**
NTS



NOTES:
1. FIBER ROLL INSTALLATION REQUIRES THE PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3" TO 4" DEEP, DUG ON CONTOUR.
2. ADJACENT ROLLS SHALL TIGHTLY ABUT.
3. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND FIBER ROLL.

2 **FIBER ROLL DETAIL**
N.T.S.



3 **TEMPORARY CONSTRUCTION ENTRANCE**
N.T.S.

IDENTIFICATION STAMP
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APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Pkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 19, 2024

Revisions

NUMBER	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
JONATHAN TAM
No. C57726
CIVIL
STATE OF CALIFORNIA

Erosion Control Details

C801

DSA BACKCHECK

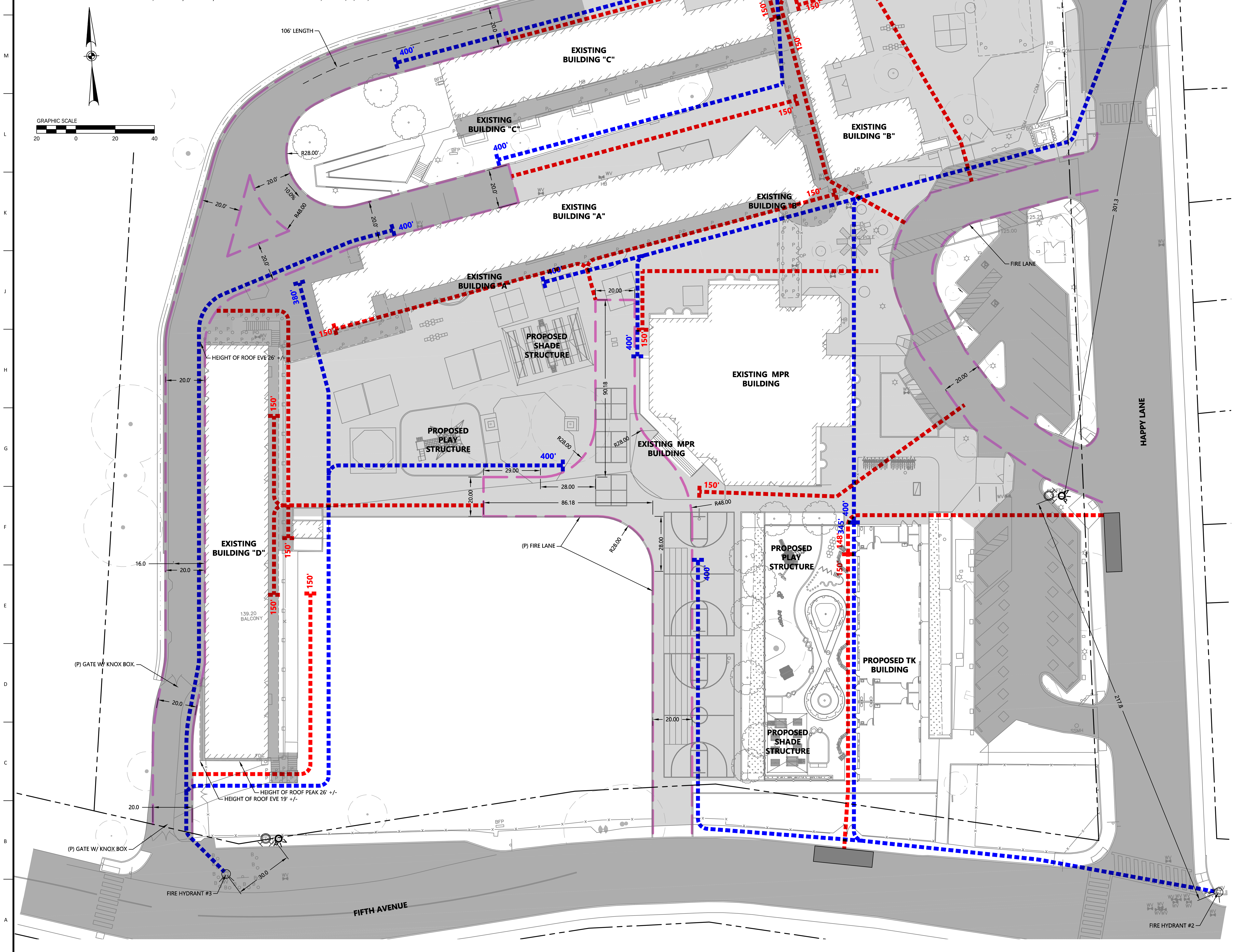
Building	DSA App	Building Type	Total Fire Flow Area (sf)	Fire Flow[a] (gpm)	75% Reduction[b] (gpm)	Fire Flow after Reduction (gmp)	Flow Duration (hr)	# Hydrants Required[c] (ea)	Hydrant Spacing (feet)
BLDG A [(1)]	#8402	VB	7,700	2,250	N/A	2,250	2	2	450
BLDG B [(1)]	#14260	VB	2,460	1,500	N/A	1,500	2	1	500
BLDG C [(1)]	#24974	VB	4,658	1,750	N/A	1,750	2	1	500
BLDG D [(1)]		VB	16,916	3,500	2,625	1,500	2	1	500
MPR	#42179	VB	8,093	2,500	1,875	1,500	2	1	500
TK		VB	4,160	1,750	N/A	1,750	2	1	500
Required				**3,500**		**2,250**	**2**	**2**	**450**

[a] Required fire flow measured at 20 psi per 2022 CFC table BB105.1(2)

[b] Reduction allowed per CFC due to use of sprinkler system

[c] Required number and spacing of fire hydrants per 2022 CFC table CC105.1 (baed on Req'd fire flow prior to reduction)

[1] Source, "Sun Valley Elementary School Modular Classrooms - Increment 2, dated 01/09/2003, SHT A1.1



LEGEND

- HOSE PULL FROM ACCESS ROUTE (END OF HOSE)
- HOSE PULL FROM HYDRANT TO BLDG (END OF HOSE)
- FIRE APPARATUS ACCESS ROUTE
- FIRE APPARATUS STAGING AREA
- (E) FIRE HYDRANT
- (E) FDC
- (E) PIV

VALUE FIRE PROTECTION, INC.
2266 Shafter Avenue
San Francisco, CA 94124
PHONE: 415 668-3398 FAX: 415 668-0869
Email: valuefire@aol.com C-16 # 531199

VFP

FIRE HYDRANT #1

Flow Test	Readings
Sun Valley Elementary School	
75 Happy Lane	
San Rafael, CA 94901	
Test Done on 11/3/2023	
Test Done by Albert Wong and Michael Chu	
Hydrant Tested #1 – 12:30PM	
Hydrant at Happy Lane (dead end street)	
Static Pressure	66 PSI
Residual Pressure (taken at Hydrant #2)	58 PSI
Flow Rate	560 GPM

Flow Available at 20 psi Residual Pressure = 1440 GPM

FIRE HYDRANT #2

Flow Test	Readings
Sun Valley Elementary School	
75 Happy Lane	
San Rafael, CA 94901	
Test Done on 11/3/2023	
Test Done by Albert Wong and Michael Chu	
Hydrant Tested #2 – 1:10PM	
Hydrant at corner of Happy Lane & Fifth Avenue	
Static Pressure	72 PSI
Residual Pressure (taken at Hydrant #1)	64 PSI
Flow Rate	600 GPM

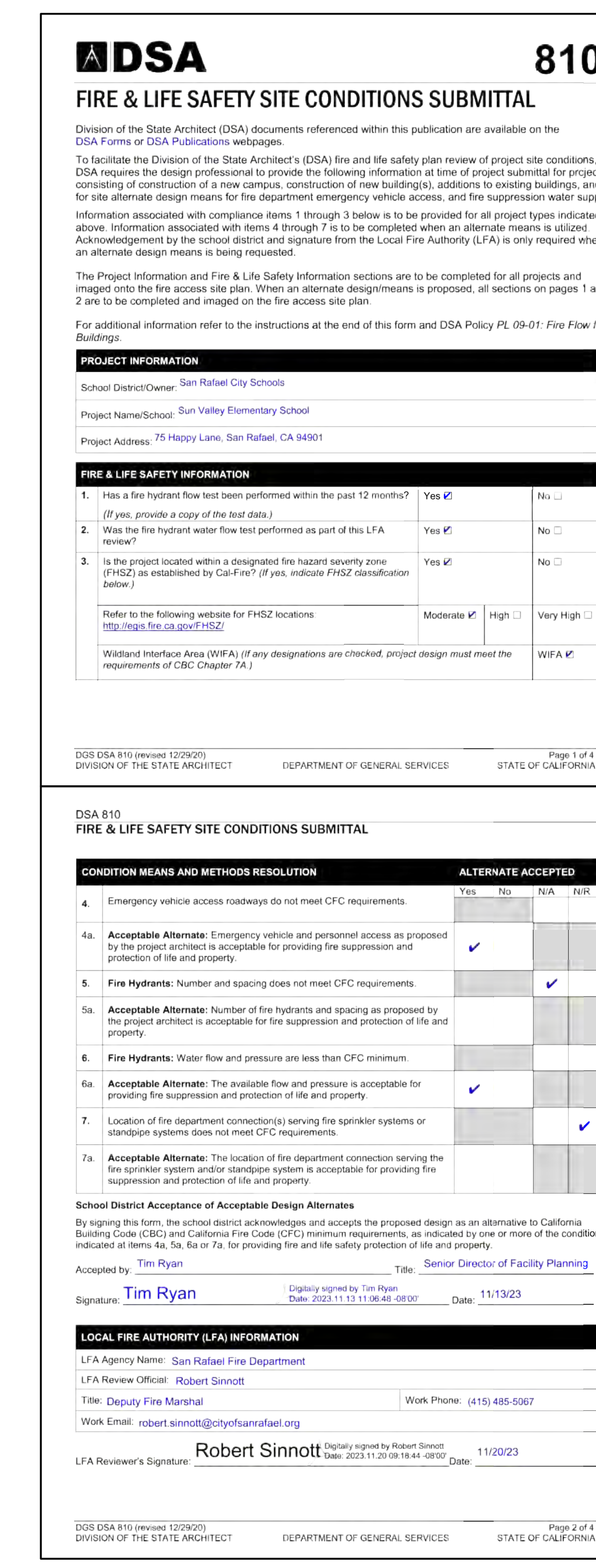
Flow Available at 20 psi Residual Pressure = 1649 GPM

FIRE HYDRANT #3

Flow Test	Readings
Sun Valley Elementary School	
75 Happy Lane	
San Rafael, CA 94901	
Test Done on 11/3/2023	
Test Done by Albert Wong and Michael Chu	
Hydrant Tested #3 – 1:40PM	
Hydrant at Fifth Avenue	
Static Pressure	68 PSI
Residual Pressure (taken at Hydrant #2)	64 PSI
Flow Rate	560 GPM

Flow Available at 20 psi Residual Pressure = 2143 GPM

Albert Wong, Project Manager — Date: 11-6-2023


DSA 810
FIRE & LIFE SAFETY SITE CONDITIONS SUBMITTAL

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architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 19, 2024

Revisions

NUMBER	DESCRIPTION	DATE

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

REGISTERED PROFESSIONAL ENGINEER — JONATHAN TANG — No. C67726 — CIVIL — STATE OF CALIFORNIA

Fire Access Plan

C900

DSA BACKCHECK

SHEET INDEX

ABBREVIATIONS

AD	AREA DRAIN	MIN	MINIMUM
ADJ	ADJACENT	(N)	NEW
AGG	AGGREGATE	NIC	NOT IN CONTRACT
APPROX	APPROXIMATELY	NPS	NOMINAL PIPE SIZE
ARCH	ARCHITECT	NTS	NOT TO SCALE
CIP	CAST IN PLACE	OC	ON CENTER
CL	CENTERLINE	OCC	OCCUPANCY
CJ	CONTROL JOINT	OD	OUTSIDE DIAMETER
CLR	CLEAR	OPP	OPPOSITE
CMU	CONCRETE MASONRY UNIT	OPP HAND	OPPOSITE HAND
CONC	CONCRETE	PA	PLANTING AREA
CONT	CONTINUOUS	PERF	PERFORATED
CY	CUBIC YARDS	POC	POINT OF CONNECTION
DIA	DIAMETER	PT	POINT OF TANGENCY
DIM	DIMENSION	PVMT	PAVEMENT
(E)	EXISTING	ROW	RIGHT OF WAY
EA	EACH	SAD	SEE ARCHITECTURAL DRAWINGS
EQ	EQUAL DISTANCE	SCD	SEE CIVIL DRAWINGS
EVA	EMERGENCY VEHICLE ACCESS	SED	SEE ELECTRICAL DRAWINGS
E.W.	EACH WAY	SIM	SIMILAR
FT	FOOT OF FEET	SPEC	SPECIFICATION
HT	HEIGHT	SSD	SEE STRUCTURAL DRAWINGS
ID	INSIDE DIAMETER	SST	STAINLESS STEEL
IN	INCH OR INCHES	STD	STANDARD
JT	JOINT	STL	STEEL
LBS	POUNDS	TBD	TO BE DETERMINED
LOW	LIMIT OF WORK	TPZ	TREE PROTECTION ZONE
MAX	MAXIMUM	TYP	TYPICAL
MFR	MANUFACTURER	VIF	VERIFY IN FIELD

DESIGN NARRATIVE

THE PROJECT INCLUDES A NEW 6,100 SQ. FT TK PLAY YARD FOR THE NEW TK CLASSROOM BUILDING, RELOCATED PLAY STRUCTURES, PLAY YARD STRIPING, SHADE STRUCTURES, AND NEW PERIMETER FENCING AT A PORTION OF THE SITE WHERE FIRE ACCESS IS BEING UPGRADED, AND NEW PLANTING AND BIORETENTION AREAS.

1. SUSTAINABILITY
WHILE THE PROJECT DOES NOT ASPIRE TO ACHIEVE OFFICIAL LEED OR OTHER SUSTAINABILITY CERTIFICATION, MANY OF THE PRINCIPLES WILL GUIDE THE DESIGN AND CONSTRUCTION. SEVERAL EXISTING LANDSCAPE FEATURES WILL BE PRESERVED TO THE EXTENT POSSIBLE: GRADING OPERATIONS WILL BE KEPT TO A MINIMUM TO AVOID DISTURBANCE TO THE LAND AND VEGETATION. LANDSCAPE STRUCTURES, FURNISHINGS, AND OTHER ELEMENTS WILL EMPLOY FSC CERTIFIED WOOD OR ALTERNATIVE WOOD MATERIALS, AND LOCALLY MANUFACTURED AND/OR SUPPLIED COMPONENTS. NEW PLAY EQUIPMENT WILL BE SPECIFIED THAT DOES NOT USE PLASTIC COMPONENTS. TREES WILL BE PLANTED TO PROVIDE DAPPLED SHADE OVER SEATING AREAS. PLANTS WILL BE SOURCED FROM NURSERIES WITH KNOWN CHAIN OF CUSTODY AND PROSCRIPTION OF SYSTEMIC PESTICIDES, WATERED WITH LOW WATER USE IRRIGATION SYSTEM, FERTILIZED WITH ORGANIC COMPOST OR OMRI APPROVED FERTILIZERS, AND MULCHED. BICYCLE RACKS WILL BE PROVIDED.THE PROJECT SITE SITS WITHIN A WILDLAND URBAN INTERFACE (WUI) AREA AND WILL COMPLY WITH ALL ORDINANCES GOVERNING WUI AREAS.

2. TREE AND PLANT PROTECTION
ALL TREES TO REMAIN WILL BE PROTECTED DURING CONSTRUCTION OPERATIONS WITH FENCES AND MULCH.

3. PAVING
SITE PAVING WILL BE DESIGNED TO VISUALLY UNIFY THE CAMPUS, WITH MOST AREAS PAVED IN EITHER ASPHALT OR CONCRETE. REGARDLESS OF THE PAVING TYPES, PAVING ACROSS CAMPUS WILL BE DURABLE AND WHEELCHAIR ACCESSIBLE.

4. SITE FURNISHINGS
SITE FURNISHINGS WILL BE SELECTED AND DESIGNED TO PROMOTE CONNECTION BETWEEN INDOOR AND OUTDOOR ENVIRONMENTS. DURABLE AND EASILY MAINTAINABLE MATERIALS AND FURNISHINGS WILL BE SELECTED; CONSIDERATION WILL BE GIVEN TO COMFORT, WARMTH, COLOR AND TEXTURE, AND STYLE, WITHIN THE STANDARDS ESTABLISHED BY THE SAN RAFAEL CITY SCHOOLS DISTRICT. PLAY EQUIPMENT WILL BE APPROPRIATE FOR THE TK AGE GROUP, AND MADE OF WOOD TO BRING MORE NATURAL MATERIALS INTO THE PLAY YARD.

5. IRRIGATION
ALL NEWLY PLANTED AREAS WILL BE WATERED BY FULLY AUTOMATIC IRRIGATION SYSTEM. THE SYSTEM WILL USE DOMESTIC WATER, AND WILL COMPLY WITH CURRENT CALIFORNIA WATER EFFICIENT LANDSCAPE ORDINANCE (WELO) REGULATIONS. IRRIGATION ZONES WILL BE BASED ON PLANT GROUPING WATER DEMANDS (HYDROZONES), AND TREES WILL BE IRRIGATED BY SEPARATE CIRCUITS. THE SYSTEM WILL INCLUDE WEATHER SENSOR, SMART INTERNET DATA-BASED CONTROLLER/S, AND LOW FLOW AND DRIP EMITTERS, AND WILL TIE INTO EXISTING BACKFLOW PREVENTOR, WATER METER OR SUBMETER.

6. PLANTING
PLANT PALETTE WILL BE LIMITED IN SCOPE AND WILL INCLUDE POLLINATOR AND NATIVE PLANTING, BIORETENTION, AND OTHER. PLANT SPECIES WILL BE SELECTED FOR THE APPROPRIATE USE, SOLAR AND WIND EXPOSURE, NATURAL FLOW OF WATER ON THE SITE, SLOPE ASPECT. PLANTS WILL BE GROUPED INTO HYDROZONES, AND WILL BE GENERALLY SELECTED FOR LOW WATER DEMAND. SOIL WILL BE PROFESSIONALLY TESTED BY SOIL LAB/S, AND AMENDMENT STRATEGIES WILL BE BASED ON RECOMMENDATIONS FOR ORGANIC FERTILIZERS. TURF WILL BE SODDED, AND MEADOW AREAS ABUTTING THE OPEN SPACE WILL BE HYDROSEEDED.

GENERAL NOTES

1. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK BY THE SUBCONTRACTORS.
2. CONTRACTOR SHALL VERIFY ALL CONDITIONS AT JOB SITE AND NOTIFY OWNER'S REPRESENTATIVE OF DIMENSIONAL OMISSIONS OR DISCREPANCIES BEFORE BEGINNING ANY WORK.
3. CONTRACTOR TO OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION. ALL CONTRACTORS MUST COMPLY WITH PERMIT REQUIREMENTS, LOCAL, STATE AND FEDERAL JURISDICTIONS AND GOVERNING BODIES/AGENCIES RULES AND REGULATIONS AND LAND USE APPROVAL CONDITIONS AT ALL TIMES.
4. WORK PERFORMED WITHOUT APPROVAL OF LOCAL, STATE AND FEDERAL JURISDICTIONS AND GOVERNING AGENCIES AND/OR NOT IN COMPLIANCE WITH SPECIFICATIONS AND/OR DRAWINGS IS SUBJECT TO REMOVAL AT CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL VERIFY LOCATION OF ALL ABOVE- AND UNDERGROUND EXISTING UTILITIES, LINES AND STRUCTURES PRIOR TO EXCAVATION OR TRENCHING, OR OTHER CONSTRUCTION ACTIVITIES. THE LANDSCAPE ARCHITECT ASSUMES NO RESPONSIBILITY FOR UTILITIES OR STRUCTURES NOT SHOWN ON THE DRAWINGS. CONTRACTOR SHALL USE EXTREME CAUTION WHEN WORKING OVER OR NEAR EXISTING GAS AND ELECTRICAL LINES. DAMAGE TO UTILITIES, LINES, STRUCTURES, OR OTHER SITE ELEMENTS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE REPAIRED AT SOLE EXPENSE OF THE CONTRACTOR AND AT THE DISCRETION OF THE OWNER.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING ALL LAND MONUMENTS DISRUPTED BY CONSTRUCTION ACTIVITIES OR NEGLIGENCE ON THE PART OF THE CONTRACTOR. RESETS SHALL BE PERFORMED UNDER THE SUPERVISION OF A REGISTERED LAND SURVEYOR AND MONUMENT RECORDS MUST BE FILED AS REQUIRED BY STATUTE FOR ALL MONUMENTS.
7. ALL CONSTRUCTION AND MATERIALS NOT SPECIFICALLY ADDRESSED IN THE CONTRACT DOCUMENTS OR SPECIFICATIONS SHALL BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL JURISDICTIONS AND GOVERNING AGENCIES STANDARDS.
8. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES NECESSARY TO PROTECT EXISTING ELEMENTS TO REMAIN FROM DAMAGE AND ALL SUCH ELEMENTS AND STRUCTURES DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR RECONSTRUCTED SATISFACTORY TO THE LANDSCAPE ARCHITECT AND OWNER AT THE CONTRACTOR'S SOLE EXPENSE.
9. ALL BARRICADING AND TEMPORARY TRAFFIC CONTROL DEVICES OR METHODS USED DURING CONSTRUCTION SHALL BE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL JURISDICTIONS AND GOVERNING AGENCIES STANDARDS. PROVIDE ADEQUATE TIME FOR REVIEW AND APPROVAL BY THE ABOVE JURISDICTIONS PRIOR TO COMMENCEMENT.
10. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES UTILIZED OR FOR SAFETY PRECAUTIONS OR PROBLEMS IN CONNECTION WITH THE WORK. THE LANDSCAPE ARCHITECT IS NOT RESPONSIBLE FOR THE CONTRACTOR'S FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. CONTRACT DOCUMENTS INCLUDE THE CONSTRUCTION DOCUMENT DRAWING SET AND TECHNICAL SPECIFICATIONS.
11. CONTRACTOR TO VERIFY ALL QUANTITIES. IN CASE OF ANY DISCREPANCIES, CONTACT OWNER'S REPRESENTATIVE FOR CLARIFICATION PRIOR TO PURCHASING. GRAPHICALLY SHOWN MATERIAL QUANTITIES SHALL TAKE PRECEDENCE OVER LISTED QUANTITIES.
12. A SYSTEM OF DIAGRAMMATIC SYMBOLS, HATCHES AND NOTATIONS IS USED IN THESE DRAWINGS. REVIEW NOTATIONS CAREFULLY, NOTIFY OWNER'S REPRESENTATIVE AND REQUEST CLARIFICATION OF ANY UNCLEAR NOTATION OR DISCREPANCY PRIOR TO COMMENCING WORK.
13. PROVIDE SLEEVES AS REQUIRED FOR DRAINAGE, IRRIGATION AND ELECTRICAL LINES REGARDLESS OF WHETHER SLEEVE LOCATIONS ARE INDICATED. IRRIGATION AND ELECTRICAL SLEEVES AND SUBSURFACE DRAINAGE SYSTEMS SHALL BE CONSTRUCTED PRIOR TO HARDSCAPE AND LANDSCAPE WORK. UTILITY SLEEVES ARE REQUIRED IN ALL PLANT BEDS ISOLATED BY PAVEMENT OR ANY OTHER STRUCTURES.
14. SPECIAL CONSIDERATION IS GIVEN TO THE DESIGN AND INTENDED RELATIONSHIP BETWEEN ARCHITECTURE, PLANTING AREAS AND PAVING SYSTEMS. CONSTRUCTION OF PAVEMENT JOINTS, PAVERS, STONE, FINISHES AND GRADES SHALL BE WELL COORDINATED IN THE FIELD.
15. VEHICLES, EQUIPMENT, AND/OR MATERIALS SHALL NOT BE PARKED OR STORED IN AREAS OF EXISTING VEGETATION, INCLUDING WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN. REFER TO TEMPORARY TREE AND PLANT PROTECTION NOTES AND SPECIFICATIONS.
16. LANDSCAPE MATERIALS SHALL BE STORED UNDER SECURED TARPS OR SHEETING PRIOR TO USE TO PROTECT AGAINST WIND, RAIN OR OTHER DAMAGE.
17. CONSTRUCTION WASTE, INCLUDING BUT NOT LIMITED TO: PLANT MATERIAL, BUILDING MATERIALS, DEMOLISHED MATERIALS, PACKAGING, LEFTOVER PAINT AND CONCRETE SLURRY SHOULD BE PROPERLY REUSED, RECYCLED, DISPOSED OF LEGALLY OFF-SITE OR IN DESIGNATED WASH-OUT AREAS DETERMINED BY THE GENERAL CONTRACTOR.
18. RECYCLING AND TRASH BINS TO BE PROVIDED ON SITE. SEPARATE BINS FOR CARDBOARD, CO-MINGLED, AND OTHER RECYCLABLE/REUSABLE MATERIALS IDENTIFIED BY THE LOCAL JURISDICTION SHALL BE MAINTAINED. ALL BINS TO BE WILDLIFE-PROOF.
19. ON-SITE FUEL STORAGE FOR CONSTRUCTION EQUIPMENT IS DISCOURAGED. CONSTRUCTION EQUIPMENT USED ON SITE TO BE CHECKED REGULARLY TO ASSURE CONTAMINATION CONCERNS FROM OILS AND GREASES ARE ELIMINATED. NO TOXIC MATERIALS SHALL BE STORED ON-SITE.
20. INSTALL AND MAINTAIN IN PROPER WORKING CONDITION SILT FENCING AND MUD TRACKING PADS THROUGHOUT THE DURATION OF CONSTRUCTION.
21. GREEN BUILDING PRACTICES SHALL BE EMPLOYED TO THE EXTENT FEASIBLE. SUCH PRACTICES INCLUDE: CARPOOLING/VANPOOLING TO JOB SITE, MINIMIZING MATERIALS PACKING BEFORE ARRIVAL TO JOB SITE, REDUCING MATERIAL/RESOURCE INEFFICIENCIES BY COORDINATING WORK.
22. IF SITE WORK IS DELAYED DUE TO ANY CIRCUMSTANCE, THE CONTRACTOR SHALL PROTECT EXPOSED SOIL FROM ALL TYPES OF EROSION.
23. EXISTING TREES TO BE PRESERVED SHALL BEAR SAME RELATIONSHIP TO FINISH GRADE PRE- AND POST-CONSTRUCTION, UNLESS CONSTRUCTION DOCUMENTS SPECIFICALLY INDICATE OTHERWISE.
24. EXISTING TREES TO BE PRESERVED SHALL BE PROTECTED WITH STURDY, WEATHERPROOF FENCING. MAINTAIN TREE PROTECTION FENCE IN WORKING ORDER DURING ALL PHASES OF CONSTRUCTION. MAINTAIN TREE PROTECTION ZONES FREE OF WEEDS AND TRASH. REFER TO TEMPORARY TREE AND PLANT PROTECTION DETAILS, NOTES AND SPECIFICATIONS.
25. NO WORK SHALL BE CONDUCTED WITHIN THE DRIPLINE OF EXISTING TREES, UNLESS REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE. ALL WORK APPROVED WITHIN THE DRIPLINE SHALL BE COMPLETED BY HAND. PROTECT ROOT SYSTEMS FROM PONDING, ERODING, EXCESSIVE WETTING, AND COMPACTION.
26. THE PROJECT LIMIT OF CONSTRUCTION TO BE CLEARLY DEFINED BY STURDY, WEATHERPROOF FENCING. REFER TO ARCHITECT'S DRAWINGS FOR CONSTRUCTION FENCE EXTENT, TYPE AND INSTALLATION.
27. VERIFY THAT WATERPROOFING OF SUB-SURFACE ARCHITECTURAL STRUCTURES ADJACENT TO LANDSCAPE IMPROVEMENTS ARE IN PLACE, AND ADEQUATELY INSTALLED TO REPEL ALL WATER SOURCES INCLUDING, BUT NOT LIMITED TO: PRECIPITATION, STORM WATER RUNOFF, GROUND WATER, IRRIGATION, ROOF RUNOFF, GROUND WATER, AND PLUMBING LEAKS.

DEMOLITION NOTES

1. ALL ITEMS AND MATERIALS TO BE REMOVED SHALL BE DISPOSED OF ACCORDING TO STATE AND LOCAL CODES AND REGULARTIONS.
2. VERIFY LOCATIONS OF ABOVE-GROUND AND BELOW-GROUND UTILITIES PRIOR TO BEGINNING DEMOLITION WORK. VERIFICATION OF UTILITIES SHALL BE PERFORMED BY TRACING EQUIPMENT WHEREVER POSSIBLE, AND WHERE NOT POSSIBLE THROUGH THE STUDY OF ORIGINAL DRAWINGS AVAILABLE FROM SAN RAFAEL CITY SCHOOLS. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UTILITIES DESIGNATED TO REMAIN WITHIN 5' OF WHERE SHOWN ON THE PLANS VIA POTHOLING. POTHOLING SHALL BE PERFORMED WITH VACUUM EXCAVATOR. REFER TO CIVIL DRAWINGS FOR UTILITY LOCATIONS, REFER TO MEP DRAWINGS FOR ELECTRICAL CONDUITS AND PLUMBING.
3. TAKE PRECAUTIONARY MEASURES NECESSARY TO PROTECT FROM DAMAGE ALL EXISTING SITE ELEMENTS, FEATURES, PLANTS AND UTILITIES TO REMAIN. EXPEDITIOUSLY REPAIR IN KIND ITEMS REMOVED OR DAMAGED BY THE CONTRACTOR'S OPERATIONS.
4. PROTECT DRAIN INLETS. PREVENT DEBRIS FROM ENTERING DRAINS DURING PROJECT. PREVENTION METHODS SHALL BE SECURE AND IMMOVABLE UNTIL CONTRACTOR REMOVES THEM AT THE END OF PROJECT CONSTRUCTION REFER TO EROSION AND SEDIMENT CONTROL PLAN, REFER TO CIVIL DRAWINGS AND SPECIFICATIONS.
5. CONCRETE AND ASPHALT PAVING SHALL BE CUT CLEANLY.
6. REMOVE FOOTINGS OF ALL REMOVED ITEMS, INCLUDING BUT NOT LIMITED TO BENCHES, LIGHT POLES, FENCES AND GATES.
7. REMOVE ALL EXISTING TREE STUMPS AND STUMPS OF TREES REMOVED DURING CONSTRUCTION. GRIND AND REMOVE STUMPS TO 12" BELOW FINISH GRADE.
8. REFER TO SELECTIVE LANDSCAPE DEMOLITION SPECIFICATIONS FOR ITEMS TO BE PRESERVED AND/OR SALVAGED.

LAYOUT NOTES

1. LAYOUT AND VERIFY DIMENSIONS PRIOR TO CONSTRUCTION. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES. LANDSCAPE ARCHITECT TO REVIEW AND APPROVE LAYOUT OF ALL PAVING, EDGING AND HARDSCAPE SHOWN IN THE CONSTRUCTION DOCUMENTS PRIOR TO CONSTRUCTION.
2. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DIMENSIONS FROM REDUCED DRAWINGS.
3. DIMENSIONS REFERRED TO AS "EQUAL" INDICATE SPACING WHICH IS EQUIDISTANT MEASURED TO THE CENTERLINES.
4. MEASUREMENTS ARE TO THE FINISHED FACE OF BUILDINGS, WALLS, CURBS, OR OTHER FIXED SITE IMPROVEMENTS. DIMENSIONS TO CENTERLINES OR REFERENCE LINES ARE IDENTIFIED AS SUCH.
5. INSTALL INTERSECTING ELEMENTS AT 90-DEGREE ANGLES, UNLESS OTHERWISE INDICATED. MAINTAIN HORIZONTAL ALIGNMENT OF ADJACENT ELEMENTS AS INDICATED IN CONTRACT DOCUMENTS.
6. PROVIDE A FULL-SCALE MOCKUP AND RECEIVE APPROVAL FROM THE OWNER'S REPRESENTATIVE FOR ALL SYSTEMS AS CALLED FOR IN THE CONSTRUCTION DOCUMENTS PRIOR TO INSTALLATION.
7. EXPANSION JOINTS SHALL BE PROVIDED WHERE FLATWORK MEETS VERTICAL STRUCTURES, SUCH AS WALLS, CURBS, STEPS, AND OTHER HARDSCAPE ELEMENTS. EXPANSION JOINTS SHALL ALSO BE PROVIDED AT MATERIAL CHANGES BETWEEN RIGID PAVING SYSTEMS. EXPANSION JOINT MATERIALS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION.
8. HOLD TOPS OF WALLS AND LANDSCAPE PARTITIONS LEVEL UNLESS OTHERWISE SPECIFIED.
9. DO NOT INSTALL WORK LOCATED ON TOP OF ARCHITECTURAL STRUCTURES WITHOUT FIRST REVIEWING ARCHITECTURAL DRAWINGS.

PLANTING NOTES

1. PLANT MATERIAL TO BE HEALTHY, FREE FROM DISEASE OR DAMAGE, AND IS TO BE MAINTAINED IN EXCELLENT CONDITION WHILE ON THE JOBSITE. LANDSCAPE ARCHITECT WILL INSPECT PLANT MATERIAL UPON ARRIVAL TO JOBSITE AND WILL REJECT PLANT MATERIAL THAT DOES NOT MEET THE STANDARDS DESCRIBED WITHIN THE CONTRACT DOCUMENTS.
2. THE LANDSCAPE ARCHITECT WILL PERIODICALLY INSPECT PLANT MATERIAL STOCKPILED AND/OR PLANTED ON SITE DURING THE COURSE OF CONSTRUCTION. PLANT MATERIAL NOT MEETING THE STANDARDS CONTAINED WITHIN CONTRACT DOCUMENTS SHALL BE REPLACED AT SOLE EXPENSE OF CONTRACTOR.
3. PROVIDE MATCHING SIZES AND FORMS FOR EACH PLANT OF THE SAME SPECIES UNLESS OTHERWISE INDICATED.
4. VERIFY ALL QUANTITIES. IN CASE OF DISCREPANCIES, GRAPHICALLY SHOWN QUANTITIES SHALL TAKE PRECEDENCE OVER LISTED QUANTITIES.
5. ALL MATERIALS USED SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN. REFER TO PLANT SPECIFICATIONS.
6. ALL PLANT MATERIAL SHALL BE INSTALLED PLUMB AND PER THE SPECIFICATIONS CONTAINED WITHIN THE CONTRACT DOCUMENTS. ANY NECESSARY STAKING AND/OR OTHER SUPPORTS MATERIALS/METHODS SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION.
7. PRUNE TREES ONLY PER WRITTEN DIRECTION OF AN INDEPENDENT ARBORIST OR LANDSCAPE ARCHITECT.
8. STAKE THE LOCATIONS FOR LAYOUT OF ALL TREES AND 5-GAL OR LARGER SHRUBS FOR LANDSCAPE ARCHITECT REVIEW AND APPROVAL, PRIOR TO INSTALLATION.
9. ALL ROOT-WRAPPING MATERIALS THAT ARE NOT BIO-DEGRADABLE SHALL BE REMOVED FROM THE ROOT BALL JUST BEFORE PLANTING.
10. ROOT BALLS OF ALL NEW PLANTS SHALL BE FREE OF WEEDS.
11. SPECIFIED PLANT MATERIAL SIZES SHALL BE CONSIDERED MINIMUM SIZES. LARGER SIZES ARE GENERALLY ACCEPTABLE.
12. FINISH GRADE OF PLANTING BEDS SHALL BE ONE (1) INCH BELOW ADJACENT FLATWORK, UNLESS SPECIFIED OTHERWISE.
13. PLACE MULCH IN ALL PLANTING AREAS. MULCH OR PLANTING BED DRESSING SHALL NOT BE PLACED WITHIN TWELVE INCHES OF TREE TRUNKS OR WITHIN THREE TO SIX INCHES OF SHRUB STEMS.
14. ALL PLANT AMENDMENT MATERIALS AND FERTILIZERS SHALL BE ORGANIC. THE USE OF SYNTHETIC FERTILIZERS IS PROHIBITED ON THIS PROJECT.
15. EXCESS FERTILIZER SHALL BE DISPOSED OF PROPERLY OFF-SITE. IT SHALL NOT BE DISPOSED OF IN STORM DRAINS.
16. STOCKPILED PLANT MATERIAL TO BE PLACED IN THE SHADE AND PROPERLY HAND-WATERED UNTIL PLANTED.
17. PRESERVE AND PROTECT ALL EXISTING VEGETATION TO REMAIN THROUGHOUT THE DURATION OF CONSTRUCTION.

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the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
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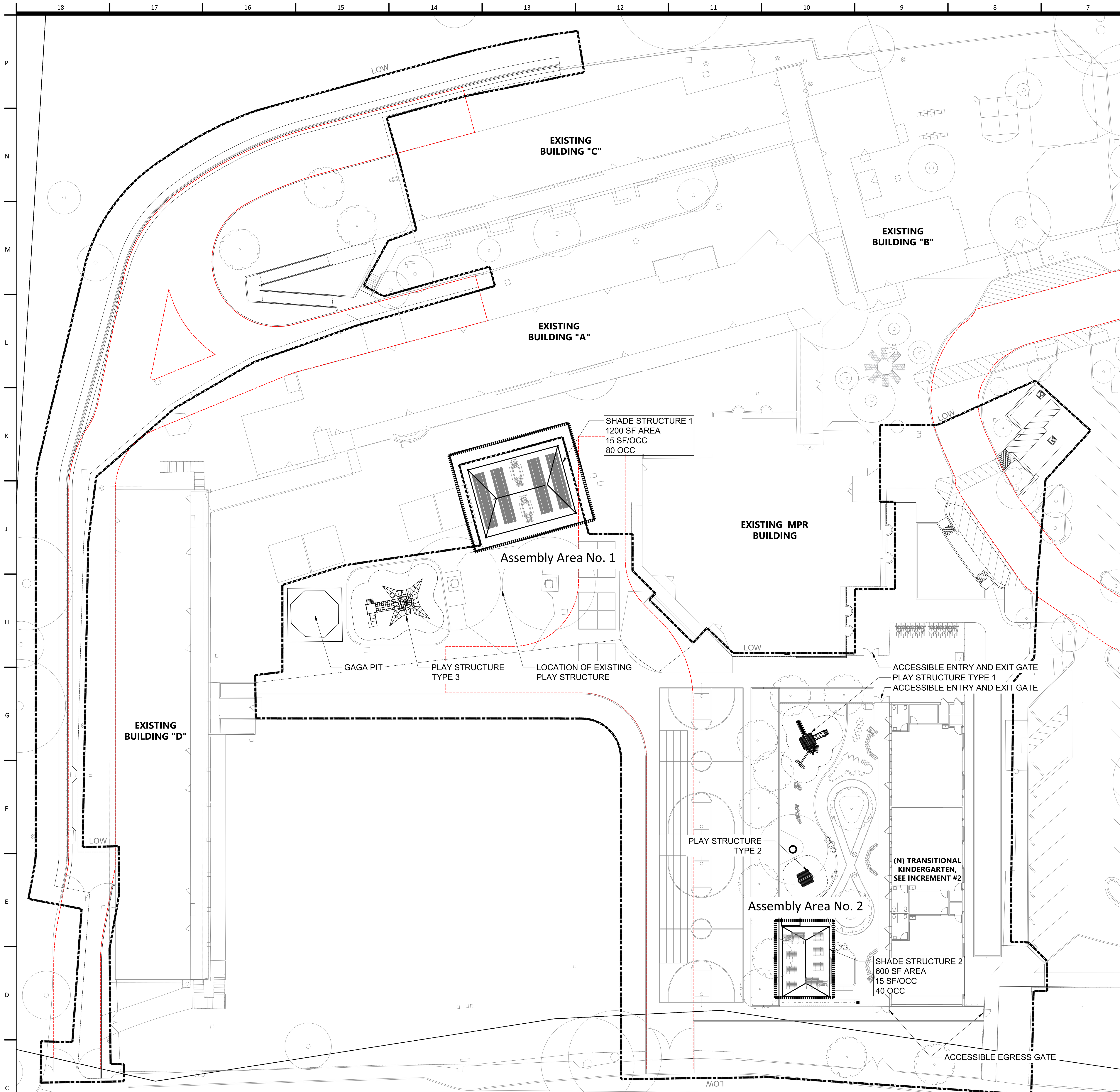
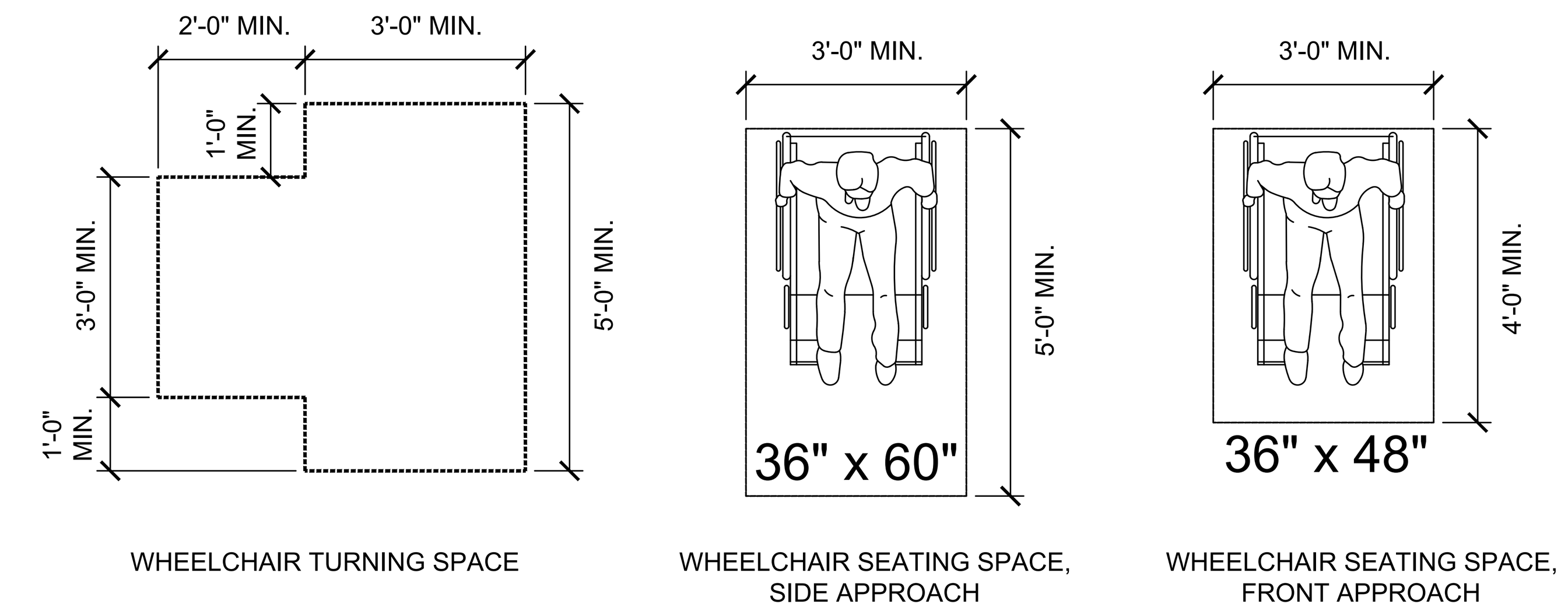
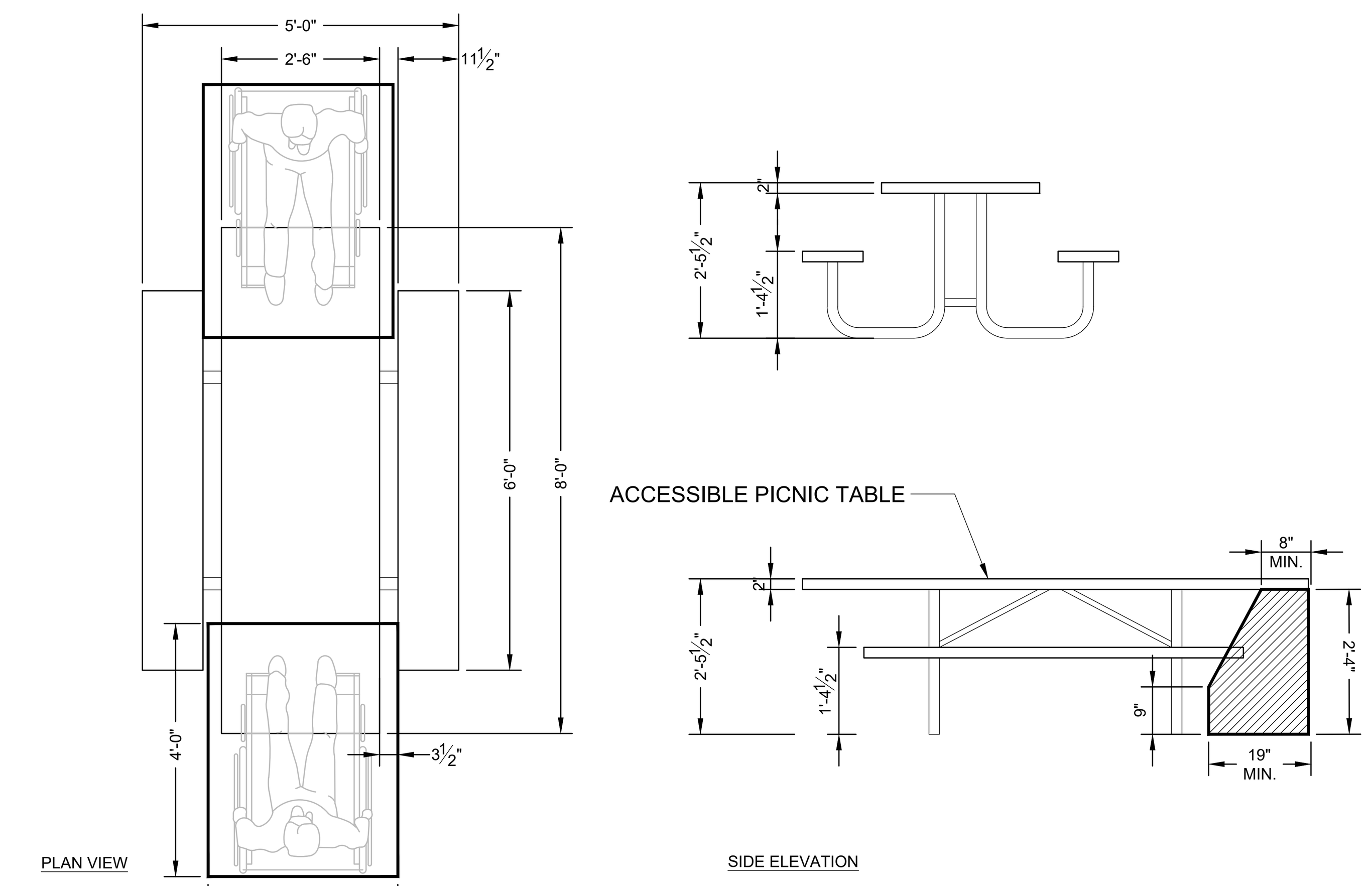
GENERAL NOTES AND ABBREVATIONS

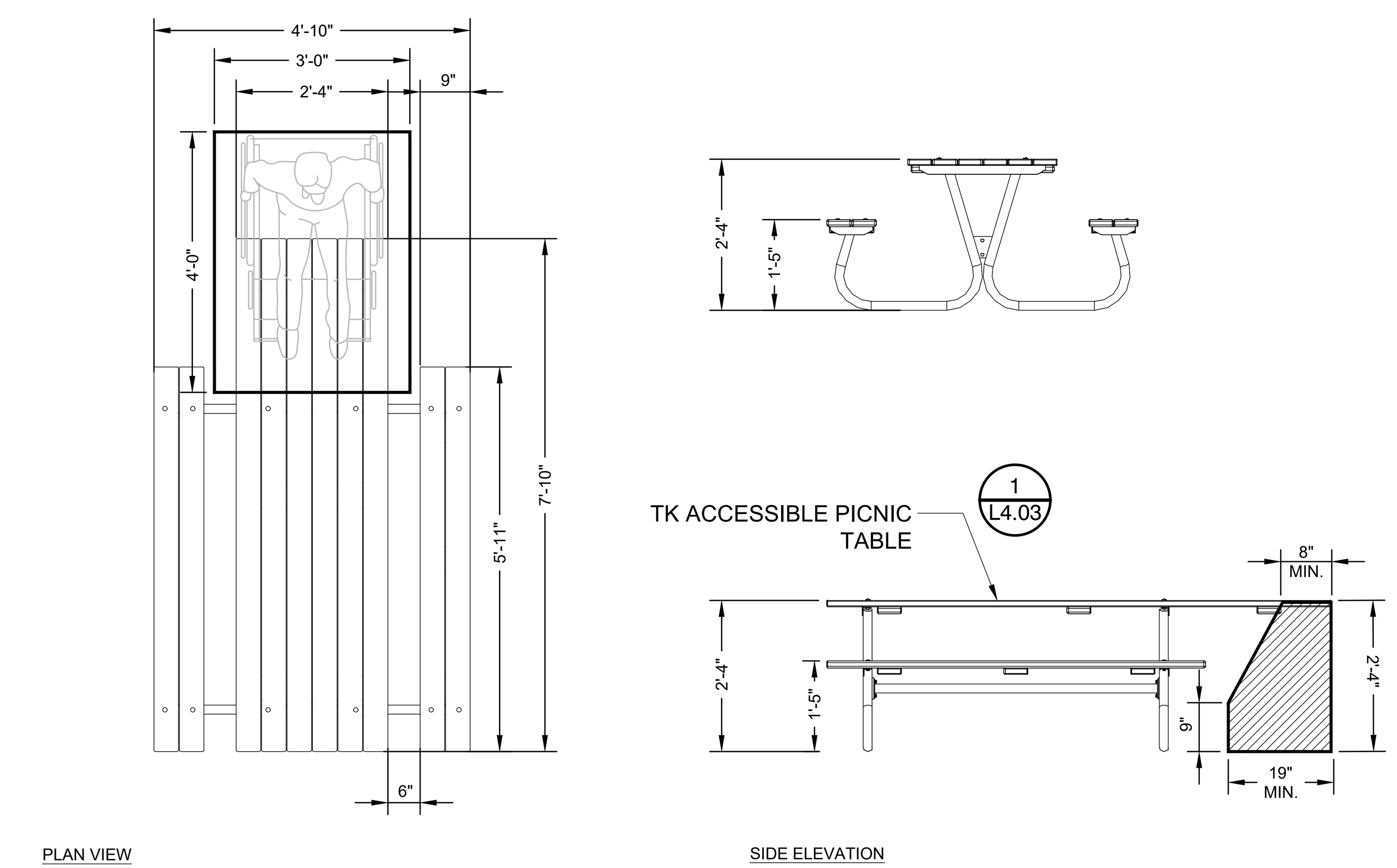
L0.01

DSA BACKCHECK









LEGEND

- LIMIT OF WORK LINE
- EMERGENCY ACCESS LANE, SCD
- ASSEMBLY AREA

DSA PRE-CHECKED SHADE STRUCTURES

DESCRIPTION	PC APPLICATION	OCCUPANCY TYPE	DETAIL REFERENCE SHEET	MANUFACTURER	MANUFACTURER'S MODEL	HEIGHT
SHADE STRUCTURE 1	04-121917			USA SHADE	DSA401304012-22	9' MAX ENTRY HEIGHT
SHADE STRUCTURE 2	04-121917			USA SHADE	DSA401203012-22	8' MAX ENTRY HEIGHT

NUMBER OF WHEELCHAIR SPACES IN ASSEMBLY AREAS (TABLE 11B-221.2.1.1)

ASSEMBLY AREA 1		
NUMBER OF SEATS	MINIMUM NUMBER OF REQUIRED WHEELCHAIR SPACES	NUMBER OF WHEELCHAIR SPACES PROVIDED
112	4	4
ASSEMBLY AREA 2		
NUMBER OF SEATS	MIINIMUM NUMBER OF REQUIRED WHEELCHAIR SPACES	NUMBER OF WHEELCHAIR SPACES PROVIDED
36	2	2

0 20 40 60 80 feet
1" = 20'
NORTH

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CODE SHEET

L0.02

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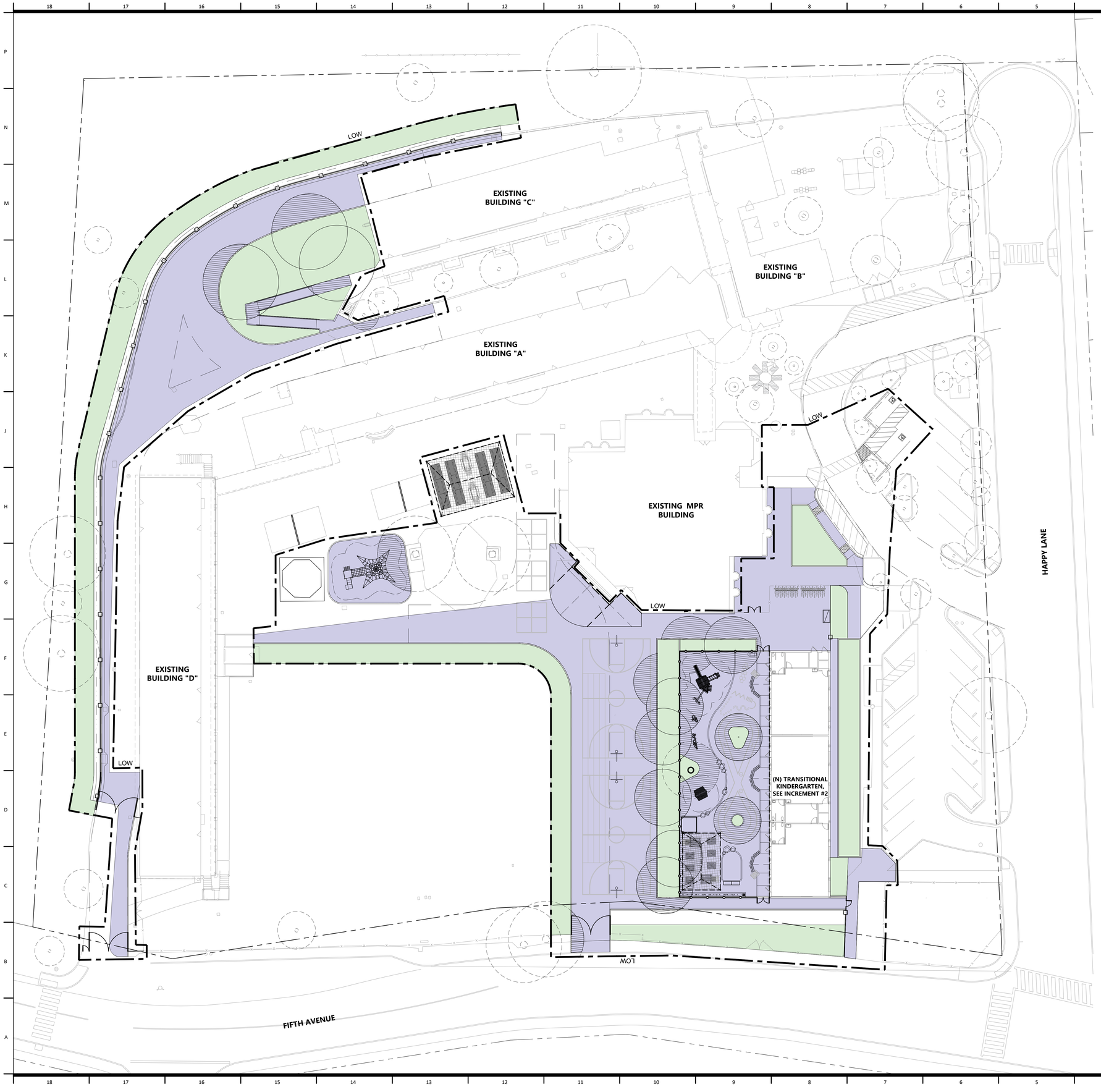

LEGEND	
17,373 SQ. FT.	NEW LANDSCAPE AREA
32,291 SQ. FT.	NEW HARDSCAPE AREA
1,800 SQ.FT.	TOTAL AUXILIARY SHADE
5,683 SQ. FT.	TOTAL TREE SHADE
74,925 SQ. FT.	TOTAL SITE AREA
23%	PERCENT SHADE

NOTES:
SEE PLANTING SCHEDULE AND PLANTING PLAN FOR ADDITIONAL INFORMATION REGARDING TYPE AND SIZE OF TREES TO BE INSTALLED.

EXISTING TREE CANOPY

PROPOSED TREE CANOPY

0 20 40 60 80 feet
1" = 20'

NORTH

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SHADE DIAGRAM

L0.03

DSA BACKCHECK

LEGEND

- EXISTING TREE TO REMAIN
- TREE TO BE PROTECTED WITH FENCE
- EXISTING TREE TO BE REMOVED
- TREE PROTECTION FENCING
- SHRUBS AND OTHER VEGETATION TO BE REMOVED

NOTES:
1. SEE SHEET L1.02 FOR TREE PROTECTION DETAILS.

0 20 40 60 80 feet
1" = 20'
NORTH

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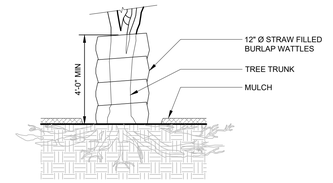
PATRICIA ALGARA LIC. #6691
SIGNATURE
3/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

TREE REMOVAL AND PROTECTION PLAN

L1.01

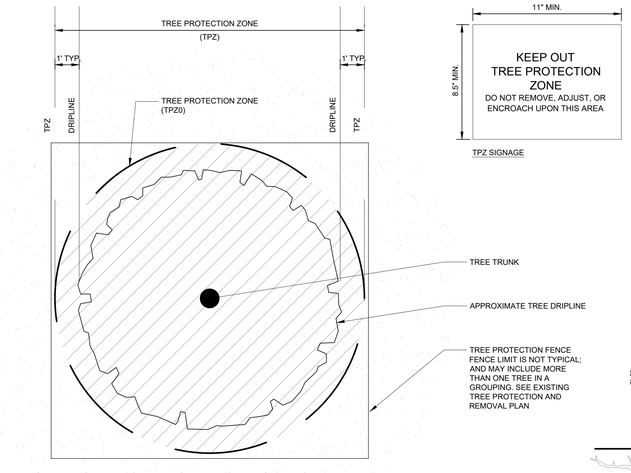
DSA BACKCHECK

NOTES:
1. BURLAP TREE PROTECTION TO BE USED ONLY IN AREAS WHERE TREE PROTECTION FENCING IS NOT POSSIBLE TO INSTALL. BURLAP TREE PROTECTION TO BE APPROVED FOR EACH INDIVIDUAL TREE BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
2. INSTALL ADDITIONAL PROTECTION OF ROOTS WITH MULCH, PLYWOOD OR OTHER MEANS, ROOT PROTECTION, INCLUDING THICKNESS OF MULCH TO BE APPROVED BY LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.



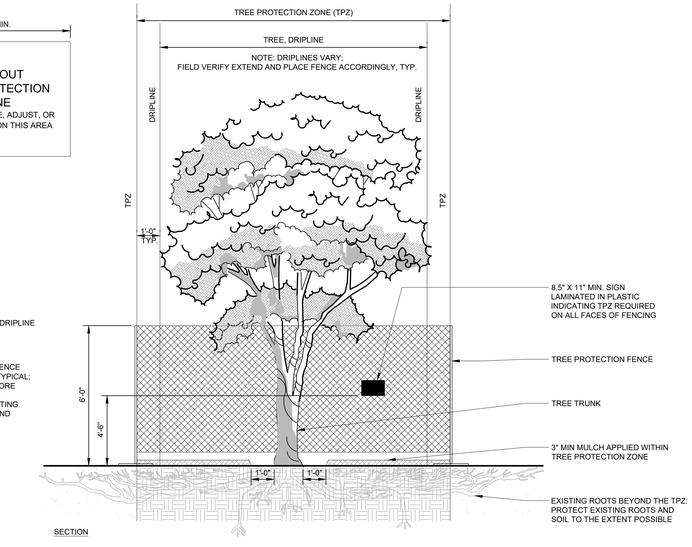
2 BURLAP TREE PROTECTION
3/8" = 1'-0"

NOTE:
1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. PRUNE TREES ONLY PER WRITTEN DIRECTION OF AN INDEPENDENT ARBORIST OR LANDSCAPE ARCHITECT.
3. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING, INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
4. REFER TO PLANTING SPEC FOR MULCH TYPE.
5. DO NOT CHANGE GRADE ELEVATION LEVEL IN TREE ROOT ZONE, UNLESS SPECIFICALLY CALLED FOR ON DRAWINGS.
6. DO NOT PRUNE ROOTS INSIDE TREE PROTECTION ZONE. DO NOT PRUNE ROOTS OUTSIDE TREE PROTECTION ZONE THAT ARE LARGER THAN 2" DIAMETER. USE ONLY CLEAN, SHARP HAND TOOLS TO PRUNE ROOTS.
7. WHERE IT IS DETERMINED BY THE CONTRACTOR, ARBORIST AND LANDSCAPE ARCHITECT THAT TREE PROTECTION FENCING IS NOT POSSIBLE TO INSTALL, CONTRACTOR TO INSTALL BURLAP TREE PROTECTION PER DETAIL 2/L1.02, WITH APPROVAL OF THE LANDSCAPE ARCHITECT.



PLAN

TPZ SIGNAGE



SECTION

1 TREE PROTECTION FENCE
NTS

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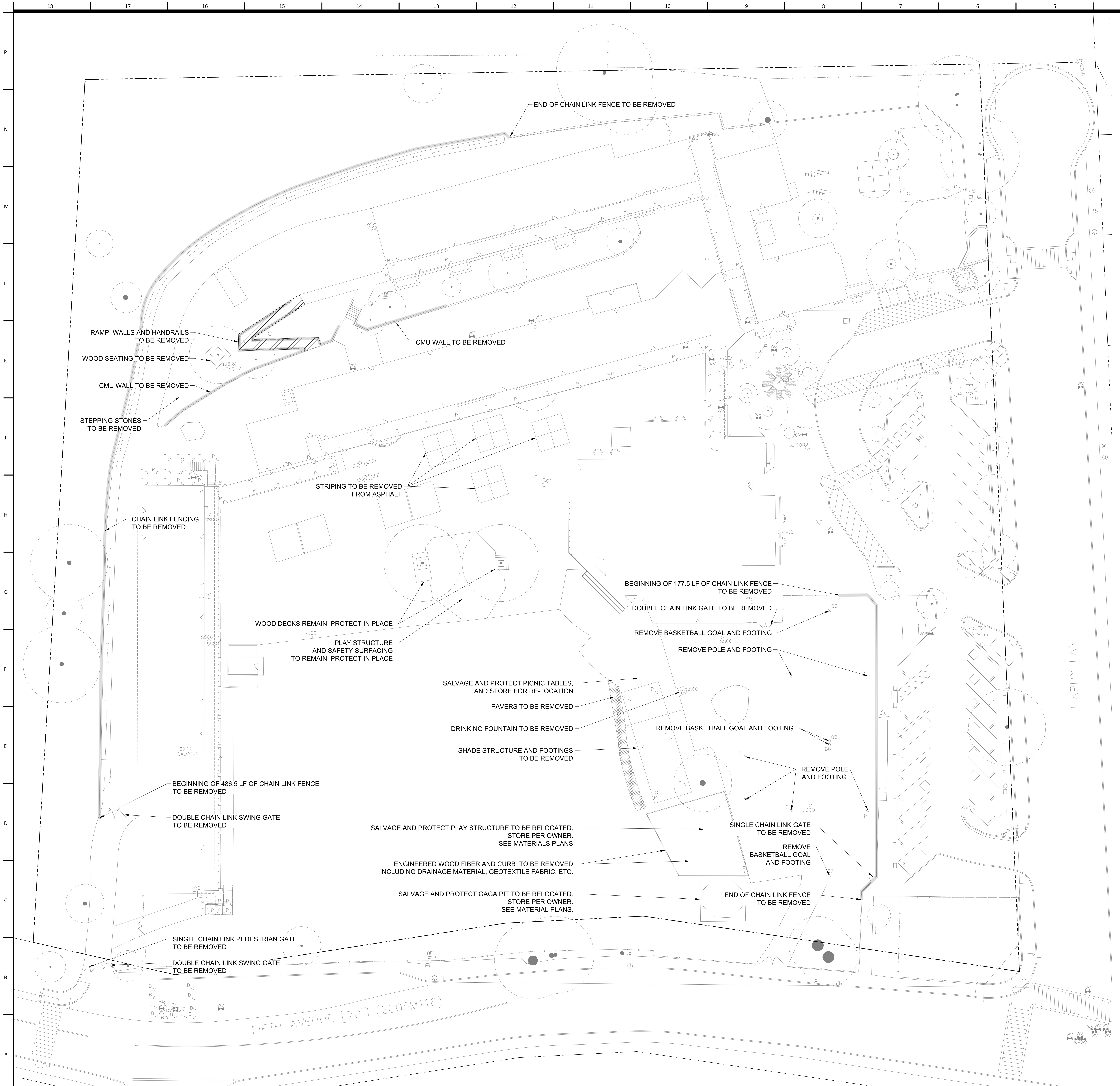
MONICA HUMMEL
SIGNATURE
07/1/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

TREE PROTECTION DETAILS

L1.02

DSA BACKCHECK



END OF CHAIN LINK FENCE TO BE REMOVED
RAMP, WALLS AND HANDRAILS TO BE REMOVED
WOOD SEATING TO BE REMOVED
CMU WALL TO BE REMOVED
STEPPING STONES TO BE REMOVED
CMU WALL TO BE REMOVED
STRIPING TO BE REMOVED FROM ASPHALT
CHAIN LINK FENCING TO BE REMOVED
WOOD DECKS REMAIN, PROTECT IN PLACE
PLAY STRUCTURE AND SAFETY SURFACING TO REMAIN, PROTECT IN PLACE
BEGINNING OF 177.5 LF OF CHAIN LINK FENCE TO BE REMOVED
DOUBLE CHAIN LINK GATE TO BE REMOVED
REMOVE BASKETBALL GOAL AND FOOTING
REMOVE POLE AND FOOTING
SALVAGE AND PROTECT PICNIC TABLES, AND STORE FOR RE-LOCATION
PAVERS TO BE REMOVED
DRINKING FOUNTAIN TO BE REMOVED
SHADE STRUCTURE AND FOOTINGS TO BE REMOVED
REMOVE BASKETBALL GOAL AND FOOTING
REMOVE POLE AND FOOTING
BEGINNING OF 486.5 LF OF CHAIN LINK FENCE TO BE REMOVED
DOUBLE CHAIN LINK SWING GATE TO BE REMOVED
SALVAGE AND PROTECT PLAY STRUCTURE TO BE RELOCATED. STORE PER OWNER. SEE MATERIALS PLANS
SINGLE CHAIN LINK GATE TO BE REMOVED
REMOVE BASKETBALL GOAL AND FOOTING
ENGINEERED WOOD FIBER AND CURB TO BE REMOVED INCLUDING DRAINAGE MATERIAL, GEOTEXTILE FABRIC, ETC.
SALVAGE AND PROTECT GAGA PIT TO BE RELOCATED. STORE PER OWNER. SEE MATERIAL PLANS.
END OF CHAIN LINK FENCE TO BE REMOVED
SINGLE CHAIN LINK PEDESTRIAN GATE TO BE REMOVED
DOUBLE CHAIN LINK SWING GATE TO BE REMOVED
128.82 BENCH
139.20 BALCONY
FIFTH AVENUE [70'] (2005M116)
HAPPY LANE

NOTES:

1. SCD FOR FURTHER DEMOLITION PLANS
2. SELECTIVE SITE DEMOLITION PLAN MAY NOT INCLUDE EVERY LANDSCAPE FEATURE, FOR ITEMS NOT SHOWN ON PLAN, CONTRACTOR TO CONSULT WITH OWNER'S REPRESENTATIVE.

SELECTIVE LANDSCAPE FEATURE, PAVING OR STRUCTURE TO BE REMOVED.

0 20 40 60 80 feet

1" = 20'

NORTH

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11/22/23
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SELECTIVE SITE DEMOLITION PLAN

L1.03

DSA BACKCHECK

LANDSCAPE MATERIALS LEGEND

SYMBOL	DESCRIPTION	DETAIL	MODEL	MANUFACTURER	MATERIAL	COLOR	FINISH	NOTES	SPEC SECTION	PROD. SBMTL	SHOP DWGS	MOCK-UP
	AMENITIES AND STRUCTURES											
A-101	STORAGE SHED		SALTBOX	JAMAICA COTTAGE SHOP	WOOD			STORAGE SHED IS NOT PART OF THE DSA APPROVAL.	32 33 00	X		
A-102	HOSE BIB	3/L4.05						STORAGE SHED IS NOT PART OF THE DSA APPROVAL		X		
A-103	HOSE BIB DRAINAGE CHANNEL	2/L4.05	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT, PEBBLES	NATURAL CONCRETE, BUFF PEBBLES	TOPCAST 05 - MICROETCH		03 30 00	X	X	X
A-104	SAND PLAY AREA	1/L4.05	PLAYGROUND SAND	ACAPULCO OR APPROVED EQUAL	PLAYGROUND SAND	TAN		SMOOTH AND SOFT TO THE TOUCH		X		
A-105	DSA PRE-CHECKED SHADE STRUCTURE 1, SEE ATTACHED DOCUMENTATION		DSA401304012-22	USA SHADE	HDPE MESH FABRIC	FABRIC: DESERT SAND; STRUCTURE: YELLOW	POWDER COAT	FOUR POST HIP 30 X 40, 9' MAX ENTRY HEIGHT	32 33 00	X		
A-106	DSA PRE-CHECKED SHADE STRUCTURE 2, SEE ATTACHED DOCUMENTATION		DSA401203012-22	USA SHADE	HDPE MESH FABRIC	FABRIC: DESERT SAND; STRUCTURE: YELLOW	POWDER COAT	FOUR-POST HIP 20 X 30, 8' MAX ENTRY HEIGHT	32 33 00	X		
A-107	PLAY STRUCTURE TYPE 1	1/L4.06	MULTIDECK TOWER, MONKEY BARS AND DESK, MODEL # NRO1024	KOMPAN	ROBINIA WOOD, STAINLESS STEEL COMPONENTS	NATURAL	UNSTAINED		11 68 13	X	X	
A-108	PLAY STRUCTURE TYPE 2	2/L4.06	VILLAGE SHOP, NRO404	KOMPAN	ROBINIA WOOD, ROPE AND NETS	NATURAL	UNSTAINED		11 68 13	X	X	
A-109	PLAY STRUCTURE TYPE 3	1/L4.07	4M PEGASUS WEBSCAPE, 8' WEB BRIDGE, 4' DECK	MIRACLE RECREATION EQUIPMENT				EXISTING NET STRUCTURE TO BE RELOCATED				
A-110	BASKETBALL GOAL	10/L4.00	LA-12C44 - CURVED POST/SINGLE 4-1/2"OD W/4' EXT.	L.A. STEELCRAFT	STEEL	POST PAD: YELLOW	GALVANIZED	BACKBOARD: LA-05 HEAVY DUTY FIBERGLASS 48"X72" RIM: LA-49 EXTRA HEAVY DUTY DOUBLE RIM WITH SUPER NYLON NET POST PAD: LA-PP-645"	11 68 33	X		
	FENCE											
SYMBOL	DESCRIPTION	DETAIL	MODEL	MANUFACTURER	MATERIAL	COLOR	FINISH	NOTES	SPEC. SECTION	PROD. SUBM TL	SHOP DWGS	MOCK-UP
F-101	6' CHAIN LINK FENCE	1/L4.01	6' HEIGHT	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH 2" OPENINGS	DARK GREEN OR BLACK, SEE MATERIALS PLANS	10 MIL PVC COATING			X	X	
F-102	4' CHAIN LINK FENCE	1/L4.01	4' HEIGHT	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH1" NON-CLIMBABLE MESH	DARK GREEN	10 MIL PVC COATING			X	X	
F-103	6' CHAIN LINK SINGLE GATE - PEDESTRIAN	1/L4.02	6' HIGH, 3' WIDE	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH 2" OPENINGS	GREEN	10 MIL PVC COATING			X	X	
F-104	4' CHAIN LINK DOUBLE EGRESS GATE - PEDESTRIAN	5/L4.01	4' HIGH, 6' WIDE	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH 1" NON CLIMBABLE FABRIC	DARK GREEN	10 MIL PVC COATING			X	X	
F-105	4' OR 6' CHAIN LINK DOUBLE ACCESSIBLE GATE - PEDESTRIAN	2/L4.03	6' HIGH, 6' WIDE	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH 2" OPENING	MATCH FENCE	10 MIL PVC COATING			X	X	
F-106	6' CHAIN LINK SINGLE EGRESS GATE - PEDESTRIAN	4/L4.01	6' HIGH, 3' WIDE	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GAUGE CHAIN LINK WITH 2" OPENINGS	MATCH FENCE	10 MIL PVC COATING			X	X	
F-107	6' CHAIN LINK DOUBLE GATE - VEHICULAR	2/L4.02	6' HIGH, 20' WIDE	MASTER HALCO OR APPROVED EQUAL	STEEL POSTS, 9 GUAGE CHAIN LINK WITH 2" OPENINGS	BLACK OR GREEN, MATCH FENCE	10 MIL PVC COATING			X	X	
	PAVING											
SYMBOL	DESCRIPTION	DETAIL	MODEL	MANUFACTURER	MATERIAL	COLOR	FINISH	NOTES	SPEC SECTION	PROD. SBMTL	SHOP DWGS	MOCK-UP
P-101	ARTIFICIAL TURF SAFETY SURFACE	4/L4.00	ENVYPLAY	ENVY LAWN	POLYETHYLENE	FIELD/APPLE	SILICA SAND INFILL	2" POLYGREEN FOAM PLAYN FALL ATTENUATION	32 18 16	X		X
P-102	VEHICULAR CONCRETE PAVING	1/L4.00	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	TOPCAST 05 - MICROETCH		32 13 13	X		X
P-103	PEDESTRIAN CONCRETE PAVING	1/L4.00	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	TOPCAST 05 - MICROETCH		32 13 13	X		X
P-104	CONCRETE RAMP WITH HANDRAILS	4/L4.02	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	TOPCAST 05 - MICROETCH		32 13 13	X		
P-105	ASPHALT PAVING, S.C.D.											
P-106	PAINT STRIPING AT ASPHALT		EXTERIOR PAINT	STREETBOND OR APPROVED EQUAL		SEE MATERIALS PLANS		LANDSCAPE ARCHITECT TO APPROVE COLOR SWATCHES	32 01 13.16	X		X
P-107	CONCRETE PAVING THICKENED EDGE	2/L4.00			CONCRETE				32 13 13			
	SITE FURNISHING											
SYMBOL	DESCRIPTION	DETAIL	MODEL	MANUFACTURER	MATERIAL	COLOR	FINISH	NOTES	SPEC SECTION	PROD. SBMTL	SHOP DWGS	MOCK-UP
S-101	LOG BENCH	9/L4.00	4' LENGTH		RECLAIMED WOOD LOG, STEEL POSTS		SANDED SMOOTH, FINISHED AND SEALED	SEE DETAIL FOR TREE SPECIES	32 33 00	X		X
S-102	STUMP IN ARTIFICIAL TURF PLAY SURFACE	7/L4.00			RECLAIMED WOOD LOG		TOP SANDED SMOOTH, STAINED AND SEALED	SEE DETAIL FOR SPECIES, FINISH	32 33 00	X		X
S-103	BOULDER EDGE	8/L4.00	HOOKER CREEK BOULDERS	LYNGSO	NATURAL STONE	WARM BUFF TO GOLD		ROUNDED EDGES, NO SHARP CORNERS, SELECTION IN YARD BY LANDSCAPE ARCHITECT	32 93 00	X		
S-104	GAGA PIT			COACH CLIFF'S GAGA BALL PITS	COMPOSITE LUMBER, POWDER COATED STEEL BRACKETS, RUBBER FLOORING TILES			OFCI - EXISTING GAGA PIT AND SURFACE TO BE RELOCATED	11 68 13			
S-105	TREE DECK	/		THERMORY	BENCHMARK PINE	BROWN	UNOILED		06 10 63	X	X	
S-106	MUD KITCHEN		MUD KITCHEN	NATURE TO PLAY	THERMORY		SEALED		32 33 00	X		
S-107	BIKE RACK	11/L4.00	ORIGINAL CYCLOOPS 2170-13-S	COLUMBIA CASCADE	STAINLESS STEEL		POLISHED STAINLESS STEEL	DIRECT EMBEDMENT	32 33 00	X		
S-108	BIKE LOCKER		DOUBLE BIKE LOCKER	HUNTCO	STEEL	SILVER GREY	POWDERCOAT	PADLOCK HANDLE, NO PERFORATION	32 33 00	X		
S-109	TRASH AND RECYCLING RECEPTACLES		435-72SH 72 GALLON RECYCLING UNIT WITH SHIELD, SIDE DEPOSIT, 3 STREAM	DUMOR	STEEL	BODY COLOR: CHARCOAL. SHIELD COLOR: CHARCOAL. LID COLORS: HERITAGE BROWN, CHARCOAL, RECYCLE GREEN.	POWDERCOAT	5"X10" AND 5"X11-3/8" RECTANGULAR HOLES. LABELED WITH COMPOST, LANDFILL, RECYCLING.	32 33 00	X		
S-110	(E) PICNIC TABLE							RELOCATE EXISTING 8' PERFORATED METAL MESH PICNIC TABLES				
S-111	TK PICNIC TABLE		PAR4080-0026 AGORA PICNIC MINI - WOOD	KOMPAN	STEEL AND WOOD	YELLOW	POWDERCOAT		32 33 00	X		
S-112	ACCESSIBLE PICNIC TABLE		T9F695289BL	GLOBAL INDUSTRIAL	EXPANDED METAL	GREEN	POWDERCOAT			X		
S-113	TK ACCESSIBLE PICNIC TABLE	1/L4.03	PAR1403-0011 ANITA PICNIC TABLE - INCLUSION	KOMPAN	STEEL AND WOOD		GALVANIZED		32 33 00	X		
	WALLS AND CURBS											
SYMBOL	DESCRIPTION	DETAIL	MODEL	MANUFACTURER	MATERIAL	COLOR	FINISH	NOTES	SPEC SECTION	PROD. SBMTL	SHOP DWGS	MOCK-UP
W-101	FLUSH CONCRETE CURB	5/L4.00	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL CONCRETE	FLOAT		03 30 53	X		
W-102	6" WIDE RAISED CONCRETE CURB	6/L4.00	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	FLOAT		03 30 53	X		X
W-103	8" WIDE RAISED CONCRETE CURB	6/L4.00	CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	FLOAT		03 30 53	X		X
W-104	RETAINING WALL, SCD		CAST-IN-PLACE CONCRETE		PORTLAND CEMENT	NATURAL	FLOAT					
W-105	CMU RETAINING WALL	7/L4.02	8" CMU BLOCK		CONCRETE	MATCH EXISTING	MATCH EXISTING			X		
W-106	RETAINING WALL, SSD		CAST-IN-PLACE CONCRETE				SMOOTH FORM FINISH					

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75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

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Issue Date: April 22, 2024

Revisions

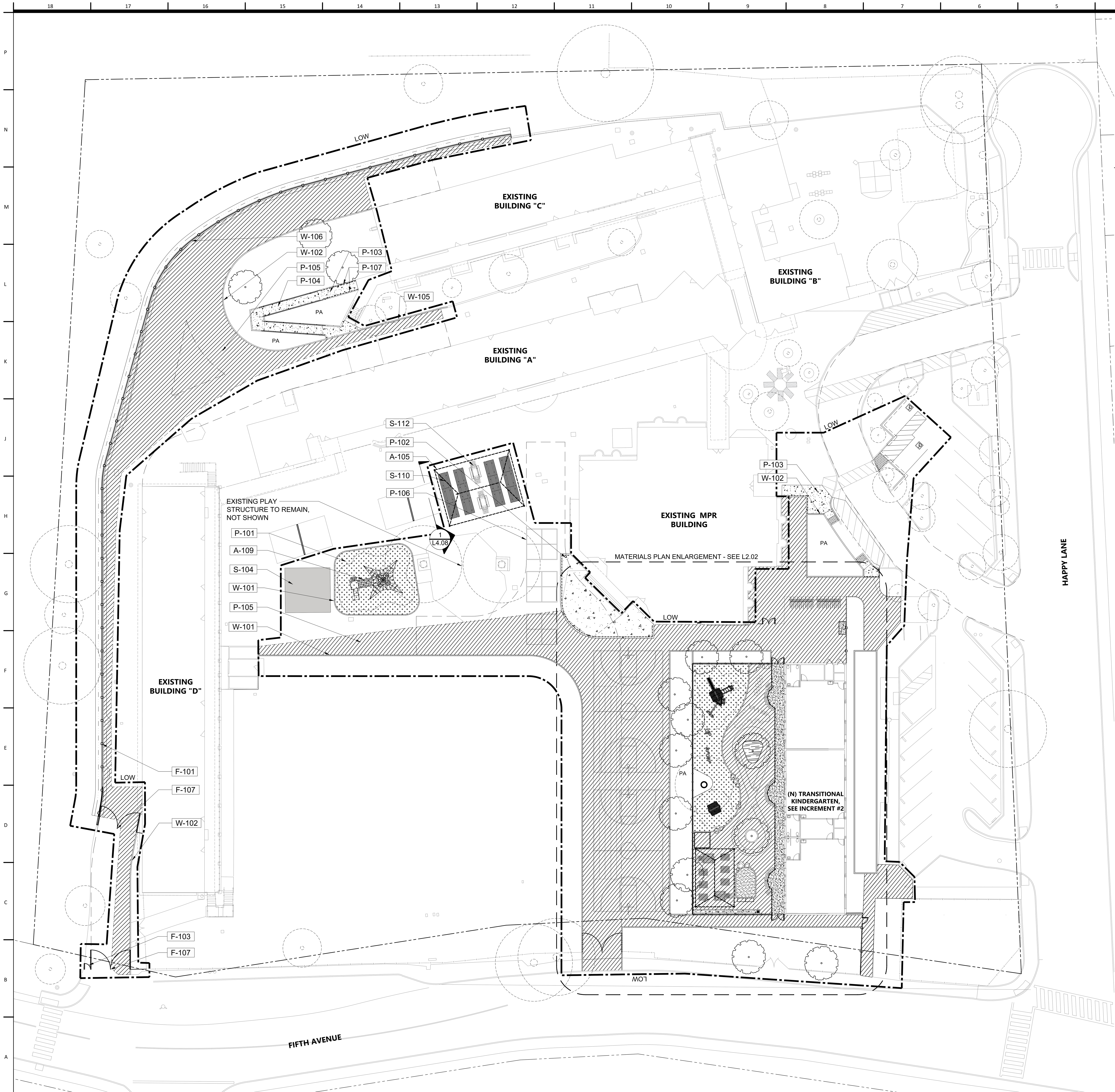
NUMBER	DESCRIPTION	DATE

LICENSED LANDSCAPE ARCHITECT
PATRICIA ALGARA LIC. #6691
SIGNATURE
3/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

LANDSCAPE MATERIALS SCHEDULE

L2.00

DSA BACKCHECK



MATERIALS LEGEND		
	AMENITIES AND STRUCTURES	
SYMBOL	DESCRIPTION	DETAIL
A-105	DSA PRE-CHECKED SHADE STRUCTURE 1, SEE ATTACHED DOCUMENTATION	
A-109	PLAY STRUCTURE TYPE 3	1/L4.07
	FENCE	
SYMBOL	DESCRIPTION	DETAIL
F-101	6' CHAIN LINK FENCE	1/L4.01
F-103	6' CHAIN LINK SINGLE GATE - PEDESTRIAN	1/L4.02
F-107	6' CHAIN LINK DOUBLE GATE - VEHICULAR	2/L4.02
	PAVING	
SYMBOL	DESCRIPTION	DETAIL
P-101	ARTIFICIAL TURF SAFETY SURFACE	4/L4.00
P-102	VEHICULAR CONCRETE PAVING	1/L4.00
P-103	PEDESTRIAN CONCRETE PAVING	1/L4.00
P-104	CONCRETE RAMP WITH HANDRAILS	4/L4.02
P-105	ASPHALT PAVING, S.C.D.	
P-106	PAINT STRIPING AT ASPHALT	
P-107	CONCRETE PAVING THICKENED EDGE	2/L4.00
	SITE FURNISHING	
SYMBOL	DESCRIPTION	DETAIL
S-104	GAGA PIT	
S-110	(E) PICNIC TABLE	
S-112	ACCESSIBLE PICNIC TABLE	
	WALLS AND CURBS	
SYMBOL	DESCRIPTION	DETAIL
W-101	FLUSH CONCRETE CURB	5/L4.00
W-102	6" WIDE RAISED CONCRETE CURB	6/L4.00
W-105	CMU RETAINING WALL	7/L4.02
W-106	RETAINING WALL, SSD	

0 20 40 60 80 feet
1" = 20'
NORTH

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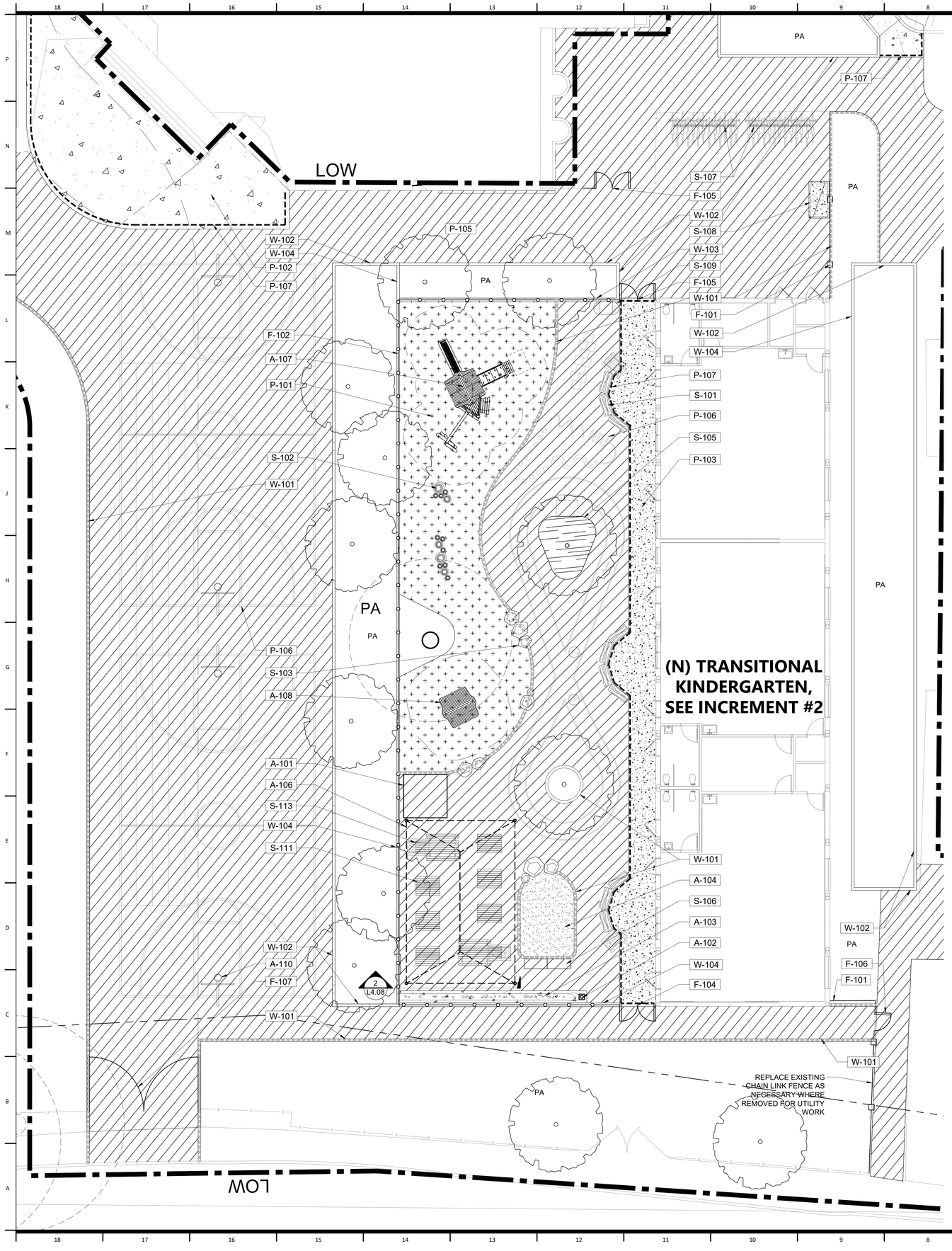
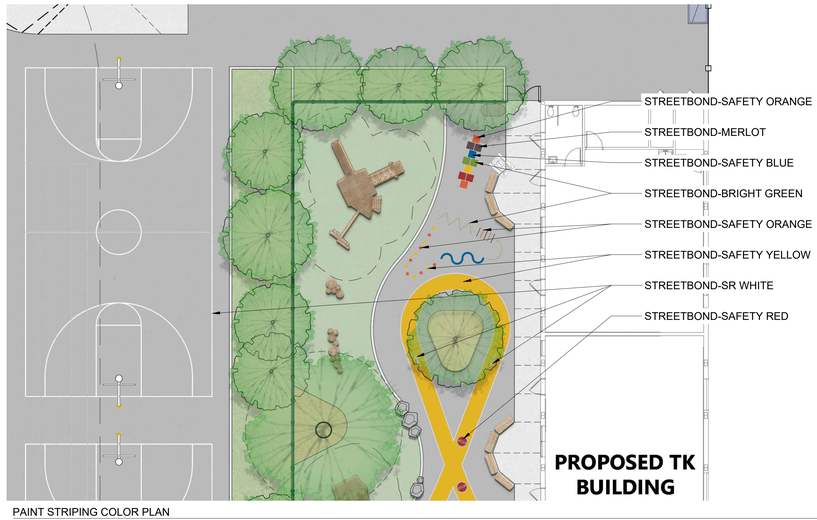
LANDSCAPE MATERIALS PLAN

L2.01

DSA BACKCHECK



MATERIALS LEGEND		
	AMENITIES AND STRUCTURES	
SYMBOL	DESCRIPTION	DETAIL
A-101	STORAGE SHED	
A-102	HOSE BIB	3/L4.05
A-103	HOSE BIB DRAINAGE CHANNEL	2/L4.05
A-104	SAND PLAY AREA	1/L4.05
A-106	DSA PRE-CHECKED SHADE STRUCTURE 2, SEE ATTACHED DOCUMENTATION	
A-107	PLAY STRUCTURE TYPE 1	1/L4.06
A-108	PLAY STRUCTURE TYPE 2	2/L4.06
A-110	BASKETBALL GOAL	10/L4.00
	FENCE	
SYMBOL	DESCRIPTION	DETAIL
F-101	6' CHAIN LINK FENCE	1/L4.01
F-102	4' CHAIN LINK FENCE	1/L4.01
F-104	4' CHAIN LINK DOUBLE EGRESS GATE - PEDESTRIAN	5/L4.01
F-105	4' OR 6' CHAIN LINK DOUBLE ACCESSIBLE GATE - PEDESTRIAN	2/L4.03
F-106	6' CHAIN LINK SINGLE EGRESS GATE - PEDESTRIAN	4/L4.01
F-107	6' CHAIN LINK DOUBLE GATE - VEHICULAR	2/L4.02
	PAVING	
SYMBOL	DESCRIPTION	DETAIL
P-101	ARTIFICIAL TURF SAFETY SURFACE	4/L4.00
P-102	VEHICULAR CONCRETE PAVING	1/L4.00
P-103	PEDESTRIAN CONCRETE PAVING	1/L4.00
P-105	ASPHALT PAVING, S.C.D.	
P-106	PAINT STRIPING AT ASPHALT	
P-107	CONCRETE PAVING THICKENED EDGE	2/L4.00
	SITE FURNISHING	
SYMBOL	DESCRIPTION	DETAIL
S-101	LOG BENCH	9/L4.00
S-102	STUMP IN ARTIFICIAL TURF PLAY SURFACE	7/L4.00
S-103	BOULDER EDGE	8/L4.00
S-105	TREE DECK	/
S-106	MUD KITCHEN	
S-107	BIKE RACK	11/L4.00
S-108	BIKE LOCKER	
S-109	TRASH AND RECYCLING RECEPTACLES	
S-111	TK PICNIC TABLE	
S-113	TK ACCESSIBLE PICNIC TABLE	1/L4.03
	WALLS AND CURBS	
SYMBOL	DESCRIPTION	DETAIL
W-101	FLUSH CONCRETE CURB	5/L4.00
W-102	6" WIDE RAISED CONCRETE CURB	6/L4.00
W-103	8" WIDE RAISED CONCRETE CURB	6/L4.00
W-104	RETAINING WALL, SCD	



PAINT STRIPING COLOR PLAN
NTS

0 8 16 24 32 feet
1/8" = 1'-0"

NORTH

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REBECCA HUGHES
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11/22/23
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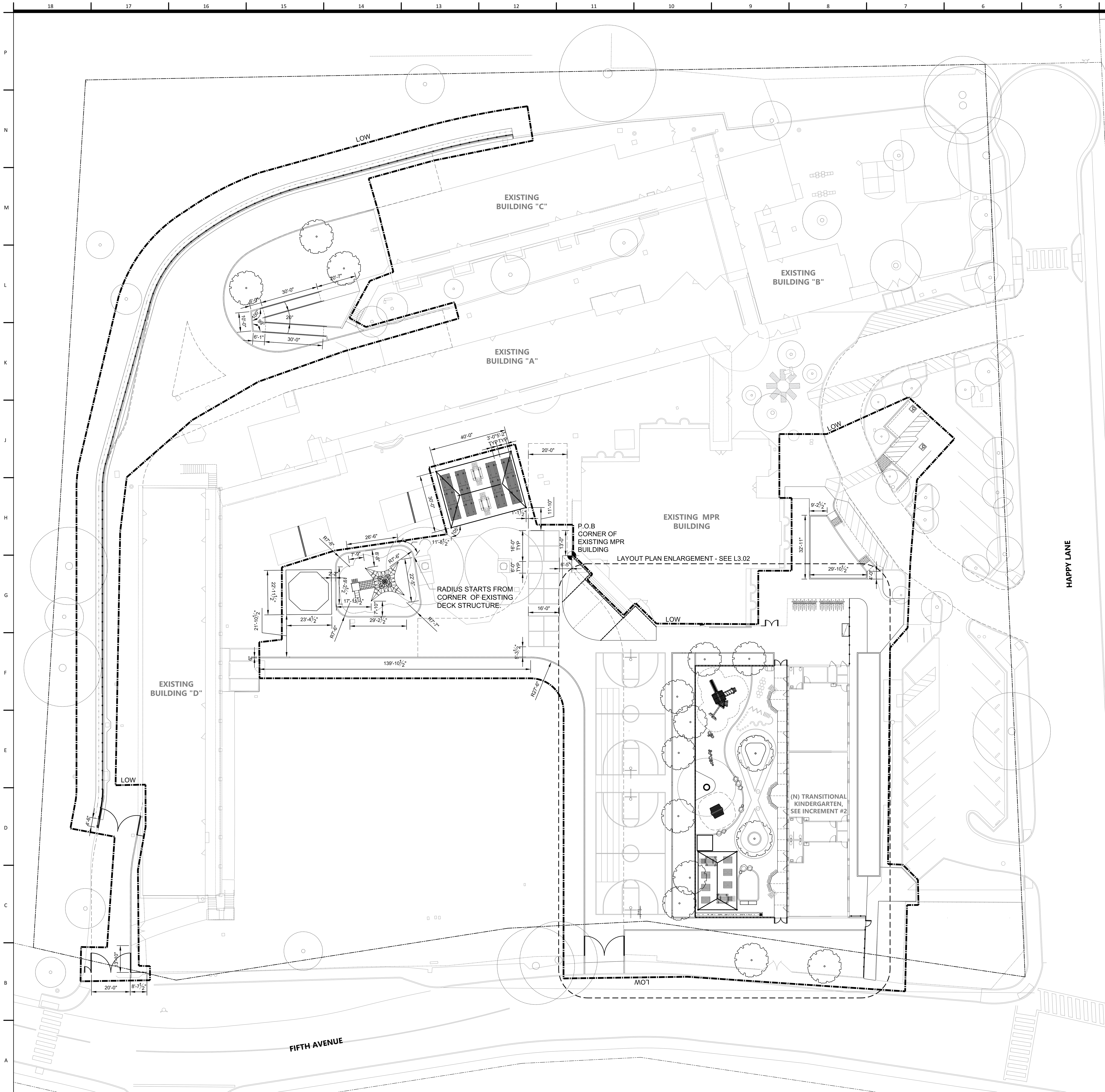
LANDSCAPE MATERIALS PLAN ENLARGEMENT

L2.02

DSA BACKCHECK



LAYOUT PLAN LEGEND

SYMBOL	DESCRIPTION
P.O.B.	POINT OF BEGINNING
EJ	EXPANSION JOINT
	CONTROL JOINT

NOTES:
1. SEE CIVIL DRAWINGS FOR LAYOUT OF WALLS, CURB RAMP, CURBS, AND PARKING AREA PAVING AND STRIPING

0 20 40 60 80 feet
1" = 20'
NORTH

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PATRICIA ALGARA LIC. #6691
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11/22/23
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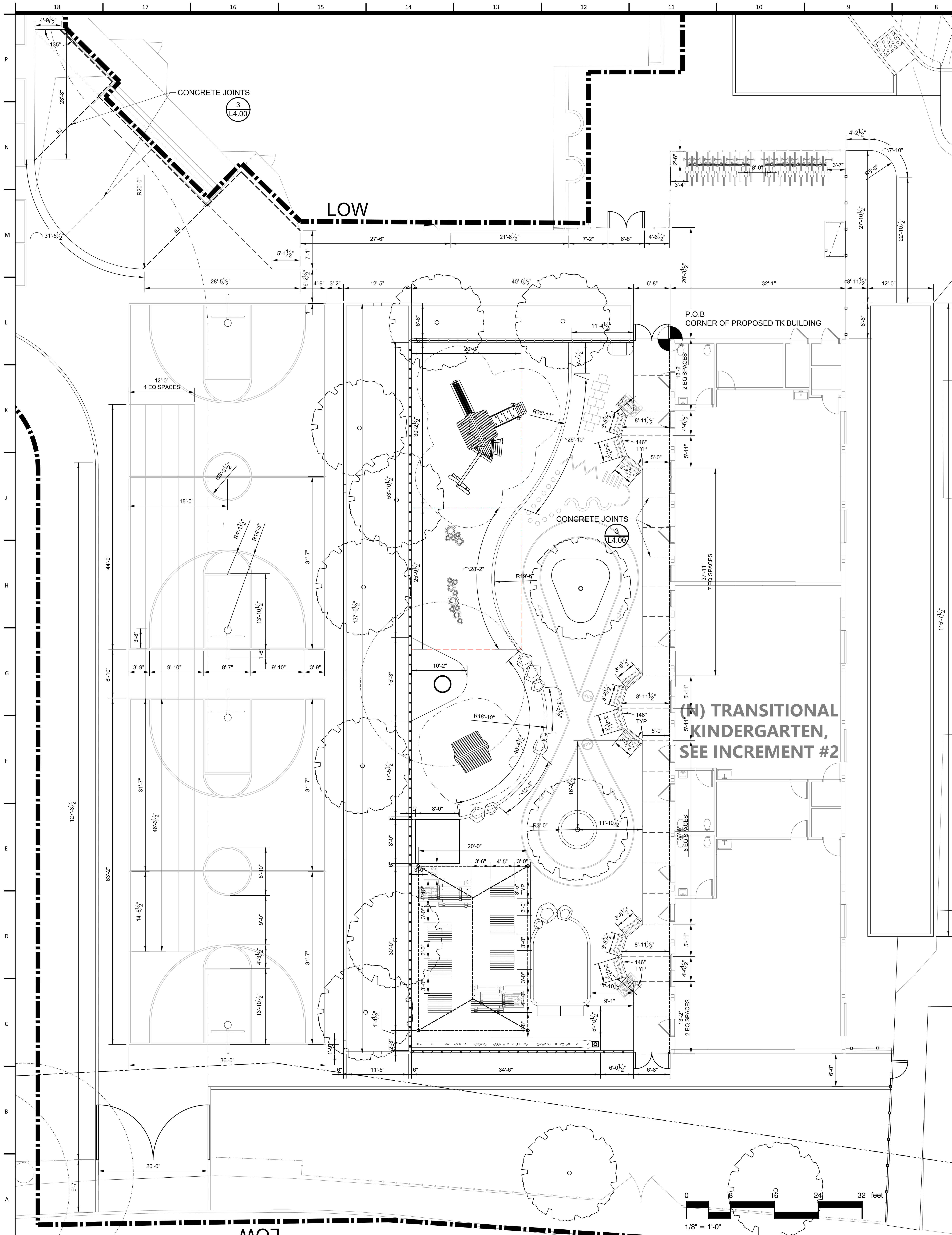
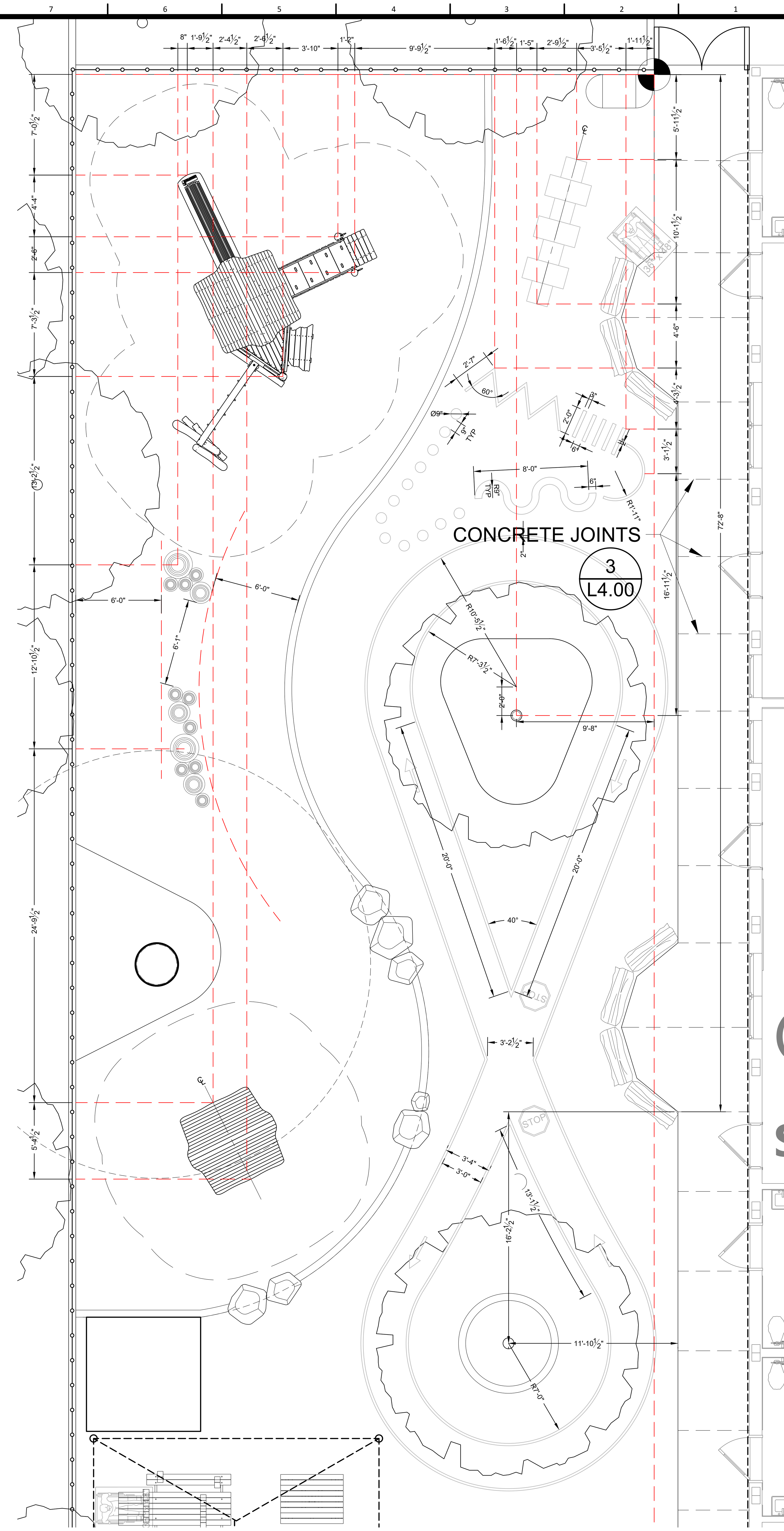
LANDSCAPE LAYOUT PLAN

L3.01

DSA BACKCHECK





TK PLAY STRUCTURES AND STRIPING LAYOUT PLAN ENLARGEMENT

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Revisions

NUMBER	DESCRIPTION	DATE

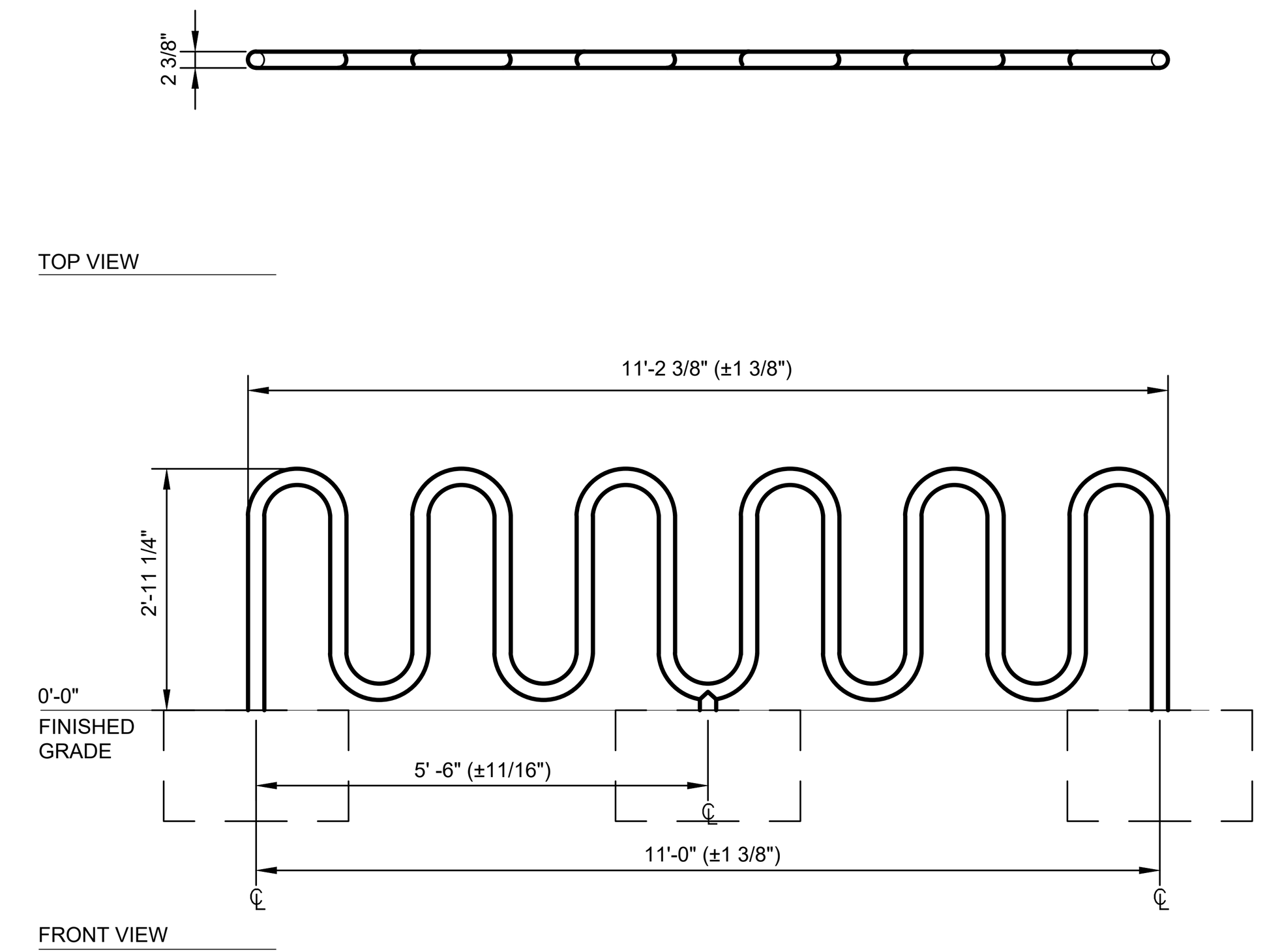
UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

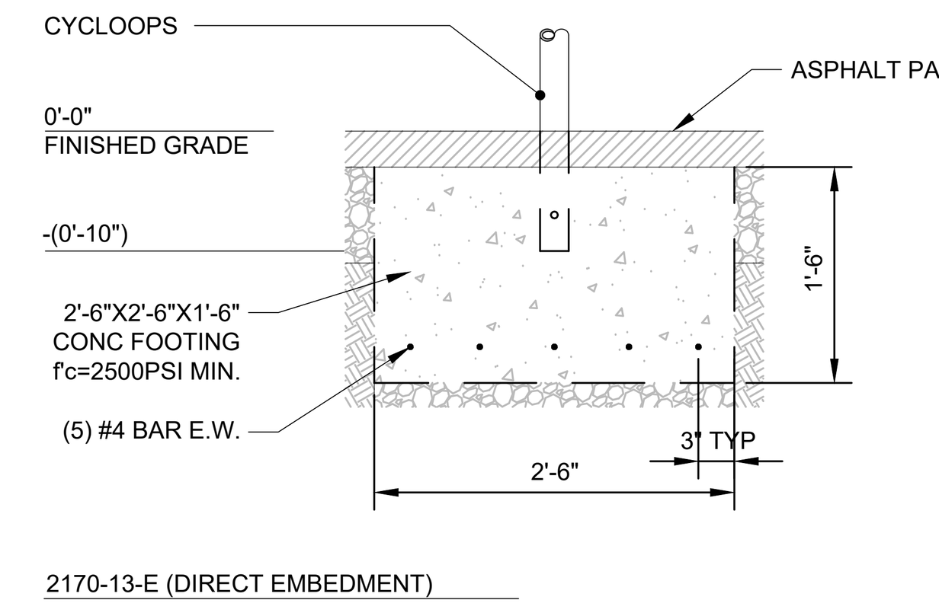
LICENSED LANDSCAPE ARCHITECT
PATRICIA ALGARA LIC. #6691
SIGNATURE
3/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

LANDSCAPE LAYOUT PLAN ENLARGEMENT

L3.02

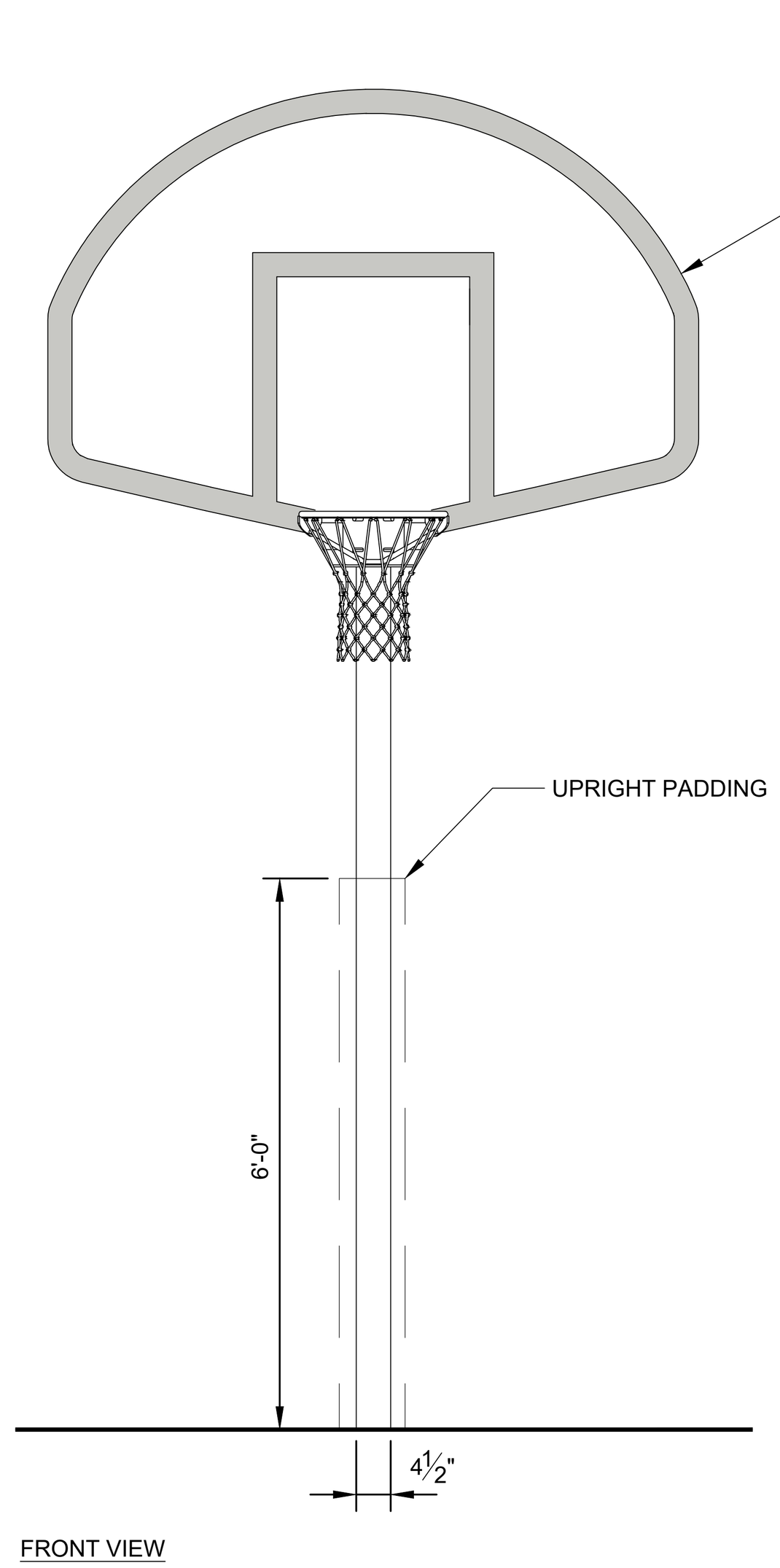
DSA BACKCHECK

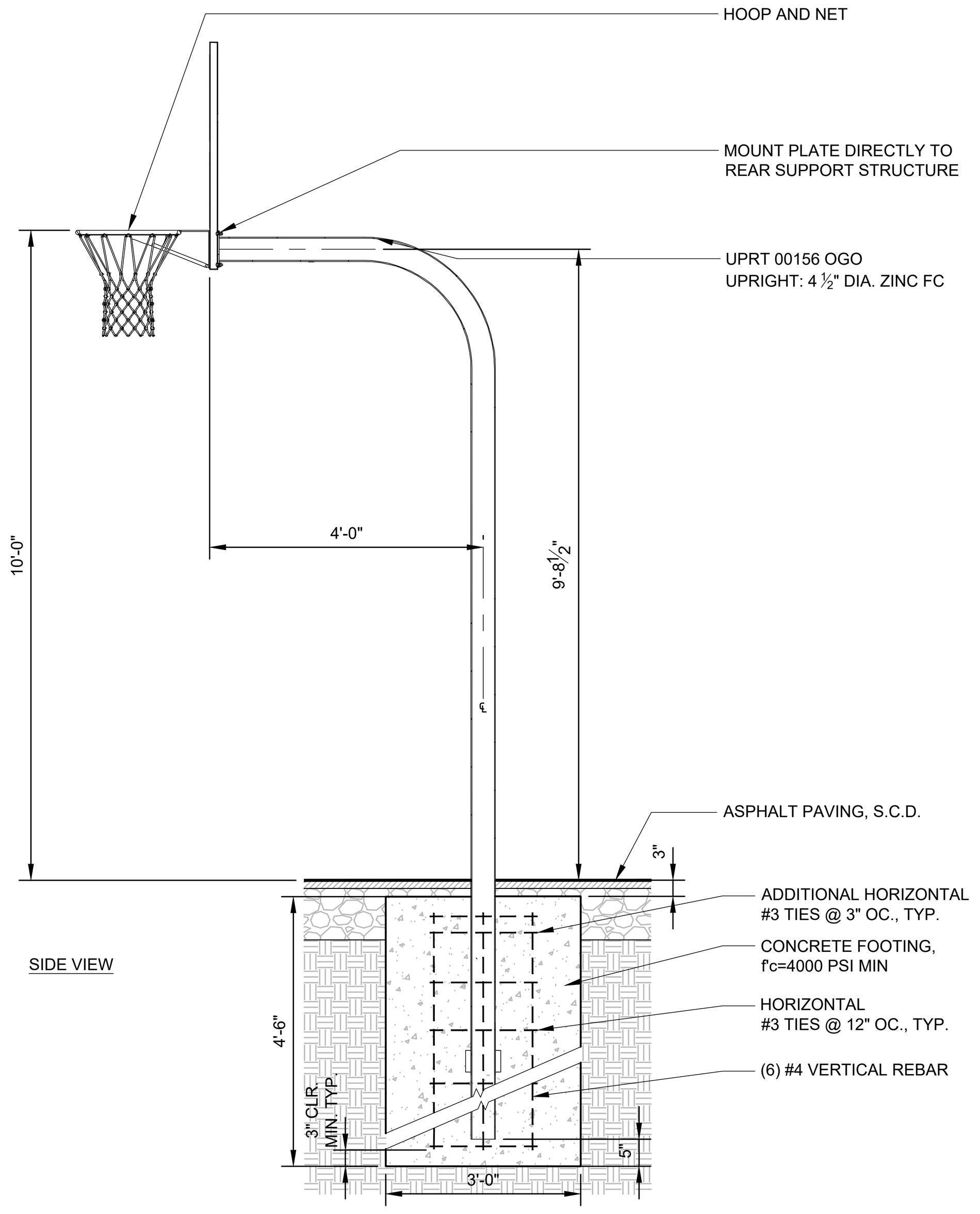




NOTES:
1. SEE SCHEDULE OF MATERIALS AND FURNISHINGS FOR MODEL AND FINISH.
2. SEE LAYOUT PLAN FOR LOCATIONS.

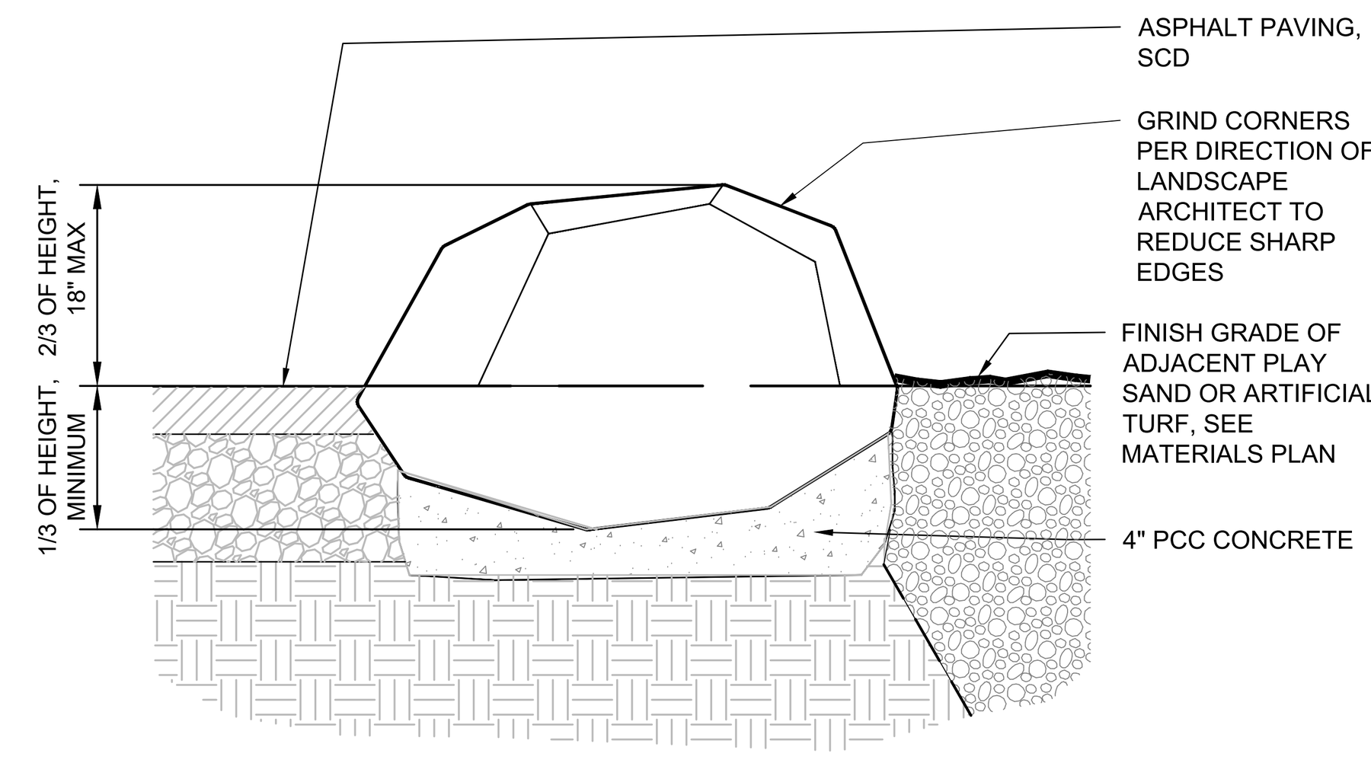
11 BIKE RACK
NTS





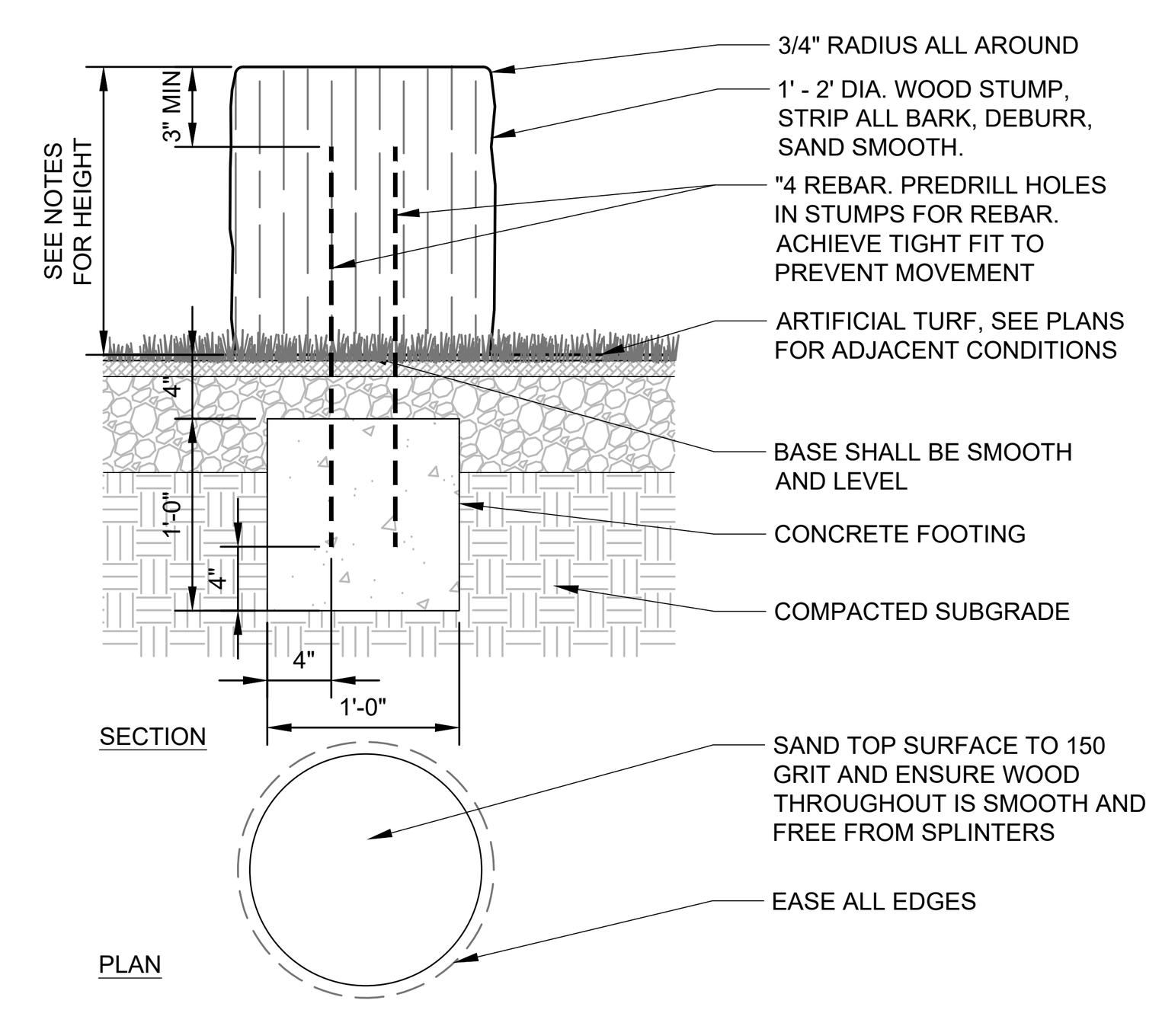
NOTES:
1. REFER TO L2.00 MATERIALS SCHEDULE FOR MODEL OF BACKBOARD, HOOP, NET, AND UPRIGHT POST PADDING.

10 BASKETBALL GOAL
1/2" = 1'-0"



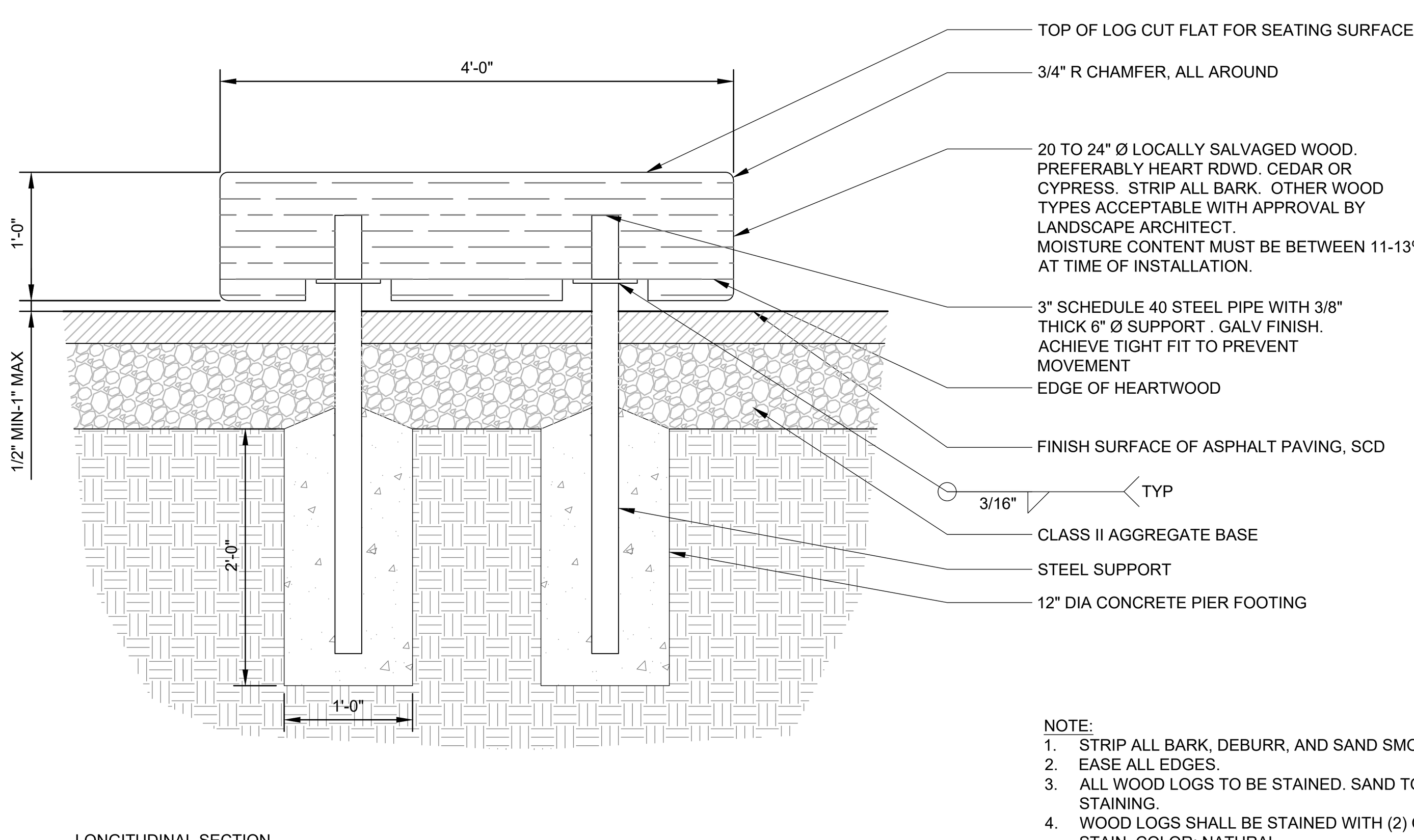
NOTE:
1. ALL BOULDERS SHALL BE SELECTED AND FIELD TAGGED BY LANDSCAPE ARCHITECT.
2. BOULDERS SHALL BE SOURCED FROM CENTRAL HOME SUPPLY OR A LOCAL QUARRY.
3. CONTRACTOR IS RESPONSIBLE FOR TRANSPORTING BOULDERS TO THE PROJECT LOCATION
4. BOULDERS OVER 24" DO NOT REQUIRE CONCRETE SETTING BED. MAINTAIN 1/3 BURIAL DEPTH.
5. BOULDERS SET ADJACENT TO EACH OTHER TO BE FIT TIGHT AGAINST EACH OTHER. AT SAND PLAY, ANY GAPS ABOVE FINISH SURFACE SHOULD BE CLOSED WITH RECESSED MORTAR SUCH AS NOT TO BE VISIBLE.

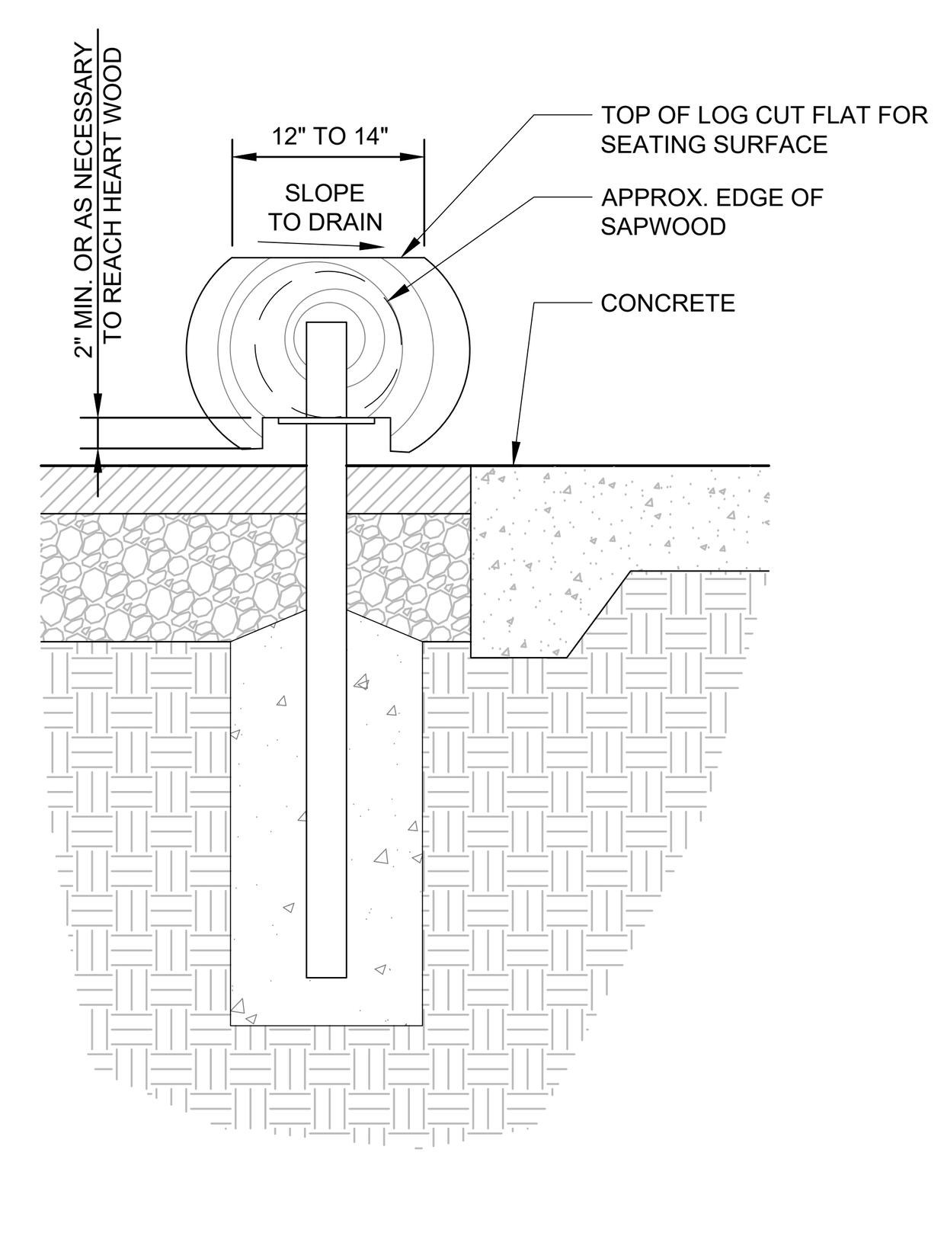
8 BOULDER EDGE
1" = 1'-0"



NOTES:
1. CONTRACTOR TO INSTALL AT A RANDOM HEIGHT BETWEEN 1'- 0" - 1'- 6" ABOVE ADJACENT F.G.
2. STRIP ALL BARK, DEBURR, AND SAND SMOOTH.
3. EASE ALL EDGES.
4. ALL WOOD STUMPS TO BE STAINED. SAND TO A 120 GRIT FINISH PRIOR TO STAINING.
5. WOOD STUMPS SHALL BE STAINED WITH (2) COATS OF DUCKBACK CLEAR STAIN, COLOR: NATURAL.
6. ALL WOOD STUMPS TO BE SOURCED LOCALLY. SUBMIT FOR APPROVAL.
7. WHEN STUMPS ARE PLACED ADJACENT TO EACH OTHER, STUMPS TO BE FIT TIGHT AGAINST EACH OTHER WITH GAPS BETWEEN STUMPS TO BE 1/2" MAX.

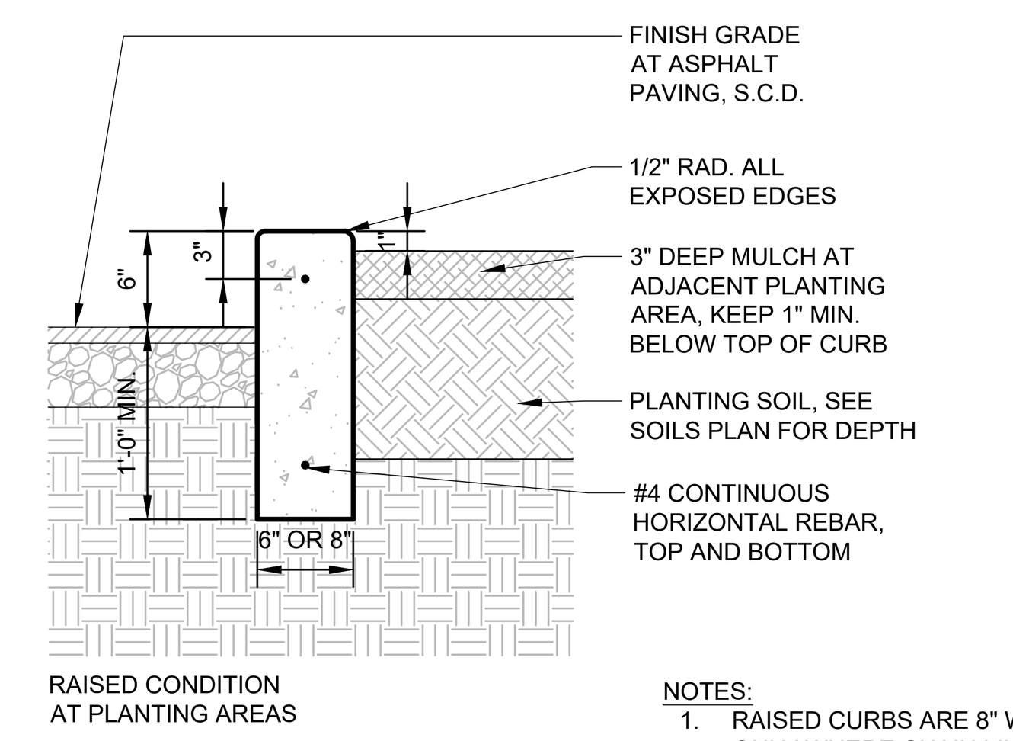
7 STUMP IN ARTIFICIAL TURF
1" = 1'-0"





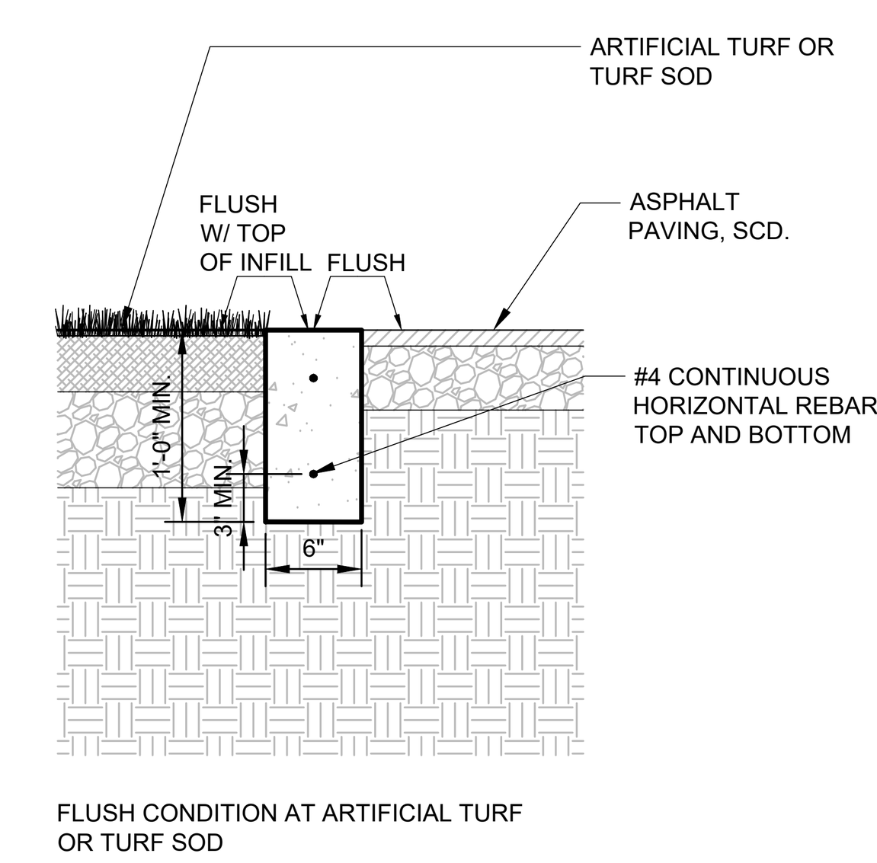
NOTE:
1. STRIP ALL BARK, DEBURR, AND SAND SMOOTH.
2. EASE ALL EDGES.
3. ALL WOOD LOGS TO BE STAINED. SAND TO A 120 GRIT FINISH PRIOR TO STAINING.
4. WOOD LOGS SHALL BE STAINED WITH (2) COATS OF DUCKBACK CLEAR STAIN. COLOR: NATURAL
5. ALL WOOD LOGS TO BE SOURCED LOCALLY. SUBMIT FOR APPROVAL.

9 LOG BENCH
1" = 1'-0"

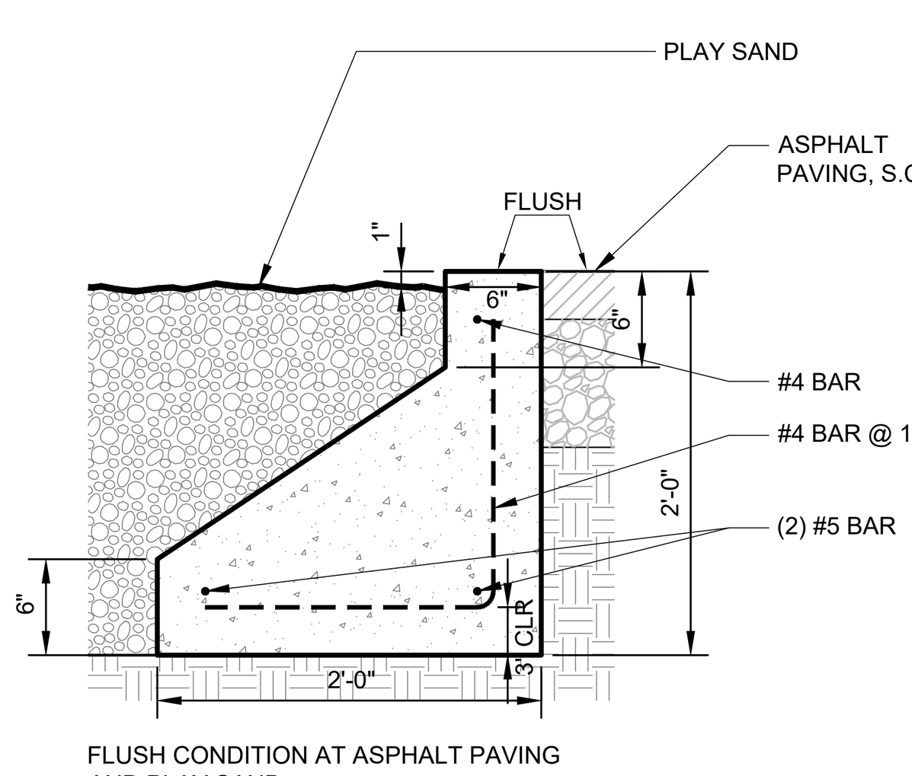


NOTES:
1. RAISED CURBS ARE 8" WIDE ONLY WHERE CHAIN LINK FENCE IS ON TOP OF CURB, SEE MATERIALS PLAN.

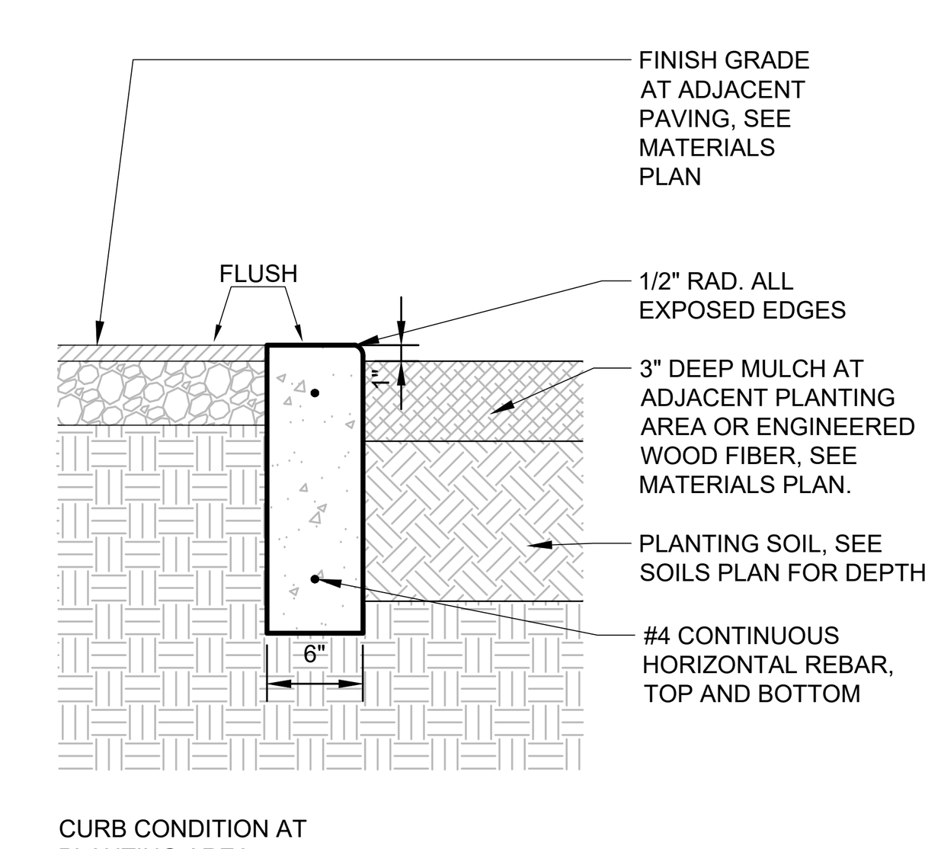
6 CONCRETE CURB - RAISED
1" = 1'-0"



FLUSH CONDITION AT ARTIFICIAL TURF OR TURF SOD



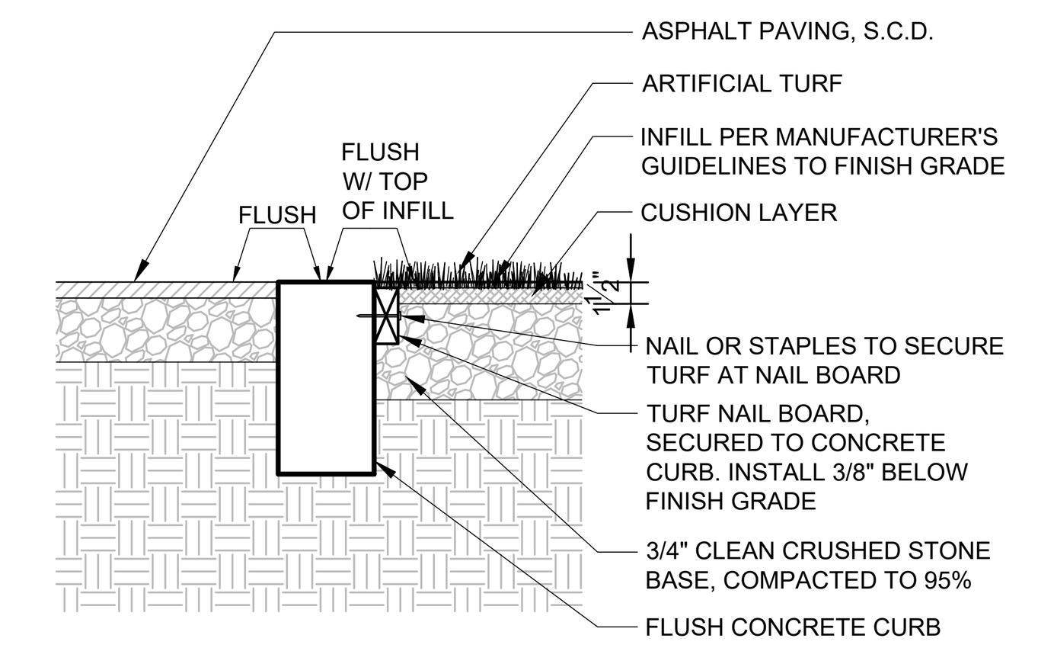
FLUSH CONDITION AT ASPHALT PAVING AND PLAY SAND



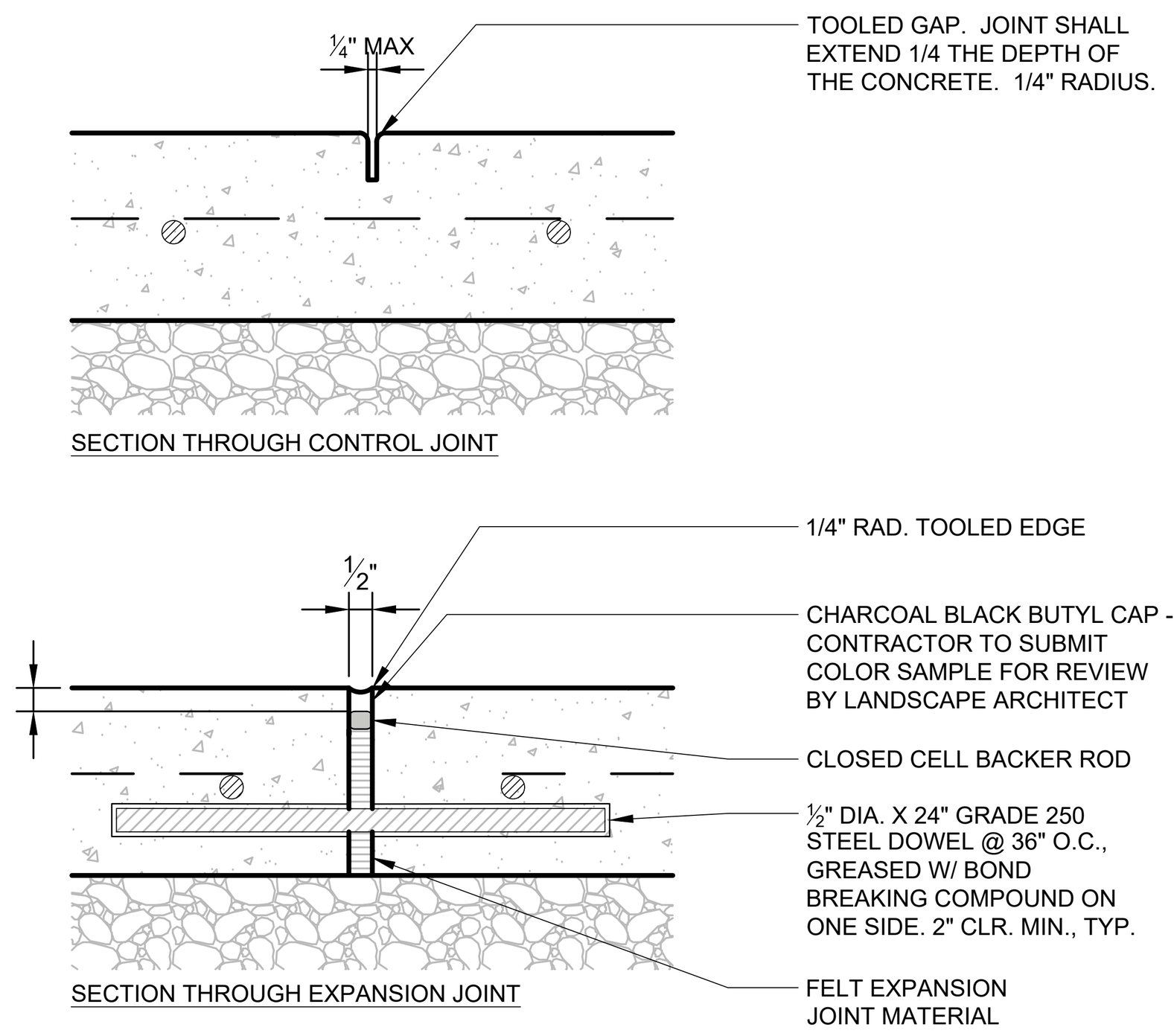
CURB CONDITION AT PLANTING AREA

NOTES:
1. EXTEND BOTTOM OF CURB 6" MIN. BELOW ASPHALT CONCRETE PAVING SUB-BASE.
2. CURB HEIGHTS 6" AT PLANTING AREA SOUTH OF KICKBALL, 12" AT PLANTERS NEAR PORTABLE CLASSROOMS. SEE GRADING PLAN FOR ACTUAL CURB HEIGHTS.
3. SEE SCHEDULE OF MATERIALS FOR COLOR AND FINISH.

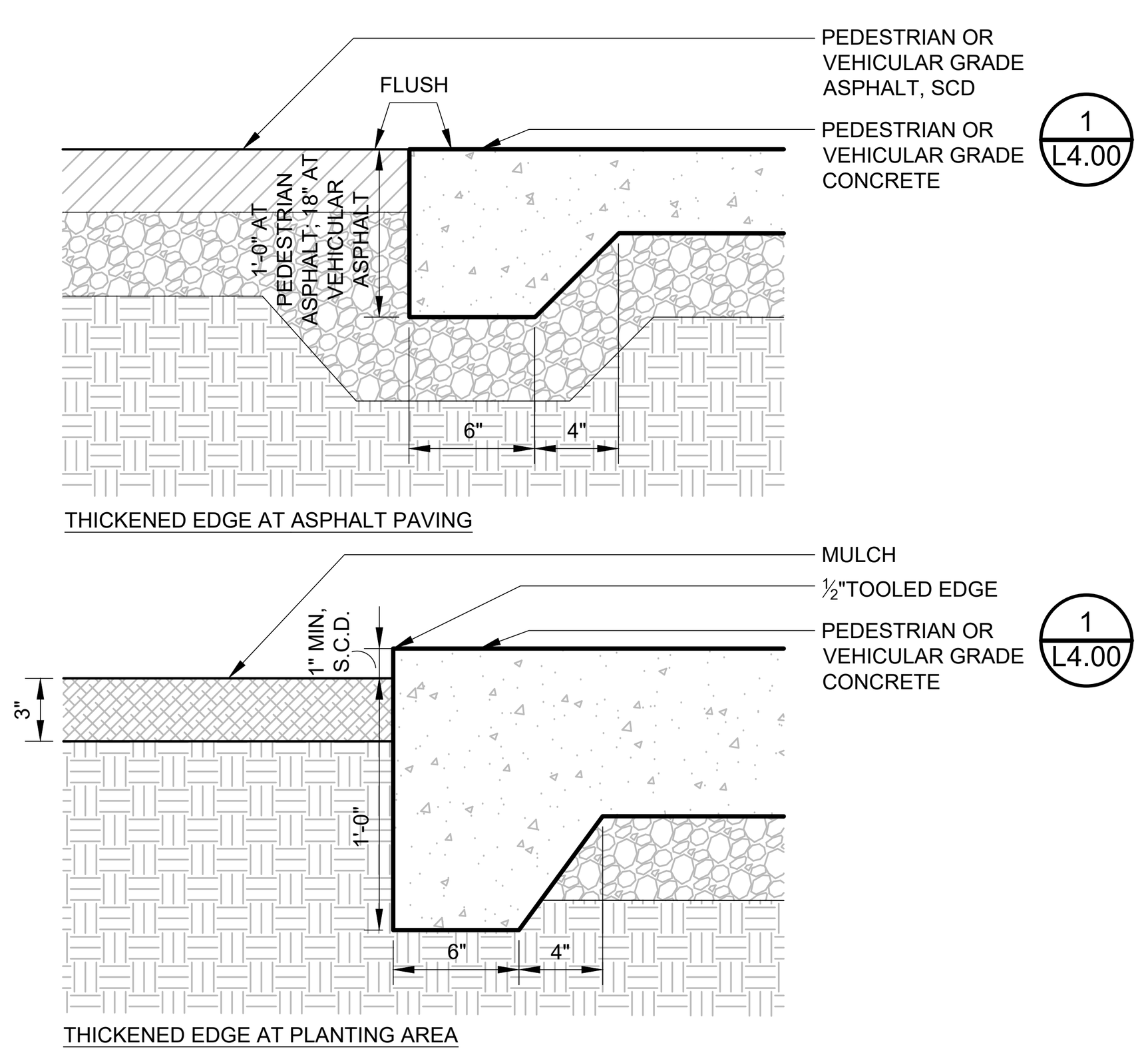
5 FLUSH CONCRETE CURB
1" = 1'-0"



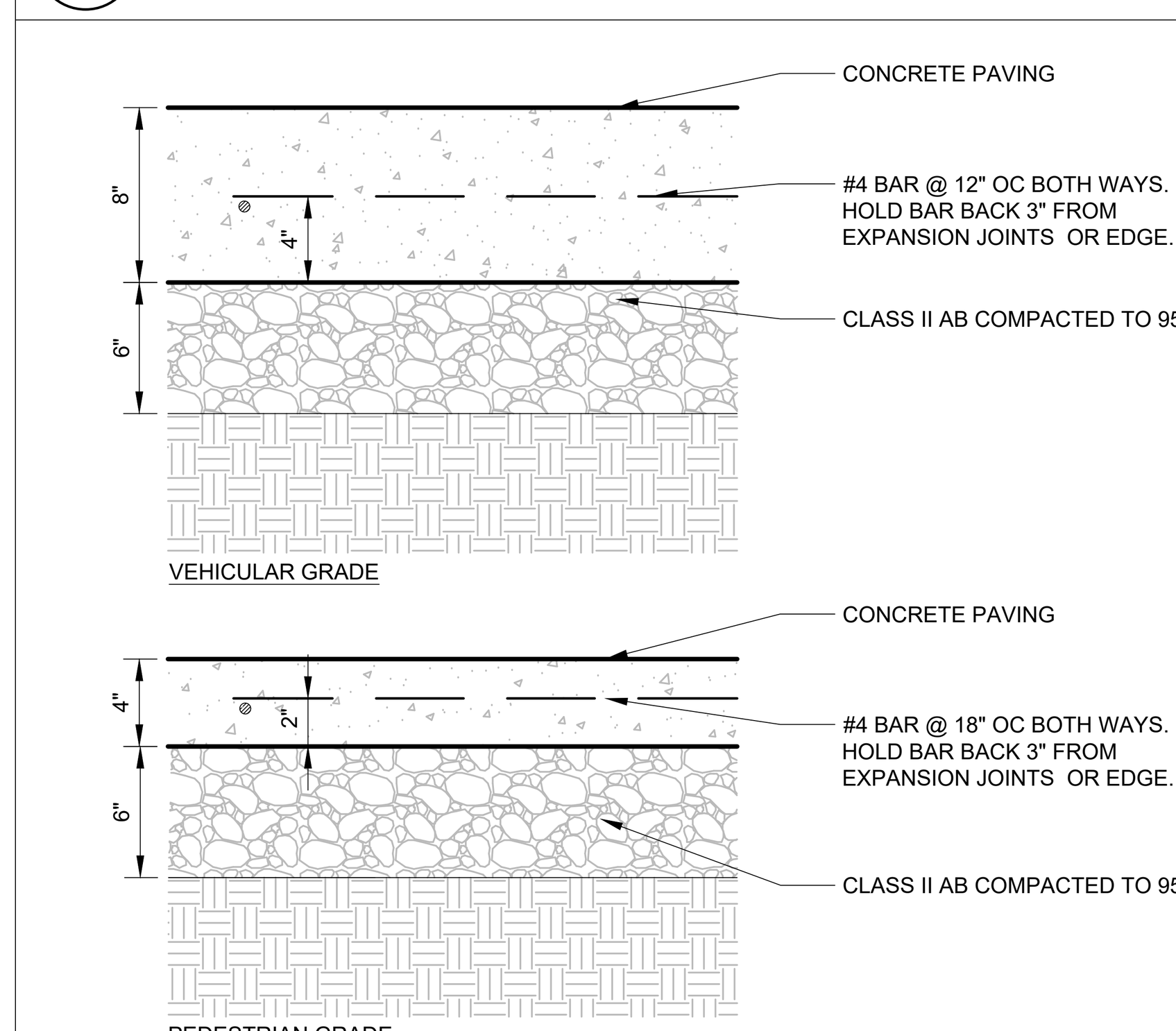
4 ARTIFICIAL TURF SAFETY SURFACE
1" = 1'-0"



3 CONCRETE JOINTS
3" = 1'-0"



2 CONCRETE PAVING, THICKENED EDGE
1 1/2" = 1'-0"



NOTES:
1. SEE SCHEDULE OF MATERIALS FOR COLOR AND FINISH.

1 CONCRETE PAVING
1 1/2" = 1'-0"

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St. #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer:
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 22, 2024

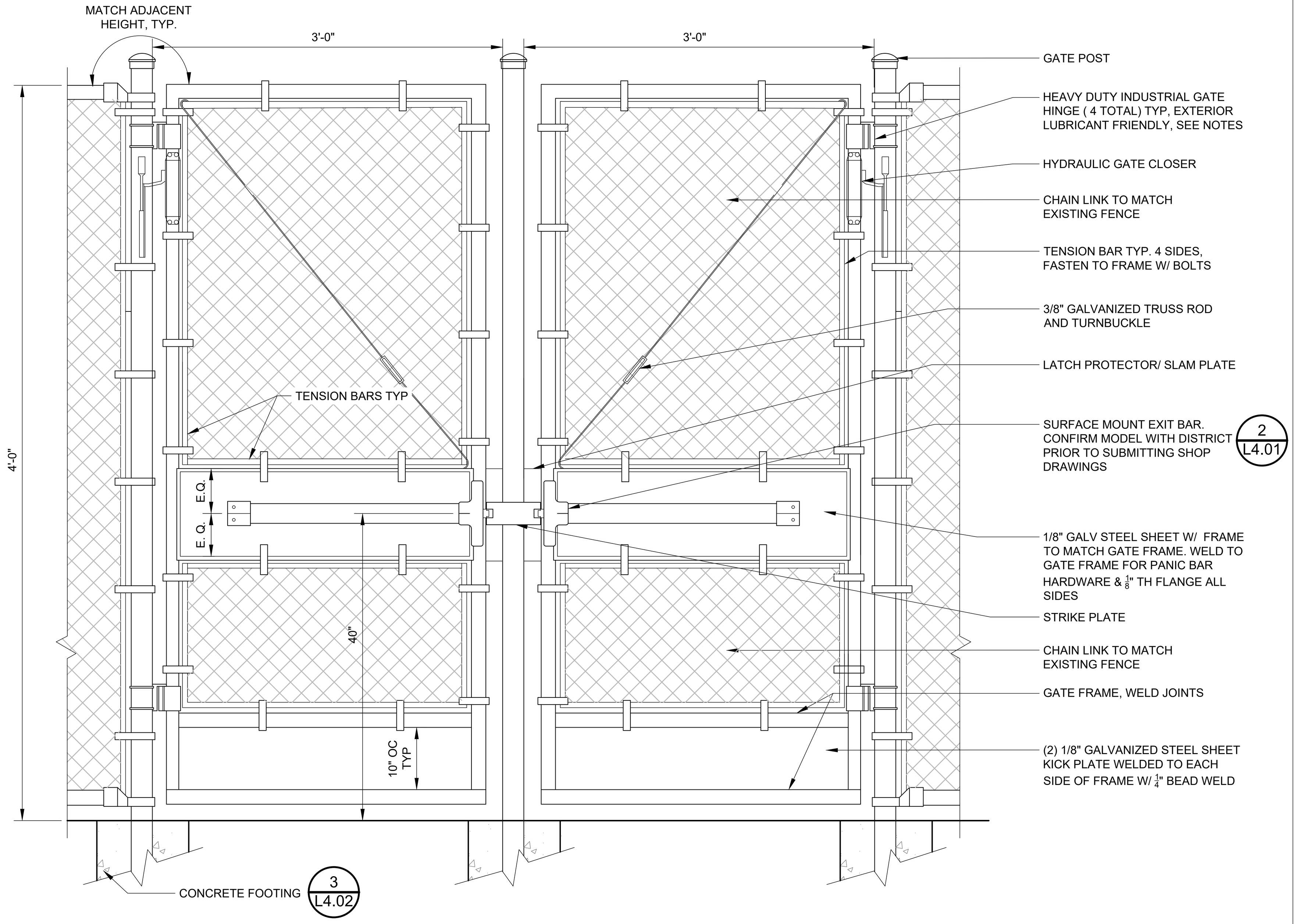
Revisions

NUMBER	DESCRIPTION	DATE

CONSTRUCTION DETAILS

L4.00

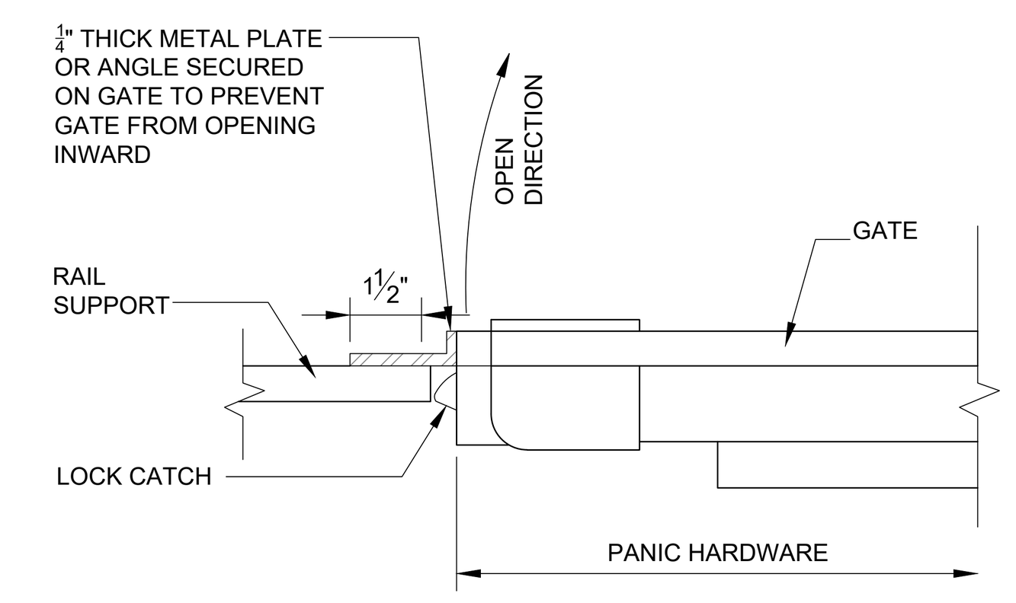
DSA BACKCHECK



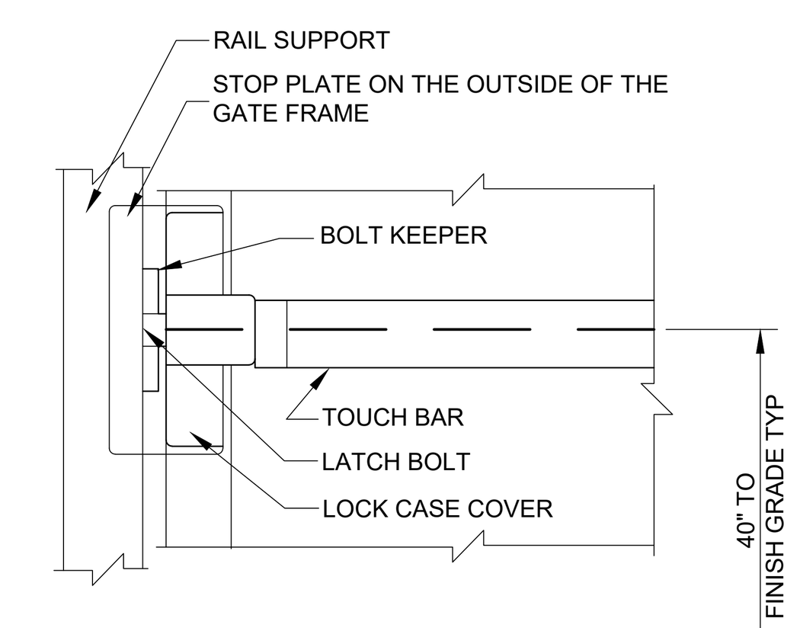
NOTES:
1. SEE FENCE AND GATE SCHEDULE IN DETAIL 1/L4.01 FOR GATE FRAME MEMBER SIZES.
2. GATES TO MATCH FENCE IN HEIGHT, TYPE OF CHAIN LINK MESH, COLOR AND FINISH
3. PROVIDE 2" MIN CLR. ON STRIKE SIDE OF GATE AND 12" MIN CLR ON PUSH SIDE OF GATE.
4. SHOP-DRILL (2) 1/4" DIA. DRAIN HOLES AT UNDERSIDE OF PANIC HARDWARE. TOUCH UP WITH PAINT AS REQUIRED.
5. PROVIDE PERFORATED METAL PANES ON PANIC BAR GATE AND WITHIN 3' OF EACH SIDE OF PANIC BAR GATE LEAF. MATCH GATE FINISH.
6. THE FORCE FOR PUSHING OR PULLING OPEN A GATE SHALL BE NO GREATER THAN 5 POUNDS.
7. SEE PLANS FOR LOCATION.
8. S.A.D. FOR ACCESSIBLE PATH OF TRAVEL.
9. PROVIDE LUBRICANT FRIENDLY EXTERIOR HEAVY INDUSTRIAL GATE HINGE.
10. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION.
11. ALL WELDS TO BE 1/4" CONTINUOUS FILLET WELDS, GRINDALL WELDS SMOOTH, TYP.

5 4' CHAIN LINK DOUBLE EGRESS GATE - PEDESTRIAN

1" 1'-0" d



LOCK ENLARGEMENT - PLAN
NTS

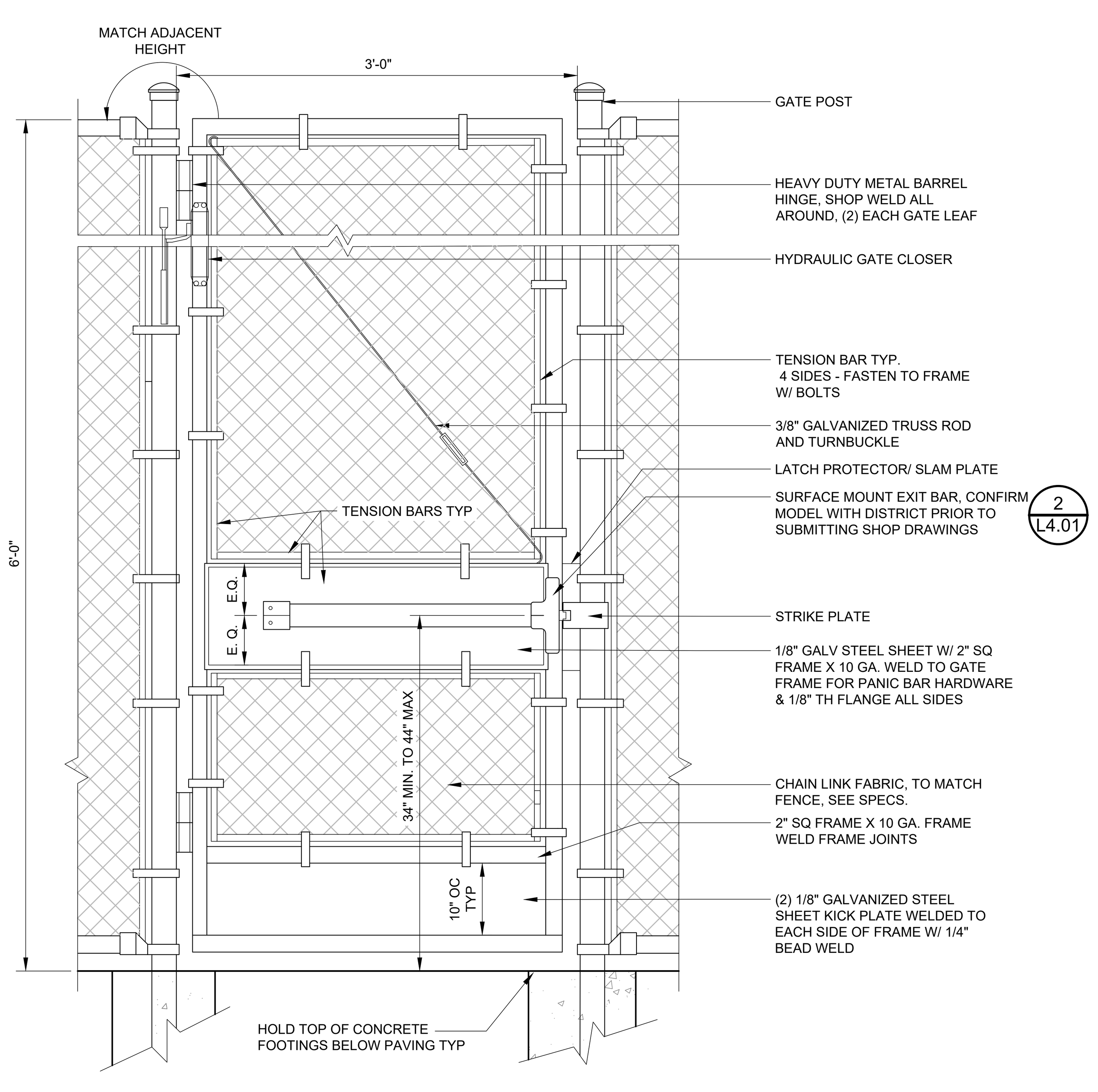


PANIC BAR EXITING DEVICE - ELEVATION
NTS

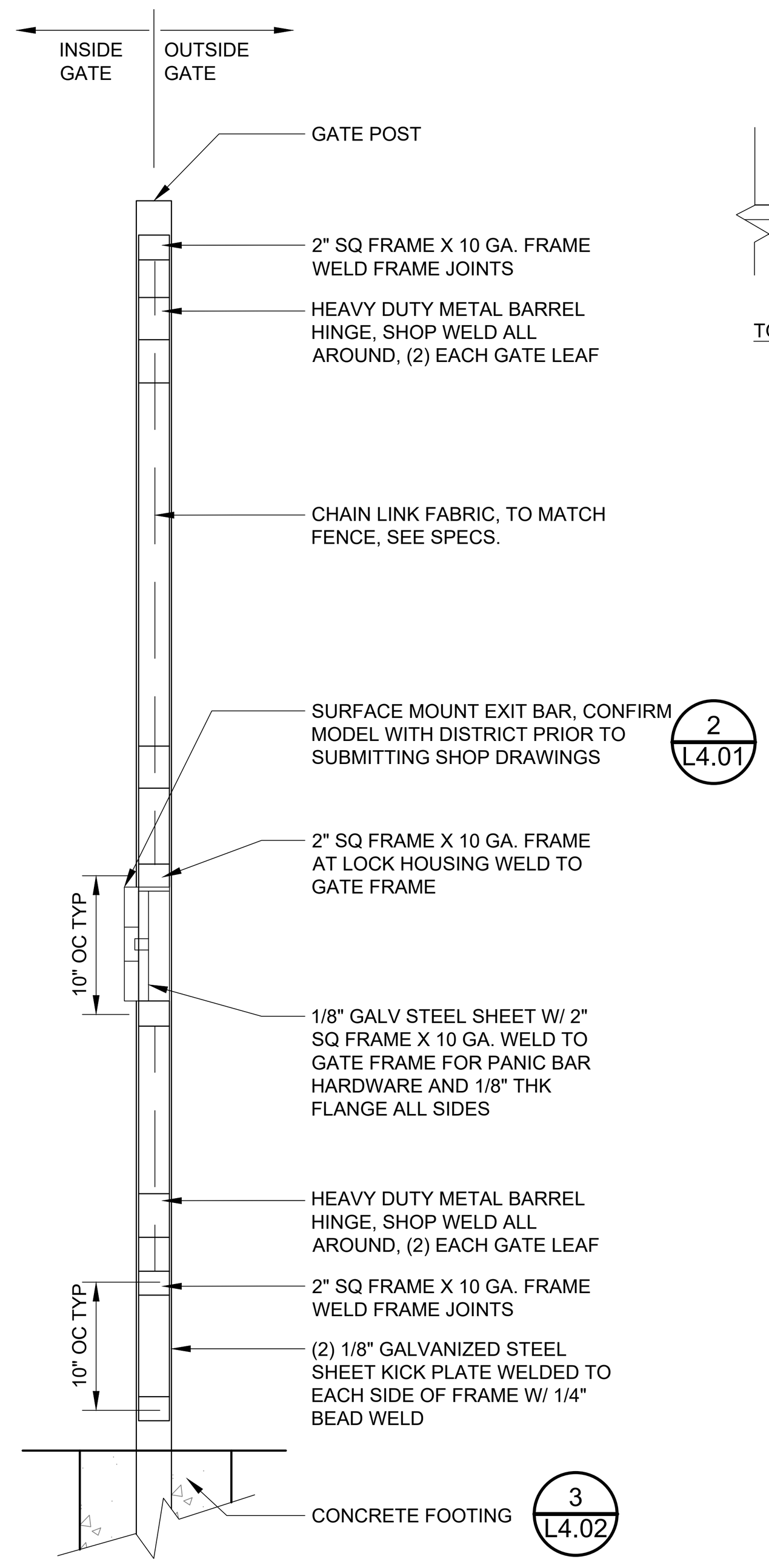
NOTE:
1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE
2. PANIC HARDWARE: VON DUPRIN AX-98-L-06-626 RIM EXIT DEVICE WITH SHLAGE 20-057 INTERCHANGEABLE CORE CYLINDER. FURNISH AND INSTALL EXIT DEVICES WITH CYLINDER DOGGING.
3. 5 POUNDS MAX ACTIVATING FORCE OF OPERABLE PARTS FOR EXIT BAR.

2 GATE PANIC BAR HARDWARE

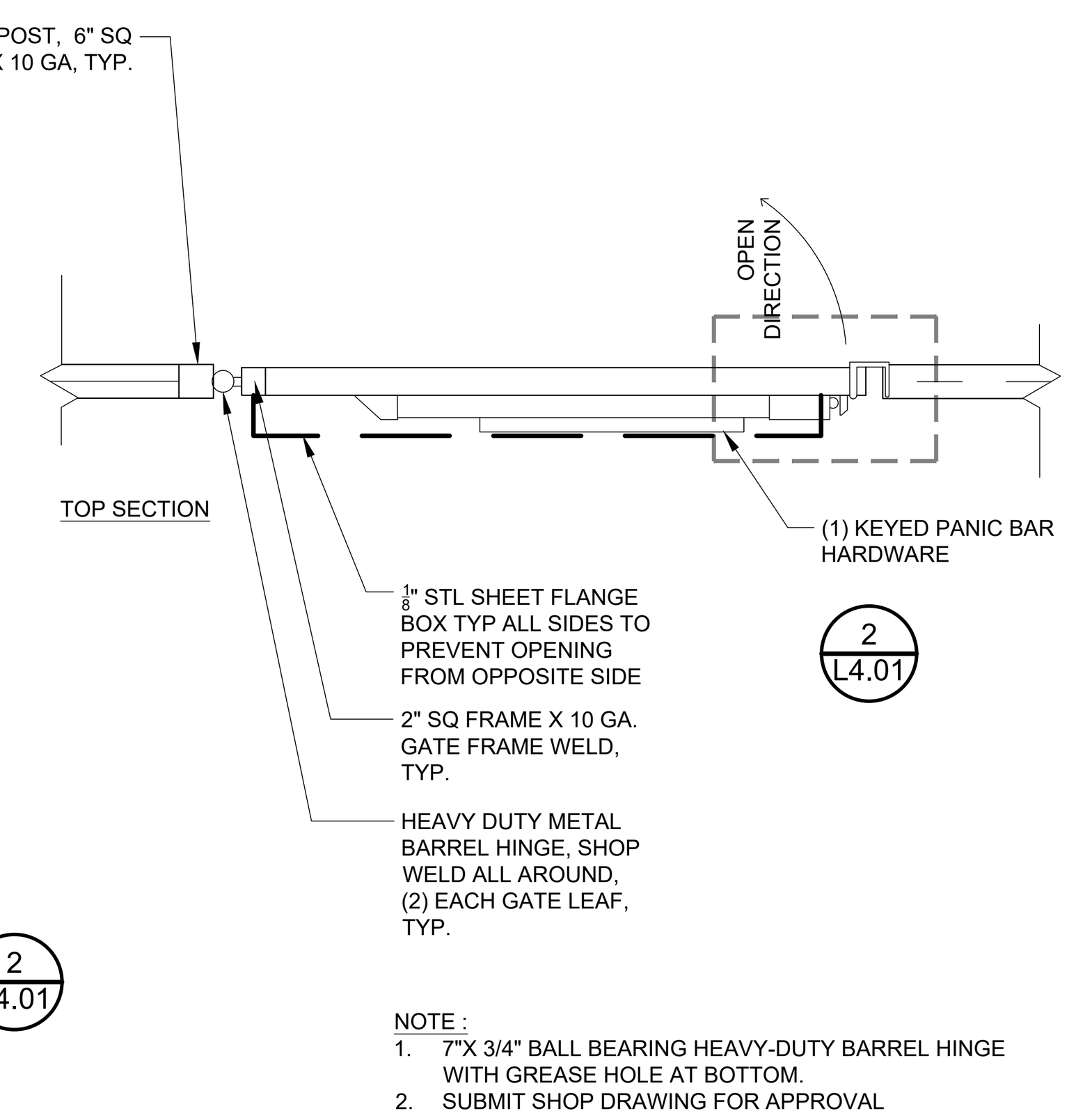
NTS



ELEVATION



SECTION

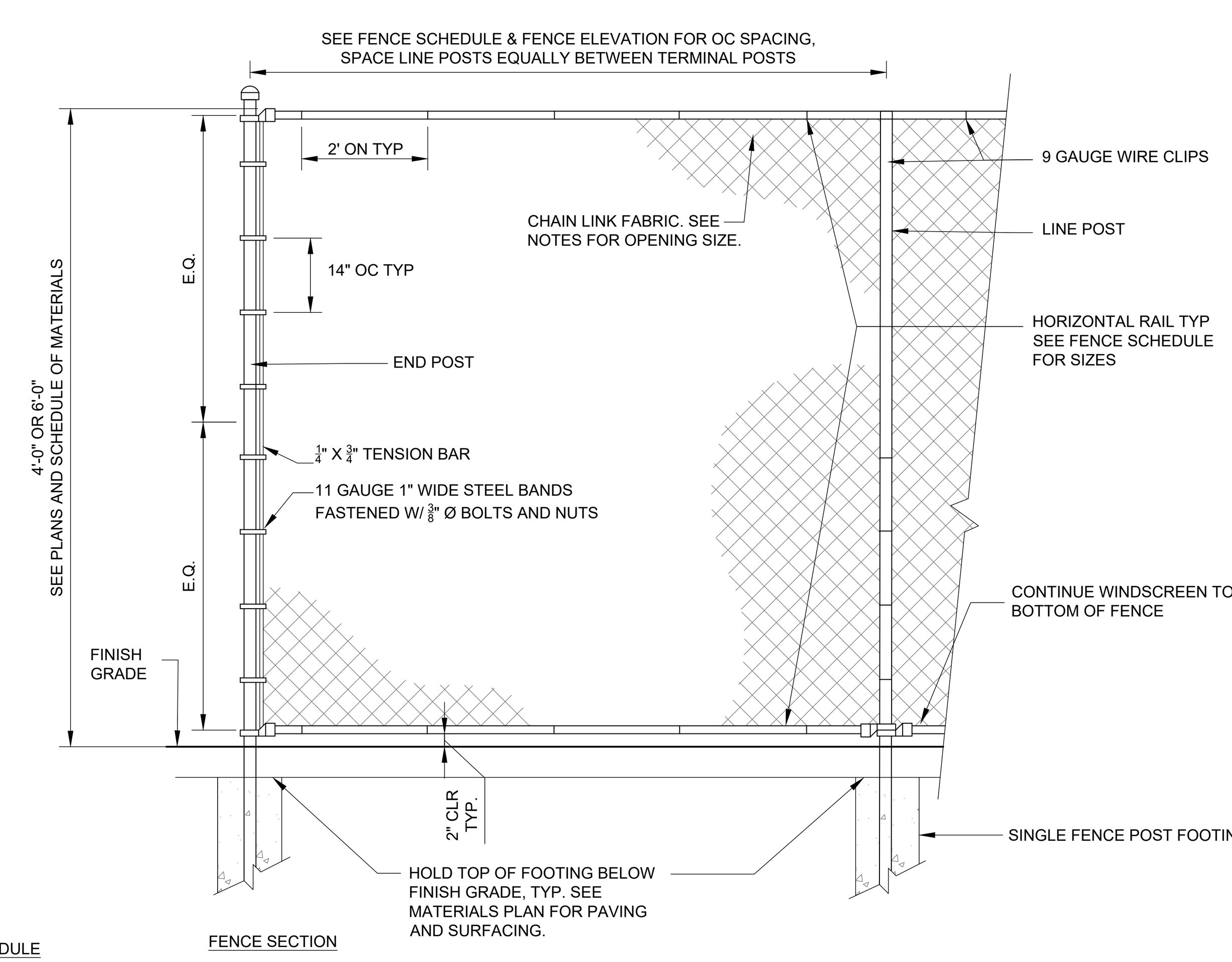


NOTE :
1. 7"X 3/4" BALL BEARING HEAVY-DUTY BARREL HINGE WITH GREASE HOLE AT BOTTOM.
2. SUBMIT SHOP DRAWING FOR APPROVAL

NOTE:
1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE
2. SEE FENCE AND GATE SCHEDULE IN DETAIL 1/L4.01 FOR GATE FRAME MEMBER SIZES
3. COLOR AND FINISH METAL TO BE POWDER COAT BLACK TYP UNLESS OTHERWISE NOTED
4. SHOP DRILL (2) 1/4" DIA DRAIN HOLES AT UNDERSIDE OF PANIC HARDWARE FOR WATER DRAINAGE TOUCH UP PANIC HARDWARE AS REQUIRED.
5. PROVIDE LEVEL LANDING ON EACH SIDE OF GATE PER DOOR REQUIREMENTS. PROVIDE 2" MIN CLR. ON STRIKE SIDE OF GATE AND 12" MIN CLR ON PUSH SIDE OF GATE.
6. THE FORCE FOR PUSHING OR PULLING OPEN A GATE SHALL BE NO GREATER THAN 5 POUNDS.
7. PROVIDE PERFORATED METAL PANELS ON PANIC BAR GATE AND WITHIN 3' OF EACH SIDE OF PANIC BAR GATE LEAF. MATCH GATE FINISH TYP.
8. ALL WELDS TO BE 1/4" CONTINUOUS FILLET WELDS, GRIND ALL WELDS SMOOTH, TYP.

4 6' CHAIN LINK SINGLE EGRESS GATE - PEDESTRIAN

1" = 1'-0"



FENCE SECTION

FENCE AND GATE SCHEDULE

"H" MAX HEIGHT ABOVE FINISH GRADE	DIAMETER AND WEIGHT OF GATE, TERMINAL & CORNER POSTS	DIAMETER AND WEIGHT OF LINE POST	FENCE HORIZONTAL RAILS	GATE FRAME, HORIZONTAL AND VERTICAL RAILS	MAXIMUM POST SPACING	MINIMUM FENCE POST FOOTING SIZE	MINIMUM GATE POST FOOTING SIZE	NOTES
4' -0" FENCE AND GATE	2 1/2" OD SCH 40 TERMINAL AND CORNER POSTS HSS 4X4X1/4" GATE POST	1 5/8" OD SCH 40	1 5/8" OD SCH 40 TOP, AND BOTTOM RAIL	HSS 2X2X1/4"	10'-0" OC	18" Ø X 2'-6"DEEP	18" Ø X 4'-6" DEEP	SEE DETAIL 3/L4.02 FOR FENCE POST FOOTINGS. SEE CIVIL DRAWINGS FOR FENCE POST EMBEDMENT AT RETAINING WALL.
6' -0" FENCE AND GATE	2 1/2" OD SCH 40 TERMINAL AND CORNER POSTS HSS 4X4X3/8" GATE POST	2" OD SCH 40	2" OD SCH 40 TOP, AND BOTTOM RAIL	HSS 2X2X1/2"	10'-0" OC	18" Ø X 3'-6" DEEP	18" Ø X 4'-6" DEEP	SEE DETAIL 3/L4.02 FOR FENCE POST FOOTINGS. SEE STRUCTURAL DRAWINGS FOR 6'-0" FENCE POST EMBEDMENT AT RETAINING WALL.

NOTES:
1. FOR CHAINLINK FABRIC OPENINGS - USE 1" OPENINGS FOR 4'-0" HIGH FENCE AT TK YARD. USE 2" OPENINGS FOR ALL 6'-0" HIGH FENCE THROUGHOUT, TYP.

1 CHAINLINK FENCE AND SCHEDULE

1/2" = 1'-0"

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modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
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475 Sansome St. #700
San Francisco, CA 94111
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Issue Date: April 22, 2024

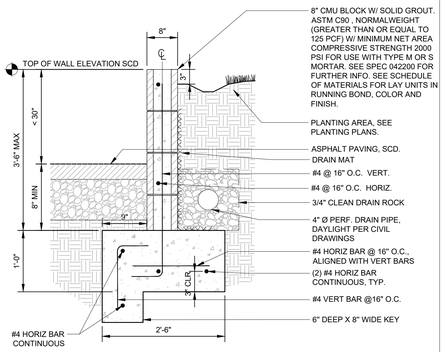
Revisions

NUMBER	DESCRIPTION	DATE

CONSTRUCTION DETAILS

L4.01

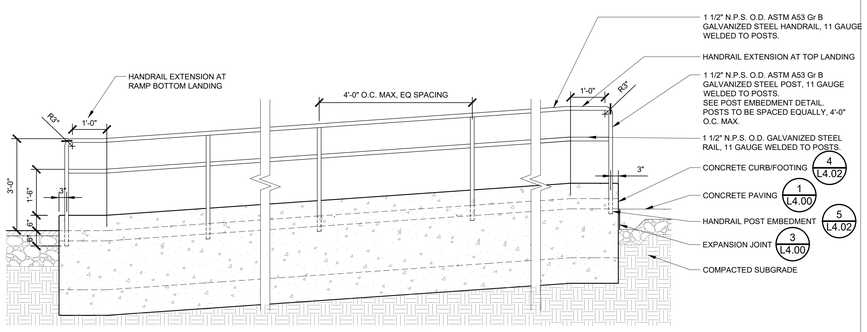
DSA BACKCHECK



NOTE: SSD FOR REINFORCEMENT BENDS, HOOKS, DEVELOPMENT LENGTHS, LAP SPLICES INFO.

7 CMU RETAINING WALL

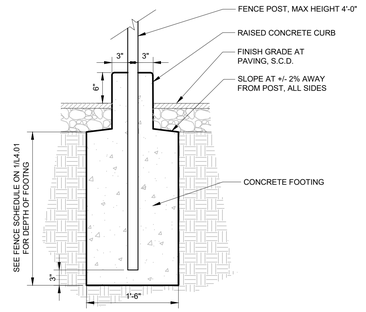
1" = 1'-0"



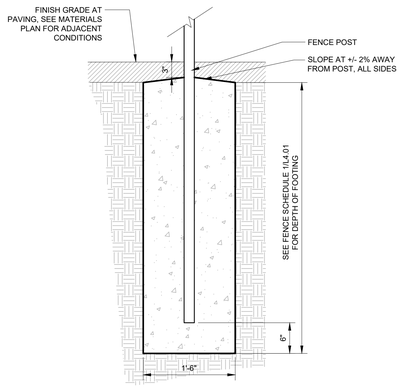
NOTES
1. ALL WELDS TO BE 3/16" FILLET WELDS ALL AROUND. GRIND ALL WELDS SMOOTH.
2. ENTIRE ASSEMBLY TO BE SHOP GALVANIZED. WHERE MULTIPLE PIECES ARE REQUIRED, PROVIDE SLEEVED CONNECTIONS THAT ALLOW FOR FIELD FITTING.
3. REFER TO CIVIL DRAWINGS FOR GRADING.
4. REFER TO CIVIL DRAWINGS FOR CONCRETE REINFORCEMENT, AND REINFORCEMENT AT HANDRAIL POSTS
5. HANDRAIL GRIPPING SURFACES AND ANY SURFACES ADJACENT TO THEM SHALL BE FREE OF SHARP OR ABRASIVE ELEMENTS AND SHALL HAVE ROUNDED EDGES.

6 HANDRAIL AT RAMP

1/2" = 1'-0"



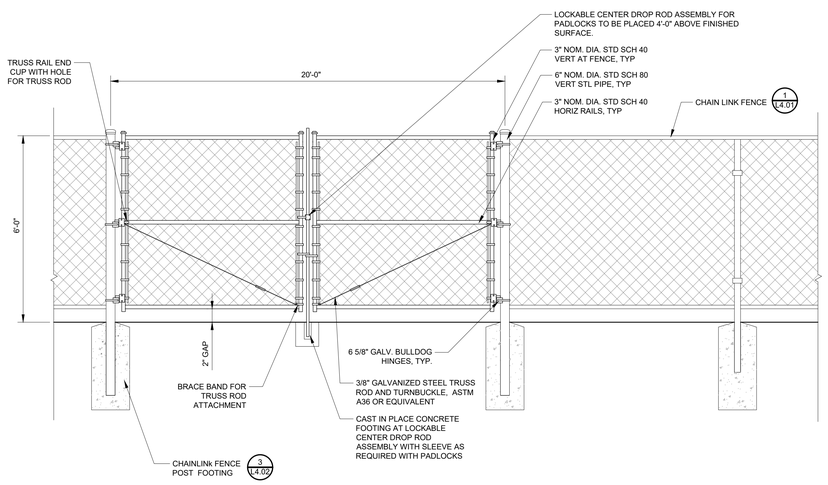
RAISED CURB POST FOOTING



SINGLE POST FOOTING

3 CHAIN LINK FENCE POST FOOTING

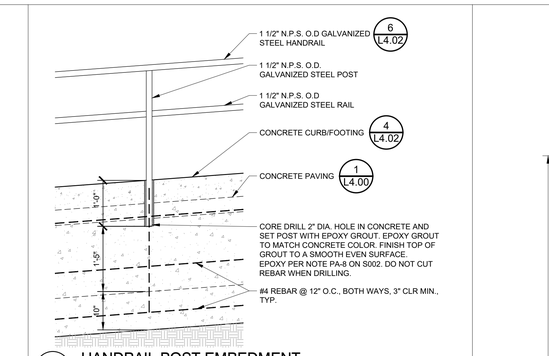
N.T.S. P-SU-FEN-10



NOTE:
1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE.
2. ALL WELDS TO BE 1/4" CONTINUOUS FILLET WELDS. GRIND ALL WELDS SMOOTH.
3. ENTIRE ASSEMBLY TO BE SHOP GALVANIZED. WHERE MULTIPLE PIECES ARE REQUIRED, PROVIDE SLEEVED CONNECTIONS THAT ALLOW FOR FIELD FITTING.
4. COLOR AND FINISH METAL TO BE 10-MIL PVC, BLACK TYP UNLESS OTHERWISE NOTED.
5. SEE MATERIALS PLAN FOR LOCATIONS OF VEHICULAR GATES.
6. GATE CHAINLINK TO MATCH FENCE.
7. PROVIDE KNOX BOX FOR VEHICULAR GATES IN FIRE LANE (SCD)

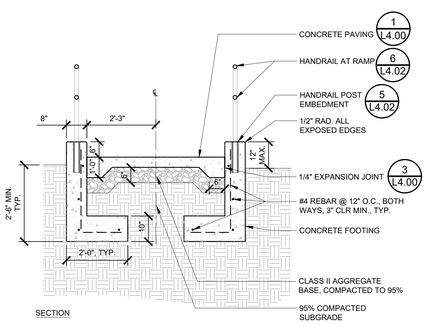
2 6' CHAIN LINK DOUBLE GATE - VEHICULAR

NTS



5 HANDRAIL POST EMBEDMENT

3/4" = 1'-0"

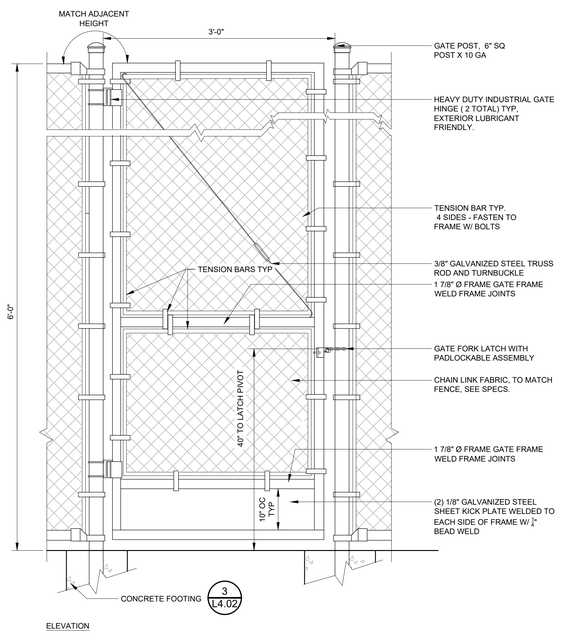


SECTION

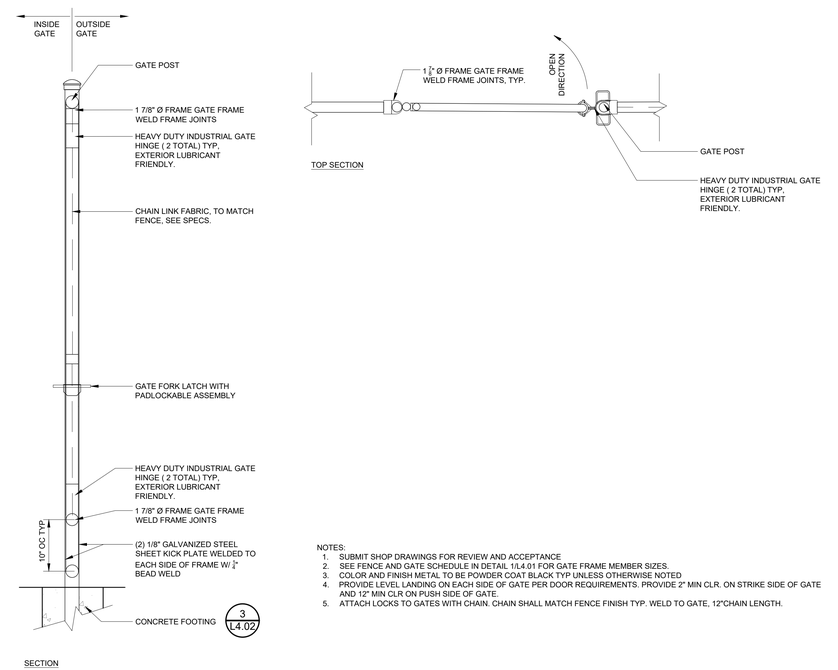
NOTES:
1. S.C.D. FOR GRADING PLANS. CONFORM TO EXISTING GRADE WHERE INDICATED ON CIVIL PLANS

4 5' WIDE CONCRETE ACCESSIBLE RAMP

1/2" = 1'-0"



ELEVATION



SECTION

TOP SECTION

NOTES:
1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE
2. SEE FENCE AND GATE SCHEDULE IN DETAIL 1/L4.01 FOR GATE FRAME MEMBER SIZES.
3. COLOR AND FINISH METAL TO BE POWDER COAT BLACK TYP UNLESS OTHERWISE NOTED
4. PROVIDE LEVEL LANDING ON EACH SIDE OF GATE PER DOOR REQUIREMENTS. PROVIDE 2" MIN CLR. ON STRIKE SIDE OF GATE AND 12" MIN CLR ON PUSH SIDE OF GATE.
5. ATTACH LOCKS TO GATES WITH CHAIN. CHAIN SHALL MATCH FENCE FINISH TYP. WELD TO GATE, 12"CHAIN LENGTH.

1 6' CHAIN LINK SINGLE GATE - PEDESTRIAN

1" = 1'-0"

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REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
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Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

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cost estimator:
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475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 22, 2024

Revisions

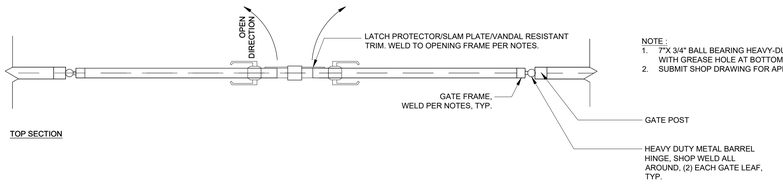
NUMBER	DESCRIPTION	DATE

LICENSED LANDSCAPE ARCHITECT
REBECCA ALGARA LEE
SIGNATURE
RENEWAL DATE 11/22/23
DATE
STATE OF CALIFORNIA

CONSTRUCTION DETAILS

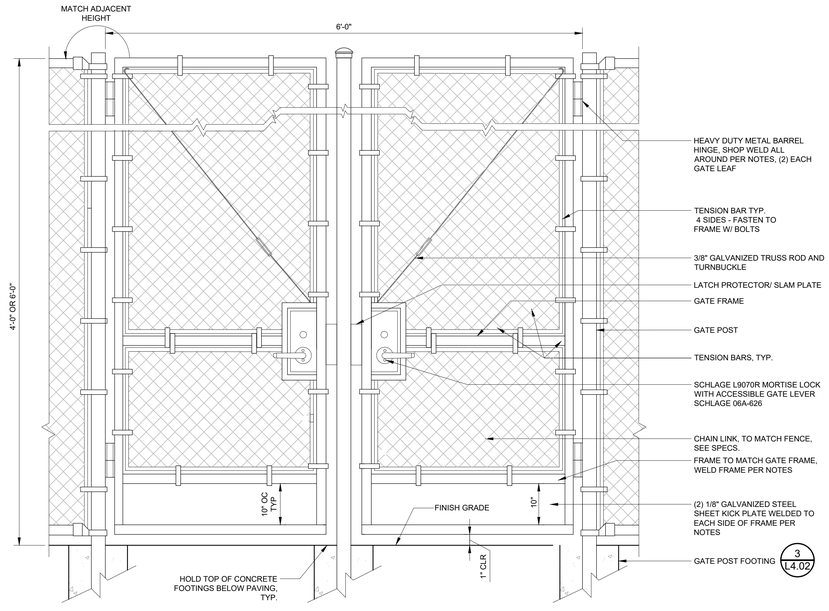
L4.02

DSA BACKCHECK

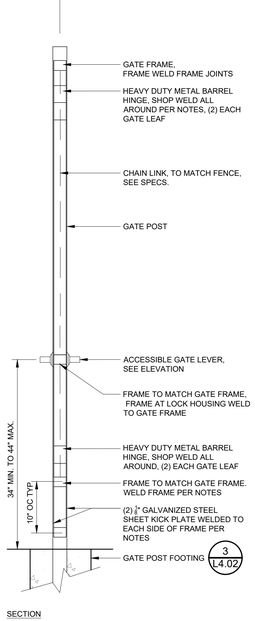


TOP SECTION

NOTE :
1. 7"X 3/4" BALL BEARING HEAVY-DUTY BARREL HINGE WITH GREASE HOLE AT BOTTOM.
2. SUBMIT SHOP DRAWING FOR APPROVAL



ELEVATION



SECTION

NOTE:
1. SUBMIT SHOP DRAWINGS FOR REVIEW AND ACCEPTANCE
2. ALL WELDS TO BE ⅛" CONTINUOUS FILLET WELDS. GRIND ALL WELDS SMOOTH, TYP.
3. ENTIRE ASSEMBLY TO BE SHOP GALVANIZED. WHERE MULTIPLE PIECES ARE REQUIRED, PROVIDE SLEEVED CONNECTIONS THAT ALLOW FOR FIELD FITTING.
4. COLOR AND FINISH METAL TO BE POWDER COAT BLACK TYP UNLESS OTHERWISE NOTED
5. PROVIDE LEVEL LANDING ON EACH SIDE OF GATE PER DOOR REQUIREMENTS. PROVIDE 24" MIN CLR. ON STRIKE SIDE OF GATE AND 12" MIN CLR ON PUSH SIDE OF GATE.
6. THE FORCE FOR PUSHING OR PULLING OPEN A GATE SHALL BE 5 POUNDS MAXIMUM.
7. FOR GATE POST AND GATE FRAME, SEE CHAINLINK FENCE AND GATE SCHEDULE 1 L4.01
8. FOR 4'-0" GATES, USE MAMMOTH 180 SELF-CLOSING HINGES BY LOCINOX OR APPROVED EQUAL

2 4' OR 6' CHAIN LINK DOUBLE ACCESSIBLE GATE - PEDESTRIAN
1" = 1'-0"

Anita Picnic - Inclusion

PAR1403

KOMPAN Let's play

Item no. PAR1403-0011	
General Product Information	
Dimensions LxWxH	7'10"x4'10"x2'4"
Age group	
Play capacity (users)	
Color options	

Outdoor Furniture plays an essential role in our communities by adding an inviting and social atmosphere, a place to meet, socialise or rest. Anita is classic and comfortable park furniture that invites citizens to take a seat and relax. They blend into and enhance public areas like parks and playgrounds etc. Anita Picnic comes in two sizes with one aim; an opportunity for adults or children to make that al fresco moment special. The inclusive version comes with an extended table top allowing people using a wheelchair to access the table entirely.

1 / 11/11/2023

Data is subject to change without prior notice.

Anita Picnic - Inclusion

PAR1403

KOMPAN Let's play

Bench is made of pine wood post pressure impregnated class AB with Tanalith E3475 according to EN335.

The steel surfaces are hot dip galvanized inside and outside with lead free zinc. The galvanization has excellent corrosion resistance in outdoor environments and require low maintenance.

The furniture is a freestanding product with optional anchoring possibilities. Kompan has multiple anchoring's to fit specific requirements for individual customer projects. The anchoring is sold as separate modules.

Item no. PAR1403-0011		
Installation Information		
Total installation time		1.8
Excavation volume		0yd³
Concrete volume		0yd³
Footing depth (standard)		0'0"
Shipment weight		219lbs
Anchoring options	Surface	✓
	In-ground	✓
Warranty Information		
Pinewood		10 Years
Hot dip galvanized steel		Lifetime
Stainless steel components		Lifetime
Spare parts guaranteed		10 Years

The benches and tables can be combined in multiple settings by choosing individual products or assembled into larger solutions. See catalog pages for more inspiration.

The hardware is made of stainless steel or galvanized steel to ensure a high corrosion-resistant, durable connection.

2 / 11/11/2023

Data is subject to change without prior notice.

Anita Picnic - Inclusion

PAR1403

KOMPAN Let's play

Cradle to Gate A1-A3	Total CO_2 emission	CO_2e/kg	Recycled materials
	kg CO_2e	kg CO_2e/kg	%
PAR1403-0011	103.40	1.11	15.60

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3)

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark

Validation of CO_2 calculation
BUREAU VERITAS
ISO Denmark A/S

Verification of CO_2 calculation of: Park

Data version no. 2023-10-05

The CO_2 calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Park" represented by item no.: PAR4270-0001.

[Scope 3 emissions include emission sources in the upstream and downstream value chain].

Date: 30. October 2023 | Valid until: 30. October 2025
Verified by:

Julie Marie Vejsgaard Larsen, LCA & EPD Consultant

Verification based on report 'Validation of CO_2 calculation of 9 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Julie M. V. Larsen.

Publication date: 30. October 2023

By Bureau Veritas HSE
www.bureauveritas.dk
+45 7731 1000

3 / 11/11/2023

Data is subject to change without prior notice.

1 TK ACCESSIBLE PICNIC TABLE
NTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
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Issue Date: April 22, 2024

Revisions

NUMBER	DESCRIPTION	DATE

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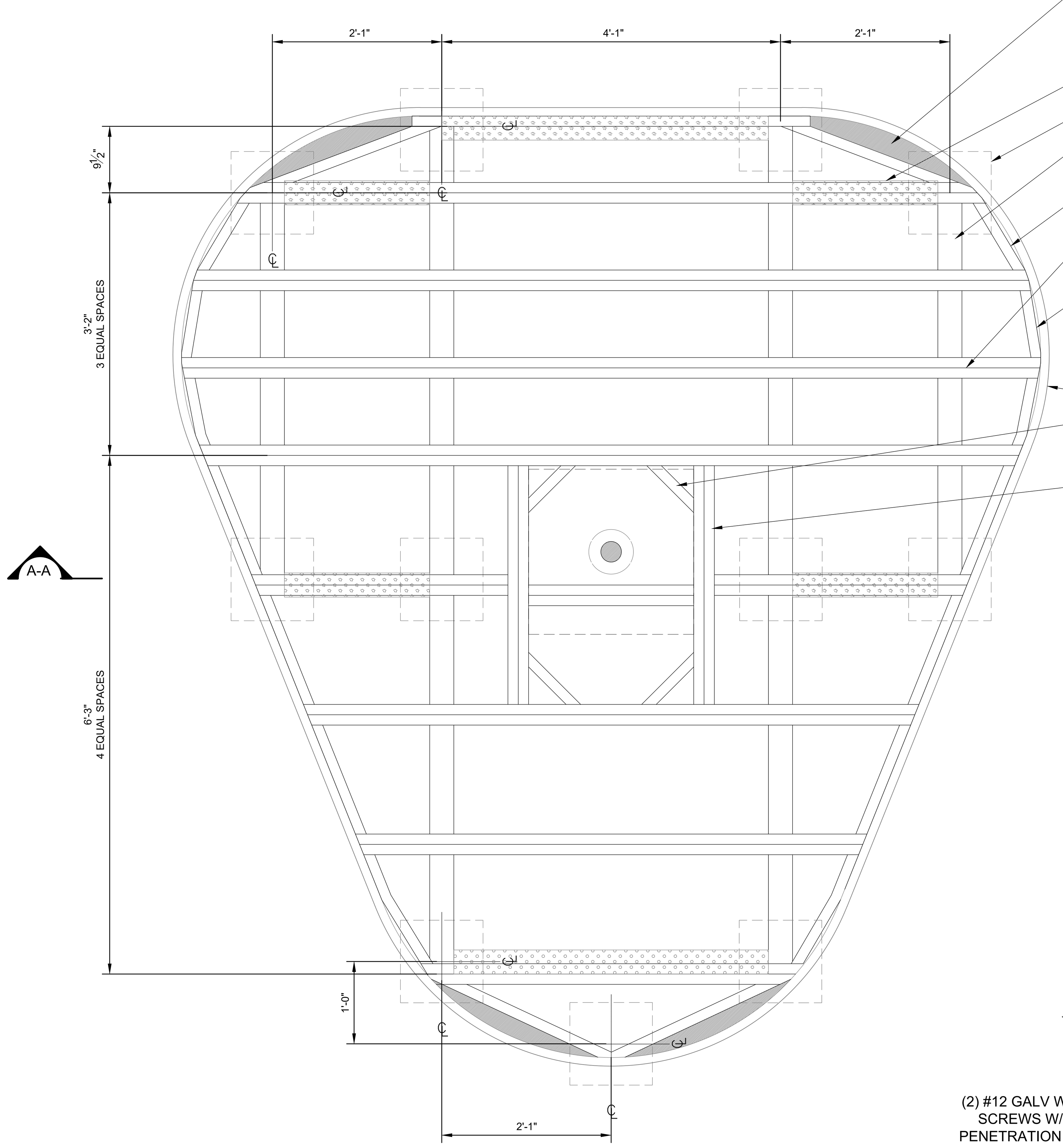
SIGNATURE
EXPIRATION DATE
11/22/23
DATE
STATE OF CALIFORNIA

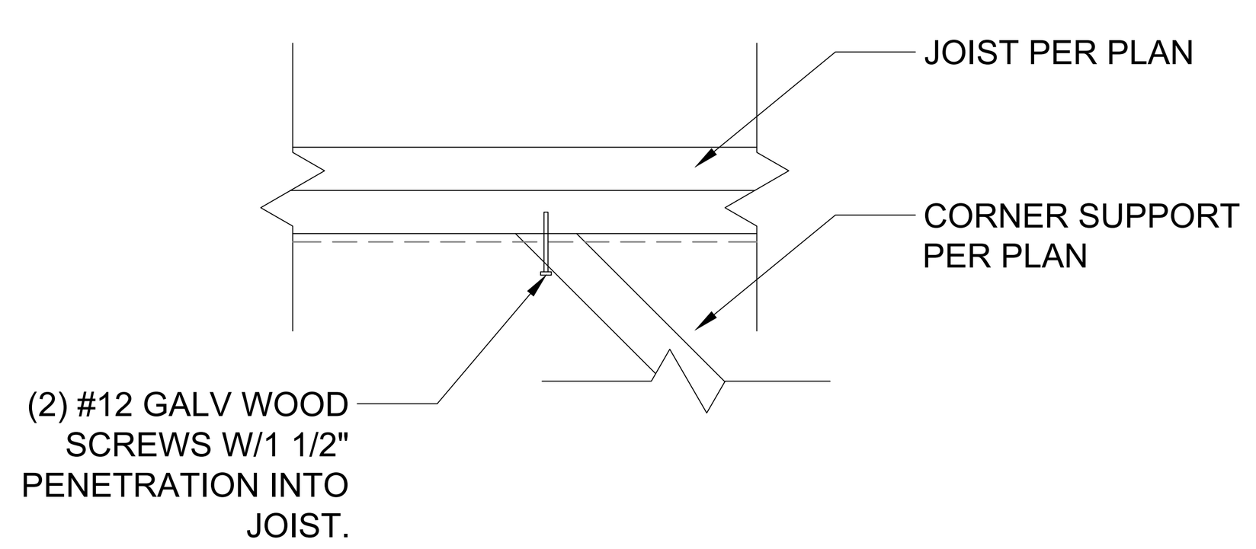
CONSTRUCTION DETAILS

L4.03

DSA BACKCHECK

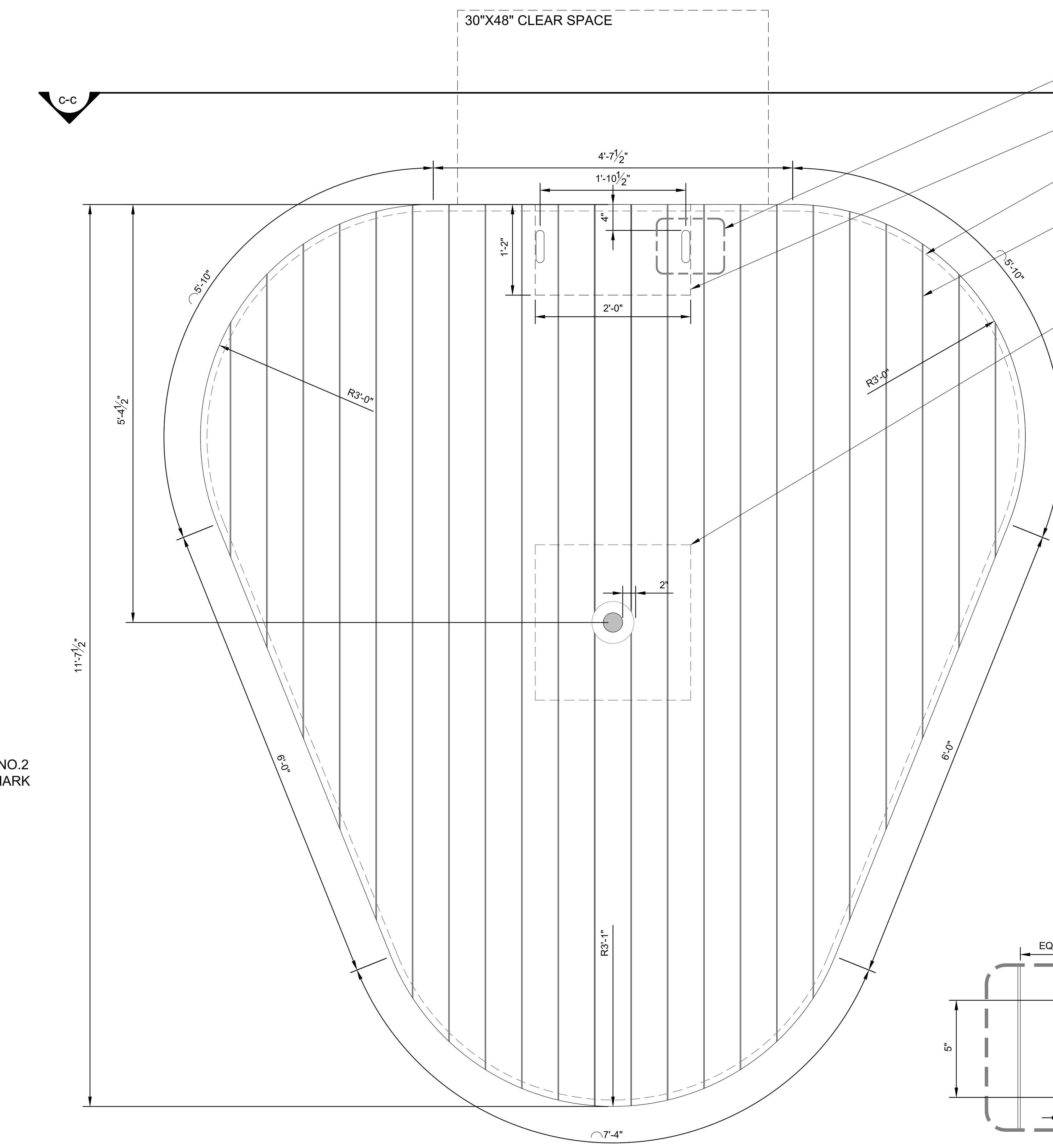


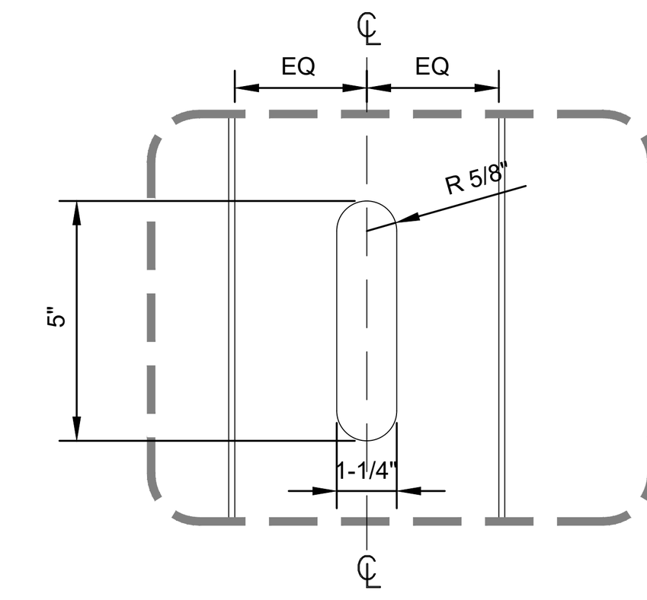
NOTES:
1. DECKING NOT SHOWN FOR CLARITY
2. BEAMS AND JOISTS SHALL BE PTDF GRADE NO.1/NO.2
3. DECKING BOARDS SHALL BE THERMORY BENCHMARK PINE, UNOILED.
4. FASTENERS, INCLUDING NUTS AND WASHERS, IN CONTACT WITH PT WOOD SHALL BE HOT-DIPPED ZINC-COATED GALVANIZED STEEL.



FRAMING PLAN

A CORNER SUPPORT CON.
NTS

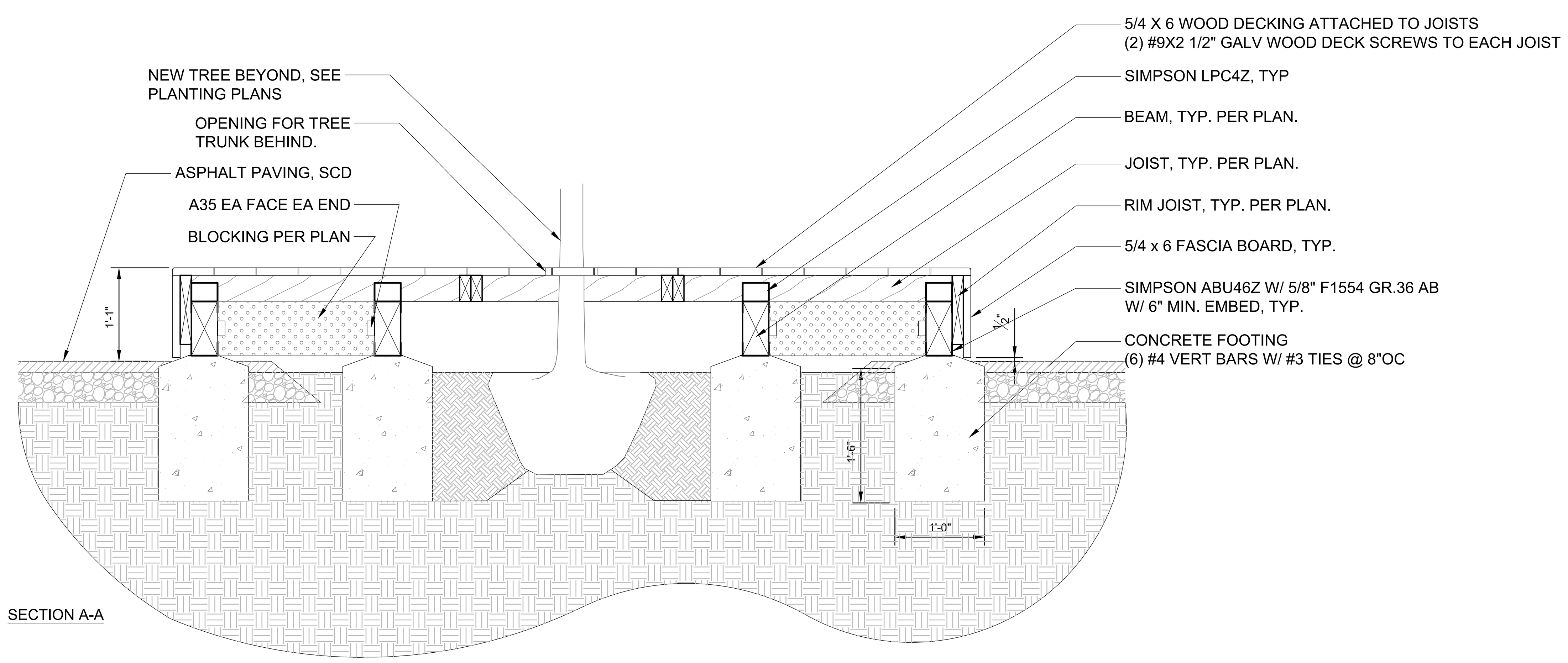




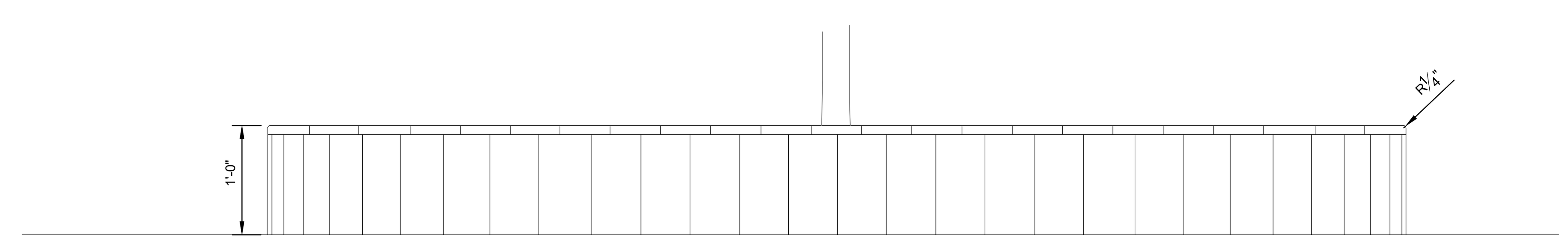
NOTES:
1. EASE ALL EDGES OF TRANSFER SUPPORT SLOT TO 1/4" RADIUS.

DECKING PLAN

TRANSFER SUPPORT SLOT ENLARGEMENT
NTS



SECTION A-A



ELEVATION C-C

1 TREE DECK
1" = 1'-0"

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Issue Date: April 22, 2024

Revisions

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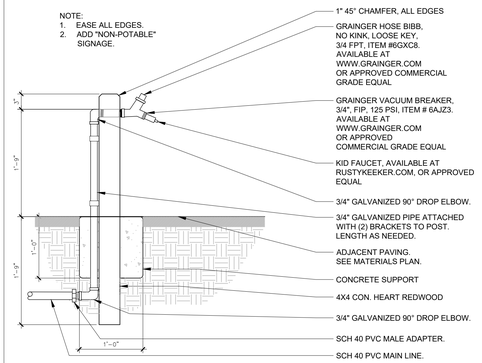
UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

LICENSED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA

CONSTRUCTION DETAILS

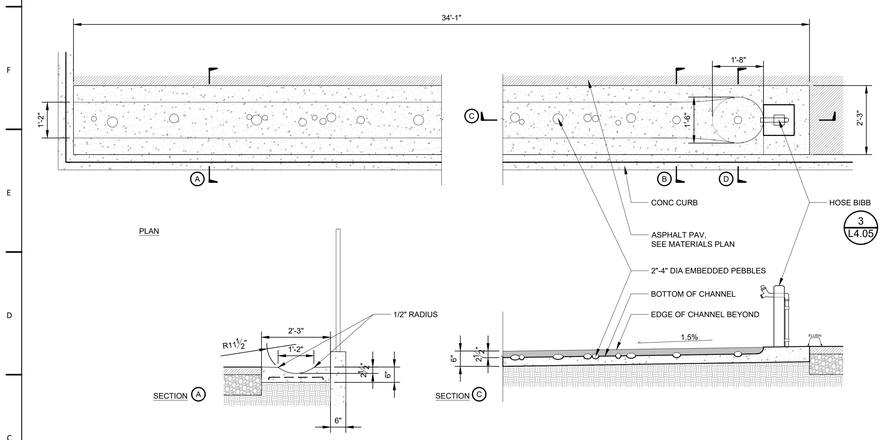
L4.04

DSA BACKCHECK



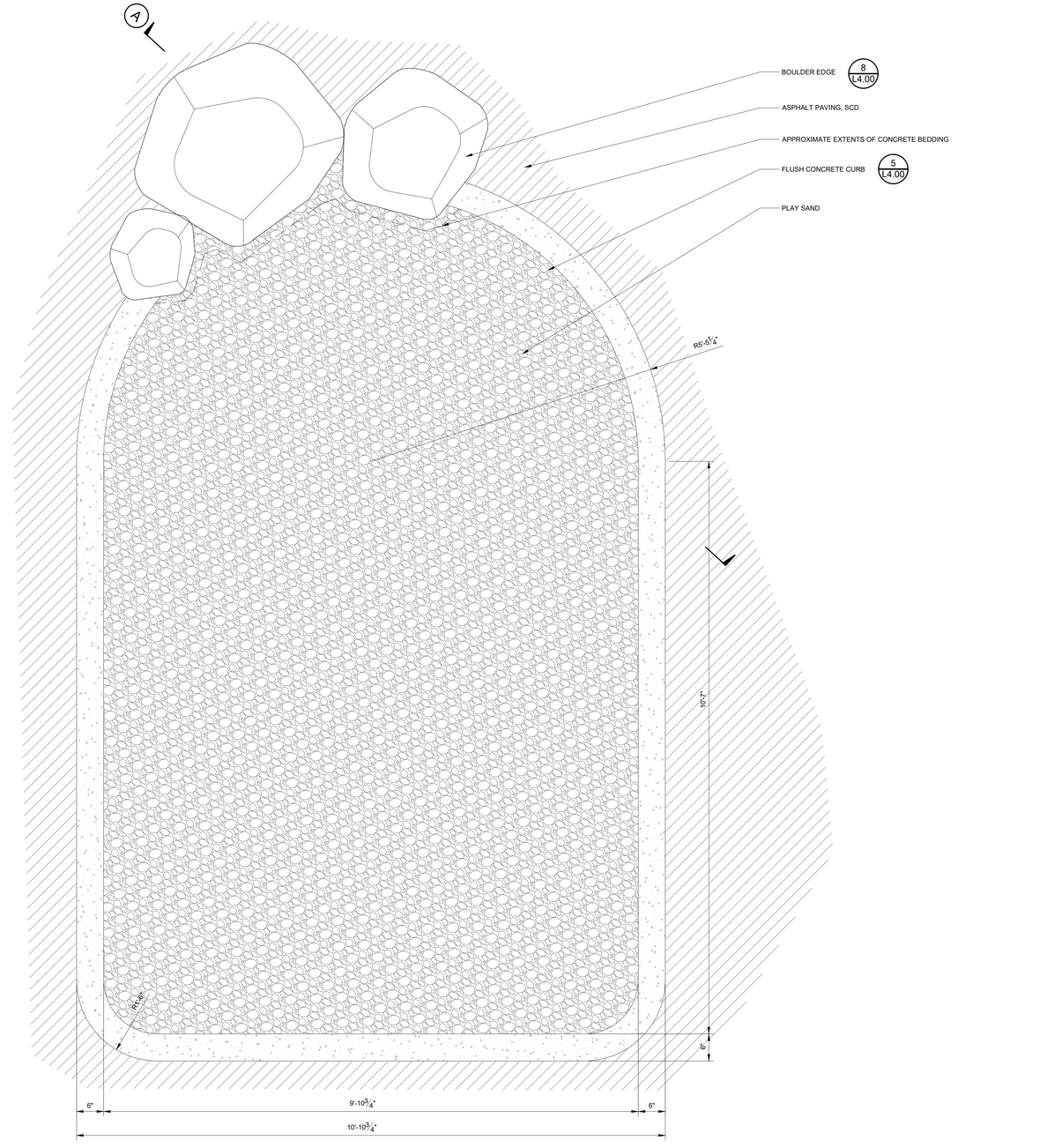
3 LOCKING HOSE BIBB

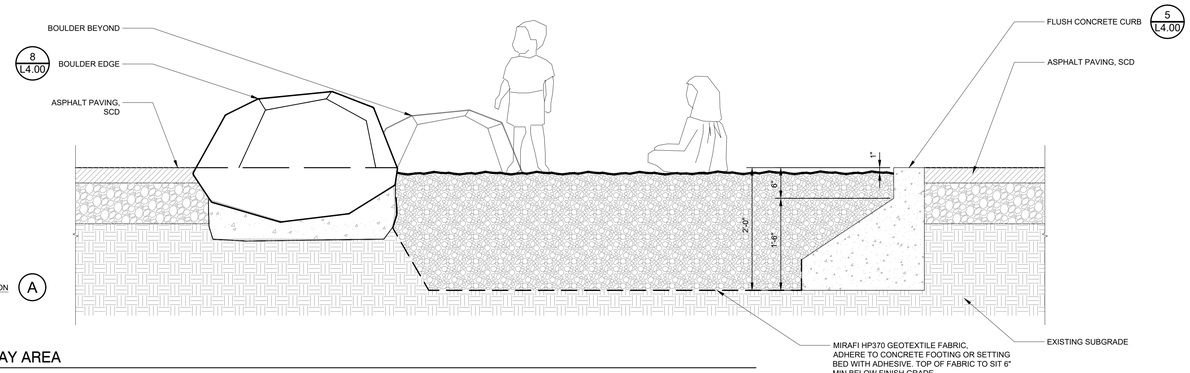
1" = 1'-0"



2 HOSE BIB DRAINAGE CHANNEL

1/2" = 1'-0"





1 SAND PLAY AREA

1" = 1'-0"

P-SU-PLA-39

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REBECCA ALGARA
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L4.05

DSA BACKCHECK

Village Shop

NRO404

Item no. NRO404-0621	
General Product Information	
Dimensions LxWxH	6'7"x5'12"x8'5"
Age group	2 - 5
Play capacity (users)	6
Color options	

The village house evokes the play urge in all children with its curved roof, open desks and nice bench inside. The dramatic play scenarios of the house know no limits: there is room for many hours of continued role play that children will return to again and again. The counter will function as shop window as well as a bench in the children's dramatic play. The bench inside will stimulate breaks and function as table, too. The romantic village windows function as extra decoration to inspire play. When children engage in dramatic play they not only train their imagination and empathy, they also play out everyday scenarios that they might have a hard time understanding, thus negotiating their life observations. While doing so, they constantly talk and communicate with their peers, thus greatly stimulating language and thinking skills.

Village Shop

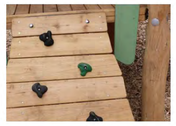
NRO404

All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).

The paint used for colored components is water based environmental friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.

The Robinia products are designed with a KOMPAN color concept with a number of different standard colors. The wood can also be supplied as untreated or with brown painted with a pigment that maintains the wood color.

Item no. NRO404-0621	
Installation Information	
Max. fall height	0'0"
Safety surfacing area	0ft²
Total installation time	10.5
Excavation volume	0.22yd³
Concrete volume	0yd³
Footing depth (standard)	1'12"
Shipment weight	1242lbs
Anchoring options	In-ground ✓ Surface ✓
Warranty Information	
Robinia Wood	10 Years
Ropes & nets	10 Years
Spare parts guaranteed	10 Years



The product/activities are preassembled from the factory to ensure all safety requirements are considered.

The hardware is made of stainless steel or galvanized steel to ensure durable connections with a high corrosion resistance.

Elevated activities 0	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	0	1	1
Required	0	1	1

ASTM F1487 compliant

Village Shop

NRO404

Cradle to Gate A1-A3	Total CO_2 emission	CO_2e/kg	Recycled materials
	kg CO_2e	kg CO_2e/kg	%
NRO404-0621	293.00	0.58	1.50
NRO404-0601	290.30	0.58	1.10

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark

Validation of CO_2 calculation method
BUREAU VERITAS HSE Denmark A/S

Verification of CO_2 calculation of:
Nature play

Data version no. 2023-10-05

The CO_2 calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO429-0621.

[Scope 3 emissions include emission sources in the upstream and downstream value chain].

Date: 30. October 2023 | Valid until: 30. October 2025
Verified by:

Julie Marie Vejsgaard Larsen, LCA & EPD Consultant

Verification based on report: Validation of CO_2 calculation of 9 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Julie M. V. Larsen.

Publication date: 30. October 2023

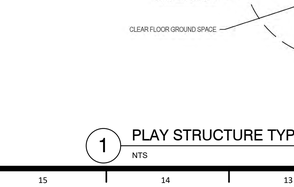
By Bureau Veritas HSE
www.bureauveritas.dk
+45 7731 1000

Village Shop

NRO404

* Max fall height | ** Total height | *** Safety surfacing area	* Max fall height | ** Total height

NRO404
** 8'-5" / 256cm



NRO404

Click to see TOP VIEW

Click to see SIDE VIEW

2 PLAY STRUCTURE TYPE 2

NTS

Multideck Tower, Monkey Bars and Desk

NRO1024

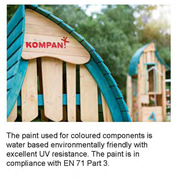
Item no. NRO1024-1021	
General Product Information	
Dimensions LxWxH	19'10"x17'12"x13'8"
Age group	5 - 12
Play capacity (users)	14
Color options	

The Multi Deck Play Tower with Monkey Bar is a richly varied play motivator for children. The targeted selection of popular play activities stimulates children to play for a long time, again and again. The accessible stairway, or the climbing wall deck, leads to the platform and a thrilling slide ride back to ground level. Apart from being great fun, sliding trains the senses of balance and space, which are very important for judging distances as well as navigating through spaces confidently and securely. The fast access via the accessible stairway provides a loop, running up and sliding down, which is great cardio training. The monkey bar trains coordination and upper body muscles and encourages turn-taking skills in children, building social-emotional awareness. At ground level a desk invites even more socializing.

Multideck Tower, Monkey Bars and Desk

NRO1024

All Organic Robinia products by KOMPAN are made of Robinia wood from sustainable European sources. On request it can be supplied as FSC® Certified (FSC® C004450).

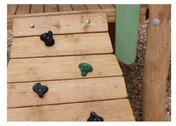


The paint used for coloured components is water based environmentally friendly with excellent UV resistance. The paint is in compliance with EN 71 Part 3.

The product/activities are preassembled from the factory to ensure all safety requirements are considered.

Item no. NRO1024-1021	
Installation Information	
Max. fall height	6'9"
Safety surfacing area	604ft²
Total installation time	33.0
Excavation volume	2.13yd³
Concrete volume	0.31yd³
Footing depth (standard)	3'3"
Shipment weight	3137lbs
Anchoring options	In-ground ✓
Warranty Information	
Robinia Wood	10 Years
Stainless steel components	Lifetime
Stainless steel components	Lifetime
Spare parts guaranteed	10 Years

Overhead climbing handles are made of high quality stainless steel. The handles are attached to the upper robinia crossbeam by stainless steel hardware.

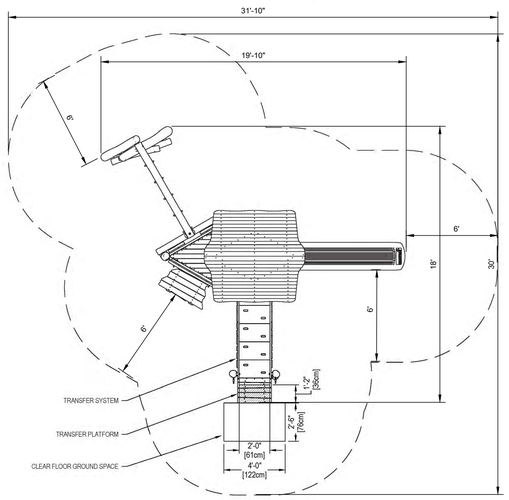


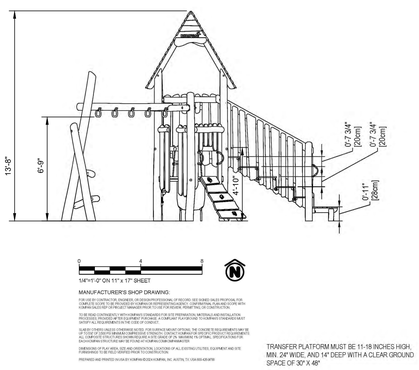
The hardware is made of stainless steel or galvanized steel to ensure durable connections with a high corrosion resistance.

The Robinia products are designed with a KOMPAN color concept with a number of different standard colors. The wood can also be supplied as untreated or with brown painted with a pigment that maintains the wood color.

Elevated activities 4	Accessible elevated activities	Accessible ground level activities	Accessible ground level play types
Present	2	1	1
Required	2	1	1

ASTM F1487 compliant





1/4"=1'-0" ON 11" x 17" SHEET

MANUFACTURER'S SHOP DRAWING

TRANSFER PLATFORM MUST BE 11-18 INCHES HIGH, MIN. 24" WIDE, AND 14" DEEP WITH A CLEAR GROUND SPACE OF 30" X 48"

Multideck Tower, Monkey Bars and Desk

NRO1024

Cradle to Gate A1-A3	Total CO_2 emission	CO_2e/kg	Recycled materials
	kg CO_2e	kg CO_2e/kg	%
NRO1024-1021	939.80	0.77	4.20
NRO1024-1001	935.90	0.77	4.00

The overall framework applied for these factors is the Environmental Product Declaration (EPD), which quantifies "environmental information on the life cycle of a product and enable comparisons between products fulfilling the same function" (ISO, 2006). This follows the structure and applies a Life-Cycle Assessment approach to the entire Product stage from raw material through manufacturing (A1-A3))

Kompan A/S
C.F. Tietgens Boulevard 32C
DK-5220 Odense SØ
Denmark

Validation of CO_2 calculation method
BUREAU VERITAS HSE Denmark A/S

Verification of CO_2 calculation of:
Nature play

Data version no. 2023-10-05

The CO_2 calculation and data are in compliance with the principles of a carbon footprint impact according to the GHG protocol (Greenhouse Gas Protocol), Scope 3, cradle to gate related to all individual components in the product category: "Nature play" represented by item no.: NRO429-0621.

[Scope 3 emissions include emission sources in the upstream and downstream value chain].

Date: 30. October 2023 | Valid until: 30. October 2025
Verified by:

Julie Marie Vejsgaard Larsen, LCA & EPD Consultant

Verification based on report: Validation of CO_2 calculation of 9 categories of Kompan product line, version 1.0, prepared by: Bureau Veritas HSE, Denmark: Julie M. V. Larsen.

Publication date: 30. October 2023

By Bureau Veritas HSE
www.bureauveritas.dk
+45 7731 1000

1 PLAY STRUCTURE TYPE 1

NTS

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
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Revisions

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CONSTRUCTION DETAILS

L4.06

DSA BACKCHECK

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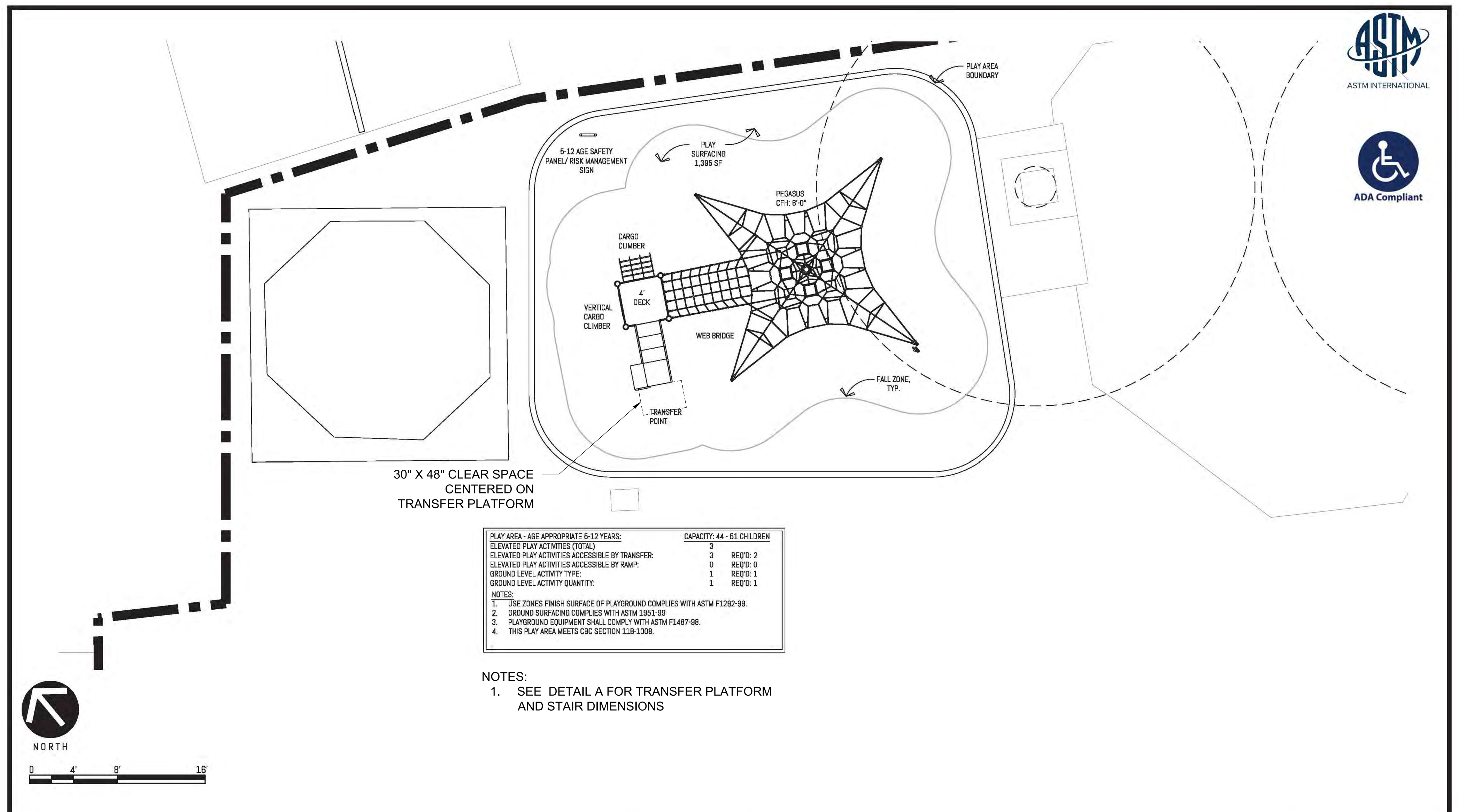


30" X 48" CLEAR SPACE CENTERED ON TRANSFER PLATFORM

PLAY AREA - AGE APPROPRIATE 5-12 YEARS:	CAPACITY: 44 - 51 CHILDREN	
ELEVATED PLAY ACTIVITIES (TOTAL)	3	
ELEVATED PLAY ACTIVITIES ACCESSIBLE BY TRANSFER:	3	REQ'D: 2
ELEVATED PLAY ACTIVITIES ACCESSIBLE BY RAMP:	0	REQ'D: 0
GROUND LEVEL ACTIVITY TYPE:	1	REQ'D: 1
GROUND LEVEL ACTIVITY QUANTITY:	1	REQ'D: 1

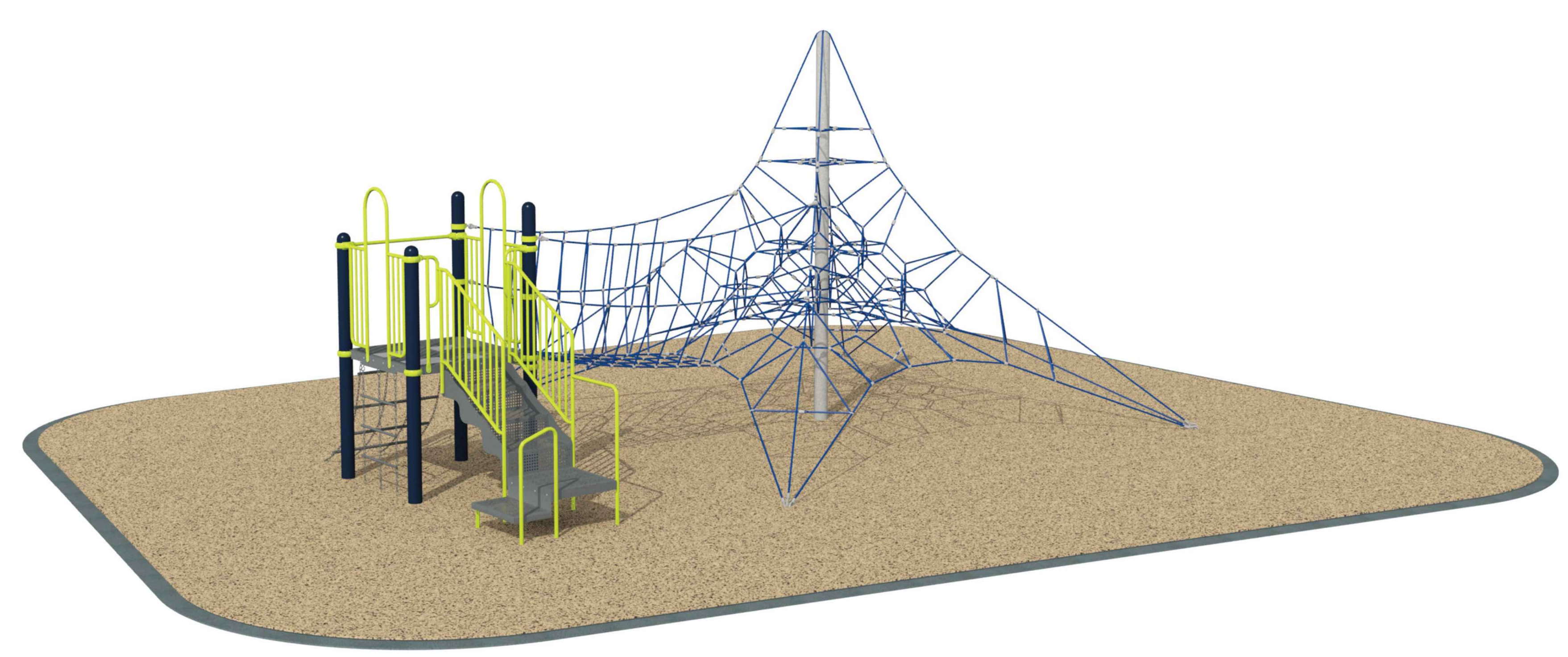
NOTES:
1. USE ZONES FINISH SURFACE OF PLAYGROUND COMPLIES WITH ASTM F1292-99.
2. GROUND SURFACING COMPLIES WITH ASTM 1951-99
3. PLAYGROUND EQUIPMENT SHALL COMPLY WITH ASTM F1487-98.
4. THIS PLAY AREA MEETS CBC SECTION 11B-1008.

NOTES:
1. SEE DETAIL A FOR TRANSFER PLATFORM AND STAIR DIMENSIONS

Sun Valley ES_Net Play -Relocation	PERIMETER: 140'-6" LF	VERSION 002
	SITE AREA: 1,395 SF	DATE: 3/20/2024
	CRITICAL FALL HEIGHT: 6'-0" CFH	DRAWN BY: CG
San Rafael, CA	DESIGN CONCEPT	FILE: 23_3008_SUNVALLEYES_NETPLAY-RELOCATION_002.DWG

MIRACLE playsystems DESIGNING PLAY
ALL DRAWINGS ARE SUBJECT TO CHANGE AND SHOULD BE REVIEWED BEFORE FINAL SALE. ALL SITE DIMENSIONS WILL NEED TO BE VERIFIED PRIOR TO SALE AND INSTALLATION.

MIRACLE PLAYSYSTEMS: DESIGNING PLAY



Colors Used In Rendering:
Dark Gray Decks
Cobalt
Chartreuse

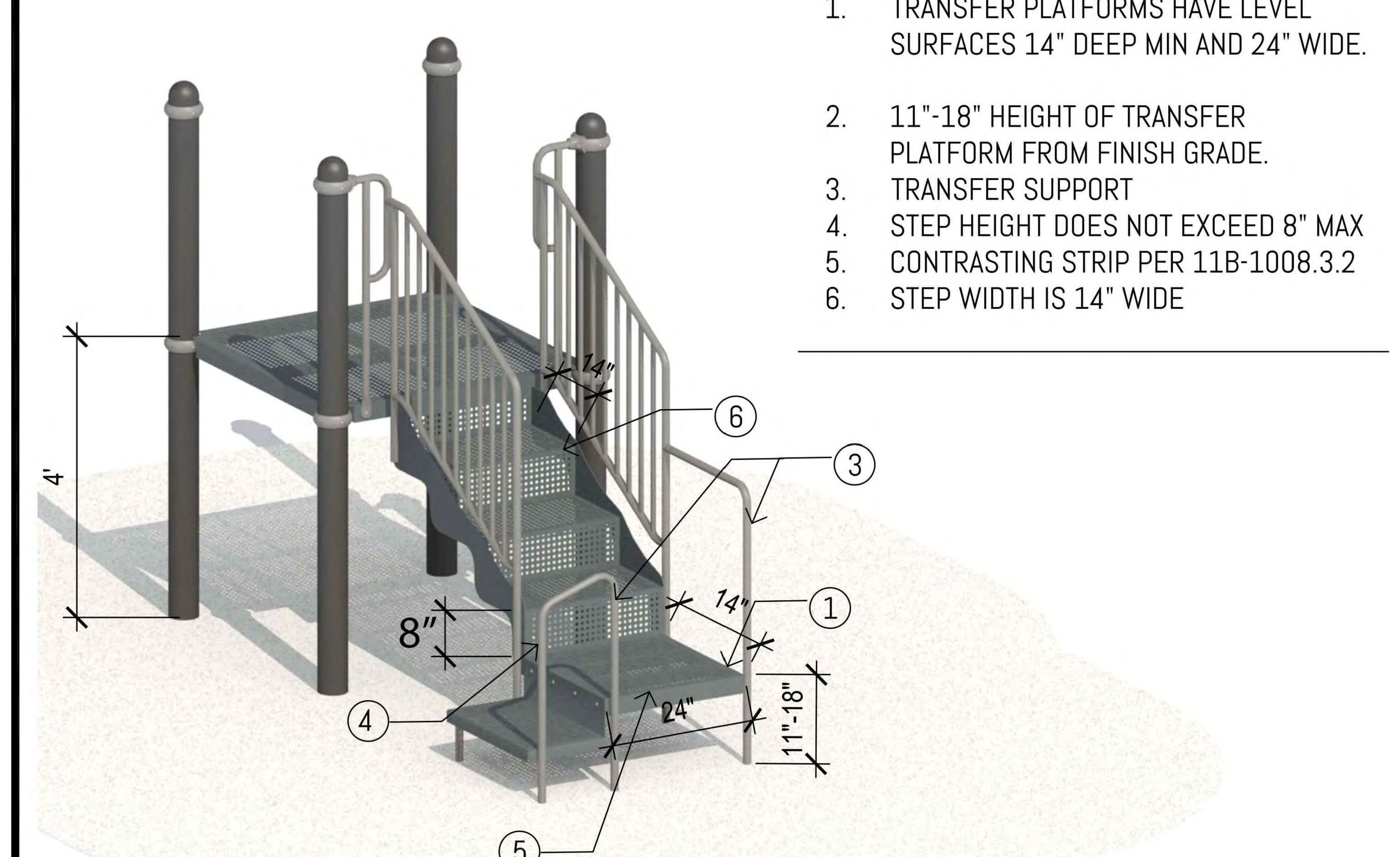
*Colors shown in rendering are for illustrative purposes only. Actual color and pattern may vary slightly.

3/20/2024
23_3008_SunValleyES_NetPlayRelocation_002

Creating Fun Play Environments to Enrich Communities

MIRACLE playsystems DESIGNING PLAY

1 PLAY STRUCTURE TYPE 3
NTS



LEGEND:
1. TRANSFER PLATFORMS HAVE LEVEL SURFACES 14" DEEP MIN AND 24" WIDE.
2. 11"-18" HEIGHT OF TRANSFER PLATFORM FROM FINISH GRADE.
3. TRANSFER SUPPORT
4. STEP HEIGHT DOES NOT EXCEED 8" MAX
5. CONTRASTING STRIP PER 11B-1008.3.2
6. STEP WIDTH IS 14" WIDE

A ADA TRANSFER STATION
N.T.S

MIRACLE playsystems DESIGNING PLAY

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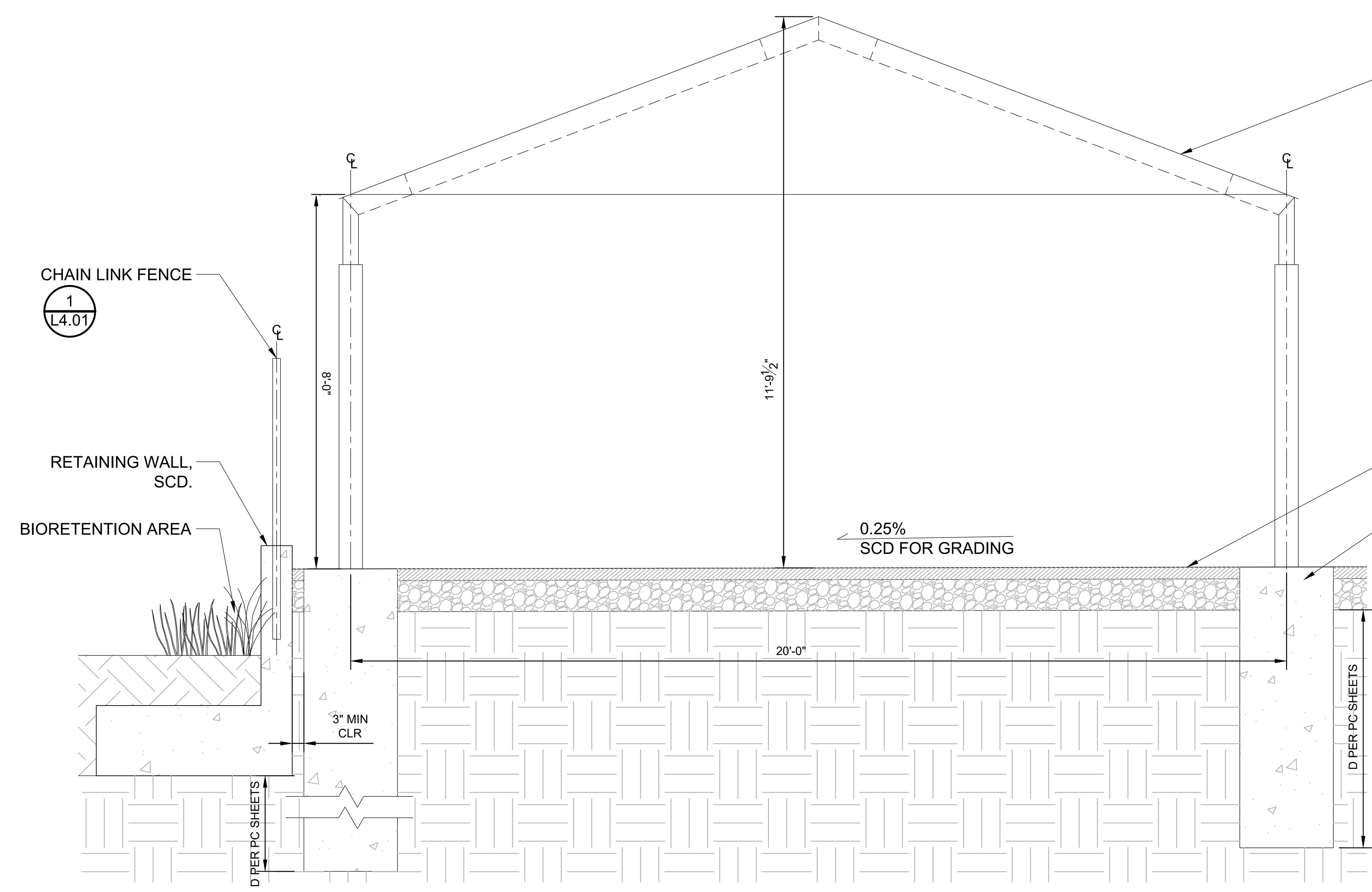
LICENSED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA

CONSTRUCTION DETAILS

L4.07

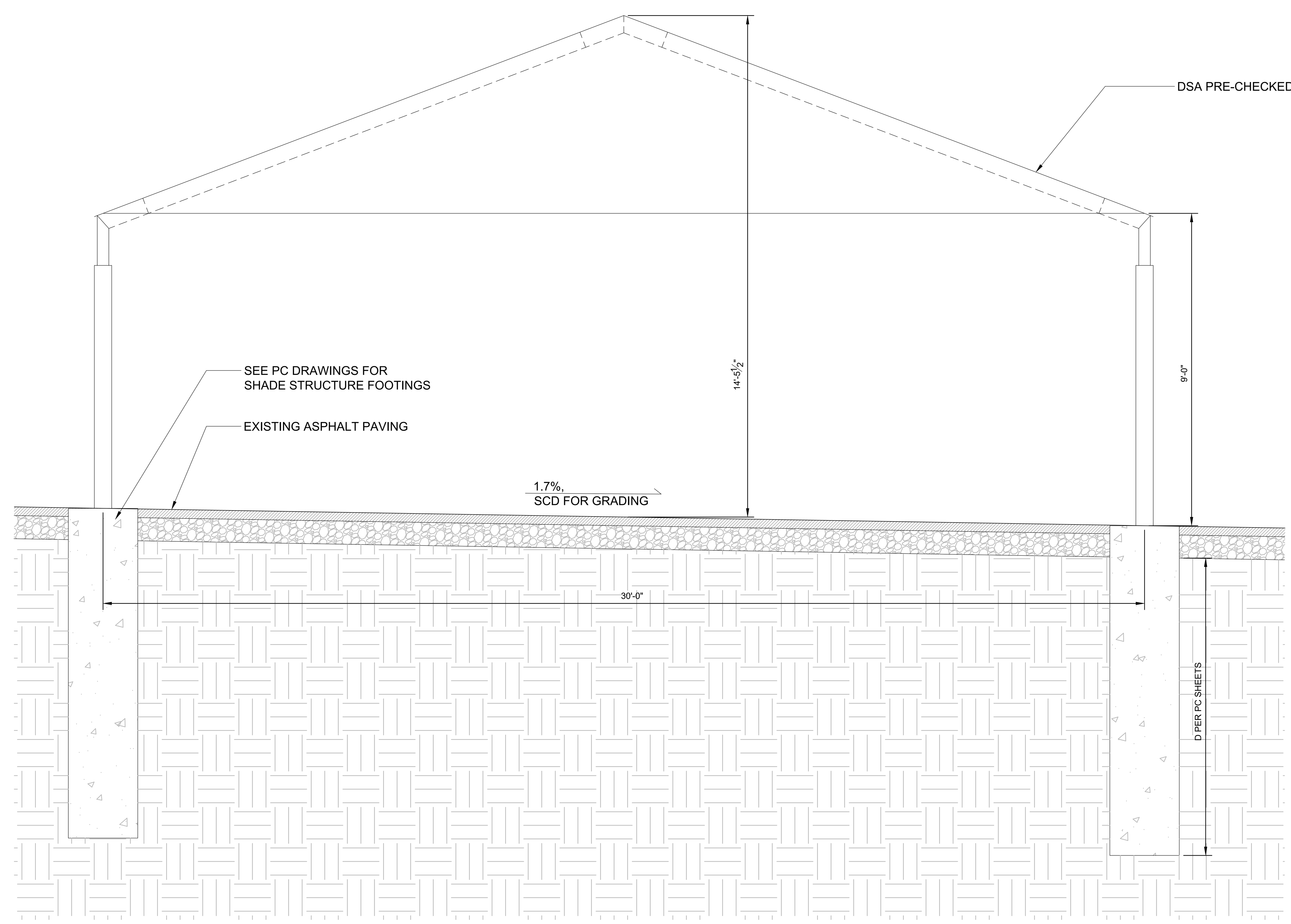
DSA BACKCHECK



NOTES:
1. SEE PC DRAWINGS PC T-1.0 THROUGH PC 7.2-2000 FOR FULL PRE-CHECKED STRUCTURE DETAILS AND FOOTINGS.

2 SHADE STRUCTURE 2 SECTION ELEVATION

1/2" = 1'-0"



NOTES:
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1 SHADE STRUCTURE 1 SECTION ELEVATION

1/2" = 1'-0"

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LICENSED LANDSCAPE ARCHITECT
STATE OF CALIFORNIA

SECTION ELEVATIONS

L4.08

DSA BACKCHECK

IRRIGATION NOTES

1. THESE IRRIGATION DRAWINGS ARE DIAGRAMMATIC AND INDICATIVE OF THE WORK TO BE INSTALLED. ALL PIPING, VALVES, AND OTHER IRRIGATION COMPONENTS MAY BE SHOWN WITHIN PAVED AREAS FOR GRAPHIC CLARITY ONLY AND ARE TO BE INSTALLED WITHIN PLANTING AREAS. DUE TO THE SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS, SLEEVES, CONDUIT, AND OTHER ITEMS WHICH MAY BE REQUIRED. INVESTIGATE STRUCTURAL AND FINISHED CONDITION AFFECTING THE CONTRACT WORK INCLUDING OBSTRUCTIONS, GRADE DIFFERENCES OR AREA DIMENSIONAL DIFFERENCES. IN THE EVENT OF FIELD DISCREPANCY WITH CONTRACT DOCUMENTS, PLAN THE INSTALLATION WORK ACCORDINGLY BY NOTIFICATION AND APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE AND ACCORDING TO THE CONTRACT SPECIFICATIONS. NOTIFY AND COORDINATE IRRIGATION CONTRACT WORK WITH OWNER FOR THE LOCATION AND INSTALLATION OF PIPE, CONDUIT OR SLEEVES THROUGH OR UNDER WALLS, ROADWAYS, PAVING AND STRUCTURES BEFORE CONSTRUCTION. IN THE EVENT THESE NOTIFICATIONS ARE NOT PERFORMED, THE CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR REQUIRED REVISIONS.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS OF THE NATIONAL ELECTRIC CODE; THE UNIFORM PLUMBING CODE, PUBLISHED BY THE WESTERN PLUMBING OFFICIALS ASSOCIATION; AND OTHER STATE OR LOCAL LAWS OR REGULATIONS. NOTHING IN THESE DRAWINGS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES OR REGULATIONS. THE CONTRACTOR SHALL FURNISH WITHOUT ANY EXTRA CHARGE, ANY ADDITIONAL MATERIAL AND LABOR WHEN REQUIRED BY THE COMPLIANCE WITH THESE CODES AND REGULATIONS.
3. THE CONTRACTOR SHALL COORDINATE INSTALLATION OF IRRIGATION SYSTEM WITH LAYOUT AND INSTALLATION OF THE PLANT MATERIALS TO INSURE THAT THERE WILL BE COMPLETE AND UNIFORM IRRIGATION COVERAGE OF PLANTING IN ACCORDANCE WITH THESE DRAWINGS, AND CONTRACT DOCUMENTS. THE IRRIGATION LAYOUT SHALL BE CHECKED BY THE CONTRACTOR AND OWNER'S AUTHORIZED REPRESENTATIVE PRIOR TO CONSTRUCTION TO DETERMINE IF ANY CHANGES, DELETIONS, OR ADDITIONS ARE REQUIRED. IRRIGATION SYSTEM SHALL BE INSTALLED AND TESTED PRIOR TO INSTALLATION OF PLANT MATERIAL
4. THE INTENT OF THIS IRRIGATION SYSTEM IS TO PROVIDE THE MINIMUM AMOUNT OF WATER REQUIRED TO SUSTAIN GOOD PLANT HEALTH.
5. IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO PROGRAM THE IRRIGATION CONTROLLER(S) TO PROVIDE THE MINIMUM AMOUNT OF WATER NEEDED TO SUSTAIN GOOD PLANT HEALTH. THIS INCLUDES MAKING ADJUSTMENTS TO THE PROGRAM FOR SEASONAL WEATHER CHANGES, PLANT MATERIAL, WATER REQUIREMENTS, SUN, SHADE AND WIND EXPOSURE.
6. USE EXISTING 120 VOLT A.C. (0.5 AMP DEMAND PER CONTROLLER) ELECTRICAL SERVICE CONTROLLER LOCATION(S). IT IS THE RESPONSIBILITY OF THE IRRIGATION CONTRACTOR TO COORDINATE THE ELECTRICAL SERVICE STUB-OUT TO THE CONTROLLER(S). PROVIDE PROPER GROUNDING PER CONTROLLER MANUFACTURER'S INSTRUCTIONS AND IN ACCORDANCE WITH LOCAL CODES.
7. PROVIDE EACH CONTROLLER WITH ITS OWN GROUND ROD. SEPARATE THE GROUND RODS BY A MINIMUM OF EIGHT FEET. THE GROUND ROD SHALL BE AN EIGHT FOOT LONG BY 5/8" DIAMETER U.L. APPROVED COPPER CLAD ROD, INSTALL NO MORE THAN 6" OF THE GROUND ROD ABOVE FINISH GRADE. CONNECT #6 GAUGE WIRE WITH A U.L. APPROVED GROUND ROD CLAMP TO ROD AND BACK TO GROUND SCREW AT BASE OF CONTROLLER WITH APPROPRIATE CONNECTOR. MAKE THIS WIRE AS SHORT AS POSSIBLE, AVOIDING KINDS OR BENDING.
8. SCHEDULE A MEETING WHICH INCLUDES REPRESENTATIVES OF THE IRRIGATION CONTROLLER MANUFACTURER, THE MAINTENANCE CONTRACTOR, THE OWNER AND THE IRRIGATION CONTRACTOR AT THE SITE FOR INSTRUCTION ON THE PROPER PROGRAMMING AND OPERATION OF THE IRRIGATION CONTROLLER.
9. INSTALL 3" DETECTABLE TAPE ABOVE ALL PRESSURIZED MAIN LINES AS DETAILED. USE CHRISTY MODEL #TA-DT-3-BIRR FOR POTABLE IRRIGATION SYSTEMS OR #TA-DT-3-PRW FOR RECYCLED IRRIGATION WATER SYSTEMS.
10. PROVIDE EACH IRRIGATION CONTROLLER WITH ITS OWN INDEPENDENT LOW VOLTAGE COMMON GROUND WIRE.
11. INSTALL PURPLE PLASTIC LOCKABLE VALVE BOXES WITH BOLT DOWN, NON HINGED COVER MARKED "IRRIGATION". BOX BODY SHALL HAVE KNOCK OUTS. ACCEPTABLE VALVE BOX MANUFACTURER'S INCLUDE NDS, CARSON OR APPROVED EQUAL.
12. INSTALL REMOTE CONTROL VALVE BOXES 12" FROM WALK, CURB, OR BUILDING AT MULTIPLE VALVE BOX GROUPS, INSTALL EACH BOX AN EQUAL DISTANCE FROM THE WALK, CURB, OR BUILDING AND PROVIDE 12" BETWEEN BOX TOPS. ALIGN THE SHORT SIDE OF RECTANGULAR VALVE BOXES PARALLEL TO WALK, CURB, OR BUILDING. LANDSCAPE ARCHITECT TO APPROVE BOX LOCATIONS PRIOR TO INSTALLATION.
13. VALVE LOCATIONS SHOWN ARE DIAGRAMMATIC. INSTALL IN GROUND COVER/SHRUB AREAS. LOCATE IN PLACES THAT ARE NOT VISUALLY PROMINENT.
14. THE CONTRACTOR SHALL LABEL CONTROL LINE WIRE AT EACH REMOTE CONTROL VALVE WITH A 2 1/4" X 2 3/4" POLYURETHANE I.D. TAG, INDICATING IDENTIFICATION NUMBER OF VALVE (CONTROLLER AND STATION NUMBER). ATTACH LABEL TO CONTROL WIRE.
15. INSTALL A GATE VALVE TO ISOLATE EACH REMOTE CONTROL VALVE OR GROUP OF RCV'S LOCATED TOGETHER. GATE VALVE SIZE SHALL BE SAME AS THE LARGEST REMOTE CONTROL VALVE IN MANIFOLD.
16. WHERE IT IS NECESSARY TO EXCAVATE ADJACENT TO EXISTING TREES, USE CAUTION TO AVOID INJURY TO TREES AND TREE ROOTS. EXCAVATE BY HAND IN AREAS WHERE TWO (2) INCH AND LARGER ROOTS OCCUR. BACK FILL TRENCHES ADJACENT TO TREE WITHIN TWENTY-FOUR (24) HOURS. WHERE THIS IS NOT POSSIBLE, SHADE THE SIDE OF THE TRENCH ADJACENT TO THE TREE WITH WET BURLAP OR CANVAS, REFER TO TEMPORARY TREE AND PLAN PROTECTION SPECIFICATIONS.
17. NOTIFY LOCAL JURISDICTIONS FOR INSPECTION AND TESTING OF EXISTING BACKFLOW PREVENTION DEVICE.
18. THE IRRIGATION SYSTEM DESIGN IS BASED ON THE MINIMUM OPERATING PRESSURE SHOWN ON THE IRRIGATION DRAWINGS. VERIFY WATER PRESSURE PRIOR TO CONSTRUCTION. REPORT ANY DIFFERENCE BETWEEN THE WATER PRESSURE INDICATED ON THE DRAWINGS AND THE ACTUAL PRESSURE READING AT THE IRRIGATION POINT OF CONNECTION TO THE OWNER'S AUTHORIZED REPRESENTATIVE.
19. IRRIGATION DEMAND: REFER TO PLANS.
20. PIPE SIZING SHOWN ON THE DRAWINGS IS TYPICAL. AS CHANGES IN LAYOUT OCCUR DURING STAKING AND CONSTRUCTION THE SIZE MAY NEED TO BE ADJUSTED ACCORDINGLY.
21. PIPE THREAD SEALANT COMPOUND SHALL BE RECTOR SEAL #5.
22. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MINOR CHANGES IN THE IRRIGATION LAYOUT DUE TO OBSTRUCTIONS SUCH AS LIGHTS, FIRE HYDRANTS, SIGNS, ELECTRICAL ENCLOSURES, ETC.
23. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR CHANGES IN THE IRRIGATION LAYOUT AND VALVE ZONING DUE TO VARIATIONS IN THE EXISTING SITE CONDITIONS SUCH AS EXPOSURE FROM BUILDINGS, TRELLISES, TREES, ETC., AS WELL AS SLOPE AND SOIL CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT AND OWNER OF THE PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.
24. THE LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR ADJUSTING THE IRRIGATION SYSTEM DESIGN IF THE PLANTING DESIGN CHANGES FROM THE ORIGINAL PLAN AND NEEDS TO ADAPT TO THE NEW PLANTING DESIGN. THE LANDSCAPE CONTRACTOR NEEDS TO NOTIFY THE LANDSCAPE ARCHITECT AND OWNER OF PROPOSED CHANGES PRIOR TO INSTALLATION FOR APPROVAL.
25. WHEN WORK OF THIS SECTION HAS BEEN COMPLETED AND SUCH OTHER TIMES AS MAY BE DIRECTED, REMOVE ALL TRASH, DEBRIS, SURPLUS MATERIALS AND EQUIPMENT FROM SITE.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLEMENTAL AND HAND WATERING OF ALL PLANT MATERIAL WITHIN DRIPLINE AREAS DURING MAINTENANCE PERIOD TO ASSURE THAT PLANTS ARE SUFFICIENTLY ESTABLISHED.
27. VERIFY LOCATIONS OF ALL IRRIGATION COMPONENTS INSTALLED WITHIN A VALVE BOX WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. DO NOT INSTALL UNTIL LANDSCAPE ARCHITECT PROVIDES ACCEPTABLE LOCATIONS.

WATER USE CALCULATIONS

WATER USE ESTIMATION - SUN VALLEY ELEMENTARY SCHOOL PROJECT

WATER TYPE	POTABLE
CITY	SAN RAFAEL, CA
TOTAL ANNUAL ETO	35.5
PEAK MONTHLY ETO	4.8
DATE	11/21/23

REGULAR LANDSCAPE AREAS

HYDROZONE	VALVE #	GPM	AREA (sq.ft) (HA)	WATER USE (LW=LOW, MW=MOD, HW = HIGH)	PLANT TYPE	IRRIGATION TYPE	PLANT FACTOR (PF)	IRRIGATION EFFICIENCY (IE)	ETAF (PF/IE)	ETWU (GAL/YEAR)	PERCENTAGE OF LANDSCAPE
1	1	5.54	629	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	2,769	9%
2	2	1.8	57	MW	TREES	BUBBLER	0.5	0.81	0.62	622	1%
3	3	9.42	1070	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	4,710	16%
4	4	3.83	435	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	1,915	6%
5	5	12.3	1,393	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	6,132	20%
6	6	3.6	113	MW	TREES	BUBBLER	0.5	0.81	0.62	1,244	2%
7	7	2.21	250	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	1,101	4%
8	8	13.6	1304	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	5,740	19%
9	9	5.4	170	MW	TREES	BUBBLER	0.5	0.81	0.62	1,866	2%
10	10	12.4	1405	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	6,185	21%
11	11	2.7	84.78	MW	TREES	BUBBLER	0.5	0.81	0.62	126	1%
12	12	17.6	2001	LW	SHRUBS/GC	DRIPLINE 12"	0.2	0.81	0.25	1,191	29%
13	13	17.3	3159	MW	TURF	MP ROTATOR	0.5	0.81	0.62	4,701	46%
		TOTAL	6,825						TOTAL	26,099	100%

SPECIAL LANDSCAPE AREA

HYDROZONE #		HYDROZONE NAME	AREA (sq.ft)(HA)	PERCENTAGE OF LANDSCAPE
				0%

MAWA		GALLONS/YEAR	67599
		ACRE FEET/YEAR	0.21
		HCF/YEAR	90.37
ETWU		GALLONS/YEAR	26099
		ACRE FEET/YEAR	0.08
		HCF/YEAR	34.89

SITE IRRIGATION EFFICIENCY		SITE PLANT FACTOR	MAWA COMPLIANT
81.00%		**0.32**	**YES**

ETAF CALCULATIONS

REGULAR LANDSCAPE AREAS		
TOTAL ETAF X AREA		2657
TOTAL AREA		6825
AVG. ETAF		39%

MAWA FORMULA	ETWU FORMULA
MAXIMUM APPLIED WATER ALLOWANCE (MAWA) GALLONS PER YEAR	**ESTIMATED TOTAL WATER USE (ETWU) GALLONS PER YEAR**
MAWA= (ETo)(0.62)(LA x 0.45) + (0.55 x SLA)	ETWU= ((ETo)(0.62)(ETAF x LA)

Eto= REFERENCE EVAOPTRANSPIRATION

0.45= ET ADJUSTMENT FACTOR

LA= LANDSCAPED AREA (SQUARE FEET)
0.62= CONVERSION FACTOR (GALLONS/SQ.FT/YEAR)

Eto= REFERENCE EVAPOTRANSPIRATION

PF= PLANT FACTOR FOR HYDROZONES

HA= HYDROZONE AREA (SQ. FT)
0.62= CONVERSION FACTOR (GALLONS/SQ. FT/YEAR)
IE= IRRIGATION EFFICIENCY (0.81)-DRIP

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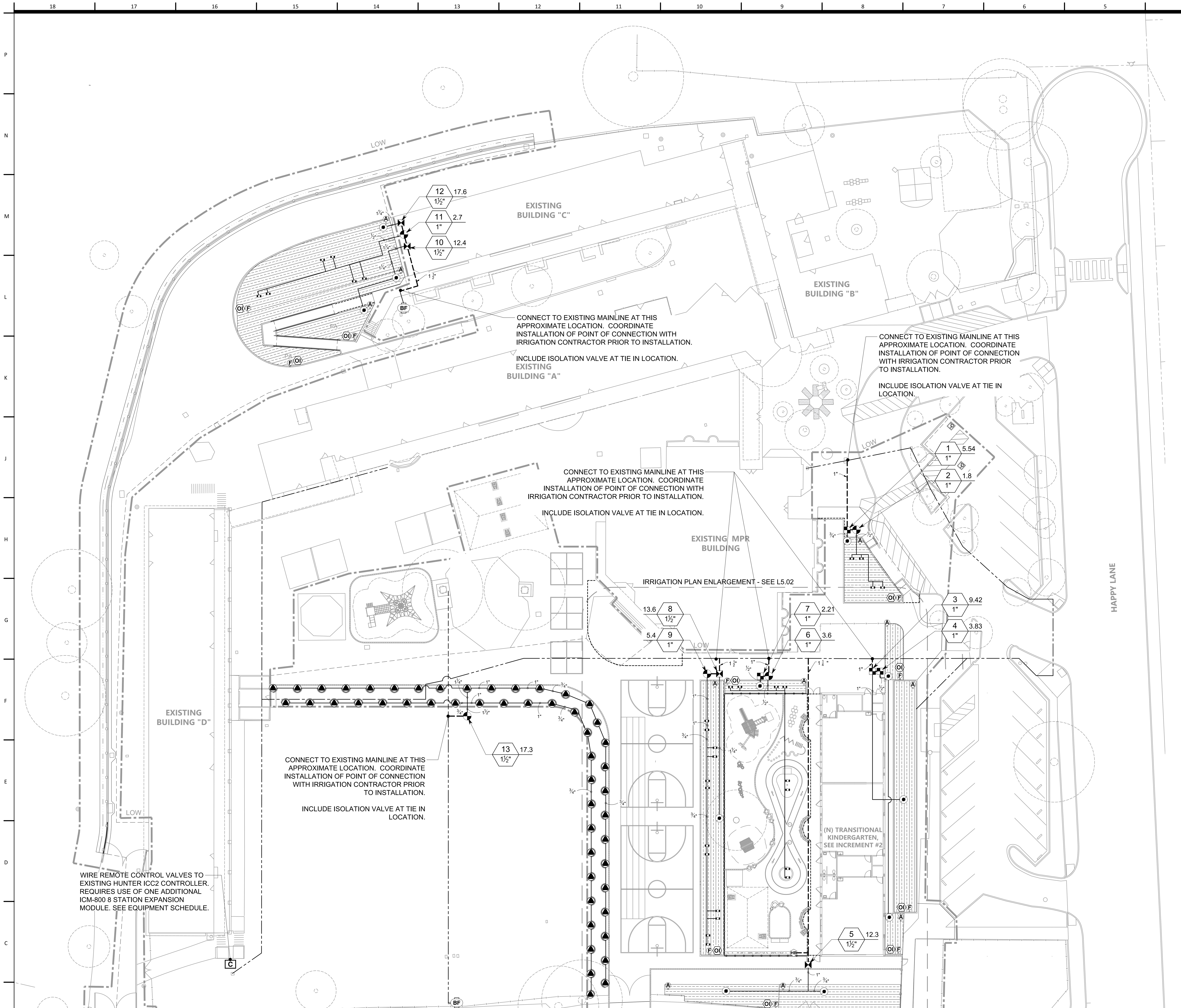
IRRIGATION NOTES AND WATER USE CALCULATIONS

L5.00

DSA BACKCHECK



NOTES:

1. IRRIGATION EQUIPMENT MAY BE SHOWN WITHIN HARDSCAPE FOR GRAPHIC CLARITY ONLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN PLANTED AREAS. IRRIGATION PIPE AND WIRE CROSSING BENEATH HARDSCAPE SURFACES SHALL BE CONTAINED WITHIN SLEEVING OR SCHEDULE 40 PVC CONDUIT. SLEEVING SIZE SHALL BE A MINIMUM OF TWO TIMES THE AGGREGATE DIAMETER OF ALL PIPES CONTAINED WITH SLEEVE. PROVIDE VERTICAL SWEEP FOR ALL ELECTRICAL CONDUIT ON EACH SIDE OF HARDSCAPE AND TERMINATED ENDS AT 12" MINIMUM DEPTH AND 12" FROM HARDSCAPE SURFACE.
2. MAINLINE AND LATERAL PIPE SIZE IS AS NOTED AND CONTIGUOUS DOWNSTREAM UNTIL OTHERWISE NOTED BY NEW PIPE SIZE CALL OUT, TYP.
3. 'AREA FOR DRIPLINE' HATCH DOES NOT ALWAYS REFLECT DIRECTION OF DRIPLINES. DRIPLINE SHALL RUN PARALLEL TO TOPOGRAPHIC CONTOURS, TYP.

IRRIGATION SCHEDULE

DETAIL	SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
10/L5.04	1000	HUNTER MP1000 PROS-04-PRS30-CV-R TURF ROTATOR, 4IN. POP-UP WITH CHECK VALVE, RECLAIMED BODY CAP, PRESSURE REGULATED TO 30 PSI, MP ROTATOR NOZZLE ON PRS30 BODY. M=MAROON ADJ ARC 90 TO 210, L=LIGHT BLUE 210 TO 270 ARC, O=OLIVE 360 ARC.
7/L5.04	50	TORO 570S-FB-PC PRESSURE-COMPENSATING FLOOD BUBBLER NOZZLE ON 570S FIXED RISER. 0.25 GPM, 0.5 GPM, 1.0 GPM, AND 2.0 GPM.
	SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
1/L5.03		HUNTER ICZ-101-25-LF DRIP CONTROL ZONE KIT. 1IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 25 PSI. FLOW RANGE: .5 GPM - 15 GPM. 150 MESH STAINLESS STEEL SCREEN.
1/L5.03		HUNTER ICZ-151-XL-40 DRIP CONTROL ZONE KIT. 1-1/2IN. ICV GLOBE VALVE WITH 1IN. HY100 FILTER SYSTEM. PRESSURE REGULATION: 40PSI. FLOW RANGE: 20 GPM TO 60 GPM. 120 MESH STAINLESS STEEL SCREEN. 1-1/2IN. INLET X SINGLE 2IN. OUTLET
7/L5.03		PIPE TRANSITION POINT IN DRIP BOX PIPE TRANSITION POINT FROM PVC LATERAL TO DRIP TUBING WITH RISER IN 6IN. DRIP BOX.
5/L5.04	F	FLUSH VALVE 12" MIN. PVC HOSE WITH 1/2" SCH 40 THREADED BALL VALVE IN VALVE BOX.
3/L5.04, 4/L5.04	A	TORO T-YD-500-34 1/2IN. AIR VENT- MIPT AIR RELEASE AND VACUUM RELIEF VALVE
6/L5.04	OI	TORO T-DL-MP9 DL2000 POP-UP OPERATION INDICATOR
10/L5.03, 1/L5.04, 11/L5.03, 2/L5.04, 12/L5.03		AREA TO RECEIVE DRIPLINE TORO RGP-212-NP SUB-SURFACE PRESSURE COMPENSATING LANDSCAPE DRIPLINE WITH ROOTGUARD TECHNOLOGY. .53 GPH EMITTERS AT 12" O.C. DRIPLINE LATERALS SPACED AT 12" APART, WITH EMITTERS OFFSET FOR TRIANGULAR PATTERN. PURPLE TUBING FOR EFFLUENT WATER USE.
	SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
2/L5.03		TORO P220-27-0 GLOBE ELECTRIC, 1IN., 1-1/2IN., 2IN. AND 3IN. PLASTIC IN-LINE REMOTE CONTROL VALVE. EQUIPPED TO WITHSTAND PRESSURE UP TO . FILTER SCREEN ON 2IN. AND 3IN. MODELS. STANDARD SOLENOID. GLOBE BODY STYLE. WITH EZ REG PRESSURE REGULATOR.
9/L5.04	HB	HOSE BIBB SELF-CLOSING FAUCET
	BF	EXISTING BACKFLOW PREVENTER 2" EXISTING REDUCED PRESSURE BACKFLOW PREVENTER
	C	HUNTER I2C-3200-M/ICC-PED EXISTING 32 STATION OUTDOOR MODULAR CONTROLLER WITH (3) ICM-800 MODULES. USE (5) AVAILABLE EXISTING STATIONS AND INSTALL (1) ADDITIONAL ICM-800 MODULE TO ACCOMODATE TOTAL OF (11) NEW STATIONS.
		NEW IRRIGATION LATERAL LINE: PURPLE PVC SCHEDULE 40-NP
		NEW IRRIGATION MAINLINE: PURPLE PVC SCHEDULE 40-NP
		EXISTING IRRIGATION MAINLINE

VALVE CALLOUT
VALVE NUMBER
VALVE FLOW
VALVE SIZE

0 20 40 60 80 feet
1" = 20'
NORTH

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 22, 2024

Revisions

NUMBER	DESCRIPTION	DATE

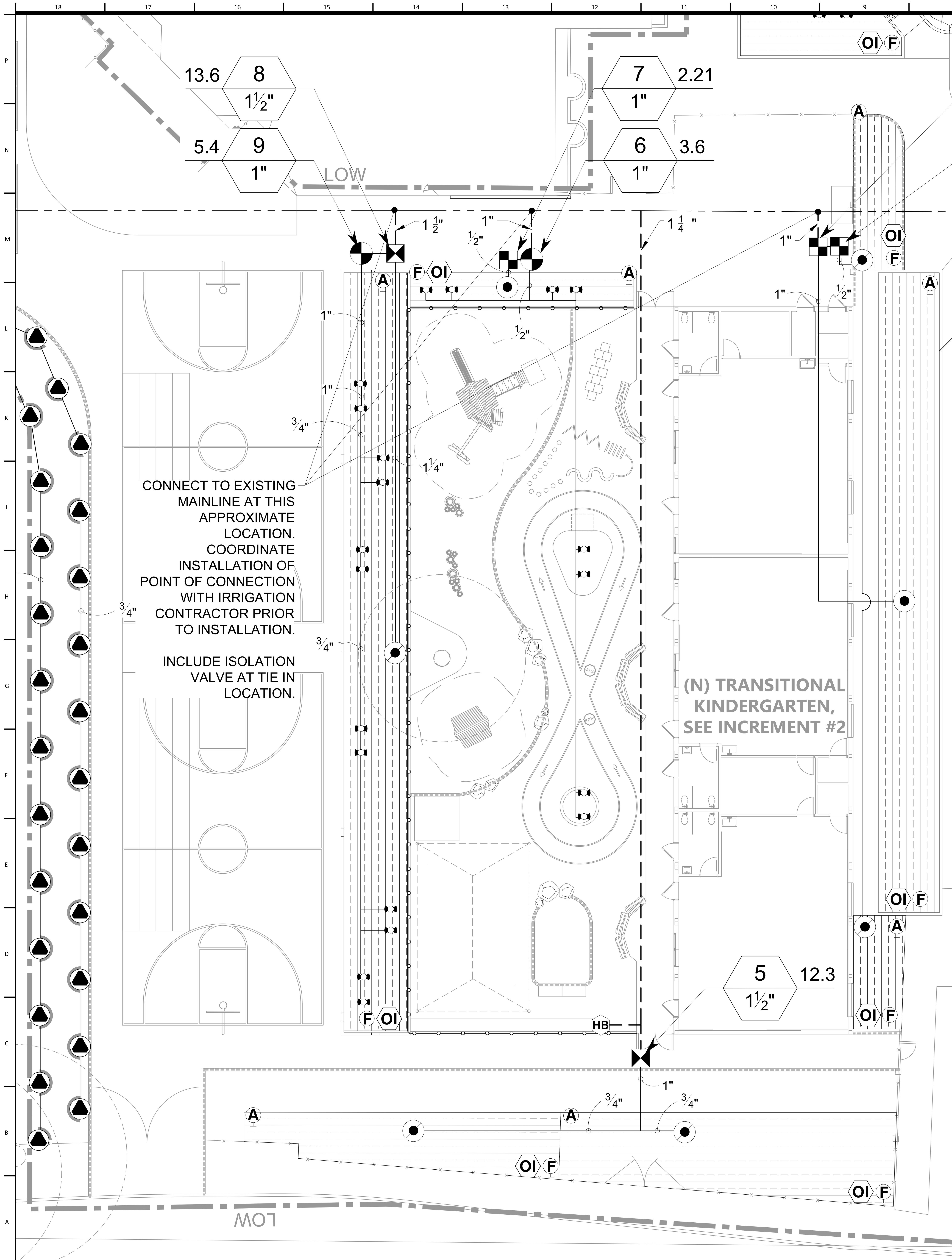
UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

LICENSED LANDSCAPE ARCHITECT
PATRICIA ALGARA LIC. #6691
SIGNATURE
3/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

IRRIGATION PLAN

L5.01

DSA BACKCHECK



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DETAIL	SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
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9 L5.04	HB	HOSE BIBB SELF-CLOSING FAUCET
	BF	EXISTING BACKFLOW PREVENTER 2" EXISTING REDUCED PRESSURE BACKFLOW PREVENTER
	C	HUNTER I2C-3200-M/ICC-PED EXISTING 32 STATION OUTDOOR MODULAR CONTROLLER WITH (3) ICM-800 MODULES. USE (5) AVAILABLE EXISTING STATIONS AND INSTALL (1) ADDITIONAL ICM-800 MODULE TO ACCOMODATE TOTAL OF (11) NEW STATIONS.
		NEW IRRIGATION LATERAL LINE: PURPLE PVC SCHEDULE 40-NP
		NEW IRRIGATION MAINLINE: PURPLE PVC SCHEDULE 40-NP
		EXISTING IRRIGATION MAINLINE

VALVE CALLOUT
- VALVE NUMBER
- VALVE FLOW
- VALVE SIZE

0 8 16 24 32 feet
1/8" = 1'-0"
NORTH

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DIV. OF THE STATE ARCHITECT
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architect:
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156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 22, 2024

Revisions

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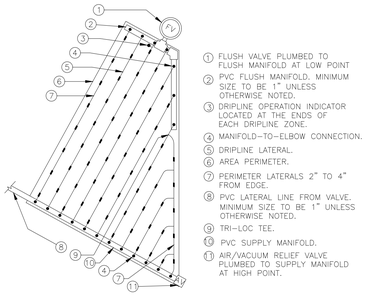
IRRIGATION PLAN ENLARGEMENT

L5.02

DSA BACKCHECK

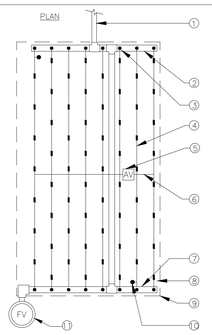


1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD–TO–ELBOW CONNECTION.
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" TO 4" FROM EDGE.
8. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. TRI–LOC TEE.
10. PVC SUPPLY MANIFOLD.
11. AIR/VACUUM RELIEF VALVE PLUMBED TO SUPPLY MANIFOLD AT HIGH POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

12 DRIPLINE TRIANGULAR LAYOUT

1" = 1'-0" P-SU-IRR-14

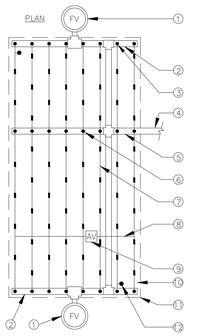


1. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. MANIFOLD–TO–ELBOW CONNECTION (TYP).
4. DRIPLINE LATERAL.
5. AIR/VACUUM RELIEF VALVE PLUMBED TO BLANK 5/8" TUBING AT EACH HIGH POINT.
6. AIR/VACUUM RELIEF LATERAL, BLANK 5/8" POLY TUBING CENTERED ON MOUND OR BERM.
7. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
8. PERIMETER LATERALS 2" TO 4"FROM EDGE.
9. AREA PERIMETER.
10. DRIP OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONES.
11. AUTOMATIC FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

11 DRIPLINE END FEED LAYOUT

1" = 1'-0" P-SU-IRR-01

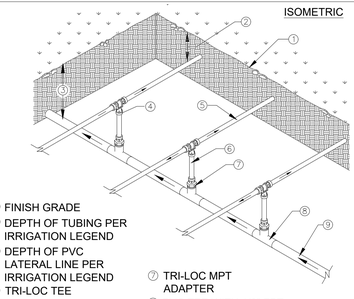


1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. MANIFOLD–TO–ELBOW CONNECTION (TYP).
4. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
5. PVC SUPPLY MANIFOLD. EXTEND TO END OF ZONE/EXHAUST HEADER.
6. MANIFOLD–TO–TEE CONNECTION.
7. DRIPLINE LATERAL.
8. AIR/VACUUM RELIEF LATERAL, BLANK POLY TUBING CENTERED ON MOUND OR BERM.
9. AIR/VACUUM RELIEF PLUMBED TO BLANK 5/8" POLY TUBING AT EACH HIGH POINT.
10. PERIMETER LATERALS 2" TO 4" FROM EDGE.
11. AREA PERIMETER.
12. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

10 DRIPLINE CENTER FEED LAYOUT

NTS P-SU-IRR-11

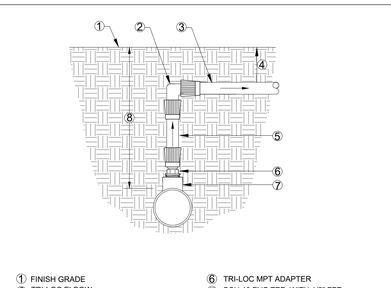


1. FINISH GRADE
2. DEPTH OF TUBING PER IRRIGATION LEGEND
3. DEPTH OF PVC LATERAL LINE PER IRRIGATION LEGEND
4. TRI-LOC TEE
5. DRIPLINE TUBING
6. BLANK 5/8" POLY TUBING, LENGTH AS NECESSARY.
7. TRI-LOC MPT ADAPTER
8. PVC TEE WITH 1/2" FPT OUTLET.
9. PVC LATERAL LINE FROM REMOTE CONTROL VALVE

NOTE:
THE TOTAL LENGTH OF A SINGLE DRIP LINE RUN SHALL NOT EXCEED 300 FT.

9 DRIPLINE CENTER FEED MANIFOLD

1" = 1'-0" P-SU-IRR-17

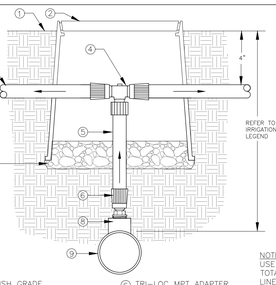


1. FINISH GRADE
2. CARSON 708 OR EQUAL. COLOR: BLACK. USE PURPLE FOR RECYCLED WATER SYSTEMS.
3. DRIPLINE TUBING
4. TRI–LOC TEE
5. BLANK 5/8" POLY TUBING, LENGTH AS NECESSARY.
6. TRI–LOC MPT ADAPTER
7. TRI–LOC MPT ADAPTER
8. CLEAN CRUSHED ROCK, 6" DEPTH.
9. SCH 40 PVC TEE WITH 1/2" FPT OUTLET.
10. PVC LATERAL LINE SUPPLY. MINIMUM SIZE TO BE 1" UNLESS SIZED DIFFERENTLY ON DRAWINGS. USE SCH 40 PVC 1"x1"x1/2" TEE OR 90° ELBOW.

NOTE:
USE ONLY WHEN THE TOTAL LENGTH OF DRIP LINE SERVICED FROM THIS PVC CONNECTION IS LESS THAN 300 FT.

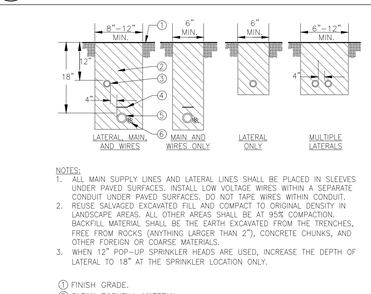
8 DRIPLINE MANIFOLD TO ELBOW CONNECTION

NOT TO SCALE P-SU-IRR-26



7 PIPE TRANSITION, DRIPLINE TO PVC CONNECTION

1" = 1'-0" P-SU-IRR-23

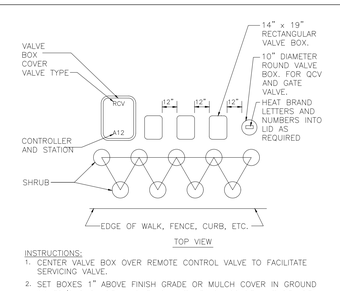


NOTES:
1. ALL MAIN SUPPLY LINES AND LATERAL LINES SHALL BE PLACED IN SLEEVES UNDER PAVED SURFACES. INSTALL LOW VOLTAGE WIRES WITHIN A SEPARATE CONDUIT UNDER PAVED SURFACES. DO NOT TAPE WIRES WITHIN CONDUIT.
2. REUSE SALVAGED EXCAVATED FILL AND COMPACT TO ORIGINAL DENSITY IN LANDSCAPE AREAS. ALL OTHER AREAS SHALL BE AT 95% COMPACTION. BACKFILL MATERIAL SHALL BE THE EARTH EXCAVATED FROM THE TRENCHES, FREE FROM ROCKS (ANYTHING LARGER THAN 2"), CONCRETE CHUNKS, AND OTHER FOREIGN OR COARSE MATERIALS.
3. WHEN 12" POP–UP SPRINKLER HEADS ARE USED, INCREASE THE DEPTH OF LATERAL TO 18" AT THE SPRINKLER LOCATION ONLY.

1. FINISH GRADE.
2. CLEAN BACKFILL MATERIAL.
3. PURPLE LATERAL LINE.
4. 3" DETECTABLE WARNING TAPE OVER MAIN LINE. INSTALL 3" ABOVE MAIN LINE. USE CHRISTY MODEL #TA–DT–3–PRW FOR RECYCLED IRRIGATION WATER SYSTEMS
5. PURPLE MAIN LINE.
6. LOW VOLTAGE CONTROL WIRES, TWO–WIRE CABLE, OR CONDUIT WITH WIRES. FOR MULTIPLE WIRES, TAPE AND BUNDLE WIRES AT 10 FT. INTERVALS. WIRING SHALL BE LAID OUT LOOSELY IN THE TRENCH.

6 TRENCHING

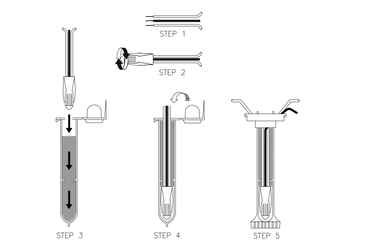
1" = 1'-0" P-SU-IRR-10



INSTRUCTIONS:
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET BOXES 1" ABOVE FINISH GRADE OR MULCH COVER IN GROUND COVER/SHRUB AREA AND FLUSH WITH FINISH GRADE IN TURF AREA.
3. SET RCV AND VALVE BOX ASSEMBLY IN GROUND COVER/SHRUB AREA. PLACE BEHIND SECOND ROW OF SHRUBS (TYPICAL).
4. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF LAWN, WALK, FENCE, CURB, ETC.
5. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOX SIDES.
6. INSTALL EXTENSION BY VALVE BOX MANUFACTURER AS REQUIRED TO COMPLETELY ENCLOSE ASSEMBLY FOR EASY ACCESS.

5 VALVE BOX INSTALLATION

1" = 1'-0" P-SU-IRR-08

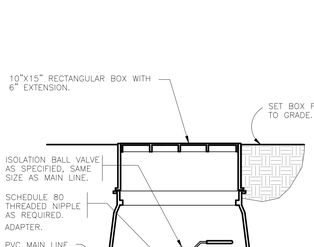


NOTE:
MAXIMUM # OF WIRES PER CONNECTOR:
- 3–#14 GAUGE
- 2–#12 GAUGE

INSTRUCTIONS:
1. STRIP WIRES APPROXIMATELY 1/2" FROM ENDS TO EXPOSE WIRE.
2. TWIST CONNECTOR AROUND WIRES CLOCKWISE UNTIL HAND TIGHT, DO NOT OVERTIGHTEN.
3. INSERT WIRE ASSEMBLY TO BOTTOM OF GEL–FILLED TUBE. CHECK TO MAKE SURE CONNECTOR HAS BEEN PUSHED PAST LOCKING FINGERS AND IS SEATED AT THE BOTTOM OF THE TUBE.
4. PLACE WIRES WHICH EXIT TUBE IN WIRE EXIT HOLES AND CLOSE CAP UNTIL IT SNAPS.
5. INSPECT FINAL SPLICE ASSEMBLY THAT IT IS SECURED.

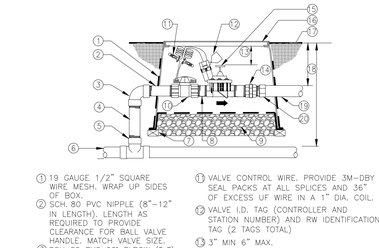
4 WEATHERPROOF WIRE SPLICE ASSEMBLY

1" = 1'-0" P-SU-IRR-06



3 BRASS BALL ISOLATION VALVE

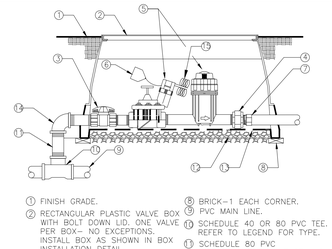
1 1/2" = 1'-0" P-SU-IRR-02



1. 19 GAUGE 1/2" SQUARE WIRE MESH. WRAP UP SIDES OF BOX.
2. SCH. 80 PVC NIPPLE (8"–12" IN LENGTH). LENGTH AS REQUIRED TO PROVIDE CLEARANCE FOR BALL VALVE HANDLE. MATCH VALVE SIZE.
3. SCH. 80 PVC 90° ELBOW (T×T).
4. SCH. 80 PVC NIPPLE. LENGTH AS REQUIRED.
5. SCH. 40 OR 80 PVC TEE. REFER TO LEGEND FOR TYPE.
6. PVC MAIN LINE.
7. BRICK–ONE ON EACH CORNER.
8. 3" LONG SCH. 80 PVC NIPPLE. MATCH VALVE SIZE (2 TOTAL).
9. PEA GRAVEL OR 3/4" DRAIN ROCK. 4" DEEP BELOW VALVE (NO SOIL IN VALVE BOX).
10. SCH. 80 PVC UNION BALL VALVE (ONE PER VALVE).
11. VALVE CONTROL WIRE. PROVIDE 3M–DBY SEAL PACKS AT ALL SPLICES AND 36" OF EXCESS UF WIRE IN A 1" DIA. COIL.
12. VALVE I.D. TAG (CONTROLLER AND STATION NUMBER) AND RW IDENTIFICATION TAG (2 TAGS TOTAL)
13. 3" MIN 6" MAX.
14. SCH. 80 PVC THREADED UNION.
15. REMOTE CONTROL VALVE WITH FLOW CONTROL AND MANUAL BLEED (PRESSURE REGULATOR WHERE SHOWN ON PLANS)
16. 14" x 19" RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX– NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
17. FINISH GRADE.
18. REFER TO IRRIGATION LEGEND.
19. PVC LATERAL LINE.
20. SCH. 80 PVC MALE ADAPTER.

2 REMOTE CONTROL VALVE

NTS P-SU-IRR-03



1. FINISH GRADE.
2. RECTANGULAR PLASTIC VALVE BOX WITH BOLT DOWN LID. ONE VALVE PER BOX– NO EXCEPTIONS. INSTALL BOX AS SHOWN IN BOX INSTALLATION DETAIL.
3. SCHEDULE 80 PVC UNION BALL VALVE (ONE PER VALVE).
4. SCHEDULE 80 PVC THREADED UNION.
5. REMOTE CONTROL VALVE DRIP ZONE KIT. (SHALL INCLUDE VALVE, FILTER AND A 40 PSI PRESSURE REDUCING VALVE)
6. VALVE I.D. TAG (CONTROLLER AND STATION NUMBER)
7. SCHEDULE 40 MALE ADAPTER
8. BRICK–1 EACH CORNER.
9. PVC MAIN LINE.
10. SCHEDULE 40 OR 80 PVC TEE. REFER TO LEGEND FOR TYPE.
11. SCHEDULE 80 PVC NIPPLE–(4–TOTAL) LENGTH AS REQUIRED.
12. PEA GRAVEL OR 3/4" DRAIN ROCK – 4" DEEP BELOW VALVE.
13. 19 GAUGE 1/2" SQUARE WIRE MESH.
14. SCHEDULE 80 PVC 90° ELBOW
15. VALVE CONTROL WIRE– PROVIDE 3M–DBY SEAL PACKS AT ALL SPLICES AND 3' OF EXCESS UF WIRE IN A 1" DIAMETER COIL.

1 CONTROL ZONE KIT (DRIPZONE)

1" = 1'-0" P-SU-IRR-05

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the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
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Revisions

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LICENSED LANDSCAPE ARCHITECT
REBECCA HARRIS
SIGNATURE
07/1/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

IRRIGATION DETAILS

L5.03

DSA BACKCHECK

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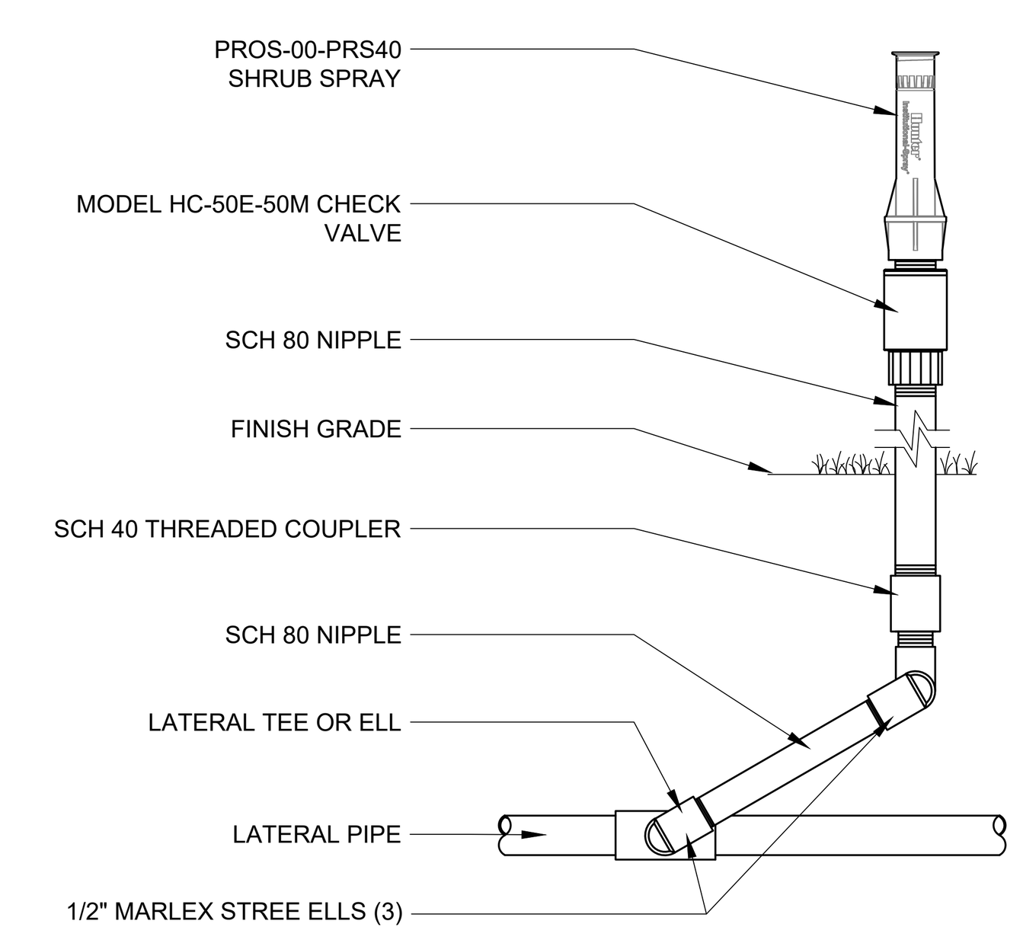
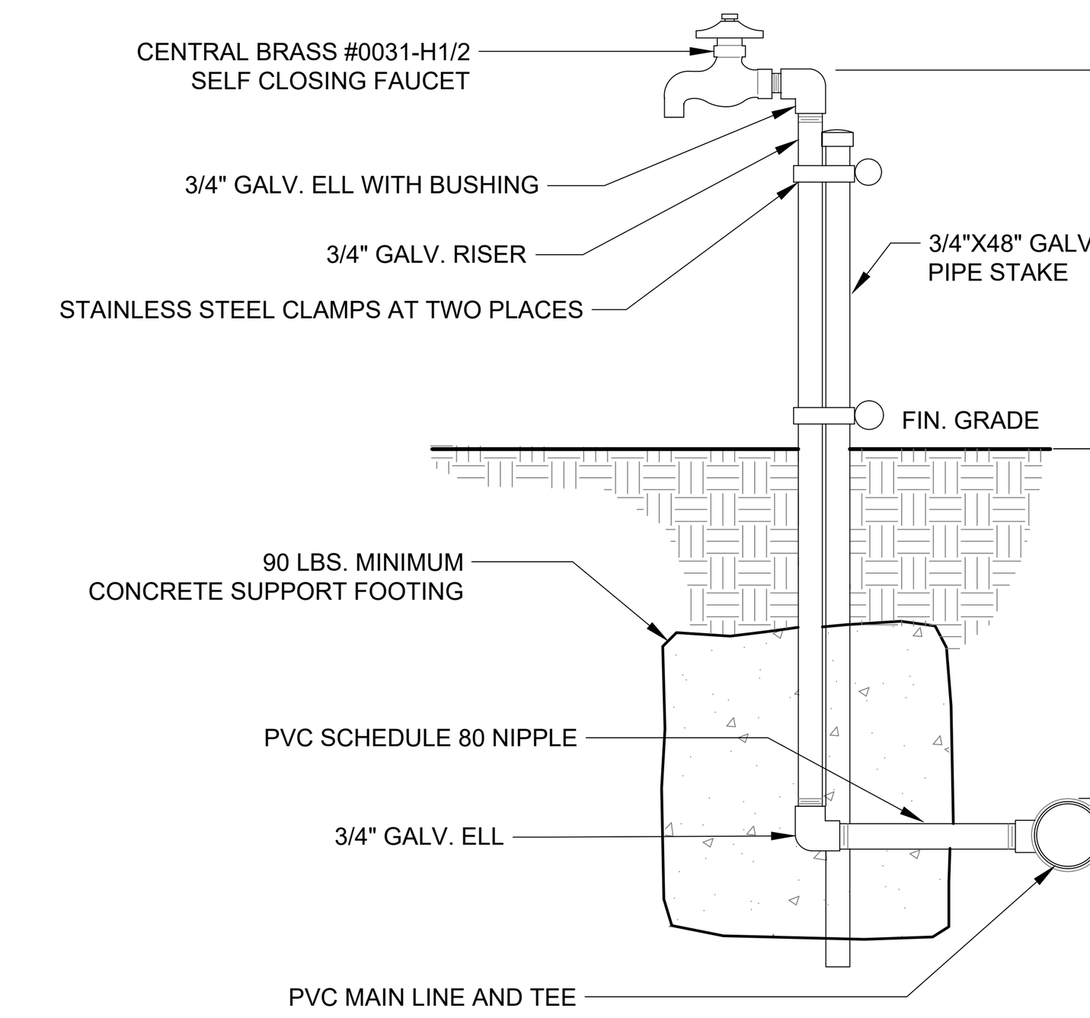


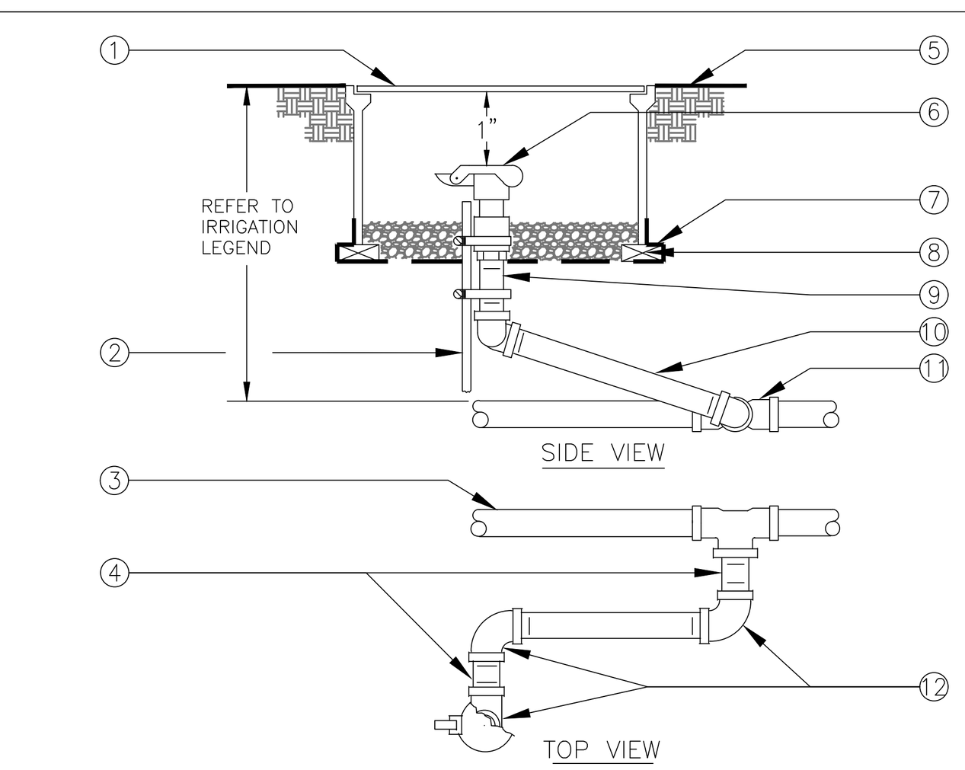
10 PROS-00-PRS30 MP ROTATOR SPRINKLER

3" = 1'-0" P-SU-IRR-66



9 SELF CLOSING FAUCET

1 1/2" = 1'-0" P-SU-IRR-04

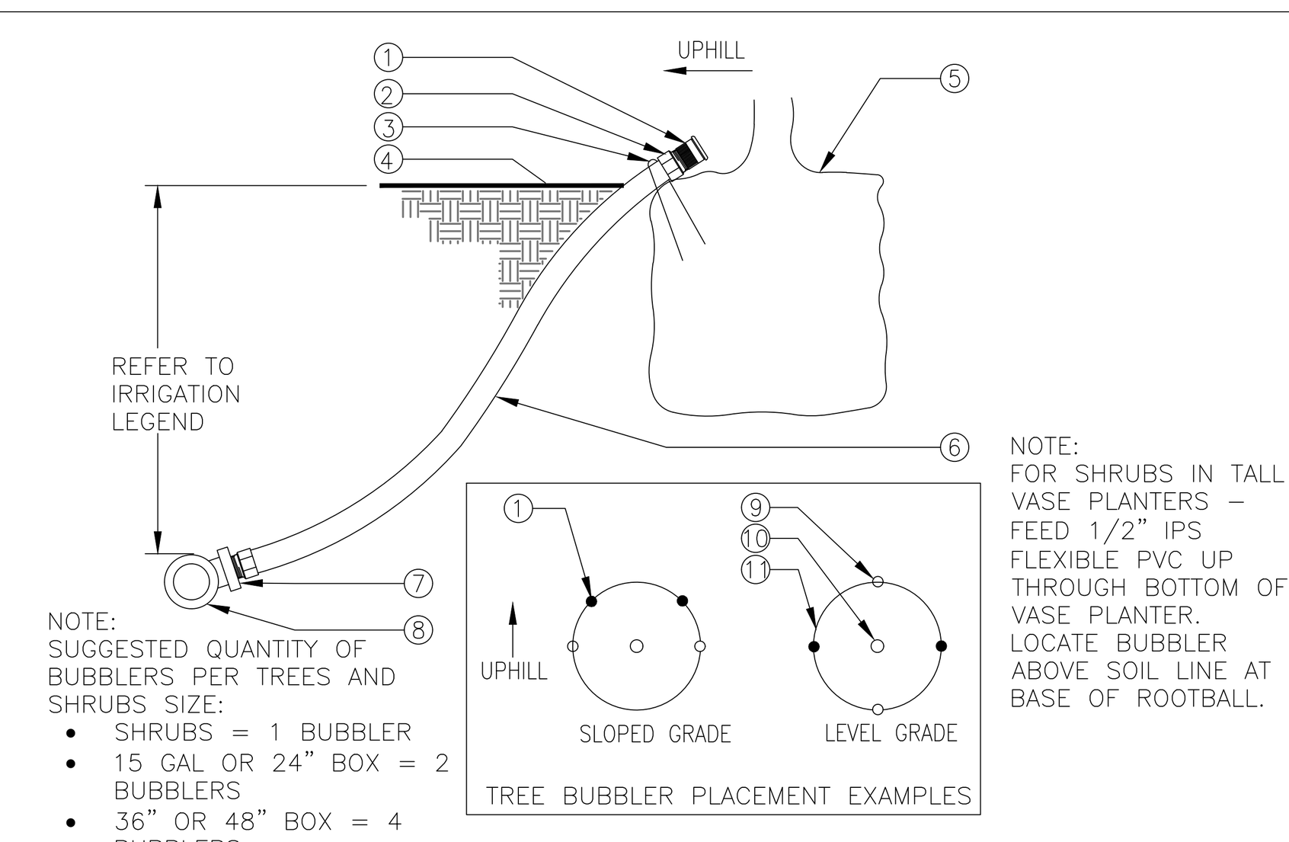


1. 10" ROUND PURPLE PLASTIC VALVE BOX WITH BOLT DOWN LID.
2. 1 1/4" x 1 1/4" x 3/16" ANGLE IRON 30" LONG W/2 STAINLESS STEEL STRAPS (ONE AROUND QCV).
3. PVC MAIN LINE.
4. 3" LONG SCHEDULE 80 PVC THREADED NIPPLE.
5. FINISH GRADE.
6. QUICK COUPLING VALVE WITH PURPLE COLORED LID.
7. 19 GAUGE 1/2" SQUARE WIRE MESH.
8. BRICK – 2 TOTAL.
9. SCHEDULE 80 PVC THREADED NIPPLE.
10. 10" LONG SCHEDULE 80 PVC THREADED NIPPLE.
11. UPC APPROVED SCHEDULE 40 PVC TEE OR ELBOW.
12. SCHEDULE 80 PVC THREADED 90° ELL.

NOTE:
NIPPLES AND FITTINGS TO BE SAME SIZE AS VALVE IPT INLET THREAD SIZE.

8 QUICK COUPLING VALVE

1" = 1'-0" P-SU-IRR-29



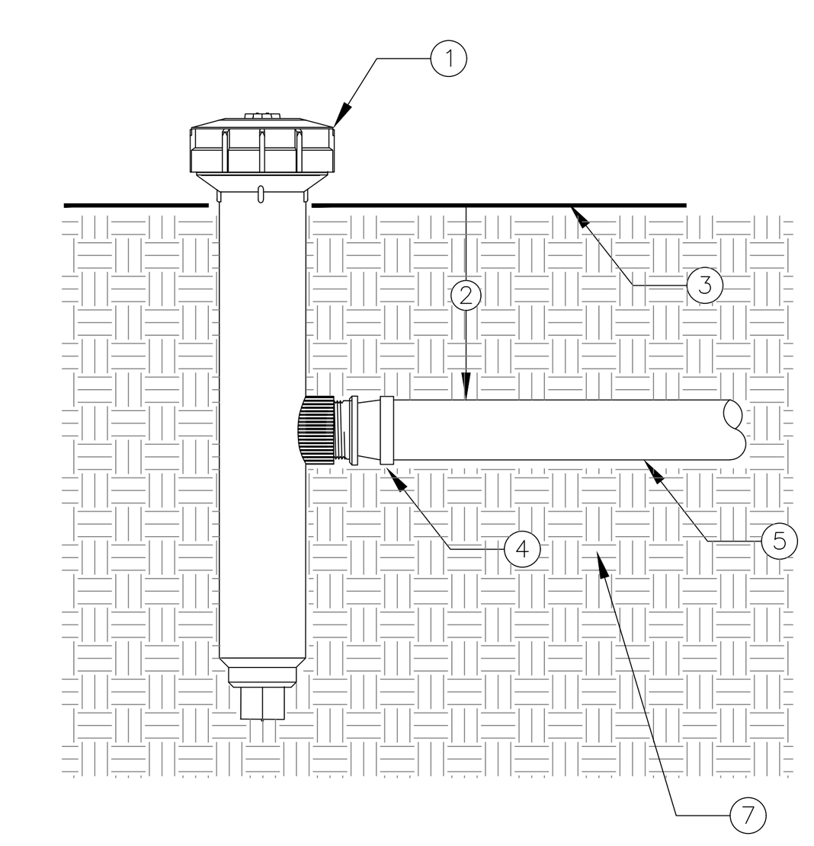
NOTE:
FOR SHRUBS IN TALL VASE PLANTERS – FEED 1/2" IPS FLEXIBLE PVC UP THROUGH BOTTOM OF VASE PLANTER. LOCATE BUBBLER ABOVE SOIL LINE AT BASE OF ROOTBALL.

NOTE:
SUGGESTED QUANTITY OF BUBBLERS PER TREES AND SHRUBS SIZE:
- SHRUBS = 1 BUBBLER
- 15 GAL OR 24" BOX = 2 BUBBLERS
- 36" OR 48" BOX = 4 BUBBLERS

1. BUBBLER (TO BE INSTALLED ON TOP OF ROOTBALL).
2. 1/2" SCH. 40 MALE ADAPTER.
3. 6" STAPLE.
4. FINISH GRADE.
5. TREE OR SHRUB ROOTBALL.
6. 1/2" IPS FLEXIBLE PVC.
7. PVC TEE (SST), ELBOW (ST) OR FEMALE ADAPTER.
8. PURPLE PVC LATERAL LINE.
9. TREE STAKES.
10. TREE OR SHRUB.
11. EDGE OF ROOTBALL (TYPICAL).

7 TREE OR SHRUB BUBBLER

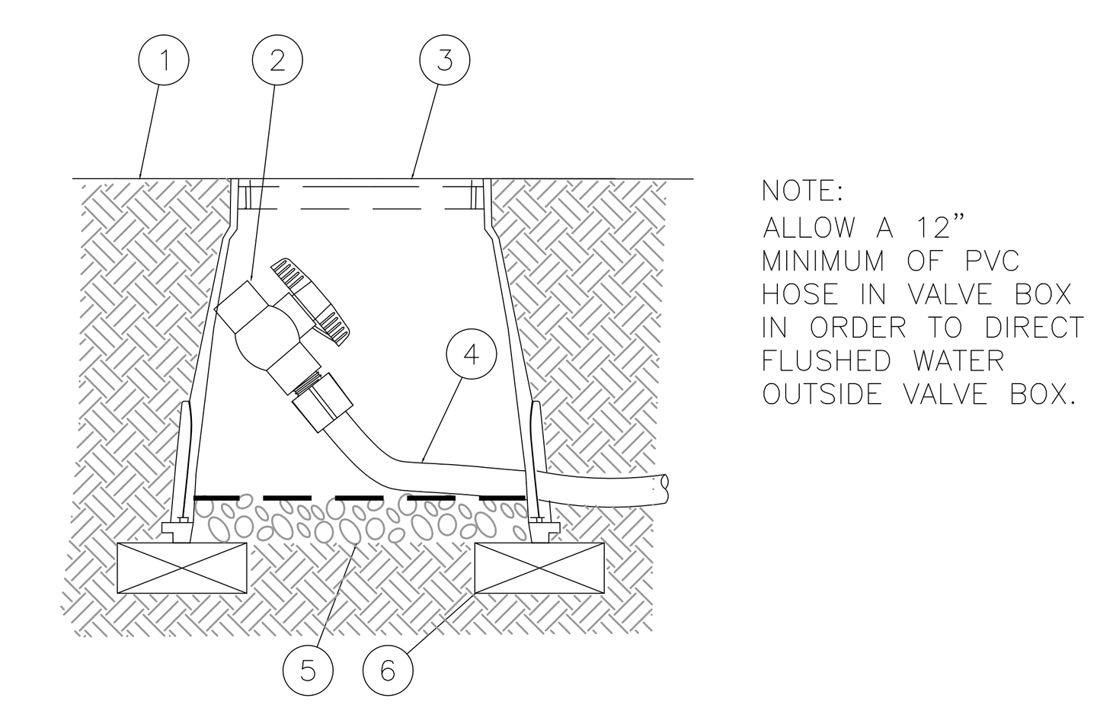
NOT TO SCALE P-SU-IRR-77



1. DRIPLINE INDICATOR. USE A MINIMUM OF ONE PER ZONE AND LOCATED AT END OF ZONE.
2. DEPTH OF DRIPLINE. REFER TO IRRIGATION LEGEND.
3. FINISH GRADE.
4. TRI–LOC X 1/2" MPT ADAPTER
5. DRIPLINE.
6. SOIL BACKFILL.

6 DRIPLINE OPERATION INDICATOR

1" = 1'-0" P-SU-IRR-22

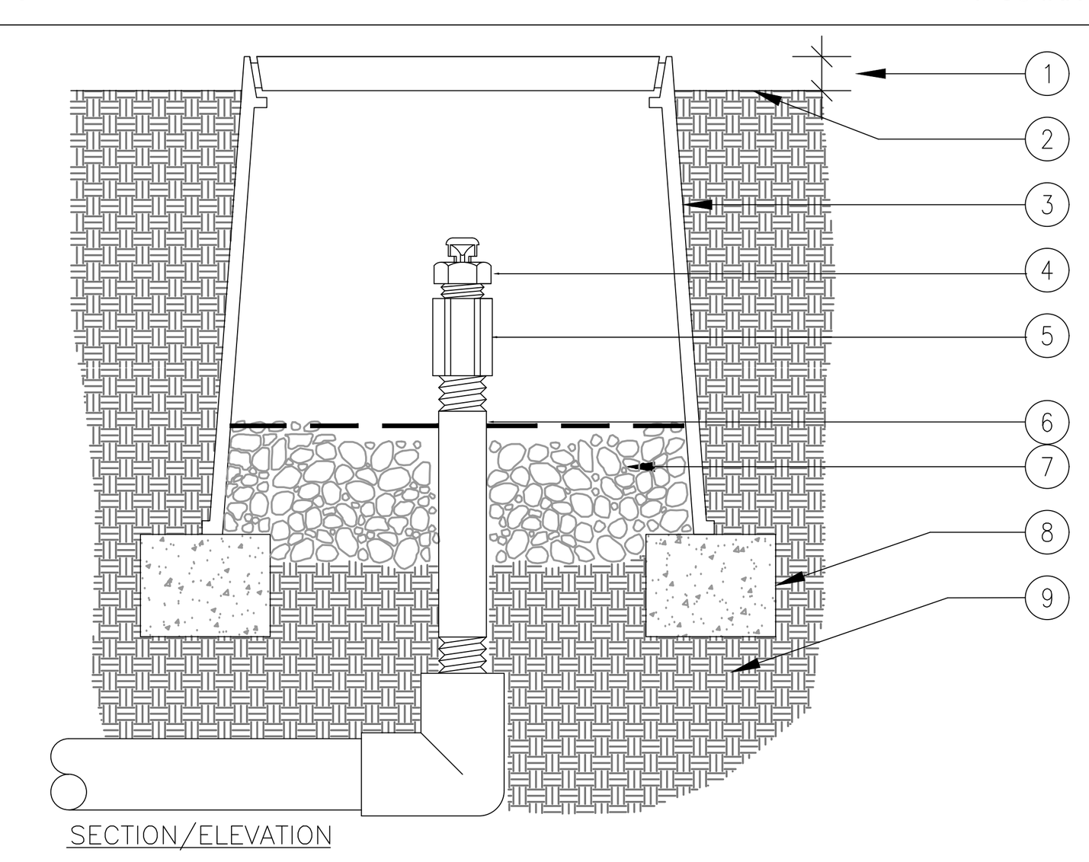


NOTE:
ALLOW A 12" MINIMUM OF PVC HOSE IN VALVE BOX IN ORDER TO DIRECT FLUSHED WATER OUTSIDE VALVE BOX.

1. FINISH GRADE
2. HUNTER PLD–BV 17MM BARB X BARB SHUT OFF VALVE
3. 6" ROUND PLASTIC VALVE BOX.
4. BLANK DRIP TUBING.
5. PEA GRAVEL SUMP (6" DEEP).
6. BRICK (1 OF 2)

5 MANUAL FLUSH VALVE

NTS P-SU-IRR-15

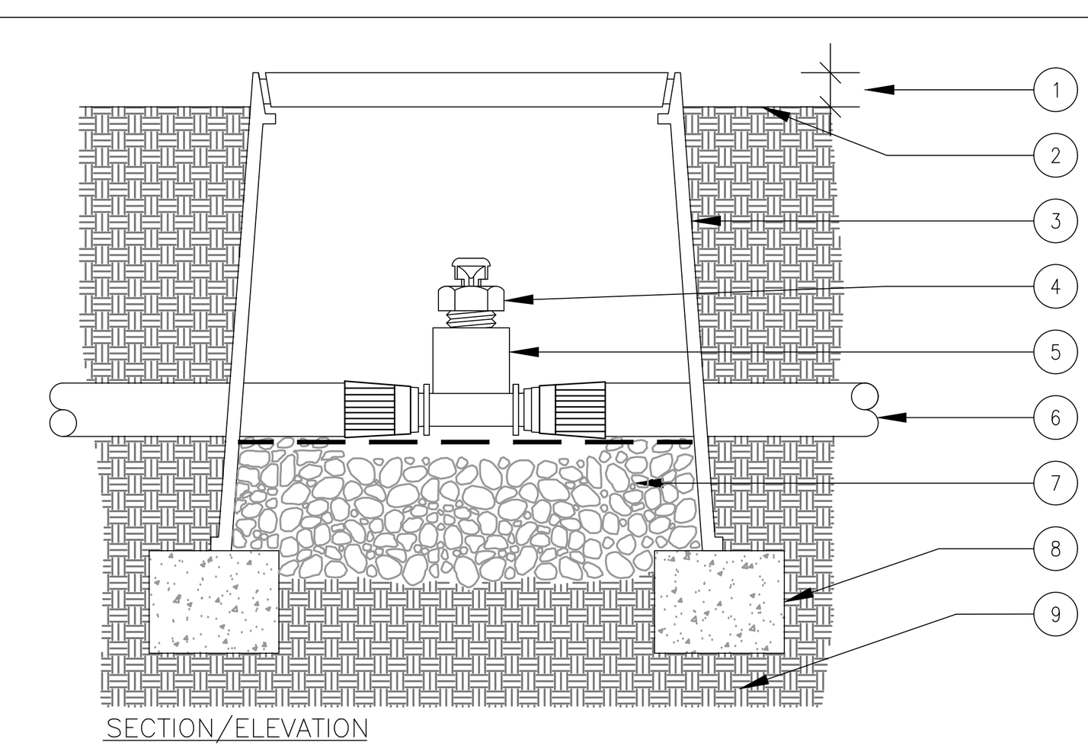


1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. 6" ROUND PLASTIC VALVE BOX. HEAT BRAND "AR" ON LID IN 1" HIGH CHARACTERS.
4. HUNTER PLD–AVR.
5. 1/2" SCH 40 PVC COUPLING (TxT)
6. 1/2" SCH 80 PVC NIPPLE (LENGTH AS REQUIRED).
7. PEA GRAVEL (4" DEEP).
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.

NOTE:
USE ONE AIR/RELIEF VALVE FOR EVERY 7 GPM PER ZONE. LOCATE AT HIGH POINTS.

4 AIR RELIEF VALVE ON PVC ELL

1 1/2" = 1'-0" P-SU-IRR-78

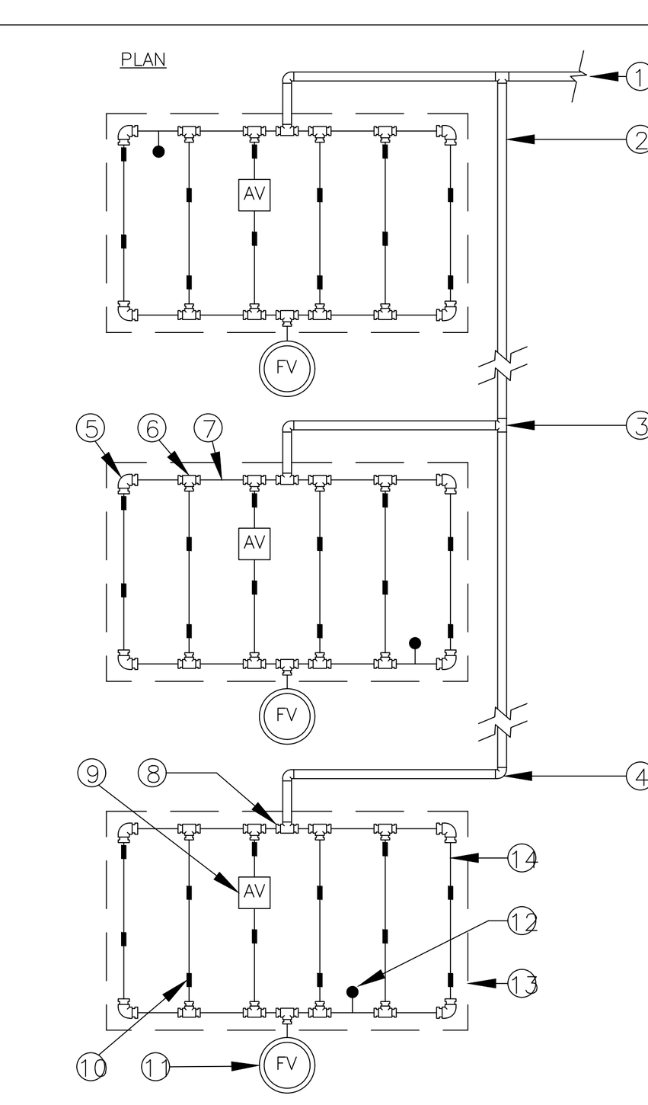


1. 1" ABOVE FINISH GRADE.
2. FINISH GRADE.
3. 6" ROUND PLASTIC VALVE BOX. HEAT BRAND "AR" ON LID IN 1" HIGH CHARACTERS.
4. HUNTER PLD–AVR.
5. TRI–LOC TEE X 1/2" FPT ADAPTER (TL–T–F50)
6. TUBING/AIR–RELIEF LATERAL.
7. PEA GRAVEL (4" DEEP).
8. BRICK SUPPORTS (2 COMMON BRICKS REQUIRED).
9. NATIVE SOIL PER SPECIFICATIONS.

NOTE:
USE ONE AIR/RELIEF VALVE FOR EVERY 7 GPM PER ZONE. LOCATE AT HIGH POINTS.

3 AIR RELIEF VALVE IN DRIPLINE TUBING

1 1/2" = 1'-0" P-SU-IRR-07

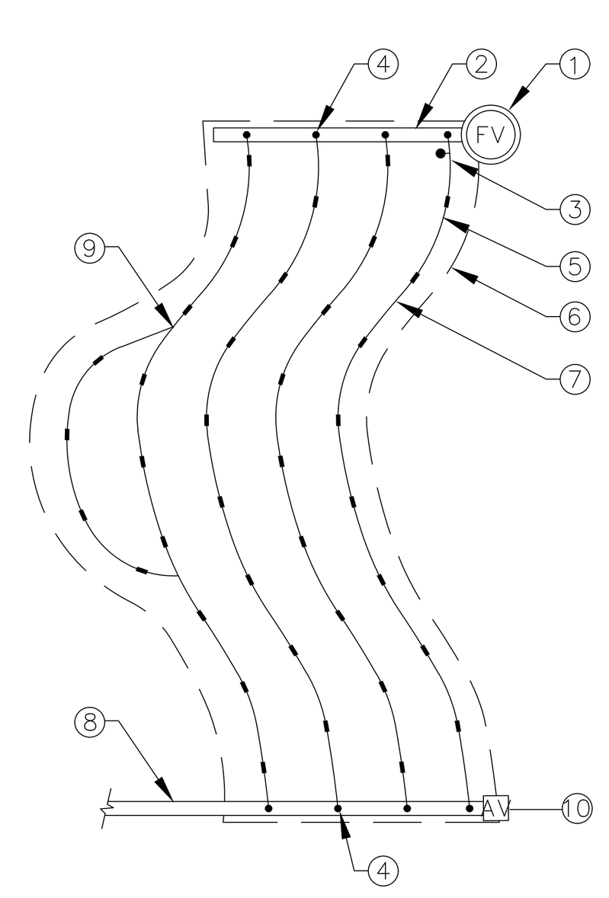


1. PVC LATERAL LINE FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. PVC TEE.
4. PVC ELL.
5. TRI–LOC ELL.
6. TRI–LOC TEE.
7. BLANK 5/8" POLY TUBING AT SUPPLY AND FLUSH END OF EACH ISLAND.
8. REFER TO DRIPLINE TO PVC CONNECTION DETAIL.
9. AIR/VACUUM RELIEF VALVE PLUMBED TO TUBING AT HIGH POINT.
10. DRIPLINE LATERAL.
11. MANUAL FLUSH VALVE PLUMBED TO TUBING AT LOW POINT.
12. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
13. ISLAND PERIMETER.
14. PERIMETER LATERALS 2" TO 4" FROM EDGE.

NOTE:
1. THE TOTAL LENGTH OF A SINGLE DRIP LINE RUN SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

2 DRIPLINE ISLAND LAYOUT

1" = 1'-0" P-SU-IRR-13



1. FLUSH VALVE PLUMBED TO FLUSH MANIFOLD AT LOW POINT
2. PVC FLUSH MANIFOLD. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
3. DRIPLINE OPERATION INDICATOR LOCATED AT THE ENDS OF EACH DRIPLINE ZONE.
4. MANIFOLD–TO–ELBOW CONNECTION.
5. DRIPLINE LATERAL.
6. AREA PERIMETER.
7. PERIMETER LATERALS 2" TO 4" FROM EDGE.
8. PVC SUPPLY LINE/HEADER FROM VALVE. MINIMUM SIZE TO BE 1" UNLESS OTHERWISE NOTED.
9. TRI–LOC TEE
10. AIR/VACUUM RELIEF VALVE PLUMBED TO SUPPLY MANIFOLD AT HIGH POINT.

NOTE:
1. THE TOTAL LENGTH OF ALL INTERCONNECTED DRIP LINE OFF A SINGLE PVC SUPPLY LINE CONNECTION OR A SINGLE RUN OF DRIPLINE SHALL NOT EXCEED 300 FT.
2. INSTALL DRIPLINE 2–4" BELOW GRADE AND STAKE DOWN EVERY 4' OR AS REQUIRED.

1 DRIPLINE ODD CURVE LAYOUT

NTS P-SU-IRR-16

Issue Date: April 22, 2024

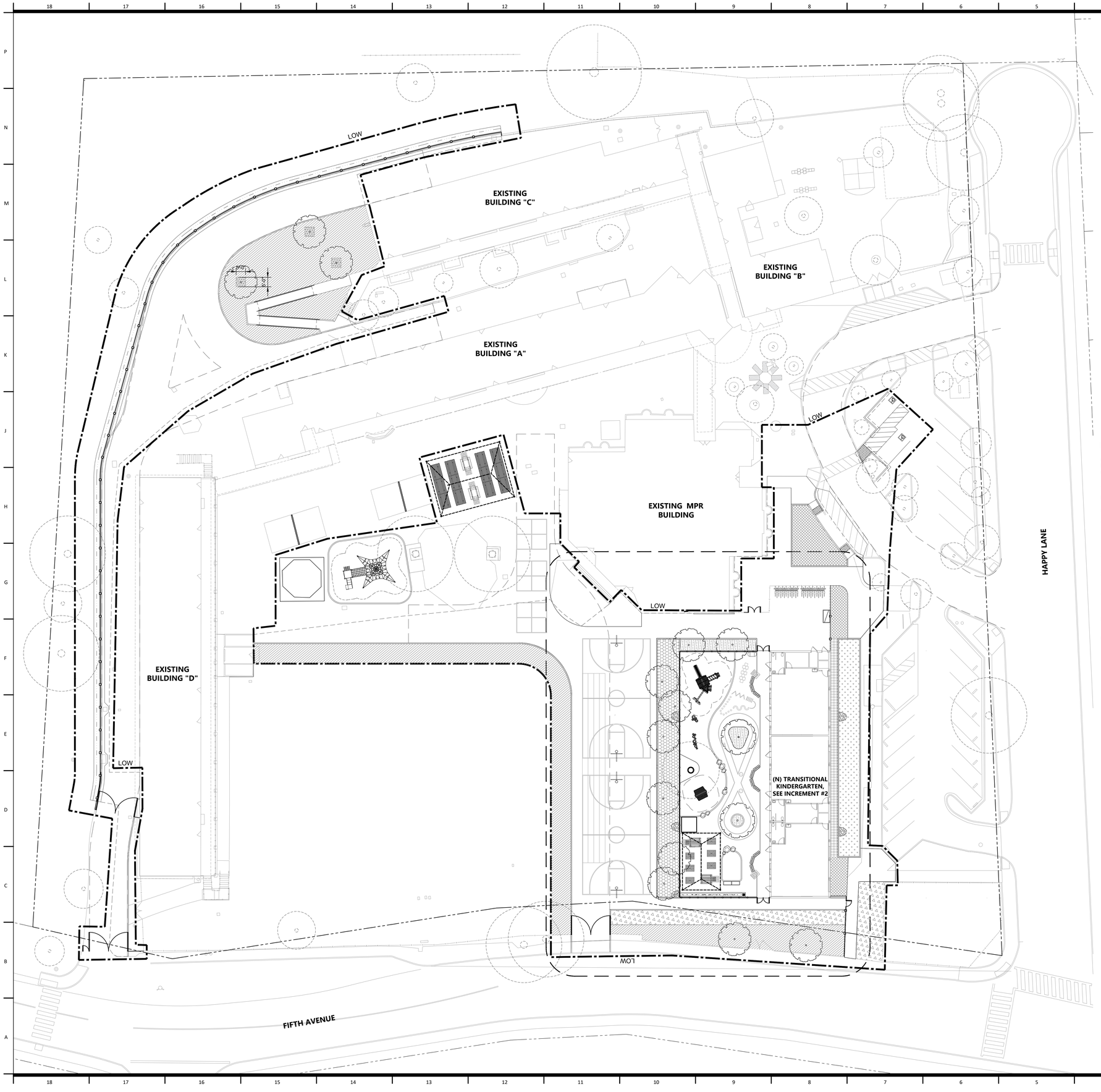
Revisions

NUMBER	DESCRIPTION	DATE

IRRIGATION DETAILS

L5.04

DSA BACKCHECK



SOIL TYPE AND DEPTH LEGEND

AMENDED SITE SOIL	EXISTING SITE SOIL WITH ORGANIC COMPOST AMENDMENT, 6" DEEP. AMENDMENTS TO BE HAND INCORPORATED IN ROOT ZONES OF EXISTING TREES AND ROOTS ARE NOT TO BE DISTURBED 3" DEEP GREEN WASTE MULCH TOP DRESSING
AMENDED SITE SOIL AT TREES	EXISTING SITE SOIL WITH ORGANIC COMPOST AMENDMENT, 30" DEEP 3" DEEP GREEN WASTE MULCH TOP DRESSING
IMPORTED PLANTING SOIL	SANDY LOAM OR LOAMY SAND IMPORTED PLANTING SOIL, 9" DEEP LOOSEN COMPACTED SOIL TO 12" DEPTH 3" DEEP GREEN WASTE MULCH DRESSING
IMPORTED PLANTING SOIL AT TREES	SANDY LOAM OR LOAMY SAND IMPORTED PLANTING SOIL, 30" DEEP 3" DEEP GREEN WASTE MULCH DRESSING
BIORETENTION SOIL MIX	FAST-DRAINING BIORETENTION SOIL MIX, 18" DEEP DISSIPATION COBBLES 3" MINERAL MULCH
BIORETENTION SOIL MIX AT TREES	FAST-DRAINING BIORETENTION SOIL MIX, 30" DEEP DISSIPATION COBBLES 3" DEEP MINERAL MULCH
BARK MULCH TOP DRESSING	BARK MULCH, 3" DEPTH
MINERAL MULCH	3" DEPTH
DISSIPATION COBBLES	

NOTES

CONTRACTOR IS RESPONSIBLE TO PROVIDE PROFESSIONAL SOIL TESTING REPORT FOR HORTICULTURAL SUITABILITY FOR ALL SOILS AMENDED AND IMPORTED TO THE SITE, AND FOR ORGANIC COMPOST.

APPROVED, SUITABLE SITE TOPSOIL CAN BE STOCKPILED AND USED FOR NEW PLANTING.

EXISTING SITE SOIL SHALL BE COLLECTED AND TESTED PER THE DESCRIBED METHODOLOGY:

SOIL SAMPLING METHODOLOGY:

1. COLLECT SOIL SAMPLES FROM EACH LOCATION SHOWN ON PLAN, THE AREA IS TO BE UNIFORM IN COLOR, TEXTURE, DEPTH, AND DRAINAGE WITH THE SAME FERTILIZING PROGRAM AND TYPE OF USE. TEST INDIVIDUALLY AREAS FOR TREES, PERENNIALS, AND CUT AND FILL AREAS. AN AREA CONTAINING MULTIPLE TREES AND SHRUBS CAN BE GROUPED INTO ONE AREA IF THE PLANT APPEARANCE IS THE SAME.
2. TAKE THREE TO FIVE SAMPLINGS FROM ANY ONE OF THE LOCATIONS NOTED AND COMBINE THEM FOR SUBMITTAL TO SOIL TESTING LAB. DO NOT SAMPLE UNUSUAL AREAS SUCH AS BURNED SPOTS OR EXTRA LUSH GROWTH. REMOVE SURFACE LITTER.
3. TAKE SAMPLES FROM THE SURFACE EXTENDING AS DEEP AS THE SOIL WILL BE AMENDED, REFER TO LEGEND, AND AT LEAST TO 3' DEEP IN TREE PLANTING AREAS. DO NOT DISTURB ROOTS OF EXISTING TREES.
4. USE A SOIL PROBE OR SOIL AUGER TO REMOVE A CORE SAMPLE. OTHERWISE USE A SHOVEL TO DIG A HOLE TO THE DESIRED DEPTH. SAMPLE THE SOIL FROM THE SIDE OF THE HOLE BY SCRAPING IT WITH A TROWEL. USE ONLY CLEAN TOOLS WITHOUT RUST. AVOID SAMPLING WHEN SOIL IS TOO WET.
5. PLACE SOIL FROM THE VARIOUS HOLES TAKEN FROM EACH SAMPLED AREA INTO A CLEAN PLASTIC BUCKET. MIX TOGETHER HOMOGENEOUSLY. PLACE TWO TO THREE CUPS OF THE COMPOSITE SAMPLE INTO A LOCK PLASTIC BAG, FOR FIVE BAGS TOTAL.
6. REMOVE EXCESS AIR FROM THE BAG, ZIP LOCK IT, FOLD IT A FEW TIMES, SECURE WITH A RUBBER BAND AND PLACE IT IN A SUITABLE MAILER. ASSIGN EACH BAG A LABEL AND SEND THE SAMPLES TO SOIL TESTING LAB BY MAIL, UPS OR OVERNIGHT CARRIER ALONG WITH A BRIEF DESCRIPTION OF THE SAMPLE AND FUTURE USE OF THE AREA. PROVIDE NAME, PHONE NUMBER, ADDRESS AND EMAIL ADDRESS. SEE SPECIFICATIONS FOR A LIST OF APPROVED SOIL TESTING LABS.

0 20 40 60 80 feet
1" = 20'

NORTH

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Revisions

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LICENSED LANDSCAPE ARCHITECT
MONICA RAMIREZ
SIGNATURE
7/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

SOIL PLAN

L6.01

DSA BACKCHECK

PLANT SCHEDULE

SYMBOL	CODE	BOTANICAL / COMMON NAME	SIZE	SPACING	QTY
TREES					
	AES CAL	AESCULUS CALIFORNICA / CALIFORNIA BUCKEYE	48"BOX		1
	NYS SYL	NYSSA SYLVATICA / TUPELO	36"BOX		8
	PLA RAC	PLATANUS RACEMOSA / CALIFORNIA SYCAMORE	36"BOX		2
	QUE AGR	QUERCUS AGRIFOLIA / COAST LIVE OAK	36"BOX		1
	QUE AGR	QUERCUS AGRIFOLIA / COAST LIVE OAK	48"BOX		1
	QUE HYP	QUERCUS HYPOLEUCOIDES / SILVERLEAF OAK	24" BOX		1
	QUE HYP	QUERCUS HYPOLEUCOIDES / SILVERLEAF OAK	36"BOX		1
SHRUBS					
	ARC SEN	ARCTOSTAPHYLOS DENSIFLORA `SENTINEL` / SENTINEL VINE HILL MANZANITA	5 GAL		6
	CEA HOR	CEANOTHUS GRISEUS HORIZONTALIS / CARMEL CREEPER	5 GAL		25
	CEA DAR	CEANOTHUS X 'DARK STAR' / DARK STAR WILD LILAC	5 GAL		14
	COT GRA	COTINUS X 'GRACE' / GRACE SMOKE TREE	5GAL		29
	MYR CAL	MYRICA CALIFORNICA / PACIFIC WAX MYRTLE	15 GAL		5
PERENNIALS					
	ACH MIL	ACHILLEA MILLEFOLIUM / COMMON YARROW	1 GAL		43
	GAU LIN	GAURA LINDHEIMERI / GAURA	1 GAL		91
	SYM CHI	SYMPHYOTRICHUM CHILENSE / PACIFIC ASTER	1 GAL		56
SYMBOL	**CODE**	**BOTANICAL / COMMON NAME**	**SIZE**	**SPACING**	**QTY**
GROUND COVERS					
	MEA 2ED	MEADOW MIX HYDROSEED	SEED		8,841 SF
	TUR BOL	TURF SOD BOLERO PLUS / FESCUE BLEND	SOD		3,132 SF
GRASSES					
	ELY CA3	ELYMUS CONDENSATUS 'CANYON PRINCE' / CANYON PRINCE WILD RYE	1 GAL	30" o.c.	71
	PEN SPA	PENNISETUM SPATHIOLATUM / SLENDER VELDT GRASS	1 GAL	30" o.c.	556

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Cumming
475 Sansome St. #700
San Francisco, CA 94111
856.776.3897
www.ccorpusa.com

Issue Date: April 22, 2024

Revisions

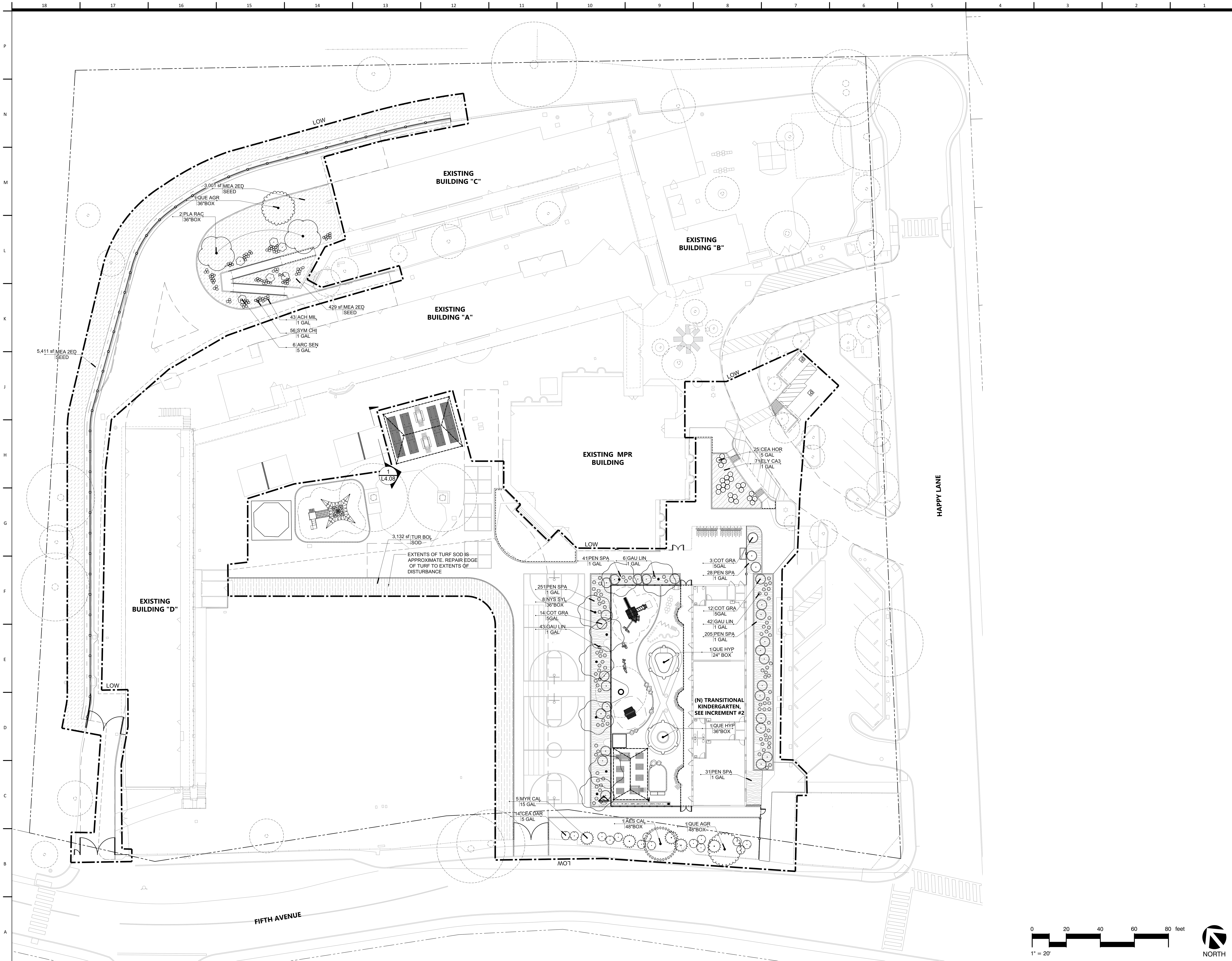
NUMBER	DESCRIPTION	DATE

UNLESS A PROFESSIONAL SEAL WITH SIGNATURE AND DATE IS AFFIXED, THIS DOCUMENT IS PRELIMINARY AND IS NOT INTENDED FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

PLANTING SCHEDULE

L7.00

DSA BACKCHECK



IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

Sun Valley Elementary School

75 Happy Lane
San Rafael, CA 94901

DSA Application: 01-121319
Project Number: 1123-0020

owner:
San Rafael City Schools
310 Nova Albion Way
San Rafael, CA 94903
415.492.3285
https://www.srcs.org/

architect:
Multistudio
156 South Park
San Francisco, CA 94107
415.844.2110
www.multi.studio

modular fabricator:
JL Modular, Inc.
70 Stony Point Road, Suite D
Santa Rosa, CA 95401
707.527.5788
www.jlcbuild.com

civil engineer:
BKF Engineers
255 Shoreline Dr. #200
Redwood City, CA 94065
650.482.6300
www.bkf.com

structural engineer:
Thornton Tomasetti
235 Montgomery St, #1050
San Francisco, CA 94104
415.365.6900
www.ThorntonTomasetti.com

electrical engineer::
The Engineering Enterprise
1305 Marina Village Prkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
475 Sansome St. #700
San Francisco, CA 94111
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Issue Date: April 22, 2024

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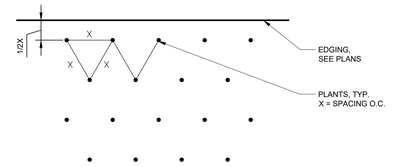
LICENSED LANDSCAPE ARCHITECT
PATRICIA ALGARA LIC. #6691
SIGNATURE
3/31/25
RENEWAL DATE
11/22/23
DATE
STATE OF CALIFORNIA

PLANTING PLAN

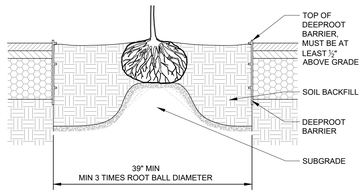
L7.01

DSA BACKCHECK

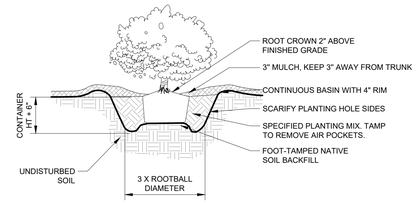
NOTE:
PLANTS TO BE SPACED IN TRIANGULAR PATTERN UNLESS OTHERWISE SHOWN ON PLANS



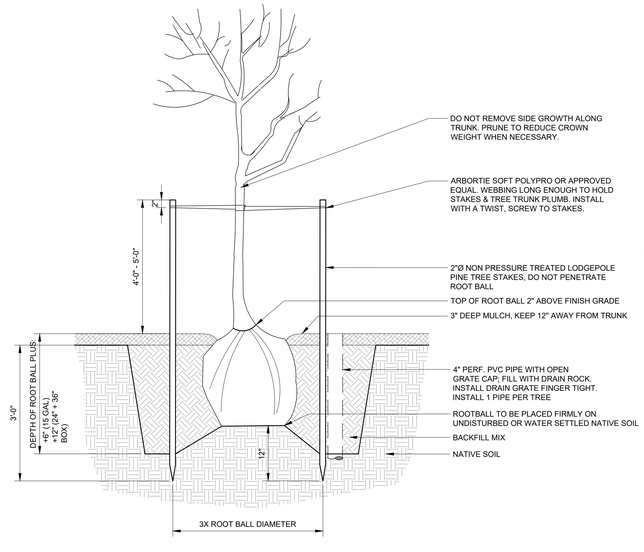
3 GROUNDCOVER SPACING
NTS



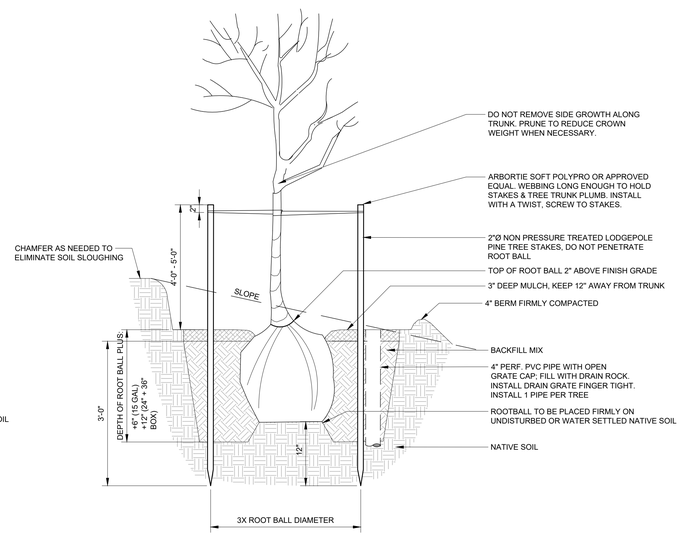
4 ROOT BARRIER
1" = 1'-0" P-SU-PLA-05



2 SHRUB PLANTING
NTS



LEVEL SURFACE ELEVATION VIEW



SLOPE SURFACE ELEVATION VIEW

NOTE:
1. BUILD SOIL BERM MIN. 4" HIGH AND 3' FROM TREE TUNK IN PLANTER STRIP. PROVIDE LOAM TOPSOIL NEEDED TO FORM BERM AND FILL HOLES.
2. SOIL, CONCRETE, AND OTHER MATERIALS SPILLED ON HARDSCAPE AND PLANTING AREA SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR.
3. IF TREE PLANTING IS DELAYED AFTER TREE WELLS ARE CONSTRUCTED, HOLES WILL BE FILLED IN WITH SOIL UNTIL TREES ARE AVAILABLE.
4. TREE PLANTING PIT DRAINAGE TEST TO BE: AUGER HOLE 18" DEEP 6" DIA., FILL WITH WATER, LET DRAIN, FILL WITH WATER AGAIN AND HAVE LASD ARBORIST ON SITE TO REVIEW DRAINAGE AND MAKE NECESSARY RECOMMENDATIONS AT THAT TIME.

1 TREE PLANTING
NTS

multistudio
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modular fabricator:
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civil engineer:
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structural engineer:
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235 Montgomery St, #1050
san Francisco, CA 94104
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electrical engineer::
The Engineering Enterprise
1305 Marina Village Pkw
Alameda, CA 94501
510.769.7600
www.engent.com

landscape architect:
BASE Landscape Architecture
145A Lower Terrace
San Francisco, CA 94114
415.509.3728
www.baselandscape.com

cost estimator:
Cumming
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Issue Date: April 22, 2024

Revisions

NUMBER	DESCRIPTION	DATE

PLANTING DETAILS

L7.02

DSA BACKCHECK

USASHADE
& Fabric Structures, Inc.

FABRIC SHADE STRUCTURE

DSA P.C. 04-121917

GENERAL NOTES:

1. ALL WORK SHALL CONFORM TO THE 2022 EDITION OF THE TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
2. ALL WORK SHALL BE IN COMPLIANCE WITH CFC CHAPTER 33 - FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION.
3. SEE INDIVIDUAL STRUCTURAL DRAWINGS FOR SPECIFIC DESIGN NOTES AND LOADING.
4. PRIOR TO SUBMITTAL ARCHITECT OF RECORD SHALL IDENTIFY PC MODEL(S) SELECTED BY END USER ON SHEETS T-1.0 AND T-2.0 BY CHECKING THE APPROPRIATE BOX ASSOCIATED WITH SELECTED PC MODEL(S). EXCLUDE SHEETS FOR MODELS NOT SELECTED.

PLANS FOR SPECIFIC APPLICATION SHALL INCLUDE THE FOLLOWING:

1. COMPLETE SCOPE OF WORK INCLUDING THE SHADE STRUCTURE MODEL NUMBER, P.C. NUMBER, AND SPECIFIC SIZE OF THE SHADE STRUCTURE(S).
2. PROVIDE A CODE ANALYSIS, INCLUDING ACTUAL SHADE STRUCTURE AREA (SQ. FT.), OCCUPANCY TYPE (A-3), AND TYPE OF CONSTRUCTIONS (V-B). INDICATE OCCUPANT LOAD FACTOR (2022 CBC, SECTION 1004).
3. ACTUAL DIMENSIONS OF SHADE STRUCTURES.
4. DIMENSIONS FROM ADJACENT STRUCTURES AND PROXIMITY OF ASSUMED OR ACTUAL PROPERTY LINES.
5. INDICATE LOCATIONS OF FIRE EXTINGUISHERS WITHIN 75 FEET.
6. SHOW LOCATION OF AUDIBLE FIRE ALARM.
7. ALL SADDLES, CLAMPS AND FITTINGS SHALL CONFORM TO THE GUIDELINES AS SPECIFIED IN APPENDICES "A, B, & C", RESPECTIVELY, IN ASCE/SEI 19-16, "STRUCTURAL APPLICATIONS OF STEEL CABLES FOR BUILDINGS."
8. ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS LOCATED IN A MAPPED GEOLOGIC HAZARD ZONE. GEOHAZARD REPORTS REQUIREMENTS SHALL COMPLY WITH DSA IR A-4.
9. ARCHITECTS OF RECORD TO DETERMINE IF SPECIFIC SITE IS LOCATED IN A MAPPED FIRE HAZARD SEVERITY ZONE OR WILDLAND INTERFACE AREA.

FOR SNOW LOAD MODELS ONLY:

10. INDICATE DIMENSIONS FROM THE ROOF TO THE HIGHER STRUCTURE OR TERRAIN FEATURE. MINIMUM DIMENSION OF 20'-0" FOR SNOW LOAD MODEL (ASCE 7-16).
11. ACTUAL SITE ELEVATION (FEET) TO DETERMINE IF THE SITE OCCURS AT OR BELOW THE UPPER ELEVATION LIMIT FOR THE GROUND SNOW LOAD SHOWN IN ASCE 7-16.

P.C. NOTES

PLANS FOR SPECIFIC APPLICATION SHALL INCLUDE THE FOLLOWING:

LIST OF APPLICABLE CODES:

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.
- 2022 CALIFORNIA ELECTRICAL CODE (CEC) , PART 3, TITLE 24 C.C.R.
- 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.
- 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R.
- 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R.
- 2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 C.C.R.
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 C.C.R.
- 2022 CALIFORNIA REFERENCED STANDARDS CODE, PART 12, TITLE 24 C.C.R.
- TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

APPLICABLE STANDARDS:

FOR A LIST OF APPLICABLE STANDARDS, INCLUDING CALIFORNIA AMENDMENTS TO THE NFPA STANDARDS, REFER TO CBC CHAPTER 35 AND CFC CHAPTER 80.

APPLICABLE CODES

SITE SPECIFIC PARAMETERS	
INSTRUCTIONS: DESIGN PROFFESIONAL SHALL CHECK THE APPROPRIATE SELECTION BOXES BELOW AND ENTER THE DESIGN PARAMETERS APPLICABLE TO THE SPECIFIC PROJECT SITE	
SEISMIC	
SELECT ONE	☐ DESIGN BASED ON SITE CLASS $D_{default}$ NO GEOTECHNICAL INVESTIGATION REQUIRED Ss = _____ Fa = 1.2
	☐ DESIGN BASED ON SITE CLASS DETERMINED PER CHAPTER 20 OF ASCE 7-16 GEOTECHNICAL INVESTIGATION PROVIDED SITE CLASS: ☐ C ☐ D Ss = _____ Fa = _____ PER ASCE 7-16 SUPPL 3, TABLE 11.4-1
	☐ DESIGN BASED ON SITE CLASS SPECIFIC GROUND MOTION HAZARD ANALYSIS PER CHAPTER 21 OF ASCE 7-16 SHORT-PERIOD DESIGN SPECTRAL RESPONSE PARAMETER, S_{DS}, SHALL BE AS SPECIFIED IN GEOTECHNICAL INVESTIGATION CGS APPROVAL REQUIRED NOT ELIGIBLE FOR OTC REVIEW SITE CLASS: ☐ C ☐ D
	S_{DS} = 2/3 Fa Ss = _____ ≤ 2.0 Cs = 1.6 USED IN DESIGN SEISMIC DESIGN CATEGORY: ☐ D ☐ E

CODE ANALYSIS			
OCCUPANCY GROUP	OCCUPANT LOAD FACTOR	TOTAL OCCUPANT LOAD	SHADE STRUCTURE AREA (ft^2)

SITE SPECIFIC PARAMETERS

MANUFACTURER:

USA SHADE & FABRIC STRUCTURES
2580 ESTERS BOUVLEVARD, SUITE 100
DFW AIRPORT, TEXAS 75261
PH. 800-966-5005
W. www.usa-shade.com

ARCHITECT:

HIGGINSON ARCHITECTS, INC.
DAVID HIGGINSON, AIA, PRINCIPAL ARCHITECT
34247 YUCAIPA BOULEVARD, SUITE D
YUCAIPA, CALIFORNIA 92399
PH. 909-499-0058
E. dhigginson@higginsonarchitects.com
W. www.higginsonarchitects.com

LICENSED ARCHITECT · DAVID HIGGINSON · C19168 · 10-31-25 RENEWAL DATE · STATE OF CALIFORNIA

STRUCTURAL ENGINEER:

MARK LOWE, S.E.
c/o USA SHADE AND FABRIC STRUCTURES

REGISTERED PROFESSIONAL ENGINEER · MARK ALBERT LOWE · No. 3693 · STRUCTURAL · STATE OF CALIFORNIA

ARCHITECT / ENGINEER

✓	SHEET NO.	SHEET DESCRIPTION	UNIT STRUCTURE TYPE	MAX. UNIT SIZE	UNIT MODEL NUMBER
X	T-1.0	TITLE SHEET			
X	T-2.0	UNIT SELECTION			
X	T-3.0	T&I FORMS			
	1.1-1000	PRODUCT INFORMATION	HIP	20' x 30' x 15'	DSA4012030-22
	1.2-2000	REACTIONS	HIP	20' x 30' x 15'	DSA4012030-22
	2.1-1000	PRODUCT INFORMATION	HIP	30' x 30' x 15'	DSA4013030-22
	2.2-2000	REACTIONS	HIP	30' x 30' x 15'	DSA4013030-22
	3.1-1000	PRODUCT INFORMATION	HIP	30' x 40' x 15'	DSA4013040-22
	3.2-2000	REACTIONS	HIP	30' x 40' x 15'	DSA4013040-22
	4.1-1000	PRODUCT INFORMATION	HIP	40' x 40' x 15'	DSA4014040-22
	4.2-2000	REACTIONS	HIP	40' x 40' x 15'	DSA4014040-22
X	5.1-1000	PRODUCT INFORMATION	HIP	20' x 30' x 12'	DSA401203012-22
X	5.2-2000	REACTIONS	HIP	20' x 30' x 12'	DSA401203012-22
	6.1-1000	PRODUCT INFORMATION	HIP	30' x 30' x 12'	DSA401303012-22
	6.2-2000	REACTIONS	HIP	30' x 30' x 12'	DSA401303012-22
X	7.1-1000	PRODUCT INFORMATION	HIP	30' x 40' x 12'	DSA401304012-22
X	7.2-2000	REACTIONS	HIP	30' x 40' x 12'	DSA401304012-22
	8.1-1000	PRODUCT INFORMATION	HIP (20 psf SNOW LOAD)	20' x 30' x 15'	DSA401S2030-22
	8.2-2000	REACTIONS	HIP (20 psf SNOW LOAD)	20' x 30' x 15'	DSA401S2030-22
	9.1-1000	PRODUCT INFORMATION	JOINED HIPS	VARIES	DSA401J-22
	9.2-1001	DETAILS	JOINED HIPS	VARIES	DSA401J-22
	9.3-2000	REACTIONS	JOINED HIPS	VARIES	DSA401J-22
	10.1-1000	PRODUCT INFORMATION	QUAD JOINED HIPS	VARIES	DSA401Q-22
	10.2-1001	DETAILS	QUAD JOINED HIPS	VARIES	DSA401Q-22
	10.3-2000	REACTIONS	QUAD JOINED HIPS	VARIES	DSA401Q-22
	11.1-1000	PRODUCT INFORMATION	FULL CANTILEVER HIP SINGLE	20' x 30' x 15'	DSA2022030-22
	11.2-2000	REACTIONS	FULL CANTILEVER HIP SINGLE	20' x 30' x 15'	DSA2022030-22
	12.1-1000	PRODUCT INFORMATION	FULL CANTILEVER HIP JOINED	20' x 200' x 15'	DSA3022060-22
	12.2-2000	REACTIONS	FULL CANTILEVER HIP JOINED	20' x 200' x 15'	DSA3022060-22
	13.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID	14' x 14' x 12'	DSA1031414-22
	13.2-2000	REACTIONS	SINGLE POST PYRAMID	14' x 14' x 12'	DSA1031414-22
	14.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID	20' x 20' x 12'	DSA1032020-22
	14.2-2000	REACTIONS	SINGLE POST PYRAMID	20' x 20' x 12'	DSA1032020-22
	15.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID CANTILEVER	14' x 14' x 12'	DSA1241414-22
	15.2-2000	REACTIONS	SINGLE POST PYRAMID CANTILEVER	14' x 14' x 12'	DSA1241414-22
	16.1-1000	PRODUCT INFORMATION	SINGLE POST PYRAMID CANTILEVER	20' x 20' x 12'	DSA1242020-22
	16.2-2000	REACTIONS	SINGLE POST PYRAMID CANTILEVER	20' x 20' x 12'	DSA1242020-22
	17.1-1000	PRODUCT INFORMATION	MARINER PEAK	30' x 30' x 15'	DSA4073030-22
	17.2-2000	REACTIONS	MARINER PEAK	30' x 30' x 15'	DSA4073030-22
	18.1-1000	PRODUCT INFORMATION	MARINER PEAK	30' x 40' x 18'	DSA4073040-22
	18.2-2000	REACTIONS	MARINER PEAK	30' x 40' x 18'	DSA4073040-22
	19.1-1000	PRODUCT INFORMATION	MARINER PEAK JOINED	30' x 133' x 15'	DSA407J3060-22
	19.2-2000	REACTIONS	MARINER PEAK JOINED	30' x 133' x 15'	DSA407J3060-22
	20.1-1000	PRODUCT INFORMATION	MARINER PEAK QUAD	60' x 60' x 15'	DSA407Q6060-22
	20.2-2000	REACTIONS	MARINER PEAK QUAD	60' x 60' x 15'	DSA407Q6060-22
	21.1-1000	PRODUCT INFORMATION	TRI TRUSS HIP SINGLE WIDE	20' x 30' x 15'	DSA2062030-22
	21.2-2000	REACTIONS	TRI TRUSS HIP SINGLE WIDE	20' x 30' x 15'	DSA2062030-22
	22.1-1000	PRODUCT INFORMATION	TRI TRUSS HIP JOINED	20' x 200' x 15'	DSA3052060-22
	22.2-2000	REACTIONS	TRI TRUSS HIP JOINED	20' x 200' x 15'	DSA3052060-22
	23.1-1000	PRODUCT INFORMATION	TENSION SAILS THREE POINT	30' x 133' x 15'	DSA30730-22
	23.2-2000	REACTIONS	TENSION SAILS THREE POINT	30' x 133' x 15'	DSA30730-22
	24.1-1000	PRODUCT INFORMATION	TENSIONS SAILS FOUR POINT	20' x 200' x 15'	DSA4182020-22
	24.2-2000	REACTIONS	TENSIONS SAILS FOUR POINT	20' x 200' x 15'	DSA4182020-22
	25.1-1000	PRODUCT INFORMATION	TENSIONS SAILS FOUR POINT	30' x 133' x 15'	DSA4183030-22
	25.2-2000	REACTIONS	TENSIONS SAILS FOUR POINT	30' x 133' x 15'	DSA4183030-22
	26.1-1000	PRODUCT INFORMATION	TRIANGLE	25' x 25' x 15'	DSA30125-22
	26.2-2000	REACTIONS	TRIANGLE	25' x 25' x 15'	DSA30125-22
	27.1-1000	PRODUCT INFORMATION	TRIANGLE	40' x 40' x 15'	DSA30140-22
	27.2-2000	REACTIONS	TRIANGLE	40' x 40' x 15'	DSA30140-22
	28.1-1000	PRODUCT INFORMATION	HEXAGON	Ø40' X 15'	DSA60340-22
	28.2-2000	REACTIONS	HEXAGON	Ø40' X 15'	DSA60340-22
	29.1-1000	PRODUCT INFORMATION	HEXAGON	Ø60' X 15'	DSA60360-22
	29.2-2000	REACTIONS	HEXAGON	Ø60' X 15'	DSA60360-22

TOTAL SHEET COUNT: 63 SHEETS

SHEET INDEX

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

USASHADE & Fabric Structures®

CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑ CG ☐
DATE: 10/30/2023

STRUCTURE TYPE:

SCALE : VARIES

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

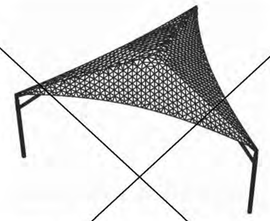
Eng. By :	DWH	2/14/23
Design By :	DWH	2/14/23
Approved By :	DWH	2/14/23

DRAWING DESCRIPTION:

DWG.
TITLE SHEET

SHEET
T-1.0

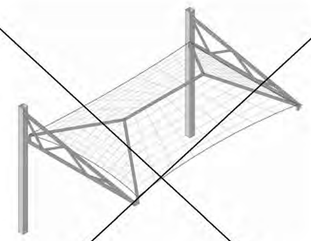
REV.



STRUCTURE MODEL:	DSA30125-22	SEE SHEET 26.1-1000
MAX. SIZE:	25' x 25' x 15'	
MAX. AREA:	271 SQ. FT.	
MAX. OCCUPANCY:	18 PERSONS	
STRUCTURE MODEL:	DSA30140-22	SEE SHEET 27.1-1000
MAX. SIZE:	40' x 40' x 15'	
MAX. AREA:	662 SQ. FT.	
MAX. OCCUPANCY:	46 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

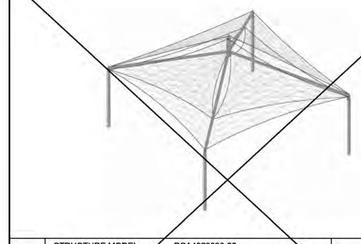
TRIANGLE



STRUCTURE MODEL:	DSA2062030-22	SEE SHEET 21.1-1000
MAX. SIZE:	20' x 30' x 15'	
MAX. AREA:	600 SQ. FT.	
MAX. OCCUPANCY:	40 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

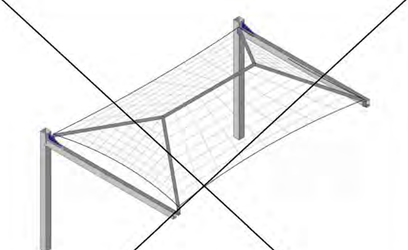
TRI-TRUSS HIP SINGLE WIDE



STRUCTURE MODEL:	DSA4073030-22	SEE SHEET 17.1-1000
MAX. SIZE:	30' x 30' x 15'	
MAX. AREA:	600 SQ. FT.	
MAX. OCCUPANCY:	40 PERSONS	
STRUCTURE MODEL:	DSA4073040-22	SEE SHEET 18.1-1000
MAX. SIZE:	30' x 40' x 15'	
MAX. AREA:	1,200 SQ. FT.	
MAX. OCCUPANCY:	80 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

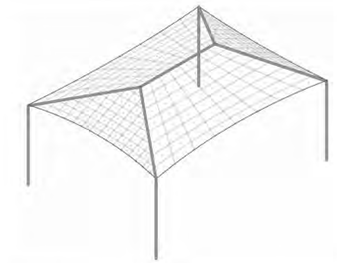
MARINER PEAK



STRUCTURE MODEL:	DSA2022030-22	SEE SHEET 11.1-1000
MAX. SIZE:	20' x 30' x 15'	
MAX. AREA:	600 SQ. FT.	
MAX. OCCUPANCY:	40 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

FULL CANTILEVER HIP SINGLE



	STRUCTURE MODEL:	DSA4012030-22	SEE SHEET 1.1-1000
	MAX. SIZE:	20' x 30' x 15'	
	MAX. AREA:	600 SQ. FT.	
	MAX. OCCUPANCY:	40 PERSONS	
	STRUCTURE MODEL:	DSA4013030-22	SEE SHEET 2.1-1000
	MAX. SIZE:	30' x 30' x 15'	
	MAX. AREA:	900 SQ. FT.	
	MAX. OCCUPANCY:	60 PERSONS	
	STRUCTURE MODEL:	DSA4013040-22	SEE SHEET 3.1-1000
	MAX. SIZE:	30' x 40' x 15'	
	MAX. AREA:	1,200 SQ. FT.	
	MAX. OCCUPANCY:	80 PERSONS	
X	STRUCTURE MODEL:	DSA401203012-22	SEE SHEET 5.1-1000
	MAX. SIZE:	20' x 30' x 12'	
	MAX. AREA:	600 SQ. FT.	
	MAX. OCCUPANCY:	40 PERSONS	
	STRUCTURE MODEL:	DSA401303012-22	SEE SHEET 6.1-1000
	MAX. SIZE:	30' x 30' x 12'	
	MAX. AREA:	900 SQ. FT.	
	MAX. OCCUPANCY:	60 PERSONS	
X	STRUCTURE MODEL:	DSA401304012-22	SEE SHEET 7.1-1000
	MAX. SIZE:	30' x 40' x 12'	
	MAX. AREA:	1,200 SQ. FT.	
	MAX. OCCUPANCY:	80 PERSONS	
	STRUCTURE MODEL:	DSA4014040-22	SEE SHEET 4.1-1000
	MAX. SIZE:	40' x 40' x 12'	
	MAX. AREA:	1,600 SQ. FT.	
	MAX. OCCUPANCY:	106 PERSONS	
	STRUCTURE MODEL:	DSA401S2030-22 (20 psf SNOW LOAD)	SEE SHEET 8.1-1000
	MAX. SIZE:	20' x 30' x 15'	
	MAX. AREA:	600 SQ. FT.	
	MAX. OCCUPANCY:	40 PERSONS	

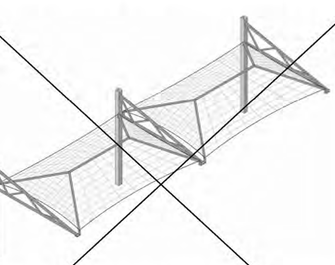
FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & ~~PC T-4.0~~

HIP

STRUCTURE MODEL:	DSA60340-22	SEE SHEET 28.1-1000
MAX. SIZE:	Ø40' x 15'	
MAX. AREA:	1,040 SQ. FT.	
MAX. OCCUPANCY:	69 PERSONS	
STRUCTURE MODEL:	DSA60360-22	SEE SHEET 29.1-1000
MAX. SIZE:	Ø60' x 15'	
MAX. AREA:	2,338 SQ. FT.	
MAX. OCCUPANCY:	156 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

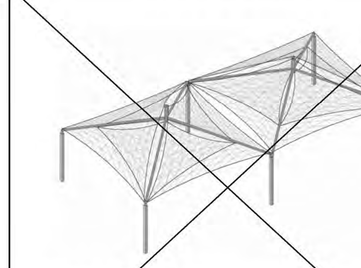
HEXAGON



STRUCTURE MODEL:	DSA3052060-22	SEE SHEET 22.1-1000
MAX. SIZE:	20' x 200' x 15'	
MAX. AREA:	4,000 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

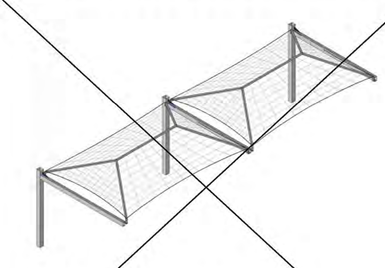
TRI-TRUSS HIP JOINED



STRUCTURE MODEL:	DSA407J3060-22	SEE SHEET 19.1-1000
MAX. SIZE:	30' x 133' x 15'	
MAX. AREA:	3,990 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

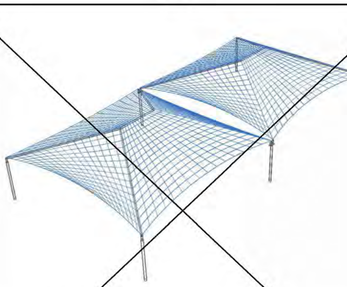
MARINER PEAK JOINED



STRUCTURE MODEL:	DSA3022060-22	SEE SHEET 12.1-1000
MAX. SIZE:	20' x 200' x 15'	
MAX. AREA:	4,000 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

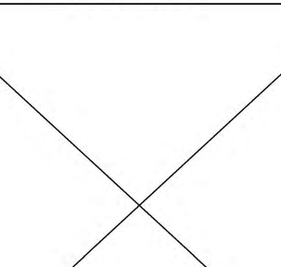
FULL CANTILEVER HIP JOINED



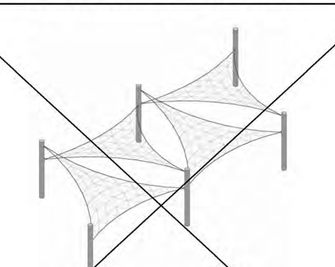
STRUCTURE MODEL:	DSA401J-22	SEE SHEET 9.1-1000
MAX. SIZE:	VARIES, SEE JOINED HIP UNIT SHEET	
MAX. AREA:	VARIES	
MAX. OCCUPANCY:	VARIES	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

JOINED HIP



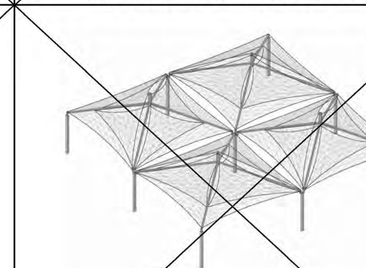
NOT USED



STRUCTURE MODEL:	DSA30730-22	SEE SHEET 23.1-1000
MAX. SIZE:	30' x 133' x 15'	
MAX. AREA:	3,990 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

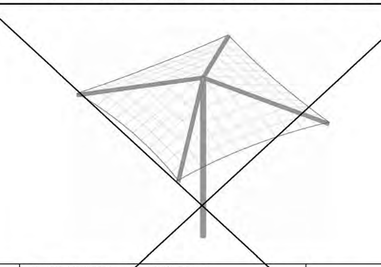
TENSIONS SAILS THREE-POINT



STRUCTURE MODEL:	DSA407Q6060-22	SEE SHEET 20.1-1000
MAX. SIZE:	60' x 60' x 15'	
MAX. AREA:	3,600 SQ. FT.	
MAX. OCCUPANCY:	240 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

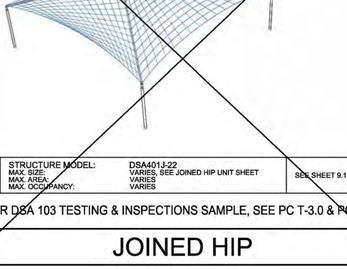
MARINER PEAK QUAD



STRUCTURE MODEL:	DSA1031414-22	SEE SHEET 13.1-1000
MAX. SIZE:	14' x 14' x 12'	
MAX. AREA:	196 SQ. FT.	
MAX. OCCUPANCY:	13 PERSONS	
STRUCTURE MODEL:	DSA1032020-22	SEE SHEET 14.1-1000
MAX. SIZE:	20' x 20' x 12'	
MAX. AREA:	400 SQ. FT.	
MAX. OCCUPANCY:	26 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

SINGLE POST PYRAMID



STRUCTURE MODEL:	DSA401Q-22	SEE SHEET 10.1-1000
MAX. SIZE:	VARIES, SEE QUAD HIP UNIT SHEET	
MAX. AREA:	VARIES	
MAX. OCCUPANCY:	VARIES	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

QUAD HIP

NOT USED

STRUCTURE MODEL:	DSA4182020-22	SEE SHEET 24.1-1000
MAX. SIZE:	20' x 200' x 15'	
MAX. AREA:	4,000 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	
STRUCTURE MODEL:	DSA4183030-22	SEE SHEET 25.1-1000
MAX. SIZE:	30' x 133' x 15'	
MAX. AREA:	3,990 SQ. FT.	
MAX. OCCUPANCY:	266 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

TENSIONS SAILS FOUR-POINT

NOT USED

STRUCTURE MODEL:	DSA1241414-22	SEE SHEET 15.1-1000
MAX. SIZE:	14' x 14' x 12'	
MAX. AREA:	196 SQ. FT.	
MAX. OCCUPANCY:	13 PERSONS	
STRUCTURE MODEL:	DSA1242020-22	SEE SHEET 16.1-1000
MAX. SIZE:	20' x 20' x 12'	
MAX. AREA:	400 SQ. FT.	
MAX. OCCUPANCY:	26 PERSONS	

FOR DSA 103 TESTING & INSPECTIONS SAMPLE, SEE PC T-3.0 & PC T-4.0

SINGLE POST PYRAMID CANTILEVER

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

USA SHADE & Fabric Structures®
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 10/30/2023

STRUCTURE TYPE:

SCALE : VARIES

DRAWING SIZE: D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	DWH	2/14/23
Design By :	DWH	2/14/23
Approved By :	DWH	2/14/23

DRAWING DESCRIPTION:

DWG. UNIT SELECTION

SHEET T-2.0

REV.

REGISTERED PROFESSIONAL ENGINEER — MARK ALBERT LOVE — No. 3693 — STRUCTURAL — STATE OF CALIFORNIA
10/18/2023

LICENSED ARCHITECT — DAVID HIGGINSON — C19168 — 10-31-25 RENEWAL DATE — STATE OF CALIFORNIA

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2022 CBC

Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

2022 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2022 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required	**GE (Geotechnical Engineer)** – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
Periodic – Indicates that a periodic special inspection is required	**LOR (Laboratory of Record)** – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.
Test – Indicates that a test is required	**PI (Project Inspector)** – Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.
	SI (Special Inspection) – Indicates that the special inspection shall be performed by an appropriately qualified approved special inspector.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

C1. CAST-IN-PLACE CONCRETE

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify use of required design mix.	**Periodic**	SI	**Table 1705A.3 Item 5, 1910A.1.**
☑	**b.** Identify, sample, and test reinforcing steel.	**Test**	LOR	**1910A.2;** ACI 318-19 Ch.20 and Section 26.6.1.2; DSA IR 17-10. (See Appendix (end of this form) for exemptions.)
☑	**c.** During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	**Test**	LOR	**Table 1705A.3 Item 6;** ACI 318-19 Sections 26.5 & 26.12.
☑	**d.** Test concrete (f'c).	**Test**	LOR	**1905A.1.17;** ACI 318-19 Section 26.12.
☑	**e.** Batch plant inspection: **Eliminated**	**See Notes**	SI	Default of **'Continuous'** per **1705A.3.3**. If approved by DSA, batch plant inspection may be reduced to **'Periodic'** subject to requirements in Section **1705A.3.3.1,** or eliminated per **1705A.3.3.2.** See IR 17-13. (See Appendix (end of this form) for exemptions.)
☐	f. Welding of reinforcing steel.	Provide special inspection per STEEL, Category S/A4(d) & (e) and/or S/A5(g) & (h) below.		

C2. PRESTRESSED / POST-TENSIONED CONCRETE (IN ADDITION TO SECTION C1):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Sample and test prestressing tendons and anchorages.	**Test**	LOR	**1705A.3.4, 1910A.3**
☐	**b.** Inspect placement of prestressing tendons.	**Periodic**	SI	**1705A.3.4, Table 1705A.3 Items 1 & 9.**

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

S/A3. WELDING:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify weld filler material identification markings per AWS designation listed on the DSA-approved documents and the WPS.	**Periodic**	SI	**1705A.2.5, Table 1705A.2.1 Items 4 & 5**; AWS D1.1 and AWS D1.8 for structural steel. AWS D1.2 for Aluminum; AWS D1.3 for cold-formed steel; AWS D1.4 for reinforcing steel; DSA IR 17-3.
☑	**b.** Verify weld filler material manufacturer's certificate of compliance.	**Periodic**	SI	DSA IR 17-3.
☑	**c.** Verify WPS, welder qualifications and equipment.	**Periodic**	SI	DSA IR 17-3.

S/A4. SHOP WELDING (IN ADDITION TO SECTION S/A3):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	SI	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☑	**b.** Inspect single-pass fillet welds ≤ 5/16", floor and roof deck welds.	**Periodic**	SI	**1705A.2.2, Table 1705A.2.1 Items 5a.5 & 5a.6;** AISC 360-16 (and AISC 341-16 as applicable); DSA IR 17-3.
☐	**c.** Inspect welding of stairs and railing systems.	**Periodic**	SI	**1705A.2.1;** AISC 360-16 (and AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3.
☐	**d.** Verification of reinforcing steel weldability other than ASTM A706.	**Periodic**	SI	**1705A.3.1;** AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	**e.** Inspect welding of reinforcing steel.	**Continuous**	SI	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8;** AWS D1.4; DSA IR 17-3.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**c.** Storage rack anchorage installation.	**Periodic**	SI	ANSI/MH16.1 Section 7.3.2; Table 1705A.3.7.
☐	**d.** Completed storage rack system to indicate compliance with the approved construction documents.	**Periodic**	SI*	Table 1705A.13.7; * May be performed by the project inspector when specifically approved by DSA.

S/A11. Other Steel

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

Geotechnical Reports: Project does NOT have and does NOT require a geotechnical report

S1. GENERAL:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify that: • Site has been prepared properly prior to placement of controlled fill and/or excavations for foundations. • Foundation excavations are extended to proper depth and have reached proper material. • Materials below footings are adequate to achieve the design bearing capacity.	**See Notes**	PI	Refer to specific items identified in the Appendix listing exemptions for limitations. Placement of controlled fill exceeding 12" depth under foundations is not permitted without a geotechnical report.

S2. SOIL COMPACTION AND FILL:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify use of proper materials, densities and inspect lift thicknesses, placement and compaction during placement of fill.	**Continuous**	LOR*	* Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**b.** Compaction testing.	**Test**	LOR*	* Under the supervision of a geotechnical engineer or LOR's engineering manager. Refer to specific items identified in the Appendix listing exemptions for limitations.

S3. DRIVEN DEEP FOUNDATIONS (PILES):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Verify pile materials, sizes and lengths comply with the requirements.	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative.
☐	**b.** Determine capacities of test piles and conduct additional load tests as required.	**Test**	LOR*	* Under the supervision of the geotechnical engineer.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRIC STRUCTURES
Date Created: 2023-02-15 15:23:09

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**c.** Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	**Periodic**	SI	**Table 1705A.3 Item 13.** Special inspector to verify specified concrete strength test prior to stressing.
☐	**d.** Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	**Continuous**	SI	**1705A.3.4, Table 1705A.3 Item 9;** ACI 318-14 Section 26.13

C3. PRECAST CONCRETE (IN ADDITION TO SECTION C1):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Inspect fabrication of precast concrete members.	**Continuous**	SI	ACI 318-19 Section 26.13.
☐	**b.** Inspect erection of precast concrete members.	**Periodic**	SI*	**Table 1705A.3 Item 10.** * May be performed by PI when specifically approved by DSA.
☐	**c.** For precast concrete diaphragm connections or reinforcement at joints classified as moderate or high deformability elements (MDE or HDE) in structures assigned to Seismic Design Category D, E or F, inspect such connections and reinforcement in the field for: 1. Installation of the embedded parts 2. Completion of the continuity of reinforcement across joints. 3. Completion of connections in the field.	**Continuous**	SI	Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5
☐	**d.** Inspect installation tolerances of precast concrete diaphragm connections for compliance with ACI 550.5.	**Periodic**	SI	Table 1705A.3; ACI 318-19 Section 26.13.1.3; ACI 550.5

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Inspect groove welds, multi-pass fillet welds, single pass fillet welds > 5/16", plug and slot welds.	**Continuous**	SI	**Table 1705A.2.1 Items 5a.1–4;** AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
☐	**b.** Inspect single-pass fillet welds ≤ 5/16".	**Periodic**	SI	**Table 1705A.2.1 Item 5a.5;** AISC 360-16 (AISC 341-16 as applicable); DSA IR 17-3.
☐	**c.** Inspect end-welded studs (ASTM A-108) installation (including bend test).	**Periodic**	SI	**2213.2.2,** AISC 360-16 (AISC 341-16 as applicable); AWS D1.1; DSA IR 17-3.
☐	**d.** Inspect floor and roof deck welds.	**Periodic**	SI	**1705A.2.2, Table 1705A.2.1 Item 5a.6;** AISC 360-16 (AISC 341-16 as applicable); AWS D1.3; DSA IR 17-3.
☐	**e.** Inspect welding of structural cold-formed steel.	**Periodic**	SI*	**1705A.2.5; AWS D1.3; DSA IR 17-3.** The quality control provisions of AISI S240-20 Chapter D shall also apply. * May be performed by the project inspector when specifically approved by DSA.
☐	**f.** Inspect welding of stairs and railing systems.	**Periodic**	SI*	**1705A.2.1;** AISC 360-16 (AISC 341-16 as applicable); AWS D1.1 & D1.3; DSA IR 17-3. * May be performed by the project inspector when specifically approved by DSA.
☐	**g.** Verification of reinforcing steel weldability.	**Periodic**	SI	**1705A.3.1;** AWS D1.4; DSA IR 17-3. Verify carbon equivalent reported on mill certificates.
☐	**h.** Inspect welding of reinforcing steel.	**Continuous**	SI	**Table 1705A.2.1 Item 5b, 1705A.3.1, Table 1705A.3 Item 2, 1903A.8;** AWS D1.4; DSA IR 17-3.

GENERAL DSA-103 NOTES:

1. THE SAMPLE DSA-103 FORM PROVIDED ON THIS SHEET IS FOR ILLUSTRATIVE PURPOSES ONLY TO ASSIST IN THE COMPLETION OF SPECIFIC DSA-103 FORMS FOR FUTURE PROJECTS.
2. A CURRENT DSA-103 FORM IS TO BE COMPLETED FOR EACH APPLICATION THAT THIS P.C. DOCUMENT IS BEING INCORPORATED INTO AND ALL SAMPLE DSA-103 SHEETS ARE TO BE CROSSED OUT ON THIS SHEET

ADDITIONAL TESTING AND INSPECTION NOTES:

1. THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE EMPLOYED BY THE SCHOOL DISTRICT AND APPROVED BY DSA AND THE ARCHITECT OF RECORD.
2. A "DSA CERTIFIED" PROJECT INSPECTRO EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY DSA SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, CCR.
3. THE SITE PROJECT INSPECTOR SHALL BE CLASS 2.
4. A DSA ACCEPTED TESTING LABORATORY DIRECTLY EMPLOYED BY THE DISTRICT (OWNER) SHALL CONDUCT ALL THE RQUIRED TEST AND INSPECTIONS FOR THE PROJECT.
5. THE COSTS OF THE PROJECT INSPECTOR AND TESTING AGENCY SHALL BE BORN BY THE SCHOOL DISTRICT.
6. COPIES OF THE VERIFIED REPORTS SHALL BE SENT TO DSA, THE ARCHITECT, THE SCHOOL DISTRICT, THE CONTRACTOR, AND THE PROJECT INSPECTOR.
7. THE IN-PLANT INSPECTOR SHALL BE A WELDING SPECIAL INSPECTOR FOR MATERIAL VERIFICATION AND WELDING.
8. PER 2022 CBC, SECTION 1705A.3.3, BATCH PLANT INSPECTION MAY BE WAIVED WHEN THE FOLLOWING REQUIREMENTS ARE MET:
   - 8.1. A LICENSED WEIGHMASTER SHALL POSITIVELY IDENTIFY QUANTITY OF MATERIALS AND CERTIFY EACH LOAD BY A BATCH TICKET.
   - 8.2. BATCH TICKETS, INCLUDING MATERIAL QUANTITIES AND WEIGHTS SHALL ACCOMPANY THE LOAD, SHALL BE TRANSMITTED TO THE INSPECTOR OF RECORD BY THE TRUCK DRIVER WITH LOAD IDENTIFIED THEREON. THE LOAD SHALL NOT BE PLACED WITHOUT A BATCH TICKET IDENTIFYING THE MIX. THE INSPECTOR OF RECORD SHALL KEEP A DAILY RECORD OF PLACEMENTS, IDENTIFYING EACH TRUCK, IT'S LOAD, TIME OF RECEIPT AT THE JOBSITE, AND APPROXIMATE LOCATION OF DEPOSIT IN THE STRUCTURE AND SHALL MAINTAIN A COPY OF THE DAILY RECORD AS REQUIRED BY THE ENFORCING AGENCY.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**c.** Inspect driving operations and maintain complete and accurate records for each pile.	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative.
☐	**d.** Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and record any pile damage.	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative.
☐	**e.** Steel piles.	Provide tests and inspections per STEEL section below.		
☐	**f.** Concrete piles and concrete filled piles.	Provide tests and inspections per CONCRETE section below.		
☐	**g.** For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	*	*	* As defined on drawings or specifications.

S4. CAST-IN-PLACE DEEP FOUNDATIONS (PIERS):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Inspect drilling operations and maintain complete and accurate records for each pier.	**Continuous**	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**b.** Verify pier locations, diameters, plumbness and lengths.Record concrete or grout volumes.	**Continuous**	PI	Continuous inspection to be provided by project inspector. Refer to specific items identified in the Appendix listing exemptions for limitations.
☑	**c.** Concrete piers.	Provide tests and inspections per CONCRETE section below.		

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (CONCRETE), 2022 CBC

Table 1705A.3; ACI 318-19 Sections 26.12 & 26.13
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

C4. SHOTCRETE (IN ADDITION TO SECTION C1):

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Inspect shotcrete placement for proper application techniques.	**Continuous**	SI	**1705A.3.9, Table 1705A.3 Item 7, 1908A.1, 1908A.2, 1908A.3.** See ACI 506.2-13 Section 3.4, ACI 506R-16.
☐	**b.** Sample and test shotcrete (f'c).	**Test**	LOR	**1908A.2, 1705A.3.6**

C5. POST-INSTALLED ANCHORS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Inspect installation of post-installed anchors	**See Notes**	SI*	**1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8** (See Appendix (end of this form) for exemptions). ACI 318-14 Sections 17.8 & 26.13. * May be performed by the project inspector when specifically approved by DSA.
☐	**b.** Test post-installed anchors.	**Test**	LOR	**1910A.5.** (See Appendix (end of this form) for exemptions.)

C6. OTHER CONCRETE:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

S/A6. NONDESTRUCTIVE TESTING:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Ultrasonic	**Test**	LOR	**1705A.2.1, 1705A.2.5;** AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
☐	**b.** Magnetic Particle	**Test**	LOR	**1705A.2.1, 1705A.2.5;** AISC 341-16 J6.2, AISC 360-16 N5.5; AWS D1.1, AWS D1.8; DSA IR 17-2.
☐	**c.**	**Test**	LOR	

S/A7. STEEL JOISTS AND TRUSSES:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Verify size, type and grade for all chord and web members as well as connectors and weld filler material; verify joist profile, dimensions and camber (if applicable); verify all weld locations, lengths and profiles; mark or tag each joist.	**Continuous**	SI	**1705A.2.3, Table 1705A.2.3;** AWS D1.1; DSA IR 22-3 for steel joists only. **1705A.2.4;** AWS D1.3 for cold-formed steel trusses.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (SOILS), 2022 CBC

Table 1705A.6, Table 1705A.7, Table 1705A.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

S5. RETAINING WALLS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Placement, compaction and inspection of backfill.	**Continuous**	GE*	**1705A.6.1.** * By geotechnical engineer or his or her qualified representative. (See section S2 above).
☐	**b.** Placement of soil reinforcement and/or drainage devices.	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative.
☐	**c.** Segmental retaining walls; inspect placement of units, dowels, connectors, etc.	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative. See DSA IR 18-2.
☐	**d.** Concrete retaining walls.	Provide tests and inspections per CONCRETE section below.		
☐	**e.** Masonry retaining walls.	Provide tests and inspections per MASONRY section below.		

S6. OTHER SOILS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Soil Improvements	**Test**	GE*	Submit a comprehensive report documenting final soil improvements constructed, construction observation and the results of the confirmation testing and analysis to CGS (California Geological Survey) for final acceptance. * By geotechnical engineer or his or her qualified representative.
☐	**b.** Inspection of Soil Improvements	**Continuous**	GE*	* By geotechnical engineer or his or her qualified representative.
☐	**c.**			

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

S/A1. STRUCTURAL STEEL, COLD-FORMED STEEL AND ALUMINUM USED FOR STRUCTURAL PURPOSES

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify identification of all materials and: • Mill certificates indicate material properties that comply with requirements. • Material sizes, types and grades comply with requirements.	**Periodic**	*	**Table 1705A.2.1 Item 3a–3c.** 2202A.1; AISI S100-20 Section A3.1 & A3.2, AISI S240-20 Section A3 & A5, AISI S220-20 Sections A4 & A6. * By special inspector or qualified technician when performed off-site.
☑	**b.** Test unidentified materials	**Test**	LOR	**2202A.1.**
☐	**c.** Examine seam welds of HSS shapes	**Periodic**	SI	DSA IR 17-3.
☑	**d.** Verify and document steel fabrication per DSA-approved construction documents.	**Periodic**	SI	Not applicable to cold-formed steel light-frame construction, except for trusses (**1705A.2.4**).
☐	**e.** Buckling restrained braces.	**Test**	LOR	Testing and special inspections in accordance with IR 22-4.

S/A2. HIGH-STRENGTH BOLTS: SEE STRUCTURAL NOTES ON SERIES 1000 SHEETS FOR JOINT TYPE

	Test or Special Inspection	Type	Performed By	Code References and Notes
☑	**a.** Verify identification markings and manufacturer's certificates of compliance conform to ASTM standards specified in the DSA-approved documents.	**Periodic**	SI	**Table 1705A.2.1 Items 1a & 1b, 2202A.1;** AISC 360-16 Section A3.3, J3.1, and M3.2; RCSC 2014 Section 1.5 & 2.1; DSA IR 17-8 & DSA IR 17-9.
☑	**b.** Test high-strength bolts, nuts and washers.	**Test**	LOR	**Table 1705A.2.1 Item 1c, 2213A.1;** RCSC 2014 Section 7.2; DSA IR 17-8.
☑	**c.** Bearing-type ("snug tight") connections.	**Periodic**	SI	**Table 1705A.2.1 Item 2a, 1705A.2.6, 2204A.2;** AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Section 9.1; DSA IR 17-9.
☑	**d.** Pretensioned and slip-critical connections.	*	SI	**Table 1705A.2.1 Items 2b & 2c, 1705A.2.6, 2204A.2;** AISC 360-16 J3.1, J3.2, M2.5 & N5.6; RCSC 2014 Sections 9.2 & 9.3; DSA IR 17-9. **"Continuous" or "Periodic" depends on the tightening method used.

DSA 103-22: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (STEEL AND ALUMNINUM), 2022 CBC

1705A.2.1, Table 1705A.2.1; AISC 303-16, AISC 341-16, AISC 358-16, AISC 360-16; AISI S100-20; RCSC 2014; AWS D1.1, AWS D1.2, AWS D1.3, AWS D1.4, AWS D1.8
Application Number: 04-121917
DSA File Number:
School Name: PC FABRIC SHADE STRUCTURES
Increment Number:
School District: USA SHADE AND FABRICATORS
Date Created: 2023-02-15 15:23:09

S/A8. SPRAYED FIRE-RESISTANT MATERIALS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Examine structural steel surface conditions, inspect application, take samples, measure thickness and verify compliance of all aspects of application with DSA-approved documents.	**Periodic**	SI	**1705A.15, 1705A.1, 1705A.2, 1705A.3, 1705A.4.**
☐	**b.** Test density.	**Test**	LOR	**1705A.15.1, 1705A.15.5, ASTM E736**
☐	**c.** Bond strength adhesion/cohesion.	**Test**	LOR	**1705A.15.1, 1705A.15.4, ASTM E605**

S/A9. ANCHOR BOLTS AND ANCHOR RODS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Anchor Bolts and Anchor Rods	**Test**	LOR	Sample and test anchor bolts and anchor rods not readily identifiable per procedures noted in DSA IR 17-11.
☐	**b.** Threaded rod not used for foundation anchorage.	**Test**	LOR	Sample and test threaded rods not readily identifiable per procedures noted in DSA IR 17-11.

S/A10. STORAGE RACK SYSTEMS:

	Test or Special Inspection	Type	Performed By	Code References and Notes
☐	**a.** Materials used to verify compliance with one or more of the material test reports in accordance with the approved construction documents.	**Periodic**	SI	Table 1705A.13.7.
☐	**b.** Fabricated storage rack elements.	**Periodic**	SI	1704A.2.5; Table 1705A.13.7.

REGISTERED PROFESSIONAL ENGINEER — MARK CALBERT — No. 3693 — STRUCTURAL — STATE OF CALIFORNIA
10/18/2023

LICENSED ARCHITECT — DAVID HIGGINSON — C19168 — 10-31-25 RENEWAL DATE — STATE OF CALIFORNIA

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

USA SHADE & Fabric Structures®
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:

LOCATION:
Sun Valley Elementary School
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 10/30/2023

STRUCTURE TYPE:

SCALE : VARIES

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	DWH	2/14/23
Design By :	DWH	2/14/23
Approved By :	DWH	2/14/23

DRAWING DESCRIPTION:

DWG. T&I FORMS

SHEET T-3.0

REV.

DSA 103 (SAMPLE) - STATEMENT OF STRUCTURAL TESTS AND INSPECTIONS

GENERAL NOTES

1.- SPECIAL INSPECTION REQUIREMENTS SHALL FOLLOW THE ATTACHED SAMPLE TEST AND INSPECTION LIST (T & I LIST) APPROVED BY DSA. THE SHOP WELDING INSPECTION SHALL INCLUDE WELDING OF ALL STEEL MEMBERS AND IDENTIFICATION OF STEEL THROUGH MILL CERTIFICATE OR MATERIAL TESTING, UNCERTIFIED STEEL SHALL BE TESTED TO THE REQUIREMENTS OF CBC 2022 CHAPTER 17A. THE FIELD SPECIAL INSPECTION SHALL INCLUDE COMPRESSION CYLINDER TESTS FOR THE CONCRETE FOUNDATION.

2.- STRUCTURE SHALL BE IN THE LOCATION SHOWN ON THE SITE SPECIFIC DSA APPLICATION DRAWING.

3.- FOUNDATION DESIGN BASED ON CBC 2022, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4.- DESIGN PER FOLLOWING CODES: CBC 2022 (CHAPTER 35), ASCE 7-16, AISC 360-16, AISC 341-16, ACI 318-19, ASCE 55-16 & ASCE 19-16

STRUCTURAL STEEL

1.- FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY SHADE STRUCTURES OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (OR MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2022 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

2.- ONLY CALIFORNIA LICENSED CONTRACTORS AUTHORIZED BY SHADE STRUCTURES SHALL INSTALL THE SHADE STRUCTURES.

3.- ALL WORK SHALL CONFORM TO CBC 2022 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

4.- ALL GALVANIZED STEEL TUBE PRODUCTS MANUFACTURED BY ALLIED TUBE & CONDUIT FOR THIS STRUCTURE SHALL BE, AND CONFORM TO ASTM A500-16 GRADE C, IN ITS' ENTIRETY.
TYPICAL MECHANICAL PROPERTIES ARE:
ROUND TUBE GRADE C 46,000 PSI YIELD STRESS MINIMUM / 62,000 PSI TENSILE STRESS MINIMUM

5.- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR HSS PRODUCTS:
SQUARE AND RECTANGULAR 50,000 PSI YIELD STRESS / 62,000 PSI TENSILE STRESS
ROUND PIPE 50,000 PSI YIELD STRESS / 62,000 PSI TENSILE STRESS

6.- ALL PLATES PRODUCTS SHALL COMPLY WITH ASTM A572 GRADE 50.

7.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

8.- ALL WELDING TO CONFORM WITH AMERICAN WELDING SOCIETY STANDARDS AND SHALL BE INSPECTED BY AN AWS/CWI INSPECTOR. AWS D1.1 FOR HOT ROLLED. AWS D1.3 FOR SHEET/COLD FORMED. AWS D1.8 SEISMIC SUPPLEMENT.

9.- ALL FULL PENETRATION WELD SHALL BE CONTINUOUSLY INSPECTED PER AWS D1.1 & D1.8.

10.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" ER70SX ELECTRODES UNLESS OTHERWISE NOTED. GMAW IS ACCEPTABLE.

11.- ALL STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, YIELD STRENGTH= 65 KSI, TENSILE STRENGTH=100 KSI MINIMUM, ALLOY GROUP 2, CONDITION CW1. ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 2, CONDITION CW1, REFERRING TO RCSC, ASTM F-593 IS NOT CONSIDERED AS HIGH STRENGTH BOLTS. BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION (ST).

12.- ALL STRUCTURAL STEEL (ITEMS FROM NOTE 5) SHALL BE POWDER COATED WITH ONE SHOP COAT (2.5 MILS MIN.) OF ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR EQUIVALENT PAINT SYSTEM. THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS, ASKO NOBEL, PPG OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
- PENCIL HARDNESS (ASTM D-3363). - HUMIDITY (ASTM D-2247).
- SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNESS.

13.- ALL STEEL ROUND TUBING (ITEMS FROM NOTE 4) SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

14.- ALL EXPOSED STEEL FASTENERS SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329) AS APPLICABLE, OR PROTECTED WITH CORROSION PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

CONCRETE SPECIFICATION

1.- CONCRETE SHALL BE SAMPLED AND TESTED PER CBC 2022 SECTION 1903A & SHALL BE INSPECTED PER SECTION 1903A.

2.- CONCRETE TO BE F'c= 4500 PSI, TYPE V CEMENT PLUS POZZOLAN OR SLAG CEMENT, MAXIMUM WATER/CEMENT RATIO OF 0.45, PER ACI 318-19 CHAPTER 19. (NO ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL BE USED.) REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 AND TO BE Fy= 60000 PSI , MIN. GR. 60. ALSO COATED ACCORDING TO ASTM A767/ A767M, STANDARD SPECIFICATION FOR ZINC-COATING (GALVANIZED) STEEL BARS FOR CONCRETE REINFORCEMENT.

3.- ALL ANCHOR BOLTS SET IN NEW CONCRETE (WHEN APPLICABLE) SHALL COMPLY WITH ASTM F-1554 GRADE 36 (GALVANIZED PER ASTM A153, CLASS D MINIMUM OR ASTM F2329).
ANCHOR BOLT'S DIAMETER NEEDS TO BE AS FOLLOW:
A) ANCHOR BOLT Ø1 1/4"

4.- CERTIFIED MILL TEST REPORTS ARE TO BE PROVIDED FOR EACH SHIPMENT OF REINFORCEMENT.

5.- ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL COMPLY THE REQUIREMENTS OF ASTM C109, ASTM C939, ASTM C1090, ASTM C1107, WHEN APPLICABLE.

6.- CONCRETE EXPOSED TO FREEZING-AND-THAWING CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECTION 19.3.3

FABRIC SPECIFICATION

1.- FABRIC SHALL BE MANUFACTURED BY MULTIKNIT LTD., WHICH MEETS THE SPECIFICATIONS LISTED ON PAGE 2000, AND SHALL BE FABRICATED FROM POLYETHYLENE MATERIALS. MINIMUM SEAM LENGTH 3/4".

2.- THE FABRIC SHALL RETAIN 80% OF ITS TENSILE AND TEARING STRENGTH AFTER ULTRAVIOLET EXPOSURE PER ASTM G53 USING A 313 NM LIGHT SOURCE FOR 500 HOURS WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS.

3.- PROVIDE CERTIFICATION BY MANUFACTURER AND STATE FIRE MARSHAL TO SCHOOL'S DISTRICT INSPECTOR OF RECORD AT SITE SPECIFIC INSTALLATION. COPY OF FIRE CERTIFICATION SHALL BE SENT TO DSA.

4.- FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE BY THE DISTRICT. FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84 EXTENDED 30 MINUTES TEST. FLAME SPREAD INDEX (FSI): 10. SMOKE DEVELOPED INDEX (SDI): 50. FABRIC IS ACCEPTABLE FOR USE IN WILDLIFE URBAN INTERFACE AREA.

5.- FABRIC TOP NEEDS TO BE REMOVED IF SNOW EXCEEDING 5 PSF ARE ANTICIPATED, FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED.

6.- A VISUAL INSPECTION LOOKING FOR TEAR AND ABNORMAL WEAR IN FABRIC MATERIAL AND THREAD IS REQUIRED PRIOR TO RE-INSTALLATION. USA SHADE & FABRIC STRUCTURES SHALL BE NOTIFIED IF SIGNIFICANT DAMAGE IS PRESENT BEFORE RE-INSTALLATION.

AIRCRAFT CABLE

1.- FOR FABRIC ATTACHMENT USE 3/8" 7x19 GALV. CABLE PER ASTM A1023/A1023M, WITH A BREAKING STRENGTH VALUE OF 14,400 LBS. CABLE SHALL BE TENSIONED TO 300 LBS MINIMUM AND 500 LBS MAXIMUM. THE MAXIMUM CALCULATED CABLE ALLOWABLE CAPACITY IS Sa=4909 LB.

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTING VISITS AS REQUIRED.

MAXIMUM OCCUPANT LOAD (PER CBC 2022 TABLE 1604A.5)
-K-12: 250 PERSONS
-PUBLIC ASSEMBLY: 300 PERSONS
-EDUCATIONAL OCCUPANCIES
ABOVE 12TH GRADE: 500 PERSONS

CBC PC DESIGN NOTES

BUILDING CODE	CBC 2022 (BASED ON IBC 2021)
FLOOR LIVE LOAD	N/A
ROOF LIVE LOAD	RLL 5 PSF

ALLOWABLE SOIL PRESSURE:
DL + LL (CONC FTG) 1500 PSF
DL + LL + SEISMIC (CONC FTG) 1500 PSF
LATERAL BEARING DESIGN VALUE 100 PSF/FT BELOW NATURAL GRADE, PER TABLE 1806A.2

TWO TIMES THE TABULAR VALUE IS USED (200 PSF/FT)
PER CBC SECTION 1806A.3.4.
ALLOWABLE PIER FRICTIONAL RESISTANCE 250 PSF MAXIMUM
BASED ON SECTION 1810A.3.3.1.4 (ONE-SIXTH OF THE BEARING VALUE).
UPLIFT FRICTIONAL RESISTANCE HAVE A SAFETY FACTOR OF 3.

ROOF SNOW LOAD	5 PSF
ICE LOAD	ZERO PSF
FLOOD HAZARD AREA	ZONE X

WHEN A SITE SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

WIND DESIGN DIRECTIONAL PROCEDURE: ASCE 7-16, SECTION 27.3.2
NOTE: WIND DESIGN IS LIMITED TO UNOBSTRUCTED CLEAR FLOW CONDITION

-BASIC DESIGN WIND SPEED (3 SEC GUST)	V	115 MPH
-ASD WIND LOAD (CBC 2022 SEC. 1603A.1.4)	V_{ASD}	90 MPH
-WIND EXPOSURE FACTOR	C	
-TOPOGRAPHIC FACTOR	Kzt	1
-RISK CATEGORY	II	
-VELOCITY PRESSURE EXPOSURE COEFFICIENT	Kz	0.85
-VELOCITY PRESSURE	qz	24.46 PSF

SEISMIC DESIGN:

-SITE CLASS		D
-SPECTRAL RESPONSE COEFFICIENTS	SS	3.00g
	S1	1.389g
	SDS	2.00
	SD1	1.39

NOTE: UNLESS A SITE-SPECIFIC GROUND MOTION HAZARD ANALYSIS IS PERFORMED, THE SM1 VALUE INCREASED BY 50% SHALL BE LESS THAN THE DESIGN CRITERIA STATED HEREIN.

-LATERAL FORCE RESISTING SYSTEM G.2 ORDINARY CANTILEVERED COLUMN SYSTEM.

-SEISMIC IMPORTANCE FACTOR	Ie	1.0
-DESIGN BASE SHEAR AT BASE	V	1608 LB
-SEISMIC RESPONSE COEFFICIENTS	Cs	1.6
-RESPONSE MODIFICATION FACTOR	R	1.25
-ANALYSIS PROCEDURE		EQUIVALENT LATERAL FORCE
-RISK CATEGORY		II
-SEISMIC DESIGN CATEGORY		E
-SITE COEFFICIENT CATEGORY	Fa	1.2
	Fv	1.5
-REDUNDANCY FACTOR	ρ	1.3

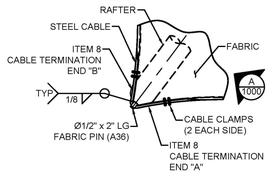
GEOHAZARD REPORT IS NOT REQUIRED FOR OPEN FABRIC STRUCTURES 1,600 SQF OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4 SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQUARE FEET UP TO A MAXIMUM OF 4,000 SQUARE FEET AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.

ARCHITECT OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.

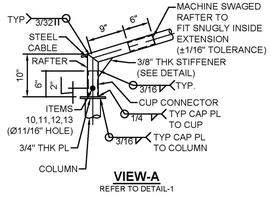
PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL (EXCEPTION: OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET OR LESS COMPLYING WITH REQUIREMENTS OF IR A-4 SECTION 3.1.1). IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.

MINIMUM FOUNDATION SETBACK LIMIT IN ADJACENT SLOPE: THE DEPTH OF REQUIRED PIER EMBEDMENT SHALL START FROM AN ELEVATION THAT CORRESPONDS WITH A HORIZONTAL CLEAR DISTANCE OF 14 FEET THAT INTERSECT WITH THE SLOPE (DAYLIGHTING). IF SETBACK LIMITS ARE SMALLER THAN CBC REQUIRES, A SITE-SPECIFIC SOILS REPORT IS REQUIRED.

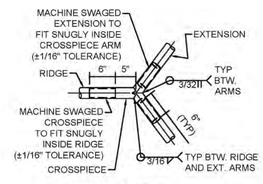
MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.



DETAIL 1
REFER TO TOP VIEW



VIEW-A
REFER TO DETAIL-1



DETAIL-2
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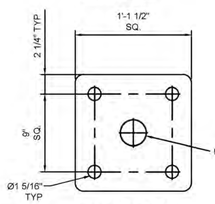
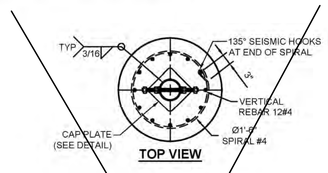
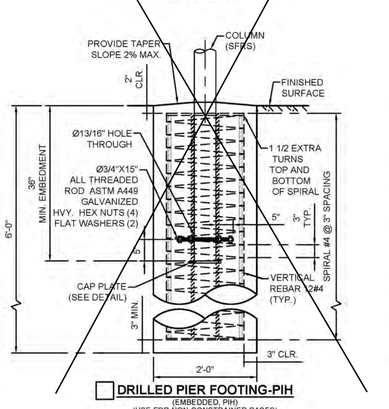


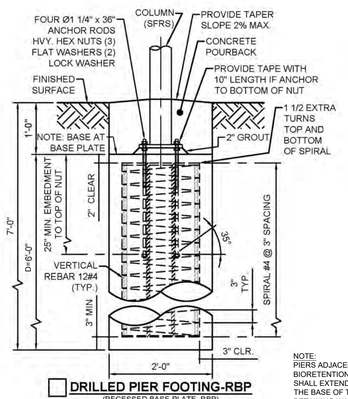
BASE PLATE
(1 1/4" THK)
(TYP. FOR RBP COLUMNS)



TOP VIEW

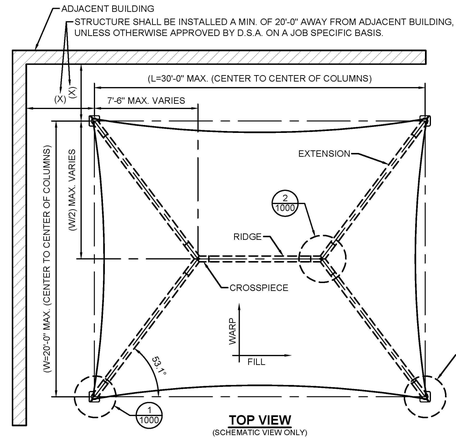


DRILLED PIER FOOTING-PIH
(EMBEDDED, PIH)
(USE FOR NON-CONSTRAINED CASES)



DRILLED PIER FOOTING-RBP
(RECESSED BASE PLATE, RBP)
(USE FOR NON-CONSTRAINED CASES)
(OPTIONAL)

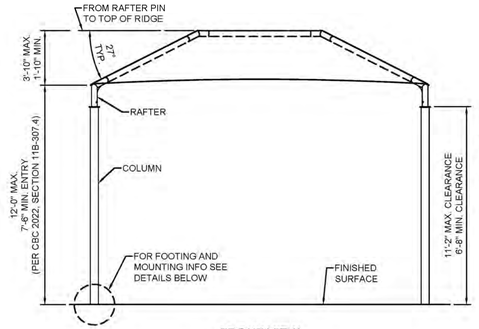
NOTE:
PIERS ADJACENT TO BIORETENTION AREAS SHALL EXTEND "D" BELOW THE BASE OF THE RETAINING WALL FOOTING.



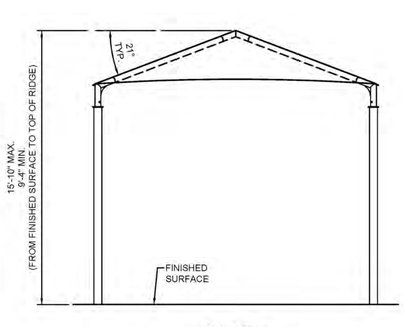
TOP VIEW
(SCHEMATIC VIEW ONLY)

LIST OF MATERIALS

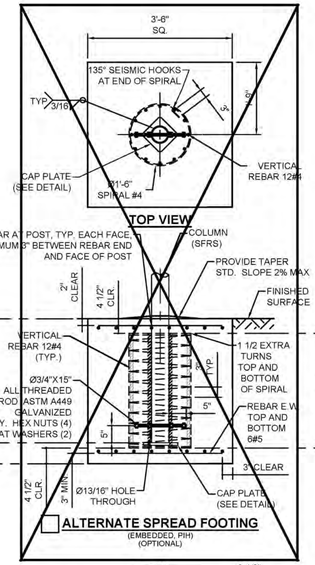
ITEM	QTY	DESCRIPTION	MATERIAL
1	4	COLUMN (GALVANIZED STEEL TUBE)	5.00 GA 7 RD. TUBE (HSS 5.0 x 0.188)
2	4	CUP CONNECTOR (6" LG)	HSS 4.0 x 0.25
3	4	RAFTER (GALVANIZED STEEL TUBE)	4.50 GA 7 RD. TUBE (HSS 4.5 x 0.188)
4	4	EXTENSION (GALVANIZED STEEL TUBE)	4.50 GA 7 RD. TUBE (HSS 4.5 x 0.188)
5	2	CROSSPIECE GALVANIZED STEEL TUBE)	4.50 GA 7 RD. TUBE (HSS 4.5 x 0.188)
6	1	RIDGE (GALVANIZED STEEL TUBE)	4.50 GA 7 RD. TUBE (HSS 4.5 x 0.188)
7	1	FABRIC TOP	FR COLOURSHADE 190/F5
8	1	Ø3/8" CABLE	GALVANIZED STEEL
9	4	Ø3/8" CABLE CLAMP	GALVANIZED STEEL
10	4	Ø5/8"-11NC x 6" HEX BOLT(ST)	316 SS
11	4	Ø5/8"-11NC HEX NUT	316 SS
12	8	Ø5/8" FLAT WASHER	316 SS
13	4	Ø5/8" SPLIT LOCK WASHER	316 SS

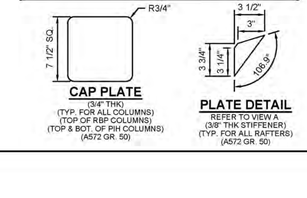


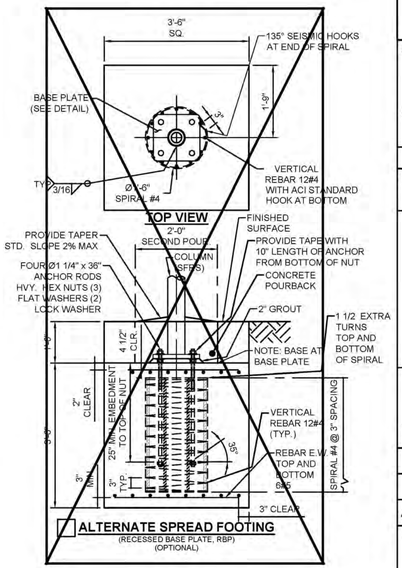
FRONT VIEW
(SCHEMATIC VIEW ONLY)



SIDE VIEW
(SCHEMATIC VIEW ONLY)







USA SHADE & Fabric Structures
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:
DSA401203012-22

STRUCTURE TYPE:
H I P
DSA

SIZE: MAXIMUM
20' x 30' x 12'e MAX.

SCALE : NONE

DRAWING SIZE:
D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	HH	12/01/22
Design By :	OS	12/01/22
Approved By :	MB	12/01/22

DRAWING DESCRIPTION:
PRODUCT INFORMATION

DWG.
DSA401203012-22

SHEET
5.1-1000

REV.
NC

LICENSED ARCHITECT
DAVID HIGGINSON
C19168
10-31-25
RENEWAL DATE
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
ALBERT CLARK
No. 3693
STRUCTURAL
STATE OF CALIFORNIA

10/18/2023

Aircraft Cable

Preformed, made in accordance with commercial specifications military and federal specification rope available.

Carbon Steel (Aircraft Cable) - Galvanized cable has the highest strength and greatest fatigue life of the materials offered. It has good to fair corrosion resistance in rural to industrial atmosphere environments. This material is most widely used for small diameter cables. Tin over galvanized cable offers greater corrosion resistance and reduced friction over pulleys.

7 x 19

7 x 19		Galvanized Min. Breaking Strengths (lbs)
Dia. (In)	Approx. Wt 1000 Ft/lbs	
3/32	17.	1,000
1/8	29.	2,000
5/32	45.	2,800
3/16	65.	4,200
7/32	86.	5,600
1/4	110.	7,000
9/32	139.	8,000
5/16	173.	9,800
3/8	243.	14,400

Multiknit INTERNATIONAL

190/F5 Fire rated specifications

Standard range

Revision 0 28-Oct-12

Colour	Shade %	UV Block %	Average GSM	Average Warp break strength kgs	Average Elongation %	Average Weft break strength kgs	Average Elongation %	Average Burst Kpa	Average Burst to Mass ratio
Desert Sand	80	92	185	50	40	72	73	156	0.84
Blue	80	85	185	50	40	72	73	156	0.84
Brown	85		185	50	40	72	73	156	0.84
Green	80	85	185	50	40	72	73	156	0.84
Red	80	86	185	50	40	72	73	156	0.84
Silver	80	81	185	50	40	72	73	156	0.84
Terracotta	75	82	185	50	40	72	73	156	0.84
Yellow	80	89	185	50	40	72	73	156	0.84
				110 LB		159 LB		3258 PSF	

CONVERSION TO IMPERIAL UNITS:
185 GSM = .0378 psf
50 KGS = 110 Lb
72 KGS = 159 Lb
156 Kpa = 3258 psf

Notes:
- 190/F5 conforms to The California State Fire Marshal Title 19 Test for Small scale Fabrics
- Tear tests are done using a 50mm wide strip and a cross head speed of 500mm/min
- This report has been compiled using the mean results from all tests conducted on the given sample by our Quality Control Laboratory, the information provided is considered to be a good reflection of the relevant properties of the fabric tested. These results must only be used as an indication of the quality and characteristics of the fabric tested.
Company cannot be held responsible or liable in any way whatsoever should this information differ to that of a registered testing institution.

pp
Deon Joubert
General Manager - Multiknit (Pty) Ltd

Tommy Rogers
Managing Director - Multiknit (Pty) Ltd

CAL FIRE

FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-052001

COLOURSHADE 190/F5

Product Marketed by:

MULTIKNIT (PTY) LTD
BOX 798 WHITE RIVER 1240
MPUMALANGA SOUTH AFRICA, ,

Issue Date : 05/08/2023
Expiration Date : 06/30/2024

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

CWalker

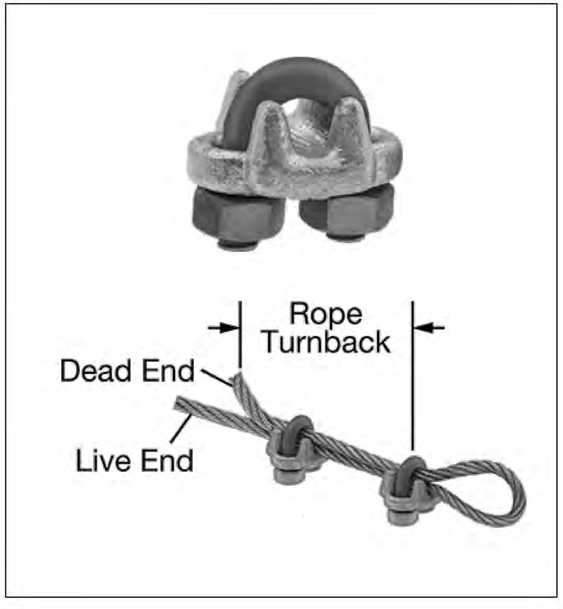
Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Reviewed and Approved By Patricia Setter
Deputy State Fire Marshal III
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit calfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

Page 1 of 1



FORGED WIRE ROPE CLAMP

FITTING TYPE ROPE CLAMP
FABRICATION: FORGED
MATERIAL: GALVANIZED STEEL
FOR WIRE ROPE DIAMETER 3/8"
NUMBER OF CLAMPS REQUIRED: 2
ROPE TURNBACK: 6 1/2"
FOR WIRE ROPE CONSTRUCTION 7 × 19
ATTACHMENT TYPE: LOOP
CLAMP:WIDTH 2", HEIGHT 1 15/16", THICKNESS 1 11/16"
REQUIRED INSTALLATION TOOL TORQUE WRENCH
REQUIRED TORQUE 45 FT.-LBS.
CAPACITY 80% OF THE ROPE'S CAPACITY
SPECIFICATIONS MET ASME B30.26, FED. SPEC. FF-C-450

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

USASHADE & Fabric Structures
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:
DSA401203012-22

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 10/30/2023

STRUCTURE TYPE:
H I P
DSA

SIZE: MAXIMUM
20' x 30' x 12'e MAX.

SCALE : NONE

DRAWING SIZE: D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	HH	12/01/22
Design By :	OS	12/01/22
Approved By :	MB	12/01/22

DRAWING DESCRIPTION:
SPECIFICATIONS

DWG. DSA401203012-22

SHEET 5.2-2000

REV. NC

LICENSED ARCHITECT DAVID HIGGINBOTHAM C19168 10-31-25 RENEWAL CIVIL STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER ALBERT CLARK LOWE No. 3693 STRUCTURAL STATE OF CALIFORNIA

10/18/2023

GENERAL NOTES

1.- SPECIAL INSPECTION REQUIREMENTS SHALL FOLLOW THE ATTACHED SAMPLE TEST AND INSPECTION LIST (T & I LIST) APPROVED BY DSA. THE SHOP WELDING INSPECTION SHALL INCLUDE WELDING OF ALL STEEL MEMBERS AND IDENTIFICATION OF STEEL THROUGH MILL CERTIFICATE OR MATERIAL TESTING, UNCERTIFIED STEEL SHALL BE TESTED TO THE REQUIREMENTS OF CBC 2022 CHAPTER 17A. THE FIELD SPECIAL INSPECTION SHALL INCLUDE COMPRESSION CYLINDER TESTS FOR THE CONCRETE FOUNDATION.

2.- STRUCTURE SHALL BE IN THE LOCATION SHOWN ON THE SITE SPECIFIC DSA APPLICATION DRAWING.

3.- FOUNDATION DESIGN BASED ON CBC 2022, TABLE 1806A.2, SOIL CLASS 5 (ALLOWABLE FOUNDATION PRESSURE 1500 PSF)

4.- DESIGN PER FOLLOWING CODES: CBC 2022(CHAPTER 35), ASCE 7-16, AISC 360-16, AISC 341-16, ACI 318-19, ASCE 55-16 & ASCE 19-16

STRUCTURAL STEEL

1.- FABRICATION OF THE STEEL STRUCTURES SHALL BE PERFORMED BY SHADE STRUCTURES OR AN AUTHORIZED LICENSEE. MATERIAL TESTING (OR MILL CERTIFICATES) AND INSPECTION OF WELDING SHALL BE CONDUCTED PER CBC 2022 SECTIONS 1704A, 1705A, 1705A.2, AND TABLE 1705A.2.1.

2.- ONLY CALIFORNIA LICENSED CONTRACTORS AUTHORIZED BY SHADE STRUCTURES SHALL INSTALL THE SHADE STRUCTURES.

3.- ALL WORK SHALL CONFORM TO CBC 2022 EDITION, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

4.- ALL GALVANIZED STEEL TUBE PRODUCTS MANUFACTURED BY ALLIED TUBE & CONDUIT FOR THIS STRUCTURE SHALL BE, AND CONFORM TO ASTM A500-16 GRADE C, IN ITS' ENTIRETY.
TYPICAL MECHANICAL PROPERTIES ARE:
ROUND TUBE GRADE C 46,000 PSI YIELD STRESS MINIMUM / 62,000 PSI TENSILE STRESS MINIMUM

5.- ALL STRUCTURAL SHAPES SHALL BE COLD FORMED HSS ASTM A500 GRADE C, UNLESS OTHERWISE NOTED. TYPICAL MECHANICAL PROPERTIES ACHIEVED FOR HSS PRODUCTS:
SQUARE AND RECTANGULAR 50,000 PSI YIELD STRESS / 62,000 PSI TENSILE STRESS
ROUND PIPE 50,000 PSI YIELD STRESS / 62,000 PSI TENSILE STRESS

6.- ALL PLATES PRODUCTS SHALL COMPLY WITH ASTM A572 GRADE 50.

7.- STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH A.I.S.C. SPECIFICATIONS.

8.- ALL WELDING TO CONFORM WITH AMERICAN WELDING SOCIETY STANDARDS AND SHALL BE INSPECTED BY AN AWS/CWI INSPECTOR. AWS D1.1 FOR HOT ROLLED. AWS D1.3 FOR SHEET/COLD FORMED. AWS D1.8 SEISMIC SUPPLEMENT.

9.- ALL FULL PENETRATION WELD SHALL BE CONTINUOUSLY INSPECTED PER AWS D1.1 & D1.8.

10.- SHOP CONNECTIONS SHALL BE WELDED UNLESS NOTED OTHERWISE. ALL FILLET WELDS SHALL BE A MINIMUM OF 3/16" ER70SX ELECTRODES UNLESS OTHERWISE NOTED. GMAW IS ACCEPTABLE.

11.- ALL STAINLESS STEEL BOLTS SHALL COMPLY WITH ASTM F-593, YIELD STRENGTH= 65 KSI, TENSILE STRENGTH=100 KSI MINIMUM, ALLOY GROUP 2, CONDITION CW1. ALL NUTS SHALL COMPLY WITH ASTM F-594 ALLOY GROUP 2, CONDITION CW1, REFERRING TO RCSC, ASTM F-593 IS NOT CONSIDERED AS HIGH STRENGTH BOLTS. BOLTS SHALL BE TIGHTENED TO A SNUG TIGHT CONDITION (ST).

12.- ALL STRUCTURAL STEEL (ITEMS FROM NOTE 5) SHALL BE POWDER COATED WITH ONE SHOP COAT (2.5 MILS MIN.) OF ZINC-RICH PRIMER, UNDERCOAT, AND FINISH COAT, OR EQUIVALENT PAINT SYSTEM. THIS COAT IS A WEATHER RESISTANT POWDER COATING BASED ON POLYESTER TGIC (MANUFACTURED BY SHERWIN WILLIAMS, ASKO NOBEL, PPG OR TIGER DRYLAC). TO ACHIEVE OPTIMUM ADHESION, IT IS RECOMMENDED THAT THE PROPER TREATMENT AND DRYING TAKE PLACE BEFORE COATING. POLYESTER POWDER (TGIC) SPECIFICATIONS SHALL BE AS FOLLOWS:
- PENCIL HARDNESS (ASTM D-3363). - HUMIDITY (ASTM D-2247)
- SOLVENT RESISTANCE (PCI METHOD) - 50 DBL RUBS SL. SOFTNESS.

13.- ALL STEEL ROUND TUBING (ITEMS FROM NOTE 4) SHALL BE TRIPLE COATED FOR RUST PROTECTION USING THE IN-LINE ELECTROPLATING COAT PROCESS. TUBING SHALL BE INTERNALLY COATED WITH ZINC AND ORGANIC COATINGS TO PREVENT CORROSION AS MANUFACTURED BY ALLIED TUBE & CONDUIT.

14.- ALL EXPOSED STEEL FASTENERS SHALL BE STAINLESS STEEL (TYPE 304 MINIMUM), HOT DIP GALVANIZED (ASTM A153, CLASS D MINIMUM OR ASTM F2329) AS APPLICABLE, OR PROTECTED WITH CORROSION PREVENTIVE COATING THAT DEMONSTRATED NO MORE THAN 2% OF RED RUST IN MINIMUM 1,000 HOURS OF EXPOSURE IN SALT SPRAY TEST PER ASTM B117. ZINC-PLATED FASTENERS DO NOT COMPLY WITH THIS REQUIREMENT.

CONCRETE SPECIFICATION

1.- CONCRETE SHALL BE SAMPLED AND TESTED PER CBC 2022 SECTION 1903A & SHALL BE INSPECTED PER SECTION 1903A.

2.- CONCRETE TO BE F'c= 4500 PSI, TYPE V CEMENT PLUS POZZOLAN OR SLAG CEMENT, MAXIMUM WATER/CEMENT RATIO OF 0.45, PER ACI 318-19 CHAPTER 19. (NO ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL BE USED.) REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 AND TO BE Fy= 60000 PSI . MIN. GR. 60. ALSO COATED ACCORDING TO ASTM A767/ A767M, STANDARD SPECIFICATION SHALL BE FOR ZINC-COATING (GALVANIZED) STEEL BARS FOR CONCRETE REINFORCEMENT.

3.- ALL ANCHOR BOLTS SET IN NEW CONCRETE (WHEN APPLICABLE) SHALL COMPLY WITH ASTM F-1554. GRADE 36 (GALVANIZED PER ASTM A153, CLASS D MINIMUM OR ASTM F2329).
ANCHOR BOLT'S DIAMETER NEEDS TO BE AS FOLLOW:
A) ANCHOR BOLT Ø1 1/4"

4.- CERTIFIED MILL TEST REPORTS ARE TO BE PROVIDED FOR EACH SHIPMENT OF REINFORCEMENT.

5.- ALL NON-SHRINK GROUT SHALL HAVE A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 5000 PSI, AND SHALL COMPLY THE REQUIREMENTS OF ASTM C1109, ASTM C939, ASTM C1090, ASTM C1107, WHEN APPLICABLE.

6.- CONCRETE EXPOSED TO FREEZING-AND-THAWING CYCLES SHALL BE AIR ENTRAINED PER ACI 318 SECTION 19.3.3.

FABRIC SPECIFICATION

1.- FABRIC SHALL BE MANUFACTURED BY MULTIKNIT LTD., WHICH MEETS THE SPECIFICATIONS LISTED ON PAGE 2000, AND SHALL BE FABRICATED FROM POLYETHYLENE MATERIALS. MINIMUM SEAM LENGTH 3/4".

2.- THE FABRIC SHALL RETAIN 80% OF ITS TENSILE AND TEARING STRENGTH AFTER ULTRAVIOLET EXPOSURE PER ASTM G93 USING A 313 NM LIGHT SOURCE FOR 500 HOURS WHILE MOISTENED FOR 1 HOUR EVERY 12 HOURS.

3.- PROVIDE CERTIFICATION BY MANUFACTURER AND STATE FIRE MARSHAL TO SCHOOL'S DISTRICT INSPECTOR OF RECORD AT SITE SPECIFIC INSTALLATION. COPY OF FIRE CERTIFICATION SHALL BE SENT TO DSA.

4.- FABRIC SHALL REQUIRE ANNUAL INSPECTION AND MAINTENANCE BY THE DISTRICT. FIRE TEST ON FABRIC: NFPA 701 TEST 2 AND ASTM E 84 EXTENDED 30 MINUTES TEST. FLAME SPREAD INDEX (FSI) 10. SMOKE DEVELOPED INDEX (SDI): 50. FABRIC IS ACCEPTABLE FOR USE IN WILDLIFE URBAN INTERFACE AREA.

5.- FABRIC TOP NEEDS TO BE REMOVED IF SNOW EXCEEDING 5 PSF ARE ANTICIPATED, FABRIC TOP NEEDS TO BE REMOVED IF WINDS EXCEEDING 115 MPH ARE ANTICIPATED.

6.- A VISUAL INSPECTION LOOKING FOR TEAR AND ABNORMAL WEAR IN FABRIC MATERIAL AND THREAD IS REQUIRED PRIOR TO RE-INSTALLATION. USA SHADE & FABRIC STRUCTURES SHALL BE NOTIFIED IF SIGNIFICANT DAMAGE IS PRESENT BEFORE RE-INSTALLATION.

AIRCRAFT CABLE

1.- FOR FABRIC ATTACHMENT USE 3/8" 7x19 GALV. CABLE PER ASTM A1023/A1023M, WITH A BREAKING STRENGTH VALUE OF 14,400 LBS. CABLE SHALL BE TENSIONED TO 300 LBS MINIMUM AND 500 LBS MAXIMUM. THE MAXIMUM CALCULATED CABLE ALLOWABLE CAPACITY IS Sa=4909 LB.

2.- CABLES SHALL BE FED THROUGH THE FABRIC SLEEVES AROUND THE PERIMETER OF THE CANOPY AND TENSIONED UNTIL THE FABRIC PANELS (DESIGNED PURPOSELY UNDERSIZED) REACH A TAUT APPEARANCE. ANY LONG TERM CABLE SAG SHALL BE MINIMIZED DURING THE MAINTENANCE RE-TIGHTING VISITS AS REQUIRED.

MAXIMUM OCCUPANT LOAD (PER CBC 2022 TABLE 1604A.5)
-K-12: 250 PERSONS
-PUBLIC ASSEMBLY: 300 PERSONS
-EDUCATIONAL OCCUPANCIES
ABOVE 12TH GRADE: 500 PERSONS

CBC PC DESIGN NOTES

BUILDING CODE	CBC 2022 (BASED ON IBC 2021)
FLOOR LIVE LOAD	N/A
ROOF LIVE LOAD	RLL 5 PSF

ALLOWABLE SOIL PRESSURE:
DL + LL (CONC FTG) 1500 PSF
DL + LL + SEISMIC (CONC FTG) 1500 PSF
LATERAL BEARING DESIGN VALUE 100 PSF/FT BELOW NATURAL GRADE, PER TABLE 1806A.2

TWO TIMES THE TABULAR VALUE IS USED (200 PSF/FT)
PER CBC SECTION 1806A.3.4.
ALLOWABLE PIER FRICTIONAL RESISTANCE 250 PSF MAXIMUM
BASED ON SECTION 1810A.3.3.1.4 (ONE-SIXTH OF THE BEARING VALUE).
UPLIFT FRICTIONAL RESISTANCE HAVE A SAFETY FACTOR OF 3.

ROOF SNOW LOAD	5 PSF
ICE LOAD	ZERO PSF
FLOOD HAZARD AREA	ZONE X

WHEN A SITE SPECIFIC PROJECT IS LOCATED IN A FLOOD ZONE OTHER THAN ZONE X, A LETTER STAMPED AND SIGNED FROM A SOILS ENGINEER IS NEEDED TO VALIDATE THE ALLOWABLE SOIL VALUES SPECIFIED IN THE PC ARE STILL APPLICABLE.

WIND DESIGN DIRECTIONAL PROCEDURE: ASCE 7-16, SECTION 27.3.2
NOTE: WIND DESIGN IS LIMITED TO UNOBSTRUCTED CLEAR FLOW CONDITION

-BASIC DESIGN WIND SPEED (3 SEC GUST)	V	115 MPH
-ASD WIND LOAD (CBC 2022 SEC. 1603A.1.4)	V_{ASD}	90 MPH
-WIND EXPOSURE FACTOR	C	
-TOPOGRAPHIC FACTOR	Kzt	1
-RISK CATEGORY	II	
-VELOCITY PRESSURE EXPOSURE COEFFICIENT	Kz	0.85
-VELOCITY PRESSURE	qz	24.46 PSF

SEISMIC DESIGN:
-SITE CLASS D
NOTE: UNLESS A SITE-SPECIFIC GROUND MOTION HAZARD ANALYSIS IS PERFORMED, THE SM1 VALUE INCREASED BY 50% SHALL BE LESS THAN THE DESIGN CRITERIA STATED HEREIN.

	SS	3.00g
	S1	1.389g
-SPECTRAL RESPONSE COEFFICIENTS	SDS	2.00
	SD1	1.39
-LATERAL FORCE RESISTING SYSTEM G.2 ORDINARY CANTILEVERED COLUMN SYSTEM.		
-SEISMIC IMPORTANCE FACTOR	Ie	1.0
-DESIGN BASE SHEAR AT BASE	V	3072 LB
-SEISMIC RESPONSE COEFFICIENTS	Cs	1.6
-RESPONSE MODIFICATION FACTOR	R	1.25
-ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE	
-RISK CATEGORY	II	
-SEISMIC DESIGN CATEGORY		E
-SITE COEFFICIENT CATEGORY	Fa	1.2
	Fv	1.5
-REDUNDANCY FACTOR	ρ	1.3

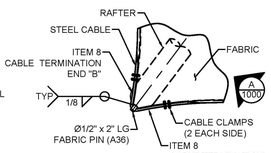
GEOHAZARD REPORT IS NOT REQUIRED FOR OPEN FABRIC STRUCTURES 1,600 SQF OR LESS COMPLYING WITH THE REQUIREMENTS OF IR A-4 SECTION 3.1.1. OPEN FABRIC SHADE STRUCTURES GREATER THAN 1,600 SQUARE FEET UP TO A MAXIMUM OF 4,000 SQUARE FEET AND COMPLYING WITH THE REQUIREMENTS NOTED IN IR A-4 SECTION 3.1.1 DO NOT REQUIRE A GEOHAZARD REPORT PROVIDED A GEOTECHNICAL REPORT INDICATES THAT NO LIQUEFACTION POTENTIAL EXISTS.

ARCHITECT OF RECORD TO DETERMINE IF SPECIFIC SITE IS IN GEOLOGIC HAZARD ZONE. GEOHAZARD REPORT REQUIREMENTS PER DSA IR A-4.

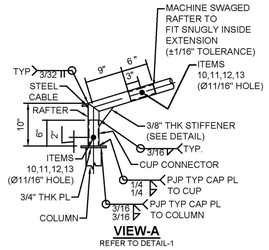
PC OPTIONS SHALL NOT INCLUDE LIQUEFIABLE SOIL (EXCEPTION: OPEN FABRIC SHADE STRUCTURES 1,600 SQUARE FEET OR LESS COMPLYING WITH REQUIREMENTS OF IR A-4 SECTION 3.1.1). IF STRUCTURE IS LOCATED IN AN AREA WITH LIQUEFIABLE SOIL OR SITE CLASS F, OVER-THE-COUNTER SUBMITTAL IS NOT ALLOWED AND REGULAR PROJECT SUBMITTAL IS REQUIRED. IF SITE IS NOT IN A MAPPED LIQUEFACTION HAZARD ZONE, IT MAY BE PRESUMED THAT NO LIQUEFACTION HAZARD EXISTS ON THAT SITE UNLESS A SITE-SPECIFIC GEOTECHNICAL REPORT IDENTIFIES SUCH HAZARD.

MINIMUM FOUNDATION SETBACK LIMIT IN ADJACENT SLOPE: THE DEPTH OF REQUIRED PIER EMBEDMENT SHALL START FROM AN ELEVATION THAT CORRESPONDS WITH A HORIZONTAL CLEAR DISTANCE OF 14 FEET THAT INTERSECT WITH THE SLOPE (DAYLIGHTING). IF SETBACK LIMITS ARE SMALLER THAN CBC REQUIRES, A SITE-SPECIFIC SOILS REPORT IS REQUIRED.

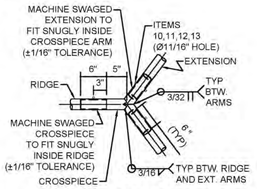
MINIMUM CLASS 2 PROJECT INSPECTOR REQUIRED.



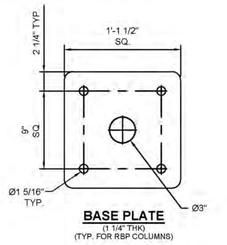
DETAIL 1
REFER TO TOP VIEW



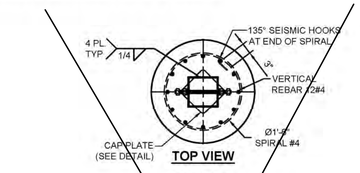
VIEW-A
REFER TO DETAIL-1



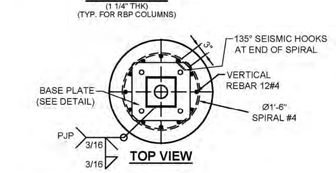
DETAIL-2
REFER TO TOP VIEW



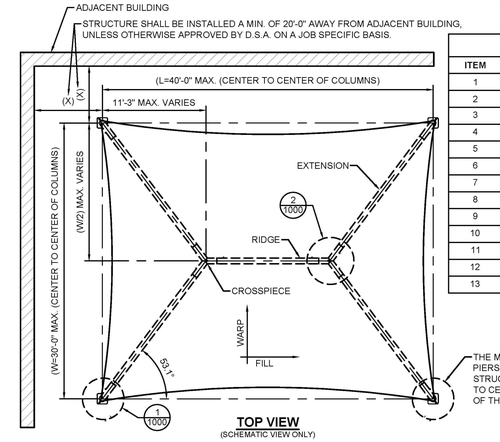
BASE PLATE
(1 1/4" THK)
(TYP. FOR RBP COLUMNS)



DRILLED PIER FOOTING-PIH
(EMBEDDED, PIH)
(USE FOR NON-CONSTRAINED CASES)



DRILLED PIER FOOTING-RBP
(RECESSED BASE PLATE, RBP)
(USE FOR NON-CONSTRAINED CASES)
(OPTIONAL)

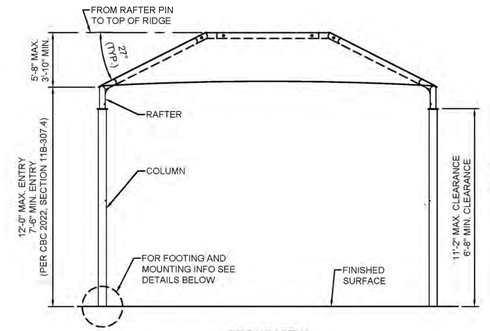


TOP VIEW
(SCHEMATIC VIEW ONLY)

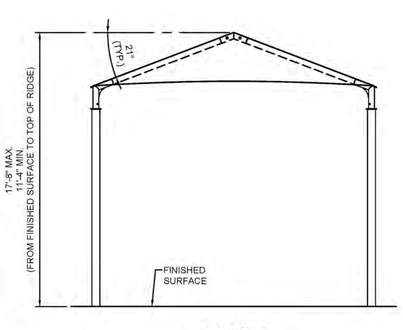
THE MINIMUM CLEARANCE REQUIRED BETWEEN DRILLED PIERS WHEN PLACING MULTIPLE OPEN FABRIC SHADE STRUCTURES ADJACENT TO EACH OTHER, FROM CENTER TO CENTER, IS THREE TIMES THE LEAST HORIZONTAL DIMENSION OF THE PIER PER CBC 2022 SEC. 1810A.2.5.

LIST OF MATERIALS

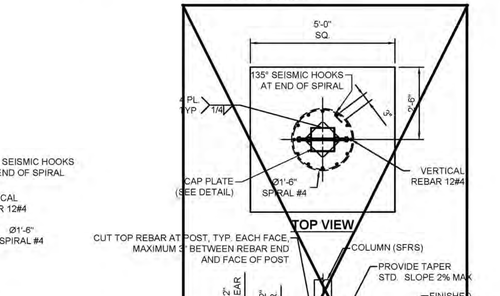
ITEM	QTY	DESCRIPTION	MATERIAL
1	4	COLUMN	HSS 7.0 x 7.0 x 0.250
2	4	CUP CONNECTOR (6" LG)	HSS 4.5 x 0.375
3	4	RAFTER (GALVANIZED STEEL TUBE)	5.00 GA 7 RD. TUBE (HSS 5.0 x 0.188)
4	4	EXTENSION (GALVANIZED STEEL TUBE)	5.00 GA 7 RD. TUBE (HSS 5.0 x 0.188)
5	2	CROSSPIECE (GALVANIZED STEEL TUBE)	5.00 GA 7 RD. TUBE (HSS 5.0 x 0.188)
6	1	RIDGE (GALVANIZED STEEL TUBE)	5.00 GA 7 RD. TUBE (HSS 5.0 x 0.188)
7	1	FABRIC TOP	FR COLOURSHADE 190/F5
8	1	Ø3/8" CABLE	GALVANIZED STEEL
9	4	Ø3/8" CABLE CLAMP	GALVANIZED STEEL
10	14	Ø5/8"-11NC x 6 1/2" HEX BOLT (ST)	316 SS
11	14	Ø5/8"-11NC HEX NUT	316 SS
12	28	Ø5/8" FLAT WASHER	316 SS
13	14	Ø5/8" SPLIT LOCK WASHER	316 SS



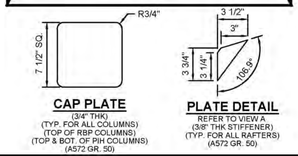
FRONT VIEW
(SCHEMATIC VIEW ONLY)



SIDE VIEW
(SCHEMATIC VIEW ONLY)

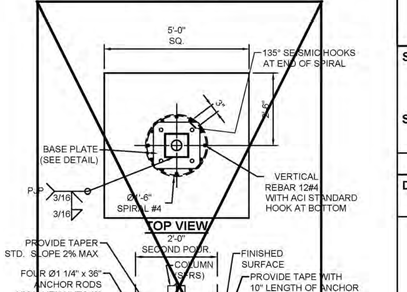


ALTERNATE SPREAD FOOTING
(EMBEDDED, PIH)
(OPTIONAL)



CAP PLATE
(3/4" THK)
(TYP. FOR ALL COLUMNS)
(TOP OF RBP COLUMNS)
(TOP & BOT. OF PIH COLUMNS)
(A572 GR. 50)

PLATE DETAIL
REFER TO VIEW A
(3/8" THK STIFFENER)
(TYP. FOR ALL RAFTERS)
(A572 GR. 50)



ALTERNATE SPREAD FOOTING
(RECESSED BASE PLATE, RBP)
(OPTIONAL)

LICENSED ARCHITECT
DAVID HIGGINS
C19168
10-31-25
RENEWAL DATE
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
ALBERT MARK CLARK
No. 3693
STRUCTURAL
STATE OF CALIFORNIA

10/18/2023

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ FLS ☑ ACS ☒ CG ☐
DATE: 10/30/2023

USASHADE & Fabric Structures
CORPORATE HEADQUARTERS
2580 ESTERS BLVD. SUITE 100
DFW AIRPORT, TX, 75261
800-966-5005

CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
CLARK COUNTY MANUFACTURER CERTIFICATION NUMBER (NEVADA): 355

CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:
DSA401304012-22

STRUCTURE TYPE:
HIP
DSA

SIZE: MAXIMUM
30' x 40' x 12'e MAX.

SCALE : NONE

DRAWING SIZE: D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	HH	12/01/22
Design By :	OS	12/01/22
Approved By :	MB	12/01/22

DRAWING DESCRIPTION:
PRODUCT INFORMATION

DWG. DSA401304012-22

SHEET 7.1-1000

REV. NC

Aircraft Cable

Preformed, made in accordance with commercial specifications military and federal specification rope available.

Carbon Steel (Aircraft Cable) - Galvanized cable has the highest strength and greatest fatigue life of the materials offered. It has good to fair corrosion resistance in rural to industrial atmosphere environments. This material is most widely used for small diameter cables. Tin over galvanized cable offers greater corrosion resistance and reduced friction over pulleys.

7 x 19

7 x 19		Galvanized Min. Breaking Strengths (lbs)
Dia. (In)	Approx. Wt 1000 Ft/lbs	
3/32	17.	1,000
1/8	29.	2,000
5/32	45.	2,800
3/16	65.	4,200
7/32	86.	5,600
1/4	110.	7,000
9/32	139.	8,000
5/16	173.	9,800
3/8	243.	14,400

Multiknit INTERNATIONAL

190/F5 Fire rated specifications

Standard range

Revision 0 28-Oct-12

Colour	Shade %	UV Block %	Average GSM	Average Warp break strength kgs	Average Elongation %	Average Weft break strength kgs	Average Elongation %	Average Burst Kpa	Average Burst to Mass ratio
Desert Sand	80	92	185	50	40	72	73	156	0.84
Blue	80	85	185	50	40	72	73	156	0.84
Brown	85		185	50	40	72	73	156	0.84
Green	80	85	185	50	40	72	73	156	0.84
Red	80	86	185	50	40	72	73	156	0.84
Silver	80	81	185	50	40	72	73	156	0.84
Terracotta	75	82	185	50	40	72	73	156	0.84
Yellow	80	89	185	50	40	72	73	156	0.84
				110 LB		159 LB		3258 PSF	

CONVERSION TO IMPERIAL UNITS:
185 GSM = .0378 psf
50 KGS = 110 Lb
72 KGS = 159 Lb
156 Kpa = 3258 psf

Notes:
- 190/F5 conforms to The California State Fire Marshal Title 19 Test for Small scale Fabrics
- Tear tests are done using a 50mm wide strip and a cross head speed of 500mm/min
- This report has been compiled using the mean results from all tests conducted on the given sample by our Quality Control Laboratory, the information provided is considered to be a good reflection of the relevant properties of the fabric tested. These results must only be used as an indication of the quality and characteristics of the fabric tested.
Company cannot be held responsible or liable in any way whatsoever should this information differ to that of a registered testing institution.

pp
Deon Joubert
General Manager - Multiknit (Pty) Ltd

Tommy Rogers
Managing Director - Multiknit (Pty) Ltd

CAL FIRE

FLAME RETARDANT

Fabric Registration

LICENSE NUMBER: F-052001

COLOURSHADE 190/F5

Product Marketed by:

MULTIKNIT (PTY) LTD
BOX 798 WHITE RIVER 1240
MPUMALANGA SOUTH AFRICA, ,

Issue Date : 05/08/2023
Expiration Date : 06/30/2024

This product meets the minimum requirements of flame resistance established by the California State Fire Marshal for products identified in Section 13115, California Health and Safety Code. The scope of the approved use of this product is provided in the current edition of the CALIFORNIA APPROVED LIST OF FLAME RETARDANT CHEMICALS AND FABRICS, GENERAL AND LIMITED APPLICATIONS CONCERNS published by the California State Fire Marshal.

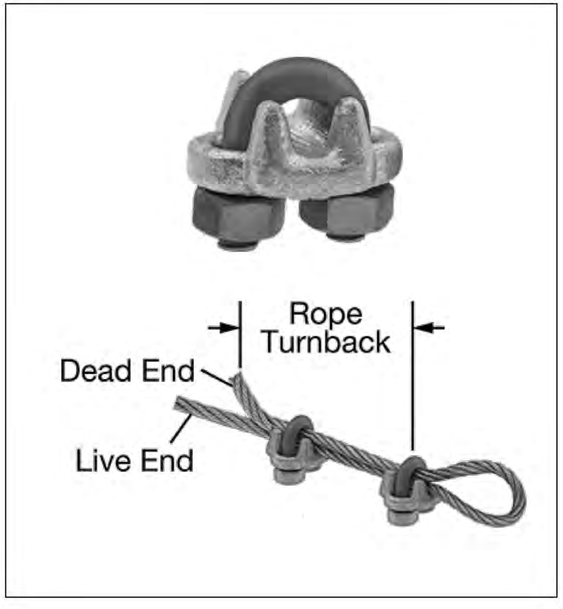
Issued By Cortney Walker
Fire Engineering License Manager
Fire Engineering & Investigations Division

Reviewed and Approved By Patricia Setter
Deputy State Fire Marshal III
Fire Engineering & Investigations Division

OFFICE OF THE STATE FIRE MARSHAL

Please visit calfire.govmotus.org for more information on Licensing and Permitting with CAL FIRE

Page 1 of 1



FORGED WIRE ROPE CLAMP

FITTING TYPE ROPE CLAMP
FABRICATION: FORGED
MATERIAL: GALVANIZED STEEL
FOR WIRE ROPE DIAMETER 3/8"
NUMBER OF CLAMPS REQUIRED: 2
ROPE TURNBACK: 6 1/2"
FOR WIRE ROPE CONSTRUCTION 7 × 19
ATTACHMENT TYPE: LOOP
CLAMP:WIDTH 2", HEIGHT 1 15/16", THICKNESS 1 11/16"
REQUIRED INSTALLATION TOOL TORQUE WRENCH
REQUIRED TORQUE 45 FT.-LBS.
CAPACITY 80% OF THE ROPE'S CAPACITY
SPECIFICATIONS MET ASME B30.26, FED. SPEC. FF-C-450

LICENSED ARCHITECT DAVID HIGGINSON C19168 10-31-25 RENEWAL DATE STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER MARK ALBERT LANE No. 3693 STRUCTURAL STATE OF CALIFORNIA

10/18/2023

IDENTIFICATION STAMP
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APP: 01-121319 INC: 1
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USASHADE & Fabric Structures
CORPORATE HEADQUARTERS
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CERTIFICATIONS:
IAS CERTIFICATION No: FA-428
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CUSTOMER:
San Rafael City Schools

PROJECT NAME:
Sun Valley Elementary School

LOCATION:
75 Happy Lane
San Rafael, CA 94901

MODEL NUMBER:
DSA401304012-22

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 04-121917 PC
REVIEWED FOR
SS ☑ PLS ☑ ACS ☒ CG ☐
DATE: 10/30/2023

STRUCTURE TYPE:
HIP
DSA
SIZE: MAXIMUM
30' x 40' x 12'e MAX.

SCALE : NONE

DRAWING SIZE: D

PRE-CHECK (PC) DOCUMENT
Code : 2022 CBC
A separate project application for construction is required.

Eng. By :	HH	12/01/22
Design By :	OS	12/01/22
Approved By :	MB	12/01/22

DRAWING DESCRIPTION:
SPECIFICATIONS

DWG. DSA401304012-22

SHEET 7.2-2000

REV. NC

SUN VALLEY ELEMENTARY SCHOOL TK PHASE

SHEET LIST

SHEET NO	SHEET NAME
S001	SHEET LIST AND GENERAL NOTES
S002	GENERAL NOTES AND LAP SCHEDULES
S201	RETAINING WALLS AND CONCRETE DETAILS
S202	CONCRETE DETAILS

ABBREVIATION	DESCRIPTION
(E)	EXISTING
(N)	NEW
ABV	ABOVE
ADDL	ADDITIONAL
ADJ	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
ALT	ALTERNATE
APPRX	APPROXIMATE
AR	ANCHOR RODS
ARCH	ARCHITECT OR ARCHITECTURAL
B/	BOTTOM OF
B/B	BACK TO BACK
BAL	BALANCE
BF	BRACED FRAME
BLDG	BUILDING
BLK	BLOCK
BLKG	BLOCKING
BLW	BELOW
BM	BEAM
BOT	BOTTOM
BRB	BUCKLING RESTRAINED BRACE
BRDG	BRIDGING
BRG	BEARING
BS	BOTH SIDES
BTWN	BETWEEN
C	COMPRESSION
C/C	CENTER TO CENTER
CIP	CAST-IN-PLACE
CJP	COMPLETE JOINT PENETRATION
CL	CENTER LINE
CLR	CLEAR OR CLEARANCE
CMU	CONCRETE MASONRY UNIT
COL	COLUMN
COMP	COMPRESSION
CONC	CONCRETE
CONN	CONNECTION(S)
CONST	CONSTRUCTION
CONT	CONTINUOUS
CTR	CENTER(ED)
CTRSK	COUNTERSINK
db	DIAMETER OF BOLT OR REBAR
DBL	DOUBLE
DCW	DEMAND CRITICAL WELD
DEG	DEGREE(S)
DET	DETAIL
DIA	DIAMETER
DIAG	DIAGONAL
DIM(S)	DIMENSION(S)
DL	DEAD LOAD
DWG(S)	DRAWING(S)
DWL	DOWEL(S)
EA	EACH
ECC	ECCENTRICITY
EF	EACH FACE
EL	ELEVATION
ELEC	ELECTRICAL
ENGR	ENGINEER
EOS	EDGE OF SLAB
EQ	EQUAL
EQUIP	EQUIPMENT
EW	EACH WAY
EXP	EXPANSION
EXT	EXTERIOR
F/	FACE OF
F/F	FACE TO FACE
FF	FINISH FLOOR
FIN	FINISH(ED)
FLR	FLOOR
FND	FOUNDATION
FP	FIREPROOF(ING)
FRM'G	FRAMING
FS	FAR SIDE
FTG	FOOTING
GA	GAGE, GAUGE
GALV	GALVANIZED
GB	GRADE BEAM
GEN	GENERAL
GR	GRADE
HK	HOOK
HORIZ	HORIZONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION (TUBE STEEL)
HT	HEIGHT
ID	INSIDE DIAMETER
IF	INSIDE FACE
INFO	INFORMATION
INT	INTERIOR
INTRM	INTERMEDIATE
JST(S)	JOIST(S)
JT	JOINT
K	KIPS (1,000 POUNDS)
KLF	KIP PER LINEAR FOOT
KSF	KIP PER SQUARE FOOT

ABBREVIATION	DESCRIPTION
LBS	POUNDS
LCS	LAP COMPRESSION SPLICE
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LONG	LONGITUDINAL
LP	LOW POINT
LTS	LAP TENSION SPLICE OR CLASS "B" LAP SPLICE
LWC	LIGHTWEIGHT CONCRETE
M	MOMENT
MATL	MATERIAL
MAX	MAXIMUM
MB	UNFINISHED MACHINE BOLT
MC	MOMENT CONNECTION(S)
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE
NW	NORMAL WEIGHT
NWC	NORMALWEIGHT CONCRETE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OH	OPPOSITE HAND
OPNG(S)	OPENING(S)
OPP	OPPOSITE
OSL	OUTSTANDING LEG
PAF	POWDER ACTUATED FASTENER
PC	PIECE
PCY	POUNDS PER CUBIC YARD
PERP	PERPENDICULAR
PJP	PARTIAL JOINT PENETRATION
PL	PLATE
PRLL	PARALLEL
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT
RAD	RADIUS
REF	REFERENCE
REINF	REINFORCE(D) (ING) OR (MENT)
REQD	REQUIRED
SCHED	SCHEDULE(D)
SDL	SUPERIMPOSED DEAD LOAD
SECT	SECTION
SER	STRUCTURAL ENGINEER OF RECORD
SF	SQUARE FOOT (FEET)
SFRS	SEISMIC FORCE RESISTING SYSTEM
SHT	SHEET
SIM	SIMILAR
SMRF	SPECIAL MOMENT RESISITNG FRAME
SMS	SHEET METAL SCREW(S)
SOG	SLAB ON GRADE
SP	SPACE
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
STD	STANDARD
STL	STEEL
STR	STRUCTURE
STRCTL	STRUCTURAL
SYMM	SYMMETRICAL
T	TENSION
T&B	TOP AND BOTTOM
T/	TOP OF
TD	TIE DOWN
TEMP	TEMPERATURE OR TEMPORARY
TEN	TENSION
THK	THICK OR THICKNESS
THRD'D	THREADED
TRANSV	TRANSVERSE
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
V	SHEAR
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
WP	WORK POINT
WPFG	WATERPROOFING
WS	WATERSTOP
WT	WEIGHT
WWR	WELDED WIRE REINFORCEMENT

GR GENERAL REQUIREMENTS

GR-1) AS USED IN THESE GENERAL NOTES:
"DRAWINGS" MEANS THE LATEST STRUCTURAL DESIGN DRAWINGS, UON.
"SPECIFICATIONS" MEANS THE LATEST PROJECT SPECIFICATIONS, UON.
"CONTRACT DOCUMENTS" IS DEFINED AS THE DESIGN DRAWINGS AND THE SPECIFICATIONS
"SER" IS DEFINED AS THE STRUCTURAL ENGINEER OF RECORD FOR THE STRUCTURE IN ITS FINAL CONDITION.
"DESIGN PROFESSIONALS" IS DEFINED AS THE OWNER'S ARCHITECT AND SER.
"MEP" INCLUDES, BUT IS NOT LIMITED TO MECHANICAL, ELECTRICAL.
"CONTRACTOR" IS DEFINED TO INCLUDE ANY OF THE FOLLOWING: GENERAL CONTRACTOR AND THEIR SUBCONTRACTORS, CONSTRUCTION MANAGER AND THEIR SUBCONTRACTORS, STRUCTURAL STEEL FABRICATOR OR STRUCTURAL STEEL ERECTOR.
"STRUCTURE IN ITS FINAL CONDITION" MEANS ALL STRUCTURAL ELEMENTS SHOWN ON THE STRUCTURAL CONTRACT DOCUMENTS ARE INSTALLED AND COMPLETELY CONNECTED AND INSPECTED WITH NO OUTSTANDING NON-COMPLIANCE ISSUES.
"DELEGATED DESIGN" MEANS A SCOPE OF WORK THAT MEETS PERFORMANCE CRITERIA ESTABLISHED IN THE CONTRACT DOCUMENTS AND IS TO BE COMPLETED BY THE CONTRACTOR'S LICENSED ENGINEER.
"SERVICE LEVEL" LOADS ARE DEFINED AS NOMINAL OR UNFACTORED LOADS TO BE COMBINED USING ALLOWABLE STRESS LOAD COMBINATIONS
"STRENGTH LEVEL" LOADS ARE DEFINED AS FACTORED LOADS TO BE COMBINED USING STRENGTH DESIGN LOAD COMBINATIONS

GR-2) THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF THE STRUCTURAL WORK WITH THE ARCHITECTURAL, CIVIL, MEP CONTRACT DOCUMENTS, AS WELL AS ANY OTHER APPLICABLE TRADES.

GR-3) THE CONTRACTOR IS RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE UNTIL THE CONSTRUCTION OF THE STRUCTURE REACHES ITS FINAL CONDITION.

GR-4) THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION, AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS, FOR NEW AND EXISTING STRUCTURES, AS NECESSARY TO COMPLETE THE PROJECT. NO PORTION OF THE PROJECT WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTOR'S TEMPORARY SUPPORTS AND BRACES. CONTRACTOR SHALL RETAIN A PROFESSIONAL/STRUCTURAL ENGINEER LICENSED CALIFORNIA TO DESIGN TEMPORARY BRACING AND CONSTRUCTION SUPPORTS.

GR-6) THE SPECIFICATIONS ARE AN INTEGRAL PART OF THE CONTRACT DOCUMENTS AND SHALL BE USED IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS.

GR-7) THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS AND COORDINATE WITH THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, DRAWINGS FROM OTHER CONSULTANTS, PROJECT SHOP DRAWINGS AND FIELD CONDITIONS.

GR-8) IN CASES OF CONFLICT BETWEEN DRAWINGS AND/OR SPECIFICATIONS AND OTHER DISCIPLINES OR EXISTING CONDITIONS, CONTRACTOR SHALL NOTIFY THE DESIGN PROFESSIONALS AND OBTAIN CLARIFICATION PRIOR TO BIDDING AND PROCEEDING WITH WORK.

GR-9) APPLY DETAILS, SECTIONS, AND NOTES ON THE DRAWINGS WHERE CONDITIONS ARE SIMILAR TO THOSE INDICATED BY DETAIL, DETAIL TITLE OR NOTE.

GR-10) ONLY USE DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT SCALE DRAWINGS.

GR-11) ASSUME EQUAL SPACING BETWEEN ESTABLISHED DIMENSIONS, IF NOT INDICATED ON DRAWINGS.

GR-15) THE CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITIES FROM DAMAGE.

GR-16) THE CONTRACTOR SHALL VERIFY THAT CONSTRUCTION LOADS DO NOT EXCEED THE CAPACITY OF THE STRUCTURE AT THE TIME THE LOAD IS APPLIED.

GR-17) THE CONTRACTOR SHALL COORDINATE THE BOTTOM OF BASE PLATE ELEVATIONS WITH THE AS-BUILT TOP OF SUPPORT ELEVATIONS.

GR-18) THE CONTRACTOR SHALL VERIFY ALL OPENING SIZES AND LOCATIONS WITH OTHER DISCIPLINES. THE DRAWINGS DO NOT SHOW ALL OPENINGS REQUIRED. ADDITIONAL OPENINGS, BLOCKOUTS AND SLEEVES MAY BE REQUIRED BY OTHER DISCIPLINES AND SHALL BE CONSTRUCTED USING THE TYPICAL DETAILS AND/OR THE CRITERIA INDICATED ON THE DRAWINGS. OPENINGS REQUIRED BUT NOT SHOWN ON THE STRUCTURAL DRAWINGS MUST BE APPROVED BY THE SER.

GR-19) ELEVATIONS INDICATED ON STRUCTURAL DRAWINGS ARE BASED ON A PROJECT DATUM INDICATED ON THE ARCHITECTURAL/CIVIL DRAWINGS.

GR-20) SEE ARCHITECTURAL, CIVIL AND MEP CONTRACT DOCUMENTS FOR ADDITIONAL INFORMATION RELATING TO THE COORDINATION OF STRUCTURAL COMPONENTS INCLUDING, BUT NOT LIMITED TO:

CIVIL:
PROJECT DATUM
SITING OF BUILDING GRID LINES WITH RESPECT TO CITY BENCHMARKS
SITE PREPARATION
BACKFILLING MATERIALS AND REQUIREMENTS
PAVING AND SITE ELEMENTS OUTSIDE OF BUILDING ENVELOPE
NEW AND EXISTING SITE UTILITIES

ARCHITECTURAL:
PLAN DIMENSIONS AND PROJECT DATUM
SLAB EDGE DIMENSIONS
FINISH ELEVATIONS
WATERPROOFING AND DAMP-PROOFING DETAILS
RAMP GEOMETRY, PITS, SLAB SLOPES AND DEPRESSIONS
EMBEDMENTS, INSERTS, BLOCKOUTS, ETC.
EXACT OPENING SIZES FOR PIPES, DUCTS, ETC.
CONCRETE FINISHES
CONCRETE CURBS AND HOUSEKEEPING PADS

MEP:
PIPE AND DUCT SIZES FOR OPENING AND SLEEVE COORDINATION
FLOOR DRAINS
UNDERFLOOR AND PERIMETER DRAINAGE SYSTEMS
EQUIPMENT CURBS
CONDUITS AND EMBEDMENTS IN WALLS AND SLABS

CD CODES AND DESIGN CRITERIA

CD-1) PERFORM ALL CONSTRUCTION IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UON:

CALIFORNIA BUILDING CODE, 2022 EDITION WITH DSA/SS AMENDMENTS

CD-2) RISK CATEGORY: II

CD-3) WIND LOAD DESIGN DATA (STRENGTH LEVEL):

MAIN WIND FORCE RESISTING SYSTEM	
BASIC WIND SPEED, V	95 MPH
EXPOSURE	C

CD-4) SEISMIC LOAD DESIGN DATA (STRENGTH LEVEL):

SEISMIC IMPORTANCE FACTOR (I_e)	1.0
S_s	1.50 g
S_1	0.60 g
S_{DS}	1.20 g
S_{D1}	0.56 g
SITE CLASS	C
SEISMIC DESIGN CATEGORY	D
ANALYSIS PROCEDURE DESCRIPTION	COMPONENT FORCE METHOD CH. 13

DE DEMOLITION

DE-1) THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE MEANS AND METHODS OF DEMOLITION AND THE INTEGRITY AND STABILITY OF THE EXISTING STRUCTURE DURING DEMOLITION UNTIL THE WORK IS COMPLETED. THE CONTRACTOR SHALL PROVIDE SHORING IN REQUIRED LOCATIONS WHERE EXISTING CONSTRUCTION TO REMAIN WILL BE AFFECTED BY DEMOLITION. CONTRACTOR SHALL RETAIN A PROFESSIONAL/STRUCTURAL ENGINEER LICENSED CALIFORNIA TO DESIGN SHORING.

DE-2) THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO ANY STRUCTURAL ELEMENTS WHICH ARE TO REMAIN AND THAT HAVE BEEN DAMAGED DURING THE DEMOLITION PROCESS TO THE COMPLETE SATISFACTION OF THE OWNER. THE REPAIRS SHALL BE AT NO EXPENSE TO THE OWNER. ALL REPAIR WORK SHALL BE DESIGNED BY A PROFESSIONAL/STRUCTURAL ENGINEER LICENSED CALIFORNIA AND SUBMITTED TO THE SER FOR REVIEW AND APPROVAL PRIOR TO COMMENCING REPAIR WORK.

DE-3) ALL EXISTING FRAMING IS INDICATED FOR REFERENCE ONLY AND IS TO BE FIELD VERIFIED BY THE CONTRACTOR. VERIFY THE EXACT EXTENT OF DEMOLITION AT THE SITE. DETERMINE THE NATURE AND EXTENT OF DEMOLITION THAT WILL BE NECESSARY BY COMPARING THE CONTRACT DOCUMENTS WITH THE EXISTING CONSTRUCTION. IMMEDIATELY NOTIFY THE DESIGN PROFESSIONALS OF ANY INCONSISTENCIES.

DE-4) THE CONTRACTOR SHALL USE THE STRUCTURAL CONTRACT DOCUMENTS IN CONJUNCTION WITH THE ARCHITECTURAL AND MEP DEMOLITION CONTRACT DOCUMENTS. IN THE EVENT OF CONFLICTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE DESIGN PROFESSIONALS.

DE-5) THE CONTRACTOR SHALL USE QUALIFIED, EXPERIENCED PERSONNEL FOR DEMOLITION AND REMOVAL OPERATIONS. PERFORM DEMOLITION AND REMOVAL OPERATIONS IN A CAREFUL AND ORDERLY MANNER TO PREVENT HAZARDS TO PERSONS, DAMAGE TO PROPERTY, AND THE SPREADING OF DUST AND DEBRIS.

DE-6) DO NOT PERMIT PORTIONS OF THE STRUCTURE TO FALL NOR DEBRIS TO DROP EXCEPT BY METHODS WHICH WILL INSURE INTEGRITY OF THE STRUCTURE.

DE-7) PRIOR TO THE START OF WORK, VERIFY THAT THE SCOPE OF DEMOLITION INDICATED ON THE CONTRACT DOCUMENTS SHALL NOT DAMAGE, CUT OR DISRUPT SERVICE OF ANY MECHANICAL SYSTEM, ELECTRICAL SYSTEM OR UTILITY EMBEDDED IN THE EXISTING STRUCTURE.

DE-8) DO NOT REMOVE MORE OF THE EXISTING STRUCTURE THAN INDICATED ON CONTRACT DOCUMENTS. DO NOT DAMAGE, MAR, CUT OR DEFACE THE REMAINING STRUCTURE OR MATERIALS TO BE REUSED.

DE-9) THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF REMOVING DEMOLISHED MATERIALS FROM THE SITE IN ACCORDANCE WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS.

DE-10) WHERE NEW OPENINGS IN EXISTING CONCRETE SLABS OR WALLS ARE TO BE CREATED, THE DEMOLITION CONTRACTOR SHALL CORE HOLES AT THE OUTSIDE CORNERS OF THE NEW OPENING PRIOR TO DEMOLITION. SAW-CUT AND DEMOLISH SLAB OR WALL ONLY AFTER THE INSTALLATION OF ALL REQUIRED NEW STRUCTURAL FRAMING AND/OR REINFORCEMENT IN PLAN OR SECTION, UON. SAW CUTTING SHALL BE STRAIGHT AND SHALL NOT EXTEND INTO EXISTING SLAB OR WALL TO REMAIN NOR BEYOND THE HOLES CORED AT THE CORNERS OF THE NEW OPENING.

SU SUBMITTALS

SU-1) THE FOLLOWING ITEMS REQUIRE SUBMITTALS FOR STRUCTURAL REVIEW. THE SER WILL RETURN THE SHOP DRAWING ITEMS WITHIN TEN WORKING DAYS AFTER HAVING RECEIVED THE ELECTRONIC SHOP DRAWING.

CONCRETE REINFORCEMENT LAYOUT
CONCRETE MIX DESIGNS

SU-2) THE CONTRACTOR IS TO REVIEW EACH SUBMITTAL PRIOR TO FORWARDING TO DESIGN PROFESSIONALS. THE CONTRACTOR IS TO STAMP EACH SUBMITTAL VERIFYING THAT THE FOLLOWING IS ADDRESSED:

1. THE SHOP DRAWING IS REQUESTED
2. THE SHOP DRAWING IS BASED ON THE LATEST DESIGN.
3. THE DESIGN PROFESSIONALS' COMMENTS FROM ANY PREVIOUS SUBMITTALS ARE ADDRESSED.
4. THE WORK IS COORDINATED AMONG ALL CONSTRUCTION TRADES.
5. REVISIONS FROM PREVIOUS SUBMITTALS ARE CLEARLY MARKED BY CIRCLING OR CLOUDS.
6. SUBMITTAL IS COMPLETE.
7. SUBMITTAL DOES NOT INCLUDE SUBSTITUTION REQUEST
8. SUBMITTAL SHALL INCLUDE A STAMP INDICATING PROJECT NAME AND LOCATION, SUBMITTAL NUMBER.

THE SER SHALL RETURN, WITHOUT COMMENT, SUBMITTALS WHICH THE CONTRACTOR HAS NOT STAMPED OR WHICH DO NOT MEET THE ABOVE REQUIREMENTS. THE SER'S REVIEW OF SUBMITTALS SHALL BE FOR GENERAL CONFORMANCE WITH THE DESIGN INTENT. NO WORK SHALL BE STARTED WITHOUT SUCH REVIEW.

FN FOUNDATIONS

FN-1) THE FOUNDATION DESIGN IS BASED ON THE GEOTECHNICAL REPORT BY ATLAS TECHNICAL CONSULTANTS LLC, DATED AUGUST 28, 2023 AND SUPPLEMENTAL GEOTECHNICAL RECOMMENDATIONS BY ATLAS TECHNICAL CONSULTANTS LLC, DATED NOVEMBER 21, 2023, FEBUARY 8, 2024 AND MARCH 19, 2024

FN-2) FOUNDATIONS HAVE BEEN DESIGNED BASED ON THE FOLLOWING DESIGN VALUES FROM THE GEOTECHNICAL REPORT (SERVICE LEVEL):

NET ALLOWABLE BEARING CAPACITY:

ROAD ALONG WESTERN AND NORTHERN PERIMETER OF CAMPUS:
3000 PSF FOR DEAD PLUS LIVE LOADS
4000 PSF FOR COMBOS INCLUDING WIND OR SEISMIC

TK CLASSROOM AREA(SEE CIVIL AND LANDSCAPE):
2400 PSF FOR DEAD PLUS LIVE LOADS
3200 PSF FOR COMBOS INCLUDING WIND OR SEISMIC

SEE GEOTECHNICAL REPORT FOR ADDITIONAL REQUIREMENTS AND INFORMATION. DESIGN VALUES SHALL BE FIELD VERIFIED BY QUALIFIED GEOTECHNICAL ENGINEER RETAINED BY THE OWNER.

FN-3) THE CONTRACTOR SHALL VERIFY FOUNDATION INSTALLATION AND CONSTRUCTION IS IN CONFORMANCE WITH THE RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT.

FN-4) CONTRACTOR SHALL BE RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION. WHERE NECESSARY, SHEET AND SHORE THE EXCAVATION WITH ALL REQUIRED TIEBACKS AND BRACING AS DETERMINED BY CONTRACTOR'S ENGINEER.

FN-6) DO NOT BACKFILL AGAINST CANTILEVER RETAINING WALLS UNTIL THE CONCRETE HAS ATTAINED 100% OF ITS DESIGN STRENGTH.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

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DSA Application: 01-121319
Project Number: U23151.00

Issue Date: November 22, 2023

Revisions

NUMBER	DESCRIPTION	DATE

SHEET LIST AND GENERAL NOTES

S001

DSA SUBMITTAL

CM CONCRETE MATERIALS

CM-1) CONCRETE STRENGTHS AND WEIGHT

LOCATION	MIN COMPRESSIVE STRENGTH (PSI)	MAX WEIGHT (PCF)	MIN/MAX % CLASS F FLY ASH
SITE RETAINING WALLS	4,000 PSI @ 28-DAY	145	15-35
FOOTINGS	4,000 PSI @ 56-DAY	145	35-50
NON-SHRINK GROUT	8,000 PSI @P 28-DAY	N/A	N/A

CM-2) ALL CONCRETE SHALL BE THOROUGHLY CONSOLIDATED.

CM-3) THE USE OF CALCIUM CHLORIDE AND OTHER CHLORIDE CONTAINING AGENTS IS PROHIBITED. THE USE OF RECYCLED CONCRETE IS PROHIBITED. PLACEMENT WITHIN AND CONTACT BETWEEN ALUMINUM ITEMS, INCLUDING ALUMINUM CONDUIT, AND CONCRETE IS PROHIBITED.

CM-4) SUBMIT CONCRETE MIX DESIGNS FOR EACH DESIGN AND STRENGTH OF CONCRETE.MIX DESIGNS SHALL BE PREPARED OR REVIEWED BY AN APPROVED INDEPENDENT TESTINGAGENCY RETAINED BY THE CONTRACTOR IN ACCORDANCE WITH REQUIREMENTS OF ACI 301 AND ACI 318, SIGNED BY A REGISTERED DESIGN PROFESSIONAL LICENSED TO PRACTICE AS A PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED, AND SHALL BE COORDINATED WITH DESIGN REQUIREMENTS AND CONTRACT DOCUMENTS. MIX DESIGN TO INCLUDE COMPRESSIVE STRENGTH TEST REPORTS IN ACCORDANCE WITH ACI 318 CHAPTER 5.

CJ CONCRETE CONSTRUCTION JOINTS

CJ-1) PROVIDE CONSTRUCTION JOINTS IN ACCORDANCE WITH ACI-318. SUBMIT SHOP DRAWINGS SHOWING PROPOSED CONSTRUCTION JOINT LOCATIONS, DETAILS AND THE PLACEMENT SEQUENCE FOR THE SER'S APPROVAL PRIOR TO PROCEEDING WITH WORK.

CJ-2) UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS, HORIZONTAL CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN FOOTINGS OR WALLS WITHOUT PRIOR WRITTEN APPROVAL FROM THE SER BEFORE CONSTRUCTION.

CJ-3) PLACE VERTICAL CONSTRUCTION JOINTS TO PROVIDE A 60 FT MAXIMUM LENGTH OF CONCRETE PLACEMENT

CJ-4) PROVIDE CONTINUOUS WATERSTOPS AT ALL CONSTRUCTION JOINTS EXPOSED TO SOIL OR WATER, AS DESCRIBED IN THE SPECIFICATIONS AND WHERE INDICATED IN THE ARCHITECTURAL DOCUMENTS.

RE CONCRETE REINFORCEMENT

RE-1) ALL CONCRETE SHALL INCLUDE REINFORCEMENT. IF REINFORCEMENT IS NOT SPECIFICALLY INDICATED ON THE DRAWINGS, VERIFY WITH THE STRUCTURAL ENGINEER BEFORE PROCEEDING WITH WORK.

RE-2) REINFORCEMENT SHALL CONFORM TO THE FOLLOWING STANDARDS AND MATERIAL PROPERTIES:

DEFORMED BARS: ASTM A615, GRADE 60, UON
WELDABLE DEFORMED BARS: ASTM A706, GRADE 60, UON

RE-3) DETAIL REINFORCEMENT BASED ON THE PROJECT REQUIREMENTS, ACI-318 AND ACI-315,UON.

RE-4) WHERE A 90-DEG, 135 -DEG OR 180-DEG HOOK IS GRAPHICALLY INDICATED, PROVIDE CORRESPONDING ACI STANDARD HOOKS PER 1/SS.1, UON.

RE-5) DOWELS SHALL MATCH SIZE AND SPACING OF MAIN REINFORCEMENT, UON.

RE-6) REINFORCEMENT SHALL HAVE CONCRETE PROTECTION (CLEAR COVER) PER ACI 318 UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

LOCATION	COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER:	
NO 5 BARS OR SMALLER	1 1/2"
NO 6 BARS AND LARGER	2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND	
SLABS, WALLS, JOISTS:	
NO 11 BARS OR SMALLER	3/4"
NO 14 BARS AND LARGER	1 1/2"

RE-7) LAP REINFORCEMENT AS SPECIFICALLY DETAILED ON THE DRAWINGS. SEE REBAR OFFSET AND LAP SPLICE SCHEDULE, DETAIL 1 ON THIS SHEET.

RE-8) UNLESS OTHERWISE NOTED ALL LAP SPLICES ARE TO BE CLASS "B" SPLICES PER REBAR OFFSET AND LAP SPLICE SCHEDULE, 1 ON THIS SHEET.

RE-9) REBAR SHOP DRAWINGS: SUBMIT SHOP DRAWINGS THAT SHALL CLEARLY INDICATE ALL DETAILS, DIMENSIONS AND INFORMATION REQUIRED FOR FABRICATION AND PLACEMENT OF CONCRETE REINFORCEMENT IN ACCORDANCE WITH CONTRACT DOCUMENTS, PREPARED IN ACCORDANCE WITH ACI 315 REQUIREMENTS.

RE-10) REINFORCING STEEL SHALL NOT BE PERMITTED TO RUST WHERE THERE IS DANGER OF STAINING EXPOSED SURFACES OF ADJACENT CONCRETE. THE CONTRACTOR SHALL REPLACE RUST-STAINED CONCRETE AT HIS EXPENSE.

RE-11) REINFORCEMENT SHALL BE FREE OF FORM COATINGS, SEALERS, POWDERED AND SCALED RUST, LOOSE MILL SCALE, EARTH, ICE, AND OTHER MATERIALS WHICH WILL REDUCE OR DESTROY BOND WITH CONCRETE.

RE-12) PLACE REINFORCEMENT IN ACCORDANCE WITH APPROVED SHOP DRAWINGS, ACI 318, AND CRSI RECOMMENDED PRACTICE FOR "PLACING REINFORCING BARS". PLACE REINFORCEMENT BARS WITHIN TOLERANCES SPECIFIED IN ACI 117 AND ACI 318 SECTION 7.5.

RE-13) POSITION, SUPPORT AND SECURE REINFORCEMENT IN A MANNER TO PREVENT DISPLACEMENT BEFORE AND DURING PLACEMENT OF CONCRETE.

RE-14) WELDING ELECTRODES: SHALL BE IN CONFORMANCE WITH AWS D1.4 AND AWS A5.1. WELDED JOINTS OF ASTM A706, GRADE 60 BARS SHALL BE MADE WITH LOW HYDROGEN WELD FILLER METALS CLASSIFIED AS E80 ELECTRODES WITH A MINIMUM TENSILE STRENGTH OF 80K.

PA POST-INSTALLED ANCHORS

PA-1) POST-INSTALLED ANCHORS INCLUDE EXPANSION ANCHORS, SCREW ANCHORS, EPOXY ANCHORS/DOWELS, AND POWDER-ACTUATED FASTENERS.

PA-2) INSTALL POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE APPLICABLE ICC-ES REPORT AND THE MANUFACTURER'S RECOMMENDATIONS.

PA-3) USE SCANNING EQUIPMENT OR OTHER MEANS TO LOCATE AND AVOID CUTTING OR DAMAGING REINFORCING BARS. SER APPROVAL IS REQUIRED PRIOR TO CUTTING OR DAMAGING REINFORCING.

PA-4) SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHOR INSTALLATIONS, UON.

PA-5) FIELD TESTING OF POST-INSTALLED ANCHORS IS REQUIRED, UON. TEST INSTALLED ANCHORS IN ACCORDANCE WITH THE FOLLOWING:

A. TEST 100% OF ANCHORS AT ALL STRUCTURAL APPLICATIONS, UON.
B. TEST 50% OF ANCHORS AT ALL NON-STRUCTURAL APPLICATIONS (SUCH AS EQUIPMENT ANCHORAGE), UON.
C. TEST 10% OF ANCHORS AT SILL PLATE BOLTING APPLICATIONS, UON.
D. IF ANY ANCHOR FAILS TESTING, TEST ALL ANCHORS OF THE SAME TYPE NOT PREVIOUSLY TESTED UNTIL 20 CONSECUTIVE ANCHORS PASS.
E. FIELD TESTS SHALL BE EITHER TENSION TESTS OR TORQUE TESTS, AS REQUIRED FOR THE SPECIFIC ANCHOR TYPE.
F. TENSION TESTS: APPLY TEST LOADS TO ANCHORS WITHOUT REMOVING THE NUT IF POSSIBLE. IF NOT, REMOVE NUT AND INSTALL A THREADED COUPLER TO THE SAME TIGHTNESS AS THE ORIGINAL NUT USING A TORQUE WRENCH. REACTION LOADS FROM TEST FIXTURES MAY BE APPLIED CLOSE TO THE ANCHOR BEING TESTED, PROVIDED THE ANCHOR IS NOT RESTRAINED FROM WITHDRAWING BY THE FIXTURES. TO BE ACCEPTABLE, ANCHORS SHALL HAVE NO OBSERVABLE MOVEMENT AT THE APPLICABLE TEST LOAD (OBSERVABLE MOVEMENT IS DEFINED AS THE WASHER UNDER THE NUT BECOMING LOOSE).
G. TORQUE TESTS: TO BE ACCEPTABLE, THE APPLICABLE TEST TORQUE MUST BE REACHED WITHIN ONE-HALF TURN OF THE NUT.
H. TEST EQUIPMENT IS TO BE CALIBRATED BY AN APPROVED TESTING LABORATORY IN ACCORDANCE WITH STANDARD RECOGNIZED PROCEDURES.
I. FIELD TESTING SHALL BE DONE IN THE PRESENCE OF THE PROJECT INSPECTOR.
J. TESTING SHOULD OCCUR A MINIMUM OF 24 HOURS AFTER INSTALLATION OF THE SUBJECT ANCHOR.

PA-6) EXPANSION ANCHORS

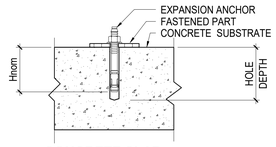
A. EXPANSION ANCHORS SHALL BE EITHER ONE OF THE FOLLOWING, UON:

HILTI KWIK BOLT TZ2
(ICC-ES REPORT ESR-4266)

SIMPSON STRONG-BOLT 2
(ICC-ES REPORT ESR-3037)

USE OF CARBON STEEL EXPANSION ANCHORS IS LIMITED TO DRY, INTERIOR LOCATIONS. USE STAINLESS STEEL EXPANSION ANCHORS AT EXTERIOR, WEATHER-EXPOSED, OR DAMP LOCATIONS.

B. ANCHOR EMBEDMENT AND FIELD TEST VALUES ARE AS FOLLOWS, UON



CONCRETE SLAB

HILTI KWIK BOLT TZ2 IN NORMAL-WEIGHT CONCRETE			
ANCHOR DIAMETER	Hnom	MINIMUM HOLE DEPTH	TORQUE TEST VALUE (FT-LBS)
3/8"	2 1/2"	2 3/4"	30
1/2"	2 1/2"	2 3/4"	50
*5/8"	3 3/4"	4 1/4"	40
*3/4"	4 1/2"	4 3/4"	110

SIMPSON STRONG-BOLT 2 IN NORMAL-WEIGHT CONCRETE			
ANCHOR DIAMETER	Hnom	MINIMUM HOLE DEPTH	TORQUE TEST VALUE (FT-LBS)
3/8"	1 7/8"	2"	30
1/2"	2 3/4"	3"	60
*5/8"	5 1/8"	5 3/8"	90
*3/4"	5 3/4"	6"	150

PA-7) SCREW ANCHORS

A. SCREW ANCHORS SHALL BE EITHER ONE OF THE FOLLOWING, UON:

SIMPSON TITEN HD
(ICC-ES REPORT ESR-2713)

HILTI KWIK HUS-EZ
(ICC-ES REPORT ESR-3027)

B. ANCHOR EMBEDMENTS AND TENSION TEST VALUES BELOW ARE TO BE USED WHEN EXPLICITLY SPECIFIED IN THE STRUCTURAL DRAWINGS. FOR LOCATIONS WHERE TENSION TEST VALUES ARE NOT SPECIFIED IN THE DRAWINGS, CONSULT WITH THE SER.

SIMPSON TITEN HD IN NORMAL WEIGHT CONCRETE (3000 PSI MIN)			
ANCHOR DIAMETER	Hnom	MINIMUM HOLE DEPTH	TENSION TEST VALUE (LBS)
1/4"	1 5/8"	1 3/4"	
3/8"	2 1/2"	3"	1200
*1/2"	3 1/4"	3 3/4"	2973
*5/8"	4 1/2"	4 1/2"	3460
*3/4"	5 1/2"	6"	5410

HILTI KWIK HUS-EZ IN NORMAL WEIGHT CONCRETE (3000 PSI MIN)			
ANCHOR DIAMETER	Hnom	MINIMUM HOLE DEPTH	TENSION TEST VALUE (LBS)
1/4"	2 1/2"	2 7/8"	1040
3/8"	2 1/2"	2 3/4"	1920
*1/2"	3 1/4"	3 3/8"	2405
*5/8"	4 1/2"	3 5/8"	2800
*3/4"	5 1/2"	4 3/8"	3780

PA-8) EPOXY ANCHORS AND DOWELS

A. EPOXY SHALL BE EITHER ONE OF THE FOLLOWING, UON:

HILTI HIT-HY 200 (ICC-ES REPORT ESR-3187)

HILTI HIT-RE 500-SD (ICC-ES REPORT ESR-2322)

SIMPSON SET-XP (ICC-ES REPORT ESR-2508)

B. RODS EMBEDDED IN EPOXY SHALL BE CARBON STEEL THREADED RODS PER THE EPOXY MANUFACTURER'S ICC-ES REPORT. FOR HILTI HIT-HY 200 EPOXY, HILTI HIT-Z ANCHOR RODS MAY BE SUBSTITUTED FOR THREADED RODS AT CONTRACTOR'S OPTION.

C. REINFORCING STEEL BARS EMBEDDED IN EPOXY SHALL BE ASTM A615, GRADE 60, UON.

D. ANCHOR EMBEDMENT AND TENSION TEST VALUES BELOW ARE TO BE USED WHEN EXPLICITLY SPECIFIED IN THE STRUCTURAL DRAWINGS. FOR LOCATIONS WHERE TENSION TEST VALUES ARE NOT SPECIFIED IN THE DRAWINGS, CONSULT WITH THE SER.

EPOXY ANCHORS IN NORMAL-WEIGHT CONCRETE (3000 PSI MIN)				
REBAR SIZE	EMBEDMENT (IN)	TENSION TEST VALUE (LBS)		
		HILTI HIT-HY 200	HILTI HIT-RE 500-V3	SIMPSON SET-XP
#3	3	2900	940	1040
#4	4	5180	1670	3740
#5	5	8130	2600	5260
#6	6	11120	3750	6740
#7	7	12260	4320	8020
* LISTED EPOXY ADHESIVE MAY NOT BE USED WITH NOTED REBAR SIZES				

EPOXY ANCHORS IN NORMAL-WEIGHT CONCRETE (3000 PSI MIN)				
THREADED ROD DIAMETER (IN)	EMBEDMENT (IN)	TENSION TEST VALUE (LBS)		
		HILTI HIT-HY 200	HILTI HIT-RE 500-V3	SIMPSON SET-XP
3/8	3	2500	1230	1700
1/2	4	4480	2110	2600
5/8	5	7030	3170	3450
3/4	6	10180	4450	4440
7/8	7	11710	4720	5540

E. TESTING OF EPOXY DOWELS AT JOINTS BETWEEN NEW AND EXISTING SLABS-ON-GRADE IS NOT REQUIRED.

F. TESTING OF #3 EPOXY DOWELS AT CURBS AND HOUSEKEEPING PADS IS NOT REQUIRED.

G. TESTING SHALL OCCUR AFTER EPOXY HAS CURED, AS PER MANUFACTURER'S RECOMMENDATIONS.

H. OVERHEAD AND/OR CONSTANT TENSION EPOXY ANCHOR INSTALLATIONS NOT SHOWN ON THE DRAWINGS SHALL NOT BE PERMITTED UNLESS EACH CONDITION IS REVIEWED AND APPROVED IN WRITTING BY SER.

I. EPOXY ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME OF ANCHOR INSTALLATION.

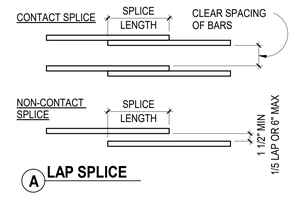
J. INSTALLATION AND INSPECTION OF EPOXY ANCHORS SHALL COMPLY WITH ACI 318-14 CHAPTER 26 SECTION 7.1 & 7.2

K. FOR USES OF EPOXY DOWELS NOT EXPLICITLY SPECIFIED IN THE STRUCTURAL DRAWINGS, CONTACT THE SER.

CONCRETE STRENGTH	f'c = 4000 PSI			
CLASS OF LAP SPLICE	CLASS "A"		CLASS "B"	
CASE / BAR SIZE		OTHER BARS	TOP BARS	OTHER BARS
#3	1'-7"	1'-3"	2'-1"	1'-7"
#4	2'-1"	1'-7"	2'-9"	2'-1"
#5	2'-7"	2'-0"	3'-5"	2'-7"
#6	3'-1"	2'-5"	4'-1"	3'-1"
#7	4'-6"	3'-6"	5'-11"	4'-6"
#8	5'-2"	4'-0"	6'-9"	5'-2"
#9	5'-10"	4'-6"	7'-7"	5'-10"
#10	6'-7"	5'-1"	8'-6"	6'-7"
#11	7'-3"	5'-7"	9'-5"	7'-3"

NOTES:

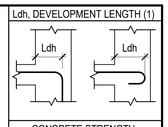
1. UNLESS INDICATED OTHERWISE, USE THE CLASS "B" LAP SPLICE LENGTHS, MULTIPLIED BY THE APPLICABLE FACTOR(S) LISTED BELOW.
2. INCREASE THE LAP SPLICE OR DEVELOPMENT LENGTH BY 50% FOR ANY OF THE FOLLOWING CONDITIONS:
   A. THE BAR COVER IS LESS THAN OR EQUAL TO THE BAR DIAMETER.
   B. WHERE STIRRUPS OR TIES ARE SHOWN IN THE DRAWINGS THROUGHOUT LAP SPLICE OR DEVELOPMENT LENGTH AND THE CLEAR SPACING OF BARS PER (A) IS LESS THAN 1 BAR DIAMETER.
   C. WHERE STIRRUPS OR TIES ARE NOT SHOWN THROUGHOUT LAP SPLICE OR DEVELOPMENT LENGTH AND THE CLEAR SPACING OF BARS PER (A) IS LESS THAN 2 BAR DIAMETERS.
3. A CLASS "A" SPLICE MAY BE USED ONLY WHERE NOTED ON THE DRAWINGS. WHERE DEVELOPMENT LENGTH (Ld) IS REQUIRED OR CALLED OUT ON THE DRAWINGS, USE CLASS "A" LAP SPLICE LENGTH.
4. CLASS "B" LAP SPLICE EQUALS "LTS".
5. TOP BARS ARE HORIZONTAL BARS WITH MORE THAN 12 INCHES OF CONCRETE CAST BELOW THE BARS.
6. WHEN BARS OF DIFFERENT SIZE ARE LAP SPLICED, THE SPLICE LENGTH SHALL BE THE LARGER OF THE FOLLOWING:
   A. Ld OF THE LARGER BAR.
   B. LAP SPLICE LENGTH OF THE SMALLER BAR.



(A) **LAP SPLICE**

1 LAP SPLICE AND DEVELOPMENT LENGTH

NOT TO SCALE

BAR SIZE	Ldh, DEVELOPMENT LENGTH (1)
	
	CONCRETE STRENGTH
	f'c = 4000 PSI
#3	0'-7"
#4	0'-9"
#5	1'-0"
#6	1'-2"
#7	1'-5"
#8	1'-7"
#9	1'-9"
#10	2'-0"
#11	2'-2"

2 STANDARD HOOK

NOT TO SCALE

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SUN VALLEY ELEMENTARY SCHOOL TK PHASE

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Revisions

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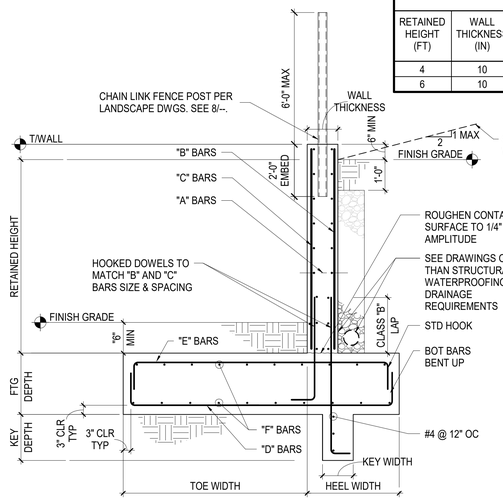
GENERAL NOTES AND LAP SCHEDULES

S002

DSA SUBMITTAL

RETAINING WALL SCHEDULE

RETAINED HEIGHT (FT)	WALL THICKNESS (IN)	WALL REINF			FTG DIMENSIONS (IN)			FTG REINF			KEY DIM (IN)	
		"A" BARS	"B" BARS	"C" BARS	FTG DEPTH	HEEL WIDTH	TOE WIDTH	"D" BARS	"E" BARS	"F" BARS	KEY DEPTH	KEY WIDTH
4	10	#4 @ 12"	#5 @ 12"	#4 @ 16"	1'-6"	2'-0"	5'-6"	#4 @ 12"	#4 @ 12"	#4 @ 12"	1'-0"	1'-6"
6	10	#4 @ 12"	#6 @ 12"	#4 @ 16"	2'-0"	2'-10"	5'-8"	#5 @ 12"	#5 @ 12"	#5 @ 12"	2'-0"	1'-6"

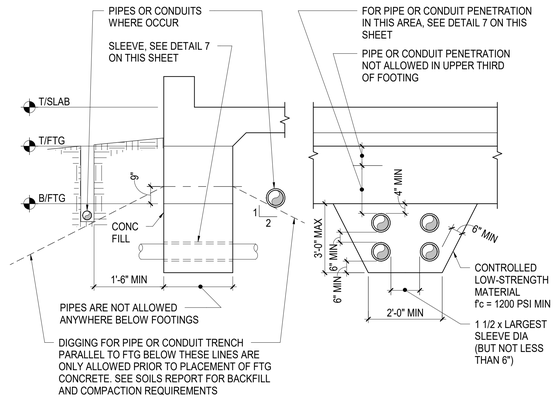


RETAINING WALL NOTES:

1. SEE DRAWINGS OTHER THAN STRUCTURAL FOR CIVIL, LANDSCAPING, AND DRAINAGE REQUIREMENTS, TYP.
2. SEE CIVIL DRAWINGS FOR FINISH GRADE ELEVATIONS AND SLOPE OF GRADE WHERE OCCURS.
3. REFER TO GENERAL NOTES ON SHEET S002 FOR CONCRETE COVER AND REINFORCING REQUIREMENTS NOT SHOWN OR NOTED.
4. DO NOT BACKFILL UNTIL WALL REACHES 28 DAY COMPRESSIVE STRENGTH.
5. PROVIDE VERTICAL CONSTRUCTION JOINT PER TYPICAL DETAIL 3/--.
6. CONTRACTOR TO SUBMIT TOP OF RETAINING WALL ELEVATIONS, TOP OF FOOTING ELEVATIONS, FOOTING STEP LOCATIONS AND MEASUREMENTS, AND FINISH GRADE ELEVATIONS TO THE ARCHITECT, STRUCTURAL ENGINEER, AND CIVIL ENGINEER FOR REVIEW AND APPROVAL. TOE COVER SPECIFIED HEREIN MUST BE SHOWN TO BE MET. THE SUBMITTAL SHALL BE MADE PRIOR TO PREPARING THE REINFORCING BAR SUBMITTAL.

1 SITE RETAINING WALL SECTION AT LEVEL OR SLOPING GRADE

NOT TO SCALE

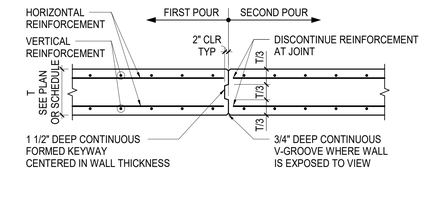


NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR SHORING OR OTHERWISE MAINTAINING THE SIDES OF THE EXCAVATION FROM CAVE-IN UNTIL ALL BACKFILL IS COMPLETED.
2. ALL PIPES AND CONDUITS SHALL CLEAR SLEEVE BY 1" ALL AROUND, UON
3. FIRE SERVICE LINES SHALL CLEAR SLEEVES 2" ALL AROUND.
4. TRENCHES FOR PIPES AND CONDUITS WITH INVERT ELEVATION BELOW 2'-6" FROM BOTTOM OF FOOTING SHALL BE FILLED PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
5. CAULK SEAL GAP AT SLEEVE-TO-PIPE/CONDUIT INTERFACE ON EXTERIOR SIDE OF FOOTING.

2 PIPE OR CONDUIT CLEARANCE AT FOOTINGS

NOT TO SCALE

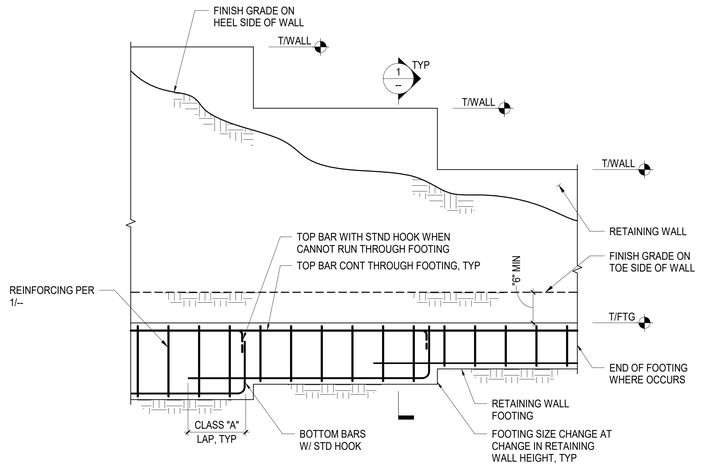


NOTES:

1. SEE GENERAL NOTES FOR CONSTRUCTION JOINT MAXIMUM SPACING

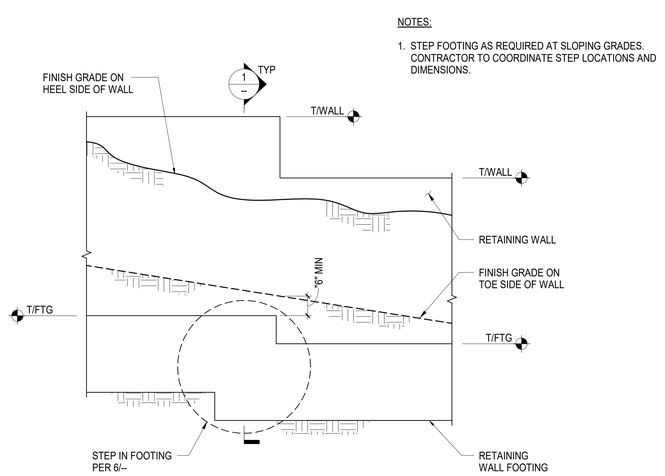
3 TYPICAL VERTICAL CONSTRUCTION JOINT - PLAN AT SITE RETAINING WALL

NOT TO SCALE



4 SITE RETAINING WALL ELEVATION AT FOOTING SIZE CHANGES

NOT TO SCALE

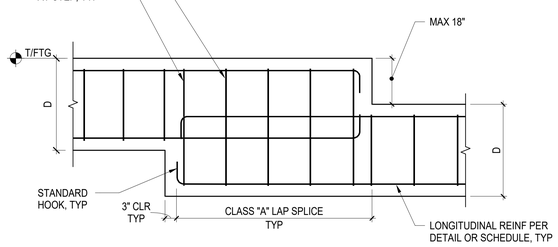


NOTES:

1. STEP FOOTING AS REQUIRED AT SLOPING GRADES. CONTRACTOR TO COORDINATE STEP LOCATIONS AND DIMENSIONS.

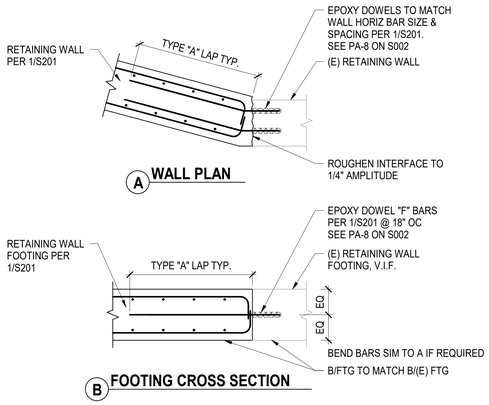
5 SITE RETAINING WALL ELEVATION AT STEP IN FOOTING

NOT TO SCALE



6 SINGLE STEP IN FOOTING

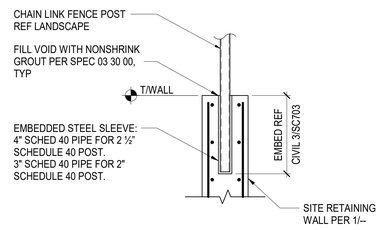
NOT TO SCALE



NOTE: SEE CIVIL DRAWINGS FOR FURTHER INFO.

7 RETAINING WALL JOINT AT (E) RETAINING WALL

NOT TO SCALE



8 FENCE POST SLEEVE

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Revisions

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RETAINING WALLS AND CONCRETE DETAILS

S201

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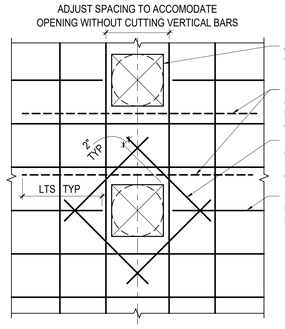
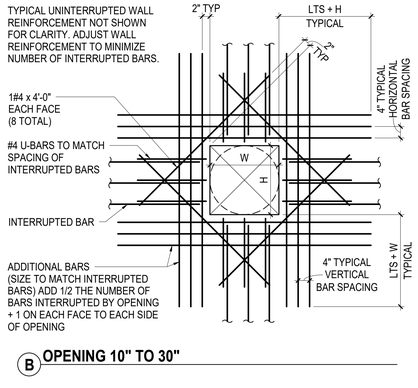


A OPENING LESS THAN 10"



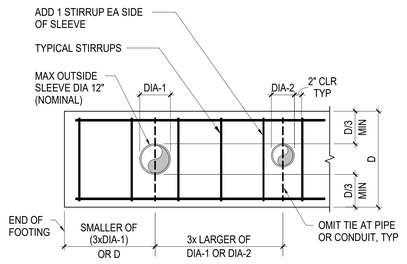
B OPENING 10" TO 30"

NOTES:

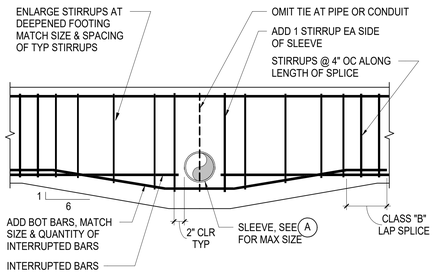
1. MINIMUM CLEAR DISTANCE BETWEEN OPENINGS IS 2 TIMES MAXIMUM OPENING SIZE
2. FOR OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS, CONTRACTOR TO SUBMIT LOCATIONS AND SPACING TO STRUCTURAL ENGINEER FOR WRITTEN APPROVAL

1 TYPICAL WALL OPENING DETAILS

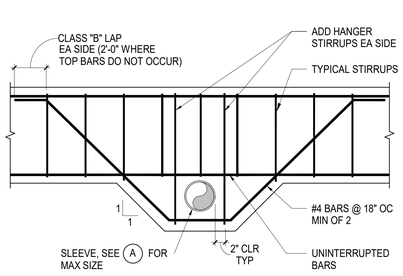
SCALE: NOT TO SCALE



A PIPE OR CONDUIT PENETRATION THRU MIDDLE THIRD OF FTG



B PIPE OR CONDUIT PENETRATION BELOW MIDDLE THIRD OF FTG



C PIPE OR CONDUIT BELOW FTG BOTTOM REINFORCEMENT

NOTES:

1. DO NOT CUT REINFORCING AT (A) OR (C). ONLY CUT INTERRUPTED REINFORCING AT (B).
2. PROVIDE MINIMUM 2" CLEAR BETWEEN SLEEVE AND REINFORCING.
3. SEE DETAIL 6 ON THIS SHEET FOR SLEEVE-TO-PIPE/CONDUIT CLEARANCE & INFO NOT NOTED.
4. CAULK SEAL GAP AT SLEEVE-TO-PIPE/CONDUIT INTERFACE ON EXTERIOR SIDE OF FOOTING.
5. IF PIPE OR CONDUIT PENETRATION OCCURS AT EITHER TOP OR BOTTOM REBAR SPLICE LOCATION PROVIDE 2 ADDITIONAL SHEAR STIRRUPS FOR A TOTAL OF 4 SHEAR STIRRUPS ON EACH SIDE OF PENETRATION.
6. IF PIPE OR CONDUIT SLEEVE IS ASTM A53 SCHEDULE 40 OR GREATER PIPE, ADDITIONAL STIRRUPS MAY BE ELIMINATED. SLEEVE SHALL BE GALVANIZED.

2 PIPE OR CONDUIT PENETRATIONS THRU CONTINUOUS FOOTINGS

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CONCRETE DETAILS
S202

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SYMBOLS LIST

POWER DISTRIBUTION

- SWITCHGEAR, SWITCHBOARD, DISTRIBUTION BOARD, SUBSTATION OR MOTOR CONTROL CENTER, FLOOR MOUNTED ON CONCRETE HOUSEKEEPING PAD WHERE INDICATED ON DRAWINGS. DOUBLE LINE INDICATES FRONT FACE OF GEAR.
- DISTRIBUTION BOARD, SURFACE MOUNTED ON WALL.
- PANELBOARD, 277/480V, SURFACE MOUNTED ON WALL.
- PANELBOARD, 277/480V, FLUSH MOUNTED IN WALL.
- PANELBOARD, 120/208V, SURFACE MOUNTED ON WALL.
- PANELBOARD, 120/208V, FLUSH MOUNTED IN WALL.
- DRY-TYPE STEP-DOWN TRANSFORMER, FLOOR MOUNTED 480-120/208V 3Ø, UON. DOUBLE LINE INDICATES FRONT FACE OF TRANSFORMER.
- ELECTRIC MOTOR, NIEC. MAKE POWER CONNECTIONS ONLY AS NOTED ON PLANS.
- EXHAUST FAN MOTOR, SINGLE PHASE, NIEC. MAKE POWER CONNECTIONS TO INCLUDE JUNCTION BOX MOUNTED, FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER WITH INTEGRAL DISCONNECT ADJACENT TO FAN WITH 2 #12 CONDUCTORS PLUS GROUND IN 1/2" FLEXIBLE CONDUIT BETWEEN STARTER AND MOTOR.
- INDOOR FAN POWERED VAV BOX MOTOR, SINGLE PHASE, NIEC. MAKE POWER CONNECTIONS TO INCLUDE JUNCTION BOX MOUNTED, FRACTIONAL HORSEPOWER MANUAL MOTOR STARTER WITH INTEGRAL DISCONNECT ADJACENT TO VAV BOX WITH 2 # 12 CONDUCTORS PLUS GROUND IN 1/2" FLEXIBLE CONDUIT BETWEEN STARTER AND MOTOR.
- MOTOR OPERATED FIRE/SMOKE DAMPER 'FSD', NIEC. SYMBOL DENOTES INTERFACE FOR POWER CONNECTIONS WITH LOCAL DISCONNECT MEANS. ADJACENT NUMBER INDICATES QUANTITY OF ACTUATORS PER FSD, EACH REQUIRING A POWER CONNECTION, IF MORE THAN 1. FOR FIRE ALARM REQUIREMENTS AT FSD, REFER TO FIRE ALARM SYMBOLS.
- COMBINATION EXHAUST FAN AND DOWNLIGHT, CEILING MOUNTED. FAN AND LIGHT SHALL BE CONTROLLED SEPARATELY.
- PULLBOX OR HANDHOLE, SIZE AND TYPE AS NOTED ON PLANS.
- SAFETY DISCONNECT SWITCH, 3 POLE, UON. ADJACENT NUMBER INDICATES FUSE SIZE WHEN APPLICABLE, LABELING CONVENTION AS FOLLOWS:
  - A: 30A, NON-FUSED — AF: 30A, FUSED
  - B: 60A, NON-FUSED — BF: 60A, FUSED
  - C: 100A, NON-FUSED — CF: 100A, FUSED
  - D: 200A, NON-FUSED — DF: 200A, FUSED
  - E: 400A, NON-FUSED — EF: 400A, FUSED
  - F: 600A, NON-FUSED — FF: 600A, FUSED
  - G: 800A, NON-FUSED — GF: 800A, FUSED
- MAGNETIC MOTOR STARTER WITH INTEGRAL OVERCURRENT PROTECTION. ADJACENT NUMBER INDICATES NEMA SIZE OF STARTER. "HANDLE" DENOTES INTEGRAL DISCONNECT.
- VARIABLE FREQUENCY DRIVE FURNISHED UNDER ANOTHER DIVISION. INSTALL VFD AND PROVIDE POWER SERVICE CONNECTION UNDER THIS DIVISION. "HANDLE" DENOTES INTEGRAL DISCONNECT.
- ELECTRONICALLY COMMUTATED MOTOR CONTROLLER FURNISHED UNDER ANOTHER DIVISION. INSTALL ECM AND PROVIDE POWER SERVICE CONNECTION UNDER THIS DIVISION. "HANDLE" DENOTES INTEGRAL DISCONNECT.
- PACKAGE MOTOR CONTROLLER OR STARTER FURNISHED AND INSTALLED UNDER ANOTHER DIVISION WITH EQUIPMENT CONTROLLED. PROVIDE SINGLE-POINT POWER SERVICE CONNECTION UNDER THIS DIVISION AS NOTED ON PLANS.
- DRIVEN GROUND ROD.
- DRIVEN GROUND ROD IN GROUND WELL WITH COVER.
- ELECTRICAL VEHICLE CHARGING STATION, WALL MOUNTED.
- ELECTRICAL VEHICLE CHARGING STATION, PEDESTAL MOUNTED.
- CABLE TO BUS TERMINATION LUGS.
- BOLTED PRESSURE OR HIGH PRESSURE CONTACT OR FUSED SWITCHES.
- GROUP MOUNTED MOLDED CASE CIRCUIT BREAKER.
- INDIVIDUALLY FIXED MOUNTED INSULATED-CASE OR POWER CIRCUIT BREAKER.
- INDIVIDUALLY DRAW-OUT MOUNTED INSULATED-CASE OR POWER CIRCUIT BREAKER.
- MEDIUM-VOLTAGE, INDIVIDUALLY DRAW-OUT MOUNTED VACUUM CIRCUIT BREAKER.
- MEDIUM-VOLTAGE LOAD INTERRUPTER SWITCH, FUSED TYPE.
- MEDIUM-VOLTAGE LOAD INTERRUPTER SWITCH, NON-FUSED TYPE.
- GROUND FAULT RELAY INTEGRAL WITH CIRCUIT BREAKER.
- ELECTRICALLY OPERATED CIRCUIT BREAKER, INTEGRAL.
- SHUNT-TRIP INTEGRAL WITH OVERCURRENT PROTECTION DEVICES.
- KIRK-KEY INTERLOCK INTEGRAL WITH OVERCURRENT PROTECTION DEVICES. ADJACENT NUMBER CORRESPONDS WITH DEVICE INTERLOCK.
- PRIVATE METER, MOUNTED INTEGRAL WITH OVERCURRENT PROTECTION OR SEPARATE WITHIN SWITCHGEAR.
- UTILITY METER, MOUNTED IN UTILITY METER SECTION OF SWITCHGEAR OR SWITCHBOARDS.
- PRIVATE METER, MOUNTED IN SEPARATE ENCLOSURE FROM SWITCHGEAR OR SWITCHBOARDS.
- GROUND FAULT RELAY WITH SHUNT TRIP.
- GROUND FAULT ALARM, NO SHUNT TRIP.
- TRANSFORMER.
- CONNECTION TO GROUND.
- CURRENT TRANSFORMERS.
- POTENTIAL TRANSFORMERS.
- AUTOMATIC OR MANUAL TRANSFER SWITCH.
- AUTOMATIC TRANSFER & BY-PASS ISOLATION SWITCH.
- EMERGENCY GENERATOR.
- BATTERIES.
- NEUTRAL SERVICE DISCONNECT LINK.
- SURGE PROTECTION DEVICE, 'SPD'.
- CONTROL CONTACTOR.
- NORMALLY OPEN CONTACT.
- NORMALLY CLOSED CONTACT.
- DIGITAL METERING UNIT.
- GROUND BUS AS SHOWN ON SINGLE LINE DIAGRAMS.
- GROUND BUS AS SHOWN ON PLAN VIEWS.
- NEUTRAL BUS.
- CONCRETE VAULT, IN-GRADE, FOR EXTERIOR APPLICATIONS. SIZE AND TYPE AS NOTED ON THE PLANS.
- CONCRETE MANHOLE, IN-GRADE, FOR EXTERIOR APPLICATIONS. SIZE AND TYPE AS NOTED ON THE PLANS.

CONVENTIONS

- NUMBERED NOTE, APPLIES TO ALL DRAWINGS.
- NUMBERED SHEET NOTE, APPLIES TO DRAWING CONTAINING NOTES ONLY.
- OVERCURRENT PROTECTIVE DEVICE NUMBER IDENTIFICATION TAG. REFERS TO LOCATION OF PROTECTIVE OR CONTROL DEVICE WITHIN SWITCHBOARDS, DISTRIBUTION BOARDS, MOTOR CONTROL CENTERS, ETC.
- EQ ## — EQUIPMENT IDENTIFICATION TAG: ITEM FURNISHED AND INSTALLED UNDER ANOTHER DIVISION AND WIRED UNDER THIS DIVISION.
- 2004 — FEEDER TAG. REFER TO FEEDER SCHEDULE.
- 1 / E-801 — DETAIL REFERENCE: DETAIL DESIGNATION; SHEET NUMBER
- 2 - F3 — LUMINAIRE IDENTIFICATION TAG: FIXTURE TYPE; QUANTITY
- 7S4 — UNDERGROUND CONDUIT DESIGNATION: CONDUIT SIZE IN INCHES; CONDUIT SYSTEM DESIGNATION (P: PRIMARY POWER; S: SECONDARY POWER; T: TELECOMMUNICATIONS); QUANTITY OF CONDUITS
- 2 E H 2 A — SWITCHBOARDS, DISTRIBUTION BOARDS, AND PANELBOARDS: BOARD DESIGNATION; FLOOR NUMBER; VOLTAGE CLASSIFICATION (PS : PRIMARY SUBSTATION; SS : SECONDARY SUBSTATION; MS : MAIN SWITCHBOARD; HD : 277/480 DIST. BOARD; H : 277/480 PANELBOARD; LD : 120/208 DIST. BOARD; L : 120/208 PANELBOARD)
- 2 E MCC / 1 B — MOTOR CONTROL CENTERS: MCC DESIGNATION; FLOOR NUMBER; MOTOR CONTROL CENTER
- 2 E TX / 2 A — TRANSFORMERS: TRANSFORMER DESIGNATION; FLOOR NUMBER; TRANSFORMER; POWER SOURCE (: NORMAL; C : CRITICAL; E : EMERGENCY or ESSENTIAL; S : LIFE SAFETY OR LEGALLY REQUIRED STANDBY; U : UPS; O : OPTIONAL STANDBY)
- 2 T TB / 2 A — SIGNAL SYSTEM TERMINALS: TERMINAL DESIGNATION; FLOOR NUMBER; TERMINAL TYPE (TB : TERMINAL BOARD; TC : TERMINAL CABINET); TERMINAL CLASSIFICATION (D : DATA; FA : FIRE ALARM; S : SECURITY; T : TELEPHONE; TV : TELEVISION); BUILDING NUMBER (WHEN APPLICABLE)

RACEWAYS

- CONDUIT RUN EXPOSED ON WALL OR CEILING.
- CONDUIT RUN CONCEALED IN SLAB, UNDER SLAB OR UNDERGROUND.
- CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING.
- CONDUIT HOMERUN, CONTINUOUS RUN TO PANEL OR EQUIPMENT CABINET. HOMERUN CAN OCCUR ON ANY OF THE ABOVE ROUTING CONDITIONS.
- CONDUIT TURNED UP, CAN OCCUR ON ANY OF THE ABOVE ROUTING CONDITIONS.
- CONDUIT TURNED DOWN, CAN OCCUR ON ANY OF THE ABOVE ROUTING CONDITIONS.
- CONDUIT CAPPED OR STUBBED WITH INSULATED BUSHINGS, CAN OCCUR ON ANY OF THE ABOVE ROUTING CONDITIONS.
- CONDUIT SLEEVE, WITH INSULATING BUSHINGS.
- FLEXIBLE METALLIC CONDUIT, EQUIPMENT CONNECTION.
- CROSSMARKS ON BRANCH CIRCUIT CONDUIT RUNS INDICATE THE QUANTITY OF CONDUCTORS AS FOLLOWS (GROUND CONDUCTORS ARE NOT NOTED, BUT SHOULD BE INCLUDED IN EVERY CONDUIT WITH POWER CONDUCTORS):
  1. NO CROSSMARKS INDICATES TWO #12 AWG CONDUCTORS, UON.
  2. THREE TO SIX CROSSMARKS INDICATES THE QUANTITY OF #12 AWG CONDUCTORS, UON.
  3. SEVEN OR MORE CROSSMARKS INDICATES THE QUANTITY OF #10 AWG CONDUCTORS, UON.
- SURFACE RACEWAY; TYPE, DEVICE SPACING AND MOUNTING AS NOTED ON PLANS.
- CABLE TRAYS/RUNWAYS, REFER TO PLANS AND/OR SPECS FOR SIZE AND MOUNTING.

TELECOMMUNICATIONS

- TELECOMMUNICATION DEVICE, WALL MOUNTED, +18" UON.
- TELECOMMUNICATION DEVICE, WALL MOUNTED, 6" ABOVE BACK SPLASH UON, BUT NO HIGHER THAN ADA REQUIREMENTS.
- TELEPHONE DEVICE, WALL MOUNTED, +42" UON.
- TELECOMMUNICATION DEVICE, MOUNTED IN FLUSH FLOOR BOX.
- TELECOMMUNICATION DEVICE, MOUNTED IN FIRE-RATED POKE-THRU FLOOR FITTING.
- TELECOMMUNICATION DEVICE, CEILING MOUNTED.
- COMBINATION POWER/TELECOMMUNICATION DEVICES, MOUNTED IN FLUSH FLOOR BOX. TYPE AS NOTED ON PLANS OR IN SPECIFICATIONS.
- COMBINATION POWER/TELECOMMUNICATION DEVICES, MOUNTED IN FIRE-RATED POKE-THRU FLOOR FITTINGS. TYPE AS NOTED ON PLANS OR IN SPECIFICATIONS.
- ELECTRIFIED FURNITURE PARTITION TELECOMMUNICATION CABLE FEED, WALL MOUNTED, +18" UON. CONSISTS OF 4 11/16" SQ. X 2 1/8" DEEP JUNCTION BOX, SINGLE GANG RING, AND STAINLESS STEEL COVERPLATE WITH 1.25" KO AND GROMMET.
- ELECTRIFIED FURNITURE PARTITION COMBINATION POWER/TELECOMMUNICATION FEEDS, MOUNTED IN FLUSH FLOOR BOX WITH KO'S IN COVERS TO ACCEPT FURNITURE WHIPS. TELECOMMUNICATIONS WHIP SHALL BE 1.25" MINIMUM.
- ELECTRIFIED FURNITURE PARTITION TELECOMMUNICATION CABLE FEEDS, MOUNTED IN FIRE-RATED POKE-THRU THRU FLOOR FITTING WITH 1.25" KO'S IN COVER TO ACCEPT FURNITURE WHIPS.
- WAP — WIRELESS ACCESS POINT, WALL MOUNTED, 8" BELOW FINISHED CEILING, UON.
- WAP — WIRELESS ACCESS POINT, CEILING MOUNTED.
- #D/#V — QUANTITY OF DATA AND/OR VOICE TELECOMMUNICATIONS DEVICES.
- EL — TELECOMMUNICATION DEVICE, WALL MOUNTED, +18" UON, FOR ELEVATOR USE IN ELEVATOR MACHINE/CONTROLLER ROOM.
- EM — TELECOMMUNICATION DEVICE, FOR EMERGENCY PHONES, MOUNTED AS NOTED ON PLANS.

AUDIO/VISUAL

- PA LOUDSPEAKER, WALL MOUNTED, 12" BELOW CEILING OR +96" AFF, WHICHEVER IS LOWER. 25V, 70V, 100V, OR IP AS INDICATED ON DRAWINGS AND SPECS.
- PA LOUDSPEAKER, CEILING MOUNTED IN FLUSH BACK BOX. 25V, 70V, 100V OR IP AS INDICATED ON DRAWINGS AND SPECS.
- AV PROGRAM SPEAKER, WALL MOUNTED.
- AV PROGRAM SPEAKER, CEILING OR STRUCTURE MOUNTED.
- AUDIO AND VIDEO INTERFACE PLATE, WALL MOUNTED, +18" UON OR AS OTHERWISE NOTED.
- AUDIO AND VIDEO INTERFACE PLATE, MOUNTED IN FLUSH FLOOR BOX.
- AUDIO AND VIDEO CABLE DISPLAY PLATE, WALL MOUNTED, 4 11/16" BOX WITH 1 1/4" CONDUIT TO ACCESSIBLE CEILING. HEIGHT AS NOTED.
- AUDIO AND VIDEO CABLE AT PROJECTOR THROUGH SUPPORT, DIRECT CONNECT TO PROJECTOR.
- FD — FLAT PANEL DISPLAY, WALL MOUNTED AFF AS NOTED.
- SD — SIGNAGE DISPLAY, WALL MOUNTED AFF AS NOTED.
- PROJECTOR WITH PROJECTOR MOUNT, 1.5"-2" NPT COLUMN AND CEILING SUPPORT HARDWARE.
- AUDIO AND VIDEO CONTROL PANEL, FLUSH WALL MOUNTED AT 42" UON IN BACKBOX
- AUDIO AND VIDEO CONTROL PANEL, MOUNTED ON DESKTOP IN SURFACE BOX.
- AUDIO AND VIDEO CONTROL PANEL, RACK MOUNTED.
- VIDEO CONFERENCING CAMERA, WALL MOUNTED @ 84"UON.
- VIDEO CONFERENCING CAMERA, CEILING MOUNTED IN CAMERA DOME.
- PROJECTION SCREEN, SIZE AND TYPE AS NOTED.
- PROJECTION SCREEN 3 WAY POWER SWITCH, WALL MOUNTED, +42" UON.
- VOLUME CONTROLLER, WALL MOUNTED, +42" UON.
- MICROPHONE JACK, WALL MOUNTED, +18" UON.
- MICROPHONE JACK, MOUNTED IN FLUSH FLOOR BOX.
- INTERCOM STATION, WALL MOUNTED, +42" UON. 'M' DENOTES MASTER STATION.
- INTERCOM STATION, MOUNTED ON DESK. 'M' DENOTES MASTER STATION.
- INDICATING CLOCK WITH CLOCK OUTLET, WALL MOUNTED, 12" BELOW CEILING OR + 96" AFF, WHICHEVER IS LOWER.
- COMBINATION LOUDSPEAKER/INDICATING CLOCK WITH CLOCK OUTLET, WALL MOUNTED IN COMBINATION BACK BOX, 12" BELOW CEILING OR +96" AFF, WHICHEVER IS LOWER.
- TELEVISION JACK, WALL MOUNTED +18" UON OR AS NOTED.
- TELEVISION JACK, MOUNTED IN FLUSH FLOOR BOX.
- ROOM SCHEDULING PANEL

SECURITY

- ALARM MONITORING CONTACT, MOUNTED AS NOTED ON PLANS.
- ELECTRIC DOOR LOCK, NIEC, BUT WIRED UNDER THIS DIVISION.
- ELECTRIC DOOR STRIKE, NIEC, BUT WIRED UNDER THIS DIVISION.
- ELECTROMAGNETIC DOOR LOCK, NIEC, BUT WIRED UNDER THIS DIVISION.
- ELECTRIFIED PANIC HARDWARE, NIEC, BUT WIRED UNDER THIS DIVISION.
- MECHANICAL PANIC HARDWARE, NIEC, BUT WIRED UNDER THIS DIVISION.
- REQUEST-TO-EXIT SWITCH, NIEC, FURNISH WITH DOOR HARDWARE AND WIRED UNDER THIS DIVISION.
- POWER TRANSFER HINGE, NIEC.
- DOOR RELEASE MOTION SENSOR, WALL OR CEILING MOUNTED ABOVE DOOR, UON.
- REMOTE ELECTRIC LOCK RELEASE BUTTON, MOUNTED AS NOTED ON PLANS.
- DURESS STATION, MOUNTED AS NOTED ON PLANS.
- AREA MOTION SENSOR, CEILING MOUNTED, UON.
- AREA MOTION SENSOR, WALL MOUNTED, +84" UON.
- GLASS BREAK DETECTOR, CEILING MOUNTED, UON.
- CARD READER CONTROLLER, WALL MOUNTED, +42" UON.
- KEY PAD CONTROLLER, WALL MOUNTED, +42" UON.
- REMOTE MOUNTED POWER SUPPLY FOR LOW-VOLTAGE EQUIPMENT CONNECTIONS.
- 90, 180, 270, 360 DEGREE CCTV CAMERA, CEILING OR PENDANT MOUNTED AS NOTED ON PLANS.
- PAN/TILT/ZOOM (PTZ) CCTV CAMERA, CEILING MOUNTED.
- 90, 180, 270, 360 DEGREE CCTV CAMERA, WALL MOUNTED.
- PAN/TILT/ZOOM (PTZ) CCTV CAMERA, WALL MOUNTED.
- CCTV MONITOR.
- IACP — INTRUSION ALARM CONTROL PANEL
- DACP — DOOR ACCESS CONTROL PANEL

FIRE ALARM

- SMOKE DETECTOR INITIATING DEVICE, CEILING MOUNTED IN FLUSH OR SURFACE JUNCTION BOX. "C" DENOTES MULTI-CRITERIA CARBON MONOXIDE AND SMOKE DETECTOR.
- SMOKE DETECTOR INITIATING DEVICE, WALL MOUNTED IN FLUSH JUNCTION BOX, MAXIMUM 6" BELOW CEILING.
- SMOKE DETECTOR INITIATING DEVICE, MOUNTED TO STRUCTURE ABOVE SUSPENDED CEILING IN SURFACE JUNCTION BOX OR SUSPENDED IN JUNCTION BOX.
- SMOKE DETECTOR INITIATING DEVICE, DUCT-MOUNTED TYPE WITH SAMPLING TUBE.
- SMOKE DETECTOR INITIATING DEVICE, IN-DUCT MOUNTED TYPE.
- PROJECTED BEAM SMOKE DETECTOR INITIATING DEVICES TO INCLUDE TRANSMITTER, RECEIVER AND REMOTE INDICATOR STATION, WALL MOUNTED IN FLUSH JUNCTION BOX BELOW BEAM DETECTOR AT +42" AFF. BEAM DETECTORS ARE EITHER CEILING OR WALL MOUNTED 6" BELOW CEILING.
- HEAT DETECTOR INITIATING DEVICE, CEILING MOUNTED IN FLUSH OR SURFACE JUNCTION BOX.
- HEAT DETECTOR INITIATING DEVICE, WALL MOUNTED IN FLUSH JUNCTION BOX, MAXIMUM 6" BELOW CEILING.
- HEAT DETECTOR INITIATING DEVICE, MOUNTED TO STRUCTURE ABOVE SUSPENDED CEILING IN SURFACE JUNCTION BOX.
- MANUAL PULL STATION INITIATING DEVICE, WALL MOUNTED AT +48" UON.
- SPRINKLER SYSTEM WATER FLOW SWITCH, NIEC. SYMBOL DENOTES INTERFACE FOR MONITORING CONNECTION FROM FIRE ALARM SYSTEM.
- SPRINKLER SYSTEM TAMPER SWITCH, NIEC. SYMBOL DENOTES INTERFACE FOR MONITORING CONNECTION FROM FIRE ALARM SYSTEM.
- SPRINKLER SYSTEM POST INDICATING VALVE 'PIV', NIEC. SYMBOL DENOTES INTERFACE FOR MONITORING CONNECTION FROM FIRE ALARM SYSTEM. INCLUDE A REMOTE MOUNTED ADDRESSABLE MONITORING MODULE AT PIV.
- SM — REMOTE MOUNTED SINGLE INPUT, ADDRESSABLE, MONITORING MODULE FOR INITIATING CIRCUIT CONNECTION.
- DM — REMOTE MOUNTED DUAL INPUT, ADDRESSABLE, MONITORING MODULE FOR INITIATING CIRCUIT CONNECTION.
- CR — REMOTE MOUNTED PROGRAMMABLE CONTROL RELAY MODULE FOR ADDRESSABLE CONTROL.
- DPS — DIFFERENTIAL PRESSURE SWITCH, NIEC. SYMBOLS DENOTES INTERFACE FOR MONITORING CONNECTION FROM FIRE ALARM SYSTEM TO ANNUNCIATE FAN OPERATION. INCLUDE A REMOTE MOUNTED ADDRESSABLE MONITORING MODULE AT EACH LOCATION.
- EOL — END-OF-LINE RESISTOR.
- CT — CURRENT TRANSFORMER FOR MONITORING AVAILABLE POWER.
- FRAP — FIREMANS REMOTE ANNUNCIATOR PANEL FRAP, FLUSH WALL MOUNTED, +42" UON.
- MAGNETIC TYPE DOOR HOLD OPEN/RELEASE DEVICE, WALL MOUNTED, NIEC. SYMBOL DENOTES INTERFACE FOR POWER AND CONTROL CONNECTIONS FROM FIRE ALARM SYSTEM.
- DOOR HOLD OPEN/RELEASE DEVICE INTEGRATED IN DOOR HARDWARE CLOSURE EQUIPMENT, NIEC. SYMBOL DENOTES INTERFACE FOR POWER AND CONTROL CONNECTIONS FROM FIRE ALARM SYSTEM.
- AUDIBLE NOTIFICATION APPLIANCE, WALL MOUNTED, 6" BELOW CEILING OR +80" AFF, WHICHEVER IS LOWER.
- VISIBLE NOTIFICATION APPLIANCE, WALL MOUNTED, 6" BELOW CEILING OR +80" AFF, WHICHEVER IS LOWER. NUMBER ASSOCIATED WITH 'cd' REPRESENTS CANDELA RATING OF STROBE.
- AUDIBLE/VISIBLE NOTIFICATION APPLIANCE, WALL MOUNTED, 6" BELOW CEILING OR +80" AFF, WHICHEVER IS LOWER. NUMBER ASSOCIATED WITH 'cd' REPRESENTS CANDELA RATING OF STROBE.
- AUDIBLE NOTIFICATION APPLIANCE, CEILING MOUNTED IN FLUSH BACK BOX.
- VISIBLE NOTIFICATION APPLIANCE, CEILING MOUNTED IN FLUSH BACK BOX. NUMBER ASSOCIATED WITH 'cd' REPRESENTS CANDELA RATING OF STROBE.
- AUDIBLE/VISIBLE NOTIFICATION APPLIANCE, CEILING MOUNTED IN FLUSH BACK BOX. NUMBER ASSOCIATED WITH 'cd' REPRESENTS CANDELA RATING OF STROBE.
- MOTOR OPERATED FIRE/SMOKE DAMPER "FSD", NIEC. SYMBOL DENOTES FIRE ALARM INTERFACE WITH PROGRAMMABLE CONTROL RELAY FOR FSD CONTROL AND DUAL INPUT ADDRESSABLE MONITORING MODULE FOR POSITION MONITORING VIA END SWITCHES.
- FIRE ALARM BELL FOR SPRINKLER FLOW ANNUNCIATOR, NIEC, POWERED AND INSTALLED BY ELECTRICAL, WALL MOUNTED ON EXTERIOR OF BUILDING.
- THERMISTOR SENSOR DEVICE IN FSAE LOBBIES FOR TEMPERATURE MONITORING, WALL MOUNTED 6" BELOW CEILING.
- SMOKE ALARM FOR RESIDENTIAL DWELLING UNITS, NON-ADDRESSABLE, 120V DEVICE WITH BATTERY BACK-UP, CEILING MOUNTED IN FLUSH OR SURFACE JUNCTION BOX.
- SMOKE ALARM FOR RESIDENTIAL DWELLING UNITS, NON-ADDRESSABLE, 120V DEVICE WITH BATTERY BACK-UP, WALL MOUNTED MAXIMUM 6" BELOW CEILING IN FLUSH JUNCTION BOX.
- COMBINATION SMOKE AND CARBON MONOXIDE ALARM FOR RESIDENTIAL DWELLING UNITS, NON-ADDRESSABLE, 120V DEVICE WITH BATTERY BACK-UP, CEILING MOUNTED IN FLUSH OR SURFACE JUNCTION BOX.
- COMBINATION SMOKE AND CARBON MONOXIDE ALARM FOR RESIDENTIAL DWELLING UNITS, NON-ADDRESSABLE, 120V DEVICE WITH BATTERY BACK-UP, WALL MOUNTED MAXIMUM 6" BELOW CEILING IN FLUSH JUNCTION BOX.
- CS — REMOTE 2-WAY COMMUNICATION STATION, WALL MOUNTED, +42" AFF.
- BS — 2-WAY COMMUNICATION BASE STATION, WALL MOUNTED, +42" AFF.

LIGHTING

- SINGLE-HEAD AREA POST-TOP LUMINAIRE WITH POLE, MOUNTED TO CONCRETE BASE.
- AREA LUMINAIRE, SURFACE OR RECESSED MOUNTED TO WALL.

WIRING DEVICES

- JUNCTION BOX, WALL MOUNTED, +18" UON.
- JUNCTION BOX, MOUNTED IN FLUSH FLOOR BOX.
- JUNCTION BOX, MOUNTED FLUSH IN CEILING.
- JUNCTION BOX, SURFACE OR PENDANT MOUNTED TO BOTTOM OF STRUCTURE IN ACCESSIBLE CEILING SPACE OR EXPOSED IN OPEN CEILING AREAS.

ABBREVIATIONS

A	AMPERES	KO	CONDUIT KNOCKOUT
AFI	ARC FAULT CIRCUIT INTERRUPTER	LCP	LIGHTING CONTROL PANEL
AF	AMPERE OVERCURRENT FRAME SIZE (WHEN APPLIED TO CIRCUIT BREAKERS) OR AMPERE FUSE SIZE (WHEN APPLIED TO FUSES)	MBGB	MAIN BUILDING GROUND BUS
		MCB	MAIN CIRCUIT BREAKER
		MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MDF	MAIN DISTRIBUTION FRAME
AIC	ASYMMETRIC INTERRUPTING CURRENT	MLO	MAIN LUGS ONLY
AL	ALUMINUM	MTC	EMPTY CONDUIT
AT	AMPERE OVERCURRENT TRIP (WHEN APPLIED TO CIRCUIT BREAKERS)	MTS	MANUAL TRANSFER SWITCH
AV	AUDIO / VIDEO	(N)	NEW
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED
BAS	BUILDING AUTOMATION SYSTEM	NF	NON-FUSED
BPS	BOLTED PRESSURE CONTACT SWITCH	NIEC	NOT IN ELECTRICAL CONTRACT
C	CONDUIT	NL	NIGHT LIGHT, UNSWITCHED
CCTV	CLOSED CIRCUIT TELEVISION	NO	NORMALLY OPEN
CEC	CALIFORNIA ELECTRICAL CODE	NTS	NOT TO SCALE
CL	CURRENT LIMITING CIRCUIT BREAKER OR FUSE	OC	ON CENTER
		OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
CP	CIRCULATION PUMP		
CT	CURRENT TRANSFORMER	PA	PUBLIC ADDRESS
CU	COPPER	PDZ	PRIMARY DAYLIGHT ZONE
DF	DRINKING FOUNTAIN	PNL	PANEL
(E)	EXISTING TO REMAIN	PQM	POWER QUALITY METER
EC	ELECTRICAL CONTRACTOR	PT	POTENTIAL TRANSFORMER
EF	EXHAUST FAN	PVC	POLYVINYL CHLORIDE
EP	EXPLOSION PROOF	(R)	EXISTING TO BE REMOVED
EPO	EMERGENCY POWER OFF	(RR)	REMOVE AND RELOCATE
EMT	ELECTRICAL METALLIC TUBING	SAD	SEE ARCHITECTURAL DRAWINGS
EWH	ELECTRIC WATER HEATER	TC	TIME CLOCK
F	FUSED	TP	TWISTED-PAIR
(F)	FUTURE	SDZ	SECONDARY DAYLIGHT ZONE
FACP	FIRE ALARM CONTROL PANEL	SPD	SURGE PROTECTION DEVICE
FFCP	FIREMAN'S FAN CONTROL PANEL	TX	TRANSFORMER
FLA	FULL LOAD AMPERES	TYP	TYPICAL
FMC	FLEXIBLE METAL CONDUIT	UON	UNLESS OTHERWISE NOTED
FSD	FIRE/SMOKE DAMPER	UPS	UNINTERRUPTIBLE POWER SUPPLY
FRAP	FIREMAN'S REMOTE ANNUNCIATOR PANEL	V	VOLTS
		VA	VOLTS-AMPS
G	GROUND	VFD	VARIABLE FREQUENCY DRIVE
GB	GROUND BUS	VM	VENDING MACHINE
GFCI	GROUND FAULT CIRCUIT INTERRUPTER	WAP	WIRELESS ACCESS POINT
GND	GROUND	WP	WEATHERPROOF
GRAP	GENERATOR REMOTE ANNUNCIATOR PANEL	2SP	TWO SPEED
GRC	GALVANIZED RIGID CONDUIT	1Ø	1-PHASE
HNC	HOME NETWORK CABINET	3Ø	3-PHASE
HPC	HIGH PRESSURE CONTACT SWITCH	1P	1-POLE
IDF	INTERMEDIATE DISTRIBUTION FRAME	2P	2-POLE
IG	ISOLATED GROUND	3P	3-POLE
INV	INVERTER	3W	3-WIRE
IMC	INTERMEDIATE METAL CONDUIT	4W	4-WIRE

APPLIANCES

DO	DOUBLE OVEN	MW	MICROWAVE
DW	DISHWASHER	RF	REFRIGERATOR
ED	ELECTRIC DRYER	RH	RANGE HOOD
EO	ELECTRIC OVEN/RANGE	UR	UNDERCOUNTER REFRIGERATOR
GD	GARBAGE DISPOSER	WC	WINE COOLER
GR	GAS RANGE	WM	WASHING MACHINE

ELECTRICAL SHEET INDEX

SHEET NO.	SHEET NAME	2023.11.22 INCREMENT 1	2024.01.24 INCREMENT 2
T001	SYMBOLS LIST & DRAWING INDEX	•	•
T002	GENERAL NOTES, SCHEDULES & CALCULATIONS	•	•
T100	SITE PLAN (INCREMENT 1)	•	
T201	FIRE ALARM PLAN		•
T301	LOW VOLTAGE PLAN		•
T401	FIRE ALARM RISER DIAGRAM		•
T501	FIRE ALARM DETAILS		•
T601	RISER DIAGRAMS		•
T701	DETAILS		•

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DIV. OF THE STATE ARCHITECT
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SS ☑ FLS ☑ ACS ☑
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SYMBOLS LIST & DRAWING INDEX

T001

Project Status

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

NUMBERED SHEET NOTES

1. EXISTING FIRE ALARM CONTROL PANEL LOCATED IN ADMIN OFFICE.
2. PROVIDE 2" CONDUIT FROM EXISTING FIRE ALARM PANEL TO NEW BUILDING. PROVIDE 1" CONDUIT FOR BMS COMM WIRE AND STUB ABOVE ACCESSIBLE CEILING IN ADMIN OFFICE SPACE. PROVIDE TWO 2" CONDUIT FROM MDF TO NEW BUILDING FOR TELECOM/DATA/SECURITY.
3. PROVIDE 2.5" CONDUIT FROM EXISTING MSB TO NEW BUILDING FOR POWER. REFER TO POWER SINGLE LINE DIAGRAM 7/E601 FOR FEEDER REQUIREMENTS.
4. CONTRACTOR SHALL COORDINATE STUB-OUT AND TRANSITION TO UNDERGROUND IN THE FIELD FOR A CLEAN INSTALLATION AND MINIMAL IMPACT TO THE EXISTING STRUCTURE. COORDINATE AROUND ALL EXISTING UNDERGROUND CONDUITS.
5. EXISTING POLE LIGHT TO BE RELOCATED FOR NEW ADA RAMP RECONFIGURATION.
6. FIRE ALARM DEVICE SHOWN FOR REFERENCE ONLY. REFER TO INC 2 PACKAGE FOR COMPLETE FIRE ALARM DRAWINGS.
7. ADD EVAX PANEL (VOICE NOTIFICATION) ADJACENT TO EXISTING PANEL.
8. PROVIDE TWO 2" CONDUITS FOR COPPER AND FIBER TELECOM/DATA AND SECURITY LINES FROM THE EXISTING MDF TO THE NEW BUILDING. RUN CONDUIT EXPOSED BELOW EXISTING CANOPY ALONG BUILDING A BEFORE TRANSITIONING IN JOINT TRENCH.
9. INTERCEPT EXISTING SITE LIGHTING BRANCH CIRCUIT AND EXTEND TO NEW LOCATION OF EXISTING POLE. PROVIDE ALL NEW WIRE BETWEEN POLES.
10. STUB CONDUITS TO WITHIN 5 FEET OF NEW BUILDING. REFER TO MODULAR BUILDING DRAWINGS FOR CONTINUATION.

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 01-121319 INC: 1
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 5/1/2024

multistudio
the evolution of gould evans

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Project Number: 23080

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Issue Date: 03/26/2024

Revisions

NUMBER	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
KRISTINA MARTIN
No. E15303
ELECTRICAL
STATE OF CALIFORNIA

SITE PLAN (INCREMENT 1)

T100

Project Status