MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS

CAMARILLO HEIGHTS ELEMENTARY SCHOOL

35 CATALINA DRIVE, CAMARILLO, CA 93010

LIST OF SYMBOLS:

AC	ASPHALTIC CONCRETE	MJ	MECHANICAL JOINT
ACP	ASBESTOS CEMENT PIPE	NIC	NOT INCLUDED IN CONTRACT
AB	AGGREGATE BASE	OC	ON CENTER
BC	BEGIN CURVE	OCEW	ON CENTER EACH WAY
BCR	BEGIN CURB RETURN	PCC	POINT OF COMPOUND CURVATURE
BD	BASEMENT DRAIN	PI	POINT OF INTERSECTION (OF CURVE TANGENTS)
BFV	BUTTERFLY VALVE	℄ OR P/L	PROPERTY LINE
BM	BENCHMARK	PRC	POINT OF REVERSE CURVATURE
BV	BALL VALVE	PVC	POLY-VINYL CHLORIDE
BVC	BEGIN VERTICAL CURVE	PV	PLUG VALVE
BW	BACK OF WALK	R	RADIUS
CIP	CAST IRON PIPE	RCP	REINFORCED CONCRETE PIPE
CJ	CRACK CONTROL JOINT	RD	ROOF DRAIN
CL	CLASS	RG	RETAINING GLAND
℄ OR C/L	CENTERLINE	RSJ	ROUGH SURFACE JOINT
CMP	CORRUGATED METAL PIPE	R/W	RIGHT-OF-WAY
CLR	CLEAR	S	SEWER
CMU	CONCRETE MASONRY UNIT	SD	STORM DRAIN
CO	CLEANOUT	SL	STREET LIGHT
CTV	CABLE TELEVISION	ST STL	STAINLESS STEEL
DIP	DUCTILE IRON PIPE	STA	STATION
D	DRAIN	STD DTL	STANDARD DETAIL
E	ELECTRICAL	T	TELEPHONE
DI	DROP INLET	T BLK	THRUST BLOCK
EC	END CURVE	TB	TOP OF BERM
ECR	END CURB RETURN	TC	TOP OF CURB
EG	EXISTING GRADE	TCN	TOP OF CONCRETE
EJ	EXPANSION JOINT	TD	TOP OF DIKE
EL	ELEVATION	TF	TOP OF FOOTING
EP	EDGE OF PAVEMENT	TG	TOP OF GRATE
EVC	END VERTICAL CURVE	TI	TRAFFIC INDEX
EW	EACH WAY	TL	TRAFFIC LIGHT
EX	EXISTING	TP	TOP OF PAVEMENT
FD	FLOOR DRAIN	TYP	TYPICAL
FF	FINISH FLOOR	TW	TOP OF WALL
FG	FINISH GRADE	VCP	VITRIFIED CLAY PIPE
FH	FIRE HYDRANT	VPI	VERTICAL POINT OF INTERSECTION (OF VERTICAL CURVE TANGENTS)
℄ OR FL	FLOWLINE	W	WATER
FLG	FLANGE	W/	WITH
FS	FINISH SURFACE	WD	WALL DRAIN
G	GAS	WM	WATER METER
GB	GRADE BREAK	WV	WATER VALVE
GM	GAS METER	△	DELTA (CURVE CENTRAL ANGLE)
GSP	GALVANIZED STEEL PIPE	±	APPROXIMATELY
GSV	GAS VALVE	%	PERCENT
GV	GATE VALVE	<	LESS THAN
HB	HOSE BIB	>	GREATER THAN
HP	HIGH POINT		
INV	INVERT		
L	CURVE LENGTH		
LF	LINEAL FEET		
MH	MANHOLE		

LEGEND:

DESCRIPTION	EXISTING	PROPOSED
CENTERLINE		
EDGE OF A.C. PAVEMENT		
ELEVATION	100.00 OR (100.00)	100.00
CONCRETE PAVEMENT		
A.C. PAVEMENT		
PROPERTY LINE		
RIGHT-OF-WAY LINE		
EASEMENT LINE		
CONTOURS (MAJOR)	10	10
CONTOURS (MINOR)	12	12
BENCH MARK		
TREE CANOPY		
APPROX. SAW CUT LINE		
LIMIT OF GRADING LINE		
GRADE BREAK LINE		GB
FLOW LINE		
FENCE		
WATER	W	W
STORM DRAIN	SD	SD

IMPORTANT NOTICE

ALL UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR IS TO NOTIFY UNDERGROUND SERVICE ALERT TWO WORKING DAYS PRIOR TO STARTING ANY EXCAVATION OR RESURFACING.

811

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

VICINITY MAP
NOT TO SCALE

USE OF PLANS

THIS DRAWING IS PROVIDED IN AN ELECTRONIC FORMAT (ON COMPUTER DISK) AS A COURTESY IF REQUESTED BY THE USER. THE DELIVERY OF THE ELECTRONIC FILE DOES NOT CONSTITUTE THE DELIVERY OF OUR PROFESSIONAL WORK PRODUCT. THE SIGNED HARD COPY PREPARED FOR THE PROJECT CONSTITUTES OUR PROFESSIONAL WORK PRODUCT AND THE HARD COPY MUST BE REFERRED TO FOR THE CORRECT DESIGN INFORMATION. THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE. USER AGREES TO INDEMNIFY AND HOLD HARMLESS F&A FOR ALL COSTS AND DAMAGES IF USED.

USE OF ELECTRONIC INFORMATION

ELECTRONIC INFORMATION MAY BE PROVIDED BY THE ENGINEER FOR CONVENIENCE; UNDER NO CIRCUMSTANCES SHALL DELIVERY OF ELECTRONIC FILES FOR USE BY OTHERS BE DEEMED A SALE BY THE ENGINEER AND THE ENGINEER MAKES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY AND FITNESS FOR ANY PARTICULAR PURPOSE. IN NO EVENT SHALL THE ENGINEER BE LIABLE FOR INDIRECT OR CONSEQUENTIAL DAMAGES AS A RESULT OF THE USE OR REUSE OF THE ELECTRONIC FILES BY OTHERS.

ELECTRONIC INFORMATION IS INTENDED TO PROVIDE INFORMATION SUPPLEMENTAL AND SUBORDINATE TO THE CONSTRUCTION CONTRACT DOCUMENTS. LAYOUT AND CONSTRUCTION OF PROJECT ELEMENTS SHALL BE BASED ON DIMENSIONS AND INFORMATION INCLUDED ON THE SIGNED AND SEALED CONSTRUCTION CONTRACT DOCUMENTS WHICH SHALL CONTROL OVER ELECTRONIC INFORMATION. USER IS RESPONSIBLE FOR CONFIRMING LOCATION OF PROPOSED IMPROVEMENTS BASED ON DIMENSIONS AND INFORMATION INCLUDED ON THE CONSTRUCTION CONTRACT DOCUMENTS; INCONSISTENCIES BETWEEN THE ELECTRONIC INFORMATION AND THE CONSTRUCTION CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO CONSTRUCTION.

PROJECT ELEMENTS SUCH AS MANHOLES, CATCH BASINS, UTILITY VAULTS, VALVE ASSEMBLIES, STAIRS, RAMPS, WALLS, ETC. ARE SHOWN SCHEMATICALLY IN THE ELECTRONIC INFORMATION AND CONSTRUCTION OF THESE ELEMENTS SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION NOTES AND DETAILS PRESENTED OR REFERENCED IN THE SIGNED AND SEALED CONSTRUCTION CONTACT DOCUMENTS. IMPROVEMENTS CONSTRUCTED BASED ON ELECTRONIC INFORMATION AND IN CONFLICT WITH THE DRAWING DIMENSIONS DETAILS, AND THE CONSTRUCTION CONTRACT DOCUMENTS SHALL BE REMOVED AND CONSTRUCTED IN THE PROPER LOCATION AND DIMENSIONS AT CONTRACTOR'S SOLE EXPENSE.

DIGITAL DRAWINGS ARE TYPICALLY A COMPILATION OF DRAWINGS FROM A NUMBER OF SOURCES AND, AS SUCH, THERE IS INFORMATION IN THE ELECTRONIC FILE ISSUED BY THE ENGINEER THAT WAS NOT DEVELOPED BY THE ENGINEER AND IS NOT AUTHORIZED BY THE ENGINEER FOR USE BY OTHERS. ELECTRONIC INFORMATION PROVIDED BY THE ENGINEER SHALL ONLY BE APPLICABLE FOR IMPROVEMENTS DESIGNED BY THE ENGINEER AND WHICH ARE SPECIFICALLY DESIGNATED BY CONSTRUCTION NOTES AND/OR DETAILS ON THE SIGNED AND SEALED CONTRACT DOCUMENTS.

IF DIGITAL FILES ARE OBTAINED WITH THE INTENT TO USE THEM FOR PROJECT STAKING, THEY SHALL ONLY BE USED BY A QUALIFIED ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF CALIFORNIA. DIGITAL INFORMATION SHALL ONLY BE USED FOR STAKING HORIZONTAL LOCATION OF PROPOSED IMPROVEMENTS AFTER IT HAS BEEN CONFIRMED WITH THE SIGNED AND SEALED CONSTRUCTION CONTRACT DOCUMENTS.

THE DIGITAL DRAWINGS ARE NOT INTENDED TO BE USED DIRECTLY FOR CONTROL OF CONTRACTOR'S GRADING OPERATIONS WITHOUT STAKING BY ENGINEER OR LAND SURVEYOR. THE INTERSECTION OF PROPOSED CUT AND FILL SLOPES WITH EXISTING GRADE IS APPROXIMATE WHERE SHOWN ON THE DRAWINGS AND SHALL BE CONFIRMED BY FIELD STAKING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT SLOPES IN CONFORMANCE WITH THE SPECIFIED AND DETAILED REQUIREMENTS CONTAINED IN THE CONTRACT DOCUMENTS.

BENCHMARK:

HORIZONTAL BASIS OF COORDINATES ARE NAD83 PER CAMARILLO HEIGHTS ELEMENTARY CONTROL POINTS 1, 2, 3.

VERTICAL DATUM IS NAD88 PER CAMARILLO HEIGHTS ELEMENTARY CONTROL POINT 1.

ELEVATION = 270.05'

CAUTION! CONFIRM BENCHMARK DATA AND CONDITION WITH PROJECT SURVEYOR (WATERS CARDENAS LAND SURVEYING, LLP) PRIOR TO USE.

TOPOGRAPHY:

EXISTING TOPOGRAPHY COMPILED BY FIELD SURVEY(S) BY WATERS CARDENAS LAND SURVEYING, LLP DATED MARCH, 2021 & JANUARY, 2022.

SURVEY MONUMENT PROTECTION:

PROTECT AND PRESERVE, IN PLACE, ALL SURVEY MONUMENTS AND BENCHMARKS. DO NOT DISTURB, MOVE, OR RELOCATE MONUMENTS OR BENCHMARKS WITHOUT THE PRIOR REVIEW AND APPROVAL BY THE AGENCY HAVING JURISDICTION OVER THE MONUMENT OR BENCHMARK. THE CONTRACTOR SHALL CONTRACT WITH A LICENSED SURVEYOR FOR MONUMENTS REQUIRING DISTURBANCE OR REMOVAL, AND THE SURVEYOR SHALL RESET THE MONUMENTS OR PROVIDE PERMANENT WITNESS MONUMENTS AND FILE THE REQUIRED DOCUMENTATION WITH THE COUNTY SURVEYOR PURSUANT TO BUSINESS AND PROFESSIONAL CODE SECTION 8771.

SHEET INDEX

SHEET NO.	GENERAL DESCRIPTION
1	G-1 TITLE SHEET
2	G-2 GENERAL NOTES AND SITE MAP
3	G-3 GEOTECHNICAL LETTER REPORT
4	C-1 SITE IMPROVEMENT PLAN
5	C-2 SITE IMPROVEMENT PLAN
6	C-3 SITE STRIPING PLAN
7	CD-1 DETAILS

NO.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

REGISTERED PROFESSIONAL ENGINEER ROBERT A. SCHMIDT No. 71335 STATE OF CALIFORNIA CIVIL

FLOWERS & ASSOCIATES, INC.
201 N. Calle Cesar Chavez, Suite 100
Santa Barbara, CA 93103
Telephone (805) 966-2224
F&A CIVIL ENGINEERING • PLANNING CONSTRUCTION ENGINEERING
BY: DATE: 3/10/2025

TITLE SHEET
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

G-1

DATE: 03/10/2025

SHT. 1 OF 7

THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.

GRADING AND PAVING SPECIFICATIONS:

A. STANDARD SPECIFICATIONS:

1. EXCEPT AS MODIFIED OR OTHERWISE SPECIFIED ON THE DRAWINGS OR HEREIN, CONSTRUCTION MATERIALS AND METHODS SHALL CONFORM WITH THE ***STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (SSPWC), 2015 EDITION***, PUBLISHED BY BUILDING NEWS, INC.

B. GEOTECHNICAL ENGINEER:

1. A GEOTECHNICAL INVESTIGATION HAS NOT BEEN PERFORMED FOR THIS PROJECT.

C. LICENSED LAND SURVEYOR:

1. A LICENSED SURVEYOR SHALL LAY OUT THE WORK, SET GRADE STAKES, CHECK FORMS AND CHECK SURFACE OF PAVEMENT BASE COURSES.

D. EARTHWORK QUANTITIES:

1. CONTRACTOR SHALL PERFORM AN INDEPENDENT EARTHWORK QUANTITY ANALYSIS ON WHICH TO BASE HIS BID. CONTRACTOR SHALL NOT BE RELIEVED OF LIABILITY UNDER THE CONTRACT FOR ANY LOSS HE MAY SUSTAIN AS A RESULT OF ANY VARIANCE BETWEEN HIS EARTHWORK ESTIMATES AND THE ACTUAL EARTHWORK QUANTITIES REQUIRED TO ACCOMPLISH GRADING AS SPECIFIED HEREIN AND AS NECESSARY FOR CONSTRUCTION OF IMPROVEMENTS TO THE FINISH GRADES OR PAVEMENT SUBGRADES CALLED FOR ON THE DRAWINGS.

E: DUST CONTROL:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF DUST DURING THE ENTIRE CONSTRUCTION PERIOD AND FOR ANY DAMAGE CAUSED BY DUST RESULTING FROM CONTRACTOR'S OPERATIONS.
2. EMPLOY LABOR, EQUIPMENT AND METHODS REQUIRED TO PREVENT CONSTRUCTION OPERATIONS FROM PRODUCING DUST DAMAGING TO PERSONS, PROPERTY, VEGETATION AND ANIMALS OR CAUSING A NUISANCE TO PERSONS OCCUPYING BUILDINGS IN THE VICINITY OF THE JOB SITE. CONTINUE DUST ABATEMENT MEASURES UNTIL AUTHORIZED BY THE OWNER'S REPRESENTATIVE TO DISCONTINUE THEM.
3. DURING TIMES OF EARTH DISTURBANCE OR MOVEMENT, MONITOR THE AMOUNT OF DUST RAISED BY THE ACTIVITY AND WATER THE AREAS BEING DISTURBED AS NEEDED TO PREVENT DUST FROM LEAVING THE PROJECT SITE.
4. ENSURE THAT TRUCKS TRANSPORTING MATERIAL FORM THE SITE ARE TARPED BEFORE LEAVING THE SITE WITH TARPS SUFFICIENTLY SECURE TO REMAIN TARPED TO THE POINT OF DISPOSAL.
5. COVER STOCKPILED SOIL MATERIALS AS REQUIRED TO PREVENT WIND-BLOWN DUST.

F: EROSION AND SEDIMENTATION CONTROL:

1. PROVIDE STORM WATER POLLUTION PREVENTION MATERIALS AND METHODS IN ACCORDANCE WITH THE CONSTRUCTION BMP ONLINE HANDBOOK, JANUARY 2015 EDITION, AVAILABLE ONLINE FROM THE CALIFORNIA STORMWATER QUALITY ASSOCIATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROL OF EROSION AND SEDIMENT TRANSPORT DURING THE ENTIRE CONSTRUCTION PERIOD AND FOR ANY DAMAGE CAUSED BY EROSION OR SEDIMENT TRANSPORT RESULTING FROM CONTRACTOR'S OPERATIONS.

G: CLEARING AND GRUBBING:

1. PRIOR TO COMMENCING GRADING OR TRENCHING OPERATIONS, CLEAR THE EXISTING GROUND SURFACE OF AREAS TO BE GRADED OR TRENCHED OF ALL VEGETATION (EXCEPT TREES INDICATED ON THE DRAWINGS TO REMAIN), WHETHER LIVING OR DEAD, INCLUDING ROOTS AND ROOT STRUCTURES, AS WELL AS ALL TRASH AND DEBRIS, UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER.
2. PRIOR TO COMMENCING GRADING OR TRENCHING OPERATIONS, EXCAVATE AND REMOVE FROM AREAS TO BE GRADED OR TRENCHED ALL EXISTING UNDOCUMENTED OR NON-COMPLYING FILL AND SOIL CONTAINING DEBRIS, ORGANICS, PAVEMENT AND OTHER UNSUITABLE MATERIAL, AS DETERMINED BY THE GEOTECHNICAL ENGINEER.
3. IF, DURING THE REMOVAL AND SCARIFICATION PROCESS, EXCESSIVE ROOT STRUCTURES ARE ENCOUNTERED, THESE AREAS SHALL BE DEEP RIPPED IN TWO DIRECTIONS TO THE DEPTH OF THE ROOT STRUCTURE AFTER WHICH THE DISTURBED SOILS AND THE ROOTS SHALL BE COMPLETELY REMOVED AND THE RESULTING CAVITIES SHALL BE SCARIFIED AND PROCESSED TO RECEIVE FILL IN ACCORDANCE WITH RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

H: GRADING:

1. GRADING WORK INCLUDES, BUT IS NOT NECESSARILY LIMITED TO, THE FOLLOWING:
   - ALL EXCAVATION TO THE GRADES SHOWN ON OR INDICATED BY THE DRAWINGS AND AS SPECIFIED HEREIN.
   - ALL EARTH FILL TO THE GRADES SHOWN ON OR INDICATED BY THE DRAWINGS AND AS SPECIFIED HEREIN.
   - ALL IMPORT AND EXPORT OF EARTH MATERIAL AS REQUIRED TO ACCOMPLISH THE FINISH GRADES AND PAVEMENT SUBGRADES SHOWN ON OR INDICATED BY THE DRAWINGS AND AS SPECIFIED HEREIN.
   - ALL CONDITIONING, PLACEMENT, COMPACTION AND RECOMPACTION OF EARTHWORK.
2. ON-SITE SOILS FREE OF OVERSIZE ROCKS AND IRREDUCIBLE MATERIAL (OVER 3 INCHES IN LARGEST DIMENSION), TRASH AND DEBRIS, ORGANICS AND DELETERIOUS MATERIALS MAY BE USED AS FILL SUBJECT TO PRIOR REVIEW AND APPROVAL BY THE GEOTECHNICAL ENGINEER. IF IMPORTED SOIL IS NECESSARY, THE MATERIAL SHALL BE GRANULAR AND NON-EXPANSIVE, EQUAL OR SUPERIOR IN QUALITY TO THE ON-SITE SOILS, AS DETERMINED BY THE GEOTECHNICAL ENGINEER PRIOR TO IMPORTATION OF THE FILL MATERIAL TO THE SITE.
3. BEFORE PLACING ANY FILL MATERIAL, REQUEST REVIEW OF THE EXPOSED IN-PLACE SOILS BY, AND PREPARE THESE SOILS TO RECEIVE FILL AS RECOMMENDED BY, THE GEOTECHNICAL ENGINEER, INCLUDING:
   - CORRECTING ANY SOFT, OVERWET OR PUMPING AREAS, AS RECOMMENDED
   - OVEREXCAVATING OR SCARIFYING, MOISTURE CONDITIONING, AND RECOMPACTING AS RECOMMENDED AND AT LEAST THE UPPER 9 INCHES TO AT LEAST 90% OF MAXIMUM DENSITY.
4. PLACE FILL MATERIAL IN LAYERS THAT CAN BE COMPACTED WITH THE EQUIPMENT BEING USED AND AS REQUIRED BY THE GEOTECHNICAL ENGINEER BUT NOT MORE THAN 6 INCHES IN LOOSE THICKNESS. AFTER EACH LAYER HAS BEEN CONDITIONED AND PLACED, COMPACT THE MATERIAL TO THE FOLLOWING DENSITIES:
   - STRUCTURAL FILL NOT OTHERWISE SPECIFIED: MINIMUM 90% OF MAXIMUM DENSITY
   - UPPER 12" OF AREAS TO RECEIVE LANDSCAPING BUT NO OTHER SURFACE IMPROVEMENTS: 85% OF MAXIMUM DENSITY
   - BASE COURSE AND UPPER 9" OF SUBGRADE SOIL BENEATH BASE COURSE IN PAVEMENT AND WALKWAY AREAS: MINIMUM 95% OF MAXIMUM DENSITY

I: ASPHALT CONCRETE PAVING:

1. AGGREGATE BASE MATERIAL SHALL BE CRUSHED AGGREGATE BASE CONFORMING TO SECTION 200-2.2 OF THE STANDARD SPECIFICATIONS (SSPWC).
2. ASPHALT CONCRETE SHALL BE THE PRODUCT OF MIXING MINERAL AGGREGATE AND A MAXIMUM OF 15 PERCENT RECLAIMED ASPHALT PAVEMENT (RAP) WITH PAVING ASPHALT, IN CONFORMANCE WITH SECTION 203-6 OF THE STANDARD SPECIFICATIONS (SSPWC).
3. PAVING ASPHALT SHALL BE PERFORMANCE GRADE PG 64-10, IN CONFORMANCE WITH SECTION 203-1 OF THE STANDARD SPECIFICATIONS (SSPWC).
4. ASPHALT CONCRETE DESIGNATED BY CLASS AND GRADE FOR VARIOUS APPLICATIONS SHALL BE AS FOLLOWS:
   - FINISH COURSE, NON-TRAFFIC: D2- PG 64-10-RAP
5. PAINT BINDER FOR TACK COAT SHALL BE SS-1H EMULSIFIED ASPHALT CONFORMING TO SECTION 203-3 OF THE STANDARD SPECIFICATIONS (SSPWC). APPLY A PAINT BINDER OF ASPHALTIC EMULSION AT THE RATE OF 0.15 GALLONS PER SQUARE YARD OF SURFACE TO EXISTING VERTICAL SURFACES AGAINST WHICH PAVING WILL BE PLACED AND BETWEEN PAVEMENT COURSES CONSTRUCTED MORE THAN 24 HOURS APART.
6. MATERIALS FOR SEALCOAT SHALL CONFORM TO SECTION 203-9 OF THE STANDARD SPECIFICATIONS (SSPWC). ***GUARDTOP*** IS ACCEPTED BY SCHOOL DISTRICT FOR USE IN SEALCOAT APPLICATIONS.
7. BEFORE ORDERING DELIVERY OF A.C. PAVEMENT, CONFIRM BY SURVEY THAT THE FINISH SURFACE OF THE BASE COURSE FOR PAVEMENTS AND FOR PAVEMENT-RELATED STRUCTURES SHALL NOT VARY MORE THAN ½ INCH (0.04 FOOT) FROM THE DESIGN ELEVATION, SLOPE AND CROSS-SECTION, ESTABLISHED WITH DUE ALLOWANCE FOR THICKNESS OF SURFACING. VARIATIONS WITHIN THE SPECIFIED TOLERANCE SHALL BE COMPENSATING SUCH THAT THE AVERAGE ELEVATION, SLOPE, AND CROSS-SECTION CONFORM TO THOSE SPECIFIED PER PLAN.
8. AFTER CONSTRUCTION OF A.C. PAVEMENT AND APPURTENANT CONCRETE FEATURES BUT BEFORE SEAL COATING AND PAINTING STRIPING AND MARKINGS, CONDUCT A FLOOD TEST TO REVIEW SURFACE DRAINAGE, AS FOLLOWS:
   - SUPPLY AND DISCHARGE WATER IN SUFFICIENT QUANTITY TO COMPLETELY WET AND COVER ALL A.C. PAVEMENT AND CONCRETE GUTTER AREAS AND ALLOW TO DRAIN/DRY FOR ONE HOUR AT 70º F OR WARMER. MARK THE OUTLINE LIMITS OF RESIDUAL STANDING WATER DEEP ENOUGH TO COVER A 5 CENT PIECE, OR DEEPER.
   - REMOVE AND REPLACE A.C. PAVEMENT AND CONCRETE GUTTER IMPROVEMENTS AT NO ADDITIONAL COST TO THE OWNER, AS NECESSARY TO PROVIDE POSITIVE SURFACE DRAINAGE AND TO PREVENT PONDING OF WATER ON PAVEMENT SURFACES AND IN GUTTERS. SUBSTITUTION OF ASPHALT CONCRETE SKIN PATCH IN LIEU OF REMOVAL AND REPLACEMENT OF PAVEMENT SHALL BE AT SOLE DISCRETION OF THE OWNER.
   - CONDUCT ADDITIONAL FLOOD TESTING TO CONFIRM SUCCESS OF CORRECTIVE MEASURES.
9. NOT SOONER THAN 10 DAYS AFTER COMPLETION OF PAVING, CONSTRUCT SEALCOAT AT THE RATE OF 0.45 GALLONS PER SQUARE YARD OF SURFACE ON ALL NEW AND EXISTING PAVEMENT WITHIN WORK SITE IN ACCORDANCE WITH SECTION 302-8 OF THE STANDARD SPECIFICATIONS (SSPWC). A TACK COAT CONFORMING TO SECTION 302-8.2.1 SHALL BE APPLIED TO **EXISTING** PAVEMENT SURFACES IN ADVANCE OF SEALCOAT.

K: SUBMITTALS:

PROVIDE SUBMITTALS DEMONSTRATING CONFORMANCE OF MATERIALS PROPOSED FOR USE IN THE PROJECT WITH REQUIREMENTS SPECIFIED HEREIN OR ON THE PLAN, AS FOLLOWS:

- BASE
- AGGREGATE BASE
- ASPHALT CONCRETE
- CONCRETE

L: CONCRETE:

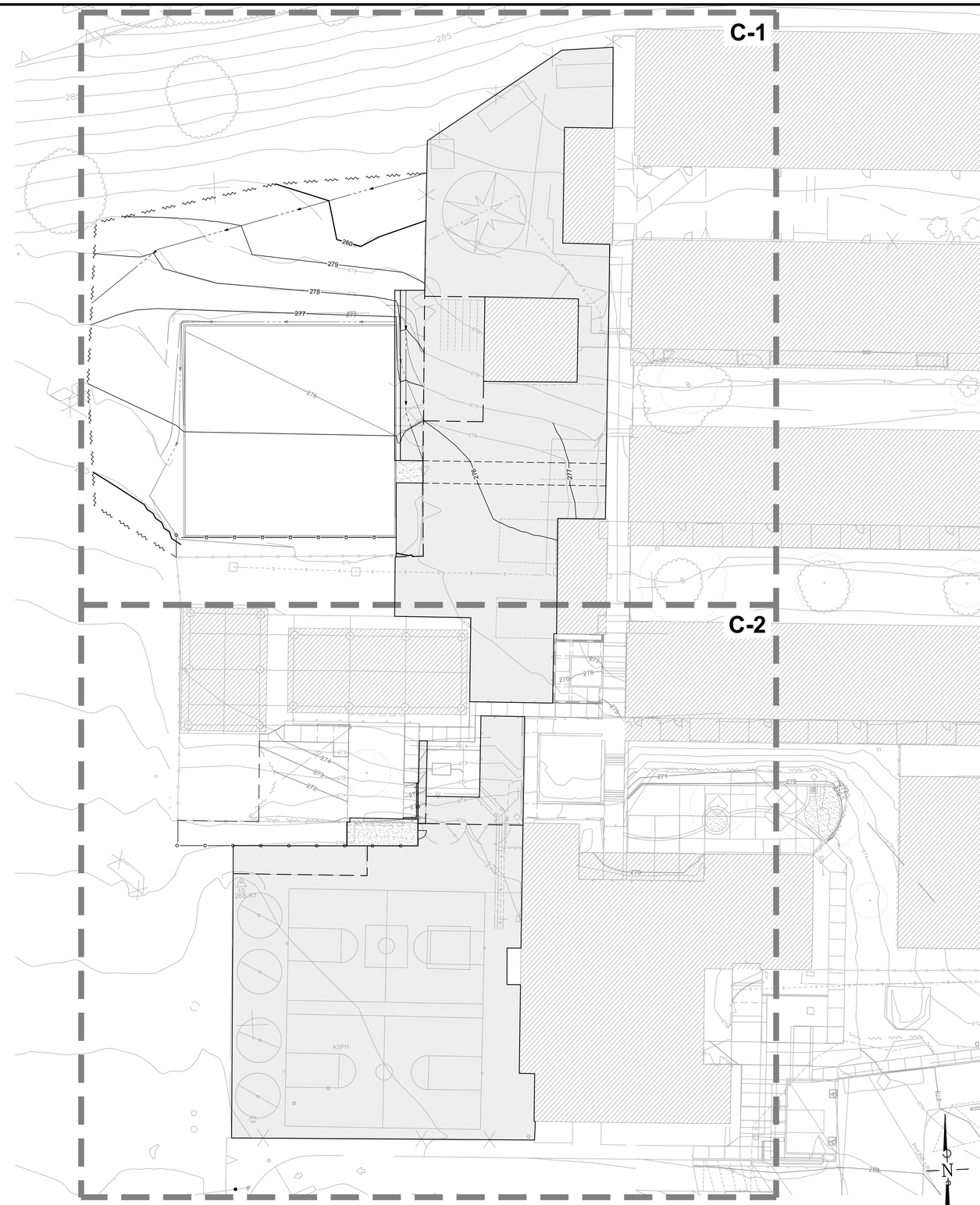
1. BASE MATERIAL
   - SAND BASE MATERIAL SHALL BE IMPORTED CLEAN SAND OF SUCH GRADATION THAT 90% TO 100% PASSES THROUGH A NO. 4 SIEVE, LESS THAN 5% PASSES THROUGH A NO. 200 SIEVE, AND THE SAND EQUIVALENT VALUE IS GREATER THAN OR EQUAL TO 40. FOR PROCESSED SAND, A MAXIMUM OF 15% SHALL PASS THROUGH A NO. 200 SIEVE.
   - AGGREGATE BASE MATERIAL SHALL BE CRUSHED AGGREGATE BASE CONFORMING TO SECTION 200-2.2 OF THE STANDARD SPECIFICATIONS (SSPWC).
2. FORM MATERIALS
   - GENERAL: SHALL CONFORM TO CALIFORNIA BUILDING CODE, SECTION 1906, FORMWORK, EMBEDDED PIPES AND CONSTRUCTION JOINTS.
   - PLYWOOD FORMS: DOUGLAS FIR SPECIES; SOLID-ONE-SIDE, SOUND UNDAMAGED SHEETS. UNLESS OTHERWISE CALLED FOR ON PLANS, SURFACE OF FORM SIDE AGAINST CONCRETE SHALL PROVIDE A MEDIUM DENSITY TEXTURE.
   - LUMBER: DOUGLAS FIR SPECIES; CONSTRUCTION GRADE WITH GRADE STAMP CLEARLY VISIBLE.
   - STEEL FORMS: MINIMUM 16 GAGE THICK, STIFFENED TO SUPPORT WEIGHT OF CONCRETE WITH MINIMUM DEFLECTION.
   - FORM TIES: REMOVABLE METAL OF ADJUSTABLE LENGTH, CONE ENDS.
3. REINFORCING STEEL
   - ALL REINFORCING SHALL BE FABRICATED FROM STEEL MANUFACTURED IN THE UNITED STATES.
   - REINFORCING STEEL SHALL BE DEFORMED BILLET-STEEL FOR CONCRETE REINFORCEMENT CONFORMING TO ASTM A-615, GRADE 60 FOR BAR SIZES NO. 4 AND LARGER, GRADE 40 FOR BAR SIZE NO. 3, GRADE 60 ACCEPTABLE FOR ALL SIZES.
   - WELDED BARS SHALL CONFORM TO THE MOST RECENT ISSUE OF ASTM STANDARD A-706, GRADE 60 FOR ALL BAR SIZES.
4. CONCRETE MATERIALS
   - CEMENT: SHALL BE TYPE II, LOW ALKALI (NO HIGHER THAN 0.4%), CONFORMING TO ASTM C-150.
   - AGGREGATES (COARSE AND FINE): ALL AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C-33. AGGREGATE SHALL BE UNIFORMLY GRADED, WITH THE MAXIMUM AGGREGATE SIZE BEING ¾" TO 1", AND THE RATIO OF COARSE AGGREGATE TO FINE AGGREGATE BEING APPROXIMATELY 60% TO 40% (BY WEIGHT), RESPECTIVELY.
   - COARSE AND FINE AGGREGATE (SAND) ARE TO COME FROM A SOURCE PROVEN TO HAVE NON-REACTIVE CHARACTERISTICS. COARSE AGGREGATE WHICH IS HEAVY MEDIA PROCESSED (SATICOY, SISQUOC), SANTA MARGARITA ROCK, OR SAN GABRIEL ROCK WILL BE CONSIDERED AS MEETING THE CRITERIA OF NON-REACTIVITY. MOORPARK SAND (QUALITY, BEST, BLUE STAR) WILL BE CONSIDERED AS MEETING THE REQUIREMENTS OF NON-REACTIVITY. OTHER AGGREGATES MEETING OR EXCEEDING THE AGGREGATE REACTIVITY CHARACTERISTICS OF THE AGGREGATES LISTED ABOVE ARE ACCEPTABLE UPON SUBMITTAL OF ADEQUATE DOCUMENTATION (ASTM C-289 AND ASTM C-277 TEST RESULTS THAT ARE NOT MORE THAN 2 YEARS OLD).
   - WATER: SHALL BE CLEAN, SUITABLE FOR HUMAN CONSUMPTION, AND NOT DETRIMENTAL TO CONCRETE.
5. CURING COMPOUND
   - SHALL BE WATER-BASE LIQUID MEMBRANE-FORMING COMPOUND CONFORMING TO ASTM C309, 1100-CLEAR SERIES MANUFACTURED BY W.R. MEADOWS, INC., OR EQUIVALENT, FOR USE ON EXTERIOR FLATWORK ONLY.
   - LIQUID MEMBRANE-FORMING COMPOUND SHALL BE APPLIED AT THE RATE OF 1 GALLON PER 200 SQUARE FEET, IN 2 COATS, THE SECOND COAT APPLIED AT RIGHT ANGLES TO THE FIRST.
6. BONDING AGENT
   - SHALL BE POLYVINYL ACETATE HIBOND MANUFACTURED BY LAMBERT CORPORATION, ORLANDO, FL, LOCK BOND NO. 906 MANUFACTURED BY MACKLANBURG-DUNCAN CO., CITY OF INDUSTRY, CA, OR EQUIVALENT.
7. CONCRETE MIX
   - MIX AND DELIVER CONCRETE IN ACCORDANCE WITH *CALIFORNIA BUILDING CODE*, SECTION 1905A.
   - HAVE MIX DESIGNED AND CERTIFIED BY A REGISTERED CIVIL ENGINEER, LICENSED IN CALIFORNIA.
   - SELECT PROPORTIONS FOR CONCRETE IN ACCORDANCE WITH THE APPROVED DESIGN MIX.
   - PROVIDE CONCRETE CONFORMING TO THE FOLLOWING CRITERIA:

ELEMENT	STRENGTH MIN. 28-DAY	MIN. CEMENT CONTENT	MAX. AGG. SIZE	MAX SLUMP	WAT/CEM RATIO	ADMIXURES
CURBS, GUTTERS, RAMPS; WALKS & FLATWORK	3,000 PSI	5.5 SACK/C.Y.	3/4-INCH	4 INCHES	0.59	SEE BELOW
DRAINAGE & STAIR STRUCTURES; PAVEMENT	4,000 PSI	6.5 SACK/C.Y.	1-INCH	4 INCHES	0.50	SEE BELOW

   - INCLUDE THE FOLLOWING ADMIXTURES:

     -2% MAX. AIR ENTRAINMENT
     -15% FLY ASH, CLASS N OR F ONLY
     -WATER REDUCING ADMIXTURE: GRACE WRDA 64, OR EQUAL

   - THE USE OF A PEA GRAVEL MIX (ROUNDED 3/8" AGGREGATE) CONCRETE MIX IS EXPRESSLY PROHIBITED.
8. EXPANSION JOINT
   - FILLER MATERIAL SHALL BE PREFORMED BITUMINOUS TYPE CONFORMING TO ASTM STANDARD D-1751.
   - DOWEL TUBING SHALL BE PLASTIC SPEED DOWEL SUPPLIED WITH SACRIFICIAL PLATE FOR ATTACHING TO FORM, AS SUPPLIED BY AZTEC CONCRETE ACCESSORIES, OR APPROVED EQUIVALENT.
9. REMOVABLE JOINT CAP
   - HIGH IMPACT POLYSTYRENE, DEPTH EQUAL TO WIDTH OF EXPANSION JOINT FILLER, SUPPLIED IN 10-FOOT LENGTHS, AS MANUFACTURED BY CONCRETE TIE, OR EQUIVALENT.
   - WHERE POLYURETHANE SEALANT PRIMERS ARE USED, A BONDBREAKER TAPE SHALL BE APPLIED PRIOR TO CAULKING.
10. JOINT SEALANT
    - FOR CRACK-CONTROL AND EXPANSION JOINTS SHALL BE CHEMICAL-CURE, TWO-COMPONENT, POLYURETHANE-BASE, NON-SAG ELASTOMERIC SIKAFLEX-2CNS MANUFACTURED BY SIKA CORPORATION, LYNDHURST, NJ, OR APPROVED EQUIVALENT. COLOR: LIMESTONE GREY.
11. EPOXY, FLATWORK DOWELS
    - EPOXY USED FOR GROUTING REBAR DOWELS TO MAINTAIN JOINT INTEGRITY BETWEEN SITE FLATWORK COMPONENTS (CURBS, GUTTERS, WALKWAYS, RAMPS) SHALL BE SIMPSON SET-XP ADHESIVE, ICC NO. ESR-2508, OR EQUIVALENT. PULL TESTS ARE NOT REQUIRED.



SITE MAP
SCALE: 1" = 20'

NO.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

REGISTERED PROFESSIONAL ENGINEER ROBERT A. SCHMIDT No. 71335 CIVIL STATE OF CALIFORNIA

FLOWERS & ASSOCIATES, INC.
201 N. Calle Cesar Chavez, Suite 100
Santa Barbara, CA 93103
Telephone (805) 966-2224
BY: DATE: 3/10/2025
F&A CIVIL ENGINEERING • PLANNING CONSTRUCTION ENGINEERING

GENERAL NOTES AND SITE MAP

MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

G-2

DATE: 03/10/2025
SHT. 2 OF 7

THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED THEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.

GEOTECHNIQUES
1645 Donlon Street, Ste. 107
Ventura, California 93003
(805) 456-9585, (805) 658-8952

January 31, 2024
Project No. 1025.008.02

Pleasant Valley School District
600 Temple Avenue
Camarillo, California 93021

Attention: Ms. Sandra Lovaas, Measure C Bond Manager

Subject: Geotechnical Recommendations for Miscellaneous Underground and Appurtenant Improvements for Relocatable Buildings at Camarillo Heights Elementary and CAPE Charter Schools, in the Pleasant Valley School District, in Camarillo, California

Dear Ms. Lovaas:

This geotechnical letter report provides recommendations for proposed relocatable building foundations and utility, pavement, and on-grade concrete improvements for the proposed kitchen at Camarillo Heights Elementary School and the proposed Kindergarten classroom at CAPE Charter School. Our understanding of the proposed projects is based on discussions with Pleasant Valley School District ("PVSD") personnel, approved plans[1], and site observations and laboratory testing on subgrade soil samples collected from locations at each campus in conjunction with recent geotechnical studies and construction activity pursuant to Measure C Bond improvements.

PROJECT SCOPE

Underground utility and foundation construction is planned for the proposed kitchen relocatable building south of the outdoor lunch canopy in and beyond (west of) the west pavement area of Camarillo Heights Elementary School campus and for the proposed Kindergarten relocatable and appurtenant improvements at CAPE Charter School.

Minor grading will be performed as needed to improve local gradients in proposed relocatable building areas, ADA access compliance, or to enhance positive drainage in building and pavement and pedestrian improvement areas.

SITE SUBGRADE PREPARATION RECOMMENDATIONS

Areas to receive new asphalt concrete, on-grade concrete, fill, or footings for short exterior site walls shall be underlain by a minimum of 12 inches of subgrade compacted to a minimum of 95 percent of the maximum dry density determined according to ASTM D1557, measured from the footing bottom, lowest point of the thickened edge of sidewalks, or below the aggregate base course for on-grade concrete or asphalt concrete pavement.

[1] Flowers and Associates (2023), "Camarillo Heights ES, Relocation of One Modular Kitchen," Project No. 20-PVSD-004, sheets 1-6, dated May 12.

Preliminary Site Preparation

Site irrigation shall be discontinued as far in advance as practicable prior to clearing, demolition, and excavation operations. Root mass from trees and shrubs and the root mat in lawn areas should be completely removed, stripped, and wasted offsite prior to utility trench or underground structure excavation, or earthmoving operations. Excavations and depressions, either existing or from removal of tree root-balls[2], below grade structures or improvements, or footings, or from rutting from demolition and construction equipment trafficking shall not be filled in or smoothed over outside the presence of the Geotechnical representative.

Contractor shall fully mitigate or repair any rutting from demolition or earthmoving equipment.

Contractor Awareness and Operations Considerations

The likelihood of encountering very moist subgrade soils should be factored into all aspects of demolition and construction to avoid exacerbating subgrade moisture conditions and inducing 'pumping' of subgrade materials.

Equipment loads during demolition and subgrade preparation in building, foundation, fill, and pavement and concrete improvement areas shall be minimized, as needed, to avoid increasing moisture content of exposed or underlying subgrade materials in excavations and subsequently placed fill materials during fill placement and compaction. Examples of such excavating, spreading, processing and compacting equipment include low ground pressure track dozers or, to a greater extent, excavators or backhoes staged outside the excavation. Similar low or no-load means of compacting fill shall be used, as needed, including non-tired sheepsfoot compactors for fine-grained subgrade materials. Care shall be exercised to avoid repeated passes over ingress or egress areas, and to avoid overworking or overloading any area such that pumping conditions and elevated moisture contents and/or rutting are induced by demolition and/or construction operations.

Aeration of subgrade soils should be initiated at earliest well-forecasted and practicable opportunity along with subsequent episodes of turning and/or cross ripping to maximize exposure to drying effects.

Lightweight equipment shall be used for placing and compacting subsequent lifts and courses, as needed, until "bridging" over potentially unstable pumping subgrade soil is accomplished and risk of aggravating moisture conditions with other equipment is low (i.e., the "bridging" effect is not destroyed by subsequent heavy or repeated loadings).

Contractor shall proof-roll both compacted subgrade and aggregate base course with fully-loaded water truck with no deflections in presence of geotechnical representative prior to placing base and asphalt concrete, respectively.

[2] especially in building and pavement areas, including, but not limited to, footprint of proposed kitchen relocatable at Camarillo Heights Elementary School.

Subgrade Preparation

Areas to Receive Fill. After removing surficial organics including grass root mat in greenbelt areas, the upper 1 foot in areas to receive fill shall be scarified and compacted to a minimum of 90 percent of the maximum dry density (determined by ASTM D1557) prior to fill placement.

Footing Areas. Footing excavations for relocatable buildings should be bottomed into firm to dense native soils. Footing excavations should be observed by the geotechnical consultant and may require deepening if localized soft, loose, or artificial fill conditions are encountered. Footings also should be deepened, as necessary, to maintain a minimum 5-foot horizontal setback to daylight on descending slopes.

Alternatively, if conditions warrant, such as unanticipated soft or loose subgrade or artificial fill in foundation areas, footing areas to a distance of 2 feet beyond perimeter shall be overexcavated to a depth of 1 foot below bottom of footing. The bottom of the overexcavation shall be observed by the Geotechnical representative prior to placing fill. Fill shall be reduced to pea-sized or finer consistency, moisture conditioned or aerated, as needed, and compacted to a minimum of 95 percent of the maximum dry density determined by ASTM D1557, latest edition.

Asphalt Concrete and On-Grade Concrete Areas. Subgrade for asphalt concrete or on-grade concrete shall be excavated to a level corresponding to lowest level of asphalt concrete pavement or on-grade concrete section (including base course). The excavation shall be deepened, as necessary to remove organics, topsoil, and deleterious material and extend a horizontal distance of an additional 1 foot beyond the asphalt concrete or new concrete in unimproved areas. The exposed surface shall be observed by the Geotechnical representative prior to scarification of the exposed excavation bottom. Depending on the moisture content of the soils exposed in the excavation bottom, the upper 1 foot of subgrade shall be moisture-conditioned or aerated to between 0 and 2 percent above optimum moisture content and processed by reducing scarified materials to pea-size or finer consistency. Excavation bottoms in silty and clayey subgrade (e.g., CAPE Charter School) likely shall require extended aeration periods (after scarification effecting pulverization) prior to compacting. Once the targeted moisture condition is achieved, processed materials shall then be compacted to a minimum of 95 percent of the maximum dry density determined by ASTM D1557, latest edition.

Alternatives to Subgrade Aeration and Subgrade Stabilization

An alternative to aeration consists of the treatment of onsite very moist to wet silty and clayey materials with cement to reduce elevated in-place moisture content and to effect "bridging" over potentially yielding, unstable underlying subgrade materials. For silty and clayey subgrade treatment, 2 to 3 percent "quicklime" or 3 to 4 percent cement (by weight), shall be thoroughly mixed into the upper 1 foot of the excavation bottom in accordance with Sections 301-3.1 through 301-3.1.6 of the "Greenbook." The soil-cement mixture shall be moisture-conditioned and compacted to a minimum of 93 percent of the maximum dry density within 90 minutes of adding moisture to cement-treated soil and according to Section 301-3.1.8. The compacted soil-cement mixture shall be cured according to Section 301-3.1.9. At least 2 days of curing time shall be allowed prior to placement of general, select, or treated fill materials. This cement content is appropriate for low-contact pressure, lightweight equipment operation; heavier equipment and rubber tired equipment imposing higher contact pressures shall require higher cement concentrations—approaching 10 percent by weight (for a pavement recycler, for

example)—and/or thicker treated zones in order to support heavier equipment loads during construction.

An alternative to cement treatment of subgrade consists of removal and replacement of the upper 1 foot of subgrade with aggregate base over Mirafi 600X, placed in accordance with the manufacturer's instructions, with the full thickness of aggregate base placed before trafficking with lightweight spreading and compacting equipment so that "bridging" is achieved and maintained over underlying very moist to saturated soil.

Cement-treatment and replacement with aggregate base alternatives both require that the Contractor employ appropriate minimal equipment loading (i.e., lightweight equipment and appropriate for materials affected) and trafficking reduction measures to maintain integrity of the compacted subgrade and overlying base courses through completion of concrete placement.

Fill Placement and Compaction

Onsite soils are anticipated to be used as general fill once cleared of organic material, demolition or other debris, and any oversized rock. Earth materials placed as fill or within the upper 12 inches of subgrade in asphalt concrete and on-grade concrete areas shall consist of onsite scarified or excavated general fill or imported non-expansive materials with an Expansion Index less than 20. Unless noted otherwise herein, the upper 1 foot of subgrade materials shall be compacted to a minimum of 95 percent of the maximum dry density determined from ASTM D1557.

Subgrade and onsite soils used as fill and imported fill materials shall be placed and compacted at a moisture content of between 0 and 2 percent over optimum moisture content. Each layer shall be spread evenly in loose lifts no thicker than 8 inches and shall be thoroughly blade-mixed during the spreading to reduce soil consistency to pea-size or finer and to provide relative uniformity of material within each layer. Fill and backfill materials may need to be placed in thinner lifts to achieve the recommended compaction with the equipment being used. Soft or yielding materials shall be removed and be replaced with properly compacted fill material, prior to placing the next layer.

Rock, gravel and other oversized material greater than 3 inches in diameter, shall be removed from the subgrade and fill material being placed. Rock less than 3 inches in diameter shall not be nested and voids caused by inclusion of rock in the fill shall be filled with sand or other approved material. All roots larger than ½-inch diameter shall be removed and discarded.

All subgrade and fill materials, including scarified materials, shall be thoroughly processed to pea-sized or finer consistency prior to aeration and applying compactive effort. Blading or turning wet soils shall be necessary to effect uniform aeration throughout the targeted layer of soil. When the moisture content of the fill material is below that sufficient to achieve the recommended compaction, water shall be added to the fill during processing. While water is being added, the soil shall be bladed and mixed to provide relatively uniform moisture content throughout the material. .

Surfaces shall be finished to uniform grades and slopes in accordance with contract documents and in such a manner to drain properly, convey runoff to existing and new drainage improvements, and be free from depressions that may cause areas of standing water or concentrates runoff on finished surface.

FILL MATERIALS

Fill shall be free of organics, oversize material (e.g., greater than 2 inches in diameter), trash and debris, and other deleterious material. The expansion index of imported materials or onsite materials used as general fill shall be tested, as necessary, during earthmoving operations to verify that the expansion index of the material is suitable for its use as general fill.

Onsite Soils. Onsite soils are generally anticipated to consist predominantly of fine to medium sand with silt at the Camarillo Heights kitchen site and fine sandy silt with clay at the CAPE Charter School site.

General Fill. General fill materials shall have an expansion index less than or equal to 20. If necessary, general fill may be blended with sand or dry cement just prior to compaction to reduce the expansion index.

There is a potential that silty and clayey onsite general fill materials, where encountered, could be sensitive to changes in moisture content. Control of moisture content, compaction layer thickness, and efficiency and appropriateness of equipment to soil type will likely be necessary to achieve and maintain the recommended compaction.

Imported Fill. Imported fill to be used as general fill shall meet the requirements of general fill material and its expansive characteristics shall be equal to or better than onsite subgrade soils. Imported fill materials shall be observed, tested as necessary, and accepted by Geotechniques prior to being brought to the site.

Aggregate Base. Aggregate base materials shall consist of imported material conforming to Caltrans Standard Specifications for Class 2 aggregate base, Section 26-1.02 [Caltrans, 2018] or Section 200-2.4 of the "Greenbook" (International Conference of Building Officials [ICBO], latest edition) for Crushed Miscellaneous Base (CMB).

The aggregate base course beneath the concrete section shall be moisture conditioned to optimum moisture content before placing and spreading and shall be compacted to a minimum of 95 percent of the maximum dry density. Aggregate base materials shall be laterally confined during compaction to achieve the minimum compaction requirements adjacent to the thickened concrete edge.

Aggregate base materials used beneath on-grade concrete, in building areas, and as bedding or backfill in utility trenches or excavations *in areas other than previously or currently paved in asphalt concrete* shall not contain recycled asphalt.

Bedding Sand in Utility Trenches. Sand used as bedding and pipe zone sand in utility trenches shall conform to Caltrans Standard Specifications for sand bedding, Section 19-3.02F(2) (2018) and have a minimum Sand Equivalent (SE) of 30. The sand shall have a gradation that allows the material to maintain a compacted surface condition during construction operations until concrete placement or until pipe and/or subsequent lift placement (i.e., as bedding or pipe zone sand in utility trench).

ASPHALT CONCRETE AND ON-GRADE CONCRETE SECTION THICKNESS

Subgrade for asphalt concrete and on-grade concrete to receive rare fire truck traffic should be prepared as recommended previously (see "**SITE SUBGRADE PREPARATION**

RECOMMENDATIONS"). Subgrade and aggregate base courses shall be firm and unyielding and proof-rolled in the presence of the Geotechnical representative prior to placement of the successive structural section course (i.e., aggregate base or asphalt concrete or concrete).

Surfaces shall be finished to uniform grades and slopes in accordance with contract documents and in such a manner to drain properly, convey runoff to existing and new drainage improvements, and be free from depressions that may cause areas of standing water or concentrates runoff on finished surface.

Asphalt Concrete Playground Pavement. Asphalt concrete pavement to receive potential fire truck access to or within playground areas shall, at a minimum, consist of the following:

Pavement Area	Asphalt Concrete Thickness (inches)	Aggregate Base Thickness (inches)
Playground/Fire truck access	2½	4
Drive Lane > 10% Grade	3	6

Aggregate base should be compacted to a minimum of 95 percent of the maximum dry density. Asphalt concrete should be compacted to a minimum of 95 percent of the maximum density.

Excavation Patches in Existing Asphalt Concrete Pavement. Asphalt concrete patches in existing pavement areas should consist of 3 inches of asphalt concrete over a minimum of 4 inches of aggregate base, each compacted to a minimum of 95 percent of the maximum density.

Concrete Sidewalks. On-grade concrete section thickness for exclusively pedestrian use such as sidewalks, should consist, at a minimum, of 4 inches of concrete over 6 inches of aggregate base compacted to a minimum of 95 percent of the maximum dry density.

Concrete Pavement Structural Sections. On-grade concrete to receive vehicular traffic, including pavement that may be used for fire truck access, should consist of a minimum of 6 inches of concrete over a minimum of 6 inches of aggregate base compacted to 95 percent of the maximum dry density. (Note that concrete to receive fork-lift traffic and routine truck traffic for deliveries or in trash dumpster areas should be at least 7 inches thick, depending on traffic index [TI].) Concrete should have a minimum 28-day compressive strength of 3,500 psi, a minimum Modulus of Rupture of 530 psi, and should be reinforced with No. 4 bars at 18 inches each way. Reinforcement should be supported at mid-slab at time of concrete pour. (Note that this structural section is not intended for exclusively pedestrian use such as shade structures.)

UTILITY TRENCHES AND EXCAVATION

Utility trenches shall be braced or sloped in accordance with the requirements of (Cal) OSHA. Utility trench backfill shall be governed by the provisions of this report relating to minimum compaction recommendations.

Prior to excavation, the grass and root mat shall be stripped and wasted (or set aside for reuse at surface upon completion of backfilling trench) along the trench alignment and in excavation stockpile areas.

Excavations and trenches shall be sufficiently wide to accommodate equipment size needed for proper compaction of bedding, pipe zone and backfill materials. Trench and excavation bottoms shall be excavated to a firm uniform bottom free of loose, disturbed material and observed by the Geotechnical representative prior to placement of bedding. Aggregate base materials may be used as bedding, as required, to mitigate soft, yielding excavation bottoms, where encountered.

Trench backfill shall be moisture conditioned between 0 and 2 percent over optimum moisture content prior to placing in trench. Backfill shall be compacted to a minimum of 90 percent relative compaction as determined from ASTM D1557, and 95 percent within the upper 1 foot of subgrade in pavement or on-grade concrete areas, or within a 1h:1v influence zone of footings[3].

Rock larger than 3 inches in maximum dimension shall be excluded from backfill. Jetting of trench backfill materials shall not be permitted.

Trench backfill materials shall consist of bedding and pipe zone sand placed a minimum thickness of 4 inches below the pipe invert and to a height of 12 inches above the top of the pipe. Bedding and pipe zone sand shall consist of fine to medium or coarse sand with a minimum Sand Equivalent (SE) of 30. General fill or pipe zone sand shall be placed as backfill above the pipe zone in 8-inch loose lifts and compacted to the minimum relative compaction summarized above. General backfill materials shall meet the preceding recommendations of this report, "Fill Placement and Compaction" and "Fill Materials."

CLOSURE

The recommendations in this letter are specific to the scope summarized herein for the relocatable kitchen at Camarillo Heights Elementary School and the relocatable Kindergarten classroom at CAPE Charter School. The presence of hazardous and/or toxic materials is not within the scope of services provided for this study.

We appreciate the opportunity to be of service to Pleasant Valley School District. Please call if you have any questions concerning this letter report.

Sincerely,

Geotechniques

Carole Wockner, P.E.
Principal Engineer
R.C. E. No. 74407, exp 09/30/25

[3] Where this is not feasible because of access constraints or for expediency, a 1½-sack cement and sand slurry may be used.

NO.	DESCRIPTION	DATE	APPROVED

REVISIONS

REGISTERED PROFESSIONAL ENGINEER ROBERT A. SCHMIDT No. 71335 CIVIL STATE OF CALIFORNIA

FLOWERS & ASSOCIATES, INC.
201 N. Calle Cesar Chavez, Suite 100
Santa Barbara, CA 93103
Telephone (805) 966-2224
F&A CIVIL ENGINEERING • PLANNING CONSTRUCTION ENGINEERING

BY: _____ DATE: 3/10/2025

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.

GEOTECHNICAL LETTER REPORT

MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

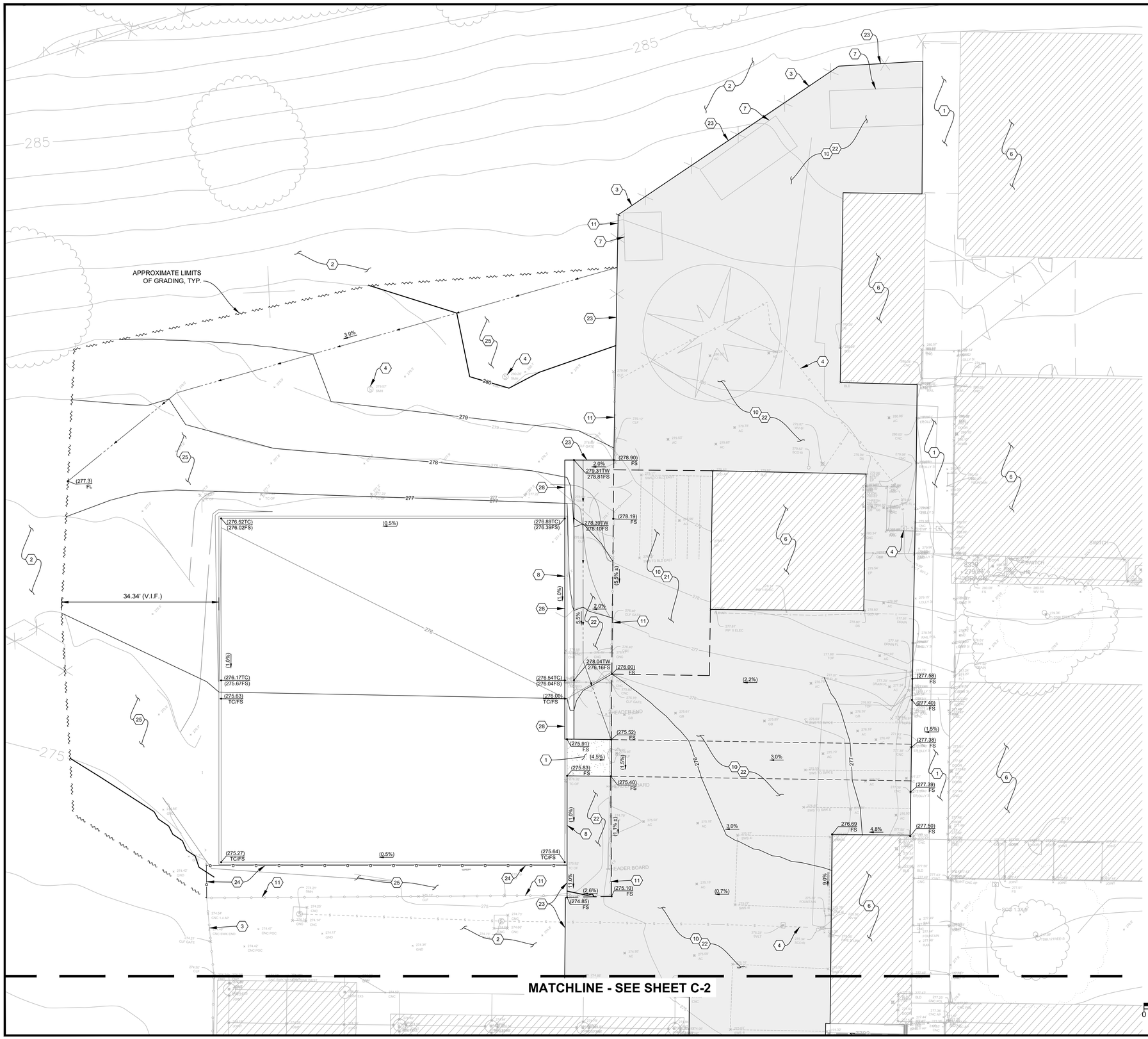
THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREON AT THE TIME THESE PLANS ARE SIGNED.

G-3

DATE: 03/10/2025

SHT. 3 OF 7

W.O. 2002



GENERAL CONSTRUCTION NOTES THIS SHEET:

A. REFER TO LEGEND, LIST OF SYMBOLS AND OTHER PLAN USE INFORMATION ON SHEET G-1.

B. PROTECT ALL EXISTING UTILITIES WITHIN WORK AREA WHETHER SHOWN ON PLAN OR NOT; NOTIFY UNDERGROUND SERVICE ALERT AT LEAST 2 WORKING DAYS IN ADVANCE OF BEGINNING EXCAVATION AT 1-500-422-4133.

C. PROTECT EXISTING SCHOOL INFRASTRUCTURE WITHIN WORK AREA; INVESTIGATE WITH DISTRICT AND SCHOOL STAFF THE LOCATIONS OF EXISTING BURIED CONDUITS, PIPELINES AND STRUCTURES WITHIN WORK AREA.

D. RETAIN A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL AND VERTICAL CONTROL FOR LAYOUT OF THE WORK, FOR SURVEYING LOCATIONS OF EXISTING BURIED PIPELINES, CONDUITS AND STRUCTURES, AND FOR GRADE CONFIRMATION WHERE REQUIRED DURING CONSTRUCTION.

CONFIRM CONTROL DATA WITH TOPOGRAPHIC MAPPING SURVEYOR PRIOR TO STAKING WORK. IN ADDITION, CHECK STAKING AT KEY LOCATIONS BY SCALING DISTANCES AND TAPING FROM EXISTING FEATURES SHOWN ON PLAN.

E. WHETHER OR NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS, PROTECT FROM DAMAGE ALL EXISTING FEATURES WITHIN AND IN THE VICINITY OF THE WORK AREA WHICH ARE NOT TO BE ALTERED BY PROPOSED WORK:

1. DOCUMENT THE EXISTING CONDITION AND PROVIDE SUCH DOCUMENTATION TO OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO BEGINNING WORK.

2. PROTECT DURING CONSTRUCTION FROM PHYSICAL AND ESTHETIC DAMAGE INCLUDING CRACKING, SCRAPING, DEFORMING, SOILING, AND SPATTER FROM PAINT, CONCRETE OR ASPHALT EMULSION.

3. RESTORE TO PRE-CONSTRUCTION CONDITION AND APPEARANCE TO SATISFACTION OF DISTRICT AT NO ADDITIONAL COST TO DISTRICT.

F. DEMOLISH AND REMOVE EXISTING OBJECTIONABLE MATERIAL FROM THE WORK AREA AND DISPOSE OF AS NECESSARY TO COMPLETE THE WORK, WHETHER OR NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS.

SPECIFIC CONSTRUCTION NOTES THIS SHEET:

(NUMBERED ITEM BELOW CORRESPONDS TO NUMBER WITHIN HEXAGON ON DRAWING)

PROTECTIONS/REMOVALS:

1 PROTECT EXISTING PAVEMENT TO REMAIN.

2 PROTECT EXISTING LANDSCAPED AREA.

3 PROTECT EXISTING FENCE AND/OR GATE.

4 PROTECT EXISTING UTILITY. ADJUST LID TO PROPOSED FINISHED SURFACE AS NECESSARY. CONTRACTOR TO VERIFY UTILITY DEPTHS IN FIELD PRIOR TO CONSTRUCTION TO ENSURE PROTECTION.

5 PROTECT EXISTING EQUIPMENT POST AND FOUNDATION.

6 PROTECT EXISTING BUILDING.

7 PROTECT EXISTING STORAGE CONTAINER. TEMPORARILY RELOCATE TO PERFORM PROPOSED SITE IMPROVEMENTS. VERIFY TEMPORARY RELOCATION SITE WITH DISTRICT PRIOR TO RELOCATING.

8 PROTECT EXISTING CONCRETE CURB TO REMAIN.

9 PROTECT EXISTING WALL TO REMAIN.

10 REMOVE EXISTING AC PAVEMENT. PROTECT EXISTING UNDERLYING AGGREGATE BASE.

11 REMOVE EXISTING PORTION OF FENCE TO LIMITS SHOWN ON PLAN.

12-19 NOT USED.

SITE IMPROVEMENTS:

20 NOT USED.

21 CONSTRUCT AC PAVEMENT STRUCTURAL SECTION PER DETAIL 1 ON SHEET CD-1.

22 CONSTRUCT AC PAVEMENT REPLACEMENT PER DETAIL 2 ON SHEET CD-1.

23 INSTALL REDWOOD HEADER AT EDGE OF PAVEMENT.

24 CONSTRUCT 6' TALL CHAIN LINK FENCE AND / OR GATE AS SHOWN ON PLAN.

25 GRADE UNPAVED AREAS WITHIN LIMITS OF DISTURBANCE TO FINISH GRADES, FLOWLINES AND CONTOURS PER PLAN TO PROVIDE PROPER DRAINAGE AND TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING IMPROVEMENTS. SEE LANDSCAPE ARCHITECTS PLANS FOR PLANTINGS/ SURFACE TYPES.

26 CONSTRUCT RETAINING CURB TO ELEVATIONS SHOWN ON PLAN AND PER DETAIL 3 / CD-1.

27 CONSTRUCT DECONSTRUCTED GRANITE PER DETAIL 4 ON SHEET CD-1.

28 CONSTRUCT CONCRETE SEAT WALL PER DETAIL 5 ON SHEET CD-1.

SEE SHEET C-3 FOR STRIPING AND MARKING WORK TO FOLLOW ASPHALT IMPROVEMENTS

IMPORTANT NOTICE

ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR IS TO NOTIFY UNDERGROUND SERVICE ALERT TWO WORKING DAYS PRIOR TO STARTING ANY EXCAVATION OR RESURFACING.

CALL TOLL FREE 1-800-422-4133

NO.	DESCRIPTION	DATE	APPROVED

REVISIONS

REGISTERED PROFESSIONAL ENGINEER ROBERT A. SCHMIDT No. 71335 CIVIL STATE OF CALIFORNIA

FLOWERS & ASSOCIATES, INC.
CIVIL ENGINEERING • PLANNING
CONSTRUCTION ENGINEERING
201 N. Calle Cesar Chavez, Suite 100
Santa Barbara, CA 93103
Telephone (805) 966-2224

BY: _____ DATE: 3/10/2025

SITE IMPROVEMENT PLAN

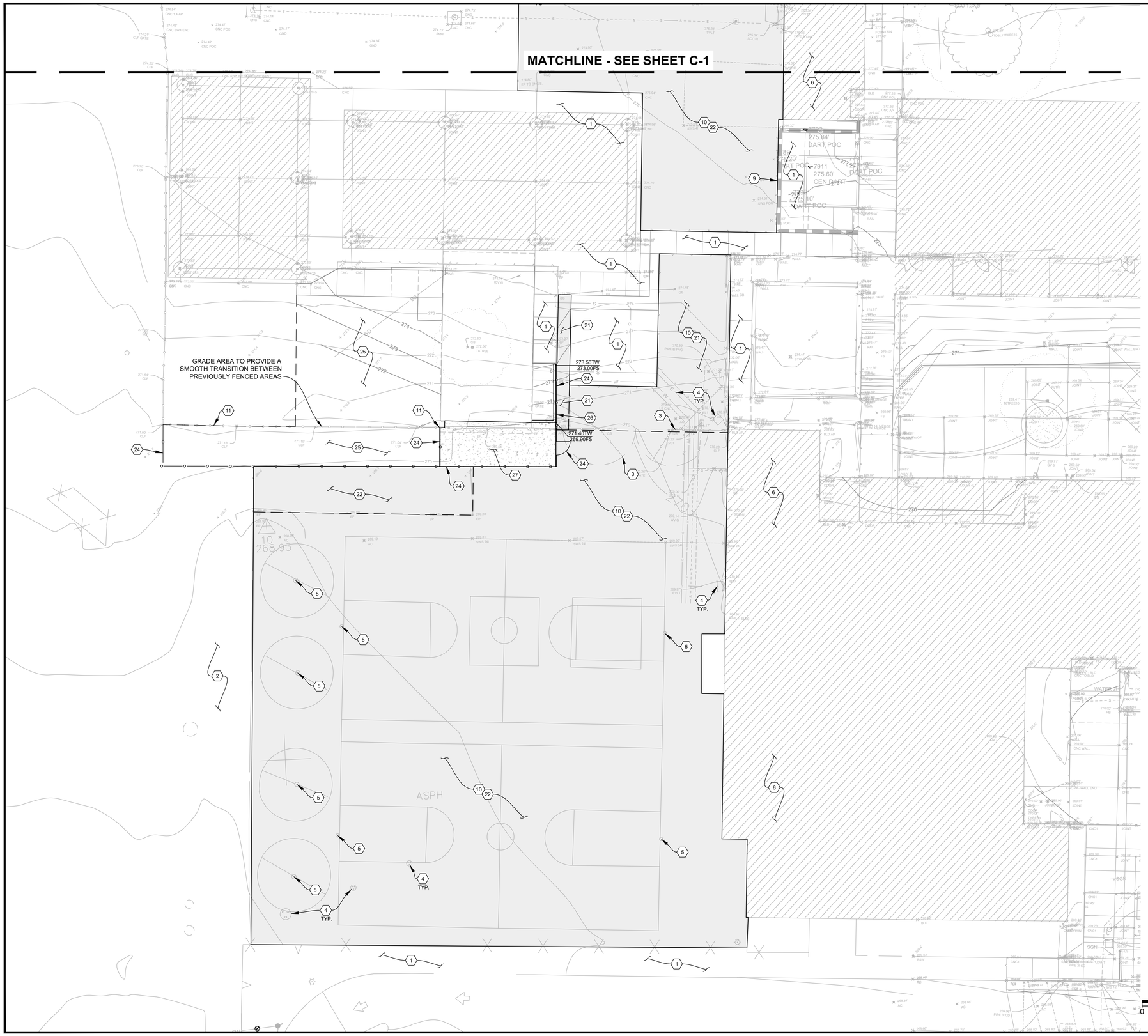
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

C-1

DATE: 03/10/2025

SHT. 4 OF 7

THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.



GENERAL CONSTRUCTION NOTES THIS SHEET:

A. REFER TO LEGEND, LIST OF SYMBOLS AND OTHER PLAN USE INFORMATION ON SHEET G-1.

B. PROTECT ALL EXISTING UTILITIES WITHIN WORK AREA WHETHER SHOWN ON PLAN OR NOT; NOTIFY UNDERGROUND SERVICE ALERT AT LEAST 2 WORKING DAYS IN ADVANCE OF BEGINNING EXCAVATION AT 1-500-422-4133.

C. PROTECT EXISTING SCHOOL INFRASTRUCTURE WITHIN WORK AREA: INVESTIGATE WITH DISTRICT AND SCHOOL STAFF THE LOCATIONS OF EXISTING BURIED CONDUITS, PIPELINES AND STRUCTURES WITHIN WORK AREA.

D. RETAIN A LICENSED LAND SURVEYOR TO STAKE HORIZONTAL AND VERTICAL CONTROL FOR LAYOUT OF THE WORK, FOR SURVEYING LOCATIONS OF EXISTING BURIED PIPELINES, CONDUITS AND STRUCTURES, AND FOR GRADE CONFIRMATION WHERE REQUIRED DURING CONSTRUCTION.

CONFIRM CONTROL DATA WITH TOPOGRAPHIC MAPPING SURVEYOR PRIOR TO STAKING WORK. IN ADDITION, CHECK STAKING AT KEY LOCATIONS BY SCALING DISTANCES AND TAPING FROM EXISTING FEATURES SHOWN ON PLAN.

E. WHETHER OR NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS, PROTECT FROM DAMAGE ALL EXISTING FEATURES WITHIN AND IN THE VICINITY OF THE WORK AREA WHICH ARE NOT TO BE ALTERED BY PROPOSED WORK:

1. DOCUMENT THE EXISTING CONDITION AND PROVIDE SUCH DOCUMENTATION TO OWNER'S CONSTRUCTION REPRESENTATIVE PRIOR TO BEGINNING WORK.

2. PROTECT DURING CONSTRUCTION FROM PHYSICAL AND ESTHETIC DAMAGE INCLUDING CRACKING, SCRAPING, DEFORMING, SOILING, AND SPATTER FROM PAINT, CONCRETE OR ASPHALT EMULSION.

3. RESTORE TO PRE-CONSTRUCTION CONDITION AND APPEARANCE TO SATISFACTION OF DISTRICT AT NO ADDITIONAL COST TO DISTRICT.

F. DEMOLISH AND REMOVE EXISTING OBJECTIONABLE MATERIAL FROM THE WORK AREA AND DISPOSE OF AS NECESSARY TO COMPLETE THE WORK, WHETHER OR NOT SPECIFICALLY CALLED FOR ON THE DRAWINGS.

SPECIFIC CONSTRUCTION NOTES THIS SHEET:

(NUMBERED ITEM BELOW CORRESPONDS TO NUMBER WITHIN HEXAGON ON DRAWING)

PROTECTIONS/REMOVALS:

1 PROTECT EXISTING PAVEMENT TO REMAIN.

2 PROTECT EXISTING LANDSCAPED AREA.

3 PROTECT EXISTING FENCE AND/OR GATE.

4 PROTECT EXISTING UTILITY. ADJUST LID TO PROPOSED FINISHED SURFACE AS NECESSARY. CONTRACTOR TO VERIFY UTILITY DEPTHS IN FIELD PRIOR TO CONSTRUCTION TO ENSURE PROTECTION.

5 PROTECT EXISTING EQUIPMENT POST AND FOUNDATION.

6 PROTECT EXISTING BUILDING.

7 PROTECT EXISTING STORAGE CONTAINER. TEMPORARILY RELOCATE TO PERFORM PROPOSED SITE IMPROVEMENTS. VERIFY TEMPORARY RELOCATION SITE WITH DISTRICT PRIOR TO RELOCATING.

8 PROTECT EXISTING CONCRETE CURB TO REMAIN.

9 PROTECT EXISTING WALL TO REMAIN.

10 REMOVE EXISTING AC PAVEMENT. PROTECT EXISTING UNDERLYING AGGREGATE BASE.

11 REMOVE EXISTING PORTION OF FENCE TO LIMITS SHOWN ON PLAN.

12-19 NOT USED.

SITE IMPROVEMENTS:

20 NOT USED.

21 CONSTRUCT AC PAVEMENT STRUCTURAL SECTION PER DETAIL 1 ON SHEET CD-1.

22 CONSTRUCT AC PAVEMENT REPLACEMENT PER DETAIL 2 ON SHEET CD-1.

23 INSTALL REDWOOD HEADER AT EDGE OF PAVEMENT.

24 CONSTRUCT 6' TALL CHAIN LINK FENCE AND / OR GATE AS SHOWN ON PLAN.

25 GRADE UNPAVED AREAS WITHIN LIMITS OF DISTURBANCE TO FINISH GRADES, FLOWLINES AND CONTOURS PER PLAN TO PROVIDE PROPER DRAINAGE AND TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING IMPROVEMENTS. SEE LANDSCAPE ARCHITECTS PLANS FOR PLANTINGS/ SURFACE TYPES.

26 CONSTRUCT RETAINING CURB TO ELEVATIONS SHOWN ON PLAN AND PER DETAIL 3 / CD-1.

27 CONSTRUCT DECONSTRUCTED GRANITE PER DETAIL 4 ON SHEET CD-1.

28 CONSTRUCT CONCRETE SEAT WALL PER DETAIL 5 ON SHEET CD-1.

SCALE: 1"=10'
GRAPHIC SCALE
0 10 20 30

SEE SHEET C-3 FOR STRIPING AND MARKING WORK TO FOLLOW ASPHALT IMPROVEMENTS

IMPORTANT NOTICE

ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR IS TO NOTIFY UNDERGROUND SERVICE ALERT TWO WORKING DAYS PRIOR TO STARTING ANY EXCAVATION OR RESURFACING.

CALL TOLL FREE 1-800-422-4133

NO.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

REGISTERED PROFESSIONAL ENGINEER ROBERT A. SCHMIDT No. 71335 CIVIL STATE OF CALIFORNIA

FLOWERS & ASSOCIATES, INC.
201 N. Calle Cesar Chavez, Suite 100
Santa Barbara, CA 93103
Telephone (805) 966-2324
F&A CIVIL ENGINEERING • PLANNING CONSTRUCTION ENGINEERING

BY: _____ DATE: 3/10/2025

SITE IMPROVEMENT PLAN

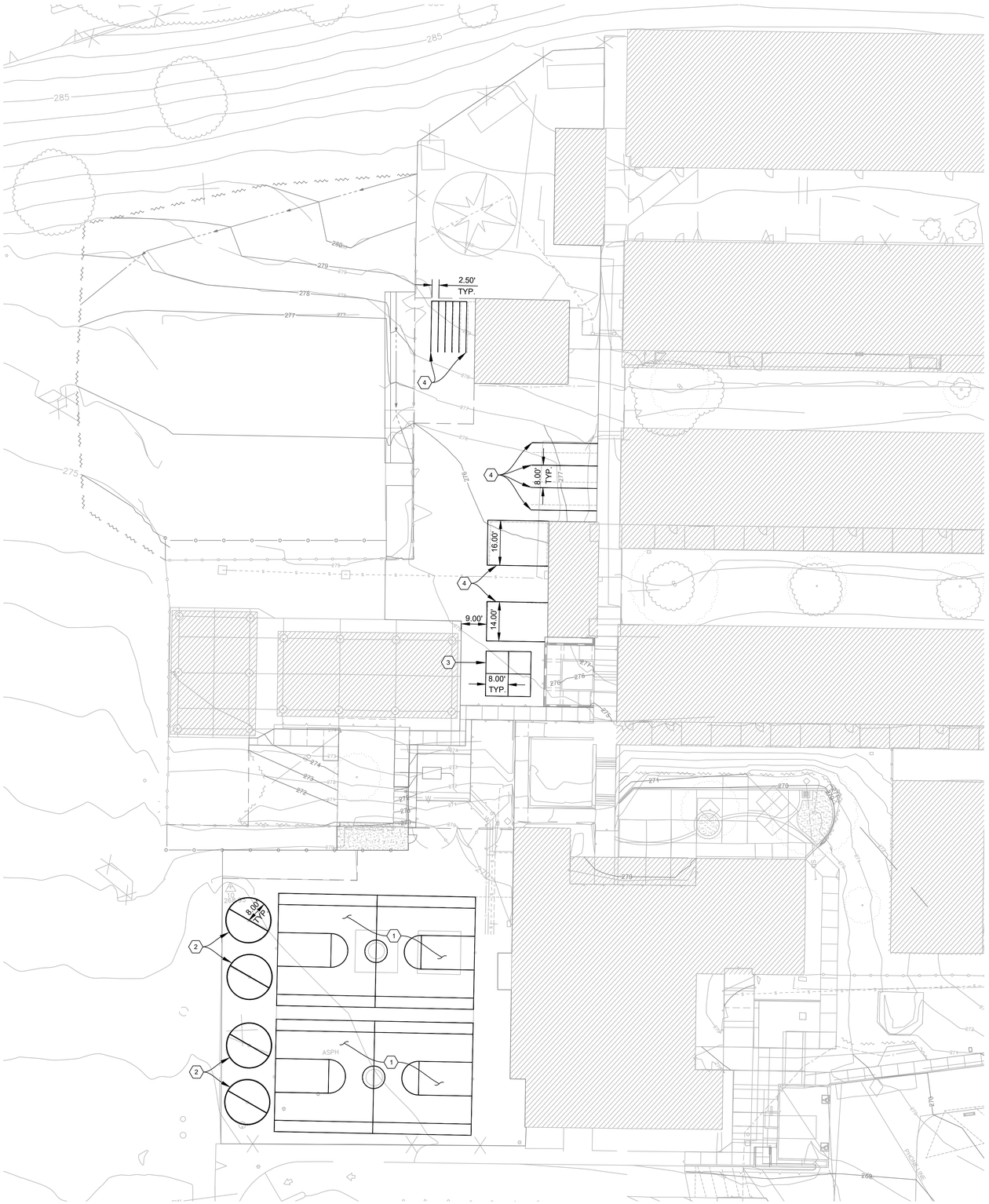
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

C-2

DATE: 03/10/2025

SHT. 5 OF 7

THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREON AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.



GENERAL CONSTRUCTION NOTES THIS SHEET:

A. PAINT COURT STRIPING IN ACCORDANCE WITH THE SPECIFICATIONS AND WITH THE COURT STRIPING NOTES HEREON (TYPICAL).

B. ALL PROPOSED STRIPING LINES ARE 2"-WIDE.

C. DIMENSIONS GIVEN ARE TO CENTERLINE OF STRIPE EXCEPT FOR RADIALS WHICH ARE FROM RADIUS POINT TO EITHER INSIDE OR OUTSIDE OF STRIPE, PER PLAN.

D. BEFORE BEGINNING PAINTING, CONFIRM STRIPING LAYOUT USING PHYSICAL MEASUREMENTS MADE ON THE GROUND.

SPECIFIC CONSTRUCTION NOTES THIS SHEET:

(NUMBERED ITEM BELOW CORRESPONDS TO NUMBER WITHIN HEXAGON ON DRAWING)

1 REPLACE EXISTING WHITE BASKETBALL COURT STRIPING IN KIND. SEE TYPICAL BASKETBALL COURT STRIPING DETAIL 'B' THIS SHEET.

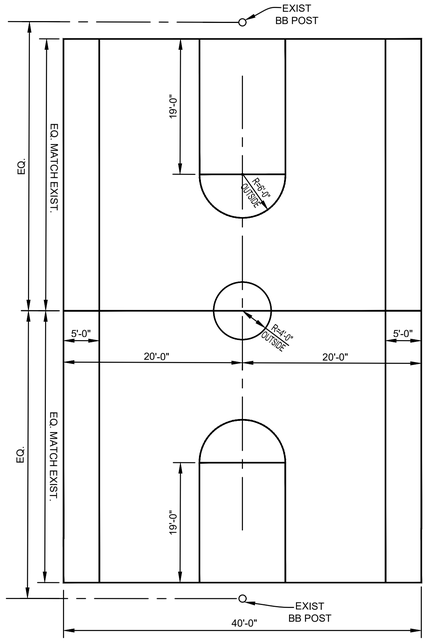
2 REPLACE EXISTING WHITE TETHERBALL COURT STRIPING IN KIND.

3 REPLACE EXISTING WHITE FOUR SQUARE STRIPING IN KIND.

4 REPLACE EXISTING WHITE PAVEMENT MARKINGS AS SHOWN IN KIND.

COURT LAYOUT CRITERIA:

1. THE LONGITUDINAL CENTERLINE AND THE COURT DIVISION LINE FOR EACH BASKETBALL COURT ARE ESTABLISHED IN THE FIELD, CONTROLLED BY THE LOCATIONS OF THE EXISTING GOAL SUPPORT POSTS.
2. THE 3-POINT LINE FOR EACH BASKETBALL COURT IS ESTABLISHED IN THE FIELD USING THE CENTER OF EACH BASKET AS THE RADIUS POINT; THIS ALSO LOCATES THE FREE THROW LINE AND FREE THROW LANE.
3. SPACE AND NEUTRAL ZONE MARKS ALONG EACH SIDE OF THE FREE THROW LANE (WHERE APPLICABLE) ARE DIMENSIONED OFF THE FACE OF EACH BACKBOARD, AS DETERMINED IN THE FIELD.
4. THE CENTER CIRCLE RADIUS POINT IS LOCATED IN THE FIELD AT THE INTERSECTION OF THE COURT DIVISION LINE AND A LINE RUNNING THROUGH THE CENTER OF EACH BASKET; COURT AND FREE THROW LANE SIDELINES ARE PARALLEL WITH THIS CENTERLINE.
5. VOLLEYBALL COURT CENTERLINES ARE PARALLEL WITH BASKETBALL SIDELINES AND END LINES.



A TYPICAL BASKETBALL COURT STRIPING DETAIL

NOT TO SCALE

N

SCALE: 1"=10'
GRAPHIC SCALE
0 10 20 30

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Santa Barbara, CA 93103
Telephone (805) 966-2224
BY: DATE: 3/10/2025

STRIPING PLAN

MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

C-3

DATE: 03/10/2025

SHT. 6 OF 7

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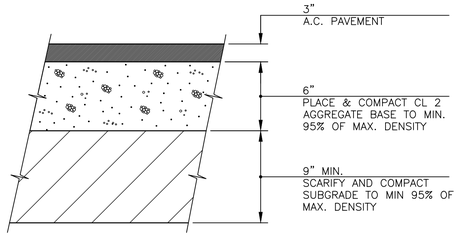
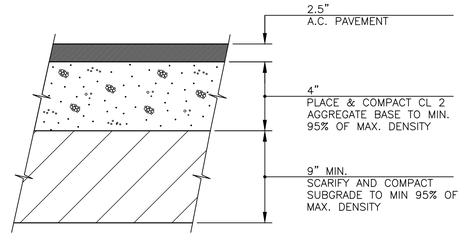


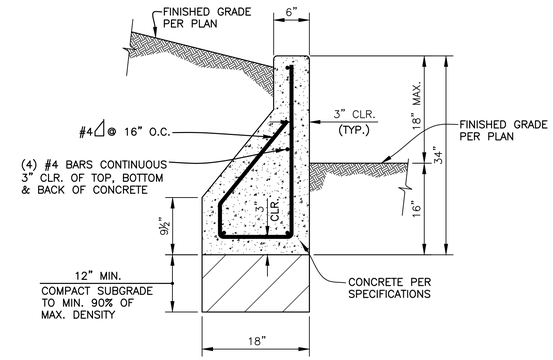
1 TYPICAL A.C. PAVEMENT STRUCTURAL SECTION
NOT TO SCALE



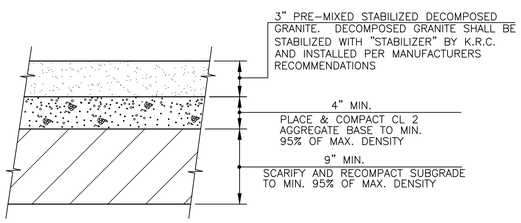
2 TYPICAL A.C. PAVEMENT STRUCTURAL SECTION
NOT TO SCALE

CONSTRUCT JOINTS PER SPECIFICATIONS AND AS SHOWN ON PLANS.

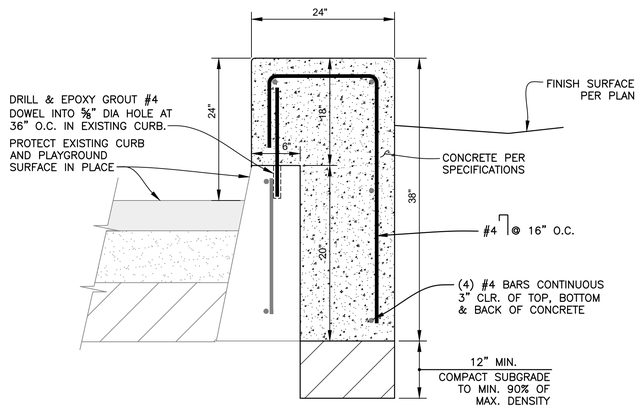
CONSTRUCT ½" RADIUS ROUNDING ON ALL EXPOSED CORNERS



3 VARIABLE HEIGHT RETAINING CURB DETAIL
NOT TO SCALE



4 TYPICAL DECOMPOSED GRANITE STRUCTURAL SECTION
NOT TO SCALE



5 SEAT WALL DETAIL
NOT TO SCALE

NO.	DESCRIPTION	DATE	APPROVED
	REVISIONS		

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BY: _____ DATE: 3/10/2025

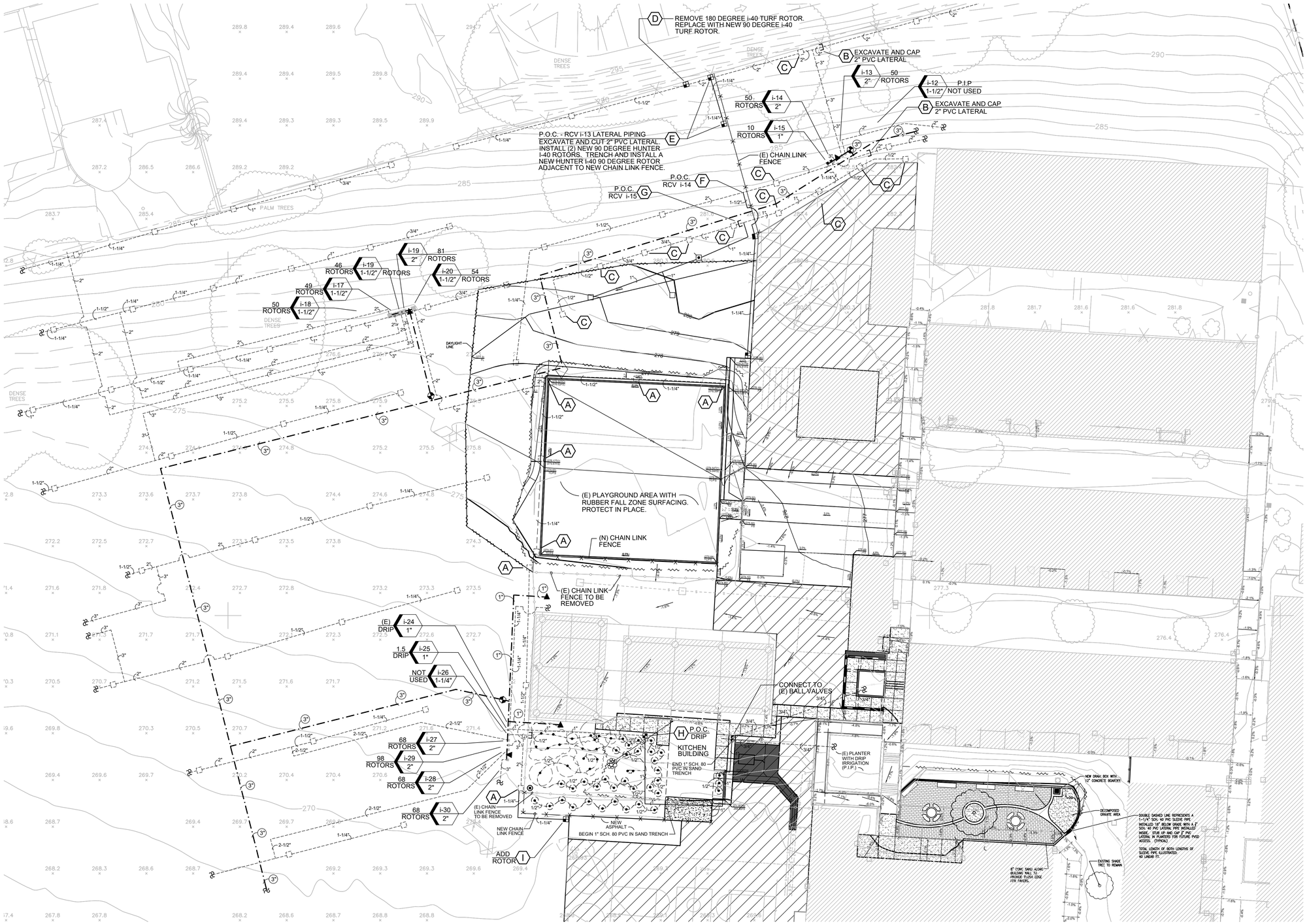
DETAILS
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CITY OF CAMARILLO, CALIFORNIA

CD-1

DATE: 03/10/2025

SHT. 7 OF 7

THESE PLANS HAVE BEEN PREPARED SOLELY FOR USE FOR THE PROJECT SCOPE AND SITE SPECIFICALLY IDENTIFIED HEREIN AT THE TIME THESE PLANS ARE SIGNED. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR, USE OF ANY PART OF THESE PLANS, INCLUDING ANY NOTE OR DETAIL, FOR ANY UNAPPROVED OR REVISED PROJECT SCOPE, OR FOR ANY OTHER PROJECT AT THIS OR ANY OTHER SITE.



NOTE: SEE SHEET L1.2 FOR IRRIGATION LEGEND AND NOTES.

GRAPHIC SCALE

0 10 20 40 60

SCALE: 1"= 20'

UNDERGROUND SERVICE ALERT

CALL BEFORE YOU DIG

CALL : TOLL FREE 1-800-422-4133 OR 811

TWO WORKING DAYS BEFORE YOU DIG

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REVISIONS

NO.	DATE	BY	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
BRIAN LANDES BAIN
SIGNATURE
04-24
RENEWAL DATE
3-10-25
DATE
STATE OF CALIFORNIA

CLIENT
PLEASANT VALLEY SCHOOL DISTRICT
600 TEMPLE AVE.
CAMARILLO, CA 93010

SHEET TITLE
IRRIGATION PLAN

PROJECT
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CAMARILLO, CA 93010

DRAWN: ML / JB
CHECKED: JB
CLIENT REV.:

DRAWING
L1.1
SHEET 1 OF 5
PROJECT No. 25.04

IRRIGATION PROJECT NOTES

1. PRIOR TO BEGINNING ANY WORK, THE CONTRACTOR AND THE PLEASANT VALLEY SCHOOL DISTRICT (P.V.S.D.) REPRESENTATIVE SHALL PARTICIPATE IN A THOROUGH IRRIGATION SYSTEM REVIEW OF THE PROJECT SITE. ALL REMOTE CONTROL VALVES SHALL BE TURNED ON AND OBSERVED IN OPERATION BY BOTH THE CONTRACTOR AND P.V.S.D. REPRESENTATIVE. ANY EXISTING DEFECTS WILL BE LISTED IN DETAIL IDENTIFYING THE SPECIFIC VALVE STATION NUMBER AND DESCRIBING THE EXACT BROKEN OR NON FUNCTIONING IRRIGATION COMPONENT NOTED DURING THE SITE REVIEW. AT THE CONCLUSION OF THE IRRIGATION REVIEW, THE CONTRACTOR SHALL GENERATE A SUMMARY OF THE ITEMS IDENTIFIED BY BOTH PARTIES LISTING ALL REMOTE CONTROL VALVES OPERATED, IDENTIFYING IF THE VALVE PERFORMED WITHOUT ANY DEFECTS OR SPECIFICALLY IDENTIFYING ANY OBSERVED DEFECTS OR NON FUNCTIONING COMPONENTS, SUCH AS BROKEN HEADS, CLOGGED NOZZLES, NON OPERATING VALVE SOLENOID, BROKEN PIPING, OR OTHER NOTED DEFECT. THE COMPLETED SUMMARY OF ITEMS NOTED SHALL BE LISTED ON A DOCUMENT CALLED `EXISTING IRRIGATION SYSTEM OBSERVATIONS'. THIS DOCUMENT SHALL BE SIGNED BY THE CONTRACTOR AND SUBMITTED TO THE P.V.S.D. REPRESENTATIVE FOR A CONFIRMING SIGNATURE. THE MUTUALLY SIGNED `EXISTING IRRIGATION SYSTEM OBSERVATIONS DOCUMENT' SHALL BE SENT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR INSPECTION PURPOSES AT THE CONCLUSION OF THE CONSTRUCTION WORK. IF REQUESTED BY THE P.V.S.D. REPRESENTATIVE, THE CONTRACTOR SHALL PROVIDE A LIST OF THE EXISTING DEFECTIVE IRRIGATION COMPONENTS NOTED WITH A DETAILED WRITTEN PROPOSAL TO REPAIR EACH ITEM IDENTIFIED ON THE LIST. A COPY OF THIS PROPOSAL WILL BE SENT TO THE LANDSCAPE ARCHITECT. THIS ADDITIONAL WORK PROPOSAL MUST BE REVIEWED AND APPROVED IN WRITING BY THE P.V.S.D. STAFF AND FORMALLY PRESENTED TO THE GENERAL CONTRACTOR BEFORE THE LANDSCAPE SUB-CONTRACTOR CAN BEGIN ANY ADDITIONAL REPAIR WORK. THE MUTUALLY SIGNED `EXISTING IRRIGATION SYSTEM OBSERVATION DOCUMENT' SHALL BE USED AS A GUIDE TO IDENTIFY ANY COLLATERAL DAMAGE CAUSED TO THE EXISTING IRRIGATION SYSTEM AS A RESULT OF NEW CONSTRUCTION PERFORMED ON SITE BY THE CONTRACTORS. ANY DAMAGE CAUSED TO THE EXISTING IRRIGATION SYSTEM NOT SPECIFICALLY IDENTIFIED ON THE `EXISTING IRRIGATION SYSTEM OBSERVATION DOCUMENT' SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. IN THE EVENT THAT THE CONTRACTOR DOES NOT PARTICIPATE OR PERFORM THE EXISTING IRRIGATION SITE REVIEW, ANY EXISTING IRRIGATION EQUIPMENT OR COMPONENTS DAMAGED ON THE PROJECT SITE NOTED BY THE LANDSCAPE ARCHITECT DURING THE FINAL IRRIGATION SYSTEM REVIEW SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THEIR EXPENSE AND TO THE SATISFACTION OF THE P.V.S.D. REPRESENTATIVE.

2. FIELD VERIFY EXISTING STATIC WATER PRESSURE AND NOTIFY THE LANDSCAPE ARCHITECT PRIOR TO BEGINNING ANY WORK.

3. CONTACT DIG ALERT AT 1-800-227-2600 TO IDENTIFY AND LOCATE ALL ON-SITE UTILITIES PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL COORDINATE WITH THE PLEASANT VALLEY SCHOOL DISTRICT (P.V.S.D.) REPRESENTATIVE AND REVIEW THE EXISTING SITE PRIOR TO BEGINNING WORK TO AVOID CONFLICTS WITH FUTURE CONSTRUCTION PROJECTS SCHEDULED ON SITE.

4. PROTECT IN PLACE AND KEEP IN WORKING CONDITION ALL EXISTING IRRIGATION SYSTEMS NOT A PART OF THIS WORK. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY EXISTING MAINLINE SEGMENT, LATERAL, IRRIGATION CONTROL WIRE, HYDRAULIC TUBING, REMOTE CONTROL VALVE, VALVE BOX, QUICK COUPLER, OR ANY OTHER IRRIGATION SYSTEM COMPONENT DAMAGED DURING THE RENOVATION PROCESS. ADJACENT FUNCTIONING IRRIGATION SYSTEM COMPONENTS MUST BE KEPT IN WORKING CONDITION TO MAINTAIN THE HEALTH AND VIGOR OF THE EXISTING TURF AND LANDSCAPE PLANTINGS. PROLONGED LACK OF WATER TO THESE PLANTERS AS A RESULT OF NEW CONSTRUCTION WORK THAT RESULTS IN THE LOSS OF TURF OR PLANTS SHALL BE REPLACED BY THE CONTRACTOR AT THEIR COST AND TO THE SATISFACTION OF THE P.V.S.D.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRENCH SETTLING OR IRRIGATION HEAD SETTLING. ALL TRENCHES WILL BE BACK FILLED WITH CLEAN SOIL, COMPACTED AND PLANTED WITH APPROVED SEED OR PLANT MATERIAL AS PER PLAN. ALL HEADS THAT SETTLE WILL BE RAISED TO 1/2" ABOVE FINISH GRADE OR AS DIRECTED BY EITHER THE LANDSCAPE ARCHITECT OR P.V.S.D. REPRESENTATIVE. PROVIDE ADDITIONAL SOIL AS NECESSARY AND HAND TAMP AROUND HEAD TO PREVENT FUTURE SETTLING.

6. SLEEVE ALL PVC IRRIGATION PIPES AND WIRES INSTALLED UNDER PAVING. WIRES SHALL BE ENCLOSED IN SCH. 40 PVC ELECTRICAL CONDUIT SIZED BY THE CONTRACTOR, NO LESS THAN 2" IN SIZE. MAINLINE SLEEVES SHALL BE SIZED AS PER LEGEND ON PLAN. SEE SPECIFICATIONS AND IRRIGATION SLEEVING SCHEDULE FOR ADDITIONAL INFORMATION.

7. THE IRRIGATION SYSTEM IS SHOWN DIAGRAMMATICALLY. INSTALL ALL IRRIGATION EQUIPMENT WITHIN LANDSCAPE PLANTERS WHENEVER POSSIBLE.

8. ALL SPRINKLER HEADS SPECIFIED ON THIS PROJECT ARE EQUIPPED WITH FACTORY INSTALLED CHECK VALVES IN THE SPRINKLER BODY. IN THE EVENT THAT LOW HEAD DRAINAGE STILL OCCURS, THE CONTRACTOR SHALL INSTALL INLINE SWING CHECK OR SPRING LOADED CHECK VALVES ON THE PVC LATERALS TO PREVENT LOW HEAD DRAINAGE. ANY INLINE CHECK VALVE INSTALLED ON PVC LATERALS MUST BE FURNISHED WITH A 10" ROUND PLASTIC VALVE BOX WITH A LOCKING GREEN PLASTIC LID.

9. ALL VALVE BOXES INSTALLED IN CONCRETE OR ASPHALT PAVING SHALL BE TRAFFIC RATED CONCRETE BOXES (13-1/4"W X 24-1/4"L X 12"D) WITH CONCRETE LIDS. BOXES SHALL BE MANUFACTURED BY OLDCASTLE PRE-CAST, BOX MODEL N30BOX, LID MODEL B30D, CONCRETE BOX EXTENSION MODEL B30X12, OR CHRISTY CONCRETE BOX EQUIVALENT. ALL RECTANGULAR PLASTIC VALVE BOXES SHALL HAVE THE MINIMUM DIMENSIONS OF (14-1/2"W X 19-1/2"L X 12-1/4"H) AND SHALL HAVE GREEN LOCKING PLASTIC LIDS. THE CONTRACTOR SHALL INCLUDE WITH THE COST OF THE PROJECT ANY PLASTIC VALVE BOX EXTENSION THAT MIGHT BE REQUIRED TO COMPLETE THE VALVE INSTALLATION AS PART OF THE BASE BID. PLASTIC BOX MANUFACTURER'S AND MODEL NUMBERS SHALL BE CARSON MODEL 1419-12 WITH 1419-4B `T-STYLE GREEN LID', APPLIED ENGINEERING PRODUCTS MODEL 1015T-1G2G, OR NDS MANUFACTURING APPROVED EQUAL.

10. USE ONLY SCH. 80 PVC NIPPLES WHEN INSTALLING VALVES REQUIRING THREADED FITTINGS. SCH. 40 PVC MALE ADAPTERS SHALL NOT BE USED ON ANY VALVE ASSEMBLY CONNECTED TO A PRESSURIZED MAINLINE.

11. MAKE ALL REQUIRED ADJUSTMENTS TO BOTH EXISTING AND NEW SPRINKLER HEADS TO PREVENT ANY IRRIGATION WATER FROM OVER SPRAYING ON TO ADJACENT PAVEMENT OR CLASSROOM BUILDINGS. MAKE ANY NOZZLE REPLACEMENTS AS REQUESTED BY EITHER THE LANDSCAPE ARCHITECT OR P.V.S.D. REPRESENTATIVE TO IMPROVE IRRIGATION COVERAGE OR TO BALANCE PRECIPITATION RATE TO LANDSCAPE PLANTER AS PART OF BASE BID.

12. HEAT STAMP OR `BRAND' INTO THE PLASTIC REMOTE CONTROL VALVE BOX LIDS THE NEW VALVE STATION NUMBER AND RELATED NEW AUTO CONTROLLER LETTER. PROVIDE CHRISTY STANDARD SIZE I.D. TAGS CONNECTED TO ALL NEW REMOTE CONTROL VALVE SOLENOIDS WITH STATION NUMBER AND RELATED EXISTING AUTO CONTROLLER IDENTIFICATION LETTER.

13. ALL WATER TIGHT CONNECTORS USED TO SPLICE 14 GAUGE WIRES TO REMOTE CONTROL VALVE SOLENOIDS OR TO REPAIR BROKEN EXISTING REMOTE CONTROL VALVE WIRES ON THIS PROJECT SHALL BE MANUFACTURED BY 3M COMPANY, MODEL DBR-Y6 SERIES, SPEARS MODEL DS-400 WITH SPEARS DS-300 SEALANT, OR P.V.S.D. APPROVED EQUAL.

14. INSTALL ALL IRRIGATION REMOTE CONTROL VALVES, BALL VALVES, AND QUICK COUPLING VALVES A MINIMUM DISTANCE OF 10'-0" FROM ALL TREE TRUNK LOCATIONS ILLUSTRATED ON PLANTING PLAN. CONFIRM LAYOUT OF EXISTING OR NEW TREE LOCATIONS PRIOR TO INSTALLING ANY VALVE.

15. EXISTING IMPROVEMENTS WITHIN THE WORK AREAS SHALL REMAIN AND BE PROTECTED IN PLACE UNLESS OTHERWISE NOTED. DAMAGE TO EXISTING IMPROVEMENTS SHALL BE REPLACED IN KIND TO A CONDITION EQUAL TO OR BETTER THAN THAT WHICH EXISTED PRIOR TO CONSTRUCTION.

16. UTILITIES MAY HAVE BEEN OMITTED ON THE IRRIGATION SHEETS. REVIEW ALL AVAILABLE P.V.S.D. `AS-BUILT' RECORD DRAWINGS AND EXERCISE CARE IN EXCAVATION WHILE PROTECTING EXISTING UTILITIES IN PLACE.

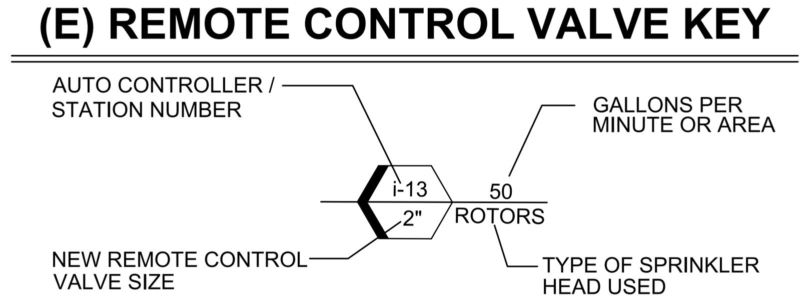
17. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ALL DAMAGED IRRIGATION PIPING, SPRINKLER HEADS, WIRES, QUICK COUPLERS, OR ANY (E) IRRIGATION COMPONENT DAMAGED AS A RESULT OF THE NEW CONSTRUCTION WORK AS PART OF THE BASE BID WORK.

IRRIGATION SLEEVING SCHEDULE

ALL SLEEVES TO BE INSTALLED 24" BELOW GRADE

MAINLINE OR / LATERAL PIPE SIZE	SLEEVE SIZE REQUIRED
1/2" SCH. 40 PVC	1-1/2" SCH. 40 PVC
3/4" SCH. 40 PVC	1-1/2" SCH. 40 PVC
1" SCH. 40 PVC	2" SCH. 40 PVC
1-1/4" SCH. 40 PVC	2-1/2" SCH. 40 PVC
1-1/2" SCH. 40 PVC	3" CLASS 200 PVC
2" CLASS 315 / SCH. 40 PVC	4" CLASS 200 PVC
2-1/2" CLASS 315 / SCH. 40 PVC	4" CLASS 200 PVC
3" CLASS 315 / SCH. 40 PVC	6" CLASS 200 PVC
4" CLASS 315 / SCH.40 PVC	6" CLASS 200 PVC

(E) REMOTE CONTROL VALVE KEY



IRRIGATION LEGEND

SYMBOL	DESCRIPTION	MANUFACTURER	MODEL	REMARKS	DETAIL
— · — · —	(E) MAINLINE	UNKNOWN	GASKETED SDR 21 PVC / SCH. 40 PVC	18" BELOW GRADE - UNLESS OTHERWISE NOTED ON PLAN	N/A
- - - - - - - -	(E) IRRIGATION LATERAL	UNKNOWN	CL. 200 / SCH. 40 SOLVENT WELD PVC	12" BELOW GRADE - PROTECT IN PLACE UNLESS OTHERWISE NOTED ON IRRIGATION PLAN	N/A
———	(N) IRRIGATION LATERAL	PACIFIC / P.W. EAGLE	SCH. 40 PVC SOLVENT WELD	SOLVENT WELD - 12" BELOW GRADE - UNLESS OTHERWISE NOTED ON PLAN	1 / L3.1
- - - - - - -	(N) POLYETHYLENE TUBING	RAIN BIRD / EQUAL	XBS700G100 / EQUAL	1/2" SIZE - OUTSIDE DIA. .7" / WALL THICKNESS .05" - PIN TO GRADE @ 5'-0" O.C.	4, 5, 6 / L3.1
NO SYMBOL	(E) AUTO CONTROLLER	WEATHERMATIC	SMART LINE SERIES	48 STATIONS - IN STAINLESS STEEL PEDESTAL - PROTECT IN PLACE	N/A
■	(E) REMOTE CONTROL VALVE	MIXTURE OF BOTH WEATHERMATIC & SUPERIOR	MAX-DW-XPR SERIES / 950DW SERIES	GLASS-NYLON VALVE BODY- 225 PSI RATING - IN A VALVE BOX - PROTECT IN PLACE BRASS VALVE BODY- 225 PSI RATING - IN A VALVE BOX - PROTECT IN PLACE	N/A
◪	1" SCH. 40 PVC BALL VALVE W/ PRESSURE REGULATING DRIP FILTER	SPEARS / EQUAL WITH RAIN BIRD FILTER	8722 SERIES - 1" SIZE OR EQUAL WITH RAIN BIRD PRB-QKCHK-100 FILTER	1" SCH. 40 PVC BALL VALVE WITH A 40 PSI PRESSURE REGULATING DRIP FILTER IN A STANDARD GREEN RECTANGULAR VALVE BOX WITH LOCKING LID.	3 / L3.1
▲	(E) QUICK COUPLER	BUCKNER	QB44RC-10	1" SIZE, RUBBER COVER, BRASS, INSTALLED IN A 10" ROUND GREEN VALVE BOX - PROTECT IN PLACE	N/A
◕	(E) GATE VALVE	NIBCO	T-113 SERIES	BRASS GATE VALVE - LINE SIZE IN VALVE BOX - PROTECT IN PLACE	N/A
⬚	(E) GATE VALVE	HUNTER	VARIES - i40 4" BODY / i20 4" BODY	PROTECT IN PLACE UNLESS OTHERWISE INSTRUCTED ON IRRIGATION PLAN	N/A

SYMBOLS Q	T	H	F	DESCRIPTION	MANUFACTURER	MODEL WITH REMARKS	PSI	RAD	GPM Q	GPM T	GPM H	GPM F	DETAIL
◰				POP UP TURF ROTOR	HUNTER	I-40-04-SS- 08 (NOZZLE LIGHT BROWN IN COLOR)	70	46	9.2				2 / L3.1
	◩			POP UP TURF ROTOR	HUNTER	I-40-04-SS- 10 (NOZZLE LIGHT GREEN IN COLOR)	70	51		12.2			2 / L3.1
		⬒		POP UP TURF ROTOR	HUNTER	I-40-04-SS- 13 (NOZZLE LIGHT BLUE IN COLOR)	70	52			13.3		2 / L3.1
			▣	POP UP TURF ROTOR	HUNTER	I-40-04-SS- 13 (NOZZLE LIGHT BLUE IN COLOR)	70	52				13.3	2 / L3.1
			□	POP UP TURF ROTOR	HUNTER	I-20-04-PRB-2.0LA	45	28				2.80	2 / L3.1
			▣	POP UP TURF ROTOR	HUNTER	I-20-04-PRB-3.5LA	45	35				3.50	2 / L3.1
			●	BARBED DRIP EMITTER SYMBOL DENOTES (2) EMITTERS	RAIN BIRD / HUNTER	PRESSURE COMPENSATING 2 GPH BARBED DRIP EMITTER / RAIN BIRD MODEL XB20-PC OR HUNTER HE-20-B	20	1				0.03	4, 5 / L3.1

PROJECT KEY NOTES

SYMBOL	DESCRIPTION
A	PROTECT IN PLACE (E) POP UP TURF SPRINKLER HEADS DURING NEW GRADING AND CONSTRUCTION WORK: FIELD VERIFY THE EXACT LOCATION OF THE (E) TURF ROTORS WITHIN THE AREAS THAT ARE TO BE RE-GRADED OR HAVE NEW CHAIN LINK FENCING INSTALLED ADJACENT TO THEIR LOCATIONS. WHEN POSSIBLE, PROTECT THE (E) SPRINKLER HEADS IN PLACE. IF NEEDED TO PROTECT THE SPRINKLER HEADS FROM DAMAGE, REMOVE THE HEADS FROM THE PVC SWING JOINT ASSEMBLIES. CAP OR COVER OVER SWING JOINT FITTING TO PREVENT SOIL INTRUSION INTO THE PIPING. AFTER NEW GRADING WORK HAS BEEN COMPLETED OR NEW FENCING HAS BEEN INSTALLED, REINSTALL THE SPRINKLER HEADS BACK INTO THEIR ORIGINAL POSITION. ENSURE ARC PATTERN IS ADJUSTED TO PREVENT OVER SPRAY ONTO ADJACENT PAVEMENT, FENCING, OR POURED IN PLACE SAFETY SURFACING. USE THE (E) SWING JOINT ASSEMBLY TO ADJUST SPRINKLER HEAD TO BE PERPENDICULAR TO FINISH GRADE. IN THE EVENT THAT THE SPRINKLER HEAD IS DAMAGED OR PVC LATERAL IS DUE TO NEW CONSTRUCTION, REPLACE WITH MATCHING SPRINKLER HEAD OR MATCHING PVC LATERAL PIPE SIZE AS PER PLANS AND SPECIFICATIONS.
B	CAP OFF (E) PVC LATERAL TO ABANDON SPRINKLER HEADS NO LONGER IN USE: EXCAVATE AND EXPOSE THE (E) PVC LATERAL AT THE APPROXIMATE LOCATION SHOWN ON THE IRRIGATION PLAN. FIELD VERIFY THE EXACT SIZE AND DEPTH OF THE (E) PVC LATERAL. CUT THE PVC LATERAL TO ABANDON (E) SPRINKLER HEADS THAT ARE NO LONGER NEEDED OR IN ACTIVE USE. COMPLETED WORK WILL ALLOW WATER TO FLOW INTO (E) AND POSSIBLY NEW SPRINKLER HEADS LOCATED IN DEFINED LIVING LAWN AREAS ORIGINATING FROM THE (E) REMOTE CONTROL VALVES WHILE ELIMINATING (E) TURF SPRINKLER HEADS IN AREAS THAT WILL NOW BE HOUSING THE NEW SOLAR PANELS WITH A NON IRRIGATED SURFACE.
C	REMOVE (E) TURF ROTOR FROM PVC SWING JOINT ASSEMBLY - INSTALL THREADED SCH. 40 PVC CAP TO SEAL OFF WATER DISCHARGE: FIELD VERIFY THE EXACT LOCATION OF THE (E) POP UP TURF ROTOR IDENTIFIED TO BE REMOVED FROM THE BURIED LATERAL PIPE SUPPLY. EXCAVATE AND EXPOSE THE (E) POP UP TURF ROTOR AND SWING JOINT ASSEMBLY. REMOVE AND DISPOSE OF OLD SPRINKLER HEAD. PURCHASE AND INSTALL A LINE SIZE SCH. 40 PVC THREADED CAP TO SECURE THE END OF THE SWING JOINT TO SEAL OFF WATER SUPPLY FROM THE (E) BURIED PVC LATERAL LINE. BEND SWING JOINT TO ENSURE COMPONENTS AND CAP WILL BE POSITIONED BELOW FINISH GRADE A MINIMUM OF 6" BELOW FINISH GRADE. COVER WITH SITE SOIL AND COMPACT TO PREVENT SETTLING AND PEDESTRIAN TRIPPING HAZARDS.
D	REMOVE (E) i-40 POP UP TURF ROTOR ALONG FENCE LINE AND REPLACE WITH A NEW i-40 POP UP TURF ROTOR WITH A 90 DEGREE ARC PATTERN TO PREVENT OVER SPRAY ONTO NEW SOLAR PANELS: FIELD VERIFY THE EXACT LOCATION OF THE (E) i-40 POP UP TURF ROTOR INSTALLED ADJACENT TO THE (E) CHAIN LINK FENCE LINE CURRENTLY DISCHARGING WATER IN A 180 DEGREE ARC PATTERN. EXCAVATE AND EXPOSE THE (E) TURF ROTOR. REMOVE THE ROTOR AND RETURN IT TO THE PVSD REPRESENTATIVE. REPLACE THE REMOVED SPRINKLER HEAD WITH A NEW HUNTER i-40 POP UP TURF ROTOR DISCHARGING WATER IN A 90 DEGREE ARC PATTERN AND NOZZLE AS PER IRRIGATION LEGEND. ADJUST ARC PATTERN TO COVER ONLY LIVING TURF WITHOUT OVER SPRAYING ONTO OR OVER (E) CHAIN LINK FENCING.
E	POC - RCV i-13 LATERAL - CUT INTO (E) 2" BURIED PVC LATERAL - INSTALL (2) NEW HUNTER i-40 POP UP TURF ROTORS AND A 1-1/4" SCH. 40 PVC LATERAL LINE ADJACENT TO CHAIN LINK FENCE: EXCAVATE AND EXPOSE THE (E) BURIED 2" PVC TURF ROTOR LATERAL INSTALLED ALONG THE (E) CHAIN LINK PERIMETER FENCE LINE. REMOVE A SECTION OF THE 2" PVC LATERAL TO ALLOW THE INSTALLATION OF A NEW HUNTER i-40 POP UP TURF ROTOR WITH A DISCHARGE 90 DEGREE ARC PATTERN INSTALLED IN THE CORNER WHERE THE TWO CHAIN LINK FENCES INTERSECT TOGETHER. INSTALL A NEW 1-1/4" SCH. 40 PVC LATERAL ORIGINATING FROM THE (E) 2" PVC LATERAL ALONG THE EDGE OF THE CHAIN LINK FENCE AS ILLUSTRATED ON THE IRRIGATION PLAN. INSTALL ANOTHER HUNTER i-40 POP UP TURF ROTOR WITH A 90 DEGREE ARC PATTERN TO PROVIDE ADDITIONAL IRRIGATION WATER FOR THE EXISTING TURF AREA. BACKFILL TRENCH AND COMPACT WITH SITE SOIL TO PREVENT SOIL SETTLING AND PEDESTRIAN TRIP HAZARDS.
F	POC - RCV i-14 LATERAL - CUT INTO (E) 2" BURIED PVC LATERAL - INSTALL (2) NEW HUNTER i-40 POP UP TURF ROTORS WITH SCH. 40 PVC LATERAL LINES AS PER IRRIGATION PLAN: EXCAVATE AND EXPOSE THE (E) BURIED 2" PVC TURF ROTOR LATERAL INSTALLED ON WEST SIDE OF THE (E) CHAIN LINK FENCE LINE. REMOVE A SECTION OF THE 2" PVC LATERAL TO ALLOW THE INSTALLATION OF A NEW 2"X2"X1-1/2" SCH. 40 PVC TEE. INSTALL A NEW 1-1/2" SCH. 40 PVC LATERAL ALONG FENCE LINE AND INSTALL (2) HUNTER i-40 POP UP TURF ROTOR WITH ARC PATTERNS AS ILLUSTRATED ON THE IRRIGATION PLAN. ADJUST NEW TURF ROTOR ARC PATTERNS TO PREVENT WATER CONTACT WITH CHAIN LINK FENCING OR ANY ADJACENT PAVING OR POURED IN PLACE RUBBER SAFETY PLAYGROUND SURFACING. BACKFILL TRENCH AND COMPACT WITH SITE SOIL TO PREVENT SOIL SETTLING AND PEDESTRIAN TRIP HAZARDS.
G	POC - RCV i-15 LATERAL - CUT INTO (E) 1" BURIED PVC LATERAL - INSTALL (3) NEW HUNTER i-20 POP UP TURF ROTORS WITH SCH. 40 PVC LATERAL LINES AS PER IRRIGATION PLAN: EXCAVATE AND EXPOSE THE (E) BURIED 1" PVC TURF ROTOR LATERAL INSTALLED ON WEST SIDE OF THE (E) CHAIN LINK FENCE LINE. REMOVE A SECTION OF THE 1" PVC LATERAL TO ALLOW THE INSTALLATION OF A NEW SCH. 40 PVC FITTINGS TO ALOW THE INSTALLATION OF THE NEW SCH. 40 PVC LATERALS AND HUNTER i-20 POP UP TURF ROTORS AS PER IRRIGATION PLAN. CAP OFF ABANDONED TURF ROTOR LINE. REMOVE AND CAP OFF IDENTIFIED TURF ROTORS THAT ARE TO BE REMOVED FORM THE IRRIGATION SYSTEM. TRENCH AND INSTALL NEW SCH. 40 PVC LATERALS AND FULL CIRCLE TURF ROTORS. ADJUST RADIUS PATTERNS OF NEW FULL CIRCLE ROTORS TO PREVENT OVER SPRAY ONTO ANY EXISTING CHAIN LINK FENCING, PAVEMENT, OR POURED IN PLACE RUBBER SAFETY SURFACING. BACKFILL TRENCH AND COMPACT WITH SITE SOIL TO PREVENT SOIL SETTLING AND PEDESTRIAN TRIP HAZARDS.
H	POC - RCV i-25 LATERAL - FIELD VERIFY (E) CAPPED PVC LATERAL SUPPLY LINE IN 6" ROUND VALVE BOX - USE THIS SOURCE TO INSTALL NEW 1" PVC BALL VALVE WITH 1" PRESSURE REGULATING FILTER IN A VALVE BOX : FIELD VERIFY THE EXACT LOCATION OF A 1" SCH. 40 PVC CAPPED LATERAL LINE HOUSED IN A 6" ROUND VALVE BOX ORIGINATING FROM (E) 1" REMOTE CONTROL VALVE `i-25'. EXCAVATE AND EXPOSE THE 1" SCH. 40 PVC CAPPED LATERAL LINE AND REMOVE THE 6" ROUND VALVE BOX. INSTALL A NEW 1" SCH. 40 PVC BALL VALVE WITH A NEW 1" 40.0 PSI PRESSURE REGULATING DRIP FILER IN A STANDARD RECTANGULAR VALVE BOX. tHE COMBINATION OF THE BALL VALVE AND PRESSURE REGULATING DRIP FILTER WILL BE USED AS THE BEGINNING POINT OF NEW DRIP IRRIGATION SYSTEM. REMOVE AND DISPOSE OF ANY REMAINING RESIDUAL DRIP TUBING INSTALLED ON GRADE. TRENCH NEW 1" SCH. 40 PVC LATERAL FROM DISCHARGE OF DRIP FILTER THROUGH THE OPEN SOIL AREA IN THE PLANTING AREA AS PER IRRIGATION PLAN. TRANSITION TO 1/2" POLYETHYLENE TUBING THAT WILL BE SECURED TO FINISH GRADE WITH SPECIFIED DRIP TUBING STAKES AT 5'-0" O.C. SPACING. PROVIDE AND INSTALL (2) 2 GALLON PER HOUR DRIP EMITTERS FOR EACH 5-GALLON SHRUB, PROVIDE AND INSTALL (4) 2 GALLON PER HOUR DRIP EMITTERS FOR (E) AND NEW 15-GALLON TREES. DURING THE CONSTRUCTION OF THE NEW KITCHEN BUILDING, THE PREVIOUS DRIP IRRIGATION SUPPLY LATERAL WAS SEVERED. TO PROVIDE A WATER SUPPLY TO BOTH THE SMALL LANDSCAPE PLANTER ON THE SOUTH-EAST SIDE OF THE NEW KITCHEN BUILDING AS WELL AS TO RESUPPLY WATER TO THE (E) PLANTERS NOW SEVERED FROM AN IRRIGATION SOURCE, CONTINUE THIS WATER SUPPLY AS ILLUSTRATED ON THE IRRIGATION PLAN. THE NEW PVC LATERAL PIPING WILL NOT BE ABLE TO BE SLEEVED DUE TO THE EXISTING SITE CONDITIONS. TO ADDRESS THIS ISSUE, TRANSITION FROM 1" SCH. 40 PVC PIPING TO 1" SCH. 80 PVC PIPING AT THE SOUTH SIDE OF THE PLANTER AS ILLUSTRATED ON THE PLANS. TRENCH THE DIRECT BURIED 1" SCH. 80 PVC LATERAL TO SUPPLY THE SMALL PLANTER LOCATED ON THE SOUTH EAST SIDE OF THE NEW KITCHEN BUILDING AND TO RESUPPLY THE (E) DRIP IRRIGATION PLANTERS TO A DEPTH OF 18" BELOW GRADE. ALL SCH. 80 PVC LATERAL PIPING TRENCHED DIRECTLY UNDER PROPOSED PAVING WILL BE ENTIRELY BACKFILLED WITH PLASTER SAND. CONTINUE THE LATERAL PIPING WORK FROM THE PLANTER LOCATED ON THE SOUTH-EAST CORNER OF THE KITCHEN BUILDING TO THE (E) GREEN RECTANGULAR VALVE BOX HOUSING (2) SCH. 40 PVC ISOLATION VALVES FOR DRIP IRRIGATION PLANTERS. RECONNECT NEW 1" SCH. 80 PVC LATERAL INTO THE (E) BALL VALVE MANIFOLD WITHIN THE (E) VALVE BOX TO COMPLETE THE RESUPPLY OF WATER TO THE (E) DRIP IRRIGATION PLANTERS. CONTRACTOR SHALL LAYOUT THE NEW PLANTS PURCHASED BY PVSD WITH THE PVSD REPRESENTATIVE IN THE FIELD. ADJUST PROPOSED TUBING AND LATERAL PIPING LAYOUT AS NEEDED TO ADJUST TO FIELD CONDITIONS WITH THE DIRECTION PROVIDED BY THE PVSD REPRESENTATIVE IN THE FIELD.
I	POC - RCV i-29 LATERAL - CUT INTO (E) 2" SCH. 40 PVC LATERAL AND INSTALL A NEW 1-1/4" SCH. 40 PVC LATERAL LINE WITH A NEW HUNTER i-40 POP UP TURF ROTOR: FIELD VERIFY THE EXACT LOCATION OF THE (E) i-40 POP UP TURF ROTOR INSTALLED ADJACENT TO THE (E) CHAIN LINK FENCE LINE CURRENTLY DISCHARGING WATER IN A 180 DEGREE ARC PATTERN. EXCAVATE AND EXPOSE THE (E) BURIED 2" PVC LATERAL. CUT PVC LATERAL AND INSTALL A 2"X2"X1-1/4" PVC TEE ONTO PVC LATERAL. TRENCH AND INSTALL A NEW 1-1/4" SCH. 40 PVC LATERAL LINE FROM TEE ALONG NEW CHAIN LINK FENCING PERIMETER TO LOCATION WHERE THE TWO CHAIN LINK FENCE PANEL CREATE A CORNER. INSTALL A NEW HUNTER i-40 POP UP TURF ROTOR WITH A 90 DEGREE ARC PATTERN AT THIS LOCATION. ADJUST ARC PATTERN TO PREVENT OVER SPRAY ONTO ANY CHAIN LINK FENCE PANELS. BACKFILL TRENCH AND COMPACT TO PREVENT SOIL SETTLING AND PEDESTRIAN TRIP HAZARDS.

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REVISIONS

NO.	DATE	BY	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
JOHN JAMES BAIN III #3193
SIGNATURE
04-24
RENEWAL DATE
3-10-25
DATE
STATE OF CALIFORNIA

CLIENT
PLEASANT VALLEY SCHOOL DISTRICT
600 TEMPLE AVE.
CAMARILLO, CA 93010

SHEET TITLE
IRRIGATION LEGEND

PROJECT
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CAMARILLO, CA 93010

DRAWN: ML / JB
CHECKED: JB
CLIENT REV.:

DRAWING
L1.2

SHEET 2 OF 5
PROJECT No. 25.04

(E) TURF PLAY FIELD. PROTECT IN PLACE. (TYPICAL)

(E) TURF PLAY FIELD. PROTECT IN PLACE. (TYPICAL)

(E) TURF PLAY FIELD. PROTECT IN PLACE. (TYPICAL)

(E) TURF PLAY FIELD. PROTECT IN PLACE. (TYPICAL)

(E) TURF PLAY FIELD. PROTECT IN PLACE. (TYPICAL)

DAYLIGHT LINE

SYMBOL DENOTES NEW SOD TURF REPLACEMENT AREA. ESTIMATED AREA OF FINE GRADING MEASURES APPROXIMATELY (8,000 S.F.). CONTRACTOR SHALL FIELD VERIFY EXACT MEASUREMENTS OF NEW GRADING WORK AND REPLACE WITH NEW SOD LAWN. (TYPICAL)

(E) PLAYGROUND AREA WITH RUBBER FALL ZONE SURFACE. P.I.P.

(E) PLAYGROUND AREA WITH RUBBER FALL ZONE SURFACE. P.I.P.

(N) CHAIN LINK FENCE INSTALLED ON EDGE OF PLAYGROUND SEE CIVIL ENGINEER'S PLANS FOR ALL FENCING.

SHOVEL CUT EDGE BETWEEN MULCH AREA AND NEW SOD LAWN. (TYPICAL)

SYMBOL DENOTES NEW MULCH REPLACEMENT AREA AREA MEASURES APPROXIMATELY (550 S.F.) CONTRACTOR TO FIELD VERIFY.

(E) CHAIN LINK FENCE TO BE REMOVED

(E) LANDSCAPE PLANTER WITH SHRUBS AND MULCH. PROTECT IN PLACE (TYPICAL)

MATCHLINE - SEE SHEET L2.2

SEE SHEET 2.2 FOR PLANTING LEGEND

GRAPHIC SCALE

0 5 10 20 30

SCALE: 1"= 10'

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DATE
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CLIENT
PLEASANT VALLEY SCHOOL DISTRICT
600 TEMPLE AVE.
CAMARILLO, CA 93010

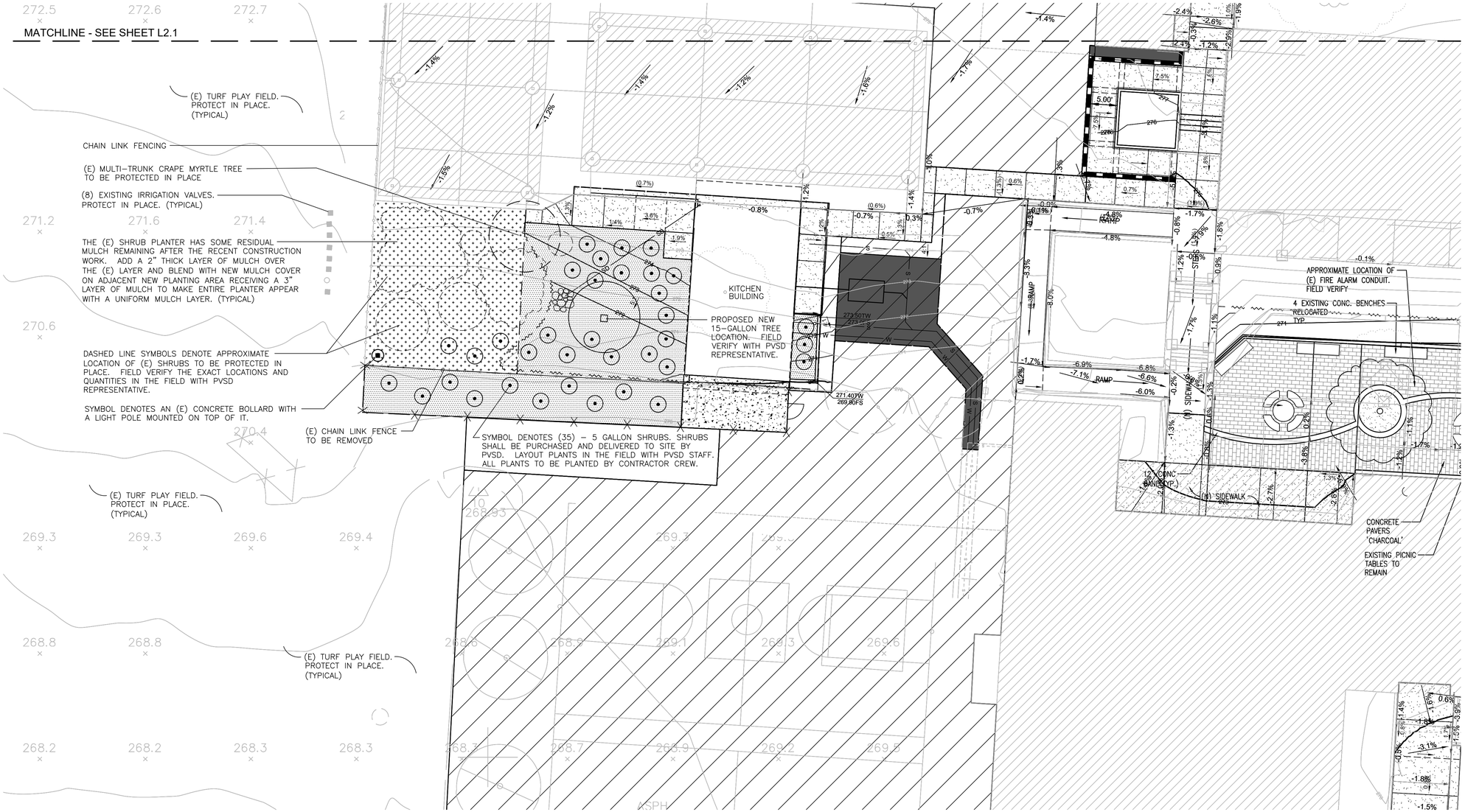
SHEET TITLE
PLANTING PLAN

PROJECT
MAIN PLAYGROUND ASPHALT REPLACEMENT PLANS
CAMARILLO HEIGHTS ELEMENTARY SCHOOL
35 CATALINA DRIVE
CAMARILLO, CA 93010

DRAWN: ML / JB
CHECKED: JB
CLIENT REV.:

DRAWING
L2.1

SHEET 3 OF 5
PROJECT No. 25.04



LEGEND AND NOTES:

SYMBOL	DESCRIPTION
	SYMBOL DENOTES PLANTING AREA TO RECEIVE NEW PLANTS. AREA SHALL BE FINE GRADED TO REMOVE ANY RESIDUAL CONSTRUCTION DEBRIS OR DEAD PLANT MATERIAL. PROTECT IN PLACE ANY (E) SHRUB OR TREE. PLANT NEW SHRUBS AND TREE AT LOCATIONS AS DETERMINED BY PVSD REPRESENTATIVE. APPLY PVSD APPROVED PRE-EMERGENT HERBICIDE ONTO PLANTER SOIL AND COVER WITH A 3" THICK LAYER OF AGROMIN `ES-2' WOOD MULCH.
NO SYMBOL	(E) TURF - PROTECT IN PLACE DURING CONSTRUCTION
	SOUTHLAND SOD MARATHON II: ROTOTILL AND PREP FOR NEW SOD LAWN INSTALLATION IN AREAS WHERE DAMAGE HAS BEEN CAUSED TO (E) TURF DURING GRADING AND NEW CONSTRUCTION WORK. SOD TURF: FINE GRADE TO MATCH EXISTING ADJACENT TURF TO CREATE SMOOTH UNIFORM SURFACE SUITABLE FOR PEDESTRIAN USE AND LAWN MOWING OPERATIONS. FINE GRADE SHALL BE KEPT 2" BELOW FINISH ADJACENT PAVED SURFACES OR AS PER CIVIL ENGINEER'S PLANS. (TYPICAL)
	(E) LANDSCAPE PLANTER WITH (E) SHRUBS AND TREES. THE MULCH LAYER HAS BEEN COMPROMISED DUE TO RECENT CONSTRUCTION WORK. CLEAN AREA BY REMOVING ANY REMAINING TRASH OR DEAD PLANTS. INSTALL A 2" THICK LAYER OF AGROMIN `ES-2' WOOD MULCH OVER REMAINING MULCH TO MATCH NEW PLANTING AREA.

PROJECT NOTES

1. BUILDING FOUNDATION SHRUB PLANTING AREAS:
CLEAN AND GRUB ANY EXISTING/ REMAINING VEGETATION. FINE GRADE EXPOSED SOIL TO A SMOOTH UNIFORM SURFACE WITH POSITIVE DRAINAGE AS PER CIVIL ENGINEER'S PLANS. PVSD SHALL SELECT & PURCHASE A TOTAL OF (35) 5-GALLON SHRUBS AND (1) 15-GALLON TREE TO BE DELIVERED TO SITE. CONTRACTOR SHALL POSITION AND SPOT DELIVERED SHRUBS AND TREE IN THE NEW PLANTERS WITH THE PVSD REPRESENTATIVE. ONCE THE PLANTS HAVE BEEN POSITIONED IN THE PLANTERS AND APPROVED BY THE PVSD REPRESENTATIVE, CONTRACTOR SHALL PLANT THE SHRUBS AS PER PROJECT SPECIFICATIONS. SHRUB PLANTING AREAS SHALL BE TREATED WITH AN APPROVED PRE-EMERGENT HERBICIDE AND COVERED WITH A 3" THICK LAYER OF AGROMIN `ES-2' WOOD MULCH.

2. SOD LAWN REPLACEMENT FOR PROJECT:
NEW SOD LAWN HAS BEEN ILLUSTRATED BY THE LANDSCAPE ARCHITECT FOR AREAS THAT ARE EXPECTED TO BE COMPLETELY DESTROYED BY NEW GRADING OPERATIONS. IT WILL BE PART OF THE BASE BID RESPONSIBILITY OF THE CONTRACTOR TO REPLACE ALL (E) TURF AREAS DAMAGED OR DESTROYED DURING THIS PROJECT SCOPE AS PART OF THE SUBMITTED PRICE TO THE SCHOOL DISTRICT. THE ILLUSTRATIONS PROVIDED ARE ESTIMATES BY THE LANDSCAPE ARCHITECT AND MAY NOT INCLUDE ALL DAMAGE TO THE (E) LAWN AREAS. THE CONTRACTOR WILL BE RESPONSIBLE TO FINE GRADE DISTURBED TURF AREAS TO BLEND EVENLY BACK TO SURROUNDING (E) GRADES TO CREATE A SMOOTH, UNIFORM SURFACE SUITABLE FOR PEDESTRIAN USE AND ROTARY LAWN MOWER OPERATION. SOD SHALL BE PLACED IN DISTURBED AREAS SO AS TO MATCH (E) FINISH GRADES.

N

GRAPHIC SCALE

0 5 10 20 30

SCALE: 1"= 10'

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BRIAN J. JAMES BAIN
04-24
RENEWAL DATE
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PLANTING PLAN

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CAMARILLO, CA 93010

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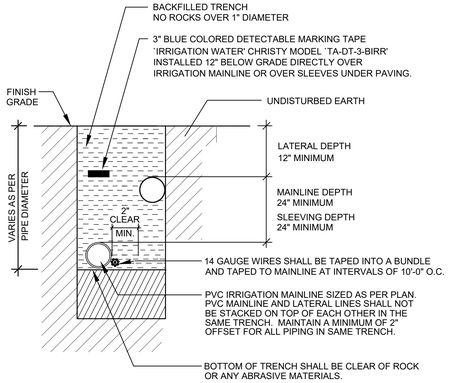
CHECKED: JB
CLIENT REV.:

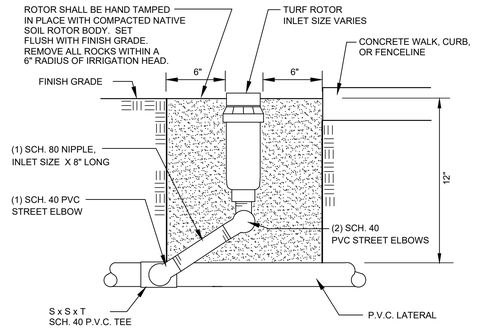
DRAWING
L2.2

SHEET 4 OF 5
PROJECT No. 25.04



NOT TO SCALE

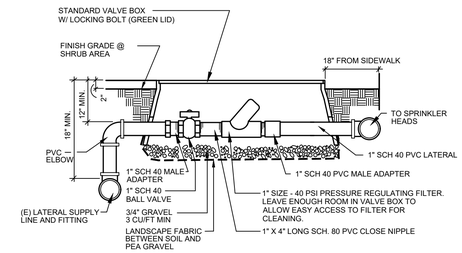
1 IRRIGATION PIPING TRENCH SECTION



NOTE:
SWING JOINT ASSEMBLY SIZE SHALL MATCH INLET SIZE OF SPRINKLER BODY.
SIZE OF SPRINKLER HEAD INLET. (TYPICAL)

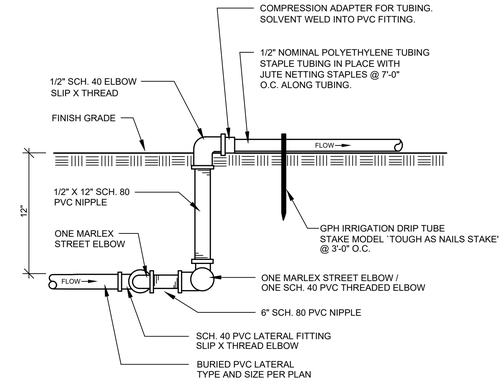
NOT TO SCALE

2 POP UP TURF ROTORS



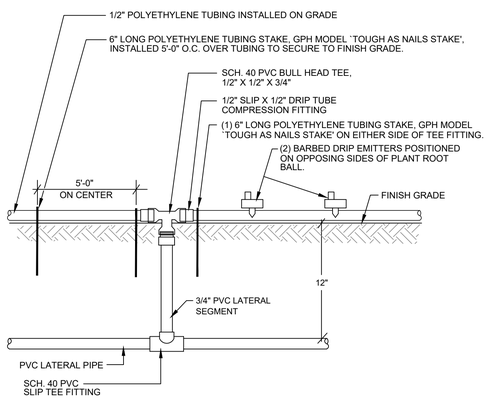
NOT TO SCALE

3 SCH. 40 PVC BALL VALVE WITH PRESSURE REGULATING FILTER



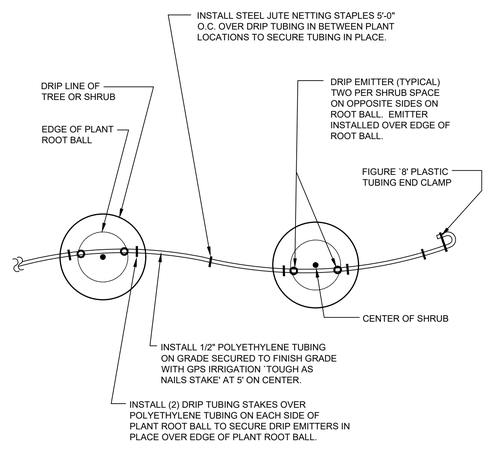
NOT TO SCALE

4 PVC LATERAL TRANSITION TO POLYETHYLENE TUBING ON GRADE



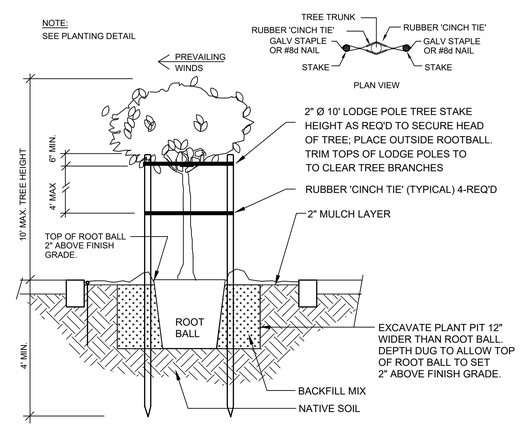
NOT TO SCALE

4 PVC LATERAL TO POLYETHYLENE DRIP TUBE WITH EMITTERS



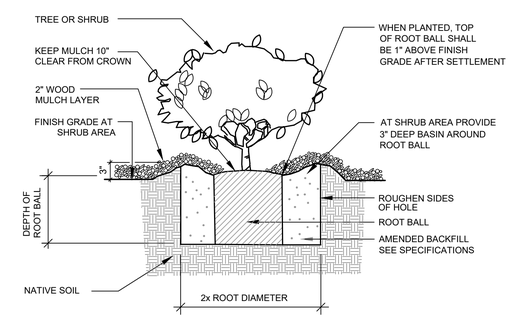
NOT TO SCALE

5 BARBED DRIP EMITTER ON POLYETHYLENE TUBING



NOT TO SCALE

7 15 GALLON TREE STAKING DETAIL



NOT TO SCALE

8 PLANTING DETAIL FOR TREES AND SHRUBS

9 NOT USED

10 NOT USED

11 NOT USED

12 NOT USED

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REVISIONS

NO.	DATE	BY	DESCRIPTION

REGISTERED LANDSCAPE ARCHITECT
JOHN LAMES BAIN JR. 2574
SIGNATURE
04-24
RENEWAL DATE
3-10-25
DATE
STATE OF CALIFORNIA

CLIENT
PLEASANT VALLEY
SCHOOL DISTRICT
600 TEMPLE AVE.
CAMARILLO, CA 93010

SHEET TITLE
LANDSCAPE DETAILS

PROJECT
MAIN PLAYGROUND ASPHALT
REPLACEMENT PLANS
CAMARILLO HEIGHTS
ELEMENTARY SCHOOL
35 CATALINA DRIVE
CAMARILLO, CA 93010

DRAWN: ML / JB
CHECKED: JB
CLIENT REV.:

DRAWING
L3.1

SHEET 5 OF 5
PROJECT No. 25.04

SPECIFICATIONS
FOR THE

MAIN PLAYGROUND ASPHALT REPLACEMENT PROJECT

AT

CAMARILLO HEIGHTS STEM ACADEMY
35 CATALINA DRIVE
CAMARILLO, CALIFORNIA 93010

FOR:

PLEASANT VALLEY SCHOOL DISTRICT
600 TEMPLE AVENUE
CAMARILLO, CA 93010

MARCH 10, 2025

PREPARED BY:

JORDAN & BAIN
LANDSCAPE ARCHITECTS, INC.
459 NORTH VENTURA AVENUE
VENTURA, CA 93001

REGISTERED LANDSCAPE ARCHITECT
JOHN JAMES BAIN III #3193
SIGNATURE
04/2026
RENEWAL DATE
03/10/25
DATE
STATE OF CALIFORNIA

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MAIN PLAYGROUND ASPHALT REPLACEMENT PROJECT
CAMARILLO HEIGHTS STEM ACADEMY

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SECTION 01 10 20
FENCING AND PROTECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

This section includes requirements for temporary fencing and protection of the work area.

1.02 SUBMITTALS

Submit for approval, all catalog cuts and or specification sheet for all fencing products.

1.03 QUALITY ASSURANCE

Fencing shall be installed by a qualified fence company with experience in the installation of temporary fencing.

PART 2 PRODUCTS

2.01 TEMPORARY FENCING

Temporary fencing shall be 6 feet high chain link fence fabric attached to post and frames in a secure manner. Barb wire and or razor wire is not allowed. Fencing shall be kept in place during the construction period and maintenance period. Fencing shall be removed only when written authorization is provided by the District.

PART 3 EXECUTION

3.01 FENCE LAYOUT

Contractor shall submit to the District for approval, a schematic fence layout showing the location of fence panels and method of attachment of panels and post. This plan must be approved by the District prior to start of the work.

3.02 FENCE INSTALLATION

A. Install fencing and post so that no damage occurs to the existing underground conduits or paving. Immediately repair all damage to the existing conditions that may occur as a result of the fence installation.

B. If fencing panels have post with a horizontal support frame, make sure they are visually apparent to prevent any trip hazard.

3.03 FENCE REPAIR

Immediately repair any damage to the fencing that may occur.

END OF SECTION 01 10 20

SECTION 02 41 10
MISCELLANEOUS REMOVALS

PART 1 GENERAL

1.01 SECTION INCLUDES

This section includes specifications for the removal of the existing concrete paving, asphalt paving, landscaping, and miscellaneous items.

1.02 REFERENCE STANDARDS

The "Greenbook" Standards and Specifications for Public Works Construction as referenced in the Specifications.

1.03 IMPORT SOIL

The source of any required Imported soil shall be tested and approved by the District prior to any delivery.

1.04 DISPOSAL OF MATERIALS

Remove items such as landscape materials, concrete paving, asphalt paving, and all other miscellaneous items scheduled to be removed shall be properly disposed of as they accumulate. Do not store or permit debris to accumulate on the site.

PART 2 PRODUCTS

(Not Used)

PART 3 EXECUTION

3.01 INSPECTION

A. Prior to starting, inspect the site with the District Inspector to verify all removals required to complete the work.

B. Examine surfaces for conditions that will adversely affect execution, permanence, and quality of work of this Section.

C. Do not proceed with work until unsatisfactory conditions have been corrected.

D. Locate existing active utility lines and provide for their protection.

3.02 CLARIFICATION

Drawings do not indicate all objects existing on site. Before commencing work, verify with the District any existing items that may affect the work.

3.03 PROTECTION OF UTILITIES

A. Preserve and maintain, in working condition, all active utilities traversing the site. Re-route or remove and cap those which interfere with work of this Project. Coordinate extent of this work with the District.

B. Expeditiously repair damaged utilities at no cost to the District.

3.04 PROTECTION OF EXISTING PLANTS

Protect existing trees, not otherwise indicated to be removed, against unnecessary cutting, or breaking, skinning, and bruising of bark. Avoid smothering of trees with stockpile building materials or excavated materials within drip line.

3.05 DISPOSAL

A. All debris resulting from demolition and removals shall become the property of the Contractor to dispose of or salvage. Debris shall not be allowed to accumulate on site unless the District specifies a site location and security requirement. The Contractor shall be responsible for its prompt removal from the site and disposal in a legal manner.

B. Prevent debris from migrating outside of construction areas.

C. Maintain safe pedestrian access, at all times, on all walkways adjacent to the fence removals.

END OF SECTION 02 41 10

SECTION 32 84 23
IRRIGATION SYSTEM

PART 1 GENERAL

1.01 SECTION INCLUDES

This section includes requirements for the installation of the Irrigation System.

1.02 RELATED SECTIONS

32 93 30 – Sod Lawn Planting
32 93 33 – Shrub Planting

1.03 REQUIREMENTS OF REGULATORY AGENCIES

Secure all permits and licenses necessary for the work. Give all notices and comply with all laws, ordinances, rules and regulations concerning the installation of the sprinkler system as drawn and specified.

1.04 SITE CONDITIONS

A. Prior to beginning any work, the Contractor and the District Inspector shall participate in a thorough irrigation system review of the project site. All remote control valves shall be turned on and observed in operation by both the Contractor and PVSD Representative. Any existing defects will be listed in detail identifying the specific valve station number and describing the exact broken or non-functioning irrigation component noted during the site review. At the conclusion of the irrigation review, the Contractor shall generate a summary of the items identified by both parties listing all remote control valves operated, identifying if the valve performed without any defects or specifically identifying any observed defects or non-functioning components, such as broken heads, clogged nozzles, non-operating valve solenoids, broken piping, or other noted defects. The completed summary of items noted shall be listed on a document called 'Existing Irrigation System Observations'. This document shall be signed by the Contractor and submitted to the PVSD Representative for a confirming signature. The mutually signed 'Existing Irrigation System Observations' document shall be sent to the attention of the Landscape Architect for inspection purposes at the conclusion of the construction work. If requested by the PVSD Representative, the Contractor shall provide a list of the existing defective irrigation components noted with a detailed written proposal to repair each item identified on the list. A copy of this proposal will be sent to the Landscape Architect. This additional work proposal must be reviewed and approved in writing by the PVSD and formally presented to the General Contractor before the Landscape Subcontractor can begin any additional repair work. The mutually signed 'Existing Irrigation System Observation' document shall be used as a guide to identify any collateral damage caused to the existing irrigation system as a result of new construction performed on site by the Contractors. Any damage caused to the existing irrigation system not specifically identified on the 'Existing Irrigation System Observation' document shall be repaired or replaced at the Contractor's expense. In the event that the

Contractor does not participate or perform the existing irrigation site review, any existing irrigation equipment or components damaged on the project site noted by the Landscape Architect during the final irrigation system review shall be repaired or replaced by the Contractor at their expense to the satisfaction of PVSD.

B. Do not willfully install the sprinkler system as indicated on the drawing when it is obvious in the field that unknown obstructions or grade differences exist that might not have been considered in the engineering. Such obstructions or differences should be brought to the attention of the District Inspector.

C. Before excavating for sprinkler lines, locate all underground utility lines so that the proper precautions may be taken to avoid damage to such utilities. In the event of a conflict between underground lines, promptly notify the District who will arrange for the relocation of one or the other. Failure to follow this procedure places the responsibility upon the Contractor for making any and all repairs for damage of any kind at his own expense.

D. Provide necessary safeguards and exercise caution against injury or defacement of any existing site improvements. Contractor shall be responsible for any damage resulting from his operations and shall repair or replace such damage at his own expenses. No trucks or vehicles of any kind shall be allowed to pass over sidewalks, curbs, etc., unless adequate protection is provided.

E. Existing Trees
   1. Exercise all possible care and precautions to avoid injury to tree roots, trunks and branches. All excavating within drip line of trees shall be done very carefully and by hand pick and shovel if it appears that large roots are within trenching zones.
   2. Alter alignment of pipe to avoid large tree roots, 2-inch and larger in diameter.
   3. Wrap exposed and bridging tree roots with several layers of burlap and keep moist. Close all trenches within drip lines, within 24 hours.
   4. All severed roots 1-inch and larger shall be hand pruned with sharp tools and painted with acceptable horticultural seal.

1.05 MATERIAL LIST

Submit to the District for acceptance, five (5) copies of all materials and equipment, including Manufacturer's names and catalog numbers, to be furnished and installed under this contract within 10 days after the award of the contract.

1.06 RECORD DRAWINGS

A. Provide and record daily a complete record set of prints on bond which shall be corrected to show changes from the original drawings and specifications and the exact installed locations, sizes and kinds of equipment. Prints for this purpose may be obtained from the District. Keep this set of drawings on the site and use only as a record set.

B. Use these drawings as work progress sheets. Make neat and legible annotations thereon as the work proceeds, showing the work as actually installed. Keep these drawings available at all times for inspection and in a location designated by the District.

C. Before the date of the final inspection, transfer all information from the record prints to a clean set of prints procured from the District. Make work neat, in ink and subject to review and acceptance of the District. District will scan final drawings into a permanent electronic record document.

D. Dimension from two permanent points of reference such as building corners, sidewalks or road intersections, the location of:
   1. Connection to existing water lines.
   2. Connection to existing electrical power.
   3. Gate valves.
   4. Routing of sprinkler pressure lines and control wiring.
   5. Electric control valves.
   6. Quick coupling valves.
   7. Other related equipment as directed by District.

1.07 TESTS AND SITE OBSERVATIONS

A. All tests shall be made in the presence of the District; at least forty-eight (48) hours' notice shall be given for tests.

B. Record drawings must be current and shall be verified by the District at the time of all observations.

C. Site observations for all items pertaining to the work of this Section shall be performed by the District.

D. Specific site observations for valve assemblies, sprinkler coverage, control wires and splices and any other observations deemed necessary by the District shall be performed by the District.

E. An open trench main line check for pipe quality and depths shall be performed by the District.

F. Head Layout - using flag marker layout all new drip emitters, tree flood bubblers, spray heads and turf rotors in field prior to trenching. Review head layout with District and Landscape Architect and perform adjustments in field as directed prior to installing irrigation.

G. Center load pipe with small amount of backfill to prevent arching and whipping under pressure. Leave joints exposed for observation during pressure test. No water shall be permitted in the pipe until the above has been accomplished and a period of at least 24 hours has elapsed for solvent weld setting and curing.

   Main lines to be tested up to valve at 125 pounds pressure and there shall be no leaks. Furnish force pump and pressure gauge. Lateral lines of system to be

tested at line pressure with risers capped. Tests to be for 2 hour period and verified by the District.

H. Backfill quality and compaction of trenches shall be verified by the District. Do not backfill trenches until all tests have been completed and accepted.

I. Perform a coverage test in the presence of the District to determine if the water coverage for planting areas is complete and adequate. Furnish materials and perform all work required to correct any inadequacies of coverage due to deviations from drawings, or where the system has been willfully installed as indicated on the drawings when it is obviously inadequate, without bringing this to the attention of the District.

J. The coverage test shall be completed, and the irrigation system modified if necessary and accepted, prior to the start of the planting operations.

K. The entire system shall be checked out thoroughly and completely by the Contractor, five (5) days prior to the final observation. All heads shall be properly aligned and adjusted for coverage and cleared of any foreign materials. All valves shall be properly adjusted. Sprinkler controller valve chart shall be checked for accuracy.

L. At the end of the Maintenance Period, a final observation shall be made by the Contractor and District to check out the entire system.

M. Final inspection prior to acceptance:
   1. Operate each system in its entirety for the District at time of final inspection. Rework any items deemed not acceptable to the District.
   2. Deliver to the District all accessories, charts, record drawings, and equipment as required before final inspection.

1.08 GUARANTEE

A. The entire sprinkler system shall be guaranteed for a period of one (1) year from date of final acceptance.

B. Should any portion of the irrigation system malfunction due to poor workmanship or defective materials, corrections shall be promptly made by the Contractor at his own expense.

C. Any damage to paving, planting areas, or other developments due to the settlements of improperly compacted trench soil, shall also be promptly repaired at the Contractor's expense, to the satisfaction of the District.

PART 2 PRODUCTS

2.01 GENERAL

A. Irrigation materials shall be in accordance with Subsection 212-2 in the SSPWC “Greenbook” and as specified herein.

B. The irrigation products specified on the drawings in these specifications are selected to match existing products in use. Substitutions are permitted only when product name is followed by or equal.

C. Use only new materials of brands and types as noted on the drawings and as specified.

2.02 MATERIALS

A. PVC primer and solvents - as recommended by Manufacturer. Pacific Plastics, Lasco, or JW Eagle.

B. Main Line Fittings - Schedule 80, PVC Type 1, Grade 1, Cell Classification 12454-B, side gated, Lasco Spears, or approved equal.

C. Lateral non-pressure line fittings - Schedule 40, PVC Type 1, Grade 1, Cell Classification 12454-B, side gated, Lasco or approved equal.

D. Nipples and Risers - PVC Schedule 80.

E. Pipe, Main Line shall be PVC Schedule 40 for all sizes, solvent weld pipe in conformance with ASTM D-1785, D-1784.

F. Pipe, Lateral Non-Pressure Lines shall be PVC Schedule 40 for all sizes, solvent weld pipe in conformance with ASTM D-1785, D-1784.

G. Thread Sealant shall be smooth, non-hardening sealant, compatible with the pipe materials specified. Do not use Teflon tape.

PART 3 EXECUTION

3.01 GENERAL

Irrigation materials shall be in accordance with Subsection 308-5 in the SSPWC "Greenbook" and as specified herein.

3.02 WORKMANSHIP AND INSTALLATION

A. Layout and Adjustments
   1. The drawings are diagrammatic to the extent that many offsets, special fittings and exact locations of the equipment are not shown. The locations of all valves, heads, lines, etc., shall be installed, however, as accurately as possible to the locations that are indicated on the drawings.
   2. The locations of main lines are indicated as bordering walks, curbs and fences shall be placed as close as possible. Locate lines within planting areas wherever possible.

3. All indicated locations of heads and equipment are placed with careful consideration to overlap, protection of the premises, lights, proposed tree locations and general layout. Coordinate installation of sprinkler irrigation materials, including pipe, so there is no interference with utilities, other construction, or difficulty in planting trees and shrubs. Layout sprinkler heads and make any minor adjustments required due to differences between site and drawings. Adjustments shall be accomplished, maintaining proper sprinkler head coverage and overlap of sprinkler throws.

B. Connections
1. All connections shall be made into existing lines as indicated on the drawings.
2. Field verify existing line types in the field.

C. Cutting and Patching
1. When piping crosses concrete paving and asphalt paving, sawcutting is required. Cut AC paving and/or concrete with concrete sawcutting tools straight and in those locations approved by the District.
2. Remove concrete and/or AC, base and soil to the required depth for mainlines.
3. Concrete walks shall be backfilled entirely with compacted sand. Compact to 95% and patched with new concrete.
4. AC paving shall be backfilled entirely with a 1-sac sand slurry mix. Compact to 95% and patch with new AC paving.
5. Concrete paving shall be received medium broom finish.
6. Remove from site any excavated soil.

D. Trenching and Backfilling
1. Trench and excavate as necessary to install the system. Excavated material shall be neatly arranged so as to cause a minimum of inconvenience to pedestrian and vehicular traffic. No soil shall be placed on concrete paving without an adequate moisture proof membrane to protect paving.
2. Trenches for all pipe shall be open vertical construction with firm level bottom and sufficiently wide to provide free working space around the work installed and to provide ample space for backfilling and tamping.
3. Depth of trenches shall be sufficient to provide a minimum cover above the top of the pipe as follows:
   a) Mains and control wires: 24-inches minimum cover.
   b) PVC laterals: 12-inches minimum cover.
4. When two (2) pipes are to be placed in the same trench, provide a minimum of 6-inch horizontal clearance. Place pipe side by side; do not install one pipe on top of another.
5. After the installation is complete and the required tests and inspections have been made and approved, the excavations and trenches shall be backfilled with clean soil, free of rubbish, rocks, and pebbles larger than one-half inch.

E. Plastic Pipe

1. Do not install multiple assemblies on plastic lines. Provide each assembly with its own outlet.
2. Install assemblies specified herein in accordance with respective detail. In absence of detail drawings or specifications pertaining to specific items required to complete work, perform such work in accordance with best standard practice.
3. Clean PVC pipe and fittings before installation. For solvent weld pipe use installation and solvent welding methods as recommended by the pipe and fitting manufacturer. For gasketed pipe installation follow detailed assembly instructions furnished by the manufacturer.
4. On PVC to metal connections, work the metal connections first. Use non-hardening sealant on all threaded joints. Screw hand tight and ½ turn by wrench. Where threaded PVC connections are required, use threaded PVC adapters into which the pipe may be welded.
5. Pipe shall have a firm, uniform bearing, for the entire length of each pipe line, to prevent uneven settlement. Pipe shall be snaked from side to side of trench bottom to allow for expansion and contraction. One additional foot per 100 foot of pipe is the minimum allowance for snaking. Never lay PVC pipe when there is water in the trench or when the temperature is 32° F or below.
6. Use 45° fittings at all changes in depth of pipe. Coupling to be of same materials and wall thickness as pipe.

F. Sprinkler Controller

1. Perform all wire connections within existing auto controller enclosure as per plans and manufacturer's specifications.
2. Electrical wiring and work shall conform to the codes and ordinances of all governmental agencies having jurisdiction. Exposed conduits and fittings shall be of one type and finish. Running threads shall not be used.

G. Sprinkler Heads

1. Prior to installing heads, flush laterals and risers with full line pressure. Repeat whenever system is opened up for repairs or replacements. Start flushing operation at the highest point of delivery and work to the lowest.
2. Align all part circle heads so that no spray shall hit building walls or concrete paving.
3. Adjust all spray nozzles so that there will be no amount of overspray, and so that the entire set will be as evenly balanced as possible.
4. Install with each lawn area sprinkler head, a "Triple Swing" joint with Schedule 80 PVC nipples and threaded elbows as per plans.

3.03 FIELD QUALITY CONTROL

A. Adjustment to System

1. Flush and adjust all sprinkler heads for optimum performance and to prevent overspray onto walk, roadways, and buildings wherever possible.
2. Select the best degree of arc to fit existing site conditions.
3. Set all sprinkler heads perpendicular to finished grades unless other designated on the drawings.

3.04 TESTING AND INSPECTION

A. Do not allow or cause any work of this section to be covered up or enclosed until it has been inspected, tested, and approved by the District. Before backfilling the main line, and with all control valves in place, but before lateral pipes are connected, completely flush and test the mainline, and repair all leaks. Flush out each section of lateral pipe before emitters are attached.

B. Make all necessary provisions for thoroughly bleeding the line of air and debris. Before testing, fill the line with water for a period of at least 24 hours.

3.05 FINAL INSPECTION

Thoroughly clean, adjust and balance all systems. Demonstrate the entire system to the District proving that all remote-control valves are properly balanced, that all emitters are properly flowing and that the entire system is installed and is workable, clean, and efficient.

END OF SECTION 32 84 23

SECTION 32 93 30
SOD LAWN PLANTING

PART 1 GENERAL

1.01 SECTION INCLUDES

This section includes requirements for the installation of the plant material.

1.02 SUBMITTALS

Furnish material invoices indicating the quantities of fertilizers, soil amendments, and all materials delivered to the job site. Material invoices must be approved by the Landscape Architect prior to incorporating soil amendments. Certificates shall be prepared by the supplier or distributor and shall indicate the quantities and qualities of materials used.

1.03 PROTECTION

A. Contractor shall check or locate existing structures, electric cables or conduits, utility lines and other existing features or conditions above or below ground level that might be damaged as a result of the operation. Questions or conflicts arising out of such examination prior to or during operation shall be immediately directed to the attention of the District for necessary action or decisions before resuming operation. Contractor shall be responsible for repair or replacement at no cost to the District for features or conditions damaged through failure to comply with the above procedures.

B. Protect existing trees and tree roots from any damage that may be caused as a result of any planting or irrigation operations.

1.04 ALTERNATES

Alternates will not be permitted, except where indicated, and as approved by the Landscape Architect.

1.05 LANDSCAPE ON-SITE OBSERVATIONS

A. The Contractor shall notify the district and the Landscape Architect forty-eight (48) hours in advance for all required On-Site Observations. The final On-Site Observation shall require seven (7) days advance notice.

B. The Contractor shall submit for approval a complete work schedule indicating tentative dates for On-Site Observations.

C. Record drawings shall be current and present at the time of On-Site Observations and shall be updated on a weekly basis.

D. Landscape On-Site Observations shall be required for the following phases of Work:

1. Job start meeting.
2. Finish grading – when all fine grading work is complete, notify the Landscape Architect or District for approval prior to proceeding with the planting.
3. Soil Preparation – furnish certificates for soil amendments at this time. Quantities must be reviewed by the Landscape Architect or District prior to incorporating into soil. When all soil preparation work is complete notify the Landscape Architect or District for approval prior to proceeding with the work.
4. Irrigation System Review – see Irrigation Section.
5. Review planting during the planting process.
6. Review planting after installation for District approval.
7. Maintenance – there is no maintenance period required for this project.

PART 2 PRODUCTS

2.01 MATERIALS – LANDSCAPE

A. Soil Amendments: Organic soil amendment shall be Agromin "Agromend," or equal.

B. Backfill Material shall be:
1. 1/3 organic soil amendment
2. 2/3 existing site soil.
3. Commercial Fertilizer (15-15-15), 1 lb./cu. yd.
4. Iron, Zinc, Manganese, 1 oz. /cu. yd.

C. Soil preparation materials for sod lawn planting areas shall per 1,000 square feet:
1. Three cubic yards of organic soil amendment
2. Commercial Fertilizer (15-15-15), eight pounds

D. Lawn shall be sod, Marathon II as grown by Southland Sod Farms.

PART 3 EXECUTION

3.01 SITE CONDITION

No plant materials shall be planted until all operations in conjunction with the installation of the irrigation system have been approved by the District and the Landscape Architect. Final grades shall be established, and the planting areas shall be properly prepared and graded.

3.02 LAWN AREAS – NEW SOD

A. The existing lawn area shall be scrapped off and removed leaving only subgrade. This subgrade shall be graded for positive drainage to the existing drain grades. After the grading is approved by the District Inspector soil preparation materials shall be thoroughly and evenly incorporated into the top six inches of the soil then the entire area shall be fine graded to receive the new sod lawn.

B. Stones or rocks over 1” in size, construction refuse, and other deleterious material shall be removed from the site, safely and legally disposed of.

C. After soil prep and fine grading is complete roll lawn areas with a water ballast roller to create even surface. Soil should be moist to a depth of six inches.

D. To lay sod, select a starting point parallel to the longest straight boundary of the area. Stagger the strips and avoid overlapping edges. Avoid cutting the sod in short narrow strips. Butt edges and ends of sod so that they fit tightly, with no overlapping. Avoid standing or kneeling on sod while it is being laid. After sod is installed, roll lightly to squeeze out air pockets.

E. Follow all recommended sod planting procedures provided by sod grower, Southland Farms.

END OF SECTION 32 93 30

SECTION 32 93 33
SHRUB PLANTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This section includes general requirements for the installation of the shrub planting and the espalier plants.

B. The District shall purchase and deliver to the site forty-eight (48) 5-gallon shrubs. The Contractor shall layout the shrubs in their location and when approved by the District, shall install the shrub planting.

1.02 RELATED SECTIONS

Section 32 84 23 – Irrigation Systems
Section 32 93 30 – Sod Lawn Planting

1.03 SUBMITTALS

Furnish material invoices indicating the quantities of fertilizers, soil amendments, mulch, and all materials required to complete the Work. Material invoices must be approved by the Landscape Architect prior to incorporating soil amendments. Certificates shall be prepared by the supplier or distributor and shall indicate the quantities and qualities of materials used.

1.04 PROTECTION

Contractor shall check or locate existing structures, electric cables or conduits, utility lines and other existing features or conditions above or below ground level that might be damaged as a result of the operation. Questions or conflicts arising out of such examination prior to or during operation shall be immediately directed to the attention of the District for necessary action or decisions before resuming operation. Contractor shall be responsible for repair or replacement at no cost to the District for features or conditions damaged through failure to comply with the above procedures.

1.05 ALTERNATES

Alternates will not be permitted, except where indicated, and as approved by the Landscape Architect.

PART 2 PRODUCTS

2.01 MATERIALS – LANDSCAPE

A. 5-gallon shrubs shall be purchased and delivered to site by PVSD for Contractor to position and plant.

B. Soil amendments: organic soil amendment shall be Agromin "Agromend," or equal.

C. Backfill material shall be:
   1. $^{1}/_{3}$ organic soil amendment
   2. $^{2}/_{3}$ existing site soil.
   3. Commercial Fertilizer (15-15-15), 1 lb./cu. yd.
   4. Iron, Zinc, Manganese, 1 oz. /cu. yd.

D. Soil preparation materials per 1,000 square feet:
   1. Three cubic yards of organic soil amendment
   2. Commercial Fertilizer (15-15-15), eight pounds

E. Mulch shall be Agromin ES-2 mulch or equal.

F. Pre-Emergent herbicide – product 'Dimension'.

PART 3 EXECUTION

3.01 SITE CONDITION

No plant materials shall be planted until all operations in conjunction with the installation of the irrigation system have been approved by the District and the Landscape Architect. Final grades shall be established, and the planting areas shall be properly prepared and graded.

3.02 GROUND PREPARATION – ALL AREAS

A. After the site clearance and preparation has been approved by the District, planted areas shall be thoroughly cultivated to a depth of six inches to reduce any compaction caused by the Work. Protect existing tree roots.

B. Stones or rocks over 1" in size, construction refuse, and other deleterious material shall be removed from the site, safely and legally.

C. Apply soil preparation materials to all planting areas and thoroughly incorporate into the top six inches of soil.

D. Wet soil thoroughly and allow to settle. Repeat this compaction procedure until soil is stable enough to permit aeration and drainage for plant material.

E. Finish grade all planting areas to a smooth, uniform surface ready for planting. Finish grade shall be one inch below finish grade of adjacent paved surfaces unless otherwise noted on Drawings.

3.03 PLANTING – SHRUBS

A. Shrub planting shall comply with details on drawings.

B. Make necessary adjustments and excavate pits of square outline and vertical sides for all plants. Scarify sides and bottoms of all plant pits. Set trees vertical.

C. At all times, protect roots and root ball of plants from drying.

D. If directed by the Landscape Architect, the Contractor shall prune plants in accordance with standard horticultural practice.

3.04 PRE-EMERGENT HERBICIDE

Broadcast pre-emergent herbicide product 'Dimension' over surface of exposed soil in shrub planters at rate per Manufacturer's specifications. Herbicide shall be applied prior to wood mulch installation.

3.05 MULCH

Install three-inch layer of mulch throughout shrub areas without groundcover. Finish grade shrub areas to a smooth uniform surface to receive mulch. Keep mulch away from tree and shrub crown. Dress mulch areas to present a clean uniform appearance when complete.

END OF SECTION 32 93 33

SECTION 32 93 43
TREE PLANTING

PART 1 GENERAL

1.01 SECTION INCLUDES

This section includes general requirements for the installation of trees.

1.02 SUBMITTALS

A. Furnish material invoices indicating the quantities of fertilizers, soil amendments, and all materials delivered to the jobsite. Material invoices must be approved by the Landscape Architect prior to incorporating soil amendments. Certificates shall be prepared by the supplier or distributor and shall indicate the quantities and qualities of materials used.

B. Plant Material – submit clear photos of all plant material specified taken and the source. Indicate plant material height and spread measured at the source. Photos must clearly show the plant quality and size. The Landscape Architect will determine if the photos meet the specifications and if further site inspection at the nursery is required or if another source is required to produce the specified plant material.

1.03 PROTECTION

A. Contractor shall check or locate existing structures, electric cables or conduits, utility lines and other existing features or conditions above or below ground level that might be damaged because of the operation. Questions or conflicts arising out of such examination prior to or during operation shall be immediately directed to the attention of the District for necessary action or decisions before resuming operation. Contractor shall be responsible for repair or replacement at no cost to the District for features or conditions damaged through failure to comply with the above procedures.

B. Protect existing trees and tree roots from any damage that may be caused by the Work.

1.04 QUALITY

All trees shall have a growth habit normal to the species and shall be sound, healthy, vigorous, and free from insect pests, plant diseases, sun scalds, fresh bark abrasions, excessive abrasions, or other objectionable disfigurements. Tree trunks shall be sturdy and well “hardened off.” All trees shall have normal well-developed branch systems, and vigorous and fibrous roots systems which are neither root bound, nor pot bound and are free of kinked or girdling roots.

1.05 ALTERNATES

Alternates will not be permitted, except where indicated, and as approved by the Landscape Architect.

1.06 GUARANTEE

All trees shall be guaranteed for one year. This guarantee is in addition to, and not a limitation other rights the District may have under the Contract Document.

PART 2 PRODUCTS

2.01 MATERIALS – LANDSCAPE

A. Trees: varieties, sizes, and quantities, as noted on plans.

B. Tree Stakes: tree stakes shall be 2" diameter Lodgepole Pine, pressure treated with Chemonite (ACZA) @ 0.40 pounds per cubic foot, for in-ground rating. Stakes shall be 10 feet long. Horizontal supports shall be 1 x 6 cedar.

C. Tree Ties: tree ties shall be virgin flexible vinyl, meeting ASTM D-412, with U.V. inhibitor. 24" inches long. (Cinch Ties of eq.)

D. Root barrier shall be high density polyethylene flat panels, 24 inches long by 18 inches deep, thickness 0.085 inch with vertical ribs at six inches on center with formed connectors that connect panels to the specified total required length.

E. Soil Amendments: organic soil amendment shall be Agromin "Agromend," or equal.

F. Backfill Material shall be:
   1. 1/3 organic soil amendment
   2. 2/3 existing site soil.
   3. Commercial Fertilizer (15-15-15), 1 lb./cu. yd.
   4. Iron, Zinc, Manganese, 1 oz. /cu. yd.

PART 3 EXECUTION

3.01 SITE CONDITION

No trees shall be planted until all operations in conjunction with the installation of the irrigation system have been approved by the District and the Landscape Architect. Final grades shall be established, and the planting areas shall be properly prepared and graded.

3.02 TREE PLANTING PITS

A. Excavate tree planting pits 12 inches wider than the tree box size on all sides and excavate to a depth that allows the tree crown (finish grade at the top of the box) to set two inches above the adjacent finish grades. Scarify the sides of the tree pit.

B. Thoroughly blend the backfill mix and apply water while backfilling. Tree root ball, plant pit and backfill material must be moist for the duration of installation. After tree is set plumb and staked, build temporary berm and fill basin with water. At all times, do not allow the tree root ball to dry out.

C. Stake tree as per details and, if necessary, trim top of tree stakes so no scaffold branches can rub against the tree stakes. Stakes and ties shall be set so that the tree is supported without leaning. Remove nursery stakes on trees immediately after the tree is staked.

3.03 TREE PRUNING

If directed by the Landscape Architect, remove specific branches or prune adhering to the ANSI A300 pruning standards.

END OF SECTION 32 93 43

SECTION 32 94 60
LANDSCAPE MAINTENANCE

PART 1 GENERAL

1.01 MAINTENANCE PERIOD

There is no extended landscape maintenance period with this project. Once the PVSD Inspectors have accepted the irrigation and planting work as complete, the Contractor shall be released from the landscape scope of work.

END OF SECTION 32 94 60