LOS BANOS, CA

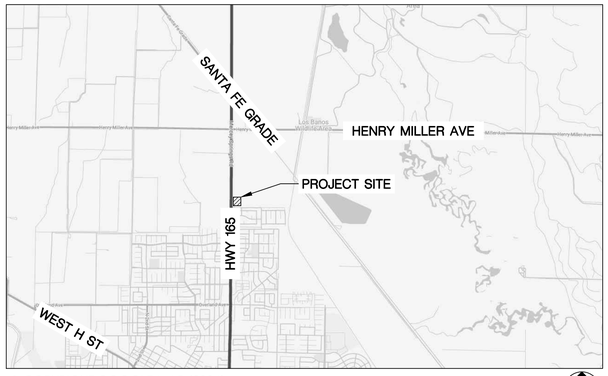
AG SPORTS COMPLEX PICKLEBALL COURTS

700 MERCEY SPRINGS RD, LOS BANOS, CA 93635

BID SUBMITTAL

SEPTEMBER 20, 2024

VICINITY MAP



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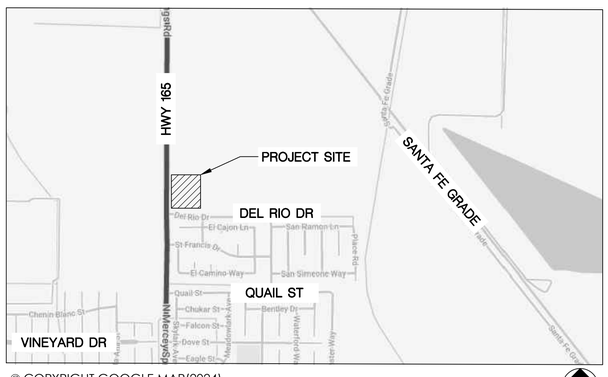
N.T.S. NORTH

LOCATION MAP



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GENERAL NOTES

1. COMPOSITE BASE SHEET: THE PROPOSED IMPROVEMENTS SHOWN ON THESE DRAWINGS ARE SUPERIMPOSED ON A BASE SHEET. THIS BASE SHEET IS COMPILED FROM THE TOPOGRAPHIC SURVEY, OTHER ARCHITECTURAL AND/OR ENGINEERING DOCUMENTS, AND OTHER DATA AS MADE AVAILABLE TO THE LANDSCAPE ARCHITECT. THIS BASE SHEET INFORMATION IS SHOWN IN HALF TONE ON THE PLANS. THE LANDSCAPE ARCHITECT SHALL NOT BE HELD LIABLE FOR CHANGES, INACCURACIES, OMISSIONS, OR OTHER ERRORS ON THESE DOCUMENTS. THE COMPOSITE BASE SHEET IS PROVIDED AS AN AID ONLY AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REVIEWING THESE DOCUMENTS AND INCORPORATING/INTEGRATING ALL CONSTRUCTION AS REQUIRED TO ACCOMMODATE SAME.

THE BASE SHEET SOURCE FOR THESE DRAWINGS IS:

TOPOGRAPHIC SURVEY, AG SPORTS COMPLEX/ PICKLEBALL COURTS, SHEET 1 OF 1, PROJECT# 240029, PREPARED BY BKF ENGINEERS, DATED 3/25/2024, (925) 396-7700

LOS BANOS DOG PARK, SHEET 1 THRU 5, PROJECT# 190388, PREPARED BY QUAD KNOPF, INC, (209) 723-2066

2. UTILITIES: PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND REQUESTING A VISUAL VERIFICATION OF THE LOCATIONS OF THEIR UNDERGROUND FACILITIES. THE UTILITY COMPANIES ARE MEMBERS OF THE UNDERGROUND SERVICE ALERT (U.S.A.) ON-CALL PROGRAM. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT SHALL NOTIFY MEMBERS OF THE U.S.A. 48 HOURS IN ADVANCE OF PERFORMING EXCAVATION WORK BY CALLING THE TOLL-FREE NUMBER 811. EXCAVATION IS DEFINED AS BEING 18 OR MORE INCHES IN DEPTH BELOW THE EXISTING SURFACE.

THE CONTRACTOR IS CAUTIONED THAT ONLY EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATION, AND DEPTHS OF SUCH UNDERGROUND UTILITIES. HOWEVER, THE LANDSCAPE ARCHITECT CAN ASSUME NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF ITS DELINEATION OF SUCH UNDERGROUND UTILITIES, NOR FOR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH ARE NOT SHOWN ON THESE DRAWINGS.

3. TREE PROTECTION AND MAINTENANCE REQUIREMENTS: ALL TRENCHING WITHIN THE DRIPLINE OF EXISTING TREES TO REMAIN SHALL BE BY HAND, WITH CARE TAKEN NOT TO CUT OR DAMAGE ROOTS OVER 1-INCH DIAMETER. TREES TO REMAIN SHALL BE FENCED WITH TEMPORARY FENCING, PER DETAIL 1/L12.0.

DEFERRED SUBMITTALS

THE FOLLOWING ITEMS ARE DEFERRED SUBMITTALS. CONTRACTOR SHALL PREPARE STAMPED AND SIGNED STRUCTURAL DRAWINGS AND CALCULATIONS REQUIRED FOR CITY BUILDING DEPARTMENT REVIEW AND PERMIT ISSUANCE FOR:

1. BID ALTERNATE #1: SHADE STRUCTURE, TYPE 1
2. BID ALTERNATE #2: SHADE STRUCTURE, TYPE 2
3. BID ALTERNATE #3: SHADE STRUCTURE, TYPE 3
4. BID ALTERNATE #4: SHADE STRUCTURE, TYPE 4

BID ALTERNATES

1. BID ALTERNATE #1: SHADE STRUCTURE, TYPE 1
2. BID ALTERNATE #2: SHADE STRUCTURE, TYPE 2
3. BID ALTERNATE #3: SHADE STRUCTURE, TYPE 3
4. BID ALTERNATE #4: SHADE STRUCTURE, TYPE 4
5. BID ALTERNATE #5: SITE ELECTRICAL: POLE LIGHTS, PUSH-BUTTONS, PANEL, CABINET, WIRING, AND CABLES

PROJECT DIRECTORY

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Joe Heim
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SHEET INDEX

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7	L5.0	GRADING AND DRAINAGE PLAN
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28	E602	LIGHTING CONTROL DIAGRAM
29	E701	ELECTRICAL SPECIFICATIONS
30	C1.0	STORMWATER CONTROL PLAN

USE OF DOCUMENTS

A. User acknowledges Callander Associates Landscape Architecture, Inc.'s (Callander Associates) construction documents, including electronic files, reports, plans, specifications, or other construction documents prepared by Callander Associates as instruments of professional service and that these instruments are intended only for use on this project, and not any future phases or for other uses. The User shall not reuse or make any modification to the construction documents without the prior written authorization of Callander Associates. In the event the User, the User's contractors or subcontractors, or anyone for whom the User is legally liable, makes or permits to be made any changes to the construction documents without obtaining Callander Associates' prior written consent, the User shall assume full responsibility for the results of such changes.

B. The User agrees, to indemnify and hold harmless Callander Associates, its officers, directors, employees and subconsultants (collectively Callander Associates) against any damages, liabilities or costs, including reasonable attorneys' fees and defense costs, arising from or allegedly arising from or in any way connected with the unauthorized reuse or modification of the construction documents by the User, or any person or entity that acquires or obtains the construction documents from or through the User, without the written authorization of Callander Associates.

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REVISION	DATE

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DAVID C. RUBIN No. 3584
Signature
May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX
PICKLEBALL COURTS
LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE
COVER SHEET

SERIES #
L0.0

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EROSION CONTROL LEGEND

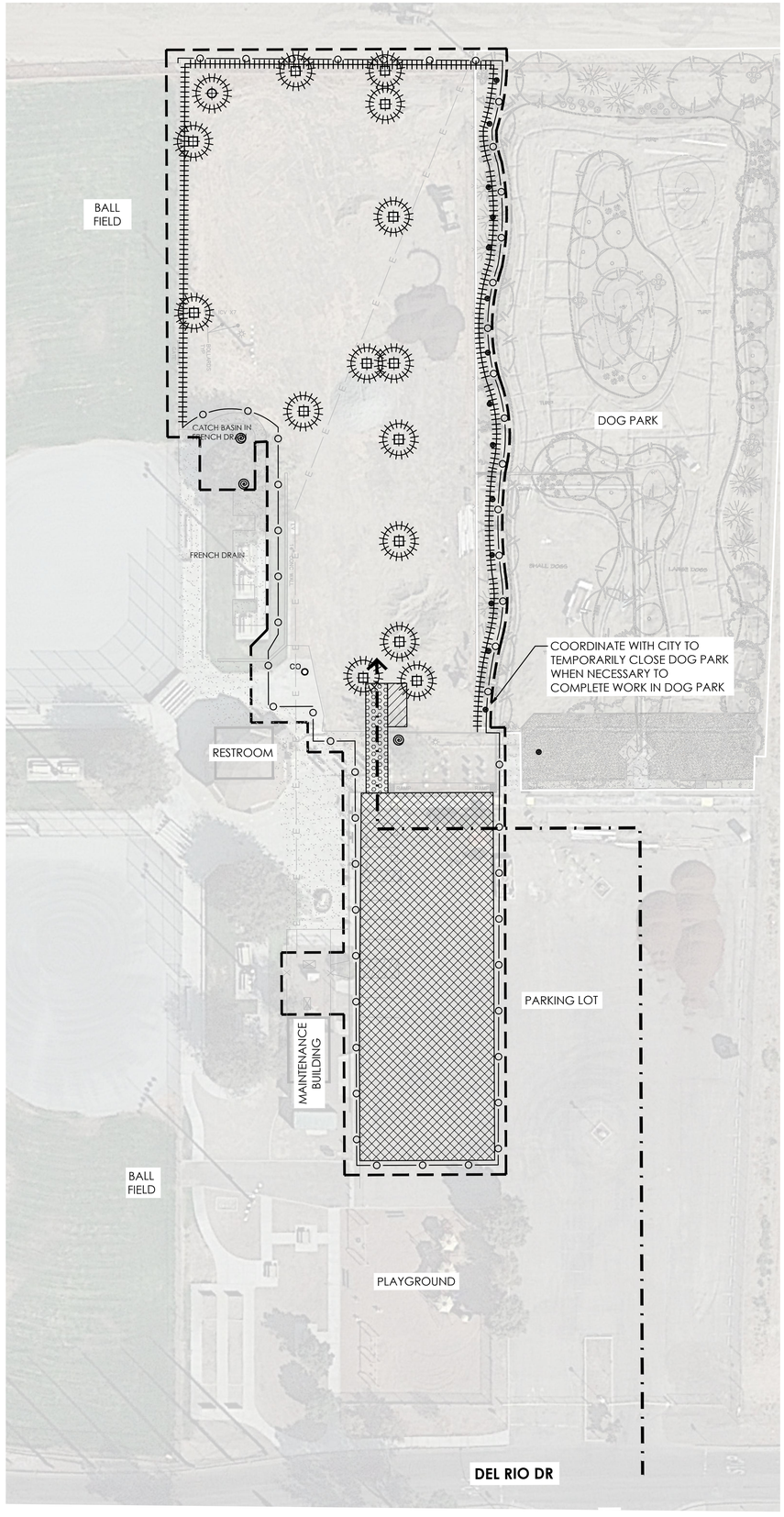
- STABILIZED CONSTRUCTION ENTRANCE (1 / L1.1)
- CONSTRUCTION STAGING AREA
- WASHDOWN AREA
- FIBER ROLL (3 / L1.1)
- DRAIN INLET PROTECTION (2 / L1.1)
- CATCH BASIN
- BUBBLE UP
- CLEAN OUT

(CATCH BASIN, BUBBLE UP, CLEAN OUT — SEE GRADING AND DRAINAGE PLAN)

- TEMPORARY CONSTRUCTION FENCE
- CONTRACTOR SITE ACCESS
- LIMIT OF WORK

EROSION CONTROL NOTES

1. RAIN EVENT: CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM. ALL EXPOSED PORTIONS OF THE SITE MUST BE PROTECTED WITHIN 48 HOURS PRIOR TO ANY LIKELY PRECIPITATION EVENT. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR CONSTRUCTION.
2. EROSION AND SEDIMENT CONTROL: ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE CITY.
3. FIELD CHANGES: THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE CITY.
4. MAINTENANCE MEASURES: ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED WEEKLY AND BEFORE AND AFTER ALL STORM EVENTS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
5. STABILIZED CONSTRUCTION ENTRANCE: THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE.
6. ROAD AND TIRE CLEANING: ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AT THE END OF EACH WORKING DAY. ALL TRUCK TIRES SHALL BE CLEANED PROPERLY BEFORE LEAVING THE SITE.
7. FIBER ROLL BARRIER: CONTRACTOR SHALL PLACE FIBER ROLL BARRIER AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE FIBER ROLL BARRIERS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
8. TRENCHES: AFTER UTILITY TRENCHES ARE BACKFILLED AND COMPACTED, THE SURFACES OVER SUCH TRENCHES SHALL BE MOUNDED SLIGHTLY TO PREVENT CHANNELING OF WATER IN THE TRENCH AREA. CARE SHOULD BE EXERCISED TO PROVIDE FOR CROSS-FLOW AT FREQUENT INTERVALS.
9. CONTRACTOR RESPONSIBILITY: THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED WITH ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURE MAINTENANCE THROUGHOUT THE DURATION OF THE PROJECT.
10. DAMAGED EROSION CONTROL DEVICES: DAMAGED EROSION CONTROL DEVICES SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AS SOON AS PRACTICAL AFTER THE DAMAGE OCCURS.
11. DAILY WATERING: DURING GRADING OPERATIONS THE SITE SHALL BE WATERED ON A DAILY BASIS TO MINIMIZE THE RELEASE OF DUST AND OTHER PARTICULATE MATTER.
12. SPECIFICATIONS: SEE ALSO EROSION CONTROL SPECIFICATIONS.



1" = 30'
0 30 60 feet
NORTH

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT — Edward C. Dhein — Signature — May 31, 2005 Renewal Date — Jan. 30, 2024 Date — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE
EROSION CONTROL PLAN

SERIES #
L1.0

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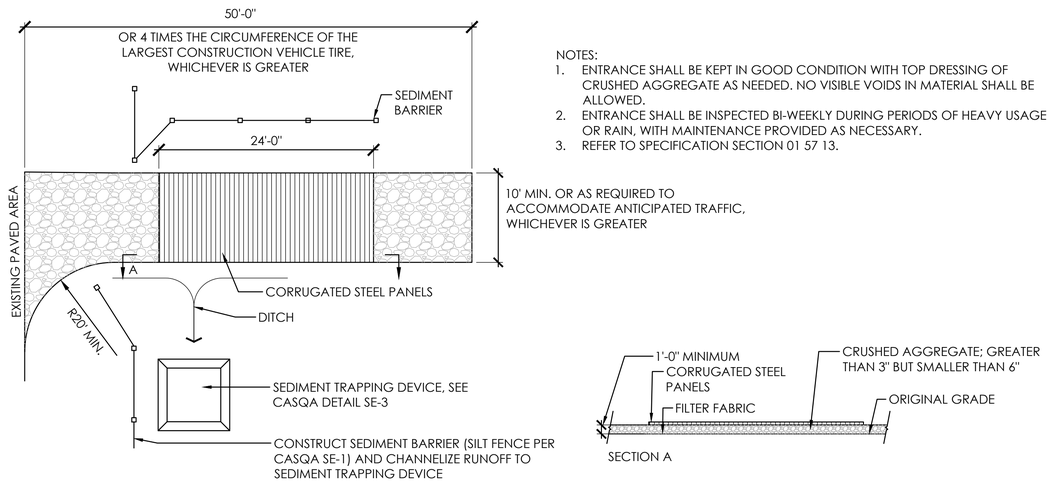

NOTES:
1. ENTRANCE SHALL BE KEPT IN GOOD CONDITION WITH TOP DRESSING OF CRUSHED AGGREGATE AS NEEDED. NO VISIBLE VOIDS IN MATERIAL SHALL BE ALLOWED.
2. ENTRANCE SHALL BE INSPECTED BI-WEEKLY DURING PERIODS OF HEAVY USAGE OR RAIN, WITH MAINTENANCE PROVIDED AS NECESSARY.
3. REFER TO SPECIFICATION SECTION 01 57 13.

1 L1.1 STABILIZED CONSTRUCTION ENTRANCE

1/8" = 1'-0"

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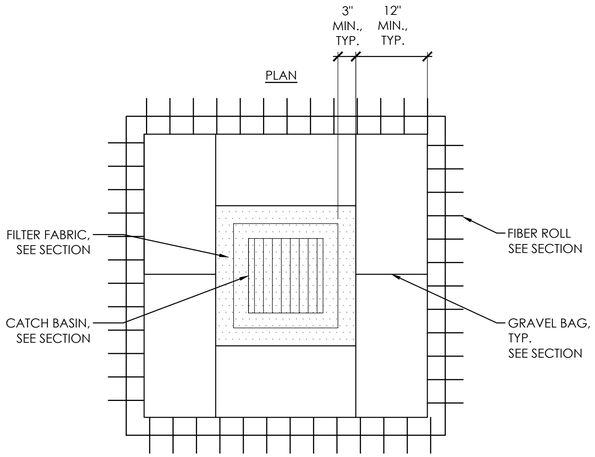

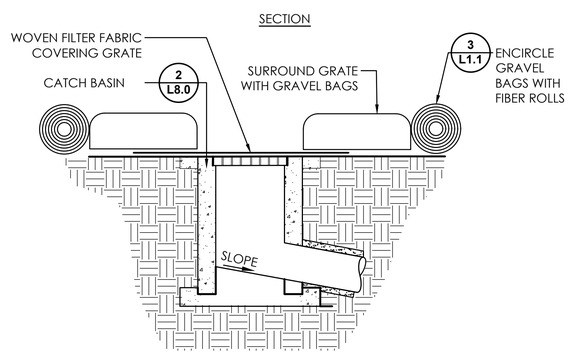

2 L1.1 DRAIN INLET PROTECTION

1/2" = 1'-0"

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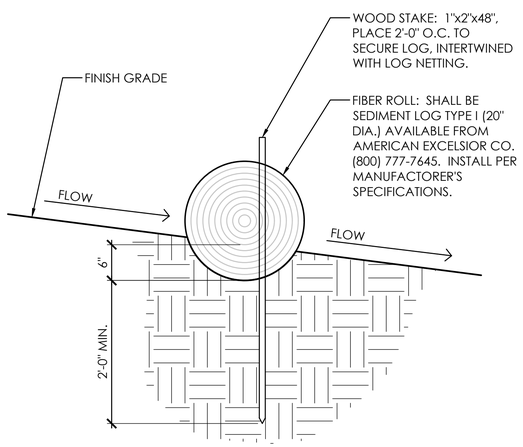

3 L1.1 FIBER ROLL

1" = 1'-0"

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
CHRISTOPHER M. RAU
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May 31, 2025
Renewal Date
Jun. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

EROSION CONTROL DETAILS

SERIES #

L1.1

DEMOLITION LEGEND

CLEAR AND GRUB	TREE PROTECTION FENCE (1 / L8.0)
REMOVE AND DISPOSE OF CONCRETE PAVING AND BASE. ASSUME 8 INCH DEPTH TOTAL.	REMOVE AND DISPOSE OF CHAIN LINK FENCE AND ASSOCIATED CONCRETE FOOTINGS
REMOVE AND DISPOSE OF ASPHALT PAVEMENT. ASSUME 12" DEPTH TOTAL	REMOVE AND DISPOSE OF CONCRETE BAND. ASSUME 16 INCH DEPTH.
CONCRETE PAVEMENT T.R.	SAWCUT
EXISTING TREE TO REMAIN, PROTECT IN PLACE	UNDERGROUND ELECTRICAL LINE
	T.R. TO REMAIN
	LIMIT OF WORK

DEMOLITION KEYNOTES

CODE	DESCRIPTION
D-01	UTILITY POLE T.R.
D-02	IRRIGATION VALVE T.R.
D-03	ELECTRICAL VAULT T.R.
D-04	RETAINING WALL T.R.
D-05	CONCRETE PAVEMENT T.R.
D-06	LIGHT POLE T.R.
D-07	CHAIN LINK FENCE AND CURB T.R., FIELD VERIFY LOCATION
D-08	CHAIN LINK FENCE T.R.
D-09	CHAIN LINK GATE T.R.
D-10	CURB T.R.
D-11	BOLLARD T.R.
D-12	CONCRETE RAMP AND TRUNCATED DOMES T.R.
D-13	PARKING LOT AND ASSOCIATED STRIPING, SIGNS, CURBS, AND WHEEL STOPS T.R. UNLESS OTHERWISE NOTED
D-14	ELECTRICAL INFRASTRUCTURE T.R.
D-15	PLANTING AREA T.R.
D-16	REMOVE STRIPING OVERLAPPING WITH NEW STRPING, SEE DETAIL 7/L8.2
D-17	ELECTRICAL LINE TO BE REMOVED, SEE ELECTRICAL DRAWINGS
D-18	REMOVE AND DISPOSE OF ACCESSIBLE PARKING SIGN AND ASSOCIATED POST AND FOOTING, TYP. OF 3
D-19	SALVAGE WHEEL STOP, TYP. OF 3. REINSTALL PER SITE CONSTRUCTION PLAN.

DEMOLITION NOTES

1. CLEAR AND GRUB: CLEAR AND GRUB ALL EXISTING VEGETATION, UNLESS OTHERWISE INDICATED, AS REQUIRED FOR THE SITE CONSTRUCTION, IRRIGATION, AND PLANTING OPERATIONS. LIMITS OF CLEARING SHALL BE REVIEWED WITH OWNER PRIOR TO COMMENCEMENT OF WORK. STRIP ALL ORGANIC MATTER TO A SUFFICIENT DEPTH TO COMPLETELY REMOVE SUCH MATERIAL.

   REVIEW DEMOLITION, AND CLEARING AND GRUBBING REQUIREMENTS ON SITE WITH OWNER'S REPRESENTATIVE PRIOR TO COMMENCING DEMOLITION OPERATIONS.

   ALL DEMOLITION OPERATIONS WITHIN THE DRIP LINE OF TREES SHALL CONFORM TO GENERAL REQUIREMENTS, NOTE 3.

   EXISTING SITE FURNISHINGS AND IRRIGATION EQUIPMENT TO BE REMOVED SHALL BE RETURNED TO OWNER.

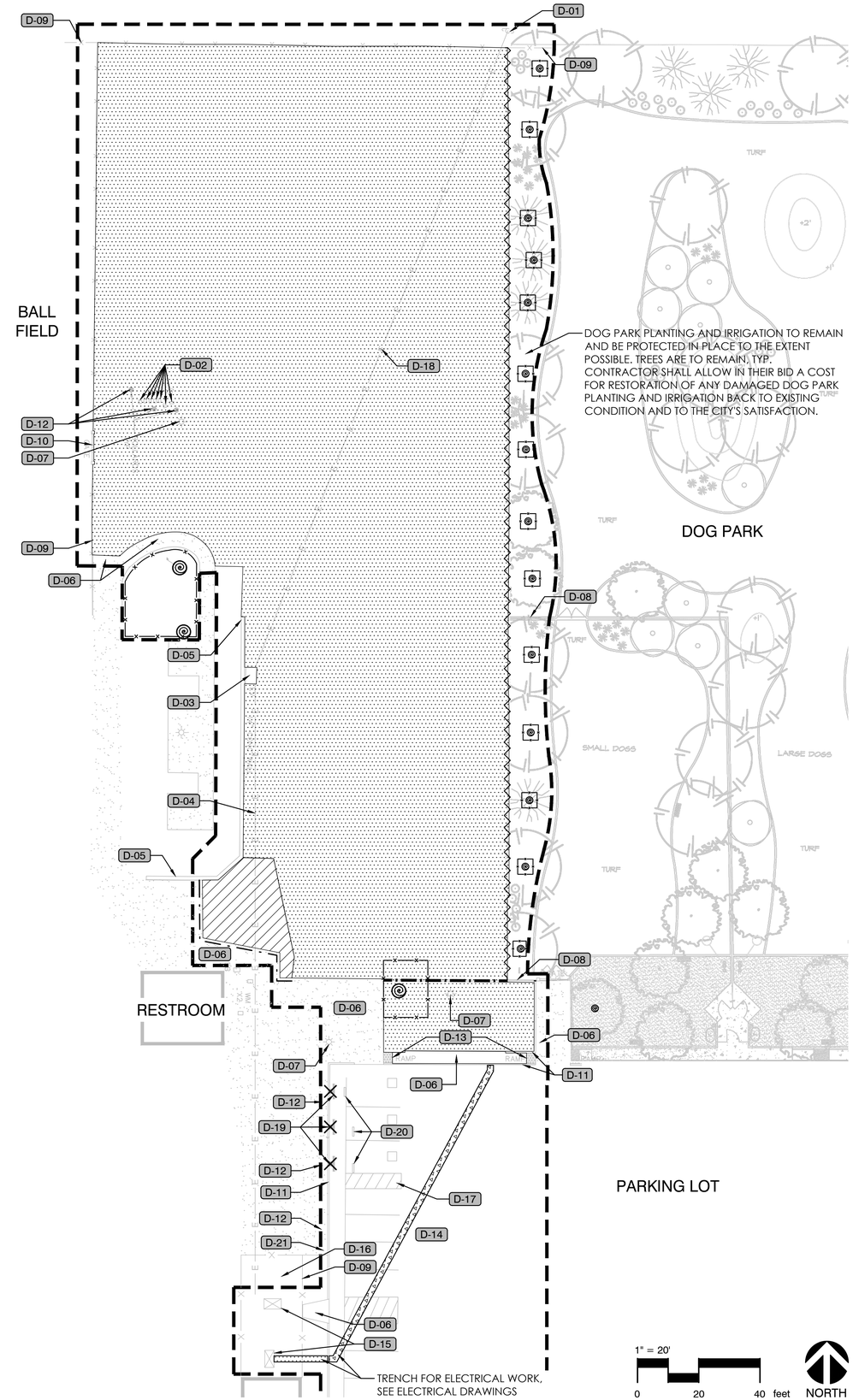
2. IRRIGATION EQUIPMENT: PROTECT ALL VISIBLE EXISTING IRRIGATION EQUIPMENT AND ANY BELOW-GRADE COMPONENTS DURING TRENCHING AND/OR ROUGH GRADING OPERATIONS, UNLESS OTHERWISE NOTED ON PLANS. CONTRACTOR SHALL REQUEST AN INSPECTION PRIOR TO BEGINNING WORK, WITH FIVE (5) WORKING DAYS MINIMUM NOTICE. CONTRACTOR SHALL REVIEW THE OPERATION AND LOCATION OF EXISTING IRRIGATION COMPONENTS WITH CITY STAFF PRESENT. CONTRACTOR SHALL OPERATE EACH STATION AT THE SITE TO DOCUMENT THE CONDITION OF EXISTING IRRIGATION EQUIPMENT. DAMAGE TO IRRIGATION EQUIPMENT CAUSED BY THE CONTRACTOR'S ACTIVITIES SUBSEQUENT TO THIS REVIEW SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

3. SAWCUTTING: ALL PAVEMENT AND CURB REMOVAL AS SHOWN ON THE PLAN SHALL BE ACCOMPLISHED BY SAWCUTTING.

   SAWCUTS SHALL BE NEAT AND CLEAN AND SHALL PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING FEATURES.

4. CONSTRUCTION DAMAGE: CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE CAUSED TO EXISTING PAVEMENT AND LANDSCAPE TO REMAIN. DAMAGED PAVEMENT SHALL BE REMOVED AND REPLACED AT THE NEAREST EXISTING JOINTS. CONTRACTOR SHALL PROVIDE VIDEO DOCUMENTATION OF EXISTING PAVING AND LANDSCAPE CONDITION PRIOR TO START OF CONSTRUCTION. THE PHOTOGRAPHIC DOCUMENTATION WILL BE USED TO EVALUATE POST CONSTRUCTION PAVING AND LANDSCAPE CONDITION. DAMAGE TO EXISTING PAVEMENT AND LANDSCAPE CAUSED BY THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.

5. PUBLIC ACCESS: CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE PUBLIC ACCESS THROUGHOUT ALL PUBLIC RIGHT-OF-WAYS, INCLUDING, BUT NOT LIMITED, SIDEWALKS AND TRAVEL LANES ALONG STREETS AND DRIVE AISLES IN PARKING LOTS THROUGHOUT CONSTRUCTION. DURING REQUIRED CLOSURES OF PUBLIC RIGHT-OF-WAYS, CONTRACTOR MUST INSTALL TRAFFIC CONTROL DEVICES AND SIGNAGE TO PROVIDE TEMPORARY ACCESS DURING CONSTRUCTION. PRIOR TO COMMENCING CONSTRUCTION, CONTRACTOR SHALL REVIEW THE TRAFFIC CONTROL PLAN PREPARED BY THE CONTRACTOR WITH THE CITY ENGINEER. STAGING AREAS AND CONSTRUCTION FENCING ARE SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY AND SHALL BE LOCATED TO AVOID CONFLICT WITH EXISTING IMPROVEMENTS AND PUBLIC TRAVEL WAYS. SEE SPECIFICATIONS FOR TRAFFIC CONTROL PLAN REQUIREMENTS.



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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
Richard C. Calander
Signature
May 31, 2005
Renewal Date
Jan. 30, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

DEMOLITION PLAN

SERIES #

L2.0

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SITE LAYOUT LEGEND

	ALIGN
	REFERENCE POINT
	NORTHING/EASTING POINT, SEE SCHEDULE
N 62631.75 E 73802.47	NORTHING AND EASTING
PT	POINT OF TANGENT
EQ	EQUAL

SITE LAYOUT NOTES

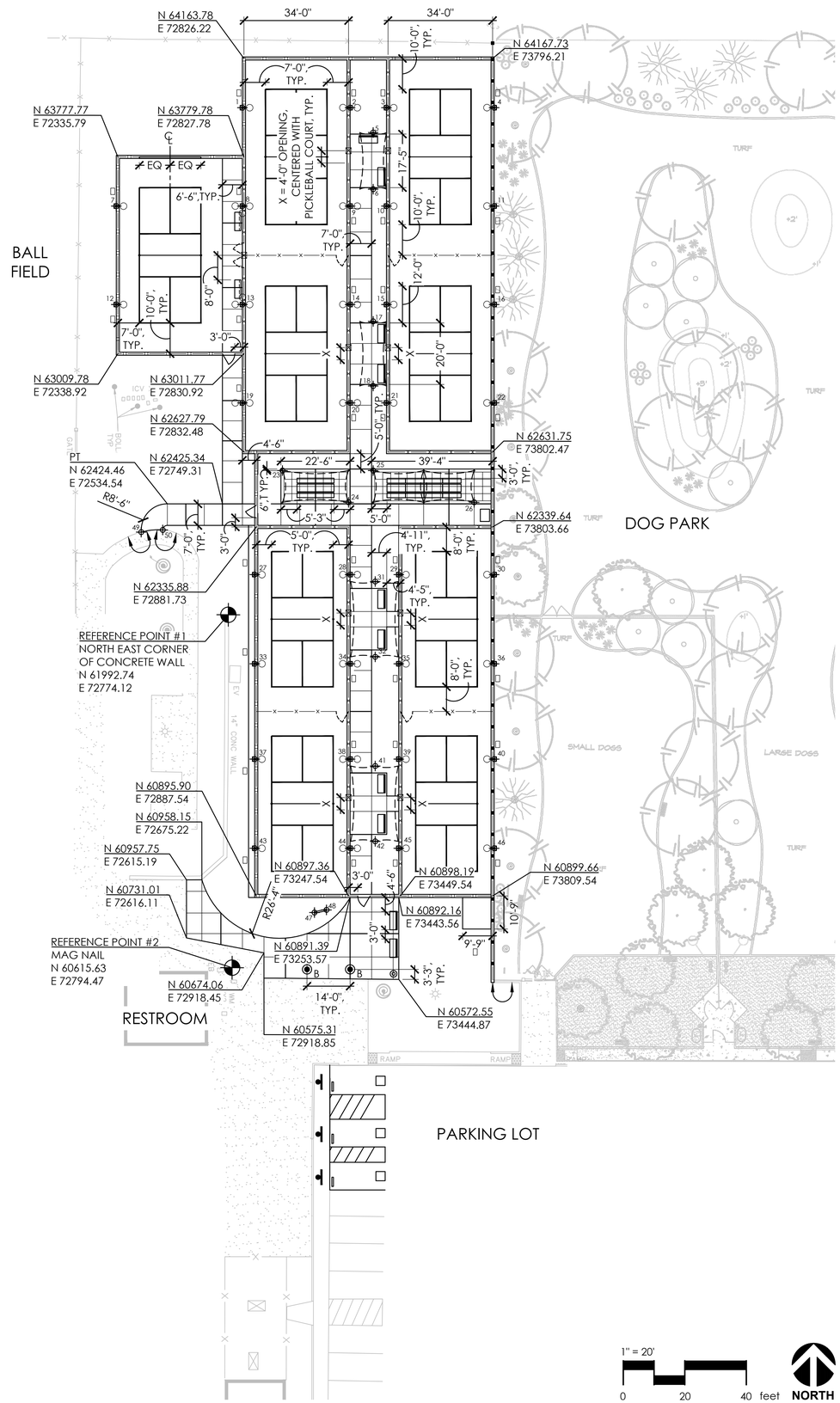
1. DIMENSIONS: ALL DIMENSIONS SHOWN SUPERSEDE SCALED DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF CURB OR WALL, EDGE OF CONCRETE FLATWORK/MOWBAND, OR CENTERLINE OF FENCE.

2. PROJECT STAKING: ALL PROPOSED SITE FEATURES SHALL BE STAKED IN FIELD FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL CURVES SHALL BE SMOOTH AND CONTINUOUS WITH CAREFULLY MATCHED TANGENTS.

NORTHING/EASTING POINT SCHEDULE

POINT	DESCRIPTION	NORTHING	EASTING
1	LIGHT POST	N 63971.75	E 72821.00
2	LIGHT POST	N 63973.47	E 73241.00
3	LIGHT POST	N 63974.05	E 73383.00
4	LIGHT POST	N 63975.76	E 73802.99
5	SHADE STRUCTURE POST	N 63876.83	E 73331.39
6	SHADE STRUCTURE POST	N 63655.84	E 73332.29
7	LIGHT POST	N 63585.75	E 72330.57
8	LIGHT POST	N 63587.76	E 72822.61
9	LIGHT POST	N 63589.47	E 73242.56
10	LIGHT POST	N 63590.05	E 73384.56
11	LIGHT POST	N 63591.90	E 73804.56
12	LIGHT POST	N 63201.75	E 72332.14
13	LIGHT POST	N 63203.76	E 72824.18
14	LIGHT POST	N 63205.47	E 73244.13
15	LIGHT POST	N 63206.05	E 73386.13
16	LIGHT POST	N 63207.76	E 73806.12
17	SHADE STRUCTURE POST	N 63139.84	E 73334.40
18	SHADE STRUCTURE POST	N 62887.84	E 73335.42
19	LIGHT POST	N 62819.76	E 72825.70
20	LIGHT POST	N 62821.48	E 73245.69
21	LIGHT POST	N 62822.06	E 73387.69
22	LIGHT POST	N 62823.77	E 73807.69
23	SHADE STRUCTURE POST	N 62556.30	E 72982.98
24	SHADE STRUCTURE POST	N 62433.34	E 73241.28
25	SHADE STRUCTURE POST	N 62557.74	E 73336.77
26	SHADE STRUCTURE POST	N 62435.34	E 73731.27
27	LIGHT POST	N 62149.86	E 72876.43
28	LIGHT POST	N 62151.38	E 73248.43
29	LIGHT POST	N 62152.15	E 73438.43
30	LIGHT POST	N 62153.67	E 73810.42
31	SHADE STRUCTURE POST	N 62124.78	E 73346.54
32	SHADE STRUCTURE POST	N 61830.78	E 73347.74
33	LIGHT POST	N 61801.86	E 72877.85
34	LIGHT POST	N 61803.38	E 73249.85
35	LIGHT POST	N 61804.16	E 73439.85
36	LIGHT POST	N 61805.67	E 73811.84
37	LIGHT POST	N 61429.87	E 72879.37
38	LIGHT POST	N 61431.38	E 73251.36
39	LIGHT POST	N 61432.16	E 73441.36
40	LIGHT POST	N 61433.68	E 73813.36
41	SHADE STRUCTURE POST	N 61404.78	E 73349.47
42	SHADE STRUCTURE POST	N 61110.79	E 73350.67
43	LIGHT POST	N 61081.87	E 72880.79
44	LIGHT POST	N 61083.39	E 73252.78
45	LIGHT POST	N 61084.16	E 73442.78
46	LIGHT POST	N 61085.68	E 73814.78
47	ENTRY SIGN END	N 60832.20	E 73114.90
48	ENTRY SIGN END	N 60842.65	E 73161.75
49	CONCRETE PAVEMENT	N 62313.86	E 72433.00
50	CONCRETE PAVEMENT	N 62322.67	E 72516.96

REFER TO SITE CONSTRUCTION PLAN FOR PROPOSED AND EXISTING ELEMENTS



1" = 20'

0 20 40 feet

NORTH

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
Kyle C. Rich
Signature
May 31, 2025
Renewal Date
Dec. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

HORIZONTAL CONTROL PLAN

SERIES #

L3.0

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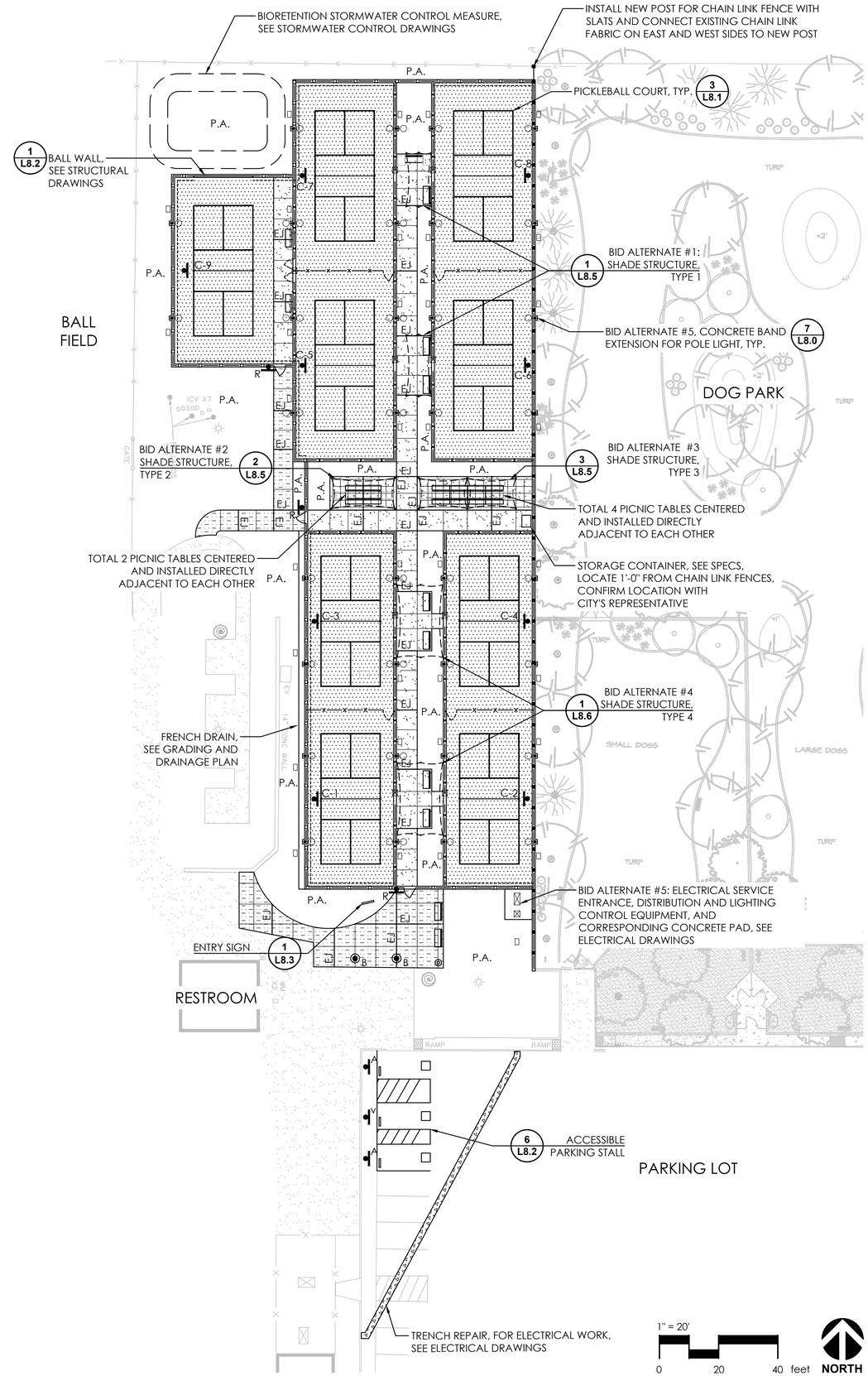
SITE CONSTRUCTION LEGEND

- POST-TENSIONED CONCRETE SLAB WITH COURT SURFACING, SEE STRUCTURAL DRAWINGS
- CONCRETE PAVEMENT, TYPE 1 — 8 / L8.0
- CONCRETE PAVEMENT, TYPE 2
- EXPANSION JOINT, TYP.
- SCORE JOINT, TYP. — 9 / L8.0
- B — BOLLARD — 5 / L8.2
- TRASH RECEPTACLE
- BENCH
- BACK OF BENCH — 3 / L8.2, 4 / L8.2
- COURT BENCH
- BACK OF BENCH
- PICNIC TABLE — 4 / L8.2
- BID ALTERNATE #5: LIGHT FIXTURE, POLE COLOR SHALL BE SANTA ANA FINES, EXPOSED WITH AMERSHIELD, OR APPROVED EQUAL, SEE ELECTRICAL DRAWINGS AND STRUCTURAL DRAWINGS — 7 / L8.0
- 6' HIGH CHAIN LINK FENCE IN CONCRETE BAND
- 6' HIGH CHAIN LINK FENCE WITH SLATS IN CONCRETE BAND — 4 / L8.1
- 4' HIGH CHAIN LINK FENCE IN CONCRETE BAND
- 4' HIGH CHAIN LINK FENCE IN POST-TENSIONED CONCRETE SLAB — 5 / L8.1
- EXISTING 6' HIGH CHAIN LINK FENCE
- CHAIN LINK GATE, 6' HIGH — 6 / L8.1
- CHAIN LINK GATE, 4' HIGH — 7 / L8.1
- WINDSCREEN — 9 / L8.1
- A — ACCESSIBLE PARKING SIGN
- V — VAN ACCESSIBLE PARKING SIGN — 8 / L8.2
- C-1 — COURT SIGN AND COURT NUMBER
- R — COURT RULE SIGNS — 2 / L8.3
- P.A. — PLANTING AREA
- ALIGN
- 30" X 40" CLEAR FLOOR OR GROUND SPACE
- SQUARE D PUSH-BUTTON, SEE ELECTRICAL DRAWINGS — 4 / L8.1
- LIGHT PULL BOX, SEE ELECTRICAL DRAWINGS — 7 / L8.0

SITE CONSTRUCTION NOTES

1. DIMENSIONS: ALL DIMENSIONS SHOWN SUPERSEDE SCALED DIMENSIONS. ALL DIMENSIONS ARE TO FACE OF CURB OR WALL, EDGE OF CONCRETE FLATWORK/MOWBAND, OR CENTERLINE OF FENCE.
2. EXPANSION JOINTS: INSTALL EXPANSION JOINTS AS SHOWN ON DRAWINGS, AS WELL AS BETWEEN CONCRETE FLATWORK AND WALLS, CURBS, AND EXISTING FLATWORK OR STRUCTURES.
3. SLEEVING: REFER TO IRRIGATION PLAN FOR REQUIREMENTS OF SLEEVING UNDER PAVEMENT.
4. PROJECT STAKING: ALL PROPOSED SITE FEATURES SHALL BE STAKED IN FIELD FOR REVIEW BY THE OWNER'S REPRESENTATIVE PRIOR TO CONSTRUCTION. ALL CURVES SHALL BE SMOOTH AND CONTINUOUS WITH CAREFULLY MATCHED TANGENTS.



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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT — Kenneth C. Fiske — Signature — May 31, 2025 Renewal Date — Jan. 30, 2024 Date — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
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CHECKED BY: DR
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SHEET TITLE
SITE CONSTRUCTION PLAN

SERIES #
L4.0

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GRADING AND DRAINAGE LEGEND

99.25	PROPOSED SPOT ELEVATION (EXISTING SPOT ELEVATIONS ARE SCREENED ON PLAN)
(99.25)	EXISTING SPOT ELEVATION
	CATCH BASIN, PER SPECS (2 / L8.0)
CO	CLEAN OUT (5 / L8.0)
	POP-UP BIORETENTION DRAIN, SEE STORMWATER CONTROL PLAN
	SOLID DRAIN LINE, SDR35
	FRENCH DRAIN (3 / L8.0)
2%	DIRECTION AND PERCENT SLOPE OF SHEET DRAINAGE
GB	GRADE BREAK
	SWALE
RIM 95.00 / INV 92.00	RIM ELEVATION AT PROPOSED DRAINAGE STRUCTURE / INVERT ELEVATION AT PROPOSED DRAINAGE STRUCTURE
	FLUSH CONDITION
	BENCHMARK, MAG NAIL, 100.45

ABBREVIATIONS

BA	BIORETENTION AREA	HP	HIGHPOINT
BB	BOTTOM OF BAND	INV	INVERT ELEVATION
BW	BOTTOM OF WALL	PA	PLANTING AREA
CP	CONCRETE PAVEMENT	RIM	RIM ELEVATION
EV	ELECTRICAL VAULT	TB	TOP OF BAND
FL	FLOW LINE	TW	TOP OF WALL

DRAINAGE PIPE CHART

CALLOUT	PIPE SIZE	LENGTH FEET	SLOPE
A	6"	24	0.005
B	6"	20	0.005
C	6"	46	0.005
D	6"	47	0.005
E	8"	35	0.005
F	6"	13	0.005
G	8"	68	0.005
H	8"	52	0.005
I	8"	16	0.005
J	8"	41	0.005
K	8"	40	0.020
L	8"	24	0.005
M	6"	79	0.005
N	6"	68	0.005
O	6"	120'	0.005

GRADING AND DRAINAGE NOTES

1. GRADING AND DRAINAGE: ALL PROPOSED PAVING, CURBS, WALLS, AND PLANTING AREAS SHALL SMOOTHLY CONFORM TO EXISTING ADJACENT FEATURES TO REMAIN. PROVIDE POSITIVE DRAINAGE ON ALL PAVING AND THROUGHOUT ALL PLANTING AREAS. CONTRACTOR SHALL FLOOD PAVED AREAS UPON COMPLETION AND RECONSTRUCT ANY LOW SPOTS AS DIRECTED. PAVING SHALL HAVE A RUNNING SLOPE OF 4.9% MAXIMUM WITH A CROSS SLOPE OF 1% MINIMUM TO 2% MAXIMUM UNLESS OTHERWISE SHOWN ON PLANS.
2. SUBSOIL: IF HERBICIDE IS PRESENT, TWELVE INCHES OF SUBSOIL SHALL BE REMOVED FROM ALL EXISTING PAVED AREAS TO BE REMOVED WHERE NEW PLANTING OR LAWN AREA ARE SHOWN.
3. TOPSOIL PLACEMENT: CROSS-RIP ALL ROUGH-GRADED PLANTING AREA SUBSOILS AS SPECIFIED PRIOR TO TOPSOIL PLACEMENT.
4. BACKFILL: EXCAVATED MATERIAL NOT SUITABLE FOR BACKFILLING SHALL BE REMOVED AND LEGALLY DISPOSED OF OFF-SITE.
5. GRADING: CONTRACTOR SHALL PERFORM ALL EARTHWORK AND GRADING PER GEOTECHNICAL REPORT DATED 05/06/2024 BY BSK ASSOCIATES (BSK PROJECT NO. B24000127). IN CASE OF A CONFLICT BETWEEN THE EARTHWORK REQUIREMENTS PRESENTED IN THE GEOTECHNICAL REPORT AND THE PROJECT PLANS / SPECIFICATIONS, THE GEOTECHNICAL REPORT SHALL PREVAIL UNLESS OTHERWISE INDICATED BY THE GEOTECHNICAL ENGINEER-OF-RECORD.
6. CUT/FILL CALCS:

   TOTAL ESTIMATED VOLUME OF CUT: 600CY

   CONTRACTOR TO CONSTRUCT IMPROVEMENTS TO THE FINISH GRADES SHOWN, MAKING PROPER ALLOWANCES FOR, INCLUDING, BUT NOT LIMITED TO, PAVEMENT SECTIONS AND FOOTINGS. SOIL OFF-HAUL IS ANTICIPATED, REFER TO SPECS FOR REQUIRED SOILS TESTING PRIOR TO DISPOSAL. CONTRACTOR SHALL BE RESPONSIBLE FOR TAKEOFFS BASED ON PLANS. EXPORTATION AND IMPORTATION OF SOIL, WHICH MAY BE NECESSARY TO MEET THE GRADES SHOWN ON THIS PLAN, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE PART OF THIS CONTRACT.

BASIS OF BEARINGS

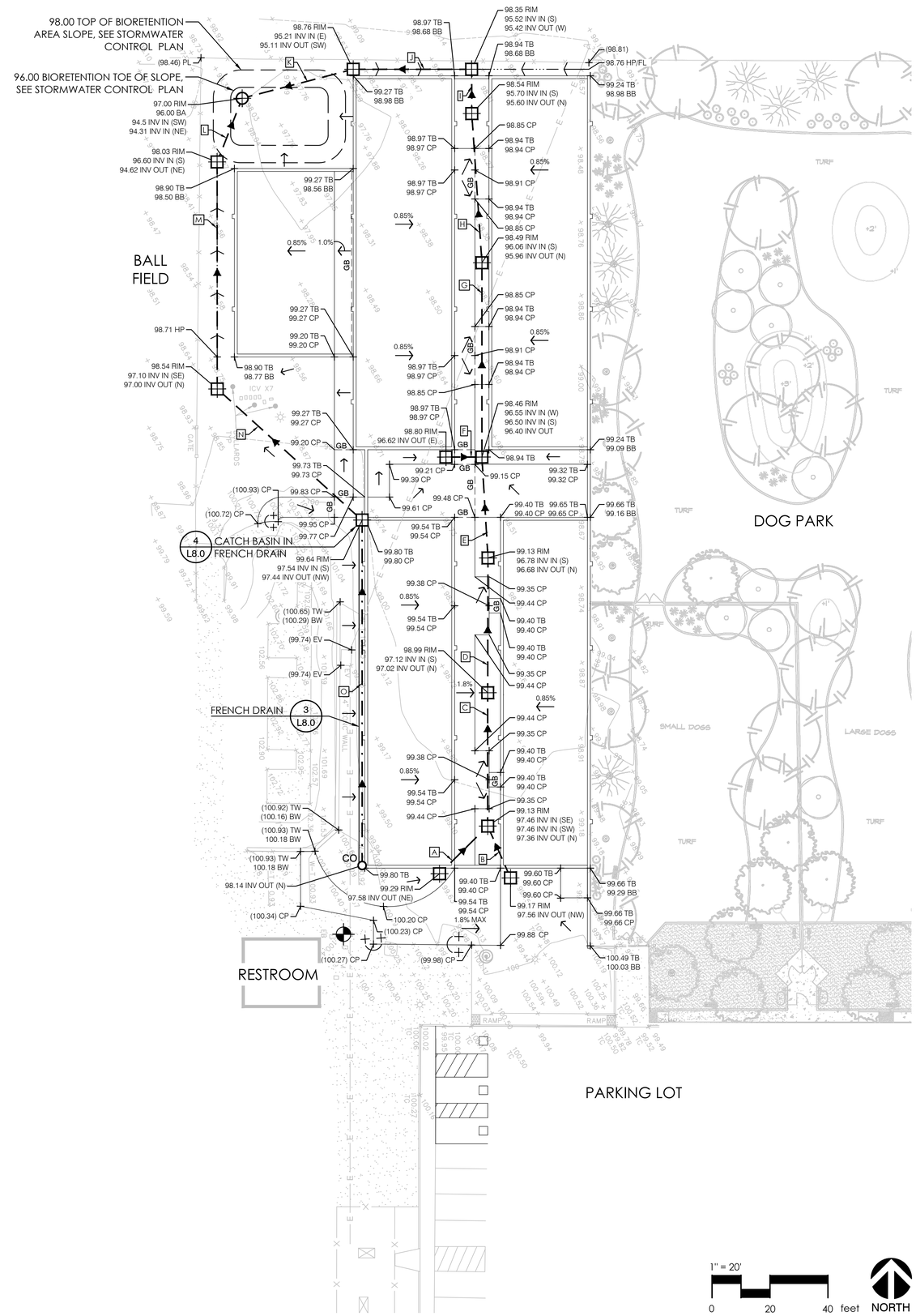
HORIZONTAL COORDINATES ARE RELATIVE TO NORTH AMERICAN DATUM OF 1983 (NAD 82), CALIORNIA COORINATE SYSTEM 1983 (CCS83), ZONE III BY NETWORK RTK METHODS AND PROCEDURES ON THE LEICA SMARTNET NETWORK. DATA COLLECTION OCCURRED ON 03/13/2024.

COORDINATES OF BKF'S SET TEMPORARY CONTROL POINTS ARE SHOWN AS BENCHMARKS ON THIS PLAN FOR RETRACEMENT PURPOSES.

BENCH MARK

ELEVATIONS ARE RELATIVE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, DERIVED FROM NETWORK RTK METHODS AND PROCEDURES ON THE LEICA SMARTNET NETWORK. DATA COLLECTION OCCURRED ON 03/13/2024.

A LOCAL REFERENCE POINT IS SHOWN AND CALLED OUT AS BENCHMARK HEREON.



1" = 20'
0 20 40 feet
NORTH

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
Richard C. Fletcher
Signature
May 31, 2025
Renewal Date
Jan. 30, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

GRADING AND DRAINAGE PLAN

SERIES #

L5.0

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IRRIGATION LEGEND

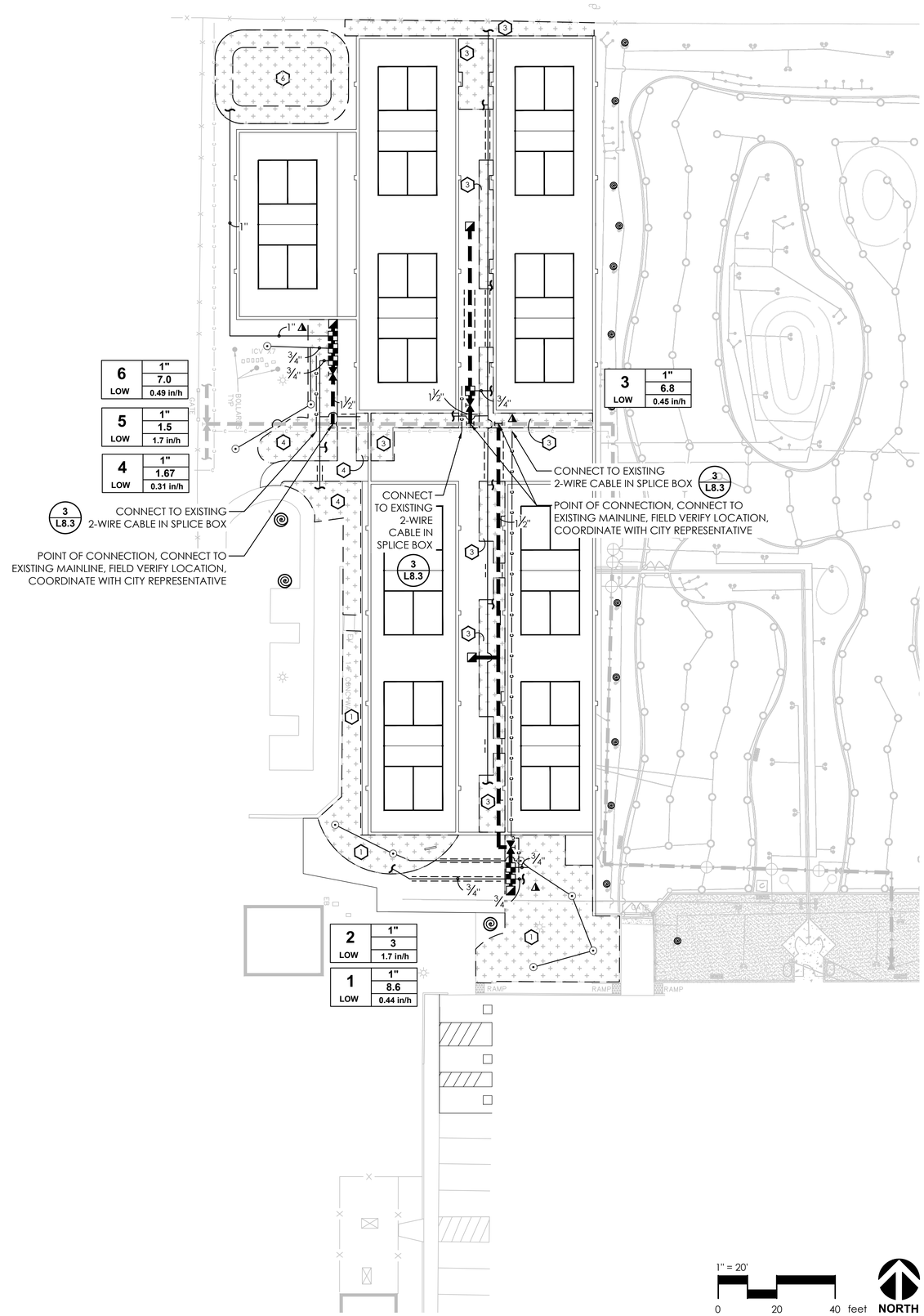
- BUBBLER PER PLANT, SHRUB BUBBLER, TORO LF40-PC — 4 L8.4, 5 L8.4
- TREE BUBBLER, HUNTER RZWS-18-25-CV, 2 BUBBLERS PER TREE — 6 L8.4
- DRIP ZONE KIT, HUNTER ICZ-101-40-LF, USE HUNTER 2-WIRE DECODER ICD-100, ICD-200, AND ICD-400 (SIZE AS NEEDED), SIZE PER PLAN — 4 L8.3
- QUICK COUPLING VALVE, RAINBIRD 44LRC — 3 L8.4
- SHUT OFF VALVE, NIBCO T113K — 5 L8.3
- EXISTING REMOTE CONTROL VALVE
- EXISTING SHUT OFF VALVE
- EXISTING MAIN LINE, SCH 40, 2" SIZE
- EXISTING MAIN LINE, CLASS 200, 4" SIZE
- MAIN LINE, SCH 40, SIZE PER PLAN
- LATERAL LINE, SCH 40, SIZE PER PLAN, MIN. 3/4" — 2 L8.4
- SLEEVE, SCHEDULE 40 PVC, SIZE AS REQUIRED
- PIPE CONTINUATION
- (3) VALVE NUMBER FOR BUBBLER PER SHRUB IRRIGATION AREA
- EXISTING 1" PVC SCH 40 ELECTRICAL CONDUIT WITH 2-WIRE COMMUNICATION CABLE
- 1" PVC SCH 40 ELECTRICAL CONDUIT FOR 2-WIRE PATH, WITH 2-WIRE COMMUNICATION CABLE
- SURGE PROTECTION — 1 L8.4

VALVE CALLOUT

X — VALVE NUMBER
— VALVE SIZE
X — VALVE FLOW
X — PRECIPITATION RATE
WATER-USE

IRRIGATION NOTES

1. PRE-IRRIGATION CONSTRUCTION MEETING: PRIOR TO INSTALLING IRRIGATION SYSTEM, CONTRACTOR SHALL MEET WITH CITY'S REPRESENTATIVE AND THE IRRIGATION TWO-WIRE MANUFACTURER TO DISCUSS PROPER CONNECTION TO EXISTING 2-WIRE IRRIGATION SYSTEM AT NO ADDITIONAL COST FROM MANUFACTURER.
2. SPECIFICATIONS: SEE IRRIGATION SPECIFICATIONS FOR ADDITIONAL INFORMATION.
3. VERIFICATION: SYSTEM DESIGN IS BASED ON 60 P.S.I. AND 8.34 G.P.M. AVAILABLE AT DISCHARGE OUTLET OF METER OR OTHER POINT OF CONNECTION. CONTRACTOR SHALL VERIFY SAME AND NOTIFY LANDSCAPE ARCHITECT IF SUCH DATA ADVERSELY AFFECTS THE OPERATION OF THE SYSTEM. SUCH NOTICE SHALL BE MADE IN WRITING AND PRIOR TO COMMENCING ANY IRRIGATION WORK.
4. UTILITIES: CONTRACTOR SHALL VERIFY LOCATION OF ALL ON-SITE UTILITIES. RESTORATION OF DAMAGED UTILITIES SHALL BE MADE AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
5. SCHEMATIC: SYSTEM FEATURES ARE SHOWN SCHEMATICALLY FOR GRAPHIC CLARITY. INSTALL ALL PIPING AND VALVES IN COMMON TRENCHES WHERE FEASIBLE AND INSIDE PLANTING AREAS WHENEVER POSSIBLE. ALL VALVES SHALL BE LOCATED IN GROUNDCOVER OR SHRUB AREAS WHENEVER POSSIBLE.
6. CODES: IRRIGATION SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH ALL LOCAL CODES AND MANUFACTURER'S SPECIFICATIONS. NOTIFY LANDSCAPE ARCHITECT BY TELEPHONE AND IN WRITING OF ANY CONFLICTS PRIOR TO INSTALLATION.
7. SLEEVING: CONTRACTOR SHALL SIZE ALL SLEEVES TO BE A MINIMUM TWO TIMES THE SIZE OF THE INTERIOR PIPE. SLEEVES SHALL BE INSTALLED AT THE NECESSARY DEPTHS PRIOR TO PAVEMENT CONSTRUCTION. SLEEVING SHALL EXTEND 1'-0" FROM EDGE OF PAVEMENT INTO LAWN OR PLANTING AREA, AND SHALL HAVE ENDS CLEARLY MARKED ABOVE GRADE.
8. QUICK COUPLING VALVES: INSTALL ON TRIPLE SWING JOINT. LOCATE 12" AWAY FROM EDGE OF WALKS, WALLS, CURBS, AND HEADERBOARDS WITHIN PLANTING AREAS. PROVIDE OWNER WITH ONE OPERATING KEY, TWO SETS OF LOCKING COVER KEYS, AND ONE SWIVEL HOSE ELL.
9. HEAD ALLOWANCE: CONTRACTOR SHALL ALLOW IN BID PRICE AN AMOUNT SUFFICIENT TO PROVIDE AND INSTALL AN ADDITIONAL 10 SHRUB BUBBLERS AND 1 TREE BUBBLER EACH TYPE SPECIFIED ON PLAN TO ACCOMMODATE FIELD CHANGES. THESE HEADS SHALL BE LOCATED AS DIRECTED BY THE LANDSCAPE ARCHITECT. CONTRACTOR SHALL DELIVER TO THE CITY ANY UN-USED ADDITIONAL HEADS AT THE END OF THE MAINTENANCE PERIOD.
10. CONTROLLER: EXISTING CONTROLLER NEAR EXISTING MAINTENANCE ROOM SHALL BE CONNECTED TO ALL NEW STATIONS. CONTRACTOR TO COORDINATE WITH CITY TO DETERMINE AVAILABLE STATIONS AND NUMBER NEW STATIONS TO CORRESPOND.
11. MAINTAINING EXISTING IRRIGATION: SHOULD THE EXISTING MAINLINE BREAK OR BE SHUT OFF FOR ANY REASON DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR SHALL HAND WATER ALL TREES, SHRUBS, TURF, AND GROUNDCOVER THAT THE EXISTING IRRIGATION SYSTEM WATERS. THE CONTRACTOR SHALL CONTINUE TO DO SO UNTIL THE IRRIGATION SYSTEM IS OPERABLE.
12. 2-WIRE CONTROL WIRE: . ALL WIRE CONNECTIONS SHALL USE WATERPROOF DBY/Y-6 WIRE CONNECTORS. FIELD VERIFY LOCATION OF EXISTING 2-WIRE CONTROL WIRE AND AND MATCH EXISTING. MINIMUM BUNDLE 6' OF CONTROL WIRE IN EACH VALVE BOX (DO NOT CUT OR SPLICE CONTINUOUS RUN UNLESS NECESSARY. ALL SPLICES SHALL USE DBY-WIRE CONNECTORS). WIRING SHALL BE COLOR CODED WITH CORRESPONDING STATION NUMBER TAGS AT THE CONTROLLER AND VALVES.



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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT — Robert C. Rubin — Signature — May 31, 2005 Renewal Date — Jan. 30, 2024 Date — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

IRRIGATION PLAN

SERIES #

L6.0

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PROJECT INFORMATION

A. DATE: SEE TITLE BLOCK

B. PROJECT APPLICANT: CITY OF LOS BANOS

C. PROJECT ADDRESS: 700 MERCEY SPRINGS RD, LOS BANOS, CA 93635

D. TOTAL LANDSCAPE AREA: SEE WATER EFFICIENT LANDSCAPE WORKSHEET

E. PROJECT TYPE: PUBLIC

F. WATER SUPPLY TYPE: POTABLE, CITY OF LOS BANOS

G. LANDSCAPE DOCUMENTATION PACKAGE CHECKLIST:

1. ✓ PROJECT INFORMATION
2. ✓ WATER EFFICIENT LANDSCAPE WORKSHEET
3. ___ *SOIL MANAGEMENT REPORT
4. ✓ LANDSCAPE DESIGN PLAN (SEE SHEET L7.0)
5. ✓ IRRIGATION DESIGN PLAN (SEE SHEET L6.0)
6. ✓ GRADING DESIGN (SEE SHEET L5.0)
7. ___ #CERTIFICATE OF COMPLETION
8. ___ *CERTIFICATE OF INSTALLATION
9. ✓ IRRIGATION SCHEDULE
10. ___ *MAINTENANCE SCHEDULE
11. ___ +*LANDSCAPE IRRIGATION AUDIT

*CONTRACTOR SHALL FURNISH UPON PROJECT COMPLETION.

#OWNER/OWNER'S REPRESENTATIVE SHALL FURNISH UPON PROJECT COMPLETION.

+CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF IRRIGATION AUDIT BY THE LOCAL AGENCY, OR A THIRD PARTY CERTIFIED LANDSCAPE IRRIGATION AUDITOR. LANDSCAPE AUDITS SHALL NOT BE CONDUCTED BY THE PERSON WHO DESIGNED THE LANDSCAPE OR INSTALLED THE LANDSCAPE. CONTRACTOR IS RESPONSIBLE TO PAY FOR ALL ASSOCIATED FEES.

H. PROJECT CONTACTS:

OWNER:
CITY OF LOS BANOS
JOE HEIM
LOS BANOS COMMUNITY CENTER
645 7TH ST.
LOS BANOS, CA 93635
PHONE: (209) 827-7034

LANDSCAPE ARCHITECT:
CALLANDER ASSOCIATES
DAVID RUBIN
2025 GATEWAY PLACE, SUITE 285
SAN JOSE, CA 95110
PHONE: (408) 275-0565

LANDSCAPE DOCUMENTATION NOTES

1. MWELO CODES AND REFERENCES: A COPY OF THE MODEL WATER EFFICIENT LANDSCAPE ORDINANCE (MWELO) DOCUMENT CAN BE FOUND AT WATER.CA.GOV. REFER TO MWELO SECTION 492.9 FOR CERTIFICATE OF COMPLETION REQUIREMENTS AND APPENDIX C FOR SAMPLE OF CERTIFICATE OF COMPLETION AND CERTIFICATE OF INSTALLATION FORM.

2. IRRIGATION PLAN CONTROLLER COPY: THE CONTRACTOR SHALL PLACE A LAMINATED 11X17 COPY OF THE IRRIGATION PLAN SHOWING THE HYDROZONES WITHIN THE IRRIGATION CONTROLLER(S) CABINET FOR FUTURE MANAGEMENT USE.

WATER EFFICIENT LANDSCAPE WORKSHEET

WATER EFFICIENT LANDSCAPE WORKSHEET

This worksheet is filled out by the project applicant and it is a required element of the Landscape Documentation Package.

Reference Evapotranspiration (ETo) 49.9

Hydrozone # /Planting Description[a]	Plant Factor (PF)[f]	Irrigation Method[b]	Irrigation Efficiency (IE)[c]	ETAF (PF/IE)	Landscape Area (sq. ft.)	ETAF x Area	Estimated Total Water Use (ETWU)[d]
Regular Landscape Areas							
Low Water Use Plantings	0.2	Drip	0.81	0.25	7,550	1,864	57,675
Low Water Use Trees	0.2	Drip	0.81	0.25	145	36	1,108
				Totals	7,695 (A)	1,900 (B)	
Special Landscape Areas							
				1			
				1			
				1			
				Totals	0 (C)	0 (D)	
						ETWU Total	58,782
						Maximum Applied Water Allowance (MAWA)[e]	107,131

[a]Hydrozone #/Planting Description
E g
1.) front lawn
2.) low water use plantings
3.) medium water use planting

[b]Irrigation Method
overhead spray or drip

[c]Irrigation Efficiency
0.75 for spray head
0.81 for drip

***[d]ETWU* (Annual Gallons Required) =**
Eto x 0.62 x ETAF x Area
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year.

[e]MAWA (Annual Gallons Allowed) =
(Eto) (0.62) [(ETAF x LA) + ((1-ETAF) x SLA)]
where 0.62 is a conversion factor that converts acre-inches per acre per year to gallons per square foot per year, LA is the total landscape area in square feet (including SLA), SLA is the total special landscape area in square feet, and ETAF is .55 for residential areas and 0.45 for non-residential areas.

[f]Plant Factor
(0.0 - 0.1) very low water use
(0.2 - 0.3) low water use
(0.4 - 0.6) medium water use
(0.7 - 1.0) high water use

ETAF Calculations

Regular Landscape Areas

Total ETAF x Area	1,900	(B)
Total Area	7,695	(A)
Average ETAF	**0.25**	**B ÷ A**

Average ETAF for Regular Landscape Areas must be 0.55 or below for residential areas, and 0.45 or below for non-residential areas.

All Landscape Areas

Total ETAF x Area	1,900	(B + D)
Total Area	7,695	(A + C)
Sitewide ETAF	**0.25**	**(B + D) ÷ (A + C)**

IRRIGATION SCHEDULE

IRRIGATION SCHEDULE

Valve No.	Description	Plant Water Use (WUCOLS)	Landscape Coefficient (KL)	GPM Flow	Precip Rate	Irrigation Method	Irrigation Efficiency	Landscape Coefficient (KL)	Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
									Los Banos	1	1.5	3.2	4.7	6.1	7.4	8.2	7	5.3	3.4	1.4	0.7	49.9
									% of July ETo	28%	34%	52%	74%	86%	97%	100%	95%	74%	57%	37%	28%	
1	Shrubs	Low	0.20	8.6	0.44	Bubbler	0.81	0.20	Minutes per Cycle	3	3	5	6	7	8	8	8	6	5	3	3	
									Days per Month	12	12	12	12	12	12	12	12	12	12	12	12	
									Cycles per Day	3	3	3	3	3	3	3	3	3	3	3	3	
									Total Minutes per Month	108	108	180	216	252	288	288	288	216	180	108	108	
									Total Gallons	929	929	1,548	1,858	2,167	2,477	2,477	2,477	1,858	1,548	929	929	20,124
2	Trees	Low	0.20	3	1.7	Bubbler	0.81	0.20	Minutes per Cycle	1	1	2	2	2	2	2	2	2	2	1	1	
									Days per Month	12	12	12	12	12	12	12	12	12	12	12	12	
									Cycles per Day	3	3	3	3	3	3	3	3	3	3	3	3	
									Total Minutes per Month	36	36	72	72	72	72	72	72	72	72	36	36	
									Total Gallons	108	108	216	216	216	216	216	216	216	216	108	108	2,160
3	Shrubs	Low	0.20	6.8	0.45	Bubbler	0.81	0.20	Minutes per Cycle	3	3	4	6	7	8	8	8	6	5	3	3	
									Days per Month	12	12	12	12	12	12	12	12	12	12	12	12	
									Cycles per Day	3	3	3	3	3	3	3	3	3	3	3	3	
									Total Minutes per Month	108	108	144	216	252	288	288	288	216	180	108	108	
									Total Gallons	734	734	979	1,469	1,714	1,958	1,958	1,958	1,469	1,224	734	734	15,667
4	Shrubs	Low	0.20	1.67	0.31	Bubbler	0.81	0.20	Minutes per Cycle	4	4	6	9	10	11	11	11	9	7	5	4	
									Days per Month	12	12	12	12	12	12	12	12	12	12	12	12	
									Cycles per Day	3	3	3	3	3	3	3	3	3	3	3	3	
									Total Minutes per Month	144	144	216	324	360	396	396	396	324	252	180	144	
									Total Gallons	240	240	361	541	601	661	661	661	541	421	301	240	5,471
5	Trees	Low	0.20	1.5	1.7	Bubbler	0.81	0.20	Minutes per Cycle	1	1	2	2	2	2	2	2	2	2	1	1	
									Days per Month	12	12	12	12	12	12	12	12	12	12	12	12	
									Cycles per Day	3	3	3	3	3	3	3	3	3	3	3	3	
									Total Minutes per Month	36	36	72	72	72	72	72	72	72	72	36	36	
									Total Gallons	54	54	108	108	108	108	108	108	108	108	54	54	1,080
6	Shrubs	Low	0.20	7	0.49	Bubbler	0.81	0.20	Minutes per Cycle	5	6	10	14	16	18	18	17	14	11	7	5	
									Days per Month	14	14	14	14	14	14	14	14	14	14	14	14	
									Cycles per Day	1	1	1	1	1	1	1	1	1	1	1	1	
									Total Minutes per Month	70	84	140	196	224	252	252	238	196	154	98	70	
									Total Gallons	490	588	980	1,372	1,568	1,764	1,764	1,666	1,372	1,078	686	490	13,818
																				Total Gallons Per Year		**58,320**

NOTES:

1. WATERING WINDOW: THIS IRRIGATION SCHEDULE IS BASED ON AN 8 HOUR WATERING WINDOW WITH 5 DAYS OF OPERATION PER WEEK. OVERHEAD IRRIGATION SHALL BE SCHEDULED BETWEEN 8:00 PM AND 10:00 AM.

2. VALVE OPERATION: THIS SCHEDULE IS NOT A "STACKING" SCHEDULE, AND DOES NOT OUTLINE WHICH VALVES SHOULD RUN AT THE SAME TIME. ALL PROGRAMMING AND STACKING SHALL BE WITHIN THE LIMITS OF THE AVAILABLE WATER PRESSURE.

3. SCHEDULE ADJUSTMENTS: DUE TO VARIABLE AND UNFORESEEN SITE CONDITIONS, THE IRRIGATION SYSTEM RUN TIMES MAY NEED TO BE ADJUSTED TO ENSURE THAT PROPER MOISTURE IS MAINTAINED IN THE LANDSCAPE.

4. PLANT ESTABLISHMENT PERIOD: CONTRACTOR SHALL PROVIDE THE IRRIGATION SCHEDULE DURING THE PLANT ESTABLISHMENT PERIOD. INCREASE THE OPERATION RUN TIME BY AT LEAST 20% AND DAYS OF OPERATION BY AT LEAST ONE DAY PER WEEK.

"I AGREE TO COMPLY WITH THE REQUIREMENTS OF THE 'MODEL WATER EFFICIENT LANDSCAPE ORDINANCE' AND SUBMIT A COMPLETE 'LANDSCAPE DOCUMENTATION PACKAGE' "

David C. Rubin DAVID RUBIN
SIGNATURE

CALA
2025 Gateway Place, Suite 285
San Jose, CA 95110
T 408.275.0565
www.callanderassociates.com

REVISION DATE

LICENSED LANDSCAPE ARCHITECT
DAVID C. RUBIN No. 5616
Signature
May 31, 2025
Renewal Date
Jan. 30, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE
LANDSCAPE DOCUMENTATION

SERIES #
L6.1

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PLANT LEGEND

TREE PLANTING (7 / L8.4)

SHRUB PLANTING (8 / L8.4)

MULCH

EXISTING TREE TO REMAIN

ROOT BARRIER: DEEP ROOT CORP. #UB18. INSTALL FLUSH WITH INSIDE FACE OF CURB OR PAVING IN LOCATIONS INDICATED. SHOWN ON OUTSIDE OF CURB FOR GRAPHIC PURPOSES ONLY.

DRAINAGE STRUCTURE, SEE GRADING AND DRAINAGE PLAN

PLANT SCHEDULE

CODE	BOTANICAL / COMMON NAME	SIZE	WATER USE	
TREES				
CER MXN	CERCIS CANADENSIS MEXICANA / MEXICAN REDBUD	24" BOX	MED	
PAR DES	PARKINSONIA X 'DESERT MUSEUM' / DESERT MUSEUM PALO VERDE	24" BOX	V LOW	
QUE AGR	QUERCUS AGRIFOLIA / COAST LIVE OAK	24" BOX	V LOW	
CODE	**BOTANICAL / COMMON NAME**	**SIZE**	**WATER USE**	**SPACING**
SHRUBS				
CAL LJN	CALLISTEMON VIMINALIS 'LITTLE JOHN' / LITTLE JOHN WEEPING BOTTLEBRUSH	5 GAL	LOW	96" o.c.
CAR DIV	CAREX DIVULSA / EUROPEAN GREY SEDGE	1 GAL	LOW	24" o.c.
CEA YAN	CEANOTHUS GRISEUS HORIZONTALIS 'YANKEE POINT' / YANKEE POINT CARMEL CREEPER	5 GAL	LOW	120" o.c.
CHO ELE	CHONDROPETALUM ELEPHANTINUM / LARGE CAPE RUSH	5 GAL	LOW	72" o.c.
CHO TEC	CHONDROPETALUM TECTORUM / SMALL CAPE RUSH	5 GAL	LOW	48" o.c.
FES CAL	FESTUCA CALIFORNICA / CALIFORNIA FESCUE	1 GAL	LOW	24" o.c.
GRE ROS	GREVILLEA ROSMARINIFOLIA / ROSEMARY GREVILLEA	5 GAL	LOW	60" o.c.
HES PAR	HESPERALOE PARVIFLORA / RED YUCCA	5 GAL	LOW	48" o.c.
MUH RIG	MUHLENBERGIA RIGENS / DEER GRASS	5 GAL	LOW	48" o.c.
SAL WIN	SALVIA CLEVELANDII 'WINNIFRED GILMAN' / WINNIFRED GILMAN CLEVELAND SAGE	5 GAL	LOW	48" o.c.

PLANTING NOTES

1. MULCH: INSTALL A UNIFORM THREE INCH COVERING OF MULCH IN ALL PLANTING AREAS, PER SPECIFICATIONS.
2. EXISTING PLANT MATERIAL: PROTECT ALL EXISTING PLANT MATERIAL TO REMAIN. REPAIR ANY DAMAGES INCURRED AS A DIRECT RESULT OF THIS CONTRACT TO THE OWNER'S SATISFACTION AT NO ADDITIONAL COST.
3. GROUNDCOVER: PROVIDE GROUNDCOVER AT INDICATED ON-CENTER SPACING THROUGHOUT ALL AREAS TO BE PLANTED. GROUNDCOVER SHALL BE PROVIDED UP TO THE WATERING BASIN OF ALL TREES AND SHRUBS.
4. QUANTITIES: THE QUANTITIES SHOWN ON THE LABELS ARE NOT TO BE CONSTRUED AS THE COMPLETE AND ACCURATE LIMITS OF THE CONTRACT. FURNISH AND INSTALL ALL PLANTS SHOWN SCHEMATICALLY ON THE DRAWINGS.
5. TOPSOIL: ALL PLANTING AREAS TO RECEIVE A SIX INCH LAYER OF NATIVE TOPSOIL PER SPECIFICATIONS.
6. SOILS TESTING: SEE SPECIFICATIONS FOR TESTING OF TOPSOIL AND AMENDMENTS. CONTRACTOR SHALL ALLOW SUFFICIENT TIME FOR TESTING PRIOR TO CONSTRUCTION.

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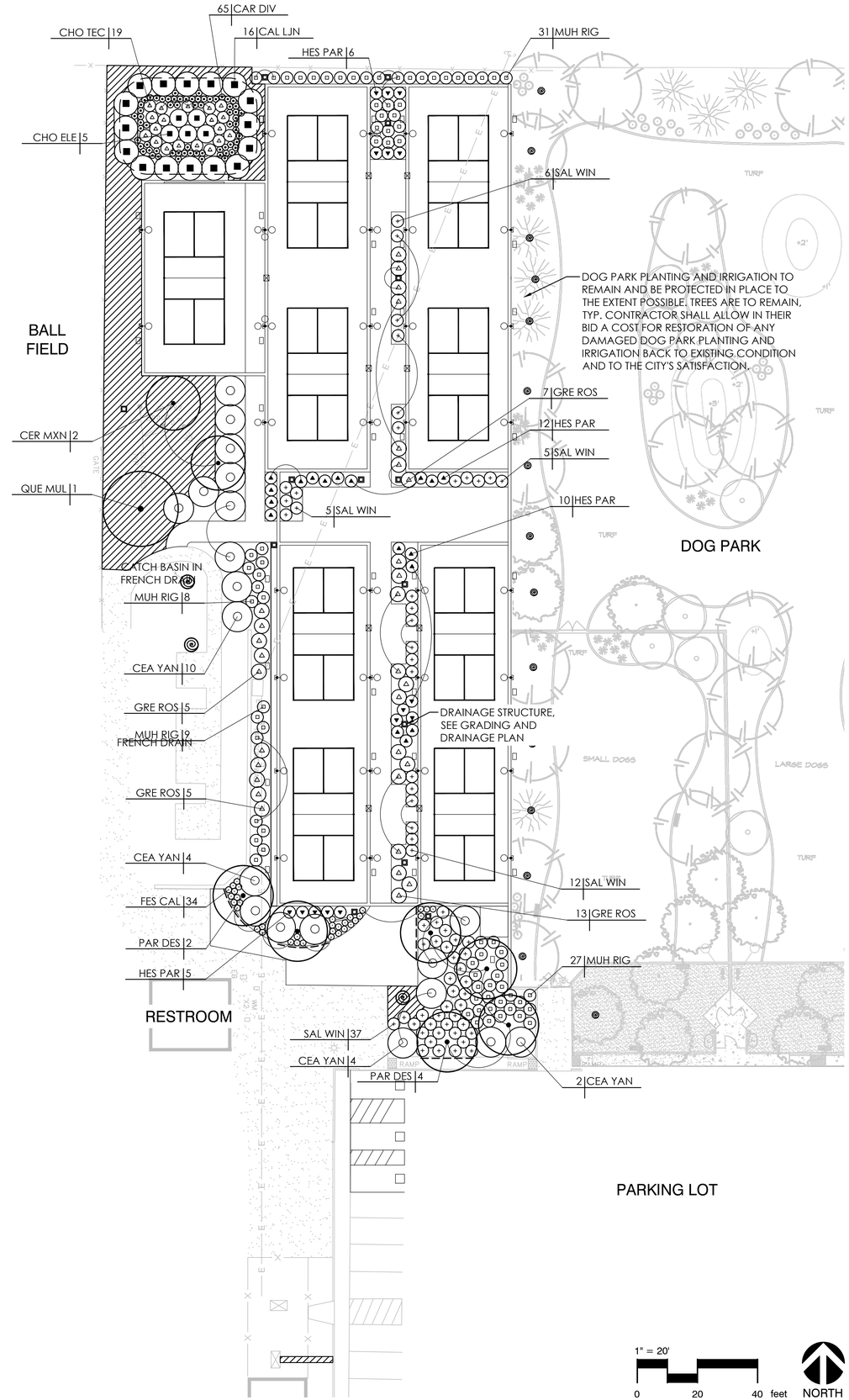


PLANT SCHEDULE

CALA
2025 Gateway Place, Suite 285
San Jose, CA 95110
T 408.275.0565
www.callanderassociates.com

REVISION	DATE

LICENSED LANDSCAPE ARCHITECT — Expires 08-31-2025 — Richard C. Drake — Signature — May 31, 2005 Renewal Date — Jan. 30, 2024 Date — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

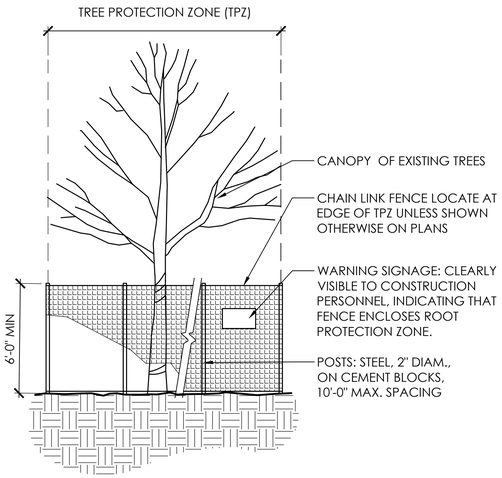
PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

PLANTING PLAN

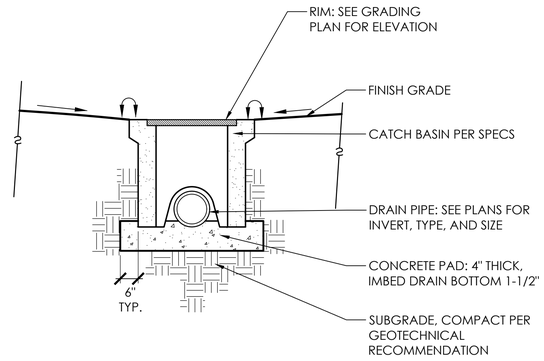
SERIES #

L7.0



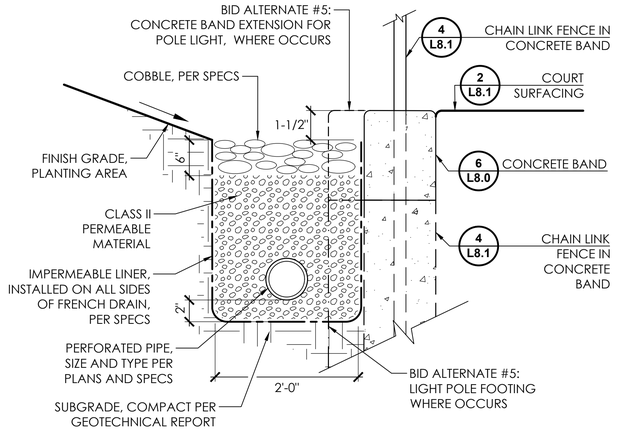
1 L8.0 **TREE PROTECTION FENCE**

3/8" = 1'-0" P-23-051-73



2 L8.0 **CATCH BASIN**

1/2" = 1'-0" P-CLA-18-01.dwg



3 L8.0 **FRENCH DRAIN**

1" = 1'-0" P-23-051-86

4 L8.0 **CATCH BASIN IN FRENCH DRAIN**

1" = 1'-0" P-23-051-87

5 L8.0 **CLEAN OUT IN FRENCH DRAIN**

1" = 1'-0" P-23-051-89

6 L8.0 **CONCRETE BAND**

1 1/2" = 1'-0" P-23-051-63

7 L8.0 **CONCRETE BAND EXTENSION AND PULL BOX LAYOUT**
CONCRETE BAND EXTENSION AND PULL BOX LAYOUT

1/2" = 1'-0" P-23-051-92

8 L8.0 **CONCRETE PAVEMENT**

1" = 1'-0" P-CLA-09-03.dwg

9 L8.0 **CONCRETE JOINTS**

3" = 1'-0" P-CLA-09-01.dwg

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
PHILIP C. BERRY No. 3584
Signature
May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

LANDSCAPE DETAILS

SERIES #

L8.0

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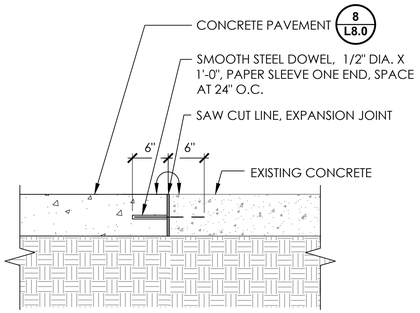


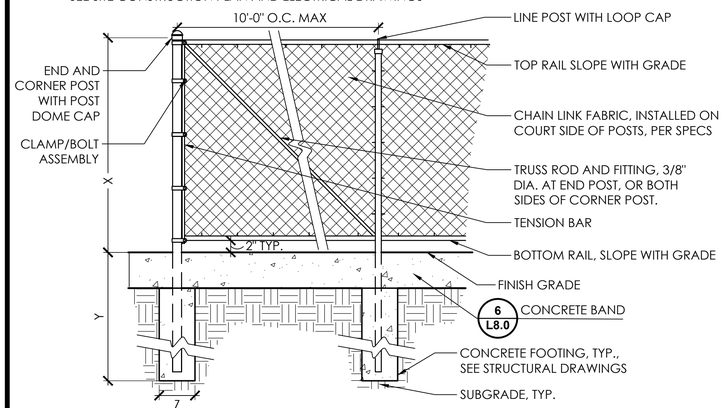
NOTE: DRILL & EPOXY DOWEL INTO EXISTING P.C.C. & GREASE OTHER END TO SET INTO NEW CONCRETE.

1 L8.1 CONCRETE PAVEMENT CONNECTION

1" = 1'-0" P-23-051-19

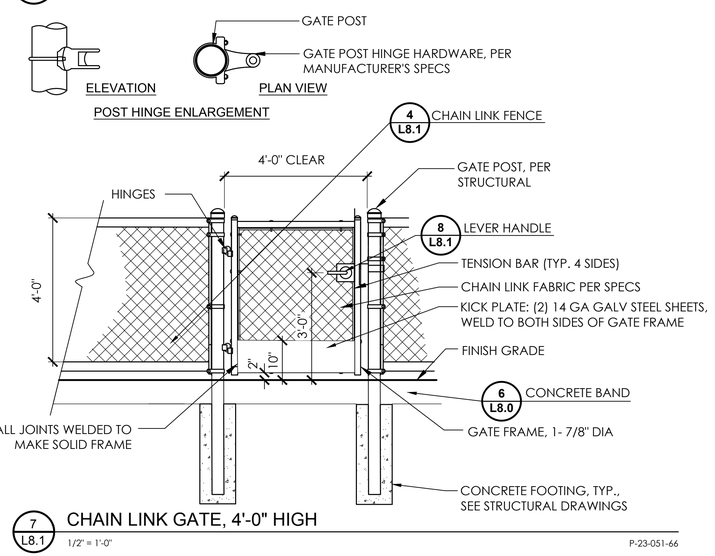
FENCE TYPE	X	Y	Z
4' HIGH CHAIN LINK FENCE	4'-0"	SEE STRUCTURAL DRAWINGS	SEE STRUCTURAL DRAWINGS
6' HIGH CHAIN LINK FENCE	6'-0"		
6' HIGH CHAIN LINK FENCE WITH SLATS	6'-0"		

NOTES:
1. PROVIDE 3" MAX GAP WHERE FENCE ABUTS BUILDINGS OR OTHER FENCES.
2. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO CITY'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
3. INSTALL SLATS PER SPECS ON 6' CHAIN LINK FENCE WITH SLATS.
4. POST SHALL BE 7'-0" HIGH FROM FINISH GRADE FOR 4'-0" HIGH CHAIN LINK FENCE WHERE PUSH BUTTONS ARE TO BE LOCATED, SEE SITE CONSTRUCTION PLAN AND ELECTRICAL DRAWINGS



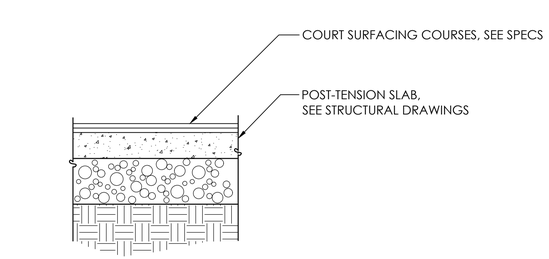
4 L8.1 CHAIN LINK FENCE IN CONCRETE BAND

1/2" = 1'-0" P-23-051-62



7 L8.1 CHAIN LINK GATE, 4'-0" HIGH

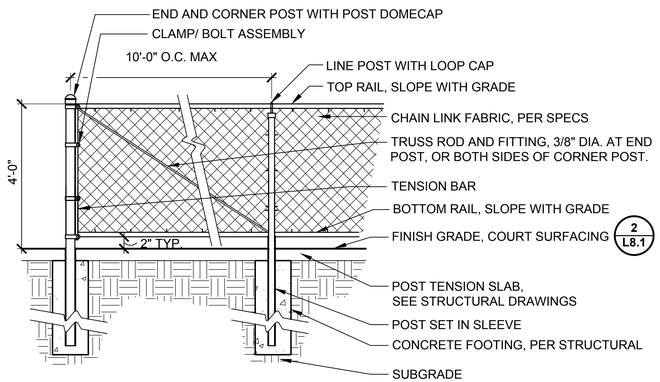
1/2" = 1'-0" P-23-051-66



2 L8.1 COURT SURFACING

1" = 1'-0" P-CLA-13-19.dwg

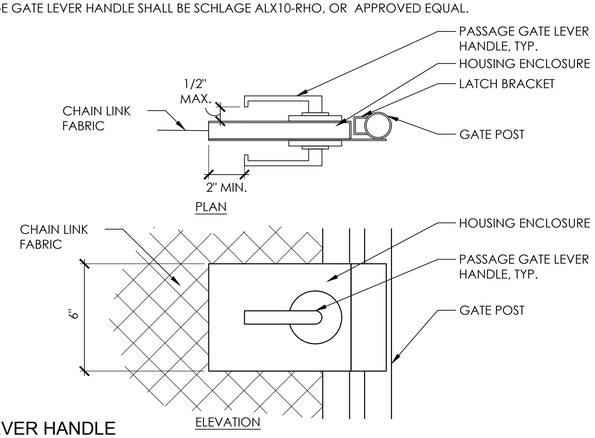
NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO CITY'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.



5 L8.1 CHAIN LINK FENCE IN POST TENSION SLAB

1/2" = 1'-0" P-23-051-21

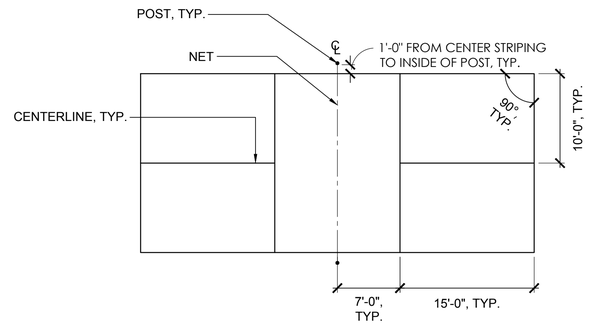
NOTE:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PRIOR TO FABRICATION.
2. HARDWARE SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL CODES AND REQUIREMENTS.
3. MAXIMUM EFFORT TO OPERATE SHALL NOT EXCEED 5 LBS.
4. PASSAGE GATE LEVER HANDLE SHALL BE SCHLAGE ALX10-RHO, OR APPROVED EQUAL.



8 L8.1 LEVER HANDLE

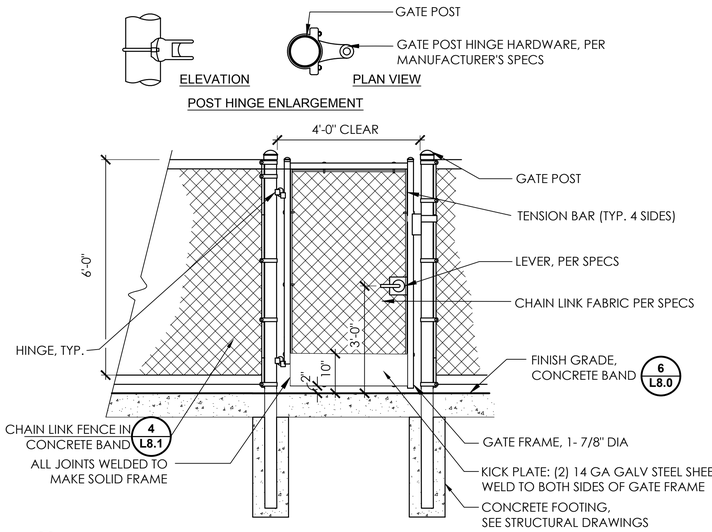
3" = 1'-0" P-23-051-54

NOTE:
1. COURT SURFACING AND LINE STRIPING COLOR PER SPECS.



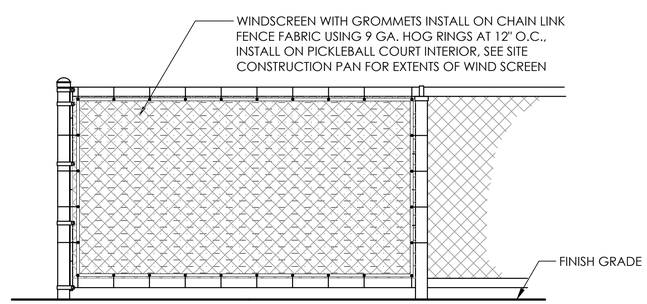
3 L8.1 PICKLEBALL COURT STRIPING

1/8" = 1'-0" P-23-051-52



6 L8.1 CHAIN LINK GATE, 6'-0" HIGH

1/2" = 1'-0" P-23-051-65



9 L8.1 WIND SCREEN

N.T.S. P-23-051-67

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT — CHRISTOPHER M. ROSS — No. 5508 — Signature — May 31, 2025 Renewal Date — Jan. 30, 2024 Date — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

LANDSCAPE DETAILS

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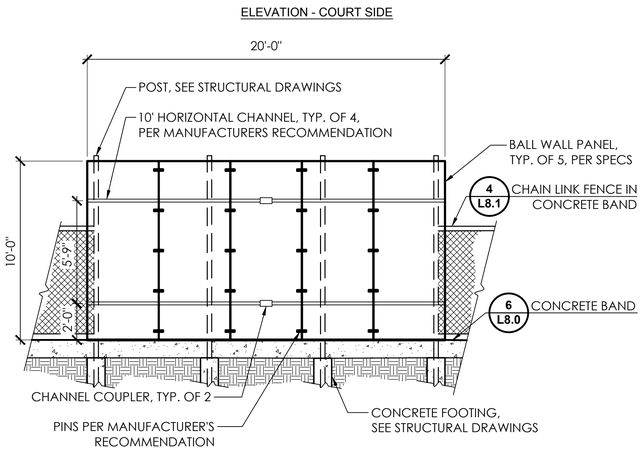
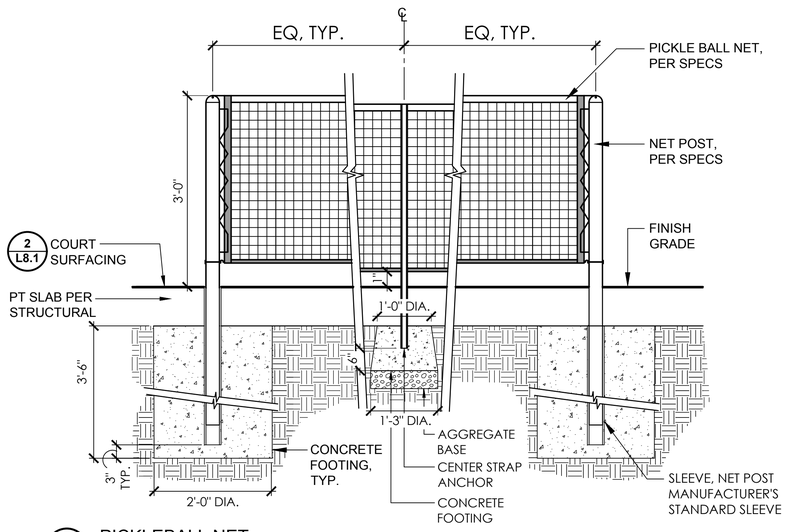


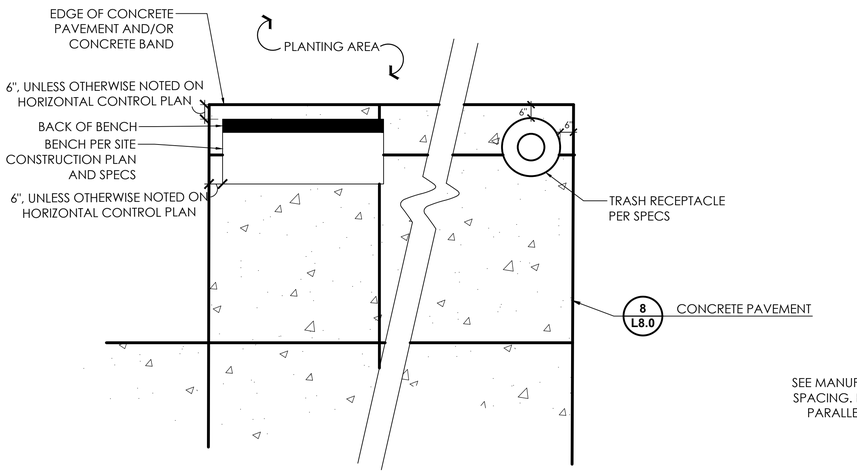
1 L8.2 BALL WALL

1/4" = 1'-0" P-23-051-85



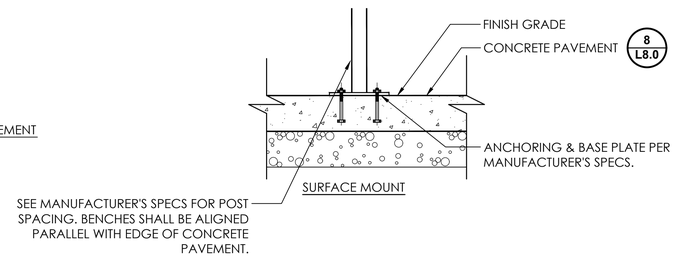
2 L8.2 PICKLEBALL NET

3/4" = 1'-0" P-23-051-53



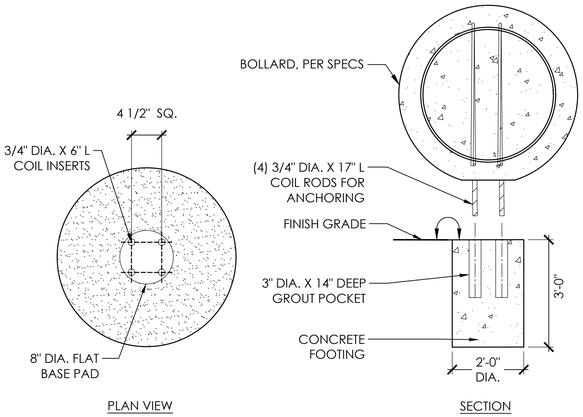
3 L8.2 BENCH AND TRASH RECEPTACLE LAYOUT

3/8" = 1'-0" P-23-051-83



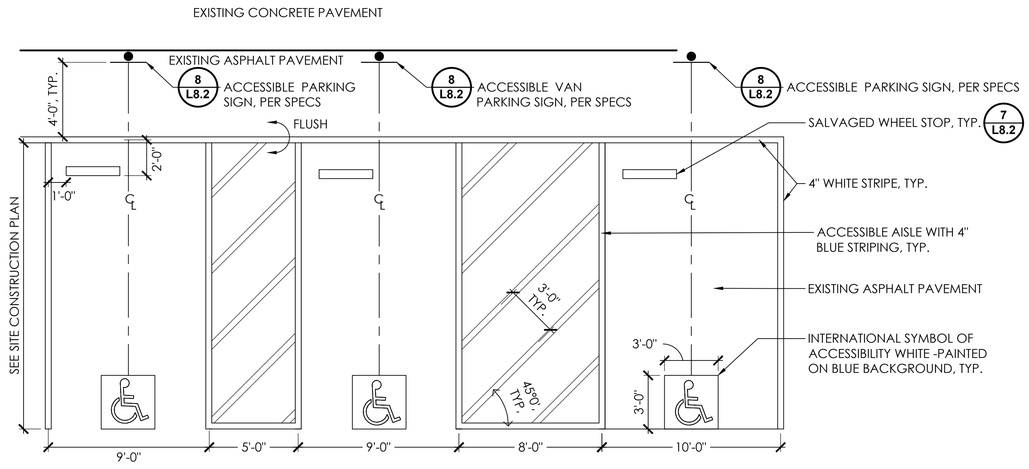
4 L8.2 FURNISHING MOUNT

1" = 1'-0" DETAIL-FILE



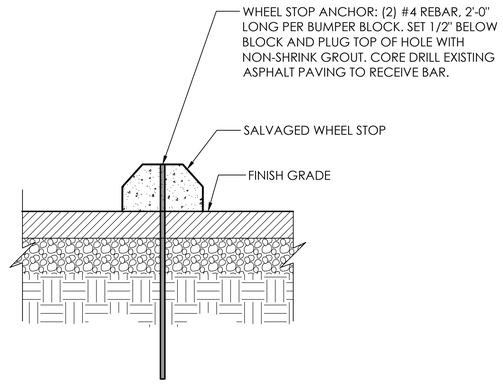
5 L8.2 BOLLARD

1/2" = 1'-0" P-23-051-70



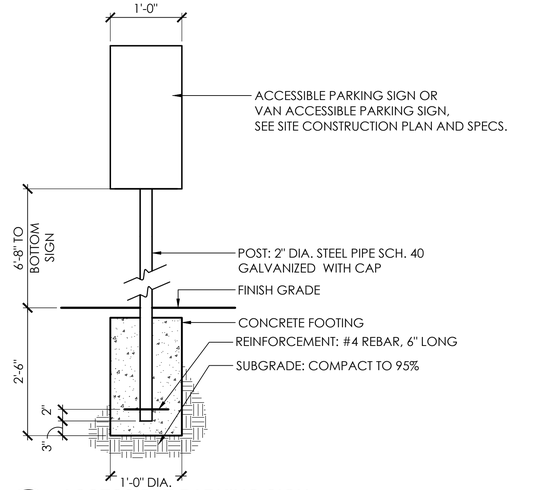
6 L8.2 ACCESSIBLE PARKING STALL

1/4" = 1'-0" P-CLA-01-04.dwg



7 L8.2 WHEEL STOP

1 1/2" = 1'-0" P-23-051-50



8 L8.2 ACCESSIBLE PARKING SIGN

1" = 1'-0" P-CLA-01-03.dwg

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San Jose, CA 95110
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www.callanderassociates.com

REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
GREGORY C. ROBIN No. 3584
Signature
May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE

LANDSCAPE DETAILS

SERIES #

L8.2

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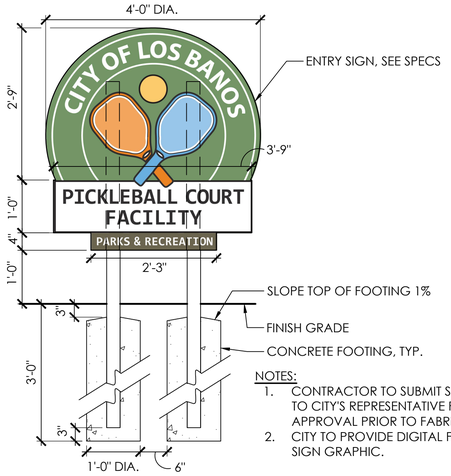
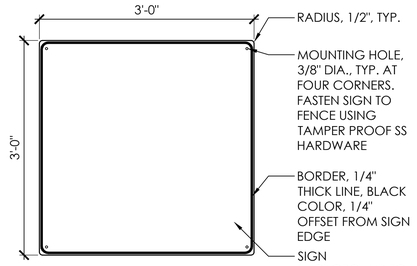


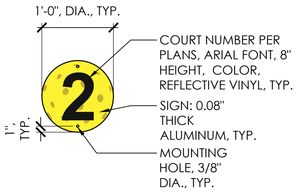
NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO CITY'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
2. CITY TO PROVIDE DIGITAL FILE FOR ENTRY SIGN GRAPHIC.

1 L8.3 ENTRY SIGN
3/4" = 1'-0" P-23-051-77

NOTE:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL SIGNS, SHOP DRAWINGS SHALL REPRESENT SPECIFIED SIZE, COLOR, FONT SIZE AND FONT STYLE.
2. SIGN LOCATION SHALL BE REVIEWED WITH CITY REPRESENTATIVE PRIOR TO INSTALLATION.
3. CITY TO PROVIDE DIGITAL FILE FOR SIGNS TO CONTRACTOR FOR FABRICATION. COLOR TO BE PER DIGITAL FILE.



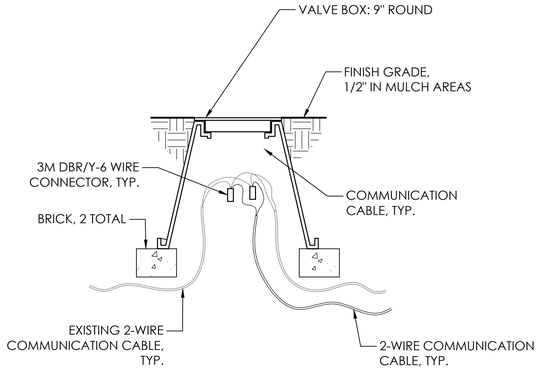
COURT RULES SIGN



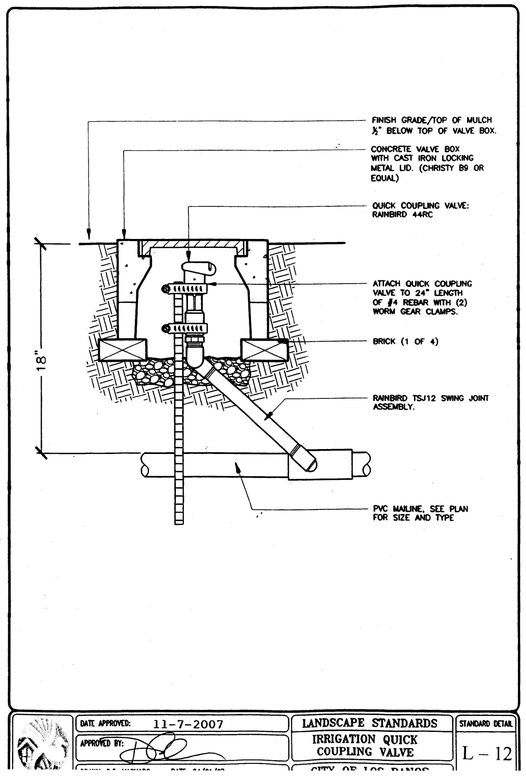
COURT NUMBER SIGN

NOTE:
COURT RULES AND COURT NUMBER SIGNS SHALL BE FABRICATED BY DOLPHINS GRAPHICS VISUAL COMMUNICATIONS (510) 481-8286, OR APPROVED EQUAL. SUBMIT SHOP DRAWINGS OF SIGNS WITH SUBMITTAL FOR CITY REVIEW AND APPROVAL.

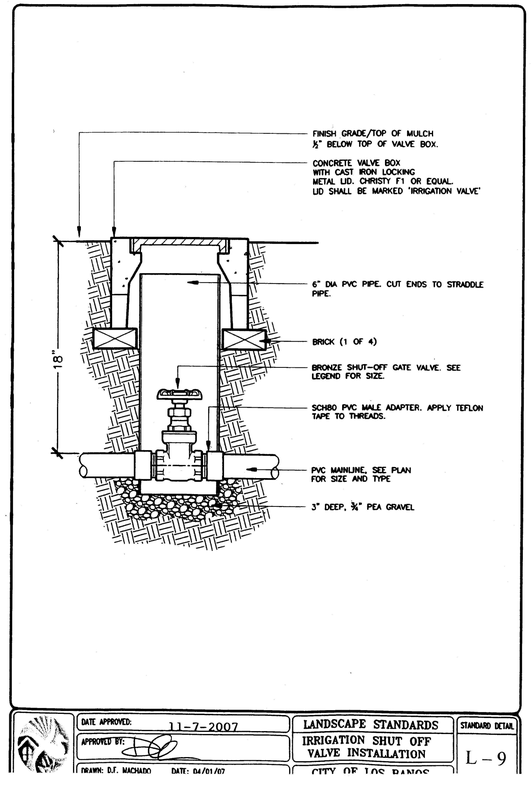
2 L8.3 COURT SIGNS
1" = 1'-0" P-23-051-24



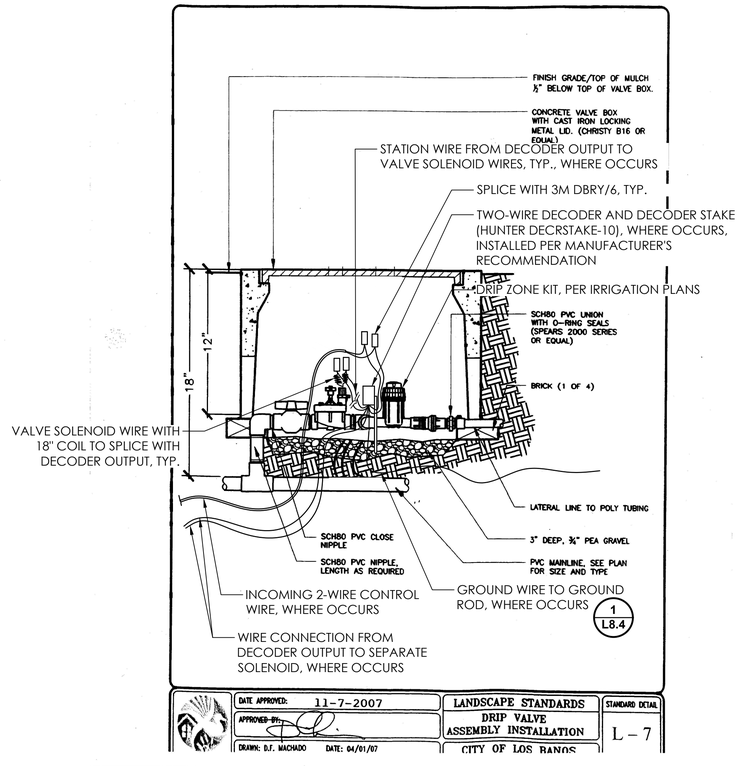
3 L8.3 SPLICE BOX
1" = 1" P-23-051-95



4 L8.3 QUICK COUPLING VALVE
1" = 1" P-23-051-76



5 L8.3 IRRIGATION SHUT OFF VALVE
1" = 1" P-23-051-75



6 L8.3 DRIP VALVE ASSEMBLY INSTALLATION
1" = 1" CITY STANDARD DETAIL L-7 (ADAPTED) P-23-051-74

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
GEOFFREY C. ROBIN No. 5080
Signature
May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE
LANDSCAPE DETAILS

SERIES #
L8.3

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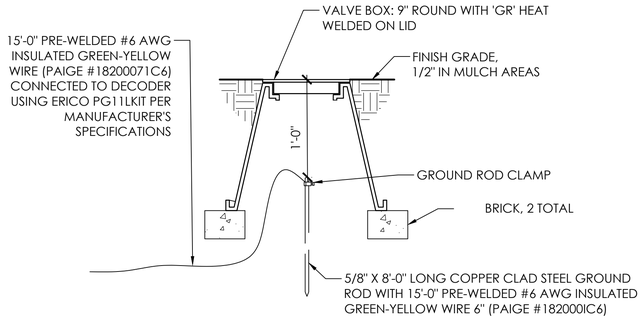
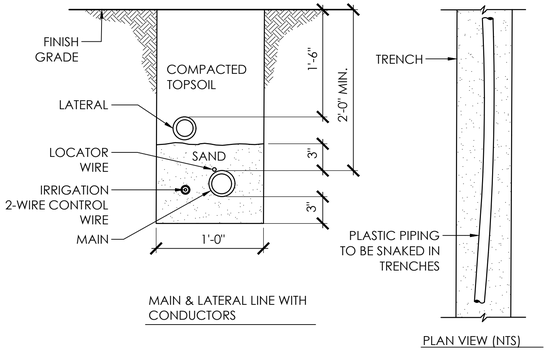
NOTES:
1. INSTALL PER DECODER MANUFACTURER'S RECOMMENDATION.
2. SPHERE OF INFLUENCE BOUNDARY SPANNING 8'-0" IN ALL DIRECTIONS IN EARTH FROM GROUND ROD, SHALL REMAIN FREE AND CLEAR OF WIRES, CABLES, ELECTRONIC EQUIPMENT, AND ANY EQUIPMENT THAT MY BE DAMAGED DURING AN ELECTRICAL SURGE EVENT.
3. GROUND ROD SHALL BE A MINIMUM 10'-0" FROM ELECTRONIC EQUIPMENT TO BE GROUNDED.
4. CONTRACTOR SHALL ENSURE 10HMS OR LESS RESISTANCE BETWEEN GROUND ROD AND CONTROLLER; ADDITIONAL GROUND RODS MAY BE NEEDED TO ACHIEVE 10OHMS OR LESS RESISTANCE.



1 L8.4 SURGE PROTECTION

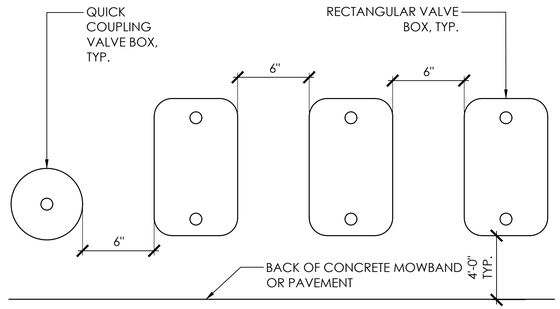
1" = 1" P-23-051-97



2 L8.4 TRENCHING

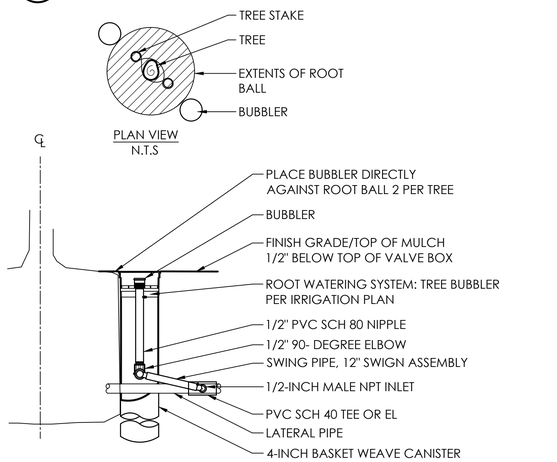
1 1/2" = 1'-0" 32840_TRENCHING_8

NOTES:
1. CENTER VALVE BOX OVER REMOTE CONTROL VALVE TO FACILITATE SERVICING VALVE.
2. SET RCV AND VALVE BOX ASSEMBLY IN GROUNDCOVER/SHRUB AREAS.
3. SET BOXES PARALLEL TO EACH OTHER AND PERPENDICULAR TO EDGE OF ADJACENT PAVEMENT
4. AVOID HEAVILY COMPACTING SOIL AROUND VALVE BOXES TO PREVENT COLLAPSE AND DEFORMATION OF VALVE BOXES.

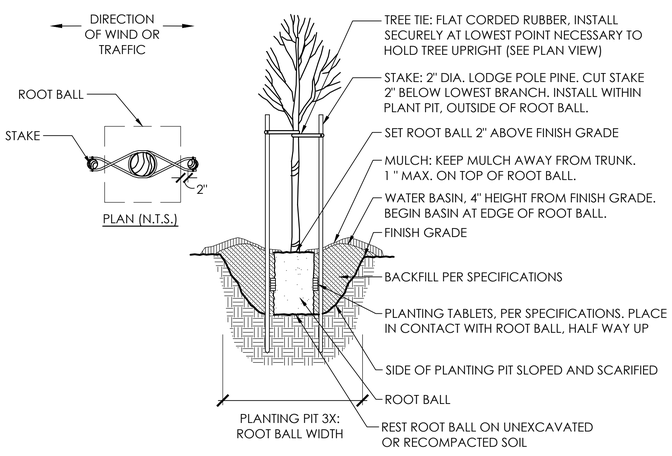


3 L8.4 VALVE BOX LAYOUT

1" = 1'-0" P-CLA-15-43.dwg

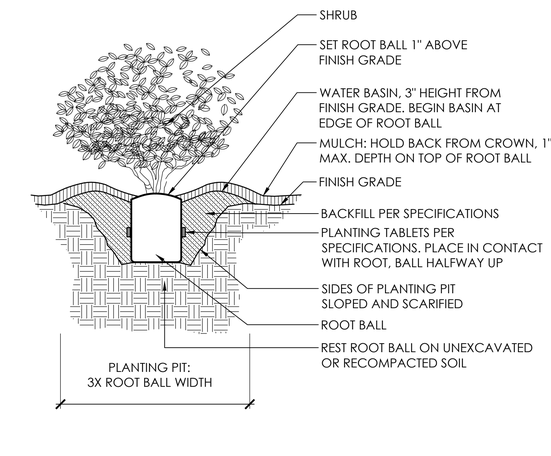


NOTE: INSTALL SAND SOCK FILTER AROUND BASKET STRAINER IN SANDY OR SILTY SOILS



4 L8.4 BUBBLER LAYOUT

1/4" = 1'-0" P-23-051-51



5 L8.4 SHRUB BUBBLER

1" = 1'-0" P-CLA-15-10.dwg

7 L8.4 TREE PLANTING

3/8" = 1'-0" P-CLA-16-07.dwg

8 L8.4 SHRUB PLANTING

1/4" = 1'-0" P-CLA-16-03.dwg

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REVISION	DATE

LICENSED LANDSCAPE ARCHITECT
PHILIP C. CALLANDER No. 3584
Signature
May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

SHEET TITLE
LANDSCAPE DETAILS

SERIES #
L8.4

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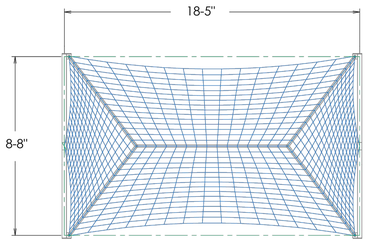
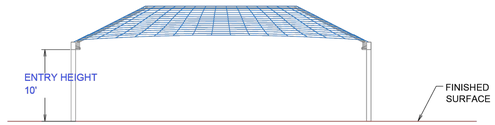
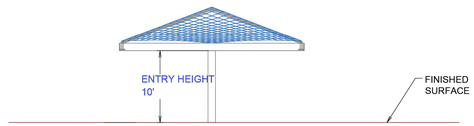
NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION
2. STRUCTURAL CALCULATIONS ARE TO BE A DEFERRED SUBMITTAL AND SUBMITTED TO THE CITY'S BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION







1 / L8.5 BID ALTERNATE #1: SHADE STRUCTURE, TYPE 1

1" = 1"

P-23-051-82

NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION
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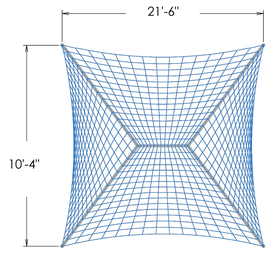
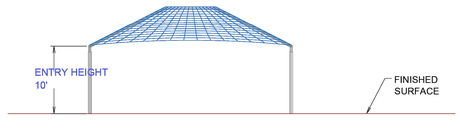
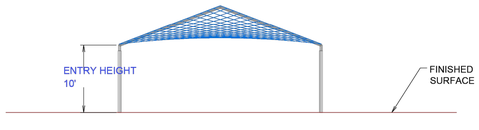


PLAN VIEW



SIDE ELEVATION



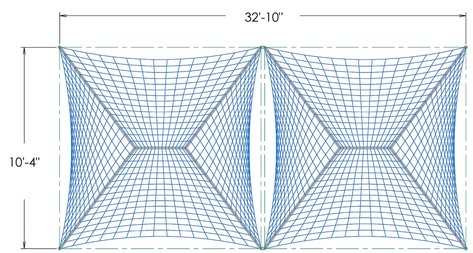
FRONT ELEVATION

2 / L8.5 BID ALTERNATE #2: SHADE STRUCTURE, TYPE 2

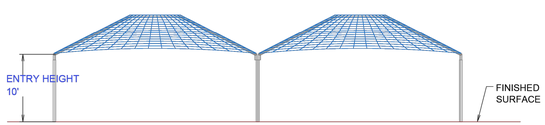
1" = 1"

P-23-051-80

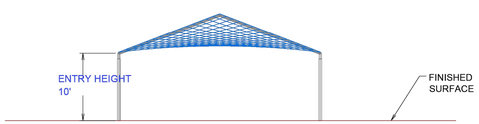
NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION
2. STRUCTURAL CALCULATIONS ARE TO BE A DEFERRED SUBMITTAL AND SUBMITTED TO THE CITY'S BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION



PLAN VIEW



FRONT ELEVATION



SIDE ELEVATION

3 / L8.5 BID ALTERNATE #3: SHADE STRUCTURE, TYPE 3

NTS

P-23-051-79

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LICENSED LANDSCAPE ARCHITECT
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May 31, 2025
Renewal Date
Sep. 20, 2024
Date
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: KO
CHECKED BY: DR
SCALE: As Shown

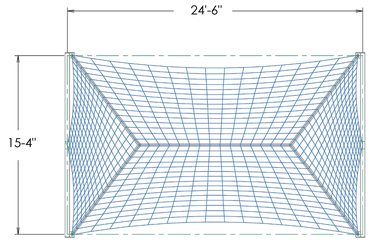
SHEET TITLE

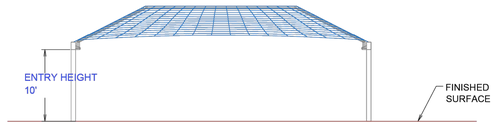
LANDSCAPE DETAILS

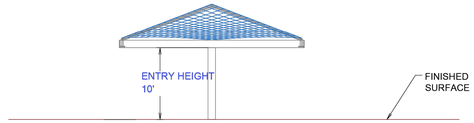
SERIES #

L8.5

NOTES:
1. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO CITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION
2. STRUCTURAL CALCULATIONS ARE TO BE A DEFERRED SUBMITTAL AND SUBMITTED TO THE CITY'S BUILDING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION







1 / L8.6 BID ALTERNATE #4: SHADE STRUCTURE, TYPE 4

1" = 1"

P-23-051-81

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POST INSTALLED ANCHOR NOTES:

1. ALL POST INSTALLED ANCHORS ARE TO BE INSTALLED PER MANUFACTURER FOR EACH ANCHOR AND PER THE ICC REPORTS LISTED BELOW.
2. ALL POST-INSTALLED ANCHORS ARE TO BE CAREFULLY INSTALLED SO AS TO NOT DISTURB OR DAMAGE THE STEEL REINFORCING IN ANY WAY. ANCHORS MAY NOT BE INSTALLED UNTIL CONCRETE OR GROUT HAS REACHED A MINIMUM AGE OF 28 DAYS.
3. ALL HOLES FOR DRILLED-IN ANCHORS SHALL BE COMPLETELY DRY AND WELL CLEANED WITH A BOTTLE BRUSH AND COMPRESSED AIR PRIOR TO INSTALLING THE ANCHORS.
4. ALL DRILLED-IN ANCHORS SHALL BE TESTED AND INSPECTED PER CHAPTER 17 OF THE 2022 CBC. INSPECTION DURING INSTALLATION AND TESTING UPON COMPLETION OF INSTALLATION SHALL BE DONE BY A CERTIFIED TESTING LABORATORY.
5. POST-INSTALLED ANCHORS ARE TO BE AS FOLLOWS:
   - 5.1 EXPANSION ANCHORS IN CONCRETE
     HILTI KB TZ2 PER ICC ESR 4266
   - 5.2 EXPANSION ANCHORS IN FULLY GROUTED CMU
     HILTI KB TZ2 PER ICC ESR 4561
   - 5.3 EPOXY ANCHORS IN CONCRETE
     HILTI HIT-HY 200 PER ICC ESR 3187
6. POST-INSTALLED ANCHORS ARE TO BE INSTALLED ONLY WHERE SPECIFICALLY DETAILED, WITH EMBEDMENTS AS SPECIFICALLY IDENTIFIED IN EACH APPLICABLE DETAIL. FOR ADDITIONAL INFORMATION, UNO, FOR EXPANSION ANCHORS, SEE TABLES BELOW.
7. POST-INSTALLED ANCHORS MAY NOT BE USED AT LOCATIONS OTHER THAN THOSE SPECIFICALLY DETAILED IN THE PROJECT DRAWINGS WITHOUT PRIOR WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER OF RECORD.

CONCRETE: HILTI KWIK BOLT TZ2 EXPANSION ANCHORS - SEE ICC ESR-4266 TABLE 1

ANCHOR DIAMETER	$\frac{3}{8}$"Ø	$\frac{1}{2}$"Ø	$\frac{5}{8}$"Ø
BIT DIAMETER	$\frac{3}{8}$"Ø	$\frac{1}{2}$"Ø	$\frac{5}{8}$"Ø
NOMINAL EMBEDMENT	$2\frac{1}{2}$"	$2\frac{1}{2}$"	$4\frac{1}{2}$"
HOLE DEPTH	$2\frac{3}{4}$"	$2\frac{3}{4}$"	$4\frac{3}{4}$"
TORQUE (STAINLESS STEEL)	30 FT-LB	40 FT-LB	60 FT-LB

CMU: HILTI KWIK BOLT TZ2 EXPANSION ANCHORS - SEE ICC ESR-4561 TABLE 1

ANCHOR DIAMETER	$\frac{3}{8}$"Ø	$\frac{1}{2}$"Ø	$\frac{5}{8}$"Ø
BIT DIAMETER	$\frac{3}{8}$"Ø	$\frac{1}{2}$"Ø	$\frac{5}{8}$"Ø
NOMINAL EMBEDMENT	3"	$3\frac{1}{4}$"	$4\frac{1}{2}$"
HOLE DEPTH	$3\frac{1}{4}$"	$4\frac{1}{4}$"	$4\frac{3}{4}$"
TORQUE (STAINLESS STEEL)	15 FT-LB	25 FT-LB	35 FT-LB

CONCRETE NOTES:

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO THE 2022 CBC AND ACI 318-19.
2. ALL CONCRETE SHALL BE NORMAL WEIGHT PER ACI 301 AND HAVE PROPORTIONS OF CEMENT, COARSE AND FINE AGGREGATE, WATER AND ADMIXTURES TO PRODUCE THE PROPERTIES SPECIFIED FOR EACH CONCRETE MIX TYPE PER ACI 301 ON THE BASIS OF PREVIOUS FIELD EXPERIENCE AND SUPPORTED BY PREVIOUS TEST RECORDS.
3. STRUCTURAL CONCRETE SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES.
   - CLASS A: FOR USE AT FOUNDATIONS & MISC CONCRETE
     28-DAY STRENGTH, f'c = 3,500 psi
     MAX AGGREGATE SIZE = 1"
     MAX WATER TO CEMENT RATIO = 0.50
     SLUMP = 4" ± 1"
   - CLASS B: FOR USE AT POST-TENSIONED SLABS
     28-DAY STRENGTH, f'c = 4,000 psi
     MAX AGGREGATE SIZE = $\frac{3}{4}$"
     MAX WATER TO CEMENT RATIO = .45
     SLUMP = 4" ± 1"

   TEST CONCRETE PER 2022 CBC CHAPTER 17
4. CONSTITUENTS OF STRUCTURAL CONCRETE SHALL MEET THE FOLLOWING REQUIREMENTS:
   - 4.1 PORTLAND CEMENT PER ASTM C-150 TYPE I OR II
   - 4.2 COARSE AND FINE AGGREGATES PER ASTM C-33
   - 4.3 REINFORCING PER ASTM A615 GRADE 60, UNO
   - 4.4 FLY ASH PER ASTM C-618 CLASS N OR F
   - 4.5 ADMIXTURES PER PROJECT SPECIFICATIONS
5. ALL DEBRIS SHALL BE REMOVED FROM FORMS AND FOOTING EXCAVATIONS PRIOR TO POURING CONCRETE. NO WOOD STAKES OR FORM SPREADERS SHALL BE PERMITTED IN CONCRETE.
6. ALL REINFORCEMENT, ANCHOR BOLTS, AND OTHER EMBEDDED ITEMS SHALL BE SECURED IN POSITION SHOWN ON DRAWINGS PRIOR TO PLACING CONCRETE.
7. FREE-FALL OF CONCRETE SHALL BE LIMITED TO 4'-0" MAX. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL SO AS TO CAUSE SEPARATION OF AGGREGATES.
8. CONCRETE SHALL BE CONSOLIDATED BY MECHANICAL VIBRATION PER ACI 309 BY MEANS SUITABLE FOR ON SITE CONDITIONS. USE HAND RODDING OR TAMPING AS REQUIRED.
9. CONSTRUCTION JOINTS SHALL HAVE ALL LOOSE MATERIAL REMOVED AND SHALL BE INTENTIONALLY ROUGHENED TO ¼" AMPLITUDE PRIOR TO POURING CONCRETE. CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT LOCATIONS TO ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.
10. ALL FORMWORK TO REMAIN IN PLACE FOR DURATION AS REQUIRED BY LATEST EDITION OF ACI 318.
11. REFER TO ACI RECOMMENDATIONS FOR PLACING AND CURING CONCRETE IN COLD AND HOT WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING CONCRETE MIX DESIGN WITH BATCH PLANT TO PROVIDE CONCRETE MIX APPROPRIATE FOR SITE CONDITIONS
12. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND IMPLEMENTING APPROPRIATE CURING PROCEDURES FOR ACTUAL SITE/WEATHER CONDITIONS AND SHALL INCLUDE PROVISIONS FOR INCLEMENT WEATHER. REFER TO ACI 308R.
13. ALL SLABS SHALL BE FLAT AND LEVEL W/A TOLERANCE OF $\frac{3}{16}$" IN 10' FOR FLATNESS AND MINIMUM LOCAL VALUE F = 32 PER ASTM 1155. THE PROJECT OWNER MAY REJECT ANY CONSTRUCTION THAT DOES NOT MEET THE FLATNESS CRITERIA NOTED WITH REPLACEMENT AT CONTRACTOR'S EXPENSE.
14. CONDUITS AND PIPES EMBEDDED IN THE SLAB (OTHER THAN THOSE PASSING VERTICALLY THROUGH) SHALL NOT BE PERMITTED. CONTRACTOR TO SUBMIT FOOTING PENETRATIONS TO STRUCTURAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
15. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED BY THE CONTRACTOR A MINIMUM OF 48 HOURS BEFORE PLACING CONCRETE.

STEEL REINFORCING NOTES:

1. ALL CONCRETE REINFORCING SHALL CONFORM TO THE 2022 CBC AND BE DETAILED, FABRICATED, AND PLACED PER ACI 318-19, AND PER THE LATEST EDITION OF ACI 315.
2. REINFORCEMENT SHALL BE DEFORMED BILLET STEEL PER ASTM A-615, GRADE 60. ALL REINFORCEMENT TO BE WELDED SHALL BE ASTM A-706, GRADE 60 (SEE NOTE 10 BELOW).
3. ALL BENDING OF REINFORCEMENT PER ACI. FIELD BENDING OF REINFORCEMENT SHALL NOT BE PERMITTED.
4. REINFORCEMENT IN SLABS AND FOOTINGS SHALL BE CONTINUOUS AROUND CORNERS OR CORNER BARS PROVIDED.
5. LAP SPLICES OF CONCRETE REINFORCEMENT UNO
   - 5.1 #3 BARS = 30"
   - 5.2 #4 BARS = 40"
   - 5.3 #5 BARS = 48"
   - 5.4 #6 BARS = 60"
6. ALL ADJACENT REINFORCING LAPS ARE TO BE STAGGERED A MINIMUM OF 5'-0".
7. REINFORCING SHALL BE PLACED WITH THE FOLLOWING MINIMUM CLEAR COVERAGE, UNO:
   - 7.1 POURED AGAINST EXCAVATIONS/GROUND = 3"
   - 7.2 POURED AGAINST FORMS, EXPOSED TO SOIL = 2"
   - 7.3 CONCRETE EXPOSED TO WEATHER = $1\frac{1}{2}$"
   - 7.4 SLABS ON GRADE - CENTER REINFORCING WITHIN SLAB DEPTH UNO
8. REINFORCING SHALL BE TIED IN PLACE. TACK WELDING OF REINFORCING IS NOT PERMITTED.
9. WHERE REINFORCING IS NOT SPECIFIED, REFER TO ACI 318 FOR MINIMUM REINFORCEMENT.
10. WELDING OF REINFORCING IS NOT PERMITTED UNLESS SHOWN ON THESE DRAWINGS OR WITH PRIOR WRITTEN APPROVAL FROM THE SEOR.

INSPECTION NOTES:

1. OBSERVATION OF SUBGRADE PREPARATION AND FOUNDATION CONSTRUCTION OPERATIONS BY GEOTECHNICAL ENGINEER PER CBC 1705.6.
2. PLACEMENT OF CONCRETE REINFORCEMENT, PLACEMENT OF CONCRETE , AND STRENGTH TESTING PER CBC 1705.3.

TESTS & INSPECTIONS:

TESTS & INSPECTIONS SHALL BE PROVIDED BY A QUALIFIED TESTING AGENCY AS NOTED BELOW AND SHALL CONFORM TO THE REQUIREMENTS OF 2022 CBC, SECTION 1701

	Inspections Continuous	Periodic
SOILS:		
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	☐	☒
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	☐	☒
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS	☐	☒
4. VERIFY USE OF PROPER MATERIALS, DENSITIES & LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	☒	☐
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY	☐	☒
CONCRETE:		
1. INSPECT REINFORCING & VERIFY PLACEMENT	☐	☒
2. INSPECT ANCHORS CAST IN CONCRETE	☐	☒
3. INSPECT POST-INSTALLED ANCHORS		
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	☒	☐
	☐	☒
B. ALL OTHER MECHANICAL AND ADHESIVE ANCHORS	☐	☒
4. VERIFY USE OF REQUIRED MIX DESIGN		
5. PRIOR TO CONC PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, DETERMINE TEMP OF CONCRETE	☒	☐
6. INSPECT CONC & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	☒	☐
7. VERIFY MAINTENANCE OF SPECIFIED CURING TEMP & TECHNIQUES	☐	☒
8. INSPECT FORMWORK FOR SHAPE, LOCATION, & DIMENSIONS OF CONCRETE MEMBERS BEING FORMED	☐	☒
9. INSPECT PRE-STRESSED CONCRETE FOR:		
A. APPLICATION OF PRE-STRESSING FORCE	☒	☐
B. GROUTING OF POCKET FORMERS	☐	☒
10. VERIFY IN-SITU CONCRETE STRENGTH PRIOR TO STRESSING TENDONS	☐	☒

FOUNDATION NOTES:

1. FOUNDATIONS ARE DESIGNED ACCORDING TO THE 2022 CBC - SEE 'DESIGN CRITERIA.'
2. FOOTINGS SHALL BEAR ON FIRM AND STABLE COMPACTED SOIL.
3. FOOTING DEPTHS INDICATED ON PLANS ARE MINIMUMS. AREAS OF LOCALIZED FOOTING OVER-EXCAVATION SHALL BE BACKFILLED WITH COMPACTED FILL PER THE SOILS REPORT OR WITH LEAN CONCRETE HAVING A MAXIMUM 28-DAY STRENGTH OF 1,000 PSI. CONSULT PROJECT GEOTECH FOR ALL CONTROLLED LOW STRENGTH MATERIAL FILL REQUIREMENTS.
4. FOOTINGS MAY BE OVER-EXCAVATED AT CONTRACTOR'S OPTION FOR PLACEMENT OF LEAN MIX CONCRETE TO FACILITATE THE REMOVAL OF DEBRIS AND STANDING WATER.
5. ALL FOOTINGS NOT FORMED SHALL BE POURED IN NEAT EXCAVATIONS. BOTTOMS OF EXCAVATIONS SHALL BE LEVEL, WITH CHANGES IN ELEVATION ONLY AS NOTED IN THESE DRAWINGS.
6. SEOR SHALL BE NOTIFIED IMMEDIATELY WHERE JOB SITE CONDITIONS ARE DIFFERENT THAN THOSE SHOWN ON CONTRACT DRAWINGS.
7. THE STRUCTURAL ENGINEER SHALL BE NOTIFIED A MINIMUM OF 48-HOURS PRIOR TO THE PLACING OF CONCRETE SLABS AND FOUNDATIONS.
8. ALL FOUNDATION EXCAVATIONS AND RELATED EARTHWORK SHALL BE PERFORMED PER GEOTECHNICAL REPORT NO. B24000127 DATED 5/6/24 BY BSK ASSOCIATES. WHERE A CONFLICT OCCURS BETWEEN THE EARTHWORK REQUIREMENTS PRESENTED IN THE GEOTECHNICAL REPORT AND THE PROJECT PLANS/SPECIFICATIONS, THE GEOTECH REPORT SHALL GOVERN UNLESS OTHERWISE INDICATED BY THE GEOTECHNICAL ENGINEER-OF-RECORD.

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF ALL STEEL CONSTRUCTION SHALL CONFORM TO THE 2022 CBC AND THE AISC STEEL CONSTRUCTION MANUAL 15th EDITION.
2. STRUCTURAL STEEL SHAPES SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED ON DRAWINGS:
   - 2.1 BARS AND PLATES — ASTM A36, Fy = 36 KSI
   - 2.2 PIPE — ASTM A53, GRADE B, Fy = 35 ksi
   - 2.3 HSS — ASTM A500, GRACE C, Fy = 50 ksi
3. WELDING SHALL BE BY THE ELECTRIC ARC PROCESS (SHIELDED METAL ARC WELDING, FLUX CORE ARC WELDING, GAS METAL ARC WELDING) PER AWS STANDARDS AND BY CERTIFIED WELDERS. REFER TO "QUALIFICATION PROCEDURE" AWS D1.1.
4. ALL WELDED JOINTS AND ELECTRODES ARE TO BE "PREQUALIFIED." ALL WELDING ELECTRODES ARE TO BE E70XX UNO. FCAW FILLER METAL WIRE SHALL BE $\frac{0}{64}$" MAX DIAMETER AND SMAW FILLER METAL WIRE SHALL BE $\frac{0}{32}$" MAX DIAMETER.
6. STEEL ITEMS EMBEDDED IN CONCRETE AND LOCATED BELOW GRADE SHALL HAVE 3" MINIMUM COVER.

STRUCTURAL SHEET INDEX:

S0.1	TYPICAL STRUCTURAL NOTES
S2.1	STRUCTURAL SITE PLAN
S2.2	SLAB PLANS
S3.1	STRUCTURAL DETAILS
S3.2	STRUCTURAL DETAILS

ABBREVIATIONS:

@	AT
AB	ANCHOR BOLT
ACI	AMERICAN CONCRETE INSTITUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
APA	AMERICAN PLYWOOD ASSOCIATION
ARCH	ARCHITECT/ARCHITECTURAL
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B.O.	BOTTOM OF
CBC	CALIFORNIA BUILDING CODE
Ø	DIAMETER
DWGS	DRAWINGS
F.O.	FACE OF
HSS	HOLLOW STRUCTURAL SECTION
L	STEEL ANGLE
MAX	MAXIMUM
MIN	MINIMUM
NTS	NOT TO SCALE
#	NUMBER OR POUNDS
cc	CENTER TO CENTER
OH	OPPOSITE HAND
PAF	POWDER-ACTUATED FASTENER
SEOR	STRUCTURAL ENGINEER OF RECORD
T & B	TOP AND BOTTOM
THRU	THROUGH
T.O.	TOP OF
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
w/	WITH

DESIGN CRITERIA:

1. PROJECT ADDRESS:
   1.1 700 MERCEY SPRINGS ROAD, LOS BANOS, CA 93635
2. BUILDING CODE: 2022 CALIFORNIA BUILDING CODE
3. GRAVITY LOADS:
4. LATERAL LOADS: RISK CATEGORY II
   - WIND LOADS (ASCE 7-16)
     - BASIC WIND SPEED: 93 MPH (ULT), 72 MPH(ASD)
     - EXPOSURE: C
   - SEISMIC LOADS (ASCE 7-16)
     - SITE CLASS: D
     - SEISMIC DESIGN CATEGORY: D
     - IMPORTANCE FACTOR: 1.00

   S_s = 1.135 S_1 = 0.391
   F_a = 1.046 F_v = 1.909
   S_{MS} = 1.187 S_{M1} = 1.120
   S_{DS} = 0.791 S_{D1} = 0.747

   SEISMIC RESPONSE FACTOR, R = 1.25
5. SOILS CRITERIA:
   - GEOTECH REPORT #B24000127 DATED 5/6/2024 BY BSK
   - ALLOWABLE BEARING PRESSURE (D+L) = 1,500 PSF
   - ALLOWABLE BEARING PRESSURE (WITH W OR E) = 2,250 PSF
   - LATERAL BEARING PRESSURE = 150 PCF
   - LATERAL BEARING PRESSURE MAY BE INCREASED 33% FOR WIND & SEISMIC LOADS
   - PIERS ARE TO BE LOCATED TO MAINTAIN A MINIMUM 3 x PIER DIAMETER CENTER TO CENTER SPACING

GENERAL NOTES:

1. ALL NEW WORK SHALL CONFORM TO TITLE 24 2022 EDITIONS WITH AMENDMENTS AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
2. THIS SET OF STRUCTURAL DRAWINGS IS APPLICABLE ONLY TO THE LISTED PROJECT AND SITE LOCATION.
3. NOTES ON THIS SHEET ARE TYPICAL AND SHALL APPLY UNLESS OTHERWISE NOTED OR SHOWN. TYPICAL DETAILS SHALL APPLY FOR ALL LIKE CONDITIONS UNLESS OTHERWISE NOTED OR DETAILED.
4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS, ELEVATIONS, EXISTING CONDITIONS, AND OTHER RELATED ITEMS. THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO CONSTRUCTION AND SHALL NOTIFY THE ENGINEER OF RECORD IF ANY CONFLICTS ARE SHOWN OR NOTED.
5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFORM TO RELEVANT SECTIONS OF THE CALIFORNIA "CONSTRUCTION SAFETY ORDERS" AND ALL OSHA REQUIREMENTS. THE ENGINEER OF RECORD ACCEPTS NO RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY W/ THESE REQUIREMENTS.
6. STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE, AND DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. DESIGN AND CONSTRUCTION OF ALL TEMPORARY BRACING, SHORING, FORMING, ETC REQUIRED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — ROB L. WELDON — No. C 66423 — CIVIL — STATE OF CALIFORNIA

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AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

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SHEET TITLE

TYPICAL STRUCTURAL NOTES

SHEET

S0.1

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BID SUBMITTAL	09/20/24

PROJECT NO: 23051
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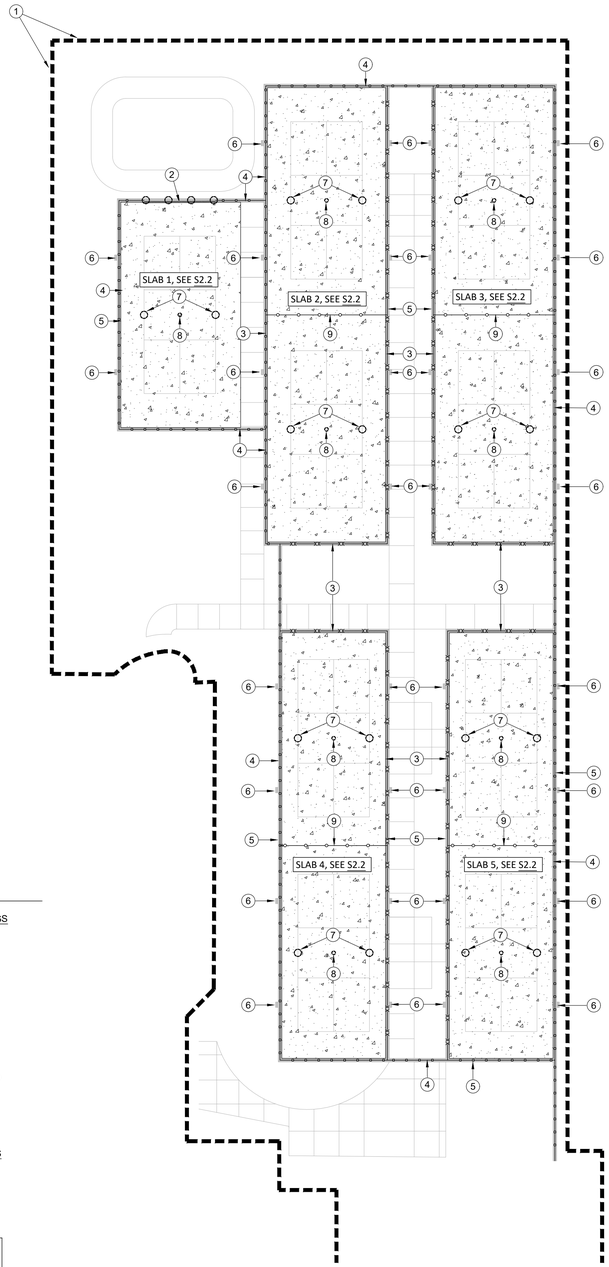
CHECKED BY: RLW
SCALE: As Shown

SHEET TITLE

STRUCTURAL SITE PLAN

SHEET

S2.1



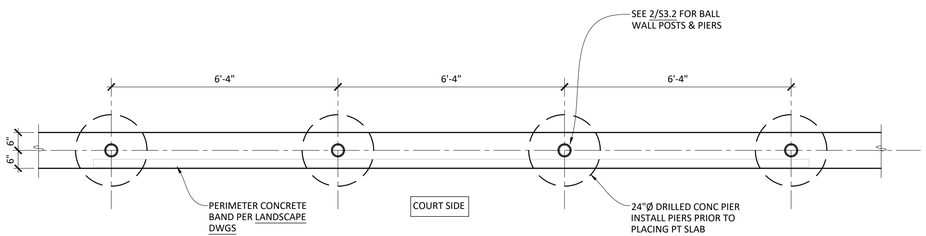
SITE PLAN
1" = 20'

SITE PLAN KEY NOTES:

1. APPROXIMATE LIMIT OF WORK AREA - SEE LANDSCAPE DWGS
2. BALL WALL - SEE BALL WALL PARTIAL PLAN THIS SHEET
3. 4' TALL CHAIN-LINK FENCE
   RAILS ARE TO BE 2"Ø SCH 40 PIPE
   POSTS AND FOOTINGS ARE TO BE PER 4/S3.1
4. 6' TALL CHAIN-LINK FENCE
   RAILS ARE TO BE 2"Ø SCH 40 PIPE
   POSTS AND FOOTINGS ARE TO BE PER 2/S3.1
5. CONCRETE BAND PER LANDSCAPE DWGS
6. BID ALT #5: LIGHT POLES PER ELECTRICAL DWGS w/DRILLED PIER PER 6/S3.1
   SEE LANDSCAPE DWGS FOR LOCATIONS
7. NET POST & FTG, SEE LANDSCAPE DWGS
   SEE 3/S3.1 FOR INSTALLATION THRU PT SLAB
8. NET CENTER STRAP ANCHOR & FTG, SEE LANDSCAPE DWGS
   SEE 5/S3.1 FOR INSTALLATION THRU PT SLAB
9. 4' TALL CHAIN-LINK FENCE
   RAILS ARE TO BE 2"Ø SCH 40 PIPE
   POSTS AND FOOTINGS ARE TO BE PER 1/S3.2

NOTE: EXCAVATIONS / VOIDS IN SOIL RESULTING FROM REMOVAL OF EXISTING CONCRETE FENCE POST PIERS ARE TO BE FILLED WITH A SAND-SLURRY MIX, 200 PSI MIN STRENGTH.

NOTE: MAINTAIN A MINIMUM PIER CENTER TO CENTER SPACING OF 3 x MAX PIER DIAMETER FOR ALL FOOTINGS AT FENCE POSTS, GATE POSTS, LIGHT POLES , & SHADE STRUCTURES.



BALL WALL PARTIAL PLAN
½" = 1'-0"

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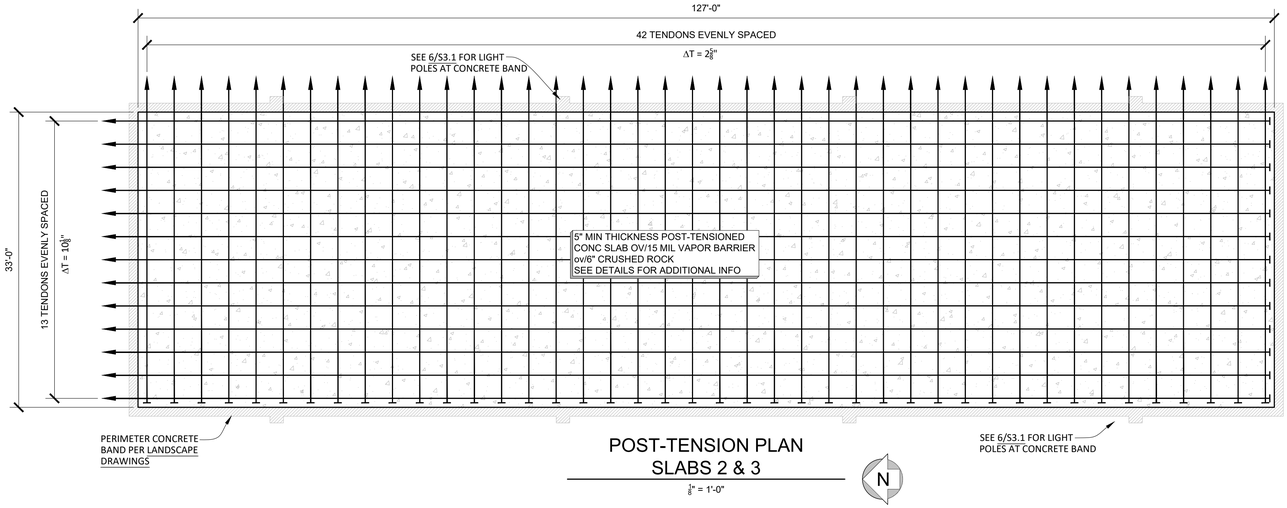
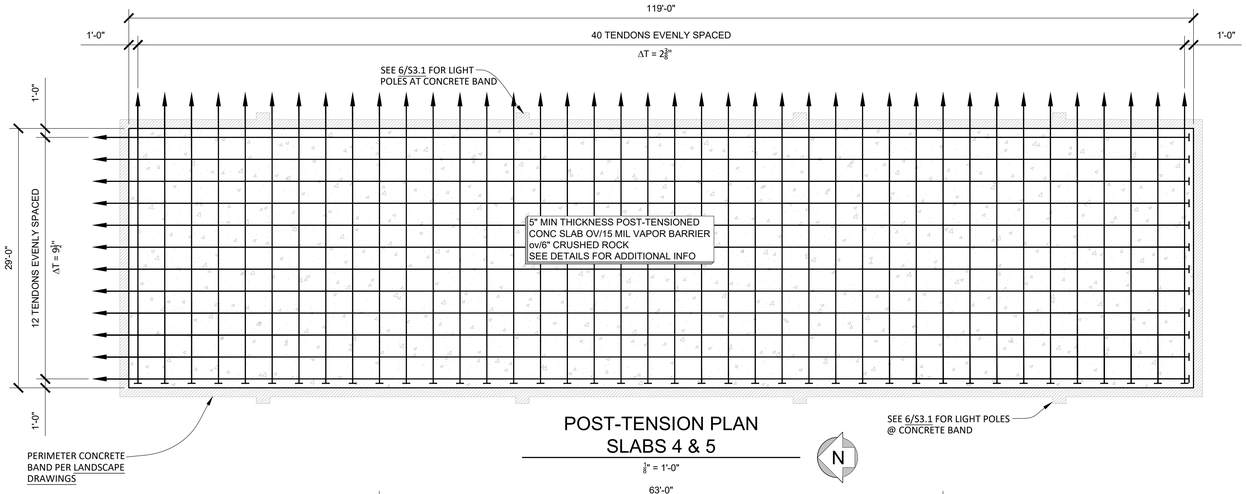


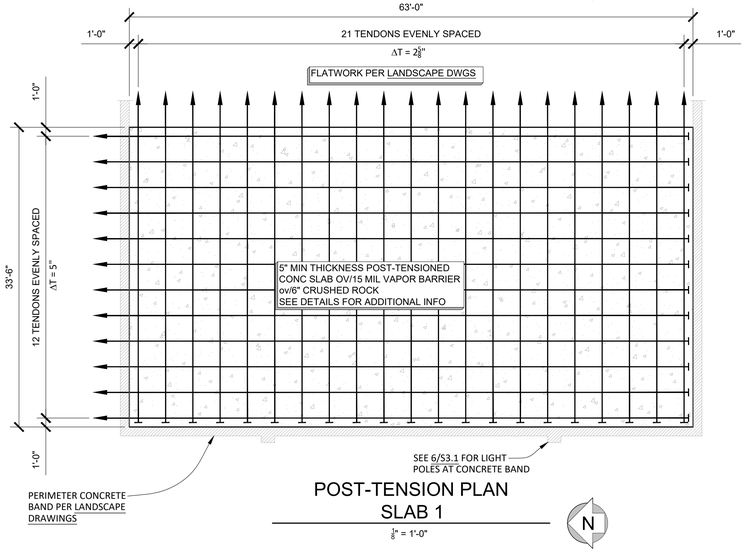
POST-TENSION PLAN
SLABS 2 & 3

⅛" = 1'-0"



POST-TENSION PLAN
SLABS 4 & 5

⅛" = 1'-0"



POST-TENSION PLAN
SLAB 1

⅛" = 1'-0"

POST-TENSION REINFORCEMENT LEGEND:

10T ΔT = 2½" — 10- ½"Ø UNBONDED POST-TENSIONED CABLES W/ESTIMATED ELONGATION

STRESSING END OF PT CABLE

ANCHOR END OF PT CABLE

POST-TENSION NOTES:

1) POST-TENSIONED SLAB SHALL HAVE INSPECTIONS IN ACCORDANCE W/ ACI 318 AND CBC 1705.1 AND SHALL INCLUDE:
   A. TENDON PLACEMENT
   B. INTEGRITY OF PROTECTIVE WRAPPING
   C. INTEGRITY OF ANCHORS
   NOTE: JOB SITE VISITS BY THE EOR DOES NOT CONSTITUTE AN INSPECTION.
2) POST-TENSIONING CABLES SHALL BE UNBONDED LOW RELAXATION STRAND AND SHALL CONFORM TO THE FOLLOWING:
   A. ASTM A416 SEVEN WIRE STRAND
   B. ½"Ø STRAND W/AREA = .153 SQ.IN
   C. ULTIMATE STRENGTH (FPU) = 270 KSI
   D. JACKING STRESS = 216 KSI
   E. ANCHORING STRESS = 189 KSI
   F. EFFECTIVE DESIGN STRESS (FSE) = 175 KSI
3) SHEATHING AROUNDTHE TENDONS SHALL CONSIST OF A DURABLE WATERPROOF POLYETHYLENE PLASTIC TUBING (.04IN THICK, MIN) WHICH WILL CONTAIN A LITHIUM BASED RUST INHIBITING GREASE COATING MEETING THE REQUIREMENTS OF CHAPTER 5 OF THE SPECIFICATION FOR UNBONDED SINGLE STRAND TENDONS. TEARS IN THE SHEATHING SHALL BE REPAIRED AND APPROVED BY THE OWNER'S SPECIAL INSPECTOR. REPAIR TAPE SHALL BE ADHESIVE HIGH DENSITY POLYETHYLENE, 12 MILS MIN THICKNESS.
4) PROVIDE FULLY ENCAPSULATED TENDONS AND ANCHORAGES IN CORROSIVE ENVIRONMENTS.
5) TENDON SUPPLIER TO SUBMIT SHOP DRAWINGS SHOWING TENDON LAYOUT, DEAD ENDS, STRESSING ENDS, AND SUPPORT SYSTEM FOR REVIEW AND APPROVAL BY ENGINEER.
6) TENDON STRESSING SHALL NOT START UNTIL CONCRETE HAS REACHED MINIMUM COMPRESSIVE STRENGTH = 3000 PSI. TENSIONING SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A PERSON EXPERIENCED IN THIS TYPE OF WORK.
7) CONTINUOUS INSPECTION AND RECORDING OF ELONGATIONS IS REQUIRED DURING ALL STRESSING OPERATIONS. THE OBSERVED ELONGATIONS SHALL BE WITHIN -5% OR +7% OF PREDICTED, EXCEPT AS APPROVED BY ENGINEER.
8) TENDON ANCHORAGES SHALL BE RECESSED 1½" (2" @ ENCAPSULATED ANCHORS) AND 2-#4 CONTINUOUS BARS PLACED BEHIND ANCHORS UNO. ANCHORS SHALL BE PAINTED W/RUST INHIBITING PAINT. ALL POCKETS ARE TO BE FILLED W/NON-SHRINK GROUT AFTER STRESSING.
9) WHERE DRILL IN ANCHORS ARE TO BE INSTALLED, CONTRACTOR IS RESPONSIBLE FOR LOCATING AND AVOIDING ALL TENDONS AND ANCHORS DURING DRILLING.
10) REFER TO CONCRETE NOTES AND CONCRETE REINFORCING NOTES ON S0.1 FOR ADDITIONAL REQUIREMENTS.
11) SECURE ALL CABLES @ MID-DEPTH OF SLAB UNO
12) LOCATE FIRST CABLE 12" FROM ADJACENT SLAB EDGE, TYP
13) SEE DETAILS FOR ADDITIONAL REINFORCING

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LOS BANOS, CA

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SHEET TITLE

SLAB PLANS

SHEET

S2.2

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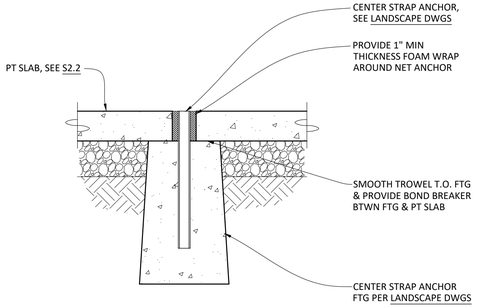
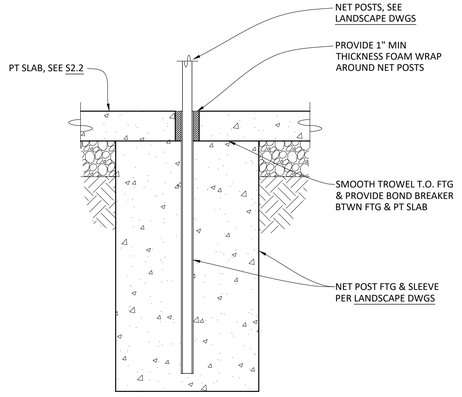


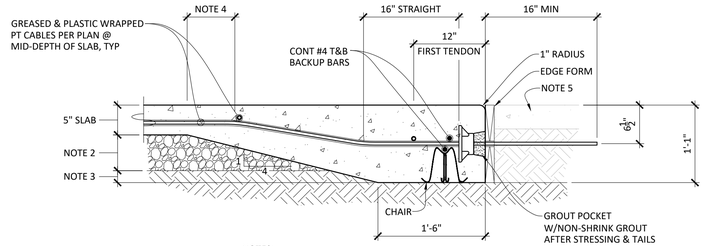
CENTER STRAP ANCHOR THRU SLAB

1" = 1'-0" — 5



NET POST THRU SLAB

1" = 1'-0" — 3

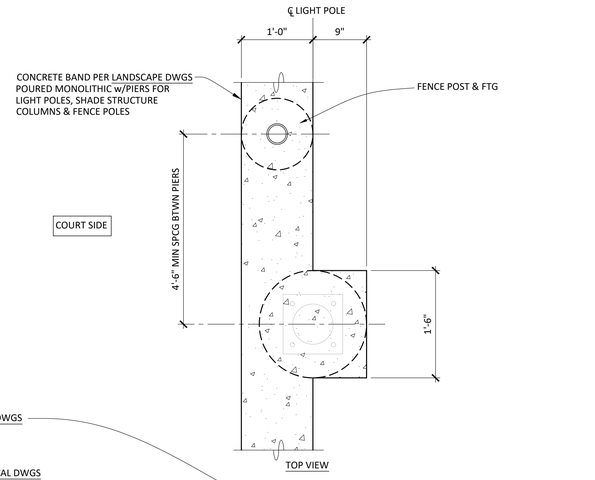


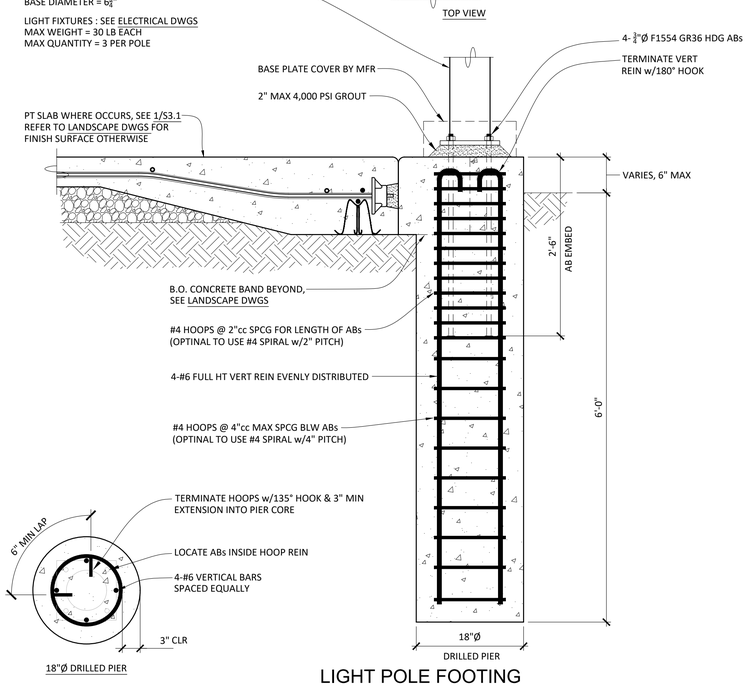
NOTES:

1) STRESSING END SHOWN, SIM @ DEAD END
2) 6" CRUSHED ROCK PER GEOTECH REPORT
3) THICKENED SLAB EDGE TO EXTEND 2" BLW ROCK LAYER
4) 8" MIN STRAIGHT BEFORE TRANSITIONING TENDON
5) CONCRETE BAND OR FLATWORK TO BE FLUSH w/T.O. PT SLAB

SLAB EDGE

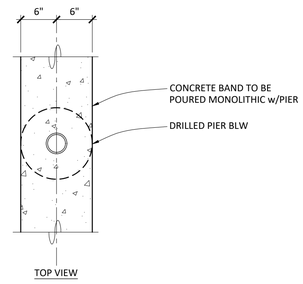
1" = 1'-0" — 1

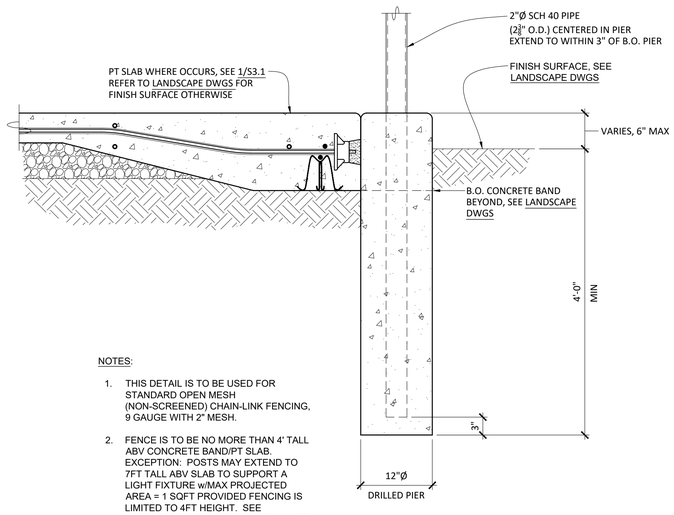




LIGHT POLE FOOTING & ANCHORAGE BID ALT #5

1" = 1'-0" — 6



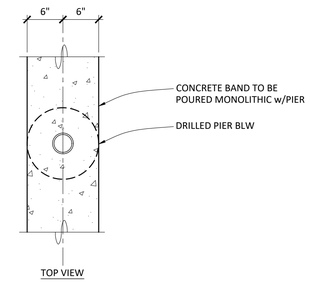


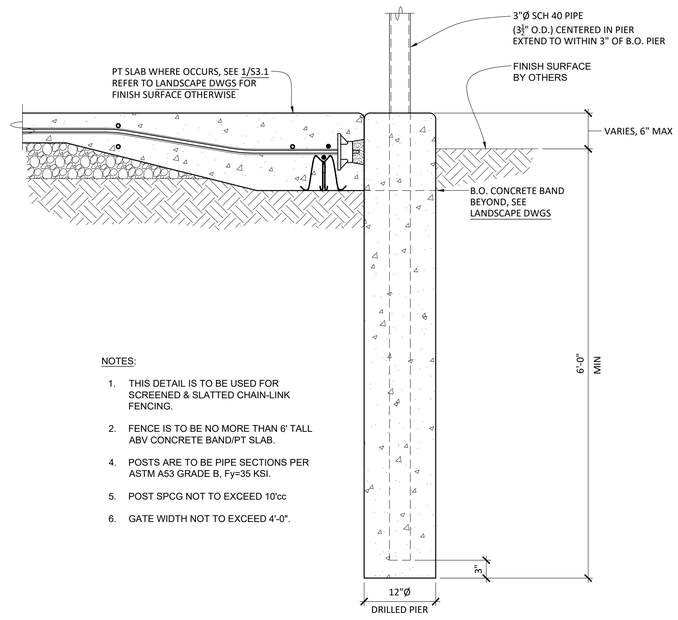
NOTES:

1. THIS DETAIL IS TO BE USED FOR STANDARD OPEN MESH (NON-SCREENED) CHAIN-LINK FENCING, 9 GAUGE WITH 2" MESH.
2. FENCE IS TO BE NO MORE THAN 4' TALL ABV CONCRETE BAND/PT SLAB. EXCEPTION: POSTS MAY EXTEND TO 7FT TALL ABV SLAB TO SUPPORT A LIGHT FIXTURE w/MAX PROJECTED AREA = 1 SQFT PROVIDED FENCING IS LIMITED TO 4FT HEIGHT. SEE LANDSCAPE DWGS FOR LOCATIONS OF 7FT TALL POLES.
4. POSTS ARE TO BE PIPE SECTIONS PER ASTM A53 GRADE B, Fy=35 KSI.
5. POST SPCG NOT TO EXCEED 10'cc
6. GATE WIDTH NOT TO EXCEED 4'-0".

4' TALL CHAIN-LINK FENCE/GATE & FOOTING

1" = 1'-0" — 4





NOTES:

1. THIS DETAIL IS TO BE USED FOR SCREENED & SLATTED CHAIN-LINK FENCING.
2. FENCE IS TO BE NO MORE THAN 6' TALL ABV CONCRETE BAND/PT SLAB.
4. POSTS ARE TO BE PIPE SECTIONS PER ASTM A53 GRADE B, Fy=35 KSI.
5. POST SPCG NOT TO EXCEED 10'cc
6. GATE WIDTH NOT TO EXCEED 4'-0".

6' TALL CHAIN-LINK FENCE/GATE & FOOTING

1" = 1'-0" — 2

RW CONSULTING Engineers Inc
1450 HARBOR BLVD SUITE F
WEST SACRAMENTO, CA 95691
916.229.8345

REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — ROB L. WELDON — No. C 66423 — CIVIL — STATE OF CALIFORNIA

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AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: RLW
CHECKED BY: RLW
SCALE: As Shown

SHEET TITLE

STRUCTURAL DETAILS

SHEET

S3.1

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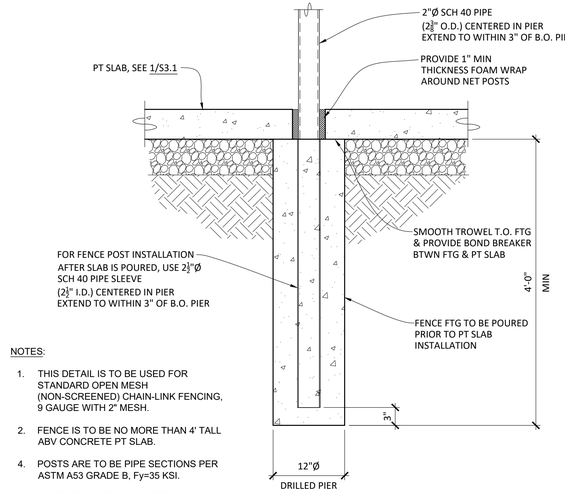
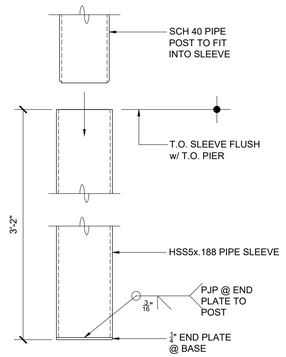


NOTES:

1. THIS DETAIL IS TO BE USED FOR STANDARD OPEN MESH (NON-SCREENED) CHAIN-LINK FENCING, 9 GAUGE WITH 2" MESH.
2. FENCE IS TO BE NO MORE THAN 4' TALL ABV CONCRETE PT SLAB.
4. POSTS ARE TO BE PIPE SECTIONS PER ASTM A53 GRADE B, Fy=35 KSI.
5. POST SPCG NOT TO EXCEED 10'cc
6. GATE WIDTH NOT TO EXCEED 4'-0".

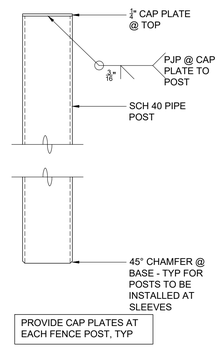
4' TALL CHAIN-LINK FENCE/GATE & FOOTING @ SLAB

1" = 1'-0" — 1



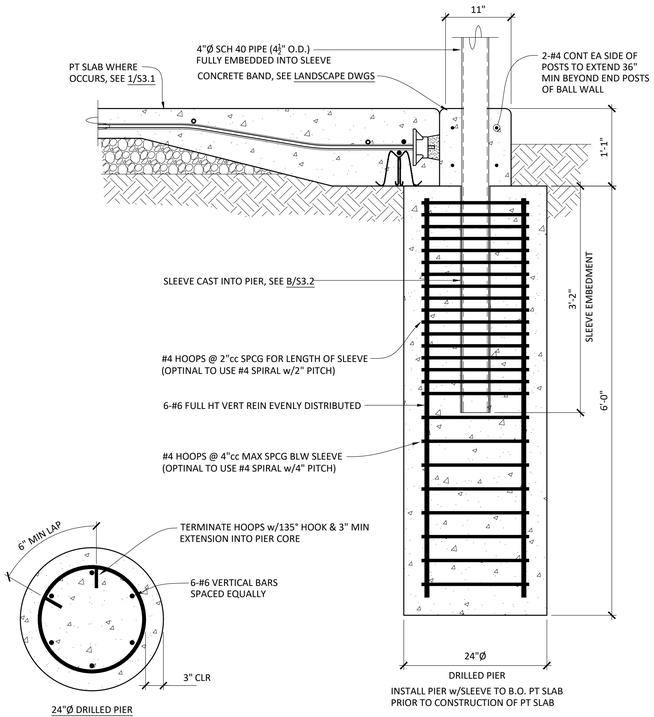
SLEEVE

1½" = 1'-0" — B



POST

1½" = 1'-0" — A



BALL WALL POST & PIER

1" = 1'-0" — 2

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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — ROB L. WELDON — No. C 66423 — CIVIL — STATE OF CALIFORNIA

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AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: RLW
CHECKED BY: RLW
SCALE: As Shown

SHEET TITLE

STRUCTURAL DETAILS

SHEET

S3.2

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GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES AND REGULATIONS. MATERIALS AND EQUIPMENT SHALL BE U.L. LISTED AND LABELED FOR THE APPLICATION.
2. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTION FEES REQUIRED BY THIS CONTRACT WORK.
3. CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO BIDDING AND ALLOW FOR ALL FIELD CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ELECTRICAL WORK NOTED AND CALLED OUT ON ALL CONTRACT DOCUMENTS. THE CONTRACTOR SHALL OBTAIN INFORMATION AND BE FAMILIAR WITH ALL OTHER TRADES WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION BETWEEN OTHER TRADES ON PROJECT.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF PERSONS AND PROPERTY AND SHALL PROVIDE INSURANCE COVERAGE AS NECESSARY FOR LIABILITY AND PERSONAL, PROPERTY DAMAGE, TO FULLY PROTECT THE OWNER, ARCHITECT AND ENGINEER FROM ANY AND ALL CLAIMS RESULTING FROM THIS WORK.
5. CONTRACTOR SHALL MAINTAIN RECORD DRAWINGS AT THE PROJECT SITE INDICATING ALL MODIFICATIONS TO ELECTRICAL SYSTEMS. THE CONTRACTOR SHALL AT THE CONCLUSION OF THE PROJECT PROVIDE ACCURATE "AS-BUILT" DRAWINGS ACCEPTABLE TO THE ARCHITECT.
6. ALL MATERIALS PROVIDED TO THE PROJECT SHALL BE NEW. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND INSTALL ALL INCIDENTAL MATERIALS REQUIRED FOR A COMPLETE INSTALLATION.
7. CONTRACTOR SHALL PROVIDE TO THE CITY'S REPRESENTATIVE A CONSTRUCTION SCHEDULE OF ELECTRICAL WORK. THE CONSTRUCTION SCHEDULE SHALL IDENTIFY ALL SIGNIFICANT MILESTONES WITH COMPLETION DATES.
8. ALL ELECTRICAL EQUIPMENT INSTALLED OUTDOORS SHALL BE WEATHERPROOF. EXTERIOR CONDUITS RUN INTO BUILDINGS SHALL BE INSTALLED WITH FLASHING, CAULKED AND SEALED. CONDUITS FOR EXTERIOR ELECTRICAL DEVICES SHALL BE RUN INSIDE BUILDING UNLESS OTHERWISE NOTED ON DRAWINGS.
9. ALL CONDUITS UNLESS OTHERWISE NOTED ON DRAWINGS SHALL HAVE AS A MINIMUM: TWO (2) #12s WITH ONE (1) #12 GROUND. "TICK" MARKS SHOWN ON CIRCUITRY ARE FOR ROUGH ESTIMATING ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WIRES AND WIRE SIZES REQUIRED BY LATEST CODE.
10. ALL BRANCH CIRCUITS SHALL HAVE INDIVIDUAL NEUTRALS. SHARED NEUTRALS ON MULTIWIRE CIRCUITS IS NOT ALLOWED.
11. ALL 120/277V LIGHT SWITCHES AND WALL OCCUPANT SENSORS SHALL HAVE A NEUTRAL INSTALLED TO THE DEVICE BOX EXCEPT WHERE A CONDUIT OR SURFACE RACEWAY SYSTEM IS INSTALLED.
12. COORDINATE ALL CONDUIT RUNS, ELECTRICAL EQUIPMENT AND PANELS WITH ALL OTHER WORK TO AVOID CONFLICTS.
13. SEE LANDSCAPE DOCUMENTS FOR EXACT PLACEMENT OF LIGHTING FIXTURES AND DEVICES.
14. CONTRACTOR SHALL PROVIDE IN EVERY NEW EMPTY CONDUIT A DRAW STRING FOR USE IN FUTURE CONSTRUCTION.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO EXISTING UNDERGROUND SYSTEMS (GAS, WATER, TELEPHONE, ELECTRICAL, SEWER, ETC.). THE CONTRACTOR SHALL REPAIR & PAY ALL EXPENSES FOR DAMAGE TO EXISTING UNDERGROUND SYSTEMS AS A RESULT OF NEW WORK. REPAIR TO DAMAGED UNDERGROUND SYSTEMS SHALL BE TO THE OWNERS SATISFACTION WITHOUT EXTRA EXPENSE TO THE OWNER.
16. EXISTING WIRING SHOWN HAS BEEN TAKEN FROM OLD PLANS AND IS ASSUMED TO BE CORRECT. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS AND MAKE ADJUSTMENTS TO SUIT ACTUAL CONDITIONS AND TO MEET THE INTENT OF THE CONTRACT DOCUMENTS.
17. CONDUCTOR/WIRING INSULATION LEVELS SHALL BE 600V THHW OR EQUIVALENT, REGARDLESS OF VOLTAGE LEVEL.

ELECTRICAL SYMBOLS & ABBREVIATIONS

SYMBOLS & ABBREVIATIONS SHOWN ARE FOR GENERAL USE. DISREGARD THOSE WHICH DO NOT APPEAR ON THE PLANS.

- FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
- EMERGENCY OR NIGHT LIGHT
- STRIP FLUORESCENT OR LED LUMINAIRE - SEE SCHEDULE
- LUMINAIRE - RECESSED - SEE SCHEDULE
- RECESSED WALL WASHER
- LUMINAIRE - SURFACE MOUNTED - SEE SCHEDULE
- LUMINAIRE - POLE OR POST MOUNTED - SEE SCHEDULE
- LUMINAIRE - WALL MOUNTED SEE SCHEDULE
- BOLLARD OR PATH LIGHT - SEE SCHEDULE
- EXIT LIGHT - DIRECTIONAL ARROWS AS INDICATED - SEE SCHEDULE
- TRACK LIGHTING - SEE SCHEDULE
- EMERGENCY LIGHT
- DIGITAL DUAL TECHNOLOGY OCC. SENSOR
- LIGHTING CONTROL OCCUPANCY SENSOR CORNER MOUNTED
- DRC — DIMMER ROOM CONTROLLER
- PC — PLUG LOAD CONTROLLER
- RC — ROOM LIGHTING CONTROLLER
- LCP — LIGHTING CONTROL PANEL
- DL — DIGITAL DAYLIGHT SENSOR
- $ — SINGLE POLE SWITCH ★★
- $a — SINGLE POLE SWITCH, ★★ a = CIRCUIT CONTROLLED
- $3 — THREE WAY SWITCH★★
- $4 — FOUR WAY SWITCH★★
- $M — MANUAL MOTOR STARTER
- $K — KEY OPERATED SWITCH ★★
- $D — LIGHTING DIMMER★★
- $ — DIGITAL ON/OFF SWITCH ★★
- $D — DIGITAL DIMMER SWITCH ★★
- $SM# — DIGITAL MULTI SCENE LIGHTING SWITCH ★★
- $DS — DIGITAL DUAL TECHNOLOGY WALL OCC. SENSOR ★★
- WALL OCCUPANCY SENSOR ★★
- 2 — DOUBLE SWITCHED WALL OCCUPANCY SENSOR ★★
- DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR ★★
- 2 — 2-BUTTON DIMMING DUAL TECHNOLOGY WALL SWITCH OCCUPANCY SENSOR ★★

- SECURITY DOOR CONTACTS
- MD — SECURITY MOTION DETECTOR
- SC — CCTV CAMERA
- KP — SECURITY SYSTEM KEYPAD
- DOOR BELL PUSHBUTTON
- CH — DOOR CHIME WITH LED
- RECEPTACLE - DUPLEX★
- DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- GFCI CONVENIENCE RECEPTACLE - DUPLEX★
- GFCI CONVENIENCE DUPLEX RECEPTACLE MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- RECEPTACLE DOUBLE DUPLEX★
- HALF SWITCHED DUPLEX RECEPTACLE ★
- SINGLE RECEPTACLE★
- DUPLEX RECEPTACLE - CEILING MOUNTED
- HC — LETTER INDICATES DUPLEX HALF CONTROLLED RECEPTACLE ★
- C — LETTER INDICATES DUPLEX FULLY CONTROLLED RECEPTACLE ★
- FLOOR MOUNTED DUPLEX RECEPTACLE
- FLOOR MOUNTED BOX
- POWER OUTLET - SEE PLANS FOR NEMA TYPE★
- POWER POLE
- WALL TELEPHONE OUTLET ★★
- [#] — VOICE/DATA WALL OUTLET ★
- [#] — VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- [#] — SURFACE MOUNTED VOICE/DATA WALL OUTLET ★
- [#] — SURFACE MOUNTED VOICE/DATA OUTLET MOUNTED ABOVE COUNTER - FIELD VERIFY HEIGHT
- WIRELESS ACCESS POINT (WAP) - CEILING MOUNTED
- WIRELESS ACCESS POINT (WAP) - WALL MOUNTED - FIELD VERIFY HEIGHT
- [#] — VOICE/DATA OUTLET - FLOOR MOUNTED
- TV OUTLET★
- [#] — VOICE/DATA OUTLET - CEILING MOUNTED
- S — INTERIOR SPEAKERS CEILING MOUNTED
- HS — INTERIOR SPEAKERS WALL MOUNTED
- HC — CLOCK +8'-0" AFF U.O.N. VERIFY BEFORE INSTALLATION

- PANELBOARD - FLUSH MOUNTED
- EQUIPMENT PANEL - FLUSH MOUNTED
- PANELBOARD - SURFACE MOUNTED
- EQUIPMENT PANEL - SURFACE MOUNTED
- M — METER W/ CURRENT TRANSFORMER
- J/HJ — JUNCTION BOX - CEILING OR WALL MOUNTED, SIZE PER CODE, TAPE AND TAG WIRES
- MOTOR CONNECTION
- NON-FUSED DISCONNECT SWITCH
- FUSED DISCONNECT SWITCH; FUSED WITH DUAL-ELEMENT FUSES SIZED PER EQUIPMENT MFGR'S NAMEPLATE DATA
- COMBINATION STARTER/FUSED DISCONNECT SWITCH; FUSED DISCONNECT SWITCH ELEMENT FUSES SIZED PER EQUIPMENT MFGRS NAMEPLATE DATA
- MAGNETIC STARTER - NEMA SIZE INDICATED NEMA 3R ENCLOSURE UNLESS OTHERWISE SPECIFIED
- CIRCUIT BREAKER
- GROUND ROD WITH GROUNDWELL BOX
- GROUND ELECTRODE
- NORMALLY OPEN CONTACT
- NORMALLY CLOSED CONTACT
- TRANSFORMER - SEE SINGLE LINE FOR SIZE
- PULLBOX
- ERMS
- FLEX CONDUIT WITH CONNECTION
- CONDUIT - UP
- CONDUIT - DOWN
- E — CONDUIT EMERGENCY SYSTEM
- LV — LOW VOLTAGE WIRING
- SURFACE METAL OR NON-METALLIC RACEWAY
- CONDUIT - CONCEALED IN WALLS OR CEILING
- CONDUIT - EXISTING
- CONDUIT - BELOW SLAB OR UNDERGROUND: 3/4"MIN.
- CAPPED OR STUB-OUT CONDUIT
- CONDUIT CONTINUATION
- #10 — CONDUIT - HOME RUN TO PANEL, TERMINAL CABINET, ETC. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF #12 AWG WIRES WHEN MORE THAN TWO. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE. CROSS HATCHES WITH NUMBER ADJACENT INDICATES WIRE SIZE OTHER THAN #12 AWG.
- 2 — SHEET NOTE REFERENCE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET
- 3 — SCHEDULE SYMBOL; SEE ASSOCIATED NOTE ON SAME SHEET

- 2 — DETAIL NOTE REFERENCE SYMBOL SEE ASSOCIATED NOTE ON SAME DETAIL
- F301 — FEEDER DESIGNATION: SEE ASSOCIATED NOTE ON SAME DETAIL
- 1 / E3.0 — DETAIL NUMBER / DETAIL OR SECTION REFERENCE / SHEET NUMBER
- 1 / 2 — INDICATES QUANTITY OF TELEPHONE OUTLETS / INDICATES QUANTITY OF DATA OUTLETS

ABBREVIATIONS

A	AMPERE	GFCI	GROUND FAULT	NTS	NOT TO SCALE
AFF	ABOVE FINISHED FLOOR	GFI	INTERRUPTING	OAH	OVERALL HEIGHT
ALUM/AL	ALUMINUM	GND, G	GROUND	OC	ON CENTER
ARCH	ARCHITECT	GRS	GALVANIZED RIGID STEEL	OH	OVERHEAD
AWG	AMERICAN WIRE GAUGE	HT	HEIGHT	OFCI	OWNER FURNACED CONTRACTOR INSTALLED
BKR	BREAKER	IC	INTERCOM	PA	PUBLIC ADDRESS
C	CONDUIT	IDF	INTERMEDIATE DISTRIBUTION FRAME	PB	PULL BOX
CATV	CABLE TV			PF	POWER FACTOR
CB	CIRCUIT BREAKER	INCAND	INCANDESCENT	PH	PHASE
CCTV	CLOSED CIRCUIT TV	JB	JUNCTION BOX	PIR	PASSIVE INFRARED
CKT	CIRCUIT	KV	KILOVOLT	PNL	PANEL
CL	CENTER LINE	KVA	KILOVOLT AMPERES	PV	PHOTOVOLTAIC
CLG	CEILING	KW	KILOWATT	PVC	POLYVINYL CHLORIDE
C.O.	CONDUIT ONLY	LCP	LIGHTING CONTROL PANEL	PWR	POWER
CTR	CENTER	LTG	LIGHTING	(R)	EXISTING TO BE REMOVED
D	DIMMER	LV	LOW VOLTAGE	(RP)	REMOVABLE POLE
DIM	DIMENSION	KCM	THOUSAND CIRCULAR MILS	RECPT'S	RECEPTACLES
DIST	DISTRIBUTION			REQD	REQUIRED
(E)	EXISTING	M.B.	MAIN CIRCUIT BREAKER	REQMT'S	REQUIREMENT(S)
EC	ELECTRICAL CONTRACTOR	MCA	MINIMUM CIRCUIT AMPS	SHT	SHEET
(EL)	EVENING LIGHT	MDF	MAIN DISTRIBUTION FRAME	SLD	SINGLE LINE DIAGRAM
EM	EMERGENCY	MECH	MECHANICAL	STC	SYSTEMS TERMINATION CABINET
EMT	ELECTRICAL METALLIC TUBING	MH	METAL HALIDE	SW	SWITCH
ERMS	ENERGY REDUCTION MAINTENANCE SWITCH	MLO	MAIN LUGS ONLY	SWBD	SWITCHBOARD
		MPOE	MAIN POINT OF ENTRANCE	TTB	TELEPHONE TERMINAL BACKBOARD
EQUIP	EQUIPMENT	MTD	MOUNTED	TYP	TYPICAL
EV	ELECTRICAL VEHICLE	MTG	MOUNTING	UON	UNLESS OTHERWISE NOTED
FA	FIRE ALARM	MOCP	MAXIMUM OVER CURRENT PROTECTION	UG	UNDERGROUND
FACP	FIRE ALARM CONTROL PANEL	(N)	NEW	V	VOLT
FC	FOOT CANDLE	NIC	NOT IN CONTRACT	VD	VOLTAGE DROP
FIN	FINISH	NIEC	NOT IN ELECTRICAL CONTRACT	W	WATT
FL	FLOOR	(NL)	NIGHT LIGHT	W/	WITH
FLA	FULL LOAD AMPS	NO.	NUMBER	WP	WEATHERPROOF
FLUOR (F)	FLUORESCENT FUTURE	NOM	NOMINAL	XFMR	TRANSFORMER
GC	GENERAL CONTRACTOR				

★ +15" A.F.F. TO BOTTOM OF BOX, U.O.N.
★★ +48" A.F.F. TO TOP OF BOX, U.O.N.
[#] NUMBER IN BRACKETS DENOTES NUMBER OF CABLE DROPS WHEN MORE THAN (2).

LIGHT FIXTURE SCHEDULE

FIXTURE NOTES:

1. ALL LED LIGHT FIXTURE DRIVERS SHALL BE ELECTRONIC TYPE, 10% TOTAL HARMONIC DISTORTION MAXIMUM.
2. ALL LED LIGHT MODULES SHALL BE ENERGY SAVING 3500° K, 80 CRI MINIMUM, U.O.N. (SEE SPECIFICATIONS FOR MORE INFORMATION).
3. ALL LED DRIVERS (AND ASSOC. FIXTS.) SHALL HAVE MANUFACTURER'S CERTIFICATION OF COMPLIANCE WITH CALIFORNIA ENERGY COMMISSION STANDARDS AND REQUIREMENTS, WHERE SUCH ARE USED IN CONDITIONED SPACES.

TYPE	DESCRIPTION	LAMPS	MANUFACTURER	QUANTITY
XA	31.3" X 13 ½" LED SPORTS LIGHTING FIXTURE DIE CAST HOUSING ONE PIECE SIILICONE OPTICS FOR COURT LIGHTING. STANDARD UNIVERSAL VOLTAGE DRIVER. INSTALL AMERON CONCRETE POLE WITH CUSTOM FACTORY TENON WITH CONVERSION KIT TO ALLOW FOR LSI FIXTURES TO BE INSTALLED AT 20 FEET HIGH AND ADDITIONAL KNOCKOUT/MOUNTING PLATE AT +16 FEET HIGH FOR FIXTURE TYPE "XC" PATHWAY LIGHT FIXTURE TO BE MOUNTED TO SAME POLE. 5" DIA 20', 01.188 THICK CONCRETE POLE. FINISH PER ARCH/CITY.	213W 3000°K LED	LSI INDUSTRIES OUTDOOR SPORTS LIGHTING ZNL SERIES POLE: AMERON SERIES 1C6/0C6 CONCRETE	32
XB	SAME AS FIXTURE TYPE 'XA', EXCEPT DUAL HEAD.	426W 3000°K LED	LSI INDUSTRIES OUTDOOR SPORTS LIGHTING ZNL SERIES	2
XC	POLE MOUNTED LED FIXTURE, 48 LEDS, TYPE 2 DISTRIBUTION, INTEGRAL WITH #3 LENS MOTION SENSING.	60W 3000°K LED	GARDCO PUREFORM P26 SERIES	11

APPLICABLE CODES & STANDARDS

CODES:

1. 2022 CALIFORNIA ADMINISTRATIVE CODE C.A.C., PART 1, TITLE 24, C.C.R.
2. 2022 CALIFORNIA BUILDING CODE (CBC) C.C.R., TITLE 24, VOL. 1 & 2 BASED ON THE 2021 INTERNATIONAL BUILDING CODE (IBC) WITH CALIFORNIA AMENDMENTS.
3. 2022 CALIFORNIA RESIDENTIAL CODE C.C.R., TITLE 24, PART 2.5 BASED ON THE 2021 INTERNATIONAL RESIDENTIAL CODE WITH CALIFORNIA AMENDMENTS.
4. 2022 CALIFORNIA ELECTRICAL CODE (CEC) C.C.R., TITLE 24, PART 3 BASED ON THE 2020 NATIONAL ELECTRICAL CODE (NEC) WITH CALIFORNIA AMENDMENTS.
5. 2022 CALIFORNIA MECHANICAL CODE (CMC) C.C.R., TITLE 24, PART 4 BASED ON THE 2021 UNIFORM MECHANICAL CODE (UMC) WITH CALIFORNIA AMENDMENTS.
6. 2022 CALIFORNIA PLUMBING CODE (CPC) C.C.R., TITLE 24, PART 5 BASED ON THE 2021 UNIFORM PLUMBING CODE (UPC) WITH CALIFORNIA AMENDMENTS.
7. 2022 CALIFORNIA ENERGY CODE C.C.R., TITLE 24, PART 6.
8. 2022 CALIFORNIA FIRE CODE (CFC) C.C.R., TITLE 24, PART 9 BASED ON THE 2021 INTERNATIONAL FIRE CODE (IFC) WITH CALIFORNIA AMENDMENTS.
9. 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE C.C.R., TITLE 24, PART 11.
10. 2022 CALIFORNIA REFERENCED STANDARDS CODE C.C.R., TITLE 24, PART 12.
11. TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.
12. NATIONAL FIRE ALARM CODE (NFPA 72) 2022.
13. CITY OF LOS BANOS ORDINANCES, CODES, AND REGULATIONS.

STANDARDS:

1. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
2. ELECTRONICS INDUSTRIES ASSOCIATION (EIA)
3. INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)
4. NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)
5. NATIONAL ELECTRICAL TESTING ASSOCIATION (NETA)
6. UNDERWRITER LABORATORIES (UL)
7. CALIFORNIA OCCUPATIONAL SAFETY AND HEALTH ACT STANDARDS (CAL/OSHA)

SHEET INDEX

E001	SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX.
E101	ELECTRICAL SINGLE LINE DIAGRAM.
E201	ELECTRICAL SITE PLAN.
E501	LIGHTING PLAN - PHOTOMETRICS PLAN
E601	ELECTRICAL DETAILS.
E602	LIGHTING CONTROL DIAGRAM.
E701	ELECTRICAL SPECIFICATIONS.

SCOPE OF WORK

1. ADD NEW PANEL FROM (E) ELECTRICAL SOURCE AND LIGHTING CONTROLS FOR NEW PICKLE BALL COURT LIGHTING.
2. RE-ROUTE (E) PG&E PRIMARY FEEDER OUTSIDE THE AREA OF THE PICKLEBALL CONSTRUCTION ZONE.

AUBURN CONSULTING ENGINEERS
MONTEREY BAY, INC.
Project No. 24-040.00
1796 Technology Dr. • Suite 242 • San Jose, CA 95110
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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER — NAJIB ANWARY — No. E21043 EXP. 3/31/25 — ELECTRICAL — STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 24-040.00
DRAWN BY: JP
CHECKED BY: NA
SCALE: As Shown

SHEET TITLE
SYMBOLS, ABBREVIATIONS, LIGHT FIXTURE SCHEDULE, CODES, STANDARDS, NOTES & SHEET INDEX

SHEET
E001

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PANELBOARD SCHEDULE

Voltage:	120/240V,1ø
Wire:	3W
Type:	NEMA 3R
Mains:	60/2

PANEL LLP (1) (2)

Bussing:	60A
Feed:	BOTTOM
Mounting:	SURFACE
A.I.C.	10,000

Load	A	B	Bkr	Ck	ab	Ck	Bkr	A	B	Load
IRRIGATION CONTROLS	200		20/1	1		2	20/1	500		LIGHTING CONTROL PANEL
RECEPT. IN CABINET		180	20/1	3		4	20/1			SPARE
COURT 1-3 PUSH BUTTON CONTROL	500		20/1	5		6	20/1			SPARE
COURT 4-5 PUSH BUTTON CONTROL		500	20/1	7		8	20/1			SPACE ONLY
COURT 6-7 PUSH BUTTON CONTROL	500		20/1	9		10	20/1			SPACE ONLY
COURT 8-9 PUSH BUTTON CONTROL		500	20/1	11		12	20/1			SPACE ONLY
	1200	1180						500	0	

(1) SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
(2) LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	1.7
KVA Phase B	1.2

Total Load KVA	2.9
Total Load Amperes	12

Voltage:	277/480V,3ø
Wire:	4W
Type:	NEMA 3R
Mains:	100/3

PANEL PHL (1) (2)

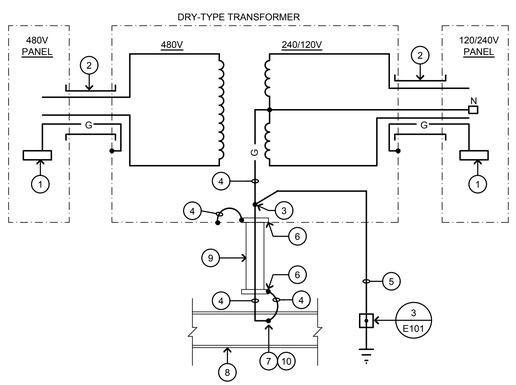
Bussing:	100A
Feed:	BOTTOM
Mounting:	SURFACE
A.I.C.	42,000

Load	A	B	C	Bkr	Ck	abc	Ck	Bkr	A	B	C	Load
COURT LIGHTS 1	852			20/1	1		2	20/1				SPARE
COURT LIGHTS 2		852		20/1	3		4	20/1				SPARE
COURT LIGHTS 3			852	20/1	5		6	20/1				SPARE
PATHWAY LIGHTING	180			20/1	7		8	20/1				SPARE
COURT LIGHTS 4		852		20/1	9		10	20/1				SPARE
COURT LIGHTS 5			852	20/1	11		12	20/1				SPARE
PATHWAY LIGHTING	240			20/1	13		14	20/1				SPARE
COURT LIGHTS 6		852		20/1	15		16	20/1				SPARE
COURT LIGHTS 7			852	20/1	17		18	20/1				SPARE
PATHWAY LIGHTING	120			20/1	19		20	20/1				SPARE
COURT LIGHTS 8		852		20/1	21		22	-				SPACE ONLY
COURT LIGHTS 9			852	20/1	23		24	-				SPACE ONLY
PATHWAY LIGHTING	180			20/1	25		26	-				SPACE ONLY
SPACE ONLY				-	27		28	30/2		1700		TRANSFORMER "T1"
SPACE ONLY				-	29		30				1180	
	1572	3408	3408						0	1700	1180	

(1) SUBMITTAL SHALL MATCH EXACT BREAKER LOCATIONS SHOWN.
(2) LABEL PANEL FOR SHORT CIRCUIT AMPS AVAILABLE PER CEC 110-24.

KVA Phase A	1.6
KVA Phase B	5.1
KVA Phase C	4.6

Total Connected Load KVA	11.3
Total Load Amperes	14

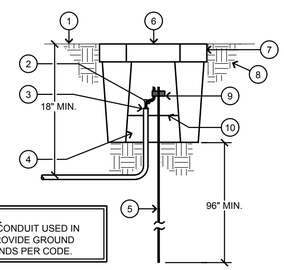


DETAIL NOTES:

1. PANEL OR SWITCHBOARD EQUIPMENT GROUND BUS.
2. CONDUIT WITH SEAL-TITE FLEX CONNECTION TO TRANSFORMER.
3. TRANSFORMER CASE BOND.
4. BARE COPPER GROUND PER CEC 250-66.
5. 1"C. WITH BARE COPPER GROUNDING ELECTRODE CONDUCTOR; SEE SINGLE LINE DIAGRAM 1/E1.1 FOR REQUIREMENTS.
6. GROUNDING BUSHINGS.
7. EXOTHERMIC WELD CONNECTION.
8. BUILDING STEEL STRUCTURE FRAMING.
9. ELECTRICAL METALLIC TUBING (EMT).
10. METAL WATER PIPE PER CEC 250.30 OR OTHER ELECTRODES PER CEC 250.50 IF BUILDING STEEL OR WATER PIPE ARE NOT AVAILABLE.

4 DRY TYPE XFMR GROUNDING DETAIL - SINGLE PHASE

NO SCALE



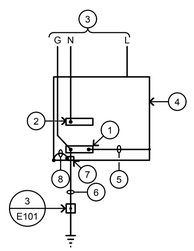
GENERAL NOTE:
WHERE METAL CONDUIT USED IN LIEU OF PVC, PROVIDE GROUND BUSHINGS & BONDS PER CODE.

DETAIL NOTES:

1. FINISHED GRADE.
2. GROUND CONDUCTOR.
3. SEAL CONDUIT WATERTIGHT.
4. GROUT BOTTOM MINIMUM 3".
5. ¾" x 10'-0" COPPER CLAD GROUND ROD.
6. LID LABELED "GROUND ROD".
7. CHRISTY "F8" GROUND ROD BOX.
8. UNDISTURBED EARTH.
9. GROUND CLAMP.
10. COAT ALL INSIDE SURFACES WITH SEALANT.

3 GROUND ROD BOX DETAIL

NO SCALE



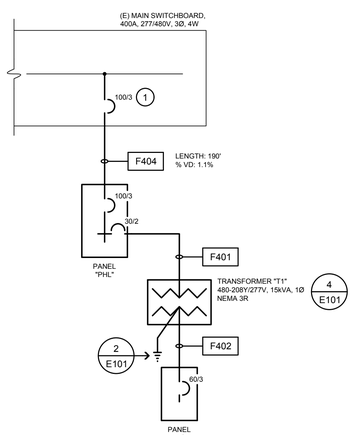
DETAIL NOTES:

1. GROUND BUS.
2. NEUTRAL BUS.
3. TO TRANSFORMER OR MAIN SWITCHBOARD.
4. DISTRIBUTION PANEL.
5. EQUIPMENT BONDING JUMPER SUPPLIED WITH PANEL INSTALLED BY CONTRACTOR.
6. 1" SCHEDULE 80 PVC CONDUIT [WITH 1 (#4) (#2) (#1/0) (#2/0) (#3/0) GROUNDING ELECTRODE CONDUCTOR] [SEE SINGLE LINE DIAGRAM1/E1.1 FOR GROUNDING ELECTRODE CONDUCTOR REQUIREMENTS].
7. BARE COPPER GROUND PER CEC 250-66.
8. GROUNDING BUSHING.

GENERAL NOTE:
IF AVAILABLE ON THE PREMISES AT EACH BUILDING OR STRUCTURE SERVED EACH OF THE FOLLOWING SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM:
a. METAL COLD WATER PIPE,
b. METAL FRAME OF BUILDING,
c. GROUND RING,
d. OTHER ELECTRODES PER CEC 250.50

2 DISTRIBUTION PANEL GROUNDING

NO SCALE



DETAIL NOTES:

1. PROVIDE AND INSTALL NEW BREAKER AND ALL NECESSARY MOUNTING HARDWARE; NEW BREAKER SHALL MATCH EXISTING IN TYPE AND RATING.

FEEDER SCHEDULE

DESIGNATION	AMPACITY	CONDUIT & CONDUCTORS SIZES
F401	30	3/4" C., 2 #8 & 1 #10 GND.
F402	50/60	1" C., 3 #6 & 1 #10 GND.
F404	100	1 1/2" C., 4 #2 & 1 #8 GND.

SINGLE LINE DIAGRAM LEGEND

(EXISTING)
(NEW)

1 SINGLE LINE DIAGRAM

NO SCALE

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EXP. 3/31/25
ELECTRICAL
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 24-040.00
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SCALE: As Shown

SHEET TITLE
ELECTRICAL SINGLE LINE DIAGRAM

SHEET
E101

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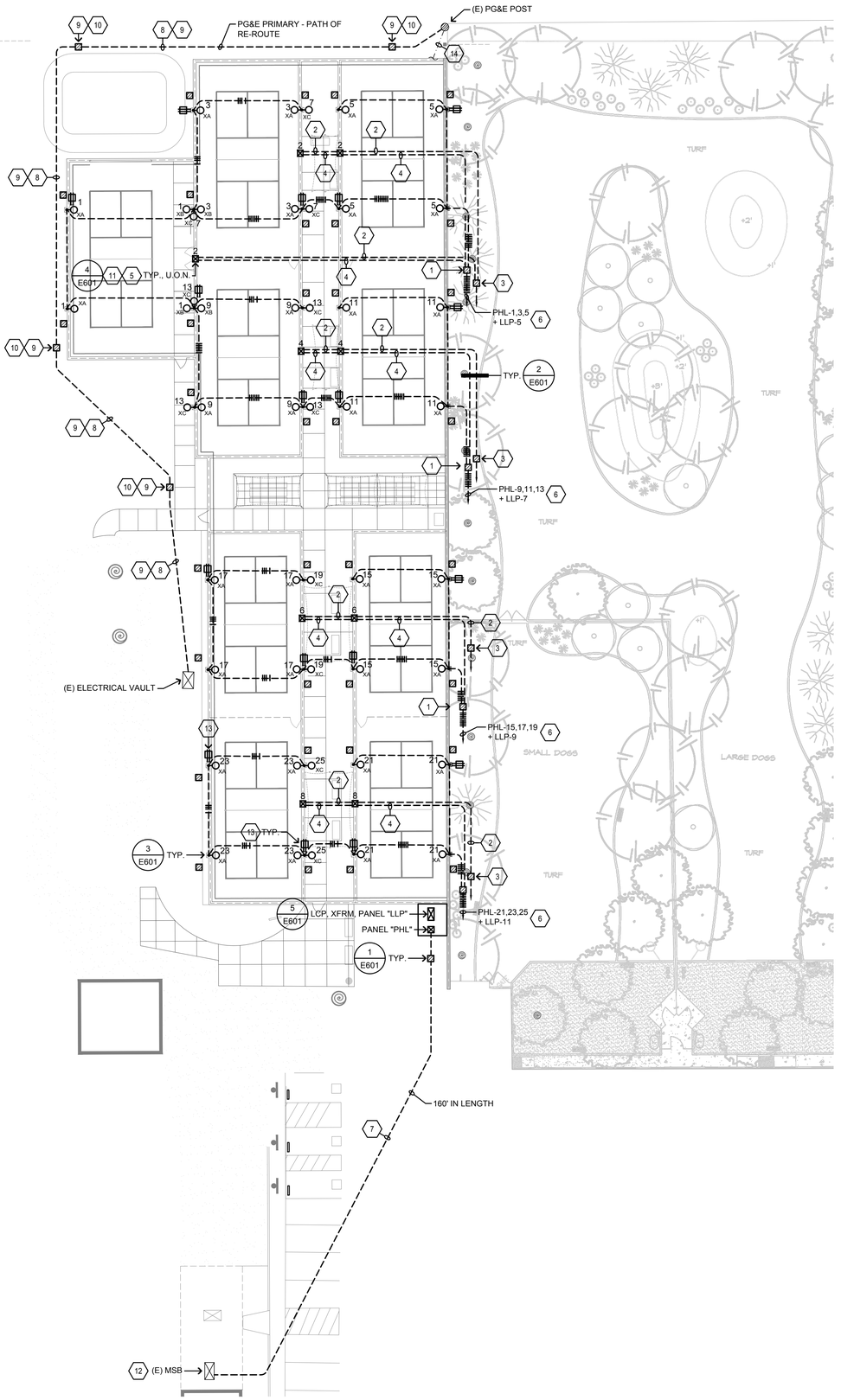

SHEET NOTES

1. INSTALL IN-GRADE CHIRSTY #N16 PULL BOX, LID LABELED "LIGHTING".
2. PROVIDE & INSTALL 1 ½"C. WITH LOW VOLTAGE CONTROL WIRES FOR CONTROLS.
3. PROVIDE & INSTALL IN-GRADE CHRISTY #N16 PULL BOX, LID LABELED "CONTROLS".
4. PROVIDE & INSTALL ¾"C. WITH 2 #10 & 1 #10 GND FOR POWER FOR BEACON LIGHT AT PUSH BUTTON CONTROLS MAINTAIN LOW VOLTAGE & LOW VOLTAGE SEPARATION.
5. PROVIDE & INSTALL SQUARE D PUSH BUTTON. INSTALL FLIP UP/OPERABLE WEATHERPROOF COVER OVER PUSH-BUTTON.
6. HOMERUN & CIRCUIT FIXTURE TYPE "XC" VIA TIMECLOCK/LIGHTING CONTROLLER.
7. SEE 1/E101 FOR FEEDER SIZES & REQUIREMENTS.
8. CONTRACTOR SHALL PROVIDE AND INSTALL 4" C.O. FOR PG&E PRIMARY FROM EXISTING PG&E POLE TO EXISTING PG&E PULLBOX LOCATED NEAR PG&E TRANSFORMER. ROUTE NEW PRIMARY CONDUIT VIA NEW PULLBOXES WHERE NECESSARY FOR CONDUIT BENDS.
9. INSTALL PER PG&E RULES, REGULATIONS AND STANDARDS.
10. INSTALL PG&E PRIMARY PULLBOX.
11. MOUNT NEAR/ADJACENT TO FENCE, OUT OF PLAY AREA.
12. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY FITTING/X-RAY OF EXISTING PAD TO STUB NEW FEEDER CONDUIT OUT FROM EXISTING MSB TO NEW PAD/PANELS. WHERE NECESSARY; CONTRACTOR SHALL (AS A SECONDARY OPTION, WITH CITY APPROVAL) INSTALL A 30" SQ X 12" DEEP, NEMA 3R PULL CAN ON SIDE OF EXISTING MSB WHERE EXITING FROM UNDERNEATH IS NOT FEASIBLE AND SEAL ALL PENETRATION, WATERPROOF.
13. INSTALL AMERON POLE WITH INTEGRAL GFCI, 20 AMP, 120V RECEPTACLE, CONNECT VIA ¾" C., 2 #10 AND 1 #10 GND BACK TO PANEL "LLP".
14. CONTRACTOR SHALL DEMOLISH EXISTING PG&E PRIMARY UNDERGROUND; COORDINATE WITH PG&E FOR DISCONNECT/REMOVAL.

GENERAL NOTES:

A. CONTRACTOR SHALL LOCATE ALL (E) UNDERGROUND UTILITIES PRIOR TO TRENCHING AND TAKE CAUTION TO AVOID DAMAGE DURING TRENCHING. HAND TRENCH IF NECESSARY. CONTRACTOR SHALL MAKE ALL REPAIRS TO DAMAGED UTILITIES AT NO CHARGE TO OWNER.

B. ALL WIRING FOR SPORTS LIGHTING SHALL BE #8 AWG MINIMUM, IN 1 ¼"C., U.O.N. (INCLUDING #8 GND).

C. ALL UTILITIES (PG&E AND CATV) ARE SHOWN IN SCHEMATIC FORM ONLY. CONTRACTOR SHALL VERIFY EXACT REQUIREMENTS WITH UTILITY COMPANY ENGINEERED DRAWINGS PRIOR TO START OF CONSTRUCTION AND PROVIDE FACILITIES ACCORDINGLY.

D. ELECTRICAL WORK SHOWN IN PLANTING AREA IN DOG PARK FOR DIAGRAMMATIC PURPOSES ONLY. COORDINATE WITH CITY'S REPRESENTATIVE TO LOCATE ELECTRICAL WORK AWAY FROM EXISTING PLANTING AND IRRIGATION WHERE POSSIBLE.

E. THE PROPOSED PRIMARY UTILITY RELOCATION IS "PRELIMINARY" SUBJECT TO FINAL UTILITY DESIGN. FOR THE PURPOSES OF THE BID PROPOSAL, THE CONTRACTOR SHALL PREPARE THEIR BID BASED ON THE RELOCATION SHOWN ON THE PLANS. THE CITY WILL ISSUE A CHANGE ORDER SHOULD THE ACTUAL RELOCATION REQUIREMENTS DEVIATE SIGNIFICANTLY FROM WHAT IS SHOWN ON THE PLANS; IN TERMS OF QUANTITY OF PULL BOXES, CONDUITS AND FITTINGS. THE RELOCATION WORK AND MATERIAL SHALL BE CONSTRUCTED IN ACCORDANCE WITH PG&E GREENBOOK STANDARDS 2022-2023 ADDITION. PG&E SHALL BE RESPONSIBLE ALL RE-CONDUCTORING AND SPLICING AS APPLICABLE.

F. ALL LINE VOLTAGE WIRES/FEEDER CABLES/CONDUCTORS SHALL BE 600V RATED/INSULATION.

BID ALTERNATE NOTES:

1. UNLESS OTHERWISE NOTED IN NOTES #2 THROUGH #4 BELOW; AS PART OF BASED BID, ALL UNDERGROUND INFRASTRUCTURE INCLUDING, BUT NOT LIMITED TO: PULL BOXES, ELECTRICAL CONDUITS/PG&E BOXES AND CONDUITS, CONTROLS CONDUITS SHALL BE INSTALLED COMPLETE AND STUBBED TO PULL BOXES CLOSEST TO FINAL POINTS OF CONNECTIONS (I.E., FUTURE PAD HOUSING PANEL PHL AND TIMER/CONTRACTORS/RELAYS CABINET).
2. ALL POLE LIGHTS (AND ASSOCIATED POLE BASES) SHALL BE BID ALTERNATE #5 SCOPE.
3. ALL POLE LIGHTS PUSH-BUTTON CONTROLLERS SHALL BE BID ALTERNATE #5SCOPE.
4. NEW CONCRETE PAD FOR PANEL PHL AND LIGHTING CONTROLS CABINET SHALL BE BID ALTERNATE #5 SCOPE.
5. ALL WIRING/LOW VOLTAGE AND LINE VOLTAGE CABLES TO/FROM THE NEW CONCRETE PAD/PANELS/CONTROLS SHALL BE INSTALLED AS PART OF BID ALTERNATE #5 SCOPE.

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STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 24-040.00
DRAWN BY: JP
CHECKED BY: NA
SCALE: As Shown

SHEET TITLE
ELECTRICAL SITE PLAN

20' 0' 10' 20'
SCALE: 1"=20'-0"

NORTH

SHEET
E201

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The light levels shown are maintained using a .94 light loss factor (LLF). Light loss factors are used to adjust the light output of a luminaire operating in a controlled laboratory environment to the output obtained under actual field conditions. The LLF used in these calculations includes both recoverable and non-recoverable factors. Recoverable factors include luminaire dirt depreciation (LDD). Non-recoverable factors include optical system variations, and depreciation in initial luminaire lumen output. The use of the light loss factor shown requires making certain assumptions about the lighting system, the specific application, and the maintenance of the system over time. Therefore, actual light levels measured in the field may vary from the calculated values, especially in regards to individual location measurements.

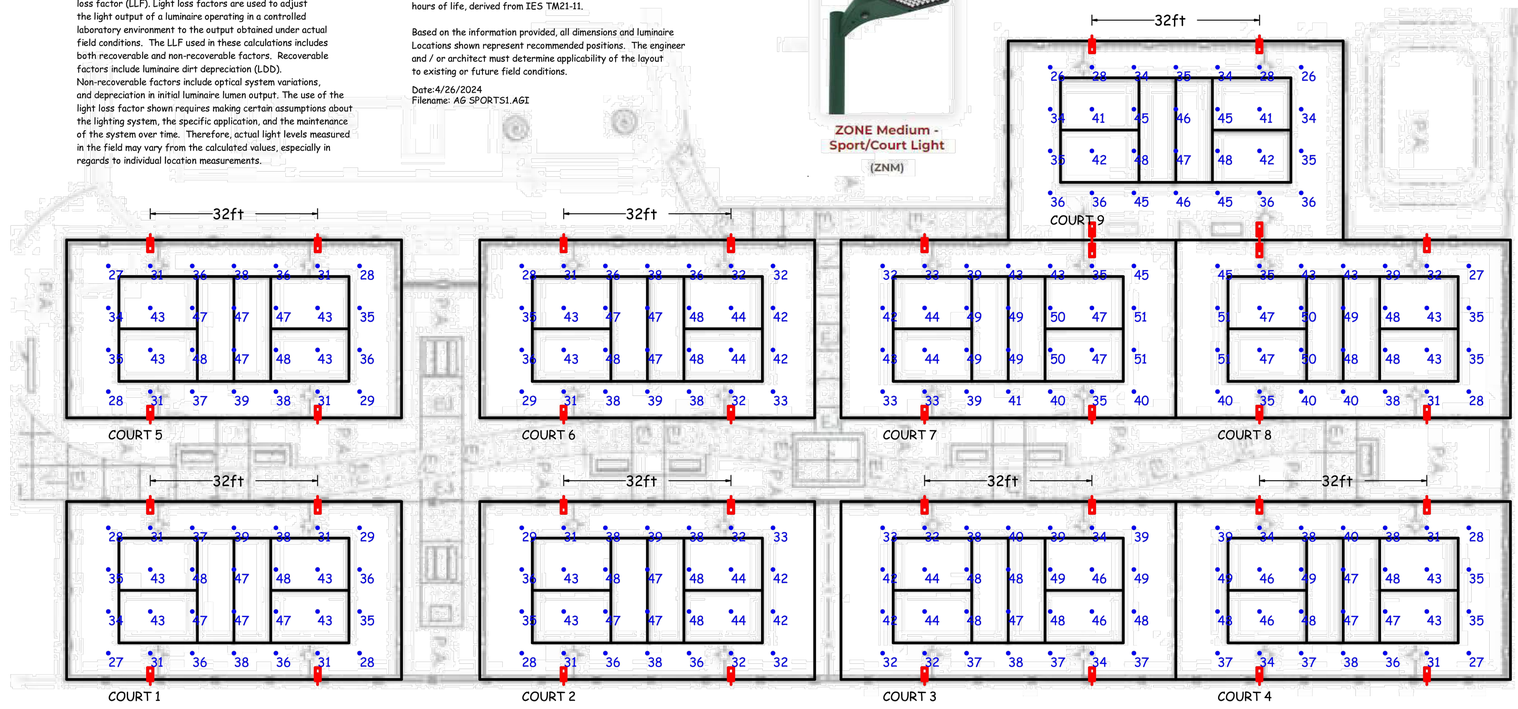
Calculations use a LED Maintained Lamp Lumen factor based upon 50,000 hours of life, derived from IES TM21-11.

Based on the information provided, all dimensions and luminaire Locations shown represent recommended positions. The engineer and / or architect must determine applicability of the layout to existing or future field conditions.

Date:4/26/2024
Filename: AG SPORTS1.AGI

ZONE Medium - Sport/Court Light

(ZNM)



Luminaire Schedule								
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Total Watts
	32	A	SINGLE	ZNM-30L-CT-40 (ZONE MEDIUM) @ 20' MTG. HT.	0.940	31820	213	6816
	2	B	TWIN 180	ZNM-30L-CT-40 (ZONE MEDIUM) @ 20' MTG. HT.	0.940	31820	213	852

Calculation Summary						
Label	CalcType	Units	Avg	Max	Min	Max/Min
COURT 1	Illuminance	Fc	37.71	48	27	1.78
COURT 2	Illuminance	Fc	38.82	48	28	1.71
COURT 3	Illuminance	Fc	41.11	49	32	1.53
COURT 4	Illuminance	Fc	39.96	49	27	1.81
COURT 5	Illuminance	Fc	37.71	48	27	1.78
COURT 6	Illuminance	Fc	38.82	48	28	1.71
COURT 7	Illuminance	Fc	42.71	51	32	1.59
COURT 8	Illuminance	Fc	41.46	51	27	1.89
COURT 9	Illuminance	Fc	38.36	48	26	1.85

Project: AG Sports Complex
Location: Los Banos, CA

Frasure Reps
3343 Lookout Drive
Cincinnati, OH 45208
Phone : 513-666-4242
Email: bruce@frasurereps.com

FRASUREREPS
SPORTS LIGHTING

Date:4/26/2024

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SHEET TITLE
LIGHTING PLAN - PHOTOMETRICS PLAN

SHEET
E501

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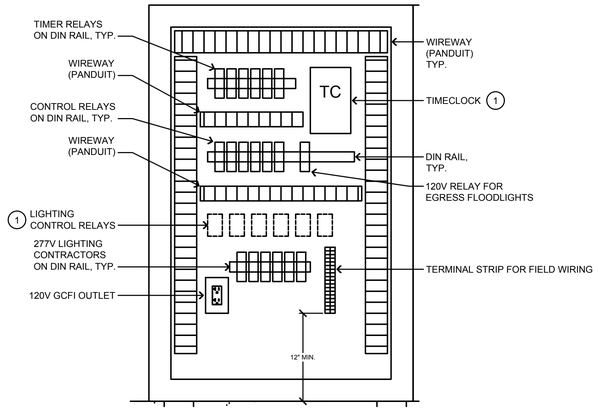
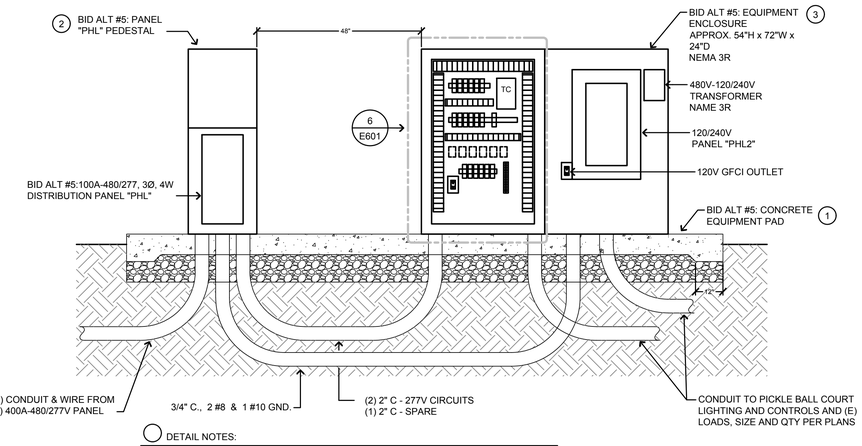


◯ DETAIL NOTES:

1. PROVIDE TIME CLOCK WITH ASTRONOMIC FUNCTION, AUTOMATIC DAYLIGHT SAVINGS TIME ADJUSTMENT AND MINIMUM 2-CHANNELS, TORK #DZS400BP OR EQUAL.

6 ENLARGED ELEVATION LIGHTING CONTROL PANEL (LCP) EQUIPMENT

NO SCALE

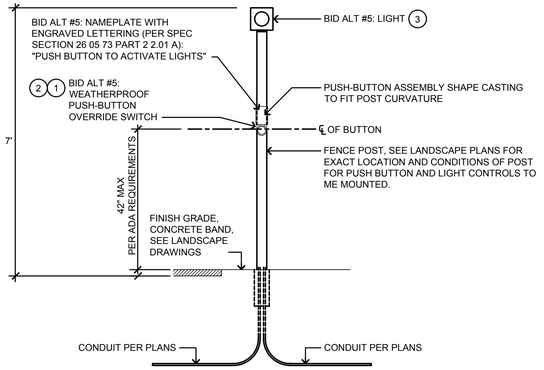


◯ DETAIL NOTES:

1. PROVIDE NOMINAL 6-INCH THICK EQUIPMENT PAD WITH #4 WELDED WIRE MESH AND 8-INCH THICK PERIMETER OVER 6-INCH THICK AGGREGATE BASE. ADJUST DIMENSIONS (WIDTH AND LENGTH) TO ACCOMMODATE EQUIPMENT. SLOPE PAD ~2% AWAY FROM EQUIPMENT FOOTPRINT TO PREVENT WATER POOLING.
2. PROVIDE MINIMUM (4) ½" CONCRETE ANCHORS WITH 3-IN EMBEDMENT AND SECURE EQUIPMENT TO PAD.
3. PROVIDE MINIMUM (6) ½" CONCRETE ANCHORS WITH 3-INCH EMBEDMENT AND SECURE EQUIPMENT TO PAD.

5 ELEVATION ELECTRICAL SERVICE ENTRANCE, DISTRIBUTION AND LIGHTING CONTROL EQUIPMENT

NO SCALE



◯ DETAIL NOTES:

1. PROVIDE & INSTALL DIE CAST JUNCTION BOX ENCLOSURE WITH INTEGRAL GUARD FOR PUSH-BUTTON, SQUARE D #9001KYG12.
2. PROVIDE & INSTALL WEATHERPROOF FITTINGS OVER PUSH-BUTTON.
3. PROVIDE & INSTALL WEATHERPROOF 120V AMBER LED VISUAL BEACON WITH WEATHERPROOF JUNCTION BOX, EDWARDS SIGNALING #101XBRM-120A OR APPROVED EQUAL. INSTALL PER MANUFACTURER'S INSTALLATION INSTRUCTIONS TO MAINTAIN INTEGRITY OF WEATHERPROOF SEAL.
4. LIGHT, NAME PLATE, AND BUTTON SHALL FACE ASSOCIATED COURT.

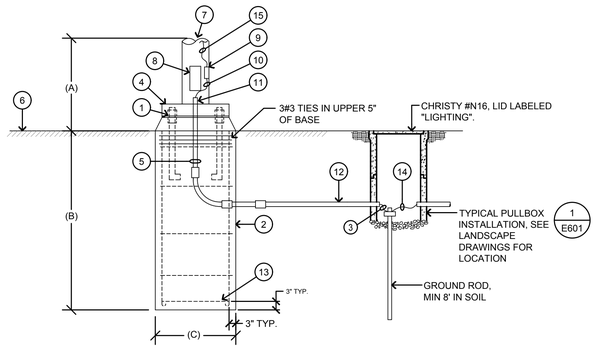
GENERAL NOTES:
MOUNT NEAR/ADJACENT TO FENCE, OUT OF PLAY AREA.

PUSH-BUTTON OPERATIONS:

TIMEOUT WARNING: 1-60 SECONDS, SET TO 30.

4 SQUARE D PUSH-BUTTON DETAIL

NO SCALE

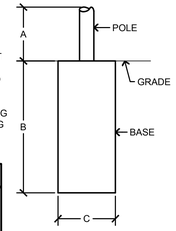


◯ DETAIL NOTES:

1. BID ALT #5: LEVELING NUTS PER STRUCTURAL DRAWINGS.
2. BID ALT #5: CONCRETE FOOTING PER STRUCTURAL.
3. BID ALT #5: #8 COPPER GROUND FROM POLE TO GROUND ROD.
4. BID ALT #5: BASE COVER.
5. RIGID STEEL ELBOW AND CONDUIT, WRAP WITH PVC TAPE OVERLAPPED 50%.
6. FINISHED GRADE.
7. BID ALT #5: LUMINAIRE POLE.
8. BID ALT #5: HAND HOLE.
9. BID ALT #5: GROUNDING LUG.
10. BID ALT #5: GROUND CONDUCTOR.
11. BUSHING, ON CONDUIT(S), CAP BEFORE POURING CONCRETE.
12. BID ALT #5: PER STRUCTURAL DRAWINGS PVC SCH 40 FROM RIGID STEEL ELBOWS TO PULLBOX.
13. BID ALT #5: HORIZONTAL TIES REBAR PER STRUCTURAL DRAWINGS.
14. BID ALT #5: CONNECT BRANCH CIRCUIT EQUIPMENT GROUNDING CONDUCTOR TO GROUND ROD.
15. BID ALT #5: #10 EQUIPMENT GROUNDING CONDUCTOR FROM POLE GROUND LUG TO LUMINAIRE.

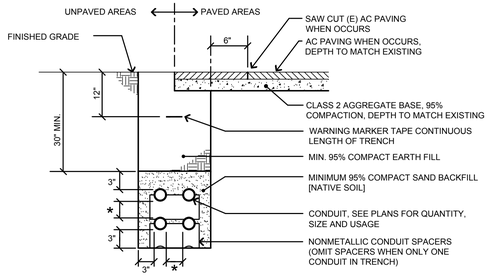
A	B	C
POLE LENGTH	FOOTING DEPTH BELOW GRADE	FOOTING DIAMETER
20'-1" TO 25'-0"	★	★

★ SEE STRUCTURAL DRAWINGS



3 FLUSH POLE BASE DETAIL

NO SCALE



★ = REQUIRED SEPARATION SHALL BE:
12" MINIMUM BETWEEN LOW VOLTAGE & LINE VOLTAGE CONDUITS

NOTES:

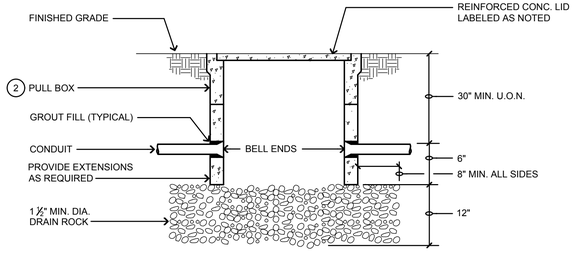
1. SAW CUT, TRENCH & BACKFILL FOR NEW CONDUITS. PATCH WALKWAY TO MATCH (E) SURROUNDING SURFACES. CARE SHALL BE TAKEN TO PROTECT EXISTING TREES. RESEED OR RESOD (E) DISTURBED PLANTED AREAS TO CITY REPRESENTATIVE'S SATISFACTION.
2. BASE MATERIAL TO BE REPLACED TO THE DEPTH OF EXISTING BASE AND COMPACTED TO A MIN. 95% RELATIVE COMPACTION. A.C. MAY BE SUBSTITUTED FOR BASE MATERIAL. WHEN USED AS BACKFILL, CLASS 100-E-100 P.C.C. MAY BE SUBSTITUTED FOR BASE MATERIAL.

2 TYPICAL TRENCH SECTION

NO SCALE

◯ DETAIL NOTES:

1. SIZE(S) & MFGR. AS NOTED ON DRAWINGS.



1 TYPICAL PULLBOX DETAIL

NO SCALE

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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
NAJIB ANWARY
No. E21043
EXP. 3/31/25
ELECTRICAL
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 24-040.00
DRAWN BY: JP
CHECKED BY: NA
SCALE: As Shown

SHEET TITLE
ELECTRICAL DETAILS

SHEET
E601

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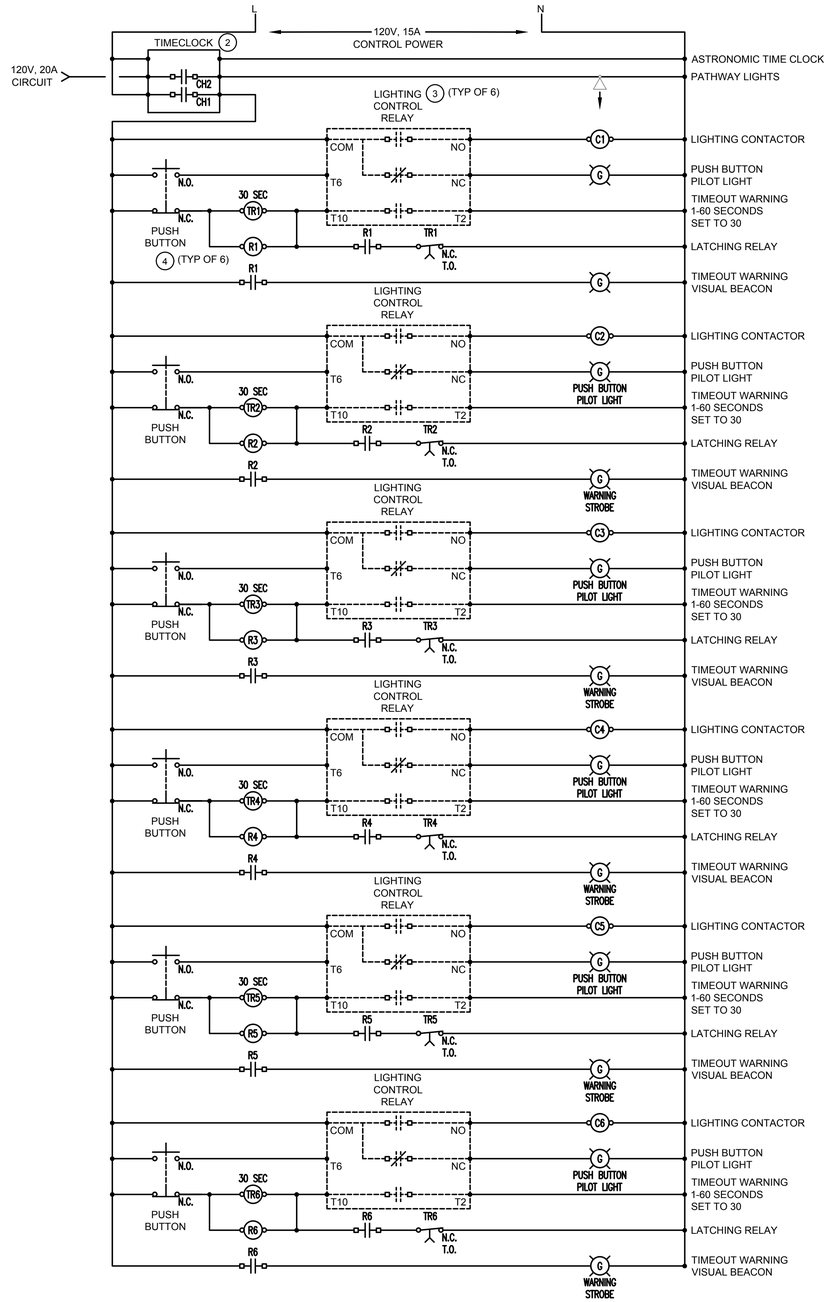

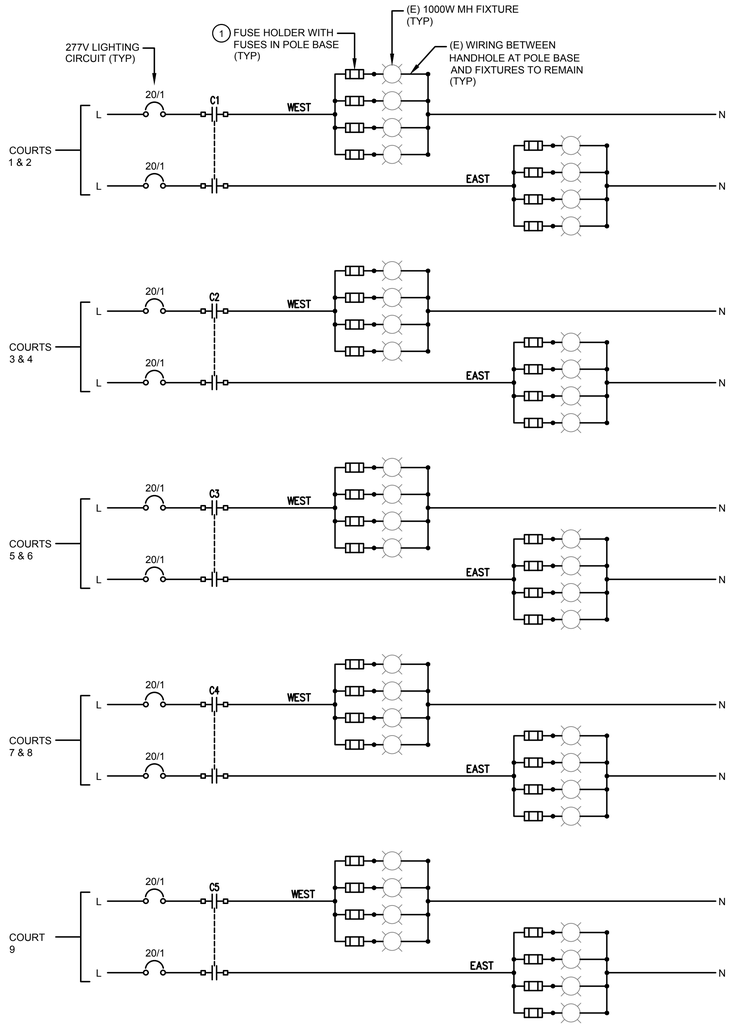

DETAIL NOTES:

1. NEW PICKLE BALL COURT LIGHT FIXTURE .
2. BID ALT #5: PROVIDE ASTRONOMIC TIMECLOCK WITH MINIMUM 2 CHANNELS. CHANNEL ASSIGNMENTS SHALL BE AS FOLLOWS:
   - CH1: DUSK - 10:00 PM (PICKLE BALL COURT LIGHTING SYSTEM ENABLE)
   - CH2: 9:45PM - 10:00 PM (EGRESS FLOORLIGHT ENABLE)
3. BID ALT #5: LIGHTING CONTROL RELAY SHALL BE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED. CONTRACTOR SHALL BE RESPONSIBLE FOR ALLOCATING TIME AS PART OF BID TO ENSURE A CONTROLS SYSTEM IS PROVIDED FOR FULLY FUNCTIONAL SYSTEM PER COURT AREAS AND PUSH-BUTTON WITH WARNING LIGHT SYSTEM. CONTRACTOR INSTALLED RELAY TERMINALS ARE IDENTIFIED FOR REFERENCE, CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING FULLY PROGRAMMABLE RELAYS WITH TIME CLOCK AND PUSH-BUTTON/WARNING LIGHT ARE INCORPORATED AND ALL PROGRAMING IS RESPONSIBILITY OF CONTRACTOR.
4. BID ALT #5: PROVIDE WEATHERPROOF 30MM PUSH-BUTTON WITH DOUBLE-POLE, DOUBLE-THROW (DPDT), DEBOUNCED MOMENTARY CONTACTS, BOTH N.O. AND N.C. AND GREEN PILOT LIGHT.
5. BID ALT #5: PROVIDE WEATHERPROOF 120V AMBER LED VISUAL BEACON, EDWARDS SIGNALING #101XBRM-120A OR APPROVED EQUAL.

GENERAL NOTE:

A. PICKLE BALL LIGHT FIXTURES ARE SHOWN SCHEMATICALLY. SEE SITE PLANS FOR FIXTURE GROUPING ON SHARED POLES.

B. CONTROL WIRING SHALL BE #14 MINIMUM, U.O.N.

C. LIGHTING CIRCUIT SHALL BE #10 MINIMUM, U.O.N.

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LOS BANOS, CA

ISSUE	DATE
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PROJECT NO: 24-040.00
DRAWN BY: JP
CHECKED BY: NA
SCALE: As Shown

SHEET TITLE
LIGHTING CONTROL DIAGRAM

SHEET
E602

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SECTION 26 05 73

GENERAL ELECTRICAL REQUIREMENTS

PART 1 - GENERAL

1.01 Description of Work:
- A. Furnish and install all required in-place equipment, conduits, conductors, cables and any miscellaneous materials for the satisfactory interconnection and operation of all associated electrical systems.
- B. See site plans and detail sheets for base bid vs. bid alternate scope. Base bid includes underground infrastructure, PG&E installation, pull boxes, conduits between new and existing equipment/devices. bid alternate includes installation of panels, breakers, cabling, wires, controls and controls conduits. Pole lights and pole bases shall be part of bid alternate package.

1.02 Submittals:
- A. Submit to the City's Representative shop drawings, manufacturer's data and certificates for equipment, materials and finish, and pertinent details for each system specified. Information to be submitted includes manufacturer's descriptive literature of catalogued products, equipment, drawings, diagrams, performance and characteristic curves as applicable, test data and catalog cuts. Obtain written approval before procurement, fabrication, or delivery of the items to the job site.
- B. Proposed substitutions of products will not be reviewed or approved prior to awarding of the Contract.
- C. Substitutions shall be proven to the City's Representative to be equal or superior to the specified product. City's Representative decision is final. The Contractor shall pay all costs incurred by the Architect and Engineer in reviewing and processing any proposed substitutions whether or not a proposed substitution is accepted.
- D. If a proposed substitution is rejected, the contractor shall furnish the specified product at no increase in contract price.
- E. If a proposed substitution is accepted, the contractor shall be completely responsible for all dimensional changes, electrical changes, or changes to other work which are a result of the substitution. The accepted substitution shall be made at no additional cost to the owner or design consultants.

1.03 Quality Assurance:
- A. Codes: All electrical equipment and materials, including installation and testing, shall conform to the latest editions of the following applicable codes:
  1. California Electrical Code (CEC).
  2. Occupational Safety and Health Act (OSHA) standards.
  3. All applicable local codes, rules and regulations.
  4. Electrical Contractor shall posses a C-10 license and all other licenses as may be required. Licenses shall be in effect at start of this contract and be maintained throughout the duration of this contract.
- B. Variances: In instances where two or more codes are at variance, the most restrictive requirement shall apply.
- C. Standards: Equipment shall conform to applicable standards of American National Standards Institute (ANSI), Electronics Industries Association (EIA), Institute of Electrical and Electronics Engineers (IEEE), and National Electrical Manufacturers Association (NEMA).
- D. Underwriter Laboratories (UL) listing is required for all equipment and materials where such listing is offered by the Underwriters Laboratories. Provide service entrance labels for all equipment required by the NEC to have such labels.
- E. The electrical contractor shall guarantee all work and materials installed under this contract for a period of one (1) year from date of acceptance by owner.
- F. All work and materials covered by this specification shall be subject to inspection at any and all times by representatives of the owner. Work shall not be closed in or covered before inspection and approval by the owner or his representative. Any material found not conforming with these specifications shall, within 3 days after being notified by the owner, be removed from premises; if said material has been installed, entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the contractor.

1.04 Contract Documents:
- A. Drawings: The Electrical Drawings shall govern the general layout of the completed construction.
  1. Locations of equipment, panels, pullboxes, conduits, stub-ups, ground connections are approximate unless dimensioned; verify locations with the City's Representative prior to installation.
  2. The general arrangement and location of existing conduits, piping, apparatus, etc., is approximate. The drawings and specifications are for the assistance and guidance of the contractor, exact locations, distances and elevations are governed by actual field conditions. Accuracy of data given herein and on the drawings is not guaranteed. Minor changes may be necessary to accommodate work. The contractor is responsible for verifying existing conditions. Should it be necessary to deviate from the design due to interference with existing conditions or work in progress, claims for additional compensation shall be limited to those for work required by unforeseen conditions as determined by the City's Representative.
  3. All drawings and divisions of these specifications shall be considered as whole. The contractor shall report any apparent discrepancies to the City's Representative prior to submitting bids.
  4. The contractor shall be held responsible to have examined the site and compared it with the specifications and plans and to have satisfied himself as to the conditions under which the work is to be performed. He shall be held responsible for knowledge of all existing conditions whether or not accurately described. No subsequent allowance shall be made for any extra expense due to failure to make such examination.

1.05 Closeout Submittals:
- A. Manuals: Furnish manuals for equipment where manuals are specified in the equipment specifications.

1.06 Coordination:
- A. Coordinate the electrical work with the other trades, code authorities, utilities and the City's Representative.
- B. Provide and install all trenching, backfilling, conduit, pull boxes, splice boxes, etc. for all Utility Company services to the locations indicated on the Drawings. Prior to performing any work, the Electrical Contractor shall coordinate with the various Utility Companies to verify that all such work and materials shown on the Drawings are of sufficient sizes and correctly located to provide services on the site.
- C. Utility Company charges shall be paid by the Owner.
- D. Contractor shall pay all inspection and other applicable fees and procure all permits necessary for the completion of this work.
- E. Where connections must be made to existing installations, properly schedule all the required work, including the power shutdown periods.
- F. When two trades join together in an area, make certain that no electrical work is omitted.

1.07 Job Conditions:
- A. Operations:
  1. Keep the number and duration of power shutdown periods to a minimum.
  2. Show all proposed shutdowns and their expected duration on the construction schedule. Schedule and carry out shutdowns so as to cause the least disruption to operation of the Owner's facilities.
  3. Carry out shutdown only after the schedule has been approved, in writing, by the owner. Submit power interruption schedule 15 days prior to date of interruption.
- B. Construction Power: Unless otherwise noted in Division 1 of these specifications, contractor shall make all arrangements and provide all necessary facilities for temporary construction power to the site. Energy costs shall be paid by the General Contractor.

1.08 Safety and Indemnity:
- A. The Contractor is solely and completely responsible for conditions of the job site including safety of all persons and property during performance of the work. This requirement will apply continually and not be limited to normal working hours. The contractor shall provide and maintain throughout the work site proper safeguards including, but not limited to, enclosures, barriers, warning signs, lights, etc. to prevent accidental injury to people or damage to property.
- B. The Contractor performing work under this Division of the Specifications shall hold harmless, indemnify, and defend the Owner, the Engineer, their consultants, and each of their officers, agents and employees from any and all liability claims, losses, or damage arising out of or alleged to arise from bodily injury, sickness, or death of a person or persons and for all damages arising out of injury to or destruction of property arising directly or indirectly out of or in connection with the performance of the work under this Division of the Specifications, and from the Contractor's negligence in the performance of the work described in the construction contract documents, but not including liability that may be due to the sole negligence of the Owner, the Engineer, their Consultants or their officers, agents and employees.
- C. If a work area is encountered that contains hazardous materials, the contractor is advised to coordinate with the owner and it's abatement consultant for abatement of hazardous material by the Owner's Representative. "Hazardous materials" means any toxic substance regulated or controlled by OSHA, EPA, State of California or local rules, regulations and laws. Nothing herein shall be construed to create a liability for Aurum Consulting Engineers regarding hazardous materials abatement measures, or discovery of hazardous materials.

1.09 Arc Flash:
- A. The contractor shall install a clearly visible arc flash warning to the inside door of all panelboards and industrial control panels, as well as to the front of all switchboards and motor control centers that are a part of this project.
- B. The warning shall have the following wording: line 1 "WARNING" (in large letters), line 2 "Potential Arc Flash Hazard" (in medium letters), line 3 & 4 "Appropriate Personal Protective Equipment and Tools required when working on this equipment".

PART 2 - PRODUCTS

2.01 Nameplates:
- A. Identify each piece of equipment and related controls with a rigid laminated engraved plastic nameplate. Unless otherwise noted, nameplates shall be melamine plastic 0.125 inch thick, white with black center core. Surface shall be matte finish. Corners shall be square. Accurately align lettering and engrave into the core. Minimum size of nameplates shall be 0.5 by 2.5 inches unless otherwise noted. Where not otherwise specified, lettering shall be a minimum of 0.25 inch high normal block style. Engrave nameplates with the inscriptions indicated on the Drawings and, if not so indicated, with the equipment name. Securely fasten nameplates in place using two stainless steel or brass screws.

2.02 Finish requirements:
- A. Equipment: Refer to each electrical equipment section of these Specifications for painting requirements of equipment enclosures. Repair any final paint finish which has been damaged or is otherwise unsatisfactory, to the satisfaction of the City's Representative.
- B. Wiring System: In finished areas, paint all exposed conduits, boxes and fittings to match the color of the surface to which they are affixed.

PART 3 - EXECUTION

3.01 Workmanship:
- A. All electrical equipment and materials shall be installed in a neat and workmanship manner in accordance with the "NECA-1 Standard Practices For Good Workmanship in Electrical Contracting". Workmanship of the entire job shall be first class in every respect.

3.02 Equipment Installations:
- A. Provide the required inserts, bolts and anchors, and securely attach all equipment and materials to their supports.
- B. Do all the cutting and patching necessary for the proper installation work and repair any damage done.
- C. Earthquake restraints: all electrical equipment, including conduits equal to or greater than 2.5 inches in diameter, shall be braced or anchored to resist a horizontal force acting in any direction as per CBC section 1617A.1.24 Title 24, part 2 and ASCE7, section 13.6.5.
- D. Structural work: All core drilling, bolt anchor insertion, or cutting of existing structural concrete shall be approved by a California registered structural consulting engineer prior to the execution of any construction. At all floor slabs and structural concrete walls to be drilled, cut or bolt anchors inserted, the contractor shall find and mark all reinforcing in both faces located by means of x-ray, pach-ometer, or prof-ometer. Submit sketch showing location of rebar and proposed cuts, cores, or bolt anchor locations for approval.

3.03 Field Test:
- A. Perform equipment field tests and adjustments. Properly calibrate, adjust and operationally check all circuits and components, and demonstrate as ready for service.
- B. Operational Tests: Operationally test all circuits to demonstrate that the circuits and equipment have been properly installed and adjusted and are ready for full-time service. Demonstrate the proper functioning of circuits in all modes of operation, including alarm conditions.

3.04 Records:
- A. Maintain one copy of the contract Drawing Sheets on the site of the work for recording the "as built" condition. After completion of the work, the Contractor shall carefully mark the work as actually constructed, revising, deleting and adding to the Drawing Sheets as required. As built Drawings shall be delivered to the City's Representative within ten (10) days of completion of construction.

3.05 Clean Up:
- A. Upon completion of electrical work, remove all surplus materials, rubbish, and debris that accumulated during the construction work. Leave the entire area neat, clean, and acceptable to the Architect.

SECTION 26 05 26

GROUNDING

PART 1 - EXECUTION

1.1 Grounding and Bonding:
- A. Grounding and bonding shall be as required by codes and local authorities.
- B. All electrical equipment shall be grounded, including, but not limited to, panel boards, terminal cabinets and outlet boxes.
- C. The ground pole of receptacles shall be connected to their outlet boxes by means of a copper ground wire connecting to a screw in the back of the box.
- D. A green insulated copper ground wire, sized to comply with codes, shall be installed in all conduit runs.
- E. All metal parts of pull boxes shall be grounded per code requirements.
- F. All ground conductors shall be green insulated copper.

SECTION 26 05 42

CONDUITS, RACEWAYS AND FITTINGS

PART 1 - EXECUTION

1.01 Conduit, Raceway and Fitting Installation:
- A. For conduit runs exposed to weather provide rigid metal (GRS).
- B. For conduit run underground, in concrete or masonry block wall and under concrete slabs, install minimum ¾" size nonmetallic (PVC) with PVC elbows. Where conduits transition from underground or under slab to above grade install wrapped rigid metal (GRS) elbows and risers.
- C. For conduit runs concealed in steel or wood framed walls or in ceiling spaces or exposed in interior spaces above six feet over the finished floor, install EMT.
- D. Flexible metal conduit shall be used only for the connection of recessed lighting fixtures and motor connections unless otherwise noted on the Drawings. Liquid-tight steel flexible conduit shall be used for motor connections.
- E. The minimum size raceway shall be 1/2-inch unless indicted otherwise on the Drawings.
- F. Installation shall comply with the CEC.
- G. From pull point to pull point, the sum of the angles of all of the bends and offset shall not exceed 360 degrees.
- H. Conduit Supports: Properly support all conduits as required by the NEC. Run all conduits concealed except where otherwise shown on the drawings.
  1. Exposed Conduits: Support exposed conduits within three feet of any equipment or device and at intervals not exceeding NEC requirements; wherever possible, group conduits together and support on common supports. Support exposed conduits fastened to the surface of the concrete structure by one-hole clamps, or with channels. Use conduit spacers with one-hole clamps.
     a. Conduits attached to walls or columns shall be as unobtrusive as possible and shall avoid windows. Run all exposed conduits parallel or at right angles to building lines.
     b. Group exposed conduits together. Arrange such conduits uniformly and neatly.
  2. Support all conduits within three feet of any junction box, coupling, bend or fixture.
  3. Support conduit risers in shafts with Unistrut Superstrut, or approved equal, channels and straps.
- I. Moisture Seals: Provide in accordance with NEC paragraphs 230-8 and 300-5(g).
- J. Where PVC conduit transitions from underground to above grade, provide rigid steel 90's with risers. Rigid steel shall be half-lap wrapped with 20 mil tape and extend minimum 12" above grade.
- K. Provide a nylon pull cord in each empty raceway.
- L. Provide galvanized rigid steel factory fittings for galvanized rigid steel conduit.
- M. Slope all underground raceways to provide drainage; for example, slope conduit from equipment located inside a building to the pull box or manhole located outside the building.
- N. Conduits shall be blown out and swabbed prior to pulling wires.

SECTION 26 05 16

LINE VOLTAGE WIRE AND CABLE

PART 1 - PRODUCTS

1.01 Conductors:
- A. Conductors shall be copper, type THHN/THWN/MTW oil and gasoline resistant, 90°C, 600 volt rated insulation.
- B. Conductors shall be stranded copper.
- C. Minimum power and control wire size shall be No. 12 AWG unless otherwise noted.
- D. All conductors used on this Project shall be of the same type and conductor material.

1.02 Terminations:
- A. Manufacturer - Terminals as manufactured by T&B, Burndy or equal.
- B. Wire Terminations - Stranded conductors shall be terminated in clamping type terminations which serve to contain all the strands of the conductor. Curling of a stranded conductor around a screw type terminal is not allowed. For screw type terminations, use a fork type stake-on termination on the stranded conductor. Use only a stake-on tool approved for the fork terminals selected.
- C. End Seals - Heat shrink plastic caps of proper size for the wire on which used.

1.03 Tape:
- A. Tape used for terminations and cable marking shall be compatible with the insulation and jacket of the cable and shall be of plastic material.

PART 2 - EXECUTION

2.01 Cable Installation:
- A. Clean Raceways - Clean all raceways prior to installation of cables as specified in Section 26 05 42 - Conduits Raceway and Fittings.
- B. All wiring including low voltage wiring shall be installed in conduit, U.O.N.
- C. All feeder conductors shall be continuous from equipment to equipment. Splices in feeders are not permitted unless specifically noted or approved by the Electrical Engineer.
- D. All branch circuit wiring shall be run concealed in ceiling spaces, walls, below floors or in crawl spaces unless noted otherwise.

2.02 Cable Terminations and Splices:
- A. Splices - UL Listed wirenuts.
- B. Terminations - Shall comply with the following:
  1. Make up and form cable and orient terminals to minimize cable strain and stress on device being terminated on.
  2. Burnish oxide from conductor prior to inserting in oxide breaking compound filled terminal.

2.03 Circuit and Conductor Identification:
- A. Color Coding - Provide color coding for all circuit conductors. Insulation color shall be white for neutrals and green for grounding conductors. Conductor colors shall be as follows:

VOLTAGE	120/240V
Phase A	Black
Phase B	Red
Neutral	White
Ground	Green

- B. Color coding shall be in the conductor insulation for all conductors #10 AWG and smaller; for larger conductors, color shall be either in the insulation or in colored plastic tape applied at every location where the conductor is readily accessible.
- C. Circuit Identification - All underground distribution and service circuits shall be provided with plastic identification tags in each secondary box and at each termination. Tags shall identify the source transformer of the circuit and the building number(s) serviced by the circuit.

2.04 Field Tests:
- A. All systems shall test free from short circuits and grounds, shall be free from mechanical and electrical defects, and shall show an insulation resistance between phase conductors and ground of not less than the requirements of the CEC. All circuits shall be tested for proper neutral connections.
- B. Insulation Resistance Tests: perform insulation resistance tests on circuits with #2 AWG and larger conductors to be energized with a line-to-neutral voltage of 120 volts or more. Make these tests before all equipment has been connected. Test the insulation with a 500Vdc insulation resistance tester with a scale reading 100 megohms. The insulation resistance shall be 2 megohms or more. Submit results for review.
- C. Contractor shall torque all termination of feeders/circuits terminations where required per CEC and manufacturer labeling requirements at point of connection.

SECTION 26 05 33

OUTLET, JUNCTION AND PULL BOXES

PART 1 - PRODUCTS

1.01 Outlet boxes, Junction and Pull boxes
- A. Standard Outlet Boxes: Galvanized, steel, knock-out type of size and configuration best suited to the application indicated on the Drawings. Minimum box size shall be 4 inches square (octagon for most light fixtures) by 1-1/2 inches deep with mud rings as required. Boxes used with conduit 1" or larger shall be minimum 2" deep.
- B. Switch boxes: Minimum box size shall be 4 inches square by 1-1/2 inches deep with mud rings as required. Install multiple switches in standard gang boxes with raised device covers suitable for the application indicated.
- C. Conduit bodies: Cadmium plated, cast iron alloy. Conduit bodies with threaded conduit hubs and neoprene gasketed, cast iron covers. Bodies shall be used to facilitate pulling of conductors or to make changes in conduit direction only. Splices are not permitted in conduit bodies. Crouse-Hinds Form 8 Condulets, Appleton Form 35 Unilets or equal.
- D. Sheet Metal Boxes: Use standard outlet or concrete ring boxes wherever possible; otherwise use a minimum 16 gauge galvanized sheet metal, NEMA 1 box sized to Code requirements with covers secured by cadmium plated machine screws located six inches on centers. Circle AW Products, Hoffman Engineering Company or equal.
- E. Flush Mounted Pull boxes and Junction boxes: Provide overlapping covers with flush head cover retaining screws, prime coated.

PART 2 - EXECUTION

2.01 Outlet Boxes
- A. General:
  1. All outlet boxes shall finish flush with walls and floors except where exposed work is called for on the Drawings.
  2. Leave no unused openings in any box. Install close-up plugs as required to seal openings.
- B. Box Layout:
  1. Outlet boxes shall be installed at the locations and elevations shown on the drawings or specified herein. Make adjustments to locations as required by structural conditions and to suit coordination requirements of other trades.
  2. Outlet boxes shall not be installed back to back nor shall through-wall boxes be permitted. Outlet boxes on opposite sides of a common wall shall be separated horizontally by at least one stud or vertical structural member.
  3. Coordinate location and mounting heights with built-in units. Adjust mounting height to agree with required location for equipment served.

2.02 Junction And Pull Boxes
- A. General:
  1. Install junction or pull boxes where required to limit bends in conduit runs to not more than 360 degrees or where pulling tension achieved would exceed the maximum allowable for the cable to be installed. Note that these boxes are not shown on the Drawings.
  2. Leave no unused openings in any box. Install close-up plugs as required to seal openings.
  3. Identify circuit numbers and panel on cover of junction box with black marker pen.

SECTION 26 27 26

DEVICES WIRING

PART 1 - PRODUCTS

1.01 Receptacles:
- A. General - Receptacles shall be heavy duty, high abuse, grounding type.
- B. Duplex Receptacles:
  1. Receptacles shall be specification grade, rated 20 ampere, two-pole, 3-wire, 120 volt, NEMA 5-20 configuration, self-grounding with screw terminals. Color shall be as selected by the Architect.
  2. Devices shall have a nylon face, back and side wired.
  3. Manufacturer: Hubbell #DR20 Series, Leviton #16352 Series.
- C. GFCI Receptacles:
  1. Device shall be rated 20 ampere, 2-pole, 3-wire, 120 volt, conforming to NEMA 5-20 configuration. Face shall be nylon composition. Unit shall have an LED type red indicator light, test and reset push buttons. Color shall be as selected by the Architect.
  2. GFCI component shall meet UL 943 Class A standards with a tripping time of 1/40 second at 5 milliamperes current unbalance. Operating range shall extend from -31°F to 158°F. Unit shall have transient voltage protection and shall be ceramic encapsulated for protection against moisture.
  3. Manufacturer: Hubbell #GF20__ _LA Series, Leviton #7899 Series.
- D. Surge Suppression Receptacles:
  1. Device shall be rated 20 ampere, 2-pole, 3-wire, 120 volt. Face shall be nylon composition. Unit shall have an LED type "Power-on" indication light and damage-alert audible alarm. Color shall be as selected by the Architect.
  2. Surge suppression protection shall be listed to UL standard 1449 and shall instantly absorb a transient surge of 6,000 volts minimum. A minimum of four (4) Metal Oxide Varistors shall be utilized to absorb transients.
  3. Manufacturer: Hubbell #HBL8362S Series, Leviton #8380 Series.

1.02 Switches:
- A. Switches shall be rated 20 amperes to 120/277 volts ac. Units shall be flush mounted, self-grounding, quiet operating toggle devices. Handle color shall be as selected by the Architect.
  1. Manufacturer: Hubbell #HBL1221 Series, Leviton #1221 Series
- B. Timed switches: Shall be as designed by Paragon Electric Company # ET2000f or Watt Stopper TS-400 rated for the voltage specified on drawings. Time out shall be adjustable from 5 minutes up to 12 hours. Unit shall be provided with warning alarm.

1.03 Plates:
- A. General - Plates shall be of the style and color to match the wiring devices, and of the required number of gangs. Plates shall conform with NEMA WD 1 , UL 514 and FS W-P-455A. Plates on finished walls shall be non-metallic or stainless steel. Plates on unfinished walls and on fittings shall be of zinc plated steel or case metal and shall have rounded corners and beveled edges.
- B. Non-Metallic: Plates shall be plain with beveled edges and shall be nylon or reinforced fiberglass.
- C. Stainless Steel: Plates shall be .040 inches thick with beveled edges and shall be manufactured from No. 430 alloy having a brushed or satin finish.
- D. Cast Metal: Plates shall be cast or malleable iron covers with gaskets so as to be moisture resistant or weatherproof.
- E. Blank Plates: Cover plates for future telephone outlets shall match adjacent device wall plates in appearance and construction.

PART 2 - EXECUTION

2.01 Installation of Wiring Devices:
- A. Interior Locations: In finished walls, install each device in a flush mounted box with washers as required to bring the device mounting strap level with the surface of the finished wall. On unfinished walls, surface mount boxes level and plumb.
- B. Mounting Heights: Adjust boxes so that the front edge of the box shall not be farther back from the finished wall plane than 1/4-inch. Adjust boxes so that they do not project beyond the finished wall. Height of device shall be as follows:
  1. Receptacles 15 Inches from finished floor to bottom of box unless otherwise noted on the drawings
  2. Toggle Switches 48 Inches from finished floor to top of box
- C. Receptacles:
  1. Ground each receptacle using a grounding conductor, not a yoke or screw contact.
  2. Install receptacles with connections spliced to the branch circuit wiring in such a way that removal of the receptacle will not disrupt neutral continuity and branch circuit power will not be lost to other receptacles in the same circuit.

2.02 Installation of Wall Plates:
- A. General - Plates shall match the style of the device and shall be plumb within 1/16-inch of the vertical or horizontal.
- B. Interior Locations, Finished Walls: Install non-metallic plates so that all four edges are in continuous contact with the finished wall surfaces. Plaster filling will not be permitted. Do not use oversized plates or sectional plates.
- C. Interior Locations, Unfinished Walls: Install stainless steel or cast metal cover plates.
- D. Exterior Locations: Install cast metal plates with gaskets on wiring devices in such a manner as to provide a rain tight weatherproof installation. Cover type shall match box type. Cover shall be [Lockable] outdoor extra-duty "in-use" type.
- E. Future Locations: Install blank cover plates on all unused outlets.
- F. Labeling: All switch and receptacle plates shall be labeled on the top portion of the plate with the panelboard and circuit number serving that device. Lettering shall be ⅛" minimum high, black color, on clear Mylar tape.

2.03 Tests:
- A. Receptacles:
  1. After installation of receptacles, energize circuits and test each receptacle to detect lack of ground continuity, reversed polarity, and open neutral condition.

PART 2 - EXECUTION

2.01 Mounting:
- A. Panelboards and Distribution Panels shall be mounted with the top of the box 6'-6" above the floor. Panelboards and Distribution Panels shall be plumb within 1/8-inch. The highest breaker operating handle shall not be higher than 72 inches above the floor.

SECTION 26 24 13

SWITCHBOARDS, 600 VOLTS AND BELOW

PART 1 - GENERAL

1.01 Submittals:
- A. Shop Drawings - For each switchboard furnished under this Contract, submit manufacturer's information on the switchboard.
- B. Before construction of the main (service) switchboard, the contractor shall deliver two or more copies of the switchboard submittal to P.G.&E. for their approval. The contractor shall deliver one P.G.&E. approved copy of the submittal to the Electrical Engineer for record.
- C. Submit operation and maintenance data for switchboards, and circuit breakers including nameplate data, parts lists, manufacturer's circuit breaker time current coordination curves, factory and field test reports, recommended maintenance procedures and typewritten as-built panel and switchboard schedules. Submit in accordance with Division 1.

1.02 Warranty
- A. Manufacturer shall warrant equipment to be free from defects in materials and workmanship for the lesser of one (1) year from date of installation or eighteen (18) months from date of purchase

PART 2 - PRODUCTS

2.01 Switchboards:
- A. General: Switchboards shall be designed, built and tested in accordance with applicable portions of the latest NEMA, EUSERC, and Underwriter Laboratories standards and the latest requirements of the California Electrical Code. All sections and devices shall be UL listed and labeled.
  1. Switchboards shall be dead front, completely self-supporting structure of the required number of vertical sections bolted together to form one metal, totally enclosed, switchboard. Sides, top, and rear covers shall be code gauge steel, bolted to the switchboard structure.
  2. The switchboard shall be furnished with phase and neutral busses of the amps, volts and phase shown on the Drawings. The bus shall extend the full length of the switchboard. Tapered bus is not acceptable. The switchboard sections, when called for on the plans, shall be as follows:
     a. Metering Section and landing lugs; Fully Pacific Gas & Electric Company compatible.
     b. All sections shall include full capacity busing between sections.
     c. All sections shall be front aligned and shall have front-connected devices.
  3. All buses shall be silver plated copper, supported with high impact, non-tracking insulating material, braced to withstand the mechanical forces exerted during short circuit conditions. The current density of the bus shall not exceed 1000 amperes per square inch of cross section area or the switchboard bussing shall be of sufficient cross-sectional area to meet UL standard 891 for temperature rise. Provisions shall be provided for future splicing of additional sections from either end. The neutral bus shall be 100% rated.
  4. A ground bus shall be furnished secured to each vertical section structure, and shall extend the length of the main and distribution sections of the switchboard. The ground bus shall be sized per UL standard 891 and be of the same material as the through bus.
  5. Vertical main bus bars shall be furnished full height to accommodate future branch devices.
  6. The switchboard shall be furnished and installed complete with all underground pull sections, utility sections, main device and feeder sections as indicated on the Drawings. Underground pull sections, utility cable termination, transformer and metering sections shall be in accordance with Pacific Gas and Electric Company requirements.
  7. The main device, where indicated to be individually mounted, shall be completely isolated from the utility and the feeder sections of the switchboard, both in the device section and the cable section of the switchboard cubicle. The cable section shall also be isolated from the main horizontal bus. The main device cubicle shall have UL service equipment label.
  8. Feeder devices shall be group-mounted and be front accessible, furnished with vertical wiring gutter on the front of the distribution sections. Wiring gutters shall be furnished with hinged, code gauge steel formed covers. Unused device space shall be covered with blank code gauge steel covers.
  9. All vertical sections comprising the switchboard shall be aligned front and rear.
  10. Switchboards for outdoor installation shall be furnished in NEMA 3R non-walk-in enclosures provided with thermostatically controlled space heaters in each vertical section. Space heaters shall be powered from a circuit breaker protected circuit originating within the switchboard and shall be sized adequately to prevent the formation of condensation. Space heater shall be suitable for operation at 120V AC.
- B. Circuit Breakers
  1. Circuit breakers, unless otherwise indicated, shall be the molded case type with ratings as indicated on the Drawings.
  2. Main circuit breakers, where indicated to be Molded case type, shall be 80 [100] percent rated, with the frame size and trip plug ratings shown.
  3. Manufacturer
     a. The switchboard shall be Square D, Siemens or I.E.M., no other switchboard manufacturers are acceptable.

PART 3 - EXECUTION

3.01 Installation:
- A. Switchboards shall be installed where indicated on the Drawings, and in accordance with the manufacturer's instructions.

3.02 Mounting:
- A. Switchboards shall be mounted on a concrete pad, as indicated on the drawings. Reinforcing shall be as shown on the Drawings. The top surface of the pad shall be 2 inches above the surrounding surface.
- B. The switchboard shall be bolted to the pad with ½ inch diameter bolts minimum at each corner of each section unless otherwise noted.
- C. The switchboard shall be seismically qualified to withstand potential seismic forces up to UBC Seismic Zone 4.

3.03 Padlocks:
- A. Exterior switchboard shall be provided with padlocks keyed as directed by the Owner's Representative. Padlocks shall be supplied by the contractor.

SECTION 26 22 00

TRANSFORMERS

PART 1 - PRODUCTS:

1.01 Dry Type Transformer:
- A. Unless otherwise noted on the Drawings, general purpose transformers for supplying lighting and small power loads shall be dry type, two winding, 60 Hertz, aluminum windings, temperature rise not exceeding 150°C under full load in an ambient of 40°C, with Class H 220°C insulation. Capacity rating, number of phases and voltages shall be as shown on the Drawings. Transformer shall comply with all applicable provisions of NEMA Standard ST20 and shall have NEMA Standard taps. Transformers rated below 15 KVA shall have two (2) 5% full capacity taps below rated primary volts and transformers rated 15 KVA and above shall have six (6) 2-1/2% full capacity taps, two above the four below nominal voltage Terminal compartment shall have temperature rise not to exceed 35°C. Provide unit UL listed for indoor/outdoor mounting. Provide dry-type transformer as manufactured by Square D, Siemens, General Electric Company or approved equal.
- B. Transformers shall be low loss type with minimum efficiencies per NEMA TP-1 when operated at 35% of full load capacity.Efficiency shall be tested in accordance with NEMA TP-2.
- C. Transformers installed outdoors shall be NEMA 3R, Unless otherwise noted on the Drawings.
- D. Transformer sound levels shall not exceed the following values;
  1. 0-9 KVA 40 decibles
  2. 10-50 KVA 45 decibels
  3. 51-150KVA 50 decibels
  4. 151-300KVA 55 decibels
  5. 301-500KVA 60 decibels

PART 2 - EXECUTION

2.01 Transformer Installation:
- A. Transformer shall be installed where indicated on the Drawings.
- B. Transformer shall be connected with flexible liquid tight metallic conduit to prevent the transmission of sound through the conduit system. All transformers shall be installed on resilient vibration-isolating mounting pads.
- C. Transformer neutral grounding shall be sized in accordance with requirements for separately derived systems and shall be connected to the nearest cold water pipe with supplementary driven ground. Ground rod and connections shall be as detailed in Section 16450.

SECTION 26 28 16

CIRCUIT BREAKERS

PART 1 - PRODUCTS

1.01 Circuit Breaker: Each circuit breaker shall consist of the following:
- A. A molded case breaker with an over center toggle-type mechanism, providing quick-make, quick-break action. Each circuit breaker shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole. Multipole circuit breakers shall have variable magnetic trip elements which are set by a single adjustment to assure uniform tripping characteristics in each pole. Circuit breakers shall be of the bolt-on type unless otherwise noted.
- B. Breaker shall be calibrated for operation in an ambient temperature of 40°C.
- C. Each circuit breaker shall have trip indication by handle position and shall be trip-free.
- D. Three pole breakers shall be common trip.
- E. The circuit breakers shall be constructed to accommodate the supply connection at either end of the circuit breaker. Circuit breaker shall be suitable for mounting and operation in any position.
- F. Breakers shall be rated as shown on Drawings.
- G. Circuit breaker and/or Fuse/circuit breaker combinations for series connected interrupting ratings shall be listed by UL as recognized component combinations for use in the end use equipment in which it is installed. Any series rated combination used shall be marked on the end use equipment per CEC section 110-22.
- H. Breakers shall be UL listed. Circuit breakers shall have removable lugs.
- I. Lugs shall be UL listed for copper and aluminum conductors.
- J. Breakers shall be UL listed for installation of mechanical screw type lugs.
- K. Circuit breakers serving HACR rated loads shall be HACR type. Circuit breakers serving other motor loads shall be motor rated.
- L. Breakers indicated as "current limiting " (CL), shall be of the non-fused type; Square D I-Limiter, Westinghouse Limit-R, or ITE Sentron only.

SECTION 26 51 00

LIGHTING

PART 1 - PRODUCTS

1.01 Fixtures
- A. Fixtures shall be of the types, wattage's and voltages shown on the Drawings and be UL classified and labeled for the intended use.
- B. Substitutions will not be considered unless the photometric distribution curve indicates the proposed fixture is equal to or exceeds the specified luminaire.
- C. Luminaire wire, and the current carrying capacity thereof shall be in accordance with the CEC.
- D. Luminaires and lighting equipment shall be delivered to the project site complete, with suspension accessories, aircraft cable, stems, canopies, hickeys, castings, sockets, holders, ballasts, diffusers, frames, and related items, including support and braces.

1.02 LED Power Supplies / Drivers:
- A. Power Supplies and Drivers shall be of the types shown on the drawings. Drivers shall be CBM certified and bear the UL label. Drivers shall be the high power factor type and have a 10% maximum total harmonic distortion.
- B. All Drivers for fixtures installed outdoors shall provide reliable operation at 0°F at 90% of the nominal line voltage.
- C. Drivers shall be Sound Rated A+ or will be rejected and shall be replaced at no expense to the Owner.

1.03 Light Sources:
- A. All LED sources shall be new at the time of acceptance; been fabricated within 12 months before installation per the date code on the module; and shall be CREE, General Electric, Osram /Sylvania, Phillips, or approved equal.
- B. Unless otherwise noted on the drawings, Light Engines shall have the highest available efficacy, 3500°K, and 85 CRI minimum.

PART 2 - EXECUTION

2.01 Installation:
- A. General:
  1. All fixtures and luminaires shall be clean and light engines shall be operable at the time of acceptance.
  2. Install luminaires in accordance with manufacturer's instructions, complete with power supply/driver, light source and controls, ready for operation as indicated.
  3. Align, mount, and level the luminaires uniformly.
  4. Avoid interference with and provide clearance for equipment. Where an indicated position conflicts with equipment locations, change the location of the luminaire by the minimum distance necessary.
- B. Mounting and Supports:
  1. Mounting heights shall be as shown on the Drawings. Unless otherwise shown, mounting height shall be measured to the centerline of the outlet box for wall mounted fixtures and to the bottom of the fixture for suspended fixtures and to the bottom of the fixture for all other types.
  2. Luminaire supports shall be anchored to structural members.
  3. Fixture supports shall be designed to resist earthquake forces of UBC Seismic Area.

AURUM CONSULTING ENGINEERS
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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
NAJIB ANWARY
No. E17043
EXP. 3/31/25
ELECTRICAL
STATE OF CALIFORNIA

AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 24-040.00
DRAWN BY: JP
CHECKED BY: NA
SCALE: As Shown

SHEET TITLE
ELECTRICAL SPECIFICATIONS

SHEET
E701

File Path: G:\Projects\2024\24-040.00 AG Sports Complex Pickleball Courts\Dwg\01 - Bid Art\24-040E701.dwg Plot Date: 9/20/24 Saved By: Jorge
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LEGEND

PROPOSED PERVIOUS SURFACE
AREA = 10,958 SF

PROPOSED IMPERVIOUS SURFACE
AREA = 24,296 SF

STORMWATER CONTROL MEASURE (SCM)
AREA = 662 SF

DRAINAGE MANAGEMENT AREA (DMA)

NOTES

1. THE BIORETENTION STORMWATER CONTROL MEASURE IS DESIGNED PER THE CITY OF LOS BANOS POST-CONSTRUCTION STORMWATER LOW IMPACT DEVELOPMENT STANDARD PLAN IN ACCORDANCE WITH THE STATE WATER RESOURCES CONTROL BOARDS (SWRCB) PHASE II MUNICIPAL SEPARATE STORMWATER SEWER SYSTEM (MS4) PERMIT.

2. THE VOLUMETRIC DESIGN CRITERIA PER CASQA'S DEVELOPMENT BMP HANDBOOK IS USED TO SIZE THE BIORETENTION STORMWATER CONTROL MEASURE

Design Volume Sizing Calculator for BMPs

Complete the steps and enter the required information in the Yellow box only. Print this page and include with the project's submittal.

DMA Name: DMA 1

1. **DMA size (square feet), "A":** 35,916

2. **DMA Percent Impervious:** 68 % impervious — I = 0.68 *This is the impervious coefficient (I) used for the Urban Runoff Quality Management approach*

Number of existing or planned trees in the DMA:
Evergreen: 0 Deciduous: 0

Total Tree Credit: 0.0 ft²

3. **DMA average runoff coefficient, "C":**

DMA average runoff coefficient: 0.67 *(Enter decimal coefficient, (Refer to the coefficient tab)* — C = 0.475 *This is the average coefficient using the Urban Runoff Quality Management approach and the impervious area.*

Basis for the Calculations*:

	Runoff Coefficients			
	0.25	0.50	0.75	1.00
City of Los Banos	0.14	0.28	0.42	0.56

*Unit Basin Storage Volumes (inches) using 80% runoff capture with 48-hour draw down times, Weather stations, CASQA BMP Handbook, Development (June 2021)

Regression constant for 48-hour draw down (a) = 1.963 *Per the CASQA BMP Handbook for the Urban Runoff Quality Management Approach*

DMA Runoff Coefficient, Volumetric design value "C"
DMA's Unit Basin Storage Volume (inches): 0.38 — P6 = 0.55 inches *CASQA Development BMP Handbook, Appendix D Table P-6, most conservative value*

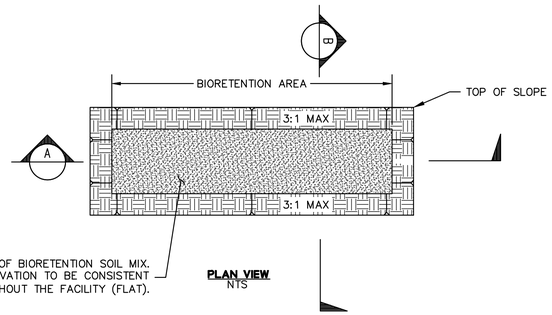
4. **Determine the DMA Capture Design Volume from the two calculations:**

CASQA Development BMP Handbook Method:
Required Capture Volume:
1,126 cubic feet
8,421 gallons
0.026 acre-feet

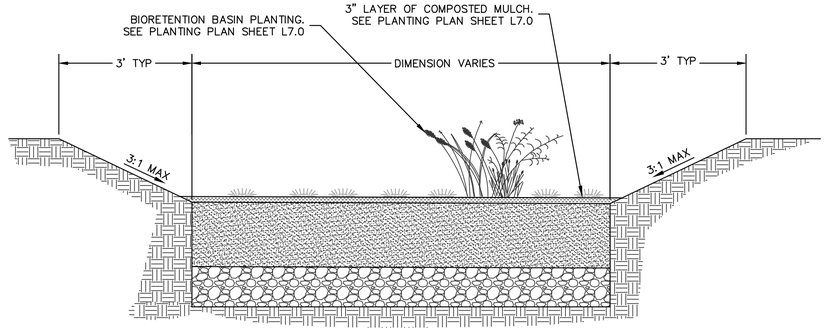
Using the Urban Runoff Quality Management Approach:
Required Capture Volume:
1,536 cubic feet
11,492 gallons
0.035 acre-feet

Maximum Detention Volume (Po) = 0.513 inches =a*P6*C

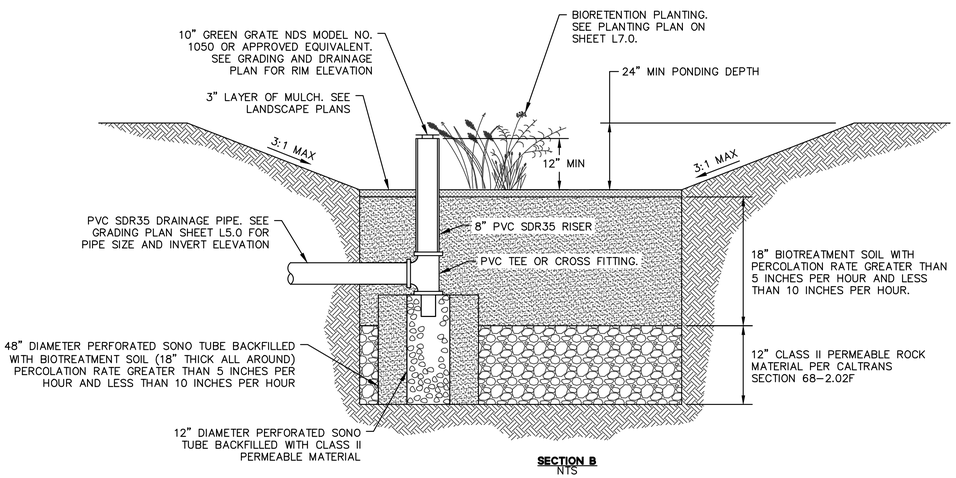
Identify the method used for Project Development DMA
CASQA Development BMP Handbook Method



PLAN VIEW
NTS



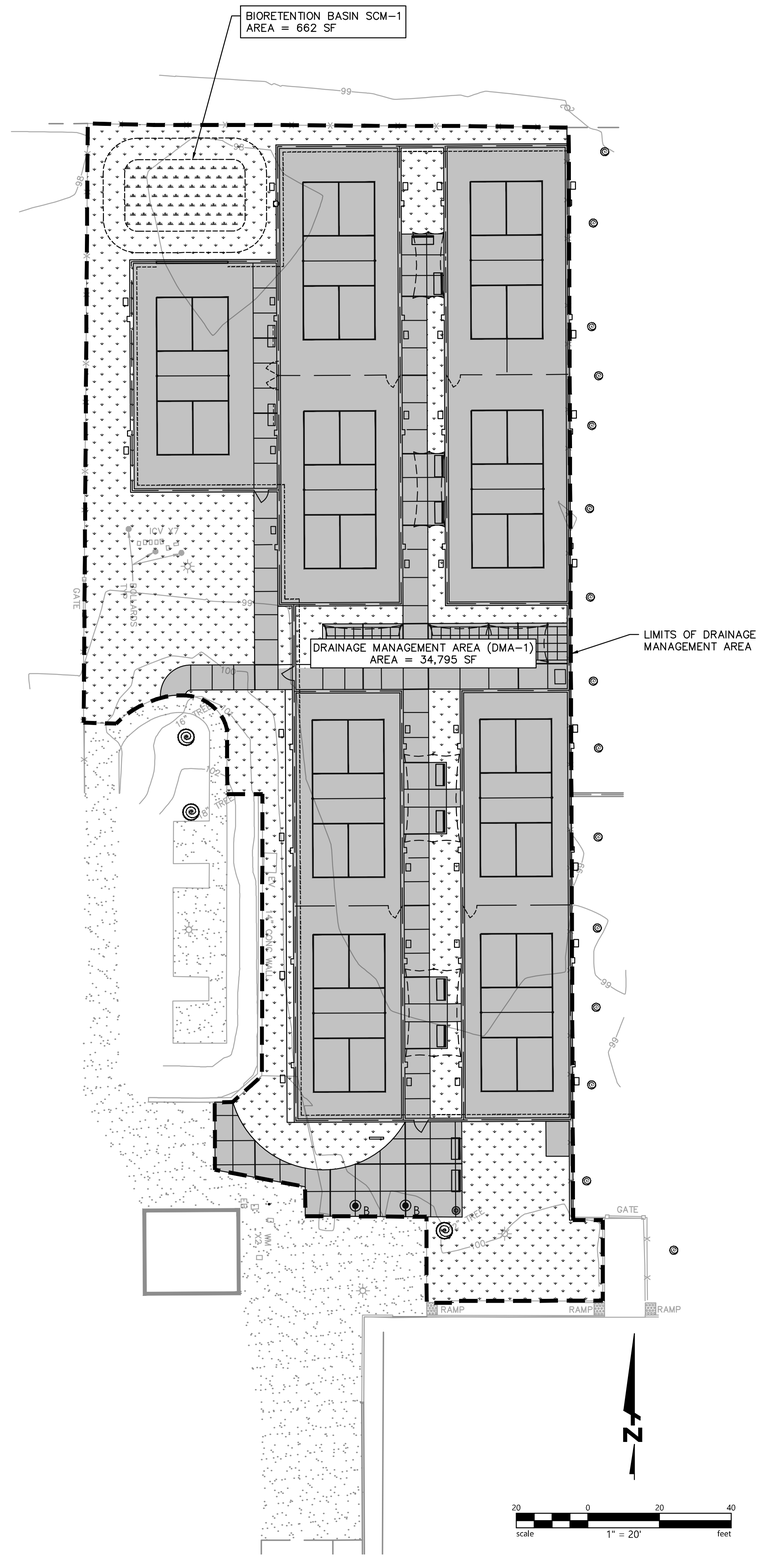
SECTION A
NTS



SECTION B
NTS

BIORETENTION STORMWATER CONTROL MEASURE

NOT TO SCALE



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REVISION	DATE

REGISTERED PROFESSIONAL ENGINEER
KEVIN WONG
No. C 72285
CIVIL
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AG SPORTS COMPLEX PICKLEBALL COURTS

LOS BANOS, CA

ISSUE	DATE
BID SUBMITTAL	09/20/24

PROJECT NO: 23051
DRAWN BY: AR
CHECKED BY: KW
SCALE: As Shown

SHEET TITLE
STORMWATER CONTROL PLAN

SHEET
C1.0

File Path: \\Sbf-fs06.local\JOBS\2023\231055_CreekTrail_Park\ENG\LS\Sheets\C1.0_CPSWCP.dwg Plot Date: 9/23/24 Stored By: Rico
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