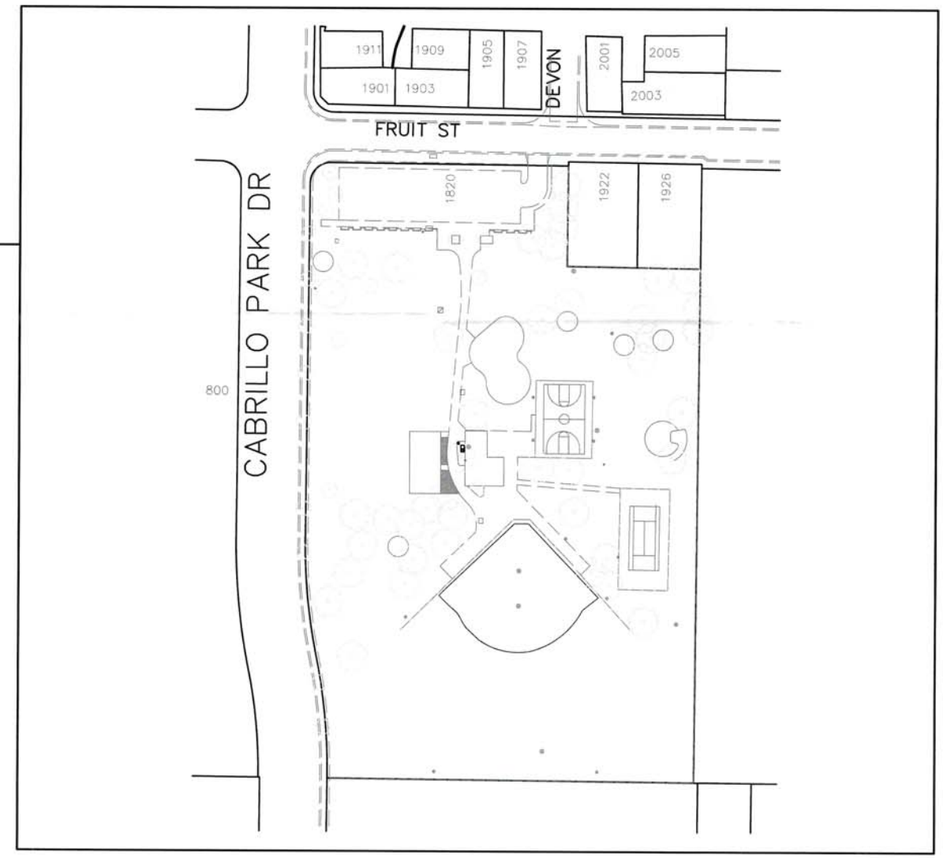
EXHIBIT 2

CITY OF SANTA ANA

PUBLIC WORKS AGENCY

PROJECT NO. 21-2727:
CABRILLO PARK IRRIGATION RENOVATION

VICINITY MAP
(NOT TO SCALE)



LOCATION MAP
(NOT TO SCALE)

1820 EAST FRUIT STREET
SANTA ANA, CA 92705

SHEET INDEX

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NOTICE TO CONTRACTOR

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GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION" AS WRITTEN AND PROMULGATED BY THE 2012 EDITION OF SOUTHERN CALIFORNIA CHAPTER OF THE A.P.W.A. A.G.C.C. JOINT COOPERATIVE COMMITTEE HEREIN REFERRED TO AS THE STANDARD SPECIFICATIONS AND THE CITY OF SANTA ANA STANDARD PLANS & SPECIFICATIONS (UNLESS SPECIFICALLY NOTED OTHERWISE OR IN THE SPECIAL PROVISIONS FOR THIS PROJECT).
2. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY OR STRUCTURE SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. NO CERTIFICATION IS MADE AS TO ACCURACY OR THOROUGHNESS OF THESE RECORDS. APPROVAL OF THIS PLAN BY THE CITY OF SANTA ANA DOES NOT CONSTITUTE AN EXISTENCE OR NONEXISTENCE OF ANY UNDERGROUND UTILITY OR SUBSTRUCTURE WITHIN THE LIMITS OF THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES (BY POTHOLING OR OTHER MEANS). THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (811) 48 HOURS BEFORE ANY EXCAVATION.
3. THESE CONSTRUCTION DOCUMENTS WERE CREATED FROM DIGITIZED BASE INFORMATION PROVIDED BY THE CITY OF SANTA ANA. EXACT LAYOUTS OF ALL HARDSCAPE ELEMENTS MAY NEED TO BE MODIFIED AND SOME FIELD ADJUSTMENTS MAY BE NECESSARY. THE CONTRACTOR SHALL INCLUDE AS PART OF THE BID, TIME AND LABOR FOR ANY MODIFICATIONS NECESSARY TO IMPLEMENT THE INTENT OF THE DRAWINGS.

APPROVALS:

Nabil B. Saba — 1/10/2022
NABIL SABA, PE, EXECUTIVE DIRECTOR, PUBLIC WORKS AGENCY — DATE

Zed Kekula — 1-7-22
ZED KEKULA, INTERIM CITY ENGINEER, PUBLIC WORKS AGENCY — DATE

01/03/2022
LISA RUDLOFF, EXECUTIVE DIRECTOR, PARKS, RECREATION AND COMMUNITY SERVICES AGENCY — DATE

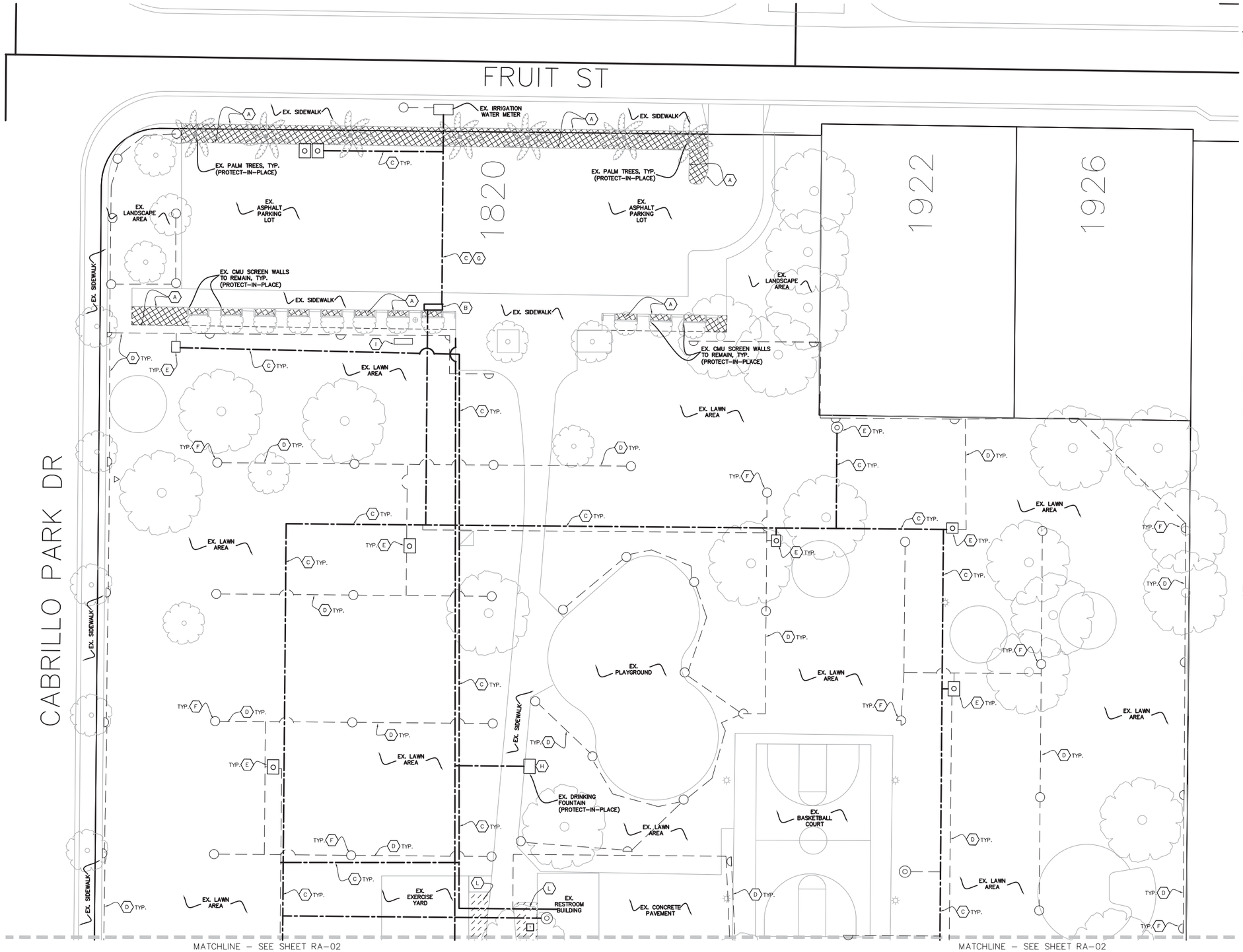
PREPARED UNDER THE SUPERVISION OF:

LLA NO.: 5553 — 01/03/21
MICHAEL LEDBETTER, SENIOR LANDSCAPE ARCHITECT — DATE

TITLE SHEET

PS-06826

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



DEMOLITION KEYNOTES:

- (A) REMOVE EXISTING LANDSCAPE IN THESE AREAS. INCLUDES ALL EXISTING IRRIGATION SUCH AS LATERALS, MAINLINE, VALVES AND VALVE BOXES, QUICK COUPLERS, ETC AS WELL AS SHRUBS AND GROUNDCOVER, MULCH AND DEBRIS. PROTECT-IN-PLACE ALL EXISTING TREES IN PLACE. SEE IRRIGATION AND LANDSCAPE PLAN FOR MORE INFORMATION.
- (B) REMOVE AND DISPOSE EXISTING VACUUM BREAKER ASSEMBLY INCLUDING RISERS AND THRUSTBLOCKS IN THEIR ENTIRETY.
- (C) ABANDON IN PLACE ALL EXISTING IRRIGATION MAINLINE AND ALL ASSOCIATED MATERIALS. REMOVE AND DISPOSE ANY PIPING AS NEEDED THAT IS IN CONFLICT WITH NEW IRRIGATION SYSTEM LAYOUT. EXISTING LOCATIONS SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-BUILTS AT THE TIME THE DRAWINGS WERE PREPARED AND ARE FOR BIDDING PURPOSES ONLY, ACTUAL LOCATIONS WILL BE DETERMINED IN THE FIELD.
- (D) ABANDON IN PLACE ALL EXISTING IRRIGATION LATERALS AND ALL ASSOCIATED MATERIALS. REMOVE AND DISPOSE ANY PIPING AS NEEDED THAT IS IN CONFLICT WITH NEW IRRIGATION SYSTEM LAYOUT. EXISTING LOCATIONS SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-BUILTS AT THE TIME THE DRAWINGS WERE PREPARED AND ARE FOR BIDDING PURPOSES ONLY, ACTUAL LOCATIONS WILL BE DETERMINED IN THE FIELD.
- (E) REMOVE AND DISPOSE EXISTING IRRIGATION VALVES AND VALVE BOXES AND ALL ASSOCIATED MATERIALS IN THEIR ENTIRETY. EXISTING LOCATIONS SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-BUILTS AT THE TIME THE DRAWINGS WERE PREPARED AND ARE FOR BIDDING PURPOSES ONLY, ACTUAL LOCATIONS WILL BE DETERMINED IN THE FIELD.
- (F) REMOVE AND DISPOSE EXISTING IRRIGATION SPRAYHEADS AND ALL ASSOCIATED MATERIALS IN THEIR ENTIRETY. EXISTING LOCATIONS SHOWN ON THESE PLANS ARE BASED ON AVAILABLE AS-BUILTS AT THE TIME THE DRAWINGS WERE PREPARED AND ARE FOR BIDDING PURPOSES ONLY, ACTUAL LOCATIONS WILL BE DETERMINED IN THE FIELD.
- (G) SAWCUT AND REMOVE EXISTING ASPHALT PARKING LOT AS NEEDED TO REMOVE AND REPLACE EXISTING TRANSITE IRRIGATION MAINLINE. PATCH AND REPAIR PARKING LOT, MATCHING LIKE FOR LIKE, PROVIDE RE-STRIPING WHERE NEEDED MATCHING LIKE FOR LIKE.
- (H) CUT AND CAP WATER LINES FEEDING RESTROOM BUILDING AND EXISTING DRINKING FOUNTAINS, TYPICAL. SEE IRRIGATION PLAN FOR MORE INFORMATION, RECONNECT TO NEW 4" MAINLINE LOOP AS SHOWN.
- (I) REMOVE AND DISPOSE EXISTING BENCH IN THIS APPROXIMATE LOCATION.
- (J) REMOVE EXISTING INFIELD MIX AND RE-ESTABLISH EDGE OF LAWN. AFTER NEW IRRIGATION IS IN PLACE, PATCH AND REPAIR INFIELD MIX MATCHING LIKE FOR LIKE, TYP.
- (K) REMOVE EXISTING LAWN AND RE-ESTABLISH EDGE OF INFIELD. AFTER NEW IRRIGATION IS IN PLACE, PATCH AND REPAIR W/ NEW SOD MATCHING LIKE FOR LIKE, TYP.
- (L) REMOVE EXISTING DRIP IRRIGATION IN THESE LANDSCAPE AREAS, INCLUDING DRIP VALVES AND BATTERY OPERATED CONTROLLER(S). RETURN DRIP VALVES AND CONTROLLERS TO CITY. PROTECT-IN-PLACE ALL EXISTING PLANT MATERIAL. SEE IRRIGATION PLAN FOR NEW SPRAY IRRIGATION TO BE INSTALLED IN THESE AREAS.

TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE PARK ARE TO BE PROTECTED-IN-PLACE, TYPICAL.
2. ALL HEAVY EQUIPMENT SHALL ONLY OPERATE OUTSIDE OF THE DRIPLINE(S) AND AVOID CONTACT WITH ANY PART OF THE EXISTING TREES THROUGHOUT THE PARK.
3. NO STOCKPILING OR SOIL COMPACTING SHALL BE ALLOWED WITHIN THE DRIPLINES(S) OF EXISTING TREES THROUGHOUT THE PARK.
4. ANY EXISTING TREE DAMAGED BY THE INSTALLATION OF THIS WORK SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY WITH COMPARABLE 48" BOX SPECIMEN.
5. ALL TRENCHING AND/OR DIGGING WITHIN THE DRIPLINE(S) OF EXISTING TREES THROUGHOUT THE PARK SHALL BE DONE WITH HAND TOOLS.

PATCH AND REPAIR NOTES:

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PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION

SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/30/22 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022

DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER — RCE NO.: 62968 — DATE 01/2022

REMOVAL/DEMOLITION PLAN

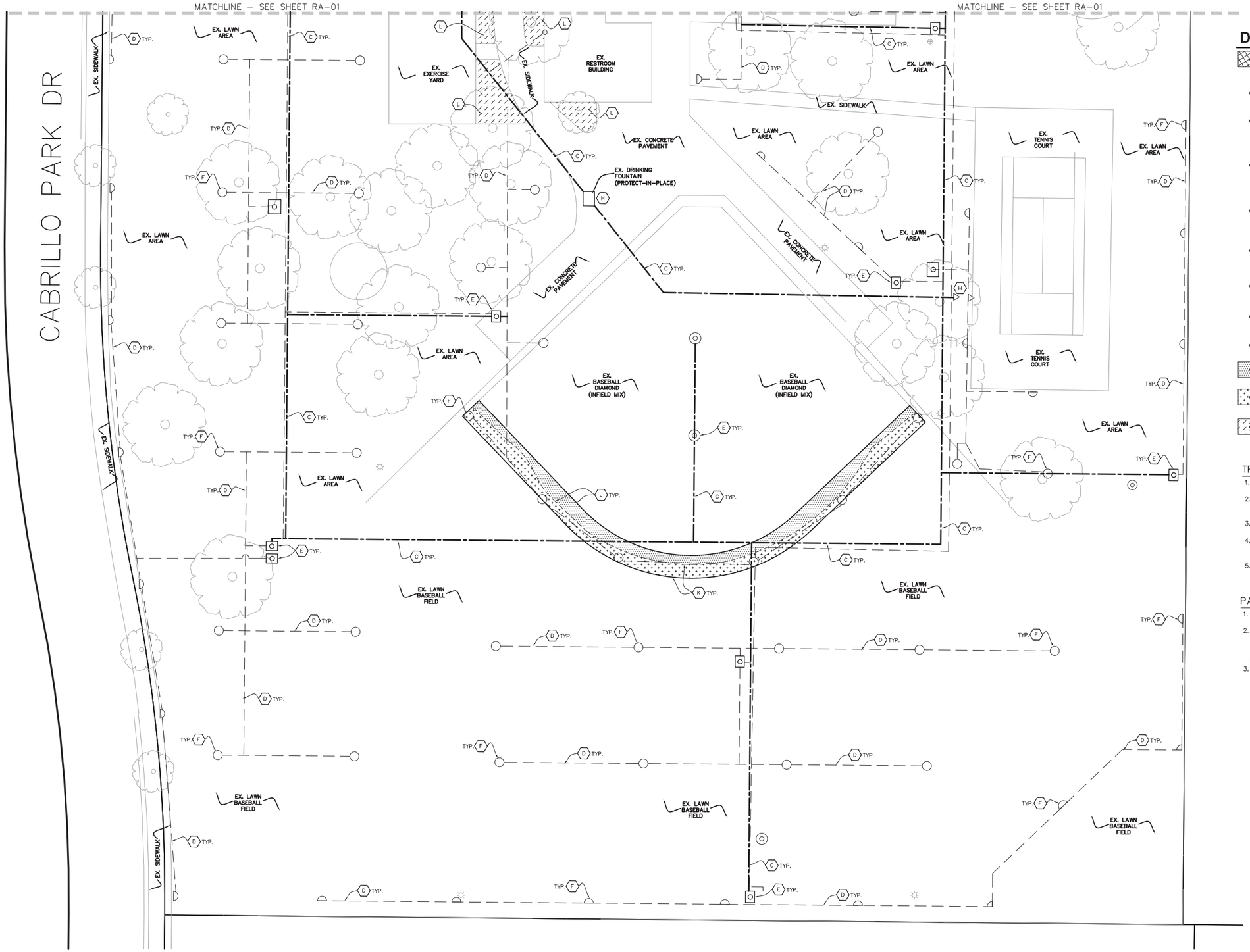
CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

RA-01

SHEET 2 OF 12



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N / W / E / S

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SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/22/22 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER	SENIOR LANDSCAPE ARCHITECT DESIGNED: ML DRAWN: AT CHECKED: ML	DATE 01/2022
REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL	PRINCIPAL CIVIL ENGINEER RCE NO.: 62968	01/2022

REMOVAL/DEMOLITION PLAN

CABRILLO PARK IRRIGATION RENOVATION

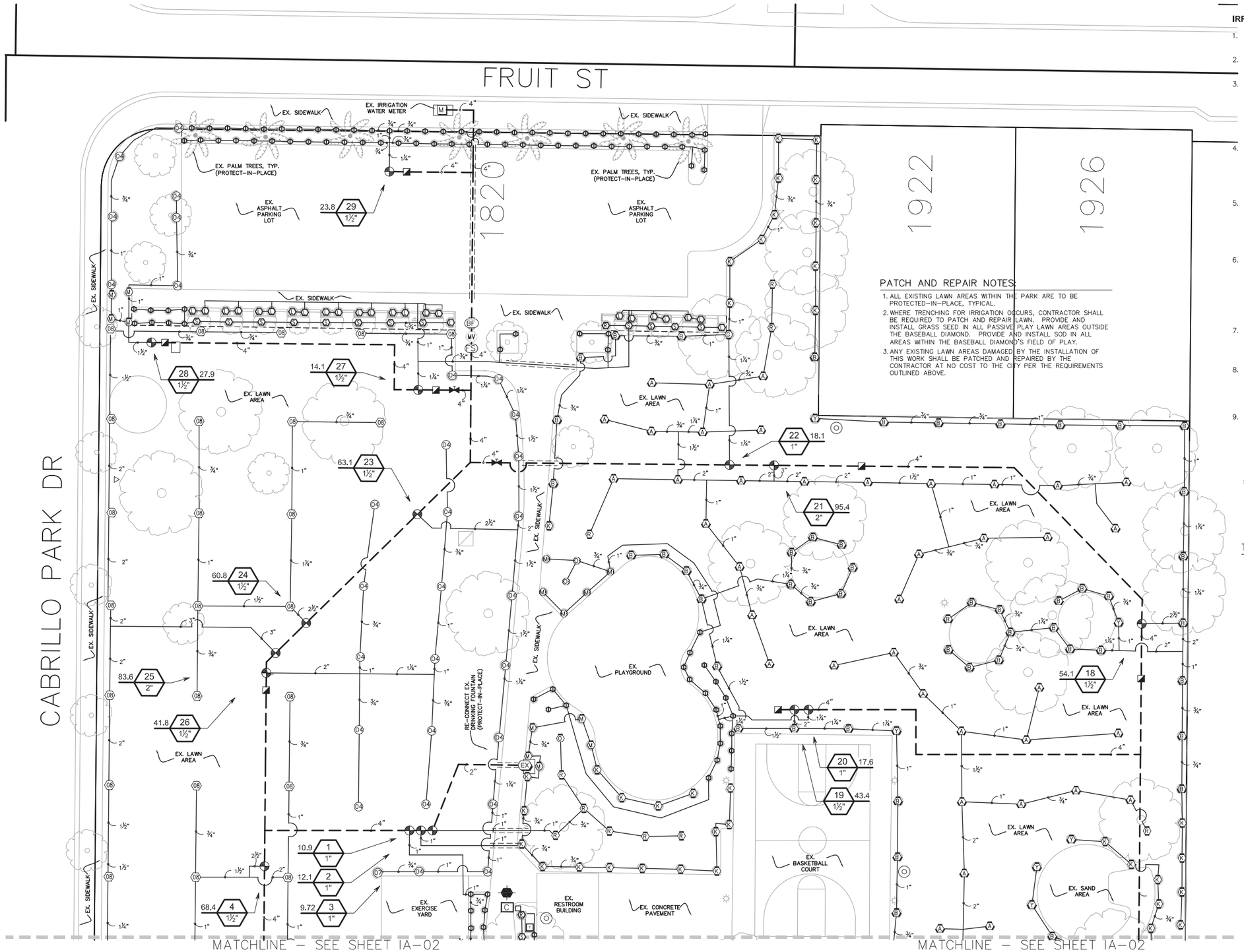
CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

RA-02

SHEET 3 OF 12

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



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IRRIGATION NOTES:

1. ALL LOCAL, MUNICIPAL AND STATE LAWS ARE HEREBY INCORPORATED INTO THESE PLANS AND SHALL BE CARRIED OUT BY THE CONTRACTOR.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ANY AND ALL PERMITS REQUIRED TO PERFORM THEIR SCOPE OF WORK.
3. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PERFORM UNDERGROUND UTILITY SURVEY AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO COMMENCING ANY WORK. LOCATIONS OF EXISTING WERE NOT AVAILABLE AT THE TIME THESE DRAWINGS WERE PREPARED. NOTIFY THE CITY'S AUTHORIZED REPRESENTATIVE IN THE EVENT CONFLICTS ARE FOUND BETWEEN THE PROPOSED DESIGN AND CONDITIONS IN THE FIELD.
4. THE IRRIGATION DESIGN SHOWN HERE-IN IS DIAGRAMMATIC AND SHOWN FOR GRAPHIC CLARITY ONLY. ALL MAINLINE, SLEEVING, VALVES, ETC. SHALL BE INSTALLED WITHIN THE LIMIT OF WORK AND LOCATED IN LANDSCAPE AREAS WHERE EVER POSSIBLE. CONTRACTOR WILL BE EXPECTED TO MAKE ADJUSTMENTS IN THE FIELD TO AVOID CONFLICTS WITH PROPOSED PLANTING AND ARCHITECTURAL IMPROVEMENTS.
5. CONTRACTOR SHALL INSTALL ALL PIPE UNDER PAVED AREAS (HARDSCAPE, PARKING LOTS, ETC.) INSIDE SLEEVING AS SHOWN ON THE LEGEND AND SPECIFICATIONS. INSTALL PER DETAILS PROVIDED. AT A MINIMUM, SLEEVES ARE TO BE 2X THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED. SLEEVES SHALL EXTEND 6" MIN. PAST THE EDGE OF PAVED AREAS ABOVE.
6. IRRIGATION HEADS SHALL BE INSTALLED WITH THE NOZZLE, SCREEN, AND ARCS SHOWN ON THE LEGEND. CONTRACTOR IS EXPECTED TO PERFORM MINOR ADJUSTMENTS IN THE FIELD TO LIMIT THE AMOUNT OF OVER-SPRAY ONTO ANY HARDSCAPE ELEMENT. WHERE OCCURS, AND AT NO ADDITIONAL COST TO THE OWNER, CONTRACTOR IS HEREBY DIRECTED TO REPLACE NOZZLES, SCREENS, ETC. WITH MORE APPROPRIATE RADIUS EQUIPMENT TO BETTER FIT ACTUAL FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL ENSURE HEAD-TO-HEAD COVERAGE THROUGHOUT.
7. THE CONTRACTOR WILL BE EXPECTED TO COORDINATE THE ELECTRICAL SERVICE AND STUB-OUT LOCATION WITH THE GENERAL CONTRACTOR AND MAKE THE FINAL CONNECTION TO THE AUTOMATIC CONTROLLER AS SHOWN ON THE PLANS.
8. CONTRACTOR SHALL SUBMIT SCALED SHOP DRAWINGS FOR PROPOSED MAINLINE ROUTING AND VALVE MANIFOLD LOCATIONS PRIOR TO COMMENCING ANY WORK. LAYOUT AND INSTALLATION OF IRRIGATION PIPING WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL AND REINSTALLATION AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
9. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL BE EXPECTED TO PROTECT-IN-PLACE ALL EXISTING LAWN AND SHRUB PLANTINGS THROUGHOUT THE PARK. ANY LANDSCAPE AREAS DISTURBED BY THIS WORK SHALL BE PATCHED AND REPAIRED AS NEEDED, MATCHING LIKE FOR LIKE.

** SEE IRRIGATION LEGEND, SHEET IL-01 FOR ALL REQUIRED PARTS AND MATERIALS AS DEPICTED HERE. **

TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE PARK ARE TO BE PROTECTED-IN-PLACE, TYPICAL.
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REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/22/22 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022

DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — 01/2022

IRRIGATION PLAN

CABRILLO PARK IRRIGATION RENOVATION

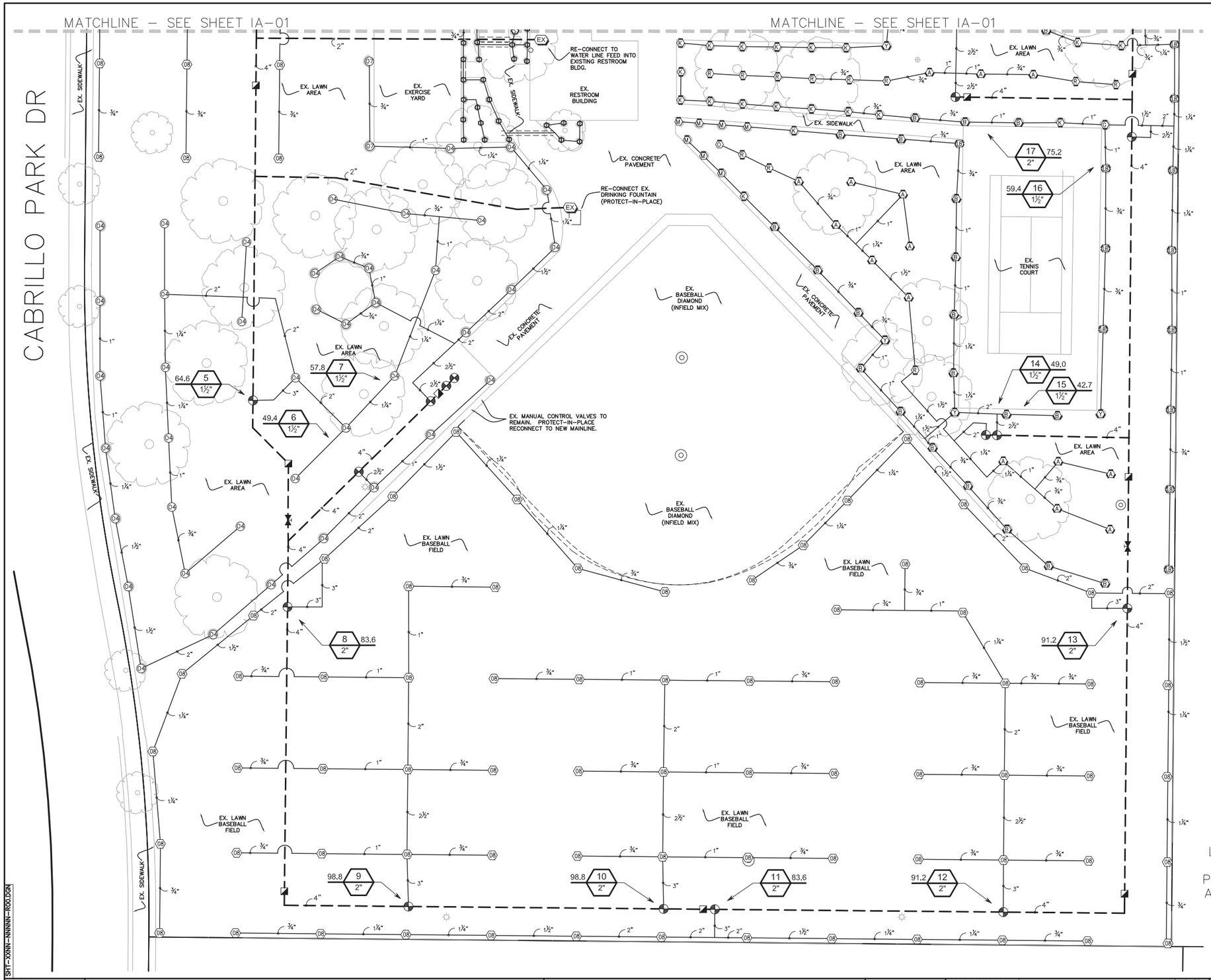
CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

IA-01

SHEET 4 OF 12

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



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4. THE IRRIGATION DESIGN SHOWN HERE-IN IS DIAGRAMMATIC AND SHOWN FOR GRAPHIC CLARITY ONLY. ALL MAINLINE, SLEEVING, VALVES, ETC. SHALL BE INSTALLED WITHIN THE LIMIT OF WORK AND LOCATED IN LANDSCAPE AREAS WHERE EVER POSSIBLE. CONTRACTOR WILL BE EXPECTED TO MAKE ADJUSTMENTS IN THE FIELD TO AVOID CONFLICTS WITH PROPOSED PLANTING AND ARCHITECTURAL IMPROVEMENTS.
5. CONTRACTOR SHALL INSTALL ALL PIPE UNDER PAVED AREAS (HARDSCAPE, PARKING LOTS, ETC.) INSIDE SLEEVING AS SHOWN ON THE LEGEND AND SPECIFICATIONS. INSTALL PER DETAILS PROVIDED. AT A MINIMUM, SLEEVES ARE TO BE 2X THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED. SLEEVES SHALL EXTEND 6" MIN. PAST THE EDGE OF PAVED AREAS ABOVE.
6. IRRIGATION HEADS SHALL BE INSTALLED WITH THE NOZZLE, SCREEN, AND ARCS SHOWN ON THE LEGEND. CONTRACTOR IS EXPECTED TO PERFORM MINOR ADJUSTMENTS IN THE FIELD TO LIMIT THE AMOUNT OF OVER-SPRAY ONTO ANY HARDSCAPE ELEMENT. WHERE OCCURS, AND AT NO ADDITIONAL COST TO THE OWNER, CONTRACTOR IS HEREBY DIRECTED TO REPLACE NOZZLES, SCREENS, ETC. WITH MORE APPROPRIATE RADIUS EQUIPMENT TO BETTER FIT ACTUAL FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL ENSURE HEAD-TO-HEAD COVERAGE THROUGHOUT.
7. THE CONTRACTOR WILL BE EXPECTED TO COORDINATE THE ELECTRICAL SERVICE AND STUB-OUT LOCATION WITH THE GENERAL CONTRACTOR AND MAKE THE FINAL CONNECTION TO THE AUTOMATIC CONTROLLER AS SHOWN ON THE PLANS.
8. CONTRACTOR SHALL SUBMIT SCALED SHOP DRAWINGS FOR PROPOSED MAINLINE ROUTING AND VALVE MANIFOLD LOCATIONS PRIOR TO COMMENCING ANY WORK. LAYOUT AND INSTALLATION OF IRRIGATION PIPING WITHOUT PRIOR APPROVAL WILL BE SUBJECT TO REMOVAL AND REINSTALLATION AT THE DIRECTION OF THE LANDSCAPE ARCHITECT.
9. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL BE EXPECTED TO PROTECT-IN-PLACE ALL EXISTING LAWN AND SHRUB PLANTINGS THROUGHOUT THE PARK. ANY LANDSCAPE AREAS DISTURBED BY THIS WORK SHALL BE PATCHED AND REPAIRED AS NEEDED, MATCHING LIKE FOR LIKE.

TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE PARK ARE TO BE PROTECTED-IN-PLACE, TYPICAL.
2. ALL HEAVY EQUIPMENT SHALL ONLY OPERATE OUTSIDE OF THE DRIPLINE(S) AND AVOID CONTACT WITH ANY PART OF THE EXISTING TREES THROUGHOUT THE PARK.
3. NO STOCKPILING OR SOIL COMPACTING SHALL BE ALLOWED WITHIN THE DRIPLINES(S) OF EXISTING TREES THROUGHOUT THE PARK.
4. ANY EXISTING TREE DAMAGED BY THE INSTALLATION OF THIS WORK SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY WITH COMPARABLE 48" BOX SPECIMEN.
5. ALL TRENCHING AND/OR DIGGING WITHIN THE DRIPLINE(S) OF EXISTING TREES THROUGHOUT THE PARK SHALL BE DONE WITH HAND TOOLS.

PATCH AND REPAIR NOTES:

1. ALL EXISTING LAWN AREAS WITHIN THE PARK ARE TO BE PROTECTED-IN-PLACE, TYPICAL.
2. WHERE TRENCHING FOR IRRIGATION OCCURS, CONTRACTOR SHALL BE REQUIRED TO PATCH AND REPAIR LAWN. PROVIDE AND INSTALL GRASS SEED IN ALL PASSIVE PLAY LAWN AREAS OUTSIDE THE BASEBALL DIAMOND. PROVIDE AND INSTALL SOD IN ALL AREAS WITHIN THE BASEBALL DIAMOND'S FIELD OF PLAY.
3. ANY EXISTING LAWN AREAS DAMAGED BY THE INSTALLATION OF THIS WORK SHALL BE PATCHED AND REPAIRED BY THE CONTRACTOR AT NO COST TO THE CITY PER THE REQUIREMENTS OUTLINED ABOVE.

** SEE IRRIGATION LEGEND, SHEET IL-01 FOR ALL REQUIRED PARTS AND MATERIALS AS DEPICTED HERE. **

N
W E
S

SCALE: 1" = 20'-0"
0 10 20 40 60

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NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 4216 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS A DIG ALERT TICKET NUMBER. CALL 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION

SHT-XXNN-NNNNN-RGO.DGN

FILE NO.: PS-06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVD'YY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/30/22 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022

DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — DATE 01/2022

IA-02

IRRIGATION PLAN

CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 5 OF 12

MASTER IRRIGATION LEGEND

GENERAL IRRIGATION NOTES:

1. ALL LOCAL, MUNICIPAL AND STATE LAWS ARE HEREBY INCORPORATED INTO THESE PLANS AND SHALL BE CARRIED OUT BY THE CONTRACTOR.

3. THE CONTRACTOR IS EXPECTED TO SECURE COPIES OF THE CURRENT ARCHITECTURAL AND ENGINEERING PLANS AND ANIMALIZE THEMSELVES WITH ALL ASPECTS OF THE PROJECT AS IT RELATES TO THEIR SCOPE.

4. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE ANY AND ALL PERMITS REQUIRED TO PERFORM THEIR SCOPE OF WORK.

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES WITHIN THE LIMIT OF WORK PRIOR TO COMMENCING ANY WORK. LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LANDSCAPE ARCHITECT MAKES NO GUARANTEES ABOUT THEIR ACTUAL LOCATIONS. NOTIFY THE CITY'S AUTHORIZED REPRESENTATIVE IN THE EVENT DISCREPANCIES ARE FOUND BETWEEN THE PLANS AND CONDITIONS IN THE FIELD.

6. THE IRRIGATION DESIGN SHOWN HERE-IN IS DIAGRAMMATIC AND SHOWN FOR GRAPHIC CLARITY ONLY. ALL MAINLINE, SLEEVING, VALVES, ETC. SHALL BE INSTALLED WITHIN THE LIMIT OF WORK AND LOCATED IN LANDSCAPE AREAS WHERE EVER POSSIBLE. CONTRACTOR WILL BE EXPECTED TO MAKE ADJUSTMENTS IN THE FIELD TO AVOID CONFLICTS WITH PROPOSED PLANTING AND ARCHITECTURAL IMPROVEMENTS.

7. THE CONTRACTOR IS EXPECTED TO SUBMIT ANY QUESTIONS REGARDING THE PROPOSED IRRIGATION DESIGN WHEN IT IS CLEAR THAT FIELD CONDITIONS DO NOT MATCH WHAT IS DEPICTED ON THE PLANS. SUBMIT QUESTIONS TO THE GENERAL CONTRACTOR AS OFFICIAL RFI'S (***REQUEST'S FOR INFORMATION***). IN CASES WHERE THE CONTRACTOR WILLFULLY INSTALLS EQUIPMENT WITHOUT CLARIFYING INTENT OF THE DRAWINGS, THE WORK WILL BE SUBJECT TO CHANGE AT CONTRACTOR'S EXPENSE.

8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AS SHOWN IN THE DETAILS AND SPECIFICATIONS. PROPOSED CHANGES BY THE CONTRACTOR SHALL BE SUBMITTED IN WRITING FOR REVIEW AND APPROVAL.

9. FINAL LOCATIONS FOR THE POINT-OF-CONNECTION AND THE AUTOMATIC CONTROLLER SHALL BE DETERMINED IN THE FIELD. STAKE LOCATIONS OF SAID EQUIPMENT FOR REVIEW AND APPROVAL BY THE CITY AND THE ARCHITECT PRIOR TO COMMENCING ANY WORK.

10. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL PROVIDE THREE ADDITIONAL PILOT WIRES AND ONE COMMON WIRE TO END OF ANY MAINLINE RUN FOR POSSIBLE FUTURE EXPANSION. PROVIDE AND INSTALL AS A 10FT COIL INSIDE A RECTANGULAR VALVE BOX..

11. CONTRACTOR SHALL INSTALL ALL PIPE UNDER PAVED AREAS (HARDSCAPE, PARKING LOTS, ETC.) INSIDE SLEEVING AS SHOWN ON THE LEGEND AND SPECIFICATIONS. INSTALL PER DETAILS PROVIDED. AT A MINIMUM, SLEEVES ARE TO BE 2X THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED. SLEEVES SHALL EXTEND 6" MIN. PAST THE EDGE OF PAVED AREAS ABOVE.

12. IRRIGATION HEADS SHALL BE INSTALLED WITH THE NOZZLE, SCREEN, AND ARCS SHOWN ON THE LEGEND. CONTRACTOR IS EXPECTED TO PERFORM MINOR ADJUSTMENTS IN THE FIELD TO LIMIT THE AMOUNT OF OVER-SPRAY ONTO ANY HARDSCAPE ELEMENT. WHERE OCCURS, AND AT NO ADDITIONAL COST TO THE CITY, CONTRACTOR IS HEREBY DIRECTED TO REPLACE NOZZLES, SCREENS, ETC. WITH MORE APPROPRIATE RADIUS EQUIPMENT TO BETTER FIT ACTUAL FIELD CONDITIONS ENCOUNTERED. CONTRACTOR SHALL PROVIDE HEAD-TO-HEAD COVERAGE THROUGHOUT.

13. ALL IRRIGATION ROTOR AND ROTATORS WITHIN TURF AREAS SHALL BE (6") POP-UPS.

14. THE CONTRACTOR IS EXPECTED TO ADJUST THE PRESSURE REGULATOR ON EACH RCV SO THAT THE HEAD FARTHEST AND HIGHEST IN ELEVATION OPERATES WITHIN THE OPERATING PRESSURE SHOWN ON THE IRRIGATION LEGEND.

15. THE PROPOSED IRRIGATION DESIGN IS BASED ON A STATED STATIC WATER PRESSURE OF 88 PSI PER THE CITY'S WATER DEPARTMENT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY THE STATIC WATER PRESSURE AVAILABLE PRIOR TO COMMENCING ANY WORK. NOTIFY THE LANDSCAPE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

16. WHERE IRRIGATION PIPE INDICATED ON THE PLANS IS NOT SIZED, THE CONTRACTOR SHALL INSTALL SAID PIPE AT AN APPROPRIATE SIZE NOT TO EXCEED 5FPS IN PVC PIPE AND 7PS IN COPPER PIPE. ANY SUCH CHANGES SUCH AS THESE SHALL BE MADE AT NO COST TO THE CITY.

17. THE CONTRACTOR WILL BE EXPECTED TO COORDINATE THE ELECTRICAL SERVICE AND STUB-OUT LOCATION WITH THE GENERAL CONTRACTOR AND MAKE THE FINAL CONNECTION TO THE AUTOMATIC CONTROLLER AS SHOWN ON THE PLANS.

18. PRESSURE REGULATING DEVICES ARE REQUIRED IF WATER PRESSURE IS BELOW OR EXCEEDS THE RECOMMENDED PRESSURE OF THE SPCIFIED IRRIGATION DEVICES.

19. CHECK VALVES OR ANTI-DRAIN VALVES ARE REQUIRED ON ALL SPRINKLER HEADS WHERE LOW POINT DRAINAGE COULD OCCUR.

IRRIGATION SCHEDULE NOTES:

A. THE IRRIGATION SCHEDULES FOR PLANT ESTABLISHMENT AND ESTABLISHED LANDSCAPE SHALL BE DETERMINED BY THE MAINTENANCE CONTRACTOR AND SHALL BE CHANGED ACCORDING TO THE MONTH OF THE YEAR. THEY ARE TO BE USED IN CONJUNCTION WITH THE IRRIGATION SYSTEM'S SMART CONTROLLER TO ADJUST RUNTIMES BASED ON ACTUAL ETO DATA. CONTRACTOR IS EXPECTED TO MAKE ADJUSTMENTS AS NEEDED TO ACCOUNT FOR PLANT TYPES AND ON-SITE MICRO-CLIMATES.

B. IRRIGATION RUN-TIMES SHALL BE ADJUSTED OR RUN AS REPEAT CYCLES TO ELIMINATE ANY WATER RUN-OFF OR PONDING OF IRRIGATION WATER IN LANDSCAPE AREAS

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY	PSI
M L O	Hunter MP1000 PROS-06-PRS40-CV Turf Rotator, 6" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc.	18	40
K G R	Hunter MP2000 PROS-06-PRS40-CV Turf Rotator, 6" pop-up with factory installed check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc.	79	40
B Y A	Hunter MP3000 PROS-06-PRS40-CV Turf Rotator, 6" pop-up with factory installed check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc.	135	40
LB	Hunter MP3500 PROS-06-PRS40-CV Turf Rotator, 6" Pop-up with factory installed check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. LB=light brown adjustable arc, 90-210.	12	40
800 A 800 F	Hunter MP800SR PROS-06-PRS40-CV Turf Rotator, 6" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. ADJ=Orange and Gray (arc 90-210), 360=Lime Green and Gray (arc 360)	21	40
M L O	Hunter MP815 PROS-06-PRS40-CV Turf Rotator, 6" pop-up with check valve, pressure regulated to 40 psi, MP Rotator nozzle on PRS40 body. M=Maroon and Gray adj arc 90 to 210, L=Light Blue and Gray 210 to 270 arc, O=Olive and Gray 360 arc.	7	40

SYMBOL	MANUFACTURER/MODEL	QTY	PSI	GPM	RADIUS
04	Hunter I-25-06-SS-HS	71	40	3.80	37'
07	Hunter I-25-06-SS-HS	3	40	6.10	40'
08	Hunter I-40-06-SS-HS	102	40	7.60	41'

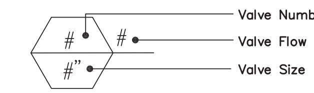
PRESSURE CALCULATION

P.O.C. NUMBER: 01
Water Source Information:

FLOW AVAILABLE	
Water Meter Size:	3"
Flow Available:	225.00 gpm
PRESSURE AVAILABLE	
Static Pressure at POC:	88.00 PSI
Elevation Change:	2.00 ft
Service Line Size:	3"
Length of Service Line:	20 ft
Pressure Available:	87.00 psi
DESIGN ANALYSIS	
Maximum Station Flow:	98.80 gpm
Flow Available at POC:	225.00 gpm
Residual Flow Available:	126.20 gpm
Critical Station:	27
Design Pressure:	40.00 psi
Friction Loss:	2.60 psi
Fittings Loss:	0.26 psi
Elevation Loss:	0.00 psi
Loss through Valve:	22.50 psi
Pressure Req. at Critical Station:	65.36 psi
Loss for Fittings:	0.00 psi
Loss for Main Line:	0.03 psi
Loss for POC to Valve Elevation:	0.00 psi
Loss for Backflow:	11.00 psi
Loss for Master Valve:	2.38 psi
Loss for Water Meter:	1.00 psi
Critical Station Pressure at POC:	79.77 psi
Pressure Available:	87.00 psi
Residual Pressure Available:	7.23 psi

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION	QTY
	RAIN BIRD 300-BPE-PRS-D ANGLE 3" BRASS ELECTRIC REMOTE CONTROL VALVE, WITH ANGLE CONFIGURATION. WITH PRS-DIAL PRESSURE REGULATING MODULE.	31
	RAIN BIRD 33-DLRC 3/4" BRASS QUICK-COUPLING VALVE, WITH CORROSION-RESISTANT STAINLESS STEEL SPRING, LOCKING THERMOPLASTIC RUBBER COVER, DOUBLE TRACK KEY LUG, AND 2-PIECE BODY.	16
	GRISWOLD ISOLATOR UNION BRASS DWS VALVE WITH UNION BALL VALVE. INCLUDES PLUG IN BOSS. SIZES 1/2" THROUGH 3", SAME SIZE AS IRRIGATION LINE. 100 MESH STAINLESS STEEL STRAINER AND PACKING GLAND BALL VALVE ARE IDEAL FOR DIRTY WATER APPLICATIONS.	4
MV	GRISWOLD 2160N 3" 3" SOLENOID, NORMALLY OPEN MASTER VALVE. CAST IRON AND BRONZE MATERIAL. NPT END CONNECTION.	1
BF	ZURN 375-BP 3" REDUCED PRESSURE BACKFLOW PREVENTER. SIZES 2 1/2", 3", 4", 6", 8", 10"	1
C	CALSENSE ET2000-32 32 STATION AUTOMATIC CONTROLLER WITH RADIO COMMUNICATIONS PER CITY REQUIREMENTS.	1
FS	Rain Bird FS-350-B 3" and Higher Flow Sensor for use with Rain Bird Maxicom, SiteControl, and ESP-LXD Central Control Systems. Brass Model. Suggested Operating Range of 12.0 GPM to 45,000 GPM.	1
	Strong Box SBBC-75SS OR APPROVED EQUAL High profile, tube and wire construction smooth touch surface, stainless steel backflow enclosure. 76.5"L, 39"H, 25.5"W (194.31cm L, 99.06cm H, 64.77cm W).	1
	Irrigation Lateral Line: PVC Schedule 40 UP TO 2" Class 200 SDR 21 OVER 2" WITH SCH. 80 FITTINGS, TYPICAL.	13,027 l.f.
	Irrigation Mainline: PVC Class 315 SDR 13.5 WITH LEEMCO RESTRAINT FITTINGS, TYPICAL.	3,024 l.f.
	Pipe Sleeve: PVC Schedule 40 2X DIA. OF PIPE	209.1 l.f.

Valve Callout



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SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX — ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER 5553 — SIGNATURE — 4/30/23 RENEWAL DATE — 1-3-22 DATE — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022
DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — 01/2022

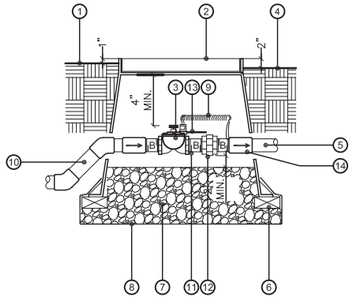
IRRIGATION LEGEND, NOTES, CALCULATIONS — IL-01

CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

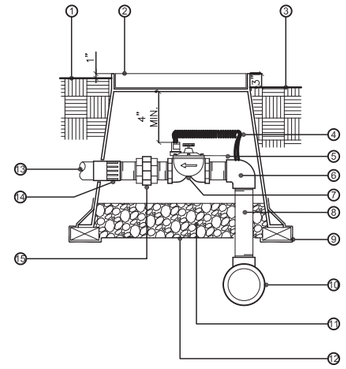
PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



1. FINISH GRADE IN TURF AREAS
2. JUMBO VALVE BOX – NDS OR APPROVED EQUAL. PROVIDE WITH STAINLESS STEEL ANTI–THEFT LID BY SENTRY OR APPROVED EQUAL. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "MV" ONTO LID.
3. MASTER CONTROL VALVE, SEE LEGEND FOR SPECIFICATION, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. FINISH GRADE IN SHRUB AREAS
5. PVC MAINLINE TO FLOW SENSOR
6. (4) BRICK SUPPORTS
7. 3/4" ROCK, 2 CUBIC FEET
8. FILTER FABRIC
9. 24" WIRE LOOP
10. PVC MAINLINE FROM BACKFLOW
11. BRASS NIPPLE, TYP.
12. BRASS UNION
13. VALVE ID TAGS
14. PVC SCH 80 FEMALE

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.

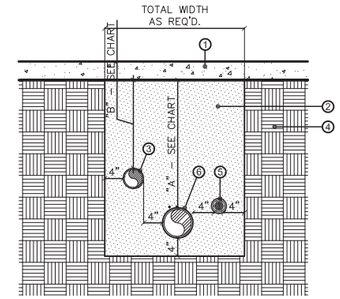
D MASTER VALVE
N.T.S.



1. FINISH GRADE IN TURF AREAS
2. JUMBO VALVE BOX – NDS OR APPROVED EQUAL. PROVIDE WITH STAINLESS STEEL ANTI–THEFT LID BY SENTRY OR APPROVED EQUAL. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "RCV" AND CONTROL STATION # ONTO LID.
3. FINISH GRADE IN SHRUB AREAS
4. 24" WIRE LOOP
5. VALVE ID TAG
6. SCH. 80 PVC THREADED ELL
7. CONTROL VALVE, SEE LEGEND FOR SPECS
8. SCH 80 PVC NIPPLES (TYP). LENGTH AS REQUI
9. (4) BRICK SUPPORTS
10. IRRIGATION MAINLINE
11. 3/4" ROCK GRAVEL 2 CUBIC FEET
12. LANDSCAPE FABRIC
13. LATERAL
14. SCH. 80 PVC FEMALE ADAP.
15. SCH. 80 UNION

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.

C REMOTE CONTROL VALVE
N.T.S.



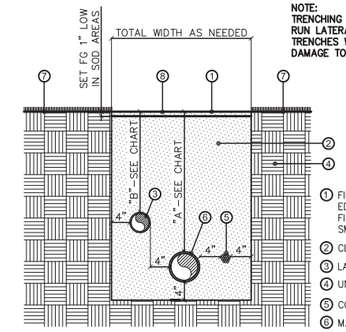
1. PAVING
2. SAND BACKFILL COMPACTED TO THE DENSITY OF EXISTING SOIL
3. LATERAL LINE SEE LEGEND FOR SPECS
4. UNDISTURBED SOIL
5. CONTROL WIRE SEE LEGEND FOR SPECS
6. MAINLINE SLEEVE, SEE LEGEND FOR SPECS

PEDESTRIAN PAVEMENT	A	B
2" TO 12" SIZE	36"	18"
VEHICULAR PAVEMENT	A	B
2" TO 12" SIZE	42"	30"

PVC SLEEVES TO BE TWICE THE DIAMETER OF THE PIPE OR WIRE BUNDLE CARRIED.

B SLEEVING
N.T.S.

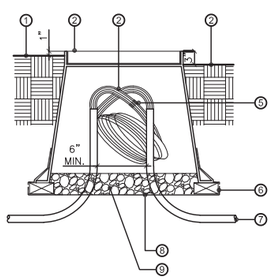
NOTE:
TRENCHING SHALL BE KEPT TO A MINIMUM, RUN LATERALS AND MAINLINE IN COMMON TRENCHES WHERE EVER POSSIBLE TO LIMIT DAMAGE TO EXISTING LAWN AREAS.



DIMENSION	A	B
1/2" TO 2-1/2" IN SIZE	24"	18"
3" IN SIZE	30"	
4" AND LARGER	36"	

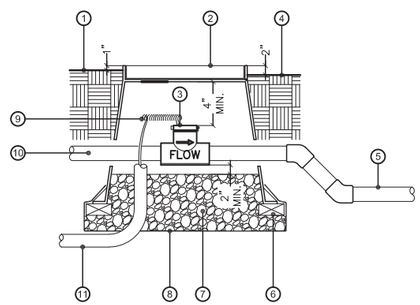
1. FINISH GRADE – PROVIDE NEAT AND CLEAN EDGES THROUGHOUT ALL EXISTING AREAS. FINISH GRADE SHALL BE COMPACTED SMOOTH AND LEVEL WITH NO HUMPS.
2. CLEAN COMPACTED BACKFILL
3. LATERAL LINE – SEE PLANS AND LEGEND
4. UNDISTURBED SOIL
5. CONTROL WIRES, SEE SPECS.
6. MAINLINE – SEE PLANS AND LEGEND
7. EXISTING LAWN – PROTECT–IN–PLACE REPLACE ANY DAMAGED BY THIS WORK.
8. LAWN PATCHING – FOR ALL PASSIVE LAWN AREAS, CONTRACTOR SHALL APPLY GRASS SEED PER SPECS. FOR ALL BASEBALL FIELD LAWN AREAS, CONTRACTOR SHALL INSTALL SOD PER SPECS.

A TRENCHING
N.T.S.



1. FINISHED GRADE IN TURF AREAS
2. 10" ROUND PLASTIC VALVE BOX WITH BOLT DOWN COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "PB" ONTO LID.
3. 24" WIRE EXPANSION LOOP (TYP).
4. FINISH GRADE IN SHRUB AREAS
5. WATER PROOF WIRE CONNECTORS
6. (4) BRICK SUPPORTS
7. PVC ELECTRICAL SWEEP (IF INSTALLED IN CONDUIT)
8. LANDSCAPE FABRIC
9. 3/4" ROCK, 1 CUBIC FT.

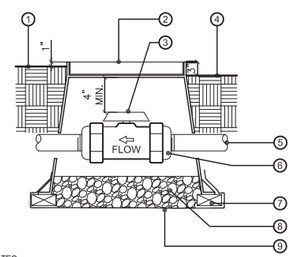
H PULL BOX
N.T.S.



1. FINISH GRADE IN TURF AREAS
2. JUMBO VALVE BOX – NDS OR APPROVED EQUAL. PROVIDE WITH STAINLESS STEEL ANTI–THEFT LID BY SENTRY OR APPROVED EQUAL. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "FS" ONTO LID.
3. FLOW SENSOR, SEE LEGEND FOR SPECIFICATION, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. FINISH GRADE IN SHRUB AREAS
5. PVC MAINLINE TO IRRIGATION SYSTEM
6. (4) BRICK SUPPORTS
7. 3/4" ROCK, 2 CUBIC FEET
8. FILTER FABRIC
9. 24" WIRE LOOP
10. PVC MAINLINE FROM MASTER VALVE
11. 1" ELECTRICAL CONDUIT TO CONTROLLER

NOTES:
a. NO FITTINGS 10x PIPE O.D. UPSTREAM OF SENSOR, NO FITTINGS 5x PIPE O.D. DOWNSTREAM OF SENSOR.

G FLOW SENSOR
N.T.S.

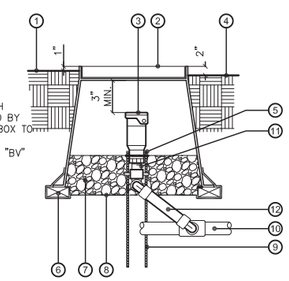


NOTES:

1. BOX TO BE INSTALLED TO ALLOW FOR PROPER OPERATION OF BALL VALVE HANDLE.
2. INSTALL AT RIGHT ANGLE TO HARDSCAPE EDGE.
3. INSTALL VALVE BOX EXTENSIONS AS REQUIRED TO ACHIEVE PROPER VALVE INSTALLATION AT MAINLINE DEPTH.
4. ALL THREADED CONNECTIONS SHALL HAVE TEFLON TAPE OR PASTE.

F BALL VALVE
N.T.S.

1. FINISH GRADE IN TURF AREAS
2. JUMBO VALVE BOX – NDS OR APPROVED EQUAL. PROVIDE WITH STAINLESS STEEL ANTI–THEFT LID BY SENTRY OR APPROVED EQUAL. BOX TO BE PLACED AT RIGHT ANGLE TO HARDSCAPE EDGE. HEAT BRAND "BV" ONTO LID.
3. BALL VALVE, SEE LEGEND FOR SPECIFICATION
4. FINISH GRADE IN SHRUB AREAS
5. MAINLINE, DEPTH AS PER SPECS.
6. DUAL UNION CONNECTIONS AS PART OF BALL VALVE, THREADED IF SPECIFIED IN LEGEND
7. (4) BRICK SUPPORTS
8. 3/4" ROCK, 2 CUBIC FT.
9. LANDSCAPE FABRIC



1. FINISH GRADE IN TURF AREAS
2. PLASTIC ROUND VALVE BOX WITH BOLT DOWN COVER, USE STAINLESS BOLT, NUT, AND WASHER. HEAT BRAND "QV" ONTO LID.
3. QUICK COUPLER VALVE, SEE LEGEND FOR SPECIFICATION, INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
4. FINISH GRADE IN SHRUB AREAS
5. STAINLESS STEEL CLAMP
6. (4) BRICK SUPPORTS
7. 3/4" ROCK, 1 CUBIC FEET
8. FILTER FABRIC
9. #4X36" REBAR STAKES (2 TOTAL)
10. MAINLINE, SEE SPECS.
11. BRASS NIPPLE (LENGTH AS REQ'D)
12. SCH. 80 TRIPLE SWING JOINT ASSEMBLY W/ DOUBLE O–RING SEAL

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
b. ENSURE QCV KEY SWIVEL'S FREELY WHEN INSERTED INTO LUG TRACK.

E QUICK COUPLER VALVE
N.T.S.

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SHT–XXNN–NNNNN–R00.DGN

FILE NO.: PS–06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX–XXX–XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — JASON A. LEDBETTER — 4/20/22 — No. 5968 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022
DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — 01/2022

IRRIGATION DETAILS — ID–01

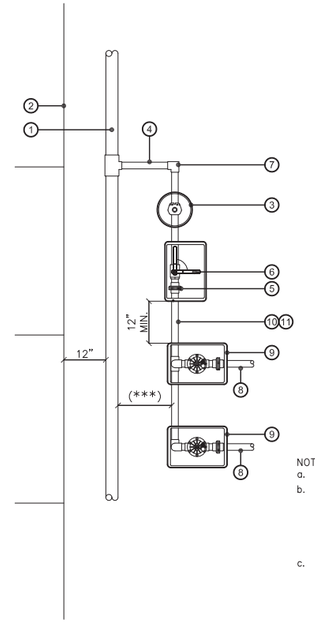
CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 7 OF 12

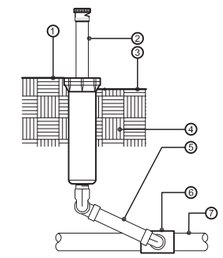
PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



1. IRRIGATION MAINLINE INSTALLED 12" OFF HARDSCAPE EDGE
2. HARDSCAPE EDGE
3. QUICK COUPLER VALVE ON SWING JOINT IN ROUND VALVE BOX
4. SCH. 80 PVC TEE, SxSxS – LENGTH VARIES MAINLINE X MANIFOLD SIZE
5. SCH 80 PVC UNION
6. BALL TYPE ISOLATION VALVE
7. SCH. 80 PVC ELL, SxSxS
8. LATERAL LINE TO SPRINKLERS
9. REMOTE CONTROL VALVE
10. IRRIGATION SUB-MAINLINE, SIZE PER LARGEST VALVE
11. MINIMUM 12" SEPARATION BETWEEN ALL VALVE BOXES

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE
b. *** = VARIABLE DISTANCE TO MANIFOLD. FINAL LOCATION OF EACH MANIFOLD TO BE DETERMINED IN THE FIELD AND COORDINATED WITH EXISTING / PROPOSED LANDSCAPE. MANIFOLD SHALL BE SET BACK FROM THE EDGE OF PAVING AND PLACED IN PLANTING AT LEAST 24" HIGH, DISCREET AND OUT OF SIGHT.
c. STAKE MANIFOLD LOCATIONS IN THE FIELD FOR REVIEW AND APPROVAL BY PARK DEPARTMENT PRIOR TO INSTALLATION.

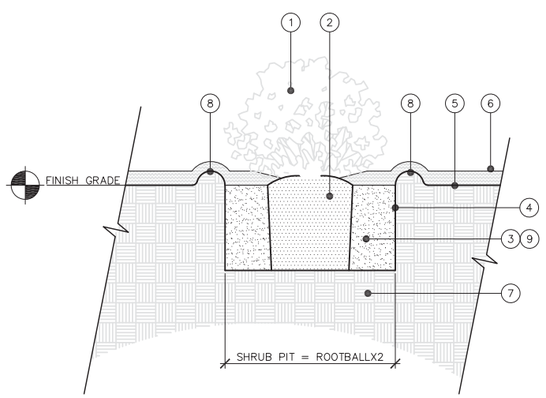
J VALVE MANIFOLD
N.T.S.



1. INSTALL SPRINKLER HEAD FLUSH WITH FINISH GRADE IN TURF AREAS
2. POP-UP SPRINKLER HEAD, SPRAY OR ROTOR SEE LEGEND FOR SPECIFICATION
3. INSTALL SPRINKLER HEAD 1/2" ABOVE FINISH GRADE IN SHRUB AND GROUND COVERS AREAS
4. UNDISTURBED SOIL
5. TRIPLE SWING JOINT ASSEMBLY
6. SCH 80 PVC SxSxT TEE FITTING LATERAL x SPRINKLER INLET SIZE
7. LATERAL LINE, SEE LEGEND AND DETAILS FOR TYPE AND DEPTH REQUIRED

NOTES:
1. INSTALL SPRINKLER HEADS 8" FROM PAVING EDGE IN SHRUB AND GROUND COVER AREAS.
2. INSTALL SPRINKLER HEADS 4" FROM PAVING EDGE IN TURF AREAS.
3. ADJUST SPRAYS OR NOZZLE STREAM SO THERE IS NO OVERSPRAY ONTO ADJACENT HARDSCAPE AND/OR BUILDINGS.
4. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.

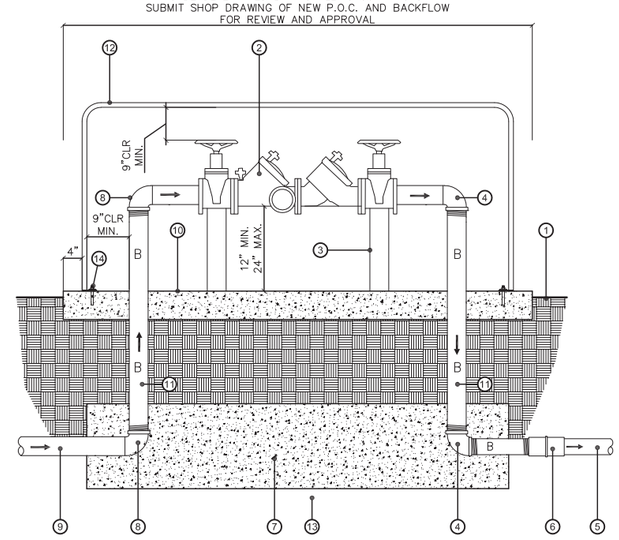
I POP-UP ROTOR
N.T.S.



1. SHRUB PER PLAN – CENTER IN PIT, SET LEVEL TYP
2. ROOTBALL – SET 2" ABOVE FINISH GRADE
3. AMENDED BACKFILL PER SPECIFICATIONS
4. SCARIFY BOTTOM AND SIDES OF PLANTING PIT, TYPICAL.
5. FINISH GRADE
6. MULCH
7. NATIVE UNDISTURBED SOIL
8. WATERING BASIN
9. PLANT TABLETS – QUANTITY AND PLACEMENT PER SPECIFICATIONS.

L SHRUB PLANTING
N.T.S.

OVERALL PAD SIZE AND ENCLOSURE DIMENSION TO BE DETERMINED BY INSTALLING CONTRACTOR. SUBMIT SHOP DRAWING OF NEW P.O.C. AND BACKFLOW FOR REVIEW AND APPROVAL



1. FINISH GRADE PER PLANS
2. BACKFLOW PER LEGEND POWDERCOAT GREEN, TYP.
3. 4" SUPPORTS, TYPICAL
4. BRASS TXT ELL, LINE SIZE
5. PVC PRESSURE SUPPLY LINE, SEE SPECIFICATIONS
6. FEMALE ADAPTER
7. 18"X18"X MONOLITHIC CONCRETE THRUST BLOCK, TYP.
8. COPPER SXT ELL, LINE SIZE
9. TYPE 'K' COPPER PIPE FROM WATER METER, LENGTH PER PLAN
10. 6" THICK CONCRETE W/ #4 @ 12"O.C. EA. WAY SET 2" ABOVE GRADE. EXTEND 4" BEYOND ENCLOSURE TYP.
11. BRASS NIPPLE, LENGTH AS REQ'D.
12. SENTRY HIGH SECURTY CAGE PER CONTRACTOR. SIZE AS REQ'D. SUBMIT CUT SHEET FOR REVIEW AND APPROVAL PRIOR TO PURCHASE OF ANY EQUIPMENT. POWDERCOAT GREEN, TYPICAL. REFER TO CITY STANDARD FOR ADDITIONAL INFO.
13. COMPACT SUBGRADE 95%
14. (4) 3/8" DIA. KB-TZ SS 304, 2-3/8" EMBEDMENT. INSTALL PER ICC-ESR 1917 TYP. EA. CORNER

NOTES:
a. ALL THREADED CONNECTIONS TO HAVE TEFLON TAPE OR PASTE.
b. CONTRACTOR SHALL PROVIDE BACKFLOW CERTIFICATION.
c. INSTALLATION SHALL CONFORM TO LOCAL CODES.

K BACKFLOW ASSEMBLY
N.T.S.

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SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS					
NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES
BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY
CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT MICHAEL A. LEDBETTER STATE OF CALIFORNIA 4/20/22 REGISTRATION EXPIRES 1-8-22

		DATE
PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER	SENIOR LANDSCAPE ARCHITECT DESIGNED: ML DRAWN: AT CHECKED: ML	01/2022
REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL	PRINCIPAL CIVIL ENGINEER RCE NO.: 62968	01/2022

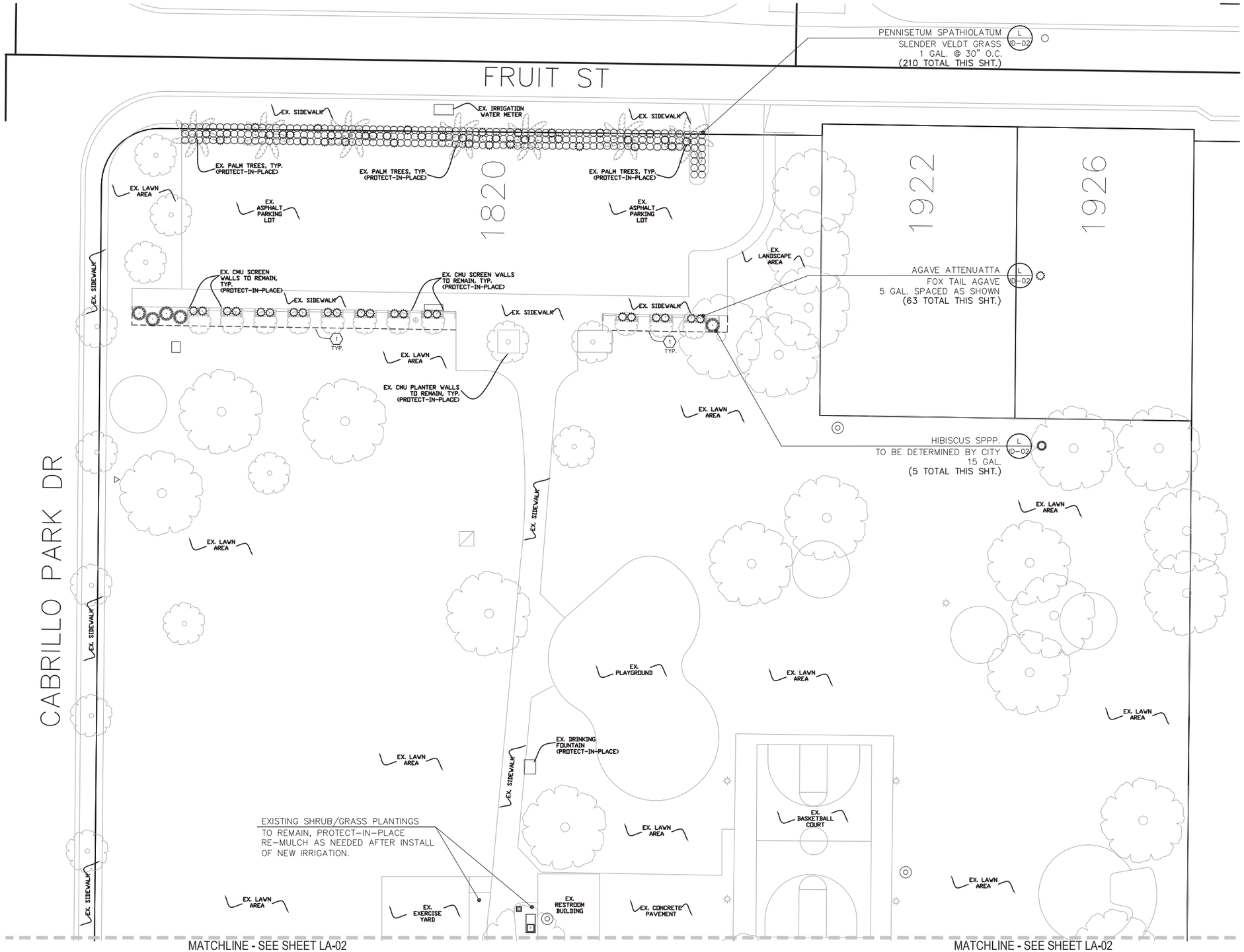
IRRIGATION AND PLANTING DETAILS
CABRILLO PARK IRRIGATION RENOVATION
CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

ID-02

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 8 OF 12

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



PLANTING NOTES:

1. REFER TO PLANTING SPECIFICATIONS FOR MORE INFORMATION REGARDING SOIL PREP, FERTILIZING, BACKFILL, PLANT SELECTION, WARRANTY'S, ETC.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FURNISH PLANT MATERIAL THAT IS FREE OF PESTS AND DISEASE. ANY PLANT MATERIAL FOUND AT THE SITE EXHIBITING SIGNS OF PESTS AND/OR DISEASE WILL BE REMOVED AND REPLACED AT NO COST TO THE OWNER.
3. ONCE ROUGH GRADES HAVE BEEN ESTABLISHED IN PLANTING AREAS, CONTRACTOR SHALL BE REQUIRED TO HAVE SOIL SAMPLES TAKEN (3 MIN.) AND HAVE AGRICULTURAL SUITABILITY TESTS CONDUCTED. TESTS SHALL REVIEW SOIL FERTILITY AND MAKE RECOMMENDATIONS FOR SOIL PREPERATION PRIOT TO PLANTING. SUBMIT SOIL TEST RESULTS TO OWNER AND LANDSCAPE ARCHITECT FOR THEIR RECORDS. SUBMIT EVIDENCE THAT RECOMMENDATIONS PROVIDED IN SOILS REPORT HAVE BEEN FOLLOWED DURING CONSTRUCTION.
4. FINAL LOCATION OF ALL TREES SHALL BE APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
5. SEE SHEET IL-01 FOR PLANTING DETAILS.
6. SEE SHEETS IA-01 AND IA-02 FOR IRRIGATION PLANS.
7. ALL SHRUB AREAS SHALL RECEIVE 3" DARK, HARDWOOD BARK MUCH. SHALL BE 'DECOBARK' AVAILABLE FROM EARTHWORKS SOIL AMENDMENTS OR APPROVED EQUAL. SUBMIT SAMPLE FOR REVIEW AND APPROVAL PRIOR TO PURCHASE. NO SHREDDED MATERIAL WILL BE ACCEPTED.
8. WHERE ANY TREE IS LOCATED WITHIN SIX FEET OF ANY PAVING SURFACE IN ANY DIRECTION, CONTRACTOR SHALL INSTALL A ROOT BARRIER TEN FEET IN EACH DIRECTION FROM THE CENTER OF THE TREE, ALL SIDES OF THE TREE AS REQUIRED. ROOT BARRIER SHALL BE 24" PANELS BY DEEP ROOT CORP. OR APPROVED EQUAL, MODEL UB-24-2, ASSEMBLE AND INSTALL PER MANUFACTURER'S RECOMMENDATIONS AND INSTALLATION INSTRUCTIONS.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH OTHER TRADES AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS PER THE CONSTRUCTION SCHEDULE.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE POSITIVE DRAINAGE AWAY FROM ALL BUILDINGS AND STRUCTURES, 2% MIN.
11. CONTRACTOR SHALL NOT WILLFULLY INSTALL ANY PLANT MATERIAL WHEN IT IS OBVIOUS THAT UNKNOWN CONDITIONS OR GRADE DIFFERENCES EXIST THAT WOULD MAKE THE PROPOSED DESIGN UNACHIEVABLE. NOTIFY THE GENERAL CONTRACTOR IMMEDIATELY IF ANY SUCH CONDITIONS ARE DISCOVERED. FAILURE TO NOTIFY THE APPROPRIATE PARTIES COULD RESULT IN THE REJECTION, REMOVAL, AND REPLACEMENT OF FINISHED WORK AT NO COST TO THE OWNER.

LANDSCAPE KEYNOTES:

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2. PROVIDE AND INSTALL NEW INFIELD MIX AND RE-ESTABLISH EDGE OF LAWN. AFTER NEW IRRIGATION IS IN PLACE, PATCH AND REPAIR INFIELD MIX MATCHING LIKE FOR LIKE, TYP.
3. PROVIDE AND INSTALL NEW LAWN AND RE-ESTABLISH EDGE OF INFIELD. AFTER NEW IRRIGATION IS IN PLACE, PATCH AND REPAIR W/ NEW SOD MATCHING LIKE FOR LIKE, TYP.

TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE PARK ARE TO BE PROTECTED-IN-PLACE, TYPICAL.
2. ALL HEAVY EQUIPMENT SHALL ONLY OPERATE OUTSIDE OF THE DRIPLINE(S) AND AVOID CONTACT WITH ANY PART OF THE EXISTING TREES THROUGHOUT THE PARK.
3. NO STOCKPILING OR SOIL COMPACTING SHALL BE ALLOWED WITHIN THE DRIPLINES(S) OF EXISTING TREES THROUGHOUT THE PARK.
4. ANY EXISTING TREE DAMAGED BY THE INSTALLATION OF THIS WORK SHALL BE REPLACED BY THE CONTRACTOR AT NO COST TO THE CITY WITH COMPARABLE 48" BOX SPECIMEN.
5. ALL TRENCHING AND/OR DIGGING WITHIN THE DRIPLINE(S) OF EXISTING TREES THROUGHOUT THE PARK SHALL BE DONE WITH HAND TOOLS.

PATCH AND REPAIR NOTES:

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SCALE: 1" = 20'-0"

0 10 20 40 60

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PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION

SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS					
NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES
BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY
CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/26/22 — 1-8-22 — STATE OF CALIFORNIA

PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER — SENIOR LANDSCAPE ARCHITECT — DATE 01/2022
DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — 01/2022

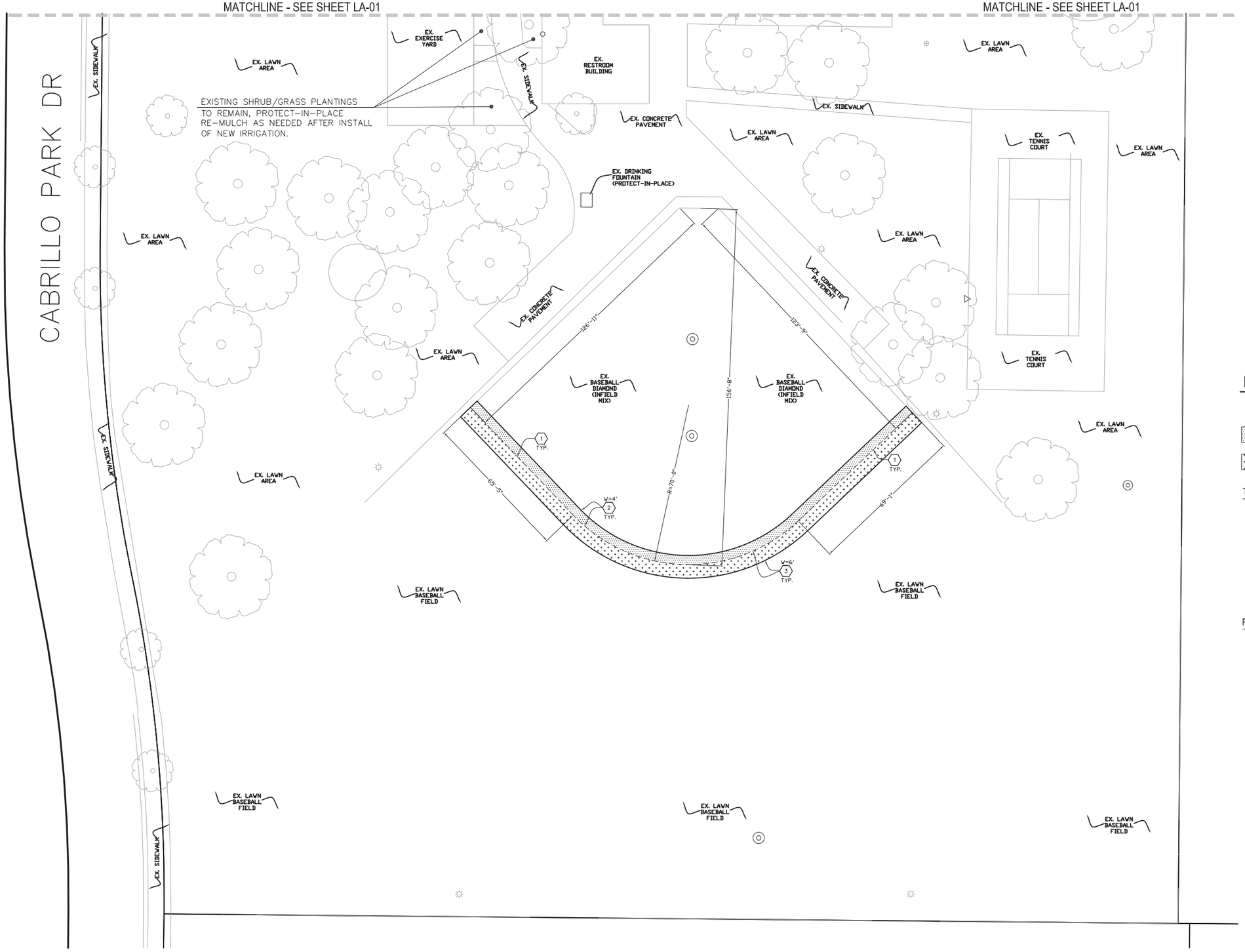
LANDSCAPE PLAN — LA-01

CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 9 OF 12



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N W E S

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FILE NO.: PS-06826

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REFERENCES

BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

LICENSED LANDSCAPE ARCHITECT — MICHAEL A. LEDBETTER — 4/20/22 — STATE OF CALIFORNIA

		DATE
PREPARED UNDER THE SUPERVISION OF: MICHAEL LEDBETTER	SENIOR LANDSCAPE ARCHITECT DESIGNED: ML DRAWN: AT CHECKED: ML	01/2022
REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL	PRINCIPAL CIVIL ENGINEER RCE NO.: 62968	01/2022

LANDSCAPE PLAN

CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

LA-02

SHEET 10 OF 12

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION

ELECTRICAL SPECIFICATIONS

GENERAL

1. CONTRACTOR SHALL PERFORM ALL WORK AS TO CONFORM TO LOCAL, STATE AND NATIONAL CODES AND THE REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
2. CONTRACTOR TO EXAMINE THE SITE TO DETERMINE THE EXACT CONDITIONS AFFECTING THE ELECTRICAL WORK.
3. DRAWINGS INDICATE THE GENERAL SCHEME OF THE INSTALLATION AND ARE DIAGRAMMATIC IN SCOPE. THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS, CONDUIT, EQUIPMENT, APPARATUS, ETC. TO A REASONABLE EXTENT AS THE BUILDING CONDITIONS MAY DICTATE PRIOR TO THEIR INSTALLATION WITHOUT EXTRA COST TO THE OWNER. THE EXACT LOCATION AND ARRANGEMENT OF ALL EQUIPMENT AND PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES.
4. DETAILS OF CONSTRUCTION AND OF WORKMANSHIP WHERE NOT SPECIFICALLY DESCRIBED HEREIN OR INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE COMPLETE SYSTEMS, LEFT IN GOOD WORKING ORDER, READY FOR OPERATION.
5. SCRAP AND DEBRIS, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THIS CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR START-UP OF ALL SYSTEMS.
7. ALL WORK SHALL BE DONE WITH A MINIMUM OF DUST AND DIRT. PROVIDE SUFFICIENT FIREPROOF TARPAULINS AND COVER ALL EQUIPMENT IN WORK AREA WITH SAME DURING WORK OPERATIONS.
8. CONTRACTOR SHALL FURNISH SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ARCHITECT FOR APPROVAL.
9. CONTRACTOR SHALL FILE, SECURE AND PAY FOR ANY NECESSARY APPROVALS, PERMITS AND INSPECTIONS.
10. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECT FOR ONE YEAR AFTER ACCEPTANCE OF WORK.
11. ALL WORK BE IN STRICT CONFORMANCE WITH THE LATEST VERSION OF THE STATE OF CALIFORNIA FIRE CODE, THE CALIFORNIA ELECTRIC CODE, THE CALIFORNIA GREEN CODE, AND THE CALIFORNIA BUILDING CODE.
12. CONTRACTOR TO COORDINATE TESTING WITH LOCAL OFFICIALS.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING AND MAKING SAFE ALL ELECTRICAL FACILITIES IN EXISTING STRUCTURE PRIOR TO DEMOLITION.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR COMMISSIONING OF SYSTEMS AS REQUIRED BY LOCAL CODE.
15. NO PIPING, DUCTS OR EQUIPMENT FOREIGN TO ELECTRICAL EQUIPMENT SHALL BE PERMITTED TO BE LOCATED WITHIN THE DEDICATED SPACE ABOVE THE ELECTRICAL EQUIPMENT.
16. PROVIDE AND MAINTAIN REQUIRED WORK SPACE, ACCESS TO WORK SPACE AND HEAD ROOM ABOUT ELECTRICAL EQUIPMENT PER TABLE 110.26(A)(1).

CONDUCTORS

1. UNLESS OTHERWISE NOTED, CONDUCTOR TYPES SHALL BE AS INDICATED BELOW:

LOCATION	CONDUCTORS
BRANCH CIRCUITS AND FEEDERS IN CONDUIT	THHN/THWN
CONCEALED BRANCH CIRCUITS	TYPE "AC" CABLE
UNDERGROUND OUTDOORS	RHW/THW/THWN

2. ALL WIRE AND CABLE SHALL BE COPPER CONDUCTORS. CONDUCTORS #10AWG AND SMALLER MAY BE SOLID. CONDUCTORS LARGER THAN #10AWG SHALL BE STRANDED.
3. CONDUCTORS #8AWG AND SMALLER MAY BE SPLICED USING NYLON SELF-INSULATED WIRE NUTS AS MANUFACTURED BY 3M "SCOTCHLOK", IDEAL "WIRE-NUT" OR APPROVED EQUAL.
4. EXCEPT WHERE EQUIPMENT, SUCH AS MOLDED CASE CIRCUIT BREAKERS, ARE SUPPLIED WITH FACTORY INSTALLED SET SCREW LUGS, ALL CONNECTIONS FOR CABLES 4/0 AND LARGER SHALL BE MADE USING NEMA 2 BOLT COMPRESSION LUGS. LUGS SHALL BE HYDRAULICALLY APPLIED USING MANUFACTURER'S TOOLING, DIES AND RECOMMENDED PROCEDURES.
5. UNLESS OTHERWISE INDICATED ON THE DRAWINGS, ALL BRANCH CIRCUITS AND HOME RUNS SHALL BE #12AWG, QUANTITY AS INDICATED BY HASH MARKS.
6. ADJUST BRANCH CONDUCTOR SIZES AS REQUIRED FOR VOLTAGE DROP. MAXIMUM BRANCH CIRCUIT LENGTHS SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

	#12	#10	#8
120V, 1 PHASE, 15A	75'	125'	185'
120V, 1 PHASE, 20A	55'	95'	145'
208V, 1 PHASE, 20A	95'	160'	245'
208V, 3 PHASE, 20A	110''	185'	285'

THE ABOVE LENGTHS REPRESENT "ONE-WAY" CIRCUIT LENGTH (NOT WIRE LENGTH) AND INCLUDE ALL VERTICAL RISES AND DROPS.

7. CONDUCTOR INSULATIONS SHALL BE COLOR CODED AS FOLLOWS:

	120/208V	277/480V
PHASE A	BLUE	BROWN
PHASE B	RED	ORANGE
PHASE C	BLACK	YELLOW
NEUTRAL	WHITE	WHITE
GROUND	GREEN	GREEN

WHERE CONDUCTORS ARE NOT AVAILABLE WITH COLOR CODED INSULATION, COLORED TAPES SHALL BE APPLIED TO THE ENTIRE EXPOSED LENGTH OF CABLES IN PULL BOXES, SWITCHBOARDS, EQUIPMENT, ETC.

RACEWAYS

1. UNLESS OTHERWISE NOTED, RACEWAY TYPES SHALL BE AS INDICATED BELOW:

LOCATION	RACEWAY
OUTDOORS, ABOVE GRADE. .	GALVANIZED RIGID STEEL (GRS)
INDOOR FEEDERS AND SUB FEEDERS NOT EXPOSED TO PHYSICAL DAMAGE.	ELECTRICAL METALLIC TUBING (EMT)
INDOOR BRANCH CIRCUITS EXPOSED IN UTILITY AREAS. . .	ELECTRICAL METALLIC TUBING (EMT)
UNDERGROUND. . .	TYPE "DB", SCHEDULE 40 RIGID (PVC), NON METALLIC CONDUIT
UNDERGROUND PENETRATION. . .	GALVANIZED RIGID STEEL (GRS) THROUGH GRADE

2. GALVANIZED RIGID STEEL CONDUIT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI #C80.1 AND UL #6. INSTALLATION OF GALVANIZED RIGID STEEL CONDUIT SHALL BE IN STRICT CONFORMANCE WITH NEC ARTICLE #344.
3. EMT SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI #C80.3 AND UL #797. INSTALLATION OF ELECTRICAL METALLIC TUBING SHALL BE IN STRICT CONFORMANCE WITH NEC ARTICLE #344. BENDING RADIUS SHALL NOT BE LESS THAN NEC TABLE 2, CHAPTER 9. SUPPORT SPACING SHALL NOT EXCEED 10'-0". ALL EMT COUPLINGS AND CONNECTORS SHALL BE OF THE CONCRETE-TIGHT AND RAIN-TIGHT TYPE. SET SCREW CONNECTORS SHALL NOT BE USED.
4. EXCEPT FOR SURFACE METAL AND SURFACE NON-METALLIC, ALL RACEWAYS SHALL BE INSTALLED CONCEALED WITH THE EXCEPTION OF BOILER ROOMS, UTILITY ROOMS, GARAGES AND OTHER AREAS SPECIFICALLY APPROVED BY THE ARCHITECT.
5. SEAL ALL PENETRATIONS THROUGH FIRE RESISTIVE ASSEMBLIES WITH APPROVED MATERIALS PER SEC. 709.6 AND 710, CBC.

SITE SERVICES

1. ALL UNDERGROUND RACEWAYS, SHALL BE TYPE DB, SCHEDULE 40 PVC, RIGID NON-METALLIC CONDUIT, AND MANUFACTURED BY CARLON OR APPROVED EQUAL AND SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE #352.
2. NON-METALLIC RIGID CONDUIT SHALL BE MANUFACTURED IN STRICT CONFORMANCE WITH UL #651 AND NEMA #TC-2.
3. FITTINGS FOR RIGID NON-METALLIC CONDUIT SHALL BE OF THE SOLVENT CEMENTED TYPE AND SHALL BE MANUFACTURED IN STRICT CONFORMANCE WITH UL 3514 AND NEMA #TC-3. SOLVENT CEMENT PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
4. WHEREVER POSSIBLE, RIGID NON-METALLIC CONDUIT ELBOWS, OFFSETS, ETC. SHALL BE MADE USING 30 DEGREE, 45 DEGREE AND 90 DEGREE FACTORY ELBOWS. WHERE FACTORY ELBOWS CANNOT BE ACCOMMODATED, FIELD BENDING SHALL USE HEATING BOXES, END PLUGS AND FORMING GUIDES AS RECOMMENDED BY THE MANUFACTURER. CARE SHALL BE EXERCISED TO ENSURE THAT THE INTERNAL DIAMETER OF CONDUITS IS NOT EFFECTIVELY REDUCED BY FIELD BENDING.
5. MINIMUM BENDING RADIUS FOR RIGID NON-METALLIC CONDUIT SHALL NOT BE LESS THAN PERMITTED BY NEC TABLE 2, CHAPTER 9.
6. ALL PENETRATIONS THROUGH MANHOLES, HANDHOLES, FOUNDATIONS, ETC. SHALL BE MADE USING HOT-DIPPED GALVANIZED, RIGID STEEL (GRS) CONDUIT. MAKE TRANSITION FROM RIGID NON-METALLIC TO GRS AT 5'-0" FROM PENETRATION USING APPROVED TRANSITION COUPLING. PROVIDE 3" CONCRETE ENVELOPE AROUND TRANSITION COUPLING EXTENDING 3'-0" IN EITHER DIRECTION TO MINIMIZE SHEAR FORCES AT TRANSITION COUPLING.

CIRCUIT BREAKERS

1. EQUIPMENT INTERRUPTING RATINGS SHOWN ON SCHEDULES ARE BASED ON UL LISTED FULL RATING FOR 65,000A AVAILABLE SHORT CIRCUIT CURRENT AT THE SERVICE. CONTRACTOR SHALL INCREASE INTERRUPTING RATINGS AS REQUIRED FOR FULLY RATED EQUIPMENT.

BOXES

1. BOXES FOR BRANCH CIRCUIT WIRING DEVICES AND BRANCH CIRCUIT SPLICES SHALL BE AS INDICATED BELOW:

FLUSH WIRING DEVICES ON METAL STUDS	RACO #172/173/174 (4" SQUARE)
FLUSH WIRING DEVICES ON WOOD STUDS	RACO #504/565 GANGABLE
FLUSH WIRING DEVICES IN MASONRY WALLS	RACO #690 (1 GANG)
GANG BOXES	RACO #951/953/953/954/955
SURFACE WIRING DEVICES (DRY AREAS)	RACO #192 4" SQUARE)
SURFACE WIRING DEVICES (WET ARES, 1 GANG)	BELL 270-L/273-L (F.S. TYPE)
SURFACE WIRING DEVICES (WET AREAS, 2 GANG)	BELL 276-4L/ 277-4L (F.S. TYPE)

THE ABOVE MODEL NUMBERS ARE TYPICAL OF THE PRODUCTS REQUIRED. CONTRACTOR SHALL ADJUST MODEL NUMBERS AS REQUIRED TO SUIT JOB CONDITIONS, WALL THICKNESS, DEVICE REQUIREMENTS, ETC.

2. PULL AND JUNCTION BOXES SHALL BE CODE GAUGE ENAMELED STEEL, NEMA "1" WITH SCREW FASTENED COVERS WHEN USED IN INDOOR, DRY AREAS. STEEL GAUGE SHALL BE IN ACCORDANCE WITH NEC ARTICLE #314.40.
3. PULL AND JUNCTION BOXES UTILIZED IN INDOOR AREAS WHICH MAY BECOME DAMP (BOILER ROOMS, UTILITY ROOMS, CONNECTIONS TO UNDERGROUND RACEWAYS, ETC.) SHALL BE GALVANIZED TYPE NEMA "1".
4. PULL AND JUNCTION BOXES FOR USE OUTDOORS SHALL BE GALVANIZED AND OF NEMA "3R" CONSTRUCTION.
5. ALL PULL BOXES FASTENED TO EXTERIOR BLOCKS OR MASONRY WALLS SHALL BE PROVIDED WITH 1 1/2" CHANNEL FRAMING SPACERS ORIENTED VERTICALLY AT REAR OF ENCLOSURE TO ENSURE AIR CIRCULATION BEHIND ENCLOSURE.
6. OUTLET, SWITCH AND JUNCTION BOXES FOR BRANCH CIRCUIT WORK SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE #314.16-#314.30.
7. PULLBOXES AND LARGER JUNCTION BOXES SHALL BE SIZED IN ACCORDANCE WITH NEC ARTICLE #314.28.
8. WHERE USE OF KNOCKOUTS IS DISCONTINUED BY CHANGES IN THE WORK, INSTALL PROPERLY SIZED KNOCKOUT SEALS BY THOMAS AND BETTS, RACOR, APPLETON OR EQUAL.

GROUNDING

1. GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED IN ACCORDANCE WITH NEC TABLE #250.66 AND NEC ARTICLE #250.102(C).
2. GROUNDING OF ELECTRICAL EQUIPMENT AND ENCLOSURES DOWNSTREAM OF THE SERVICE DISCONNECT SHALL BE BY INSULATED GROUNDING CONDUCTOR. INCLUDE WITH ALL FEEDERS AND BRANCH CIRCUITS.
3. RECEPTACLE MOUNTING YOKE SHALL NOT BE USED FOR GROUNDING PURPOSES WITH RECESSED OUTLET BOXES. PROVIDE INSULATED GROUNDING JUMPER FROM OUTLET BOXES TO RECEPTACLE GROUNDING TERMINAL.

SAFETY SWITCHES

1. SAFETY SWITCHES SHALL BE GENERAL DUTY, FUSED OR UNFUSED RATINGS AS SHOWN ON THE DRAWINGS.
2. ALL SWITCHES SHALL BE QUICK-MAKE, QUICK-BREAK OPERATION AND SHALL HAVE PADLOCKING PROVISIONS.
3. ALL SWITCHES SHALL BE FURNISHED IN NEMA ENCLOSURES SUITABLE FOR USE IN THE LOCATION SHOWN. SWITCHES SHALL BE AS MANUFACTURED BY SQUARE D, GENERAL ELECTRIC, WESTINGHOUSE OR EQUAL.

ELECTRICAL GENERAL NOTES

1. CONTRACTOR SHALL PERFORM ALL WORK AS TO CONFORM TO LOCAL, STATE AND NATIONAL CODES AND THE REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
2. CONTRACTOR TO EXAMINE THE SITE TO DETERMINE THE EXACT CONDITIONS AFFECTING THE ELECTRICAL WORK.
3. DRAWINGS INDICATE THE GENERAL SCHEME OF THE INSTALLATION AND ARE DIAGRAMMATIC IN SCOPE. THE ENGINEER RESERVES THE RIGHT TO CHANGE THE LOCATION OF OUTLETS, CONDUIT, EQUIPMENT, APPARATUS, ETC. TO A REASONABLE EXTENT AS THE BUILDING CONDITIONS MAY DICTATE PRIOR TO THEIR INSTALLATION WITHOUT EXTRA COST TO THE OWNER. THE EXACT LOCATION AND ARRANGEMENT OF ALL EQUIPMENT AND PARTS SHALL BE DETERMINED AS THE WORK PROGRESSES.
4. DETAILS OF CONSTRUCTION AND OF WORKMANSHIP WHERE NOT SPECIFICALLY DESCRIBED HEREIN OR INDICATED ON THE DRAWINGS SHALL BE SUBJECT TO THE ENGINEER'S APPROVAL. IT IS THE INTENT OF THESE SPECIFICATIONS TO PROVIDE COMPLETE SYSTEMS, LEFT IN GOOD WORKING ORDER, REAY FOR OPERATION.
5. SCRAP AND DEBRIS, EXCEPT AS OTHERWISE SPECIFIED, SHALL BE REMOVED FROM THE SITE AND DISPOSED OF BY THIS CONTRACTOR.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR START-UP OF ALL SYSTEMS.
7. ALL WORK SHALL BE DONE WITH A MINIMUM OF DUST AND DIRT. PROVIDE SUFFICIENT FIREPROOF TARPAULINS AND COVER ALL EQUIPMENT IN WORK AREA WITH SAME DURING WORK OPERATIONS.
8. CONTRACTOR SHALL FURNISH SHOP DRAWINGS AND EQUIPMENT CUTS TO THE ARCHITECT FOR APPROVAL (MINIMUM (5) COPIES).
9. COORDINATE NEW SERVICE CONNECTIONS WITH LOCAL UTILITY COMPANY(S).
10. CONTRACTOR SHALL FILE, SECURE AND PAY FOR ANY NECESSARY APPROVALS, PERMITS AND INSPECTIONS.
11. ALL WORK SHALL BE GUARANTEED TO BE FREE FROM DEFECT FOR ONE YEAR AFTER ACCEPTANCE OF WORK.
12. CONTRACTOR TO COORDINATE TESTING WITH LOCAL OFFICIALS.
13. ALL WORK BE IN STRICT CONFORMANCE WITH THE LATEST VERSION OF THE STATE OF CALIFORNIA FIRE CODE, THE CALIFORNIA ELECTRIC CODE, THE CALIFORNIA GREEN CODE, AND THE CALIFORNIA BUILDING CODE.
14. PRIOR TO TESTING, CONTRACTOR SHALL MAKE ALL SYSTEM ADJUSTMENTS REQUIRED FOR PROPER OPERATION. ADJUSTMENTS SHALL INCLUDE TRANSFORMER TAPS, CIRCUIT BREAKER MAGNETIC SETTINGS, GROUND FAULT RELAY TRIP SETTINGS, BALLAST TAP SETTINGS, ETC.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR DISCONNECTING AND MAKING SAFE ALL ELECTRICAL FACILITIES IN EXISTING STRUCTURE PRIOR TO DEMOLITION.
16. CONTRACTOR SHALL BE RESPONSIBLE FOR COMMISSIONING OF SYSTEMS AS REQUIRED BY LOCAL CODE.
17. ALL EQUIPMENT SHALL BE LISTED BY A CITY OF SANTA ANA RECOGNIZED ELECTRICAL TESTING LAB (IE U.L.) OR APPROVED BY THE DEPARTMENT.
18. COMPLY WITH CITY OF SANTA ANA AMENDMENTS TO 2019 CEC.
19. USE RIGID METAL CONDUIT IN ALL AREAS EXPOSED TO WEATHER. USE GROUND WIRE INSIDE ALL FLEXIBLE METAL CONDUITS. METAL CONDUIT SHALL NOT BE INSTALLED IN CONTACT WITH EARTH.
20. SCREENING SHALL BE PROVIDED SO THAT MATERIALS STORED IN ANY OUTDOOR STORAGE AREA AND/OR EQUIPMENT AT GRADE OR ON THE ROOF ARE SCREENED FROM VIEW FROM ALL ADJACENT STREETS, NO MATTER THE STREET GRADE, AND ALL PROPERTIES AT THE SAME GRADE.
21. ALL UNDERGROUND RACEWAYS, SHALL BE TYPE DB, SCHEDULE 40 PVC, RIGID NON-METALLIC CONDUIT, AND MANUFACTURED BY CARLON OR APPROVED EQUAL AND SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE #352.
22. NON-METALLIC RIGID CONDUIT SHALL BE MANUFACTURED IN STRICT CONFORMANCE WITH UL #651 AND NEMA #TC-2.
23. ALL GROUND CONDUCTORS SHALL BE INSULATED COPPER.
24. FITTINGS FOR RIGID NON-METALLIC CONDUIT SHALL BE OF THE SOLVENT CEMENTED TYPE AND SHALL BE MANUFACTURED IN STRICT CONFORMANCE WITH UL 3514 AND NEMA #TC-3. SOLVENT CEMENT PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
25. WHEREVER POSSIBLE, RIGID NON-METALLIC CONDUIT ELBOWS, OFFSETS, ETC. SHALL BE MADE USING 30 DEGREE, 45 DEGREE AND 90 DEGREE FACTORY ELBOWS. WHERE FACTORY ELBOWS CANNOT BE ACCOMMODATED, FIELD BENDING SHALL USE HEATING BOXES, END PLUGS AND FORMING GUIDES AS RECOMMENDED BY THE MANUFACTURER. CARE SHALL BE EXERCISED TO ENSURE THAT THE INTERNAL DIAMETER OF CONDUITS IS NOT EFFECTIVELY REDUCED BY FIELD BENDING.
26. MINIMUM BENDING RADIUS FOR RIGID NON-METALLIC CONDUIT SHALL NOT BE LESS THAN PERMITTED BY NEC TABLE 2, CHAPTER 9.
27. MINIMUM BURIAL DEPTH FOR UNDERGROUND RIGID NON-METALLIC RACEWAY SHALL BE 36" BELOW FINISHED GRADE. WHERE LESSER DEPTHS ARE REQUIRED DUE TO SUBSURFACE OBSTACLES, ENCASE RACEWAYS IN MINIMUM 3", 3000 PSI CONCRETE ENVELOPE.
28. ALL PENETRATIONS THROUGH MANHOLES, HANDHOLES, FOUNDATIONS, ETC. SHALL BE MADE USING HOT-DIPPED GALVANIZED, RIGID STEEL (GRS) CONDUIT. MAKE TRANSITION FROM RIGID NON-METALLIC TO GRS AT 5'-0" FROM PENETRATION USING APPROVED TRANSITION COUPLING. PROVIDE 3" CONCRETE ENVELOPE AROUND TRANSITION COUPLING EXTENDING 3'-0" IN EITHER DIRECTION TO MINIMIZE SHEAR FORCES AT TRANSITION COUPLING.
29. RISERS AT UTILITY POLES SHALL CONSISTS OF GRS ELBOW(S) AND CONDUCT TO 10'-0' ABOVE FINISHED GRADE FOR ELECTRICAL SUPPLIES. SPARE ELECTRICAL DUCTS SHALL BE CAPPED AT 6" ABOVE FINISHED GRADE.
30. PROVIDE WEATHERPROOF (NEMA 3R) JUNCTION BOXES, CONDUIT, FITTINGS AND ENCLOSURES AT ALL EXTERIOR LOCATIONS AND ALL WET OR DAMP INTERIOR LOCATIONS.
31. ALL AMPACITIES ARE BASED UPON TABLE 310.15(B)16 OF THE 2019 CALIFORNIA ELECTRICAL CODE.

ABBREVIATIONS AND DESCRIPTIONS

A	AMPERES
AC	ALTERNATING CURRENT
AIC	AMPERES INTERRUPTING CAPACITY
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AF	AMP FRAME/AMP FUSE
AL	ALUMINUM
AS	AMP SWITCH
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
CATV	CABLE TELEVISION
CCTV	CLOSED CIRCUIT TELEVISION
CB	CIRCUIT BREAKER
CO	CONDUIT ONLY WITH NYLON PULLCORD
COAS	COAXIAL CABLE
CU	COPPER
CT	CURRENT TRANSFORMER
DC	DIRECT CURRENT
DIST	DISTRIBUTION
DB	DISTRIBUTION SWITCHBOARD
DWGS	DRAWINGS
EF	EXHAUST FAN
ELECT	ELECTRICAL
ELEV	ELEVATION/ELEVATOR
EMER,EM	EMERGENCY
EMT	ELECTRO-METALLIC TUBING
EQUIP	EQUIPMENT
EXIST,EX	EXISTING
F	DEGREES FAHRENHEIT
FA	FIRE ALARM
FF	FURNITURE FEED, FINISHED FLOOR
G	GROUND BUS OR WIRE
GD	GARBAGE DISPOSAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
H	HORIZONTAL
HP	HORSEPOWER
HOA	HAND-OFF-AUTOMATIC
HZ	HERTZ
IG	ISOLATED GROUND
IMC	INTERMEDIATE METAL CONDUIT
J-BOX	JUNCTION BOX
KCM	KILO-CIRCULAR-MIL
KVA	KILO-VOLTAMPERE
KW	KILO-WATT
LBS	POUNDS
LV	LOW VOLTAGE
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MECH	MECHANICAL
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO	NORMALLY OPEN
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
PB	PULLBOX
PC	PHOTOCELL CONTROL
PH	PHASE
PLBG	PLUMBING
PNL	PANEL
PVC	POLYVINYL CHLORIDE
PP	POWER POLE
PS	POWER SENTRY EMERGENCY BATTERY UNIT
QTY	QUANTITY
RECEPT	RECEPTACLE
REF	REFRIGERATOR
RGS	RIGID GALVANIZED STEEL
RM	ROOM
SB	STANDBY
SD	SMOKE DETECTOR
SPEC	SPECIFICATION
SQFT	SQUARE FEET OR SQUARE FOOT
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TEMP	TEMPERATURE OR TEMPORARY
TV	TELEVISION
TYP	TYPICAL
UGPS	UNDERGROUND PULL SECTION
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
V	VOLTS
VA	VOLTAMPERE
VFD	VARIABLE FREQUENCE DRIVE
W/	WITH
WP	WEATHERPROOF
WT	WEIGHT
X	EXISTING
XFMR	TRANSFORMER

APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE (CBC)
2019 CALIFORNIA ELECTRICAL CODE (CEC)
2019 CALIFORNIA ENERGY CODE
2019 CALIFORNIA FIRE CODE.
2019 CALIFORNIA BUILDING ENERGY EFFICIENCY STANDARDS
2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

SCOPE OF WORK

EXISTING IRRIGATION CONTROLLER WITHIN ELECTRICAL ROOM TO BE DISCONNECTED AND REMOVED AND A NEW PEDESTAL MOUNTED IRRIGATION CONTROLLER IN AND EXTERIOR PLANTER AREA TO BE INSTALLED. EXISTING CIRCUITRY SHALL BE REUSED FOR CONNECTION OF NEW CONTROLLER.

SYMBOLS LIST

BRANCH CIRCUIT HOMERUN

3/4" CONDUIT MINIMUM – 1#2 HOT, 1#12 NEUTRAL AND 1#12 GROUND. TYPICAL UNLESS NOTED OTHERWISE.

NEUTRAL / GND / HOT(S) — BRANCH CIRCUIT WIRING WITH TICK MARKS

ELECTRICAL PANELBOARD

Sheet List Table

Sheet Number	Sheet Title
EN01	ELECTRICAL LEAD SHEET
EA01	PARTIAL SITE ELECTRICAL PLAN

811 Know what's below. Call before you dig.
Underground Service Alert of Southern California
TWO WORKING DAYS BEFORE YOU DIG
CALL BEFORE YOU DIG
www.DigAlert.org

NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 4216 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS A DIG ALERT TICKET NUMBER. CALL 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

Robert J. Hatch, P.E.
CA # E16118
LINWOOD ENGINEERING INC
REGISTERED PROFESSIONAL ENGINEER ROBERT J. HATCH E16118 ELECTRICAL STATE OF CALIFORNIA
EXP. 12/31/23

SHT-XXNN-NNNNN-R00.DGN

FILE NO.: PS-06826

REVISIONS

NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES

BENCHMARK NO.: XX-XXX-XX — ELEV.: NNN.NN' NAVDYY

CONSTRUCTION COMPLETED:

PREPARED UNDER THE SUPERVISION OF: JAMES BRECK — SENIOR LANDSCAPE ARCHITECT — DATE 10/2021
DESIGNED: ML DRAWN: AT CHECKED: ML
REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — XX/YYYY

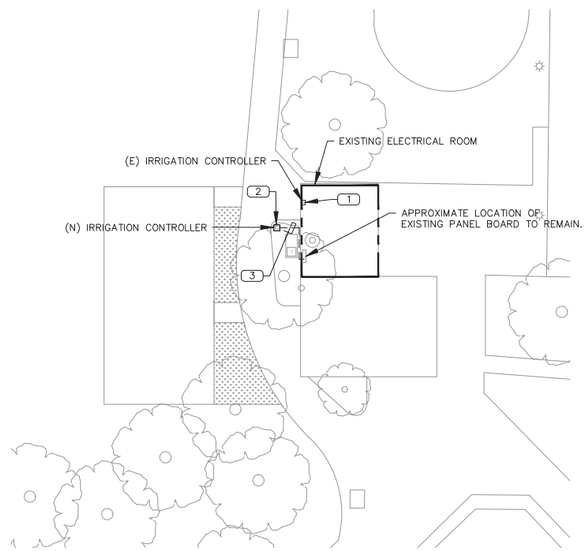
ELECTRICAL LEAD SHEET — EN01

CABRILLO PARK IRRIGATION RENOVATION

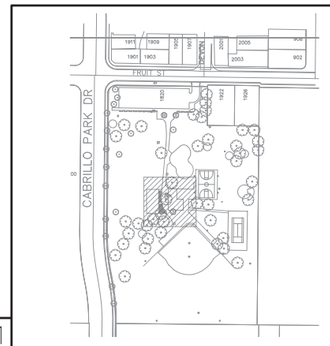
CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION



PARTIAL SITE ELECTRICAL PLAN | 1/2" = 1'-0" | 01



GENERAL NOTES

1. CONTRACTOR SHALL WALK SITE AND FIELD VERIFY ALL REQUIREMENTS FOR ROUTING OF CONDUITS PRIOR TO BID.
2. CONTRACTOR SHALL EXERCISE CAUTION IN EXCAVATING AND TRENCHING ON THIS SITE TO AVOID EXISTING DUCTS, PIPING, CONDUITS, ETC. AND SHALL PREVENT HAZARD TO PERSONNEL AND/OR DAMAGE TO EXISTING UNDERGROUND UTILITIES OR STRUCTURES. THESE DOCUMENTS ARE NOT RESPONSIBLE FOR THE LOCATION OF UNDERGROUND UTILITIES OR STRUCTURES WHETHER OR NOT SHOWN, DETAILED OR INSTALLED BY THIS OR ANY OTHER CONTRACTS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER IF UNFORESEEN CONDITIONS ARE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
3. USE 3/4" CONDUIT (MINIMUM) AND #10 CONDUCTORS (MINIMUM) FOR ALL SITE WIRING WORK.
4. REFER TO CEC TABLE 300-5 FOR MINIMUM CONDUIT BURIAL DEPTHS.
5. ALL WORK SHALL BE VERIFIED AT MANDATORY PRE-BID JOB WALK.

PLAN NOTES (X)

1. EXISTING IRRIGATION CONTROLLER TO BE DISCONNECTED AND REMOVED. REMOVE BRANCH CIRCUIT WIRING BACK TO SOURCE.
2. NEW PEDESTAL IRRIGATION CONTROLLER. REFER TO LANDSCAPE DRAWINGS FOR SPECIFICATION.
3. PROVIDE 3/4" – 2#12 & 1#12 GROUND FROM PANEL BOARD TO NEW IRRIGATION CONTROLLER. CONDUIT SHALL BE ROUTED DOWN WALL FROM PANEL TO EXISTING CORE THRU WALL, THRU WALL AND DOWN TO PLANTER AREA. CONTINUE UNDERGROUND TO NEW IRRIGATION CONTROLLER AS SHOWN. CONNECT TO EXISTING SPARE CIRCUIT REMAINING AFTER DEMOLITION OF EXISTING IRRIGATION CONTROLLER.

811 Underground Service Alert of Southern California
TWO WORKING DAYS BEFORE YOU DIG
Know what's below. Call before you dig.
CALL BEFORE YOU DIG!
www.DigAlert.org

NOTICE TO CONTRACTOR

PURSUANT TO ASSEMBLY BILL 4216 NO EXCAVATION PERMIT IS VALID UNLESS THE CONTRACTOR CONTACTS AND OBTAINS A DIG ALERT TICKET NUMBER. CALL 811 AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING EXCAVATION.

Robert J. Hatch, P.E.
CA #28118
LINWOOD ENGINEERING INC
2701 dupont drive, suite 102
Irvine, ca 92612 – 714-424-0509
www.linwoodengineering.com
REGISTERED PROFESSIONAL ENGINEER ROBERT J. HATCH ELECTRICAL STATE OF CALIFORNIA
EXP. 12/31/23

SHT-XXNN-NNNNN-RGO.DGN

FILE NO.: PS-06826

REVISIONS					
NUMBER	DATE	INITIALS	DESCRIPTION	APPROVED	INSTALLED

REFERENCES
BENCHMARK NO.: XX-XXX-XX ELEV.: NNN.NN' NAVDYY
CONSTRUCTION COMPLETED:

PREPARED UNDER THE SUPERVISION OF: JAMES BRECK — SENIOR LANDSCAPE ARCHITECT — DATE 10/2021
DESIGNED: ML DRAWN: AT CHECKED: ML

REVIEWED FOR CONSTRUCTABILITY AND RECOMMENDED FOR CONSTRUCTION: JASON GABRIEL — PRINCIPAL CIVIL ENGINEER RCE NO.: 62968 — XX/YYYY

PARTIAL SITE ELECTRICAL PLAN — EA01

CABRILLO PARK IRRIGATION RENOVATION

CABRILLO PARK – CORNER OF CABRILLO PARK DR. & FRUIT ST.

PUBLIC WORKS AGENCY
CITY OF SANTA ANA

SHEET 12 OF 12

PROJECT NO. 21-2727: CABRILLO PARK IRRIGATION RENOVATION